Mayor: Bill Barnett
Vice Mayor: Linda Penniman
City Council Members:
Reg Buxton, Doug Finlay, Michelle McLeod, Sam J. Saad III, Ellen Seigel
City Attorney: Robert D. Pritt • City Clerk: Patricia L. Rambosk • City Manager: Bill Moss
Council Members Elect: Terry Hutchison • Linda Penniman • Gary Price

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Welcome to today's City Council meeting. If you wish to address the Council regarding an item listed on this agenda, please complete a registration form at the rear of the room and place it in the Speaker Request Box located on the Council dais prior to consideration of that item. We ask that speakers limit their comments to 3 minutes and that large groups name a spokesperson whenever possible. Thank you for your interest and participation in City government.

City Council Regular Meeting
Wednesday, February 21, 2018
8:30 AM

All proposed ordinances and information on other items listed below, which have been provided in advance of this meeting, may be inspected in the office of the City Clerk, Room B, City Hall, or on the City of Naples home page https://www.naplesgov.com/ or call the City Clerk's Office, 213-1015. All written, audio-visual and other materials presented to the City Council in conjunction with deliberations during this meeting will become the property of the City of Naples and will be retained by the City Clerk.

1.Roll call

2.Invocation and Pledge of Allegiance

3.Certification of Election

4.Presentation of Service Awards to Doug Finlay, Linda Penniman, Sam J. Saad III

5.Swearing-In Council Members Elect Terry Hutchison, Linda Penniman, and Gary Price

6.Roll Call

7.Set agenda (add or remove items)

8.Public Comment

NOTICE

Formal action may be taken on any item discussed or added to this agenda. Any person who decides to appeal any decision made by the City Council with respect to any matter considered at this meeting (or hearing) will need a record of the proceedings and may need to ensure that a verbatim record of the

proceeding is made, which record includes the testimony and evidence upon which the appeal is to be heard. Any person with a disability requiring auxiliary aids and services for this meeting City Clerk's Office at 213-1015 with requests at least two business days before the meeting date.

CONSENT AGENDA

9.City Clerk

9.A. Approval of the January 17, 2018 Regular City Council meeting minutes.
Recommended Action: Approve the minutes.
Agenda Memorandum
1/17/18 Regular Meeting Minutes

10.Community Services

10.A. Special Events - Repeat Events
(1) Coconut 5K Race - The Gulf Coast Runners - Lowdermilk Park, Gulf Shore Boulevard N, Mooring Line Drive, Beacon Lane, Bow Line Drive, Windward Way, Wedge Drive, Crayton Road, and Yucca Road - 2/24/18
(2) 2018 Naples Craft Beer Fest - The Naples North Rotary Club Foundation, Inc. - Bayfront - 3/3/18
(3) Annual Spring Sidewalk Sale - The Third Street South Merchants Association - Third Street South Shopping District - 4/5/18, 4/6/18, 4/7/18 and 4/8/18
Recommended Action: Review and approve as submitted.
Agenda Memorandum

10.B. Resolution authorizing the Mayor to submit an application to Collier County to capture the City's Fiscal Year 2018-19 Community Development Block Grant (CDBG) Federal allocation for funding support to install outdoor fitness equipment at Charlie C. Anthony Park.
Recommended Action: Approve the Resolution.
Agenda Memorandum
Resolution
Application

END OF CONSENT AGENDA

11.City Clerk

11.A. Election of Vice Mayor.
Recommended Action: Elect a Vice Mayor.
Agenda Memorandum
Charter and Florida Statutes

11.B. Selection of Community Redevelopment Agency (CRA) Chair and Vice Chair.
Recommended Action: Appoint a Chair of the CRA for a two-year term and appoint a Vice Chair of the CRA for a two-year term.

Agenda Memorandum
Florida Statutes 163.356(3)(c)

11.C. Selection of a City Council Member for the Naples Airport Authority Noise Compatibility Committee.
Recommended Action: Appoint a City Council Member to the Naples Airport Authority Noise Compatibility Committee for either a two-year term or a four-year term.
Agenda Memorandum
Spreadsheet - Council appointments to outside boards

12.Community Services

12.A. Award of contract to Tree Scaping of Naples, Inc. in the amount $192,908.10 (includes a City controlled contingency of $9,186.10) for time specific palm pruning.
Recommended Action: Award a contract to Tree Scaping of Naples, Inc. in the amount $192,908.10.
Agenda Memorandum
Agreement
Bid Analysis

13.Fire-Rescue

13.A. (1) A Resolution amending the Fiscal Year 2017-18 budget adopted by Resolution 17-14027 to appropriate $100,000 for Fire Station No. 2 HVAC, electrical, ceiling renovation and kitchen completion.

(2) Award a contract to Vantage Construction Services, LLC in the amount of $364,408 to fund upgrades / renovations to the Fire-Rescue Department / Fire Station No. 2, HVAC, electrical and ceiling construction

Recommended Action: (1) Approve the Resolution; and (2) Award a contract to Vantage Construction Services, LLC in the amount of $364,408.
Agenda Memorandum
Resolution
Agreement
Bid Analysis

13.B. (1) Resolution amending the Interlocal Agreement between the City of Naples Airport Authority and the City of Naples that establishes procedures and conditions for providing 24-hour aircraft rescue and firefighting services at the Naples Municipal Airport; approving the amended Interlocal Agreement.

(2) Resolution amending the FY 2017-18 Budget adopted by Resolution 2017-14027 to appropriate contracted revenue to be received from the Naples Airport Authority to increase fire service to the Naples Municipal Airport.
Recommended Action: (1) Approve the Resolution; and (2) Approve the Resolution.
Agenda Memorandum

(1) Resolution - Amending Interlocal Agreement
(2) Resolution - Amending budget
Amended Interlocal Agreement (track changes)

14.Planning

14.A. Resolution - Quasi-Judicial - Public Hearing relating to Outdoor Live Entertainment; determining Petition 17-LE6 for South Avenue Restaurant and Bar on property owned by 643-63 Fifth Avenue South Holding, LLC, and located at 651 5th Avenue South.
Recommended Action: Denial of the Resolution.
Agenda Memorandum
Resolution
Supplemental Memo
Application
Disclosure
Floor Plan
Police and Code Enforcement Memos
Fire Code Violations
Letters in response to mailing
Public Notice Mailing Labels
Resumes

15.Streets and Stormwater

15.A. Ordinance - First Reading - Public Hearing relating to Valet Parking; amending Section 17, On-Street Parking and Valet Parking, of the public right-of-way Construction Standards Handbook, Subsection 2, to revise the Hours of Operation for Valet Services. ~ Scheduling a Public Hearing and Second Reading on March 7, 2018.
Recommended Action: Hold a Public Hearing, approve the Ordinance on First Reading, and schedule a Public Hearing and Second Reading on March 7, 2018.
Agenda Memorandum
Ordinance

15.B. Resolution - Quasi-Judicial - Public Hearing determining Dredge and Fill Application 180630 to apply for a Marine Permit that would allow dredging the access channel to Hamilton Harbor Marina on Naples Bay at 7054 Hamilton Avenue, Naples, Florida 34112, owned by Hamilton Harbor Marina Inc.
Recommended Action: Approve the Resolution.
Agenda Memorandum
Resolution
Application
Resume

15.C. Presentation of the 2018 Stormwater Master Plan 90% Draft
Recommended Action: Receive the report and presentation for discussion.

Agenda Memorandum
PowerPoint - Stormwater Master Plan Update at 90%
Cost Estimate Summary
Stormwater Master Plan Update 90% Deliverable
2/7/18 Letter from the Conservancy of Southwest Florida

16.Technology Services

16.A. (1) Resolution amending the Fiscal Year 2017-18 budget adopted by Resolution 2017-14027 to appropriate $105,000 for Closed Captioning of City meetings broadcast via the internet and television.

(2) City Council is asked to approve a contract with Encore Broadcast Solutions in the amount of $93,102.55 for a digital solution for closed captioning services for City meetings broadcast via the internet and television.

Recommended Action: (1) Approve the Resolution; and (2) Approve a contract with Encore Broadcast Solutions in the amount of $93,102.55.
Agenda Memorandum
Resolution
Encore Quote
Granicus quote

17.City Attorney

17.A. Review and discussion of Ethics disclosure form.
Recommended Action: Review and consider options for disclosure form.
Agenda Memorandum
City Attorney Memorandum - Ethics Disclosure Form

18.City Manager

18.A. A Resolution determining a request to compromise and reduce the fine imposed by the City of Naples Code Enforcement Board under Code Enforcement Board under Case No. 17-406473 and refund the difference.
Recommended Action: Consider the Resolution.

Agenda Memorandum
Resolution
December 20, 2017 Letter
Notice of Violation
Notice of Hearing
Finding of Facts/Order May 2017
Finding of Facts/Order December 2017
September 1, 2017 Letter

Email Correspondence

Public Comment

Correspondence and Communications

Adjourn

NOTICE

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City Council Agenda Item Report

Submitted by: Patricia Rambosk
Submitting Department: City Clerk
Meeting Date: February 21, 2018

SUBJECT
Approval of the January 17, 2018 Regular City Council meeting minutes.

Legislative Type:

Funding Source:

Recommendation:
Approve the minutes.

ATTACHMENTS
- Agenda Memorandum
- 1/17/18 Regular Meeting Minutes

AGENDA MEMORANDUM *City Clerk*

Regular Meeting Date: February 21, 2018

To: City Council

From: Patricia L. Rambosk, City Clerk

Date: February 2, 2018

Legislative ☒ Quasi-Judicial ☐

SUBJECT:
Approval of City Council minutes.

SUMMARY:
City Council is asked to review and approve by motion the January 17, 2018 Regular Meeting minutes.

RECOMMENDED ACTION:
Approve the City Council minutes as submitted.

City Council Chamber
735 Eighth Street South
Naples, Florida 34102

City Council Regular Meeting – January 17, 2018 – 8:30 a.m.

1. ROLL CALL

Present:

Bill Barnett, Mayor
Linda Penniman, Vice Mayor (left 3:30 p.m.)
Reg Buxton
Doug Finlay
Michelle McLeod
Sam Saad III
Ellen Seigel

Also Present:

William Moss, City Manager
Robert Pritt, City Attorney
Roger Reinke, Assistant City Manager
Ann Marie Ricardi, Finance Director
Dana Souza, Community Services Director
Robin Singer, Planning Director
Gregg Strakaluse, Streets and Stormwater Director
Roger Jacobsen, Code and Harbor Manager
Michael Nichols, Deputy Fire Chief
Jessica Rosenberg, Exec. Asst. / Deputy City Clerk
Kyle Bennett, Police Sergeant
Michael O'Reilly, Police Lieutenant
Josh Maxwell
Bradley Walters
John Nocera
Robert DeCastro
Andy Hjortas
Tom Marvel
Bruce Barone
Cathalin Miner
Sonersha Estima
James Pankonin
Gordon Knapp
Gene Scott
Debra King
Dustin Raines
Terri Lewis
John Passidomo
Matthew Kragh
Renee Zepeda
Christian Andrea
Harry Zea
Burt Saunders
George Diehl
Leigh Kistler
Brett Cohan
Joseph Karaganis
Elaine Reed
Don Pickworth
Anthony Pires
Susan Suarez
Preston Smith
Jack Cooper

Media:

Joseph Cranney, Naples Daily News

It is noted for the record that all documentation electronically appended hereto is also contained in the file for this meeting in the City Clerk's Office. It is also noted that all experts who testified during quasi-judicial hearings were accepted as qualified to do so in their respective fields of expertise.

2. INVOCATION AND PLEDGE OF ALLEGIANCE

Pastor Gene Scott, Celebration Community Church.

3. ANNOUNCEMENTS

3-a. RECOGNITION OF OUTGOING COMMUNITY REDEVELOPMENT AGENCY ADVISORY BOARD MEMBERS JOHN NOCERA AND ROBERT DECASTRO

Mayor Barnett recognized John Nocera and Robert DeCastro for their years of service.

3-b. HUMAN TRAFFICKING AWARENESS MONTH PROCLAMATION

The proclamation was read and presented by Mayor Barnett.

Proclamation (ADDED ATTACHMENT / staff)

3-c. DO THE RIGHT THING RECOGNITIONS

Police Lieutenant Michael O'Reilly recognized business sponsor Susan Suarez of The Holocaust Museum and Education Center of Southwest Florida. Police Sergeant Kyle Bennett and Bruce Barone, Fifth Avenue South Business Improvement District (FASBID) Executive Director, recognized the following area school children: Jack Cooper, Preston Smith and Sonersha Estima.

4. SET AGENDA (ADD OR REMOVE ITEMS)

MOTION by Buxton to SET THE AGENDA as submitted; seconded by Penniman and unanimously carried, all members present and voting (Buxton-yes, Finlay-yes, McLeod-yes, Penniman-yes, Saad-yes, Seigel-yes, Barnett-yes).

5. PUBLIC COMMENT

George Diehl, Palm Bay Villas Board of Directors President, said that the seawall along the eastern edge of the property had been severely damaged by Hurricane Irma, and requires replacement. He thereby requested that the City remove its abandoned sewage force main that projects through the north end of the seawall. Mayor Barnett asked that this issue be considered at a future meeting after the new Council takes office. Later in the meeting, **Leigh Kistler** expressed concern regarding the early start time allowed for construction and landscaping activity due to the excessive noise produced. Council Member McLeod noted the prior consensus of Council for a future workshop discussion on this matter.

6. CONSENT AGENDA

MOTION by Buxton to APPROVE CONSENT AGENDA as submitted; seconded by Saad and unanimously carried, all members present and voting (Buxton-yes, Finlay-yes, McLeod-yes, Penniman-yes, Saad-yes, Seigel-yes, Barnett-yes).

6-a. MINUTES FOR THE DECEMBER 18, 2017 WORKSHOP AND THE DECEMBER 20, 2017 REGULAR MEETING

Agenda Memorandum 12/18/17 Workshop Minutes

12/20/17 Regular Meeting Minutes

6-b. CONSIDERATION TO RECOMMEND REAPPOINTMENT: *CLERK TRACKING 2018-00000* - ROBERT MEISTER III AS A CONTRACTOR ON THE COLLIER COUNTY CONTRACTOR'S LICENSING BOARD FOR A THREE-YEAR TERM COMMENCING MARCH 1, 2018 AND EXPIRING FEBRUARY 28, 2021

Agenda Memorandum R. Meister Application and Resume

Recommendation from Collier County Licensing Compliance Supervisor

Code Sec. 22-165. - The contractors' licensing board.

6-c. SPECIAL EVENTS – REPEAT EVENTS

1. Collier Freedom Women's March – Collier Freedom - Broad Avenue South, 3rd Street South, 5th Avenue South, 8th Street South, and Cambier Park – 1/20/18
2. The National Alliance of Mental Illness (NAMI) of Collier County Annual Walk – NAMI of Collier - 8th Street South, 12th Avenue South, 7th Street South, 14th Avenue South, Gordon Drive, 8th Avenue South and Cambier Park – 2/17/18
3. Second Annual Christian Concert - Mega Ministries, Inc. – Cambier Park Bandshell – 3/31/18
4. United States Navy Band - Commodores Concert - The United States Navy Band – Cambier Park Bandshell - 11/11/18

Agenda Memorandum

END OF CONSENT AGENDA

7. PRESENTATION AND APPROVAL OF BRADLEY WALTERS, A SCOUT WITH TROOP 2001, REGARDING BUILDING NEW BENCHES AT THE NAPLES CITY DOCK FOR HIS EAGLE SCOUT SERVICE PROJECT

Title read by City Attorney Robert Pritt. Roger Jacobsen, Code and Harbor Manager, briefly reviewed the agenda memorandum. Josh Maxwell, Chief Engineer of Turrell, Hall and Associates and mentor for this project, introduced Bradley Walters who utilized an electronic presentation to outline his proposal to erect benches for the newly rebuilt City Dock. Mr. Jacobsen recommended approval, noting that there would be no cost to the City.

Public Comment: None.

MOTION by Saad to APPROVE ITEM 7; seconded by Buxton and unanimously carried, all members present and voting (Buxton-yes, Finlay-yes, McLeod-yes, Penniman-yes, Saad-yes, Seigel-yes, Barnett-yes).

Agenda Memorandum Eagle Scout Rank Information Sheet

PowerPoint - City Dock-Eagle Scout Proposal

8. *ORDINANCE 2018-14090* - AN ORDINANCE RELATING TO POSSESSION OF ALCOHOLIC BEVERAGES ON THE NAPLES FISHING PIER; AMENDING CHAPTER 42, WATERWAYS, ARTICLE II. RECREATION AREAS, DIVISION 2, CITY PIER, SECTION 42-53(a) CONDUCT ON FISHING PIER AND PARKING AREA, OF THE CITY OF NAPLES CODE OF ORDINANCES; PROVIDING A SEVERABILITY CLAUSE; PROVIDING A CONFLICT AND REPEALER PROVISION; AND PROVIDING AN EFFECTIVE DATE.

Title read by City Attorney Robert Pritt. Assistant City Manager Roger Reinke briefly outlined the agenda memorandum noting it would allow beer and wine on the Pier between noon and one hour past sunset and prohibit glass thereon.

Council Member Finlay predicted this could lead to excessive amounts of alcohol being brought to the Pier which he said he could not support. Council discussed imposing limits on quantity or potentially curtailing the allowed hours. Mayor Barnett however noted that Council can amend the ordinance if problems arise.

Public Comment: None.

MOTION by Barnett to APPROVE ITEM 8; seconded by Buxton and failed 3-4, all members present and voting (Buxton-yes, Finlay-no, Penniman-no, Saad-no, Seigel-yes, McLeod-no, Barnett-yes).

MOTION by Barnett to RECONSIDER ITEM 8; seconded by Seigel and carried 5-2, all members present and voting (Finlay-no, McLeod-yes, Saad-yes, Buxton-yes, Penniman-no, Seigel-yes, Barnett-yes).

Council Member Saad said he believed the staff would maintain the Pier at the same high standards that it does with all other City facilities.

MOTION by Saad to ADOPT ORDINANCE 2018-14090; seconded by Buxton and carried 4-3, all members present and voting (McLeod-no, Penniman-no, Finlay-no, Buxton-yes, Seigel-yes, Saad-yes, Barnett-yes).

Agenda Memorandum Ordinance

9. *RESOLUTION 2018-14091* - A RESOLUTION OF THE CITY COUNCIL OF NAPLES, FLORIDA OPPOSING OFFSHORE OIL DRILLING AND EXPLORATION IN THE EASTERN GULF OF MEXICO AND SUPPORTING THE CURRENT MORATORIUM ON DRILLING IN THE EASTERN GULF; AND PROVIDING AN EFFECTIVE DATE.

Title read by City Attorney Robert Pritt after which City Manager William Moss briefly reviewed the agenda memorandum. Council Member Saad requested an amendment as indicated in the motion below.

Public Comment: None.

MOTION by Saad to APPROVE RESOLUTION 2018-14091 amending Section 2 to include the provision of copies to the President and the U.S. Secretary of

the Interior; seconded by Buxton and unanimously carried, all members present and voting (Buxton-yes, Finlay-yes, McLeod-yes, Penniman-yes, Saad-yes, Seigel-yes, Barnett-yes).

Agenda Memorandum Resolution

10. *RESOLUTION 2018-14092* - AN INITIAL ASSESSMENT RESOLUTION OF THE CITY COUNCIL OF NAPLES, FLORIDA, RELATING TO THE ESTABLISHMENT OF A SPECIAL ASSESSMENT AREA TO BE KNOWN AS THE GULF ACRES / ROSEMARY HEIGHTS ASSESSMENT AREA FOR THE CONSTRUCTION AND FUNDING OF WASTEWATER IMPROVEMENTS; DESCRIBING THE PROPERTY TO BE LOCATED WITHIN THE ASSESSMENT AREA AND THE WASTEWATER IMPROVEMENTS TO BE CONSTRUCTED THEREIN; ESTIMATING THE COST OF THE WASTEWATER IMPROVEMENTS; ESTABLISHING THE METHOD OF ASSESSING THE COSTS OF THE WASTEWATER IMPROVEMENTS AGAINST REAL PROPERTY THAT WILL BE SPECIALLY BENEFITED THEREBY; DIRECTING THE CITY MANAGER TO PREPARE A PRELIMINARY ASSESSMENT ROLL; ESTABLISHING A PUBLIC HEARING TO CONSIDER IMPOSITION OF THE PROPOSED ASSESSMENTS AND DIRECTING THE PROVISIONS OF NOTICE; AND PROVIDING AN EFFECTIVE DATE.

Title read by City Attorney Robert Pritt. Finance Director Ann Marie Ricardi reviewed the agenda memorandum noting that property owners would have up to 20 years to pay the assessment, but that it must be satisfied immediately if the property is sold or otherwise transferred for other than nominal consideration. City Attorney Pritt explained that, if it is not paid, a lien would be placed upon the property.

Public Comment: None.

MOTION by Buxton to APPROVE RESOLUTION 2018-14092; seconded by Seigel and unanimously carried, all members present and voting (Buxton-yes, Finlay-yes, McLeod-yes, Penniman-yes, Saad-yes, Seigel-yes, Barnett-yes).

Agenda Memorandum
Supplement Memo (ADDED ATTACHMENT / SUPPLEMENT 1)
Memorandum (ADDED ATTACHMENT / SUPPLEMENT 1)
Revised Resolution (ADDED ATTACHMENT / SUPPLEMENT 1) Resolution
Calculation Timeline

11. *RESOLUTION 2018-14093* - A RESOLUTION AUTHORIZING STAFF TO PROCEED WITH A REQUEST BY SEAGATE AND NAPLES CAY HOMEOWNERS' ASSOCIATIONS FOR A SPECIAL ASSESSMENT RELATED TO UNDERGROUNDING POWER LINES ON THE SOUTHWEST PORTION OF SEAGATE DRIVE AND ADJOINING STREETS WITHIN SEAGATE AND NAPLES CAY HOMEOWNERS' ASSOCIATIONS' PURVIEW; AND PROVIDING AN EFFECTIVE DATE.

Title read by City Attorney Robert Pritt. Finance Director Ann Marie Ricardi reviewed the agenda memorandum and stated that the associations had requested an eight (8) or 10-year period in which to repay the assessment if approved, rather than the usual six (6) years proposed. In response to Council, she provided additional information on the project and costs.

Brett Cohan, representing the Naples Cay Homeowners Association, provided clarification on the properties to be included in the project. He added that upon approval by Council, he would begin the process of obtaining majority support of all affected property owners in order to proceed.

Public Comment: None.

MOTION by Buxton to APPROVE RESOLUTION 2018-14093 extending the assessment payments to eight (8) years; seconded by Penniman and unanimously carried, all members present and voting (Buxton-yes, Finlay-yes, McLeod-yes, Penniman-yes, Saad-yes, Seigel-yes, Barnett-yes).

Agenda Memorandum Resolution
Seagate Utility Underground Project Description Sample Letter and Ballot

Resolution 08-12256 Code Sec. DIVISION 5. - Special Assessment Regulations

Recess: 10:07 a.m. to 10:20 a.m. It is noted for the record that the same Council Members were present when the meeting reconvened.

12. *RESOLUTION 2018-14094* - A RESOLUTION AMENDING THE FY 2017-18 BUDGET ADOPTED BY RESOLUTION 2017-14027 TO APPROPRIATE FUNDS FOR THE APPROVED FIRE STATION CONTRACTS, AND PROVIDING AN EFFECTIVE DATE.

Title read by City Attorney Robert Pritt. Finance Director Ann Marie Ricardi briefly reviewed the agenda memorandum noting that the total project cost is currently $8.9 million. Vice Mayor Penniman expressed concern regarding the cost increase. Finance Director Ricardi noted this had occurred in part due to Hurricane Irma, and City Manager William Moss explained that after considering various options, Council had decided to construct a two-story building with an emergency operations center which had also driven the increase. Deputy Fire Chief Michael Nichols pointed out that the lowest most acceptable bid, which came from Manhattan Construction, Inc., was actually 7 percent lower than the professional cost estimate provided.

Public Comment: None.

MOTION by Saad to APPROVE RESOLUTION 2018-14094; seconded by Buxton and carried 5-2, all members present and voting (Seigel-no, Buxton-yes, Finlay-no, McLeod-yes, Saad-yes, Penniman-yes, Barnett-yes).

Agenda Memorandum Resolution

12/13/17 Funding of Future Capital Projects Memorandum

12/20/17 Funding Options for Fire Station 1 Memorandum

13. *CLERK TRACKING 2018-00001* - FIRST AMENDMENT TO THE AGREEMENT WITH MANHATTAN CONSTRUCTION, INC., FOR CONSTRUCTION MANAGEMENT AT RISK SERVICES, IN THE AMOUNT OF $10,653,591 FOR THE CONSTRUCTION OF BAKER PARK

Title read by City Attorney Robert Pritt. Dana Souza, Community Services Director, reviewed the agenda memorandum. He then proffered an electronic presentation that included a change in the agreement regarding the guaranteed maximum price, an addendum requested by the contractor that outlined clarifications and assumptions, and a summary of the construction costs.

In response to Council, Director Souza provided additional information on the main building, which is not included in the contract. Gordon Knapp, Senior Vice President of Manhattan Construction, Inc., stated that construction could begin on the park in the meantime, and that he would work with City staff to cap the anticipated main building cost at $2.99 million. He added that his staff would use as much of the onsite soil as possible rather than removing it from the site.

Public Comment: None.

MOTION by Buxton to APPROVE CLERK TRACKING 2018-00001; seconded by Saad and carried 6-1, all members present and voting (Buxton-yes, Finlay-no, McLeod-yes, Penniman-yes, Saad-yes, Seigel-yes, Barnett-yes).

Agenda Memorandum First Amendment Agreement

PowerPoint - Baker Park Alternate Park Features

Revised contract (ADDED ATTACHMENT / Staff)

Addendum to contract (ADDED ATTACHMENT / Staff)

Amended presentation (ADDED ATTACHMENT / Staff)

14. *CLERK TRACKING 2018-00002* - FIRST AMENDMENT TO THE AGREEMENT WITH KIMLEY-HORN AND ASSOCIATES, INC., FOR BAKER PARK DESIGN AND PERMITTING SERVICES, IN THE AMOUNT OF $330,000 FOR THE CONSTRUCTION PHASE SERVICES

Title read by City Attorney Robert Pritt. Community Services Director Dana Souza briefly reviewed the agenda memorandum. James Pankonin, Kimley-Horn Project Manager, outlined the scope of services and the staff who would be involved in supervising and monitoring the project. Director Souza added that City as well as Manhattan Construction, Inc. staff would also

be on-site daily, and expressed confidence that an effective and professional team would be managing the project.

Public Comment: None.

MOTION by Buxton to APPROVE CLERK TRACKING 2018-00002; seconded by Saad and carried 6-1, all members present and voting (Penniman-yes, Buxton-yes, Seigel-yes, Saad-yes, Finlay-no, McLeod-yes, Barnett-yes).

Agenda Memorandum First Amendment Agreement

15. *RESOLUTION 2018-14095* - A RESOLUTION RELATING TO BUILDING DEPARTMENT FEES; AMENDING SECTIONS 16-52 THROUGH 16-59, BUILDING PERMIT FEES, OF APPENDIX A, FEES AND CHARGES SCHEDULE, OF THE CODE OF ORDINANCES, CITY OF NAPLES, FOR THE PURPOSE OF INCREASING AND AMENDING PERMIT FEES; AND PROVIDING AN EFFECTIVE DATE.

Title read by City Attorney Robert Pritt after which City Manager William Moss briefly reviewed the agenda memorandum.

Public Comment: None.

MOTION by Penniman to APPROVE RESOLUTION 2018-14095; seconded by Buxton and carried 6-1, all members present and voting (Buxton-yes, Finlay-no, McLeod-yes, Penniman-yes, Saad-yes, Seigel-yes, Barnett-yes).

Agenda Memorandum Resolution

16. *ORDINANCE 2018-14096* - AN ORDINANCE RELATING TO THE FLORIDA BUILDING CODE; AMENDING SECTION 16-112, FLORIDA BUILDING CODE ADOPTED; AMENDMENTS, OF THE CODE OF ORDINANCES, CITY OF NAPLES, FOR THE PURPOSE OF ADOPTING THE SIXTH EDITION (2017) OF THE FLORIDA BUILDING CODE; READOPTING AMENDMENTS TO THE CODE; PROVIDING A SEVERABILITY CLAUSE, A REPEALER PROVISION AND AN EFFECTIVE DATE.

Title read by City Attorney Robert Pritt. City Manager William Moss briefly reviewed the agenda memorandum noting that local governments are required to adopt the Florida Building Code.

Public Comment: None.

MOTION by Penniman to ADOPT ORDINANCE 2018-14096; seconded by Buxton and unanimously carried, all members present and voting (Buxton-yes, Finlay-yes, McLeod-yes, Penniman-yes, Saad-yes, Seigel-yes, Barnett-yes).

Agenda Memorandum Ordinance

17. *ORDINANCE 2018-14088* - AN ORDINANCE RELATING TO SPECIAL MAGISTRATES; APPROVING DESIGNATION AND DUTIES, MINIMUM REQUIREMENTS, AND TERM; PROHIBITING CERTAIN COMMUNICATIONS; PROVIDING A SEVERABILITY CLAUSE; PROVIDING A CONFLICT AND REPEALER PROVISION; AND PROVIDING AN EFFECTIVE DATE.

Title read by City Attorney Robert Pritt who also responded to questions from Council regarding Council approval of magistrates, term length, and the avoidance of one-sided communications.

Public Comment: None.

MOTION by Seigel to ADOPT ORDINANCE 2018-14088; seconded by Penniman and unanimously carried, all members present and voting (Buxton-yes, Finlay-yes, McLeod-yes, Penniman-yes, Saad-yes, Seigel-yes, Barnett-yes).

Agenda Memorandum Ordinance

18. *RESOLUTION 2018-14089* - A RESOLUTION RELATING TO REQUEST FOR QUALIFICATIONS FOR SPECIAL MAGISTRATES; AUTHORIZING AND DIRECTING THE CITY MANAGER TO ADVERTISE FOR AND RECEIVE PROPOSALS FOR ONE OR MORE QUALIFIED SPECIAL MAGISTRATES FOR HEARINGS ON CODE ENFORCEMENT AND OTHER MATTERS AS SET OUT IN ORDINANCE NUMBER 2018-14088; AND TO SUBMIT PROPOSALS TO COUNCIL FOR REVIEW; AND PROVIDING AN EFFECTIVE DATE.

Title read by City Attorney Robert Pritt who also said that staff would issue the request for proposals and predicted that Council might approve one Special Magistrate for the Code Enforcement Board and another for trespass ordinance hearings.

Public Comment: None.

MOTION by McLeod to APPROVE RESOLUTION 2018-14089; seconded by Buxton and unanimously carried, all members present and voting (Buxton-yes, Finlay-yes, McLeod-yes, Penniman-yes, Saad-yes, Seigel-yes, Barnett-yes).

Agenda Memorandum Resolution

19. *RESOLUTION 2018-14097* - A RESOLUTION RELATING TO LIVE ENTERTAINMENT; DETERMINING PETITION 17-LE7 TO ALLOW OUTDOOR LIVE ENTERTAINMENT TO BE LOCATED OUTSIDE THE STORE FOR TOMMY BAHAMA RELAX, ON PROPERTY OWNED BY NEAPOLITAN ENTERPRISES, LLC, LOCATED AT 1201 3RD STREET SOUTH, MORE FULLY DESCRIBED HEREIN; AND PROVIDING AN EFFECTIVE DATE.

Title read by City Attorney Robert Pritt. This being a quasi-judicial proceeding, Notary Public Jessica Rosenberg administered an oath to those intending to offer testimony; all responded in the affirmative. Council Members then made the following ex parte disclosures: Saad / received an email, familiar with the site, but had not had contact; Seigel / received an email that was included in the agenda packet, visited the site, but had not had contact; Penniman / received emails, visited the site, but had not had contact; Barnett / visited the site but had not had contact; Finlay / familiar with the site and had received two emails; McLeod / visited the site and spoke with the general manager; and Buxton / received an email and had visited the site frequently.

Debra King, petitioner's agent and Assistant Manager at Tommy Bahama Relax, and Dustin Raines, General Manager at Tommy Bahama Relax, outlined the request for a single musician located outside the store playing guitar or a steel drum from 1:00 p.m. to 5:00 p.m. on Fridays, Saturdays, and Sundays. Noting that the music at the restaurant starts at 6:30 p.m., Council Member McLeod suggested slightly amending the hours.

City Manager William Moss briefly reviewed the agenda memorandum and noted that staff recommended approval with the condition that the speakers be directed toward the interior of the store. City Attorney Pritt confirmed that the Disclosure of Interest had been provided by the owner as required by the applicable ordinance.

Public Comment: None.

MOTION by Buxton to APPROVE RESOLUTION 2018-14097 amending the hours to 12:00 p.m. to 6:00 p.m. Fridays, Saturdays, and Sundays; seconded by Saad and unanimously carried, all members present and voting (Buxton-yes, Finlay-yes, McLeod-yes, Penniman-yes, Saad-yes, Seigel-yes, Barnett-yes).

Agenda Memorandum Resolution Application Disclosure
Supplemental Memorandum Live Entertainment Master List
Public Notice Mailing Labels Resumes
Supplement Memo (ADDED ATTACHMENT / SUPPLEMENT 1)
Letter in response to mailing (ADDED ATTACHMENT / SUPPLEMENT 1)

20. RESOLUTION *(CONTINUED)* - A RESOLUTION RELATING TO OUTDOOR LIVE ENTERTAINMENT; DETERMINING PETITION 17-LE6 FOR SOUTH AVENUE RESTAURANT AND BAR ON PROPERTY OWNED BY 643-63 FIFTH AVENUE SOUTH HOLDING, LLC, AND LOCATED AT 651 5TH AVENUE SOUTH, MORE FULLY DESCRIBED HEREIN; AND PROVIDING AN EFFECTIVE DATE.

Title read by City Attorney Robert Pritt. Noting that the petitioner was not present, Council proffered the motion below.

Public Comment: None.

***MOTION** by Buxton to **CONTINUE** Live Entertainment Petition 17-LE6 to the February 21, 2018 Regular Meeting; seconded by Penniman and unanimously carried, all members present and voting (Buxton-yes, Finlay-yes, McLeod-yes, Penniman-yes, Saad-yes, Seigel-yes, Barnett-yes).*

Agenda Memorandum Resolution Application Disclosure
Floor Plan Supplemental Memorandum
Police and Code Enforcement Memos Letters in response to mailing
Supplement Memo (ADDED ATTACHMENT / SUPPLEMENT 1)
Letter in response to mailing (ADDED ATTACHMENT / SUPPLEMENT 1)
Public Notice Mailing Labels Resumes

It is noted for the record that Items 21-a and 21-b were considered concurrently.

21-a. ***RESOLUTION 2018-14099*– A RESOLUTION DETERMINING VARIANCE PETITION 17-V9 FOR A VARIANCE FROM SECTION 58-175(1) OF THE CODE OF ORDINANCES TO ALLOW THE SUBDIVISION OF PROPERTY TO CREATE A LOT THAT IS 75 FEET IN WIDTH WHERE A MINIMUM LOT WIDTH OF 87.5 FEET IS REQUIRED IN THE R1-10 RESIDENCE DISTRICT, ON PROPERTY OWNED BY MARY MCINTYRE (F/K/A MARY FAIR GRAVES), AND LOCATED AT 186 10TH AVENUE SOUTH, MORE FULLY DESCRIBED HEREIN; AND PROVIDING AN EFFECTIVE DATE.**

21-b. ***RESOLUTION 2018-14100* - A RESOLUTION APPROVING AND ACCEPTING THE FINAL (RECORD) PLAT OF MY NEW TREE HOUSE PART II SUBDIVISION, A REPLAT OF LOTS 1, 2, 3 AND 4, BLOCK 10, TIER 2, CITY (PLAN) OF NAPLES, AS RECORDED IN PLAT BOOK 1, PAGE 8, PUBLIC RECORDS OF COLLIER COUNTY, FLORIDA, CONTAINING APPROXIMATELY 0.46 ACRES OWNED BY MARY MCINTYRE (F/K/A MARY FAIR GRAVES) AND LOCATED AT 186 10TH AVENUE SOUTH, MORE FULLY DESCRIBED HEREIN; APPROVING SUBDIVISION REPLAT PETITION 17-SD8; AND PROVIDING AN EFFECTIVE DATE.**

Titles read by City Attorney Robert Pritt. This being a quasi-judicial proceeding, Notary Public Jessica Rosenberg administered an oath to those intending to offer testimony; all responded in the affirmative. Council Members then made the following ex parte disclosures: Saad / met with the petitioner, visited the site, and had conversations with the public and the petitioner's agent; Seigel / visited the site, met with the petitioner, had several telephone conversations with the petitioner's agent, met with a constituent, and received emails; Penniman / visited the site, spoke with the petitioner's agent, and received emails; Barnett / visited the site, met with the petitioner, spoke with the petitioner's agent, and received several emails; Finlay / visited the site, met with the petitioner, spoke to the petitioner's agent, received several emails, and had a meeting with Joseph Karaganis; McLeod / visited the site and met with the petitioner and the petitioner's agent; and Buxton / visited the site and spoke with the petitioner's agent.

Petitioner's agent John Passidomo said he represented Mary McIntyre in a request for relief from a dimensional requirement to provide an incentive for the conservation, preservation and restoration of an historically significant structure in the Naples Historic District. He thereby proffered an electronic presentation that included an aerial view, the existing cottage, a rendering of the renovated cottage relocated on the property, the proposed plat, historic preservation criteria, surrounding non-conforming lots, comparative building footprints, and comparative massing models. Attorney Passidomo explained that the only way Mrs. McIntyre could financially restore the cottage would be by creating a second building parcel on the property and using the proceeds from the sale to finance the cost. In closing, he noted letters of support from neighboring property owners as well as from the Naples Historical Society.

Architect Matthew Kragh, MHK Architecture and Planning (sworn separately), proffered an electronic presentation which included an aerial view of the site, the non-conforming guesthouse

which would be removed, the proposed building massing, the proposed building footprint, and a depiction of the renovated cottage.

Planning Director Robin Singer reviewed the agenda memorandum, explained that the petitions were inconsistent with the required criteria, and said staff recommended denial of both. In response to Council, she addressed various questions regarding setbacks and proposed conditions for approval.

Public Comment: Joseph Karaganis recommended denial asserting that this would violate the subdivision ordinance and that developing a second lot would prove financially profitable which would lead to similar subdivision requests in the area. **Elaine Reed, President and Chief Executive Officer (CEO) of the Naples Historical Society**, expressed support of the petition noting that there are only 64 houses in the Historic District, and that this request would gauge the Council's commitment to historic preservation.

Council Member Seigel said she could not, by use of a variance, create a lot that does not conform to the Land Development Code. Several Council Members however noted the importance of preserving historic houses.

MOTION* by Saad to *APPROVE RESOLUTION 2018-14099 (ITEM 21-a); adding the following conditions to Section 2: "1. The historic structure on the property shall be renovated to restore its architectural character in keeping with the period in which it was built. 2. The existing guesthouse shall be demolished when application is made for a building permit." This motion was seconded by Buxton and carried 6-1, all members present and voting (Seigel-no, Penniman-yes, Saad-yes, Buxton-yes, McLeod-yes, Finlay-yes, Barnett-yes).

MOTION* by Saad to *APPROVE RESOLUTION 2018-14100 (ITEM 21-b); seconded by Buxton and carried 6-1, all members present and voting (Buxton-yes, Finlay-yes, McLeod-yes, Penniman-yes, Saad-yes, Seigel-no, Barnett-yes).

(a-b) Agenda Memorandum (a) Resolution (b) Resolution Staff Report
Petition 17-V9 Application and Plans Petition 17-SD8 Application and Plans
PAB Meeting Minutes
Supplement Memo (ADDED ATTACHMENT / SUPPLEMENT 1)
Letters in response to mailing (SUPPLEMENT 1 / ADDED ATTACHMENT)
12/04/17 J. Karaganis letter to Cheffy Passidomo P.A. Public Notice Mailing Labels
Resumes Presentation (ADDED ATTACHMENT / Petitioner)
Presentation (ADDED ATTACHMENT / Petitioner M. Kragh)

Recess: 12:40 p.m. to 1:15 p.m. It is noted for the record that the same Council Members were present when the meeting reconvened.

22. *RESOLUTION 2018-14101* – A RESOLUTION DETERMINING VARIANCE PETITION 17-V8 FOR A VARIANCE FROM SECTION 58-234 OF THE CODE OF ORDINANCES TO ALLOW THE SEPARATION AND DEVELOPMENT OF TWO PLATTED LOTS THAT DO NOT MEET THE MINIMUM LOT AREA REQUIREMENTS FOR PROPERTY LOCATED IN THE R1-7.5 RESIDENCE DISTRICT, ON PROPERTY OWNED BY CATHALIN P. MINER, AND LOCATED AT 1245 8TH TERRACE NORTH, MORE FULLY DESCRIBED HEREIN; AND PROVIDING AN EFFECTIVE DATE.

Title read by City Attorney Robert Pritt. This being a quasi-judicial proceeding, Notary Public Jessica Rosenberg administered an oath to those intending to offer testimony; all responded in the affirmative. Council Members then made the following ex parte disclosures: Saad / visited the site and had several conversations with the petitioner; Seigel / had not had contact, but visited

the site, and had received an email from the petitioner and an email from the neighbor; and Penniman, Barnett, Finlay, McLeod, and Buxton / had not had contact, but visited the site, and had received emails.

Petitioner Cathalin Miner outlined her request for a variance, affirming that she intended to retain the existing cottage on the property. Planning Director Robin Singer reviewed the agenda memorandum and said staff recommended approval. She also responded to questions from Council on several issues including lots, non-conformities, and subdivisions.

Public Comment: Joseph Karaganis urged denial of the variance asserting it is unnecessary and that it would not comply with the applicable code. **Andy Hjortas** also urged denial noting it would compromise the character of the neighborhood. Council Member Finlay however noted the petition may actually foster the character of the neighborhood, as the alternative might be the construction of one large house.

MOTION by Saad to APPROVE RESOLUTION 2018-14101; seconded by Finlay and carried 4-3, all members present and voting (Saad-yes, Seigel-no, McLeod-no, Finlay-yes, Penniman-no, Buxton-yes, Barnett-yes).

Agenda Memorandum | Resolution | Application and Disclosure | Staff Report | Letters in Response to Mailing | PAB Meeting Minutes | Public Notice Mailing Labels | Resumes | Aerial map (ADDED ATTACHMENT / Petitioner) | Text messages (ADDED ATTACHMENT / Petitioner)

It is noted for the record that Vice Mayor Penniman left the meeting at 3:30 p.m. during consideration of Item 23 and did not return for the remainder of the meeting.

23. RESOLUTION *(WITHDRAWN)* – A RESOLUTION RELATING TO SITE PLAN WITH DEVIATIONS PETITION 17-SPD5 FOR A DEVIATION FROM SECTION 58-630 TO ALLOW LOT COVERAGE UP TO 50 PERCENT WHERE 40 PERCENT IS REQUIRED; A DEVIATION FROM SECTION 58-626(3) TO ALLOW A 0-FOOT SETBACK WHERE 25 FEET IS REQUIRED FOR A POOL, SPA AND CABANA; A DEVIATION FROM SECTION 58-626(3) TO ALLOW THE BUILDING TO EXTEND BEYOND THE WET SIDE OF THE SEAWALL LINE; CONSIDERATION OF A CONDITIONAL USE PURSUANT TO SECTION 58-623(4) AND SECTION 58-1078, NOISE IMPACT ZONE D IN THE AIRPORT OVERLAY DISTRICT, TO ALLOW A TRANSIENT LODGING FACILITY ON PROPERTY OWNED BY COMBS FISH COMPANY LOCATED AT 1302 5TH AVENUE SOUTH MORE FULLY DESCRIBED HEREIN; AND PROVIDING AN EFFECTIVE DATE.

Title read by City Attorney Robert Pritt. This being a quasi-judicial proceeding, Notary Public Jessica Rosenberg administered an oath to those intending to offer testimony; all responded in the affirmative. Council Members then made the following ex parte disclosures: Saad / met with the petitioner, the petitioner's agent, Attorney Anthony Pires, and Attorney Don Pickworth and had visited the site; Seigel / met with the agent, a representative of the petitioner and two attorneys of neighboring properties, and had visited the site; Penniman / familiar with the site, met with the petitioner's agent, and met with two attorneys representing other interests; Barnett / met with the petitioner's agent, familiar with the site, and had talked to various people; Finlay / met with Attorney Burt Saunders, Attorney Pires, Attorney Pickworth, and had received several emails; McLeod / visited the site, met with Attorney Pickworth, Attorney Pires, and staff; and Buxton / visited the site.

Attorney Burt Saunders, petitioner's agent, outlined the request for a new project entitled Kelly's Landing at the Promenade, asserting that it would maintain the charm as well as enhance public access to the waterfront. Architect Renée Zepeda, Stofft Cooney Architects, LLC, and Landscape Architect Christian Andrea, Architectural Land Design, utilized electronic presentations to display the architectural and landscape plans for the project.

Harry Zea, Pinnacle Asset Trust representative and project developer, explained the plans and features intended for the project and described his development efforts to date. Attorney Saunders, Mr. Zea, and Mr. Andrea responded to various questions from Council on issues such as the proposed underground parking, the landscape plan, signage, the submerged lands lease, boat slips, traffic, and parking.

Planning Director Robin Singer reviewed the agenda memorandum noting that staff finds the proposed development does not meet the definition of a marina and does not qualify for the additional lot coverage afforded marinas. She asserted that both the Planning Advisory Board and staff had recommend denial.

Public Comment: Attorney Don Pickworth, representing Port of Naples Marina and the Naples Princess, and **Attorney Anthony Pires, representing Naples Bay Yacht Stowage,** recommended denial. **Captain Tom Marvel** noted the cultural significance of the fishing industry in the City and asked that any redevelopment be contingent upon keeping some form of a fish house intact.

Gregg Strakaluse, Streets and Stormwater Director (sworn separately), responded to questions from Council regarding traffic counts and impacts, access to the property, and roadway level of service.

After further discussion, Council had additional questions and concerns regarding underground parking, traffic flow, adequate outreach to the neighbors, and engineering issues. Council Member Saad proffered a motion to continue until April. Attorney Saunders however said the project could not wait that long and withdrew the petition.

Agenda Memorandum Resolution Application Staff Report
Supplement Memo (ADDED ATTACHMENT / SUPPLEMENT 1)
Revised Disclosure (ADDED ATTACHMENT / SUPPLEMENT 1)
Disclosure Architectural Plans Landscape Plans Civil Plans
Submerged Land Lease Traffic Impact Statement
6/6/17 Letter from Naples Airport Authority Public Notice
Petition 17-SP4 Kelly's Landing Conditional Letter of Approval
PAB Meeting Minutes Letters in Response Public Notice Mailing Labels
Resumes Kelly's Landing (ADDED ATTACHMENT / Petitioner)
Transcript of disclosure statement (ADDED ATTACHMENT / staff)
Code Section 46-33 (ADDED ATTACHMENT / Petitioner)

PUBLIC COMMENT

None.

CORRESPONDENCE AND COMMUNICATIONS

Council Member Finlay asked that the City address the concern brought forward under Public Comment (see Item 5) regarding the abandoned main so the seawall at Palm Bay Villas could be repaired. He then said that Collier County had been using zip codes to gauge City participation at County park programs, which may not have been an accurate method. Council Member Seigel expressed appreciation for the opportunity to serve on Council with Council Member Finlay and Council Member Saad. She then noted upcoming Community Redevelopment Agency town hall meetings as well as Community Redevelopment Agency Advisory Board meetings to elicit suggestions from the public on future capital projects for the redevelopment area. Mayor Barnett explained that the present Council would be seated at the start of the February 21, 2018 Regular Meeting, and that after a brief recess, the new Council would be sworn into office.

ADJOURN
4:19 p.m.

_____
Bill Barnett, Mayor

_____
Patricia L. Rambosk, City Clerk

Minutes prepared by:

_____
Jessica R. Rosenberg, Executive Assistant/Deputy City Clerk

Minutes Approved: _____

City Council Agenda Item Report

Submitted by: Mike Leslie
Submitting Department: Community Services
Meeting Date: February 21, 2018

SUBJECT
Special Events - Repeat Events
(1) Coconut 5K Race - The Gulf Coast Runners - Lowdermilk Park, Gulf Shore Boulevard N, Mooring Line Drive, Beacon Lane, Bow Line Drive, Windward Way, Wedge Drive, Crayton Road, and Yucca Road - 2/24/18
(2) 2018 Naples Craft Beer Fest - The Naples North Rotary Club Foundation, Inc. - Bayfront - 3/3/18
(3) Annual Spring Sidewalk Sale - The Third Street South Merchants Association - Third Street South Shopping District - 4/5/18, 4/6/18, 4/7/18 and 4/8/18

Legislative Type:
Legislative Item

Funding Source:
N/A

Recommendation:
Review and approve as submitted.

ATTACHMENTS
- Agenda Memorandum

AGENDA MEMORANDUM ***Community Services Department***

Regular Meeting Date: **February 21, 2018**

To: City Council

From: Mike Leslie, Deputy Director

Date: February 12, 2018

Legislative ☒ Quasi-Judicial ☐

SUBJECT:
Consideration of Special Event Permit requests for events to be conducted in the City of Naples. All requests included in this Agenda Memorandum are **repeat events**.

SUMMARY:
City Council is asked to consider and approve the following (repeat) special event requests. Previously approved special events may be reviewed via the following link: http://www.naplesgov.com/calendar.aspx.

BACKGROUND:

Item #1 – Coconut 5K Race (Repeat Event): The Gulf Coast Runners is requesting approval to host the Coconut 5k Race on Saturday, February 24, 2018 at Lowdermilk Park. The race will start at Lowdermilk Park, at 7:00 a.m. with the Naples High School Band playing the National Anthem. Runners will proceed north on Gulf Shore Blvd. N, east on Mooring Line Dr., north on Beacon Lane, west on Bow Line Dr., north on Windward Way, east on Wedge Dr., south on Crayton Rd., west on Yucca Rd., north on Gulf Shore Blvd. North, and will finish at approximately 8:00 a.m. at Lowdermilk Park.

Event Details:

Petitioner:	Mitch Norgart
Event Date:	February 24, 2018
Event Location:	Starts and ends at Lowdermilk Park
Event Hours:	7:00 am-8:00 am *(Setup 5am-7am – Take Down 8am-9am)*
Estimated Attendance:	Approximately 500
Event Type:	Road Race – Running – 5K
Parking:	Lowdermilk Park and on-street parking along GSBN
Parking Shuttle:	N/A
Property Owner Consent:	Lowdermilk Park reservation has been approved
Staffing – City:	2 Police Officers, 2 Vehicles and 2 EMTs @ estimated cost of $480.00
Fundraiser/Recipient:	Yes/Proceeds to the Naples High School Band Boosters
Street Closure Request:	Yes-See above

2017 Event: No complaints were received by City staff and all fees and charges were paid.

Coconut 5K Request: City Council authorization is required as this event includes **temporary intermittent intersection closures along the race route** on Saturday, February 24, 2018 from 7:00 a.m. until 8:00 a.m., and to allow the Naples High School Band play the National Anthem at the start of the race, which has been approved the past couple of years. Petitioner is responsible for all fees assessed by the City.

Item #2 – 2018 Naples Craft Beer Fest (Repeat Event): The Naples North Rotary Club Foundation, Inc., is requesting approval to host the 2018 Naples Craft Beer Fest on Saturday, March 3, 2018 at Bayfront from 12:00 p.m. - 4:00 p.m. The Naples Craft Beer Fest is a celebration of craft and micro-brewed beer from American and international breweries. Food, beverages and live entertainment are part of the event. Parking will be held (offsite) at the Commons Professional Park at 750 Goodlette-Frank Road and participants will be shuttled to the event.

Event Details:

Petitioner:	Jim Morey
Event Date:	Saturday, March 3, 2018
Event Location:	Bayfront – 465 Bayfront Place
Event Hours:	Event: 12pm-4pm *(Setup: 3/2/18-7:00pm–10:00pm and 3/3/18-7am-11am; Take Down 3/3/17-4pm-7pm)*
Estimated Attendance:	Approximately 1,300 people
Event Type:	Festival
Parking:	Commons Professional Park @ 750 Goodlette-Frank Road
Parking Shuttle:	Naples Transportation & Tours
Property Owner Consent:	Approved by Bayfront Condos Board of Directors, Stoneburner Companies and Commons Professional Park
Staffing – City:	3 Police Officers, 1 Fire Inspector, 2 EMTs @ estimated cost of $1,215.00
Fundraiser/Recipient:	Yes/100% to Naples North Rotary Club Foundation
Street Closure Request:	No

2017 Event: No complaints were received by City staff and all fees and charges were paid.

2018 Naples Craft Beer Fest Request: City Council authorization is required as this event includes offsite parking and amplified music at Bayfront on Saturday, March 3, 2018 between the hours of 12:00 p.m.–4:00 p.m. The petitioner will pay for all fees and staff charges assessed for this event.

Item #3 – Annual Spring Sidewalk Sale on Third Street Shopping District (Repeat Event): The Third Street South Merchants Association is hosting an Annual Spring Sidewalk Sale on April 5, 6, 7 and 8, 2018 along the Third Street South Shopping District from 10:00 a.m. until

6:00 p.m. daily. This event consists of live entertainment staged in the Fleischmann Courtyard. Third Street South will remain open during the event.

Event Details:

Petitioner:	Terry Banks
Event Date:	April 5, 6, 7 and 8, 2018
Event Location:	Third Street South Shopping District
Event Hours:	10:00 a.m. until 6:00 p.m. daily
Estimated Attendance:	Approximately 500+ per day
Event Type:	Sidewalk Sale
Parking:	Will include the Third Street Shopping District public parking lot, on-street parking spaces and parking garage.
Parking Shuttle:	N/A
Property Owner Consent:	N/A
Staffing – City:	N/A
Fundraiser/Name:	No
Street Closure Request:	No

2017 Event: No complaints were received by City staff and all fees and charges were paid.

Annual Spring Sidewalk Sale on Third Street Shopping District Request: City Council authorization for amplified live entertainment staged in the Fleischmann Courtyard in the Third Street Shopping District on April 5, 6, 7 and 8, 2018 from 10:00 a.m. until 6:00 p.m. daily.

FUNDING SOURCE:
N/A

RECOMMENDED ACTION:
Staff recommends consideration and approval of these repeat special events as submitted.

City Council Agenda Item Report

Submitted by: Dana Souza
Submitting Department: Community Services
Meeting Date: February 21, 2018

SUBJECT
Resolution authorizing the Mayor to submit an application to Collier County to capture the City's Fiscal Year 2018-19 Community Development Block Grant (CDBG) Federal allocation for funding support to install outdoor fitness equipment at Charlie C. Anthony Park.

Legislative Type:
Legislative Item

Funding Source:
CDBG Funding - See staff memorandum for additional information.

Recommendation:
Approve the Resolution.

ATTACHMENTS
- Agenda Memorandum
- Resolution
- Application

AGENDA MEMORANDUM *Community Services Department*

Regular Meeting Date: **February 21, 2018**

To: City Council

From: Dana A. Souza, Director

Date: February 2, 2018

Legislative ☒ Quasi-Judicial ☐

SUBJECT:
Resolution authorizing the Mayor to submit an Application to Collier County to Capture the City's FY 2018-19 Community Development Block Grant (CDBG) Federal Allocation for funding support to install Outdoor Fitness Equipment at Charlie C. Anthony Park.

SUMMARY:
City Council is asked to approve a resolution authorizing the Mayor to submit an application to Collier County to capture the City's FY 2018-19 Community Development Block Grant (CDBG) federal allocation. City staff have prepared an application detailing the proposed use of this allocation to install outdoor fitness equipment at Charlie C. Anthony Park (Anthony Park). This project application has been determined to be an eligible use for CDBG funding by Collier County.

BACKGROUND:
On January 16, 2018, Colliery County Community and Human Services Department announced the CDBG grant application cycle for FY 2018-2019. Collier County, in accordance with a three-year Urban Cooperative Agreement with the City of Naples, passes the funds through to the City, but requires an annual application. Because the exact dollar amount of the City's federal allocation has not been published yet by the US Department of Housing and Urban Development, the City's application is using a place-holder amount of $172,500 for the installation of outdoor fitness equipment at Anthony Park. This amount will be adjusted once the City's allocation is published by the federal government.

The City's Community Services Department (CSD) held a series of public meetings with Naples residents in connection with the development of a comprehensive Parks Master Plan. CSD held a public meeting on October 10, 2016 specifically for Anthony Park and River Park neighborhoods. At this meeting, the installation of outdoor exercise equipment was requested by residents. In follow-up stakeholder and public meetings, residents have continued to request the addition of outdoor fitness equipment at Anthony Park. This includes January 3, 2018 public meeting. Most higher ranked requested improvements have either been completed, are in progress or will be part of a long-range planning and improvement initiative.

Installing outdoor fitness equipment at Anthony Park will add to revitalizing the neighborhood and serves as a long-term enhancement to the park consistent with resident requests. This project also serves an investment in improving community wellness.

FUNDING SOURCE:
CDBG will serve as the primary funding source for this project (Fund 130). Should the project cost exceed available grant funds, staff will seek funds from another City fund (General Fund, CRA) to supplement the project. Preliminary estimates place the project cost at approximately $172,500.

RECOMMENDED ACTION:
Adopt a Resolution authorizing the Mayor to submit an application to Collier County to capture the City's FY 2018-19 Community Development Block Grant (CDBG) federal allocation for funding to support the installation of outdoor fitness equipment at Charlie C. Anthony Park.

RESOLUTION 2018-

A RESOLUTION AUTHORIZING THE MAYOR TO SUBMIT AN APPLICATION TO COLLIER COUNTY TO CAPTURE THE CITY'S FISCAL YEAR 2018-19 COMMUNITY DEVELOPMENT BLOCK GRANT (CDBG) FEDERAL ALLOCATION FOR FUNDING SUPPORT TO INSTALL OUTDOOR FITNESS EQUIPMENT AT CHARLIE C. ANTHONY PARK; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, Collier County will be receiving a formula grant allocation from the United States Department of Housing and Urban Development under the Community Development Block Grant (CDBG) Entitlement Program on behalf of certain areas of Collier County including the City of Naples; and

WHEREAS, the grant application must be submitted by the City of Naples to Collier County Community and Human Services Department for the City of Naples to capture CDGB funds for Fiscal Year 2018-19; and

WHEREAS, the federal allocation presently available from Collier County is currently unknown therefore should the project cost exceed available grant funds staff will seek an allocation from another City fund (i.e. General Fund, CRA) to supplement the project during the City's FY19 budget process; and

WHEREAS, the application and funding associated with the request is for a worthwhile public purpose;

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF NAPLES, FLORIDA:

Section 1. The City Council hereby authorizes the Mayor to submit an application to Collier County to capture the City's FY 2018-19 Community Development Block Grant (CDBG) Federal Allocation for support to install outdoor fitness equipment at Charlie C. Anthony Park.

Section 2. The Mayor is authorized to submit changes to the application to accommodate the final federal funding allocation.

Section 3. This resolution shall take effect immediately upon adoption.

PASSED IN OPEN AND REGULAR SESSION OF THE CITY COUNCIL OF THE CITY OF NAPLES, FLORIDA THIS 21st DAY OF February 2018.

Attest:

Patricia L. Rambosk, City Clerk

Bill Barnett, Mayor

Approved as to form and legality:

Robert D. Pritt, City Attorney

L\LEGISLATIONCITYCOUNCIL\PENDING\2/14/2018 1:57 PM_vls

Date filed with City Clerk: _____

Collier County

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Collier County Community and Human Services
Community and Human Services
2018 Community Development Block Grant (CDBG)
2/20/2018 deadline

City of Naples

City of Naples - Anthony Park Exercise Stations

$ 172,500.00 Requested
$ 172,500 Total Project Cost

Project Contact
Gregory Givens
ggivens@naplesgov.com
Tel: 239-213-7100

Additional Contacts
DSouza@naplesgov.com,
FGomez@naplesgov.com

City of Naples

735 8th Street - South
Naples, FL 34102

City Manager
A. William Moss
bmoss@naplesgov.com

Telephone 239-213-1001
Fax 239-213-1033
Web http:/www.naplesgov.com
DUNS 084130293
SAM Expires 7/24/2018

Agency Information

Section 3: AGENCY ORGANIZATION INFORMATION

1. Is your organization a non-profit with 501(c)(3) status?

- Yes
- ✓ No

2. How many years have you been in operation?

95 Years
95.00 **TOTAL**

3. Is your organization or agency faith based?
If yes, all faith-based organizations must complete and attach Acknowledgement of Religious Organization Requirements Form (in the Documents tab)

- Yes
- ✓ No

4. Does your agency have written personnel, fiscal/procurement & implemented policy?

(Community and Human Services will review upon award)

✓ Yes

☐ No

5. Does your agency have a written operating procedures manual?
(Community and Human Services will review upon award)

✓ Yes

☐ No

6. Physical Address (if different from mailing address listed in previous tab)
If the mailing and physical address are the same, enter 'Same'.
Same

Application Questions

Section 4: NATIONAL OBJECTIVES

1. Which one of the three National Objectives will this project target?
For additional information, click the Application Guide tab, above.

✓ Benefits low and moderate income persons (24 CFR 570.208(a))

☐ Aids in the prevention or elimination of slums or blight (24 CF 570.208(b))

☐ Qualifies as a certified urgent need (24 CF 570.208(c))

2. Provide justification for how your project targets the National Objective selected above.
Refer to the Application Guide tab, above, for specific subcategories to address.
The City of Naples activity supports a National Objective by benefiting low and moderate income persons (24 CFR 570.208 (a)). The project area contains a neighborhood consisting predominantly of LMI area. This activity is located in Naples SMSA - Census Tract 7, Block Group and is not supplanting existing City projects. This area is a low and moderate income (base on FY 2010 Income Limits Summary for Naples using 2015 estimated US Census data) "area benefit" with a population of 1,292. Data shows the low and moderate income neighborhood in which the activity is located has a 76% rate of children in single parent household with a 33% poverty rate and 9% of 5-17 year old youth not enrolled in school (US Department of Justice Data). The map section shows Census Tract 7 identified as HUD defined low income area.

Section 5: INDICATOR ACTIVITY CODE (HUD MATRIX CODES)

3. Which HUD Activity Code best reflects this proposed project?
Refer to the HUD Activity Codes document in the Library tab for a list of codes. If your project reflects more than 1 matrix code, you must submit multiple applications. (Click the Open Programs tab, above, to create an additional application.)

03F	Activity Code
0.00	**TOTAL**

Section 6: PROJECT DESCRIPTION AND GOALS

4. Concise Project Description and Goals Narrative (placing emphasis in THIS project application)
Refer to Applicant Guide tab for specific instructions.
Problem: The Charlie C. Anthony Neighborhood Park (Anthony Park) is a widely used 8-acre neighborhood park within the River Park neighborhood, offering a variety of passive and active recreational activities. There is a small community center onsite that is used for drop-in programs during after-school hours and summer school vacation.

The City's Community Services Department, CSD (that over sees the city's parks and recreational facilities) held a series of public meetings with Naples residents in connection with the development of a comprehensive Parks Master Plan. CSD held a public meeting on October 10, 2016 specifically for Anthony Park and River Park. At this meeting, the installation of outdoor exercise equipment was requested by residents. In follow-up stakeholder and public meetings, residents have continued to request the addition of outdoor fitness equipment at Anthony Park. This includes January 3, 2018 public meeting. Most higher ranked requested improvements have either been completed, are in progress or will be part of a long-range planning and improvement initiative.

Installing outdoor fitness equipment at Anthony Park will add to revitalizing the neighborhood and serves as a long-term enhancement to the park consistent with resident requests. This project also serves an investment in improving community wellness.

Project Description: Based on community needs assessment, the city has identified installing outdoor fitness equipment at Anthony Park. This project will add to revitalizing the neighborhood and serves as a long-term enhancement to the park consistent with resident requests. This project also serves an investment in improving community wellness.

Anthony Park consists of 4 parcels. The proposed outdoor fitness equipment will be installed on a parcel that is located at 1500 Fifth Avenue - North, Naples, FL (Folio # 18163560000); on the east side of 5th Avenue. Installing outdoor fitness equipment will expand the community use of the existing developed Park. Anthony Park provides passive and active recreational facilities for individuals and families in a single family and multi-family housing neighborhood, and accounts for meeting the "51 % of the residents being low and moderate income persons" criteria of 24 CFR 570.208. This outdoor fitness equipment at Anthony Park project is designed to principally benefit area use for neighboring low and moderate income families. (See attached map)

Section 7: IMPACT ON COLLIER COUNTY'S PRIORITY NEEDS NOTED IN THE APPLICANT GUIDE

5. Impact on Collier County's Priority Needs Noted in the Applicant Guide Narrative
Refer to Applicant Guide tab for specific instructions.
This project supports the CDBG Entitlement communities' objective as authorized under Title I of the Housing and Community Development Act of 1974 by assisting in revitalizing neighborhoods through "providing improved community facilities." This project will provide an enhanced passive neighborhood park facility to low and moderate Income families in the River Park community. The long term impact of the project is to maintain a quality city by meeting the needs and expectations of residents in keeping with the City referenced Vision Plan and support the County's needs identified impacts related to Public Facilities and Improvements - streets, parks, sidewalks, water and sewer lines; community/neighborhood facilities as stated in the Applicant Guide.

Section 8: EXPERIENCE AND CAPACITY

6. Experience and Capacity Narrative
Refer to Applicant Guide tab for specific instructions.

City of Naples has a highly qualified and experienced staff. The federal CDBG allocation currently comes under the control of the City of Naples with a history of experience in this CDBG funding and management. Additional, the City's Grants Coordinator has some 25 years' experience in managing federal grants.

The City of Naples is a full service municipal government incorporated under the State of Florida. The City of Naples is a tax exempt government entity under IRS Code section 170 (c) (1). Naples continues to enjoy the results of proper planning. Parks and open space are abundant and most roadway medians are wide and well landscaped. Naples is one of the few Florida communities that offer adequate public access to beaches.

Naples was incorporated on December 1, 1923. It is approximately 16 square miles in size and has 108 miles of streets. The City is managed under a Council-City Manager form of government. The legislative and governing body of the City consists of a Mayor and six Council Members. Each Council Member is elected to a four-year staggered term. There is a limit of two consecutive terms that any elected City official may serve. The City has the managerial and financial capability to ensure proper planning, management, and completion of the project described in this proposal.

This is demonstrated through no uncorrected current audit finding under the federal 0MB Circular A-133 Single Audit requirement, as submitted to the federal clearinghouse. Furthermore, there is no pending action which might in any way adversely affect the proposed project in this proposal, or the ability of the City to carry out the project.

A sample of recent grant funded projects completed on time include: Water Conservation - SFWMD, TASER Purchase -FDLE, BP Deepwater - British Petroleum, Beach Re-nourishment - TDC, Green Business Program - EECBG, GPS Software - U&C Forestry, Automated Traffic Ticket Writer - FDOT, Gordon River Filter Marsh - FDEP

7. Have you received funding in the past?
If so, please complete the Prior Awards table in the Tables tab.

✓ Yes AND the Prior Awards table is complete

No

Section 9: ADDITIONAL PROJECT SPECIFIC INFORMATION

8. Additional Project Specific Information Narrative (include sources of estimates)
Refer to the Applicant Guide tab for specific instructions.
Background: The Charlie C. Anthony Neighborhood Park (Anthony Park) is a widely used neighborhood park within the River Park neighborhood, offering a variety of passive and active recreational activities. There is a small community center onsite that is used for drop-in programs during after-school hours and summer school vacation.

Project Description: Based on community needs assessment, the city has identified Installing outdoor fitness equipment at Anthony Park. This project will add to revitalizing the neighborhood and serves as a long-term enhancement to the park consistent with resident requests. This project also serves an investment in improving community wellness.

Project Budget: The City would like to install the outdoor fitness equipment utilizing CDBG funding. Preliminary budgeting is based on quotes from Greenfields Outdoor Fitness. There are several companies that can provide equivalent equipment. The preliminary budget is:
12-Unit Outdoor Fitness Equipment Stations $65,000
Concrete Pad $15,000
Shade Structure $50,000
Installation $20,000

Subtotal $150,000
Contingency – 15% non-design $22,500
Total (estimate) $172,500

Section 10: ENVIRONMENTAL ISSUES

9. Put a check in any box that pertains to the proposed activity.
If you check any of the boxes below (except 'None of the above'), you must provide an explanation in the next question. If you check the 'None of the above' box, you may enter 'N/A' in the next question.

- ☐ Project/property is located on an historical or archeological site
- ✓ Project/property is in the 100-year flood plain
- ☐ Project/property is in a wetlands area
- ☐ Project/property is in a coastal barrier area
- ✓ Project/property is within a half-mile of an airfield
- ☐ Project/property is near storage or manufacturing facility of industrial products
- ☐ Project/property is on or near soil contaminated by diesel/fuel or gasoline
- ☐ Project/property is expected to impact the environment in any negative manner or pose a hazard or nuisance
- ☐ Endangered or threatened or listed species are located on the proposed project site
- ☐ There are environmental concerns or impediments associated with the proposed activity (if yes, please provide detail)
- ☐ Project/property is expected to adversely affect the environment
- ☐ Project/property is NOT on a properly zoned site (if not zoned properly, please explain)
- ☐ None of the above

10. If you checked any box (except 'None of the above') in the previous question, provide an explanation in the box below.
If you checked 'None of the above' in the previous question, please enter 'N/A'.
The City CDBG activity will have no negative impact on the flood plain or increased flooding. The project appears to be within 1700 feet of the Naples City Airport, however there will be no anticipated negative impacts. Both issues will be addressed in the environmental assessment for this project.

Section 11: PROJECT IMPLEMENTATION PLAN AND READINESS TO IMPLEMENT

11. Project Implementation Plan and Readiness to Implement
Refer to Applicant Guide tab for specific instructions.
The activity is ready to implement, and there are no permitting or regulatory obstacles. The City of Naples will be the primary recipient and lead agency for controlling and completing all aspects and activities proposed in this grant proposal. The City of Naples will remain the lead agency for the duration of funding. The City has the managerial and financial capability to ensure proper planning, management, and completion of the project described in this proposal. Furthermore, there is no pending action which might in any way adversely affect the proposed project in this proposal, or the ability of the City to carry out the sidewalk project.

12. Please complete the Project Timeline table in the Tables tab, then check the box below to confirm. Timelines must be well thought out, complete, and achievable. Failure to provide adequate timelines may result in disqualification.

✓ Project Timeline is complete

Section 12: FINANCIAL MANAGEMENT

13. Financial Management
Refer to the Applicant Guide tab for specific instructions.
Project sustainability will require only minimum maintenance, monitoring and upkeep. The grant activity will be managed by the Community Services Department. Additionally, an assessment of public and private program priorities will be made to secure future improvements for the projects.

The project is realistic with continued City support for sustainability. Funding sources are documented, indicating continued level of commitment. The City has past demonstrates of established accounting system and financial ability to fund the project until reimbursement. Evidence of long-term commitment project "buy in" at high levels and community support for this project has been demonstrated through community meetings. Costs of implementing the work plan are congruent with the proposed budget and reflects an understanding of the required costs to implement and maintain the project.

14. Please complete and upload the Financial Review Spreadsheet in the Documents tab.

✓ Financial Review Spreadsheet is complete and uploaded

15. Agency maintains the following records:
Check all that apply.

✓ Cash Receipts Journal
✓ Cash Disbursements Journal
✓ General Ledger
✓ Charts of Accounts
✓ Payroll Journal and Individual Payroll Records
✓ Individual Personnel Files
✓ Written Procurement Procedures
✓ Capital Inventory
✓ Written Travel Policy
✓ Property Control Policy and Records
None of the above

16. Agency agrees to:
Check all that apply.

✓ Submit complete audits for every year during contract
✓ Retaining all project records for the applicable time period as outlined in applicable regulations

Section 13: OUTCOMES AND PERFORMANCE MEASURES

17. Outcomes and Performance Measures
Refer to the Applicant Guide tab for specific instructions.
The City activity is for a CDBG defined Area Benefit. The project area is a low and moderate income neighborhood (base on FY 2014 Income Limits Summary for Naples using 2015 estimated US Census data) with a population of 1,292. The City has several long-term financial and operating planning processes in place, all of which eventually integrate into the budget. In June 2007, the City established a Ten-Year Vision

Plan, which was created by the citizens and adopted by the City Council. This vision has been incorporated into each subsequent budget with goals and objectives to achieve the vision. With the City's larger vision in place, the activity in this application additionally meet and support the U.S. Housing and Urban Development's National Objective of principally benefiting low and moderate income persons. The project target area is US Census tract 007 and is neighborhood consisting predominantly of LMI.

Section 14: BUDGET

18. Please complete the Budget Summary and Itemization table in the Tables tab, then check the box below to confirm.

✓ Budget Summary and Itemization table is complete

Section 15: ESTIMATED PROGRAM INCOME

19. Will program income be generated as a result of the service or product provided?
If so, please use the 'explain' box to indicate the SOURCE of the income generated (rent, proceeds, revenue, program fees, etc.) and the TOTAL DOLLAR AMOUNT that will be generated.

☐ Yes, please explain:

✓ No

20. Estimated Program Income Narrative
Refer to the Applicant Guide tab for specific instructions. If no program income will be generated, enter 'N/A'.
-no answer-

21. If program income is anticipated, indicate how the funds will be utilized:

☐ Organization will track, re-use within the program and report to CHS on a monthly basis

☐ Organization will submit program income to CHS on a monthly (or at least yearly basis)

✓ N/A - No program income will be generated

Section 16: LEVERAGED OR MATCH FUNDS

22. If applicable, please complete the Leveraged or Match Funds table in the Tables tab, then confirm below.

☐ Leveraged or Match Funds table is complete

✓ N/A - No leveraged or matched funds exist

Tables

Prior Awards

Fiscal Year	Award Amount	Clients Served	Project Location
FY 2017-18	$ 123,304	Tract 007	Anthony Park Restrooms
FY 2015-16	$ 166,000	Tract 007	River Park Sidewalk Improvements

FY 2014-15	$ 79,807	Tract 007	5th Ave - N Intersection Safety Improvements
FY 2013-14	$ 91,693	Tract 007	Central Ave Intersection Safety Improvements
FY 2012-13	$ 105,835	Tract 007	River Park Accessible Play Structure
FY 2011-12	$ 72,243	Tract 007	5th Ave - N South Side Parking and Landscaping
FY 2010-11	$ 108,606	Tract 007	Anthony Park Improvements
FY 2009-10	$ 103,474	Tract 007	Cambridge- Perry Park Creation
FY 2008-09	$ 73,200	Tract 007	Community Center Roof Repair
FY 2007-08	$ 40,730	Tract 007	5th Ave - N North Side Parking and Landscaping
FY 2006-07	$ 77,961	Tract 007	Fun Time Early Child Academy
Total	**$ 1,042,853**	**0**	

Project Timeline

Tasks	# of Days to Date Completed/Anticipated Complete Date (Month & Year)	Responsible Party
Environmental review	85 Days from NTP	County
Acquisition	Days	
Loan application	Days	
Enforceable commitment	Days	
Other Grants/Sources: Type and Source: Application Closing & Award	Days	
Design/Location Drawings	30 Days from Environmental review	In-house City
Turnkey Bid Documents	60 Days Location Drawings	In-house City
Vendor selection / Contract / Approval	45 Days from Bid Float	In-house City
Construction plans	Days	
Permits	5 Days from Vendor Contract	Vendor - City - County
Anticipated start date for construction	Days	
Construction milestones	Days	
Construction complete	45 Days from Permits - Vendor NTP	Vendor - City
Certificate of Occupancy	Days	
Equipment purchases for operating facility	30 Days from Construction Final I	Vendor - City
Facility opening	15 Days from Turnkey Inspection	Vendor - City
Final Invoicing Payment from County	45 Days form Project completion	City -County
	Days	
	Days	
	Days	
	Days	

	Days
	Days
	Days
Total	**360 Days**

Budget Summary and Itemization

Project Components - Detail/Itemization by Line Item	CDBG Funding	Other Funds	Leverage/Match	Total	Narrative	Deliverable
Environmental Review	$ 0	$ 0	$ 0	$	County to sub-contract	Phase 1 Environmental Review
12-Unit Outdoor Fitness Equipment Stations	$ 65,000	$ 0	$ 0	$	Equipment Aquisition	Delivery of Fitness Equipment
Concrete Pad	$ 15,000	$ 0	$ 0	$	Concrete pad for placing Fitness Equipment on	Placement of Poured Concrete Pad
Shade Structure	$ 50,000	$ 0	$ 0	$	Fabric Shade and Weather Protection for Equipment a Pad	Delivery of Shade Structure
Installation	$ 20,000	$ 0	$ 0	$	Installation of Fitness Equipment and Shade Structure on Poured Concrete Pad	Project Completion
Contingency – 15% non-design	$ 22,500	$ 0	$ 0	$	Contingency	Punch List Completion
	$	$	$	$		
	$	$	$	$		
	$	$	$	$		
	$	$	$	$		
	$	$	$	$		
	$	$	$	$		
	$	$	$	$		
	$	$	$	$		
	$	$	$	$		
	$	$	$	$		
	$	$	$	$		
	$	$	$	$		

		$	$	$
		$	$	$
		$	$	$
		$	$	$
		$	$	$
		$	$	$
		$	$	$
		$	$	$
Total	**$ 172,500**	**$ 0**	**$ 0**	**$0**

Leveraged or Match Funds

Source of Match/Leveraged Funds	Conditions/Limitations of Match/Leverage Funds	Amount
No match funds are anticipated.	CDBG allocation does not supplant existing or programmed funding.	$ 0
		$
		$
		$
		$
		$
		$
		$
		$
		$
Total		**$ 0**

Documents

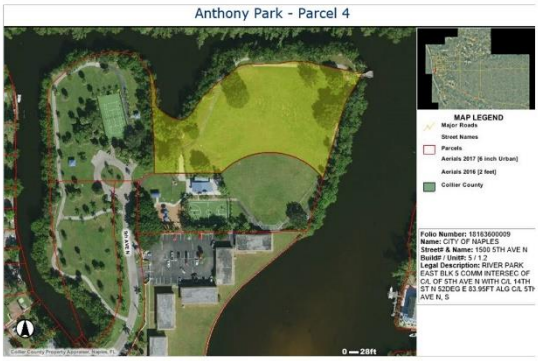
Documents Requested *	Required?	Attached Documents *
501(c)(3) IRS Tax Exemption Letter		✓
Articles of Incorporation		✓
By-Laws		✓
Organizational Chart		✓
List of Board of Directors		✓
Resumes, Pay Scales with Job Descriptions		✓
State of Florida Certificate of Good Standing		✓
Board Resolution authorizing submittal of grant application		✓
Preceding 2-year completed audits including management letter and findings		✓
Acknowledgement Letter download template		✓

Affidavit of Compliance with Federal, State, and Local Regulations download template	✓
Certification of CDBG Funded Construction/Rehabilitation Projects download template	
Acknowledgment of Religious Organization Requirements (template?) download template	
Certification Regarding Debarment, Suspension, Ineligibility Voluntary Exclusion download template	✓
Procurement Policy	✓
Match Documentation	
Internal Revenue Service Form 990 - First 12 page of the last 2 years	✓
IF APPLICABLE: Verification of site plan/plat approval	
IF APPLICABLE: Verification of zoning	
IF APPLICABLE: Location map/photo of site	
IF APPLICABLE: Floor plans	
IF APPLICABLE: Relocation plan associated with Uniform Relocation regulations	
Financial Review Spreadsheet download template	✓
Additional documents, if needed	

** ZoomGrants™ is not responsible for the content of uploaded documents.*

Application ID: 103674

CHARLIE C. ANTHONY PARK



Address:		1500 5th Ave. North	
Neighborhood:		River Park	
Acreage:		8.04 Acres	
Parcel Information:			
Parcel	**Acreage**	**Parcel #**	**Acquired**
1	1.28	18163520008	03/28/1997
2	1.92	18163620005	02/25/1991
3	1.77	18163560000	12/01/1974
4	3.07	18163600009	12/21/1978

City Council Agenda Item Report

Submitted by: Patricia Rambosk
Submitting Department: City Clerk
Meeting Date: February 21, 2018

SUBJECT
Election of Vice Mayor.

Legislative Type:
Legislative Item

Funding Source:
N/A

Recommendation:
Elect a Vice Mayor.

ATTACHMENTS
- Agenda Memorandum
- Charter and Florida Statutes

AGENDA MEMORANDUM *City Clerk*

Regular Meeting Date: February 21, 2018

To: City Council

From: Patricia L. Rambosk, City Clerk

Date: February 7, 2018

Legislative ☒ Quasi-Judicial ☐

SUBJECT:
Election of Vice Mayor.

SUMMARY:
City Council is asked to: Elect a Vice Mayor for a two-year term.

BACKGROUND: **VICE MAYOR**
Section 2.4 of the Charter (copy attached) provides that at the first Regular Meeting following each general election, City Council is to elect a Vice Mayor who will *in the absence or disability of the mayor, have all of the powers and prerogatives and shall perform all of the duties of the mayor*. This is a two-year appointment extending to the first Regular Meeting following the next general election.

The process for election of the Vice Mayor is pursuant to Section 13 of Resolution 16-13801 as set forth below:

Section 13. Process for the Election of the Vice Mayor.

(a) The Mayor will call for nominations. Nominations do not require a second. The Mayor may nominate. Nominations should continue until there are no further nominations. Discussions may follow the nominations. A nominee may decline the nomination.

(b) When no further nominations are forthcoming, the Mayor should close the nominations and call for a vote. Each nominee will be called in alphabetical order.

(c) If there are more than two candidates nominated, it is possible that, following the vote, no candidate will receive a majority (4) of votes. If there are three or more nominees, the nominee(s) receiving the least number of affirmative votes will be dropped from consideration, followed by a second vote on the nominees receiving the most votes.

(d) In the event that neither of the remaining nominees receives a majority vote, or in the event of a tie vote, the Mayor will reopen nominations followed again by a vote in order of nomination.

Following the vote, there will be a brief swearing in ceremony.

RECOMMENDED ACTION:

Elect _____ as Vice Mayor for a two-year term.

1. City Council-Vice Mayor

City Charter Sec. 2.4. Presiding officer; mayor; vice-mayor.

The mayor shall preside at the meetings of the council and shall have a voice and vote in its proceedings. He will be the liaison officer between the city council and the city manager and city attorney at all times except when the council is in session. His instructions to the city manager and city attorney shall have the effect of a council decision except where disapproved by the city council in regular or special session. He shall be recognized as head of the city government and by the governor for purposes of military law. The council shall, at the first regular meeting after each general municipal election, elect one of its own members vice-mayor. The vice-mayor shall, in the absence or disability of the mayor, have all of the powers and prerogatives and shall perform all of the duties of the mayor. The vice-mayor shall hold office until the first regular meeting after the next general municipal election following his election by the council.

2. Community Redevelopment Agency – Board of Commissioners

Florida Statutes 163.356(3)(c)

(c) The governing body of the county or municipality shall designate a chair and vice chair from among the commissioners. An agency may employ an executive director, technical experts, and such other agents and employees, permanent and temporary, as it requires, and determine their qualifications, duties, and compensation. For such legal service as it requires, an agency may employ or retain its own counsel and legal staff. An agency authorized to transact business and exercise powers under this part shall file with the governing body, on or before March 31 of each year, a report of its activities for the preceding fiscal year, which report shall include a complete financial statement setting forth its assets, liabilities, income, and operating expenses as of the end of such fiscal year. At the time of filing the report, the agency shall publish in a newspaper of general circulation in the community a notice to the effect that such report has been filed with the county or municipality and that the report is available for inspection during business hours in the office of the clerk of the city or county commission and in the office of the agency.

City Council Agenda Item Report

Submitted by: Patricia Rambosk
Submitting Department: City Clerk
Meeting Date: February 21, 2018

SUBJECT
Selection of Community Redevelopment Agency (CRA) Chair and Vice Chair.

Legislative Type:
Legislative Item

Funding Source:
N/A

Recommendation:
Appoint a Chair of the CRA for a two-year term and appoint a Vice Chair of the CRA for a two-year term.

ATTACHMENTS
- Agenda Memorandum
- Florida Statutes 163.356(3)(c)

AGENDA MEMORANDUM *City Clerk*

Regular Meeting Date: February 21, 2018

To: City Council

From: Patricia L. Rambosk, City Clerk

Date: February 7, 2018

Legislative ☒ Quasi-Judicial ☐

SUBJECT:
Selection of Community Redevelopment Agency (CRA) Chair and Vice Chair.

SUMMARY:

COMMUNITY REDEVELOPMENT AGENCY

Section 163.356(3)(c) of the Florida Statutes (copy attached) provides that *the governing body of the county or municipality shall designate a chair and vice chair from among the commissioners*. In addition, the By-Laws of the CRA require City Council to determine the Chair and Vice-Chair of the CRA after City Council Members assume the duties of office in election years.

RECOMMENDED ACTION:

CRA

Appoint _____ as Chair of the CRA for a two-year term.

Appoint _____ as Vice Chair of the CRA for a two-year term.

Community Redevelopment Agency – Board of Commissioners

Florida Statutes 163.356(3)(c)

(c) The governing body of the county or municipality shall designate a chair and vice chair from among the commissioners. An agency may employ an executive director, technical experts, and such other agents and employees, permanent and temporary, as it requires, and determine their qualifications, duties, and compensation. For such legal service as it requires, an agency may employ or retain its own counsel and legal staff. An agency authorized to transact business and exercise powers under this part shall file with the governing body, on or before March 31 of each year, a report of its activities for the preceding fiscal year, which report shall include a complete financial statement setting forth its assets, liabilities, income, and operating expenses as of the end of such fiscal year. At the time of filing the report, the agency shall publish in a newspaper of general circulation in the community a notice to the effect that such report has been filed with the county or municipality and that the report is available for inspection during business hours in the office of the clerk of the city or county commission and in the office of the agency.

City Council Agenda Item Report

Submitted by: Patricia Rambosk
Submitting Department: City Clerk
Meeting Date: February 21, 2018

SUBJECT
Selection of a City Council Member for the Naples Airport Authority Noise Compatibility Committee.

Legislative Type:
Legislative Item

Funding Source:
N/A

Recommendation:
Appoint a City Council Member to the Naples Airport Authority Noise Compatibility Committee for either a two-year term or a four-year term.

ATTACHMENTS
- Agenda Memorandum
- Spreadsheet - Council appointments to outside boards

Regular Meeting Date: February 21, 2018

To: City Council

From: Patricia L. Rambosk, City Clerk

Date: February 7, 2018

Legislative ☒ Quasi-Judicial ☐

SUBJECT:
Selection of a City Council Member for the Naples Airport Authority Noise Compatibility Committee.

SUMMARY:

NAPLES AIRPORT AUTHORITY NOISE COMPATIBILITY COMMITTTEE

After each election, a listing of vacancies to be filled on various Boards and Committees by City Council Members is circulated by the City Clerk to City Council. The attached summary indicates the vacancies at this time.

RECOMMENDED ACTION:

Appoint _____ to the Naples Airport Authority Noise Compatibility Committee for either a two-year term or a four-year term. (elected official)

City Council Outside Board/Committee Assignments

Board/Committee	Name	Resolution/Clerk Tracking	Expiration	
Airport Noise Compatibility Committee	Finlay	16-00044	2/6/18	**Either a two-year or four-year term**
Collier County Coastal Advisory Committee	Penniman	16-00045	5/22/20	**Four-term term**
Metropolitan Planning Organization	Penniman	16-00046	3/17/20	**Four-year term**
Metropolitan Planning Organization	Buxton	16-00047	3/17/20	**Four-year term**
Southwest Florida Regional Planning Council	Buxton	16-00048	3/17/20	**Either a two-year or four-year term**
Tourist Development Council	McLeod	16-00049	3/17/20	**Four-year term**

City Council Agenda Item Report

Submitted by: Dana Souza
Submitting Department: Community Services
Meeting Date: February 21, 2018

SUBJECT
Award of contract to Tree Scaping of Naples, Inc. in the amount $192,908.10 (includes a City controlled contingency of $9,186.10) for time specific palm pruning.

Legislative Type:
Legislative Item

Funding Source:
Funding is available in the Parks and Parkways FY17 Operating budget (001.0919.572.31-04)

Recommendation:
Award a contract to Tree Scaping of Naples, Inc. in the amount $192,908.10.

ATTACHMENTS
- Agenda Memorandum
- Agreement
- Bid Analysis

AGENDA MEMORANDUM *Community Services Department*

Regular Meeting Date: **February 21, 2018**

To: City Council

From: Dana Souza, Director

Date: February 9, 2018

Legislative ☒ Quasi-Judicial ☐

SUBJECT:
Award of contract to Tree Scaping of Naples, Inc. for time specific palm pruning (Bid #18-032).

SUMMARY:
City Council is asked to consider awarding a contract to Tree Scaping of Naples, Inc. of Naples, Florida, in the amount of $192,908.10 for time specific palm pruning, which includes a City controlled contingency of 5% ($9,186.10). The contract shall commence on February 21, 2018. The initial term shall be for a period of three-years which may be renewed for two additional one-year periods.

BACKGROUND:
City Council provided funding for Time Specific Palm Pruning in the FY18 Operating Budget with the following requirements:

- Coconut palms be pruned twice/year
- Coconut palms on 5th Ave. be pruned three-times/years
- Sabal palms be pruned every other year

Since FY17, Time Specific Palm Pruning is bid separately from General Tree Pruning to ensure the contractor maintains sufficient staffing levels to meet the City's specified schedule.

			Tree Scaping	
Naples Tree Species	**Inventory (Quantity)**	**Quantity Pruned/ Year**	**Unit Cost**	**Total**
Coconut Palm	2,926	5,852	$24	140,448.00
Coconut Palm - 5th Ave.	76	228	$24	5,472.00
Canary Island Date Palm	18	18	$50	900.00
Medjool Date Palm	19	19	$50	950.00
Sabal Palm	2,344	1,172	$30	35,160.00
Chinese Fan Palm	88	44	$18	792.00
Total				**$183,722.00**
City Controlled Contingency 5%				9,186.10
Recommended Contract Award				192,908.10

Contract specifications require the contractor to:

- Prune all Canary Island Date Palms and Medjool Date Palms annually
- Prune ½ of all Chinese Fan Palms and Sabal Palms annually
- Prune all Coconut Palms (except 5th Ave.) twice annually
- Prune all Coconut Palms on 5th Ave. three times annually

The "Inventory Quantity" column in the above spreadsheet accounts for coconut palm trees planted during FY17 and the number of palm trees lost to Hurricane Irma in September 2017.

The bid advertisement for Time Specific Palm Pruning project (Bid #18-032) was posted in the Naples Daily News and on the City's web site on January 16, 2018. A public notice was also posted with the City Clerk's Office. The Purchasing Division reports that seventy-five (75) City registered vendors and 15 supplemental vendors were sent information regarding Bid #18-032. DemandStar notified 82 potential vendors and six plan-holders. There was a non-mandatory pre-bid meeting for this bid held on January 25, 2018 at which two vendors were in attendance. Sealed bids were received and opened on February 8, 2018 with three (3) vendors submitting proposals. The Purchasing Division staff has indicated Tree Scaping of Naples, Inc, (EIN 46-1317135) as the low responsive and responsible bidder based on per palm total cost.

FUNDING SOURCE:
Funding is available in the Parks and Parkways FY17 Operating budget (001.0919.572.31-04) for Time Specific Palm Pruning. Staff budgeted $237,625 for Time Specific Palm Pruning in the FY18 budget.

RECOMMENDED ACTION:
Award a contract to Tree Scaping of Naples, Inc. of Naples, Florida in the amount $192,908.10 for time specific palm pruning, which includes a City controlled contingency of 5% ($9,186.10) and, authorize the City Manager to execute the contract. The contract shall commence on February 21, 2018. The initial term shall be through September 30, 2021 which may be renewed for two additional one-year periods.

CITY OF NAPLES, FLORIDA
AGREEMENT
(SERVICES)

Bid/Proposal No. **18-032**

Clerk Tracking No. _____

Project Name: **Time Specific Palm Trimming**

THIS AGREEMENT (the "Agreement") is made and entered into this **21st day of February 2018** by and between the City of Naples, a Florida municipal corporation, (the "CITY") and **Tree Scaping of Florida, Inc.,** a Florida Corporation located at: **1180 23rd Street SW; Naples, Florida 34117** (the "CONTRACTOR").

WHEREAS, the CITY desires to obtain the services of the CONTRACTOR concerning certain services specified in this Agreement (referred to as the "Project"); and

WHEREAS, the CONTRACTOR has submitted **(ITB) Invitation-to-Bid 18-032** for provision of those services; and

WHEREAS, the CONTRACTOR represents that it has expertise in the type of services that will be required for the Project.

NOW, THEREFORE, in consideration of the mutual covenants and provisions contained herein, the parties hereto agree as follows:

ARTICLE ONE
CONTRACTOR'S RESPONSIBILITY

1.1. The Services to be performed by the CONTRACTOR are generally described as **Time Specific Palm Trimming** and may be more fully described in the Scope of Services, attached as **EXHIBIT A** and made a part of this Agreement.

1.2. The CONTRACTOR agrees to obtain and maintain throughout the period of this Agreement all such licenses as are required to do business in the State of Florida, the City of Naples, and in Collier County, Florida, including, but not limited to, all licenses required by the respective state boards and other governmental agencies responsible for regulating and licensing the services to be provided and performed by the CONTRACTOR pursuant to this Agreement.

1.3. The CONTRACTOR agrees that, when the services to be provided hereunder relate to a professional service which, under Florida Statutes, requires a license, registration, certificate of authorization or other form of legal entitlement to practice such services, it shall employ or retain only qualified personnel to provide such services.

1.4. The CONTRACTOR agrees to employ and designate, in writing, within 5 calendar days after receiving its Notice to Proceed, or other directive from the CITY, a qualified employee to serve as the CONTRACTOR's project manager (the "Project Manager"). The Project Manager shall be authorized and responsible to act on behalf of the CONTRACTOR with respect to directing, coordinating and administering all aspects of the services to be provided and performed under this Agreement.

1.5. The CONTRACTOR has represented to the CITY that it has expertise in the type of services that will be required for the Project. The CONTRACTOR agrees that all services to be provided by CONTRACTOR pursuant to this Agreement shall be subject to the CITY's review and approval and shall be in accordance with the generally accepted standards of practice in the State of Florida, as may be applied to the type of services to be rendered, as well as in accordance with all published laws, statutes, ordinances, codes, rules, regulations and requirements of any governmental agencies which regulate or have jurisdiction over the Project or the services to be provided and performed by the CONTRACTOR. In the event of any conflicts in these requirements, the CONTRACTOR shall notify the CITY of such conflict and utilize its best professional judgment to advise CITY regarding resolution of the conflict.

1.6. The CONTRACTOR agrees not to divulge, furnish or make available to any third person, firm or organization, without CITY's prior written consent, or unless incident to the proper performance of the CONTRACTOR's obligations hereunder, or in the course of judicial or legislative proceedings where such information has been properly subpoenaed, any non-public information concerning the services to be rendered by the CONTRACTOR hereunder, and the CONTRACTOR shall require all of its employees, agents, sub-consultants and subcontractors to comply with the provisions of this paragraph. However, the CONTRACTOR shall comply with the Florida Public Records laws including those requirements set out in ARTICLE FIVE, below.

1.7 The CONTRACTOR agrees not to employ or offer to employ any Elected Officer or City Managerial Employee of the CITY who in any way deals with, coordinates on, or assists with, the services provided in this Agreement, for a period of 2 years after termination of all provisions of this Agreement. For purposes of this paragraph, the term "Elected Officer" shall mean any member of the City Council. For purposes of this paragraph, the term "City Managerial Employee" shall mean the City Manager, the Assistant City Manager, the City Clerk, and any City department head or director. If the CONTRACTOR violates the provisions of this paragraph, the CONTRACTOR shall be required to pay damages to the CITY in an amount equal to any and all compensation that is received by the former Elected Officer or City Managerial Employee of the CITY from or on behalf of the contracting person or entity, or an amount equal to the former Elected Officer's or City Managerial Employee's last 2 years of gross compensation from the CITY, whichever is greater.

1.8 The CONTRACTOR agrees not to provide services for compensation to any other party other than the CITY on the same subject matter, same project, or scope of services as set forth in this Agreement without approval from the City Council of the CITY.

1.9. Except as otherwise provided in this Agreement, the CONTRACTOR agrees not to disclose or use any information not available to members of the general public and gained by reason of the CONTRACTOR's contractual relationship with the CITY for the special gain or benefit of the CONTRACTOR or for the special gain or benefit of any other person or entity.

ARTICLE TWO
CITY'S RESPONSIBILITIES

2.1. The CITY shall designate in writing a project coordinator to act as the CITY's representative with respect to the services to be rendered under this Agreement (the "Project Coordinator"). The Project Coordinator shall have authority to transmit instructions, receive information, interpret and define the CITY's policies and decisions with respect to the CONTRACTOR's services for the Project. However, the Project Coordinator is not authorized to issue any verbal or written orders or instructions to the CONTRACTOR that would have the effect, or be interpreted to have the effect, of modifying or changing in any way whatever:

(a) The scope of services to be provided and performed by the CONTRACTOR;

(b) The time the CONTRACTOR is obligated to commence and complete all such services; or

(c) The amount of compensation the CITY is obligated or committed to pay the CONTRACTOR.

Any such modifications or changes shall only be made by or upon the authorization of the CITY's city manager as authorized by city council in the enabling legislation or in the CITY's procurement policies.

2.2. The Project Coordinator shall:

(a) Review and make appropriate recommendations on all requests submitted by the CONTRACTOR for payment for services and work provided and performed in accordance with this Agreement;

(b) Arrange for access to and make all provisions for the CONTRACTOR to enter the Project site to perform the services to be provided by the CONTRACTOR under this Agreement; and

(c) Provide notice to the CONTRACTOR of any deficiencies or defects discovered by the CITY with respect to the services to be rendered by the CONTRACTOR hereunder.

2.3. The CONTRACTOR acknowledges that access to the Project Site, to be arranged by the CITY for the CONTRACTOR, may be provided during times that are not the normal business hours of the CONTRACTOR.

ARTICLE THREE
TIME

3.1. Services to be rendered by the CONTRACTOR shall be commenced subsequent to the execution of this Agreement upon written Notice to Proceed from the CITY for all or any designated portion of the Projects assigned to this Agreement and **shall be performed through September 30, 2021** with the mutually agreed upon option between the CITY and CONTRACTOR of two (2) one-year renewals. Time is of the essence with respect to the performance of this Agreement.

3.2. Should the CONTRACTOR be obstructed or delayed in the prosecution or completion of its services as a result of unforeseeable causes beyond the control of the CONTRACTOR, and not due to its own fault or neglect, including but not restricted to acts of God or of public enemy, acts of government or of the CITY, fires, floods, epidemics, quarantine regulations, strikes or lock-outs, then the CONTRACTOR shall notify the CITY in writing within 5 working days after commencement of such delay, stating the cause or causes thereof, or be deemed to have waived any right which the CONTRACTOR may have had to request a time extension.

3.3. No interruption, interference, inefficiency, suspension or delay in the commencement or progress of the CONTRACTOR's services from any cause whatsoever, including those for which the CITY may be responsible in whole or in part, shall relieve the CONTRACTOR of its duty to perform or give rise to any right to damages or additional compensation from the CITY. The CONTRACTOR's sole remedy against the CITY will be the right to seek an extension of time to its schedule. This paragraph shall expressly apply to claims for early completion, as well as claims based on late completion.

3.4. Should the CONTRACTOR fail to commence, provide, perform or complete any of the services to be provided hereunder in a timely and reasonable manner, in addition to any other rights or remedies available to the CITY hereunder, the CITY at its sole discretion and option may withhold any and all payments due and owing to the CONTRACTOR until such time as the CONTRACTOR resumes performance of its obligations hereunder in such a manner so as to reasonably establish to the CITY's satisfaction that the CONTRACTOR's performance is or will shortly be back on schedule.

3.5 Liquidated Damages: Services to be rendered by the CONTRACTOR shall be commenced subsequent to the execution of this Agreement upon written Notice to Proceed from the CITY for all or any designated portion of the Project must be completed by the contract dates specified within the Notice to Proceed for construction. Should CONTRACTOR fail to complete the project within this timeframe, daily liquidated damages in an amount of $250.00 per day will be assessed.

3.6 Bond. A Payment & Performance Bond with a surety insurer authorized to do business in this state as a surety. Prior to commencement of work, Payment & Performance Bond will be recorded by CONTRACTOR in the public records of Collier County.

ARTICLE FOUR
COMPENSATION

4.1. The total compensation to be paid the CONTRACTOR by the CITY for all Services is not to exceed **$192,908.10 that includes a $9,186.10 CITY controlled Contingency** and shall be paid in the manner set forth in the "Basis of Compensation", which is attached as **EXHIBIT B** and made a part of this Agreement.

ARTICLE FIVE
MAINTENANCE OF RECORDS

5.1. The CONTRACTOR will keep adequate records and supporting documentation which concern or reflect its services hereunder. The records and documentation will be retained by the CONTRACTOR for a minimum of five 5 years from the date of termination of this Agreement or the date the Project is completed, whichever is later. The CITY, or any duly authorized agents or representatives of the CITY, shall have the right to audit, inspect and copy all such records and documentation as often as they deem necessary during the period of this Agreement and during the 5 year period noted above; provided, however, such activity shall be conducted only during normal business hours. If the CONTRACTOR desires to destroy records prior to the minimum period, it shall first obtain permission from the CITY in accordance with the Florida Public Records laws.

5.2 119.0701 F.S. CONTACT INFORMATION FOR CITY OF NAPLES' CUSTODIAN OF PUBLIC RECORDS, CITY CLERK'S OFFICE

If the CONTRACTOR has questions regarding the application of Chapter 119, Florida Statutes, to the CONTRACTOR'S duty to provide public records relating to this contract, contact the City of Naples' Custodian of Public records, the City Clerk at Telephone: 239-213-1015; Email:PublicRecordsRequests@naplesgov.com; Address: 735 8th Street S., Naples, Florida 34102; Mailing address: same as street address.

5.3 The CONTRACTOR shall:

(a) Keep and maintain public records required by the CITY to perform the service.

(b) Upon request from the CITY's custodian of public records, provide the CITY with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in this chapter 119.0701 F.S. or as otherwise provided by law.

(c) Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and following completion of the contract if the CONTRACTOR does not transfer the records to the CITY.

(d) Upon completion of the contract, transfer, at no cost, to the CITY all public records in possession of the CONTRACTOR or keep and maintain public records required by the CITY to perform the service. If the CONTRACTOR transfers all public records to the CITY upon completion of the contract, the CONTRACTOR shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the CONTRACTOR keeps and maintains public records upon completion of the contract, the CONTRACTOR shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the CITY, upon request from the CITY's custodian of public records, in a format that is compatible with the information technology systems of the CITY.

ARTICLE SIX
INDEMNIFICATION

6.1. The CONTRACTOR agrees to indemnify and hold harmless the CITY from liabilities, damages, losses and costs, including, but not limited to, all attorneys' fees, to the extent caused by the negligence, recklessness, or intentional wrongful misconduct of the CONTRACTOR and persons employer or utilized by the CONTRACTOR in the performance of the Contract.

ARTICLE SEVEN
INSURANCE

7.1. The CONTRACTOR shall obtain and carry, at all times during its performance under this Agreement, insurance of the types and in the amounts set forth in the document titled General Insurance Requirements, which is attached as **EXHIBIT C** and made a part of this Agreement.

ARTICLE EIGHT
SERVICES BY CONTRACTOR'S OWN STAFF

8.1. The services to be performed hereunder shall be performed by the CONTRACTOR's own staff, unless otherwise authorized in writing by the CITY. The employment of, contract with, or use of the services of any other person or firm by the CONTRACTOR, as independent contractor or otherwise, shall be subject to the prior written approval of the CITY. No provision of this Agreement shall, however, be construed as constituting an agreement between the CITY and any such other person or firm. Nor shall anything contained in this Agreement be deemed to give any such party or any third party any claim or right of action against the CITY beyond such as may otherwise exist without regard to this Agreement.

ARTICLE NINE
WAIVER OF CLAIMS

9.1. The CONTRACTOR's acceptance of final payment shall constitute a full waiver of any and all claims, except for insurance company subrogation claims, by it against the CITY arising out of this Agreement or otherwise related to the Project, except those previously made in writing and identified by the CONTRACTOR as unsettled at the time of the final payment. Neither the acceptance of the CONTRACTOR's services nor payment by the CITY shall be deemed to be a waiver of any of the CITY's rights against the CONTRACTOR.

ARTICLE TEN
TERMINATION OR SUSPENSION

10.1. The CONTRACTOR shall be considered in material default of this Agreement and such default will be considered cause for the CITY to terminate this Agreement, in whole or in part, as further set forth in this section, for any of the following reasons: (a) failure to begin work under the Agreement within the times specified under the Notice(s) to Proceed, or (b) failure to properly and timely perform the services to be provided hereunder or as directed by the CITY, or (c) the bankruptcy or insolvency or a general assignment for the benefit of creditors by the CONTRACTOR or by any of the CONTRACTOR's principals, officers or directors, or (d) failure to obey laws, ordinances, regulations or other codes of conduct, or (e) failure to perform or abide by the terms or spirit of this Agreement, or (f) for any other just cause. The CITY may so terminate this Agreement, in whole or in part, by giving the CONTRACTOR at least 3 calendar days written notice.

10.2. If, after notice of termination of this Agreement as provided for in paragraph 10.1 above, it is determined for any reason that the CONTRACTOR was not in default, or that its default was excusable, or that the CITY otherwise was not entitled to the remedy against the CONTRACTOR provided for in paragraph 10.1, then the notice of termination given pursuant to paragraph 10.1 shall be deemed to be the notice of termination provided for in paragraph 10.3 below and the CONTRACTOR's remedies against the CITY shall be the same as and limited to those afforded the CONTRACTOR under paragraph 10.3 below.

10.3. The CITY shall have the right to terminate this Agreement, in whole or in part, without cause upon 7 calendar days written notice to the CONTRACTOR. In the event of such termination for convenience, the CONTRACTOR's recovery against the CITY shall be limited to that portion of the fee earned through the date of termination, together with any retainage withheld and any costs reasonably incurred by the CONTRACTOR that are directly attributable to the termination, but the CONTRACTOR shall not be entitled to any other or further recovery against the CITY, including, but not limited to, anticipated fees or profits on work not required to be performed.

ARTICLE ELEVEN
CONFLICT OF INTEREST

11.1. The CONTRACTOR represents that it presently has no interest and shall acquire no interest, either direct or indirect, which would conflict in any manner with the performance of services required hereunder. The CONTRACTOR further represents that no persons having any such interest shall be employed to perform those services.

ARTICLE TWELVE
MODIFICATION

12.1. No modification or change in this Agreement shall be valid or binding upon the parties unless in writing and executed by the party or parties intended to be bound by it.

ARTICLE THIRTEEN
NOTICES AND ADDRESS OF RECORD

13.1. All notices required or made pursuant to this Agreement to be given by the CONTRACTOR to the CITY shall be in writing and shall be delivered by hand or by United States Postal Service Department, first class mail service, postage prepaid, return receipt requested, addressed to the following CITY's address of record:

City of Naples
735 Eighth Street South
Naples, Florida 34102-3796
Attention: **A. William Moss**, City Manager

13.2. All notices required or made pursuant to this Agreement to be given by the CITY to the CONTRACTOR shall be made in writing and shall be delivered by hand or by the United States Postal Service Department, first class mail service, postage prepaid, return receipt requested, addressed to the following CONTRACTOR's address of record:

Tree Scaping of Naples, Inc.
1180 23rd Street SW
Naples, Florida 34117
Attention: **Gustavo Leon**, President
FEI/EIN Number: On File

13.3. Either party may change its address of record by written notice to the other party given in accordance with requirements of this Article.

ARTICLE FOURTEEN
MISCELLANEOUS

14.1. The CONTRACTOR assumes toward the CITY a duty of care commensurate with that which is imposed upon persons or firms in contractor's profession. CONTRACTOR will make reasonable efforts to ensure that its employees and agents maintain a professional demeanor and that the work area is compliant with CITY property maintenance and Project standards.

14.2. No modification, waiver, suspension or termination of the Agreement or of any terms thereof shall impair the rights or liabilities of either party.

14.3. This Agreement is not assignable, in whole or in part, by the CONTRACTOR without the prior written consent of the CITY.

14.4. Waiver by either party of a breach of any provision of this Agreement shall not be deemed to be a waiver of any other breach and shall not be construed to be a modification of the terms of this Agreement.

14.5. The headings of the Articles, Exhibits, Parts and Attachments as contained in this Agreement are for the purpose of convenience only and shall not be deemed to expand, limit or change the provisions in such Articles, Exhibits, Parts and Attachments.

14.6. This Agreement constitutes the entire agreement between the parties hereto and shall supersede, replace and nullify any and all prior agreements or understandings, written or oral, relating to the matter set forth herein, and any such prior agreements or understanding shall have no force or effect whatever on this Agreement.

14.7. The CONTRACTOR shall comply fully with all provisions of state and federal law, including without limitation all provisions of the Immigration Reform and Control Act of 1986 ("IRCA") as amended, as well as all related immigration laws, rules, and regulations pertaining to proper employee work authorization in the United States. The CONTRACTOR shall execute the Certification of Compliance with Immigration Laws, attached hereto as **EXHIBIT D.**

14.8 To the extent that any provision in the Specifications or any other Contract Documents pertaining to this Project conflict with any provision of this Agreement, this Agreement controls.

14.9 Dispute Resolution. Disputes under this Agreement shall be resolved through mutual consultation between the parties within 14 days after notice; and failing resolution through mutual consultation, through mediation within 30 days thereafter; and failing mediation, through Arbitration under the Florida Arbitration Code, by a single arbitrator. If the parties cannot agree on a mediator or arbitrator, within 14 days of failure of the previous method, they shall request the Chief Judge of the 20th Judicial Circuit to appoint a mediator, or an arbitrator, as the case may be. Time periods are waivable by mutual agreement of the parties, but shall not exceed 90 days for completion of the processes described herein, unless by mutual agreement. Costs of the mediator or arbitrator shall be shared equally.

14.10 Attorneys' fees. Except as otherwise provided herein, each party shall be responsible for its own attorneys' fees.

ARTICLE FIFTEEN
APPLICABLE LAW

15.1. Unless otherwise specified, this Agreement shall be governed by the laws, rules, and regulations of the State of Florida, and by the laws, rules and regulations of the United States when providing services funded by the United States government. Any suit or action brought by either party to this Agreement against the other party relating to or arising out of this Agreement must be brought in the appropriate Florida state court in Collier County, Florida.

END OF ARTICLE PAGE

IN WITNESS WHEREOF, the parties hereto have executed this Agreement for the day and year first written above.

ATTEST:

By: _____
Patricia L. Rambosk, City Clerk

CITY:

CITY OF NAPLES, FLORIDA,
A Municipal Corporation

By: _____
A. William Moss, City Manager

Approved as to form
and legal sufficiency:

By: Robt D. Pritt
Robert D. Pritt, City Attorney

CONTRACTOR:

Witness

Witness Printed Name

CONTRACTOR:

TREE SCAPING OF NAPLES, INC.
1180 23rd Street SW
Naples, Florida 34117
Attention: **Gustavo Leon**, President

By: _____

Printed Name: Gustavo F Leon

Title: President

FEI/EIN Number: On File
Florida Corporation (FL)

(CORPORATE SEAL)

EXHIBIT A

SCOPE OF SERVICES

The Scope of Services to be provided under this Agreement are included in Attachment A-1 which is attached and made a part of this Agreement and those set out in the Bid, any Issued Addendum(s) and Vendor's Submittal of (ITB) Invitation-to-Bid No.18-032, titled Time Specific Palm Trimming herein referenced and made a part of this Agreement.

END OF EXHIBIT A

SCOPE OF SERVICES

1. Length of Contract

Contract will begin on March 1, 2018, and expire on September 30, 2021. Contract may be extended for two 12-month periods based on the mutual agreement of both parties.

The City intends to accept the best bid submitted. In addition to cost, the City will also consider and weigh the experience, qualifications, and past performance of bidders.

The City reserves the right to award each bid to a Primary and Secondary Contractors and/or by section, group, or individual species to separate and independent Contractors. The Contract, when executed, shall be deemed to include the entire agreement between the parties; the Contractor shall not base any claim for modification of the Contract upon any prior representation or promise made by representatives of the City or other persons.

The successful Bidder or Bidders, unless otherwise specified by the City Arborist, shall furnish and assume full responsibility for all materials, supervision, equipment, labor, transportation, and tools for the completion of the work. Supervision must be on site and speak English. Contractor shall be responsible to see that the finished work complies accurately with the Contract Documents. Contractor shall follow specific means, method, techniques, sequence, or procedure of the trimming as indicated or required by the Contract Documents, or City Arborist. Contractor shall provide competent, qualified personnel to perform work as required by the Contract Documents. During the trimming the Contractor shall keep the work areas free from accumulation of waste materials, rubbish, and debris resulting from the work. The Contractor shall not block the passage on any street or roadway without prior arrangements having been made with the Parks/Parkways Superintendent or designee. Contractor shall restore to the original condition all property altered by the trimming. Plywood shall be used when necessary to prevent ruts and property damage.

All hazardous trees and/or hazardous conditions shall be reported to the Parks/Parkways Superintendent or designee immediately. This would be any situation that could cause injury to people or damage to property.

2. Protection of Public and Private Property

The CONTRACTOR shall exercise all necessary caution to protect all public and private property from injury or damage caused by the CONTRACTORS operations. The CONTRACTOR shall accept all responsibility for personal injury and property damage claims, and shall hold harmless the CITY OF NAPLES and its employees from any and all claims arising out of the performance of this contract.

Any practice obviously hazardous in the opinion of the CITY REPRESENTATIVE shall be immediately discontinued by the CONTRACTOR upon receipt of either written or oral notice to discontinue such practice. The CONTRACTOR shall comply with all OSHA and other Federal State safety standards. Blocking of the public street, except under extreme emergency conditions, shall not be permitted unless prior arrangements have been made with the CITY REPRESENTATIVE and the CITY POLICE and FIRE DEPARTMENTS and other agencies having jurisdiction over the street to be closed. Barricading and detouring of the traffic shall be accomplished in conformance with the State of Florida Manual of Uniform Traffic Control Devices for Highway Construction and Maintenance Operations, latest edition.

3. Traffic Control

Contractor will be required to furnish Maintenance of Traffic Certification at bid opening. Barricading and detouring of the traffic shall be accomplished in conformance with the State of Florida Manual of Uniform Traffic Control Devices for Highway Construction and Maintenance Operations, latest edition. A flagman is required when two-way traffic is obstructed by the trimming operation.

Contractor will be responsible for adequate barricades, warning devices, and the necessary safety equipment according to State DOT standards while working on City, County or State roads as a sub-Contractor of the City.

4. Barricades

Adequate barricades and warning devices shall be placed properly to warn vehicles of the work site. "Men Working" signs are to be placed five hundred feet (500') before work site adjacent to both lanes of traffic. Orange cones are required around the vehicles adjacent to paved road. Flagmen must be used if one lane of a two-lane road is closed.

5. Contractors Equipment

All vehicles and equipment must be maintained in good repair, appearance and sanitary condition at all times. Vehicles must be clearly identified with the name of the company and phone number clearly visible. The contractor must display certificate of competency number on every vehicle used in the performance of his work. Any practice obviously hazardous in the opinion of the City Representative shall be immediately discontinued by the Contractor upon receipt of either written or oral notice to discontinue such practice. The Contractor shall comply with all OSHA and other Federal and State safety standards. Blocking of the public street, except under extreme emergency conditions, shall not be permitted unless prior arrangements have been made with the City Representative and the City Police and Fire Departments and other agencies having jurisdiction over the street to be closed.

6. Observance of Laws, Ordinances and Regulations

The CONTRACTOR at all times during the term of this contract shall observe and abide by all federal, state, and local laws which in any way affect the conduct of the work and shall comply with all decrees and orders of courts of competent jurisdiction. The CONTRACTOR shall comply fully and completely with any and all applicable state and federal statutes, rules and regulations as they relate with hiring, wages, and any other applicable conditions of employment.

7. Protection of Overhead Utilities

Tree trimming and removal operations will be conducted in many areas where overhead electric, telephone, and cable television facilities exist. The CONTRACTOR shall protect all utilities from damage, shall immediately contact the appropriate utility if damage should occur, and shall be responsible for all claims for damage due to his operations. The CONTRACTOR shall make arrangements with the utility for removal of necessary limbs and branches, which may conflict with, or create a personal injury hazard in, conducting the operations of this contract. If the CONTRACTOR has properly contacted the utility in sufficient time to arrange for the required work by the utility, delays encountered by the CONTRACTOR in waiting for the utility to complete its work shall not be the responsibility of the CONTRACTOR.

8. Working Hours

The CONTRACTOR will be allowed to schedule his normal work hours between the hours of 7:00 a.m. and 6:00 p.m., Monday through Friday, and will dedicate the required crews to complete the trimming in provided time frame. Work

during other hours will be allowed only on an emergency basis and as authorized by the City Arborist.

9. Disposal of Debris

The Contractor shall dispose of all debris and other materials gathered from the described work in compliance with City and County laws. All debris shall be removed daily.

10. Insurance

Successful Contractor is to provide proof of insurance. The City of Naples will be named as additional co-insured. A 30-day cancellation notice to the City is required. An outline of the insurance requirements is included elsewhere in this bid invitation. Successful contractor shall submit, with their bid, a copy of Collier County Contractors License and Workers Compensation as they relate to tree work for both hardwood and palm trees.

11. Hold Harmless

The successful Contractor(s) agree(s) to hold harmless and indemnify the City of Naples for any claims arising out of the Contractor's actions, including legal fees incurred.

12. Conduct

The Contractor and his employee's will conduct themselves in such a manner as to avoid embarrassment to the City of Naples, and shall at all times be courteous to the public. Although uniforms are not required, proper clothing shall be worn at all times to include shirts, necessary safety equipment, pants, short or long, and proper footwear. Proper safety equipment shall be worn at all times. The contractor will require his employees to follow all procedures and behave in a manner, as would an employee of the City of Naples. Employees of the contractor will dress appropriately and equipment must be clearly marked as to identify the company name.

13. Scheduling of Work

The City will provide schedules for all work performed. The City will have the right to alter said schedules and/or provide schedules on a daily basis due to events or projects that may conflict or require immediate attention.

The contractor will receive written (email) notice 10 business days before the trimming is to begin. This trimming work will be scheduled as follows:

Species	Estimated Quantity	Required Schedule
Coconut Palms	2958	45 days
Canary Island Dates	18	5 days
Medjools	19	5 days
Coconut Palms	2958	45 days
Sabal Palms	1242	30 days
Chinese Fan	45	5 days

The successful bidder must have the crews to meet the above trim schedule.

14. Liquidated Damages

Services to be rendered by the Contractor shall be commenced subsequent to the execution of this Agreement upon written Notice to Proceed from the City for all or any designated portion of the Project must be completed by the contract dates specified. Should Contractor fail to complete the project within this timeframe, daily liquidated damages in an amount of $250.00 per day shall be assessed.

15. Safety

The Contractor will be responsible for using the proper safely equipment whenever work is being performed on the medians, i.e., cones, flashing arrows, safety vests, etc.

16. Payment Requests, Invoices and Work Reports

Payment requests should be submitted weekly. Invoices should be submitted at the beginning of each week with a detailed description of the work performed the proceeding week. The successful bidder(s) will meet with City Arborist and set up billing schedules prior to the start of work. The goal will be for a weekly billing system or after the completion of separate tasks.

17. Non-Performance

The City reserves the right to cancel the contract with 7 days written notice should the Contractor fail to perform up to the requirements and standards

identified in the specifications. The City may withhold part or all payments due to the Contractor until correction is made.

18. Quality Control

The Contractor's supervisor shall provide and maintain, throughout the contract period, a properly documented quality control program designed to ensure that the contracted services are provided at all times. The City shall provide to the Contractor a daily work schedule of trees to be trimmed. The Contractor shall include daily supervision and inspections of all work performed. Within 24 hours of all tree trimming, the Contractor shall conduct an on-site inspection of the trees to ensure the trimming meets the contract specifications. Following a satisfactory inspection, the Contractor shall notify the City Arborist that the street trees have been properly trimmed. The City Arborist shall then inspect all trees trimmed in a timely manner.

19. Property Damage

Any damage to City owned right-of-way, property, or plant material and any private property damaged during trimming will be reported to the City Arborist immediately and repaired by the Contractor within three (3) working days. Damage can include but is not limited to tire ruts, cracked sidewalks, broken lamp posts, etc.

20. Prohibited Equipment

The CONTRACTOR shall not allow any person to use shoes with spikes, spurs, climbing irons or any other footwear, which may cause injury to the trees being trimmed under the terms of this contract.

21. Storm Recovery

In addition, the contractor will be required to provide at least 1 tree trimming crew to the City immediately following any emergency (windstorm, hurricane, etc.) to act as its tree clearing representative and a total of 2 crews no later than 24 hours after emergency re-entry begins.

22. Rejecting Defective Work

The City Arborist will have the authority to disapprove or reject work which he/she believes to be unacceptable work and not in accordance with Contract Documents. The Contractor within three (3) working days from notification must correct work deficiencies and/or problems pointed out by the City Arborist. If

work has been rejected, Contractor shall correct all defective work and bear all costs to correct the defective work. If the Contractor fails to correct the defective work, or if the Contractor fails to perform the work in accordance with the Contract Documents, the City may correct and remedy any such deficiency; this may result in the City withholding part or all payments due to the Contractor. Parks and Parkways Superintendent will be the final interpreter of the requirements of the Contract Documents and judge of the acceptability of the work performed.

23. Location of Work

The trees to be trimmed are located on City owned properties, right-of-ways, medians, beach ends, parks, cul-de-sac, City government buildings, and parking lots. The Contractor shall have, as part of the company fleet or the ability to rent, a self-propelled boom lift for trimming in tight areas and areas with weight limits such as our US 41 medians and City parks. The City will determine and provide direction for when this equipment must be used.

24. Clean Up

All debris generated by the trimming operations shall be removed from the work site immediately after trimming and disposed of properly and in accordance with local, state and federal laws. The Bidder will be expected to provide a price per tree for complete work, which would include trimming as described in the contract documents and debris removal.

PALM TREE TRIMMING SPECIFICATIONS

1. General Objective

This solicitation is to identify a firm(s) to furnish and assume full responsibility for all materials, supervision, equipment, labor, transportation, and tools for the completion of the work related to time-specific palm trimming within the City of Naples. The objective of this Section is to set a standard by which City Palm trees owned are to be trimmed.

2. Scope of Services

The palm-trimming contract will bind the contractor to the City daily until the contract is complete.

City Arborist may authorize minor variations in the trimming of trees from the requirements of the Contract Documents, which do not involve an adjustment in contract price and are consistent with the overall intent, which could be hazards, aesthetics, maintenance cleanup, or health of the trees.

3. Requirements

The successful contractor must have an English speaking, Certified Arborist on site at all times to offer supervision and/or guidance on the work to be performed, who is familiar with the trimming of palms as it relates to nutrient problems and their effect on the tree. The contractor must also provide a trimmer licensed with the ANSI Certified Line Clearance designation since the scope of services will include removal of limbs from electric service lines, transformers and poles. An hourly rate will need to be provided for frond removal from power lines.

4. Size of Palms

Palms that do not exhibit any trunk wood will not be trimmed under this contract. Palms may vary in height and may require trimming heights of sixty feet. Contractor will have equipment to meet these requirements.

5. Trimming

Palms must be trimmed according to ANSI A300 pruning specifications. All palms will be trimmed to reflect a 9:00 to 3:00 appearance. No palms will be

trimmed higher. Any and all exotic growth or growth not of the same species shall be removed from the palm. Sabal Palms shall be trimmed to remove loose "boots" and provide for a clear trunk.

6. Quality/Guarantee

Careless trimming can lead to "nicks" or cracks in remaining fronds. The Contractor will be responsible for removing fronds that drop or fall due to improper pruning for a period of 45 days after the palm has been trimmed.

EXHIBIT B

BASIS OF COMPENSATION

As consideration for providing the Services as set forth in the Agreement, the CITY agrees to pay, and the CONTRACTOR agrees to accept payment on a time and reimbursement cost basis as indicated below in Exhibit B, which is attached and made part of this Agreement. The CITY is adding a separate $9,186.10 CITY controlled Contingency to the issuance of this Agreement making the total amount of the Agreement at $192,908.10.

Retainage: (N/A) Not applicable to this Agreement.

BID SCHEDULE - PALM TRIMMING

Common Name	Botanical Name	Cost Per Palm Per ANSI A300
Canary Island Date Palm	Phoenix canariensis	$50.00/ ea.
Chinese Fan Palm	Livistonia chinesis	$18.00/ ea
Coconut Palm	Cocos nucifera	$24.00/ ea.
Medjool Date Palm	phoenix dactylifera	$50.00/ ea
Sabal Palm	Sabal palmetto	$30.00/ ea.

Storm Recovery: $275.00 **Per Hour Rate/ Per Crew**

The contractor will be required to provide at least 1 tree trimming crew to the City immediately following any emergency (windstorm, hurricane, etc.) to act as its tree clearing representative and a total of 2 crews no later than 24 hours after emergency re-entry begins.

END OF EXHIBIT B

EXHIBIT C

GENERAL INSURANCE REQUIREMENTS

The Contractor shall not commence work until he has obtained all the insurance required under this heading, and until such insurance has been approved by the Owner, nor shall the Contractor allow any subcontractor to commence work until all similar insurance required of the subcontractor has also been obtained and approved by the Owner.

Certificates of insurance must be issued by an authorized representative of the insurance company at the request and direction of the policyholder and must include sufficient information so as to identify the coverage and the contract for Owner's improvements for which they are issued. Certificates of insurance must be issued by a nationally recognized insurance company with a Best's Rating of no less than B+VII, satisfactory to the Owner, and duly authorized to do business in the state of said Contract.

The Contractor shall procure and maintain, during the life of this Contract, Workmen's Compensation Insurance for all of his employees to be engaged in work under this Contract, and he shall require any subcontractor similarly to provide Workmen's Compensation Insurance for all of the latter's employees to be engaged in such work, unless such employees are covered by the protection afforded by the Contractor's insurance. In case any employees are to be engaged in hazardous work under this Contract, and are not protected under this Workmen's Compensation statute, the Contractor shall provide, and shall cause each subcontractor to provide, adequate coverage for the protection of such employees. It is acceptable to use a State-approved Workmen's Compensation Self-Insurance fund.

The Contractor shall take out and maintain during the life of this Contract, Public Liability and Property Damage and shall include Contractual Liability, Personal Injury, Libel, Slander, False Arrest, Malicious Prosecution, Wrongful Entry or Eviction, Broad Form Property Damage, Products, Completed Operations and XCU Coverage to be included on an occurrence basis, and to the full extent of the Contract to protect him, the Owner, and any subcontractor performing work covered by this Contract from damages for personal injury, including accidental death, as well as from claims for property damage, which may arise from operations under this contract, whether such operations be by himself or by a subcontractor, or by anyone directly or indirectly employed by either of them. The Contractor shall also maintain automobile liability insurance including "non-owned and hired" coverage. The entire cost of this insurance shall be borne by the Contractor.

The amount of such insurance shall be no less than $1,000,000 annual aggregate for bodily injury and property damage combined per occurrence.

The City of Naples must be named as Additional Insured on the insurance certificate and the following must also be stated on the certificate. "These coverage's are primary to all other coverage's the City possesses for this contract only." The City of Naples shall be named as the Certificate Holder. The Certificate Holder shall read as follows:

The City of Naples
735 Eighth Street South
Naples, Florida 34102

No City Division, Department, or individual name should appear on the Certificate.
No other format will be acceptable.

The Certificate must state the bid number and title.

When using the ACORD 25 – Certificate of Insurance only the most current version will be accepted.

The City of Naples requires a copy of a cancellation notice in the event the policy is cancelled. The City of Naples shall be expressly endorsed onto the policy as a cancellation notice recipient.

[If other insurance or insurance requirements or any waivers, attach as Exhibit C-1through C-__]

EXHIBIT D

CERTIFICATION OF COMPLIANCE WITH IMMIGRATION LAWS

The undersigned is the **President of the Tree Scaping of Naples, Inc.,** company ("the CONTRACTOR"), and hereby certifies to the following:

1. The CONTRACTOR is in full compliance with all provisions of the Immigration Reform and Control Act of 1986 ("IRCA"), as well as all related immigration laws, rules, regulations pertaining to proper employee work authorization in the United States.

2. The undersigned has verified that the CONTRACTOR has obtained and maintains on file, and will continue to obtain and maintain on file, all documentation required by law, including but not limited to, Form I-9, Employment Eligibility Verification, for all persons employed by or working for the CONTRACTOR in any capacity on any project for the City of Naples (CITY). All such persons have provided evidence of identity and eligibility to work to the CONTRACTOR in accordance with the IRCA and related law. The undersigned hereby affirms that no person has been or will be employed by the CONTRACTOR to work on projects for the CITY who is not authorized to work under law. The undersigned further affirms that the CONTRACTOR's files will be updated by written notice any time that additional employees work on projects for the CITY.

3. The CONTRACTOR will have its contractors, subcontractors, suppliers and vendors who are involved in projects for the CITY to sign a written acknowledgment that they too are in compliance with immigration law. It is understood that failure to do so could result in the CONTRACTOR being liable for any violation of the law by such third parties.

4. The CONTRACTOR will fully cooperate with and have its contractors, subcontractors, suppliers and vendors to fully cooperate with, all inquiries and investigations conducted by any governmental agency in connection with proper compliance with the laws pertaining to appropriate work authorization in the United States.

5. The undersigned, on behalf of the CONTRACTOR, acknowledges that this Certification may be relied upon by the CITY, its officers, directors, employees, and affiliates or related persons and entities.

6. If it is found that the CONTRACTOR has not complied with the laws pertaining to proper employment authorization, and any legal and administrative action ensues against the CITY, the CONTRACTOR will indemnify, defend and hold the CITY harmless along with their officers, directors, employees, and affiliated or related persons and entities.

7. The CONTRACTOR acknowledges that the CITY by their authorized representatives shall have the right, at any time, upon 24 hours' notice, to examine the CONTRACTOR's books and records to confirm that the CONTRACTOR is in compliance with the terms of this certification.

Executed this 12 day of February, 2018.

By: _____

Analysis of Bid

ANALYSIS

18-032 Time Specific Palm Trimming ITB
Department Estimated Cost: None
Date: February 9, 2018

PROJECT SUMMARY
This solicitation was to identify a firm(s) to furnish and assume full responsibility for all materials, supervision, equipment, labor, transportation, and tools for the completion of the work related to time-specific palm trimming within the City of Naples.

BACKGROUND
Seventy-five (75) city registered vendors and fifteen supplemental vendors were sent information regarding Invitation to Bid No. 18-032 which was advertised in the Naples Daily News on January 16, 2018 and posted on the City's web site. A public notice was also posted with the City Clerk's Office. Demand Star notified 82 potential vendors and six (6) planholders. There was a non-mandatory pre-bid meeting for this bid held on January 25, 2018, at which two vendors were in attendance. Sealed bids were received and opened on February 8, 2018 with three (3) vendors submitting proposals.

ANALYSIS
The Purchasing Division is indicating Tree Scaping of Naples, Inc. (EIN 46-1317135) as the low responsive bidder was based on total cost of unit cost x Department estimate units for all species. The firm's non-technical elements of their submission were not deficient in any manner. The company's solicitation submission was found responsive, and the below data on the company indicate an acceptable level of responsibility. The firm is currently a City registered vendor (#14902) and has been verified as active in the Florida's Division of Corporations database. A check of the firm's references found no negative findings or areas of concern.

Please provide your concurrence as soon as you are satisfied with the technical portions of the submission, at which time Purchasing will post Notice of Declaration of Intent to Award. Accompanying this analysis, please find the following support information:

Attachment A - BID TABULATION
Attachment B – DEPARTMENT CALCULATION
Attachment C - REFERENCES CONTACTED
Attachment D - W-9
Attachment E - CERTIFICATIONS
Attachment F - FLORIDA COMPANY VERIFICATION

Attachment A - BID TABULATION

City of Naples

Opening Date 02/08/18 - FOR INFORMATION PURPOSE ONLY

Bid Tab 18-032 Time Specific Palm Trimming

		The Davey Tree Expert Company	The F.A. Bartlett Tree Expert Company	Tree Scaping of Naples Inc.
Common Name	**Botanical Name**	**Cost Per Palm Per ANSI A300**	**Cost Per Palm Per ANSI A300**	**Cost Per Palm Per ANSI A300**
Canary Island Date Palm	Phoenix canariensis	$50.00	$115.00	$50.00
Chinese Fan Palm	Livistonia chinesis	$50.00	$30.00	$18.00
Coconut Palm	Cocos nucifera	$50.00	$36.00	$24.00
Medjool Date Palm	Phoenix dactylifera	$50.00	$65.00	$50.00
Sabal Palm	Sabal palmetto	$50.00	$30.00	$30.00
Storm Recovery:_____Per Hour Rate/ Per Crew		$280.00	$411.00	$275.00

Attachment B – DEPARTMENT CALCULATION

Time Specific Palm Pruning

Common Name	Estimated Quanity	Quanity per Trim Cycle	Davey Tree		Bartlett		TreeScaping	
			Cost Per Palm	Total	Cost Per Palm	Total	Cost Per Palm	Total
Coconut Palm	2926	5852	$ 50.00	$ 292,600.00	$ 36.00	$ 210,672.00	$ 24.00	$ 140,448.00
5th Ave S Coconut Palm	76	228	$ 50.00	$ 11,400.00	$ 36.00	$ 8,208.00	$ 24.00	$ 5,472.00
Canary Island Date	18	18	$ 50.00	$ 900.00	$ 115.00	$ 2,070.00	$ 50.00	$ 900.00
Medjools	19	19	$ 50.00	$ 950.00	$ 65.00	$ 1,235.00	$ 50.00	$ 950.00
Sabal	2344	1172	$ 50.00	$ 58,600.00	$ 30.00	$ 35,160.00	$ 30.00	$ 35,160.00
Chinese Fan	88	44	$ 50.00	$ 2,200.00	$ 630.00	$ 27,720.00	$ 18.00	$ 792.00
TOTALS				$ 366,650.00		$ 285,065.00		$ 183,722.00
City Controlled Contingency of 10%				$ 18,332.50		$ 14,253.25		$ 9,186.10
Targeted Contract Award				$ 384,982.50		$ 299,318.25		$ 192,908.10

Budget for Time Specific Palm Pruning	$237,625

Attachment C - REFERENCES CONTACTED

REFERENCES

THIS SHEET MUST BE COMPLETED AND RETURNED WITH BID

PROVIDE AT LEAST THREE NON-CITY REFERENCES FOR WHOM YOUR COMPANY HAS PROVIDED SAME OR SIMILAR SERVICES WITHIN THE LAST 2 YEARS.

COMPANY NAME: Strand Executive Park

ADDRESS: 5621 Strand Blvd. ; Naples, FL 34110

TELEPHONE: (239) 269-7839

CONTACT PERSON: Angela Williford

CONTACT E-MAIL ADDRESS: angela@strandexecutivepark.com

COMPANY NAME: Villas Torino

ADDRESS: 361 9th Ave. S ; Naples, FL 34102

TELEPHONE: (239) 273-4104

CONTACT PERSON: Mildred Schott

CONTACT E-MAIL ADDRESS: millieschott@aol.com

COMPANY NAME: NA

ADDRESS: 4133 Lakewood Blvd.

TELEPHONE: (727) 798-4144

CONTACT PERSON: Jan Severance

CONTACT E-MAIL ADDRESS: jsev46@hotmail.com

Submitting Vendor Name: Tree Scaping of Naples, Inc.

Attachment D - W-9

Form **W-9**
(Rev. November 2017)
Department of the Treasury
Internal Revenue Service

Request for Taxpayer Identification Number and Certification

▶ Go to *www.irs.gov/FormW9* for instructions and the latest information.

Give Form to the requester. Do not send to the IRS.

Print or type. See Specific Instructions on page 3.

1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.
Tree Scaping of Naples, Inc.

2 Business name/disregarded entity name, if different from above

3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only one of the following seven boxes.

☐ Individual/sole proprietor or single-member LLC ☐ C Corporation ☑ S Corporation ☐ Partnership ☐ Trust/estate

☐ Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ▶ _____

Note: Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is not disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner.

☐ Other (see instructions) ▶

4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):

Exempt payee code (if any) _____

Exemption from FATCA reporting code (if any) _____

(Applies to accounts maintained outside the U.S.)

5 Address (number, street, and apt. or suite no.) See instructions.
1180 23rd Street SW

Requester's name and address (optional)

6 City, state, and ZIP code
Naples, Florida 34117

7 List account number(s) here (optional)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

Note: If the account is in more than one name, see the instructions for line 1. Also see *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number
☐☐☐ - ☐☐ - ☐☐☐☐

or

Employer identification number
46 - 1317135

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign Here Signature of U.S. person ▶ [signature] Date ▶ 02/06/18

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to *www.irs.gov/FormW9*.

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

- Form 1099-INT (interest earned or paid)
- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding, *later.*

Attachment E - CERTIFICATIONS

COLLIER COUNTY
CERTIFICATE OF COMPETENCY

CERTIFICATION INFORMATION

LCC20170001172 Certification Information
Collier County Board of County Commissioners

Date: July 21, 2017

DBA: TREESCAPING OF NAPLES, INC.
ADDRESS: 4457 18TH PLACE SW
NAPLES, FL 34116

PHONE: 2393313103

CELL:
FAX:

LICENSEE NBR:
LCC20170001172

QUALIFIER: LEON, KASEY

TYPE: TREE REMOVAL & TRIMMING CONTR.

CLASS CODE: 4430

ISSUANCE NBR: 201700000606

INSURANCE:	ORIG ISSD:	EXPIRATION:
General Liability October 28, 2017	July 21, 2017	September 30, 2018
Worker's Compensation January 01, 2018		

NOTE: It is the Qualifier's responsibility to keep all business, licensing and requirements current and to provide up to date copies for Collier county files. This includes all insurance certificates and any change of address information.

INTERNATIONAL SOCIETY OF ARBORICULTURE
CERTIFIED ARBORIST™

Gustavo Fortunato Leon

Having successfully completed the requirements set by the Arborist Certification Board of the International Society of Arboriculture, the above named is hereby recognized as an ISA Certified Arborist®

Jim Skiera, Executive Director
International Society of Arboriculture

Certification Board, Chair
International Society of Arboriculture

FL-6703A	Jan 31, 2015	Jun 30, 2018
Certification Number	Certified Since	Expiration Date

DIVISION OF CORPORATIONS

Attachment F - FLORIDA COMPANY VERIFICATION

Sunbiz.org Division of Corporations an official State of Florida website

Department of State / Division of Corporations / Search Records / Detail By Document Number /

Detail by FEI/EIN Number

Florida Profit Corporation
TREE SCAPING OF NAPLES INC.

Filing Information

Document Number	P12000092073
FEI/EIN Number	46-1317135
Date Filed	11/02/2012
Effective Date	10/26/2012
State	FL
Status	ACTIVE
Last Event	AMENDMENT
Event Date Filed	02/05/2016
Event Effective Date	NONE

Principal Address

1180 23rd Street SW
NAPLES, FL 34117

Changed: 02/07/2018

Mailing Address

1180 23rd Street SW
NAPLES, FL 34117

Changed: 02/07/2018

Registered Agent Name & Address

Leon, Kasey
1180 23rd Street SW
NAPLES, FL 34117

Name Changed: 04/13/2015

Address Changed: 02/07/2018

Officer/Director Detail

Name & Address

Title President

LEON, GUSTAVO F
1180 23rd Street SW

NAPLES, FL 34117

Title VP

JIMENEZ, JORGE FLORES
5560 16TH PL SW - APT. 3
NAPLES, FL 34116

Annual Reports

Report Year	Filed Date
2016	01/20/2016
2017	01/30/2017
2018	02/07/2018

Document Images

02/07/2018 -- ANNUAL REPORT	View image in PDF format
01/30/2017 -- ANNUAL REPORT	View image in PDF format
01/20/2016 -- ANNUAL REPORT	View image in PDF format
04/13/2015 -- ANNUAL REPORT	View image in PDF format
05/22/2014 -- Name Change	View image in PDF format
04/21/2014 -- ANNUAL REPORT	View image in PDF format
04/23/2013 -- ANNUAL REPORT	View image in PDF format
11/02/2012 -- Domestic Profit	View image in PDF format

City Council Agenda Item Report

Submitted by: Pete DiMaria
Submitting Department: Fire-Rescue
Meeting Date: February 21, 2018

SUBJECT
(1) A Resolution amending the Fiscal Year 2017-18 budget adopted by Resolution 17-14027 to appropriate $100,000 for Fire Station No. 2 HVAC, electrical, ceiling renovation and kitchen completion.

(2) Award a contract to Vantage Construction Services, LLC in the amount of $364,408 to fund upgrades / renovations to the Fire-Rescue Department / Fire Station No. 2, HVAC, electrical and ceiling construction

Legislative Type:
Legislative Item

Funding Source:
CIP Project 16E22, Account 340-08-10-522-560300, plus amending the FY16-17 budget allocating $100,000 from the Public Service Tax fund balance.

Recommendation:
(1) Approve the Resolution; and (2) Award a contract to Vantage Construction Services, LLC in the amount of $364,408.

ATTACHMENTS
- Agenda Memorandum
- Resolution
- Agreement
- Bid Analysis

AGENDA MEMORANDUM ***Fire - Rescue Department***

Regular Meeting Date: **February 21, 2018**

To: City Council

From: Pete DiMaria, Fire Chief

Date: February 21, 2018

Legislative ☒ Quasi-Judicial ☐

SUBJECT:
A Resolution amending the FY17-18 budget adopted by Resolution 17-14027 to appropriate funds for Fire Station No. 2 HVAC, electrical and ceiling renovation ($100,000); and award of contract for Fire Station No. 2 upgrade / renovations to the HVAC systems in the amount of $364,408 which includes a City controlled contingency of $20,000.

SUMMARY:

1. Approve a Resolution amending the Fiscal Year 2017-18 budget adopted by Resolution 17-14027, by appropriating $100,000 from the Public Service Tax fund balance for the contracts related to Fire Station No. 2 Renovations, project 16E22, increasing the FY17-18 appropriation to $400,000.

2. Award of contract to Vantage Construction Services, LLC in the amount of $364,408 to fund upgrades / renovations to the Fire-Rescue Department / Fire Station No. 2 HVAC, electrical and ceiling renovation. This project will bring electrical systems up to current code, removes acoustical ceiling, adding drywalled insulated ceiling and replaces HVAC system with all-in-one commercial grade equipment, and authorize the City Manager to execute the contract.

BACKGROUND:

1. During the budget process, City Council was advised that project 16E22 Fire Station No. 2 Renovations / HVAC from FY16-17 was not yet completed and would require a budget amendment to roll the funds to FY 2017-18. The ongoing project had a 9/30/17 year end balance of $199,770, because the HVAC bids had not yet been received. The ongoing project had $300,000 budgeted in FY17-18, intended to redesign and construct engine bays.

   Based on the bid opening of November 3, 2017, the HVAC, electrical and ceiling renovation project will cost $364,408, which includes a City controlled contingency of $20,000, Staff recommends limiting the scope of the FY17-18 project 16E22 to the HVAC,

electrical, ceiling renovation and kitchen completion; by rolling forward sufficient funds of $100,000 to complete the project. The engine bay renovation project will be delayed.

2. As part of the FY 2017-18 budget authorization, City Council approved a CIP project to renovate Fire Station No. 2 which is located at 977 26th Avenue North. The project scope presented to City Council was for HVAC replacement and expansion of bays. Fire-Rescue staff presented a plan to address the long-term problem areas of constant HVAC issues. Staff goals are to provide the City of Naples with a long-term facility to house Fire-Rescue personnel, creating a safe working area and minimizing high future expenses on repairs and maintenance.

The HVAC replacement and electrical upgrades includes:

- Removal of existing HVAC split systems
- Demolition and removal of existing duct work, acoustical tile and grid ceiling tile in living areas
- Installation of three (3) new high efficiency HVAC all-in-one commercial units
- Installation of new metal, mildew resistive duct work.
- Construction of hardened drywall ceiling with insulation through living areas of the station
- Addition of electrical panel and upgrades to building-wide electrical system
- Miscellaneous items, as needed to complete construction

This project has been bid three times. The first bid was awarded by City Council, but prior to starting the project, the contract was terminated due to the contractor's license was found to be insufficient for the project. The second bid was not brought to City Council due to the contractor withdrawing their bid.

***Bidding and Award Recommendation**:*

Fifty-eight (58) City registered vendors were sent information regarding Bid #08-002 which was advertised in the Naples Daily News on October 16, 2017 and posted on the City's web site. A public notice was also posted with the City Clerk's Office. DemandStar notified 170 potential vendors and four (4) plan holders. There was a nonmandatory pre-bid meeting for this bid held on October 20, 2017. Sealed bids were received and opened on November 3, 2017 with three (3) vendors submitting proposals. The Purchasing Division staff is indicating Vantage Construction Services, LLC (EIN# 47-1959369) as the low responsive bidder based on total base bid price. The firm's non-technical elements of their submission were not deficient in any manner. A purchasing staff check of references found no areas of concern. The company's solicitation submission was found responsive, and the below data on the company indicate an acceptable level of responsibility.

The Florida Department of State, Division of Corporations indicated Vantage Construction Services, LLC, is in an active status and is authorized to transact business in the State of Florida. Vantage Construction Services Inc. LLC has a current Certified General Contractor's license (CGC1519835) registered with the State of Florida.

FUNDING SOURCE:
CIP Project 16E22, Account 340-08-10-522-560300, plus amending the FY16-17 budget allocating $100,000 from the Public Service Tax fund balance.

RECOMMENDED ACTION:

1. Approve a Resolution amending the Fiscal Year 17-18 budget adopted by Resolution 17-14027 by appropriating $100,000 from the Public Service Tax fund balance; and

2. Award a contract to Vantage Construction Services, LLC in the amount of $364,408 to fund upgrades / renovations to the Fire-Rescue Department / Fire Station No. 2, HVAC, electrical and ceiling construction and authorize the City Manager to execute the contract.

RESOLUTION 2018-

A RESOLUTION AMENDING THE FY 2017-18 BUDGET ADOPTED BY RESOLUTION 2017-14027 TO APPROPRIATE FUNDS FOR FIRE STATION NO.2 HVAC, ELECTRICAL, CEILING RENOVATION AND KITCHEN COMPLETION; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the City of Naples adopted a budget on September 20, 2017 via Resolution 2017-14027; and

WHEREAS, during the budget process, City Council was advised that project 16E22 Fire Station #2 Renovations/HVAC from FY 2016-17 was not yet completed and would require a budget amendment to roll over the funds; and

WHEREAS, the FY 2016-17 project 16E22 had a September 30, 2017 balance of $199,770; and

WHEREAS, Project 16E22 Fire Station #2 Renovations is an ongoing project, with a FY 2017-18 budget of $300,000 intended to redesign and construct engine bays; and

WHEREAS, construction for the HVAC, Electrical, and Ceiling Renovation project will cost $364,408 based on bid opening of November 3, 2017; and

WHEREAS, staff recommends amending the scope of the FY 2017-18 project 16E22 to include the HVAC, Electrical, Ceiling Renovation and Kitchen Completion and rolling forward sufficient funding to complete that project and delaying the engine bay portion of the project.

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF NAPLES, FLORIDA:

Section 1. That the City of Naples FY 2017-18 budget, adopted by Resolution 2017-14027, is hereby amended to appropriate funds for the contracts related to the Fire Station #2 as follows:

Section 2. That the Public Service Tax fund is amended to increase project 16E22 Fire Station #1 by $100,000 with the source of funds being Fund Balance.

Section 3. That the FY 2017-18 project 16E22 Fire Station No. 2 is amended to indicate the project will fund HVAC, Electrical, Ceiling Renovations and Kitchen completion.

Section 4. This resolution will take effect immediately.

PASSED IN OPEN AND REGULAR SESSION OF THE CITY COUNCIL OF THE CITY OF NAPLES, FLORIDA, THIS 21ST DAY OF FEBRUARY 2018.

Attest:

Patricia L. Rambosk, City Clerk

Bill Barnett, Mayor

Approved as to form and legality:

Robert D. Pritt, City Attorney

Date filed with City Clerk:_____

L\LEGISLATION\CITY COUNCIL\PENDING

CITY OF NAPLES, FLORIDA
AGREEMENT
(CONSTRUCTION SERVICES)

Bid/Proposal No. **18-002**

Clerk Tracking No. _____

Project Name: **Fire Station No. 2 Improvements**

THIS AGREEMENT (the "Agreement") is made and entered into this **21st day of February 2018** by and between the City of Naples, a Florida municipal corporation, (the "CITY") and **Vantage Construction Services, LLC,** a Florida Limited Liability Company, located at: **8801 College Parkway, Suite 2; Fort Myers, Florida 33919** (the "CONTRACTOR").

WHEREAS, the CITY desires to obtain the services of the CONTRACTOR concerning certain services specified in this Agreement (referred to as the "Project"); and

WHEREAS, the CONTRACTOR has submitted an **(ITB) Invitation to Bid No. 18-002** for provision of those services; and

WHEREAS, the CONTRACTOR represents that it has expertise in the type of services that will be required for the Project.

NOW, THEREFORE, in consideration of the mutual covenants and provisions contained herein, the parties hereto agree as follows:

ARTICLE ONE
CONTRACTOR'S RESPONSIBILITY

1.1. The Services to be performed by the CONTRACTOR are generally described as **Fire Station No. 2 Improvements** and may be more fully described in the Scope of Services, attached as **EXHIBIT A** and made a part of this Agreement.

1.2. The CONTRACTOR agrees to obtain and maintain throughout the period of this Agreement all such licenses as are required to do business in the State of Florida, the City of Naples, and in Collier County, Florida, including, but not limited to, all licenses required by the respective state boards and other governmental agencies responsible for regulating and licensing the services to be provided and performed by the CONTRACTOR pursuant to this Agreement.

1.3. The CONTRACTOR agrees that, when the services to be provided hereunder relate to a professional service which, under Florida Statutes, requires a license, registration, certificate of authorization or other form of legal entitlement to practice such services, it shall employ or retain only qualified personnel to provide such services.

1.4. The CONTRACTOR agrees to employ and designate, in writing, within 5 calendar days after receiving its Notice to Proceed, or other directive from the CITY, a qualified employee to serve as the CONTRACTOR's project manager (the "Project Manager"). The Project Manager shall be authorized and responsible to act on behalf of the CONTRACTOR with respect to directing, coordinating and administering all aspects of the services to be provided and performed under this Agreement.

1.5. The CONTRACTOR has represented to the CITY that it has expertise in the type of services that will be required for the Project. The CONTRACTOR agrees that all services to be provided by CONTRACTOR pursuant to this Agreement shall be subject to the CITY's review and approval and shall be in accordance with the generally accepted standards of practice in the State of Florida, as may be applied to the type of services to be rendered, as well as in accordance with all published laws, statutes, ordinances, codes, rules, regulations and requirements of any governmental agencies that regulate or have jurisdiction over the Project or the services to be provided and performed by the CONTRACTOR. In the event of any conflicts in these requirements, the CONTRACTOR shall notify the CITY of such conflict and utilize its best professional judgment to advise CITY regarding resolution of the conflict.

1.6. The CONTRACTOR agrees not to divulge, furnish or make available to any third person, firm or organization, without CITY's prior written consent, or unless incident to the proper performance of the CONTRACTOR's obligations hereunder, or in the course of judicial or legislative proceedings where such information has been properly subpoenaed, any non-public information concerning the services to be rendered by the CONTRACTOR hereunder, and the CONTRACTOR shall require all of its employees, agents, sub-consultants and subcontractors to comply with the provisions of this paragraph. However, the CONTRACTOR shall comply with the Florida Public Records laws including those requirements set out in ARTICLE FIVE, below.

1.7 The CONTRACTOR agrees not to employ or offer to employ any Elected Officer or City Managerial Employee of the CITY who in any way deals with, coordinates on, or assists with, the services provided in this Agreement, for a period of 2 years after termination of all provisions of this Agreement. For purposes of this paragraph, the term "Elected Officer" shall mean any member of the City Council. For purposes of this paragraph, the term "City Managerial Employee" shall mean the City Manager, the Assistant City Manager, the City Clerk, and any City department head or director. If the CONTRACTOR violates the provisions of this paragraph, the CONTRACTOR shall be required to pay damages to the CITY in an amount equal to any and all compensation that is received by the former Elected Officer or City Managerial Employee of the CITY from or on behalf of the contracting person or entity, or an amount equal to the former Elected Officer's or City Managerial Employee's last 2 years of gross compensation from the CITY, whichever is greater.

1.8 The CONTRACTOR agrees not to provide services for compensation to any other party other than the CITY on the same subject matter, same project, or scope of services as set forth in this Agreement without approval from the City Council of the CITY.

1.9. Except as otherwise provided in this Agreement, the CONTRACTOR agrees not to disclose or use any information not available to members of the general public and gained by reason of the CONTRACTOR's contractual relationship with the CITY for the special gain or benefit of the CONTRACTOR or for the special gain or benefit of any other person or entity.

ARTICLE TWO
CITY'S RESPONSIBILITIES

2.1. The CITY shall designate in writing a project coordinator to act as the CITY's representative with respect to the services to be rendered under this Agreement (the "Project Coordinator"). The Project Coordinator shall have authority to transmit instructions, receive information, interpret and define the CITY's policies and decisions with respect to the CONTRACTOR's services for the Project. However, the Project Coordinator is not authorized to issue any verbal or written orders or instructions to the CONTRACTOR that would have the effect, or be interpreted to have the effect, of modifying or changing in any way whatever:

(a) The scope of services to be provided and performed by the CONTRACTOR;

(b) The time the CONTRACTOR is obligated to commence and complete all such services; or

(c) The amount of compensation the CITY is obligated or committed to pay the CONTRACTOR.

Any such modifications or changes shall only be made by or upon the authorization of the CITY's city manager as authorized by city council in the enabling legislation or in the CITY's procurement policies.

2.2. The Project Coordinator shall:

(a) Review and make appropriate recommendations on all requests submitted by the CONTRACTOR for payment for services and work provided and performed in accordance with this Agreement;

(b) Arrange for access to and make all provisions for the CONTRACTOR to enter the Project site to perform the services to be provided by the CONTRACTOR under this Agreement; and

(c) Provide notice to the CONTRACTOR of any deficiencies or defects discovered by the CITY with respect to the services to be rendered by the CONTRACTOR hereunder.

2.3. The CONTRACTOR acknowledges that access to the Project Site, to be arranged by the CITY for the CONTRACTOR, may be provided during times that are not the normal business hours of the CONTRACTOR.

ARTICLE THREE
TIME

3.1. Services to be rendered by the CONTRACTOR shall be commenced subsequent to the execution of this Agreement upon written Notice to Proceed from the CITY for all or any designated portion of the Project and **shall be performed and completed within 150 days from the Notice to Proceed with an estimated completion date of August 10, 2018. Project Close-out shall be performed within 30 days of Completion.** Time is of the essence with respect to the performance of this Agreement.

3.2. Should the CONTRACTOR be obstructed or delayed in the prosecution or completion of its services as a result of unforeseeable causes beyond the control of the CONTRACTOR, and not due to its own fault or neglect, including but not restricted to acts of God or of public enemy, acts of government or of the CITY, fires, floods, epidemics, quarantine regulations, strikes or lock-outs, then the CONTRACTOR shall notify the CITY in writing within 5 working days after commencement of such delay, stating the cause or causes thereof, or be deemed to have waived any right which the CONTRACTOR may have had to request a time extension.

3.3. No interruption, interference, inefficiency, suspension or delay in the commencement or progress of the CONTRACTOR's services from any cause whatsoever, including those for which the CITY may be responsible in whole or in part, shall relieve the CONTRACTOR of its duty to perform or give rise to any right to damages or additional compensation from the CITY. The CONTRACTOR's sole remedy against the CITY will be the right to seek an extension of time to its schedule. This paragraph shall expressly apply to claims for early completion, as well as claims based on late completion.

3.4. Should the CONTRACTOR fail to commence, provide, perform or complete any of the services to be provided hereunder in a timely and reasonable manner, in addition to any other rights or remedies available to the CITY hereunder, the CITY at its sole discretion and option may withhold any and all payments due and owing to the CONTRACTOR until such time as the CONTRACTOR resumes performance of its obligations hereunder in such a manner so as to reasonably establish to the CITY's satisfaction that the CONTRACTOR's performance is or will shortly be back on schedule.

3.5 Liquidated Damages: Services to be rendered by the CONTRACTOR shall be commenced subsequent to the execution of this Agreement upon written Notice to Proceed from the CITY for all or any designated portion of the Project must be completed by the contract dates specified within the Notice to Proceed for construction. Should CONTRACTOR fail to complete the project within this timeframe, daily liquidated damages in an amount of $250.00 per day will be assessed.

3.6 Bond. A Payment & Performance Bond with a surety insurer authorized to do business in this state as surety
XXX___ prior to commencement of work, will be recorded in the public records of the County.

ARTICLE FOUR
COMPENSATION

4.1. The total compensation to be paid the CONTRACTOR by the CITY for all Services is not to exceed **$364,408.00 that includes Cost Schedule HVAC equipment Item-2 upgrade at $2,200.00 and Item-11 a CITY Controlled Allowance at $20,000.00** and shall be paid in the manner set forth in the "Basis of Compensation", which is attached as **EXHIBIT B** and made a part of this Agreement.

ARTICLE FIVE
MAINTENANCE OF RECORDS

5.1. The CONTRACTOR will keep adequate records and supporting documentation which concern or reflect its services hereunder. The records and documentation will be retained by the CONTRACTOR for a minimum of five 5 years from the date of termination of this Agreement or the date the Project is completed, whichever is later. The CITY, or any duly authorized agents or representatives of the CITY, shall have the right to audit, inspect and copy all such records and documentation as often as they deem necessary during the period of this Agreement and during the 5 year period noted above; provided, however, such activity shall be conducted only during normal business hours. If the CONTRACTOR desires to destroy records prior to the minimum period, it shall first obtain permission from the CITY in accordance with the Florida Public Records laws.

5.2 119.0701 F.S. CONTACT INFORMATION FOR CITY OF NAPLES' CUSTODIAN OF PUBLIC RECORDS, CITY CLERK'S OFFICE

If the CONTRACTOR has questions regarding the application of Chapter 119, Florida Statutes, to the CONTRACTOR'S duty to provide public records relating to this contract, contact the City of Naples' Custodian of Public records, the City Clerk at Telephone: 239-213-1015; Email:PublicRecordsRequests@naplesgov.com; Address: 735 8th Street S., Naples, Florida 34102; Mailing address: same as street address.

5.3 The CONTRACTOR shall:

(a) Keep and maintain public records required by the CITY to perform the service.

(b) Upon request from the CITY's custodian of public records, provide the CITY with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in this chapter 119.0701 F.S. or as otherwise provided by law.

(c) Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and following completion of the contract if the CONTRACTOR does not transfer the records to the CITY.

(d) Upon completion of the contract, transfer, at no cost, to the CITY all public records in possession of the CONTRACTOR or keep and maintain public records required by the CITY to perform the service. If the CONTRACTOR transfers all public records to the CITY upon completion of the contract, the CONTRACTOR shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the CONTRACTOR keeps and maintains public records upon completion of the contract, the CONTRACTOR shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the CITY, upon request from the CITY's custodian of public records, in a format that is compatible with the information technology systems of the CITY.

ARTICLE SIX
INDEMNIFICATION

6.1. The CONTRACTOR agrees to indemnify and hold harmless the CITY from liabilities, damages, losses and costs, including, but not limited to, all attorneys' fees, to the extent caused by the negligence, recklessness, or intentional wrongful misconduct of the CONTRACTOR and persons employer or utilized by the CONTRACTOR in the performance of the Contract.

ARTICLE SEVEN
INSURANCE

7.1. The CONTRACTOR shall obtain and carry, at all times during its performance under this Agreement, insurance of the types and in the amounts set forth in the document titled General Insurance Requirements, which is attached as **EXHIBIT C** and made a part of this Agreement.

ARTICLE EIGHT
SERVICES BY CONTRACTOR'S OWN STAFF

8.1. The services to be performed hereunder shall be performed by the CONTRACTOR's own staff, unless otherwise authorized in writing by the CITY. The employment of, contract with, or use of the services of any other person or firm by the CONTRACTOR, as independent contractor or otherwise, shall be subject to the prior written approval of the CITY. No provision of this Agreement shall, however, be construed as constituting an agreement between the CITY and any such other person or firm. Nor shall anything contained in this Agreement be deemed to give any such party or any third party any claim or right of action against the CITY beyond such as may otherwise exist without regard to this Agreement.

ARTICLE NINE
WAIVER OF CLAIMS

9.1. The CONTRACTOR's acceptance of final payment shall constitute a full waiver of any and all claims, except for insurance company subrogation claims, by it against the CITY arising out of this Agreement or otherwise related to the Project, except those previously made in writing and identified by the CONTRACTOR as unsettled at the time of the final payment. Neither the acceptance of the CONTRACTOR's services nor payment by the CITY shall be deemed to be a waiver of any of the CITY's rights against the CONTRACTOR.

ARTICLE TEN
TERMINATION OR SUSPENSION

10.1. The CONTRACTOR shall be considered in material default of this Agreement and such default will be considered cause for the CITY to terminate this Agreement, in whole or in part, as further set forth in this section, for any of the following reasons: (a) failure to begin work under the Agreement within the times specified under the Notice(s) to Proceed, or (b) failure to properly and timely perform the services to be provided hereunder or as directed by the CITY, or (c) the bankruptcy or insolvency or a general assignment for the benefit of creditors by the CONTRACTOR or by any of the CONTRACTOR's principals, officers or directors, or (d) failure to obey laws, ordinances, regulations or other codes of conduct, or (e) failure to perform or abide by the terms or spirit of this Agreement, or (f) for any other just cause. The CITY may so terminate this Agreement, in whole or in part, by giving the CONTRACTOR at least 3 calendar days written notice.

10.2. If, after notice of termination of this Agreement as provided for in paragraph 10.1 above, it is determined for any reason that the CONTRACTOR was not in default, or that its default was excusable, or that the CITY otherwise was not entitled to the remedy against the CONTRACTOR provided for in paragraph 10.1, then the notice of termination given pursuant to paragraph 10.1 shall be deemed to be the notice of termination provided for in paragraph 10.3 below and the CONTRACTOR's remedies against the CITY shall be the same as and limited to those afforded the CONTRACTOR under paragraph 10.3 below.

10.3. The CITY shall have the right to terminate this Agreement, in whole or in part, without cause upon 7 calendar days written notice to the CONTRACTOR. In the event of such termination for convenience, the CONTRACTOR's recovery against the CITY shall be limited to that portion of the fee earned through the date of termination, together with any retainage withheld and any costs reasonably incurred by the CONTRACTOR that are directly attributable to the termination, but the CONTRACTOR shall not be entitled to any other or further recovery against the CITY, including, but not limited to, anticipated fees or profits on work not required to be performed.

ARTICLE ELEVEN
CONFLICT OF INTEREST

11.1. The CONTRACTOR represents that it presently has no interest and shall acquire no interest, either direct or indirect, which would conflict in any manner with the performance of services required hereunder. The CONTRACTOR further represents that no persons having any such interest shall be employed to perform those services.

ARTICLE TWELVE
MODIFICATION

12.1. No modification or change in this Agreement shall be valid or binding upon the parties unless in writing and executed by the party or parties intended to be bound by it.

ARTICLE THIRTEEN
NOTICES AND ADDRESS OF RECORD

13.1. All notices required or made pursuant to this Agreement to be given by the CONTRACTOR to the CITY shall be in writing and shall be delivered by hand or by United States Postal Service Department, first class mail service, postage prepaid, return receipt requested, addressed to the following CITY's address of record:

City of Naples
735 Eighth Street South
Naples, Florida 34102-3796
Attention: **A. William Moss**, City Manager

13.2. All notices required or made pursuant to this Agreement to be given by the CITY to the CONTRACTOR shall be made in writing and shall be delivered by hand or by the United States Postal Service Department, first class mail service, postage prepaid, return receipt requested, addressed to the following CONTRACTOR's address of record:

Vantage Construction Services, LLC
8801 College Parkway, Suite 2
Fort Myers, Florida 33919
Attention: **Phil Morris**, Vice President
FEI/EIN Number: On File

13.3. Either party may change its address of record by written notice to the other party given in accordance with requirements of this Article.

ARTICLE FOURTEEN
MISCELLANEOUS

14.1. The CONTRACTOR assumes toward the CITY a duty of care commensurate with that which is imposed upon persons or firms in contractor's profession. CONTRACTOR will make reasonable efforts to ensure that its employees and agents maintain a professional demeanor and that the work area is compliant with CITY property maintenance and Project standards.

14.2. No modification, waiver, suspension or termination of the Agreement or of any terms thereof shall impair the rights or liabilities of either party.

14.3. This Agreement is not assignable, in whole or in part, by the CONTRACTOR without the prior written consent of the CITY.

14.4. Waiver by either party of a breach of any provision of this Agreement shall not be deemed to be a waiver of any other breach and shall not be construed to be a modification of the terms of this Agreement.

14.5. The headings of the Articles, Exhibits, Parts and Attachments as contained in this Agreement are for the purpose of convenience only and shall not be deemed to expand, limit or change the provisions in such Articles, Exhibits, Parts and Attachments.

14.6. This Agreement constitutes the entire agreement between the parties hereto and shall supersede, replace and nullify any and all prior agreements or understandings, written or oral, relating to the matter set forth herein, and any such prior agreements or understanding shall have no force or effect whatever on this Agreement.

14.7. The CONTRACTOR shall comply fully with all provisions of state and federal law, including without limitation all provisions of the Immigration Reform and Control Act of 1986 ("IRCA") as amended, as well as all related immigration laws, rules, and regulations pertaining to proper employee work authorization in the United States. The CONTRACTOR shall execute the Certification of Compliance with Immigration Laws, attached hereto as **EXHIBIT D.**

14.8 To the extent that any provision in the Specifications or any other Contract Documents pertaining to this Project conflict with any provision of this Agreement, this Agreement controls.

14.9 Dispute Resolution. Disputes under this Agreement shall be resolved through mutual consultation between the parties within 14 days after notice; and failing resolution through mutual consultation, through mediation within 30 days thereafter; and failing mediation, through Arbitration under the Florida Arbitration Code, by a single arbitrator. If the parties cannot agree on a mediator or arbitrator, within 14 days of failure of the previous method, they shall request the Chief Judge of the 20th Judicial Circuit to appoint a mediator, or an arbitrator, as the case may be. Time periods are waivable by mutual agreement of the parties, but shall not exceed 90 days for completion of the processes described herein, unless by mutual agreement. Costs of the mediator or arbitrator shall be shared equally.

14.10 Attorneys' fees. Except as otherwise provided herein, each party shall be responsible for its own attorneys' fees.

ARTICLE FIFTEEN
APPLICABLE LAW

15.1. Unless otherwise specified, this Agreement shall be governed by the laws, rules, and regulations of the State of Florida, and by the laws, rules and regulations of the United States when providing services funded by the United States government. Any suit or action brought by either party to this Agreement against the other party relating to or arising out of this Agreement must be brought in the appropriate Florida state court in Collier County, Florida.

END OF ARTICLE PAGE

IN WITNESS WHEREOF, the parties hereto have executed this Agreement for the day and year first written above.

ATTEST:

By: _____
Patricia L. Rambosk, City Clerk

CITY:

CITY OF NAPLES, FLORIDA,
A Municipal Corporation

By: _____
A. William Moss, City Manager

Approved as to form
and legal sufficiency:

By: Robt D. Pritt
Robert D. Pritt, City Attorney

CONTRACTOR:

Connie Boyd
Witness

Connie Boyd
Witness Printed Name

CONTRACTOR:

VANTAGE CONSTRUCTION SERVICES, LLC
8801 College Parkway, Suite 2
Fort Myers, Florida 33919
Attention: **Phil Morris**, Vice President

By: _____

Printed Name: **Phil Morris**

Title: **Vice President**

FEI/EIN Number: On File
A Florida Limited Liability Company (FL)

(CORPORATE SEAL)

VANTAGE CONSTRUCTION SERVICES LLC
CORPORATE
SEAL
FLORIDA

EXHIBIT A

SCOPE OF SERVICES

The Scope of Services to be provided under this Agreement are included in Attachment A-1 which is attached and made a part of this Agreement and those set out in the Bid, any issued Addendum(s) and Vendor's Submittal of (ITB) Invitation To Bid No.18-002, titled Fire Station No. 2 Improvements herein referenced and made a part of this Agreement.

END OF EXHIBIT A

City of Naples FL

Invitation to Bid # 18-002
Fire Station #2 Improvements

PROJECT DESCRIPTION

The Fire Station # 2 HVAC Improvement Project, located at 977 26th Ave North, is comprised of HVAC system improvement and electrical system upgrade. Fire Station #2 must be kept in operation 24 hours per day and 7 days per week. To accomplish this, the work must proceed in three phases.

- Phase 1 covers the Day room/kitchen/ Radio room areas.
- Phase 2 covers the bunk room areas.
- Phase 3 covers the wellness area.

QUALIFICATIONS

The Contractor must demonstrate they are qualified and licensed by the State of Florida or Collier County to perform the work scope described below and on the drawings.

COMPLETION

The project duration is 150 days after Notice to Proceed to substantial completion and another 30 days to Final Completion and project closeout.

SCOPE OF WORK

HVAC System improvements was designed by AMEC and their sub-consultant AWS. The major components of the new HVAC system is the replacement of the existing six interior ceiling mounted air handlers with three new exterior located air handlers. The existing electrical system in the kitchen area is being upgraded to address the frequent shut down or blown breakers. New LED ceiling lights are being added. The existing ceiling tile is being upgraded with gypsum board system to significantly improve the energy efficiency of the station.

Unless otherwise stated in the documents, the Contractor shall be required to provide the items, vendor, and model number specified in the drawings. Should the Contractor wish to submit APPROVED EQUIVALENTS as provided under Section 8 of the General Conditions, this must be done 10 days prior to bid for owner review and approval.

The base HVAC scope includes Trane TCC A/C or approved equivalent equipment. The upgraded bid is the incremental cost to provide Trane THC A/C (high efficiency) units. The incremental additional cost will include any and all modifications required for the larger equipment such as concrete base, supports, equipment platforms, electrical, and duct work.

In general, the Work includes, but is not limited to:

1. All demolition including ceilings, insulation, grid, soffit, bulkheads, headers, fans, etc.

2. Temporary relocate and return equipment and furniture per phase. Protect all kitchen casework, counters and equipment.

3. Temporary support for existing light fixtures. Remove and store smoke detectors, speakers, strobes, horns, emergency and exit lights etc. to be reinstalled.

4. Phase Removal of all existing HVAC equipment, piping, electrical, controls, etc.

5. Supply and install PAC 1, 2, and 3 and all associated supports including HVAC platforms and concrete base.

6. Electrical power supply to and from local disconnect switch to each PAC.

7. All ducts, supply and return registers, motorized dampers.

8. Moving equipment, furniture, etc. and protect equipment as required to accomplish each phase.

9. All cutting and patching of exterior and interior walls.

10. Supply and install all new light fixtures and switches/occupancy sensors per Phase.

11. Supply and install new ceiling fans per Phase.

12. Reinstall all smoke detectors, speakers, strobes, horns, emergency and exit lights etc. in new ceiling per Phase.

13. Provide temporary power to kitchen when kitchen electrical upgrade work is undertaken.

14. Power supply for motorized dampers.

15. Install all new ceilings, including access hatches per Phase.

16. Relocate/modify fire sprinkler system as needed per Phase.

17. New duct chase in Day Room.

18. Patch and repair existing bathrooms hard ceilings.

The following items are clarifications of items provided in the drawings.

1. A-300 – Please note that the platform material of construction is galvanized steel. Contractor is responsible for removing any existing concrete pads and providing new per S-100.

2. A-300 – Detail 1 and 2. Remove requirement to furnish and install R19 blown-insulation over hard ceiling/batt over ACT.

3. M-201 – Remodel Notes. The existing kitchen makeup air system shall remain except that a new ceiling diffuser is to be provided and the contractor shall modify the ductwork as required to install the new diffuser.

###

EXHIBIT B

BASIS OF COMPENSATION

As consideration for providing the Services as set forth in the Agreement, the CITY agrees to pay, and the CONTRACTOR agrees to accept payment on a time and reimbursement cost basis as indicated below in Exhibit B, which is attached and made part of this Agreement. The CITY has added HVAC equipment Item-2 upgrade at $2,200.00 and Item-11 a $20,000.00 CITY controlled Contingency to the issuance of this Agreement making the total amount of the Agreement at $364,408.00.

Retainage: (N/A) Not applicable to this Agreement.

Attachment A – Cost Schedule

Cost Schedule

City of Naples Fire Station #2 HVAC Improvements

HVAC Construction/Installation

ITEM	DESCRIPTION	QUANTITY	UNIT	BASE COST	UPGRADE COST *
1	Demolition	1	LS	$ 18,000.00	$ -
2	HVAC equipment (Trane TCC A/C)	1	LS	$ 56,500.00	$ 2,200.00 -
3	Ducts, Registers, Dampers	1	LS	$ 38,750.00	$ -
4	Electrical	1	LS	$ 24,329.00	$ -
5	Light Fixtures Material	1	LS	$ 30,254.00	$ -
6	Light Fixture Installation	1	LS	$ 8,917.00	$ -
7	New Ceilings	1	LS	$ 23,400.00	$ -
8	Fire Sprinkler Modifications	1	LS	$ 8,840.00	$ -
7	Duct Chase in Day Room	1	LS	$ 7,000.00	$ -
8	Other items	1	LS	$ 73,871.00	$ -
9	Permits	1	LS	$ 5,000.00	$ -
10	General Condition	1	LS	$ 47,347.00	$ -
11	City Controlled Allowance			$ 20,000.00	$ 20,000.00
	TOTAL			$ 362,208.00	$ -
	* NOTE 1: The upgraded bid is the incremental additional cost to provide Trane THC A/C equipment (high efficiency), including any and all modifications incremental increase to utilize high efficiency units. See project description.				

The City may choose to proceed with award on base bid or upgraded bid, depending on what is in the best interest of the City.

Company Name: Vantage Construction Services LLC

EIN: 47-1959369

Email: Phil@VantageConstructionllc.com

Name and Title of individual completing this schedule:

Philip Morris (Printed Name) Vice President (Title)

(Signature) 10-3-17 (Date)

END OF EXHIBIT B

EXHIBIT C

GENERAL INSURANCE REQUIREMENTS

The Contractor shall not commence work until he has obtained all the insurance required under this heading, and until such insurance has been approved by the Owner, nor shall the Contractor allow any subcontractor to commence work until all similar insurance required of the subcontractor has also been obtained and approved by the Owner.

Certificates of insurance must be issued by an authorized representative of the insurance company at the request and direction of the policyholder and must include sufficient information so as to identify the coverage and the contract for Owner's improvements for which they are issued. Certificates of insurance must be issued by a nationally recognized insurance company with a Best's Rating of no less than B+VII, satisfactory to the Owner, and duly authorized to do business in the state of said Contract.

The Contractor shall procure and maintain, during the life of this Contract, Workmen's Compensation Insurance for all of his employees to be engaged in work under this Contract, and he shall require any subcontractor similarly to provide Workmen's Compensation Insurance for all of the latter's employees to be engaged in such work, unless such employees are covered by the protection afforded by the Contractor's insurance. In case any employees are to be engaged in hazardous work under this Contract, and are not protected under this Workmen's Compensation statute, the Contractor shall provide, and shall cause each subcontractor to provide, adequate coverage for the protection of such employees. It is acceptable to use a State-approved Workmen's Compensation Self-Insurance fund.

The Contractor shall take out and maintain during the life of this Contract, Public Liability and Property Damage and shall include Contractual Liability, Personal Injury, Libel, Slander, False Arrest, Malicious Prosecution, Wrongful Entry or Eviction, Broad Form Property Damage, Products, Completed Operations and XCU Coverage to be included on an occurrence basis, and to the full extent of the Contract to protect him, the Owner, and any subcontractor performing work covered by this Contract from damages for personal injury, including accidental death, as well as from claims for property damage, which may arise from operations under this contract, whether such operations be by himself or by a subcontractor, or by anyone directly or indirectly employed by either of them. The Contractor shall also maintain automobile liability insurance including "non-owned and hired" coverage. The entire cost of this insurance shall be borne by the Contractor.

The amount of such insurance shall be no less than $1,000,000 annual aggregate for bodily injury and property damage combined per occurrence.

The City of Naples must be named as Additional Insured on the insurance certificate and the following must also be stated on the certificate. "These coverage's are primary to all other coverage's the City possesses for this contract only." The City of Naples shall be named as the Certificate Holder. The Certificate Holder shall read as follows:

The City of Naples
735 Eighth Street South
Naples, Florida 34102

No City Division, Department, or individual name should appear on the Certificate.
No other format will be acceptable.

The Certificate must state the bid number and title.

When using the ACORD 25 – Certificate of Insurance only the most current version will be accepted.

The City of Naples requires a copy of a cancellation notice in the event the policy is cancelled. The City of Naples shall be expressly endorsed onto the policy as a cancellation notice recipient.

[If other insurance or insurance requirements or any waivers, attach as Exhibit C-1through C-__]

EXHIBIT D

CERTIFICATION OF COMPLIANCE WITH IMMIGRATION LAWS

The undersigned is the **Vice President of the Vantage Construction Services, LLC** company ("the CONTRACTOR"), and hereby certifies to the following:

1. The CONTRACTOR is in full compliance with all provisions of the Immigration Reform and Control Act of 1986 ("IRCA"), as well as all related immigration laws, rules, regulations pertaining to proper employee work authorization in the United States.

2. The undersigned has verified that the CONTRACTOR has obtained and maintains on file, and will continue to obtain and maintain on file, all documentation required by law, including but not limited to, Form I-9, Employment Eligibility Verification, for all persons employed by or working for the CONTRACTOR in any capacity on any project for the City of Naples (CITY). All such persons have provided evidence of identity and eligibility to work to the CONTRACTOR in accordance with the IRCA and related law. The undersigned hereby affirms that no person has been or will be employed by the CONTRACTOR to work on projects for the CITY who is not authorized to work under law. The undersigned further affirms that the CONTRACTOR's files will be updated by written notice any time that additional employees work on projects for the CITY.

3. The CONTRACTOR will have its contractors, subcontractors, suppliers and vendors who are involved in projects for the CITY to sign a written acknowledgment that they too are in compliance with immigration law. It is understood that failure to do so could result in the CONTRACTOR being liable for any violation of the law by such third parties.

4. The CONTRACTOR will fully cooperate with and have its contractors, subcontractors, suppliers and vendors to fully cooperate with, all inquiries and investigations conducted by any governmental agency in connection with proper compliance with the laws pertaining to appropriate work authorization in the United States.

5. The undersigned, on behalf of the CONTRACTOR, acknowledges that this Certification may be relied upon by the CITY, its officers, directors, employees, and affiliates or related persons and entities.

6. If it is found that the CONTRACTOR has not complied with the laws pertaining to proper employment authorization, and any legal and administrative action ensues against the CITY, the CONTRACTOR will indemnify, defend and hold the CITY harmless along with their officers, directors, employees, and affiliated or related persons and entities.

7. The CONTRACTOR acknowledges that the CITY by their authorized representatives shall have the right, at any time, upon 24 hours' notice, to examine the CONTRACTOR's books and records to confirm that the CONTRACTOR is in compliance with the terms of this certification.

Executed this 2 day of February, 2018.

By: _____

Phil Morris, Vice President

Analysis of Bid

ANALYSIS

18-002 Fire Station #2 Improvements ITB
Department Estimated Cost: $250,000
Date: November 7, 2017

PROJECT SUMMARY
City of Naples Fire Station #No. 2 is located at 977 26th Ave N. The HVAC and certain components of the electrical systems have reached the end of their useful life and need to be upgraded. This bid was to identify qualified contractors for this work.

BACKGROUND
Fifty-eight (58) city registered vendors were sent information regarding Invitation to Bid No. 18-002 which was advertised in the Naples Daily News on October 16, 2017 and posted on the City's web site. A public notice was also posted with the City Clerk's Office. Demand Star notified 170 potential vendors and four (4) planholders. There was a non-mandatory pre-bid meeting for this bid held on October 20, 2017. Sealed bids were received and opened on November 3, 2017, with three (3) vendors submitting proposals.

ANALYSIS
The Purchasing Division is indicating Vantage Construction Services, LLC (EIN 47-1959369) as the low responsive bidder with a base bid price of $362,208.00. Please note, the Blue Spark Electrical's submission did not hold General Contractor's licenses and deemed not qualified, non-responsive.

Vantage Construction Services, LLC's non-technical elements of their submission were not deficient in any manner. The company's solicitation submission was found responsive, and the below data on the company indicate an acceptable level of responsibility. The firm is currently a city registered vendor (#13059) in good standing with an active status. The firm has been verified as active in the Florida's Division of Corporations database. Vantage Construction Services has a current Certified General Contractor's license (CGC1519835) registered with the State of Florida. A check of the firm's references found no negative findings or areas of concern.

Please provide your concurrence as soon as you are satisfied with the technical portions of the submission, at which time Purchasing will post a Notice of Declaration of Intent to Award. Accompanying this analysis, please find the following support information:

Attachment A - BID TABULATION
Attachment B - REFERENCES CONTACTED
Attachment C - W-9
Attachment D - BID BOND
Attachment E – LICENSE(S) AND FEDERAL DATABASE SEARCH
Attachment F - FLORIDA COMPANY VERIFICATION

Attachment A - BID TABULATION

City of Naples

Opening Date 11/03/17 - FOR INFORMATION PURPOSE ONLY

Bid Tab 18-002 Fire Station #2 Improvements

				Vantage Construction Services LLC		DEC Contracting Group Inc.		Blue Spark Electrical Inc.	
ITEM	DESCRIPTION	QUANTITY	UNIT	BASE COST	UPGRADE COST*	BASE COST	UPGRADE COST*	BASE COST	UPGRADE COST*
1	Demolition	1	LS	$18,000.00	$0.00	$13,845.00	$0.00	$0.00	$0.00
2	HVAC equipment (Trane TCC A/C)	1	LS	$56,500.00	$2,200.00	$28,314.00	$4,500.00	$0.00	$0.00
3	Ducts, Registers, Dampers	1	LS	$38,750.00	$0.00	$47,171.00	$0.00	$0.00	$0.00
4	Electrical	1	LS	$24,329.00	$0.00	$44,170.00	$0.00	$27,733.85	$0.00
5	Light Fixtures Material	1	LS	$30,254.00	$0.00	$22,085.00	$0.00	$24,786.80	$0.00
6	Light Fixture Installation	1	LS	$8,917.00	$0.00	$10,193.00	$0.00	$12,000.00	$0.00
7	New Ceilings	1	LS	$23,400.00	$0.00	$28,955.00	$0.00		$0.00
8	Fire Sprinkler Modifications	1	LS	$8,840.00	$0.00	$8,607.00	$0.00	$0.00	$0.00
7	Duct Chase in Day Room	1	LS	$7,000.00	$0.00	$2,265.00	$0.00	$0.00	$0.00
8	Other items	1	LS	$73,871.00	$0.00	$79,019.00	$0.00	$0.00	$0.00
9	Permits	1	LS	$5,000.00	$0.00	$5,662.00	$0.00	$0.00	$0.00
10	General Condition	1	LS	$47,347.00	$0.00	$92,757.00	$0.00	$0.00	$0.00
11	City Controlled Allowance			$20,000.00	$20,000.00	$20,000.00	$20,000.00	~~$20,000.00~~	$20,000.00
	TOTAL			**$362,208.00**	$0.00	**$403,043.00**	$0.00	**$64,520.65**	$0.00
	* NOTE 1: The upgraded bid is the incremental additional cost to provide Trane THC A/C equipment (high efficiency), including any and all modifications incremental increase to utilize high efficiency units. See project description.								

The City may choose to proceed with award on base bid or upgraded bid, depending on what is in the best interest of the City.

Attachment B - REFERENCES CONTACTED

REFERENCES

THIS SHEET MUST BE COMPLETED AND RETURNED WITH BID

PROVIDE AT LEAST THREE NON-CITY REFERENCES FOR WHOM YOUR COMPANY HAS PROVIDED SAME OR SIMILAR SERVICES WITHIN THE LAST 2 YEARS.

COMPANY NAME: City of Naples/Building Department

ADDRESS: 295 Riverside Circle, Naples, FL 34102

TELEPHONE: 239-213-5008

CONTACT PERSON: Craig Mole, Chief Building Official

CONTACT E-MAIL ADDRESS: cmole@naplesgov.com

COMPANY NAME: Charlotte County Airport Authority

ADDRESS: 28000 Airport Road, Punta Gorda, FL 33982

TELEPHONE: 941-639-1101 Ext 129

CONTACT PERSON: Ron Ridenour

CONTACT E-MAIL ADDRESS: rridenour@flypgd.com

COMPANY NAME: Jordan Reses Supply

ADDRESS: 2535 Crystal Drive, Ft. Myers, FL 33966-8361

TELEPHONE: 734-929-1460

CONTACT PERSON: Steve Baugh, CEO

CONTACT E-MAIL ADDRESS: sbaugh@jrsupply.com

Submitting Vendor Name: Vantage Construction Services, LLC

Attachment C - W-9

W-9 FORM MUST BE COMPLETED AND RETURNED WITH BID

Fillable Form can also be downloaded at
https://www.irs.gov/pub/irs-pdf/fw9.pdf

Form **W-9**
(Rev. December 2014)
Department of the Treasury
Internal Revenue Service

Request for Taxpayer Identification Number and Certification

Give Form to the requester. Do not send to the IRS.

Print or type
See Specific Instructions on page 2.

1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.
Vantage Construction Services, LLC

2 Business name/disregarded entity name, if different from above

3 Check appropriate box for federal tax classification; check only one of the following seven boxes:
☐ Individual/sole proprietor or single-member LLC ☐ C Corporation ☐ S Corporation ☐ Partnership ☐ Trust/estate
☒ Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=partnership) ▶ P
Note. For a single-member LLC that is disregarded, do not check LLC; check the appropriate box in the line above for the tax classification of the single-member owner.
☐ Other (see instructions) ▶

4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):
Exempt payee code (if any) _____
Exemption from FATCA reporting code (if any) _____
(Applies to accounts maintained outside the U.S.)

5 Address (number, street, and apt. or suite no.)
8801 College Parkway, Suite 2

Requester's name and address (optional)

6 City, state, and ZIP code
Fort Myers, FL 33919

7 List account number(s) here (optional)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the Part I instructions on page 3. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN* on page 3.

Note. If the account is in more than one name, see the instructions for line 1 and the chart on page 4 for guidelines on whose number to enter.

Social security number
___ - ___ - ____

or

Employer identification number
47 - 1959369

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions on page 3.

Sign Here Signature of U.S. person ▶ [signature] Date ▶ 10-31-17

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. Information about developments affecting Form W-9 (such as legislation enacted after we release it) is at *www.irs.gov/fw9*.

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following:

- Form 1099-INT (interest earned or paid)
- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See *What is backup withholding?* on page 2.

By signing the filled-out form, you:

1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
2. Certify that you are not subject to backup withholding, or
3. Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income, and
4. Certify that FATCA code(s) entered on this form (if any) indicating that you are exempt from the FATCA reporting, is correct. See *What is FATCA reporting?* on page 2 for further information.

Cat. No. 10231X Form **W-9** (Rev. 12-2014)

Attachment D - BID BOND

THE AMERICAN INSTITUTE OF ARCHITECTS

AIA Document A310

Bid Bond

KNOW ALL MEN BY THESE PRESENTS, that we

Vantage Construction Services, LLC, 8801 College Parkway, Suite 2, Ft. Myers, FL 33919
as Principal, hereinafter called the Principal, and

Nationwide Mutual Insurance Company, One West Nationwide Boulevard, 1-04-701, Columbus, OH 43215
a corporation duly organized under the laws of the State of **Ohio** as Surety, hereinafter called the Surety, are held and firmly bound unto

City of Naples - Purchasing Division, City Hall, 735 8th Street South, Naples, FL 34102
as Obligee, hereinafter called the Obligee, in the sum of **FIVE Percent of the amount bid**

Dollars ($ 362,208.00)

for the payment of which sum well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a bid for
#17-017, Fire Station Improvements, 977 26th Avenue N., Naples, FL 34103

NOW, THEREFORE, if the Obligee shall accept the bid of the Principal and the Principal shall enter into a Contract with the Obligee in accordance with the terms of such bid, and give such bond or bonds as may be specified in the bidding or Contract Documents with good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof, or in the event of the failure of the Principal to enter such Contract and give such bond or bonds, if the Principal shall pay to the Obligee the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Obligee may in good faith contract with another party to perform the Work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

Signed and sealed this **3rd** day of November, 2017.

VANTAGE CONSTRUCTION SERVICES CORPORATE SEAL FLORIDA

(Witness)

Vantage Construction Services, LLC (Seal)
(Principal)

(Witness)

Nationwide Mutual Insurance Company (Seal)
(Surety)

Paul A. Locascio, Attorney-in-Fact
& Florida Licensed Resident Agent

AIA DOCUMENT A310 - BID BOND - AIA - FEBRUARY 1970 ED - THE AMERICAN INSTITUTE OF ARCHITECTS 1735 N Y AVE N W WASHINGTON, D C 20006

G-23248-A

Nationwide®

Power of Attorney

KNOW ALL MEN BY THESE PRESENTS THAT:

Nationwide Mutual Insurance Company, an Ohio corporation
National Casualty Company, an Ohio corporation

AMCO Insurance Company, an Iowa corporation
Allied Property and Casualty Insurance Company, an Iowa corporation

hereinafter referred to severally as the "Company" and collectively as "the Companies" does hereby make, constitute and appoint:

Benjamin H. French, Pamela L. Jarman, K. Wayne Walker, Rebekah G. Wolf, Clyde D. Hare, Paul A. Locascio, L. Dale Waldorff

each in their individual capacity, its true and lawful attorney-in-fact, with full power and authority to sign, seal, and execute on its behalf any and all bonds and undertakings, and other obligatory instruments of similar nature, in penalties not exceeding the sum of

Ten Million Dollars and no/100 $10,000,000.00

and to bind the Company thereby, as fully and to the same extent as if such instruments were signed by the duly authorized officers of the Company; and all acts of said Attorney pursuant to the authority given are hereby ratified and confirmed.

This power of attorney is made and executed pursuant to and by authority of the following resolution duly adopted by the board of directors of the Company:

"RESOLVED, that the president, or any vice president be, and each hereby is, authorized and empowered to appoint attorneys-in-fact of the Company, and to authorize them to execute and deliver on behalf of the Company any and all bonds, forms, applications, memorandums, undertakings, recognizances, transfers, contracts of indemnity, policies, contracts guaranteeing the fidelity of persons holding positions of public or private trust, and other writings obligatory in nature that the business of the Company may require; and to modify or revoke, with or without cause, any such appointment or authority; provided, however, that the authority granted hereby shall in no way limit the authority of other duly authorized agents to sign and countersign any of said documents on behalf of the Company."

"RESOLVED FURTHER, that such attorneys-in-fact shall have full power and authority to execute and deliver any and all such documents and to bind the Company subject to the terms and limitations of the power of attorney issued to them, and to affix the seal of the Company thereto; provided, however, that said seal shall not be necessary for the validity of any such documents."

This power of attorney is signed and sealed under and by the following bylaws duly adopted by the board of directors of the Company

Execution of Instruments. Any vice president, any assistant secretary or any assistant treasurer shall have the power and authority to sign or attest all approved documents, instruments, contracts, or other papers in connection with the operation of the business of the company in addition to the chairman of the board, the chief executive officer, president, treasurer or secretary; provided, however, the signature of any of them may be printed, engraved, or stamped on any approved document, contract, instrument, or other papers of the Company

IN WITNESS WHEREOF, the Company has caused this instrument to be sealed and duly attested by the signature of its officer the 16th day of February, 2017

Antonio C. Albanese, **Vice President** of Nationwide Mutual Insurance Company, National Casualty Company, AMCO Insurance Company, Allied Property and Casualty Insurance Company

ACKNOWLEDGMENT

STATE OF NEW YORK, COUNTY OF NEW YORK: ss

On this 16th day of February, 2017, before me came the above-named officer for the Company aforesaid, to me personally known to be the officer described in and who executed the preceding instrument, and he acknowledged the execution of the same, and being by me duly sworn, deposes and says, that he is the officer of the Company aforesaid, that the seal affixed hereto is the corporate seal of said Company, and the said corporate seal and his signature were duly affixed and subscribed to said instrument by the authority and direction of said Company.

BARRY T BASSIS
Notary Public, State of New York
No. 02BA4656400
Qualified in New York County
Commission Expires April 30, 2019

Notary Public
My Commission Expires
April 30, 2019

CERTIFICATE

I, Parag H. Shah, Assistant Secretary of the Company, do hereby certify that the foregoing is a full, true and correct copy of the original power of attorney issued by the Company; that the resolution included therein is a true and correct transcript from the minutes of the meetings of the boards of directors and the same has not been revoked or amended in any manner; that said Antonio C. Albanese was on the date of the execution of the foregoing power of attorney the duly elected officer of the Company, and the corporate seal and his signature as officer were duly affixed and subscribed to the said instrument by the authority of said board of directors; and the foregoing power of attorney is still in full force and effect.

IN WITNESS WHEREOF, I have hereunto subscribed my name as Assistant Secretary, and affixed the corporate seal of said Company this 3rd day of November, 2017

This power of attorney expires: April 30, 2019

Assistant Secretary

BDJ 1(01-17)00

Attachment E – LICENSE(S)

2:09:27 PM 11/6/2017

Data Contained In Search Results Is Current As Of 11/06/2017 02:07 PM.

Search Results

Please see our glossary of terms for an explanation of the license status shown in these search results.

For additional information, including any complaints or discipline, click on the name.

License Type	Name	Name Type	License Number/ Rank	Status/Expires
Certified General Contractor	VANTAGE CONSTRUCTION SERVICES, LLC	DBA	CGC1519835 Cert General	Current, Active 08/31/2018
	License Location Address*: 8801 COLLEGE PARKWAY, SUITE #2 FORT MYERS, FL 33919			
	Main Address*: 5535 COGNAC DR FT. MYERS, FL 33919			
Construction Business Information	VANTAGE CONSTRUCTION SERVICES, LLC	Primary	Business Info	Current
	License Location Address*: 8801 COLLEGE PARKWAY, SUITE #2 FORT MYERS, FL 33919			
	Main Address*: 5535 COGNAC DRIVE FORT MYERS, FL 33919			

Back New Search

*** denotes**
Main Address - This address is the Primary Address on file.
Mailing Address - This is the address where the mail associated with a particular license will be sent (if different from the Main or License Location addresses).
License Location Address - This is the address where the place of business is physically located.

RICK SCOTT, GOVERNOR KEN LAWSON, SECRETARY

STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION
CONSTRUCTION INDUSTRY LICENSING BOARD

LICENSE NUMBER	
CGC1519835	

The GENERAL CONTRACTOR
Named below IS CERTIFIED
Under the provisions of Chapter 489 FS.
Expiration date: AUG 31, 2018

SWARTZ, TRENTON READ
VANTAGE CONSTRUCTION SERVICES LLC
8801 COLLEGE PARKWAY, SUITE #2
FORT MYERS FL 33919

ISSUED: 09/01/2016 DISPLAY AS REQUIRED BY LAW SEQ # L1609010003872

DIVISION OF CORPORATIONS

Attachment F - FLORIDA COMPANY VERIFICATION

Sunbiz.org Division of CORPORATIONS an official State of Florida website

Department of State / Division of Corporations / Search Records / Detail By Document Number /

Detail by FEI/EIN Number

Florida Limited Liability Company
VANTAGE CONSTRUCTION SERVICES, LLC

Filing Information

Document Number	L14000151947
FEI/EIN Number	47-1959369
Date Filed	09/29/2014
Effective Date	09/25/2014
State	FL
Status	ACTIVE

Principal Address

8801 College Pkwy
Suite 2
FORT MYERS, FL 33919

Changed: 02/23/2015

Mailing Address

8801 College Pkwy
Suite 2
FORT MYERS, FL 33919

Changed: 02/23/2015

Registered Agent Name & Address

JONES, CHARLES C, ESQ.
1633 SE 47TH TERRACE
CAPE CORAL, FL 33904

Authorized Person(s) Detail

Name & Address

Title MGR

SWARTZ, TRENT
5535 COGNAC DRIVE
FORT MYERS, FL 33919

Title MGR

MORRIS, PHILIP J
2004 NE 42ND TERRACE

2004 NE 42ND TERRACE
CAPE CORAL, FL 33909

Title MGR

FRY, DAVID
5911 WEST RIVERSIDE DRIVE
FORT MYERS, FL 33919

Annual Reports

Report Year	Filed Date
2015	02/23/2015
2016	03/11/2016
2017	01/13/2017

Document Images

01/13/2017 -- ANNUAL REPORT	View image in PDF format
03/11/2016 -- ANNUAL REPORT	View image in PDF format
02/23/2015 -- ANNUAL REPORT	View image in PDF format
09/29/2014 -- Florida Limited Liability	View image in PDF format

City Council Agenda Item Report

Submitted by: Tarin Bachel
Submitting Department: Fire-Rescue
Meeting Date: February 21, 2018

SUBJECT
(1) Resolution amending the Interlocal Agreement between the City of Naples Airport Authority and the City of Naples that establishes procedures and conditions for providing 24-hour aircraft rescue and firefighting services at the Naples Municipal Airport; approving the amended Interlocal Agreement.

(2) Resolution amending the FY 2017-18 Budget adopted by Resolution 2017-14027 to appropriate contracted revenue to be received from the Naples Airport Authority to increase fire service to the Naples Municipal Airport.

Legislative Type:
Legislative Item

Funding Source:
NAA shall reimburse the City for the actual cost of providing ARFF services under the Agreement. A budget amendment will be prepared acknowledging the revenue, directing the revenue to the GF and appropriating revenue from the fund balance of the GF.

Recommendation:
(1) Approve the Resolution; and (2) Approve the Resolution.

ATTACHMENTS
- Agenda Memorandum
- (1) Resolution - Amending Interlocal Agreement
- (2) Resolution - Amending budget
- Amended Interlocal Agreement (track changes)

AGENDA MEMORANDUM ***Fire - Rescue Department***

Regular Meeting Date: **February 21, 2018**

To: City Council

From: Pete DiMaria, Fire Chief

Date: February 21, 2018

Legislative ☒ Quasi-Judicial ☐

SUBJECT:

1. Resolution amending the Interlocal Agreement with Naples Airport Authority (NAA).
2. Resolution amending the FY17-18 budget adopted by Resolution 17-14027 by appropriating funds for the Naples Airport Authority Fire Services Interlocal Agreement.

SUMMARY:

1. Approve a Resolution amending the Interlocal Agreement with Naples Airport Authority to re-establishes 24-hour Fire and Aircraft Rescue and Fire Fighting (ARFF) Services coverage and continues established procedures and conditions at Naples Airport.

2. Approve a Resolution amending the 2017-18 budget, adopted by Resolution 17-14027, to appropriate funds from the unassigned fund balance of the General Fund to increase the overtime budget of the Fire-Rescue Department for the provision of Aircraft Rescue and Firefighting Services at the Naples Municipal Airport; adjusting revenue in the General Fund in accordance with the Interlocal Agreement between the City of Naples and the City of Naples Airport Authority.

BACKGROUND:

1. Naples Fire-Rescue provided fire and ARFF service to Naples Airport Authority for over 30 years. In October 2015, negotiations were held between the City of Naples and Naples Airport Authority. An agreement was reached to provide fire and ARFF services by Naples Fire-Rescue personnel utilizing overtime with reimbursement from the NAA. The overtime hours begin each day at 7:00 a.m. and terminate at 10:00 p.m., a reduction of nine hours per day. A Resolution adopting an Interlocal Agreement was approved by City Council on November 4, 2015.

   There have been on-going discussions to expand the 15-hour fire and ARFF services to 24-hours. These discussions considered response times, incident volume, risk factors and liability issues once Fire Station No. 3 is vacated for nine hours each night.

   Reasons to re-establish 24-hour Fire and ARFF services include: increased night operations at the NAA; times of fuel delivery: medical incident responses; and the overall potential high-hazards located of the airport operations. The Fire-Rescue Department provides structural, vehicle and brush firefighting services, emergency

medical services, HazMat and a variety of additional rescue services to the NAA. Naples Fire-Rescue personnel are familiar with airport property and the nuances associated with the various facilities, aircraft and geography. Fire-Rescue staff assist with Mass Casualty Incident training and preparedness, Fire Inspections and Prevention services and is the Authority Having Jurisdiction as it relates to the Florida Fire Prevention Code.

2. The proposed interlocal agreement provides for ARFF services through personnel assignment on a 24-hour basis with reimbursement by the NAA.

   Naples Fire-Rescue employees are able to provide fire and ARFF services to the NAA on an overtime basis, expanding the 15-hour fire and ARFF services to 24-hours. This expanded service and overtime costs were not budgeted. The overtime expenses are estimated to increase $258,000 annually, which includes payroll and related taxes. Since the fiscal year impact of this agreement is from March 1, 2018 to September 30, 2018, the estimated additional cost for FY 17-18 is $148,000. This estimate is based on providing two employees from 8:00 a.m. to 8:00a.m., seven days per week. Actual costs will be based on the employees who are assigned to work overtime. The NAA is billed each quarter based on the actual overtime cost incurred for the quarter.

   This agreement also affects revenue in the General Fund. The FY 2017-18 budget provides revenue of $457,450 from the NAA for ARFF services. With the amended agreement, revenue will continue to equal the expenses, which is estimated at $533,450 for the seven months, plus $182,000 for the first five months of the fiscal year, for total revenue of $715,450.

FUNDING SOURCE:
The NAA shall reimburse the City for the actual cost of providing fire and ARFF services under this Interlocal Agreement. Following approval of the Interlocal Agreement by the City Council and Board of Commissioners of the NAA, a budget amendment will be prepared, acknowledging the revenue, directing the revenue to the General Fund, and appropriating revenue from the Unassigned Fund Balance of the General Fund to fund the increased overtime expenditure that will be realized in the Naples Fire-Rescue 2017-18 fiscal year budget.

RECOMMENDED ACTION:

1. Approve a Resolution amending the Interlocal Agreement between the Naples Airport Authority and the City of Naples that establishes procedures and conditions for providing 24-hour Aircraft Rescue and Fire Fighting Services at the Naples Municipal Airport; approving the Amended Interlocal Agreement; and authorizing the Mayor to execute the Amended Interlocal Agreement.

2. Approve a Resolution amending the FY2017-18 budget adopted by Resolution 17-14027 by appropriating funds from the unassigned fund balance of the General Fund to increase the overtime budget of the Fire-Rescue Department for the provision of aircraft rescue and firefighting services at the Naples Municipal Airport; adjusting revenue in the General Fund in accordance with the Interlocal Agreement between the City and the NAA.

RESOLUTION 2018-

A RESOLUTION AMENDING THE INTERLOCAL AGREEMENT BETWEEN THE CITY OF NAPLES AIRPORT AUTHORITY AND THE CITY OF NAPLES THAT ESTABLISHES PROCEDURES AND CONDITIONS FOR PROVIDING 24-HOUR AIRCRAFT RESCUE AND FIREFIGHTING SERVICES AT THE NAPLES MUNICIPAL AIRPORT; APPROVING THE AMENDED INTERLOCAL AGREEMENT; AUTHORIZING THE MAYOR TO EXECUTE THE AMENDED INTERLOCAL AGREEMENT; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the City of Naples (City) is responsible for the provision of fire-rescue services within the corporate limits of the City; and

WHEREAS, the Naples Airport Authority (NAA) is a governmental unit charged with the operation, development, and improvement of the Naples Municipal Airport (airport); and

WHEREAS, the NAA leases property from the City, that is located within the corporate limits of the City, for the purpose of providing municipal airport services; and

WHEREAS, the NAA provides general aviation services with thousands of total annual flight operations and recognizes the need for Aircraft Rescue and Firefighting (ARFF) services; and

WHEREAS, the NAA desires to secure reliable and cost-effective ARFF services from the City; and

WHEREAS, the City has provided fire-rescue services with ARFF qualified personnel to the NAA for 30 years and desires to continue providing an enhanced level of fire-rescue services with ARFF qualified personnel and equipment; and

WHEREAS, an agreement by Resolution 15-13715, was reached on November 4, 2015 to provide fire and ARFF services by Naples Fire-Rescue personnel utilizing overtime paid for by the NAA; the overtime hours currently begin each day at 7:00 a.m. and terminate at 10:00 p.m.; and

WHEREAS, there have been ongoing discussions relating to expanding the 15-hour fire and ARFF services to 24-hours that include response times, incident volume, risk factors and liability issues once Fire Station No. 3 is vacated in the evenings; and

WHEREAS, the re-establishment of 24-hour Fire and ARFF services is due to increased night operations, times of fuel delivery, medical incident responses and the overall high hazards located at the airport; the Fire-Rescue Department provides structural, vehicle and brush firefighting services, and emergency medical services to the NAA; and

WHEREAS, the City of Naples Fire-Rescue personnel are familiar with airport property and the nuances associated with the various facilities, aircraft and geography; staff assists with Mass Casualty Incident training and preparedness, fire inspections and prevention services and is the Authority Having Jurisdiction as it relates to the Florida Fire Prevention Code;

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF NAPLES, FLORIDA:

Section 1. That the Interlocal Agreement between the NAA and the City, to provide ARFF services at the airport approved by Resolution 15-13715 and dated November 19, 2015, is hereby amended to indicate provision of 24-hour service. The Amended Interlocal Agreement, a copy of which is attached hereto and incorporated herein by this reference, is hereby approved.

Section 2. That the Mayor is hereby authorized to execute the Amended Interlocal Agreement.

Section 3. This resolution shall take effect immediately upon adoption.

PASSED IN OPEN AND REGULAR SESSION OF THE CITY COUNCIL OF THE CITY OF NAPLES, FLORIDA, THIS 21ST DAY OF FEBRUARY 2018.

Attest:

Patricia L. Rambosk, City Clerk

Bill Barnett, Mayor

Approved as to form and legality:

Robert D. Pritt, City Attorney

Date filed with City Clerk:_____

L\LEGISLATIONCITYCOUNCIL\PENDING

AMENDED INTERLOCAL AGREEMENT BETWEEN THE CITY OF NAPLES, FLORIDA AND THE CITY OF NAPLES AIRPORT AUTHORITY FOR AIRCRAFT RESCUE AND FIREFIGHTING SERVICES

THIS AGREEMENT made this _____ day, of _____ , 2018, by and between the City of Naples Airport Authority, hereinafter referred to as "AUTHORITY", a political subdivision of the State of Florida, whose address is 160 Aviation Drive North, Naples, Florida 34104-3568, Attention: Executive Director, and the City of Naples, hereinafter referred to as "CITY", a political subdivision of the State of Florida, whose address is 735 8th Street South, Naples, Florida 34102, Attention: City Manager.

SECTION ONE

PERSONNEL AND SERVICES

The CITY shall provide the AUTHORITY, and the AUTHORITY shall accept from the CITY, certified firefighting personnel as necessary to meet the requirements of Federal Aviation Regulations, Part 139.315(b)(1) as provided herein, at the Naples Municipal Airport described in Chapter 69-1326 of the Laws of the State of Florida, as amended. The CITY shall provide to the AUTHORITY:

a. Aircraft Rescue and Firefighting services (ARFF) in accordance with Federal Aviation Regulation, Part 139.319 from the CITY of Naples Fire Rescue Department.

b. Two State-Certified, ARFF-trained firefighters per shift, stationed at the Authority provided fire station 24 hours per day, seven days per week.

c. The availability of a sufficient number of State-certified and ARFF certified personnel to meet FAA requirements to support on-site and off-site aircraft emergencies.

d. Continuing training of all ARFF-certified firefighter personnel to support on- site and off-site aircraft emergencies.

e. The benefit of a Public Safety Answering Point for all 9-1-1 calls, computer- aided dispatch with links to Collier County and the State of Florida mutual aid and mass casualty incident response and mitigation.

f. Computer, radio, telecommunications, and emergency alert hardware and software in the AUTHORITY's Fire Station (Station 3).

g. Replacement vehicles and equipment with adequate firefighting capabilities in the event that the AUTHORITY's crash, fire, and rescue vehicles and equipment are temporarily removed from service.

h. CITY Command Staff to provide required operational and administrative oversight of ARFF services required under the provisions of this agreement.

i. Available personnel with extensive HAZMAT training, including aircraft cargo hazards, and access to specific hazardous materials guidance (Part 139.319(i)(2)(x) and 319.3190).

j. Personnel educated and trained in emergency medical services as State of Florida certified Emergency Medical Technicians and Paramedics who meet the training and certification requirements of the Collier County Medical Director and consistent with the Interlocal Agreement between Collier County and the CITY.

k. The benefits of Mutual Aid and Automatic Aid Agreements between the CITY and other Fire-Rescue Agencies within Collier County.

l. Qualified and experienced management of the CITY to insure the provision of a high level of services to the AUTHORITY, consistent with the laws and regulations of the United States, the State of Florida, the CITY, and the AUTHORITY.

m. Personnel operating pursuant to the National Incident Management System (NIMS).

n. Initial and recurrent training and recordkeeping required under Part 139.303, and a dedicated ARFF training liaison to work with AUTHORITY staff to coordinate ARFF required training, drills, inspections, and recordkeeping. Specific training, such as movement area driver training, may be conducted by AUTHORITY personnel, as determined by the AUTHORITY, and coordinated with the CITY ARFF training liaison. Copies of all ARFF training records shall be provided to the AUTHORITY's Director of Operations.

The AUTHORITY shall provide to the City:

a. All crash, fire and rescue equipment and vehicles necessary to meet the requirements of Federal Aviation Regulation, Part 139.317. All vehicles provided to the CITY shall remain the property of the AUTHORITY.

b. A fire station to house personnel of the CITY, with adequate living quarters, and to provide shelter to the AUTHORITY's fire and rescue equipment and vehicles, and shall pay all costs associated with the maintenance of the fire station, with the exception of the CITY-provided computer, radio, telecommunications, and emergency alert hardware and software and television service.

c. Payment of the cost of registration fees, per diem, and accommodations (if required) for the annual live-drill training necessary for CITY personnel to be ARFF qualified.

d. Reimburse the CITY for all requested maintenance and repair expenses of AUTHORITY vehicles, equipment, or property owned by the AUTHORITY and maintained by the CITY. It is recognized that the AUTHORITY may directly order and pay for repairs from other sources.

The CITY and the AUTHORITY agree that the CITY shall have the right to deploy CITY personnel and AUTHORITY equipment to any location off the Naples Municipal Airport site at any time for emergency 9-1-1 response, except during air carrier operations as defined under Part 139.5. The AUTHORITY's Air Traffic Control Tower and Duty Officer shall be immediately notified upon such deployment.

SECTION TWO

EMERGENCY PROCEDURES

In the event of an aircraft incident, fire, rescue requirement or a warning of such event at the Naples Municipal Airport, the CITY firefighting personnel assigned to the AUTHORITY shall follow the procedures outlined in the then current version of the Letter of Agreement between the Naples Airport Traffic Control Tower and the AUTHORITY. CITY personnel shall also comply with the requirements of the CITY of Naples Airport Emergency Procedure as set forth in the Naples Municipal Airport Certification Manual in effect at the time of the incident or warning of an emergency.

In the event of an aircraft incident, fire or rescue requirement, or the potential of such emergency, the CITY personnel assigned to the AUTHORITY and all other CITY personnel brought to the Naples Municipal Airport shall be under the exclusive command and control of the Incident Commander.

It shall be the responsibility of the Naples Airport Authority's Executive Director or designee to disseminate and release to the public/media regarding on-field incident or accident in accordance with all Federal Aviation Administration (FAA) and National Transportation Safety Board (NTSB) regulations. It is recognized that the CITY and the AUTHORITY are subject to the requirements of Section 119 F.S. - Public Records, including exemptions provided by state and federal laws.

SECTION THREE

MISCELLANEOUS

All routine requests or inquiries, by the AUTHORITY, regarding the CITY's firefighting personnel at the Naples Municipal Airport shall be made by the AUTHORITY to the CITY

to the attention of the Fire Chief or his designee. All routine requests or inquiries by the CITY to the AUTHORITY shall be made through the Executive Director or the Operations Director at the AUTHORITY.

SECTION FOUR

DURATION OF SERVICE AND FEE FOR SERVICE

This Agreement shall commence on the 1st day of March 2018 and terminate on September 30, 2022.

Unless terminated in writing by the CITY or the AUTHORITY ninety (90) days prior to September 30, 2022, this Agreement shall continue thereafter on a month-to-month basis until the CITY or the AUTHORITY provides the other with a notice of termination dated ninety (90) days prior to the expected date of termination.

The AUTHORITY shall reimburse the CITY for the actual cost of providing ARFF services under this Agreement. Such cost shall be determined by the formula provided in the attached "Exhibit A". Beginning March 1, 2018, the CITY, shall invoice the AUTHORITY for the actual cost of providing ARFF service for the previous monthly period, and then at the end of each quarter of the year thereafter for the previous three months. Payment shall be made by the AUTHORITY within twenty days of the date of the CITY's invoice.

The CITY and the AUTHORITY shall discuss potential changes in personnel costs in June of each year for the purpose of developing a budget estimates for the next fiscal year.

The foregoing notwithstanding, either the CITY or the AUTHORITY may terminate this Agreement at any time by providing the other party with written notification of its intent to terminate the Agreement ninety (90) days prior to the date of termination.

This Agreement is entered into pursuant to the authority granted in the Florida Interlocal Cooperation Act, Chapter 163 Part I, Chapter 166, Chapter 189, and other relevant provisions of Florida Statutes and Federal Law.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed by their appropriate officials, the day and year first above written.

ATTEST:

Christopher A. Rozansky
Executive Director

CITY OF NAPLES AIRPORT AUTHORITY:

Donna Messer
Chair

Approved as to form and legal sufficiency:

William L. Owens
Naples Airport Authority Legal Counsel

ATTEST:

Patricia L. Rambosk
City Clerk

CITY OF NAPLES:

Bill Barnett
Mayor

Approved as to form and legal sufficiency:

Robert D. Pritt
City of Naples Attorney

EXHIBIT "A"

METHOD TO DETERMINE ACTUAL COST OF ARFF SERVICES

1. Determine the applicable overtime rate for each Firefighter assigned to the NAA for the provision of ARFF services, or each Firefighter assigned to relieve a Firefighter that is then assigned to the NAA for the provision of ARFF services. The overtime rate is 1 ½ times the regular rate.

2. If a firefighter is a part-time employee of the City, determine the actual hourly rate.

3. Multiply the applicable hourly rate for each Firefighter times the number of hours assigned to provide ARFF Services to the Authority for the prior quarterly period.

4. Add the total cost for all Firefighters to determine the actual total cost for the prior quarterly period.

5. Multiply the total cost for the prior quarterly period by 1.0765 (FICA and MEDC).

6. Add Quarterly Administrative Fee of $5,000 to provide for management oversight, scheduling work, coordinating and scheduling training, payroll processing, Workers Compensation and Liability Insurance.

7. The sum is the amount of the quarterly invoice by the City to the Authority.

METHOD TO DETERMINE THE ESTIMATED ANNUAL COST OF ARFF SERVICES FOR THE FIRST YEAR

1. Average overtime rate for all Firefighters, Drivers and Lieutenants $37.13.

2. Multiply 48 hours per day times 365 days = 17,520 hours.

3. Multiply 17,520 hours by the average overtime rate of $37.13 = $650,517.

4. Multiply product of (3) above by 1.0765 (FICA/MEDC) $650,517 x 1.0765 = $700,282.

5. Add Annual Administrative Fee of $20,000. The Administrative Fee shall increase each year by the federal Consumer Price Index. Annual estimated cost is $720,282.

RESOLUTION 2018-

A RESOLUTION AMENDING THE FY 2017-18 BUDGET ADOPTED BY RESOLUTION 2017-14027 TO APPROPRIATE CONTRACTED REVENUE TO BE RECEIVED FROM THE NAPLES AIRPORT AUTHORITY TO INCREASE FIRE SERVICE TO THE NAPLES MUNICIPAL AIRPORT; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the City of Naples adopted a budget on September 20, 2017 via Resolution 2017-14027; and

WHEREAS, the Naples Airport Authority and the City of Naples wish to amend their interlocal agreement dated November 15, 2015 to increase professional firefighting service to 24 hours per day; and

WHEREAS, the current budgeted expense for the Naples Airport Authority service is $457,450; and

WHEREAS, for the contract amendment, effective date of March 1, 2018, the expected increase in costs for the current fiscal year is $148,000; and

WHEREAS, for next fiscal year, although actual costs are dependent upon the wages of the firefighters assigned to the airport, the expected annual cost and revenue increase for the amendment will be approximately $258,000 per year for a total expected annual contract amount of $715,450; and

WHEREAS, the full amount of this increase will be paid, pursuant to the contract, by the Naples Airport Authority; and

WHEREAS, the FY 2017-18 budget requires an amendment to reflect the new contract.

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF NAPLES, FLORIDA:

Section 1. That the City of Naples FY 2017-18 budget, adopted by Resolution 2017-14027, is hereby amended to increase the General Fund line item, Naples Airport Authority Overtime, in the Fire Department budget by $148,000.

Section 2. That the source of revenue will be contracted payments from the Naples Airport Authority, increasing the General Fund revenue line item by $148,000.

Section 3. That this budget amendment shall be effective immediately upon passage.

PASSED IN OPEN AND REGULAR SESSION OF THE CITY COUNCIL OF THE CITY OF NAPLES, FLORIDA, THIS 21ST DAY OF FEBRUARY 2018.

Attest:

Patricia L. Rambosk, City Clerk

Bill Barnett, Mayor

Approved as to form and legality:

Robert D. Pritt, City Attorney

Date filed with City Clerk:_____

L\LEGISLATIONCITYCOUNCIL\PENDING

AMENDED INTERLOCAL AGREEMENT BETWEEN THE CITY OF NAPLES, FLORIDA AND THE CITY OF NAPLES AIRPORT AUTHORITY FOR AIRCRAFT RESCUE AND FIREFIGHTING SERVICES

THIS AGREEMENT made this day, of , 2018, by and between the **City of Naples Airport Authority,** hereinafter referred to as **"AUTHORITY",** a political subdivision of the State of Florida, whose address is 160 Aviation Drive North, Naples, Florida 34104-3568, Attention: Executive Director, and the **City of Naples,** hereinafter referred to as **"CITY",** a political subdivision of the State of Florida, whose address is 735 8th Street South, Naples, Florida 34102, Attention: City Manager.

SECTION ONE

PERSONNEL AND SERVICES

The CITY shall provide the **AUTHORITY,** and the **AUTHORITY** shall accept from the **CITY,** certified firefighting personnel as necessary to meet the requirements of Federal Aviation Regulations, Part 139.315(b)(1) as provided herein, at the Naples Municipal Airport described in Chapter 69-1326 of the Laws of the State of Florida, as amended. The CITY shall provide to the **AUTHORITY:**

a. Aircraft Rescue and Firefighting services (ARFF) in accordance with Federal Aviation Regulation, Part 139.319 from the CITY of Naples Fire-Rescue Department.

b. Two State-Certified, ARFF-trained firefighters per shift, stationed at the **AUTHORITY**-provided fire station 24 hours per day, seven days per week.

c. The availability of a sufficient number of State-certified and ARFF certified personnel to meet FAA requirements to support on-site and off-site aircraft emergencies.

d. Continuing training of all ARFF-certified firefighter personnel to support on-site and off-site aircraft emergencies.

e. The benefit of a Public Safety Answering Point for all 9-1-1 calls, computer-aided dispatch with links to Collier County and the State of Florida mutual aid and mass casualty incident response and mitigation.

f. Computer, radio, telecommunications, and emergency alert hardware and software in the **AUTHORITY's** Fire Station (Station 3).

g. Replacement vehicles and equipment with adequate firefighting capabilities in the event that the **AUTHORITY's** crash, fire, and rescue vehicles and equipment are temporarily removed from service.

h. CITY Command Staff to provide required operational and administrative oversight of ARFF services required under the provisions of this agreement.

i. Available personnel with extensive HAZMAT training, including aircraft cargo hazards, and access to specific hazardous materials guidance (Part 139.319(i)(2)(x) and 319.3190).

j. Personnel educated and trained in emergency medical services as State of Florida certified Emergency Medical Technicians and Paramedics who meet the training and certification requirements of the Collier County Medical Director and consistent with the lnterlocal Agreement between Collier County and the **CITY.**

k. The benefits of Mutual Aid and Automatic Aid Agreements between the CITY and other Fire-Rescue Agencies within Collier County.

l. Qualified and experienced management of the CITY to insure the provision of a high level of services to the **AUTHORITY,** consistent with the laws and regulations of the United States, the State of Florida, the **CITY,** and the **AUTHORITY.**

m. Personnel operating pursuant to the National Incident Management System **(NIMS).**

n. Initial and recurrent training and recordkeeping required under Part 139.303, and a dedicated ARFF training liaison to work with **AUTHORITY** staff to coordinate ARFF required training, drills, inspections, and recordkeeping. Specific training, such as movement area driver training, may be conducted by **AUTHORITY** personnel, as determined by the **AUTHORITY,** and coordinated with the CITY ARFF training liaison. Copies of all ARFF training records shall be provided to the **AUTHORITY's** Director of Operations.

The **AUTHORITY** shall provide to the **CITY:**

a. All crash, fire and rescue equipment and vehicles necessary to meet the requirements of Federal Aviation Regulation, Part 139.317. All vehicles provided to the CITY shall remain the property of the **AUTHORITY.**

b. A fire station to house personnel of the **CITY,** with adequate living quarters, and to provide shelter to the **AUTHORITY's** fire and rescue equipment and vehicles, and shall pay all costs associated with the maintenance of the fire station, with the exception of the CITY-provided computer, radio,

telecommunications, and emergency alert hardware and software and television service.

c. Payment of the cost of registration fees, per diem, and accommodations (if required) for the annual live-drill training necessary for CITY personnelto be ARFF qualified.

d. Reimburse the CITY for all requested maintenance and repair expenses of **AUTHORITY** vehicles, equipment, or property owned by the **AUTHORITY** and maintained by the **CITY.** It is recognized that the **AUTHORITY** may directly order and pay for repairs from other sources.

The CITY and the **AUTHORITY** agree that the CITY shall have the right to deploy CITY personnel and **AUTHORITY** equipment to any location off the Naples Municipal Airport site at any time for emergency 9-1-1 response, except during air carrier operations as defined under Part 139.5. The **AUTHORITY's** Air Traffic Control Tower and Duty Officer shall be immediately notified upon such deployment.

SECTION TWO

EMERGENCY PROCEDURES

In the event of an aircraft incident, fire, rescue requirement or a warning of such event at the Naples Municipal Airport, the CITY firefighting personnel assigned to the **AUTHORITY** shall follow the procedures outlined in the then current version of theLetter of Agreement between the Naples Airport Traffic Control Tower and the **AUTHORITY. CITY** personnel shall also comply with the requirements of the CITY ofNaples Airport Emergency Procedure as set forth in the Naples Municipal Airport Certification Manual in effect at the time of the incident or warning of an emergency.

In the event of an aircraft incident, fire or rescue requirement, or the potential of such emergency, the CITY personnel assigned to the **AUTHORITY** and all other CITY personnel brought to the Naples Municipal Airport shall be under the exclusive command and control of the Incident Commander.

It shall be the responsibility of the Naples Airport Authority's Executive Director or designee to disseminate and release to the public/media regarding on-field incident or accident in accordance with all Federal Aviation Administration (FAA) and National Transportation Safety Board (NTSB) regulations. It is recognized that the CITY and the **AUTHORITY** are subject to the requirements of Section 119 F.S. - Public Records, including exemptions provided by state and federal laws.

SECTION THREE

MISCELLANEOUS

All routine requests or inquiries, by the **AUTHORITY,** regarding the **CITY's** firefighting personnel at the Naples Municipal Airport shall be made by the **AUTHORITY** to the CITY to the attention of the Fire Chief or his designee. All routine requests or inquiries by the CITY to the **AUTHORITY** shall be made through the Executive Director or the Operations Director at the **AUTHORITY.**

SECTION FOUR

DURATION OF SERVICE AND FEE FOR SERVICE

This Agreement shall commence on the 1st day of March, 2018 and terminate on September 30, 2022.

Unless terminated in writing by the CITY or the **AUTHORITY** ninety (90) days prior to September 30, 2022, this Agreement shall continue thereafter on a month-to-month basis until the CITY or the **AUTHORITY** provides the other with a notice of termination dated ninety (90) days prior to the expected date of termination.

The **AUTHORITY** shall reimburse the CITY for the actual cost of providing ARFF services under this Agreement. Such cost shall be determined by the formula provided in the attached "Exhibit A". Beginning March 1, 2018, the CITY, shall invoice the **AUTHORITY** for the actual cost of providing ARFF service for the previous monthly period, and then at the end of each quarter of the year thereafter for the previous three months. Payment shall be made by the **AUTHORITY** within twenty days of the date of the **CITY's** invoice.

The CITY and the **AUTHORITY** shall discuss potential changes in personnel costs in June of each year for the purpose of developing a budget estimates for the next fiscal year.

The foregoing notwithstanding, either the CITY or the **AUTHORITY** may terminate this Agreement at any time by providing the other party with written notification of its intent to terminate the Agreement ninety (90) days prior to the date of termination.

This Agreement is entered into pursuant to the authority granted in the Florida Interlocal Cooperation Act, Chapter 163 Part I, Chapter 166, Chapter 189, and other

relevant provisions of Florida Statutes and Federal Law.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed by their appropriate officials, the day and year first above written.

ATTEST: CITY OF NAPLES AIRPORT AUTHORITY

Christopher A. Rozansky
Executive Director

Donna Messer
Chair

Approved as to form and legal sufficiency:

William L. Owens
Naples Airport Authority Legal Counsel

ATTEST: CITY OF NAPLES

Patricia L. Rambosk
City Clerk

Bill Barnett
Mayor

Approved as to form and legal sufficiency:

Robert D. Pritt
City of Naples Attorney

EXHIBIT "A"

METHOD TO DETERMINE ACTUAL COST OF ARFF SERVICES

1. Determine the applicable overtime rate for each Firefighter assigned to the NAA for the provision of ARFF services, or each Firefighter assigned to relieve a Firefighter that is then assigned to the NAA for the provision of ARFF services. The overtime rate is 1 ½ % times the regular rate.

2. If a Firefighter is a part-time employee of the City, determine the actual hourly rate.

3. Multiply the applicable hourly rate for each Firefighter times the number of hours assigned to provide ARFF Services to the Authority for the prior quarterly period.

4. Add the total cost for all Firefighters to determine the actual total cost for the prior quarterly period.

5. Multiply the total cost for the prior quarterly period by 1.0765 (FICA and MEDC).

6. Add Quarterly Administrative Fee of $5,000 to provide for management oversight, scheduling work, coordinating and scheduling training, payroll processing, Workers Compensation and Liability Insurance.

7. The sum is the amount of the quarterly invoice by the City to the Authority.

METHOD TO DETERMINE THE ESTIMATED ANNUAL COST OF ARFF SERVICES FOR THE FIRST YEAR

1. Average overtime rate for all Firefighters, Drivers, and Lieutenants $37.13.

2. Multiply 48 hours per day times 365 days= 17,520 hours.

3. Multiply 17,520 hours by the average overtime rate of $37.13 = $650,517.

4. Multiply product of (3) above by 1.0765 (FICA/MEDC) $650,517 x 1.0765 = $700,282.

5. Add Annual Administrative Fee of $20,000. The Administrative Fee shall increase each year by the federal Consumer Price Index. Annual estimated cost is $730,282.

City Council Agenda Item Report

Submitted by: Margaret Perry
Submitting Department: Planning
Meeting Date: February 21, 2018

SUBJECT
Resolution - Quasi-Judicial - Public Hearing relating to Outdoor Live Entertainment; determining Petition 17-LE6 for South Avenue Restaurant and Bar on property owned by 643-63 Fifth Avenue South Holding, LLC, and located at 651 5th Avenue South.

Legislative Type:
Quasi Judicial Item

Funding Source:
N/A

Recommendation:
Denial of the Resolution.

ATTACHMENTS
- Agenda Memorandum
- Resolution
- Supplemental Memo
- Application
- Disclosure
- Floor Plan
- Police and Code Enforcement Memos
- Fire Code Violations
- Letters in response to mailing
- Public Notice Mailing Labels
- Resumes

AGENDA MEMORANDUM ***Planning Department***

Regular Meeting Date: **February 21, 2018**

To: City Council

From: Margaret Perry, Planner II

Date: January 25, 2018

Legislative ☐ Quasi-Judicial ☒

SUBJECT:
A Resolution relating to Outdoor Live Entertainment; determining Petition 17-LE6 for South Avenue Restaurant and Bar on property owned by 643-63 Fifth Avenue South Holding, LLC, and located at 651 5th Avenue South.

SUMMARY:
City Council is asked to consider a Resolution determining Live Entertainment Petition 17-LE6 to allow Outdoor Live Entertainment with musicians located indoors but with doors and windows open from 3:00 p.m. to 10:00 p.m. on Sunday through Wednesday and from 3:00 p.m. to 12:00 a.m. on Thursday through Saturday for South Avenue Restaurant and Bar on property owned by 643-63 Fifth Ave South Holding, LLC, and located at 651 5th Avenue South. In that this is a Quasi-Judicial matter, disclosures and the swearing in of those giving testimony are required.

BACKGROUND:
This Petition was presented to City Council on January 20, 2018 and was continued to this meeting because the Petitioner was not present. City Council is asked to consider a Resolution determining Live Entertainment Petition 17-LE6 to allow Outdoor Live Entertainment with musicians located indoors but with doors and windows open from 3:00 p.m. to 10:00 p.m. on Sunday through Wednesday and from 3:00 p.m. to 12:00 a.m. on Thursday through Saturday for South Avenue Restaurant and Bar on property owned by 643-63 Fifth Ave South Holding, LLC, and located at 651 5th Avenue South. In that this is a Quasi-Judicial matter, disclosures and the swearing in of those giving testimony are required.

On March 1, 2017, City Council denied an application for Live Entertainment (Petition 16-LE10) for this establishment due to the incompleteness of the application and concerns regarding safe ingress and egress. The request at that time included live entertainment starting at 12 noon, 7 days a week and the speakers could be in the outdoor dining area which could have an impact on the other businesses in the same building. There were also Code Enforcement issues with this establishment relative to the use of an unpermitted A-frame sign and the outdoor furniture not in keeping with the approved plan and encroaching into the right of way. The Design Review Board approved a revised outdoor dining petition (17-ODPV12) on

September 27, 2017. It is Staff's understanding that since this approval was given, the restaurant has been generally abiding by the approved plan.

The Petitioner is now requesting approval to provide live entertainment with doors open within the indoor dining area of South Avenue Restaurant and Bar in two potential locations, but not at the same time. The first location is toward the front of the restaurant to the west of the entrance. The other location is toward the rear of the restaurant along the western side. The request is for up to 2 entertainers performing an amplified variety of music. The proposed hours for the entertainment are consistent with the hours permitted in Section 56-125 of the Code of Ordinances. Police indicate that there was a violation verified on New Year's Eve, 2017, with live entertainment offered prior to the approval of this petition. There have been other compliance issues regarding the outdoor dining area that are detailed in the memorandum from Code Enforcement. Furthermore, since the meeting of January 20th, Fire-Rescue conducted Fire inspections on 5th Avenue S. and identified deficiencies at the South Avenue Restaurant and Bar. While the petition meets the individual criteria, given the compliance history of this business, staff recommends caution in granting additional entitlements.

An analysis of the applicable criteria for the live entertainment permit can be found in the attached supplemental memorandum. As there are residential units within 300 feet of the proposed live entertainment, analysis under the residential impact criteria is included.

File Reference: 17-LE6
Petitioner: Crispy Seafood, LLC, DBA South Avenue Restaurant and Bar
Agent: Tony Madkour
Owner: 643-63 Fifth Ave South Holding, LLC
Location: 651 5th Avenue South
Zoning: C1-A Commercial Core District and Fifth Avenue South Special Overlay District

PUBLIC NOTICE:
On November 30, 2017, a total of 122 public notices were mailed out to all property owners with 500 feet of the subject property. As of the date of this report, staff has received two (2) emails in opposition to the request and these emails are included with the backup material for this agenda item.

RECOMMENDED ACTION:
Staff recommends denial of the Resolution determining Outdoor Live Entertainment Petition 17-LE6 for South Avenue Restaurant and Bar, on property owned by 643-63 Fifth Ave Holding, LLC, and located at 651 5th Avenue South.

RESOLUTION 2018-

A RESOLUTION RELATING TO OUTDOOR LIVE ENTERTAINMENT; DETERMINING PETITION 17-LE6 FOR SOUTH AVENUE RESTAURANT AND BAR ON PROPERTY OWNED BY 643-63 FIFTH AVENUE SOUTH HOLDING, LLC, AND LOCATED AT 651 5TH AVENUE SOUTH, MORE FULLY DESCRIBED HEREIN; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, Section 56-125 of the Code of Ordinances addresses the requirements for a live entertainment permit; and

WHEREAS, Crispy Seafood, LLC, DBA South Avenue Restaurant and Bar, has requested outdoor live entertainment with doors and windows open from 3:00 p.m. to 10:00 p.m. on Sunday through Wednesday and from 3:00 p.m. to 12:00 a.m. on Thursday through Saturday, for South Avenue Restaurant and Bar, located at 651 5th Avenue South, on property owned by 643-63 Fifth Avenue South Holding, LLC; and

WHEREAS, Tony Madkour has been authorized by the owner of the property, 643-63 Fifth Avenue South Holding, LLC, to file this petition; and

WHEREAS, after providing the petitioner, staff and the public an opportunity to present testimony and evidence, the City Council finds that the criteria for granting the petition HAVE / HAVE NOT been met and that the petition should therefore be APPROVED / DENIED;

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF NAPLES, FLORIDA:

Section 1. That Live Entertainment Petition 17-LE6 is hereby APPROVED / DENIED for South Avenue Restaurant and Bar, owned by 643-63 Fifth Ave South Holding, LLC, and located at 651 5th Avenue South, more fully described:

UNITS 102 AND 103 OF FIFTH AT PARK PLAZA, A CONDOMINIUM ACCORDING TO THE DECLARATION OF CONDOMINIUM THEREOF, RECORDED IN OFFICIAL RECORDS BOOK 1174, PAGE 2293, OF THE PUBLIC RECORDS OF COLLIER COUNTY, FLORIDA, AND ANY AMENDMENTS THERETO, TOGETHER WITH ITS UNDIVIDED SHARE IN THE COMMON ELEMENTS.

Section 2. **(If approved)** That approval of this Live Entertainment Petition is subject to the following conditions:

1. Outdoor live entertainment consisting of up to two (2) amplified (microphone and speakers) entertainers, with doors and windows open, between 3:00 p.m. and 10:00 p.m. Sunday through Wednesday, and between 3:00 p.m. and 12:00 a.m. Thursday through Saturday.

2. Noise levels shall comply with Section 22-37, Noise, of the Code of Ordinances.

3. Any speakers associated with the entertainment shall be located within the indoor dining area and face inward to the restaurant.

4. This live entertainment approval may be renewed at the start of the City's fiscal year every 2 years, pursuant to Section 56-125(g) of the Code.

5. In addition to any other enforcement action or penalty provided by ordinance or law, failure to comply with the conditions contained herein may subject the holder to revocation of the permit, in accordance with the City of Naples revocation ordinance (02-9778).

Section 2. **(If Denied)** That denial of this live entertainment petition pursuant to Section 56-125 of the Code of Ordinances is based upon the following:

Section 3. The granting of a live entertainment permit does not create a vested right or basis for estoppel.

Section 4. **Disclaimer & Permit Condition (Applicable only if federal or state permits are required):** Issuance of a development permit by the City does not create any right to obtain a permit from a State or Federal agency and does not create any liability on the part of the City for issuance of the permit if the applicant fails to obtain requisite approvals or fulfill the obligations imposed by a State or Federal agency or undertakes actions that result in a violation of State or Federal law. If applicable, all other State or Federal permits must be obtained before commencement of the project.

Section 5. That this resolution shall take effect immediately upon adoption.

PASSED IN OPEN AND REGULAR SESSION OF THE CITY COUNCIL OF THE CITY OF NAPLES, FLORIDA, THIS 21ST DAY OF FEBRUARY, 2018.

Attest:

Patricia L. Rambosk, City Clerk

Bill Barnett, Mayor

Approved as to form and legality:

Robert D. Pritt, City Attorney

Date filed with City Clerk:_____

L\LEGISLATION\CITY COUNCIL\2018\2/14/2018 2:09 PM_vls

Memo

Planning

TO: A. William Moss, City Manager

VIA: Robin D. Singer, Planning Director

FROM: Margaret Perry, AICP, Planner II

DATE: February 5, 2018

SUBJECT: Live Entertainment Petition 17-LE6
for South Avenue Restaurant and Bar located at 651 5th Avenue South

---

Request

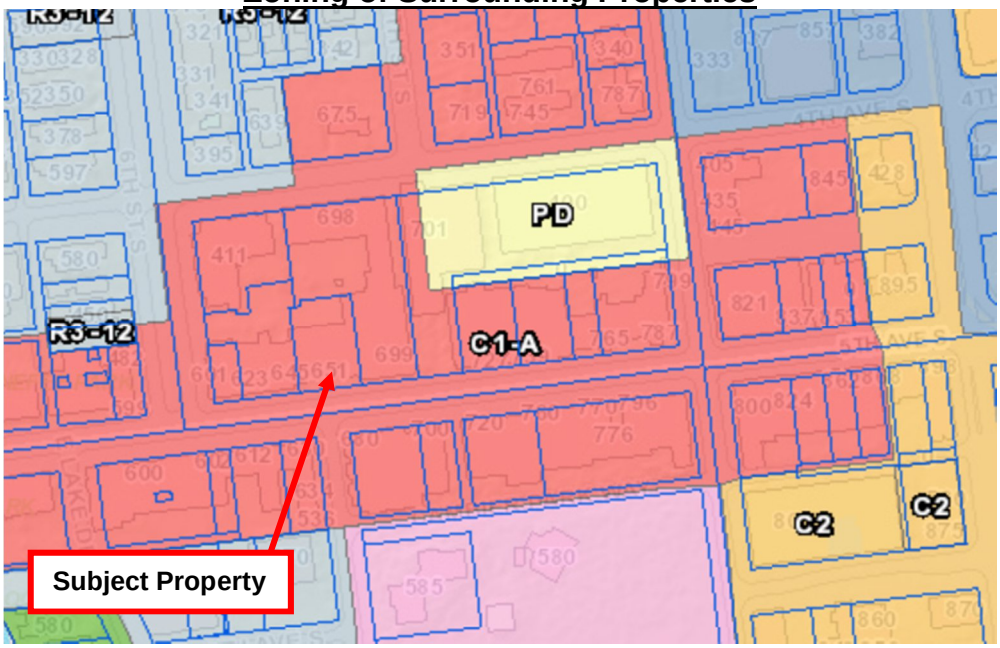
Tony Madkour, agent for Petitioner, Crispy Seafood, LLC, DBA South Avenue Restaurant and Bar, has requested approval for outdoor live entertainment with doors open for South Avenue Restaurant and Bar located at 651 5th Avenue South. The entertainment will consist of up to 2 entertainers and will be located within the indoor dining area in two potential locations, but not at the same time. The first location is at the front of the restaurant west of the entrance. A second alternative location is toward the rear of the restaurant along the west side. The performers will be amplified, utilizing a microphone and speakers. The request is for outdoor live entertainment with musicians located indoors but with doors and windows open from 3:00 p.m. to 10:00 p.m. on Sunday through Wednesday, and from 3:00 p.m. to 12:00 a.m. on Thursday through Saturday. The proposed hours for entertainment are consistent with the hours permitted in Section 56-125 of the Code of Ordinances. Staff is recommending approval of the proposed entertainment with a condition that the speakers be located inside and directed toward the inside of the indoor dining area and not toward 5th Avenue South or to other tenant spaces to the east and west. Staff also recommends that the required distances between tables be maintained during all hours of live entertainment.

Staff has provided the application to the applicable City Departments for review. There was a violation found for live entertainment on New Year's Eve, 2017. There have been past code enforcement issues regarding the outdoor dining area. Memorandum from Code Enforcement and the Police Department are included in the package.

Staff finds that the request meets the criteria, as indicated below, but remains cautious given the enforcement history on this property.

Aerial of Subject Property

Zoning of Surrounding Properties



North	South	East	West
C1-A -Commercial Core and 5th Avenue South Special Overlay District	C1-A -Commercial Core and 5th Avenue South Special Overlay District	C1-A -Commercial Core and 5th Avenue South Special Overlay District	C1-A -Commercial Core and 5th Avenue South Special Overlay District

- **Analysis - Live Entertainment Standards for Review**

  Per Section 56-125(f) of the Code of Ordinances, the City Council shall carefully consider the following guidelines and standards in its deliberations concerning the granting of a live entertainment permit:

  (1) Ingress and egress to the subject property and the proposed structures thereon, with particular reference to automotive and pedestrian safety and convenience, traffic generation flow and control, and access in case of fire or catastrophe, shall be adequate and not potentially detrimental to existing or anticipated uses in the vicinity and particularly not detrimental to property immediately adjacent to the subject site.

  - ***The petitioner has indicated that the performers will be located within the indoor dining area along the front of the restaurant to the west of the entrance. An alternative location is indicated toward the rear of the restaurant along the west side. Ingress and egress to the restaurant will not be impeded by the entertainers in either location identified. However, there are outstanding fire code issues relative to ingress and egress that must be resolved.***

  (2) Off-street parking and loading areas, where required or requested by the property owner, shall be adequate and well-designed, and relate well, in terms of proximity, access and the like, to the uses intended to be serviced, with particular attention to the items listed in subsection (h)(1) of this section and the smoke, noise, glare, dust, vibrations, fumes, pollution or odor effects related to the vehicular use area or the live entertainment, and such shall not be detrimental to the adjoining properties in the general area.

  - ***There are no changes proposed or required to the parking area and no impact is anticipated to the demand for parking as a result of the live entertainment request. There is on street parking available on 5th Avenue South and in the nearby City parking garage, as well as other streets and avenues in the vicinity.***

  (3) Screening, buffering or separation of any nuisance or hazardous feature, with reference to type, dimensions and character, shall be fully and clearly represented on the submitted plans and shall be adequate to protect adjacent properties.

  - ***The live entertainment area is located within the indoor dining area of the restaurant. The entertainers will face toward the interior of the restaurant and will be located either at the front of the restaurant, west of the entrance, or at the rear of the restaurant along the west side wall. No speakers will be allowed outside of the dining area. It is noted that there are residential dwelling units in the vicinity that may be impacted by live entertainment.***

(4) The land and buildings which are involved shall be adequate, in terms of size, shape, type of building and the like, to ensure compatibility with the proposed live entertainment.

- ***The petitioner has requested approval for up to 2 entertainers to be located within the indoor dining area of the restaurant as shown on the site plan. The potential areas the entertainers will be located are small and will be clear of the egress area.***

(5) The proposed live entertainment shall be compatible and appropriate with respect to adjacent properties and other property in the district and geographic area.

- ***There are existing approved live entertainment permits within the nearby vicinity, as follows:***

  Ocean Prime – 699 5th Avenue South, up to 3 amplified entertainers with doors and windows closed between 12:00 p.m. and 10:00 p.m. Sunday through Wednesday and between 12:00 p.m. and 11:00 p.m. Thursday through Saturday; outdoor with doors and windows open between 12:00 p.m. and 10:00 p.m. Sunday through Saturday.

  Trulucks Seafood – 698 4th Avenue South, one indoor amplified piano player singing and one additional singer from 4:00 p.m. to 11:30 p.m. Monday through Saturday and from 4:00 p.m. to 10:30 p.m. on Sunday.

  Monticello Café (formerly Vergina's) – 700 5th Avenue South, 3 amplified entertainers with doors and windows closed from 11:30 a.m. to 11:30 p.m. Sunday through Wednesday and from 11:30 p.m. to 12:00 a.m. Thursday through Saturday; doors and windows open from 11:30 a.m. to 10:00 p.m. Sunday through Thursday and from 11:30 a.m. to 10:00 p.m. Friday and Saturday.

- ***There are residential dwelling units within the vicinity of the restaurant which could be impacted by live entertainment. The proposed hours of outdoor live entertainment are in keeping with Code of Ordinances Section 56-125.***

- **<u>Analysis – Residential Impact Statement Criteria</u>**

Pursuant to Section 46-43, petitions which result in the establishment, expansion or intensification of a commercial activity on property: containing residential units; within 300 feet of a property containing residential units; or within 300 feet of a property zoned for residential use, shall also comply with the residential impact criteria. The nearest residential units include units on the second floor of the adjacent property to the east.

(1) *Illumination.* Illumination levels shall not exceed 0.5 footcandle at the lot lines of the subject property. In addition, the standards for illumination set forth in section 56-89 shall also be met.

- ***The request is for outdoor live entertainment with doors and windows oper*** 145
  consisting of up to 2 performers within the indoor dining area. No additional

illumination is proposed as part of this request.

(2) *Noise.* Physical barriers exist and operation plans are in place to insure that noise levels shall be consistent with those identified in section 22-37. Businesses with external speakers such as outdoor live entertainment, drive-thru lanes and automotive dealerships, shall take measures to insure that speakers are pointed away from residences and sound is buffered.

- ***It is not anticipated that the restaurant will exceed noise levels as identified in Section 22-37. The entertainers will be located within the indoor dining area either along the front of the restaurant to the west of the entrance or toward the rear of the restaurant on the west side.***

(3) *Parking and access*. Parking must meet the minimum requirements and be adequate to avoid any overflow into the residential area. Parking areas shall be situated and buffered to avoid impacting the residential areas. Primary vehicular ingress and egress shall, where possible, be located to avoid conflict with traffic in the residential area. Pedestrian connections with public sidewalks and residential areas are encouraged.

- ***There is on-street parking available in the area, along with spaces available in the City parking garage. Existing parking will not be modified as a result of this request.***

(4) *Landscape buffer.* Landscaping provides adequate screening between the commercial activity and the residential units including buffering noise and the glare from vehicular headlights. Based on the project design and surrounding development patterns, additional landscaping and screening may be required to provide adequate buffering as determined by the city council. Where possible, existing landscaping buffers shall be upgraded to meet or exceed the requirements of Chapter 50, Article III, landscaping and tree protection.

- ***No changes to the existing streetscape are proposed with this request.***

(5) *Mitigation of hazardous or adverse impacts.* All hazardous or adverse impacts to adjacent residences in adjacent residential zoning shall be adequately addressed in a mitigation plan to minimize or eliminate such hazardous or adverse impacts. The city reserves the right to require additional mitigation when it finds the identified impacts are not adequately addressed.

- ***Any hazardous or adverse condition that may arise will be handled appropriately through the code enforcement process. No hazardous or adverse impacts are anticipated.***

(6) *Hours of operation*. Where the proposed hours of operation extend to between 9:00 pm and 8:00 am, the security measures shall be taken to insure monitoring of the premises including parking areas.

- ***It is not anticipated that any additional security measures will be necessary as a result of the requested outdoor live entertainment. The applicant indicates that the restaurant manager will monitor the premises to ensure that noise levels are code compliant.***

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For more assistance with Adobe Reader visit http://www.adobe.com/go/acrreader.

City of Naples, Florida
Disclosure of Interest

The City's Ethics Code requires disclosure of interests of individual owners, applicants and petitioners for city land use and development permits where the entity is OTHER THAN an individual and the individual's interest exceeds 5%. If so, please fill out the information provided below. If additional space is needed, attach it to this form.

Failure to provide accurate information violates the Ethics Ordinance and is also grounds for rejection of the application or petition.

Petitioner ____ Owner__X__ Other (Explain) _____

1. Nature of Ownership (check one)
   Fee Simple _X_ Tenancy in common __ Tenancy by Entireties __ Life Estate__ Trust__ Court Order__ Other (specify) _____

2. Owner(s) (List ALL owners exceeding 5% interest).
Name _____ Address _____%_____
643-63 Fifth Avenue South Holdings, LLC
_____
_____
_____
_____
_____

3. If other than an individual, list the type of entity (e.g., corporation, partnership, trust, LLC, LLP, Other) and Address:
Type of entity _LLC_____
Authorized to do business in Florida Yes (attach proof) _X___ No_____
Address _405 5th Ave south #6
Naples, FL 34102

Name & Address (or contact information) of each stockholder, member, partner or other owner (exceeding 5% interest).
_____
_____
_____
_____

4. Is entity registered upon any stock or securities exchange, or otherwise regulated where disclosures of ownership are required and on file? Yes____ No__X_ (If yes, provide name) _____
(NOTE: If so, no need to name all owners.)

5. If information above cannot be provided in full, explain why.

Certifications: I certify that the information provided is a true, correct and full disclosure of ownership in the property or the petitioner that is the subject of the Application or Petition for a permit.

I certify that there is no known conflict of interest between any owner and any City board or council member that may review the Application or Petition __X__, or that there is a potential conflict _____

with Name _____ Position_____ Describe

Signed: Mark Paul agent for owner Date: 11/22/17

Relationship to Property: Owner
Petitioner, Owner or Other

In the event Tenant obtains a judgment or right to proceed against Landlord, Tenant agrees to look solely to Landlord's interest in the Premises, or the proceeds thereof, for the satisfaction of Tenant's remedies for the collection of a judgment or other judicial process requiring the payment of money by landlord in the event of any default by Landlord hereunder, and no other property or assets of Landlord, or partners of Landlord, shall be subject to levy, execution or other enforcement procedure for the satisfaction of Tenant's claims.

SECTION 12 – MISCELLANEOUS

12.01 Prohibited Uses. Any use of the Premises by the Tenant is prohibited that creates strong, unusual or offensive odors, fumes, dust or vapors; is a public or private nuisance; or, unusual or offensive noise or sounds. Tenant will be prohibited from the use of, for example, noisy equipment, oil-based solvents, mineral spirits or similar chemical materials.

The use of the premises for any other purpose than that specifically noted in the lease is prohibited. Outside storage in the front or back of premises for supplies, cleaning equipment and/or any other items of whatsoever kind are also prohibited.

Tenants shall keep the premises as well as the front and the back areas tidy and neat at all times.

12.02 Attorney's Fees. In any litigation between the parties regarding this Lease, the losing party shall pay to the prevailing party all reasonable expenses and court costs including attorney's fees incurred by the prevailing party. A party shall be considered the prevailing party if:

(i) it initiated the litigation and substantially obtains the relief it sought, either through a judgment or the losing party's voluntary action before arbitration (after it is scheduled), trial, or judgment;

(ii) the other party withdraws its action without substantially obtaining the relief it sought; or

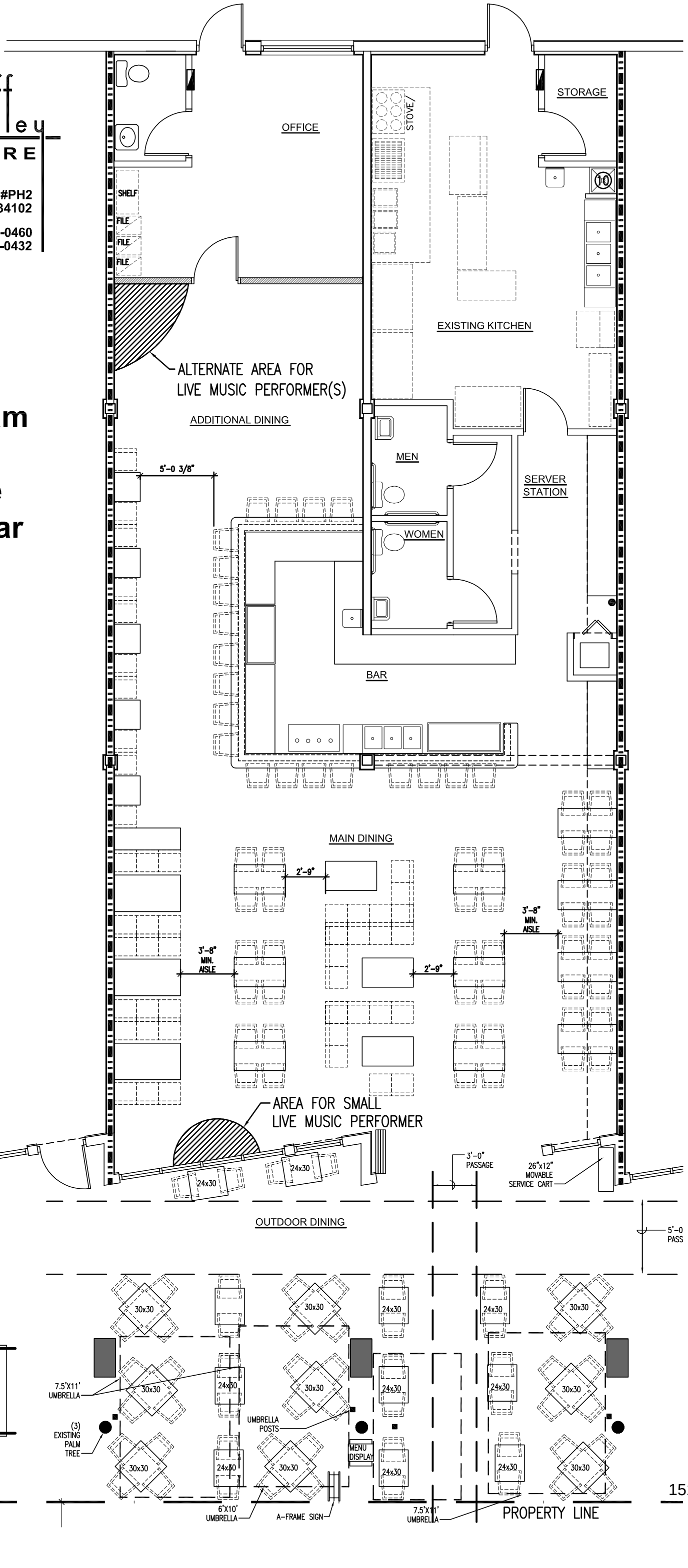
(iii) it did not initiate the litigation and judgment is entered for either party, but without substantially granting the relief sought.

12.03. Notices. Unless a Lease provision expressly authorizes verbal notice, all notices under this Lease shall be in writing and sent by registered or certified mail, postage prepaid, by facsimile transmission, or by overnight carrier, as follows:

Caffey
ARCHITECTURE
700 11th St S Suite #PH2
Naples, Florida 34102
Laura Caffey
License #AR92780 / AA26003297 ph (239) 793-0460
email: lcaffey@caffeyarch.com fax (239) 280-0432

Live Music Location Diagram for South Avenue Restaurant & Bar

NOVEMBER 29, 2017



CITY OF NAPLES
POLICE DEPARTMENT

MEMORANDUM NO.:

DATE: January 4, 2018

TO: Margaret Perry / Planning

FROM: Master Officer Buddy Kent Bonollo / Community Policing

SUBJECT: Live entertainment review; Crispy Seafood located at 651 5th Avenue South

Crispy Seafood (dba South Ave.) located at 651 5th Avenue South is petitioning for a new live entertainment permit. I completed a previous Memo January 20, 2017 at which time we had zero noise complaints associated with this location, therefore, no history to rely upon.

Since then, there has been one noise complaint. On 12/31/2017 at 9:13pm, officers responded to this location where they observed a musician playing with an amplified device, speaker and microphone. The establishment also had their windows and doors open. Crispy Seafood (dba South Ave.) does not have a live entertainment permit, therefore, the officer notified owners to have the musician stop playing and the entertainment ceased. Since this was the first noise complaint from the establishment, the owner was issued a verbal warning. (call # 17-00030389)

Naples Police Department, 355 Riverside Circle, Naples, Florida 34102 – Tel. 239-213-4853

MEMO

Office of the City Manager

To: Robin Singer, Director of Planning Department

Through: Roger Jacobsen, Code Enforcement Manager

From: Ali Duran, Code Enforcement Officer

Date: January 4, 2018

Subject: 651 5th Avenue South

Below lists interactions Code Enforcement Division, with assistance from Naples Police Department, has been involved with regarding South Avenue Restaurant located on 651 5th Ave South:

2016

March 24, 2016: Code Enforcement Department

Reference: Outdoor dining without Outdoor Dining Permit. Notice of Violation was issued.

Resolution: Found in compliance on April 27, 2016

April 29, 2016: Naples Police Department

Reference: Complaint from Roma Pizzeria regarding Crispy Seafood having too many menu signs.

Resolution: Complaint was valid and addressed.

2017

January 7, 2017: Naples Police Department

Reference: Sign in right of way

Resolution: Complaint valid and addressed. Sign was moved.

January 9, 2017: Naples Police Department

Reference: Sign in right of way, blocking pedestrian walkway

Resolution: Complaint valid and addressed. Sign was moved.

February 16, 2017: Code Enforcement

Reference: Items (sign, tables, chairs, etc) placed in ROW

Resolution: Notice of Violation issued, items removed.

February 10, 2017: Naples Police Department

Reference: Sign in right of way

Resolution: Complaint valid and addressed. Sign moved. NPD incident report 17-00289

February 16, 2017: Code Enforcement Department

Reference: Objects in right of way

Resolution: Notice of violation was issued.

April 10, 2017: Code Enforcement Department

Reference: Failure to follow Outdoor Dining Permit by changing tables and chairs without permission from Design Review Board. Notice of Violation issued.

Resolution: Found in compliance on April 28, 2017. Design Review Board approved changes.

May 13, 2017: Naples Police Department

Reference: Complaint from Roma Pizzeria regarding plants, tables, chairs and signs in right of way.

Resolution: Items moved into compliance. NPD incident report 17-01012. Verbal warning was issued. Incident report and pictures forwarded to Code Enforcement.

May 14, 2017: Naples Police Department

Reference: Complaint from Roma Pizzeria regarding tables, chairs and signs in right of way.

Resolution: Items moved into compliance. NPD incident report 17-01018. Incident report and pictures were forwarded to Code Enforcement.

May 15, 2017: Code Enforcement Department

Reference: Follow up of Naples Police Department incident reports

Resolution: responded to 651 5th Avenue South. Manager was notified a formal Notice of Violation would be issued for items in the right of way. Found in compliance on June 5, 2017.

June 16, 2017: Code Enforcement Department

Reference: Additional signage

Resolution: Notice of Violation issued.

July 7, 2017: Code Enforcement Department

Reference: Complaint by Roma Pizzeria regarding umbrellas in right of way.

Resolution: Responded to 651 5th Avenue South. Notified manager that Notices of Violation would be issued for umbrellas, chairs, and a sign all in the right of way. Upon further investigation of the Outdoor Dining Permit, a second Notice of Violation was issued for Failure to Comply with the Outdoor Dining Permit for having umbrellas, tables and chairs abutting the restaurant façade. Violations closed on 10/04/2017 per Code Enforcement Manager's request.

July 20, 2017: Code Enforcement Department

Reference: Information from Planning Department. Failure to follow Outdoor Dining Permit with unapproved A-frame sign and tables and chairs are not placed as approved.

Resolution: A-Frame was removed, Tables and chairs were changed to match Outdoor Dining Permit.

November 3, 2017: Naples Police Department

Reference: Blue accent lighting on palm trees

Resolution: Verified and addressed. Accent lighting removed.

Please feel free to contact me with any questions regarding the above information.

From: Robert Rogers
To: Margaret Perry
Subject: FW: Code Violations - 651 5th Ave South
Date: Tuesday, January 23, 2018 4:12:13 PM

Mr. Moss has requested these violations from Fire to deny application.

Bob Rogers
Fire Marshal
City of Naples Fire-Rescue Department
355 Riverside Circle
Naples, Florida 34102
E-mail: rrogers@naplesgov.com
O: (239)213-4919
C: (207)807-0225
F: (239)231-4907

From: Robert Rogers
Sent: January 23, 2018 4:08 PM
To: Pete DiMaria <pdimaria@naplesgov.com>
Cc: Michael Nichols <mnichols@naplesgov.com>
Subject: Code Violations - 651 5th Ave South

Good Afternoon Chief

As requested, these are the Code violations for 651 5th Avenue South that need to be addressed prior to Live Entertainment being approved.

7.1.3.1 Exit Access Corridors.

Corridors used as exit access and serving an area having an occupant load exceeding 30 shall be separated from other parts of the building by walls having not less than a 1-hour fire resistance rating in accordance with Section 8.3, unless otherwise permitted by one of the following:

1. (1) This requirement shall not apply to existing buildings, provided that the occupancy classification does not change.
2. (2) This requirement shall not apply where otherwise provided in Chapters 11 through 43.

7.5.1.2

Corridors shall provide exit access without passing through any intervening rooms other than corridors, lobbies, and other spaces permitted to be open to the corridor, unless otherwise provided in 7.5.1.2.1 and 7.5.1.2.2.

7.5.1.3.1

Where more than one exit, exit access, or exit discharge is required from a building or portion thereof, such exits, exit accesses, or exit discharges shall be remotely located from each other and be arranged to minimize the possibility that more than one has the potential to be blocked by any one fire or other emergency condition.

7.5.4.3

Each required accessible means of egress shall be continuous from each accessible occupied area to a public

way or area of refuge in accordance with 7.2.12.2.2.

7.10.1.3 Exit Door Tactile Signage.

Tactile signage shall be provided to meet all of the following criteria, unless otherwise provided in 7.10.1.4:

1. (1) Tactile signage shall be located at each exit door requiring an exit sign.
2. (2) Tactile signage shall read as follows: EXIT.
3. (3) Tactile signage shall comply with ICC/ANSI A117.1, *American National Standard for Accessible and Usable Buildings and Facilities*.

12.2.3.8 Minimum Corridor Width.

The width of any exit access corridor serving 50 or more persons shall be not less than 44 in. (1120 mm).

12.2.5.2 Access Through Hazardous Areas.

Means of egress from a room or space for assembly purposes shall not be permitted through kitchens, storerooms, restrooms, closets, platforms, stages, projection rooms, or hazardous areas as described in 12.3.2.

7.1.10.2.1

No furnishings, decorations, or other objects shall obstruct exits or their access thereto, egress therefrom, or visibility thereof.

Bob Rogers
Fire Marshal
City of Naples Fire-Rescue Department
355 Riverside Circle
Naples, Florida 34102
E-mail: rrogers@naplesgov.com
O: (239)213-4919
C: (207)807-0225
F: (239)231-4907

From: barbara holley
To: Margaret Perry
Subject: Live entertainment petition17-LE6
Date: Saturday, December 2, 2017 4:43:00 PM

I can’t begin to tell you how strongly I object to this petition. I live at 625 Fifth Ave south and my balcony is almost directly over this restaurant. There are residential condos that would be disturbed by any noise at any time from live music especially with the doors open.
We don’t want fifth avenue south to turn into a street of loud noisy bars. These restaurants shouldn’t be allowed to stay open until midnight. As more and more condos and hotels are built down here there should be consideration for keeping a refined mix of commercial and residential use. No one wants a loud,bawdy bar scene. If you continue to allow live music,certainly past ten o’clock at night, this congenial atmosphere will be lost and all of fifth avenue will suffer.
Respectfully,
Barbara Holley
Sent from my iPad

From: Roger Jacobsen
To: Margaret Perry
Subject: FW: from Roma bistro pizzeria
Date: Friday, December 8, 2017 3:28:51 PM

Didn't know if you wanted to include this in the packet for South Ave entertainment application. Ron's Pizza has a statement.

Roger

From: burhan ruli [mailto:ginorj11@yahoo.com]
Sent: Friday, December 8, 2017 1:10 PM
To: Roger Jacobsen <rjacobsen@naplesgov.com>
Subject: from Roma bistro pizzeria

Hello mr Roger

Im the owner of Roma bistro pizzeria in 655 fith av south,,,doing bussines in the same location for olmost 9 years,,,,during this period i created a nice and good reputation bussiness.

Lately in the last two years nex to me been open crispy restorant which is writed on the lease ,,i want to make a big complain and i can tell that u are the only person and very professional that

can help me ,,,,,,

In this matter,,,is not enought that after they opened for crispy food for selling fish menu but this year they converted in the same menu italian ,, selling the same dishes im selling even pizza ,,thats

a shame,,,,,besides that i

hear that they want to put music with open doors,,,,,,,i thought that this book as been cloused before, which as been not appruved and now again,,,,?

First this plazza is very small and not build for two restorants,,, second this building as been builded for 5 stores and not for restorants ,,, the walls are thin and the aquistic cant permit that ,,

third,, were is respect for my place i run the bussines too,,,,

fourth they put jogurt place out of bussiness which as been nex to them the soficate their space with their patio,,,,

Fifth ,,,is music in Vergina restorant but is in end and far from the street and they are detached bussiness,,,,, or any place else but the are right on the street and they got me next door what about

my bussiness and 22 people that

are working for me,,,my opinion if u want to turn fifth av lake Miami beach better think two times

thank u with respect Ron Ruli

NAPLES CITY COUNCIL
Agenda Item 20
For the Meeting of 1/17/18

INN ON FIFTH.
699 Fifth Ave. South
Naples, Florida 34102

#239.263.0723
Fax: #239.430.2326
mccabe@innonfifth.com

January 15, 2018

Mayor & City Council Members
City of Naples
735 8th St. south
Naples, Fl. 34102

Re: Live Entertainment Permit
Petition 17-LE6 Hearing of January 17, 2018

Mayor, City Council Members:

Regarding a petition that will be appearing before you on Wednesday, January 17th, seeking a permit for live entertainment, I wish to express my concerns. I endorse entertainment on Fifth Ave., and for restaurants to thrive. However, I only want to caution as it relates to late night music that may impact my business, and residential on the street.

My personal concern is that this restaurant is directly across the street from my Club Level hotel operation. I can support entertainment provided windows and doors are closed after 10PM, and loud music does not impact my guests stay or sleep. Further, I would oppose that establishment turning into a late night club operation. (Piano is fine).

In my humble opinion Fifth Ave. does not need late night loud music that can filter out onto the street after 10PM. The Street is thriving. The community has managed to plan, and develop an amazing world class main street, a one of a kind in America. I wish to preserve that image for families, and the demographic we have worked so hard to appeal to over the years. Please proceed with caution regarding live music.

Thank You

Philip J. McCabe
General Manager
Inn on Fifth

318 7TH ST S LLC
2411 VINEWOOD ST
DETROIT, MI
UNITED STATES 48216

342 7TH STREET NAPLES LLC
4360 BROWNSBORO RD # 101
LOUISVILLE, KY
UNITED STATES 40207

440 6TH STREET LLC
PO BOX 2544
NAPLES, FL
UNITED STATES 34106

531 BUILDING LLC
699 5TH AVE S
NAPLES, FL
UNITED STATES 34102

560 9TH ST SOUTH LLC
2614 TAMIAMI TRL N STE 615
NAPLES, FL
UNITED STATES 34103

5TH AVE NAPLES LLC
440 6TH AVENUE
FOX ISLAND, WA
UNITED STATES 98333

602 FIFTH AVENUE REALTY LLC
775 PLEASANT STREET UNIT 1
WEYMOUTH, MA
UNITED STATES 02189

625 FIFTH AVE SO HOLDINGS LLC
%EDGEWOOD R/E INVSTMNT II LLC
8000 MARYLAND AVENUE, STE 925
ST LOUIS, MO
UNITED STATES 63105

630 FIFTH AVE S HOLDINGS LLC
8000 MARYLAND AVE STE 610
SAINT LOUIS, MO
UNITED STATES 63105

643 63 FIFTH AVENUE SOUTH HOLDINGS LLC
8000 MARYLAND AVENUE, STE 610
ST LOUIS, MO
UNITED STATES 63105

6TH STREET LLC
PO BOX 2544
NAPLES, FL
UNITED STATES 34102

780 FIFTH AVE SO HOLDINGS LLC
%EDGEWOOD R/E INVSTMNT II LLC
8000 MARYLAND AVENUE, STE 925
ST LOUIS, MO
UNITED STATES 63105

780 FIFTH AVENUE LLC
780 5TH AVE S STE 200
NAPLES, FL
UNITED STATES 34102

85 13TH AVE LLC
800 S MILWAUKEE AVE STE 170
LIBERTYVILLE, IL
UNITED STATES 60048

ALAFOGINIS, ARTHUR & JOANNE
9445 TOBIN CIR
POTOMAC, MD
UNITED STATES 20854

AMERICAN GUARANTEE BANK
% SANDRIFT CONDOMINIUM ASSOC
613 E LAKE DR
NAPLES, FL
UNITED STATES 34102

ANTON & ANTONIE ROSSMANN TRUST
1112 JARDIN DR
NAPLES, FL
UNITED STATES 34104

ARRIGO, MARIE V
530A 4TH AVE S APT 10
NAPLES, FL
UNITED STATES 34102

BOFF, JOSEPH D
CONSTANCE M BURKE
6520 THOMAS JEFFERSON CT
NAPLES, FL
UNITED STATES 34108

BOLLIGER, ARTHUR R & CLAUDIA
6966 VILLA LUGANESE
LUGANO
SUIZZERA,
SWITZERLAND 6966

BOTTALLA, ROGER J
BOTTALLA TR, ROGER J
780 5TH AVE S #301
NAPLES, FL
UNITED STATES 34102

BOYLE REVOCABLE TRUST
234 4TH AVE SOUTH
FRANKLIN, TN
UNITED STATES 37064

BUOL, CHRISTINE
2170 GULF SHORE BLVD N
NAPLES, FL
UNITED STATES 34102

C A CHRISTENSEN REV TRUST
534 4TH AVE S #12
NAPLES, FL
UNITED STATES 34102

CALDERONE, SANTO
625 6TH AVE S
NAPLES, FL
UNITED STATES 34102

CAPPIELLO JR, ROCCO V
539 RIVA AVE
EAST BRUNSWICK, NJ
UNITED STATES 08816

CAROLYN S PLSEK REV LIV TRUST
6465 SHERINGHAM RD
BLOOMFIELD HILLS, MI
UNITED STATES 48301

CITY OF NAPLES
735 8TH ST S
NAPLES, FL
UNITED STATES 34102

CLINGERMAN, JOANNE L & BRIAN K
4116 PIERCE ST
HOLLYWOOD, FL
UNITED STATES 33021

CONSTAN, GEORGE & VICTORIA
602 5TH AVENUE SOUTH #301
NAPLES, FL
UNITED STATES 34102

CONTES, SALLY M
PO BOX 100
ROARING GAP, NC
UNITED STATES 28668

CONTI JR, PETER T & HUI S
1239 WISTERIA CIR
JAMISON, PA
UNITED STATES 18929

CRF BUILDING 600 LTD PRTNRSHP
C/O CONTINENTAL REALTY CORP
1427 CLARKVIEW RD STE 500
BALTIMORE, MD
UNITED STATES 21209

DAVID F OKEEFFE DEC OF TRUST
633 6TH AVE S
NAPLES, FL
UNITED STATES 34102

DB INVSTMNTS RETIREMENT TRUST
5042 BATESON BEACH DRIVE NE
THORNVILLE, OH
UNITED STATES 43076

DEGENNARO, GERARD P & LAURA M
625 5TH AVE S PH 301
NAPLES, FL
UNITED STATES 34102

DELANEY-EVANS, JANE B
600 5TH AVE S APT 211
NAPLES, FL
UNITED STATES 34102

DONLAN, DANIEL P
780 5TH AVE S APT 305
NAPLES, FL
UNITED STATES 34102

DOROTHY L THOMPSON TRUST
JENNIFER LOVE GRISSOM
12406 PONY CT
TAMPA, FL
UNITED STATES 33626

F FRED PEZESHKAN IRREV TRUST
300 5TH AVE S STE 101-346
NAPLES, FL
UNITED STATES 34102

FIFTH AVENUE HOLDINGS LLC
4410 MARINERS RDG
ALPHARETTA, GA
UNITED STATES 30005

FIFTH AVENUE OF NAPLES INC
700 5TH AVE S
NAPLES, FL
UNITED STATES 34102

FORTUNATO, JOSEPH M
CORINNE M FORTUNATO
4191 MUIRFILED CIRCLE
PRESTO, PA
UNITED STATES 15142

FRANCO, JOSE A
CAROL A EGUSQUIZA-FRANCO
5600 NORTHBORO DR, #102
NAPLES, FL
UNITED STATES 34110

GCS MOM'S LLC
649 5TH AVE S
NAPLES, FL
UNITED STATES 34102

GIBSON, GREGORY J
CLAUDIA LUISA LORELLI GIBSON
780 5TH AVE S #203
NAPLES, FL
UNITED STATES 34102

GOLDMAN, GLENDA R
PO BOX 212
CONCORD, GA
UNITED STATES 30206

GREANEY, TARA
1 GRACIE TER
NEW YORK, NY
UNITED STATES 10028

GUMPERT, FRANK & THERESA C
19766 BEAULIEU CT
FORT MYERS, FL
UNITED STATES 33908

HEATHCOTE, JUDITH & DEREK
714 UPPER ROSLYN
WESTMOUNT, QC
CANADA H3Y 1H9

HOFFMAN, DAVID H & JERRILYN M
8000 MARYLAND AVENUE
STE 1010
ST LOUIS, MO
UNITED STATES 63105

HOLLEY, BARBARA WILSON
625 5TH AVENUE S PH-302
NAPLES, FL
UNITED STATES 34102

INGRAM BUILDING PARTNERSHIP
720 5TH AVE S
NAPLES, FL
UNITED STATES 34102

JACOBS, JANE POLLOM
74 DEAKE ST
S PORTLAND, ME
UNITED STATES 04106

JOCELYNE SENECAL TRUST
265 FIRST STREET
STJEAN RICHELIEU, QC
CANADA J2X 3A5

JOHN F KENNEDY REV TRUST
650 3RD AVE SOUTH
NAPLES, FL
UNITED STATES 34102

JOY L DILLON TRUST
47 RAVENSCRAIG LN
INVERNESS, IL
UNITED STATES 60067

KANE, JEFFREY D & JUDITH A
14 PINEHURST LN
FALMOUTH, ME
UNITED STATES 04105

KAREN E HARRIS REV TRUST
8776 HIDEAWAY HARBOR CT
NAPLES, FL
UNITED STATES 34120

KELLAMS, JACK B & SUE C
C/O KELLAMS ENTERPRISES INC
117 MAIN ST
OOLITIC, IN
UNITED STATES 47451

KENNEDY, KAREN L
JOHN T MCLENNAN
131 BELL ROAD
MAHONE BAY, NS
CANADA B0J 2E0

KENT, MAURICE D & DOROTHY M
4160 CUTLASS LN
NAPLES, FL
UNITED STATES 34102

KOZLOWSKI, DANIEL R & MARCIA J
780 5TH AVE S #204
NAPLES, FL
UNITED STATES 34102

KUNKEL, KIM M
337 6TH STREET S
NAPLES, FL
UNITED STATES 34102

LAMBRECHTS, JOHN S & SANDRA K
617 6TH AVE S
UNIT B-202
NAPLES, FL
UNITED STATES 34102

LOFGREN, JEFFREY J & MARGARET
1325 7TH ST S APT 4C
NAPLES, FL
UNITED STATES 34102

LOUCA, KYRIACOS P & MARGARET S
780 5TH AVE S #202
NAPLES, FL
UNITED STATES 34102

MANDEL, RICHARD E & DEANNA L
180 W BENTON AVE UNIT 401
NAPERVILLE, IL
UNITED STATES 60540

MARCUS, BRAD & SHELLEY
1471 MUREX DRIVE
NAPLES, FL
UNITED STATES 34102

MARIE A MALEBRANCHE REV TRUST
367 DOVER PL APT 1013
NAPLES, FL
UNITED STATES 34104

MARTYNOWICZ, LEONARD L
MARILYN S MARTYNOWICZ
660 3RD AVE S
NAPLES, FL
UNITED STATES 34102

MATTHEWS, JOY L
711 LARI DAWN
SAN ANTONIO, TX
UNITED STATES 78258

MAUCH, JAMES C
SHARON A SMITH
555 5TH AVE S
NAPLES, FL
UNITED STATES 34102

MAUER, OTTO H & MARIE THERESA
380 GREEN BAY ROAD APT #3E
WINNETKA, IL
UNITED STATES 60093

MC MORROW, JOHN E
LORI E RALEIGH
411 6TH ST S APT 204
NAPLES, FL
UNITED STATES 34102

MCARTHY, JOHN P & JEANETTE A
13 WEST FAIRVIEW LANE
SPRINGFIELD, IL
UNITED STATES 62711

MCCABE TR, PHILIP J
PHILIP J MCCABE REV TR
699 5TH AVE S
NAPLES, FL
UNITED STATES 34102

MELISSA K MOSLING IRREV TRUST
640 3RD AVE S
NAPLES, FL
UNITED STATES 34102

MELVIN, JAMES R & ISABELLE
755 PERIWINKLE LN
WYNNEWOOD, PA
UNITED STATES 19096

MES RESIDENTIAL HOLDINGS LLC
PO BOX 3958
INCLINE VILLAGE, NV
UNITED STATES 89450

METZGER, RICHARD W & LINDA P
381 DEER RIDGE ROAD
VALPARAISO, IN
UNITED STATES 46385

MIRALIA TR, BENEDICT P
CARMELLA M MIRALIA TR
4700 ROCKSIDE RD STE 603
INDEPENDENCE, OH
UNITED STATES 44131

MURNANE, MICHAEL
RHONDA MURNANE
226 S COLUMBIA AVE
COLUMBUS, OH
UNITED STATES 43209

NAPLES NEST LLC
9076 STONE CREEK PLACE
DALLAS, TX
UNITED STATES 75243

NAPLES WOMANS CLUB INC
570 PARK ST
NAPLES, FL
UNITED STATES 34102

NEU TECHNOLOGY INVESTMENTS LLC
411 6TH ST S APT 301
NAPLES, FL
UNITED STATES 34102

NICK S GEORGE TRUST
411 6TH ST S APT 205
NAPLES, FL
UNITED STATES 34102

ORANGE NURSE LLC
2145 W SHAKESPEARE
CHICAGO, IL
UNITED STATES 60647

PAMELA S THOMAS TRUST
175 BALDWIN RD
BIRMINGHAM, MI
UNITED STATES 48009

RACEMES LLC
175 BALDWIN STREET
BIRMINGHAM, MI
UNITED STATES 48009

REINBOLT, WILLIAM J & JAMIE
3185 KLONDIKE RD
DELAWARE, OH
UNITED STATES 43015

REUTHER, JOHN S
629 6TH AVE S
NAPLES, FL
UNITED STATES 34102

RICHARD J GOMEZ REV TRUST
411 6TH ST S #304
NAPLES, FL
UNITED STATES 34102

RLR1 LLC
ROYAL SHELL REAL ESTATE INC
600 GILLIAM RD
WILMINGTON, OH
UNITED STATES 45177

ROBERT A BERNARDI LIV TRUST
600 5TH AVE S APT 301
NAPLES, FL
UNITED STATES 34102

ROUX, GILBERT M
MARIANNE MASSHARDT ROUX
CHEMIN DU MACHERET 27
LA CONVERSION,
SWITZERLAND CH 1093

SALLY A ABBOTT TRUST
440 2ND ST S
NAPLES, FL
UNITED STATES 34102

SCARPELLI, GARY T & RHONI
555 5TH AVE S #304
NAPLES, FL
UNITED STATES 34102

SCOTIA PROPERTIES LLC
352 6TH ST S
NAPLES, FL
UNITED STATES 34102

SECOND GENERATION DEVELOPMENT
699 5TH AVE S
NAPLES, FL
UNITED STATES 34102

SHTAYYEH IMAD & ROLA
1466 COUNTRY WOOD DR
DAYTON, OH
UNITED STATES 45440

SIX NINETEEN SIXTH AVE SOUTH
B-203 NOMINEE REALTY TRUST
619 6TH AVE S #B-203
NAPLES, FL
UNITED STATES 34102

SOLLERS, CHARLES & NANCY
607 RANDOLPH RD
MOGADORE, OH
UNITED STATES 44260

SOSNOVSKIKH, OLGA
555 5TH AVE S STE 201
NAPLES, FL
UNITED STATES 34102

STURGEON, RODNEY R
CHERYL M STURGEON
329 6TH ST S
NAPLES, FL
UNITED STATES 34102

SUSAN MCGROGAN REV TRUST
5437 FIRETHORN PT
SPRINGHILL, FL
UNITED STATES 34609

SYPERT, GEORGE W & E JOY
352 6TH ST S
NAPLES, FL
UNITED STATES 34102

TAYLOR, ALICE THOMPSON
JAMES RICHARD TAYLOR
600 5TH AVE S #303
NAPLES, FL
UNITED STATES 34102

THOMAS S MCCARTAN & MARY E
MCCARTAN REV TRUST
2188 TARPON RD
NAPLES, FL
UNITED STATES 34102

THOMAS, JOHN EARL
SHARYN LYN THOMAS
727 PROEHLS TRAIL
HUDSON, WI
UNITED STATES 54016

TIMOTHY W MATHEWS AMD TRUST
2811 NAVARRE AVE
OREGON, OH
UNITED STATES 43616

TRACZYK, EDWARD J & NANCY J
6238 TOWNCENTER CIR
NAPLES, FL
UNITED STATES 34119

USUDA, CARLOS F
6055 MECHANICSVILLE TURNPIKE
MECHANICSVILLE, VA
UNITED STATES 23111

VERCOLLONE, JOANNE C
46 STANDISH ROAD
DUXBURY, MA
UNITED STATES 02332

VERDUIN, DOUGLAS & PATRICIA
4108 PROMENADE BLVD
FAIR LAWN, NJ
UNITED STATES 07410

VINCENT PRESTIGE PROP LLC
3033 EXCELSIOR BLVD STE 525
MINNEAPOLIS, MN
UNITED STATES 55416

WARWICK FLORIDA PROPERTIES LLC
C/O WILLIAM POTEET JR
PO BOX 10667
NAPLES, FL
UNITED STATES 34101

WHIDDON, THOMAS E
155 BAYVIEW DR
BELLEAIR, FL
UNITED STATES 33756

WIECHMANN, JAMES L
SUE JEANNE WIECHMANN
1010 N CASS ST
MILWAUKEE, WI
UNITED STATES 53202

WOLPERT, JOHN F
48 ARCTIC SPGS
JEFFERSONVILLE, IN
UNITED STATES 47130

WRENN, KELLY M
4038 MANSION CT NW
WASHINGTON, DC
UNITED STATES 20007

WYNN ET AL TR, LARRY A
% WYNN PROPERTIES
9220 BONITA BEACH RD STE 200
BONITA SPRINGS, FL
UNITED STATES 34135

Robin D. Singer, AICP
City of Naples Planning Department
295 Riverside Circle
Naples, Florida 34102

PURPOSE:
This resume is provided for the purpose of establishing credentials for expert testimony.

EMPLOYMENT:

November 2004 to Present

City of Naples, Florida, Planning Department
Planning Director. Direct the Planning Department in the administration of the City's Comprehensive Plan and Land Development Regulations including the review of building permits and planning petitions. Supervise staff in the preparation and presentation of planning petitions before the Design Review Board, Planning Advisory Board and City Council. Administer the public art program. Represent the City at homeowners' association meetings and other public events. Prepare and administer the Planning Department budget. Provide expert testimony at board and City Council meetings. Interpret the Code of Ordinances as it pertains to planning and zoning issues.

June 2001 to November 2004

City of West Palm Beach, Florida, Planning Department
Planning and Zoning Administrator. Supervised a staff of eleven in the Planning and Zoning Division which was responsible for the interpretation, implementation and periodic updating of the Zoning and Land Development Regulations and Comprehensive Plan. Participated in the creation and implementation of three new mixed use districts with form-based zoning. Regularly presented to and acted as department representative at City Commission, Zoning Board of Appeals and Planning Board meetings.

August 1989 to June 2001

City of Hollywood, Florida, Community Planning Division
Zoning Administrator (8/99-6/01) Responsible for supervising 4-7 Associate Planners involved in the interpretation and enforcement of the City's zoning regulations through building plan review, design review, occupational license review, site plan review, the processing of variance applications, the writing and presentation of staff reports and answering questions of the public. Regular contact with property owners and developers to review and advise on

Robin D. Singer, AICP
City of Naples Planning Department
295 Riverside Circle
Naples, Florida 34102

zoning and land use issues was required. Facilitated the prompt and accurate review of development proposals and coordinating the efforts of staff. Assisted and advised the Community Planning Director and Office of the City Manager on personnel and zoning related issues.

Principal Planner (5/99-8/99) Promoted to this supervisory position responsible for the Zoning Office and processing of petitions to the Board of Appeals and Adjustment. Acted as the Division representative at board and committee meetings.

Associate Planner (8/93-5/99) augmented the responsibilities of the Assistant Planner position with greater responsibilities in presenting items before the Board of Appeals and Adjustment, Design Review Board and Historic Preservation Board. Contributed to a complete re-write of the City's Zoning and Land Development Regulations with primary responsibility for the Office and Commercial Districts.

Assistant Planner (11/90-8/93) Reviewed building permits and site plans for compliance with the zoning and Land Development Regulations. Processed applications for variance, special exception, site plan review and amendments to the Comprehensive Plan.

Planning Technician (temporary part time 5/90-9/90) included preparing the graphics for variance petitions within the department and for special projects of other departments in the City. Also assisted other planners with area wide land use studies.

Student Intern (8/89-5/90 part time). Participated in two corridor studies, observed at meetings and at the zoning counter and learned to use the Accumap (G.I.S.) software program by mapping the locations of zoning petitions.

August 1987 to August 1988

Kravit Architectural Associates, Boca Raton, Florida . Responsible for the digitizing and plotting of working drawings using AutoCAD.

November 1984 to August 1987

Randall F. Keller, A.I.A., P.A., Fort Lauderdale, Florida. Active in the drafting and coordination of working drawings for residential and commercial projects including restaurants, adult congregate living facilities, shopping centers and various tenant bay improvements.

Robin D. Singer, AICP
City of Naples Planning Department
295 Riverside Circle
Naples, Florida 34102

EDUCATION:

Fall 1999	**Florida Atlantic University,** Boca Raton, Florida. Masters of Urban and Regional Planning.
Fall 1984	**Florida Atlantic University,** Boca Raton, Florida. Bachelors of Fine Art.

CERTIFICATION:

1997	Obtained certification with the **American Institute of Certified Planners.**
1993	Completed 40 hour certification course in **Crime Prevention Through Environmental Design.**
SKILLS:	Manual drafting, geographic information systems (Arc/Info and Accumap), Word, Excel, Powerpoint

ERICA J. MARTIN, MPA, AICP

295 Riverside Circle
Naples, Florida 34102

Phone: (239) 213-1041
Email: emartin@naplesgov.com

EDUCATION/HONORS

Florida Gulf Coast University: Fort Myers, Florida
Master of Public Administration in Environmental Policy, May 2011
Graduated Cum Laude

Flagler College: St. Augustine, Florida
Bachelor of Arts Degree, Political Science, Sociology (emphasis in Criminology), April 2004
Certificate of Completion, Pre-Law Program, April 2004
Dean's List

Telluride High School: Telluride, Colorado
Diploma, June 2000

CERTIFICATIONS

American Institute of Certified Planners, March 2010

PROFESSIONAL EXPERIENCE

City of Naples, Naples, FL **November 2013 to Present**
Senior Planner, Planning Department

- Development and updating of the City's Comprehensive Plan.
- Process applications and present plans to the Design Review Board, Planning Advisory Board and City Council.
- Review and process applications for zoning changes, conditional use petitions, variances, and other current planning petitions.
- Develop amendments to the Code of Ordinances and process the amendments through the Presidents' Council, Planning Advisory Board, City Council and all other applicable boards/committees.
- Review and approve building permits ranging from fence and mechanical equipment to new single family residences and commercial developments.
- Review all marine permits and work closely with marine contractors and the Natural Resources Division on environmental issues pertaining to the City's marine resources.
- Perform Planning Director's functions in Director's absence.
- Supervise Planning Technician and Planners II.
- Assist in budget preparation.

City of Naples, Naples, FL **May 2007 to November 2013**
Planner II, Planning Department

- Development and updating of the City's Comprehensive Plan.
- Process applications and present plans to the Design Review Board, Planning Advisory Board and City Council.
- Review and process applications for zoning changes, conditional use petitions, variances, and other current planning petitions.
- Develop amendments to the Code of Ordinances and process the amendments through various Boards and City Council.
- Review and approve building permits.
- Review all marine permits and work closely with marine contractors and the Natural Resources Division on environmental issues pertaining to the City's marine resources.

Town of Mountain Village, Mountain Village, CO **May 2005 to May 2007**
Planner I, Department of Community Development

- Responsible for the preparation of Design Review Board (DRB) meeting agendas and ensuring proper public notice of all projects.
- Provided public information regarding building, zoning, design review process and signage, including calculation of required fees.
- Completed staff reviews of Design Review Board and Land Use (zoning) applications.
- Presented Design Review Board and Land Use applications to the Design Review Board and Town Council.
- Prepared minutes of the Design Review Board and Town Council meetings.
- Responsible for processing administrative applications, such as applications for signage and lighting, reviewing to ensure compliance with appropriate regulations.

Town of Mountain Village, Mountain Village, CO **May 2004 to May 2005**
Building and Planning Coordinator, Department of Community Development

Town of Mountain Village Housing Authority, Mountain Village, CO
April 2003 to August 2003
Office Manager for the Town of Mountain Village Housing Authority

OTHER EXPERIENCE

Receptionist, Town Hall, Town of Mountain Village, CO
Sales Associate, Ralph Lauren Polo Factory Store, St. Augustine, FL
Ski Instructor, Telluride Ski and Golf Company, Telluride, CO

ACTIVITIES/VOLUNTEER WORK

Community Hospice, Jacksonville, FL
Telluride Middle School Volleyball Coach, Telluride, CO
Member, American Planning Association
Member, International Society of Arboriculture
APA Colorado State Conference, 2003, Host Committee

Leslee C Dulmer

City of Naples Planning Department
295 Riverside Circle Naples, Florida 34102
ldulmer@naplesgov.com 239.213.1042

EDUCATION

Master of Landscape Architecture Ball State University 2006
Bachelor of Urban Planning and Development Ball State University 2004

EXPERIENCE

Planner II

City of Naples *Naples, Florida* *March 2014 – Present*

Provides skilled professional planning and land development work for assigned planning functions of the City. Identifies issues/problems, researches and gathers data, analyze alternatives, and provides recommendation for implementing zoning changes, development plans and other projects that comply with City planning initiatives and applicable development codes and state statutes. Attends and participates in various meetings relevant to design and plan review, planning and zoning, utilities construction, and other City planning and development initiatives. Areas of assignment include, but are not necessarily limited to land use and regulations, neighborhood redevelopment, natural resources, transportation, and housing programs.

Zoning Coordinator

Town of Fort Myers Beach, Florida *Fort Myers Beach, Florida* *Dec 2010 – March 2014*

Responsible for recommendations to the Department Director, Town Manager, Local Planning Agency and the Town Council regarding current growth management and land development projects and issues. Develops changes and recommends improvements and programs to the Community Development Director and Town Manager for the future direction of the Town in balancing growth with quality of life and citizen's desires. Independently responsible for the management and coordination of all project submittals presented at monthly Local Planning Agency meetings. Also tasked with the review of all zoning applications for comprehensive plan and zoning compliance and initiates new programs as needed; plans, directs and coordinates the zoning responsibilities of the department; organizes and directs the planning and zoning programs; organizes trains and coordinates internal operations of personnel; coordinates and maintains effective working relationships within the department, with other Town departments, with members of the general public, Town Council, Town committees, building and development industry and state and local agencies and officers.

Assistant Planner/Assistant Project Manager/Landscape Designer

Morris-Depew Associates, Inc. *Fort Myers, Florida* *Mar 2008 – April 2010*

As assistant planner, responsibilities included research, design, and other tasks related to analysis and assistance in land use changes, zoning requests, comprehensive plan amendments, community plans, Development of Regional Impact submittals and substantial expert witness and litigation support. Responsibilities also included the creation of site plans and design, master concept plan preparation, presentation and publication graphics and other public hearing and/or trial exhibit materials. As landscape designer, duties included landscape and irrigation design and permitting, as well as preparing complete landscape construction drawings, along with providing construction observation and certification services. Lead editor on a number of successful RFQ/RFP submittals for local and national jobs. Attended numerous conferences and seminars relating to the fields of planning and landscape architecture. Mentored CAD technicians and research assistants.

Planner I

Johnson Engineering, Inc. *Fort Myers, Florida* *Jan 2007 – Feb 2008*

Provided assistance to the development of site plans and design of land development projects; including Master Concept Plans and exhibits for comprehensive plan amendments, rezoning applications and development order submittals. Prepared graphic exhibits for public meetings and hearings. Assisted Landscape Architecture department with planting plans, including Rain Garden design. Design lead/editor on a number of successful RFQ/RFP submittals for local and regional jobs.

Planning/Landscape Intern

Johnson Engineering, Inc. *Fort Myers, Florida* *May 2006 – Aug 2006*

Assistance with application preparation and submittal for both planning and landscape projects.

Gardener

Minnetrista Cultural Center *Muncie, Indiana* *May 2005 – Aug 2005*

Duties included installation of various plant material and maintenance of a variety of specific and themed gardens/landscapes at a regional cultural and learning center; maintenance of a native Indiana prairie; responsible for lead design of the Rainbow Garden within the Children's Garden.

Planning Intern

City of Muncie, Community Development *Muncie, Indiana* *May 2003 – Aug 2003*

Duties included assisting Senior Planners with community involvement initiatives; conducted neighborhood analysis/surveys; helped to facilitate a National Trust Main Street program in downtown Muncie.

AFFILIATIONS

Member, City of Fort Myers Beautification Advisory Board, 2009-2010
Member, American Society of Landscape Architecture
Member, American Planning Association
Member, Florida Planning and Zoning Association

PROFICIENCIES

Microsoft Word, Excel, PowerPoint, Outlook
Adobe InDesign, Photoshop, Illustrator
AutoCAD 2007 – 2010

Margaret C. Perry, AICP
(239) 213-1039
mperry@naplesgov.com

Career Experience

February, 2014 to Present: **Planner II**, City of Naples

Provide skilled professional planning and land development work for assigned planning functions of the City. Identify issues/problems, research and gather data, analyze alternatives, and provide recommendation for implementing zoning changes, development plans and other projects that comply with City planning initiatives and applicable development codes and state statutes. Attend and participate in various meetings relevant to design and plan review, planning and zoning, utilities construction, and other City planning and development initiatives. Areas of assignment include, but are not necessarily limited to land use and regulations, neighborhood redevelopment, natural resources, transportation, and housing programs. Perform related work as required.

July, 1998 to February, 2014: **Senior Project Manager**; WilsonMiller, Inc., nka Stantec Consulting Services, Inc.

April, 1993 to August, 1996: **Project Planner/Assistant to Planning Director**; Wilson, Miller, Barton and Peek, Inc.

Senior professional member of the firm serving in the Community and Regional Planning (Long Range Planning) and Development Planning and Approvals Planning (Current Planning/Zoning) Business Units. Responsibilities included: preparation of Growth Management Plan (GMP) and rezoning documentation for land use applications to be considered by Local, Regional, and State governmental entities related to the planning of residential, commercial and mixed-use developments throughout Southwest Florida; representation of clients in governmental venues (County Commission, Planning/Zoning Boards, etc.), including agency-level staff negotiations and coordination of exhibits and presentations at public agency hearings; organize and facilitate public involvement and participation activities; extensive client and review agency staff contact regarding GMP and Land Development Code (LDC) regulations as they relate to particular properties and processing of land use applications; research land development regulations and property histories; development of policy language for GMP amendments; development of regulatory language for LDC amendments; development of recommendations to clients regarding land development proposals; coordination of project activities between all business units within the firm and with sub-consultants; prepare proposals and perform project management for numerous activities for projects, including budget management/control, and the establishment and maintenance of close coordination with related disciplines, e.g., engineering, environmental, transportation, and geographic information systems (GIS).

September, 1996 to June, 1998: **Administrative Assistant**; Syracuse University College of Law and LeMoyne College

January 1989 to February, 1993: **Administrative/Legal Assistant/Land Use**; Young, van Assenderp, Varnadoe and Benton, P.A.

Assistant to the managing partner of the law firm. Responsibilities included: preparation of various land use applications including exhibits to be considered by Local, Regional, and State governmental entities; research comprehensive plan, zoning and development histories of properties; scheduling appointments, meetings, and hearings for managing partner; extensive client and review agency staff contact; composition of correspondence and reports.

December, 1982 to January, 1989: **Planning Technician**
Board of County Commissioners, Collier County

Planning Technician/Assistant to Planning/Zoning Director. Responsibilities included: processing of applications for public hearing (including conditional uses, rezones, PUD's, variances, etc.) before the Planning Commission and County Commission; customer service to the general public regarding land use and zoning issues; preparation of staff reports, executive summaries, ordinances and resolutions for presentation to the County Commission; research property histories; preparation of correspondence and follow-up action as required by the Director; review of site development plans for compliance with County land development regulations.

Education: Associate of Arts, Edison Community College (1987)

Professional Associations: American Institute of Certified Planners
American Planning Association
Florida Planning and Zoning Association

City Council Agenda Item Report

Submitted by: Gregg Strakaluse
Submitting Department: Streets, Stormwater & Natural Resources
Meeting Date: February 21, 2018

SUBJECT
Ordinance - First Reading - Public Hearing relating to Valet Parking; amending Section 17, On-Street Parking and Valet Parking, of the public right-of-way Construction Standards Handbook, Subsection 2, to revise the Hours of Operation for Valet Services. ~ Scheduling a Public Hearing and Second Reading on March 7, 2018.

Legislative Type:
Legislative Item

Funding Source:
The fee for valet applications remains at $150. There is no fiscal impact associated with amending the code.

Recommendation:
Hold a Public Hearing, approve the Ordinance on First Reading, and schedule a Public Hearing and Second Reading on March 7, 2018.

ATTACHMENTS
- Agenda Memorandum
- Ordinance

AGENDA MEMORANDUM ***Streets & Stormwater Department***

Regular Meeting Date: **February 21, 2018**

To: **City Council**

From: **Gregg Strakaluse, Director**

Date: **February 4, 2018**

Legislative ☒ Quasi-Judicial ☐

SUBJECT:
Public Hearing and First reading of an Ordinance to amend valet parking hours, drop-off and pickup locations, and public parking for valet operations that utilizes the public right-of-way.

SUMMARY:
City Council is asked to hold a Public Hearing and consider an Ordinance on First Reading relating to Valet Parking; amending Section 17, On-Street Parking and Valet Parking, of the public right-of-way Construction Standards Handbook, Subsection 2, to revise the Hours of Operation for Valet Services, and schedule a Public Hearing and Second Reading on March 7, 2018.

BACKGROUND:
At the September 9, 2017 City Council meeting, Councilor Seigel had noted that a valet operator had requested hours of operation that differ from the restrictions that are currently set within the Section 17 of the Public Right-of-Way Construction Standards Handbook. In 2008, Ordinance 08-12285 created a regulatory process for establishing valet operations that use the public right-of-way. The ordinance prohibited operations on 5th Avenue South and 3rd Street South and restricted hours of operation to between 6 p.m. to 2 a.m. Recent valet applications have requested consideration on hours, location and parking that are intended to better serve the community and reduce difficulties in finding limited parking spaces. In some cases, the requests have conflicted with the ordinance. The attached ordinance amends the Right-of-Way Construction Standards Handbook to allow staff and City Council to consider the needs of the community and custom fit a valet operation to best serve the community. More specifically, proposed changes include:

1. Remove the prohibition of valet pickup and drop-off locations on 5th Avenue South and 3rd Street South. Staff does not foresee making a recommendation to City Council to approve a new pickup/drop-off location along these streets, as it would remove valuable parking and potentially add to congestion. Staff's opinion is that the existing valet operation that uses side streets and alleyways serves the community well. However, such a restriction may prevent opportunities for future circumstances and City Council may want to consider those on a case-by-case basis and not be restricted by code. Additionally, this restriction appears to conflict with an existing operation authorized by its original development approval.

2. Remove the restriction for hours of operation currently set at 6:00 p.m. and 2:00 a.m. The demand for valet service may not be confined to these specific hours, especially for shopping, early dining, and special events. Staff recommends that applicants provide sufficient detail within their applications to justify their proposed hours of operation and allow City Council to consider each application and set operational hours on a case-by-case basis.

3. The existing ordinance prohibits the use of public parking spaces for valet parking operations at any time. Staff considers this requirement as the standard protocol; however special circumstances may occur where City Council may desire to approve the temporary use of public parking spaces for a valet operation associated with a public or private event occurring as a result of public interest.

FUNDING SOURCE:
The current permit fee for processing right-of-way permits is $150.00.

RECOMMENDED ACTION:
Hold a Public Hearing and approve an Ordinance on First Reading relating to Valet Parking; amending Section 17, On-Street Parking and Valet Parking, of the public right-of-way Construction Standards Handbook, Subsection 2, to revise the Hours of Operation for Valet Services, and schedule a Public Hearing and Second Reading on March 7, 2018.

ORDINANCE 2018-

AN ORDINANCE RELATING TO VALET PARKING; AMENDING SECTION 17, ON-STREET PARKING AND VALET PARKING, OF THE PUBLIC RIGHT-OF-WAY CONSTRUCTION STANDARDS HANDBOOK, SUBSECTION 2, TO REVISE THE HOURS OF OPERATION FOR VALET SERVICES; PROVIDING A SEVERABILITY CLAUSE, A REPEALER PROVISION AND AN EFFECTIVE DATE.

WHEREAS, on January 18, 2006, by Ordinance 06-11099, City Council adopted the City of Naples Right-of-Way Construction Standards Handbook; and

WHEREAS, on March 21, 2007, by Ordinance 07-11595, City Council adopted an amendment to the City of Naples Right-of-Way Construction Standards Handbook to allow for the temporary placement of devices to protect greenscaped areas within the right-of-way during neighborhood construction activities; and

WHEREAS, on December 3, 2008, by Ordinance 08-12285, City Council adopted an amendment to the City of Naples Right-of-Way Construction Standards Handbook to provide a permitting process and create standards for permitting valet parking in the public right-of-way; and

WHEREAS, there is a need to amend the standards set forth in Section 17, Subsection 2, of the Right-of-Way Construction Standards Handbook to revise the hours of operation for valet parking services and allow City Council approval of each valet parking permit and its hours of operation in the public right-of-way; and

WHEREAS, the adoption of the amending language to Section 17 of the Right-of-Way Construction Standards Handbook is considered in the best interest of public safety and the protection of public facilities within the public rights-of-way of the City;

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF NAPLES, FLORIDA:

Section 1. That Section 17, Subsection 2, of the Public Right-of-Way Construction Standards Handbook is hereby amended to read as follows (with <u>underlining</u> indicating additions and ~~strikethrough~~ indicating deletions):

SECTION 17: ON STREET PARKING AND VALET PARKING

. . .

2. The City's requirements for valet parking operations on and within the public rights-of-way are as follows:

   a. Submittal of a right-of-way permit application to include a scaled site location sketch and operating information in accordance with the following standards:

      i. Site information shall be provided confirming pick-up and ~~or~~ drop-off location(s) ~~(Note: no pick-up locations are allowed on 5th Avenue South and on 3rd Street South)~~, pick-up or drop-off area dimensions (Note: use of right-of-way shall not exceed 60 feet of street frontage), off-site parking location, off-site parking capacity and the location of all signs associated with the valet parking operation. Pick-up and drop-off areas shall ~~be located so as to~~ minimize impact on the public right-of-way and traffic congestion.

      ii. Operational information shall be provided to confirm projected utilization of valet parking during the peak hour, valet service staffing, minimum qualifications of staff, examples of the minimum 2-part valet ticket form, and location or operating controls of the secured portable valet station.

      iii. Valet parking hours that are proposed by the petition and reviewed by the city shall be consistent with the need of the service area and determined by city council at the time of the petition consideration. Subsequent to an approved right-of-way permit, the city manager may modify valet operating hours in the best interest of the public. ~~shall not begin prior to 6:00 p.m. and terminate not later than 2:00 a.m.~~

      iv. Valet parking shall not require or utilize parking from a public parking reserve or public parking garage, unless approved by City Council, and shall utilize private, non-residential parking spaces ~~during off-hours for the businesses it normally serves~~. It is not the intent of this section to diminish parking within a private parking lot for any operating business(s) during business hours, but rather to allow businesses to provide a service that complements their operations by increasing the parking opportunities by making it more visible, accessible and efficient. Additional ~~E~~exceptions may be allowed for valet parking provided by or for the City as a public service.

v. Vehicles shall not park within the public valet parking area for more than 10 minutes.

vi. All signage or markers shall conform to all applicable sections of the land development regulations.

b. The right-of-way permit application will require processing to City Council for final action in accordance with the standards contained in this Section. The City Council shall have the authority to revoke valet parking approvals where operations have been found to be in violation of the standards of approval or any imposed conditions, or where the City Council finds that it is in the public interest to reduce or consolidate valet parking to relieve traffic congestion, avoid motorist confusion, or to eliminate other negative impacts.

Section 2. If any word, phrase, clause, subsection or section of this ordinance is for any reason held unconstitutional or invalid, the invalidity thereof shall not affect the validity of any remaining portions of this ordinance.

Section 3. That all sections or parts of sections of the Code of Ordinances, City of Naples, all ordinances or parts of ordinances, and all resolutions or parts of resolutions in conflict herewith, be and the same are hereby repealed to the extent of such conflict.

Section 4. This ordinance shall take effect immediately upon adoption at second reading.

APPROVED AT FIRST READING THIS 21ST DAY OF FEBRUARY 2018.

SCHEDULED FOR SECOND READING AND PUBLIC HEARING IN OPEN AND REGULAR SESSION OF THE CITY COUNCIL OF THE CITY OF NAPLES, FLORIDA, THE 7TH DAY OF MARCH 2018.

Attest:

Patricia L. Rambosk, City Clerk

Bill Barnett, Mayor

Approved as to form and legality:

Robert D. Pritt, City Attorney

Date filed with City Clerk:_____

City Council Agenda Item Report

Submitted by: Stephanie Molloy
Submitting Department: Streets, Stormwater & Natural Resources
Meeting Date: February 21, 2018

SUBJECT
Resolution - Quasi-Judicial - Public Hearing determining Dredge and Fill Application 180630 to apply for a Marine Permit that would allow dredging the access channel to Hamilton Harbor Marina on Naples Bay at 7054 Hamilton Avenue, Naples, Florida 34112, owned by Hamilton Harbor Marina Inc.

Legislative Type:
Quasi Judicial Item

Funding Source:
This project is to be funded entirely by the applicant.

Recommendation:
Approve the Resolution.

ATTACHMENTS
- Agenda Memorandum
- Resolution
- Application
- Resume

Regular Meeting Date: **February 21, 2018**

To: Bill Moss

Through: Gregg Strakaluse

From: Stephanie Molloy, Natural Resources Manager

Date: February 8, 2018

Legislative ☐ Quasi-Judicial ☒

SUBJECT:
A resolution determining a Dredge and Fill Petition 180630 to allow dredging of the access channel to Hamilton Harbor, Naples Bay, Naples, FL.

SUMMARY:
City Council is asked to consider a Resolution to determine a Dredge and Fill Petition 180630 to allow dredging of the access channel to Hamilton Harbor, Naples Bay, Naples, FL. The purpose of this dredging is to provide safe ingress and egress of vessels to Hamilton Harbor from Naples Bay/Gordon Pass. In that this is a Quasi-Judicial matter, disclosures and the swearing in of those giving testimony are required.

BACKGROUND:
Pursuant to City Ordinance 52-93, approval to dredge in natural inland waters must be obtained by City Council. The petitioner submitted an Application for Dredge and Fill for City Council's consideration. The subject property is the access channel (previously dredged) to Hamilton Harbor, Naples Bay, Naples. The subject property is on a natural water body (Naples Bay), and so dredging activities must have City Council approval. Notice of a public hearing to consider the application was placed in the Naples Daily News on 11 February 2018.

The project involves dredging Naples Bay/Gordon Pass, Class II waters, to a depth of -7.0 feet Mean Low Water, removing approximately 1,400 cubic yards of material adjacent to 1600 Danford St., Naples 34103 (Parcel ID # 20764040001), Section 25, Township 50 South, Range 25 East, Collier County. The staging site will be located at the Hamilton Harbor fuel dock. Spoil materials will be trucked off-site and disposed at 25501 Bonita Grande Dr, Bonita Springs FL

34135. A submerged Resources Survey revealed no submerged resources that would preclude dredging in this area. The bottom material is a silty mud within the existing channel and a slightly sandier substrate on the shoals on either side of the channel. No live oyster or seagrasses were present within the proposed dredge footprint. Seagrass (shoal grass; *Halodule beaudettii*) was present on the north side of the channel, within an area that is monitored by Natural Resources Division staff.

The Petitioner has obtained the required Florida Department of Environmental Protection permit (No. 0226196-007EE, BOT File No. 110231105_40636) for the proposed dredging.

FUNDING SOURCE:
This project is to be funded entirely by the applicant.

RECOMMENDED ACTION:
Adopt a Resolution approving Dredge and Fill Application 180630 to allow dredging Hamilton Harbor access channel, Naples Bay/Gordon Pass, Naples, FL.

RESOLUTION 2018-

A RESOLUTION DETERMINING DREDGE AND FILL APPLICATION 180630 TO APPLY FOR A MARINE PERMIT THAT WOULD ALLOW DREDGING THE ACCESS CHANNEL TO HAMILTON HARBOR MARINA ON NAPLES BAY AT 7054 HAMILTON AVENUE, NAPLES, FLORIDA 34112, OWNED BY HAMILTON HARBOR MARINA INC.; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, Section 52-93 (a) of the Code of Ordinances states that it is unlawful for any dredging or filling any portion to be performed in, upon or contiguous to any inland water area of the city without approval in accordance with this code section; and

WHEREAS, the city manager has determined that the proposed dredging activity will take place on a natural water body, thus City Council approval must be obtained prior to dredging; and

WHEREAS, Jeff Rogers, as agent for Hamilton Harbor Marina Inc., has petitioned City Council to allow application for a marine permit to dredge Naples Bay/Gordon Pass (access channel to Hamilton Harbor), Class II waters, to a depth of -7.0 feet Mean Low Water, removing approximately 1,400 cubic yards of material adjacent to 1600 Danford Street, Naples, Florida 34103 (Parcel ID # 20764040001), Section 25, Township 50 South, Range 25 East, Collier County, hereinafter referred to as the 'Project'; and

WHEREAS, after considering the recommendation of the City staff and after providing the petitioner, staff and the public an opportunity to present testimony and evidence, the City Council finds that the basis for granting approval of Dredge and Fill Application 180630 with attachments ARE/ARE NOT met;

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF NAPLES, FLORIDA:

Section 1. That Dredge and Fill Application 180630 with attachments, approval to apply for a marine permit for the purposes of dredging the access channel to Hamilton Harbor, Naples Bay, a copy of which is on file in the City Clerk's Office, is hereby GRANTED/DENIED.

Section 2. That, prior to dredging activities, a marine permit shall be required for this project.

Section 3. This resolution shall take effect immediately upon adoption.

PASSED IN OPEN AND REGULAR SESSION OF THE CITY COUNCIL OF THE CITY OF NAPLES, FLORIDA, THIS 21ST DAY OF FEBRUARY 2018.

_____
Bill Barnett, Mayor

Attest:

Approved as to form
and legality:

_____
Patricia Rambosk, City Clerk

_____
Robert D. Pritt
City Attorney

_____
Date filed with City Clerk

City of Naples - Streets & Stormwater
295 Riverside Circle | Naples, Florida 34102
Phone: (239) 213-5000 Fax: (239) 213-5010

APPLICATION FOR DREDGE AND FILL

Date Received

File Number

Staff Reviewer

Dredge and Fill petitions must be submitted to the National Resources Office.

Petitioner: Hamilton Harbor Marina, Inc.

Address: 2550 GOODLETTE RD N #100 Naples, FL 34103

Telephone: _____ Fax #: _____ Email: _____

Agent for Petitioner: Jeff Rogers

Address: 3584 Exchange Ave

Telephone: 239-643-0166 Fax #: 239-643-6632 Email: Jeff@thanaples.com

Owner of Property: Hamilton Harbor Marina, Inc.

Address: 2550 Goodlette Road North #100, Naples, FL 34103

Telephone: _____ Fax #: _____ Email: _____

Address/Location of Subject Property: 1600 DANFORD ST, NAPLES, FL 34112

Legal Description of Property Involved:

UNPLATTED LANDS 22 50 25 GOV LOT 3 EXC NE1/4 OF SE1/4 OF NE1/4, LESS OR 166 PG 617 TO CNTY, LESS R/W, LESS THOSE PORTIONS AS DESC IN OR 4467 PG 3474 AS "PARCEL 1" & NORTH PORTION OF "PARCEL 2" DESC.

South Florida Water Management District Permit Number: 0226196-007

Existing Zoning: PUD

Total Acreage/Square Footage of Subject Property: 2.64 ACRES

Current Use of Land: Marina & Yacht Club

Proposed of Land: _____

Square Footage of Area to be Filled: _____

Petition Request and Summary of Facts

Hamilton Harbor Yacht Club is requesting an emergency maintenance dredging approval for their access channel. Due to Hurricane Irma the access channel silted in which is restricting access for their members and the public. State and Federal permits have been issued for this maintenance activity in order to dredge the channel to its original designed depth of -7-feet MLW by removing approximately 1,400 cubic yards of spoil. The spoil will be off loaded at the Hamilton Harbor fuel dock and trucked off-site to the approved site at Bonita Grande. There are no submerged resources within the dredge footprint therefore no impacts to the surrounding waterway will result from these maintenance activities.

In signing below I acknowledge and attest that I am the owner of the property described above and/or the duly appointed representative of the owner(s) of the property described above; that I understand the nature and ramifications of this petition relative to the property; that I hereby authorize the petitioner and their agent to represent the property during any deliberations regarding this petition; that I allow access to the property by City staff and City elected and appointed officials for the purpose of inspecting the premises relative to this petition; that all information contained in this petition and associated materials is correct; that any incorrect information may render the final decision and recommendations on this petition void; and that I have read the Proposed Policy Guidelines for Presentation of Petitions to the Naples City Council approved under Resolution 01-9397.

(Note: If submitting this form electronically, please type your name and date on the corresponding Signature line(s) below. Also, please review the Electronic Submittal disclaimer on the last page of this document.)

Hamilton Harbor Marina, Inc
Patrick L. Utter V.P.
Signature of Property Owner

2-6-18
Date

Patrick L. Utter
Printed Name of Property Owner

In signing below I acknowledge that I am the authorized petitioner and/or petitioner's agent for this petition and I attest to the accuracy of all information contained in this petition and associated materials; that I understand that any incorrect information may render the final decision and recommendations on this petition void; and that I have read the Proposed Policy Guidelines for Presentation of Petitions to the Naples City Council approved under Resolution 01-9397.

Signature of Petitioner

Date

Jeff Rogers
Signature of Agent

2/6/18
Date

Printed Name of Petitioner

Jeff Rogers
Printed Name of Agent

Section 52-93(4)2 of the Code of Ordinances lists the criteria to be considered in determining a dredge and fill permit. **Please address the criteria below.**

If the city council shall make the following findings, the application may be approved, or approved with conditions, subject to approval of the appropriate departments of the state and the U.S. Army Corps of Engineers:

That the proposed activities or project will not violate any statute, zoning law, ordinance or other restrictions which may be applicable thereto;

The proposed maintenance dredging activities will not violate any local building or zoning ordinances. All required permits have been issued by State and Federal agencies.

That no harmful obstruction to or harmful alteration of the natural flow of the navigable water within such area will arise from the proposed construction;

The proposed maintenance dredging activities will not alter any water flow along the Gordon River. The proposed maintenance dredging is within the marked navigable public access channel which is being proposed to maintain safe ingress/egress to the marina and public boat ramp/county park.

That no significant biological or ecological adverse impact will result therefrom;

Please see attached Submerged Resource Survey which indicates that no resources are within the project footprint. Therefore no impacts to any biological resources will occur from the proposed dredging project.

That no harmful or increased erosion, shoaling or channels or stagnant areas of water will be created thereby; and

The proposed maintenance dredging will not cause any additional erosion or shoaling of the surrounding waterway.

That no material injury or monetary damage to adjoining land will accrue therefrom.

The proposed project is contained within a designated access channel that has been previously dredged.

ADDITIONAL INFORMATION TO BE SUBMITTED:

1. Affidavit of ownership of abutting upland property, written statement describing proposed project, and a plan or sketch of proposed activity showing mean high-water line, mean low-water line, soundings/depths, shoreline vegetation; biological, hydrographic, or ecological survey; plans prepared and sealed by a registered state engineer.

ELECTRONIC SUBMITTAL

(NOTE: The button used to submit this form (via email) will appear upon checking the box and agreeing to the terms below. Saving this entire form for electronic submittal requires a minimum of free Adobe Reader version 11 (or greater), or Adobe Acrobat Standard / Pro).

☐ **By checking this box, typing your name in the Owner and/or Petitioner's signature field(s), and submitting this form electronically (via email), you affirm that all information contained within this document was completed truthfully, and to the best of your knowledge and you understand that your electronic signature is considered legally binding the same as signing your physical signature by hand.**

HAMILTON HARBOR ENTRANCE CHANNEL SUBMERGED RESOURCE SURVEY

NAPLES, FLORIDA

OCTOBER 2017

PREPARED BY:

TURRELL, HALL & ASSOCIATES, INC.
Marine & Environmental Consulting
PHONE: 239-643-0166 WWW.THANAPLES.COM

Table of Contents

1. INTRODUCTION

In 2005 Hamilton Harbor Marina, Inc. (Hamilton Harbor) was issued an Environmental Resources Permit (Permit #11-0226196-001) by the Florida Department of Environmental Protection to excavate 4.9 acres of mangrove wetlands to construct a marina facility, which included the dredging of approximately 15,806 cubic yards of material (14,253 cubic yards of sovereignty submerged lands) for a 1.55 acres navigational access channel to a depth of -7 feet mean low water (MLW). A private easement was issued for the access channel under BOT #110231105. Hamilton Harbor is located in Naples, Florida 34112, in Section 22, Township 50 South, and Range 25 East in Collier County. The access channel is located within Naples Bay, Class II Waters, Unclassified for Shellfish Harvesting.

Turrell, Hall & Associates, Inc. (THA) was contracted to provide environmental permitting services for maintenance dredging of the access channel within the private easement. This work includes a Submerged Resources Survey (SRS, which will provide planning assistance to both the owner and government agencies reviewing the proposed project.

The SRS was conducted on October 10, 2017, between 10 a.m. and 12 a.m. Surface conditions consisted of partly cloudy skies with wind speeds averaging 10 to 12 mph. The air temperature was approximately 84 degrees Fahrenheit. High tide for the project site occurred at 3:40 a.m. and reached approximately 3.2 feet above the mean low water line. Low tide occurred at 11:30 a.m. during the submerged resource survey and reached a level of 0.0 feet above the mean low water line. The following high tide then occurred at 6:08 p.m. and reached 2.6 feet above the mean low water mark.

2. OBJECTIVE

The objective of the submerged resources survey was to locate and identify any existing submerged resources within the proposed project area. The survey provided on-site environmental information to help determine if the proposed project would impact any existing submerged resources that may have re-established within the private easement area. The general scope of work performed at the site is summarized below.

- THA personnel conducted a site visit in order to verify the location of any submerged resources.

- THA personnel identified submerged resources (or the lack thereof) at the site, estimated the percent coverage, and delineated the approximate limits of any submerged resources observed.

- THA personnel delineated the limits via a handheld GPS (Garmin Model 64st).

3. METHODOLOGY

THA biologists intentionally designed the methodology of the SRS to cover the extent of the private easement and either side of the channel. The components of this survey included:

- Review of aerial photography of the survey area as well as the private easement location.
- Establish survey transect lines overlaid onto aerials.
- Physically swim transects, GPS locate limits of submerged resources, and determine approximate percent coverage of any submerged resources.
- Document and photograph all findings.

The survey area was evaluated systematically by following the established transects, spaced approximately 50 feet apart as shown on the attached exhibit. The existing channel markers provided reference points for easily identifiable markers, which assisted in maintaining position within each transect.

Due to the amount of boat traffic utilizing the channel from Hamilton Harbor and the Bayview Park public boat ramp, a boat was situated within the channel with a dive flag clearly visible to alert boat traffic to the THA staff in the water. In the event of an additional vessel attempting to utilize the channel, the swimmers were alerted by the watch boat and moved outside of the channel until the vessel had passed through.

4. RESULTS

The surveyed area consisted of a substrate composed of silty mud within the existing channel and a slightly sandier substrate on the shoals on either side of the channel.

The shoals on either side of the marked channel were shallow in depth (approximately 24-36", shallower in some spots). The shoal on the south side of the channel consisted of mangrove detritus and oyster shell debris, however no live oysters were observed. Visibility was approximately 18-24" on both shoals and slightly less within the channel. The shoal on the north side of the channel contained patches of shoal grass (*Halodule beaudettii*). From Green Marker 1 heading towards the boat basin, shoal grass coverage was approximately 30% for approximately 75 feet and becoming sparser (approximately 10% coverage). The shoal grass became thick again just landward of the Seagrass Area sign located on the north side of the channel (see the attached exhibits). There were no sea grasses or other resources located within the channel footprint. Observed species can be seen in Table 1.

Table 1: Observed species of flora and fauna within the project site:

Common Name	**Scientific Name**
Shoal Grass	*Halodule beaudettii*
Easter oyster (shell debris)	*Crassostrea virginica*

The observed shoal grass on the north side of the channel is an existing seagrass bed that was located prior to the channel being dredge and is monitored by the City of Naples staff annually.

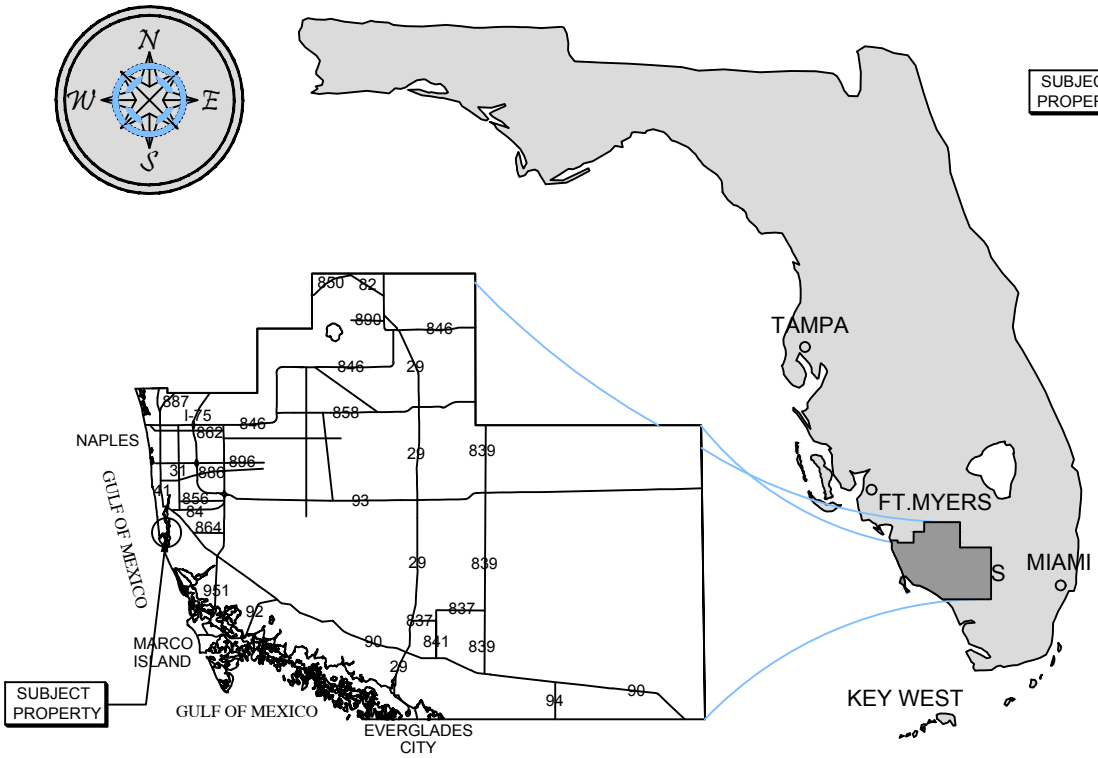
5. CONCLUSIONS

The SRS conducted at the project site indicates that the area where the private easement and navigational channel exist do not have any significant resources in the maintenance dredge footprint. All resources occurred outside of the channel on the shallower shoals and no living specimens (including seagrasses, algae, or shellfish) were observed within the channel footprint. Some "boils" were observed, indicating the presence of fish, however none could be identified due to the waterway's poor visibility and busy nature.

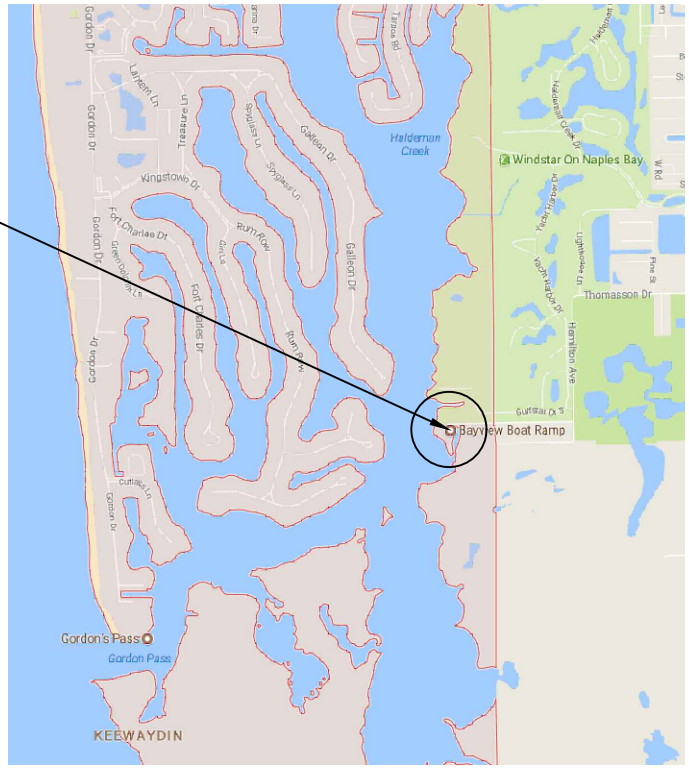
Negative impacts to submerged resources are not expected as a result of the maintenance dredging of the existing channel.

P:\0356.3-Hamilton Harbor Dredge\CADEIA\0356 HAMILTON SRS.dwg LOCATION 2/6/2018

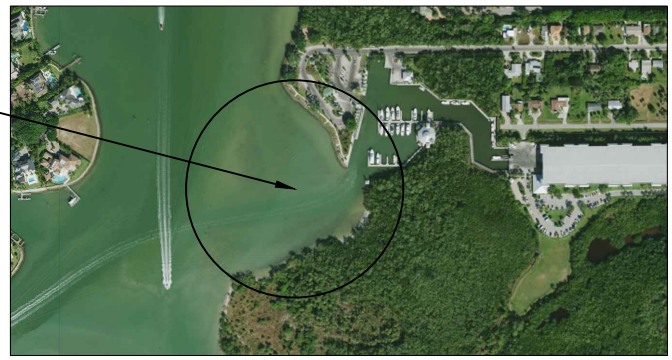
STATE OF FLORIDA



COLLIER COUNTY



VICINITY MAP



COUNTY AERIAL

NOTES:

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<> LATITUDE: N 26° 06' 05"

<> LONGITUDE: W 81° 47' 00"

Turrell, Hall & Associates, Inc.
Marine & Environmental Consulting
3584 Exchange Ave. Suite B. Naples, FL 34104-3732
Email: tuna@turrell-associates.com Phone: (239) 643-0166 Fax: (239) 643-6632

HAMILTON HARBOR

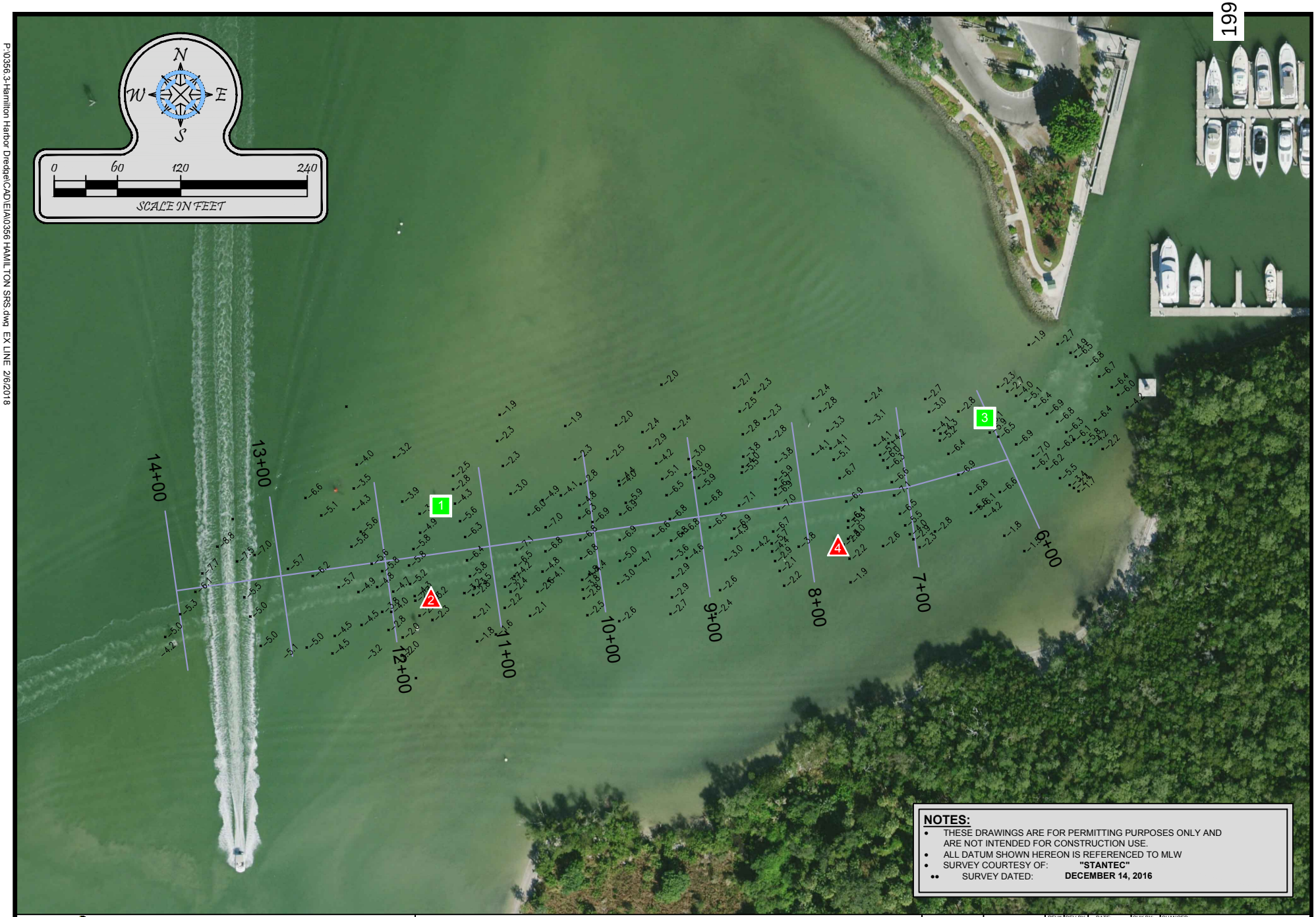
LOCATION

THESE DRAWINGS ARE FOR PERMITTING PURPOSES ONLY AND ARE NOT INTENDED FOR CONSTRUCTION USE.

		REV#	REV BY:	DATE:	CHK BY:	CHANGED:
DESIGNED:	T.T.T.	1.	-	-	-	-
DRAWN BY:	SPC	2.	-	-	-	-
CREATED:	11/7/17	3.	-	-	-	-
JOB NO.:	0356.2	4.	-	-	-	-
SHEET NO.:	01 OF 05	5.	-	-	-	-

SECTION- 22 TOWNSHIP- 50S RANGE- 25E

P:\0356.3-Hamilton Harbor Dredge\CAD\EIA\0356 HAMILTON SRS.dwg EX LINE 2/6/2018



NOTES:

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- SURVEY COURTESY OF: **"STANTEC"**
- SURVEY DATED: **DECEMBER 14, 2016**

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HAMILTON HARBOR

EXISTING CONDITIONS

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		REV#:	REV BY:	DATE:	CHK BY:	CHANGED:
DESIGNED:	T.T.T.	1.	-	-	-	-
DRAWN BY:	KCD	2.	-	-	-	-
CREATED:	01.24.12	3.	-	-	-	-
JOB NO.:	0356.2	4.	-	-	-	-
SHEET NO.:	02 OF 05	5.	-	-	-	-

SECTION- 22 TOWNSHIP- 50S RANGE- 25E

P:\0356.3-Hamilton Harbor Dredge\CAD\EIA\0356 HAMILTON SRS.dwg SUBMERGED1 2/6/2018

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HAMILTON HARBOR

SUBMERGED RESOURCES

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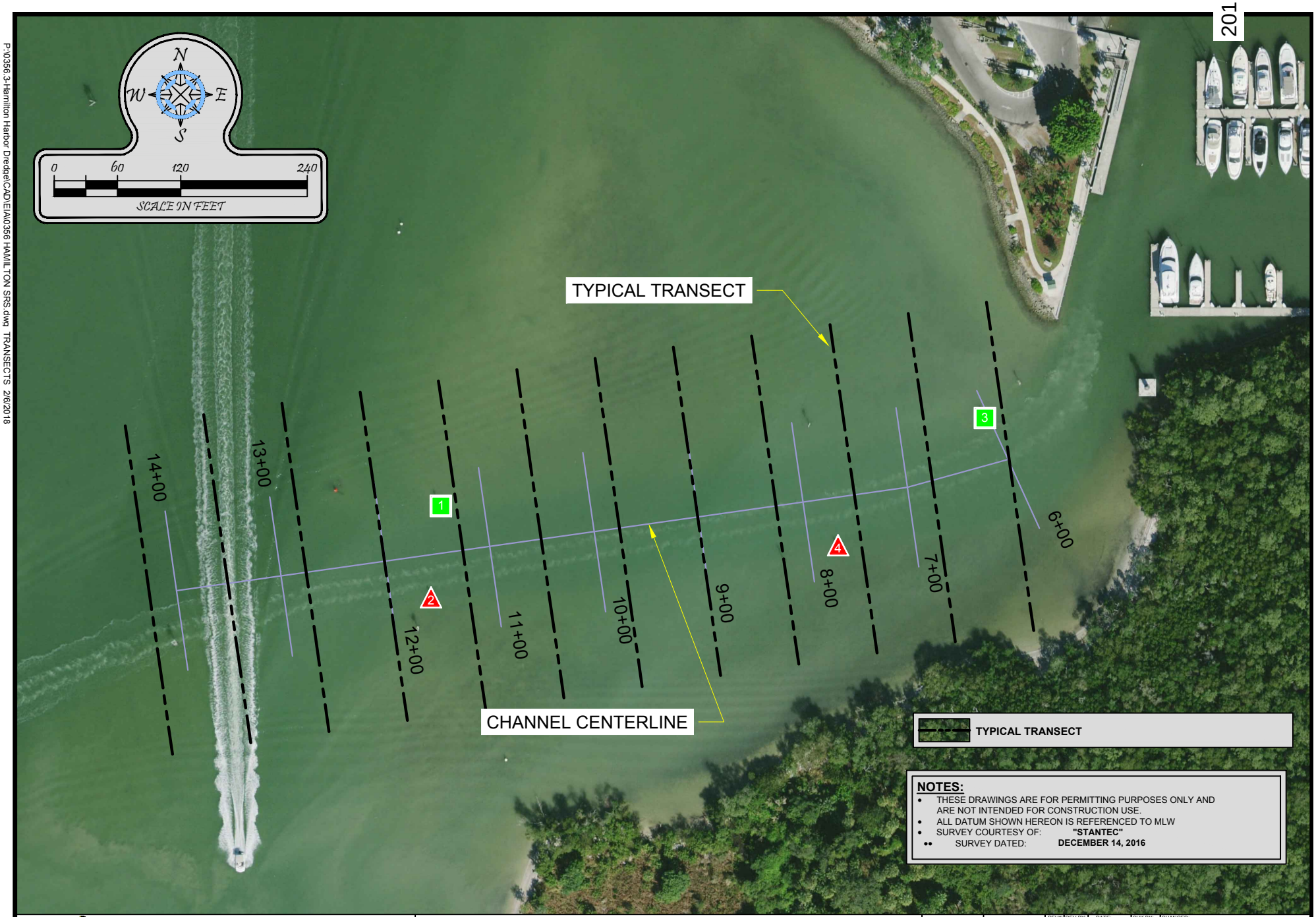
DRAWN BY:	SPC	2.	-	-	-	-
CREATED:	11/7/17	3.	-	-	-	-
JOB NO.:	0356.2	4.	-	-	-	-
SHEET NO.:	03 OF 05	5.	-	-	-	-

SECTION- 22 TOWNSHIP- 50S RANGE- 25E

P:\0356.3-Hamilton Harbor Dredge\CAD\EIA\0356 HAMILTON SRS.dwg TRANSECTS 2/6/2018



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HAMILTON HARBOR

TRANSECTS

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SECTION- 22 TOWNSHIP- 50S RANGE- 25E

Florida Department of Environmental Protection

South District
Post Office Box 2549
Fort Myers, Florida 33902-2549
SouthDistrict@dep.state.fl.us

Rick Scott
Governor

Carlos Lopez-Cantera
Lt. Governor

Noah Valenstein
Secretary

January 26, 2018

Hamilton Harbor Marina
c/o Turrell Hall & Assoc., Jeff Rogers
3584 Exchange Ave.
Naples, Fl. 34104
JEFF@THANAPLES.COM

File No.: 0226196-007 EE, Collier County
BOT File No.: 110231105_40636

Dear: Mr. Rogers,

On December 29, 2017, we received your request for verification of exemption to perform the following activities:

To maintenance dredge Naples Bay/Gordon Pass, Class II waters, to a depth of -7.0 feet Mean Low Water, removing approximately 1,400 cubic yards of material adjacent to 1600 Danford St., Naples 34103 (Parcel ID # 20764040001), Section 25, Township 50 South, Range 25 East, Collier County. The spoil shall be removed and deposited in uplands with the final spoil disposal location at 25501 Bonita Grande Drive, Bonita Springs 34135.

Your request has been reviewed to determine whether it qualifies for (1) a regulatory exemption, (2) proprietary authorization (related to state-owned submerged lands), and (3) federal approval that may be necessary for work in wetlands or waters of the United States.

Your project either qualifies or was not applicable for all three authorizations types. However, this letter does not relieve you from the responsibility of obtaining other federal, state, or local authorizations that may be required for the activity.

1. Regulatory Review – VERIFIED

Based on the information submitted, the Department has verified that the activity as proposed is exempt under Chapter 62-330.051(7)(a), Florida Administrative Code, and Section 403.813 (1)(f) of the Florida Statutes from the need to obtain a regulatory permit under Part IV of Chapter 373 of the Florida Statutes.

2. Proprietary Review - PENDING

The Department acts as staff to the Board of Trustees of the Internal Improvement Trust Fund (Board of Trustees) and issues certain authorizations for the use of sovereign submerged lands. The Department has the authority to review activities on sovereign submerged lands under Chapters 253 and 258 of the Florida Statutes, and Chapters 18-18, 18-20, and 18-21, Florida Administrative Code, as applicable.

The activity appears to be located on sovereign submerged lands owned by the Board of Trustees. The activity is not exempt from the need to obtain the applicable proprietary authorization. As staff to the Board of Trustees, the Department has reviewed the activity described above, and has determined that the activity requires a letter of consent for the use of sovereign submerged lands. Based on the information provided, we have begun processing your application to use sovereign submerged lands but need additional information to continue processing this request. Please provide the information requested below by March 27, 2018. If neither the information nor request for additional time is received, then your application may be denied without prejudice.

REQUEST FOR ADDITIONAL INFORMATION:

1. Removal of dredge material from state-owned lands requires severance fees (18-21.011(3), F.A.C.) Based upon the dredge volume, a fee of $3,150.00 will be required. Please remit payment to the Department for the $3,150 after receipt of severed dredge fee invoice.

3. SPGP Review - APPROVED

Your proposed activity, as outlined in your application and attached drawings, qualifies for Federal authorization pursuant to the State Programmatic General Permit V, and a **SEPARATE permit** or authorization **will not be required** from the Corps. Please note that the Federal authorization expires on July 26, 2021. However, your authorization may remain in effect for up to 1 additional year, if provisions of Special Condition B. 27 of the SPGP V permit instrument are met. You, as permittee, are required to adhere to all General Conditions and Special Conditions that may apply to your project." Special conditions required for your project are attached. A copy of the SPGP V with all terms and conditions and the General Conditions may be found at http://www.saj.usace.army.mil/Missions/Regulatory/Source-Book/."

Authority for review an agreement with the USACOE entitled "Coordination Agreement Between the U. S. Army Corps of Engineers (Jacksonville District) and the Florida Department of Environmental Protection, or Duly Authorized Designee, State Programmatic General Permit", Section 10 of the Rivers and Harbor Act of 1899, and Section 404 of the Clean Water Act.

Additional Information

Please retain this letter. The activities may be inspected by authorized state personnel in the future to ensure compliance with appropriate statutes and administrative codes. If the activities are not in compliance, you may be subject to penalties under Chapter 373, F.S., and Chapter 18-14, F.A.C.

NOTICE OF RIGHTS

This action is final and effective on the date filed with the Clerk of the Department unless a petition for an administrative hearing is timely filed under Sections 120.569 and 120.57, F.S., before the deadline for filing a petition. On the filing of a timely and sufficient petition, this action will not be final and effective until further order of the Department. Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice.

Petition for Administrative Hearing

A person whose substantial interests are affected by the Department's action may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. Pursuant to Rule 28-106.201, F.A.C., a petition for an administrative hearing must contain the following information:

(a) The name and address of each agency affected and each agency's file or identification number, if known;
(b) The name, address, any email address, any facsimile number, and telephone number of the petitioner; the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests are or will be affected by the agency determination;
(c) A statement of when and how the petitioner received notice of the agency decision;
(d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;
(e) A concise statement of the ultimate facts alleged, including the specific facts that the petitioner contends warrant reversal or modification of the agency's proposed action;
(f) A statement of the specific rules or statutes that the petitioner contends require reversal or modification of the agency's proposed action, including an explanation of how the alleged facts relate to the specific rules or statutes; and
(g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wishes the agency to take with respect to the agency's proposed action.

The petition must be filed (received by the Clerk) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000 or by email to Agency_clerk@dep.state.fl.us. Also, a copy of the petition shall be mailed to the applicant at the address indicated above at the time of filing.

Time Period for Filing a Petition

In accordance with Rule 62-110.106(3), F.A.C., petitions for an administrative hearing by the applicant must be filed within 21 days of receipt of this written notice. Petitions filed by any persons other than the applicant, and other than those entitled to written notice under Section 120.60(3), F.S. must be filed within 21 days of publication of the notice or within 21 days of receipt of the written notice, whichever occurs first. Under Section 120.60(3), F.S., however, any person who has asked the Department for notice of agency action may file a petition within 21 days of receipt of such notice, regardless of the date of publication. The failure to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the discretion of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

Extension of Time

Under Rule 62-110.106(4), F.A.C., a person whose substantial interests are affected by the Department's action may also request an extension of time to file a petition for an administrative hearing. The Department may, for good cause shown, grant the request for an extension of time. Requests for extension of time must be filed with the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, before the applicable deadline for filing a petition for an administrative hearing. A timely request for extension of time shall toll the running of the time period for filing a petition until the request is acted upon.

Mediation

Mediation is not available in this proceeding.

FLAWAC Review

The applicant, or any party within the meaning of Section 373.114(1)(a) or 373.4275, F.S., may also seek appellate review of this order before the Land and Water Adjudicatory Commission under Section 373.114(1) or 373.4275, F.S. Requests for review before the Land and Water Adjudicatory Commission must be filed with the Secretary of the Commission and served on the Department within 20 days from the date when the order is filed with the Clerk of the Department.

Judicial Review

Any party to this action has the right to seek judicial review pursuant to Section 120.68, F.S., by filing a Notice of Appeal pursuant to Rules 9.110 and 9.190, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 3900 Commonwealth Boulevard, M.S. 35, Tallahassee, Florida 32399-3000; and by filing a copy of

the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date this action is filed with the Clerk of the Department.

Thank you for applying to the Submerged Lands and Environmental Resource Permit Program. If you have any questions regarding this matter, please contact Jon Guinn by telephone at (239) 344-5650 or by e-mail at Jonathan.Guinn@dep.state.fl.us. When referring to this project, please reference the file number listed above.

Executed in Orlando, Florida

STATE OF FLORIDA DEPARTMENTOF ENVIRONMENTAL PROTECTION

Megan Mills
Permitting Program Administrator
South District

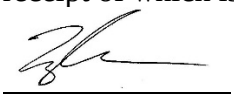
CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this document and authorization to use sovereignty submerged lands, including all copies, were sent to the addressee and to the following listed persons:

Kathy Griffin, Division of State Lands, BOT # 110231105_40636, Kathy.Griffin@dep.state.fl.us

FILING AND ACKNOWLEDGMENT

FILED, on this date, pursuant to Section 120.52(7), F.S., with the designated Department clerk, receipt of which is hereby acknowledged.

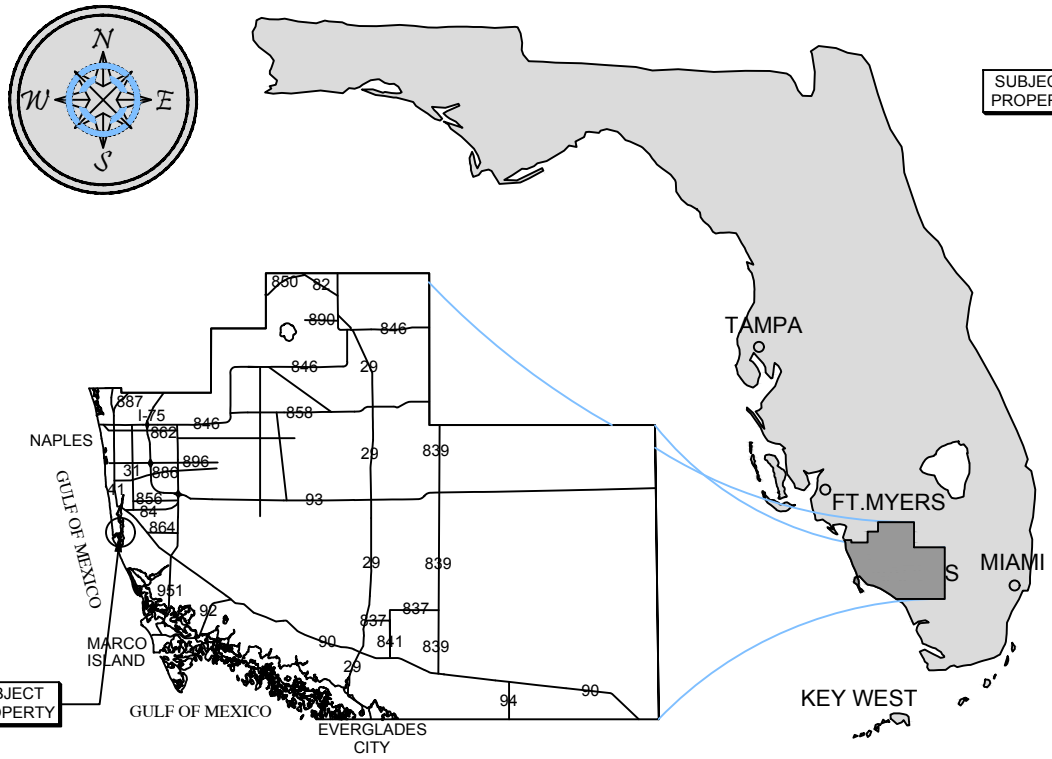


Clerk January 26, 2018
Date

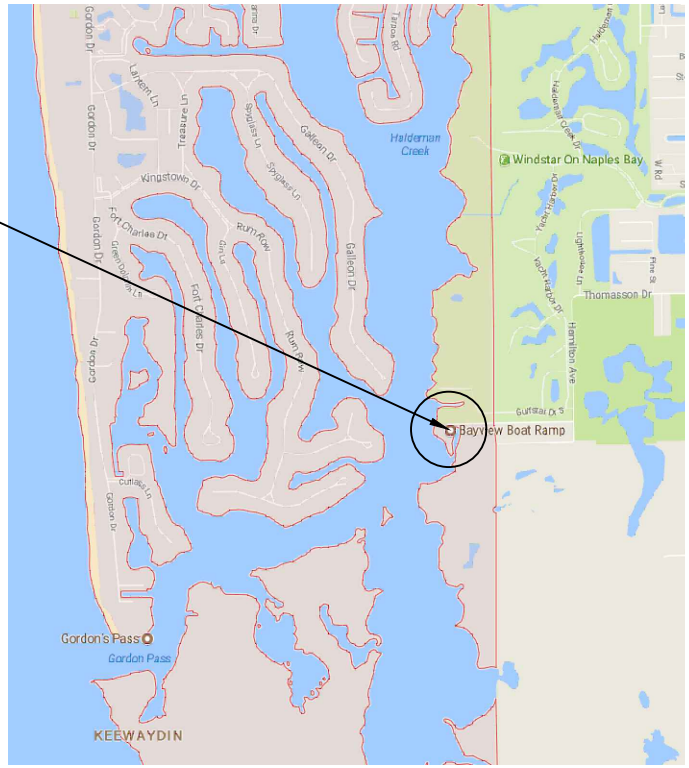
Enclosures:
7 Project drawings
62-330.051(7)(a), F.A.C./403.813(1)(f), F.S.
General Conditions for Federal Authorization for SPGP V
Special Conditions for Use of the SPGP V
Sea Turtle and Smalltooth Sawfish Construction Conditions
Standard Manatee Conditions for In-water Work 2011
Manatee ACOE Key Collier County

EXEMPT
File Number:
0226196-007 EE

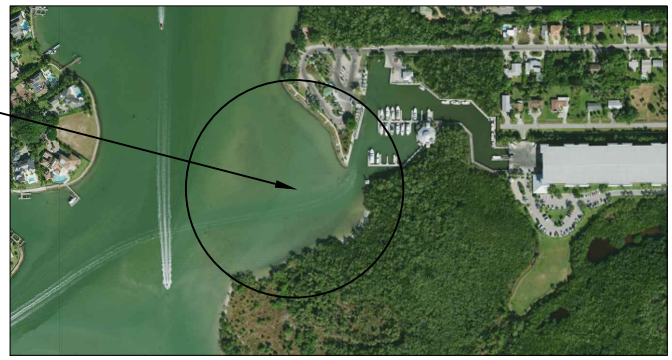
STATE OF FLORIDA



COLLIER COUNTY



VICINITY MAP



COUNTY AERIAL

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<> LATITUDE: N 26° 06' 05"
<> LONGITUDE: W 81° 47' 00"

Received Electronically
Dec 29, 2017
South District

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HAMILTON HARBOR

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JOB NO.:	0356.2	4.	-	-	-	-
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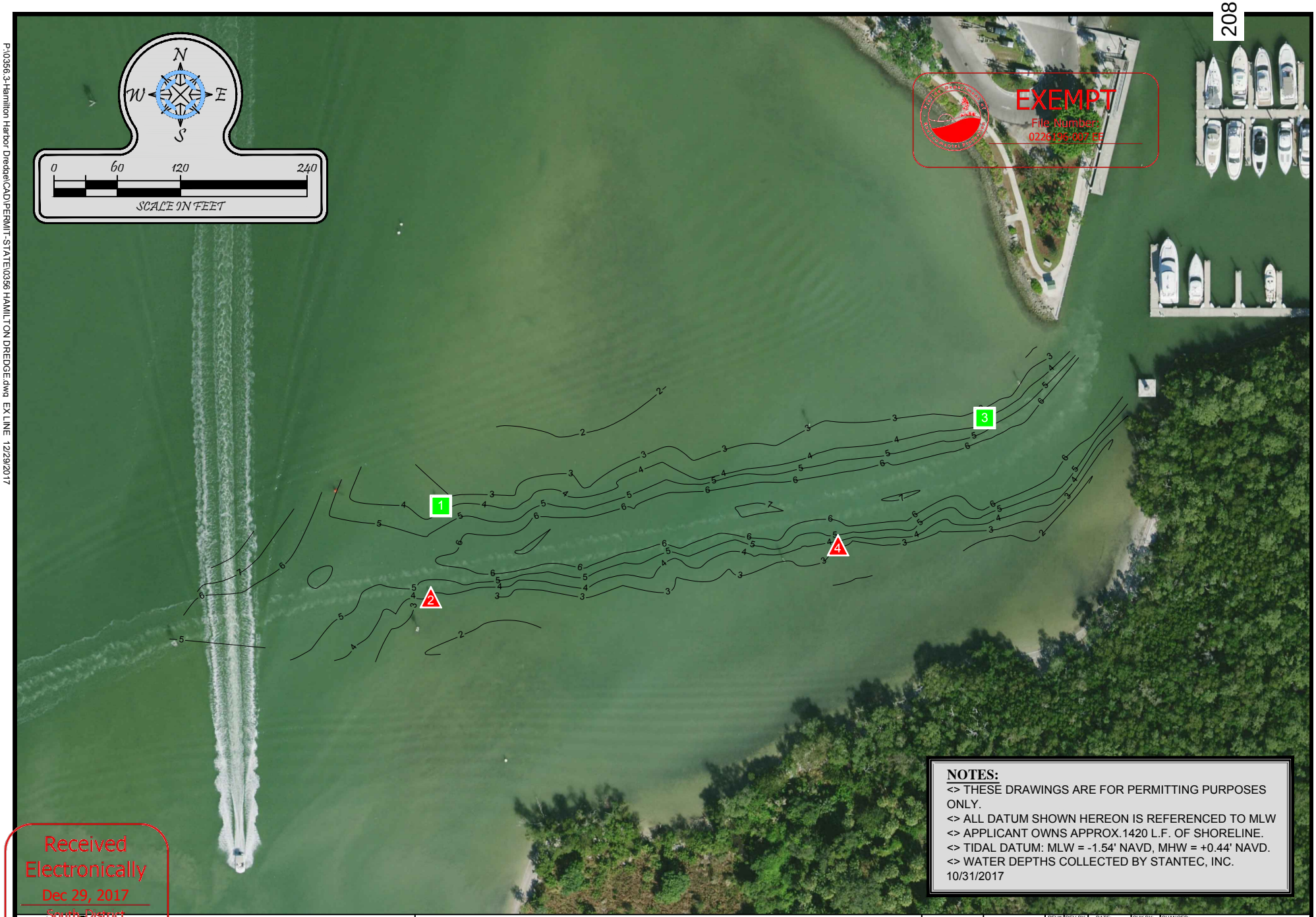
SECTION- 22 TOWNSHIP- 50 S RANGE- 25 E

P:\0356.3-Hamilton Harbor Dredge\CAD\PERMIT-STATE\0356 HAMILTON DREDGE.dwg EX LINE 12/29/2017



NOTES:

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<> APPLICANT OWNS APPROX.1420 L.F. OF SHORELINE.
<> TIDAL DATUM: MLW = -1.54' NAVD, MHW = +0.44' NAVD.
<> WATER DEPTHS COLLECTED BY STANTEC, INC. 10/31/2017

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HAMILTON HARBOR

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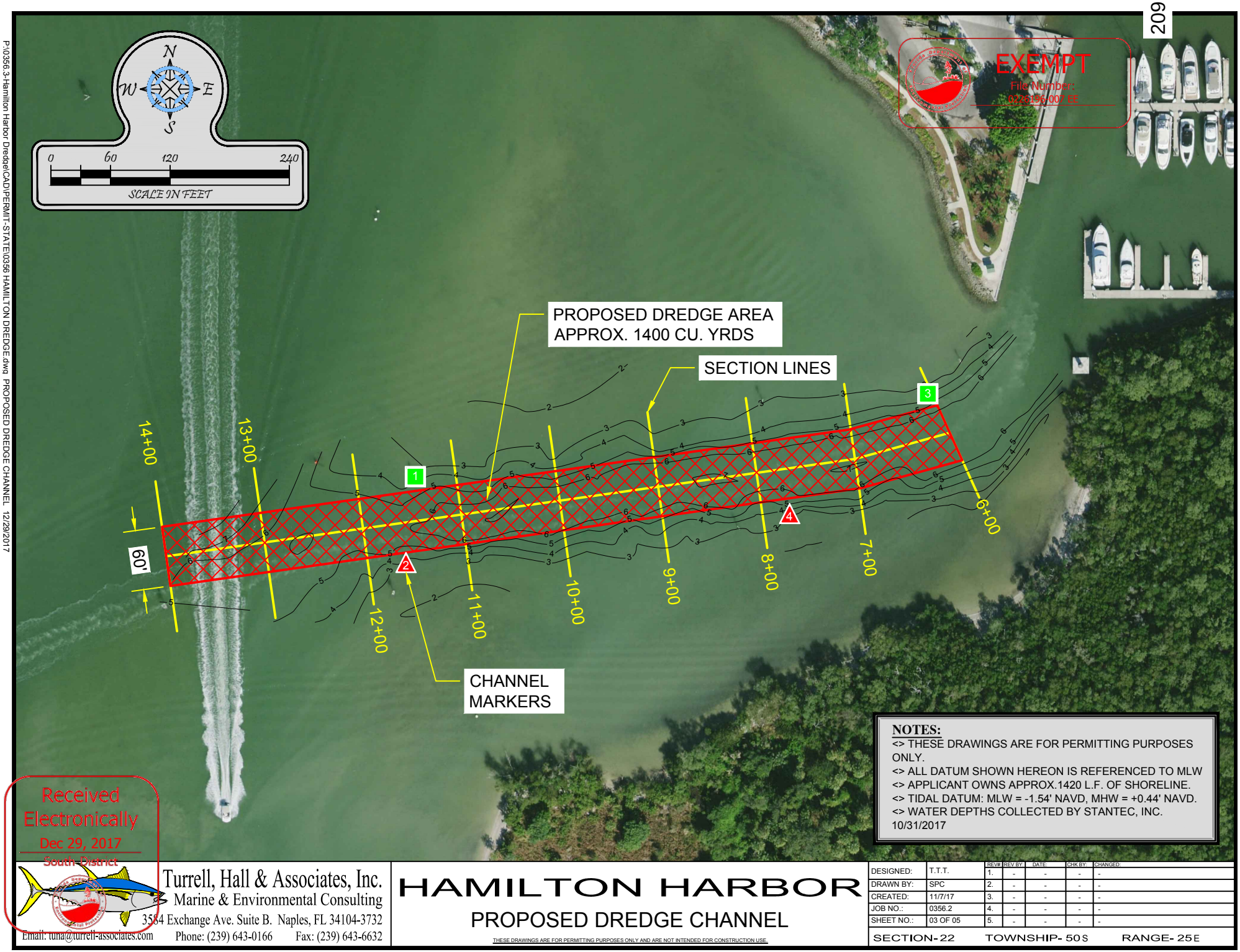
SECTION- 22 TOWNSHIP- 50S RANGE- 25E

P:\0356.3-Hamilton Harbor Dredge\CAD\PERMIT-STATE\0356 HAMILTON DREDGE.dwg PROPOSED DREDGE CHANNEL 12/29/2017



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HAMILTON HARBOR

PROPOSED DREDGE CHANNEL

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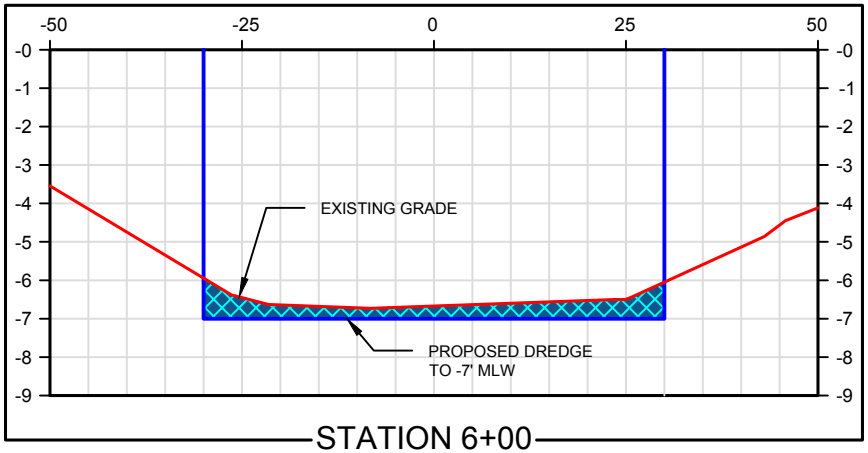
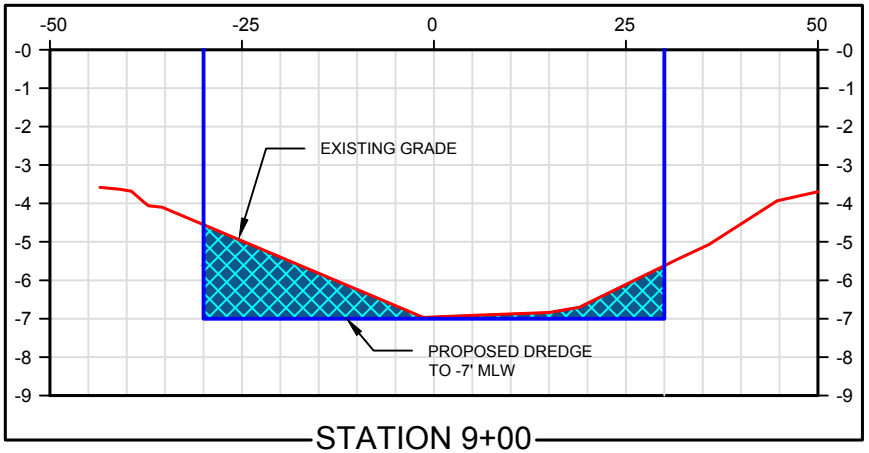
SECTION- 22 TOWNSHIP- 50 S RANGE- 25 E

EXEMPT
File Number:
0226196-007 EE



STATION 6+00



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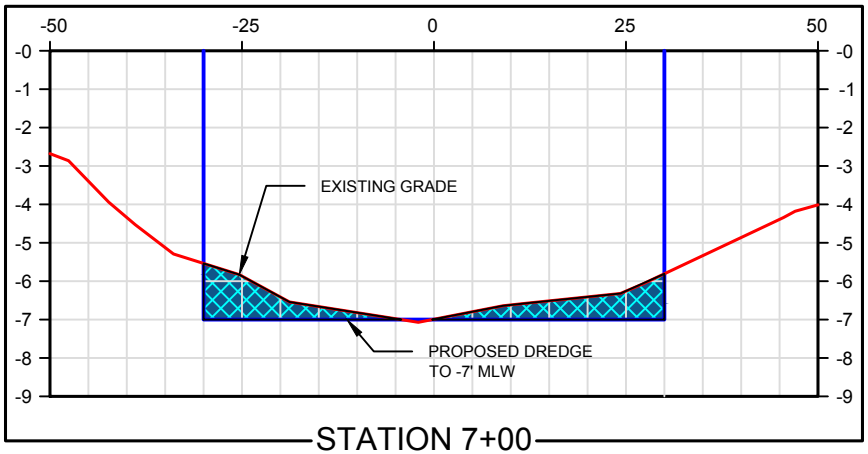

STATION 7+00

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EXISTING ELEVATION

PROPOSED DREDGE TO -7' MWL

Received
Electronically
Dec 29, 2017
South District

Turrell, Hall & Associates, Inc.
Marine & Environmental Consulting
3584 Exchange Ave. Suite B. Naples, FL 34104-3732
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HAMILTON HARBOR

SECTIONS 1

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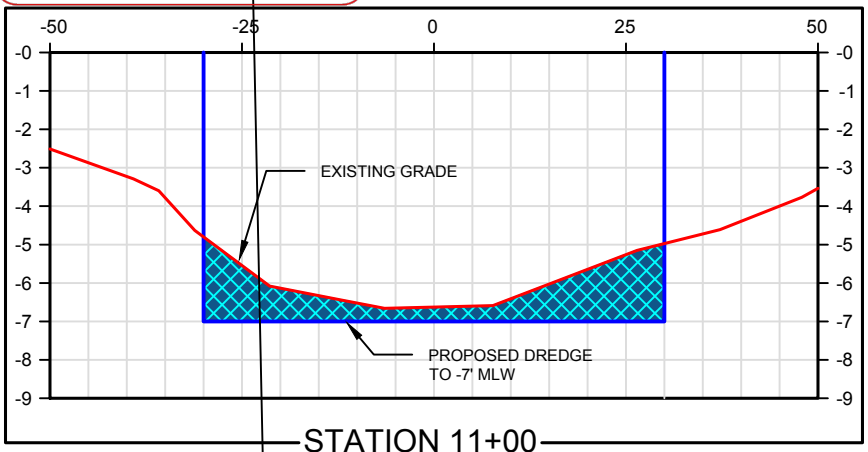
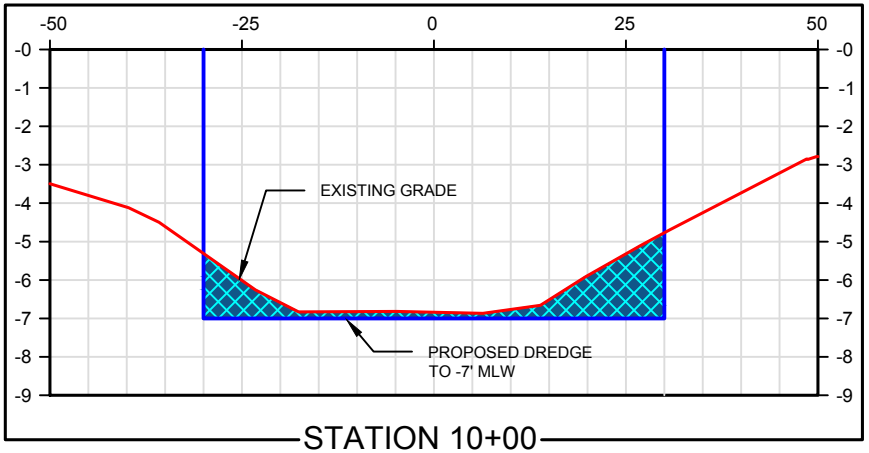
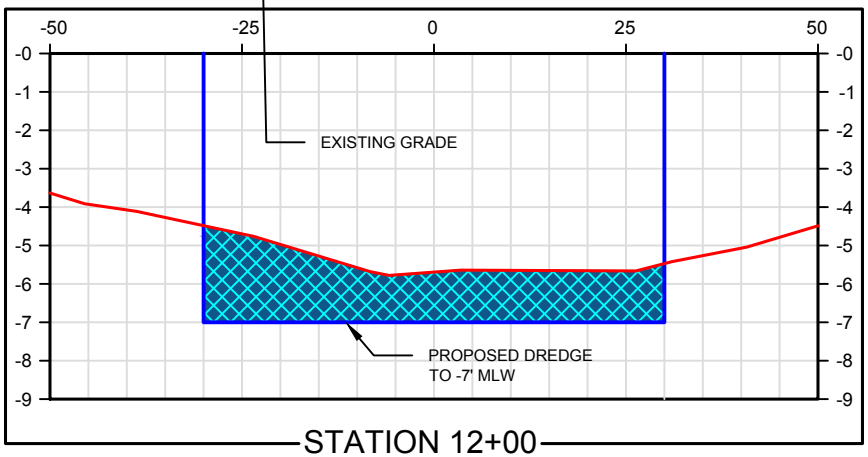


STATION 11+00



STATION 10+00



STATION 12+00

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<> ALL DATUM SHOWN HEREON IS REFERENCED TO MLW
<> APPLICANT OWNS APPROX.1420 L.F. OF SHORELINE.
<> TIDAL DATUM: MLW = -1.54' NAVD, MHW = +0.44' NAVD.
<> WATER DEPTHS COLLECTED BY STANTEC, INC. 10/31/2017

EXISTING ELEVATION

PROPOSED DREDGE TO -7' MWL

Turrell, Hall & Associates, Inc.
Marine & Environmental Consulting
3584 Exchange Ave. Suite B. Naples, FL 34104-3732
Email: tuna@turrell-associates.com Phone: (239) 643-0166 Fax: (239) 643-6632

HAMILTON HARBOR

SECTIONS 2

THESE DRAWINGS ARE FOR PERMITTING PURPOSES ONLY AND ARE NOT INTENDED FOR CONSTRUCTION USE.

		REV#	REV BY:	DATE:	CHK BY:	CHANGED:
DESIGNED:	T.T.T.	1.	-	-	-	-
DRAWN BY:	SPC	2.	-	-	-	-
CREATED:	11/7/17	3.	-	-	-	-
JOB NO.:	0356.2	4.	-	-	-	-
SHEET NO.:	05 OF 05	5.	-	-	-	-

SECTION- 22 TOWNSHIP- 50 S RANGE- 25 E

Turrell, Hall & Associates, Inc.
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Email: tuna@turrell-associates.com Phone: (239) 643-0166 Fax: (239) 643-6632

HAMILTON HARBOR
DREDGE HAUL MAP

DRAWN BY:	RMJ	REVISION:	SCALE: 1 "=2.2 mi
CREATED:	01-25-18	N/A	FILE PATH: P:\0356.3-Hamilton Harbor Dredge\GIS\Spoil_Haul_Map.mxd
JOB NO.:	0356.3	N/A	
SHEET:	01	N/A	

62-330.051 Exempt Activities.

The activities meeting the limitations and restrictions below are exempt from permitting. However, if located in, on, or over state-owned submerged lands, they are subject to a separate authorization under Chapters 253 and 258, F.S., and Chapters 18-18, 18-20, and 18-21, F.A.C., as applicable.

(7) Maintenance and Restoration –

(a) Maintenance dredging under Section 403.813(1)(f), F.S.

403.813 Permits issued at district centers; exceptions.—

(1) A permit is not required under this chapter, chapter 373, chapter 61-691, Laws of Florida, or chapter 25214 or chapter 25270, 1949, Laws of Florida, for activities associated with the following types of projects; however, except as otherwise provided in this subsection, this subsection does not relieve an applicant from any requirement to obtain permission to use or occupy lands owned by the Board of Trustees of the Internal Improvement Trust Fund or a water management district in its governmental or proprietary capacity or from complying with applicable local pollution control programs authorized under this chapter or other requirements of county and municipal governments:

(f) The performance of maintenance dredging of existing manmade canals, channels, intake and discharge structures, and previously dredged portions of natural water bodies within drainage rights-of-way or drainage easements which have been recorded in the public records of the county, where the spoil material is to be removed and deposited on a self-contained, upland spoil site which will prevent the escape of the spoil material into the waters of the state, provided that no more dredging is to be performed than is necessary to restore the canals, channels, and intake and discharge structures, and previously dredged portions of natural water bodies, to original design specifications or configurations, provided that the work is conducted in compliance with s. 379.2431(2)(d), provided that no significant impacts occur to previously undisturbed natural areas, and provided that control devices for return flow and best management practices for erosion and sediment control are utilized to prevent bank erosion and scouring and to prevent turbidity, dredged material, and toxic or deleterious substances from discharging into adjacent waters during maintenance dredging. Further, for maintenance dredging of previously dredged portions of natural water bodies within recorded drainage rights-of-way or drainage easements, an entity that seeks an exemption must notify the department or water management district, as applicable, at least 30 days prior to dredging and provide documentation of original design specifications or configurations where such exist. This exemption applies to all canals and previously dredged portions of natural water bodies within recorded drainage rights-of-way or drainage easements constructed prior to April 3, 1970, and to those canals and previously dredged portions of natural water bodies constructed on or after April 3, 1970, pursuant to all necessary state permits. This exemption does not apply to the removal of a natural or manmade barrier separating a canal or canal system from adjacent waters. When no previous permit has been issued by the Board of Trustees of the Internal Improvement Trust Fund or the United States Army Corps of Engineers for construction or maintenance dredging of the existing manmade canal or intake or discharge structure, such maintenance dredging shall be limited to a depth of no more than 5 feet below mean low water. The Board of Trustees of the Internal Improvement Trust Fund may fix and recover from the permittee an amount equal to the difference between the fair market value and the actual cost of the maintenance dredging for material removed during such maintenance dredging. However, no charge shall be exacted by the state for material removed during such maintenance dredging by a public port authority. The removing party may subsequently sell such material; however, proceeds from such sale that exceed the costs of maintenance dredging shall be remitted to the state and deposited in the Internal Improvement Trust Fund.

General Conditions for Federal Authorization for SPGP V

1. The time limit for completing the work authorized ends on July 26, 2021.

2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and State coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner on the enclosed form and forward a copy of the permit to this office to validate the transfer of this authorization.

5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

Further Information:

1. Limits of this authorization.

   a. This permit does not obviate the need to obtain other Federal, State, or local authorizations required by law.

   b. This permit does not grant any property rights or exclusive privileges.

   c. This permit does not authorize any injury to the property or rights of others.

   d. This permit does not authorize interference with any existing or proposed Federal projects.

2. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or Construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

3. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

4. Reevaluation of Permit Decision: This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

a. You fail to comply with the terms and conditions of this permit.

b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (see 3 above).

c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

5. Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CER 209.170) accomplish the corrective measures by contract or otherwise and bill you for

the cost.

6. When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date the enclosed form.

7. The Permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structures or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the Permittee will be required, upon due notice from the U.S. Army Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal, relocation or alteration.

Department of the Army Permit Transfer for SPGP V

PERMITEE: _____

PERMIT NUMBER: _____ DATE: _____

ADDRESS/LOCATION OF PROJECT:

_____

_____
(Subdivision) (Lot) (Block)

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. Although the construction period for works authorized by Department of the Army permits is finite, the permit itself, with its limitations, does not expire.

To validate the transfer of this permit and the associated responsibilities associated with compliance with its terms and conditions, have the transferee sign and date below and mail to the U.S. Army Corps of Engineers, Enforcement Branch, Post Office Box 4970, Jacksonville, FL 32232-0019.

_____ _____
(Transferee Signature) (Date)

_____
(Name Printed)

_____
(Street address)

_____
(Mailing address)

_____
(City, State, Zip Code)

Special Conditions Related to All Review and Authorizations

In addition to the conditions specified above, the following Special Conditions apply to all projects reviewed and/or authorized under the SPGP V.

1. The District Engineer reserves the right to require that any request for authorization under this SPGP V be evaluated as an Individual Permit. Conformance with the terms and conditions of the SPGP V does not automatically guarantee Federal authorization.

2. On a case-by-case basis the Corps may impose additional Special Conditions which are deemed necessary to minimize adverse environmental impacts.

3. Failure to comply with all conditions of the Federal authorizations under the SPGP V would constitute a violation of the Federal authorization.

4. No structure or work shall adversely affect or disturb properties listed in the National Register of Historic Places or those eligible for inclusion in the National Register. Prior to the start of work, the Applicant/Permittee or other party on the Applicant's/Permittee's behalf, shall conduct a search of known historical properties by contracting a professional archaeologist, and contacting the Florida Master Site File at 850-245-6440 or SiteFile@dos.state.fl.us. The Applicant/Permittee can also research sites in the National Register Information System (NRIS). Information can be found at http://www.cr.nps.gov/nr/research.

a. If, during the initial ground disturbing activities and construction work, there are archaeological/cultural materials unearthed (which shall include, but not be limited to: pottery, modified shell, flora, fauna, human remains, ceramics, stone tools or metal implements, dugout canoes or any other physical remains that could be associated with Native American cultures or early colonial or American settlement), the Permittee shall immediately stop all work in the vicinity and notify the Compliance and Review staff of the State Historic Preservation Office at 850-245-6333 and the Corps Regulatory Project Manager to assess the significance of the discovery and devise appropriate actions, including salvage operations. Based, on the circumstances of the discovery, equity to all parties, and considerations of the public interest, the Corps may modify, suspend or revoke the permit in accordance with 33 CFR Part 325.7.

b. In the unlikely event that human remains are identified, they will be treated in accordance with Section 872.05, Florida Statutes; all work in the vicinity shall immediately cease and the local law authority, the State Archaeologist (850-245-6444), and the Corps Regulatory Project Manager shall immediately be notified. Such activity shall not resume unless specifically authorized by the State Archaeologist and the Corps.

5. No work shall be authorized under the SPGP V which proposes the use of prefabricated modules for habitat creation, restoration, or enhancement except as allowed in Special Condition 15 for *Living Shorelines* of the *Shoreline Stabilization category*.

6. The Design and construction of a Project must comply with the following.

a. Where aquatic vegetation is present, adverse impacts to aquatic vegetation from construction of piling-supported structures may be avoided/minimized by adherence to, or employing alternative construction techniques that provide a higher level of protection than, the protective criteria in the joint U.S. Army Corps of Engineers'/National Marine Fisheries Service's **"***Construction Guidelines in Florida for Minor Piling-Supported Structures Constructed in or over Submerged Aquatic Vegetation (SAV), Marsh or Mangrove Habitat"* U.S. Army Corps of Engineers/National Marine Fisheries Service August 2001 (updated June 2008). Unless otherwise specifically approved by the National Marine Fisheries Service, where aquatic vegetation is present, piling-supported structures authorized under the SPGP V must comply with, or provide a higher level of protection than, the criteria contained in the referenced construction guidelines. Mangrove impacts are limited to the removal of mangroves along 4 linear feet of shoreline to accommodate a 4-ft-wide access walkway associated with a dock that meets the above guidelines.

b. Additionally, because of concerns about adverse impacts to the endangered Johnson's seagrass (*Halophila johnsonii*) in the lagoon and canal systems on Florida's east coast from Sebastian Inlet (Brevard County) south to and including central Biscayne Bay (Miami-Dade County), the following requirements must be met:

(1) Piling-supported structures must comply with, or provide a higher level of protection than, the criteria contained in the construction guidelines titled "*Key for Construction Conditions for Docks or Other Minor Structures Constructed in or Over Johnson's seagrass (Halophila johnsonii)"* National Marine Fisheries Service/U.S. Army Corps of Engineers - February 2002 (updated October 2002)*."*

(2) Removal of derelict vessels must comply with the practices of Special Condition 18.

(3) All other activities will have no effect on Johnson's seagrass, i.e., no seagrass is present.

c. The presence of seagrass will be determined utilizing the attached "*Submerged Aquatic Vegetation Survey Guidelines*".

7. For projects in waters accessible to sea turtles, Smalltooth sawfish, Gulf sturgeon, or Shortnose sturgeon, the Permittee will utilize the "*Sea Turtle and Smalltooth Sawfish Construction Conditions*" and the following additions:

a. Any collision(s) with and/or injuries to any whale, or sturgeon occurring during the construction of a project, shall be reported immediately to NMFS's Protected Resources Division (PRD) at (727-824-5312).

b. Reports to NMFS's Protected Resources Division (PRD) may be made by email to takereport.nmfsser@noaa.gov.

c. Sea turtle and marine mammal stranding/rescue organizations' contact information is available by region at http://www.nmfs.noaa.gov/pr/health/networks.htm.

d. Smalltooth sawfish encounters shall be reported to http://www.flmnh.ufl.edu/fish/sharks/sawfish/sawfishencounters.html.

e. All work must occur during daylight hours.

8. The Permittee is responsible for obtaining any "take" permits required under the U.S. Fish and Wildlife Service's regulations governing compliance with the Migratory Bird Treaty Act or the Bald and Golden Eagle Protection Act. The Permittee should contact the appropriate local office of the U.S. Fish and Wildlife Service to determine if such "take" permits are required for a particular activity.

9. The Permitee is responsible for compliance with 50 CFR 224.103(c) prohibiting approach within 500 yards of a right whale, with limited exceptions.

10. Turbidity control measures shall be used throughout construction to control erosion and siltation to ensure there are no violations of state or federal water quality standards. Turbidity control measures shall be: (1) for the smallest practicable area; (2) monitored daily to ensure listed species are not entangled or trapped in the project area; (3) shall be removed promptly upon project completion and the return of water quality conditions; (4) and shall not block entry to or exit from designated critical habitat. Siltation barriers shall be made of material in which listed species cannot become entangled (i.e., reinforced impermeable polycarbonate vinyl fabric [PVC]).

a. Turbidity curtains are not required where not practical in dynamic systems such as surf zones and could actually do more harm than good if the curtains become detached (e.g., they could entrap pelagic organisms and become entangled around benthic organisms, such as coral).

b. Turbidity barriers are not required if installation of single piling in deep water since is unlikely to adversely affect water quality.

11. In-water rope or chain must meet the following requirements: Industrial grade metal

chains or heavy cables that do not readily loop and tangle; All in-water lines (rope and cable) must be thick and taut and cannot have excess line in the water; Lines can be enclosed in a plastic or rubber sleeve/tube to add rigidity.

12. No work shall occur where hard bottom or any hard or coral including ESA-listed coral species are present within the footprint of the project.

13. No work shall occur that results in removal of mangroves (including prop roots), except:

a. as provided by Special Condition 6.a.; or,

b. for removal of mangroves growing at the foot or from an existing seawall whose removal needed to repair the seawall.

14. No work shall occur that results in impacts to seagrass except as provided by Special Condition 6.

15**.** (For *Docks, Piers, Associated Facilities, and Other Minor Piling-Supported Structures* and *Boat Ramps and Boat Launch Areas and Structures Associated with Such Ramps or Launch Areas.*)

a. Aids to Navigation and Private Aids to Navigation (e.g. attached to the structures authorized by the SPGP) must be approved by and installed in accordance with U.S. Coast Guard requirements.

b. Temporary structures associated with marine events will be removed and the site restored upon completion of the event.

c. (*For multi-family residential docks (e.g., condos, trailer parks, apartment complexes) designated for fishing or vessel storage, for temporary marine event pile-supported structures involving high speed vessel traffic or fishing, and for commercial or public boat ramps.*) Install educational signs as follows in a visible location to alert boaters of listed species in the area susceptible to vessel strikes or hook-and-line captures. NMFS website (http://sero.nmfs.noaa.gov/protected_resources/section_7/protected_species_educational_signs/index.html) provides sign installation guidance and most current version of the signs.

(1) All commercial and public boat ramps shall install the Save Sea Turtle, Sawfish, and Dolphin sign.

(2) If the Project occurs within the range of Gulf, Atlantic, or Shortnose sturgeon, the Permittee will install and maintain the *Report Sturgeon* sign.

(3) If the Project occurs within 14 miles of North Atlantic Right Whale critical habitat, the Permittee will install and maintain the *Help Protect North Atlantic Right Whales* sign.

d. Project construction will take place from uplands or from floating equipment (e.g., barge); prop or wheel-washing is prohibited.

16. (For *Transient activities*.)

a. Temporary structures shall not block access of species to an area such as preventing movement in or out of a river or channel.

b. (*For scientific sampling, measurement, and monitoring devices*.) No later than 24 months from initial installation, or upon completion of data acquisition, whichever comes first, the measuring device and any other structure or fills associated with that device (e.g., anchors, buoys, lines) must be removed and the site must be restored to pre-construction elevations.

17. (For *Living Shorelines* of the *Shoreline Stabilization category.)*

a. Only native plant species will be planted.

b. Not more than 500 linear feet in length, not more than 35 ft waterward of the hightide line.(note that FAC 62-330 limits to 10 feet of the mean high water line) or result in more than 0.5 ac area between the natural shoreline and the structure.

c. No discharge of earthen fill material, other than earthen material associated with vegetative planting, is not authorized.

d. Construction, maintenance and removal of approved permanent, shore-parallel wave attenuation structures are authorized. Approved permanent wave attenuation materials include oyster breakwaters (described above), clean limestone boulders, and prefabricated structures made of concrete and rebar that are designed in a manner that cannot trap sea turtles, Smalltooth sawfish, or sturgeon. Reef balls that are not open on the bottom, triangle structures with a top opening of at least 3 feet between structures, and reef discs stacked on a pile may be used.

e. (For oyster breakwaters).

(1) Reef materials shall be placed in a manner to ensure that materials (e.g., bagged oyster shell, oyster mats, loose cultch surrounded and contained by a stabilizing feature, reef balls, and reef cradles) will remain stable and prevent movement of materials to surrounding areas.

(2) Materials must be placed in designated locations (i.e., shall not be indiscriminately/randomly dumped) and shall not be placed outside of the total project limits.

18. (For *Subaqueous Utility Lines* of the *Transient Activities* category.*)*

a. A Frac-out Contingency Plan similar to the attached plan will be developed, submitted with the application and then followed.

b. All subaqueous transmission lines crossing over, under, or in flood control channels/canals in Federal projects (either federally or locally maintained) which are installed with horizontal direction drilling (HDD) shall ensure the top of the HDD boring is a minimum of 10 feet beneath the bottom of the channel plus a minimum 25 feet outside the channel edges and the estimated total drilling fluid pressure is less than 10 psi. Projects not in compliance with these criteria shall not be eligible for authorization under SPGP V.

c. The Permittee shall, upon completion of work, provide an as-built survey showing the horizontal and vertical location (X-Y-Z coordinates in NAD 83 and NAVD 88) of the object below the channel as it enters and exits the design edges of the authorized width of the channel, plus a minimum of 25 feet outside the channel edges.

19. (For R*emoval of Derelict Vessels* of the *Transient Activities* category.*)*

a. Removal of marine debris shall require visual confirmation (e.g., divers, swimmers, camera) that the item can be removed without causing further damage to aquatic resources.

b. If an item cannot be removed without causing harm to surrounding coral, the item will be disassembled as much as practicable so that it no longer can accidently harm or trap species.

c. Monofilament debris will be carefully cut loose from coral so as not to cause further harm. Under no circumstance will line be pulled through coral since this could cause breakage of coral.

d. Marine debris shall be lifted straight up and not be dragged through seagrass beds, coral, or hard bottom habitats. Debris shall be properly disposed of in appropriate facilities in accordance with applicable federal and state requirements.

20. For concrete piles installed by impact hammer:

a. The piles will be less than or equal to than 24 inches in diameter; and

b. Not more than 10 piles will be installed per day if in open water; or,

c. Not more than 5 piles will be installed per day in a *confined space*. A *confined space* is defined as any area that has a solid object (e.g., shoreline, seawall, jetty) or structure within 150 feet of the pile installation site that would effectively serve as a barrier or otherwise prevent animals from moving past it to exit the area. This does not include objects such as docks or other pile-supported structures that would not stop animal movement or significantly reflect noise.

21. Metal piles will NOT be installed by impact hammer.

22. Projects within the boundary of the NOAA Florida Keys National Marine Sanctuary require prior approval from the Sanctuary.

23. The Permittee shall use only clean fill material. The fill material shall be upland sources and be free of items such as trash, debris, automotive parts, asphalt, construction materials, concrete block with exposed reinforcement bars, and soils contaminated with any toxic substance, in toxic amounts in accordance with Section 307 of the Clean Water Act.

24. No blasting is authorized.

25. For Projects authorized under this SPGP V in navigable waters of the U.S., the Permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structures or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the Permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

26. The SPGP V will be valid for five (5) years from the date of issuance unless suspended or revoked by issuance of a public notice by the District Engineer. The Corps, in conjunction with the Federal resource agencies, will conduct periodic reviews to ensure that continuation of the permit during the five-year authorization period is not contrary to the public interest. If revocation occurs, all future applications for activities covered by the SPGP V will be evaluated by the Corps.

27. If the SPGP V expires or is revoked prior to completion of the authorized work, authorization of activities which have commenced or are under contract to commence in reliance upon the SPGP V will remain in effect provided the activity is completed within twelve (12) months of the date the SPGP V expired or was revoked.

28. The General Conditions attached hereto are made a part of this SPGP V and must be attached to all authorizations processed under this SPGP V.

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southeast Regional Office
263 13th Avenue South
St. Petersburg, FL 33701

SEA TURTLE AND SMALLTOOTH SAWFISH CONSTRUCTION CONDITIONS

The permittee shall comply with the following protected species construction conditions:

a. The permittee shall instruct all personnel associated with the project of the potential presence of these species and the need to avoid collisions with sea turtles and smalltooth sawfish. All construction personnel are responsible for observing water-related activities for the presence of these species.

b. The permittee shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing sea turtles or smalltooth sawfish, which are protected under the Endangered Species Act of 1973.

c. Siltation barriers shall be made of material in which a sea turtle or smalltooth sawfish cannot become entangled, be properly secured, and be regularly monitored to avoid protected species entrapment. Barriers may not block sea turtle or smalltooth sawfish entry to or exit from designated critical habitat without prior agreement from the National Marine Fisheries Service's Protected Resources Division, St. Petersburg, Florida.

d. All vessels associated with the construction project shall operate at "no wake/idle" speeds at all times while in the construction area and while in water depths where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels will preferentially follow deep-water routes (e.g., marked channels) whenever possible.

e. If a sea turtle or smalltooth sawfish is seen within 100 yards of the active daily construction/dredging operation or vessel movement, all appropriate precautions shall be implemented to ensure its protection. These precautions shall include cessation of operation of any moving equipment closer than 50 feet of a sea turtle or smalltooth sawfish. Operation of any mechanical construction equipment shall cease immediately if a sea turtle or smalltooth sawfish is seen within a 50-ft radius of the equipment. Activities may not resume until the protected species has departed the project area of its own volition.

f. Any collision with and/or injury to a sea turtle or smalltooth sawfish shall be reported immediately to the National Marine Fisheries Service's Protected Resources Division (727-824-5312) and the local authorized sea turtle stranding/rescue organization.

g. Any special construction conditions, required of your specific project, outside these general conditions, if applicable, will be addressed in the primary consultation.

Revised: March 23, 2006
O:\forms\Sea Turtle and Smalltooth Sawfish Construction Conditions.doc

Additions

to the

"*Sea Turtle and Smalltooth Sawfish Construction Conditions*"

for SPGP V

a. Any collision(s) with and/or injuries to any whale, or sturgeon occurring during the construction of a project, shall be reported immediately to NMFS's Protected Resources Division (PRD) at (727-824-5312).

b. Reports to NMFS's Protected Resources Division (PRD) may be made by email to takereport.nmfsser@noaa.gov.

c. Sea turtle and marine mammal stranding/rescue organizations' contact information is available by region at http://www.nmfs.noaa.gov/pr/health/networks.htm.

d. Smalltooth sawfish encounters shall be reported to http://www.flmnh.ufl.edu/fish/sharks/sawfish/sawfishencounters.html.

e. All work must occur during daylight hours.

STANDARD MANATEE CONDITIONS FOR IN-WATER WORK
2011

The permittee shall comply with the following conditions intended to protect manatees from direct project effects:

a. All personnel associated with the project shall be instructed about the presence of manatees and manatee speed zones, and the need to avoid collisions with and injury to manatees. The permittee shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act, the Endangered Species Act, and the Florida Manatee Sanctuary Act.

b. All vessels associated with the construction project shall operate at "Idle Speed/No Wake" at all times while in the immediate area and while in water where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels will follow routes of deep water whenever possible.

c. Siltation or turbidity barriers shall be made of material in which manatees cannot become entangled, shall be properly secured, and shall be regularly monitored to avoid manatee entanglement or entrapment. Barriers must not impede manatee movement.

d. All on-site project personnel are responsible for observing water-related activities for the presence of manatee(s). All in-water operations, including vessels, must be shutdown if a manatee(s) comes within 50 feet of the operation. Activities will not resume until the manatee(s) has moved beyond the 50-foot radius of the project operation, or until 30 minutes elapses if the manatee(s) has not reappeared within 50 feet of the operation. Animals must not be herded away or harassed into leaving.

e. Any collision with or injury to a manatee shall be reported immediately to the Florida Fish and Wildlife Conservation Commission (FWC) Hotline at 1-888-404-3922. Collision and/or injury should also be reported to the U.S. Fish and Wildlife Service in Jacksonville (1-904-731-3336) for north Florida or Vero Beach (1-772-562-3909) for south Florida, and to FWC at ImperiledSpecies@myFWC.com

f. Temporary signs concerning manatees shall be posted prior to and during all in-water project activities. All signs are to be removed by the permittee upon completion of the project. Temporary signs that have already been approved for this use by the FWC must be used. One sign which reads *Caution: Boaters* must be posted. A second sign measuring at least 8 ½" by 11" explaining the requirements for "Idle Speed/No Wake" and the shut down of in-water operations must be posted in a location prominently visible to all personnel engaged in water-related activities. These signs can be viewed at MyFWC.com/manatee. Questions concerning these signs can be sent to the email address listed above.

CAUTION: MANATEE HABITAT

All project vessels

IDLE SPEED / NO WAKE

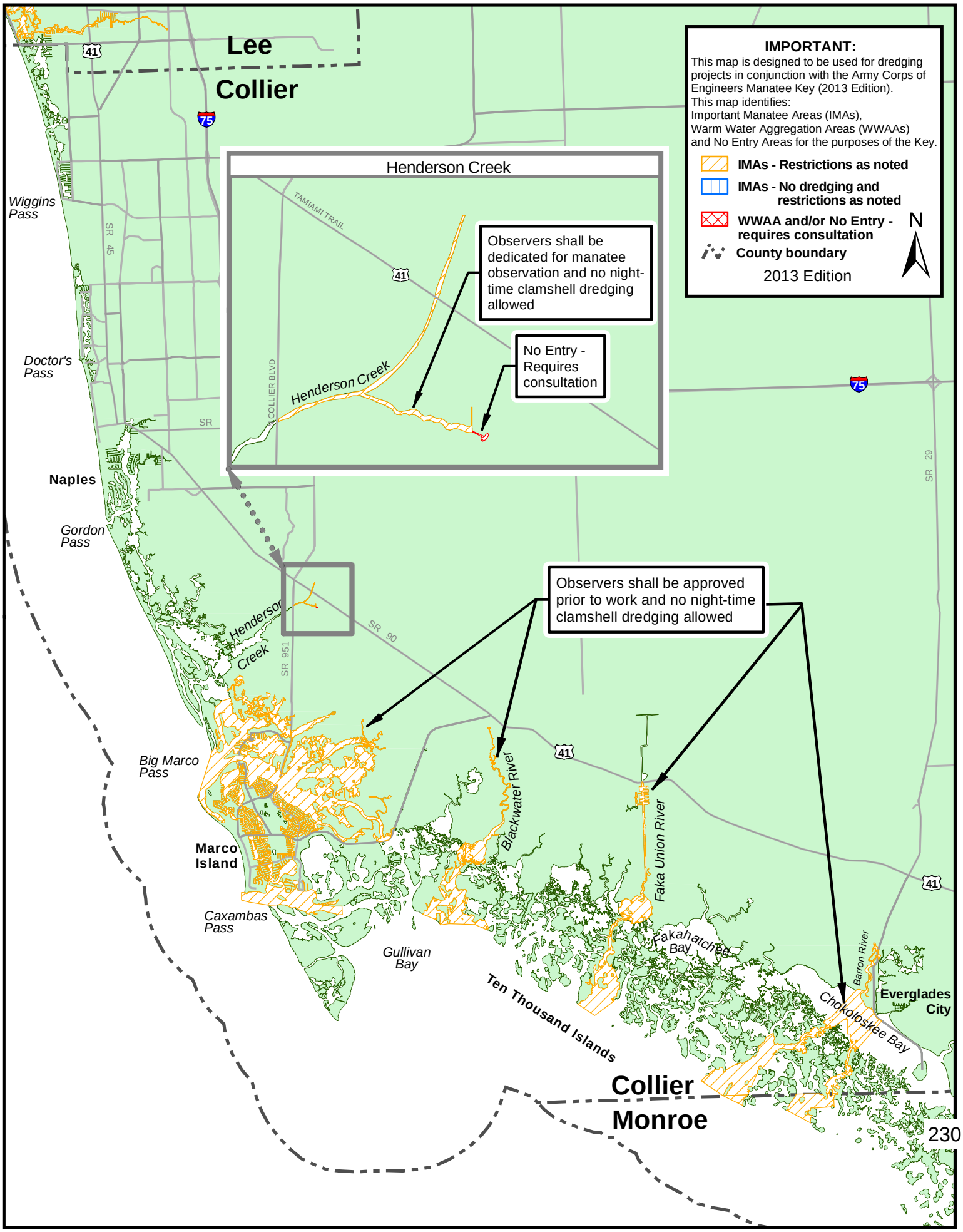
When a manatee is within 50 feet of work
all in-water activities must

SHUT DOWN

Report any collision with or injury to a manatee:

Wildlife Alert:
1-888-404-FWCC(3922)
cell *FWC or #FWC

Collier and Monroe Counties



> Ad Proof

Naples Daily News

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Company Name: CITY OF NAPLES - LEGALS

Contact Name:

Email: dbayless@naplesgov.com

Address: 735 8TH ST S, NAPLES, FL, 34102-6703

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Publications: ND-Naples Daily News, ND-Internet-naplesnews.com

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LEGAL NOTICE

Notice is hereby given that the Naples City Council will hold a meeting beginning at 8:30 a.m., Wednesday, February 21st, 2018, in City Council Chambers, 735 Eighth Street South, Naples, FL, 34102.

Among the public hearing to be considered at that meeting is:
DREDGE AND FILL PETITION 180630
A Resolution determining Dredge and Fill Petition 180630 to dredge the access channel to Hamilton Harbor, Naples, FL.

Petitioner:	Hamilton Harbor Marina, Inc.
Location:	1600 Danford St, Naples, FL 34112
Agent:	Jeff Rogers

A complete legal description for this petition is available in the City of Naples Streets & Stormwater Department, 295 Riverside Circle, Naples, Florida, (239) 213-5000.

ALL INTERESTED PARTIES ARE INVITED TO APPEAR AND BE HEARD.

Any person who decides to appeal any decision made by City Council with respect to any matter considered at this hearing will need a record of the proceedings and may need to ensure that a verbatim record is made, which record includes the testimony and evidence upon which the appeal is to be heard. Any person with a disability requiring auxiliary aids and services for this meeting may call the City Clerk's office at 213-1015 with requests at least two business days before the meeting date.

City of Naples
By Patricia L. Rambosk, MMC, City Clerk

February 11, 2018 No.1919287

Stephanie L. Molloy
Natural Resources Manager
Natural Resources Division
Streets & Stormwater Department, City of Naples
295 Riverside Dr., Naples, FL 34102
ph: 239-213-1031; Email: smolloy@naplesgov.com

EMPLOYMENT EXPERIENCE

06/2016– present	Natural Resources Manager, Natural Resources Division, Streets & Stormwater Department, City of Naples, FL
04/2014 – 06/2016	Supervising Environmental Services Specialist, Integrated Waste Management, Environmental Services Department, City of San José, CA
08/2013 – 03/2014	Environmental Services Specialist, Sustainability and Compliance Division, San José-Santa Clara Regional Wastewater Facility, Environmental Services Department, City of San José, CA
06/2011 – 06/2016	Assistant Professor (Part-time, contract), PHAP (Pre-Professional Health Academic Program), California State University East Bay
09/2008 - 08/2013	Assistant Professor in Microbiology, Department of Biological Sciences, California State University East Bay
08/2006 – 08/2008	Assistant Professor in Biology (Temporary), University of Hawai`i at Hilo, Hilo, HI
08/2003 – 08/2006	Research Associate, Michigan State University, East Lansing, MI
1994 – 2003	Contract Microbiologist, UniServices, University of Auckland, NZ
1991 – 1993	Water Quality Technician, Environmental Services, City of Portland, OR
1989 – 1990	Water Treatment Plant Operator/Water Quality Analyst, Clackamas Water District, Clackamas, OR
1987 – 1989	Production and Product Development Technician (HIV testing), Epitope, Inc., Beaverton, OR

EDUCATION

2005 PhD Environmental Science, University of Auckland, New Zealand
1998 MS (hons) Environmental Microbiology, University of Auckland, New Zealand
1990 BS Biology, Portland State University, Portland, OR
1988 BS Biological Sciences and Zoology (Double Major), University of Auckland, New Zealand

PEER-REVIEWD PUBLICATIONS (EXAMPLES)

Caree J. Weiss, Tracy N. Wiegner, L. Abaya, A. Lyon-Colbert and **Stephanie L. Molloy**. (2016) Spatial and Temporal Microbial Pollution Patterns in a Tropical Estuary During High and Low River Flow Conditions. Marine Pollution Bulletin 114 (2): 952-961.

Erin A. Dreelin, Rebecca L. Ives, **Stephanie Molloy** and Joan B. Rose. (2014) *Cryptosporidium* and *Giardia* in Surface Water: A Case Study from Michigan, USA to Inform Management of Rural Water Systems. International Journal of Environmental Research and Public Health. 11: 10480-10503.

Chaopeng Shen, Mantha S. Phanikumar, Theng T. Fong, Irfan Aslam, **Stephanie L. Molloy** and Joan B. Rose. (2008) Evaluating Bacteriophage P22 as a Tracer in a Complex Surface Water System: The Grand River, Michigan. Environmental Science & Technology. 42(7) 2426 – 2431.

City Council Agenda Item Report

Submitted by: Gregg Strakaluse
Submitting Department: Streets, Stormwater & Natural Resources
Meeting Date: February 21, 2018

SUBJECT
Presentation of the 2018 Stormwater Master Plan 90% Draft

Legislative Type:
Legislative Item

Funding Source:
N/A

Recommendation:
Receive the report and presentation for discussion.

ATTACHMENTS

- Agenda Memorandum
- PowerPoint - Stormwater Master Plan Update at 90%
- Cost Estimate Summary
- Stormwater Master Plan Update 90% Deliverable
- 2/7/18 Letter from the Conservancy of Southwest Florida

AGENDA MEMORANDUM ***Streets & Stormwater Department***

Regular Meeting Date: **February 21, 2018**

To: **City Council**

Through: **Gregg Strakaluse, Director**

From: **Andrew Holland, Engineering Manager**

Date: **January 31, 2018**

Legislative ☒ Quasi-Judicial ☐

SUBJECT:
Presentation of the 2018 Stormwater Master Plan 90% Draft

SUMMARY:
On September 6, 2017, City Council received a presentation on the 60% Draft 2018 Stormwater Master Plan Update. Each decade, the City updates its Stormwater Master Plan to summarize efforts of the prior 10-year period, and plan stormwater management programs and projects over the next 10-year period. The 2007 master plan contained over $76 million worth of projects and programs aimed at flood minimization, improved stormwater drainage, and higher stormwater quality throughout the City. To date, over $46 million of those projects and programs have been implemented with $7.5 million (16%) of that total coming from grants. This does not include personnel and operating expenses totaling just over $10 million over the decade.

In 2008, the City was the first in the State to require individual single-family home construction projects to include on-site stormwater management systems that improve stormwater quality and reduce street flooding. In the past decade, the City has upgraded all three stormwater pump stations with state of the art pumps, water quality components, and backup generator systems. In 2016, the Florida Stormwater Association presented the City with its Outstanding Achievement Award for the Lake Manor Restoration Project. And last, but not least, the City is working with FDEP and the local community on a plan to greatly reduces the environmental impacts from ten large Stormwater outfalls along the shoreline of one of the nation's most beautiful beaches.

During the last decade, the City's Stormwater Division infrastructure were required to manage an average annual rainfall amount of 55 inches over the City. This equates to roughly 13 billion gallons of stormwater each year. At times, the intensity of some storms brought downpours that exceeded the City's level of service of 2.8-inches per hour. These events seemed to (and in some years actually did) exceed the once every five-year frequency that we expected and planned for a decade ago. And during the last decade, State agencies have considered increasing the hourly rainfall amount for a 5-year storm to a higher number because of the increased frequency of the 2.8" rainfall. Over the last decade, the Stormwater Division faced named storms such as Gustov, Ike and Fay in 2008, Debby in 2012, Erika in

2015, Colin in 2016, and Irma in 2017. These severe storms caused street flooding, and, in some cases, the flooding of buildings. Staff expects the next 10-year planning period will continue to bring challenging storm events with increased frequency and intensity. Compounding the challenge are rising sea levels, redevelopment, and an aging stormwater conveyance system. This is most apparent along US-41 where FDOT plans to invest several million dollars in the next few years to replace a 40-year old stormwater system.

The 2018 update to the Stormwater Master Plan began in September of 2016 with the focus of continuing flood protection within the City and improving stormwater quality and the health of Naples Bay, Moorings Bay and the Gulf of Mexico. New topics of the 2018 update include climate adaptation and building resiliency into stormwater projects, as well as other City projects. Also, dedicating more effort towards interagency coordination is a focus of the new plan since the unincorporated areas of the County account for almost 89% of the stormwater discharges to Naples Bay.

On August 17, 2016, City Council approved an agreement with AECOM to develop the 2018 update to the Stormwater Master Plan. In developing the updated Master Plan, AECOM has reviewed 85 stormwater related reports as well as significant data associated with the City's stormwater management system. The Project Team, consisting of AECOM, AMEC, Cella Molnar and the City of Naples Stormwater Division and Natural Resources Division, hosted two public involvement meetings. The first meeting was held on Monday, January 23rd, 2017 and the second was held on Wednesday, February 22, 2017. Both were held at the River Park Community Center from 3pm to 6pm. Staff deployed an online survey which was activated on February 22, 2017 and active until July 11th. An email link was sent to City Council and all Homeowner Associations on file on March 15. City staff made presentation to the President's Council on March 27, 2017.

On September 6, 2017, the 60% Master Plan Update was presented to City Council focusing on the following components of the update:

- Water Quantity (Flooding)
- Water Quality and Ecology
- Level of Service
- Regulatory and Development Code Review
- Climate Adaptation & Resiliency
- Best Management Practices (BMP) Review
- Operational Strategies
- Capital Improvement Program
- Funding Strategies
- Stormwater & Natural Resource Divisions Review
- Public Involvement

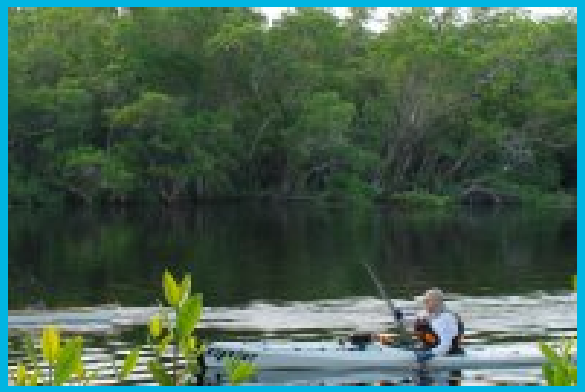
At this time, the document has reached 90% completion and AECOM and Staff are seeking concluding thoughts and comments from City Council prior to presenting the final plan to City Council for adoption by Resolution.

FUNDING SOURCE:
On August 17, 2017, City Council approved an agreement with AECOM for $304,874 to update the City's Stormwater Master Plan.

RECOMMENDED ACTION:
Receive the 90% Draft Report and presentation for discussion with intent to adopt the final plan by resolution in the near future.

City of Naples
Stormwater Master Plan Update

90% Submittal Review


Presented by Andy Holland, Gregg Strakaluse, and Amy Eason (AECOM)

uary 21, 2018

als

e goals of this Stormwater Master Plan Update are:

rotect the health, safety and welfare of the public

rotect and improvement the City's surface and ground water resources

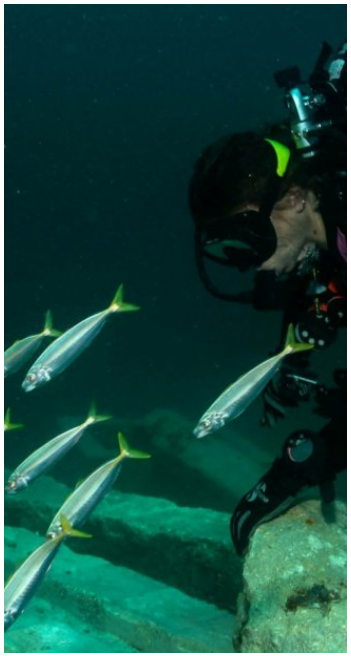
rotect public and private property

rotect and restoration ecology

lan wise and strategic investments for the stormwater management system

ich components are being evaluated in the Stormwater Master Plan?

Executive Summary
ntroduction
nformation and Data Collection
Water Quantity (Flooding)
Water Quality and Ecology
Level of Service
Regulatory and Development Code Review
Climate Adaptation
Best Management Practices (BMP) Review
Operational Strategies
Capital Improvement Program
Funding
Stormwater & Natural Resource Divisions
Public Involvement
Recommendations



apter 4 – Water Quantity (Volume of Stormwater)

eneral Information

- Level of Service (LOS)
  - o Storm events are being reevaluated (SFWMD, FDOT)
  - o City's LOS is 5-yr 1-hr storm event = 2.8 inches per hour (FDOT is considering raising to 3.3in/hr)
- Types of Flooding
  - o Tailwater and Tidal Issues (Sea Level Rise, King Tides, Storm Surges)
  - o Inlet and Structure Capacity (Throat size & Spacing, Pipe Sizing, Control Structure Sizing)
  - o Groundwater Flooding (High wet season water table, e.g. Belair Lane)
  - o Rainfall (Intensity, Duration, Saturation)

apter 4 – Water Quantity Recommendations

- apital Improvement Projects that address flooding issues
- omplete Basin Assessment and/or Reassessment for all basins
  - LOS for basins…what can we handle?
- evelopment Code Changes: Increase in on-site attenuation.
- olicies…
  - Climate Issues & Anthropogenic Impacts
  - LOS for the future?
  - Level of Funding
  - Funding Equity (Tiered SW Fees, Credit Levels, MF Impervious Option)
  - Balance of Funding (personnel, operations, capital)
  - Interagency Coordination

apter 5 – Water Quality and Ecology

Receiving Waters and Inputs

. Naples Bay

i. Golden Gate Canal
ii. Upland stormwater
iii. Gordon River
iv. Rock Creek
v. Haldeman Creek

. Gulf of Mexico

i. Beach outfalls
ii. Naples Bay
iii. Moorings Bay

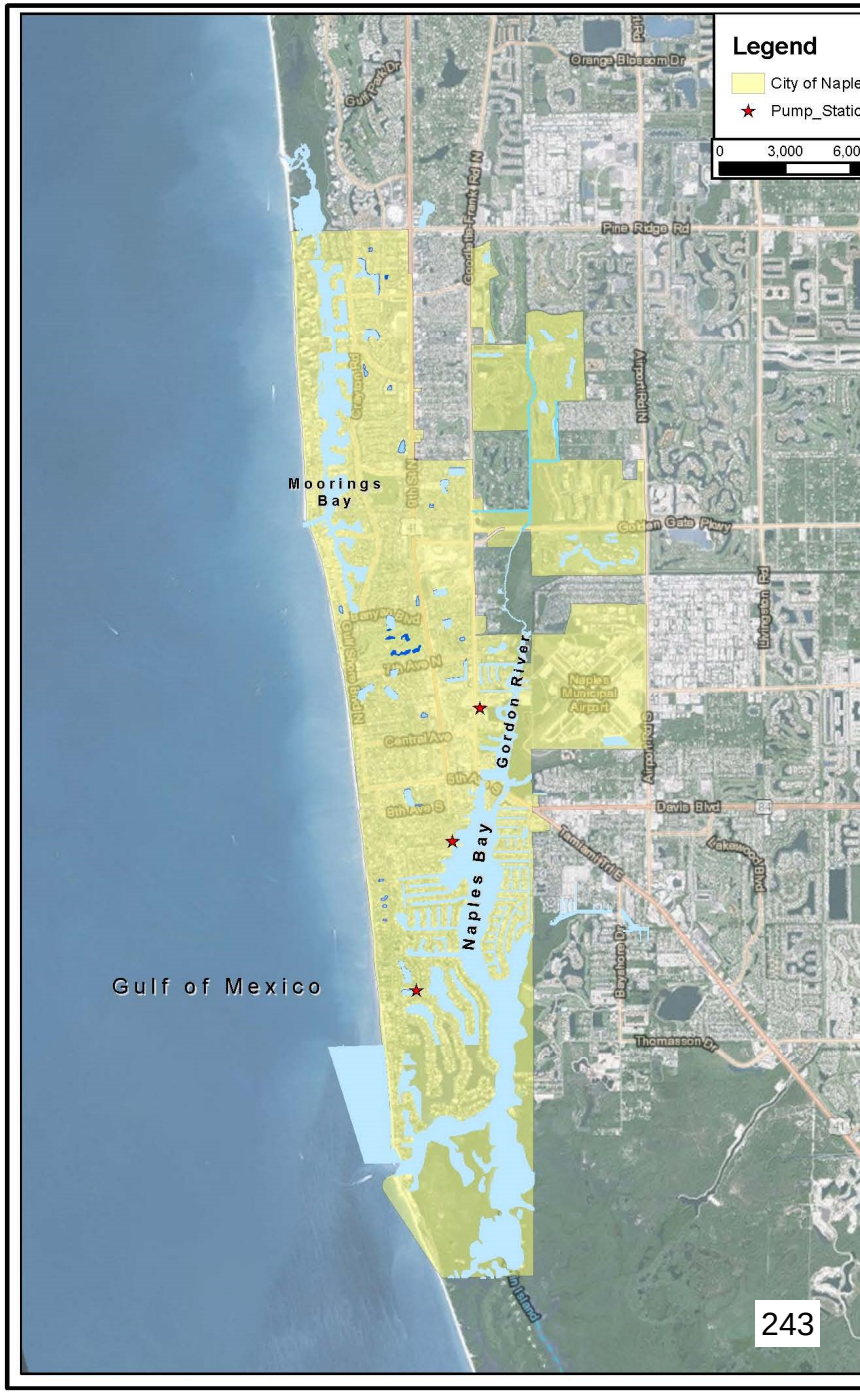
. Moorings Bay

i. Upland stormwater

. Gordon River

i. Golden Gate Canal
ii. Upland stormwater

. Upland surface waters (lakes)



apter 5 – Water Quality and Ecology Recommendations

ontinue Implementing BMPs and Low Impact Design and consider making
MPs a requirement for new construction (treatment train).

onsider a Reasonable Assurance Plan for Naples Bay to avoid BMAP/TMD

ntergovernmental Coordination (SFWMD BCB, Collier County, etc)

- Support projects and programs that benefit the region (aka. Collier County – master plan,
  utility, C^2WI-TAC, Belle Meade project)

ncourage agencies to improve weir operations to store more water and allo
r recharge/reuse instead of discharging to the Gordon River and Naples Ba

apter 7 – Regulatory and Development Code Review Recommendation

onsider requiring BMPs for development along with SW systems

onsider requiring or incentivizing low impact design approaches for development

onsider removing Rooftop Exemption for water quality calculations for single family

onsider maintaining pre-construction discharge rates for new construction

onsider reducing stormwater credit program which currently allows a 30% reduction

evise coastal high hazard area definition in LDC to match Florida Building Code

onsider review of max buildable area, max. impervious areas and max driveway area in new development

onsider reviewing seawall heights and seawall maintenance codes for resiliency purposes.

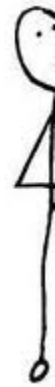
onsider modifying ordinance to require non-conversion agreements for new development below flood elevation

onsider tighter restrictions on improvements in easements

onsider strengthening stormwater specific code enforcement

Public Input

"More SW regulation or development



apter 8 – Climate Adaptation & Resiliency

w does sea level rise relate to SW management?

a Level Rise (SLR) Projections

rm Surge and SLR Maps

R Impacts on the SW System Components

aluate Resiliency Design Standards

cussion of SW management practices

y Vulnerabilities and Potential Adaptation
ategies

apter 8 – Climate Adaptation - Recommendations

onsider preparing a Climate Adaptation Plan that would look into ulnerabilities and provide specific adaptation strategies, physical strategies, formational strategies, and governance strategies for adaption to climate hange events

apter 9 – Best Management Practice (BMP) Review & Recommendatio

ow Impact Development (LID) includes natural processes to improve SW anagement (BMP's)

- Goals & Benefits: water quality, attenuation, groundwater recharge, reducing potable wat consumption, habitat restoration, aesthetics, and potentially a cost reduction in community infrastructure

ecommendation – The SW Management Standards Manual should be pdated and expanded to include the wide range of BMPs that have develop ver the last 10 years

apter 11 – CIP Recommendations

018 Plan Update

-Yr. CIP Recommendation = $57.7 M (2007 = $74 M)

Major Expenditures:

SW Infrastructure Renew & Replace

Outfalls on Naples Beaches

Citywide Lake (or SW Pond) Management Projects

Citywide	$11,412,(
Basin 1	$2,819,0
Basin 2	$18,954,1
Basin 3	$7,000,9
Basin 4	$2,083,0
Basin 5	$7,020,9
Basin 6	$6,148,0
Basin 7	$678,500
Basin 8	$190,400
Basin 9	$95,200
Basin 10	$1,245,2
Basin 11	$50,000
Basin 12	$50,000
TOTAL	**$57,747,**

hapter 12 – Funding

- SW Utility generates a revenue of roughly $5 M/Yr.
  - ❖$50 M over 10-yrs
- Grant opportunities, amount varies (16+% over last decade)
  - ❖Say 5% or $2.5 M
- Partner with County, BCB, FDEP, Conservancy, Developers
- Consider if an updated rate study is warranted

Public Inp
"SW Fee
Fair"

apter 10 – Operational Strategies
apter 13 – Stormwater & Natural Resources Divisions Review

ue to the increase in regulation, aging infrastructure, level of service, retrofitting existing ormwater facilities, and increase in stormwater infrastructure that deals with water quantity nd quality, **increased staff may be needed** to maintain and monitor and operate stormwat frastructure into the future.

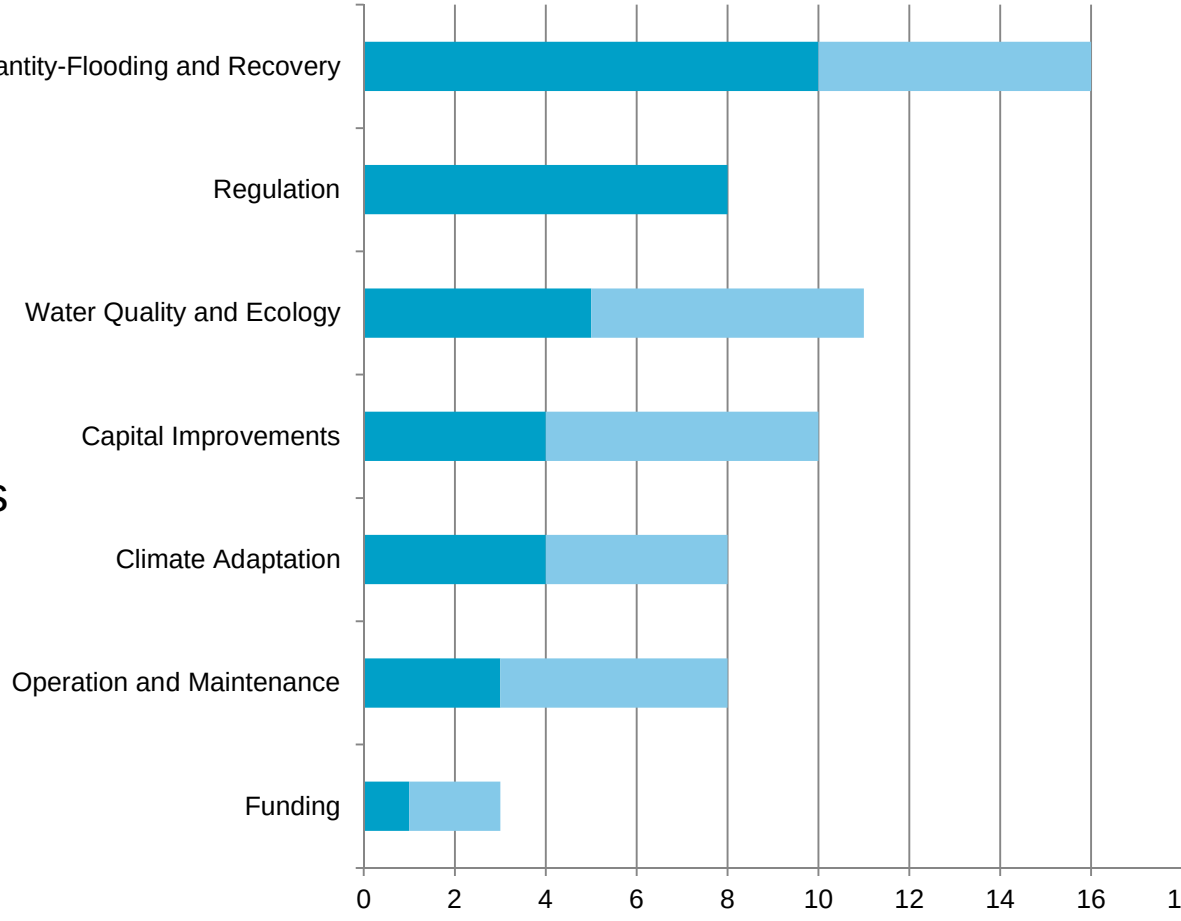
ome additional **responsibilities may need to be outsourced** after further analysis is ompleted on the budget and future capital improvements and operation and maintenance ctivities. For instance, additional water quality monitoring may be outsourced.

ue to the City of Naples being a stakeholder in several environmentally sensitive areas, the atural Resources division will need to take a **more staff hours dedicated to regional artnership activities**.

etails Presented to City Council as part of annual budget requests

apter 14. - Public Involvement Process

onday, January 23, 2017
ednesday, February 22, 2017
rvey Monkey
ebruary 22, 2017 thru July 11, 2017
mails to/from HOA's, Residents, Businesses



xt Steps

00% Deliverable

- Address 90% Comments
- Bring back Resolution to City Council adopting 2018 update of Stormwater Master Plan

hank You

uary 21, 2018

	CAPITAL IMPROVEMENT PROJECT	PROJECT OR PROGRAM COST IN 2017 DOLLARS
1	***Non Basin Specific Projects***	
2	Stormwater Drainage GIS Inventory, Inspection & Evaluation (asset management)	250,000
3	Citywide Stormwater Improvements	7,000,000
4	Storm Sewer Pipe Lining	2,950,000
5	Oyster Reef & Seagrass Restoration Project	300,000
6	Street Sweeper Replacement	400,000
7	Update of the 2012 Lake Management Plan	150,000
8	Review of City-owned Parcels for Storage/WQ Treatment Opportunities	12,000
9	Resiliency Plan	350,000
	Non Basin Specific Projects Total	**11,412,000**
	Basin 1 (Park Shore, Moorings, Seagate, Gulf Shore btw Doctor's Pass & Seagate)	
10	Primary Conveyance System Analysis & Modeling Basin I	178,500
11	Gulfshore Blvd North south of Vedado Way to inlet (Complaint Areas 1,2 and 3) - SW Analysis	40,000
12	East side of Gulfshore Blvd North – South of Seagate to North of Parkshore Drive (Complaint Areas 14-15); Study	40,000
13	Seagate Drive Area - SW Study; Reclaim swales	200,000
14	Stormwater Upgrades and Swale - Install a stormwater swale within City owned parcel along Seagate Drive and remove 700 LF of 30" RCP; install 500 LF of 30" RCP to connect	470,759
15	Improve Stormwater Outfalls - Install 63 inlet filters and connector pipe screens at discharge points into the Moorings and Doctor's Bay	304,290
16	Devil's Lake (Lake #1 - Tier III) Outfall Improvement - Install Suntree Nutrient Removal Box at Outfall	291,525
17	Devil's Lake (Lake #1 - Tier III)- Aeration	17,550
18	Devil's Lake (Lake #1 Tier III)- Public Education Program	5,000
19	Swan Lake (Lake #2 - Tier II) Outfall Improvement - Install Suntree Nutrient Removal Box at Outfall	583,050
20	Swan Lake (Lake #2 - Tier II)- Aeration; Spot dredge and sediment removal	105,300
21	Colonnade Lake (Lake #3 - Tier III) Outfall Improvement - Install Suntree Nutrient Removal Box at Outfall	291,525
22	Lake Suzanne (Lake #5 - Tier III) Outfall Improvement - Install Suntree Nutrient Removal Box at Outfall	291,525
	Total Basin 1	**2,819,024**
	Basin 2 (Coquina Sands, Olde Naples, Moorings)	
23	Primary Conveyance System Analysis & Modeling Basin 2	238,000
24	Lowdermilk Lake (Lake #23 - Tier I) - Structural Repairs	8,775
25	North Lake (Lake #8 - Tier II) Structural Repairs/full dredge	687,375
26	Beach Restoration & Outfall Improvement	18,000,000
27	Wedge Drive (Complaint Areas 9-12) - LOS Analysis	20,000
28	Gulfshore Blvd South – from 3rd Ave. and 4th Ave. North to 1st Ave. South (part of ocean outfall study)	
	Total Basin 2	**18,954,150**
	Basin 3 (Olde Naples, 5th Ave S, 3rd St S)	
29	Spring Lake (Lake #11 - Tier II) Full dredge muck/sediment	1,786,590
30	12th – 14th Ave. South between 3rd – 5th St. South - LOS Analysis	125,000
31	Cambier Park Dry / Wet Detention Treatment Area - Utilize area south of the baseball fields to install a wet / dry retention	589,404
32	Stormwater from Cove Pump to ASR for irrigation	3,500,000
33	Naples Bay Restoration & Water Quality at Cove PS	1,000,000
	Total Basin 3	**7,000,994**
	Basin 4 (Port Royal & Aqualane Shores)	
34	Primary Conveyance System Analysis & Modeling Basin 4	178,500
35	Basin 4 - Study for Artesian wells & estate lot drainage impact to water quality/quantity	100,000
36	Unnamed Lake #13 and Unnamed Lake #28 (both Tier III) Outfall Improvement - Install Suntree Nutrient Removal Box at outfall prior to discharge into canal connected to Naples Bay and Consolidate outfalls	1,346,777

	CAPITAL IMPROVEMENT PROJECT	PROJECT OR PROGRAM COST IN 2017 DOLLARS
37	Half Moon and Lantern Lakes Outfall Improvement - Install Suntree Nutrient Removal Box at outfall prior to discharge into canal connected to Naples Bay and	451,880
38	Unnamed Lake #25 (Tier III) - Structural Repairs to erosion and pipe	5,850
	Total Basin 4	**2,083,007**
	Basin 5 (US41 to Goodlette btw Creech Rd & 7th Ave N)	
39	Add new pipe along 10th Ave. No. & 15th Ave. No.	1,329,008
40	Add Parallel Storm Sewer Along 10th Street North	651,643
41	Add Parallel Pipe, Outfall from 6th Avenue North Pond	158,624
42	Pipe improvements along Golden Gate Parkway	Collier County
43	Add parallel pipe along Golden Gate Parkway	Collier County
44	Stormwater Management - Goodlette Frank Road Water Quality Greenway	2,000,000
45	Mandarin Road from Orchid Drive to Alamanda Drive - LOS Analysis	40,000
46	Three northern lakes (Sun Terrace, Thurner and County Lakes -Tier III); 15, 16, 17 - SW study & improvements	500,000
47	Lake Manor Outfall Improvement - Install Suntree Nutrient Removal Box at outfall prior to discharge into Gordon River	291,525
48	Forest Lake (Lake #20 - Tier III) -Dry / Wet Detention Treatment Area - Purchase parcel # and remove / redirect the three 18" RCP inflows along 7th St North into the wet / dry retention area with planted wetlands and designed concrete overflow weir back into the	1,653,581
49	Fleischman Lake (15th Ave North Lake) Lake #19 - Tier I - Dredging/sediment rem./planting	96,525
50	Willow Lake (Lake #21 - Tier III)- Outfall improvement & 8th Terrace drainage	300,000
	Total Basin 5	**7,020,906**
	Basin 6 (CRA area - West of Goodlette, east of 3rd St btw 7th Ave N & 5th Ave S)	
51	Stormwater Projects in Basin 6 (CRA projects, pump station improvements)	5,645,063
52	The Naples Community Hospital Lake - Pubic Education on copper in lake	3,000
53	8th Street Stormwater Improvements	500,000
	Total Basin 6	**6,148,063**
	Basin 7 (Oyster Bay & Royal Harbor)	
54	Primary Conveyance System Analysis & Modeling Basin 7	178,500
55	Stormwater design and permitting projects in Basin 7	
56	Reclaim Swales	500,000
	Total Basin 7	**678,500**
	Basin 8 (East of Goodlette btw US41 & 14th Ave N)	
57	Primary Conveyance System Analysis & Modeling Basin 8	190,400
58	Stormwater design and permitting projects in Basin 8	
	Total Basin 8	**190,400**
	Basin 9 (Moorings Park , Royal Poincianna, Estuary, Bears Paw)	
59	Primary Conveyance System Analysis & Modeling Basin 9	95,200
60	Stormwater design and permitting projects in Basin 9	
	Total Basin 9	**95,200**
	Basin 10 (Naples Municipal Airport & Collier Park of Commerce/Horseshoe)	
61	Primary Conveyance System Analysis & Modeling Basin 10	95,200
62	Stormwater design and permitting projects in Basin 10	
63	Avion Park - Swale Reclamation (approx. 0.7 mi)	150,000
64	Collier Park of Commerce Swale Reclamation & Stormwater improvements	1,000,000
	Total Basin 10	**1,245,200**
	Basin 11 (Conservation area south of Windstar/Hamilton Harbor)	
65	System Analysis & Modeling Basin 11	50,000
	Total Basin 11	**50,000**
	Basin 12 (Keewaydin Island)	
66	System Analysis & Modeling Basin 12	50,000
	Total Basin 12	**50,000**
	Grand Total	**$ 57,747,443**

Stormwater Master Plan Update
City of Naples

90% Deliverable

February 21, 2018

257

AECOM

DRAFT

Quality information

Prepared by	Checked by	Approved by
Amy Eason, PE Project Manager	Karen Brandon, PE Technical Advisor	Ron Cavalieri, PE Project Director

Revision History

Revision	Revision date	Details	Authorized	Name	Position
90% Deliverable	2/21/18	90% Submittal	Contract Deliverable	Amy Eason, PE	Project Manager
60% Deliverable	8/23/17	60% Submittal	Contract Deliverable	Amy Eason, PE	Project Manager
30% Deliverable	12/6/16	30% Submittal	Contract Deliverable	Amy Eason, PE	Project Manager

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# Hard Copies	PDF Required	Association / Company Name
1	Yes	City of Naples Department of Streets and Stormwater

DRAFT

Prepared for:

City of Naples
380 Riverside Circle
Naples, Florida 34102

Prepared by:

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Project Manager
E: amy.eason@aecom.com

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4415 Metro Parkway
Fort Myers
FL, 33916
USA
aecom.com

Prepared in association with:

AMEC Foster Wheeler Environment & Infrastructure, Inc (AMEC), Angie Brewer & Associates, and Cella Molnar & Associates, Inc.

DRAFT

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TAB 1

Executive Summary

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1. Executive Summary

The City of Naples has evolved in the development of their goals and objectives for their stormwater master plan as regulations have also changed throughout the years. From the City's original 1981 citywide drainage study to their various basin studies to their 2007 Stormwater Master Plan Update, the approach to stormwater management has changed. In the past, the main purpose was to resolve flooding problems associated with quantity or timing of stormwater runoff. In addition various basin reports invested time in evaluating existing conditions of infrastructure, future conditions, and alternatives to improve the level of service of the system. The 2007 master plan attempted to address water quality considerations due to growing concerns for the water resources within the area especially Naples Bay.

This stormwater master plan update takes a more comprehensive approach of evaluating the City's stormwater program as a whole. Not only does this plan evaluate flooding and water quality concerns, it addresses operations and maintenance, division organization, climate adaptation, regulations, and funding. The purpose of the plan is to provide an overview of the program as a whole, evaluate the current conditions of the program, provide recommendations for the City to consider to improve the program, and to provide a forward thinking plan to address future needs of the program.

Throughout the evaluation of the existing program, there have been areas in which the City has done well in such as addressing flooding concerns and providing its property owners a certain level of service. In addition, the City has taken an effort to protect its water resources through water quality monitoring and developing plans that would address water quality concerns over the next 20 years. There are also areas of improvement. These areas consist of developing a comprehensive asset management system through their existing GIS system, evaluating all the basins within the City to determine existing level of service and level of protection, and developing a proactive operation and maintenance program. There are also added plans that the City could develop and implement such as a climate adaptation plan and additional regulations that could assist in achieve a higher community rating score for flood insurance purposes.

In addition, there are some comparison analyses with other municipalities that face the same issues that the City of Naples does. These comparisons were completed in the evaluation of operational strategies, stormwater departmental review, and funding. These comparisons were helpful in providing recommendations and to provide a guide to where Naples is today and where it could go in the future.

Overall, this plan is consistent with the City's stormwater mission "*to protect people and property against flood by maintaining and improving the public stormwater management system, while protecting and restoring ecological systems that work naturally to improve water quality and the environment and quality of life for residents and visitors.*"

TAB 2

Introduction

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2. Introduction

The City of Naples, Florida (Naples or City) is the largest municipality in Collier County, Florida and lies on the southwest coast of Florida. It is bordered on the west by the Gulf of Mexico and on the east by East Naples along with several large developments outside the City limits. The City encompasses approximately 15.9 square miles in total area (exclusive of recent annexations) of which about 1.4 square miles, or 9%, of the City is comprised of bays, waterways, channels and other critically important surface water bodies. Currently, the U.S. Census Bureau estimates that the City's population is approximately 19,700 with several seasonal residents (over 33,000) that arrive during the winter months. The economy of Naples is largely based on tourism due to its proximity to the Everglades and Ten Thousand Islands, and there are several large waterbodies such as the Gulf of Mexico, Naples Bay, Dollar Bay, Mooring's Bay, and the Gordon River, which add to the desire of ecotourism.

Much of the early development that created Naples did not properly plan for the flood potential of the low lying areas that make up this coastal region or for natural resources of the estuaries. The City is characterized by its:

- Coastal environment
- Low topography
- Substantial build-out
- Ongoing redevelopment activities
- Heavy rainfall patterns
- High tidal activity, and
- High potential of storm surge above mean sea level along the gulf coast beaches on the City's western edge.

These characteristics cause some areas of the City to be more prone than others to nuisance and damaging flooding along with degradation of the quality of surface water bodies.

Multiple basin studies and master plans have been conducted over the years in an effort to assess and correct the City's stormwater deficiencies. Previous efforts have included hydrologic and hydraulic modeling in some of the City's basins to attempt to find solutions to the problems and prevent more from occurring. In addition, due to the increase in regulations affecting storm water discharges, the focus on water quality has been a major concern. Additional studies have been commissioned to help understand water quality concerns facing the City and provide potential treatment solutions as well as water quality monitoring programs. Previous efforts also included attempts to ensure that the City's Operation and Maintenance programs were optimized to assist in addressing water quality and quantity issues.

Stormwater runoff is an increasingly important resource that needs to be managed from both a water quantity and quality standpoint to protect public health and safety and to preserve the City's way of life in Southwest Florida. Drainage is an increasingly important subject and the management of it needs to be approached in a comprehensive matter. The development of this stormwater master plan gives the City the tools to record and evaluate current City stormwater management practices, allows the City to establish goals and provide a foundation for future policy decisions, and establishes capital improvement projects for the next 10 years taking into account existing and future practices in stormwater management.

2.1 Background

In 1996, a Stormwater Master Plan was prepared by City staff to outline a comprehensive program to identify and correct deficiencies in the existing systems to accommodate a practical level of service within available resources. In 1998, Camp, Dresser and McKee, Inc. (CDM) was hired to prepare an Assessment Report on Basin VI. In 2001, CDM was hired to prepare a Design Development Report for Basin III. In 2004, CDM was again hired to draft an Interim Report on Basin V. In February 2006, staff updated City Council on the status of the 1996 plan that included a $42,635,000 program for capital

improvements, and an Operation and Maintenance (O&M) Management Plan. That overview included a finance plan to increase the revenue from the Stormwater Utility Fee.

Again in 2007, a Stormwater Master Plan update was performed by Tetra Tech that summarized past documents and efforts, outlined goals and objectives, and identified $78 million worth of projects and programs, many of which have been implemented in the past 10-years. A result of the master planning effort was the modification of the Stormwater Utility Fee ordinance to allow credits to be issued for properties with certified stormwater management systems, and the fee was raised from $4 per ERU to $10.40. A portion of the current master plan efforts involves the identification of the status of capital improvement projects identified in the 2007 plan.

2.2 Objective

The objective for this plan update is to develop a clear, comprehensive, and forward looking master plan (updated from April 2007) that encompasses Naples stormwater management program, presents a detailed investigation into key components of stormwater as it is related to the City, establishes goals and provides a foundation for future policy decisions. This Stormwater Master Plan Update will help the City guide its stormwater management program for the next 10 or more years.

2.3 Goals

The goals of this Stormwater Master Plan Update are: protection of the health, safety and welfare of City residents; protection of and improvement to the City's surface and ground water resources; protection of public and private property; protection and restoration of ecology, and planning wise and strategic investments into the storm water management system.

2.4 Components of the Stormwater Master Plan

As with the 2007 Master Plan Update, this master plan includes a continuation of the compilations of the many related studies, engineering reports, previous master plans and other relevant data into one combined source data book. In order to provide the City a comprehensive stormwater master plan that will effectively outline Naples' stormwater related needs for the next 10 years, the following components are included and are being evaluated in the plan:

1. Water Quantity (Flooding) - Identification of key water quantity issues and recommendations on solutions
2. Water Quality and Ecology - Address current and future water quality and ecology issues through the review of existing data, applicable regulatory standards, and evaluation of the City's monitoring program
3. Level of Service - Evaluation of the water quantity and quality level of service
4. Regulatory and Development Code Review - A thorough review of the City's regulatory and development codes as they relate to stormwater management
5. Climate Adaptation - Evaluation of mutually agreed upon local and regional sea level rise and resilience guidance documentation
6. Best Management Practices (BMP) Review - Review and expansion of the City's current literature on Best Management Practices and the applicability of each towards meeting the City's future stormwater goals
7. Operational Strategies - Provide guidance on how to enhance current operational strategies to assist the City in delivering stormwater protection services more economically, while better maintaining and reporting on current systems

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8. Capital Improvement Program - Identification of capital improvement needs and recommendations regarding future projects based on five year increments, for a 10 year duration
9. Funding - Evaluation of funding options through funding strategy services and an existing rate evaluation
10. Stormwater & Natural Resources Divisions – Review each division's goal and objectives
11. Public Involvement - Provide services to present and document public involvement during the Stormwater Master Plan process

TAB 3

Information and Data Collection

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3. Information and Data Collection

As part of this update to the 2007 Stormwater Master Plan, this plan continues the compilation of the many related studies, engineering reports, previous master plans, and other relevant data. A list of those documents is listed in a table provided in **Appendix A** along with a copy of the documents on a CD. Information and data collection includes the review of existing relevant drainage studies and master plans performed over several decades, as well as numerous reference materials from regulatory and governmental agencies and other technical sources. Data collection and review allows for a thorough understanding of the work that has been previously performed, work that is ongoing, and areas that need to be improved.

In addition to the documents that were collected and reviewed, other technical information was gathered which was specific to the City of Naples from other governmental agencies. This information includes hydrologic data such as rainfall data, tidal data, and groundwater data. Also, this section includes detailed descriptions of the characteristics of nine (9) of the twelve (12) basins that comprise of the City's watershed and an evaluation of the City's GIS system that is used to inventory the City's stormwater assets.

3.1 Sources of Data

3.1.1 Existing Drainage Studies and Stormwater Master Plans

As an update to the 2007 Stormwater Master Plan, **Table 3-1** continues the list of existing drainage studies, stormwater master plans and other similar data sources used to assess and evaluate how the City has been managing stormwater infrastructure. The studies were examined first for relevancy to existing stormwater issues facing the City, then relevant documents were subsequently reviewed to provide a comprehensive understanding of the current state of the City's stormwater management system and areas that may be upgraded. Although sources are cited from the 2007 Stormwater Master Plan, this master plan continues from the conclusions of the previous master plan and concentrates on information occurring after the 2007 Stormwater Master Plan since the previous master plan already evaluated the information up to 2007.

In addition to drainage studies, the City has been concentrating its efforts in the evaluation of water quality since the 2007 Stormwater Master Plan. A more detailed assessment of the studies is located in Section 5 of this report.

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Table 3-1 Summary of Existing Drainage Studies and Stormwater Master Plans

Year	Title of Document	Date Issued	By
1981*	Stormwater Master Plan	1/1981	CH2M Hill
1990*	Phase 1 Stormwater Master Plan and Inventory	10/1990	CDM
1996*	Stormwater Management Program Phase 1 Master Plan	10/1996	Naples Staff
1996*	Lantern Lake Drainage Area Study	06/1996	HMA
1998	Basin VI Assessment Report	08/1998	CDM
1999*	Gordon River Extension Basin Study Phase III	09/1999	Wilson Miller/CDM
2000	Lantern Lake Basin Drainage Study Update	09/2000	HMA
2001*	Interim Basin III Design Development Report	02/2001	CDM
2002*	Gordon River Extension Basin Study Phase IV	2002	Wilson Miller/ CDM
2005	Basin V Stormwater System Improvement Plan – Phase I: Basin Assessment and Conceptual Improvement Plan	11/2005	CDM
2006*	Draft Report Ph-1 Master Plan Stormwater Management Program	04/2006	Naples Staff
2007	City of Naples Stormwater Master Plan Update “90% Draft Report”	04/2007	Tetra Tech
2007	Feasibility Study for Basin III Stormwater Management System Improvements and Broad Avenue Linear Park DRAFT	08/2007	CDM
2009	Naples Beach Outfalls Conceptual Stormwater Management Analysis	11/2009	Gulfshore Engineering, Inc.
2012	Final Technical Memorandum on Beach Stormwater Outfall Hydrologic and Hydraulic Modeling for Existing Conditions	11/2012	AECOM
2013	Final Technical Memorandum on Beach Stormwater Outfall Alternatives Preliminary Assessment	04/2013	AECOM

* Listed in Previous Plan and not included in the CD in Appendix A

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3.1.2 Other Relevant Sources

Besides the City provided resources, additional key reference sources were obtained from several federal, state and local governmental agencies. Some of these agencies are referenced below with a more comprehensive list of information is included in **Appendix A**:

- Federal Emergency Management Agency (FEMA)
- U.S. Geological Survey (USGS)
- Nation Oceanic and Atmospheric Administration (NOAA)
- South Florida Water Management District (SFWMD)
- Florida Department of Environmental Protection (FDEP)
- Big Cypress Basin Board
- Collier County
- City of Naples

3.2 Hydrologic Data

When evaluating the level of service of stormwater management facilities and calibrating models, hydrologic data is essential in the design and assessment of stormwater management facilities. Hydrologic data consists of rainfall data, tidal data, and groundwater information.

3.2.1 Rainfall Data

The City of Naples receives an average annual rainfall of 49 inches. Over a 14.5 square mile area, the amount of rainfall that the City needs to manage its stormwater management system is approximately 12 billion gallons or 38,000 acre-feet per year. Rainfall is where stormwater management begins. Without rainfall, there would be no need to manage the stormwater. The City of Naples is located in a coastal area where the rainy season begins in June and ends in October. This is when Naples receives the most rainfall. When designing stormwater management systems, the amount of rainfall is important in determining whether your system is meeting the desired level of service. Rainfall data is received from several sources. These sources include the National Oceanic and Atmospheric Administration (NOAA) and South Florida Water Management District (SFWMD). These sources are used for design and calibration of stormwater management systems.

3.2.1.1 NOAA Rainfall Data

National Oceanic and Atmospheric Administration (NOAA) precipitation data from 1985 to 2016 is summarized in **Table 3-2**. There are four (4) NOAA rainfall stations as shown in **Figure 3-1**, but the most complete record of rainfall information is from the Naples Municipal Airport Station USW00012897. This station began collecting data in March 2002 and the data is located in **Appendix B**. The NOAA Precipitation data prior to March 2002 was collected at an unnamed data collection station located at 26°10' N Latitude and 81°43' W Longitude. According to the data complied, the average monthly precipitation for the referenced time frame is approximately 4.2 inches with the average rainy season precipitation of approximately 7.3 inches per month. The maximum annual precipitation is 71.16 inches in 2003 and the minimum annual precipitation is 33.91 inches in 2009.

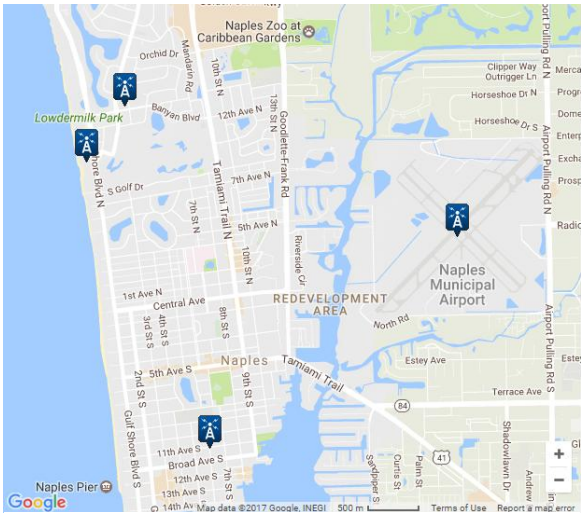

Figure 3-1 NOAA Rainfall Stations

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Table 3-2 NOAA Precipitation (inches) Data from 1985 to 2016

						Rainy Season							
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1985	0.83	0.90	1.55	2.41	0.71	6.77	21.49	5.30	9.78	5.28	2.66	0.89	58.57
1986	1.75	1.94	2.44	0.80	4.98	9.46	3.79	7.77	7.61	5.24	2.11	3.14	51.03
1987	2.13	2.19	8.12	0.14	8.34	7.50	6.54	5.77	3.63	7.06	6.60	0.19	58.21
1988	1.08	0.99	2.58	0.16	1.30	2.31	8.66	9.55	6.25	0.84	1.70	0.35	35.77
1989	0.84	0.09	1.40	4.55	0.91	10.86	11.48	9.37	10.07	4.59	0.32	2.37	56.85
1990	0.09	2.21	0.84	2.77	4.62	10.17	5.69	2.17	7.39	5.13	1.06	0.07	42.21
1991	9.40	2.11	1.86	2.92	10.70	MD*	14.15	MD*	MD*	MD*	MD*	0.37	N/A
1992	0.49	3.69	2.65	2.55	0.91	10.94	7.90	9.22	8.27	0.69	0.57	0.06	47.94
1993	7.66	3.93	2.13	2.25	2.97	6.71	9.19	11.72	3.57	6.87	0.52	0.59	58.11
1994	1.56	1.67	1.11	1.21	0.93	10.86	11.30	7.49	9.46	3.79	2.54	3.58	55.50
1995	4.35	1.74	0.75	3.48	3.98	10.38	MD*	MD*	10.90	15.98	0.59	MD*	N/A
1996	2.10	0.01	1.72	1.71	6.20	2.74	2.60	5.56	3.58	7.40	0.26	0.3	34.18
1997	1.04	0.36	4.04	7.73	4.52	8.42	6.36	4.23	3.36	2.30	3.85	6.28	52.49
1998	1.52	6.09	2.52	0.66	3.92	5.43	7.58	6.18	11.57	4.34	6.63	1.75	58.19
1999	1.52	1.15	0.70	0.37	5.10	9.81	9.15	5.96	13.64	1.94	2.17	0.41	51.92
2000	0.72	MD*	1.21	1.35	1.83	5.81	5.68	10.79	9.95	0.25	0.21	1.01	38.81
2001	1.06	0.01	1.59	0.30	MD*	6.94	12.45	11.71	20.84	6.24	0.20	2.76	64.10
2002**	3.42	1.94	1.19	2.36	5.16	13.19	6.60	7.56	11.28	2.06	3.19	2.70	60.65
2003	2.45	0.80	4.90	4.34	3.39	11.71	8.93	9.94	17.22	1.28	4.08	2.12	71.16
2004	3.15	3.54	0.14	2.78	0.64	5.18	7.61	9.79	3.22	1.83	1.02	1.29	40.19
2005	0.72	0.99	5.22	1.61	1.46	21.06	6.28	4.60	5.49	13.74	2.09	0.17	63.43
2006	0.56	3.21	0.08	0.00	2.74	10.33	12.17	11.61	7.50	1.15	0.41	0.45	50.21
2007	0.02	0.95	0.26	1.71	3.49	4.37	3.54	5.77	9.04	4.92	0.09	0.82	34.98
2008	0.69	1.51	0.74	5.91	0.34	9.46	9.83	10.00	4.28	4.60	0.33	0.60	48.29
2009	0.16	0.31	0.20	0.71	3.92	2.37	3.17	6.20	11.36	0.45	1.11	3.95	33.91
2010	1.65	1.06	2.85	4.68	1.58	9.69	7.77	7.13	6.12	0.52	0.59	1.00	44.64
2011	1.50	0.17	1.06	0.17	1.70	2.43	6.06	7.97	6.96	8.03	1.72	0.43	38.20
2012	0.17	3.21	1.00	2.47	2.46	4.51	4.29	10.95	3.78	3.18	0.12	1.78	37.92
2013	0.15	1.67	0.62	4.43	3.47	8.77	9.06	7.85	10.98	1.24	0.78	0.32	49.34
2014	2.39	0.77	1.90	1.80	1.97	8.19	6.95	13.89	10.08	1.43	1.05	0.25	50.67
2015	0.10	1.54	1.45	1.76	3.19	6.33	10.14	2.78	6.75	1.06	2.98	1.64	39.72
2016	7.54	1.16	0.45	0.47	2.48	4.91	6.31	10.72	5.57	4.60	0.00	0.35	44.56
Average	1.96	1.67	1.85	2.21	3.22	7.99	8.15	7.99	8.37	4.13	1.66	1.35	49.06
Maximum	9.40	6.09	8.12	7.73	10.70	21.06	21.49	13.89	20.84	15.98	6.63	6.28	71.16
Minimum	0.02	0.01	0.08	0.00	0.34	2.31	2.6	2.17	3.22	0.25	0.00	0.06	33.91

*"MD" is missing data and "N/A" is not applicable.
** Data in March 2002 and subsequent years collected from the Naples Municipal Airport Station.

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3.2.1.2 SFWMD Rainfall Data

In addition to the NOAA Precipitation Stations, South Florida Water Management District (SFWMD) also collects precipitation data at a number of rainfall stations shown on **Figure 3-2**. SFWMD rainfall data may be accessed by station ID at the following website: https://www.sfwmd.gov/weather-radar/rainfall-historical/sites-and-basins

This data along with the NOAA data is useful in the calibration of hydrologic and hydraulic modeling along with water quality modeling.

SFWMD also provides information concerning design storm events that are used in designing stormwater management systems. This information is provided in the Environmental Resource Permit Applicant's Handbook Volume II dated May 22, 2016 (**Appendix B**). The only storm event that did not come from this manual is the 10 Year, 1-Hour event in which the information was gathered from Technical Publication 40. Common storm events used in the design of these systems are shown in **Table 3-3**.

Figure 3-2 SFWMD Rainfall Stations

Table 3-3 SFWMD Equivalent Rainfall for Return Frequency Storm (yrs) and Duration (time)

Storm Event	Rainfall (in)
5 Year, 1-Hour	2.8
10 Year, 1-Hour	3.1
3 Year, 1-Day	4.5
5 Year, 1-Day	5.5
10 Year, 1-Day	7.0
25 Year, 1-Day	8.0
100 Year, 1-Day	11.0
10 Year, 3-Day	9.5
25 Year, 3-Day	11.8
100 Year, 3-Day	15.0

3.2.1.3 NEXRAD Rain Grid

Next Generation Radar (NEXRAD) was deployed by the National Weather Service to determine quantities of rainfall by measuring the reflectivity of falling raindrops. NEXRAD is an attempt to improve upon conventional approaches to the collection of rainfall data that include localized methods such as rain gauges. Precipitation is estimated based on the reflectivity and rainfall relationship called Z-R. NEXRAD has the capability to measure reflectivity to a distance of 230 kilometers. NEXRAD Level II and Level III

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radar stations near Naples are located in Tampa, FL, Miami, FL and Key West, FL. NEXRAD rainfall data for Collier County for a 20 year period, earliest data is available in 1996, is shown below in **Table 3-4**. The average monthly precipitation for the referenced time frame is approximately 4.5 inches with the average monthly rainy season precipitation of approximately 9 inches per month. The maximum annual precipitation is 38.45 inches in 2001. NEXRAD data results differ substantially from NOAA data for some annual total while average monthly and average monthly rainy season average is similar. NEXRAD precipitation data can be accessed at the following website:
http://apps.sfwmd.gov/nexrad2/nrdmain.action

Table 3-4 NEXRAD Rainfall Data for Collier County

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1996	0.47	0.33	2.51	0.96	6.50	9.18	4.82	6.46	4.12	4.61	0.24	0.44	40.62
1997	0.89	0.57	2.22	4.18	4.61	6.97	8.30	7.18	6.11	0.58	3.43	4.76	49.78
1998	1.40	4.37	3.98	0.16	2.75	4.38	7.02	7.96	7.36	4.12	7.99	1.67	53.16
1999	1.78	0.52	0.60	1.21	6.41	12.16	8.70	9.65	12.07	6.50	2.75	0.63	62.98
2000	0.73	0.23	2.35	2.53	2.35	9.11	10.21	9.81	11.53	4.24	0.08	0.15	53.32
2001	0.46	0.14	3.15	0.00	4.86	10.93	16.47	10.40	15.08	4.67	0.64	1.67	68.45
2002	0.44	2.08	0.76	1.10	2.39	11.41	6.32	5.82	6.14	2.17	2.33	3.03	43.99
2003	0.97	0.58	3.19	3.44	6.63	9.51	5.98	8.63	11.82	0.79	1.94	1.17	54.64
2004	3.29	2.98	0.19	2.50	1.11	8.83	10.17	10.95	7.48	1.40	0.56	1.10	50.56
2005	1.03	1.02	4.65	2.14	3.22	18.94	8.14	8.45	6.82	6.26	1.85	0.38	62.90
2006	0.34	2.72	0.50	1.09	3.55	8.40	9.32	10.00	8.35	1.12	1.56	1.82	48.77
2007	0.61	1.22	0.53	2.82	3.14	9.29	8.48	6.01	7.73	3.10	0.37	0.89	44.19
2008	0.76	4.87	1.94	3.96	1.53	11.19	11.36	15.93	8.26	3.59	0.27	0.83	64.50
2009	0.30	0.51	0.36	0.48	7.56	11.63	7.36	8.76	9.22	1.43	1.62	3.39	52.60
2010	2.14	2.69	5.63	4.51	3.39	6.92	6.45	11.98	6.74	0.85	1.41	1.07	53.78
2011	1.54	0.24	1.93	2.03	3.64	6.86	8.82	9.73	8.74	9.86	0.28	0.47	54.12
2012	0.10	1.43	1.81	3.25	5.30	6.33	5.99	9.63	7.23	5.93	0.04	2.81	49.83
2013	0.15	2.03	0.74	5.01	6.67	11.01	12.01	7.46	9.00	1.20	1.94	0.27	57.50
2014	2.98	0.86	2.10	2.33	2.88	8.64	8.26	8.29	8.69	1.69	2.41	0.37	49.50
2015	0.57	2.24	1.45	3.99	3.97	7.49	7.04	8.79	9.88	1.56	3.68	2.30	52.94
2016	10.24	2.19	1.04	1.23	6.28	10.42	8.23	10.44	7.39	2.74	0.06	0.33	60.58

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3.2.2 Tidal Data

For the City of Naples, there are two known stations. NOAA Station (ID 8725110) showed in **Figure 3-3** and the Naples Bay North Station. Station 8725110 was established in March 4, 1965 and provides current data. The maximum water level was 3.11 feet MHHW on December 21, 1972, and the minimum water level was -2.48 feet MLLW in March 15, 1988, with a mean range of 2.01 feet and diurnal range of 2.87 feet. This station may be accessed at the following website: https://tidesandcurrents.noaa.gov/stationhome.html?id=8725110.

The Naples Bay North Station was established in March 13, 1978, and then subsequently removed on April 10, 1981. The only historical information is the mean range of 1.97 feet and the Diurnal Range of 2.76 feet. Prior basin studies by CDM have extensively studied tidal information. The results of these studies were summarized in the previous master plan performed by TetraTech (2007) with a summary of high tide elevations and the associated return frequencies. **Table 3-5** summarizes those results.

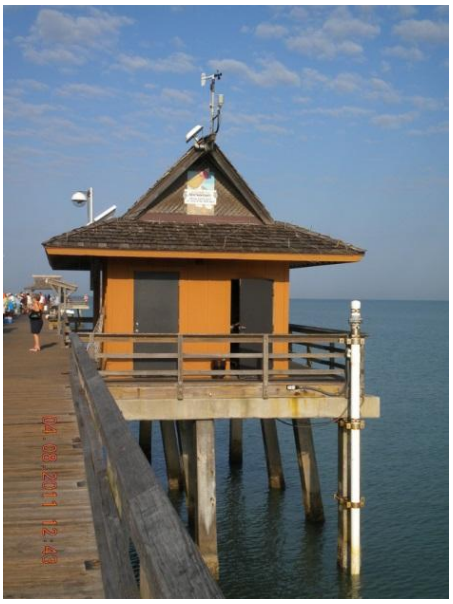

Figure 3-3 NOAA Station 8725110

Table 3-5 Summary of High Tide Elevations

Stillwell Elevation (NGVD)	Return Frequency (Years)
2.7	1/12 (average month)
3.2	1
4.1	10
4.9	25
5.0	Highest Observed Tide (12/21/1972)

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3.2.3 Groundwater Data

The United States Geological Survey's (USGS) collects data from groundwater wells. There are five (5) active monitoring wells within Naples with periodic monitoring frequencies of at least one data point during the last 13 months. The USGS provides this data through their groundwater watch database. Each of the following Site Identification numbers contain a link to the groundwater monitoring station's USGS websites, which contain statistics on each site's ground water levels as well as the number of years the sites has been monitored. The well identification numbers are as follows: 261200081483001, 261156081475801, 261018081484101, 261002081483701, and 260925081475101.

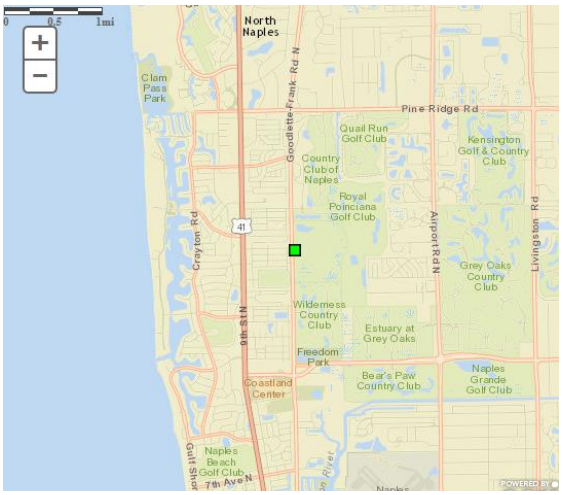

Figure 3-4 USGS Groundwater Well Location Map for Site No. 261124081470301

Also, there are two continuous monitoring wells, 261124081470301 and 261124081470101. These wells are located together on the east side of Goodlette-Frank Road N as shown in **Figure 3-4**. Site 261124081470301 is a 75 feet deep well, which is monitoring the "Tamiami Formation" local aquifer, and Site 261124081470101 is a 30 feet deep well, which is monitoring the "Nonartesian Sand Aquifer" (surficial aquifer system). By reviewing the data, the actual groundwater elevations appear to be 2 feet below existing ground elevation.

3.3 Basin Data

In order to assess and evaluate the City's stormwater management system, the City is delineated into drainage basins to determine the size of the area impacting a receiving water body, retention area, or drainage structure. During the 2007 Master Plan Update, Tetra Tech reconciled and defined the drainage basins. These basins are numbered with Roman Numerals in the 2007 report. Within this report, these basins are numbered with a standard numbering system.

The City comprises of approximately 16 square miles with approximately 2 square miles identified as major waterbodies for a total of 14.4 square miles, in which the City manages stormwater infrastructure. The City has been divided into twelve (12) drainage basins as shown in **Figure 3-5**. This section will further describe each drainage basin. For the purpose of this study, only Basins 1, 2, 3, 4, 5, 6, 7, 8, and 10 are being assessed and evaluated. Basins 9, 11, and 12 contain mostly developed private areas and conservation areas in which the City maintains little to no stormwater infrastructure. Each basin is characterized in the following sections with the following characteristics:

- General geography – to aid in the general location of the basin
- Topographic information – to aid in determining areas that may be prone to flooding due to low elevations and to give a generalize view of the storage the basin may contain
- Future land use and Zoning – to aid in the amount of runoff that a basin is producing that the City must manage
- Soil information – to aid in the amount of soil storage that a basin is providing thus reducing or increasing the amount of stormwater runoff
- Stormwater Infrastructure – to evaluate how the basin's stormwater management system is working.

Larger basin maps are provided in **Appendix D** along with soil survey information from the Natural Resource Conservation Services (NRCS) for the basins being assessed in this study in **Appendix E**.

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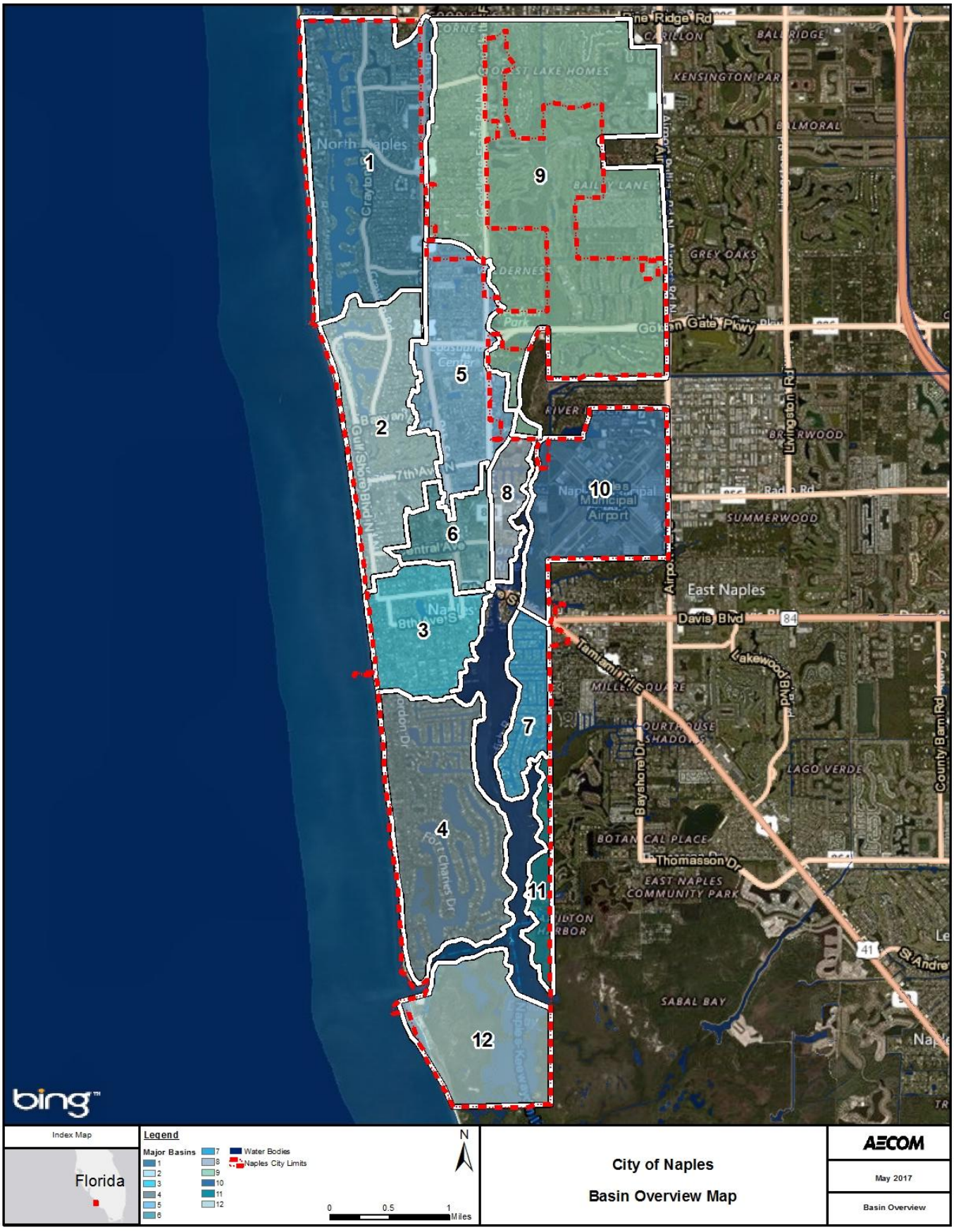
Figure 3-5 Overall Basin Location Map



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3.3.1 Basin 1

Basin 1 is bordered by the Gulf of Mexico on the west, Seagate Drive on the north, US 41 on the east, and from Doctors Pass through Moorings Country Club to US 41 on the south. **Figure 3-6** shows the basin location. The neighborhood areas that are within this area include Seagate, Park West, Park West-Parkshore, Harbour Drive Gulf Shore-Parkshore, Parkshore, the north part of the Moorings, and Harbour Drive Gulf Shore-Moorings. Topography ranges between 1 feet NAVD to 18 feet NAVD where elevations are 13 feet NAVD to 18 feet NAVD on the east boundary by US Highway 41 and where elevations are 1 feet NAVD to 6 feet NAVD on the west boundary by the Gulf of Mexico. The land use in the basin is predominantly residential development with some commercial development concentrated along US Highway 41 and high density, high-rise residential along the Gulf Beaches. The following lists the future land uses within this basin along with the zoning:

Future Land Use

- Commercial (Highway)
- Commercial (Limited)
- Institutional (Public, Semi Public)
- Recreation (Public, Semi Public, Private)
- Residential (High Density High Rise)
- Residential (High Density Mid Rise)
- Residential (High Density Tower)
- Residential (Low Density)
- Residential (Medium Density)

Zoning

- Highway Commercial
- Office
- Planned Development
- Public Service
- Single Family
- Multifamily

More than 50 percent of the land in Basin 1 consists of the Urban Land soil classification. The majority of the land along the Gulf of Mexico surrounding Gulf Shore Boulevard, consisting of one quarter of the land in the basin, is of the Urban Land-Aquenets Complex, Organic Substratum soils classification. The landforms associated with the soil classifications for these areas consist of marine terraces. Specific soils information for this basin is located in **Appendix E**.

Stormwater infrastructure in this basin is routed via swales, inlets, pipes and detention ponds into Venetian Bay, Inner Doctors Bay, Outer Doctors Bay, and Moorings Bay. There are also six (6) lakes within this basin, Devils Lake (consists of 2 Lakes), Swan Lake, Colonnade Lake, Hidden Lake (Lake 4), and Lake Suzanne.

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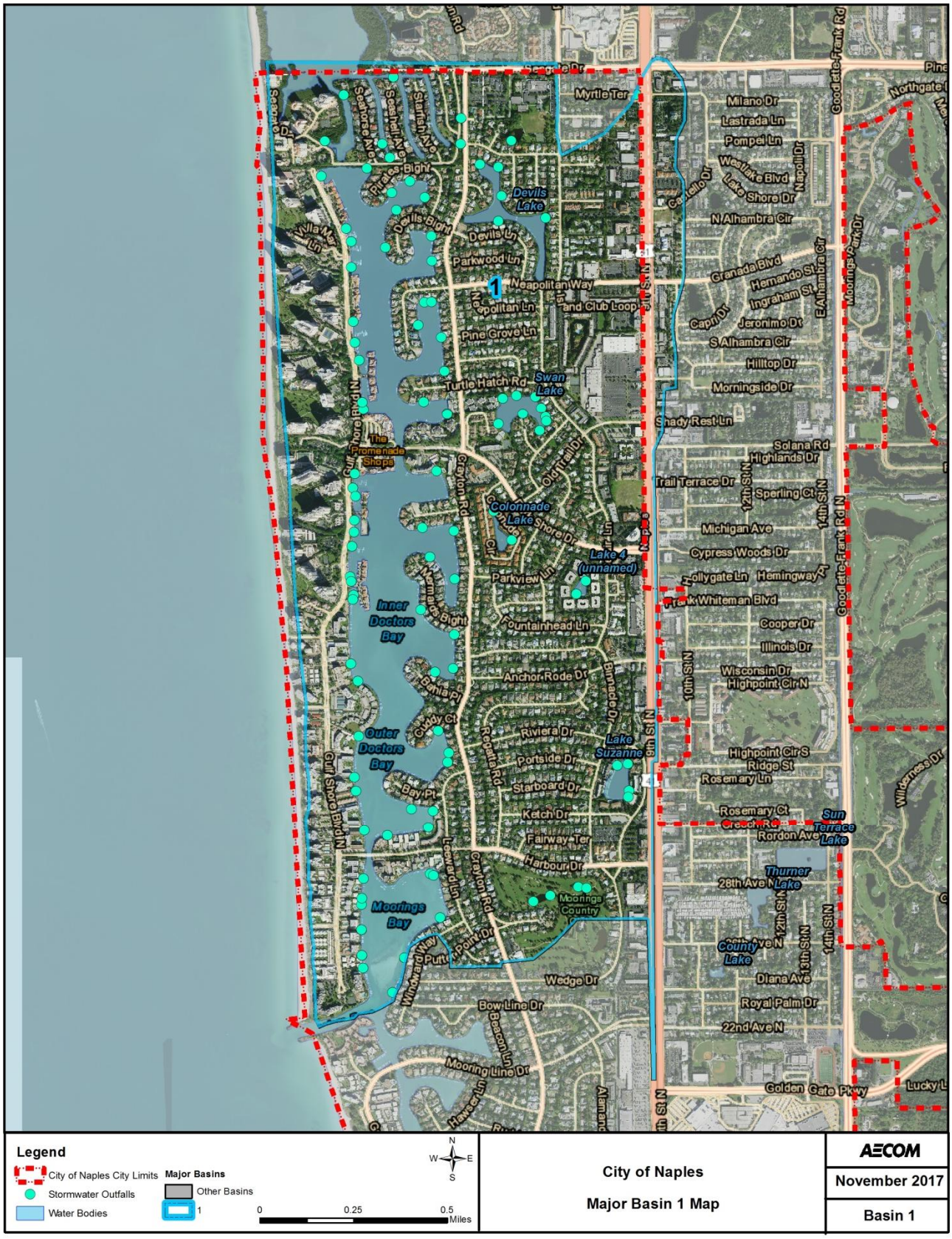
Figure 3-6 Basin 1 Location Map



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3.3.2 Basin 2

Basin 2 is bordered by the Gulf of Mexico on the west, Basin 1 on the north, US 41 and Basin 5 on the east and Basin 3 south of a line that runs from the intersection of 4th Avenue South and the beach northeasterly to the southeast corner of the Naples Beach Club golf course. **Figure 3-7** shows the basin location. The neighborhood areas that are within this area include Moorings, Coquina Sands, Naples Beach Golf Club, and Old Naples. Topography ranges from an elevation of 14 feet NAVD at US Highway 41 to elevation 5 feet NAVD at Crayton Road and from elevation 9 feet NAVD on the dune system at the Gulf of Mexico to an elevation 2 to 3 feet NAVD at Gulf Shore Boulevard. Gulf Shore Boulevard appears to have the lowest elevations within the basin. The land use in the basin is predominately single family residential with commercial development concentrated along US Highway 41 and high density residential along the Gulf coast beaches and the Naples Beach Golf Course. The following lists the future land uses within this basin along with the zoning:

Future Land Use

- Commercial (Highway)
- Commercial (Limited)
- Institutional (Public, Semi Public)
- Recreation (Public, Semi Public, Private)
- Residential (High Density, Low Rise Coquina Sands)
- Residential (High Density, Low Rise Moorings)
- Residential (High Density Mid Rise)
- Residential (Low Density)
- Residential (Medium Density)

Zoning

- Highway Commercial
- Planned Development
- Public Service
- Single Family
- Multifamily

More than 50 percent of the land in the basin consists of the Urban Land soil classification. The northern portion of the basin that runs near the Gulf of Mexico, consisting approximately 18% of the basin, is of the Urban Land-Aquenets Complex Organic Substratum soils classification. An additional 13% of the basin consists of Udorthents classification which is classified as somewhat poorly drained. The landforms associated with the soil classifications for these areas consist of marine terraces. Specific soils information for this basin is located in **Appendix E**.

Stormwater discharges in the northern portion of the basin are routed via a system of swales, inlets, and pipes to Moorings Bay. The southern portion of the basin discharges its storm water via a system of swales, inlets, pipes, and detentions lakes to the Gulf of Mexico via beach outlets. There are also five (5) lakes within this basin, Lowdermilk Lake, North Lake, South Lake, Alligator Lake, and Lake 7 (Naples Golf and Beach Club Lake). Lowdermilk Lake is maintained by the City.

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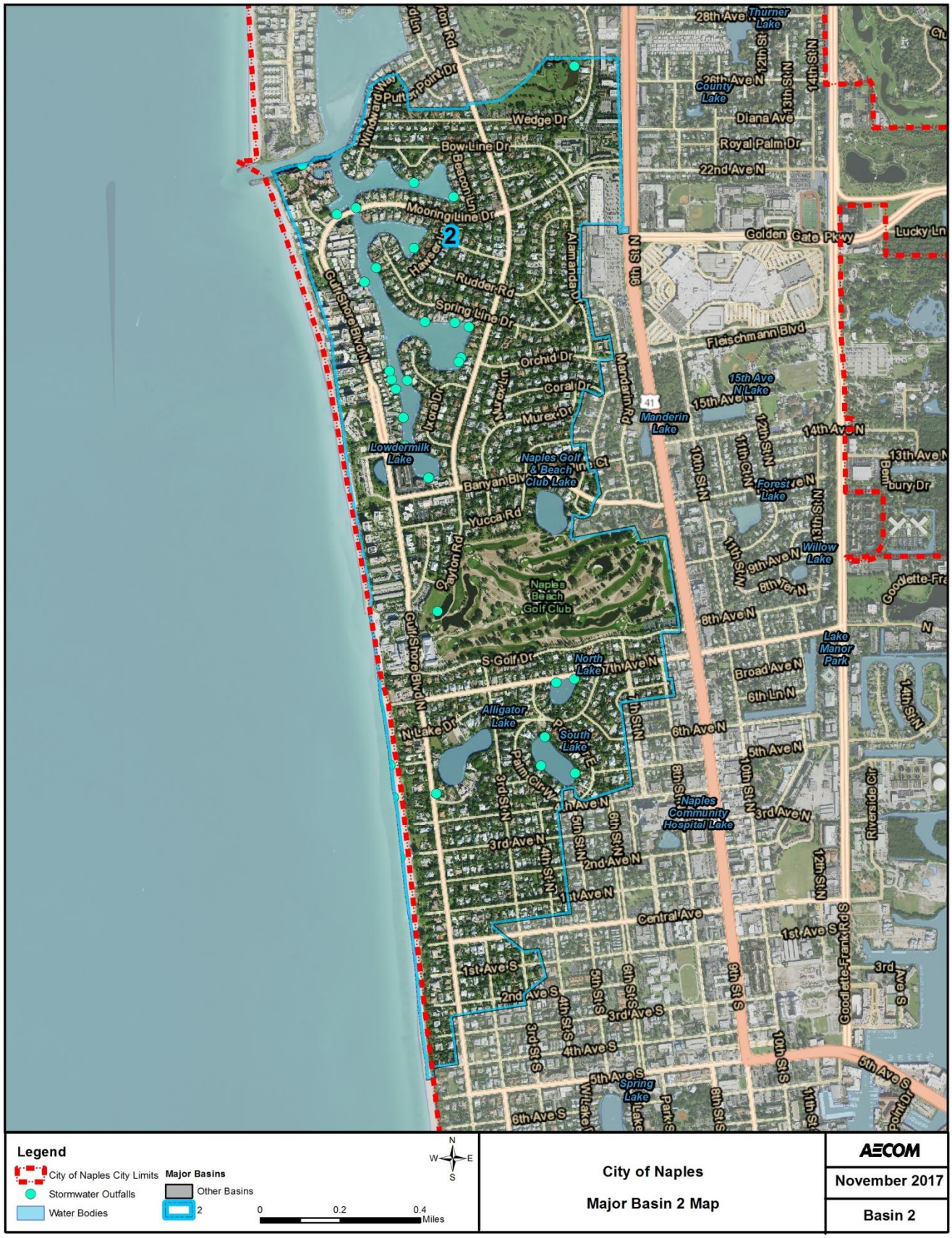
Figure 3-7 Basin 2 Location Map



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3.3.3 Basin 3

Basin 3 is bordered by the Gulf of Mexico on the west, Basins 2 and 4 on the north, Naples Bay on the east, and a line running from Naples Pier southeasterly to Naples Bay on the south (Basin 4). **Figure 3-8** shows the basin location. The only identified neighborhood in this basin is Old Naples. It also includes three (3) overlay districts, the 3rd Street Overlay, the 5th Avenue Overlay, and the Community Redevelopment Area (CRA) District. Topography is at elevation 12 feet NAVD in the north part of the basin and slopes to the south and east to an elevation of 1 feet NAVD. On the west side of the basin, there is a high dune ranging from 8 to 10 feet NAVD which slopes toward Gulf Shore Boulevard to an elevation of 1 to 2 feet NAVD. The area is relatively flat throughout the center of the basin. The land use in the basin predominantly consists of residential development with commercial development in the northeast portion of the basin and along 5th Avenue South and along 3rd Street South between Broad Avenue South and 14th Avenue South. In addition, City Hall and the Fire Department are located in this basin. The following lists the future land uses within this basin along with the zoning:

Future Land Use

- Commercial (Limited)
- Downtown Mixed Use
- Institutional (Public, Semi Public)
- Residential (Low Density)
- Residential (Medium Density)
- Waterfront (Mixed Use)

Zoning

- Retail Shopping
- Commercial Core
- General Commercial
- Waterfront Commercial
- Downtown
- Planned Development
- Public Service
- Single Family
- Multifamily

More than 96 percent of the land in the basin consists of the Urban Land soil classification. Specific soils information for this basin is located in **Appendix E**.

Stormwater runoff in the basin is routed by swales, inlets, pipes, and detention lakes (East Lake and Spring Lake), and then subsequently routed to the Cove Stormwater Pumping Station on Broad Avenue South and 9th Street South for discharge into Naples Bay. East Lake, also known as Lois Selfon Park Lake, is maintained by the City.

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Figure 3-8 Basin 3 Location Map

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3.3.4 Basin 4

Basin 4 is bordered by the Gulf of Mexico on the west, Basin 3 on the north, and Naples Bay on the east and south. **Figure 3-9** shows the basin location. The neighborhood areas that are within this area include Aqualane Shores and Port Royal. Topography ranges between 1 feet NAVD to 8 feet NAVD throughout the basin with a dune along the Gulf of Mexico that begins at 10 to 11 feet NAVD in elevation to an elevation of 1 to 2 feet NAVD along Gulf Shore Boulevard and Gordon Drive. The elevations appear to be relatively flat throughout the basin with high topography at the build pads to street elevations ranging from 1 feet NAVD to 5 feet NAVD. The land use in the basin is predominately single family residential development. The following lists the future land uses within this basin along with the zoning:

Future Land Use

- Beach Front Estates
- Conservation
- Institutional (Public, Semi Public)
- Recreation (Public, Semi Public, Private)
- Residential (Low Density)

Zoning

- Conservation
- Planned Development
- Public Service
- Single Family
- Multifamily

The majority of the area of the basin consists of Urban Land-Aquenets Complex Organic Substratum soils classification which consists of poorly drained soils with close to one quarter consisting of the Urban Land classification. In addition, 12 percent consisting of Urban land –Immokale e-Oldsmar, limestone substratum complex consisting of poorly drained. Specific soils information for this basin is located in **Appendix E**.

Storm water discharges in the basin are routed via swales, inlets, and pipes to the canals of the basin which flow to Naples Bay. There is a stormwater pump station located on Lantern Lane in Port Royal. There are also six (6) lakes within this basin, Lakes 12, 13, 25, and 28 and Lantern Lake and Half Moon Lake.

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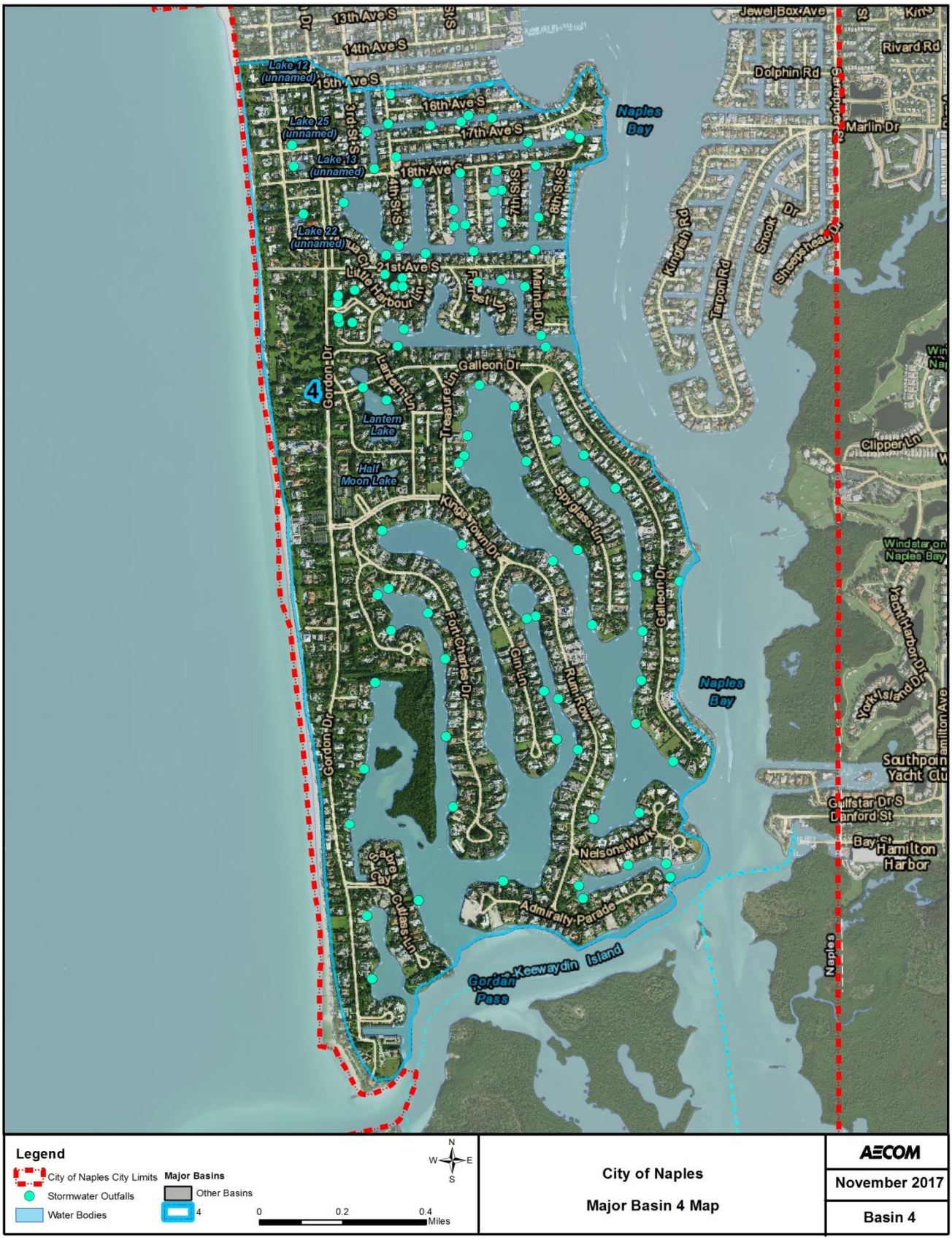
Figure 3-9 Basin 4 Location Map



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3.3.5 Basin 5

Basin 5 is bordered on the west by US Highway 41 and Basin 2, Creech Road on the north, Goodlette Road on the east and a line that runs from the intersection of US Highway 41 and 3rd Avenue North northeasterly to Goodlette Road on the south. **Figure 3-10** shows the basin location. The neighborhood areas that are within this area include Lake Park and Eagle Oak Ridge. In addition, part of the CRA District is within this basin. Topography in this basin generally slopes west to east with the higher elevations of 12 feet NAVD along US Highway 41 and the lower elevations from 5 to 9 feet NAVD. There are also flatter areas between US Highway 41 and Goodlette Road. The land use in the basin consists of commercial development along the US Highway 41 corridor and the Coastland Mall area with residential development throughout the basin. The following lists the future land uses within this basin along with the zoning:

Future Land Use

- Commercial (Highway)
- Commercial (Limited)
- Downtown Mixed Use
- Institutional (Public, Semi Public)
- Recreation (Public, Semi Public, Private)
- Residential (Low Density)
- Residential (Medium Density)

Zoning

- General Commercial
- Downtown
- Highway Commercial
- Medical
- Planned Development
- Public Service
- Single Family
- Multifamily

More than 85 percent of the area of Basin 5 consists of the Urban Land soil classification which features the landform marine terraces with no associated drainage classification. Approximately 8 percent consists of Urban land-Immokalee-Oldsmar, limestone substratum complex which is poorly drained consisting of the landform flatwoods on marine terraces. Specific soils information for this basin is located in **Appendix E**.

The basin's stormwater runoff is routed via swales, inlets, pipes, and several detention lakes to a storm sewer pipe system along the west right-of-way of Goodlette Road. This system discharges to the Gordon River. There are also eight (8) lakes within this basin, Sun Terrace Lake, Thurner Lake, County Lake (Lake 17), Lake 19 (5th Avenue N. Lake), Mandarin Lake, Forrest Lake, Willow Lake, and Lake Manor. Lake 19, Mandarin Lake and Lake Manor are maintained by the City.

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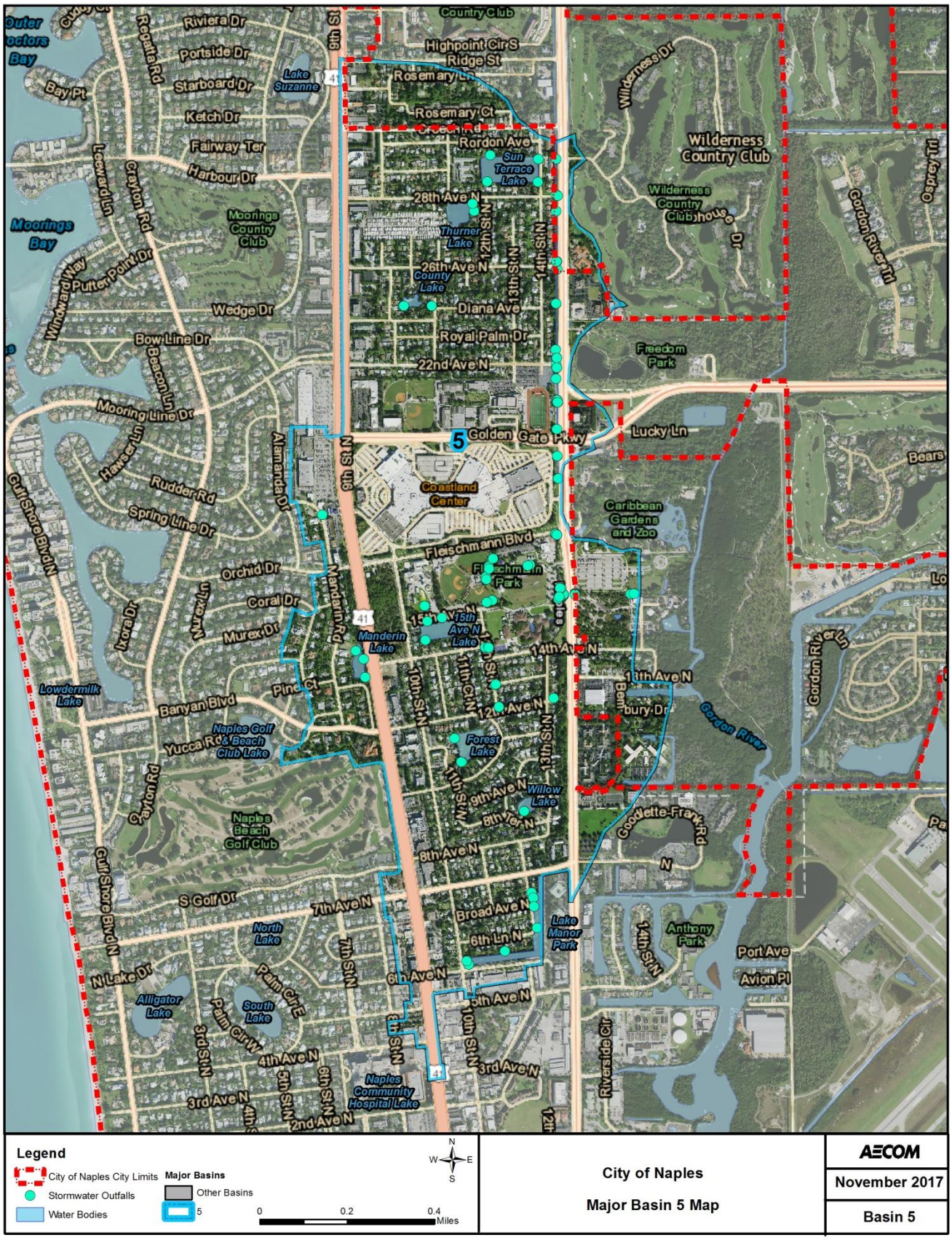
Figure 3-10 Basin 5 Location Map



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3.3.6 Basin 6

Basin 6 is bordered on the west by Basin 2, Basin 5 on the north, Basin 3 on the south, and Goodlette-Frank Road on the east. **Figure 3-11** shows the basin location. The neighborhood areas that are within this area include Old Naples and River Park. In addition, portions of the CRA District are within this basin. Topography slopes north to south and west to east. The elevations range 12 feet NAVD from the north to 2 feet NAVD to the south and 10 feet NAVD from the west to 2 feet NAVD to the east. There are also areas within the basin that have relatively flat slopes. The land use in the basin consists of primarily commercial development in the US Highway 41 corridor and downtown Naples area with residential development interspaced throughout. The following lists the future land uses within this basin along with the zoning:

Future Land Use

- Downtown Mixed Use
- Institutional (Public, Semi Public)
- Recreation (Public, Semi Public, Private)
- Residential (Low Density)
- Residential (Medium Density)
- Residential (Low Density)

Zoning

- General Commercial
- Downtown
- Medical
- Planned Development
- Public Service
- Single Family
- Multifamily

Basin 6 consists exclusively of the Urban Land soil classification which consists of the landform marine terraces with no associated drainage classification. Specific soils information for this basin is located in **Appendix E**.

The majority of stormwater runoff in the basin is conveyed via swales, inlets and pipes to the Goodlette Road (Public Works) stormwater pump station near the Police Station. A portion of the basin's stormwater runoff is routed via swales, inlets and pipes to a ditch and pipe system along the west right-of-way of Goodlette Road. This system discharges ultimately to the Gordon River. There is also one lake within the basin, Naples Community Hospital (NCH) Lake.

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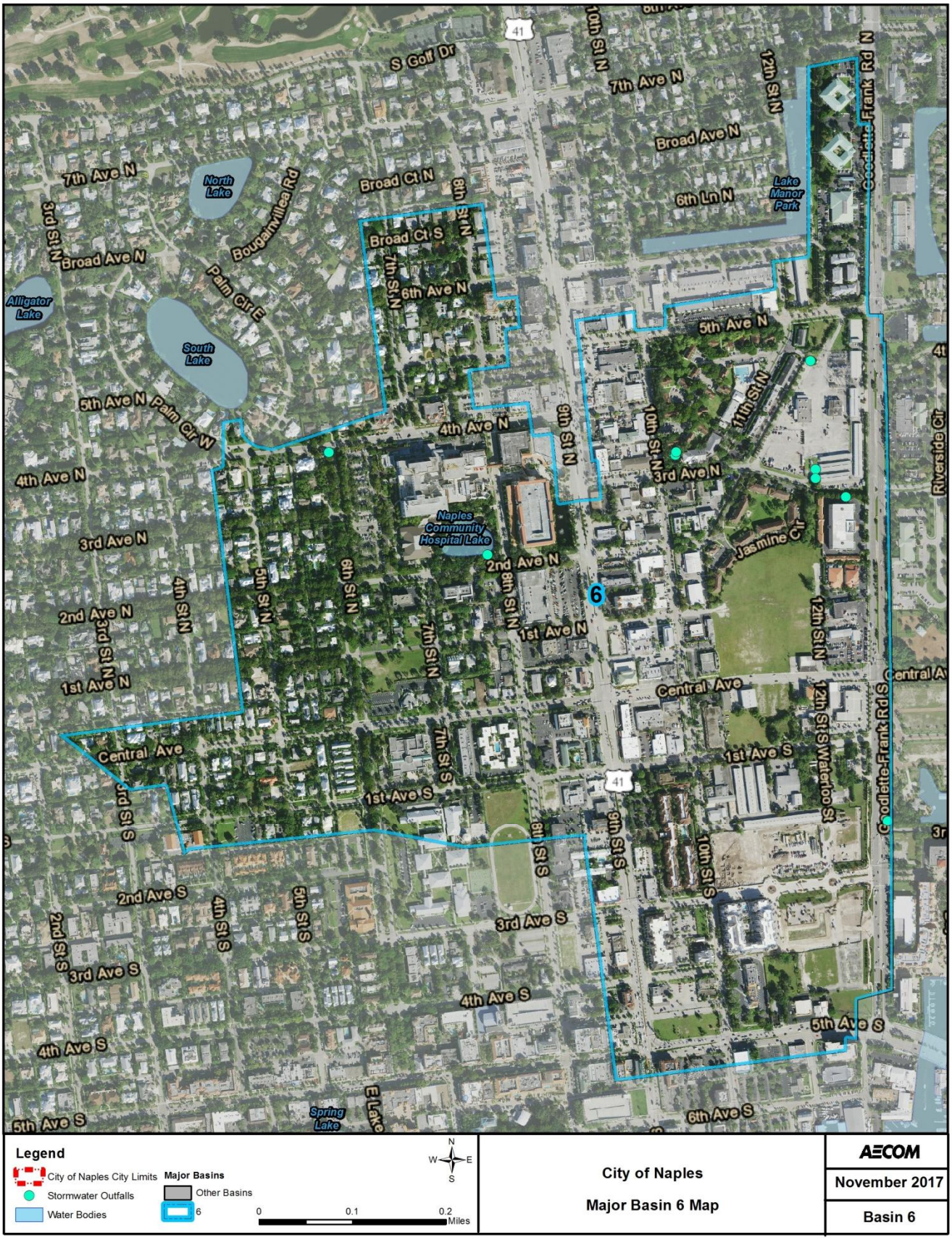
Figure 3-11 Basin 6 Location Map



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3.3.7 Basin 7

Basin 7 is bordered on the west by Naples Bay, US Highway 41 on the north, Naples Bay on the south, and Sandpiper Street on the east. **Figure 3-12** shows the basin location. The neighborhood areas that are within this area include Oyster Bay and Royal Harbor. Topography is relatively flat with a high elevation of 2 feet NAVD to elevation 7 feet NAVD. Due to the many canals within the area topography slopes toward the canals. The land use in the basin is predominately single family residential with some multi-family residential dwellings and a small portion of commercial development in the north part of the basin along 5th Avenue South. The following lists the future land uses within this basin along with the zoning:

Future Land Use

- Residential (Low Density)
- Residential (Medium Density)
- Waterfront (Mixed Use)

Zoning

- Waterfront Commercial
- Planned Development
- Single Family
- Multifamily

More than 86 percent of the area in Basin 7 consists of the Urban Land-Aquenets complex, organic substratum soil classification which features the somewhat poorly drained drainage classification. Specific soils information for this basin is located in **Appendix E**.

Stormwater discharges in the basin are routed via a system of swales, inlets, pipes and canals which flow into Naples Bay.

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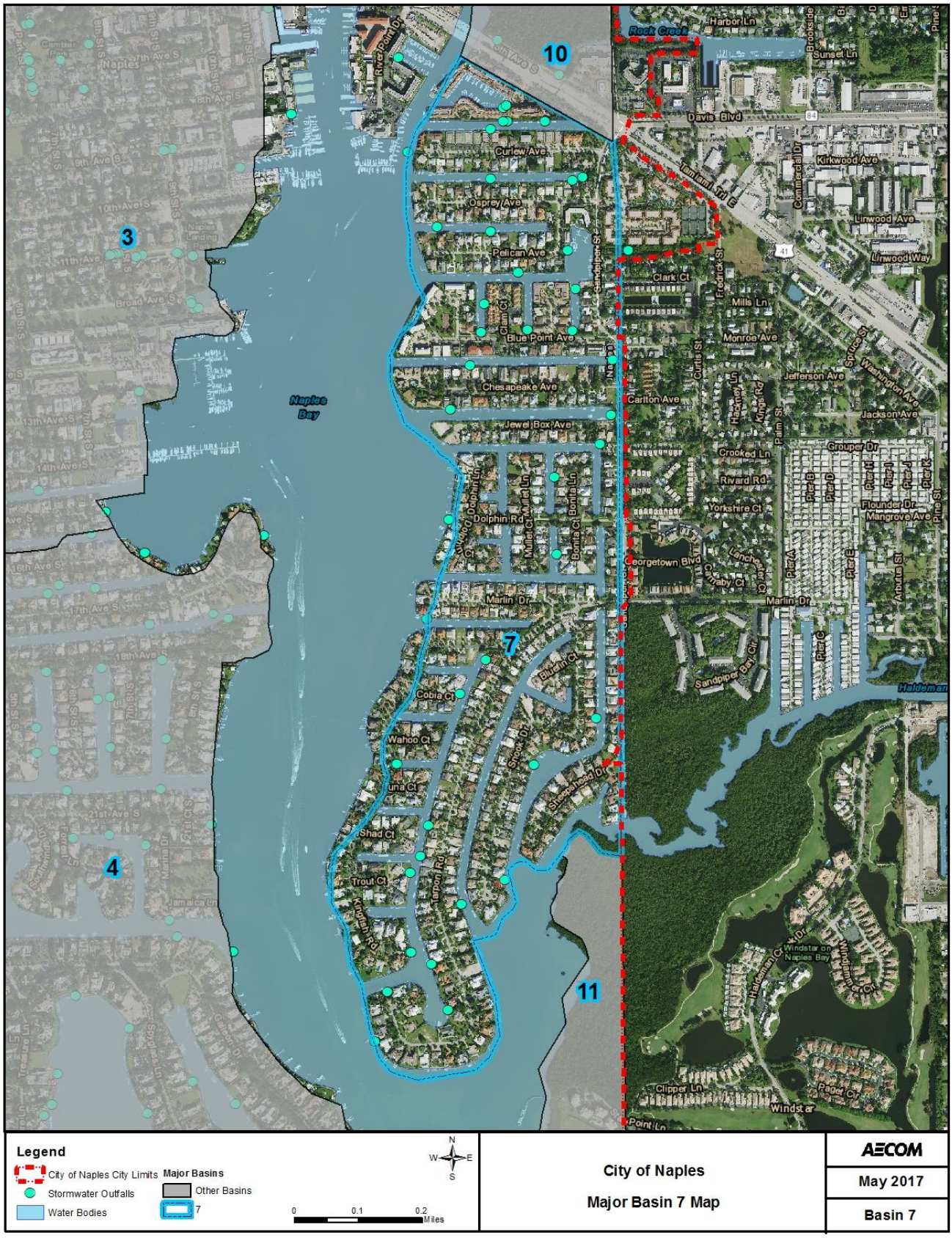
Figure 3-12 Basin 7 Location Map



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3.3.8 Basin 8

Basin 8 is bordered by Goodlette-Frank Road on the west, the Gordon River on the east and south, and an east-west line that would be the westerly extension of the northern boundary of Naples Airport on the north and Basin 5. **Figure 3-13** shows the basin location. The neighborhood areas that are within this area include Old Naples and River Park. Topography slopes from Goodlette-Frank Road on the west to the Gordon River on the east with elevations from 1 feet NAVD to 6 feet NAVD. There are some relatively flat areas in the north basin where the topography is 3 feet NAVD from the west to 1 feet NAVD to the east. The land use in the basin consists of some residential development in the north portion of the basin with commercial development along the Goodlette Road corridor. The City Police Department, Utilities Department and the Goodlette Road (Public Works) Stormwater Pump Station are within the basin. The following lists the future land uses within this basin along with the zoning:

Future Land Use

- Conservation
- Downtown Mixed Use
- Institutional (Public, Semi Public)
- Recreation (Public, Semi Public, Private)
- Residential (Low Density)
- Residential (Medium Density)

Zoning

- Conservation
- General Commercial
- Waterfront Commercial
- Highway Commercial
- Planned Development
- Public Service
- Single Family
- Multifamily

The majority of the land in Basin 8 consists of the Urban Land-Aquenets complex, organic substratum soil classification which features soils that are classified as somewhat poorly drained. The remainder of Basin 8 consists of the Urban land-Immokalee-Oldsmar, limestone substratum complex and Urban Land classification with some uninhabited area in the Durbin and Wulfert mucks, frequently flooded classification. Specific soils information for this basin is located in **Appendix E**.

Storm water discharges in the basin are routed via a system of swales, inlets, and pipes to the Gordon River. Stormwater also collects to the Public Works Stormwater Pump Station on Riverside Circle and discharges to the Gordon River.

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Figure 3-13 Basin 8 Location Map

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3.3.9 Basin 9

Basin 9 is bordered by Goodlette Road on the west, the Gordon River and Airport Road on the east and Basin 8 on the south. This basin is the City's portion of the Collier County "Gordon River Extension Stormwater Basin" which extends will into the County. **Figure 3-14** shows the basin location. The neighborhoods located within this basin are Moorings Park, Royal Poinciana Golf Club, Hole-in-the-Wall Golf Club, Estuary at Grey Oaks, Freedom Park, and the Bear's Paw Country Club. This basin is not being assessed or evaluated in this study, but the information is being provided to illustrate the City's entire limits for stormwater management.

The land use is characterized by residential development, some commercial development along the Goodlette Road corridor and undeveloped land/preserve land. The following lists the future land uses within this basin along with the zoning:

Future Land Use

- Commercial (Highway)
- Recreation (Public, Semi Public, Private)
- Residential (High Density High Rise)
- Residential (Low Density)
- Residential (Medium Density)
- Residential (Senior Living)

Zoning

- Highway Commercial
- Planned Development
- Public Service
- Transitional Conservation

The basin's stomwater runoff is routed through major development's stormwater conveyance systems, privately maintained lakes, roadway pipes and ditches, swales, and overland sheet flow to the Gordon River.

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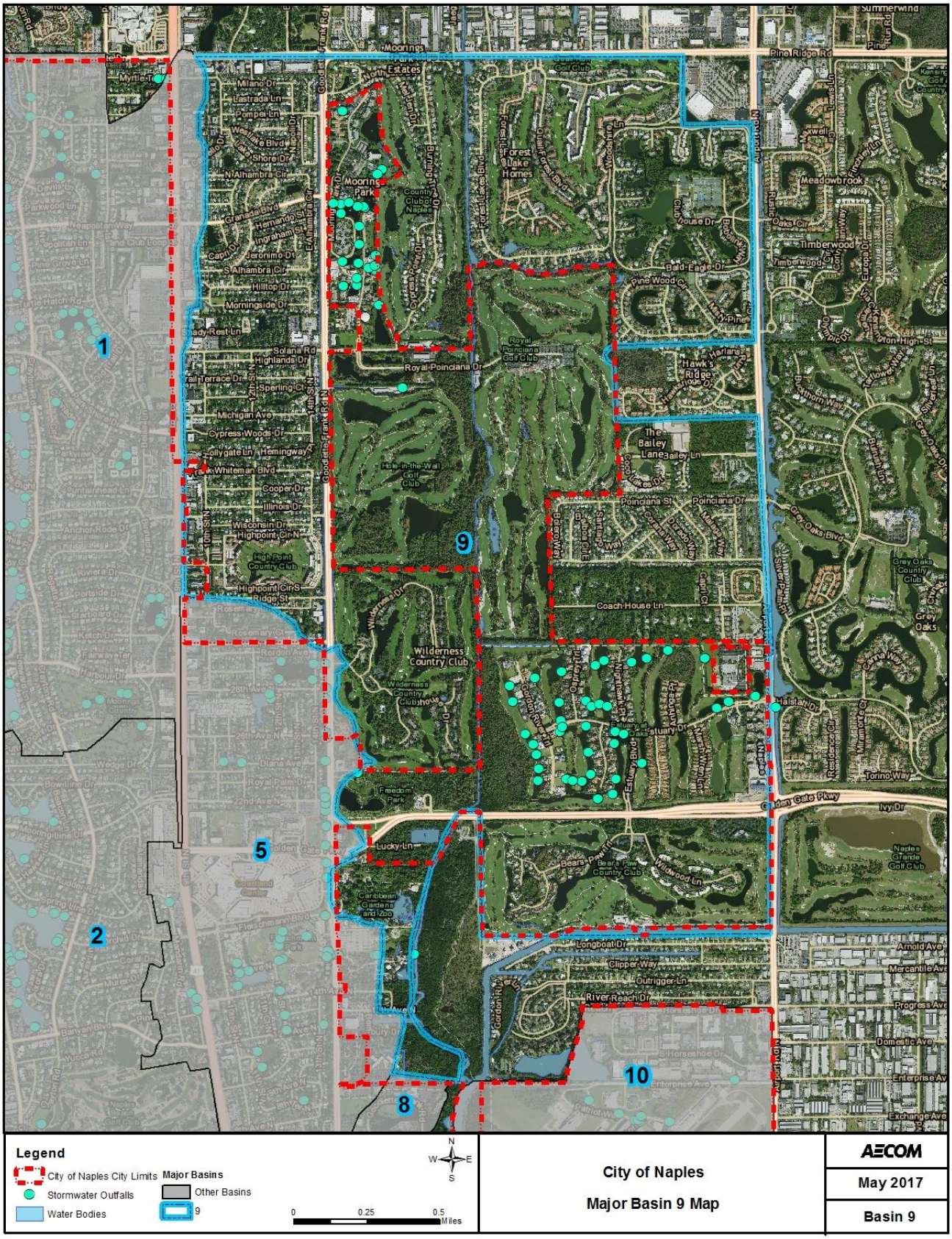
Figure 3-14 Basin 9 Location Map



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3.3.10 Basin 10

Basin 10 is bordered on the west by the Gordon River, the north boundary of Naples Airport on the north, Airport Road on the east, River Reach Drive on the north and North Road on the south. Topography within this basin slopes north to south from elevations 7 feet NAVD to 0 feet NAVD, respectively, and east to west from elevations 6 feet NAVD to 0 feet NAVD, respectively. The Naples Municipal Airport is the majority landowner within this basin. There are also some residential and commercial developments within the basin. The following lists the future land uses within this basin along with the zoning:

Future Land Use

- Airport
- Commercial (Business Park)
- Commercial (Limited)
- Conservation
- Residential (Low Density)
- Runway

Zoning

- Business Park
- Airport Commercial
- Planned Development
- Single Family

Approximately 44% of the land in the basin consists of Urban Land soils classification followed by the Immokalee find sand and Hallandale find sand classifications which are both classified as poorly drained on the east side of the basin. Specific soils information for this basin is located in **Appendix E**.

The basin's stormwater runoff is routed via swales, inlets, pipes, and overland street flow to the Gordon River.

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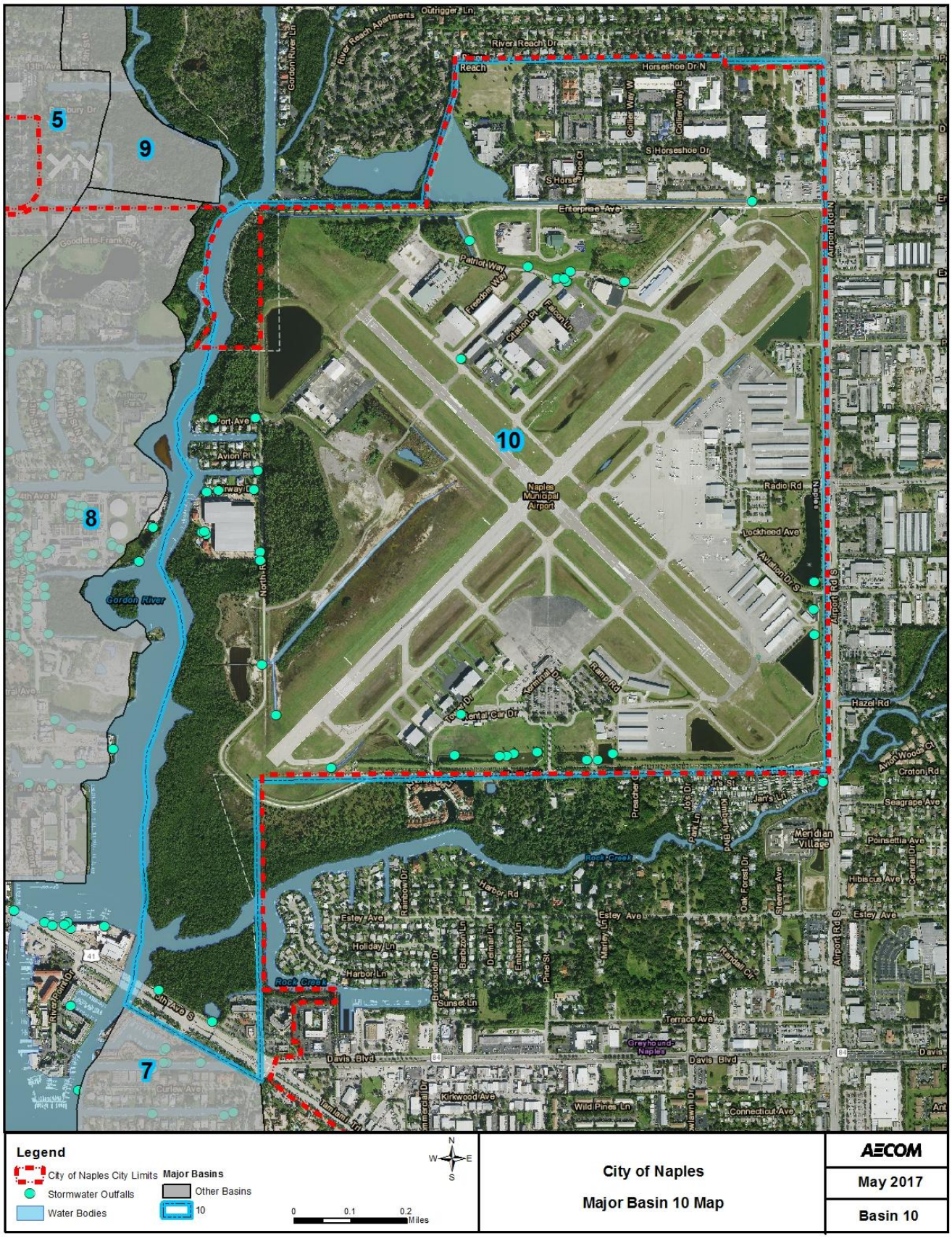
Figure 3-15 Basin 10 Location Map



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3.3.11 Basin 11

Basin 11 is bounded by Naples Bay on the west, Basin 7 on the north and the City limits on the east and south. **Figure 3-16** show the location map for this basin. This basin is not being assessed or evaluated in this study, but the information is being provided to illustrate the City's entire limits for stormwater management.

This area is mainly undeveloped with the exception of Bayview Park, portion of Windstar on Naples Bay, portion of Southpointe Yacht Club, and portion of Hamilton Harbor. The following lists the future land uses within this basin along with the zoning:

Future Land Use

- Conservation
- Recreation (Public, Semi Public, Private)
- Residential (Low Density)

Zoning

- Planned Development
- Public Service
- Single Family
- Transitional Conservation

The basin's stormwater runoff is routed via overland sheet flow to Naples Bay.

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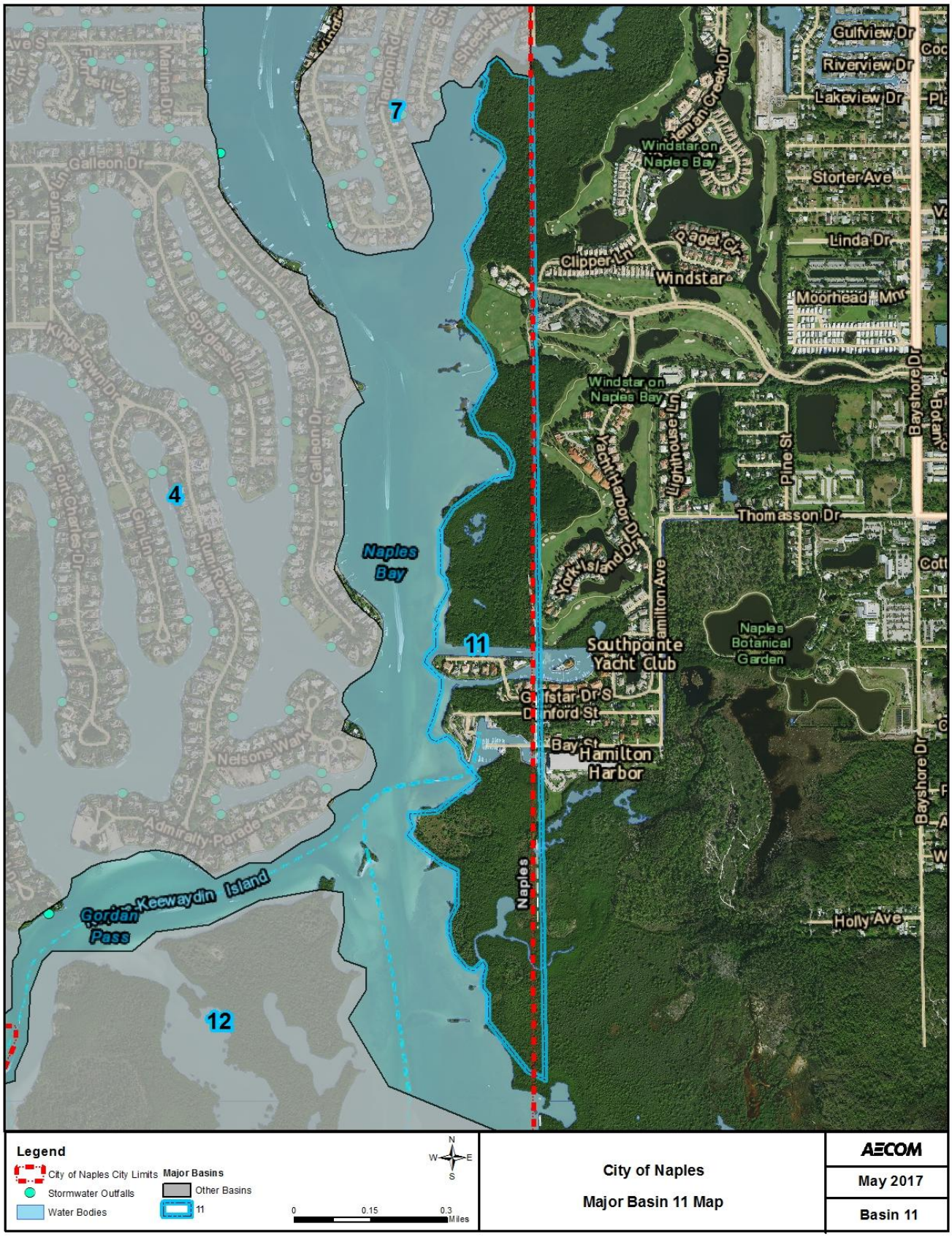
Figure 3-16 Basin 11 Location Map



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3.3.12 Basin 12

The basin is the portion of Key Island within the City limits. **Figure 3-17** shows the location map for this basin. This basin is not being assessed or evaluated in this study, but the information is being provided to illustrate the City's entire limits for stormwater management.

The land is mostly undeveloped with some sparse residential development. The following lists the future land uses within this basin along with the zoning:

Future Land Use

- Conservation

Zoning

- Conservation
- Planned Development

The basins stormwater runoff is routed via overland sheet flow to Naples Bay and the Gulf of Mexico.

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Figure 3-17 Basin 12 Location Map

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3.4 GIS Data

The City of Naples uses its Geographic Information System (GIS) as an asset management tool for its stormwater management system. Asset Management has recently become a buzz-word and is practiced by anyone owning assets. There is no easy or one-size fits all solution for asset management and it can be not only a technological or financial challenge, but also a cultural challenge. Asset management should focus on the full lifecycle of assets which should help in making the best possible decisions in building, operating, maintaining, renewing, replacing, and disposing of infrastructure assets. There has been an increasing emphasis on asset management due to high profile asset failures, deteriorating infrastructure and the lack of funds to take preventive actions. There are also increasing pressures to demonstrate good stewardship and due diligence.

3.4.1 Existing Conditions

During the 2007 Stormwater Master Plan, Tetra Tech converted the City's Computer Aided Design (CAD) inventory into a Geographic Information System (GIS). Since this conversion, the City has been building and maintaining its stormwater infrastructure in GIS. The City has taken steps in inserting record drawings of stormwater infrastructure along with other important information into GIS. The GIS stormwater inventory improves the ability of the City to study the infrastructure system in relation to other datasets available in GIS, such as planning data, flood zones, capital improvement projects, water systems, wastewater systems, and reuse systems. This information is not only critical to proper project planning and design, but can be useful in evaluating the value of the stormwater management assets for accounting purposes.

The City currently has an operating GIS system and provides City of Naples GIS Maps for the public to access on its website. The following maps are currently provided on the GIS Website:

- FEMA DFIRM Flood Zones
- Wind Speed Risk Categories
- Naples Annexations
- Naples Future Land Use
- Naples Overlay Districts
- Naples Zoning
- Bike Lanes
- Bronze Marker Story Map
- City Trees
- Naples Government Services
- Naples Historic District
- Naples Interactive Map
- Naples Walking Map
- Public Information Center
- Naples Bathymetry
- Naples Bay Substrates
- Oyster Reefs
- Seagrass
- Water Sampling Sites

As part of the master plan update, the City provided GIS information related to the stormwater infrastructure that the City operates and maintains, basin delineation (major basins), sub basins, easements, right-of-way, and flood zone maps. This GIS information was provided on October 27, 2016. The stormwater infrastructure consisted of the following datasets and based on the information found in the dataset the following descriptions apply:

- Minor Water Bodies – Includes surface-retention, swale, sub surface-rock trench, private lake, underground, WWTP retention area, lake, and ditch
- Gravity Mains – Includes size, type, invert and slope of pipes
- Inlets – Includes catchbasin, curb inlet, rear yard drain, open throat, roof, and recessed grate
- Junctions – No clear information is provided on this defined attribute
- Manholes – Includes material types, invert elevation, pipe invert elevation, and rim elevation
- Outfalls – Includes discharge types of standard outlet and outfall along with diameter and type
- Weirs – Includes weir type, weir shape, and orfice
- Raw Stormwater Data - This dataset appears to be a temporary location for data until it has been verified
  - Storm Clean Outs – Includes size and type
  - Storm Culverts – Includes diameter, material, and invert elevations

- Storm Discharge Points – Includes discharge type of standard outlet and outfall along with diameter
- Storm Network Structures – pump station identification
- Storm Open Drains – on the GIS map, this appears to be swales and the dataset includes length of swale with the ability of documenting side slopes, depths, and widths
- Storm System Valves – includes the type of valve and size
- Storm Virtual Drain lines – appears to consist of driveway culverts and low areas where drainage could collect and includes length
- Stormwater Pressure Mains – includes diameter, material, and length
- Stormwater Network Junctions - No clear information is provided on this defined attribute
- Stormwater Gravity Main – includes diameter, shape, type of material, invert, slope, and length
- Stormwater Repairs – includes size and water type
- Trench Drains – includes invert, size, type, and length

3.4.2 Observations

These datasets have been converted into excel spreadsheets by AECOM to further investigate the data collected and documented in the GIS system and are found in **Appendix F**. The City has been continually updating its data by documenting infrastructure as it has been installed and referring to as-built information within the dataset. However, there are several gaps in the information and other areas where data is incomplete. There are also some duplication between the main attributes and the category "Raw Stormwater Data". In addition, the data needed for each attribute needs to be evaluated to determine the best information needed for the attribute.

The City currently does not provide information concerning its stormwater infrastructure on its website. Other municipalities provide some stormwater infrastructure information on their websites. Each municipality is different. Some have their watersheds and basins defined along with discharge points, some have groundwater elevation information along with water quality sampling information that can be downloaded from their website, and some provide major pipe conveyance locations. Information that is publicly available can help in providing a consistent message to the public about concerning the data that the City prefers the public to use in developing their public or private systems. The City should determine which data the public should know and determine how and if it should be restricted to certain situations.

Although the City has documented the main drainage basins as described in this study, there are also sub basins within the GIS system. These sub basin delineations should define smaller areas that correspond to a network which eventually discharges into a main outfall to a receiving water body. However, these sub basin boundaries do not appear to follow the area defined by the stormwater collection system. The importance in defining these sub basins is to give the City information to evaluate whether the discharge piping has the capacity to handle discharges from the area contributing to the outfall and allows the City to determine if there are water quality deficiencies in a particular area. As part of the City's National Pollutant Discharge Elimination System (NPDES) Permit, the City could also use the sub basins to determine the locations of illicit discharges when they occur.

The City has purchased global positioning system (GPS) equipment to document some of the missing information about its stormwater infrastructure. This equipment will be useful to staff when troubleshooting a stormwater issue, however, it will take staff a lot of time to document and fill in the gaps in the GIS system.

3.4.3 Recommendations

It is recommended that the stormwater infrastructure information be reconciled into an understandable data set. For example, swales appear to be identified as "open drains" perhaps they can be identified as swales. Also, "minor water bodies" can be identified as the identified water body to better document the assets instead of having to review the entire data set to find the information. In addition, the attribute information should be reviewed to insure that they proper data is being collected for each attribute. After

reconciling the items and determining the information that is needed for each attribute, then the City should continue its efforts of including as-built information of both private and public infrastructure projects as well as public repairs and capital improvement plan (CIP) projects. As part of the reconciliation of the data, the City should keep in mind information that helps them to develop an asset management system. The first step in any asset management system is to document the physical assets and to document the assets age.

Another recommendation is to contract with a surveyor with global positioning system (GPS) equipment to obtain information on existing infrastructure that is missing from the database. This would free up staff time to work on the operation and maintenance of the system instead of documenting the system. The use of GPS equipment is cheaper than conventional surveying equipment and takes less time than surveying.

By updating the GIS system, the City will save money in the long-term by 1) Reducing the time it takes staff to determine where problems occur in the drainage system; 2) Better documenting the stormwater infrastructure to determine the cost to maintain the system; 3) Assisting the City in determining replacement or repair costs for its aging system to improve projections of operation and maintenance costs and future capital costs. In addition, the documentation of the assets can help develop other asset management tools such as life cycle costs which will aid in determining the renewing, replacing and disposing of the infrastructure assets which will aid in better capital improvement and operation and maintenance planning.

TAB 4

Water Quantity

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4. Water Quantity

Water quantity is identified as the amount of stormwater runoff produced by a rainfall event. Water quantity impacts the community significantly when the capacity of the existing stormwater infrastructure is exceeded causing public flooding. Water quantity issues are often studied with the aid of hydraulic and hydrologic modeling, a thorough review of area topography, and complaint information. For this stormwater master plan update, studies that have been performed after 2007, along with a review of the FEMA maps, topographic information, and a mapping of the complaints will be utilized for the assessments of the basins. This section will, also, include a presentation of existing FEMA flood zones, types of flooding applicable to the City, and assessments of each basin including recommendations for potential Capital Improvements Projects.

4.1 General Information

To the public, when water quantity is not managed, flooding occurs. Flooding occurs when the stormwater management system does not have enough capacity to convey the stormwater quickly enough nor store the stormwater in stormwater designated areas (ponds, lakes, or swales) for certain storm events. Not all flooding can be prevented. Municipalities have design their stormwater management facilities to handle the more frequent storm events. Not every storm event is designed for. To help the public understand whether an area is impacted by larger storm events, they can examine floodplain maps. Floodplain maps show whether flooding occurs at storm events above the 100 year event. These maps do not show events that occur more frequently. Typically, structures such as buildings are designed to withstand a 100 year event. This section provides information on the Federal Emergency Management Agency (FEMA) floodplain mapping along with the types of flooding the City could be experiencing.

4.1.1 FEMA Floodplain Mapping

The latest Federal Insurance Relief Maps (FIRM) by FEMA that covers the City are listed below:

- 12021C0379H - May 16, 2012
- 12021C0383H - May 16, 2012
- 12021C0384H - May 16, 2012
- 12021C0387H - May 16, 2012
- 12021C0391H - May 16, 2012
- 12021C0392H - May 16, 2012
- 12021C0393H - May 16, 2012
- 12021C0394H - May 16, 2012
- 12021C0581H - May 16, 2012
- 12021C0583H - May 16, 2012

Panels covering the City were revised in the conjunction with the latest Flood Insurance Study for Collier County, published on May 16, 2012. As shown on the above referenced FIRM panels the majority of the City is within flood zones indicating a flooding risk of varying severities. **Figure 4-1** shows that the majority of the City lies within Zone AE with some of the north and northeast portions of the City being in Zone VE indicating a risk of shallow flooding. The eastern portion of the City along the Gulf Beaches primarily consists of coastal floodplain VE indicating a significant flooding risk due to the potential storm surge potential. The floodplain zoning is described in the following sections and **Appendix G** contains FEMA maps of all the basins. These descriptions are described in generalizations for an overall understanding of floodplain management, not for a specific analysis of any given area. It should be noted that the potential depth of “floodplain” flooding relative to an area, and/or the band of base flood elevations provided on the FIRM panel, that there comparisons are based on the following:

- Relative differences in natural ground elevations and flood elevations. Thus, if a building structure of a lot has been raised above historic grade, it is protected by as much fill as was imported to raise the structure above the floodplain.
- The assumptions are based on broad topographic interpretations, not site specific data.
- The floodplain elevations are based on FEMA approved modeling of a theoretical 100-year design storm event, not an actual event that occurred.

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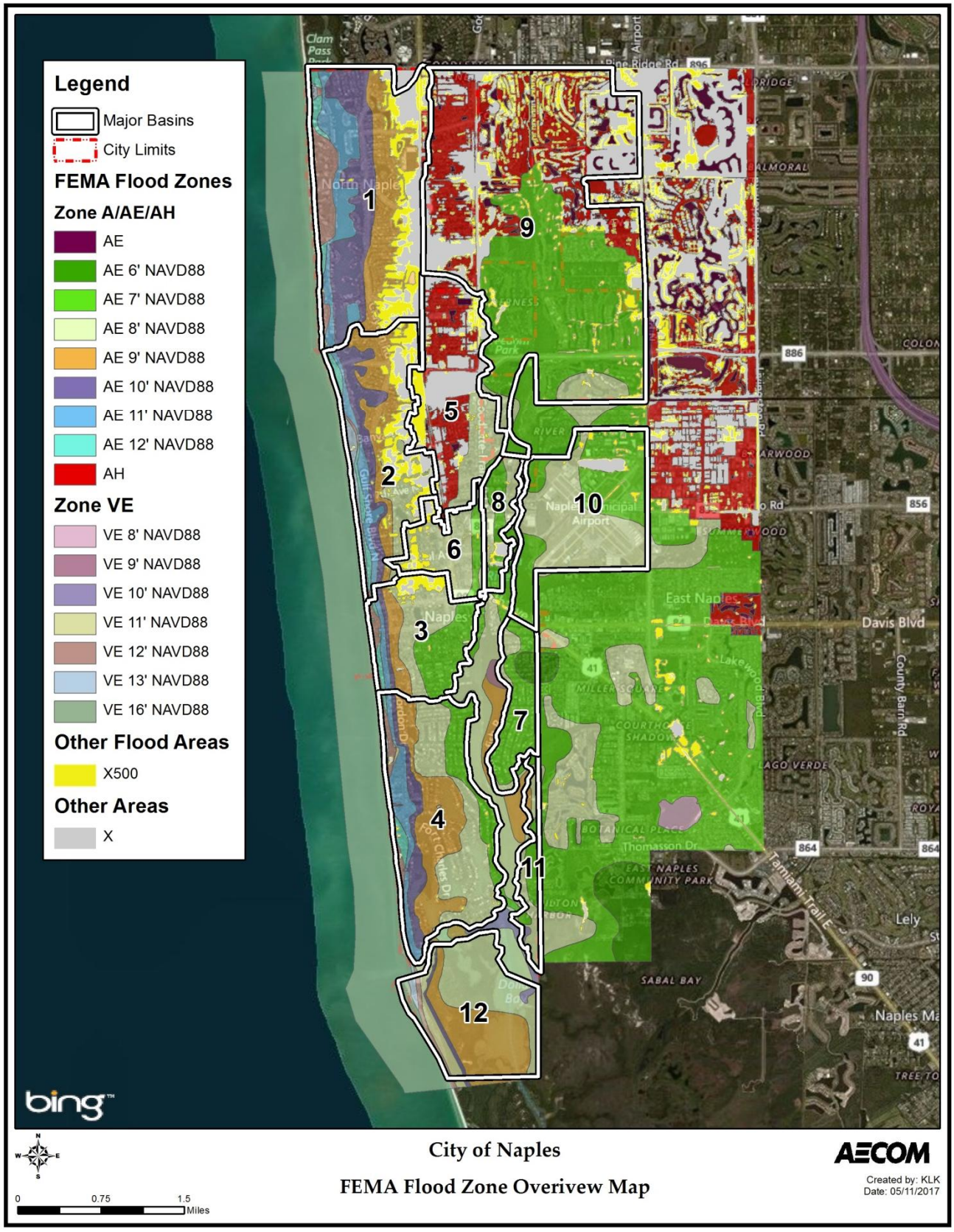
Figure 4-1 Overall FEMA Map



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4.1.1.1 Coastal Floodplains (VE)

A significant floodplain zone covering the western coast of the City is the coastal flood designation where a velocity hazard is expected (wave action). These zones are shown as "VE" zones. Specific anticipated flood elevations are provided based on a storm event with an expected return frequency of 100 years. Zone VE corresponds to the 1-percent-annual-chance coastal floodplains that have additional hazards associated with storm waves. This is the floodplain that is caused by the tropical storm surge that occurs from hurricanes or other large tropical storms.

FEMA recognizes that the coastal floodplain affecting the coast of Naples is anticipated to produce a surge elevation of sixteen (16) feet NAVD just off the coastline and thirteen (13) feet NAVD along the western edge of Naples on the coast. The primary fore dune that runs along the coastline of Naples is inadequate in height to protect the City from tropical storm surge since the dune only reaches elevations in the magnitude of five (5) feet NAVD. In some coastal communities on the east coast, the primary fore dune actually prevents the surge from penetrating deep into the upland territory of the community. In the case of Naples, the surge drives eastward affecting much property with velocity hazards. Since the elevation of the land is very low near the beach, the flooding depth (over natural ground) during the storm event is greater than eight (8) feet deep and as high as 11 feet on the beach.

The small dune does, however, cause the wave action to lose energy rapidly as it extends inward and the flood elevations decrease rapidly. There are a very thin band of flood zones with anticipated base flood elevations just east of the VE=16 Zone. This band provides a drop in base flood elevations from elevation 13 down to 11 (two feet drop) and is completely west of Gulf Shore Blvd with an exception in Basin 4 where it is west of Gordon Drive. Since most of the City in these areas are at elevations 3 to 9 feet NAVD with some elevations from 10 to 11 feet NAVD, one would expect that the depth of flooding (over natural ground) to continue to be as deep as 4 to 10 feet within this band.

To help better understand these relationships between the V Zone and the A Zone, **Figure 4-2** shows a transect schematic.

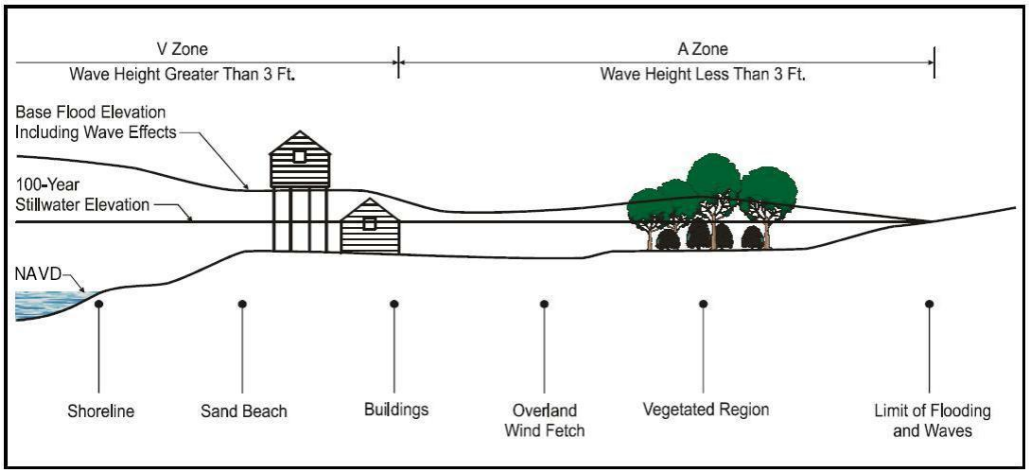

Figure 4-2 Transect Schematic

4.1.1.2 Riverine and Tributary Floodplains (Zone AE)

Adjacent to the VE zones are the "AE" zones which are those floodplains that are not specifically associated with the tidal surge and velocity hazards and can be found in palustrine, lacustrine and riparian floodplain areas throughout the State of Florida. Like the velocity hazards zones in Naples, all of the Floodplain Zone "A" areas have been studied in sufficient detail to have specific base flood elevations established and thus, have the specific designation "AE". When the AE designation was given, there is an elevation associated with the AE. For example, AE-7 would indicate flooding up to elevation 7 feet NAVD. The same is true for other flood designations. There are no areas in the City limits with an

unstudied designation of Zone "A" which indicates that a level of floodplain analysis in the City has been well studied.

The most problematic Zone AE areas are those bands associated with the VE zones to the west. Here the energy of the VE bands has dissipated to a point where wave activity is no longer predicted to be an issue, but the surge of water into the inlets, bays, and tributaries, still reaches elevations substantially higher than mean sea level. The first few base flood elevations begin as additional bands adjacent to the VE bands but directly to the east. These bands begin at elevation 12 feet NAVD and extend down to elevation 10 feet above sea level. East of these bands are the AE Zones where the floodplain establishes base flood elevations over broad areas and inflict much shallower flooding on the City. The lowest floodplain contour is the AE-7 which is found just east of, and adjacent to the airport. There is a pocket of AE-6 within Basin 7, which appears to be contained in a low area of the City.

It is interesting to note that the AE bands (AE-11 and AE-12) are found adjacent to the VE-12 and VE-13 bands and runs along the first block east of Gulf Shore Blvd (2nd Street South) and into the northern bays that drain out through Doctors Pass. Essentially all of Compass Cove, Bowline Bay, Mooring Bay, Outer Doctor Bay, Inner Doctor Bay, and Venetian Bay, all are subjected to AE10 and 11 Zones. As a result the band is much wider in this area (Basin 1) than south in Basins 2, 3, and 4. The depth of flooding in this most serious AE zone would be expected to be in the order of 4 to 9 feet deep.

The next three bands (AE-7, AE-8, and AE-9) are very wide and encompass much of the western City limits east of 2nd and 3rd Street South. This flood zone encumbers much of Basins 1, 2, 3, 4, and 6. These are the last of the deep flooding areas (based on natural ground). One would expect that the flooding depth above natural ground (unfilled grade) would be in the order of 1 foot to no more than 7 feet above sea level, with the majority of the depth being in the 2 to 5 foot depth range.

East of this last organized band of base flood elevations the flooding contours spread out into wide meandering areas that decrease from elevation 9 feet NAVD down to 7 feet NAVD. The bulk of Naples Bay contains the AE-8 and AE-9 base flood elevation. Basins 7, 8, and 9 contain primarily the AE-7 and AE-8 base flood elevations. The airport is the majority of Basin 10, and is almost entirely comprised of the AE-7, thus being subjected to the lowest base flood elevations in the City.

There are only two drainage basins in the City that fare better than the airport area in terms of their base flood elevations; Basins 5 and 9. These two basins only have portions in the AE-7 and AE-8 floodplain areas. A significant amount of each of these two basins contains areas outside of the predicted 100-year floodplain. By definition all of these areas are expected to flood deeper than 1 foot, however, it is unlikely that there are areas that can flood higher than 5 feet in any of these areas and the most likely flood depths would be around 2 to 3 feet above natural ground.

4.1.1.3 (Zone AH)

Zone AH is the flood insurance rate zone used for areas of 1-percent-annual-chance shallow flooding from rainfall with a constant water-surface elevation (usually areas of ponding) where average depths are less than 3 feet. Base Flood Elevations (BFEs) derived from detailed hydraulic analyses are shown at selected intervals within this zone. Basins 5 and 9 contain the most of this zone.

4.1.1.4 Other Flood Area and Non-flood Areas (Zone X)

Zone X is the best rating one can have on a FEMA FIRM Panel. There are two designations that apply to the City of Naples: Zone X500 and Zone X. Zone X500 are those areas that are subjected to floodplain flooding in less often occurring storm events at the 500 year return frequency or higher; or, the depth of flooding is so inconsequential during the 100 year storm event that the maps show the area as a 500 year floodplain. The maps describe these areas as follows: Areas of the 500 year flood, or areas of the 100 year flood where the average flood depths are thought to be less than an average of less than one (1) foot; or with drainage areas less than one (1) square mile (640 acres); or areas protected by levees from the 500 year flood.

In reviewing the mapping for Naples, it appears that the designation for these areas of the City was based primarily on the criteria that the 100 year flooding depth is predicted to be less than one foot of average depth. Thus, the residents in these areas are still subject to potential flooding in these areas. Homes that are in an area where the flood depth is 1-foot instead of 2-feet are not necessarily better off. Once flood waters enter the physical home structure destroying flooring and drywall, there is typically not a lot of difference in the damage claim whether the water depth over the carpet was 6 inches deep or 18 inches deep. This Zone X500 makes up nearly all of the remaining City limits and is primarily found in the northern reaches of the City in Basins 1, 5, and 9, but are also found in Basins 2, 3, 6, 8, and 10.

There is one last designation in the City, Zone X. This zone is allotted to those areas that are determined to be outside of the 500 year floodplain and are thus, non-floodplain areas for purposes of determining flood insurance needs. Theoretically, a storm event so severe that it only occurs once every 600 years could potentially flood these areas as well, but for purposes of requiring flood insurance, these areas are considered non-risk. Rarely do residents pay for insurance in these areas. However, flooding is not always causes by floodplain type flooding. Homes sometimes flood due to blockages in lines (maintenance related), capacity related or other factors that are not simulated by a 100-year flood analysis. Thus, homes are able to purchase flood insurance regardless of where they are situated relative to the FIRM panels if they wish to pay for flood protection.

There are some sections of land that are designated outside of the floodplains in the City of Naples. These sections are in Basin 1, 2, 5, and 9, in the northern most sections of the City. There is a relatively high ridge that runs along the historic Tamiami Trail (US 41). The ridge begins just north of where US 41 crosses the Gordon River and proceeds north beyond City limits. The ridge ranges from around elevation 10 to over elevation 18. The two high areas of the ridge that are within City limits are the areas where Park Shore Dr. intersects with US 41 and then up in the northeast City limits where Seagate Dr. intersects with US 41. Both of these Zone X areas are approximately 15 feet above sea level and the predicted floodplain bands in the surrounding area are no higher than elevation 10 (on the west side).

4.1.2 Types of Flooding

It is important to understand the different types of conditions that cause flooding why flooding problem characterization is important especially when trying to educate the public on the expectations of level of service and performance for a particular retrofit project alternative. In this section, a description of the technical categories of flooding is given.

4.1.2.1 Tailwater and Tidal Issues

Tailwater and tidal flooding problems occur when the receiving water bodies' water elevation is so high relative to the upstream drainage facilities, that there is essentially no energy (drivinghead) to convey the stormwater out through the culvert into the receiving water body. In some instances, the tailwater elevation exceeds the top of grate and inlet throat elevations of the upstream drainage collection facilities causing the downstream water body to flow backward into the streets and adjacent properties. Usually tailwater/tidal flooding is a temporary condition caused by a periodic rising of the water in the receiving body which is higher than the drainage system design anticipated or allowed for.

Tailwater flooding can occur any time that a stormwater management conveyance design improperly disregards the periodic high water fluctuations in the receiving water body or is based on faulty data. In coastal communities, such as Naples, this condition is most commonly associated with unusual high tide events in the Gulf of Mexico or Naples Bay, the Moorings Bay system, or any of the tidally influenced channels or canals. Mean sea level is assumed to be elevation 0. Typical tide variations are in the order of approximately 2 feet. On an annual basis, Naples Bay will reach a high tide elevation of approximately 3.2 feet. High tide events have been measured as high as 5 feet above sea level. Although such extreme peaks in high tide are very uncommon, there are numerous streets and drainage systems constructed in the City of Naples at elevations 12 to 18-inches below that record high tide elevation. As a result, very high tide events have been known to back water through the drainage system and flood streets and parking areas. Even when the high tide elevation is below that necessary to back up into the streets, just the presence of an above-average high tide in these systems has such a minor

difference in head that the conveyance cannot effectively occur until the high tide recedes. Thus, in these areas of the City, the actual performance and efficiency of the existing infrastructure may be directly tied to the timing of tidal events occurring simultaneously with rainfall events.

Another extreme variation of this type of flooding is tropical storm surge flooding. This is an unusual situation where the tropical cyclonic storm activity surges the Gulf of Mexico to an elevation dangerously above normal high tide fluctuations. It is not uncommon during Category 5 hurricanes for tidal surge elevation along the Gulf of Mexico to range up to 15 to 20 feet above sea level. Obviously, during such extreme tailwater conditions, no stormwater discharge out of the City is possible and in fact most of the City is under water. Lesser category hurricane events, however, can still whip up tropical storm surges in the range of 5 to 15 feet above sea level which is still far greater than the highest elevation events caused by gravitational forces. Tailwater problems associated with tropical storm surge are often unresolvable by typical capital improvement projects. Whereas, high tailwater problems associated with tide events can often be cured with one-way flap gates (also referred to as tidal flap gates), surge usually rises up and above all containment berms and structures rendering such devices useless.

4.1.2.2 Primary Conveyance Issues (Canals, Ditches and Major Culverts)

If tailwater conditions are properly considered during design, primary conveyance facilities (canals, ditches, and major culvert lines) should be able to flow stormwater runoff effectively away from property and right-of-way and discharge the excess water to the receiving water bodies. When primary conveyance facilities are not properly designed/constructed for the intended design storm event, the discharge capacity structures can be exceeded and cause flooding. Examples of such flooding would include man-made ditches and canals where the cross sectional area is not large enough to handle the intended design storm event, and culverts that are too small to handle the quantity of flow from the storm event.

Sometimes this inadequacy of the primary conveyance facility is a result of the design storm event selected for the facility. For instance, if a culvert was designed to handle a 5-year/1-hour return frequency storm event and the system receives a 25-year/24-hour storm event, the additional rainfall runoff will exceed the design capacity of the culvert and cause flooding upstream. Resolving this type of problem involves a capital expenditure since the corrective solution involves replacing the existing infrastructure with facilities that can handle additional capacity or improve the level of service provided by increasing the design storm event.

Another common cause of flooding in primary conveyance facilities is when a retrofit drainage projects occurs over time that forces additional drainage basin areas into the primary conveyance facility including lands that were never intended to drain into the existing facility. In many older facilities, the primary conveyance facilities were often sized by intuition and not to a certain level of service (LOS) performance expectation.

4.1.2.3 Secondary/Tertiary Conveyance Issues (Ditches, Swales, and Minor Culverts)

The problems associated with secondary and tertiary facilities are identical to those described in the previous section for primary conveyance facilities. The secondary and tertiary conveyance facilities are those cross culverts, smaller ditches, swales and other conveyance facilities that bring sub-basins and minor tributary areas to the main primary collection and convey infrastructure system. The main difference between the problems with secondary/tertiary systems and those of the primary conveyance facilities is that the primary conveyance deficiencies are much more problematic in that their inadequacy provides a backwater flooding condition into the secondary/tertiary conveyance facilities. In other words, the secondary and tertiary infrastructure system may be adequately sized to handle their intended subcomponent flows, however, they are discharging into a primary infrastructure system which is inadequate and the backwater conditions from the downstream primary system overwhelms secondary/tertiary systems. It is important to separate which system is actually causing the backwater flooding as enlarging the secondary system may not alleviate flooding caused by the primary facilities.

Examples of secondary/tertiary conveyance facilities that are inadequately sized include: roadway cross culvert, swale, or commercial parking drain that is sized too small for the intended design storm event. Often secondary and/or tertiary facilities extend onto private property which can further complicate the corrective actions necessary when the system is analyzed as a whole because of legal access and maintenance issues.

4.1.2.4 Renewal and Replacement (R&R) Deficiencies

Another category of flooding occurs when an existing facility deteriorates to a point where it can no longer supply the conveyance capacity that it was originally designed and constructed to provide. This type of flooding is often difficult to ascertain and categorize properly as it often disguises itself as a maintenance problem or a capital capacity deficiency. An R&R deficiency is a problem where the corrective measures involve the renewal or replacement of the existing facility to restore the original capacity of the system and level of service. An example of an R&R deficiency would be an outfall culvert which performed properly for 30-years but became so deteriorated by salt water that the facility collapsed due to the migration of soil into the corroded steel pipes. The renewal of this existing culvert by slip lining, for example, could restore the original capacity of the culvert without upgrading the level of service or future potential expansion of service effectively extending the life of the infrastructure. Replacing this culvert with a new culvert of the same size, capacity and design performance would do the same. Both of these corrective actions to the flooding problem described above would be considered renewal and/or replacement.

4.1.2.5 Inlet and Structure Inadequacies (Throat Capacity & Spacing)

Inlet and structure inadequacy is an interesting flooding problem associated with the intake structures within primary and secondary/tertiary conveyance facilities. Usually these flooding problems are found on the terminal locations of secondary and tertiary conveyance facilities. This type of flooding occurs when the inlets themselves are either spaced inadequately to collect the water efficiently or the throat capacity (or grate capacity) is inadequate to efficiently collect the surface runoff. The calculations necessary in design to properly size and space inlet structures along public roadways are different activities to that of conveyance line sizing. One is not considering the backup of the hydraulic grade line in this type of design activity. One is ensuring that the water can get into the pipe system quick enough. It is possible to have a pipe system which is effectively passing the flow once it enters the conveyance system, but the inlet structures above are simply too few and far between to fill the culverts to capacity.

As a result, many public entities require specific design guidelines in the analysis and sizing determination of inlets including their spacing. In many areas of Florida, the inlets are to be sized to collect stormwater during a 10-year return frequency storm event without causing a spread of water pooling at the inlet throat or specifying that the inlet spread does not exceed the height of the roadway crown elevation. If the conveyance facilities (culverts) are sized properly, flooding due to inlet and structure deficiency is a very temporary condition. It is most likely experienced during high intensity short duration storms as opposed to heavy rainfall storms. For instance, a system of inlets may adequately be able to collect the stormwater runoff from 8- inches of rainfall falling in 24-hours (essentially the 25-year/24-hour storm event) without causing any street flooding as long as the rainfall was distributed moderately throughout the day without any significant high intensity downpours. If, on the other hand, a high intensity downpour (such as 4-inches of rain in one hour) fell upon the same system of inlets, there is a high probability the inlet capacity would be exceeded and flooding would occur. Inlets are thus normally designed for storm events based on intensity duration curves instead of rainfall return frequency storm events.

Retrofit solutions to this type of flooding are usually relatively simple as they involve modifications at the edge of roadways at curb lines. Unfortunately, most modeling techniques used by consultants to analyze flooding do not incorporate techniques and modeling scenarios that are designed to identify this particular type of flooding. As a result, comprehensive regional drainage basin studies using hydraulic grade line performance simulations may fail to recognize and/or correct this particular flooding problem. The modeling techniques for inlet design are very site specific and involve site specific data where as comprehensive drainage studies are much broader.

The funding category of this problem type can be either capital, R&R, or operation and maintenance (O&M). If the existing system was simply sized improperly to handle the LOS of the conveyance system, then the replacement of these structures is a capacity upgrade or service upgrade. If the facility deteriorated to a point where it can no longer perform to its original design specifications, it is an R&R project. Maintenance can involve activities as simple as unclogging the debris from the inlet grates, removing sediment trapped inside of the catch basins, or replacing steel grate or manhole covers that have been destroyed by salt corrosion.

4.1.2.6 Operation and Maintenance Deficiencies

Operation and Maintenance (O&M) deficiencies are the easiest typically to diagnose and resolve in stormwater management plans. These are problems where maintenance to stormwater management facilities described above have not been performed adequately enough to maintain the desired level of service. The removal of sand, debris and other objects from culverts, inlets, and outfall structures are all examples of routine maintenance activities. Removing vegetation obstructing the flow in a channel is another example of a typical maintenance function. The maintenance activity should restore the intended level of service, not improve it. Improving the level of service through "maintenance activities" may need to be reevaluated as a capital expenditure if the capacity or level of service is increased in a regional system. Consider for an example, the "maintenance dredging" of a primary canal facility. If the dredging activity simply removes the sediment buildup along the bottom of the conveyance way, the activity could be considered maintenance. If however, the conveyance cross section of the canal-way was enlarged by deepening the facility or widening the facility, the maintenance activity should be considered a capital expenditure. We also note that most of the regulatory exemptions for "maintenance" have very specific language about restoring the primary conveyance facility to its "original design cross section". Increasing the conveyance capacity of such facility triggers significant regulatory considerations.

4.1.2.7 Groundwater Flooding

Groundwater flooding occurs whenever the surficial aquifer fills enough of the void spaces in the soil to encroach upon stormwater management facilities (and/or roadway bases) so that the effectiveness of the system is diminished. Often groundwater flooding problems occur during unusual high rainfall periods where the seasonal high water table exceeds the expectations of prior geotechnical investigations and design assumptions. In coastal communities such as Naples, however, groundwater intrusion may be exacerbated by tidal fluctuations. Historically, drainage systems to lower high groundwater conditions were implemented throughout the State of Florida making lowland areas developable by converting wetlands into uplands. With today's more stringent regulations regarding wetland protection and the state being more sensitive to protecting our groundwater resources, such over-drainage practices and retrofit activities are typically not available. On a limited basis, infiltration systems (such as underdrain) can be permitted. Underdrain controls pesky high groundwater fluctuations that adversely impact roadway bases and swales. Modem development regulations and proper geotechnical practices however, should guard today's development activities from additional groundwater flooding problems.

4.2 Basin Assessments

During the 2007 Stormwater Master Plan update, three (3) out of the twelve (12) basins were evaluated, Basins 3, 5, and 6. According to the 2007 Plan, these basins were the only basins that had detailed modeling results of drainage basin studies that were performed up to 2007. Since the 2007 Stormwater Master Plan evaluated prior studies and documents before 2007, the stormwater master plan update concentrates on documents after 2007. The assumption is that the capital improvement projects that were developed for the 2007 master plan were developed to address any LOS deficiencies. A summary of the projects, which have been implemented since 2007, is addressed in the Capital Improvement section of this report.

For this master plan, basin assessments are conducted by reviewing basin studies that occurred after 2007, FEMA maps of each basin, topographic information of each basin, complaint data compiled by the City from 2015 to 2016, and repetitive loss information provided by FEMA. Repetitive loss structures are

building structures that have been subjected to insurance claims to flooding at least twice in ten (10) years with claims in excess of $1,000. Although this information can be useful in mapping flooding concerns, this information does not state whether a claim was due to flooding or wind. In addition, the repetitive losses are listed in a table within each basin assessment. This table provides the location of the claims and whether the claim was paid or not. There was no information as to why a claim was paid or not, but the information can be used to supplement the complaint information and topographic data to assess the areas.

Each basin assessment contains information on the basin, FEMA maps (Appendix G) and a complaint map along with repetitive loss information. The complaints are provided in a table for each basin and also are located on a map. The complaints are labeled as drainage, standing water, swale, and dropped vg. The following describes the meaning of each of these designations:

- Drainage – Complaints related to stormwater runoff causing flooding or other drainage related problems.
- Standing Water - Complaints related to stormwater runoff taking several days to drain.
- Swale – Complaints related to roadside grassed drainage swale or swaled driveway. Complaints can be standing water related, grass maintenance related, driveway use (cars bottom out).
- Dropped VG – Roadside Valley Gutter has settled, broken/cracked or is depressed and in need of repair. Typically causes water to pond at edge of road. Typically as a result of underground utility issue (including water/irrigation leaks, stormwater or sanitary sewer pipe issues) or poor compaction.

Appendix H contains the complaint maps of each of the basins with the most recent 2007 LIDAR topographic information for each basin. By examining the location of the complaints on the topographic map and also confirming situations on Google Maps, the complaint was assessed with possible causes.

4.2.1 Basin 1 Assessment

Basin 1 consists of approximately 1,514 acres of land and is the northern most stormwater basin in the City of Naples. Rectangular in shape, it is approximately 6,000 feet long by 13,500 feet wide. The basin has not been subject of any previous hydraulic or hydrologic modeling studies and was not assessed in previous master planning efforts. The only study that has been conducted in this basin is the “City of Naples Outfall System Coastal Impact Assessment & Management” report by Humiston & Moore Engineers (**Appendix A**). The purpose of this report was to address stormwater outfalls to the Gulf of Mexico and concentrated on beach nourishment.

The conveyance elements in the basin consist of a system of swales, inlets, pipes, outfalls, detention ponds and bays. The basin, which is bordered on the west by the Gulf of Mexico, features several interconnected bays including Venetian Bay, Inner Doctors Bay and Moorings Bay that lie between Gulf Shore Boulevard North on the west and Crayton Road on the east. The bays open to the Gulf of Mexico at Doctors Pass at the southernmost tip of the basin. The stormwater in the basin is routed directly to these bays through a number of small diameter pipes or it is routed to one of several wet weather detention ponds then directed to the bays with the use of weirs and larger 42” to 60” diameter pipes. Several outfalls in the northern portion of the basin discharge to Outer Calm Bay directly north of the City limits.

A review of the Basin 1 FEMA Map, **Figure 4-3**, indicates that the majority of the area along the Gulf of Mexico in the linear stretch surrounding Gulf Shore Boulevard North lies within the VE flood zone indicating a significant flood risk due to storm surge. The majority of this area is associated with flood zone VE 12’ indicating a potential storm surge elevation approximately 12 feet NAVD. This represents a significant flooding hazard in Basin 1 area east of interconnected system of bays due to ground surface elevations in the general range of 3 to 4 feet NAVD. Although, storm surge conditions are not a part of this assessment, the relatively low topography in this area is of particular concern and must be evaluated

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to ensure that the current drainage features are adequate. The basin features bands of flood zone AE that decrease in severity from AE 11 to AE 9 as you travel westerly across the basin. Small portions of flood zone AH along the western portion of the basin represent a chance of shallow flooding with large pockets of flood zone X, indicating a 1 foot depth of flooding during the 100 year storm, in portions of the basin located along the western edge.

The assessment of Basin 1 was primarily based on complaint information provided by the City. This information was evaluated with the aid of topographic information, FEMA flood zone maps, relevant drainage features as indicated on the City's GIS database, and visual assessments. Basin 1 complaints from 2015 to 2016 consisted of a total of 19 complaints including 14 drainage complaints, 3 standing water complaints, 3 dropped vertical grade complaints and 1 swale complaint. Some locations had more than one complaint. The complaint locations for Basin 1 are shown below on **Figure 4-4** and a list of the complaints along with their location and potential cause is located in **Table 4-1**. There were also twelve repetitive loss claims within the basin and our listed in **Table 4-2**. For the most part, the complaints corresponded with inlet locations, no swales, low roadway elevations, small gutter inlets, and small pipe sizes.

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Figure 4-3 Basin 1 FEMA Map

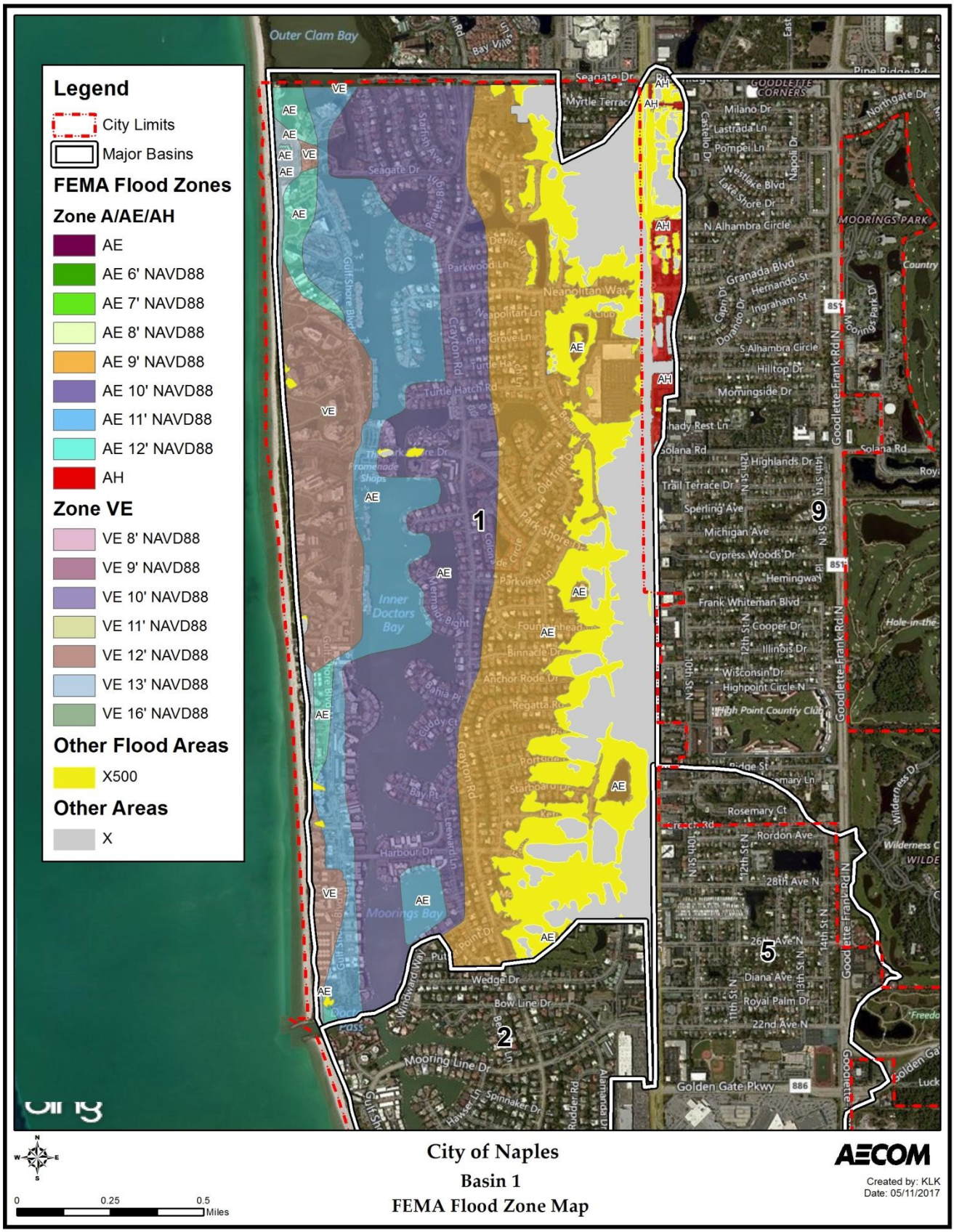

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Table 4-1 Basin 1 Complaint List

ID	Location	Type	Potential Cause
1	Gulf Shore Boulevard North, south of Harbor Drive	Drainage	Low area, small inlets - 2 on east plus low on west side
2	Gulf Shore Boulevard North near Harbor Drive	Drainage	Low Area; no swales, 0.2 miles to nearest inlet; small inlets
3	Gulf Shore Boulevard North, north of Harbor Drive	Drainage	Low area, no swales, small inlet in driveway; nearest inlet approximately 500 feet to the north and 250 feet to the South
4	Bay Point	Drainage, Standing Water	No inlet or piping, no swales and property drains toward street
5	Fountainhead Lane near Fountainhead Way	Drainage, Dropped VG	Low area, no swales, cannot locate inlet on street view
6	707 Fountainhead Lane	Drainage	No swales, only one small inlet. Some pipe sizes missing
7	690 Harbor Drive (near Rivera Drive)	Drainage	No swales, inlet on N side of road or elevated in yard
8	985 Wedge Drive (near Harbor Drive)	Drainage	No swales, valley gutter; missing pipe sizes
9	Park Shore Drive near Old Trail Drive	Drainage	No swales, low area
10	4150 Blair Lane	Standing Water	Road is low, no swales - valley gutters
11	4131 Blair Lane	Dropped VG	Road is low, no swales
12	Southern Pines Drive (on map not long, high pines drive is on the log but not in the City limits)	Drainage	No pipes or inlets in area, no swales
13	W Boulevard Court	Drainage	No Swales , no pipes/inlets in the area
14	Gulf Shore Drive North	Drainage	No inlets in immediate area; inlet to the south is small, inlet to the NE is elevated
15	4751 Gulf Shore Drive North	Drainage	No Swales - curbs with piped drainage
16	Neapolitan Way near Neapolitan Lane	Standing Water	No Swales, valley gutter; large circular driveways; no nearby inlets
17	Riviera Drive near Binnacle Drive	Swale	Very small valley gutter inlets
18	Binnacle Drive near Anchor Road Drive	Dropped VG	Very small valley gutter inlets
19	2571 Leeward Lane	Drainage	Extremely small inlets, pipe size unknown on N and 12" on south.

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Table 4-2 Basin 1 Repetitive Loss Claims

Basin	Address	Date of Loss	Claim Paid
1	5221 SAND DOLLAR LN	08/18/2016	YES
1	5221 SAND DOLLAR LN	08/05/2014	YES
1	86 SEAGATE DR - UNIT 10	06/14/2010	NO
1	788 PARK SHORE DR BLDG G	12/14/2012	NO
1	3636 CRAYTON RD	06/23/2013	NO
1	636 FOUNTAINHEAD LN	06/24/2013	YES
1	3450 GULF SHORE BLVD N # 310	08/06/2015	NO
1	3003 GULF SHORE BLVD N	08/04/2014	YES
1	2750 LEEWARD LN	06/20/2011	NO
1	2339 GULF SHORE BLVD N # 109	02/08/2008	NO
1	2300 GULF SHORE BLVD N	08/04/2014	YES
1	434 PUTTER POINT CT	04/07/2013	NO

After review with the City, capital improvements were developed for this basin. The projects consist of the following suggestions:

1. Gulfshore Blvd North south of Vedado Way to inlet (Complaint Areas 1,2 and 3)

   Project Description - A sub basin hydrologic and hydraulic analysis to determine if the existing roadway meets current LOS standards. The study would review pipe sizing, including the outfall just north of Harbor Drive.

2. East side of Gulfshore Blvd North – South of Seagate to North of Parkshore Drive (Complaint Areas 14-15)

   Project Description – In initial review of options for reclaiming swales and retention ponds to original volumes or expanding and improving ponds along with examining the potential for rain gardens. After the review, design, permit, and construct improvements.

3. Devil's Lake (Lake #1)

   Project Description - Public Education Program to educate on high level of copper due to excessive use of algacides/herbicides.

4. Seagate Drive Area

   Project Description - A subbasin hydrologic and hydraulic analysis to determine if the existing roadway meets current LOS Standards. In addition, a swale reclamation program for swales is suggested to reclaim swales that have been filled in and/or landscaped.

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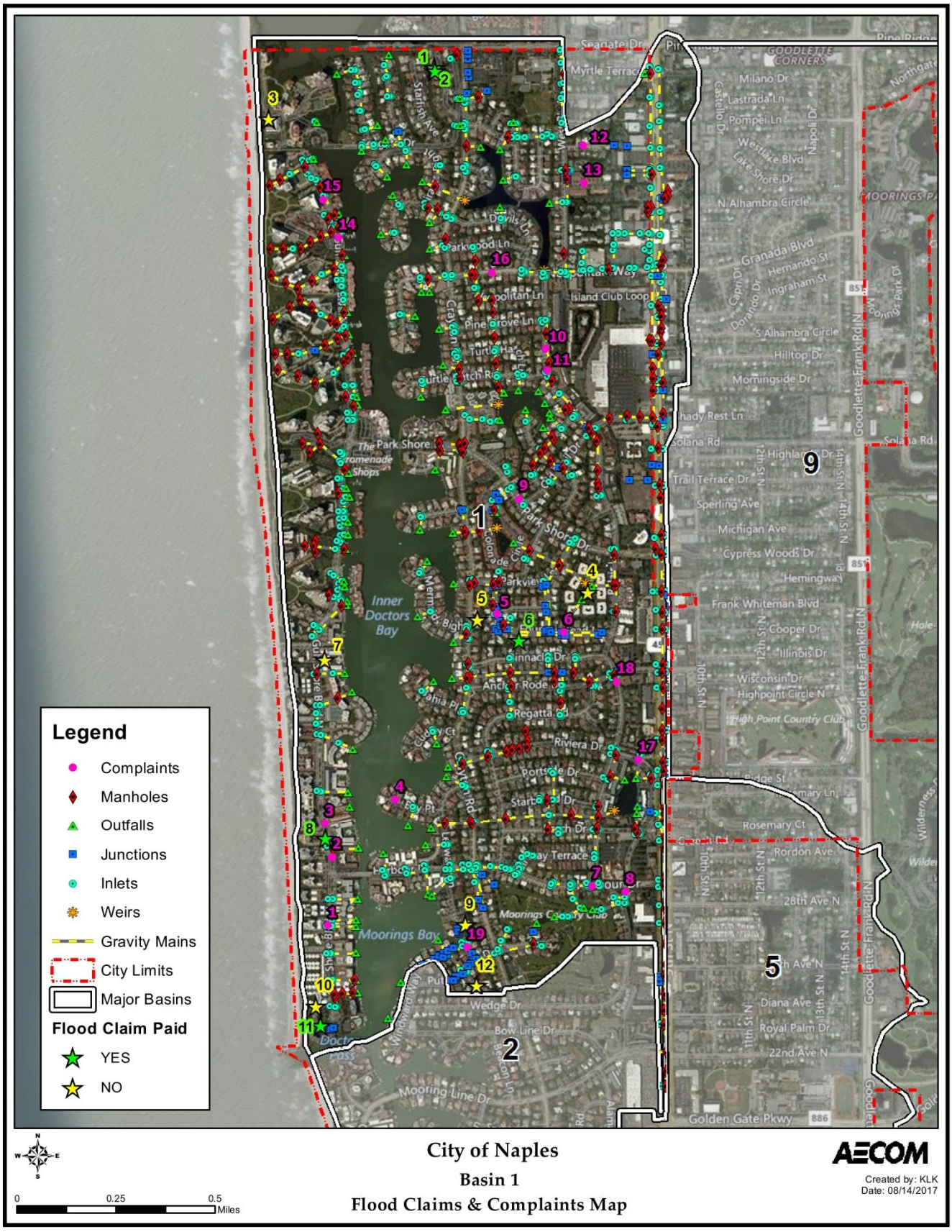
Figure 4-4 Basin 1 Complaint Map



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4.2.2 Basin 2 Assessment

Basin 2 consists of approximately 917 acres of land and is 12,000 feet long and at its widest point is 4,500 feet wide. Stormwater in the basin is primarily conveyed via swales, inlets and pipes to Moorings Bay or Hurricane Harbor in the Northern portion of the basin and to detention ponds then subsequently to the Gulf of Mexico via beach outlets in the southern portion of the basin. Moorings Bay and Hurricane Harbor in the northern portion of the basin opens to the Gulf of Mexico at Doctor's Pass.

The City has completed several studies primarily focusing on the stormwater beach outfalls in the basin. These studies include:

- Final Technical Memorandum on Beach Stormwater Outfalls Hydrologic and Hydraulic Modeling for Existing Conditions by AECOM in November 2012
- Final Technical Memorandum on Beach Stormwater Outfall Alternatives Preliminary Assessment by AECOM in April 2013
- Conceptual Stormwater Management Analysis, Naples Beach Outfalls by Gulfshore Engineering, Inc. in November 2009
- City of Naples Outfall System Coastal Impact Assessment & Management" report by Humiston & Moore Engineers in February 2010

There are 10 beach outfalls discharging to the Gulf of Mexico including one privately owned and operated outfall. In 2005, the Florida Department of Environmental Protection (FDEP), as a part of a Joint Coastal Permit for the Collier County Beach Nourishment project, required a management plan aimed at eliminating the beach stormwater outfalls. FDEP was primarily concerned with beach erosion, turtle nesting habitat, interference with lateral beach access, and water quality degradation.

A study titled "Conceptual Stormwater Management Analysis" (February 2010) (Gulfshore Engineering, Inc., 2009) evaluated the feasibility of eliminating the system of beach outfalls that provided most of the stormwater drainage for the basin. The analysis determined that outright removal would not be practical but the system of outfalls may be reduced in quantity. Further investigation into coastal impacts on beach erosion, water quality and turtle nesting habitat and lateral beach access by Huminston & Moore Engineers (February 2010) found no significant or documented impacts were found.

In 2012, AECOM performed a hydraulic and hydrologic modeling study on the beach outfalls within the southern portion of Basin 2, modeling the 9 public outfalls in the basin which covered a total surface area of 395 acres. At the time of the basin study, frequent flooding occurred in low lying areas close to the beach. This report is the only report that contain water quantity information that reflected the results of a 5-year, 1-hour storm event. Unfortunately, the storm event was evaluated for a 1.7 inch rainfall event and a 5-year, 1-hour storm event is 2.8 inches. Based on the 1.7 inches, there were exceedances on the minimum roadway elevation for Gulf Shore Blvd and Palm Circle W.

In addition, an assessment performed by AECOM the following year was aimed at evaluating the concerns of FDEP and look at potentially eliminating or reducing beach outfalls. At the present time, the beach outfalls are currently in place and no projects to remove or reduce them have been initiated.

A review of the Basin 2 FEMA Map, **Figure 4-5**, shows the majority of the area along the Gulf of Mexico in the linear stretch surrounding Gulf Shore Boulevard North along the western portion of the basin consists of bands of the VE flood zone ranging from VE 12 to VE 13, indicating a significant flood risk due to storm surge. Similar to Basin 1, the area in the VE flood zone along Gulf Shores Boulevard North features very low topography with many portions of the roadway only 3-4 feet above sea level. The western portions of the basin predominately consist of bands of the AE flood zone ranging in severity from AE 11 to AE 8. The basin also consists of smaller area of the AH and X flood zones that pose a lower risk of flooding with X being the best possible flood zone classification.

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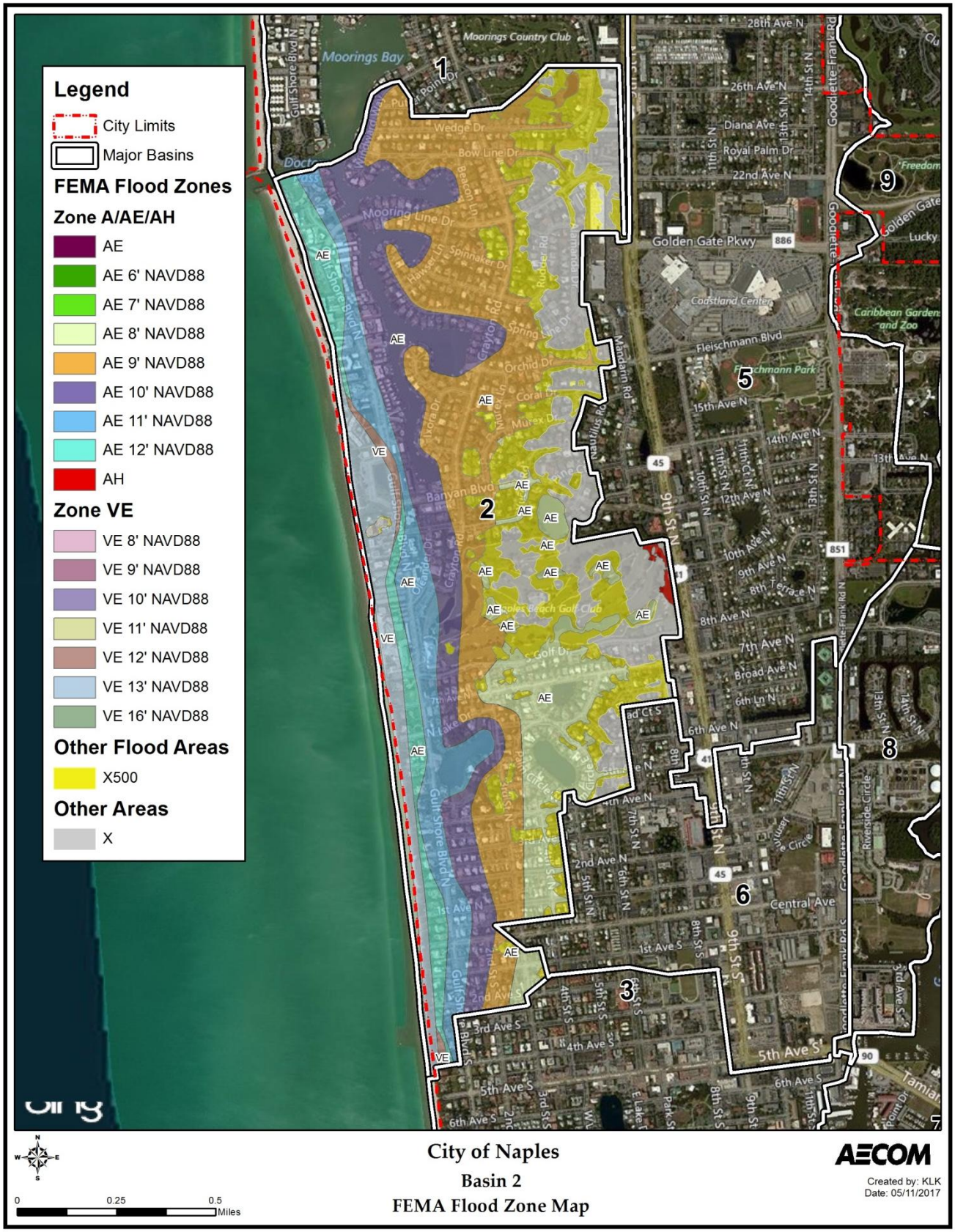
Figure 4-5 Basin 2 FEMA Map



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The assessment of Basin 2 was based on complaint information provided by the City, which was evaluated with the use of topographic information, FEMA floodplain classification, and a review of relevant drainage features as indicated on the City's GIS database. Basin 2 complaints from 2015 to 2016 consisted of a total of 15 complaints including 8 drainage complaints, 3 standing water complaints, 1 dropped vertical grade complaint, and 4 swale complaints. Some of the complaint locations had multiple comments. The complaint locations and the repetitive loss claims for Basin 2 are shown in **Figure 4-6** and **Table 4-3** lists the complaint location, the type, and the potential cause. There were also seven (7) repetitive loss claims within the basin and are listed in **Table 4-4**.

Table 4-3 Basin 2 Complaint List

ID	Location	Type	Potential Cause
1	292 1st Avenue S near 3rd Street S	Drainage, Standing Water	Swales in some yards, Small pipe sizes, small inlet
2	1st Avenue S near 2nd Street S	Drainage	Pipe size seems small
3	Central Avenue near Gulf Shores Boulevard	Drainage	Pipe size may small, low area, no swales so hard to access, 3 inlets at the intersection.
4	1st Avenue N near Gulf Shore Boulevard	Drainage	Pipe size may be too small, low area
5	2nd Avenue N near Gulf Shores Boulevard N	Standing Water	Pipe size may be too small, Low area
6	2nd Avenue N near 3rd Street N	Drainage	Small Inlets, small pipe size (12"), low area
7	Crayton Boulevard near Ixora Drive	Drainage	Low area, small inlets, small pipe size (12")
8	Banyan Boulevard	Dropped VG	Low area, small pipe size 12"
9	Bow Line Drive	Swale	Low area
10	Wedge Drive	Drainage	Low area
11	Wedge Drive	Swale	Low area, inlets seem adequately sized
12	Wedge Drive	Swale	Low area, inlets seem adequately sized
13	Wedge Drive	Swale	Missing pipe size,small inlets, pipe discharges directly to weir
14	3rd Avenue North near Gulf Shore Boulevard North	Standing Water	12-15 inch pipe size, slightly graded swales, small inlets
15	2225 Beacon Lane	Drainage	Pipe sizes missing or 12", no inlets in direct vicinity.

Table 4-4 Basin 2 Repetitive Loss Claims

Basin	Address	Date of Loss	Claim Paid
2	1930 GULF SHORE BLVD N #AE	08/04/2014	YES
2	680 BOUGAINVILLEA RD	06/17/2010	NO
2	441 2ND AVE N	08/04/2014	NO
2	376 1ST AVE N	05/19/2009	YES
2	78 2ND AVE S	10/29/2011	YES
2	78 2ND AVE S	11/18/2011	NO
2	78 2ND AVE S	09/29/2016	NO

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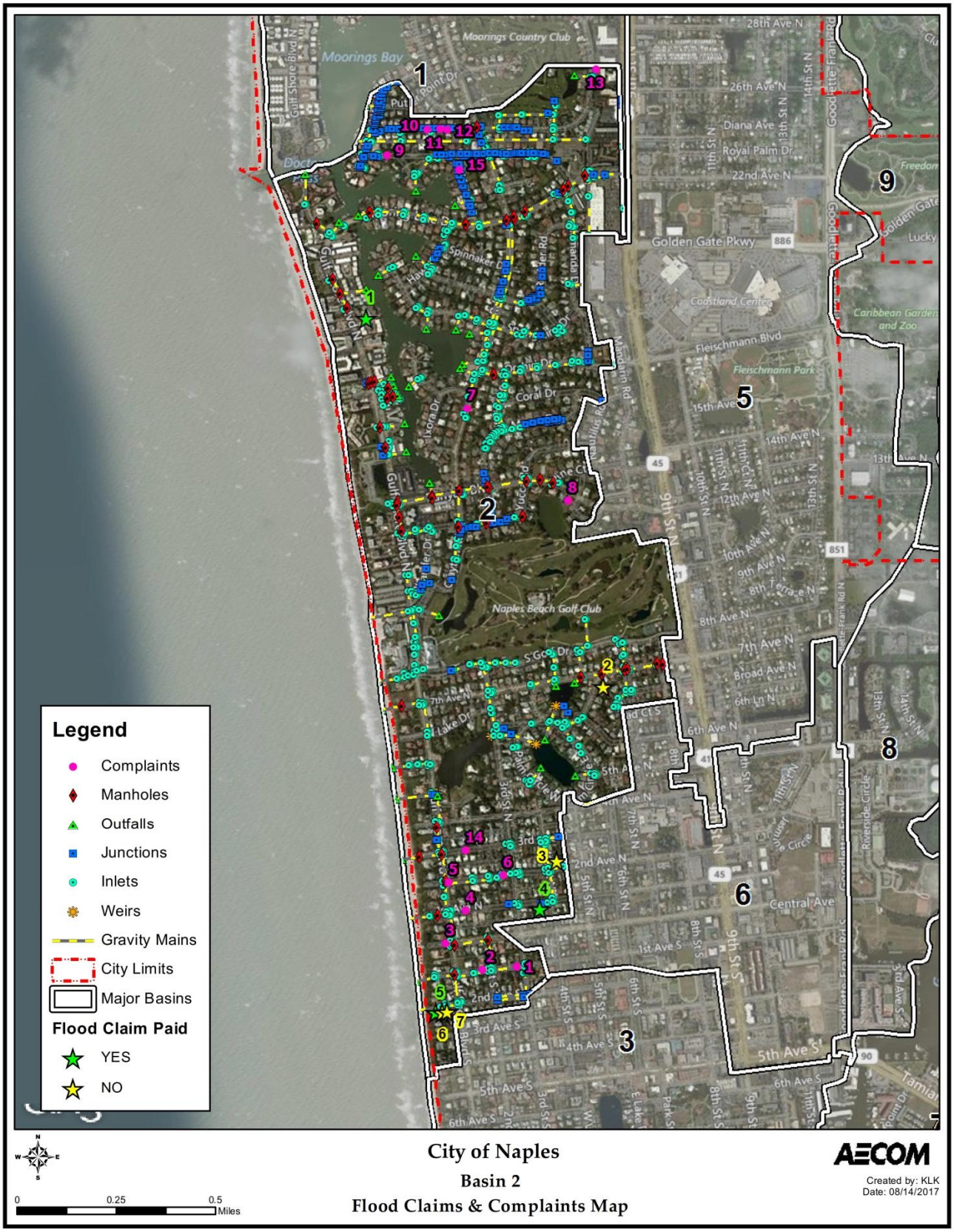
Figure 4-6 Basin 2 Complaint Map



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For the most part, the complaints corresponded with low areas, no swales, small pipe sizes, and missing pipe information. After review with the City, capital improvements were developed for this basin. The projects consist of the following suggestions:

1. Wedge Drive (Complaint Areas 9-12)

   Project Description - Recommend a LOS Analysis due to complaints of water in swales, and road elevation is low. There is a water table issue.

2. Gulfshore Blvd South – from 3rd St. and 4th Ave. North to 1st Ave. South

   Project Description - This area is to be reviewed as part of the Ocean Outfall Study scheduled to be completed in December 2017.

4.2.3 Basin 3 Assessment

Basin 3 consists of approximately 571 acres of land and is 6,200 feet long and at its widest point is 5,500 feet wide. Stormwater runoff in the basin is routed by swales, inlets, pipes, and detention lakes (East Lake and Spring Lake), and then subsequently routed to the Cove Stormwater Pumping Station on Broad Avenue South and 9th Street South for discharge into Naples Bay.

The City has completed several studies prior to 2007. Camp Dresser and McKee (CDM) was retained in 2001 to perform hydrologic and hydraulic modeling of Basin 3 and evaluated stormwater management system improvements. Several alternatives were developed by CDM concentrating on cost, water quality, and flood control benefits and permitting criteria. The report, “Interim Basin III Design Development Final Report” was finalized February 2001. Alternative 3 was chosen and consists of pumping and piping improvements in the basin that would maintain flood waters at a minimum of 2-inches below the road crown under the 2-year/24-hour design storm. This option did not identify any pumping capacity changes thus simplifying the permitting process. The estimated cost for this alternative was identified as 6.73 million in 2001.

The City commenced with basin improvements identified in Alternative 3. A subsequent study by CDM in 2007 titled “Feasibility Study for Basin III Stormwater Management System Improvements and Broad Avenue Linear Park” updated the previously developed hydraulic model for Basin 3 based on updated information and identified water quality treatment facilities in the southern portion of the basin.

Since the initial studies, the Cove Road Pump Station was completed in 2010 and currently, there is a project under design to address erosion concerns at the pump outfall. There have been no additional studies since 2007 for this basin.

A review of the Basin 3 FEMA Map, **Figure 4-7**, shows the majority of the area along the Gulf of Mexico in the linear stretch surrounding Gulf Shore Boulevard North along the western portion of the basin consists of bands of the VE flood zone ranging from VE 12 to VE 13, indicating a significant flood risk due to storm surge. Similar to Basin 1 and 2, the area in the VE flood zone along Gulf Shores Boulevard North features very low topography with many portions of the roadway only 3 to 4 feet NAVD. The rest of the basin from west to east consists of bands of the AE flood zone ranging in severity from AE 7 to AE 12. There is one small area in Zone X.

The assessment of Basin 3 was based on complaint information provided by the City, evaluated with the use of topographic information, FEMA flood plain classification and a review of relevant drainage features as indicated on the City’s GIS database. Basin 3 complaints from 2015 to 2016 consisted of a total of 27 complaints including 13 drainage complaints, 8 standing water complaints, 6 dropped vertical grade complaints and 1 swale complaint. The complaint locations and the repetitive loss claims for Basin 3 are shown in **Figure 4-8** and **Table 4-5** lists the complaint location, the type, and the potential cause. There were also seven (7) repetitive loss claims within the basin and are listed in **Table 4-6**.

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Figure 4-7 Basin 3 FEMA Map

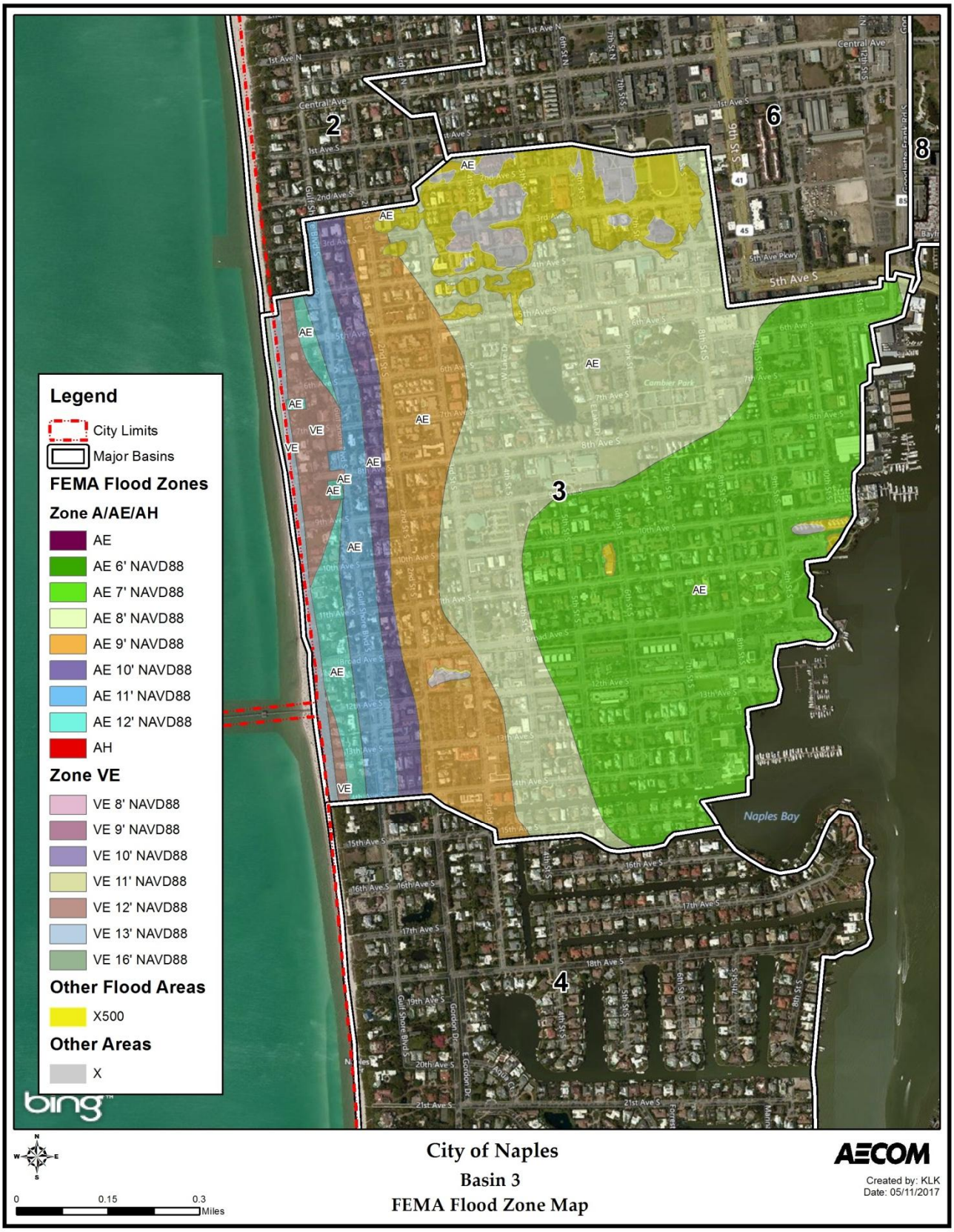

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Table 4-5 Basin 3 Complaint List

ID	Location	Type	Potential Cause
1	12nd Avenue South near Naples Pier	Drainage, Standing Water	No swales, or drainage pipe and inlets (small inlet not shown on GIS), no swales
2	Alleyway near 3rd Street South between 14th Avenue South and 15th Avenue S	Drainage	Low area
3	14th Street South near 4th Street South	Dropped VG	Pipe may be undersized (12"), small inlets
4	4th Street South near 13 Avenue S	Drainage	Pipe may be undersized (10") note: plenty of inlets near complaint area, inlet size small
5	4th Street South near 12 Avenue S	Dropped VG	Pipe may be undersized (8"), small inlet, no swale or conveyance
6	5th Street South near 12 Avenue S	Drainage	Pipe may be undersized (12"), small inlet sizes, no sizes
7	4th Street South near Broad Avenue South	Dropped VG	Pipe may be undersized (12"), no swales, small inlets sizes
8	3rd Street South near 11th Avenue South	Dropped VG	Inlet on road, quantity seems sufficient. Inlets on E side of intersection are elevated and not accessible. Pipe may be undersized
9	3rd Street South near 11th Avenue South	Drainage	Inlet on road, quantity seems sufficient. Inlets on E side of intersection are elevated and not accessible. Pipe may be undersized
10	5th Street South between 9th Avenue South and 10th Avenue South	Standing Water	Pipe size is 18", low area, very small inlets
11	6th Street South near 10th Avenue South	Drainage	Pipe size is 12", Inlets near complaint area, numerous small inlets
12	7th Street South near 10th Avenue South	Standing Water	Small pipe size (12"),very small inlet
13	7th Street South between 10th Avenue South and 11th Avenue South	Swale	12" pipe, may be undersized.
14	Intersection of 7th Avenue S and 3rd Street South	Dropped VG	No swales. Pipe may be undersized.
15	Intersection of 6th Avenue S and 3rd Street South	Dropped VG	No swales. Pipe may be undersized. (10-12"), some inlets on the smaller size
16	Intersection of W Lake Drive and 6th Avenue South	Drainage	Small pipe sizes. Swales seem adequate (12")
17	Intersection of W Lake Drive and 7th Avenue South	Drainage	No pipe sizes. Swales seem adequate (12"), small inlets
18	Intersection of W Lake Drive and 7th Avenue South	Drainage	Small pipe sizes. Swales seem adequate, small inlets
19	405 5th Street South (4th Street South near 5th Street South)	Drainage	Small pipe sizes (12")
20	4th Avenue South between 5th	Standing Water	Small pipe sizes (12")

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	and 6th Street South		
21	348 5th Street South (5th Street South between 3rd Avenue South and 4th Avenue South	Drainage	Small pipe sizes (very small inlet)
22	5th Street South at 3rd Avenue South	Standing Water	Small pipe sizes
23	6th Avenue South	Standing Water	Small inlets
24	5th Avenue South	Standing Water	Small inlets
25	7th Avenue South	Drainage	Pipe size 12"-24", outlets shown in incorrect areas. Missing pipe size. Inlets in alley may be private. Not shown on the GIS.
26	E. Lake Drive	Drainage	Low area, no pipe sizes indicated, small inlets
27	5th Ave S and West Lake Drive	Standing Water	12 inch pipe sizes, (some pipe sizes missing on GIS), extremely small inlets

Table 4-6 Basin 3 Repetitive Loss Claims

Basin	Address	Date of Loss	Claim Paid
3	385 2ND AVE S	08/19/2008	NO
3	385 2ND AVE S	08/23/2008	NO
3	175 5TH AVE S # 101	12/18/2009	NO
3	625 5TH AVE S	06/26/2010	NO
3	87 6TH AVE S	08/04/2014	NO
3	840 GULF SHORE BLVD S	08/05/2014	YES
3	758 764 12TH AVE S	08/17/2015	YES

For the most part, the complaints corresponded with low areas, no swales, small pipe sizes, and missing pipe information. After review with the City, capital improvements were developed for this basin. The projects consist of the following suggestions:

1. 12th – 14th Ave. South between 3rd – 5th St. South

   Project Description - LOS Analysis for pipe size issues

2. 8th Street from 3rd Ave. south to 4th Ave. North

   Project Description - CRA Streetscape project that includes stormwater is currently under design.

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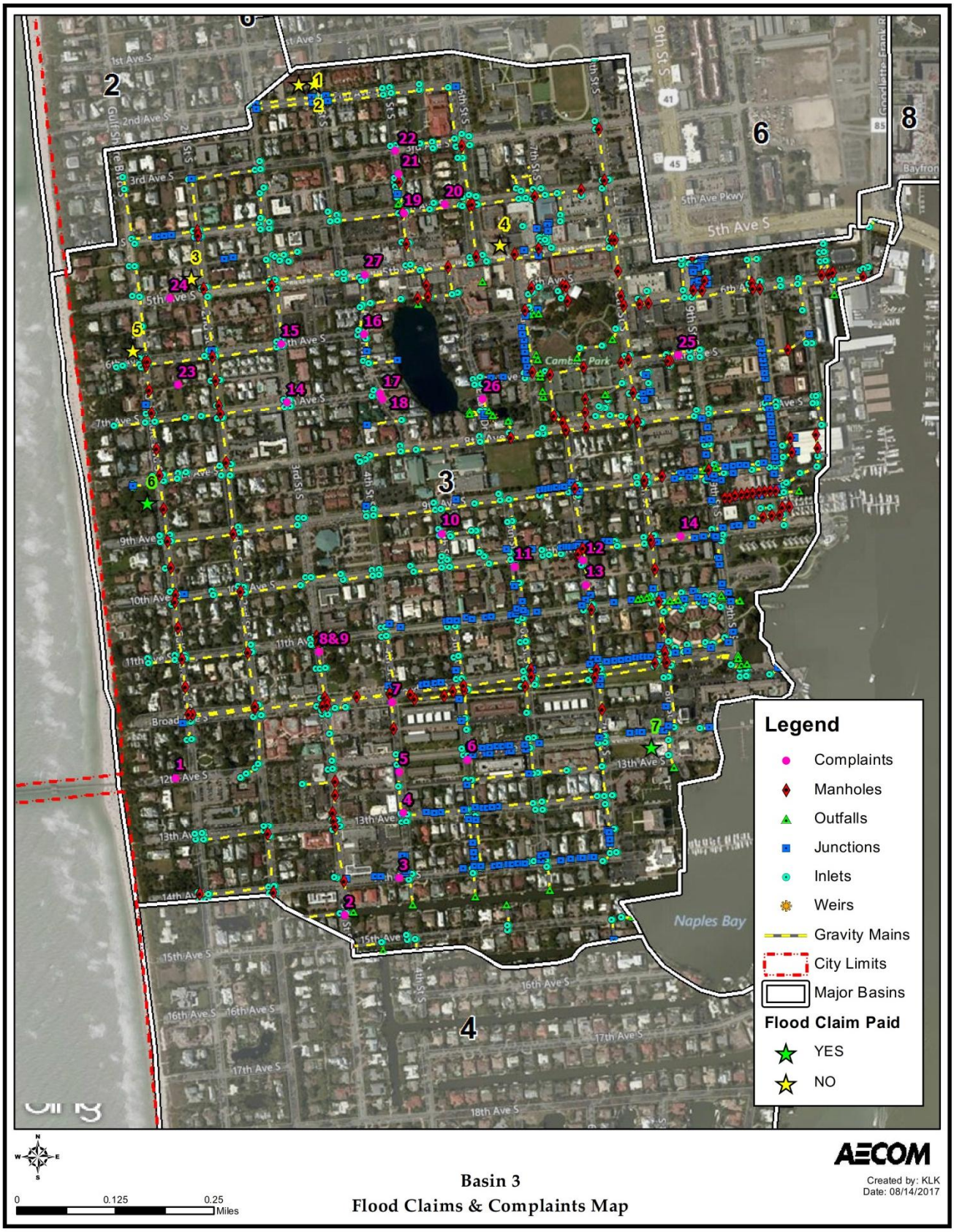
Figure 4-8 Basin 3 Complaint Map



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4.2.4 Basin 4 Assessment

Basin 4 consists of approximately 1,174 acres of land and is the southernmost basin being evaluated in this master planning effort. It is bordered by the Gulf of Mexico on the west and Naples Bay on the east. Rectangular in shape, it is approximately 5,000 feet long by 13,500 feet wide. The basin has not been subject of any previous hydraulic or hydrologic modeling studies and was not assessed in previous master planning efforts. Lantern Lakes Basin Drainage Investigation was prepared for the City of Napes by Hole, Montes and Associates, Inc. in September 2000. The investigation was a follow-up to a prior engineering report submitted to the City identifying possible solutions to flooding in the area, particularly in response to a 100-year flood event several years prior in which the area experienced significant flooding. Recommendations of the report include the construction of a new 24-inch storm sewer between Lantern Lake and Jamaica Channel and upgrading the capacity of the pumps in the existing pump station (Port Royal) that feeds the 30-inch gravity storm sewer for flow to Treasure Cove. The conveyance elements in the basin consist of a system of swales, inlets, pipes, outfalls, detention ponds, and one pump station.

A review of the Basin 4 FEMA Map, **Figure 4-9**, shows the majority of the area along the Gulf of Mexico in the linear stretch surrounding Gulf Shore Boulevard and Gordon Drive along the western portion of the basin consists of bands of the VE flood zone ranging from VE 11 to VE 13, indicating a significant flood risk due to storm surge. Similar to Basins 1, 2, and 3, the area in the VE flood zone along Gulf Shores Boulevard and Gordon Drive features very low topography with many portions of the roadway only 3 to 4 feet NAVD. The rest of the basin from west to east consists of bands of the AE flood zone ranging in severity from AE 12 to AE 7, respectively. There are a couple of areas that have been designated Zone X.

The assessment of Basin 4 was based on complaint information provided by the City, evaluated with the use of topographic information, FEMA flood plain classification and a review of relevant drainage features as indicated on the City's GIS database. Basin 4 complaints from 2015 to 2016 consisted of a total of 15 complaints including 11 drainage complaints and 4 standing water complaints. The complaint locations and the repetitive loss claims for Basin 4 are shown in **Figure 4-10** and **Table 4-7** lists the complaint location, the type, and the potential cause. There were also five (5) repetitive loss claims within the basin and are listed in **Table 4-8**.

For the most part, the complaints corresponded with low areas, no swales, small pipe sizes, and missing pipe information. After review with the City, capital improvements were developed for this basin. The projects consist of the following suggestions:

1. Project Description - Study the area and provide recommendations for artesian wells in the western area.

2. Project Description - Study how large private drainage systems on the beach side impact the City's system from both a quality and quantity standpoint.

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Figure 4-9 Basin 4 FEMA Map

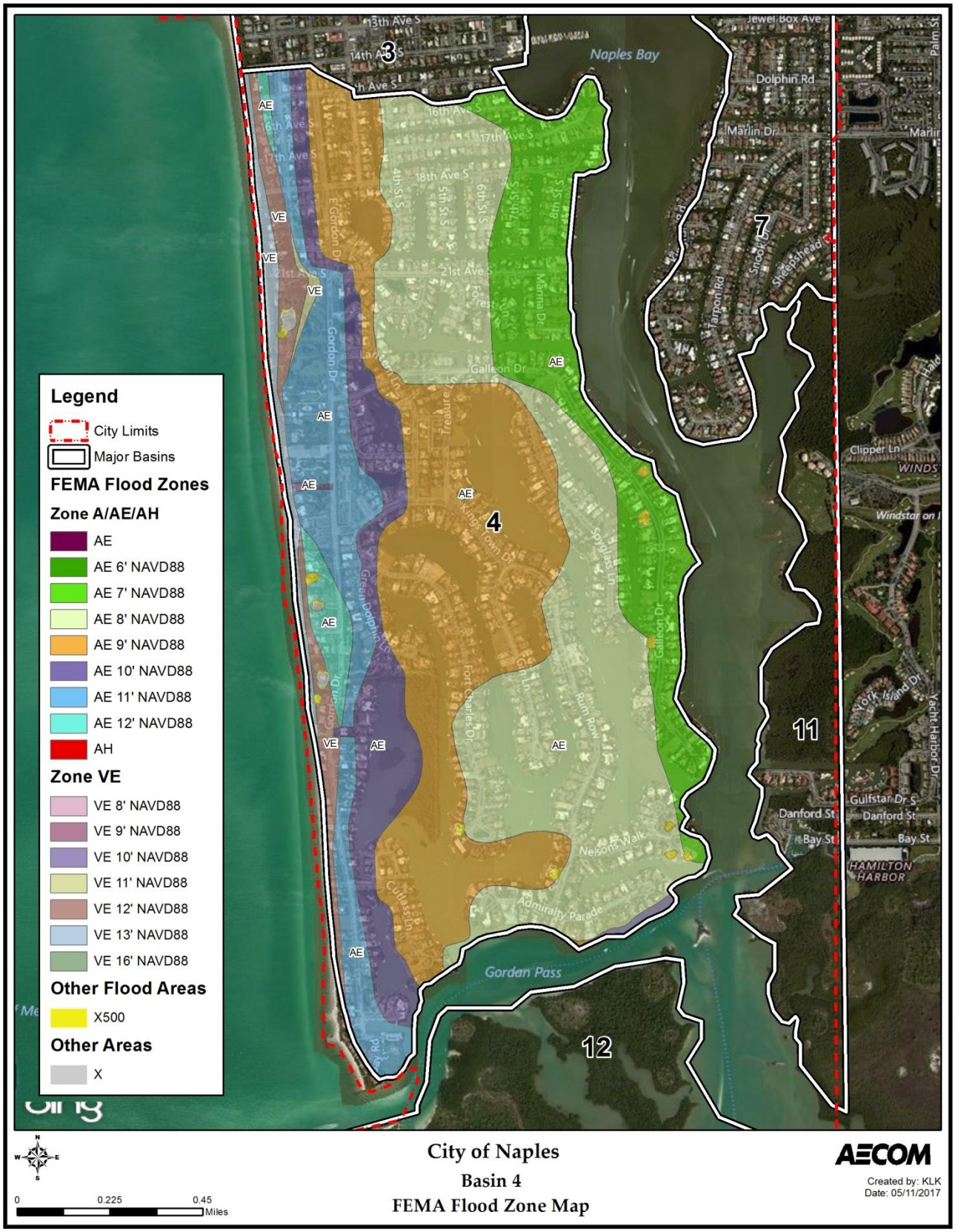

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Table 4-7 Basin 4 Complaint List

ID	Location	Type	Potential Cause
1	Nelson's Walk	Drainage	No swales to convey water to inlets (sufficiently sized)
2	Rum Row	Drainage	No swales, low area
3	Galleon Drive	Drainage	Very small inlets, area leading to inlet obstructed by landscaping.
4	Galleon Drive	Standing Water	Very small inlets, area leading to inlet obstructed by landscaping.
5	Gordon Drive	Drainage	Low Area, 4 inlets nearby with swales. Very small elevated inlets. Pipe size 12"
6	Half Moon Way	Standing Water	No Swales, small inlet that is elevated in yard.
7	Treasure Lane	Drainage	Pipe size no indicted on west side. Other pipe is 12", small inlets, no swales
8	Lantern Lane	Drainage	No swales, extremely small inlets, 12"-18" pipe size, low area
9	21st Avenue South	Standing Water	slightly graded swales, small inlets, 12inch pipes
10	21st Avenue South and Marina Drive	Drainage	Small Inlets to the north, small pipe size (12")
11	6th Street South	Drainage	Small inlets elevated in yard in cul-de-sac area, no swales
12	7th Street South	Drainage	No swales and no inlets on north end of street near this complaint area
13	17th Avenue South	Drainage	Low area, inlet sizing seems sufficient, pipe sizing between 12" and 15"
14	Gulf Shore Boulevard between 17th and 18th Ave. S	Drainage	Low area, inlet sizing seems sufficient, pipe sizing between 12" and 15"
15	Cutlass Lane	Standing Water	Inlets sufficiently sized, pipe size is 12"

Table 4-8 Basin 4 Repetitive Loss Claims

Basin	Address	Date of Loss	Claim Paid
4	1545 4TH ST S	05/11/2013	NO
4	631 16TH AVE S	08/31/2008	YES
4	980 SPYGLASS LN	08/19/2009	NO
4	3845 FORT CHARLES DR BLDG 2	09/15/2008	NO
4	4100 RUM ROW	10/19/2012	YES

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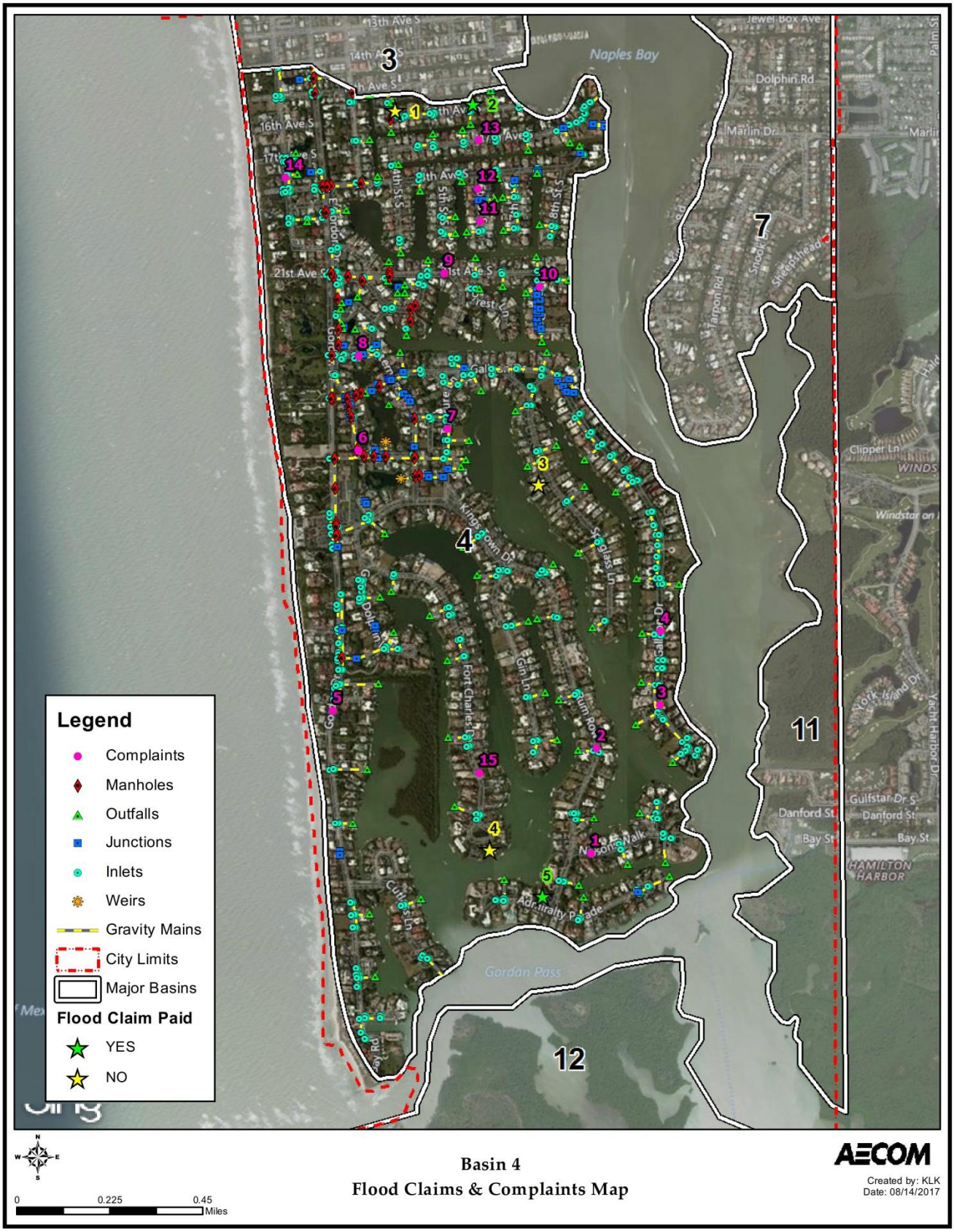
Figure 4-10 Basin 4 Complaint Map



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4.2.5 Basin 5 Assessment

Basin 5 consists of approximately 803 acres of land and is 13,000 feet long and at its widest point is 4,600 feet wide. The basin's stormwater runoff is routed via swales, inlets, pipes, and several detention lakes to a storm sewer pipe system along the west right-of-way of Goodlette Road. This system discharges to the Gordon River. There are also seven (7) lakes within this basin, Sun Lake, Thurner Lake, Lake 19, Mandarin Lake, Forrest Lake, Willow Lake, and Lake Manor.

The previous master plan took into consideration the Conclusions and Recommendations section of the "Basin V Stormwater System Improvement Plan Phase I: Basin Assessment and Conceptual Improvement Plan", November 2005. The chosen alternative, Alternative 3, consist of a refined retrofit LOS criteria that were consistent with what other Florida coastal communities developed to achieve the various LOS criteria for several design storm events, including Class C LOS (i.e., maximum 6-in overtopping the road crown) for the 25-year/72 hour design storm as well as up to 3 inches for the 10-year 72-hour storm, up to 9 inches for the 100-year 72-hour storm, and all storm event flood stages below know building elevations. (CDM, 2005) In the previous report CDM recommended a phased approach to the implementation of Alterative 3 as summarized below:

- Land and easement acquisition including required to construction and maintain the planned conveyance and detention facilities
- Modification of the existing detention facilities
- Water quality evaluation of the existing detention facilities to meet volume requirements
- Implementation of the conveyance improvements identified in Alternative 3

No further analysis has been completed after 2007. This report assumes that the improvements have been completed for this basin.

A review of the Basin 5 FEMA Map, **Figure 4-11**, shows the majority of the area consists of AH zone, which is used for areas of 1-percent-annual-chance shallow flooding from rainfall with a constant water-surface elevation (usually areas of ponding) where average depths are less than 3 feet. There are some areas that consist of AE 7 and AE 8 and several areas of Zone X. This area is relatively higher in elevation with topographic elevations ranging from 9 to 12 feet NAVD in Zone X.

The assessment of Basin 5 was based on complaint information provided by the City, evaluated with the use of topographic information, FEMA flood plain classification and a review of relevant drainage features as indicated on the City's GIS database. Basin 5 complaints from 2015 to 2016 consisted of a total of 6 complaints with all the complaints on drainage. The complaint locations and the repetitive loss claims for Basin 5 are shown in **Figure 4-12** and **Table 4-9** lists the complaint location, the type, and the potential cause. Also, there was one (1) repetitive loss claim within the basin and are listed in **Table 4-10**.

After review with the City, capital improvements were developed for this basin. The projects consist of the following suggestions:

1. Mandarin Road from Orchid Drive to Allamanda Drive

   Project Description - LOS Analysis (12 inch diameter pipe)

2. Lake #19 –Fleischman Lake (15th Avenue North Lake)

   Project Description – Dredge Lake, plant littorals, etc.

3. The City received complaints on three (3) northern lakes in this Basin. Two are City owned, Sun Lake and Thurner Lake. The two northern lakes have water quality issues which can be addressed in a Lake Management Plan update. The southernmost of the lakes is owned by Collier County. Public Education is recommended.

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Figure 4-11 Basin 5 FEMA Map

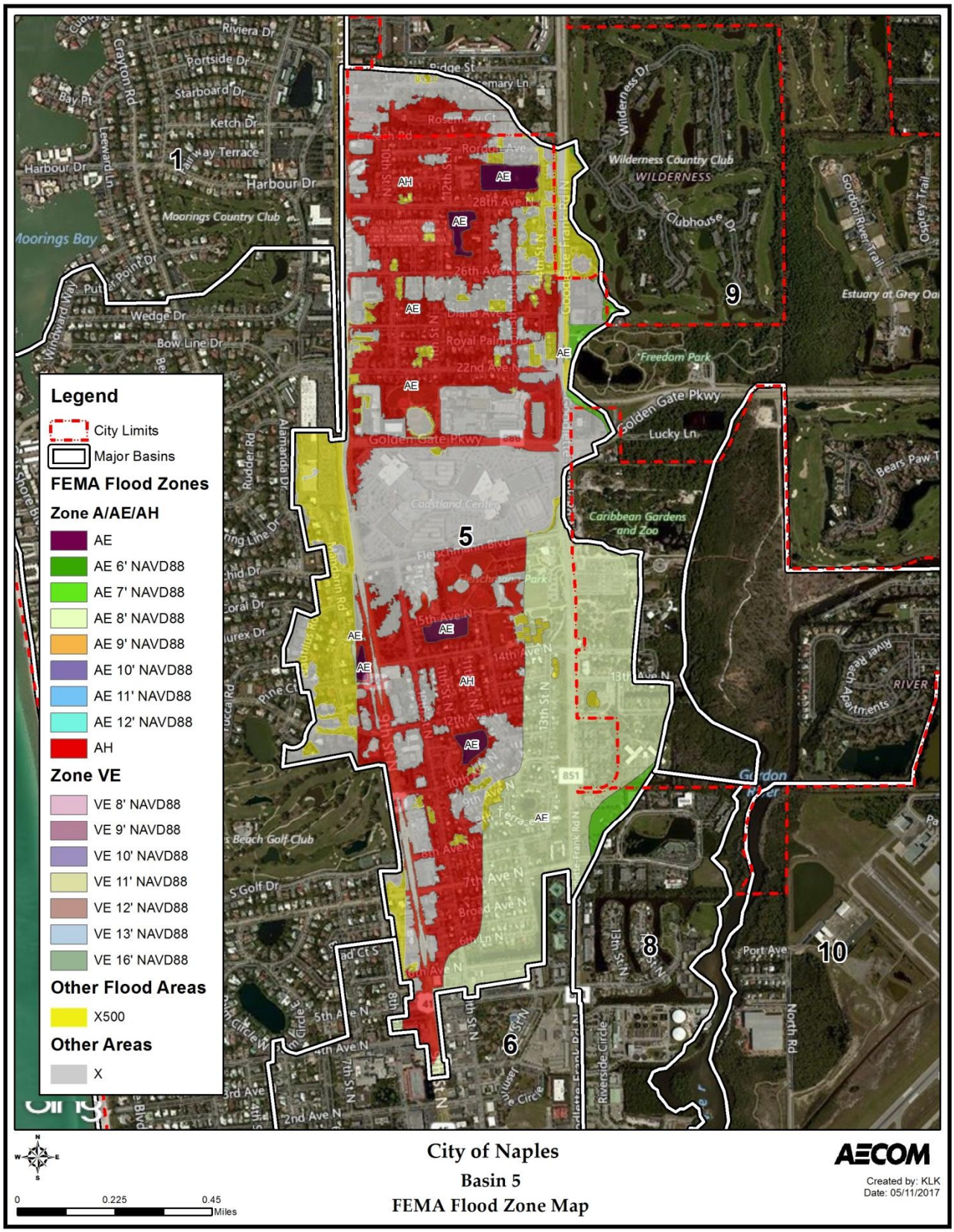

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Table 4-9 Basin 5 Complaint List

ID	Location	Type	Potential Cause
1	6th Lane North	Drainage	Small pipe size (12"), inlets in yard. Slightly graded swales, discharges to weir
2	8th Avenue North near 12th Street N	Drainage	Low elevation, inlet on south side of road is elevated
3	8th Terrace North	Drainage	Pipe sizes missing or 12", no inlets in direct vicinity.
4	14th Avenue North near 10th Street N	Drainage	Pipe size small (12"), no swales
5	15th Avenue North near 10th Street North	Drainage	Pipe size small (12"-18"), no swales
6	11th Street North	Drainage	12" pipe size. GIS information complete, GIS information incomplete. Missing pipe on 11th Street N.

Table 4-10 Basin 5 Repetitive Loss Claim

Basin	Address	Date of Loss	Claim Paid
5	761 11TH STREET N ST	01/18/2007	NO

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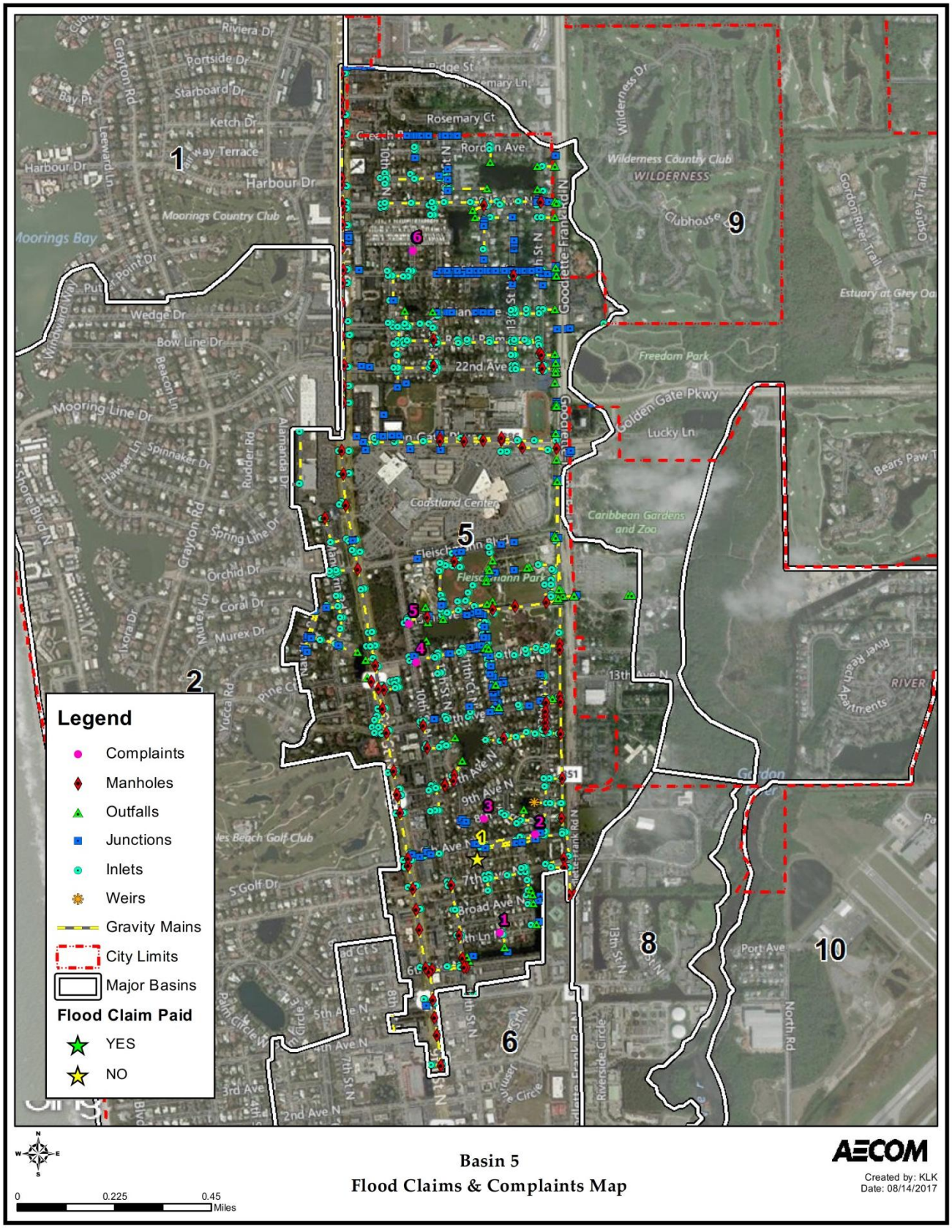
Figure 4-12 Basin 5 Complaint Map



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4.2.6 Basin 6 Assessment

Basin 6 consists of approximately 316 acres of land and is 5,500 feet long and at its widest point is 4,200 feet wide. The majority of stormwater runoff in the basin is conveyed via swales, inlets and pipes to the Goodlette Road (Public Works) stormwater pump station near the Police Station. A portion of the basin's stormwater runoff is routed via swales, inlets and pipes to a ditch and pipe system along the west right-of-way of Goodlette Road. This system discharges ultimately to the Gordon River. There is also one lake within the basin, NCH Lake.

There have been no new studies completed in this basin. There have been improvements made to Central Avenue and the Public Works pump station since the last study. The previous study contained an evaluation of this basin since there were two basin studies completed in this basin. These studies were the Basin VI Assessment Report – Draft by CDM in 1998 and Drainage Basin VI Stormwater Pump Station and System Improvements Model Methodology Technical Memorandum - Part 2 by CDM in 1998. No further analysis has been completed after 2007. This report assumes that the improvements have been completed for this basin.

A review of the Basin 6 FEMA Map, **Figure 4-13**, shows the majority of the area consists of AE 7 and AE 8 on the eastern part of the basin with X500 and Zone X on the western side of the basin. The western area has elevations from 8 feet to 12 feet NAVD. With the AE 7 and AE 8 on the eastern side, the topography ranges from 3 feet NAVD to 8 feet NAVD, which would result in a flooding depth of 1 to 5 feet.

The assessment of Basin 6 was based on complaint information provided by the City, evaluated with the use of topographic information, FEMA flood plain classification and a review of relevant drainage features as indicated on the City's GIS database. Basin 6 complaints from 2015 to 2016 consisted of a total of 3 complaints with all the complaints on drainage. The complaint locations and the repetitive loss claims for Basin 6 are shown in **Figure 4-12** and **Table 4-11** lists the complaint location, the type, and the potential cause. There were also four (4) repetitive loss claims within the basin and are listed in **Table 4-12**.

Table 4-11 Basin 6 Complaint List

ID	Location	Type	Potential Cause
1	Central Avenue and 10th Street South	Drainage	No swales, some pipe sizes not indicated, no inlets for approximately 350 feet in either direction
2	2nd avenue north and 10th Street North	Drainage	No swales, low area
3	1st Avenue South and 5th Street South	Drainage	Some swales, small inlets that are not placed in the swales

Table 4-12 Basin 6 Repetitive Loss Claims

Basin	Address	Date of Loss	Claim Paid
6	46 12TH ST	08/04/2014	YES
6	65 12TH ST S	08/04/2014	YES
6	1175 1ST AVE S	08/04/2014	YES
6	1175 1ST AVE S	08/04/2014	YES

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Figure 4-13 Basin 6 FEMA Map

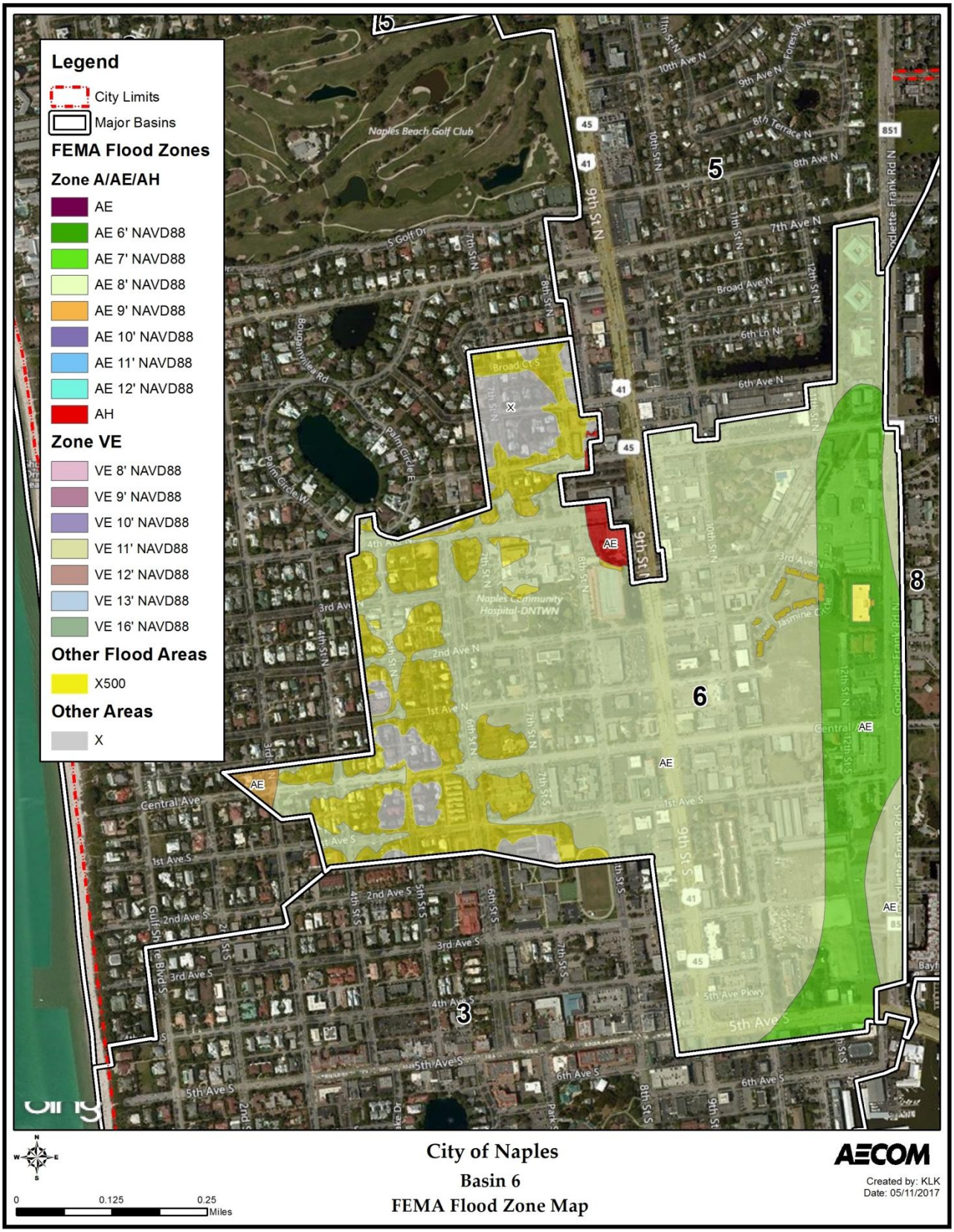

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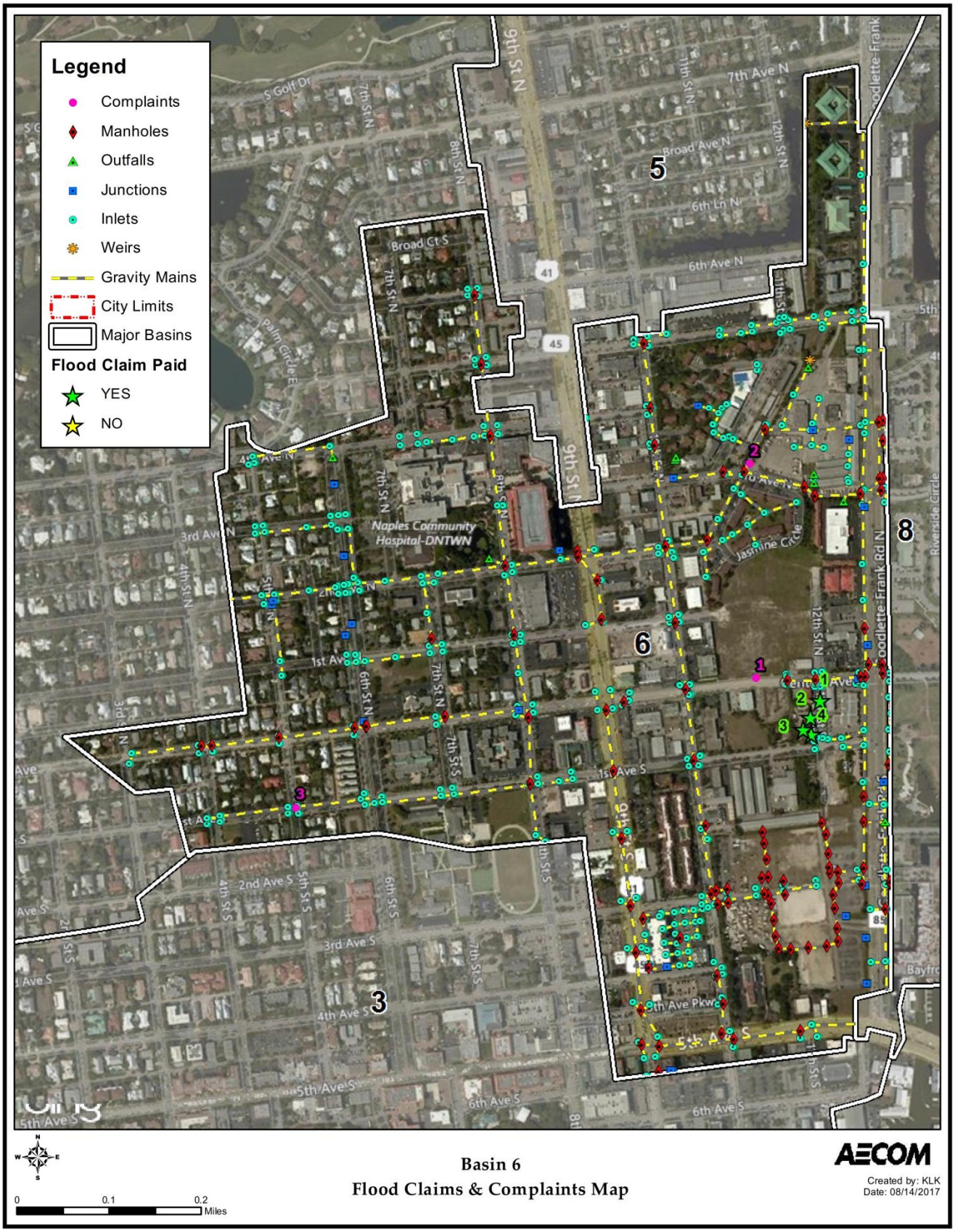
Figure 4-14 Basin 6 Complaint Map



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After review with the City, capital improvements were developed for this basin. The projects consist of the following suggestions:

1. 8th Street experiences flooding due to the intensity of development

   Project Description - CRA Project includes 8th St. south up to 4th Avenue North.

2. The Naples Community Hospital (NCH) Lake has the highest concentration of copper of any lake.

   Project Description - This is a Public Education issue.

4.2.7 Basin 7 Assessment

Basin 7 is approximately 8,500 feet long by 2,500 feet wide and consists of an area of approximately 297 acres. The basin features relatively low topography ranging from 0 feet NAVD to 6 feet NAVD. The conveyance system is characterized by swales, inlets and relatively short lengths of small diameter pipe that discharge into a system of canals, then subsequently to Naples Bay. The basin was not subject to any previous basin studies or master plans and had a relatively low number of drainage complaints. The Basin 7 FEMA Map shown in **Figure 4-15** indicates that flood zones in the basin range from large bands of AE 6 and AE 7 to a small pocket of zone AE 10 on the eastern portion of the basin adjacent to Naples Bay.

The assessment of Basin 7 was based on complaint information provided by the City, evaluated with the use of topographic information, FEMA flood plain classification and a review of relevant drainage features as indicated on the City's GIS database. Basin 7 complaints from 2015 to 2016 consisted of a total of 5 complaints with 3 drainage complaints and 2 standing water complaints. The complaint locations and the repetitive loss claims for Basin 7 are shown in **Figure 4-16** and **Table 4-13** lists the complaint location, the type, and the potential cause. There were also four (4) repetitive loss claims within the basin and are listed in **Table 4-14**.

Table 4-13 Basin 7 Complaint List

ID	Location	Type	Potential Cause
1	Cobia Court	Drainage	No swales, pipe size not indicated, low area
2	Snook Drive	Drainage	Small pipe size, small inlets
3	Curlew Avenue	Drainage	Small pipe size that discharges directly to water body, small inlets
4	Wahoo Court	Standing Water	No drainage inlets
5	Blue Point Avenue	Standing Water	No pipe size, small inlet

Table 4-14 Basin 7 Repetitive Loss Claims

Basin	Address	Date of Loss	Claim Paid
7	1409 DOLPHIN RD	05/18/2015	NO
7	2380 KINGFISH RD	08/19/2008	NO

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Figure 4-15 Basin 7 FEMA Map

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Figure 4-16 Basin 7 Complaint Map

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Complaint locations were not centralized in a specific portion of the basin and the majority of complaint locations were near areas featuring stormwater inlets. Pipe and inlet sizes in the basin are relatively small and a number of locations with drainage inlets are few. The majority of the properties in the basin are built on manmade canals thus drainage may take place via natural grading. The majority of the recommendations for improvements include the addition of swales for conveyance in addition to increasing inlet sizes.

After review with the City, capital improvements were developed for this basin. The projects consist of the following suggestions:

1. Project Description - Concrete flumes were replaced with side yard swales, which are now mostly filled in and/or landscaped. Need to maintain the concrete flumes or determine another solution.
2. Project Description - Need to update GIS in this basin.

4.2.8 Basin 8 Assessment

Basin 8 lies in the center of the City and is bounded by the Gordon River on the east side. It consists of a land area of approximately 194 acres. The basin has not been subject of any previous hydraulic or hydrologic modeling studies and was not assessed in previous master planning efforts. The conveyance elements in the basin consist of a system of swales, inlets, small diameter pipes, outfalls and canals that flow in to the Gordon River. The southern portion of the basin consists of larger diameter pipes in a planned united development complex. A large diameter 60-inch storm sewer line on the east side of the basin carries stormwater from Basin 6 to an outfall which discharges to a drainage canal near the Gordon River.

A review of the Basin 8 FEMA Map, **Figure 4-17**, indicates that the majority of the basin consists of bands of flood zone AE with large bands of AE 8 along the eastern and western portions of the basin. Significant portions of the basins center consists of flood zone AE 7. Several small pockets of flood zone X are located toward the southern portion of the basin. Basin 8 only consisted of one drainage complaint location in the western portion of the basin as shown on **Figure 4-18** and no repetitive loss claims. Detailed information on the complaint and potential solutions is listed in **Table 4-15**.

Table 4-15 Basin 8 Complaint List

ID	Location	Type	Potential Cause
1	3rd Avenue North near Paradise Circle	Drainage	Low area, no swales, small pipe size (12"), small inlets

After review with the City, no capital improvements were developed for this basin. This basin has small localized flooding issues that the City can maintain through operations and maintenance.

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Figure 4-17 Basin 8 FEMA Map

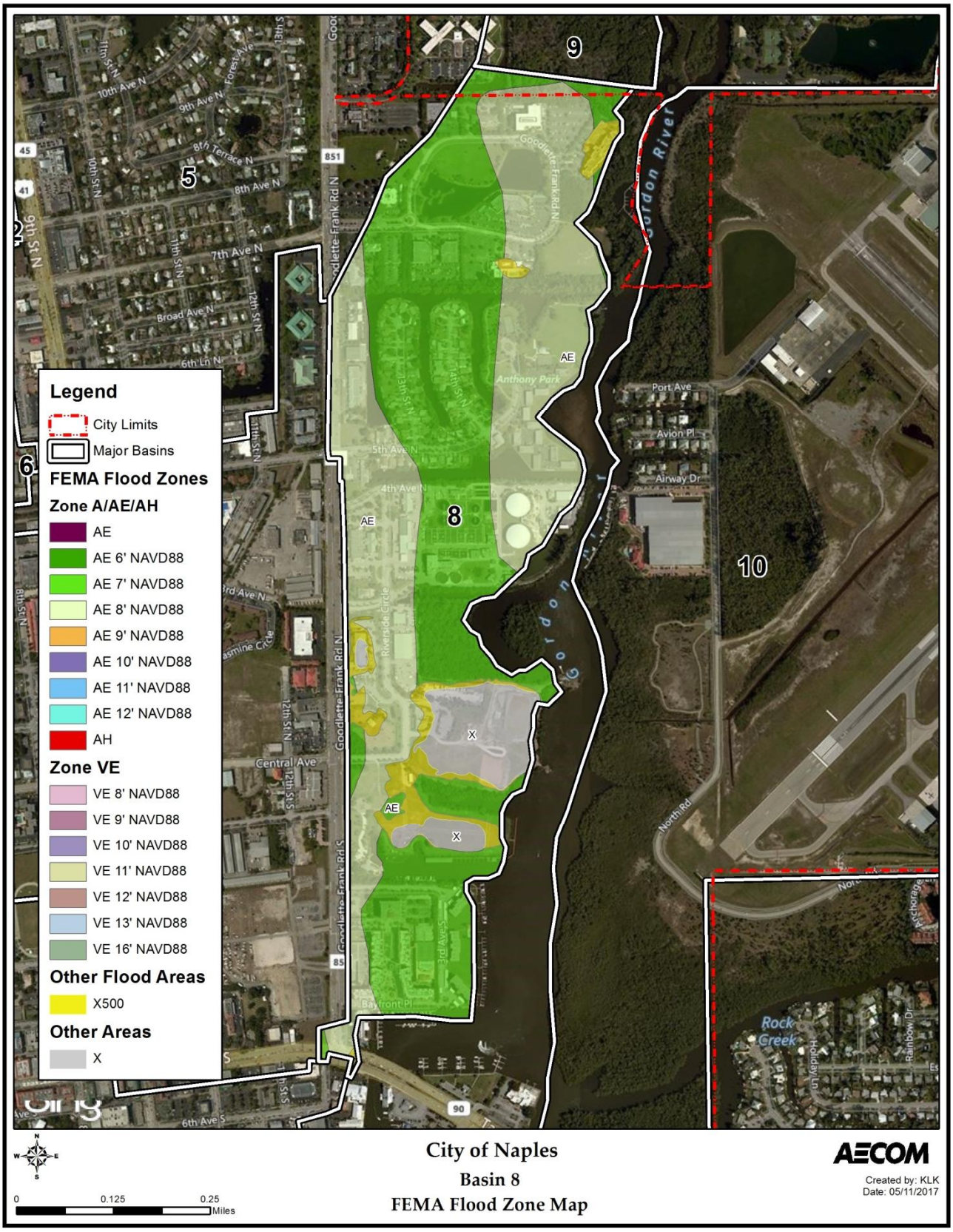

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Figure 4-18 Basin 8 Complaint Map

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4.2.9 Basin 10 Assessment

Basin 10 consists almost exclusively of the Naples Municipal Airport with a residential community on the western edge of the basin. The basin consists of approximately 912 acres and is bordered by the Gordon River on the west. The City has limited GIS information in the basin and the majority of the basin is covered by a SFWMD permit at the airport.

A review of the Basin 10 FEMA Map, **Figure 4-19**, indicates that the majority of the basin consists of the AE 7 and AE 8 flood zones. A small portion of flood zone AH lies on the western basin border representing a chance of shallow flooding. In addition the basin consists of small pockets of flood Zone X, indicating a 1 foot depth of flooding during the 100 year storm. Pockets of flood Zone X500, predominately located in the northeast portion of the basin, indicate areas within the 500 year floodplain not located in a special flood hazard area. Basin 10 only consisted of one standing water complaint location near a residential complex in the western portion of the basin as shown on **Figure 4-20**. Detailed information on the complaint and potential solutions is listed in **Table 4-16**. No repetitive loss claims were noted in this basin.

Table 4-16 Basin 10 Complaint List

ID	Location	Type	Potential Cause
1	Port Avenue	Swale	Wooded area inclines away from road. Small structure to allow for natural drainage.

After review with the City, capital improvements were developed for this basin. The projects consist of the following suggestions:

1. Avion Park

   Project Description - Swale reclamation and water quality project to deal with issues on discharges to mangroves and vegetation accumulation.

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Figure 4-19 Basin 10 FEMA Map

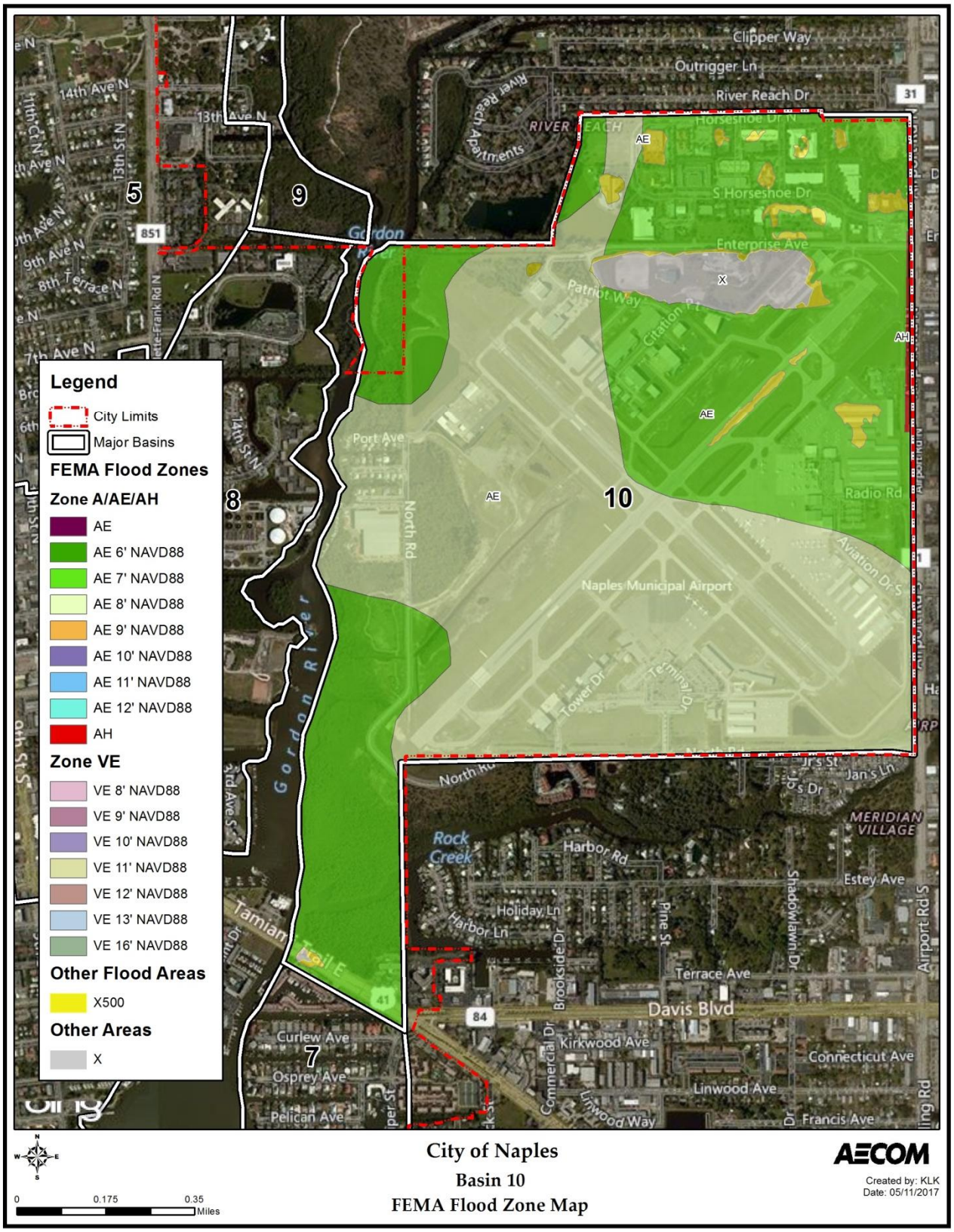

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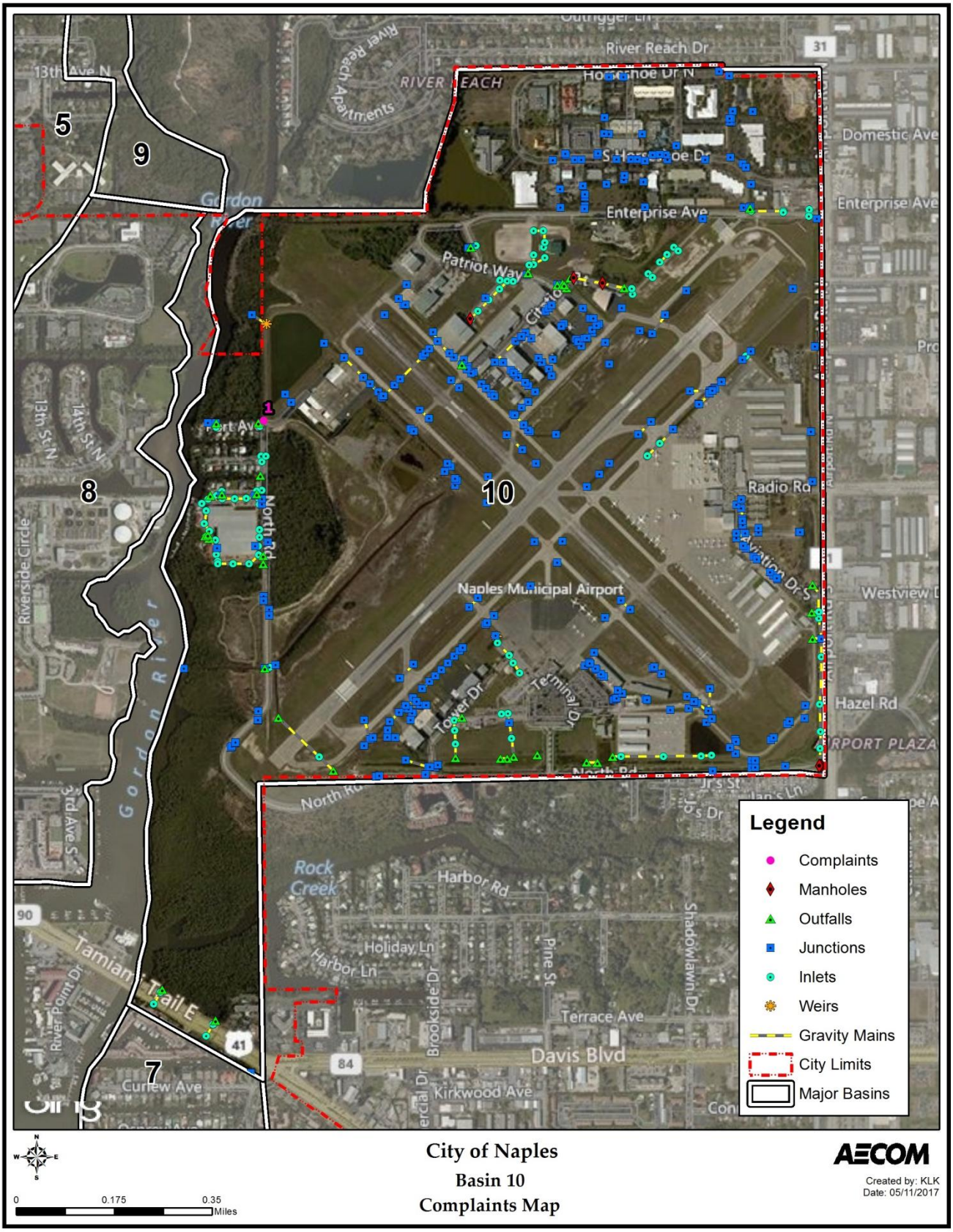
Figure 4-20 Basin 10 Complaint Map



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4.3 Repetitive Loss Area Analysis

In the 2007 Master Plan, there was discussion on structural problems from the result of repetitive loss structures. Repetitive loss structures are building structures that have been subjected to insurance claims to flooding at least twice in ten (10) years with claims in excess of $1,000. The following information was provided by the City which consists of a summary of the general areas where they have had repetitive losses.

- Area 1 – 16th Avenue South - There is only (1) repetitive loss structure located in this area and it is a Pre-FIRM structure. The mapped area includes all the surrounding Pre-FIRM structures that are well below the required base flood elevation. There is also (1) additional structure that has had a flood claim in this area. This area is completely mapped in a Special Flood Hazard Area. All the structures outside of the mapped area were built to higher elevation requirements and no flood claims have been noted. This area is a natural low spot but most of the flood claims either coincide with heavy storm events or tropical storm and hurricane events. Flooding can be exasperated if it is high tide when one of these events occurs.

- Area 2 – 9th & 10th Avenue South - There is only (1) repetitive loss structure located in this area and it is a Pre-FIRM structure. The mapped area includes only a couple of other Pre-FIRM structures located on 10th Avenue South just south of the repetitive loss property. The entire area is completely mapped in a Special Flood Hazard Area. In prior years the area was subject to localized flooding especially at high tide and during heavy storm events but a large stormwater project was completed in the area in 2012 and there has been no recognized flooding in the area since.

In addition to these two general areas, each basin assessment in the preceding sections list addresses that have made claims after 2007 along with the date of the loss and whether the claim has been paid. This list does not indicate whether the claim was due to flooding or wind. It can be assumed that the claims that were not paid could be due to not enough information to pay the claim. There have been 16 claims paid since the last master plan update. This is two (2) less claims than shown in the 2007 Master Plan update. This information has been plotted on the basin maps located in **Appendix H**.

4.4 Recommendations

In each of the above sections, project recommendations were provided. These projects were reviewed by the City and mostly addressed localized issues within the basins. Water quantity analyses usually consist of reviewing models and comparing the results of the models with the City's current level of service standards along with calibrating them to actual storm events and complaints. Since the 2007 Master Plan update, there have been very little hydrologic and hydraulic (H&H) modeling completed. Besides the recommendations of the projects previously discussed, a H&H model for each basin should be conducted to evaluate whether the City's facilities are meeting the current level of service. In order to produce a H&H model that would provide sensible results, the City's stormwater infrastructure needs to be documented within its GIS system. These facilities can be mapped and verified as part of the basin study effort.

In addition to the basin studies, localized evaluations of flooding issues can be evaluated with a more detailed H&H model. This model can evaluate pipe networks to determine how they function and to determine if the issue is with the pipe sizing or the inlets. Also, swales can be examined at a more localized model.

Most of the complaints that were given appeared to be in low areas where drainage structures were not evident. By updating the GIS system, operations and maintenance will be able to assess flooding issues. According to operations, complaints are addressed immediately and are usually resolved through an operation and maintenance activity such as cleaning a swale, cleaning inlets, and lining pipes. These activities help solve the immediate complaint but may not address bigger issues such as undersized pipes and inlets or lack of swales and outfalls. A basin study would look into those issues.

TAB 5

Water Quality and Ecology

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5. Water Quality and Ecology

The City of Naples stormwater system has been delineated into 12 basins and includes 28 stormwater ponds and three pump stations (Cardno, 2015a). Note that Basins 9, 11 and 12 have no significant City maintained stormwater infrastructure, thus Basins 1 through 8 and 10 are the primary focus of the water quality and ecologic evaluation for this Stormwater Master Plan Update.

5.1 Review of Existing Data

The City of Naples has enacted a number of water quality monitoring and improvement studies, to address, for the most part, impairments to the water quality and ecology of Naples Bay. There are also monitoring programs to evaluate water quality throughout the City of Naples stormwater management systems. Evaluation of direct outfalls from Basin 2 has been the primary focus of the Gulf of Mexico water quality projects, while the Moorings Bay system has received less attention.

5.1.1 Summary of Documents Reviewed

Table 5-1 presents a list of City of Naples water quality and improvement studies since 2007, and following sections provide a brief summary of data reported in these studies. The summary of data is presented in chronological order.

In addition to the documents below, monitoring data collected by City staff was also reviewed. These data are from monthly estuarine sampling in Naples Bay (2006 to present) and Moorings Bay (2008 to present). These data are discussed in Section 5.4.2.

Table 5-1 Summary of Existing Water Quality Monitoring and Improvement Studies

Year	Title of Document	Date Issued	By
2016*	Moorings Bay Water Quality and Biological Data Analysis	Oct-16	Cardno
2016*	Status of Naples Bay Water Clarity: 2005-2014	Jul-16	Cardno
2016*	Naples Bay Restoration and Water Quality Project at the Cove- Preliminary Design Report	Mar-16	Stantec
2015	Upland Stormwater Lake and Pump Station Water Quality Monitoring – Q4 2014 Quarterly Report	Jan-15	Cardno
2015	Status of the 20 Year Plan to Restore Naples Bay	Apr-15	City of Naples Staff
2015	Naples Bay Monitoring Design Recommendations for a Comprehensive Monitoring Program	Aug-15	Cardno
2015	Naples Bay Water Quality and Biological Analysis Project	Aug-15	Cardno
2015	Natural Resources Division City of Naples FY 2014-15 Annual Report	Oct-15	City of Naples Staff
2014	City of Naples Semi-annual and Quarterly Stormwater Infrastructure Monitoring	Mar-14	AMEC Foster Wheeler
2013	City of Naples Semi-annual and Quarterly Stormwater Infrastructure Monitoring	Jan-13	AMEC Foster Wheeler
2013	A Twenty Year Plan (and visionary guide) for the Restoration on Naples Bay	Feb-13	City of Naples Staff

2013	Bathymetry and sediment characterization of Lake Manor City of Naples, FL	Jul-13	SW Florida Aquatic Ecology Group
2012	City of Naples Stormwater Quality Analysis, Pollutant Loading and Removal Efficiencies	Jan-12	AMEC Foster Wheeler
2012	Stormwater Lakes Management Plan	Mar-12	City of Naples Staff
2008	TMDL Report on Dissolved Oxygen for the Gordon River Extension, WBID 3278K (formerly 3259C)	Aug-08	FDEP
2007	Naples Bay Surface Water Improvement & Management Plan	Jan-07	SFWMD
2007	Stormwater Master Plan	Apr-07	Tetra Tech
2007	Feasibility Study for Basin III Stormwater Management System Improvements and Broad Avenue Linear Park	Aug-07	CDM

*Reports published after April, 2016, were received after initiation of development of this Plan, and were not reviewed in detail.

5.1.1.1 Naples Bay Surface Water Improvement & Management Plan

The 2007 Naples Bay SWIM Plan by SFWMD focused on water quality as one of its initiatives and the strategies associated with this initiative include water quality and flow monitoring and water quality modeling. SFWMD evaluated the existing water quality-monitoring network to determine its ability to detect change and established hydrologic and hydrodynamic water quality monitoring. SFWMD assisted in pollutant loading model development and testing. Contractors worked on applying the Water Management Model (WMM) as part of the Southwest Florida Feasibility Study, a component of the Comprehensive Everglades Restoration Project (CERP). The SWIM Plan reports a need to spend over $100 million in projects that may improve the Naples Bay Watershed.

5.1.1.2 Feasibility Study for Basin III Stormwater Management System Improvements and Broad Avenue Linear Park

The 2007 Feasibility Study for Basin III Stormwater Management System Improvements and Broad Avenue Linear Park by CDM focused on providing an updated hydrologic and hydraulic modeling evaluation of four alternatives for water quality treatment and a linear park. The evaluation included data collection, facility sizing and alternative evaluations, linear park concept and evaluation, and a design development report. The Watershed Management Model (WMM) was used to estimate nutrient loading rates for the pre and post developed conditions. CDM recommended Alternative 4, which involved a combination of dry and wet treatment facilities and the conversion of 1.5 acres at a marina into a wet detention pond.

5.1.1.3 City of Naples 2007 Stormwater Master Plan

The 2007 Tetra Tech Stormwater Master Plan (SMP) compiled all existing data and historic stormwater master plan information to create an updated SMP. For water quality pollution, the updated SMP focuses on Total Nitrogen, Total Phosphorus, Total Suspended Solids, and Copper. These parameters were chosen because they are well documented and easy to compare. Additionally, the SMP looked at information related to the timing and volume of freshwater flowing into receiving waters in the City. Some of the recommendations related to water quality included: coordinating seagrass efforts carefully, commission a feasibility study to remove beach outfalls, include Moorings Bay System as a water body of concern, focus on improving pollutant removal efficiency during construction of stormwater facilities rather than retrofitting, increase monitoring based on discussed parameters, and establish on-going basin-wide swale restoration program. In 2012, the City amended their stormwater master plan to require the removal of the City's stormwater beach outfalls (City 2017).

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5.1.1.4 TMDL Report on Dissolved Oxygen for the Gordon River Extension

The Final Total Maximum Daily Load (TMDL) Report for Everglades West Coast Basin, Gordon River Extension, WBID 3278K, for Dissolved Oxygen (DO) was published by FDEP on 2008. FDEP reported that Total Nitrogen (TN) is the pollutant causing the Gordon River to be impaired for low DO. Low DO was determined to be a parameter of concern based on an analysis of samples collected between 1995-2002 and another set of samples collected between 2000-2007. For the first set of samples, 76 out of 116 samples showed exceedances for the DO parameter (17 being the Impaired Waters Rule (IWR) required number of exceedances). For the second set of samples, 70 out of 72 samples showed exceedances for the DO parameter (12 being the IWR required number of exceedances). TN was determined to be the causative pollutant based on an assessment of potential causative pollutants and their correlation with low DO in the Gordon River.

5.1.1.5 A Twenty Year Plan for the Restoration on Naples Bay

In 2010, the City published A Twenty Year Plan for the Restoration of Naples Bay. This plan focused on seven major restoration efforts, including water quality. For water quality, the plan proposed installing floating islands and aerators at ten retention ponds/lakes, planting native wetland plants along shorelines, constructing additional rain gardens in the following five years. For the next ten years, in order to improve water quality the plan proposed that two filter marshes be installed, dredge three ponds per year, have a majority of lakes/retention ponds with aerators and floating islands, have all shorelines ringed with wetland vegetation, and residents begin to replace sodded lawns with native flowering vegetation. The City's Plan projected that after 10 years stormwater runoff will have been reduced by 50 percent, irrigation use will be down by 30 percent, and water quality will be improved to the point that the Bay meets all state standards and become "unimpaired".

The report also documented changes in economically and ecologically significant species (City 2010), which are listed as follows:

Mangroves

Mangroves filter pollutants, allow sediment to settle, sequester carbon, reduce erosion, and serve as nursery habitat for a variety of wildlife including commercially and recreationally important fish species. However, prior to understanding ecological services provided by mangroves, and the state protection of mangroves in Florida, mangroves were removed from the City shorelines for residential and commercial development and to eliminate mosquitoes. As a result, the mangrove fringe habitat of Naples Bay was reduced by 70 percent.

Currently, the City is making an effort to encourage the placement of riprap along shorelines rather than seawalls, primarily in front of all new seawalls fronting Naples Bay. Riprap is naturally colonized by mangroves, oysters, crabs, and fish. Similar to mangroves, riprap reduces erosion by absorbing wave energy, reduces turbidity, and improves water clarity.

Riprap has been installed at the shoreline of Collier County's Bayview Park. The riprap at this location frequently recruits mangrove seedlings. These mangroves disappear soon after sprouting, which might be due to local anglers removing them. To allow some of these seedlings to mature, a portion of the park's shoreline was closed off. The closed portion of the shoreline was implemented using educational signs along the roped off area and boardwalk. While the seedlings outside the roped-off area continue to disappear, the mangroves within the closed area are still present and growing.

Oysters

Over the past few decades oyster populations have declined by 80 percent in Naples Bay. Oysters are important to the health of an estuary since they improve water quality. Additionally, oyster beds/reefs can reduce shoreline erosion and provide important habitat to other organisms. The City has started an oyster restoration project in Naples Bay and as part of the project has built four oyster reefs in the bay. Three have been successful while the fourth one has been reduced due primarily to boat wakes.

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Seagrass

Seagrass ecosystems are one of the most heavily impacted in Naples Bay, with 90 percent of seagrasses historically present now gone. Seagrass beds serve as a food source, protection, and nursery for many species that are commercially and recreationally important. Seagrasses also improve water clarity by stabilizing bottom sediments. Impacts to seagrasses in the bay include freshwater discharges, high nutrient levels, low water clarity, dredging, boat wakes, and high sediment loads. Improved water quality, reduced freshwater flows, and reduced suspended sediment would be needed in order to expand the remaining areas of seagrasses in Naples Bay. Currently, City staff annually monitors two areas of the remaining seagrass. Monitoring includes recording species, abundance, sediment type, water depth, epiphyte coverage, and blade lengths.

5.1.1.6 City of Naples Stormwater Quality Analysis, Pollutant Loading and Removal Efficiencies

The 2012 City of Naples Stormwater Quality Analysis, Pollutant Loading and Removal Efficiencies by Amec Foster Wheeler provides the results of stormwater and lakes monitoring conducted by AMEC; consolidates available data from 2008-2011; and uses related data to develop a model that provides a condition assessment and initial identification of the source of critical water pollutants. As a prioritization strategy, total pollutant loadings discharged from each stormwater lake were calculated.

5.1.1.7 Stormwater Lakes Management Plan

In 2012, City staff provided a Proposed Stormwater Lakes Management Plan and an addendum to the plan. This plan proposed that City-owned stormwater lakes be restored to improve each lake's ability to remove pollutants, a comprehensive outreach program should be established, create local ordinances for stormwater lake management, and the creation/use of assessment districts for stormwater lake improvements. This plan identified the five lakes performing the poorest in terms of pollutant removal efficiency. These five lakes are South Lake, Lois Selfon Park (East Lake), Alligator Lake, Swan Lake, and Half Moon Lake. In all five cases, these lakes were adding pollutants to the stormwater discharge. To improve pollutant removal in the lakes, the plan suggests chemical and mineral treatment, aeration, floating vegetation islands, spot dredge, and/or full dredge.

5.1.1.8 Bathymetry and sediment characterization of Lake Manor

In 2013, the SW Florida Aquatic Ecology Group provided the City with a Bathymetry and Sediment Characterization of Lake Manor Report. Water samples were analyzed for chlorides, total Kjeldahl Nitrogen (TKN), total nitrogen (TN), Nitrates + nitrites (NOx), ammonia nitrogen, orthophosphate and total phosphorus (TP). Sediment was analyzed for the same aforementioned nutrients conducted for the water with the addition of total organic carbon and heavy metals (Al, As, Cd, Cu, Pb, Hg and Zn). The results of the report show that nitrogen limitation was occurring in the water and in the sediment. Additionally, the results states that Lake Manor had high concentrations of green micro algae and floating vegetation.

5.1.1.9 City of Naples Semi-annual and Quarterly Stormwater Infrastructure Monitoring

In 2013 and 2014, Amec Foster Wheeler provided the City with Semi-Annual and Quarterly Stormwater Infrastructure Monitoring Reports. The reports present the results of the stormwater and lakes monitoring as well as a prioritization strategy and remediation recommendations. Sampling conducted as part of this project included biannual lakes monitoring and quarterly pump station monitoring. The results of this continued monitoring were used to fill data gaps identified by a previous Amec Foster Wheeler report and to develop recommendations for structural and non-structural Best Management Practices (BMPs) that may be used by the City to improve the water quality of its stormwater lakes and the receiving waters of the state. The results from the 2013 report were able to fill in critical data gaps and identified conveyances with elevated pollutant concentrations and lakes with consistently high discharge pollutant concentrations. In 2014, since this monitoring program has been operated consistently for several years, the entire data set was examined to determine if trends have been detected, and whether there is evidence that trends were the response of City actions or other identifiable causes. In 2014, the report stated that loading estimates developed to support the Collier County Watershed Management Plan

shows that more than 75% of TN, TP, and TSS discharging to Gordon River and Naples Bay come from unincorporated portions of Collier County via the Golden Gate Canal (GCC).

5.1.1.10 Natural Resources Division City of Naples FY 2014-15 Annual Report

In 2015, the Natural Resources Division of the City published a 2014-2015 Annual Report. The report identified the three major environmental challenges facing the City which included the Golden Gate Canal (GGC) dumping freshwater into Naples Bay, increasing impervious surfaces and stormwater runoff, and sea level rise. Additionally, the report reviewed the status of the Twenty Year Plan to Restore Naples Bay, summarized continuing projects, and described current advisory roles and committee participation.

5.1.1.11 Naples Bay Water Quality and Biological Analysis Project, Naples Bay Monitoring Design Recommendations for a Comprehensive Monitoring Program, and Upland Stormwater Lake and Pump Station Water Quality Monitoring

In 2015, Cardno provided the City with three reports: Naples Bay Water Quality and Biological Analysis Project, Naples Bay Monitoring Design Recommendations for a Comprehensive Monitoring Program, and Upland Stormwater Lake and Pump Station Water Quality Monitoring – Q4 2014 Quarterly Report. The Naples Bay Water Quality and Biological Analysis Project provides a comprehensive update on the status of water quality and biology in Naples Bay. This project found that statistics for Naples Bay show a decreasing trend in nutrients but increasing trends in copper, chlorophyll a, turbidity, and bacteria (fecal coliform and enterococci). Additionally, nutrient and solids loading to Naples Bay likely contribute to the decreasing trend in seagrass. The Naples Bay Monitoring Design Recommendations for a Comprehensive Monitoring Program compiled and analyzed available data to identify trends in water quality, biology, and the effects of water quality on the biological communities in the bay. This program recommended focusing resource management money on sampling biological communities that are more responsive to water quality changes as opposed to sampling fish. The program also recommended establishing restoration goals that have a specific biological endpoint. The Pump Station Water Quality Monitoring Report recommended maintaining a semi-annual stormwater lake monitoring program, continue to collect samples, and continue to analyze copper based on conductivity of the lake or pump station at the time of monitoring.

5.1.1.12 Naples Bay Restoration and Water Quality Project at the Cove-Preliminary Design Report

In 2016, Stantec provided the City with a Preliminary Design Report for a Naples Bay Restoration and Water Quality Project at the Cove. This design report focuses the existing conditions at the Cove Outfall and identifies improvements that will reduce freshwater impacts to Cove outfall and assist in the restoration of Naples Bay. Four improvements were developed based on the evaluation: dredging and armoring at the Outfall, constructing a living shoreline, improve water quality upstream, and creating a public amenity at the cove.

5.1.1.13 Status of the 20 Year Plan to Restore Naples Bay

In 2015, the Naples City Manager put out a memo regarding the status of the 20 Year Plan to Restore Naples Bay. The 20 Year Plan had stated that within 5 years freshwater flowing into the Naples Bay would be reduced by a third. However, according the status memo this did not occur in the first five years due to modeling challenges. Another goal of the Plan was that during the first five years floating islands would be installed in 10 lakes and that additional rain gardens would be installed throughout the City. According to the memo, there are now floating islands in seven lakes and several rain gardens have been installed since the creation of the Plan. Five-year goals in the 20 Year Plan related to oysters and seagrasses were not fully met due to the continuation of freshwater discharges into the Bay. Additionally, the Plan had put forth a goal to have an outreach program for mangroves put into place within the first five years and this goal also had not been met at the time of the memo.

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5.1.2 Summary of Identified Project Needs

5.1.2.1 Description of City of Naples's Stormwater System

The City's stormwater system connects to Naples Bay, Moorings Bay, and the Gulf of Mexico. According to the 2014-2015 Annual Report by the Natural Resources Division of the City of Naples, the stormwater system includes storm sewers, water control structures, rain gardens, vegetated swales, filter marshes, and 28 stormwater retention ponds within the City. Of those 28 lakes, 23 are either private or ownership undetermined and 5 are on City property (City of Naples, 2012). The following information is a summary of the City's stormwater treatment and relevant water quality information provided in the Naples Bay-20 Year Restoration plan (2010), and the City of Naples FY 2014-2015 Annual Report.

- The City's Natural Resources Division has created various demonstration rain gardens. Rain gardens improve water quality by collecting stormwater and allowing plants to filter pollutants (fertilizer, yard waste, sediment, animal waste) naturally before the water drains into storm sewers and waterbodies. Per the above mentioned plans, the City is now encouraging the community to build at least 1,000 rain gardens within the city boundaries, and has provided guidance on their construction.
- A filter marsh created by the City and located in Riverside Circle receives diverted water from a ditch connecting the northernmost City stormwater pump to the Gordon River by point discharge. Stormwater is now filtered by vegetation in the wetland before sheet-flowing over a weir into a mangrove forest before reaching the river.
- Retention ponds reduce flooding by collecting/receiving rainfall and redirecting the stormwater to natural waterbodies. The stormwater ponds in the City are 40 to 50 years old and after decades of use the water quality in these ponds has decreased due to excess of sediment, nutrients (nitrogen and phosphorus), bacteria, and other pollutants. Over the years, a few of the ponds were treated for algae using copper sulfate. This copper moved through the stormwater system and ended up in the Naples Bay, which is now impaired for copper.
    - Alternative methods for managing algae are now in use, including floating islands (artificial platforms of planted vegetation) in seven ponds and aerators within ten ponds. The floating islands outcompete the algae by taking in excess nutrients and in some cases excreting a poison that kills algae. The aerators reduce favorable conditions for algae by increasing oxygen and reducing temperature. In general, these methods have been successful at reducing algae within the ponds. However, in some areas the floating islands are not able to handle the excessive amount of nutrients in the ponds caused by fertilizer and grass clippings from residential areas.

5.1.2.2 Stormwater System Project Needs

The Twenty-Year Plan to Restore Naples Bay stated that the water quality of the bay would improve and habitat would increase as a result of filter marsh construction, pond shore plantings, and floating islands. However, a recent statistical analysis of the City's water quality data indicates that nutrients are declining in the bay, but copper and bacteria have increased (Cardno, 2015a). Additionally, the City has made efforts to install floating islands and rain gardens. City staff work with residents to educate and assist citizen efforts; however, there is currently no overarching environmental outreach program.

5.2 Receiving Waters Considerations

Stormwater runoff is discharged into three primary receiving water bodies: Naples Bay, the Gulf of Mexico, and Moorings Bay (Cardno, 2015a). These three water bodies are tidally influenced and support a variety of plant and wildlife species. Additionally, the increased development of the surrounding land areas has negatively affected water quality in Naples and Moorings Bay and in nearshore areas of the Gulf of Mexico. The Gordon River and upland surface waters also receive discharge from the City of Naples stormwater, and are further discussed in this section.

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5.2.1 Naples Bay

Naples Bay is a relatively narrow (100-1,500 ft) and shallow (1-23 ft) estuary with a watershed of approximately 120 square miles (mi^2) (Cardno, 2015a). The Bay is formed by the confluence of the Gordon River and other small tributaries that empty into the Gulf of Mexico through Gordon Pass (TetraTech 2007). Although the Naples Bay Watershed (NBW) is wholly contained within Collier County, the City of Naples comprises of approximately 14.5 mi^2 (TetraTech, 2007) within the watershed. In addition, the NBW is wholly contained within the Big Cypress Basin (TetraTech, 2007). Currently, the Big Cypress Basin board collected continuous data on rainfall, evaporation, surface and groundwater levels, stormflow, and water quality from 106 hydrologic monitoring stations, from which seven are of immediate interest to the City of Naples (Gold Gate Weir 1, Gold Gate Weir 2, Gordon River, Haldeman Creek, I-75 Weir 1, CR31 South and The Conservancy).

On average, the Golden Gate Canal (GGC) discharges 150 million gallons of freshwater a day into Naples Bay. The Bay receives the majority of its runoff from Collier County via the GGC (TetraTech, 2007). Prior to construction of the GGC, the Naples Bay watershed drained a total 10 mi^2 (Cardno, 2015a). Additional sources of freshwater include stormwater runoff, the Gordon River, Rock Creek, and Haldeman Creek, while saltwater exchange between Naples Bay and the Gulf of Mexico occurs via Gordon Pass (Cardno, 2015a). This has affected the salinity of the bay and the animals and plants that live in the area.

Furthermore, development has increased the amount of impervious surface, increasing in turn the flow of stormwater. As a result, the canal carries large loads of nutrients, copper, bacteria, and sediment, making it a major source of the bay's pollution. All three of the City's pump stations discharge into Naples Bay or into the Gordon River. Basins 3, 4, and 7 discharge into Naples Bay and Basins 5, 6, 8, and 9 discharge into the Gordon River (TetraTech, 2007). Residential and commercial land uses are dominant within these basins. The Cove Pump Station outfall is the discharge point for the City's Stormwater Basin 3, and the contributing drainage area covers a largely impervious area of approximately 0.7 mi^2 (Stantec, 2016). The total contribution of surface water from City of Naples to Gordon River and Naples Bay is approximately 10 mi^2 (Amec, 2014).

Currently, Naples Bay supports a fish community similar to other regional estuaries in less developed areas. However, Naples Bay no longer exhibits the natural salinity fluctuations of a protected estuarine bay (Tera Tech, 2007). Since the 1950s, increased pollutant loading due to urbanization, dredge and fill activities, and changes to the salinity regime following construction of the GGC in 1960, have contributed to a loss of 90% of the seagrass beds, 80% of the oyster reefs, and 70% of the mangrove fringe (Schmid et al., 2005, Cardno, 2015a). Furthermore, canals, seawalls and bulkheads have replaced extensive areas of mangrove (Tetra Tech, 2007). The flows and biology of natural tributaries have also been altered by changes in urban infrastructure (Tetra Tech, 2007). Based on a comparison of recent water quality data to a study conducted in the late 1970s (Simpson et al., 1979), freshwater contributions and concentrations of nutrients and chlorophyll a in Naples Bay have improved significantly since the 1970s. These water quality improvements are potentially a result of advances in stormwater practices and adoption of water quality criteria as well as a decrease in flow from the GGC (Cardno, 2015a). However, discharges continue to contribute pollutants, nutrients, excessive freshwater, and solids to the waterbody and thus contributes to chlorophyll a concentrations in Naples Bay exceeding the FDEP's chlorophyll criteria and the Bay being listed as impaired for copper and iron. Concentrations of fecal coliform and enterococci bacteria are also increasing (Cardno, 2015a). Salinity stratification is pronounced in Naples Bay, especially in the wet season when GGC flows are at their highest (Cardno, 2015a).

5.2.2 Gulf of Mexico

Ultimately, all of the City of Naples surface water runoff flows to the Gulf of Mexico (TetraTech, 2007). The Gulf of Mexico receives City of Naples surface water runoff directly via 9 stormwater outfalls, within Basin 2, and indirectly via Naples Bay and Moorings Bay (AECOM, 2012; TetraTech, 2007). Basin 2, which also discharges into Moorings Bay, contains primarily residential areas with commercial

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developments (TetraTech, 2007). Direct stormwater outfalls into the Gulf of Mexico are no longer permitted in the State of Florida (TetraTech, 2007). Furthermore, there have been long-standing concerns from the State's regulatory agencies, City officials and staff, environmental groups, property owners, residents and visitors that the beach outfalls adversely impact beach erosion, lateral beach access, sea turtle nesting habitat, water quality, flooding and beach aesthetics (ECE, 2016). The City of Naples 2007 Stormwater Master Plan report included recommendations to evaluate alternatives to remove the beach outfalls and to treat pollutants.

City of Naples' Basin 2 outfalls were evaluated for their potential to degrade the beach and nearshore ecosystems during a Collier County beach nourishment permitting study (Humiston & Moore Engineers 2010). Specifically, the outfalls were evaluated relative to contribution to beach erosion, impact on sea turtle nesting habitat, degradation of water quality and lateral beach access. The 2010 study found minor, localized beach erosion and no apparent impacts on sea turtle nesting or lateral beach access. Still, in 2012, the City adopted Resolution No 12-13028 and amended their stormwater master plan to require the removal of the City's stormwater beach outfalls. These actions were taken to satisfy the FDEP JCP Condition (Permit No. 0222355-001-JC) for beach nourishment projects (City 2017).

A more recent (2016) report conducted in support of the City of Naples intention to remove the beach outfalls (ECE, 2016) indicated that the outfalls contribute to impaired water quality and the pollutants of interest for stormwater runoff into the Gulf of Mexico were bacteria, nutrients, suspended sediments, and mercury. The ECE 30% Design Technical Report (2016) also provides design requirements and an alternative analysis for the removal of beach outfalls. Overall, the preferred alternative in the 30% report is comprised of a "North System" and a "South System" as follows:

- North Drainage and Treatment System – consolidates the existing stormwater flows associated with Outfalls 2, 3 and 4 (25-Yr) and conveys the flows to a pump station located in the vicinity of the Naples Beach Hotel and Golf Club.
- South Drainage and Treatment System - consolidates the existing stormwater flows associated with existing Outfalls 5, 6, 7, 8, 9 and 10 (25-Yr) and conveys these flows to a pump station located at 3rd Avenue North. An overflow line will be located at Outfall 6 to convey stormwater during extreme storm events.

Both systems will include treatment and discharge lines with diffuser systems placed offshore in the Gulf. The north system will treat 100% of the 25-yr peak flow through the pump station, while the south system will treat 77% of the 25-yr peak flow through the pump station.

5.2.3 Moorings Bay

The Moorings Bay system is comprised of Moorings Bay, Outer and Inner Doctor's Bays, and Venetian Bay and includes a number of man-made finger canals (TetraTech, 2007). This system has been extremely altered/engineered and discharges into the Gulf of Mexico via Doctor's Pass (TetraTech, 2007). The Moorings Bay system receives runoff from City of Naples Basins 1 and 2, and the primary land use in these basins is residential (TetraTech, 2007). Unlike the other waterbodies that receive City of Naples stormwater runoff (Naples Bay and the Gulf of Mexico), Moorings Bay is completely within the City of Naples.

City of Naples staff sample Moorings Bay monthly since 2008 and have invested in recent studies regarding the water quality of Moorings Bay (Cardno, 2016). However, the result of the water quality reports for Moorings Bay indicates that Moorings Bay is potentially high in total phosphorus, bacteria, and copper (Cardno 2015b, 2016, AMEC 2014). Additionally, the 2016 Moorings Bay Water Quality and Biological Data Analysis Report found that the copper, total phosphorus, and bacteria measurements may trigger an impairment listing during FDEP's next assessment cycle (anticipated to be 2019) (Cardno 2016).

5.2.4 Gordon River

The Gordon River Extension, which is located in Collier County and partially within the City of Naples, is one of the tributaries to Naples Bay and part of the Southwest Coast Planning Unit within the Everglades West Coast Basin. The river is approximately 3 miles long, originating near the center of the watershed as a drainage canal for several large golf courses. It then flows southward into a wetland region, eventually reaching the confluence with the Golden Gate Canal (FDEP 2008).

In the Gordon River watershed, which covers 5,154 acres, a number of land uses affect water quality through nonpoint source runoff. The most significant nonpoint sources include runoff and erosion from developed areas, small-scale construction, residential and commercial fertilizer use, pets, residential septic tank failure, or poorly designed septic tanks. The watershed has a limited amount of agriculture, with only 58 acres devoted to cropland and pasture (FDEP, 2008). The Gordon River Extension is impaired for dissolved oxygen (DO is < 5.0 mg/L). A final TMDL for DO in the Gordon River Extension was proposed and adopted in 2008, however this TMDL does not have an associated BMAP yet (FDEP 2008, 2017a). The TMDL identified total nitrogen (TN) as the causative pollutant for the low DO.

Several filter marsh projects have been completed to improve some of the pollution issues. These include the Riverside Filter Marsh located behind 280 Riverside Circle, one at Collier County's Freedom Park, and another is on the Conservancy's campus. These marshes help filter out pollutants from stormwater runoff before it reaches the Gordon River. In addition, the Gordon River control structure at Golden Gate Parkway is intended to limit the flow from tidal exchange to prevent saltwater intrusion to the City of Naples Coastal Ridge wells. Above the control structure, channels are maintained as a dredged stormwater conveyance system to maintain an adequate flow regime. The main network of drainage canals extends approximately 3 miles north of the structure and connects with an additional 13 miles of drainage canals and ditches (FDEP, 2008).

5.2.5 Upland Surface Water

Upland surface waters include dry detention, storm sewers, water control structures, rain gardens, vegetated swales, filter marshes, and 28 stormwater retention ponds (City of Naples, 2015). Land uses associated with these upland surface waters are primarily residential.

BMPs for water quality treatment that are associated with the upland surface water system are summarized below (TetraTech, 2007):

- Wet Detention Provisions:
  These systems are permanently wet pools that detain untreated runoff and over time pollutants are removed from the water via nutrient uptake by algae, adsorption onto bottom sediments, biological oxidation of organic materials, and sedimentation. These systems slowly release detention volume over 24-72 hours through an outlet structure until water is drawn down to the normal water level.

- Dry Detention/Detention Ponds:
  Dry detention systems collect runoff and slowly release the volume to adjacent surface waters through an outlet structure over 2-3 days until water is drawn down completely. These areas do not permanently hold water and are typically dry. Pollutants settle to the bottom of the dry detention pond as water is drawn out. Dry retention systems collect runoff and release the volume by allowing the water to percolate through soils into the shallow ground aquifer.

- Swale Provisions:
  These systems consist of vegetated channels that require shallow slopes and soils that drain well. Runoff collected in these systems drain quickly and is not detained for a long period of time. Pollutants are removed by filtration through grass and infiltration through soil. When swales are deeper they function similar to a linear retention pond and can provide higher removal rates.

- Biological Provisions:
  These systems include wetland treatment areas, filter marshes, and algal filter devices. These systems involve pollutant removal from stormwater by incorporating vegetation uptake of nutrients in combination with filtration and/or physical settling.

- Mechanical provisions:
  These systems include devices that can remove floatable organics and oils, or large particles and suspended solids. These systems are typically used as pretreatment devices and require maintenance to remove collected debris and sediment.

5.3 Regulatory Standards Affecting the Stormwater Management Plan

The Federal Water Pollution Control Act of 1948 was the first major federal law to address water pollution (EPA, 2016). Further amendments to the Water Pollution Control Act, triggered by an increase in public awareness and their interest for controlling water pollution, led to the development of the Clean Water Act (CWA) of 1972. The CWA provides the statutory basis for Florida's water quality standards and for best management programs to restore the quality of impaired waters.

City of Naples uses state and site-specific regulatory standards as a guidance to evaluate the quality of surface waters in the different water body identification numbers (WBIDs) within the City of Naples boundaries. These WBIDs are shown in **Figure 5-1**. Waterbodies that receive stormwater from within City of Naples include Gordon River Extension (WBID 3278K), Gordon River Marine Segment (WBID 3278R5), Naples Bay Coastal (WBID 3278R4), Moorings Bay (WBID 3278Q2) and the Gulf of Mexico. In previous reports, some of these waterbodies had different WBIDs. For instance, the Naples Bay Coastal WBID 3278R has been retired, and subdivided by FDEP into five smaller WBIDs: 3278R1, 3278R2, 3278R3, 3278R4, and 3278R5. Of those, 3278R4 and 3278R5 are now within the City's boundaries. In addition, Amec Foster Wheeler reported a subset of ponds and lakes that do not discharge into their WBID boundaries as reported by FDEP (Amec FW, 2014). These include sample locations (BC, BC-Pond, BCG, Lakes 7, 8, 9, and 10) that discharge into the Gulf of Mexico not into Moorings Bay. In addition, Lake Manor that is shown to contribute to Gordon River Extension actually discharges into Naples Bay Coastal.

Regulatory standards and guidance relevant to the City of Naples include, Numeric Nutrient Criteria (as applies to Moorings Bay and Naples Bay), Total Maximum Daily Load rules (as applies to Gordon River Extension for DO), the Impaired Waters Rule (IWR) Chapter 62-303 of the Florida Administrative Code (F.A.C), Surface Water Quality Standards (Chapter 62-302, F.A.C.) and/or local criteria set by the City or other local agency. The order in which these regulations are implemented are presented in the following diagram (**Figure 5-2**), and discussed in detail in the following sections.

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Figure 5-1 Water Body Identification Number (WBID) Map

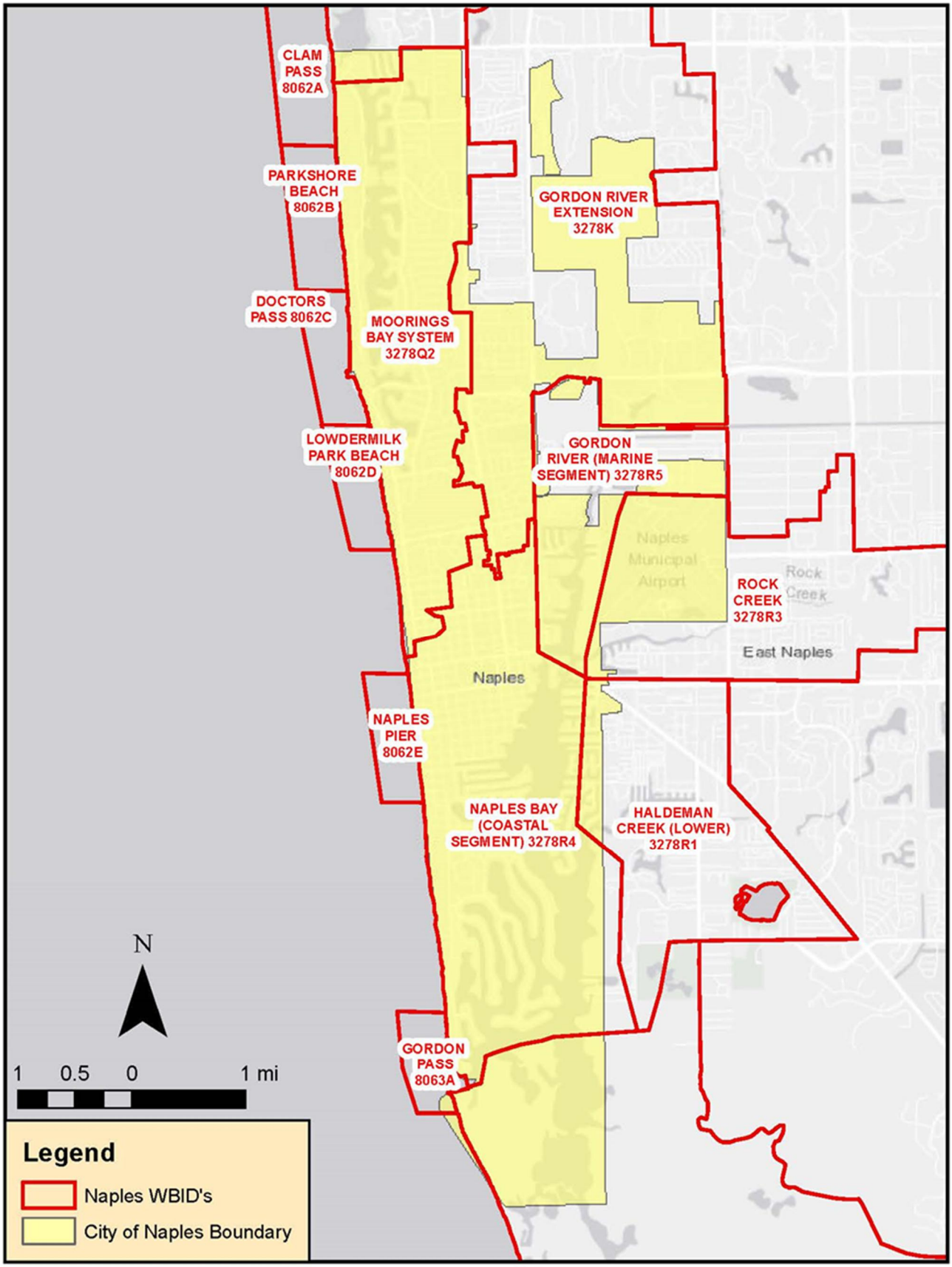

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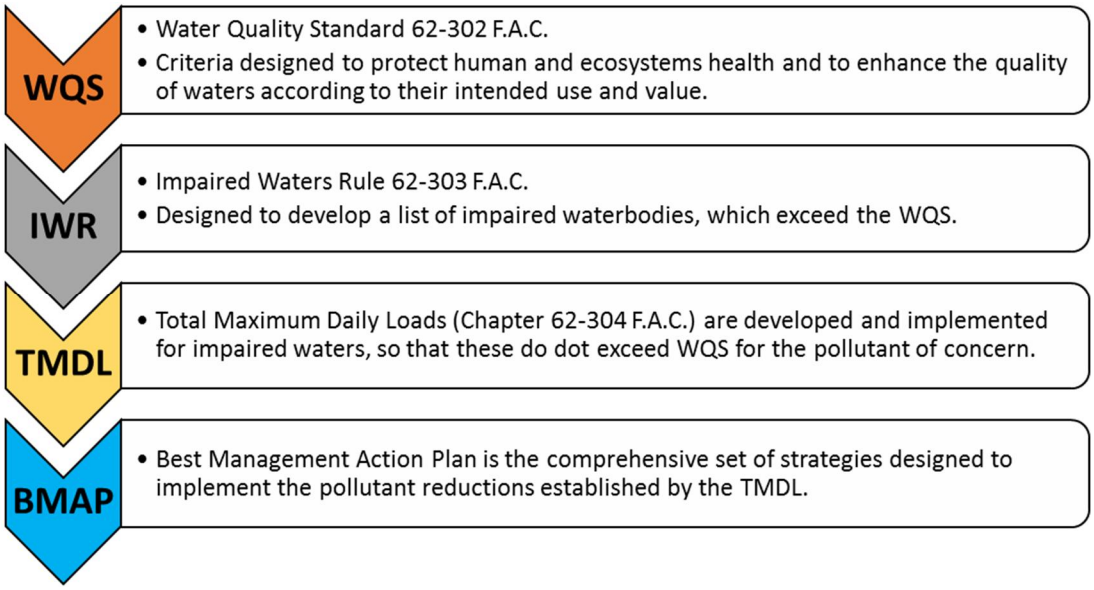
Figure 5-2 Regulation Implementation Chart



5.3.1 Water Quality Standard 62-302 F.A.C.

Florida's surface water quality standards system, adopted in March 1979, and published in 62-302 F.A.C (and 62-302.530 F.A.C.), were designed to protect human and ecosystem health and to enhance the quality of waters according to their intended use and value. The components of this system include classifications of waterbodies based on their use, criteria evaluated and minimum levels for protection of waters, an anti-degradation policy, and special protection of Outstanding Florida Waters.

The FDEP classifies Florida waters in six classes depending on their designated uses, and are arranged in descending degree of protection required as follows:

- Class I - Potable Water Supplies;
- Class II - Shellfish Propagation or Harvesting;
- Class III - Fish Consumption, Recreation, Propagation and Maintenance of a Healthy, Well-Balanced Population of Fish and Wildlife;
- Class III-Limited – Fish Consumption; Recreation or Limited Recreation; and/or Propagation and Maintenance of a Limited Population of Fish and Wildlife;
- Class IV - Agricultural Water Supplies;
- Class V - Navigation, Utility and Industrial Use.

The water quality standards 62-302 F.A.C. rule establishes that,

- Existing uses and the level of water quality necessary to protect the existing uses should be fully maintained and protected.
- Any discharge of pollution, which causes or contributes to violations of water quality standards, should not be allowed.
- Waters must be protected and enhanced in order to meet the water quality standards, unless exceeding criteria represents the natural conditions of the system.
- If a requested discharge to a waterbody, which is clearly in the public interest, is not expected to reduce the quality of the receiving waters below the classification established for them, it could be permitted.

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In addition to standards provided on 62-302 F.A.C. rule, the Numeric Nutrient Criteria (NNC), defined under 62-302.530 F.A.C provides guidance for development and implementation of site-specific nutrient criteria. The first set of statewide numeric nutrient standards for Florida's waters was adopted in 2011, and by 2015, most water bodies in Florida had numeric nutrient standards.

Most of Florida's freshwater streams, lakes, and springs are covered by numeric interpretations of the nutrient criterion, and only wetlands (except for the Everglades Protection Area) and South Florida canals are not covered by numeric nutrient criteria. Non-perennial streams, man-made or physically altered canals/ditches with poor habitat used primarily as water conveyances for flood control, irrigation, etc., and tidal creeks may also be solely covered by the narrative criterion once properly documented as meeting one of the exclusions for the definition of a stream. In addition, numeric nutrient criteria are established for all estuary segments, including criteria for total nitrogen, total phosphorus, and chlorophyll *a*. For open ocean coastal waters, numeric criteria are established for chlorophyll *a* that is derived from satellite remote sensing techniques (http://www.dep.state.fl.us/water/wqssp/nutrients/).

The NNC established that:

> *When anthropogenic nutrient loading or concentrations exceed a system's assimilative capacity, the primary response consists of changes to the primary producer communities and excess production of plant biomass. In turn, this enhanced floral biomass can lead to habitat loss, food web alterations, and/or low DO from decomposition of plant biomass or respiration. This chain of events is ultimately reflected in meaningful biological endpoints, such as excessive algal mats, excess water column chlorophyll-a, excess nuisance vascular plant growth, and/or failing Stream Condition Index (SCI) scores. Conversely, if data show that biological health is fully supported in an aquatic system (no adverse responses consistent with the ecological model), one may conclude that the associated nutrient regime is inherently protective of the waterbody, and the NNC is achieved.*

FDEP has developed a NNC for Naples Bay Coastal area and Moorings Bay (**Table 5-2**).

Table 5-2 NNC Developed for City of Naples Waterbodies

Water Body	TN (mg/L)	TP (mg/L)	Chlorophyll-a (µg/L)
Moorings Bay	0.040, in ≤10% samples	0.85, in ≤10% samples	8.1
Naples Bay Coastal	0.045	0.57	4.3

Proposed Revisions to Chapter 62-302, F.A.C.:

The Department of Environmental Protection (department) is initiating rulemaking to consider proposed revisions to the human health-based surface water quality criteria in Chapter 62-302, F.A.C. The revisions are based on updated scientific information on fish and drinking water consumption rates, toxicological data, and revised methods to estimate bioaccumulation of pollutants in fish. Additionally, the department is proposing to establish a new classification of surface waters (Class I-Treated, Treated Potable Water Supplies) and to reclassify seven Class III surface waters into the new classification (http://www.dep.state.fl.us/water/wqssp/).

5.3.2 Impaired Waters Rule 62-303 F.A.C.

On April 16, 2001 Florida's Environmental Regulation Commission approved chapter 62-303, F.A.C., for identification of impaired surface waters, also known as Impaired Waters Rule (IWR). This rule was most recently revised on October 17, 2016. The IWR provides guidance for the development of a planning list (potentially impaired waters), which include waterbodies that may not be meeting water quality standards but for which sufficient scientific data are not available to judge; and a verified list, that include waters determined based on sufficient, reliable data, to be failing water quality standards. FDEP must submit the

verified list to EPA for approval. Each water body on the planning list is further monitored to establish whether it truly is impaired.

How are waterbodies selected to be in the planning list and the verified list?

Pursuant to Chapter 62-303, F.A.C., the FDEP assesses whether there is an adverse trend in nutrients (nitrate-nitrite, TN or TP) or a nutrient response variable (chlorophyll a) and if the waterbody is expected to become impaired. If statistically significant adverse trends are present in causal variables, then the waterbody will initially be placed on the Planning List of potentially impaired waters so that a more rigorous statistical analysis can be conducted.

- *If statistically significant adverse trends are present in causal variables after controlling for confounding variables and the waterbody is expected to become impaired within 10 years, then the waterbody will be placed on the Study List and the Department will develop a site specific interpretation of the NNC for the waterbody.*
- *If statistically significant adverse trends are present in response variables (after controlling for confounding variables) and the waterbody is expected to become impaired within 5 years, then the waterbody will be placed on the Verified List for nutrient impairment, pursuant to subsection 62- 303.450(4), F.A.C., and a TMDL will be developed, which will be a site-specific interpretation of the NNC and set levels/allocations to upstream waterbodies.*

How is the IWR Implemented?

Overall, waterbodies are impaired under the Clean Water Act if they fail to meet their water quality standards according to the IWR. Once a water body is classified as impaired the state is obligated to develop a plan to restore their water quality. According to the Everglades West Coast Group 1 Basin/ South District verified list published by FDEP in October of 2016, the Gordon River Marine Segment (WBID 3278R5), Moorings Bay (WBID 3278Q2) and Naples Bay Coastal (WBID 3278R4) are impaired. **Table 5-3** summarizes the impairments.

Table 5-3 Status of City of Naples Waters under Existing and Potential Requirements

Water Body	Water Body Classification	Description of Water Quality Status
Moorings Bay	Class III	Impaired for mercury
Naples Bay Coastal	Class II	Impaired for copper, iron, and mercury
Gordon River Marine	Class III	Impaired for copper, iron, dissolved oxygen, and mercury
Gordon River Extension	Class III	Impaired for dissolved oxygen

The current status for impairment of waterbodies within the City of Naples is as follows. Moorings Bay (WBID 3278Q2) is impaired for mercury. The concentration causing the impairment for mercury is methylmercury > 0.3 milligrams per kilograms (mg/Kg) in edible fish tissue. A statewide mercury TMDL has been developed (FDEP 2013), but not yet adopted, and will be used as guidance to reduce mercury loads throughout the state. It should be noted that Moorings Bay was delisted from the Verified List because previous WBID number was retired (3278Q, previously called Naples Estuary), and all associated data was re-assigned to WBIDs 3278Q1 and 3278Q2. However, the current verified list of impaired waters, has no mention of WBID 3278Q2. Furthermore, WBID 3278Q1 was assigned to Clam Bay.

Naples Bay Coastal WBID 3278R4, is impaired for copper, iron, and mercury. The concentration causing impairment for copper is > 3.7 micrograms per liter (µg/L), iron is > 0.3 milligrams per liter (mg/L), and methylmercury is Hg > 0.3 mg/Kg, in edible fish tissue.

Gordon River Marine Segment, WBID 3278R5, is impaired for copper, iron, DO, and mercury. The concentration causing impairment for copper is > 3.7 µg/L, iron is > 0.3 mg/L, and methylmercury > 0.3 mg/Kg in fish tissue. Although this portion of Gordon River is identified as impaired for DO (DO is < 4.0 mg/L), the causative agent for the impairment cannot be identified; it is thus placed in Category 4d. In a FDEP Responsiveness Summary Concerning Public Comments on Chapters 62-302 and 62-303, F.A.C., the District stated: "the Department concluded that the anthropogenic issues in Naples Bay (now known as Gordon River Marine Segment) involve physical alteration (dredge and fill) and inappropriate freshwater delivery, not nutrients. In fact, the nutrients and chlorophyll a in Naples Bay are lower than many other minimally disturbed estuary segments to the south." Thus, waterbodies placed into Category 4d, such as WBID 3278R5, will be monitored for their particular impairment before the next cycle of assessments.

The Gordon River Extension (WBID 3278K) is not listed on the verified list; however, this waterbody is impaired for DO (DO is < 5.0 mg/L). A final TMDL for DO in the Gordon River Extension was proposed and adopted in 2008. The TMDL identified total nitrogen (TN) as the causative pollutant for the low DO; a median TN concentration of 0.755 mg/L was calculated during the verified period. The target concentration for TN for the Gordon River is 0.74 mg/L and is believed to be the concentration at which DO for the river will meet Class III freshwater guidelines.

Finally, none of these WBIDs were found to be impaired for nutrients.

5.3.3 TMDLs, Reasonable Assurance Plans, and Basin Management Action Plans

5.3.3.1 TMDLs

The Total Maximum Daily Load (TMDL) program was established in 1972 through Section 303 (d) of the federal Clean Water Act (CWA). The TMDLs establishes the maximum amount of a pollutant a waterbody can assimilate without exceeding established water quality standards for protection of humans and aquatic life (62-302 F.A.C.). TMDLs are established to determine the loading capacity of impaired waterbodies and to allocate that load among different pollutant sources so that the appropriate control actions can be taken and water quality standards can be achieved. TMDLs must be developed and adopted for each impairment identified on the verified lists developed through the IWR.

Florida is currently working on the development of a more comprehensive approach to protecting water quality. This new approach involves basin-wide assessments and the application of a full range of regulatory and non-regulatory strategies to reduce pollution, and the TMDL is the heart of this comprehensive approach.

Basic steps of the TMDL program include:

1. Assess the quality of surface waters--are they meeting surface water quality standards established on Chapter 62-302.
2. Determine which waters are impaired--which waterbodies are not meeting water quality standards for one of multiple pollutants (Impaired Waters Rule (IWR) - Chapter 62-303).
3. Establish and adopt, by rule, a TMDL for each impaired water body for the pollutants of concern--the ones causing the water quality problems (TMDLs - Chapter 62-304).
4. Develop, with extensive local stakeholder input, Basin Management Action Plans (BMAPs).
5. Implement the strategies and actions in the BMAP

6. Measure the effectiveness of the BMAP, both continuously at the local level and through a formal re-evaluation every five years
7. Adapt--change the plan and change the actions if things aren't working
8. Reassess the quality of surface waters continuously

The TMDL point source allocations are generally implemented through EPA's NPDES permits under CWA Section 402. This section of the Act requires that point source discharges be controlled by including water quality-based effluent limits in permits issued to point source entities. Under EPA's permitting regulations, water quality-based discharge limits in NPDES permits must be "consistent with the assumptions and requirements" of load allocations in EPA-approved TMDLs (FDEP, 2013).

To streamline the TMDL program, the FDEP adopted a five-year cycle. In 2000, the FDEP initiated development of TMDLs for the first group of basins (Group 1 - Everglades West Coast). The cycle will be repeated methodically and continuously over time, to determine the successes of clean-up efforts and problems associated with ongoing activities, make necessary changes, and consider and address new circumstances associated with growth and development. In addition, the Watershed Restoration Act directs the FDEP to report to the Governor and legislature after five years on the implementation of the TMDL program and recommend statutory changes necessary to improve it.

The City of Naples is part of the Group 1 Basin, Everglades West Coast Planning Unit in the South District. Not all listed impaired waters in City of Naples have TMDLs. Development of Naples Bay 2-year plan TMDL is still in progress. However, a Phase II municipal separate storm sewer system (MS4) permit (Permit Number FLR04E080) has been established for WBID 3278K, WBID 3278R5, and 3278R4 of the Gordon River Extension, Gordon River Marine Segment and Naples Bay coastal area. A TMDL was developed for DO with TN as the causative pollutant for the Gordon River Extension. The Gordon River Marine Segment is impaired for DO, iron, and copper. Naples Bay Coastal area is impaired for iron, copper, and mercury. TMDLs should be developed.

Waterbodies have been delisted due to retired WBID number and subdivision of old WBIDs into smaller ones. Changes in the WBID numbers have resulted in elimination of areas previously identified as impaired for fecal coliforms.

Implementation of TMDLs:
The Watershed Restoration Act of 1999 (s. 403.067, F. S.) directs FDEP to scientifically evaluate the quality of Florida's surface waters and promote the mechanisms necessary to clean up pollution. The threshold limits on pollutants in Florida surface waters, on which TMDLs are based, are set forth primarily in rule 62-302, F.A.C., and the associated table of water quality criteria. The law further directs FDEP to promote, in conjunction with Florida's water management districts, the Department of Agriculture and Consumer Services, local governments, and other affected parties, the specific mechanisms to accomplish the pollutant reductions necessary to meet the TMDL.

5.3.3.2 Basin Management Action Plans (BMAPs)

Adopted TMDLs are implemented through Basin Management Action Plans (BMAPs). BMAPs provide strategies and guidance to reduce and prevent discharges of the causative pollutant(s) identified in the TMDL. FDEP and the affected stakeholders collaborate to develop BMAPs or other implementation approaches. A basin may have more than one BMAP, based on practical considerations. The Florida Watershed Restoration Act (FWRA) contains provisions that guide the development of BMAPs and other TMDL implementation approaches (FDEP 2012b).

BMAPs typically include (FDEP 2008):

- Appropriate load reduction allocations among the affected parties
- A description of the load reduction activities to be undertaken, including structural projects, nonstructural BMPs, and public education and outreach

- A description of further research, data collection, or source identification needed to achieve the TMDL
- Timetables for implementation
- Confirmed and potential funding mechanisms
- Any applicable signed agreement(s)
- Local ordinances defining actions to be taken or prohibited
- Any applicable local water quality standards, permits, or load limitation agreements
- Milestones for implementation and water quality improvement
- Implementation tracking, water quality monitoring, and follow-up measures

Progress assessments of adopted BMAPs are conducted every five years and revisions are made as needed, in cooperation with stakeholders.

5.3.3.3 Reasonable Assurance Plans

In some cases, Reasonable Assurance Plans (RAPs) are implemented for impaired waterbodies rather than TMDLs. Most waters that are verified as being impaired by a pollutant will be listed on the state's Verified List pursuant to the FWRA and Section 303(d) of the Clean Water Act. Once a waterbody is listed, TMDLs are developed for the causative pollutant(s). However, as required by the FWRA, the FDEP will evaluate whether existing or proposed pollution control mechanisms will effectively address the impairment before placing a waterbody on the state's Verified List. If it is found and documented that there is reasonable assurance that the impairment will be effectively addressed by the existing or proposed control measure(s), then the waterbody will not be listed on the final Verified List and therefore will not require a TMDL. From there it is determined if the waterbody will be placed in the 4b (Evaluation of Pollution Control Mechanisms) or 4e (Study List) category.

The rules for the 4b and 4e categories are as follows:

- 62-303.600 Evaluation of Pollution Control Mechanisms.
  (1) Upon determining that a water body is impaired, the Department shall evaluate whether existing or proposed technology-based effluent limitations and other pollution control programs under local, state, or federal authority are sufficient to result in the attainment of applicable water quality standards.
  (2) If, as a result of the factors set forth in (1), the water segment is expected to attain water quality standards in the future and is expected to make reasonable progress towards attainment of water quality standards by the time the next 303(d) list is scheduled to be submitted to EPA, the segment shall not be listed on the verified list. The Department shall document the basis for its decision, noting any proposed pollution control mechanisms and expected improvements in water quality that provide reasonable assurance and that the water segment will attain applicable water quality standards.

- 62-303.390 The Study List.
  (2) A Class I, II, or III water shall be placed on the study list if: . . . .
  (d) A waterbody segment where pollution control mechanisms are in place or planned that meet the requirements of Rule 62-303.600, F.A.C., except that there is uncertainty when water quality standards will be attained and the waterbody segment requires additional study.

Waterbodies with restoration plans meeting the requirements of Rule 62- 303.600, F.A.C. ["4b plans" or "Reasonable Assurance Plans ("RAPs")] are not placed on the Verified List. For RAPs, there is reasonable assurance that pollution control mechanisms will result in water quality standards being met in

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the future and reasonable progress towards meeting the water quality standards will be made by the time the next Verified List that includes the basin of the affected waterbodies is scheduled to be submitted to EPA.

It is FDEP's responsibility to assure adequate documentation in the administrative record whenever it decides not to list an impaired waterbody. However, the Department expects local stakeholders (including state and local government) to prepare the necessary documentation to demonstrate reasonable assurance that their proposed control mechanisms will restore the waterbody to the current water standards. FDEP provides guidance to stakeholders on what information is needed and how it should be submitted. Standard documentation for RAPs include the descriptions of the impaired waterbody, water quality or aquatic ecological goals, procedures for monitoring and reporting results, and proposed corrective actions (FDEP 2015b).

5.3.4 NPDES Program

The National Pollutant Discharge Elimination System (NPDES) was developed by the U.S. Environmental Protection Agency (EPA), as part of the Clean Water Act of 1972. The NPDES stormwater permitting program was developed in two phases. Phase I was implemented in 1990, and addresses requirements for municipal storm sewer systems (MS4s) for large municipalities (population ≥100,000) and other industrial activities that disturbs >5 acres of land. Phase II was promulgated in 1999, and addresses additional sources, including MS4s not regulated under Phase I, and small construction activities disturbing between 1 and 5 acres of land.

In October 2000, the EPA authorized the Florida Department of Environmental Protection (FDEP) to implement the NPDES stormwater permitting program in the State of Florida. FDEP's authority to administer the NPDES program is set forth in Section 403.0885, Florida Statutes (F.S.). The NPDES stormwater program regulates point source discharges of stormwater into surface waters of the State of Florida from different municipal, industrial and construction activities. As the NPDES stormwater permitting authority, FDEP is responsible for promulgating rules and issuing permits, managing and reviewing permit applications, and performing compliance and enforcement of these activities. This stormwater permitting program is separate from the State's stormwater/environmental resource permitting programs authorized by Part IV, Chapter 373, F.S. (593 KB) and implemented by FDEP, as well as the water management districts using these rules, and from local stormwater/water quality programs, which have their own regulations and permitting requirements.

The City of Naples was permitted under Phase II of the NPDES program, through FDEP permit number FLR04E080, on November of 2003. The permit is an ongoing process that requires the City to report all efforts implemented for pollution prevention management.

5.3.5 Naples Bay under the State's SWIM Act

In recognition of the need to place additional emphasis on the restoration, protection and management of the surface water resources of the State, the Florida Legislature, through the Surface Water Improvement and Management (SWIM) Act of 1987, directed the State's water management districts to "design and implement plans and programs for the improvement and management of surface water" (Section 373.451, Florida Statutes). The SWIM legislation requires the water management districts to protect the ecological, aesthetic, recreational, and economic value of the State's surface water bodies, keeping in mind that water quality degradation is frequently caused by point and non-point source pollution, and that degraded water quality can cause both direct and indirect losses of aquatic habitats.

The South Florida Water Management District (SFWMD) ranked Naples Bay as a Tier 2 waterbody on the SFWMD priority list approved in 2001. In 2003, the development of a SWIM plan for Naples Bay Watershed (NBW) was authorized by the SFWMD Governing Board.

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In preparation for development of the NBW SWIM Plan, a NBW SWIM Reconnaissance Report was authorized in 2005. The objective of the Reconnaissance Report was to identify sources of existing data, identify gaps in existing data, and identify related programs within the Study Area. The intent of the report was to provide a meaningful resource for the development of the NBW SWIM Plan.

The NBW SWIM Plan focuses on the following four primary initiatives:

1. Initiative 1 - Water Quality: consists of two distinct but interrelated strategies: Water quality and flow monitoring; and water quality modeling.

2. Initiative 2 - Stormwater Quantity: focuses on identifying inflows from canals and stormwater conduits, including non-point discharges, and on mechanisms to reduce these excess flows and restore more natural timing and quantity of freshwater inflows to the Bay.

3. Initiative 3 - Watershed Master Planning and Implementation: assist local governments in coordinating their plan implementation and construction of projects through a prioritized stormwater retrofit program. A key tool for implementation is solicitation of available federal and state funding and identification of other partnering opportunities.

4. Initiative 4 - Habitat Assessment, Protection and Restoration: develop maps to identify areas for habitat protection and restoration in the NBW. Additional data collection efforts for parameters such as benthic organism diversity, submerged aquatic vegetation distribution, and shellfish areas will be evaluated and implemented as necessary.

Using the initiatives aforementioned, the NBW SWIM Plan included strategies and action steps to achieve each initiative such as expanding water quality monitoring network and water quality model to assist in pollutant loading development and testing, modeling of salinity levels, evaluate aquifer storage and recovery wells, updating stormwater master plans for the stakeholders, and develop habitat maps. The SWIM Plan also identified the need to establish TMDLs for the NBW to control and understand the pollutant loadings contributing to the NBW. One of the important roles that local government, including City of Naples, plays in maintaining water quality in the NBW is through the improvement and maintenance of stormwater water facilities, drainage easements, catch basins and other facilities under their jurisdiction. The SWIM Plan identified capital improvement projects for the City of Naples that would improve the NBW. **Table 5-4** summarizes the Water Quality Initiative Projects.

Table 5-4 Water Quality Initiative Projects

Water Quality Initiative Projects	Cost Estimate for Identified Projects	Cost Estimate for Scheduled Projects
Naples Bay Outfall Treatment Project—Naples City Campus Stormwater Sheet Flow	$250,000	
NPDES Phase II Stormwater Public Education & Public Outreach Control Measure	$200,000	
Watershed Master Planning and Implementation Projects		
Naples Bay Basin Management Plan	$450,000	
Beach Management Plan for Removal of Ten Stormwater Outfalls	$380,000	
Lake Water Quality Management Plan	$225,000	
Stormwater Drainage Inventory, Inspection & Evaluation	$600,000	
Basin III Stormwater System Improvements	$3,100,000	

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Basin V Stormwater System Improvements	-	
Basin VI Water Quality & Flood Mitigation Improvements	$200,000	
Naples Stormwater Master Plan Update		$87,000
Detention Improvements at 13th Street North Pond	$44,850	
Pipe and Detention Improvements along 10th Avenue North	$412,620	
Detention Improvements at 15th Avenue North Pond	$29,900	
Weir Modifications Adjacent to Reach 03	$22,975	
Broad Avenue South Linear Park and Filter Marsh	$4,200,000	
Goodlette-Frank Road Water Quality Greenway	-	
Cove Pump Station Mangrove Filter Marsh	-	
Lake Park Neighborhood Stormwater Treatment System	$2,200,000	
Spring Lake Stormwater Improvements	-	
Royal Harbor Concrete Swale Retrofits	$828,000	
Lakes to Bay Goodlette-Frank Conservancy Filter Marsh System	-	
Habitat Assessment, Protection and Restoration Projects		
Naples Bay Estuarine Population Survey		$100,000

In discussions with SFWMD Big Cypress Basin in August 2017, there are no current plans for updating the NBW SWIM Plan. However it is noted by SFWMD in the NBW SWIM Plan that this plan is a living document that will be updated periodically, especially to reflect findings and recommendations of the Southwest Florida Feasibility Study as it appropriately relates to the NBW and its water quality improvements.

5.3.6 City's Stormwater Management Regulation Program

It is the responsibility of the City, through its Stormwater Management Division (in partnership with other departments such as Building, Planning and Community Services), to effectively and efficiently regulate, manage and maintain stormwater drainage infrastructure and surface water bodies to meet growth management goals of flood prevention, groundwater recharge, wetland preservation and water quality protection (http://www.naplesgov.com/index.aspx?NID=382)

The stormwater management function is critical to achieving the City's current vision statement:

"Naples shall remain a premier City by continuing to protect its natural resources, enhance City aesthetics, ensure public safety, and continue to improve the quality of life for all who live in the City and visit through the year."

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5.4 Evaluation of the City's Water Quality Monitoring Program

The City of Naples, Natural Resources Division, currently monitors surface estuarine waters in Naples Bay, the Gordon River, and Moorings Bay. Prior to January 2006, limited water quality monitoring in Naples Bay had been carried out by FDEP and Collier County. However, in January of 2006, the City's Natural Resources Division established a scientific and technically valid water quality sampling program. Since that time, the water quality of Naples Bay and the Gordon River has been sampled on a monthly basis at 16 different locations; 8 one month and 8 different sites the next month. In October 2008, 4 sites were added in Moorings Bay. Sites were revamped in January 2011 for Naples Bay and the Gordon River so that a total of 8 sites are sampled every month and some relocated sites are sampling water coming into the City from creeks and outfalls that drain County lands. This will allow staff to determine what pollutants are entering the City limits and where they are coming from.

The City's monitoring program was further upgraded in 2016 to address comments on the City's water quality monitoring program by Cardno (2015c). Cardno recommended reducing the number of and standardizing stormwater monitoring locations to allow more frequent monitoring at a consistent set of locations. The frequency of stormwater monitoring has been increased to monthly. In Naples Bay, an additional monitoring station was added.

Parameters that are measured include turbidity, salinity, temperature, DO, and other physical parameters, and water samples are laboratory-tested for various nutrient, bacteria, and heavy metals. Having met the vigorous quality assurance and quality control requirements of the FDEP, the data is entered into the official State of Florida data storage system (formerly known as STORET). The City analyzes this data to assess trends and make management decisions concerning the restoration of Naples Bay.

The City of Naples Stormwater Master Plan Update will focus on well-documented parameters and pollutants affecting water quality and ecology of main waterbodies and treatment ponds. Key parameters to be addressed and monitored include nutrients (nitrogen and phosphorus), a metal (copper), bacteria (Enterococci sp.), total suspended solids (TSS), and DO.

According to FDEP, the number one pollutant in Florida is stormwater runoff, and the City's stormwater system conveys runoff laden with pollution to natural water bodies. This is in addition to the freshwater inflow from the GGC that also conveys large annual loads of pollutants into Naples Bay. The bay has been designated as an impaired water body for copper by both FDEP and the U.S. Environmental Protection Agency. Additionally, the bay has been listed as impaired for iron by the FDEP. In January of 2006, the Natural Resources Division established a water quality sampling program that FDEP considers to be scientifically valid. Since that time, the water quality of Naples Bay has been continuously tested on a monthly basis. Staff also sample Moorings Bay monthly on behalf of the Moorings Bay Special Taxing District. This mostly artificial lagoon receives stormwater runoff from approximately 75 inflow pipes and also takes in water from Clam Bay to the north through culverts under Seagate Drive. However, its water quality is better than Naples Bay due to the flushing effect of daily tides entering this confined and sea walled bay through Doctors Pass.

In 2014, the City hired a consulting firm with expertise in statistical analysis of environmental data to determine if significant trends existed in the water quality data over time and by location. They found that nutrients are declining, but copper and bacteria are increasing. There are two likely reasons for these results: one is that the fertilizer laws in the City and County are making a difference with respect to fertilizer runoff while, at the same time, the County is undergoing tremendous growth with more bacteria and copper inputs without source control programs. There are three major actions the City can take to further address these pollution issues: one, build more natural structural treatment facilities such as filter marshes, swales, and retention areas; two, change people's behavior through education and outreach; and three, lobby the state and county to divert water out of the GGC before it reaches Naples Bay.

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5.4.1 Past and Current Water Quality and Biological Monitoring Programs

Sources to Naples Bay: Currently, the only major input to Naples Bay being quantified is the Main GGC system. The SFWMD maintains daily flow records for the three weirs in the GGC. Although the GGC may represent the most significant input of freshwater into Naples Bay, other tributaries also provide freshwater inflow and potential pollutants associated with that inflow that are not currently being quantified (i.e. Gordon River, Rock Creek, and Haldeman Creek).

Upland Stormwater Monitoring: The City currently conducts monthly water quality monitoring in 10 of the City's 28 stormwater lakes and quarterly monitoring of the three pump stations and an additional 5 lakes.

Naples Bay Water Quality Monitoring: The City is currently monitoring 9 locations in Naples Bay and the marine segment of the Gordon River. Three of these locations have been monitored on a bi-monthly and monthly basis since 2005, while the remainder were relocated to different areas in 2011 and are currently sampled monthly. The three long-term locations along with other stations that were added back into the sampling program provide a general characterization of Naples Bay, while 6 other stations are located in areas to represent stormwater and tributary inputs to the Bay. Additional sub-set of stations monitored from 2005 to 2010 have been discontinued.

Biological Monitoring: Currently, the City conducts bi-monthly monitoring of fish in Naples Bay using an otter trawling technique. The program uses a random monitoring design in each of four zones covering the Gordon River (Marine Segment), Naples Bay proper, and the Port Royale canal area. Monitoring was specifically designed to mimic the Rookery Bay National Estuarine Research Reserve fish monitoring program to allow for comparisons between the two systems. Quarterly trawling is also conducted in Moorings Bay. In addition to fish, the City conducts annual monitoring of the existing seagrass beds in southern Naples Bay.

5.4.2 Summary of Water Quality and Biological Data

All water quality data discussed in this section refers to data, up to 2014, reported and analyzed in the Cardno report (2015a), and additional 2015 data provided by the City.

Water quality data evaluated in the Cardno report were obtained from the South Florida Water Management District (SFWMD), Collier County, and the Florida **STO**rage and **RET**rieval (STORET) database. However, the primary source of data was the City of Naples Natural Resources Division. **Table 5.5** provides a brief description from each source (Cardno, 2015a).

In preparation of this Stormwater Master Plan update, water quality data prepared for upload to FDEP STORET was acquired from the City of Naples for 2015 and reviewed. The data from 2015 was not available to Cardno at the time of their report.

The 2015 data supports the increasing trends that Cardno observed for copper, chlorophyll-a, turbidity, and fecal coliform bacteria. Additionally, the 2015 data supports the decreasing trend in nutrients that Cardno observed.

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Table 5-5 Water Quality and Quantity Data Sources Used in Cardno Report (2015a)

Data Source	Location	Data Type	Number of Stations	Data Range	Number of Records
City of Naples	Naples Bay	Grab	16	2005-2010	480
	Naples Bay	Grab	8	2011-Present	384
	Stormwater lakes	Grab	15	2010-Present	81
	Pump Stations	Grab	3	2010-Present	32
	Pump Stations	Flow	3	2011-2014	Annual Totals
Collier County	Naples Bay and Tributaries	Grab	7	1995-2014	1900
	Collier County Facilities Management	Rainfall	1	2008-2014	Daily Records
USGS	Naples Bay	Continuous recording	4	2011-2014	440,420
SFWMD	Naples Bay	Grab	14	2000-2014	49,260
	GGC	Flow	1	2008-2014	Daily Records
NOAA-NERRS	Henderson Ck	Continuous recording	1	2011-2014	118,000
NOAA	GGC	Rainfall	1	1977-2014	Daily Records
FDEP STORET	Naples Bay	Grab	62	1998-2014	770
FDEP	Estero Bay	Continuous recording	3	2011-2014	143,140

For copper, the 2015 data supports the increasing trends that Cardno observed with the exception of site ROCKCR (see **Figure 5-3** below). At ROCKCR, the frequency of samples exceeding 3.7 µg/L of copper was lower than 2012-2014 and only slightly higher than 2011 (the first year samples were collected at this site). However, although 2015 data for copper follows the overall increasing trend that Cardno observed, the 2015 data shows that at all but one site (HALDCR) copper was lower in 2015 than in 2014. **Figure 5-3** shows the annual copper frequency above 3.7 µg/L.

The 2015 geometric mean for chlorophyll-a in Naples Bay was 6.15 µg/L, which is consistent with Cardno's findings through 2014 (see Cardno 2015a, Figure 3-27). For nutrients, the 2015 geometric mean for TN (0.11 mg/l) and TP (0.03 mg/l) in Naples Bay were also consistent with the results observed by Cardno through 2014 (see Cardno 2015a, Figure 3-22 and Figure 3-23).

For turbidity, the 2015 range of lognormal values for GORDEXT (0.47-1.46 NTU), GPASS6 (0.47-2.94 NTU), NBAYNL (0.74-1.86 NTU), and NBAYWS (0.59-1.99 NTU) are consistent with the trends observed by Cardno through 2014 (see Cardno 2015a, Figure 3-31).

For fecal coliform bacteria, the 2015 range of lognormal values for GORDEXT (4.13-6.25 cfu/100ml), GPASS6 (0.69-4.36 cfu/100ml), NBAYNL (2.20-6.82 cfu/100ml), and NBAYWS (0.69-5.44 cfu/100ml) are consistent with the trends that Cardno observed through 2014 (see Cardno 2015a, Figure 3-33). For enterococci bacteria, the 2015 range of lognormal values for GORDEXT (2.30-4.80 cfu/100ml), GPASS6 (2.30-3.95 cfu/100ml), NBAYNL (2.30-5.06 cfu/100ml), and NBAYWS (2.30-3.71 cfu/100ml) are consistent with the trends that Cardno observed (see Cardno 2015a, Figure 3-34).

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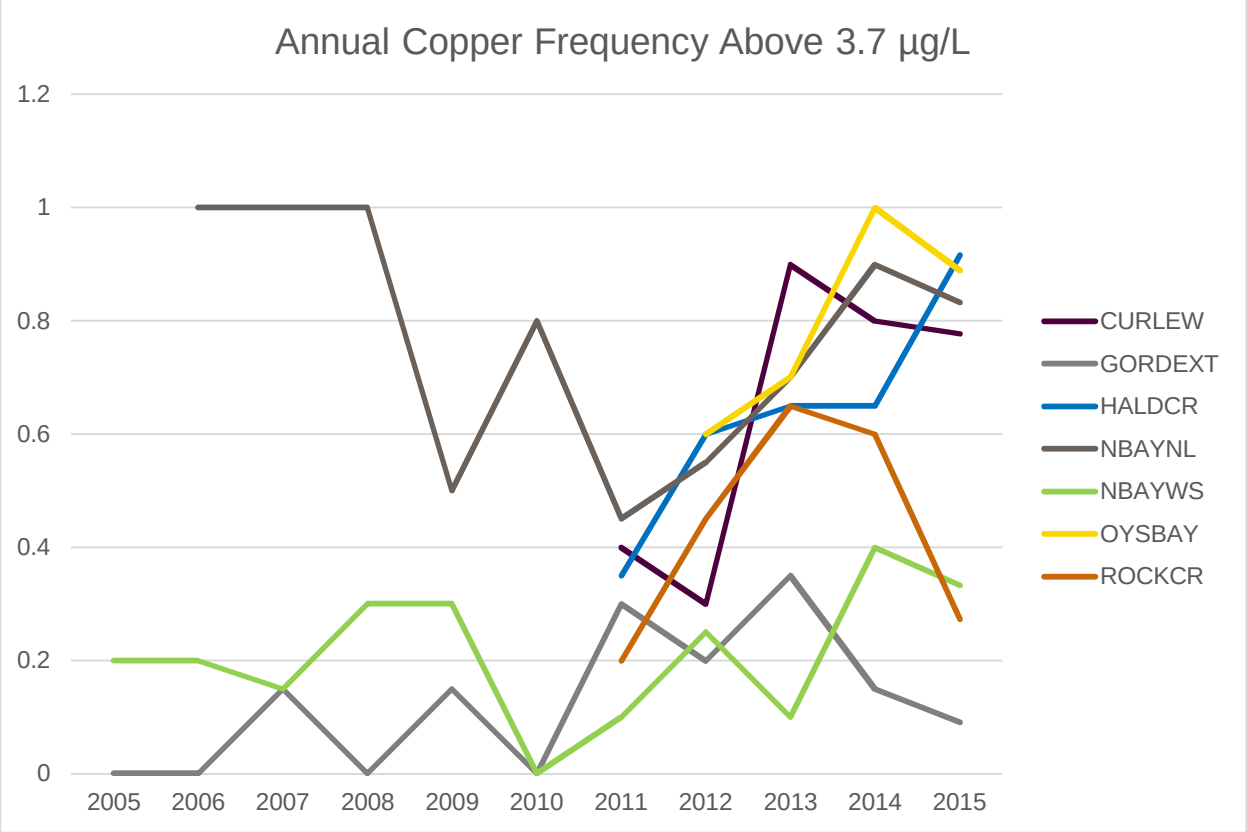
Figure 5-3 Annual Copper Frequency Above 3.7 µg/L (Cardno 2015a, STORET 2015 Data)



Golden Gate Main Canal

Daily flow data from GGC Weir 1 are available from September 21, 2008 through December 31, 2014. Average daily flow over this time period was approximately 77 million gallons per day (mgd), including times of no flow. When the GGC1 Weir 1 is flowing, the average daily discharge is 123 mgd.

Total freshwater flow during the six months of the wet season (June–November) ranges from approximately 10 to over 40 billion gallons, typically constituting over 90 percent of the annual freshwater flow delivered from the GGC to Naples Bay.

Along with the large volume of freshwater, the GGC also delivers significant loadings of potential pollutants to Naples Bay. Although several water quality constituents are monitored at this location, the analysis reported in the Cardno report (2015a), and summarized herein, will focus on nutrients, copper, and suspended solids as the constituents of concern that represent potential impacts to the Bay. Pollutant loadings were calculated for the 2009 to 2014 period, using water quality measurements from the GGCAT31 sampling location. Over the 2009-2014 time period, the average daily loadings from the GGC were approximately 0.45 lbs/day copper; 495 lbs/day nitrogen; 16.5 lbs/day phosphorus; and 1,945 lbs/day suspended solids. With the exception of copper, the time periods with the highest loadings (2010 and 2013) were observed during years with the greatest flow from GGC (**Figure 5-4**).

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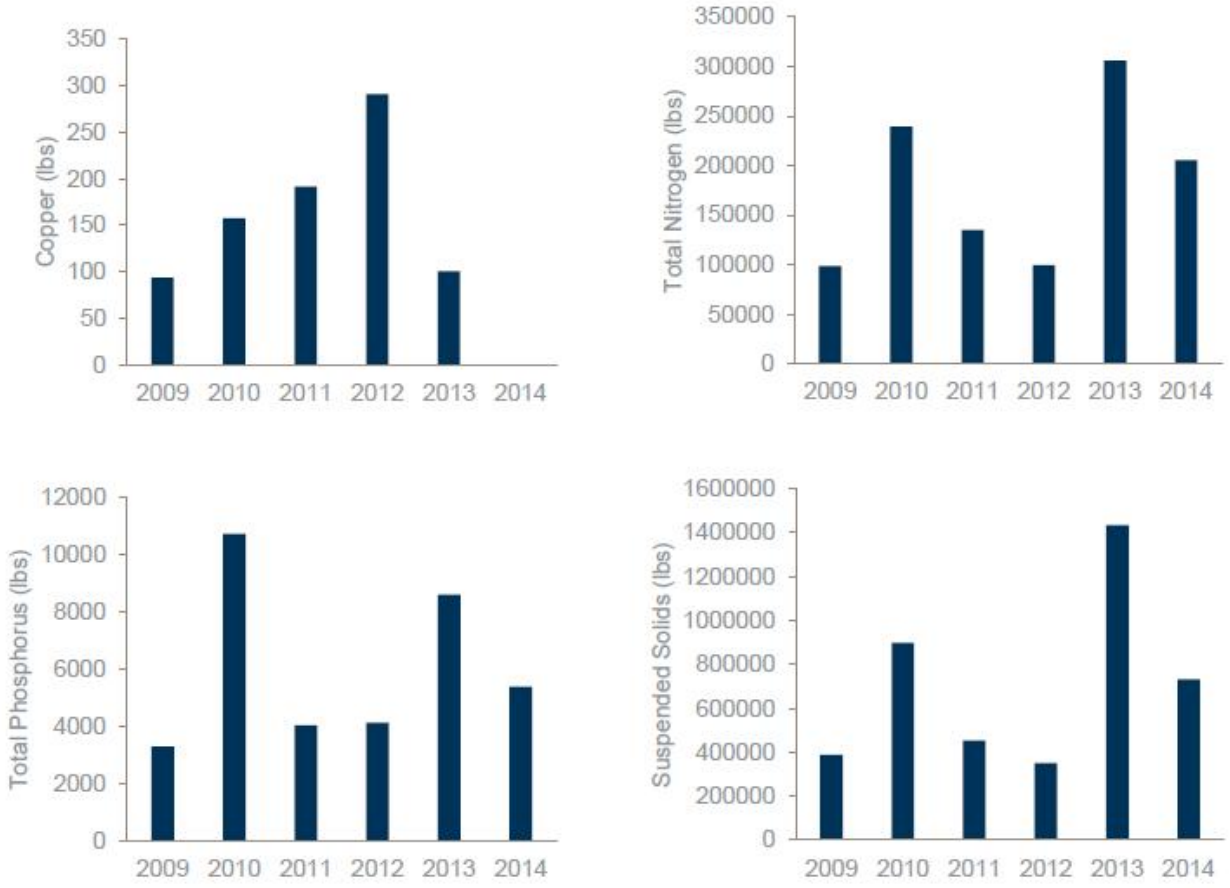
Figure 5-4 Total Annual Loads from the Golden Gate Canal System into the Gordon River (Marine Segment) and Naples Bay, 2009-2014 (Figure reprinted from Cardno, 2015a)



Urban Stormwater Runoff

Currently, 15 of the 28 stormwater lakes within the City and all three pump stations are included in the water quality monitoring program as shown in **Figure 5-5**. Of the stormwater lakes in the monitoring program, four discharge to Moorings Bay, six discharge to the Gordon River (Marine Segment) above the SR 41 bridge, one discharges to northern Naples Bay, two discharge to the Port Royal canal area, and two discharge to the Gulf of Mexico. For the purposes of representing the water quality that enters receiving waterbodies, only data collected at the discharge point of each stormwater lake is included in the analysis. However, due to the small sample size and inconsistent sampling frequency a time series analysis was not developed.

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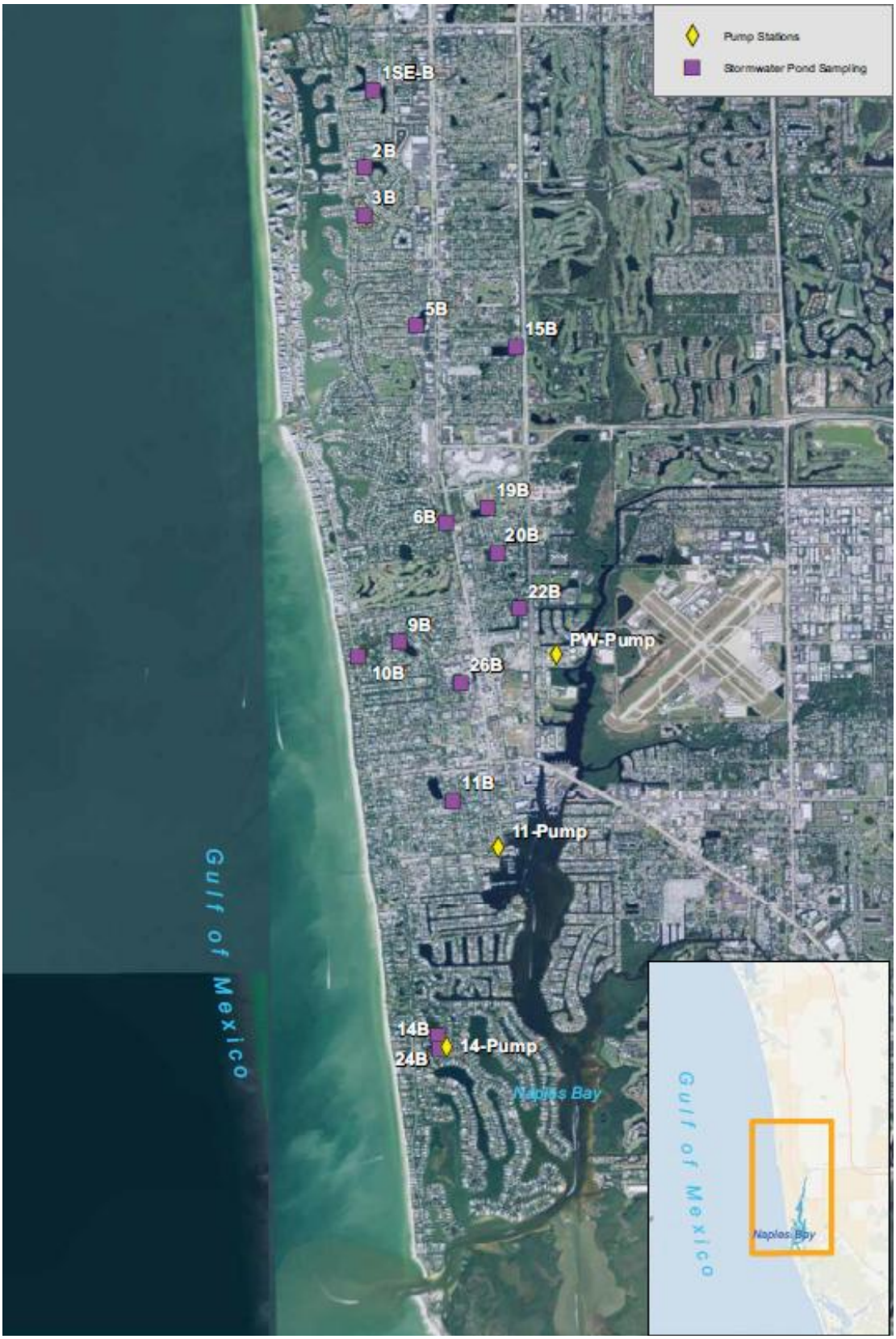
Figure 5-5 Stormwater Lake and Pump Stations Water Quality Monitoring Locations (Figure reprinted from Cardno, 2015a)



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Characterization of water quality in stormwater contributions also focused on the major parameters of concern, and included copper, nutrients, suspended solids, and bacteria (fecal coliform and enterococci). In addition, calculations of loads to Naples Bay from the pump stations were performed for three distinct time periods: water year 2012 (October–September 2012); calendar year 2013, and calendar year 2014. The average daily loadings to Naples Bay from the three pump stations over the available time period were approximately 0.032 lbs/day copper; 12.9 lbs/day total nitrogen; 1.9 lbs/day total phosphorus; and 37 lbs/day total suspended solids. Additional loading information per year by pump station is described in **Table 5.6**.

Table 5-6 Total Annual Loads Delivered to Naples Bay through City of Naples Pump Stations (Cardno, 2015a)

		Total Annual Loads (lbs)		
Pump Station	**Parameter**	**WY2012**	**2013**	**2014**
PW-Pump	Copper	33.1	-	-
	Total Nitrogen	2566.9	-	-
	Total Phosphorus	162.6	-	-
	Suspended Solids	10425.3	-	-
11-Pump	Copper	8.3	11.3	5.4
	Total Nitrogen	5730.3	8755.3	1978.6
	Total Phosphorus	930.5	829.5	346.5
	Suspended Solids	14371.9	11514.7	5376.1
14-Pump	Copper	5.9	8.4	9.9
	Total Nitrogen	356.1	9393.5	4290.4
	Total Phosphorus	130.7	982	1427.8
	Suspended Solids	15219.8	24549.4	13526.9

Naples Bay

The water quality analysis provided in this section focuses on constituents that affect water quality in Naples Bay and have regulatory significance such as, salinity, nutrients, chlorophyll *a*, copper, turbidity, DO, and bacteria (fecal coliform and enterococci). In addition to a graphical and tabular interpretation of conditions of water quality in Naples Bay, the Cardno report (2015a) provides several types of statistical analyses for each constituent of concern at long-term data stations throughout the bay (**Figure 5.6**). Statistical methods include, autoregressive error time-series models, predictive models between salinity and flow, Inverse Distance Weighting spatial interpolation, regression analysis, and parametric and nonparametric correlation analyses. Specific details of the statistical analysis or date related to predictive models are not discussed herein.

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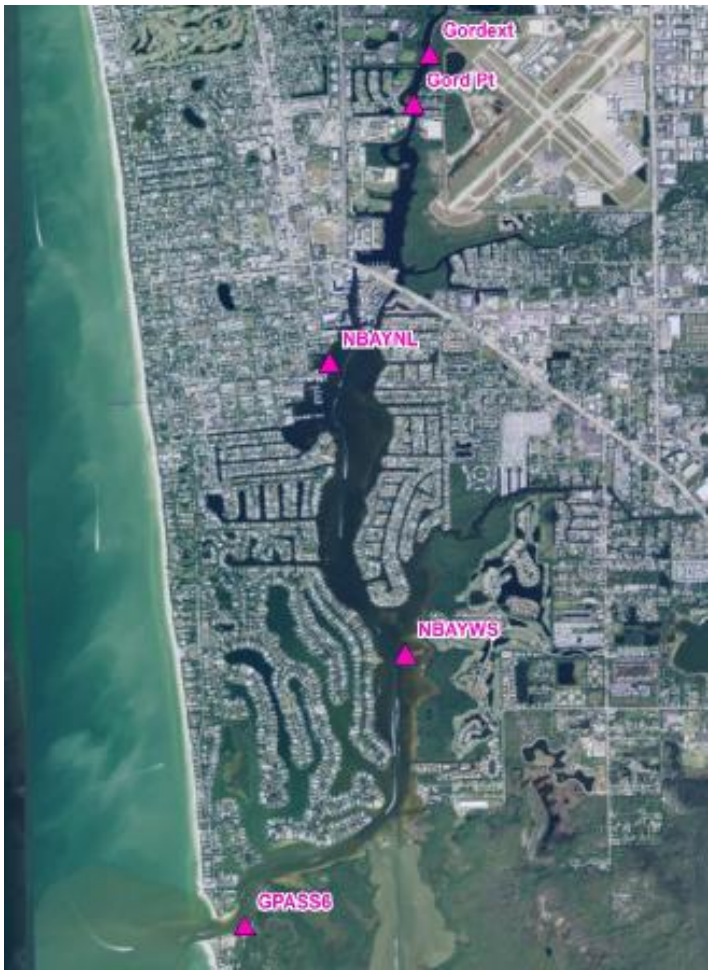
Figure 5-6 Naples Bay Long-Term Water Quality Monitoring Locations (Cardno, 2015a)



Salinity: All four USGS continuous monitoring stations (**Figure 5-7**) showed a negative relationship between GGC flow and average daily salinity (National Exponential Regression: Rowing Club Point R_2 = 0.86, City Dock R_2 = 0.92, Mid Estuary R_2 = 0.90, Gordon Pass R_2 = 0.79; $p < 0.05$), indicating that the entire bay is affected by the GGC flow. When GGC flow is greater than approximately 300 cfs, the average salinity in the Gordon River above the SR 41 bridge drops below the regulatory threshold of 2.7 ppt for marine water (62-302.200(30), F.A.C.), turning this section of the Gordon River into a freshwater system. The vast majority of flow from the GGC occurs during the wet season and, as a result, the average salinity during summer months is much lower than during the winter. The seasonal differences in flow result in a more dramatic salt gradient during the wet season that pushes into northern Naples Bay from the Gordon River.

Results of the Autoregressive Error Model (AEM) time-series model analysis indicate salinity in Naples Bay is not changing over time ($p > 0.05$), although the model confirmed that GGC flow and rainfall have a statistically significant negative relationship with salinity in Naples Bay for most stations ($p< 0.05$).

Copper: As discussed in previous sections, the FDEP listed Naples Bay (WBID 3278R4) as impaired for copper in 2009 along with Rock Creek (WBID 3278R3), Haldeman Creek (WBID 3278R1), and the Gordon River (Marine Segment) (WBID 3278R5) that contribute to Naples Bay. Cardno (2015a) evaluated the spatial and temporal status of copper in Naples Bay relative to the Class II water quality standard of 3.7 µg/L. The highest copper concentrations were consistently found in Haldeman Creek, where annual average concentrations are four to eight times higher than the water quality standard at the SR 41 (Tamiami Trail Rd.) monitoring location.

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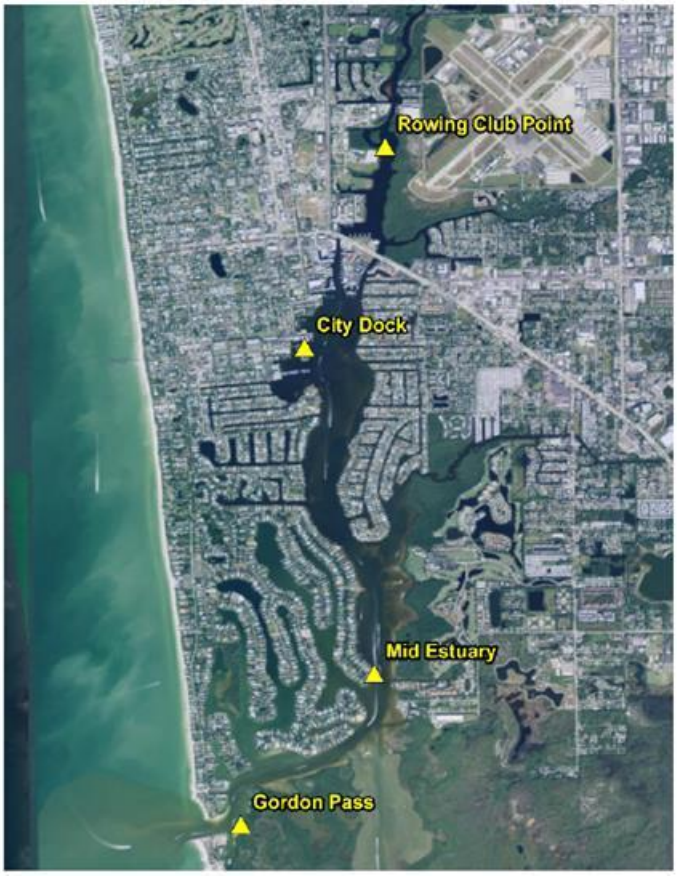
Figure 5-7 USGS Continuous Recorder Stations (Cardno, 2015a)



Copper concentrations at GGCAT31/3945 and GPASS6 were always below the 3.7 µg/L criteria and, therefore, were not included in the analysis. This indicates that copper concentrations delivered to Naples Bay from the GGC and at Gordon Pass do not exceed the water quality standard. Two other stations, HALDCRK and BC5, were above the threshold almost 100 percent of the time. The data from HALDCRK and BC5 were analyzed using the annual average concentrations instead of percentage of samples above the water quality standard. The water quality monitoring station locations are shown in **Figure 5-8**.

When considering the frequency of results above the threshold of 3.7 µg/L, patterns vary from station to station. GORDEXT/GORDPT has a statistically significant increase in the percent of copper measurements above 3.7 µg/L over time ($r = 0.66$, $p < 0.05$). NBAYNL shows a statistically significant decrease over time in the percent of copper measurements above 3.7 µg/L from 2006 to 2012 ($r = -0.80$, $p < 0.05$) and then a statistically significant increase over time from 2012 to 2014 ($r = 0.99$, $p < 0.05$). At NBAYWS, the percent of copper measurements above 3.7 µg/L was relatively consistent from 2005–2009, dropped to 0 percent in 2010, and then showed a strong but not significant increase from 2010 to 2014. BC2 showed a strong, but not statistically significant, increase in percent of copper measurements above 3.7 µg/L. Of the four stations with only four years of data (ROCKCR, CURLEW, OYSBAY, HALDCR), one showed a statistically significant increase (OYSBAY, $r = 0.98$, $p < 0.05$) in percent of copper above 3.7 µg/L over time. The other three showed high correlation coefficients (> 0.77) and visually clear increases in the percent of samples with copper concentrations above 3.7 µg/L over time from 2011 to 2014, but the increases were not statistically significant because of the small sample size ($0.1 < p < 0.25$). These four stations are located where tributaries enter Naples Bay (HALDCR and ROCKCR) or in dead end canals (OYSBAY and CURLEW) where stormwater enters the Bay.

The annual average copper concentrations at BC5 and HALDCRK (the stations where copper concentrations are almost always above 3.7 µg/L) do not show a significant correlation with time for either the arithmetic or geometric mean over the period of record (2001–2013). Although the data analysis

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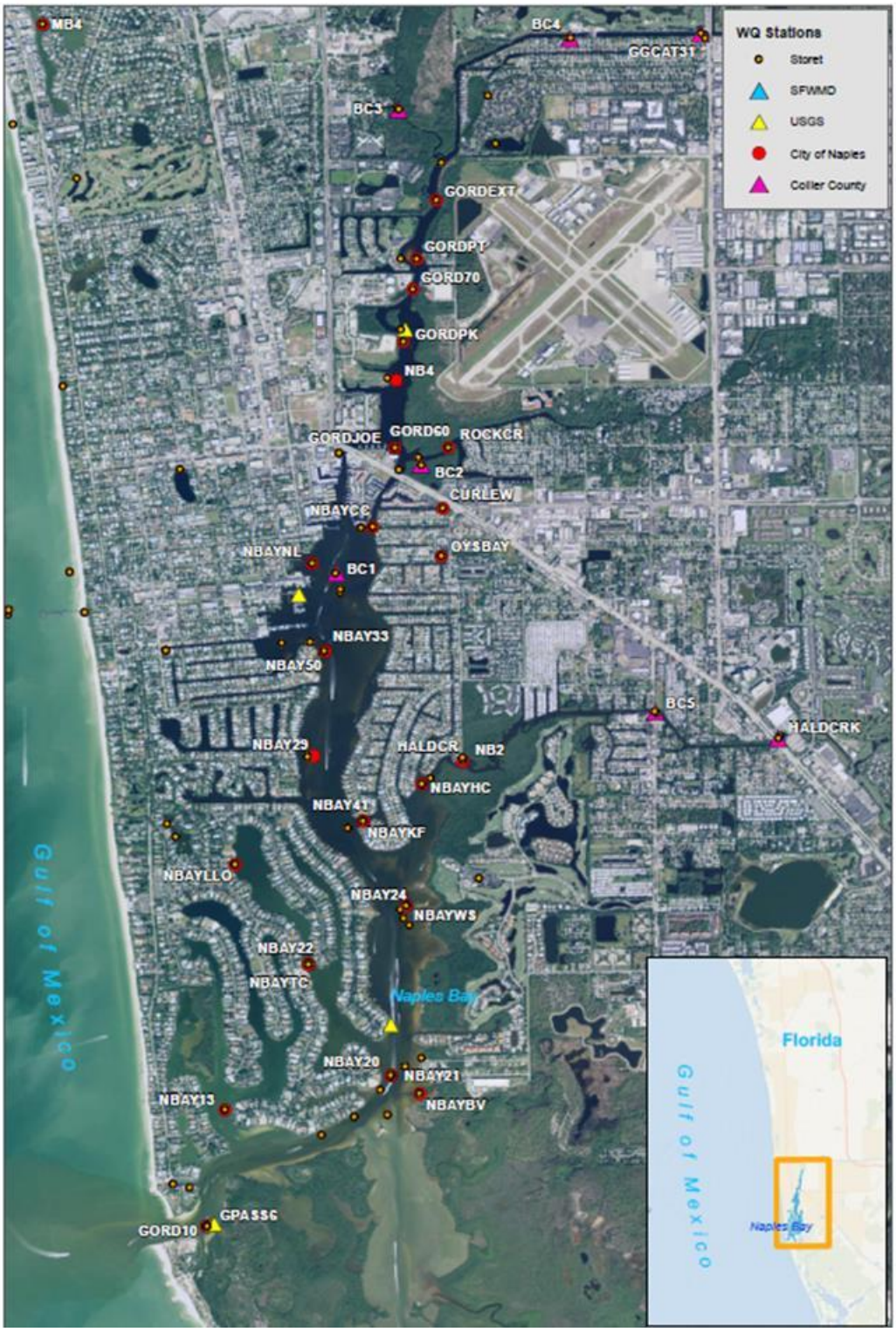
shows that while copper is spatially variable among the stations in Naples Bay and the tributaries, several stations appear to exhibit copper that is more frequently above the water quality standard in more recent years compared to earlier years in the dataset.

Figure 5-8 Water Quality Data Locations, Naples Bay (Cardno, 2015a)



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Nutrients (TN and TP): NNC for Naples Bay were adopted by the FDEP's Environmental Regulatory Commission (ERC) in 2011 and approved by EPA in 2012. The Naples Bay NNC is expressed as annual geometric mean concentrations that are not to be exceeded more than once in a three year period. The allowable concentrations are as follows:

- Total Nitrogen (TN) = 0.57 mg/L;
- Total Phosphorus (TP) = 0.045 mg/L, and
- Chlorophyll *a* = 4.3 µg/L.

Over the period of record (2002–2014), the TN and TP annual geometric mean concentrations in WBID 3278R4 (Naples Bay) appear to have decreased while TN and TP appear to remain relatively stable in WBID 3278R5 (Gordon River Marine Segment) (see Cardno 2015a, Figures 3-22 and 3-23). WBID 3278R4 (Naples Bay) has achieved the newly adopted NNC every year since 2006, with TP achieving the criteria every year since 2003, indicating the Bay is in compliance with the NNC. TN in WBID 3278R5 (Gordon River Marine Segment) typically fluctuates above and below the criteria with more than one year in a three year period above the limit, indicating non-compliance with the NNC. Prior to 2011, TP in WBID 3278R5 (Gordon River Marine Segment) exceeded the annual geometric mean NNC limit of 0.045 mg/L at least once in three years, but shows compliance with the NNC since after 2011.

AEM time series models, developed for stations with consistent long-term data, indicate a statistically significant decreasing trend in TN over time for the 2008–2014 period at all of the long-term stations (GORDEXT/GORDPT, NBAYNL, NBAYWS ($p < 0.05$); GPASS6 ($p < 0.1$)). Flow was not a significant covariate at any of the stations (and was not included in the best-fitting model), however rainfall showed a statistically significant positive relationship with TN at the Gordon River (GORDEXT/GORDPT) and mid estuary (NBAYWS) long-term stations. No statistically significant trends over time in TP were observed at any of the long-term stations when assessed over the 2008–2014 time period, and the models had very poor fit and few significant relationships with flow and rainfall.

The time-series model was extended back to 2005 by omitting the GGC flow covariate, which was not available before 2008. In the time-series analysis for 2005–2014, TP did show a statistically significant decreasing trend at the northern bay (NBAYNL) and mid-estuary stations (NBAYWS) in a model that included rainfall as a covariate.

Spatial interpolation of annual average TN were created (for illustration purposes) showing slightly higher nitrogen concentrations are typical in the upper portions of Naples Bay and the Gordon River (Marine Segment) compared to the lower portions of the Bay. This is not unexpected as the upper portion of the Bay is influenced by urban runoff and coastal tributaries with less expected tidal exchange with the relatively low nutrient Gulf water. The decreasing overall nitrogen concentrations are apparent when data from 2008 are compared to 2013 data.

Chlorophyll a: The chlorophyll *a* (Chla) criterion is expressed as an annual geometric mean concentration of 4.3 µg/L not to be exceeded more than once in a three year period. Over the period of record (2000–2014), chlorophyll *a* concentrations in the WBID 3278R5 (Gordon River Marine Segment) and WBID 3278R4 (Naples Bay) have fluctuated around the newly adopted NNC criteria. Since 2005, more than one year in each three year period has exceeded the threshold, indicating chlorophyll *a* is not in compliance with the NNC. A total of 18 individual monitoring locations are included in this assessment for Naples Bay (WBID 3278R4), but only three have sufficient chlorophyll *a* data since 2011. Similarly, six individual locations were used in the assessment of the Gordon River (WBID 3278R5), with only two having data since 2011.

AEM time series models of chlorophyll *a* over time (2008–2014) show a statistically significant increasing trend at all of the long-term sampling locations (GODREXT/GORDPT, NBAYNL, NBAYWS) with the exception of the Gordon Pass location (GPASS6). However, it is possible that a higher laboratory Minimum Detection Limits (MDL) in the older data from the Gordon Pass location may be impacting this analysis. Flow was a significant covariate at the GORDEXT/GORDPT location with a negative relationship (chlorophyll *a* decreases as flow increases). Flow was not a statistically significant covariate at any other station. Rainfall was a statistically significant covariate at the NBAYWS and GPASS6 locations with a positive relationship indicating that chlorophyll *a* increases when rainfall increases. This

may represent the localized effect of tributaries and rainfall on chlorophyll *a* concentrations instead of the GGC freshwater flow.

The Spearman's Rank Order Correlation showed that chlorophyll *a,* Naples Bay (WBID 3278R4), is weakly positively correlated with both TN and TP ($0.1 > [r_s] > 0.12$, $p < 0.05$). For the Gordon River Marine Segment (WBID 3278R5), chlorophyll *a* is weakly negatively correlated with TN ($-0.12 > [r_s]$, $p < 0.05$) and weakly negatively correlated with TP (Spearman's rank correlation, $0.21 > [r_s]$, $p < 0.05$). The weak results indicate that nutrient concentrations are not an accurate predictor of chlorophyll *a* in either waterbody.

Inverse Distance Weighting (IDW) interpolation showed higher chlorophyll *a* concentrations are typically found in the northern bay and Gordon River (Marine Segment), with the highest values observed in Haldeman Creek.

Dissolved Oxygen (DO): In 2013, FDEP adopted revised DO criteria for fresh and marine waters. The new marine DO criterion is based on percent saturation instead of concentration and requires DO to maintain a daily average of 42 percent saturation (62-302.533, F.A.C.). In addition to the daily average, a seven day average percent saturation of 51 and a 30 day average percent saturation of 56 shall also be maintained.

WBIDs 3278R5 (Gordon River Marine Segment) and 3278R4 (Naples Bay) both achieve the DO criteria with far less than 10 percent of measurements below the 42 percent saturation benchmark. The grab sample data available (typically collected on a monthly or bi-monthly schedule) are insufficient to assess the seven day and 30 day average components of the criteria; however, with the vast majority of measurements above the 51 and 56 percent thresholds, there is no reason to suspect any exceedance of the DO weekly and monthly thresholds in Naples Bay.

Four stations in WBID 3278R4 (Naples Bay) and WBID 3278R5 (Gordon River Marine Segment) had enough long-term monitoring data to examine trends in DO concentrations over time at individual stations, accounting for the effects of flow from the GGC and regional rainfall. AEM time series models show no statistically significant trends in DO over time from 2008 to 2014 at the four long-term monitoring locations ($p > 0.05$). The models for the northern Naples Bay and mid-estuary stations (NBAYNL and NBAYWS) had rainfall as a significant negative covariate, with flow also a significant negative covariate at NBAYWS.

Turbidity: Although there is a marine water quality standard for turbidity, the standard is based on comparisons relative to natural background conditions, which are not defined for Naples Bay. In addition, turbidity values in Naples Bay are low relative to the exceedance values defined in the standard. Accordingly, turbidity trends were examined by station rather than by WBID.

Four stations in Naples Bay and Gordon River (Marine Segment) had enough long-term monitoring data to examine trends in turbidity over time at individual stations, accounting for the effects of flow from the GGC and regional rainfall with AEM time series models. Three of the four locations show a statistically significant increasing trend in turbidity in the 2008–2014 time period (GODREXT/GORDPT, NBAYNL, and GPASS6). NBAYWS was the only station that did not show a significant increasing trend. Flow was a statistically significant covariate at the northern Naples Bay (NBAYNL) and mid estuary (NBAYWS) locations with a negative relationship (as flow increases, turbidity decreases). Rainfall was a significant covariate at the Gordon River location (GORDEXT/GORDPT) and the mid estuary location (NBAYWS) with a positive relationship.

Based on IDW interpolation analysis, turbidity appears to increase from 2008 to 2013, with slightly higher values observed in the northern portion of the Bay.

Bacteria (Fecal coliform and Enterococci): The recommended limit of enterococci in marine waters to protect human health is a geometric mean of 35 cfu/100 mL with no more than 10 percent of values to exceed 130 cfu/100 mL (EPA 2012).

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Four stations in Naples Bay and Gordon River (Marine Segment) had enough long-term monitoring data to examine trends in bacteria concentrations over time at individual stations, accounting for the effects of flow from the GGC and regional rainfall with AEM time series models. Models for fecal coliform bacteria show a statistically significant increasing trend over time (2008–2014) at the northern most stations (GORDEXT/GORDPT ($p < 0.05$) and NBAYNL ($p < 0.1$)). Flow and rainfall covariates were seldom statistically significant for the best-fitting fecal coliform auto-regressive time series models.

Enterococci bacteria show a statistically significant increasing trend over time at all long-term stations with the exception of the Gordon River location. GGC flow was not a significant covariate at any station, however rainfall was a significant covariate with a positive relationship at all three Naples Bay long-term locations (NBAYNL, NBAYWS, and GPASS6). Enterococci bacteria persist in marine water much longer than fecal coliform bacteria and therefore may explain the identification of enterococci trends in the more consistently marine locations.

Based on IDW interpolation graphics enterococci levels appear to be higher in 2013 than 2008.

The primary source of biological data was the City of Naples Natural Resources Division ongoing monitoring efforts. Additional data, provided by the City to Cardno, were compiled from other southwest Florida estuary monitoring programs to serve as comparison to Naples Bay data. **Table 5.5** summarizes data evaluated by Cardno (2015a).

Seagrass:

The City has been monitoring seagrass since 2006. Seagrass transects were monitored 1-2 times per year during the growing season from 2006 to 2014. Monitoring efforts occur along five fixed transects located in three separate seagrass areas (designated BV, NChannel, and SPortRoyal) located in the southernmost portion of Naples Bay. These three areas represent the majority of seagrass known in the bay. The following indicators were used to evaluate and identify general patterns in the seagrass systems of Naples Bay over time: composition, cover, density, and water depth distribution.

Species observed in the survey area include: shoalweed (*Halodule wrightii*), paddle grass (*Halophila decipiens*), and Engelmann's seagrass (*Halophila engelmannii*). Shoalweed was the most common seagrass, occurring in 88 percent of the quadrats surveyed. Paddle grass and Engelmann's seagrass were less common, occurring in less than 5 percent of quadrats surveyed for the whole survey period from 2006 to 2014.

Cover was assessed using a modified Braun-Blanquet scale, which involves assigning a categorical score to a range of percent bottom cover. Total seagrass cover was generally low across all transects over the entire survey period. Coverage was generally low across all transects over the entire survey period, ranging from less than 5% in most areas up to 25% cover (Bran-Blanquet score of 1 and 2, respectively).

Density was measured as the number of short shoots per square meter. Measurements were taken within each fixed quadrat sampling location during each survey event. When data were considered together by year, shoalweed appeared to be increasing in density until about 2011 and then decreasing through 2014. However, when the data were considered by month, a trend of decreasing density as the growing season progresses becomes apparent. In southwest Florida bays, it is common for seagrass densities to decrease as the growing season progresses from summer to winter. From 2012 to 2014, seagrass surveys in the Naples Bay were conducted later in the survey season, which makes it difficult to determine if the trend is due to seasonal sampling bias or actual overall declines.

Water depths were standardized relative to mean high water (MHW) to eliminate tidal influence on the measurements. During the 2006–2014 monitoring, it was determined that shoalweed grows at the widest range of water depths out of the three species observed. The other two seagrass species were present only in slightly deeper water depths. Depth distributions observed are within the expected range for each species.

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Table 5-7 Biological Data Sources from 2006-2014 (Cardno 2015a)

Data Source	Location	Sample type	Approximate Data Range	Description
City of Naples	Southern Naples Bay	Seagrass	2006-2014	Five transects sampled once or twice per year between April and October. Quadrats placed at fixed points along transect: species composition, cover (Braun-Blanquet scale), shoot count, blade length, qualitative sediment type, water depth, and relative epiphyte coverage recorded.
	Naples and Moorings Bays	Fish-Trawling	2009-2011	Otter trawls pulled for specific lengths and times at four fixed locations in each Bay. Naples Bay was trawled approximately six times per year; Moorings Bay was trawled four times per year. Species identity and abundance recorded. Length of first 20 individuals of each species recorded. Bycatch and environmental conditions recorded.
			2011-2014	Otter trawls pulled for specific length and time. Four grid zones established in each Bay. A random grid box is selected within each zone for sampling in each Bay during each event. Naples Bay is trawled six times per year; Moorings Bay is trawled four times per year. Species were identified and abundance recorded. Length of first 20 individuals of each species recorded. Bycatch and environmental conditions recorded.
Rookery Bay National Estuarine Research Reserve	Rookery Bay	Fish-Trawling	2009-2011	Otter trawls pulled for specific length and time. A random grid box was selected for sampling at each event. Sampling approximately every other month from Apr 2009 to Apr 2011. Species identity and abundance recorded. Length of first 20 individuals of each species recorded. Bycatch and environmental conditions recorded.
	Fakahatchee		2009-2013	Otter trawls pulled for specific length and time. A random grid box was selected for sampling within each bay during each event. All bays trawled six times per year. Species identity and abundance recorded. Length of first 20 individuals of each species recorded. Bycatch and environmental conditions recorded.
	Faka Union Bay			
	Pumpkin Bay			

Fish community:

The City monitored the fish community in Naples Bay using bottom trawls from 2009 to 2014. During each sampling event in Naples Bay, samples were collected from four zones in the Bay. From 2009 to August 2011, sampling was conducted at fixed transect sites, but from October 2011 to 2014 sampling was conducted in one randomly selected grid in each zone during each sampling event. Statistical analyses of the fish community were conducted for structure, diversity, richness, and abundance. Cardno (2014) investigated whether the change in sampling methodology may have affected apparent trends, but this investigation was not conclusive.

No statistically significant relationships between water quality parameters and the fish community were observed in the Naples Bay trawling data. Between 2009 and 2014, Mojarras (*Eucinostomus* spp.) and anchovies (*Anchoa* spp.) were the most numerous taxa collected, accounting for almost 90 percent of the total catch. These two species were also the most frequently caught: occurring in 92 percent and 50 percent (respectively) of the samples.

Cardno (2014) compared fish community data from five (5) other southwest Florida bays with the data from Naples Bay. The similarity of the fish community in Naples Bay to other southwest Florida estuaries indicates the Naples Bay fish community does not appear to be sensitive to changes in water quality occurring in Naples Bay only (i.e. salinity). A reduction in diversity of the fish community occurred more or less simultaneously in 2011 in the six bays investigated by Cardno (2014); however diversity is lower in Naples Bay than the other bays after 2011. Cardno's investigation indicated the pattern of freshwater inputs to Naples Bay may have contributed to the reduced diversity observed after 2011.

5.4.3 Recommendations for Improvement of the Water Quality and Biological Monitoring Programs

The recommendations provided below are verbatim from the Naples Bay Monitoring Design report by Cardno (2015b). These recommendations are intended to complement the ongoing monitoring program and to further the long-term data, while providing additional water quality and biological data to address complex questions related to resource management and restoration. Recommendations were developed taking into account statistical analysis of water quality and biological data, including predictive models, reported in Naples Bay Water Quality and Biological Analysis Report (Cardno, 2015a).

<u>Recommendations for tributary sources:</u>

- Work with the SFWMD to install flow monitoring equipment at the Gordon River and Haldeman Creek weirs, as well as in Rock Creek to generate daily flow volume data comparable to flow volume generated at the GGC weir.
- Work with Collier County to establish a long-term water quality monitoring station at the Gordon River weir to quantify pollutant loads to the bay from this source. The City already has a water quality monitoring location in Rock Creek (ROCKCR) and Collier County already monitors on the upstream side of the Haldeman Creek weir (HALDCRK).

<u>Recommendations for stormwater monitoring:</u>

- Stormwater lake and pump station monitoring frequency should be increased to monthly for 1-2 years to allow for identification of seasonal patterns and trends over time. After such time, sensitivity testing can be completed to determine if a less frequent (more cost effective) sampling frequency (perhaps bi-monthly) maintains the robust integrity of the dataset.
- Generate estimates of flow from each stormwater lake being monitored either through direct flow monitoring or estimations based on lake design and rainfall amounts to calculate loadings to receiving waters from the lakes.

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- Conduct paired monitoring of stormwater lake inflow and discharge points for all lakes with floating islands and at least three control lakes (no floating islands) for at least one year to quantify water quality changes as a result of in-lake treatment.
- Verify with Home Owners Associations (HOAs) and lake management contractors that copper is no longer being applied in lakes with floating islands and document the date of last application.
- Confirm all copper analyses are conducted using EPA method 200.8 or SM3113B MIBK.
- Record monthly totals of pump station discharge into Naples Bay to better characterize seasonal flow and loadings.
- Coordinate stormwater lake, pump station, and Naples Bay monitoring events to occur on the same day or within the same week to facilitate comparisons and to provide a basis for statistical correlation of bay measurements with inputs.
- Increase monitoring locations to include all 28 stormwater lakes.
- Generate stormwater volume estimations from the City's MS4 as well as the County's contribution into Naples Bay to generate overall stormwater volume and load estimates for comparison to other sources of flow to the Bay.

Recommendations for Naples Bay water quality monitoring:

- Supplement the Naples Bay monitoring with the addition of two stations to the current program, both of which were previous monitoring locations that were discontinued in 2011 (NBAY29 and NBAYBV) (Cardno (2015a), Figure 2-1). These will improve the ability to characterize the Bay as well as provide site specific data for the area of the Bay nearest the current seagrass monitoring transects.
- The County should consider relocating station BC-3 upstream to the Gordon River weir near Golden Gate Parkway. The current location is subject to influence from the GGC flow, which is reflected in the dataset. Also, relocating the station allows for quantification of loads to Naples Bay from the Gordon River. This recommendation should be considered in conjunction with the previous recommendation to install flow meters in the tributaries to Naples Bay.
- The City's current station ROCKCR can be moved upstream to Airport Pulling Rd to quantify inputs from Rock Creek to Naples Bay (Cardno (2015a), Figure 2-1). The County currently monitors BC-2 in the same location as ROCKCR, so these resources may be better used in quantifying the Rock Creek inputs in the new location. This recommendation should be considered in conjunction with the previous recommendation to install flow meters in the tributaries to Naples Bay.
- The City and County should collaborate on moving stations CURLEW and OYSBAY from their current locations to upstream locations that will allow for better characterization of stormwater inputs to the bay from these sources (Cardno (2015a), Figure 2-1). The new locations should be in the stormwater pipes that discharge to the bay, and not in the dead end canals within the bay where they are currently monitored.
- The City's HALDCR station should be moved "downstream" to a central location in the Haldeman Creek embayment where historic seagrass was observed (Cardno (2015a), Figure 2-1). This would allow for a more robust characterization of this area that will be valuable in future seagrass restoration efforts. Also, the SFWMD currently monitors station NB2 in the same location as HALDCR so the sampling resources can be better used in the new location.
- The City, County, and SFWMD should collaborate in their monitoring efforts to ensure consistent monitoring frequencies, parameters, timing, and methods are used by all monitoring entities.
- Maintain the frequency of monitoring at all bay stations as monthly data collection events.
- Confirm all copper laboratory analyses are completed using EPA method 200.8 or SM3113B MIBK.
- Review all laboratory Minimum Detection Limits (MDLs) with the contracted laboratory regularly and attempt to maintain them at reasonably low concentrations that are relatively consistent over

time. Large increases in MDLs over the course of long-term monitoring can make it difficult to identify changes over time in the affected parameter.

- Field measurements of water clarity (*i.e.* Secchi disk depth) and light limitation using LI-COR PAR sensors throughout the water column should be conducted during each monthly water quality event at all stations. This will be useful data when planning for future seagrass and oyster restoration activities. The City should also consider conducting a single water clarity transect on a monthly basis from the GGC down the center of the Bay to Gordon Pass (with sampling intervals to be determined). This could be done during the monthly water quality monitoring events and would be extremely valuable in understanding how, when, and where the GGC loadings are affecting Naples Bay.
- Consider installation of continuous recorders at the same four locations of the USGS recorders that were discontinued in 2014. These provide extremely useful data on daily and seasonal patterns that provide a robust characterization of Bay conditions and identify patterns and changes over time.

Recommendations for Naples Bay biological monitoring:

- Collect water quality grab samples during each biological (fish and seagrass) monitoring event at the location of monitoring for the same parameters as the monthly water quality monitoring.
- The current seagrass monitoring frequency is insufficient for linking the effects of management decisions to changes in seagrass condition. It also does not provide the information needed to evaluate and generate a rigorous cost-efficient survey design for the purpose of seagrass assessment. It is recommended that at least three existing transects (locations to be determined later) be monitored on a monthly basis during the growing season (April – October) for approximately two years (pilot study). These data can be evaluated at the end of this period for the purpose of establishing a rigorous design for all seagrass locations. At a minimum, the remaining existing transects should be monitored twice a year once near the beginning and end of the growing season, and at the same time (i.e. during the same months) each year. This information can be used, along with the intense seagrass monitoring, to evaluate the ability to link water quality, biology, and management decisions over both space and time.
- Collect LI-COR PAR light availability measurements with each seagrass quadrat on all transects during each seagrass monitoring event.
- Measure Secchi disk depth along each transect during each seagrass monitoring event. Record when measurement represents “visible on bottom.”
- Map the spatial extent of each seagrass bed during each monitoring event to characterize changes in the size of the beds over time. This would allow for better comparisons of changes in Naples Bay over time as well as compare changes in other bays in the region and statewide.
- Record actual percent cover in addition to Braun-Blanquet score for each transect. Seagrass in Naples Bay is generally sparse and what could be considered a small increase in percent cover, for example from six or seven percent to 20 percent, could represent large relative increases in biomass and habitat function. The Braun-Blanquet scoring system masks these changes and limits the ability to detect changes over time.
- Add an additional fish sampling event during the wet season during the period of greatest GGC flow. The current sampling pattern is designed to capture samples throughout the year but is not capturing high and low flow periods equally.
- Add one or two fixed sampling locations for fish sampling. While the current random sampling method allows for an overall estimate of the fish community structure in Naples Bay, the variation among random sampling locations (in terms of habitat quality and environmental factors) makes it difficult to determine if there are site-specific factors during some sampling events that may mask or distort seasonal and inter-annual patterns. The fixed sampling locations can control for the potential effect of randomized sampling locations and help identify temporal trends.
- Include additional transects (three, if available) during each event in more sheltered areas as well as the current locations. The current monitored areas all have relatively high exposure to physical

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disturbance and, thus, it is difficult to determine the relative roles of disturbance and water quality on the structure of the seagrass system in Naples Bay. The exact locations of these additional transects would be determined in conjunction with the City experts who have greater knowledge of the sheltered areas and potential locations of seagrass.

- The random sampling design for the bi-monthly fish sampling is presumably designed to collect a more representative sample of the fish community within each zone than a fixed sampling design, in order to draw conclusions about differences between zones. However, the environmental differences among random sampling locations means one sample per zone may not always be representative of the breadth of fish habitats contained within the zone. Conducting at least three replicate random trawls within each zone during each fish monitoring event will provide an estimate of the within zone variance that can be used to test whether zones are different. The replicate data may also aid in getting a better estimate of fish community structure to pair with water quality data.
- Measure biomass for the species most commonly caught in the bottom trawls within each zone during each monitoring event (currently those species are *Eucinostomus* and *Anchoa*). There are few differences in the species assemblage or community structure across the sampling zones in Naples Bay, but length data suggest that there may be differences for some species among the zones. Thus, a link between water quality and fish community in Naples Bay may be found in differences in growth and biomass rather than abundance or species richness.
- Copper is a specific water quality constituent of concern in Naples Bay. A copper specific monitoring program to determine the effects of elevated copper concentrations on the biological community of the Bay should be considered. The program may include water quality, sediment, and biology (e.g. fish tissue samples, epiphyte copper accumulation) data to compare with known toxicological (mortality, growth, and reproduction) thresholds can be valuable for identifying any links between copper and the observed biological community in Naples Bay. For example, given the current sampling framework, semi-annual or annual sediment samples could be collected at the water quality monitoring locations, and fish tissue samples could be obtained during bi-monthly sampling events within each zone, along with seagrass epiphyte samples collected during each seagrass monitoring event. The details of such a program are outside the scope of these recommendations, but can be discussed and developed at the City's discretion.

5.5 Analytical Water Quality Modeling Results

The City has been monitoring its water quality, but a simple water quality model can be used to investigate pollutant loadings into major water bodies. This model simply examines land uses along with runoff to determine pollutant loadings. Once the model is developed, then certain BMPs can be applied to each basin to determine reductions in loadings. In addition, the model may be used to rank priority basins to aid in determining the best way funds may be used to reduce pollutants.

The model used to determine existing conditions for the City of Naples is an Event Mean Concentration (EMC) model. The base of the EMC model is created by determining the land use and associated soils present in each major basin. Land uses present within in each basin is summarized in **Table 5-8**.

Once the acreages for each land use and soil combination were added to the model, a runoff curve number (CN) was imposed on the acreage in order to determine a composite CN value for each land use. The CN values were then used to determine annual runoff volumes. The annual runoff volumes were then used in a formula with EMC values for each land use in order to get an annual loading (without BMPs) value for each key pollutant. The EMC values used for each key pollutant and land use are summarized in **Table 5-9**.

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Table 5-8 Percentage of Land Use by Major Basin

Basin	Total Basin Acreage	Low-Density Res./ Parks and Zoos	Single Family/ Golf	Multi-Family	Low-Intensity Comm.	Comm./ Industr.	Institut.	Transp.	Undeveloped / Rangeland/ Forest	Wetland	Water	Total
1	1514.3	0%	39%	29%	10%	0%	2%	3%	0%	0%	16%	100%
2	916.9	1%	72%	15%	2%	0%	1%	0%	3%	0%	7%	100%
3	570.5	3%	36%	32%	22%	0%	4%	0%	2%	0%	2%	100%
4	1173.8	7%	65%	0%	0%	0%	0%	0%	1%	2%	25%	100%
5	803.3	0%	45%	4%	26%	1%	12%	7%	3%	0%	2%	100%
6	316.2	0%	21%	10%	50%	0%	7%	6%	6%	0%	0%	100%
7	296.8	0%	65%	13%	0%	0%	0%	3%	0%	0%	19%	100%
8	194.2	4%	9%	10%	31%	7%	0%	1%	19%	7%	12%	100%
9	3265.7	7%	53%	14%	4%	0%	2%	2%	5%	7%	6%	100%
10	911.8	0%	1%	0%	10%	0%	0%	62%	13%	8%	5%	100%
11	178.6	5%	8%	2%	0%	0%	0%	0%	0%	76%	9%	100%
12	759.1	3%	0%	0%	0%	0%	0%	0%	21%	41%	35%	100%

Sources: NRCS Digital Soil Survey 2012, SFWMD Land Cover Land Use Data 2009

Table 5-9 EMC Values for Key Pollutants Reviewed

	Low-Density Res./Parks and Zoos	Single Family/ Golf	Multi-Family	Low-Intensity Comm.	Comm./ Industr.	Institut.	Transp.	Undeveloped/ Rangeland/ Forest	Wetland	Water
TSS	23	37.5	77.8	57.5	69.7	60	37.3	8.4	10.2	3.1
TN	1.61	2.07	2.32	1.18	2.4	1.2	1.64	1.15	1.6	1.25
TP	0.191	0.327	0.52	0.179	0.345	0.26	0.22	0.055	0.19	0.11

Sources:

1. Harper, H. H. 2007. Evaluation of Current Stormwater Design Criteria within the state of Florida. Environmental Research and Design, Inc.
2. Harper, H. H. 1994. Stormwater Loading Rate Parameters for Central and South Florida. Environmental Research and Design, Inc.

BMP removal efficiencies were then added to the model so that annual loading (with BMPs) could be calculated for each land use. The BMPs and associated efficiencies used in the model are summarized in **Table 5-10**.

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Table 5-10 BMP Removal Rates

BMP Removal Rates					
BMP Type	**TSS**	**TN**	**TP**	**Volume**	**Source**
Baffle Box	19%	20%	90%	-	NSBB Suntree Technologies Inc. Brochure
Dry Detention	0%	0%	0%	80%	Harper, H. H. 2007. Evaluation of Current Stormwater Design Criteria within the state of Florida. Environmental Research and Design, Inc.
Wet Detention	80%	25%	65%	20%	Harper, H. H. 2007. Evaluation of Current Stormwater Design Criteria within the state of Florida. Environmental Research and Design, Inc.
Small Swale	0%	0%	0%	80%	FDEP (2010)
Large Swale	0%	0%	0%	80%	FDEP (2010)
Filter Marsh	80%	41%	84%	80%	TN and TP from Bays, J.S. and M. Bishop, 2014, Meeting Multiple Objectives in Stormwater Treatment at Freedom park, Florida Water Resources Journal. TSS assumed removal similar to dry detention volume removal rates.
Street Sweeping	55%	42%	40%	-	FHWA. Stormwater Best Management Practices in an Ultra-Urban Setting: Selection and Monitoring. Website: https://web.archive.org/web/20161219020256/ https:/www.environment.fhwa.dot.gov/ecosystems/ultraurb/3fs16.asp
No BMP	0%	0%	0%	0%	-
Wet Detention (Lakes)	0%	0%	0%	20%	Removal Rates from AMEC Lakes (2012 Report). Volume from Harper (2007)

An existing loading model was developed as described above to be representative of the current conditions, incorporating existing BMPs that currently provide treatment to the basins. The existing BMPs were identified through a variety of ways:

1) A list of implemented projects from the City of Naples
2) The 2012 Lake subbasin delineation, from the City of Naples Stormwater Quality Analysis, Pollutant Loading and Removal Efficiencies report (AMEC Foster Wheeler, 2012)
3) Aerial review of the Stormwater Major Basins
4) The 2007 swale analysis by TetraTech (presented in Section 6.6.2 in the City of Naples Stormwater Master Plan Update 90% Draft Report)

Included in the implemented projects from the City of Naples list was street sweeping, which was implemented on all residential areas within the City limits, as well as the Freedom Park Filter Marsh. This Filter Marsh treats areas within Basins 1, 5 and 9. Based on the July 2014 Florida Water Resources Journal article “Meeting Multiple Objectives in Stormwater Treatment at Freedom Park” by James S Bays and Margaret Bishop, the filter marsh basins were digitized and the field removal rates that had been determined for removal of TSS, TN and TP were applied to the basin area. Next, the 28 lake basins from the 2012 City of Naples Stormwater Quality Analysis, Pollutant Loading and Removal Efficiencies Report were imposed onto the 12 basins, and all lake subbasins within the 12 basins were incorporated into the model as existing BMPs. The 2012 City of Naples Stormwater Quality Analysis, Pollutant Loading and Removal Efficiencies report determined specific efficiencies and removal rates for each of the lakes, and thus the specific lake removal rates were applied to each lake in the existing model. The aerial review of the basin reviewed BMPs, mainly wet and dry detention, that were not already incorporated into the 2012 lake basins. These were visually identified on the aerial, and the appropriate BMP removal efficiency was applied to the entire subbasin that was associated with the BMP. Subbasins were provided by AECOM as a result of the 2007 analysis. Finally, a review of TetraTech’s 2007 swale analysis from the City of Naples Stormwater Master Plan Update 90% Draft Report was incorporated into the existing model in the residential areas within the major basins.

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The results of the EMC model are summarized below in **Table 5-11** and **Table 5-12**.

Table 5-11 Current Loading Removal Efficiencies of Key Pollutants

	Annual Loading w/o BMPs			Annual Loading with BMPs			% Removal Efficiency		
Basin	TSS (lb)	TN (lb)	TP (lb)	TSS (lb)	TN (lb)	TP (lb)	TSS (lb)	TN (lb)	TP (lb)
1	694,057	28,446	4,891	243,403	16,904	2,442	65%	41%	50%
2	408,416	20,014	3,296	112,513	9,627	1319	72%	52%	60%
3	374,225	12,752	2,332	178,008	7,716	1335	52%	39%	43%
4	267,458	19,043	2,621	118,695	12,777	1634	56%	33%	38%
5	436,611	15,717	2,503	193,843	9,121	972	56%	42%	61%
6	200,559	5,715	933	152,620	4,327	672	24%	24%	28%
7	107,849	5,933	932	50,913	3,921	599	53%	34%	36%
8	80,974	3,107	438	51,317	2,553	311	37%	18%	29%
9	1,150,839	60,635	8,613	130,680	34,980	1,795	89%	42%	79%
10	345,476	16,319	2,047	68,296	12,140	709	80%	26%	65%
11	23,028	3,276	383	21,375	3,225	374	7%	2%	2%
12	45,077	8,615	863	45,077	8,615	863	0%	0%	0%

Table 5-12 Major Basin Ranking in 2007 and 2017

	2007 Ranking w/o BMPs			2017 Ranking w/o BMPs			2007 Ranking with BMPs			2017 Ranking with BMPs		
Basin	TSS	TN	TP	TSS	TN	TP	TSS	TN	TP	TSS	TN	TP
1	1	2	2	2	2	2	1	2	2	1	2	1
2	5	5	3	4	3	3	5	5	3	7	5	5
3	6	6	6	5	7	6	6	6	6	3	8	4
4	4	4	5	7	4	4	4	4	5	6	3	3
5	3	3	4	3	6	5	3	3	4	2	6	6
6	7	7	7	8	10	8	7	7	7	4	9	9
7	9	10	8	9	9	9	9	10	8	10	10	10
8	8	9	9	10	12	11	8	9	9	9	12	12
9	2	1	1	1	1	1	2	1	1	5	1	2
10	10	8	10	6	5	7	10	8	10	8	4	8
11	11	11	11	12	11	12	11	11	11	12	11	11
12	N/A	N/A	N/A	11	8	10	N/A	N/A	N/A	11	7	7

Source: 2007 rankings are from TetraTech (2007) City of Naples Stormwater Master Plan Update 90% Draft Report, Table 8.1.1-1

TAB 6

Level of Service (LOS) Analysis

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6. Level of Service (LOS) Analysis

Level of Service (LOS) is defined in Chapter 9J-5 FAC and the City's Comprehensive Plan as an indicator of the extent or degree of service provided by, or proposed to be provided by a facility based on and related to the operational characteristics of the facility. A LOS standard is the capacity of a facility relative to demand. For stormwater management, LOS standards represent degrees of protection provided for various development and natural features expressed in terms of storm events to be accommodated by the applicable drainage facilities.

LOS Standards apply to both water quantity, in terms of providing an efficient and effective stormwater management or drainage system which protects the public and property from flooding, and water quality, in terms of protecting surface waters from erosion and degradation of water quality. For water quantity, LOS Standards are used for the design of facilities such as roads, drainage systems such as conveyance and outfalls, and buildings.

Specifying the return period and duration of rainfall to be handled by a drainage facility establishes the degree of protection that the facility can be expected to provide. That is, the chance of overloading a facility designed to accommodate runoff from a 5 year, 1-hour "design storm" is one in five, while the chance of satisfactory performance is four in five, in any given year for a storm lasting one hour. Generally, the greater the potential threat to life and property if a drainage system should fail, the more severe or less probable the design storm used in determining the drainage capacity required for that system.

For water quality, LOS is about public health and environmental quality. Water quality standards establish the water quality goals for specific waterbodies as well as for stormwater runoff and treatment quality. Water quality standards consist of the following elements:

- Designated uses such as "supporting aquatic life" or "recreation"
- Water quality criteria necessary to protect the designated uses
- Anti-degradation requirements
- General policies affecting the application and implementation of standards

It is necessary to establish water quality criteria and standards, in order to protect public health and environmental quality, as well as to determine how these items get regulated. For public health, achievement of water quality standards can improve quality of life for residents and visitors, including health and overall well-being, availability of seafood, and recreational fishing to name a few examples. For environment and ecology, water quality standards help maintain the overall health of ecosystems, including seagrass systems and their associated habitat for dependent species in Naples Bay. An assessment of the effectiveness of water quality standards relating to these components will be performed by reviewing existing LOS standards and comparing and contrasting the regulations to the requirements of implemented TMDLs and BMAPs for impaired waters.

This Level of Service (LOS) Analysis includes a review of the existing LOS standards in the City's Comprehensive Plan and Land Development Regulations and a comparison of the standards to the water quantity assessment in Section 5. Also, a summary to illustrate where LOS standards are being met in each basin based on previous post-2007 basin studies, LIDAR, or other sources of information is discussed along with recommendations on whether the current LOS standards should remain the same or change for future conditions.

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6.1 Water Quantity LOS

6.1.1 City's Currently Approved LOS

Level of Service is defined in the City's Comprehensive Plan under the Public Facilities and Water Resources Element, which was last updated in 2013, and are included in Policies 1-10 and 1-11.

Under Objective 1, Policy 1-10 states:

> *The level of service standard for surface water management for all development, redevelopment and the primary drainage system requires no flooding during a 5 year, one hour storm event for roads, yard drainage pump stations and trunk lines and requires no flooding during a 100 year storm event for building finished floors.*

This policy states the level of services and also includes a wet retention guideline to refer to best management practices listed in a table following this policy, dry retention of 1.25 inches minimum, and retention of 0.5 inch minimum. The next policy, Policy 1-11, states:

> *All new development, redevelopment or substantial improvement of platted properties within the City of Naples shall be reviewed to assure compliance with local ordinances, design criteria and building code requirements, which include stormwater management systems to be constructed to minimum standards.*

It also states, for drainage conveyance and quantity that the land uses of single-family, multi-family and non-residential mixed use properties should follow the following policy:

> *Unless otherwise specified by previous South Florida Water Management District (SFWMD) permits or District criteria, a storm event of one-hour duration and 5-year return frequency shall be used in computing the minimum off-site discharge rates from private properties to the City's stormwater system. The stormwater conveyance system should be design sufficiently so that the conveyance shall pass the design flow while ensuring that the backwater head doeas not exceed the proposed berms, walls or other containment systems in a 25 year, 24 hour storm event. The side lot swales and other emergency conveyance facilities may be designed to pass the water forward to the public right-of-way.*

The water quantity LOS Standards can also be found in the City of Naples Code of Ordinances under Ordinance 07-11807, which includes amending Section 16-51 and adding Section 16-115 Stormwater Construction Standards on October 17, 2007.

The ordinance basically states the same LOS criteria that were included in the 2013 Comprehensive Plan. In addition, all implementation of stormwater improvements shall conform to the above standards and shall include compliance with special criteria. The special criteria will be further explained in Section 7 of this report since it does not directly apply to LOS.

6.1.2 Level of Service Comparison

Level of Service is defined differently for each municipality. Each municipality examines its facilities and determines the level of service each facility can achieve and then requires any development or re-development to abide by the defined level of service. Most municipalities state level of service standards from a water management district or the Florida Department of Transportation (FDOT) as their level of service. Some municipalities examine their facilities and then establish a level of service. The following municipalities and governments have established level of service standards.

6.1.2.1 SFWMD

SFWMD provides guidance for level of service criteria as the governing authority of the water management district in which the City of Naples is located. Within the Environmental Resource Permit Applicant's Handbook – Volume II (Basis of Review, BOR), SFWMD states:

- A storm event of 3 day duration and 25 year return frequency shall be used in computing off-site discharge rates.
- Off-site discharge rate is limited to rates; rates determined in previous Agency permit actions; or rates specified in District criteria (These rates are based on level of service criteria for each basin the District has analyzed.)
- Flood protection of building floors is determined at the 100 year, 3 day storm event.
- In cases where criteria are not specified by the local government with jurisdiction, the drainage and flood protection of roads and parking lots is determined at the 5 year, 1 day for road centerlines and 5 year, 1 hour for parking lots served by exfiltration systems.

These levels of service criteria are used when a local government has not defined the criteria.

6.1.2.2 FDOT

Another source of information for stormwater design systems is the FDOT. FDOT states different LOS standards for certain facilities. The following table is within the Drainage Manual:

Table 6-1 Design Storm Frequencies of Storm Drain Systems

Type Storm Drain	Storm Frequency
General design	3-year
· General design work that involves replacement of a roadside ditch with a pipe system by extending side drain pipes · General design on work to Interstate Facilities	10-year
· Interstate Facilities for which roadway runoff would have no outlet other than a storm drain system, such as in a sag inlet or cut section · Outlets of systems requiring pumping stations	50-year

It also states that if a system has both curb inlets and ditch bottom inlets, the hydraulic grade line for these inlets should be at a 10-year design frequency. FDOT also evaluates several storm events to ensure that post development flows do not exceed predevelopment flows.

For drainage design, the conveyance system is designed using the rational method while the entire system is designed using the National Resources Conservation Services (NRCS) equation. The difference between these two methods is that the NRCS equation takes into consideration storage and attenuation whereas the rational method ignores the timing differences between pre-developed and post-developed hydrographs.

6.1.2.3 Local Governments

In addition to the design standards and level of protection of the state agencies, local agencies such as Collier County, Monroe County, the City of Key West, and the City of Fort Myers were examined. First, Collier County was examined since the City of Naples is within this county. Collier County states in Objective 2 of its Comprehensive Planning Document for the Stormwater Management Sub-Element that

it shall "maintain adopted drainage level of service standards for basins and sub-basins identified in the Water Management Master Plan." Collier County has conducted studies throughout the county and had determined the allowable discharge rates per basins and sub-basins identified. The County also refers to the SFWMD's BOR for design methodology and level of protection.

Monroe County and the City of Key West are located south of the City of Naples and has geographical similarities. Both entities refer to the SFWMD BOR. Monroe County looks at the 25 year, 3 day storm event for post-development flows to be equal to or less than pre-development flows where as the City of Key West looks at the 25 year, 24 hour storm event.

Lastly, City of Fort Myers was examined. This City is located in Lee County, north of the City of Naples. Fort Myers also uses the SFWMD BOR where the post-development run-off shall not exceed pre-development runoff in rate or quantity, based on a 25 year, 3 day storm event. They also state that roads should have flood protection for a 5 year, 24 hour storm event and channels should be designed for a 25 year, 3 day event.

6.1.3 Evaluation of Past Studies LOS

A review of studies completed since the 2007 Master Plan included the following: Naples Beach Stormwater Outfalls (AECOM, 2012) in Basin 2, Basin 3 Modeling (Johnson Engineering, 2011), and Central Avenue (Kimley-Horn, 2013).

Table 6-2 is Table 6 from the Naples Beach Stormwater Outfalls Report, there were seven nodes where the 5 year, 1 hour LOS was not being met for at least a portion of the main roadway in the sub basin. The locations are all within Basin 2.

Table 6-2 Naples Beach Stormwater Outfalls Report LOS Table 6

Location	Main Road Elev, (ft NGVD)	5-yr 1-hr peak stage (ft NGVD)
Gulf Shore Blvd S. near 2nd Ave. So.	4.5-5.0	4.93
Gulf Shore Blvd S. near 1St Ave. So.	4.5 – 5.0	4.96
Gulf Shore Blvd S. So. of 1St Ave N. to No. of 1st Ave. So.	4.5 – 5.0	4.87
Gulf Shore Blvd N. near 1st Ave. N.	4.5 – 5.0	4.76
Gulf Shore Blvd N. near 2nd Ave. N.	4.5 – 5.0	4.87
Gulf Shore Blvd N. near 3rd Ave. N.	4.0 – 4.5	4.36
Palm Circle W. between S. Lake Dr. and 3rd Ave N.	7.0 – 8.5	7.87

In 2011, Johnson Engineering completed modeling for Basin 3 stormwater improvements. The modeling efforts included 2 year, 24 hour; 5 year, 24 hour; and 10 year, 24 hour storm events. The proposed condition model indicated only two locations where road flooding was experienced during a 2 year, 24 hour storm: at the intersections of Gulf Shore Blvd and 3rd Ave S.(0.41 ft. depth) and Gulf Shore Blvd and 8th Ave. S.(0.58 ft. depth).

In Basin 6, Kimley-Horn prepared calculations for the Central Avenue Streetscape project in 2013. The project included drainage improvements to mitigate flooding frequency concentrated between 8th Street

and 12th Street. The calculations were based on a 25 year, 3 day storm for computing offsite discharge rates. According to the drainage report, it states that the project was designed to comply with the City's Stormwater Ordinance 07-11807, which stipulates that the stormwater conveyance system be designed sufficiently so that the conveyance shall pass the design flow while ensuring that the backwater head does not exceed the proposed berms, walls or other containment systems in a 5-year 24-hour event (5.8 inches of rainfall).

6.1.4 Assessment of LOS

Based on the existing information provided as part of the data and basin review, it is inconclusive as to whether the current level of service as described in the Comprehensive Plan is being met. The previous studies since 2007 do not provide information on whether the level of service standard for surface water management for all development, redevelopment and the primary drainage system requires no flooding during a 5 year, one hour storm event for roads, yard drainage, pump stations and trunk lines and requires no flooding during a 100 year storm event for building finished floors elevations. Each study examines different storm events.

In addition to the Comprehensive Plan and the Stormwater Ordinance 07-11807, the City has a Public Right-of-Way Construction Standards Handbook that was adopted pursuant to Ordinance No. 08-12285. This handbook refers to the SFWMD BOR for computing offsite rainfall-runoff using the pre-development versus post-development analysis with the storm event of 3 day duration and 25 year return frequency. Also, the ordinance states that the stormwater drainage designs shall provide flood protection in accordance with the following design storm events:

i. Collector roadways: 10 year 1 day storm event

ii. Local streets: 5 year 3 day storm event

iii. Flood protection-building elevations: 100-year storm event

iv. Roadway elevation: minimum roadway crown elevation shall be at least 2 feet higher than the control elevation in order to preserve the structural integrity of the pavement sub grade.

In addition this handbook mentions that the discharge rate shall equal historic rates (pre-development) as well as provides an allowable discharge rate of 0.15 cubic feet per second (cfs) per acre.

Besides the Public Right-of-Way Construction Standards Handbook, the Stormwater Standards Handbook has language from the Ordinance 07-11807, which is in line with the language in the Comprehensive Plan, but the sample applications and calculations in Section 8 of the manual may cause issues to the City's system. The samples in the manual are meant for land owners to use for improvements on their lots. The samples do not provide a pre-development versus post-development analysis. The sample simply allows the allowable discharge to be calculated for a 5 year, 1 hour storm event and it uses the rational method to perform the calculation. In addition, the calculation uses a time of concentration of 10 minutes which produces a rainfall intensity for a 5 year, 1 hour event of 6.9 inches per hour. This produces a high discharge rate and also does not consider storage on site. The first example in the manual is for a 0.26 acre site with a calculated peak flow of 1.22 cfs. If this calculation was applied to a 10.27 acre residential area with 22 lots with 75% of the lot being impervious in Basin 1, the allowable discharge into the City's system would be 49 cfs. This example is in an area with 2 current City outfalls that consist of a 15 inch and a 12 inch pipe. These pipes would not be able to handle the discharge. In addition, the level of service states no flooding for yard drainage. Since there is no storage component of the calculation, it cannot be determined whether there is flooding or not.

A 5 year, 1 hour storm event may be acceptable as a level of service standard, but without a basin by basin assessment of this level of service, it is inconclusive as to whether the City should adjust its current level of service.

6.1.5 Recommendations on LOS

Throughout the past research on the analysis of the City's stormwater master system, there was no clear conclusion as to whether each basin is meeting the current level of service of a 5 year, 1 hour storm event. Past basin studies examined varying level of services criteria. The 2007 Master Plan recommended that moving forward with utilizing a 5 year, 1 hour event as a level of service.

The 2007 Master Plan noted that the 2.9 inches of rain in the 5-year, 1 hour event is a very intense storm since all the rainfall is in only 1 hour. The limitation on this event is that it does not consider total volume impacts from longer durations. The City could adopt a review of various storm events similar to the FDOT to ensure that developments or redevelopments are not exceeding pre-development flows. Although shorter, intense storms are more frequent, storage is essential for the longer duration storm events.

Since a capacity analysis has not been completed on the City's system nor basin studies have been conducted in all areas of the City, it is recommended that the City evaluate its current system to determine if it is meeting its level of services and determine what it wants the level of service to be. By completing a basin by basin analysis similar to Collier County, the City can examine the existing level of service of its facilities and determine if the level can be increased.

The code currently discusses no flooding for a 5 year, 1 hour event. Since volume is not currently considered, this would mean that all conveyance systems to the outfalls must have the capacity for this event as explained in the analysis in Section 6.1.4.

The first recommendation is for the City to evaluate its existing system to determine whether it is meeting its own level of service before suggesting a change in the storm event. If the City's system meets its current level of service then an analysis maybe completed to determine if a higher level of service can be achieved.

The second recommendation is to re-examine the samples shown in Section 8 of the Stormwater Manual. The sample is misleading on how a lot owner should calculate their stormwater management for re-development and could allow more stormwater discharge than what is intended. The City could proceed with a pre-development versus post-development analysis to ensure that no added stormwater discharge is entering the system.

Lastly, the City should reconcile the Stormwater Manual and the Public Right-of-Way Construction Standards Handbook.

Once these recommendations are completed, the City will be able to determine an appropriate level of service.

6.2 Water Quality LOS

Water quality standards are set and achieved in a variety of ways including stormwater design standards and implementations, TMDLs, BMAPs, and water quality mitigation. BMAPs are created to include a list of action items to reduce pollutant loadings to waters designated impaired by the establishment of TMDLs. Stormwater treatment standards are largely implemented through Best Management Practices (BMPs) such as wet retention, dry detention, and vegetated filter swales to name a few. BMPs are typically utilized when constructing new developments or redevelopments in order to meet the current water quality standards and avoid violations (City 2013). For existing developments that were built prior to the creation of current standards and regulations, stormwater retrofitting can be implemented to help those areas to increase their treatment efficiencies by implementing BMPs and subsequently reduce their impact on water quality degradation in the surrounding watershed. Furthermore, if activities or developments are determined to be increasing pollutant loading to an impaired waterbody, then water quality mitigation is required and implemented (SFWMD 2016).

Other programs and policies in place related to water quality and stormwater management include: stormwater utility fee, SFWMD regulations/permits, NPDES regulations/permits, street sweeping, City of

Naples Ordinances (Stormwater Ordinance No. 07-11807, Construction Site Management Ordinance No. 14-13561, and Fertilizer Ordinance No. 08-11972), Collier County ordinances (Water Management Ordinance No. 1990-10, and Litter Ordinance No. 2005-44), Stormwater Pollution Prevention public outreach, Swale Restoration and Underdrain Program, filter marsh initiatives, lake assessment and maintenance contracts, and water quality monitoring programs.

An evaluation of the City's LOS criteria as it relates to water quality is useful in determining if current projects, future developments, initiatives and City regulations are meeting the standards put forth by the water management district, county, and state. It is important that the City's regulations and efforts are meeting the aforementioned standards and improving water quality impairments set forth through the establishment of TMDLs.

6.2.1 Existing Requirements for Pollution Abatement

Water quality design and performance criteria for stormwater management systems are regulated by the South Florida Water Management District through the Environmental Resource Permit (ERP) program authorized under Part IV of Chapter 373, F.S. (SFWMD 2016). In addition, the City's Comprehensive Plan (2013) also provides standards and regulations for water quality and stormwater treatment design. The current water quality requirements are listed in **Table 6.3** in Section 6.2.2 of this document. The EPA provides water quality guidelines in their Water Quality Standards Handbook as well, but does not regulate or issue permits within the City. The State of Florida regulates water quality through implementation and adoption of TMDLs and BMAPs, as further discussed below. In addition, the current City Stormwater Ordinance mandates a minimum level of water quality retention/detention on all properties discharging into City owned roadway right-of-ways to be consistent with the SFWMD water quality standards (City 2007).

6.2.1.1 BMAPs and TMDLs

According to FDEP, "*Total Maximum Daily Loads (TMDL) are quantitative analyses of water bodies where one or more water quality standards are not being met, and are aimed at identifying the management strategies necessary to attain those water quality standards*" (FDEP 2016a). TMDLs determine the pollutant causing the impairment to a body of water and provide the maximum loading that the waterbody can receive and still meet water quality standards. Basin Management Action Plans (BMAPs) are developed to identify means to reduce the current and future loading to the TMDL and are implemented based on the adopted TMDL. BMAPs provide information and guidance on how to reduce pollutant loading for each specific waterbody (FDEP 2008).

Within the City of Naples, the Gordon River Extension is impaired for dissolved oxygen (DO is < 5.0 mg/L). The Gordon River Extension is located within Basins 1, 5, and 9, and includes areas that drain into the Gordon River. A final TMDL report for DO in the Gordon River Extension was published and adopted in 2008. The TMDL identified total nitrogen (TN) as the causative pollutant for the low DO. The TMDL requires a 29 percent reduction of TN for all known point sources. This reduction is allocated to the categories of load allocation (nonpoint source component of the load including stormwater runoff) and waste-load allocation (NPDES Stormwater Discharge points and wastewater treatment facility discharges). These allocations are responsible for determining the current load as well as the percentage load reduction in place due to improvements in the area (FDEP 2008). It should be noted that as of April 2017, there is no associated BMAP in place for this TMDL (FDEP 2012b, 2017a, 2017b).

The development of the Naples Bay 2-year plan TMDL is still in progress (FDEP 2015). This TMDL would be for water discharging into Naples Bay. Naples Bay is impaired for iron, copper, and mercury (FDEP 2012a, 2016b). Please see **Table 6.3** for a summary of current TMDL and BMAP information.

6.2.1.2 New Construction Standards

Water quality standards for new construction is regulated by the City of Naples in the Comprehensive Plan (2013), the City Stormwater Ordinance as well as the South Florida Water Management District (SFWMD ERP Permitting). According to the Comprehensive Plan and the Stormwater Ordinance, the

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City provides design guidance for water quality standards, in addition to those regulated by the SFWMD. In accordance with the Stormwater Ordinance 07-11807, any new development, redevelopment or substantial improvement of platted properties within the City of Naples shall be reviewed to assure compliance with the following minimum stormwater design criteria for water quality:

- *Unless otherwise specified by previous SFWMD permits or district criteria, water quality standards shall be determined based upon selecting the most appropriate pollutant removal presumption to the corresponding BMP technique. The BMP guidelines used must meet a presumed pollutant removal of 85 percent Total Suspended Solids (TSS), Total Nitrogen (TN), and Total Phosphorus (TP). BMPs that do not effectively remove TN and TP such as "dry detention" will be discouraged. Innovative approaches and LID techniques that reduce percent impervious are encouraged. Although reductions in storage volume may be given to BMPs that use "retention" and exfiltration, under no circumstances will the design storage volume be allowed to be less than one- half inch of retention storage volume nor less than 1.25 inch of dry detention storage volume (based on total site area). The following special conditions shall apply in meeting the above standards:*
    - *on single family lots, no more than one-half inch of detention or retention shall be stored underground in vaults, exfiltration pipes, or French drains;*
    - *rainfall runoff from roof drains can be disregarded from the water quality calculations;*
    - *retention systems shall be designed and located no less than 18 inches above the wet season water table; exfiltration and pervious pavement shall be designed to be a minimum of 24 inches above the wet season water table;*
    - *where special filtering materials are utilized, where swimming pools and patio areas are designed for storage or where special retention provisions are provided consistent with SFWMD criteria or consistent with Chapter 62 of the Florida Administrative Code, the building official may credit such areas in the computation of total on-site storage.*

The SFWMD water quality design regulations require that new construction projects be designed and operated so that off-site discharges will meet State water quality standards. The SFWMD uses a presumptive criteria, that if the system is permitted, constructed, operated and maintained in accordance with Chapter 62-330, F.A.C., and Part III, Part IV, and Part V of the SFWMD Handbook Volume II, it is presumed to meet State water quality standards. The volume of runoff to be treated from a site shall be determined by the type of treatment system utilized. Systems which have a direct discharge to an Outstanding Florida Water, must provide an additional fifty percent of the required water quality treatment. The SFWMD water quality design criteria are listed below for reference:

- Wet detention volume shall be provided for the first inch of runoff from the developed project, or the total runoff of 2.5 inches times the percentage of imperviousness, whichever is greater.
- Dry detention volume shall be provided equal to 75 percent of the above amounts computed for wet detention.
- Retention volume shall be provided equal to 50 percent of the above amounts computed for wet detention. Retention volume included in flood protection calculations requires a guarantee of long term operation and maintenance of system bleed-down ability.
    - Systems with inlets in grassed areas will be credited with up to 0.2 inches of the required wet detention amount for the contributing areas. Full credit will be based on a ratio of 10:1 impervious area (paved or building area) to pervious area (i.e. the grassed area) with proportionately less credit grant

Please see **Table 6.3** in Section 6.2.2 for a summary of the above referenced City of Naples and SFWMD water quality design criteria. SFWMD also has specific water quality design regulations in place for the following specific circumstances:

- Commercial and industrial zoned projects shall provide at least one-half inch of dry detention or retention pretreatment as part of the required retention / detention, unless reasonable assurances can be offered that hazardous materials will not enter the project's surface water management system, such as deed restrictions on property planned for re-sale, type of occupancy, recorded lease agreements, local government restrictive codes, ordinances, licenses, and separate containment systems designed to prevent discharge.
- Projects including more than 40% impervious area of the total project area, and which discharge directly to the District stated receiving waters, shall comply with the SFWMD regulations regarding providing at least one half inch of dry detention or retention pretreatment as part of the required water quality treatment.
- Public highway widening projects in urban areas having provided documentation demonstrating that all reasonable design alternatives have been considered, and providing evidence that the presented alternatives are all cost-prohibitive, have the option for the District to reduce the water quality requirements associated with the project.
- Stormwater treatment facilities shall not be constructed within 100 feet of a public drinking water well and shall not be constructed within 75 feet of a private drinking water well.

6.2.1.3 Retrofit Standards

In the City of Naples, there are some developments and structures that were built prior to the current regulations and standards; therefore, these developments might not meet the current design treatment standards. Retrofitting provides for stormwater treatment implementation at older developments and structures that were installed prior to the current standards and regulations. This allows for a reduction in negative impacts to stormwater quality and management. Although retrofitting does not guarantee that these developments and structures fully meet the current standards, it does ensure some degree of water quality improvement. The pollutants of concern for water quality improvement are determined on a case-by-case basis and are based upon factors such as the type and intensity of land use, existing water quality data within the area subject to the retrofit, and the degree of impairment or water quality violations in the receiving waters.

The primary requirement of a stormwater quality retrofit project in the City of Naples is that applicants provide proof that the project will provide additional water quality treatment such that there is a net reduction of the stormwater pollutant loading into receiving waters. Applicants can meet this requirement in a variety of ways, including the addition of treatment capacity to an existing stormwater management system such that it reduces loadings of stormwater pollutants of concern to receiving waters; adding treatment or attenuation capability to an existing developed area when either the existing stormwater management system or the developed area has substandard stormwater treatment and attenuation capabilities, compared to what would be required for a new system requiring a permit under Part IV of Chapter 373, F.S.; removing pollutants generated by, or resulting from, previous stormwater discharges (SFWMD 2016).

The applicants should provide reasonable assurances that their proposed stormwater quality retrofit will provide the intended pollutant load reduction from the existing system or systems. Reasonable assurances can include providing design, construction, operation, and maintenance plans for the project showing that it does not cause or contribute to any water quality violation; does not cause any adverse water quality impacts in receiving waters; does not reduce stormwater treatment capacity; does not increase discharges of untreated stormwater; does not cause new adverse water quantity impacts to receiving waters, and/or does not cause or contribute to increased flooding of adjacent lands.

6.2.2 Summary of past recommendations

Please see **Table 6.3** below for a summary of previous LOS standards relating to Water Quality. It should be noted that the City's Stormwater Ordinance and the City's 2013 Comprehensive Plan update are consistent with the below recommendations.

Table 6-3 Summary of LOS Criteria Requirements

Agency	Water Quality Requirements
City of Naples (Existing Comprehensive Plan 1996)[a]	Wet Detention: 1st. 1" or 2.5" X % Imp. Dry Detention: Wet Det. X 75%, 1" Min. Retention: Wet Det. X 50%, 1" Min.
City of Naples (Existing Comprehensive Plan Updated December 3, 2013)[b]	Wet Detention: Best Management Practices (refer to Comprehensive Plan section Public Facilities and Water Resources Element Policy 1-11) Dry Detention: 1.25" Minimum Retention: 0.5" Minimum
SFWMD (Environmental Resource Permit Applicant's Handbook Volume II)[c]	Wet Detention: 1st 1" or 2.5" X % Impervious, whichever is greater Dry Detention: Wet Detention X 75%, 1" Minimum Retention: Wet Detention X 50%, 1" Minimum

Sources:

a. Tetra Tech. (2007). City of Naples Stormwater Master Plan Update 90% Draft Report.
b. City of Naples. 2013. Comprehensive Plan. Website: http://www.napleshistoricalsociety.org/pdfs/2016files/City%20of%20Naples%20Comprehensive%20Plan.pdf
c. SFWMD. 2016. Environmental Resource Permit Applicant's Handbook Volume II. Website: https://www.sfwmd.gov/sites/default/files/documents/swerp_applicants_handbook_vol_ii.pdf

6.3 Recommended Approach to Address LOS for Water Quantity and Water Quality

In the 2007 Master Plan, the same conclusions were given for the level of service analysis. The past basin studies that were reviewed appear that the City's adopted level of service criteria was not analyzed. Although each basin evaluation and mater plan modeled different storm frequencies, most of the analysis used longer durations with more rainfall. For example, a 5 year, 1 hour storm event is at 2.8 inches where as a 5 year, 24 hour storm event is 5.5 inches.

Since there has been no comprehensive analysis of the level of service on the City's Infrastructure, a basin by basin analysis should be conducted to determine if the current level of service is acceptable. This analysis should consider evaluate several storm events to determine if the level of service can be increased.

The City of Naples Comprehensive Plan identifies the SFWMD Criteria as the recommended level of service goal for meeting water quality standards in the City of Naples (City 2007). However, the City recognizes there is a need for specific standards and details to guide the development community to ensure the proper design and installation of stormwater facilities, grading techniques, and development practices within the City in order to ensure that the applicable provisions of the current Naples Code of Ordinances and goals of this ordinance are met, as well as goals associated with adopted TMDLs are achieved.

The water quality design criteria Level of Service require a project-specific BMP implementation to meet a presumed pollutant removal of 85 percent Total Suspended Solids (TSS), Total Nitrogen (TN), and Total Phosphorus (TP). BMPs that do not effectively remove TN and TP such as "dry detention" will be

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discouraged during the review and permitting stages. Appropriate BMPs for selection are summarized in the Comprehensive Plan Section Public Facilities and Water Resources Element Policy 1-11. Please refer to **Table 6.4** for a summary of the water quality requirements presented by the TMDLs within the City.

Table 6-4 TMDL Summary Table

TMDL Name/ID	Water-body Class	Acres	Basin	City of Naples Stormwater Major Basin	Nutrients included in TMDL (or impairment)	Causative Pollutant (parameter)	Requirements of TMDL	BMAP
Gordon River Extension, WBID 3278K (formerly 3259C)	III	5,153	Everglades West Coast Basin Group	All of Basin IX and Basin V Small portion of Basin I (east-southeast section of basin) Approximately 1/3 of Basin VIII (north portion)	low dissolved oxygen (DO)	total nitrogen (TN)	TMDL of TN = 0.74 mg/L Requirement: 29 percent reduction of TN	This TMDL does not have an associated BMAP
Naples Bay Coastal, WBID 3278R4	II	9,581	Everglades West Coast Basin Group	N/A	Iron, Copper	N/A	Development of Naples Bay 2-year TMDL is still in progress.	N/A

Sources:

d. FDEP. (2008). TMDL Report, Dissolved Oxygen TMDL for the Gordon River Extension, WBID 3278K (formerly 3259C). FDEP South District, Everglades West Coast Basin. Website: http://www.dep.state.fl.us/water/tmdl/docs/tmdls/final/gp1/gordondofinal091208.pdf

e. FDEP. (2016b). Statewide Comprehensive List of Impaired Waters. Website: http://www.dep.state.fl.us/water/watersheds/assessment/a-lists.htm

f. FDEP. (2012b). Final Basin Management Action Plan For the Implementation of Total Daily maximum Loads for Dissolved Oxygen Adopted by the Florida Department of Environmental Protection for the Everglades West Coast Basin. Website: http://www.dep.state.fl.us/water/watersheds/docs/bmap/ewc-bmap-final-nov12.pdf

g. FDEP. (2015). TMDLs in the State of Florida. Website: http://www.dep.state.fl.us/water/tmdl/docs/TMDL-MapStatus.pdf

Notes:

- Not all listed impaired waters in City of Naples have TMDLs
- N/A = information not available or applicable at the time of table creation

For Naples Bay Coastal, the focus of the TMDL is unknown at this time.

6.3.1 Implementation

The implementation of these modifications is normally performed by Development Services with technical input from the Public Works staff. Since the recommendation for water quality level of service has been suggested in the past but not implemented, basin by basin studies should become a priority for implementation in order to confirm an appropriate level of service as part of the stormwater master plan update.

For water quality, an existing loading model was developed for the twelve basins within the City, based on Event Mean Concentration (EMC) loading calculations. The model is spreadsheet based, and is split out by basin to determine the loading from land use and soils within each basin. The existing loading model was developed to be representative of the current conditions, incorporating existing BMPs that currently provide treatment to the basins. Existing BMPs were identified through a variety of ways:

1) A list of implemented projects from the City of Naples
2) The 2012 Lake subbasin delineation, from the City of Naples Stormwater Quality Analysis, Pollutant Loading and Removal Efficiencies report.

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3) Aerial review of the basins
4) The 2007 swale analysis by TetraTech

The current pollutant loadings within the City of Naples indicate the loading rate from Basins 1, 9 and 5 are generally producing the most loading for TN, TP and TSS. The adopted TMDL for the Gordon River Extension requires a reduction of TN by 29%, and specifically relates to Basins 1, 9 and 5. When compared to the current LOS standard of providing a pollutant removal of 85 percent TSS, TN, and TP, it is presumed that future pollutant load reductions based on new development and redevelopment would reduce the loading in this TMDL. In addition, new Best Management Practices should be implemented throughout the City in developed areas in order to reduce current pollutant loadings. In Section 11 of this document, future CIP projects have been identified which will help to reduce the overall pollutant loading in the City, focused on the areas with these highest current loading rates. This will assist in achieving a higher level of service, and meeting the TMDL requirements for loading within these basins.

TAB 7

Regulatory and Development Code Review

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7. Regulatory and Development Code Review

As the stormwater master plan develops, a review of the City's regulatory and development code is completed to compare the current regulations that are in place to the recommendations needed to provide the City guidance on the implementation of the plan. The key purpose of the review is to review the City land development codes, ordinances, stormwater utility codes and policies related to stormwater management; identify inconsistencies and gaps; and provide recommendations to enhance long term water quality and stormwater management. This review consists of reviewing the City codes and ordinances, the National Flood Insurance Program (NFIP) Community Rating System (CRS) for the City, and the Municipal Separate Storm Sewer (MS4) Program or the City's National Pollutant Discharge Elimination System Phase II Permit (NPDES).

7.1 Codes and Ordinances

The following materials were reviewed:

- Comprehensive Plan: reviewed to identify gaps and inconsistencies between Plan and Ordinance and opportunities to address Comprehensive Plan objectives in the revised ordinance
  - Future Land Use Element
  - Conservation and Coastal Management Element
  - Transportation Element
  - Public Facilities and Water Resources Element
  - Capital Improvements Element
  - Comprehensive Plan Maps
- City Ordinance including Land Development Codes
  - Chapter 16 - Construction, Rehabilitation and Property Maintenance Regulations
  - Chapter 30 – Utilities
  - Chapter 44 - General Provisions
  - Chapter 50 - Development and Design Standards
  - Chapter 52 - Resource Protection Standards
  - Chapter 54 - Subdivision Standards
  - Chapter 56 - Supplemental Standards
  - Chapter 58 - Zoning
- Collier County Multi-Jurisdictional Local Mitigation Strategy (March 31, 2015)
- 2012 Flood Insurance Rate Maps (FIRM) for Collier County (for context only), including: Panels 379, 383, 384, 387, 391, 392, 393, 394, 581, and 583

Please note that all recommendations presented in **Table 7.1** were developed for the purpose of enhancing long-term water quality and stormwater management. The recommendations also address opportunities to bridge gaps between the land development ordinance and the Comprehensive Plan. Each recommendation indicated whether it helps the City achieve one or more of the following:

- Goal 1: Better position the City for future flood mapping
- Goal 2: Prepare the City for further NFIP Reform
- Goal 3: Protection from future flood events

The only inconsistency noted in **Table 7.1** relates to the definition of Coastal High-Hazard Area which differs between the Naples (FL) Code of Ordinance, the Comprehensive Plan, and the Florida Building Code. See details under Recommendation #8.

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Table 7-1 Recommendations to Codes, Ordinances and Comprehensive Plan

City Ordinance / Comprehensive Plan	Current Provision	Recommendation
Chapter 16 CONSTRUCTION, REHABILITATION AND PROPERTY MAINTENANCE REGULATIONS	Sec. 16-112. - Florida Building Code adopted; amendments For City of Naples amendments to Florida Building Code (FBC), Fifth Edition (2014) and Florida Residential Code (FRC), Fifth Edition (2014) reference City of Naples Building Code Adoption Ordinance 15-13696. **Amendment 1:** Section 202 FBC (2014) definition of Substantial Improvement (SI) is modified to limit SI value to cumulative changes during a 1-year period. The relatively short period for incurred improvement costs serves to keep non-compliant NFIP structures from being brought into compliance, resulting in a more vulnerable building stock for City of Naples and potentially higher NFIP premiums for all policy holders.	No recommended changes.
	Amendment 2: Section R322 FRC (2014) adds the following statement to the provision that restricts use of below flood elevation enclosures to parking, access or storage: "The interior portion of such enclosed area shall not be partitioned or finished into separate rooms except for building access and small mechanical rooms."	**Recommendation #1:** Modify ordinance to require non-conversion agreements to acknowledge the restriction on the use of enclosures. The DEM provides a sample non-conversion agreement form called, "Declaration of Land Restriction (Non-conversion Agreement)'. Requirement would complement existing ordinance per Amendment 2. The Community Rating System awards credits for regulatory standards that prohibit the enclosure of the building's area that lies below the base flood elevation. Credit is also available for communities that execute non-conversion agreements, whereby owners agree not to modify the enclosed area to make it more susceptible to flood damage. **Recommendation #1 serves Goals 2, 3 and qualifies for CRS credits** **Recommendation #2:** Replace 'small mechanical rooms' with 'storage' to comply with NFIP regulations. Mechanical equipment is vulnerable to inundation and should be maintained

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City Ordinance / Comprehensive Plan	Current Provision	Recommendation
		above the design flood elevation. **Recommendation #2 serves Goals 1, 2, and 3**
	Sec. 16-114. - Submission of sidewalk, street and project site drainage and driveway plans. **Summary:** Section requires submittal of site plan that includes perimeter retaining structures or surface water management plan which provides for containment of runoff on-site with surplus routed to rights-of-way or right-of-way swales for drainage as applicable	**Recommendation #2A:** Modify language to include that the perimeter retaining structures or surface water management facilities may not be constructed within easements.
	Sec. 16-115. - Stormwater construction standards. **Summary:** Section includes stormwater construction standards and design criteria for new development, redevelopment, and substantial improvement of platted properties. For quantity criteria, "a storm event of a one-hour duration and five-year return frequency shall be used in computing the minimum off-site discharge rates from private properties to the City's stormwater system". Further, "conveyance shall pass design flow while ensuring that the backwater head does not exceed the proposed berms, walls or other containment systems in a 25-year - 24-hour storm event" For water quality, the requirements are in line with South Florida Water Management District with the exception of not including roof tops in the water quality areas.	**Recommendation #3:** Add three Best Management Selection Criteria Tables from Policy 1-11 of the Comprehensive Plan's Public Facilities and Water Resources Element to end of existing section. **Recommendation #3 serves Goal 3** **Recommendation #4:** Utilize Low-Impact Development (LID) approach to stormwater management by capturing and retaining the Design Storm (as defined under Technical Criteria (A)) on-site. Alternatives (e.g., capture/retain 95th percentile average annual rainfall event) and fees-in-lieu option should be addressed where required volume creates a hardship or is technically infeasible. **Recommendation #4 serves Goal 3** **Recommendation #4A:** For water quality treatment, remove the exception on roof tops. **Recommendation #4B:** Require the submission of a maintenance plan for surface water management systems as part of a building permit application.
	Sec. 16-291. - Construction site management **Summary:** Submittal requirements include grading and drainage surface water management plan for street and project site with reference to Section 16-114 (see	**Recommendation #5:** Consider requiring or incentivizing final grading/drainage plan that retains design storm surface water in excess of pre-construction discharge amount. An example way to implement the

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City Ordinance / Comprehensive Plan	Current Provision	Recommendation
	above) and subsections (d)(4) and (5). Section (d)(4) – Final grading – requires no surface water in excess of pre-construction amounts flows onto adjacent properties and that discharge flows to system. Section (d)(5) – Surface water - requires filtration of surface water prior to discharge in accordance with State law.	recommendation would be to add the following language to Erosion & Sediment Control Regulations ESC - for properties .5 acre or larger: Application for any grading and/or building permit (except for single-family dwellings on existing platted lots) must include an erosion control plan designed to prevent sediment from leaving the site during all storms up to and including the 100-year storm and recover the ground after construction to prevent or minimize erosion. **Recommendation #5 serves Goal 3**
Chapter 30 Utilities	**ARTICLE VI. – STORMWATER MANAGEMENT** **Summary:** Section generally addresses establishment, administration and fiscal aspects of City's stormwater system.	**Recommendation #6:** Add definition for new term - Best Management (BMP) Practice Selection Criteria and Credits. BMP incentive plan described in Policy 1-11 of the Comprehensive Plan's Public Facilities and Water Resources Element has many stormwater management-related credits available. **Recommendation #6 serves Goal 3**
	Sec. 30-340. - Credit policy for approved stormwater management systems credits. **Summary:** Section describes existing credits system for properties that operate and maintain approved stormwater management systems.	**Recommendation #7:** Consider reducing the credit based upon the Capital Improvement Plan projects identified in the master stormwater plan as an alternative to fee increases. Only give credit to properties that have retention systems that are not contributing to the City's stormwater system.
Chapter 44 - GENERAL PROVISIONS (definitions)	**Section 44-8:** Coastal high-hazard areas means areas designated by local governments, and includes areas which have historically experienced destruction or severe damage, or which may experience destruction or severe damage, from storm surge, waves, erosion or other outcomes of rapidly moving or storm-driven water. Please note the following definitions for same terminology: **Comprehensive Plan (Conservation and Coastal Management Element: Policy 5-**	**Recommendation #8:** Revise 'coastal high hazard area' definition in land development code and Comprehensive Plan to match definition in FBC which is tied to NFIP designated (*not local government*) Zones V that trigger code provisions and design requirements related to scour and hydrodynamic loading. If storm surge criteria described in Comprehensive needs to be maintained, then use different terminology. Existing *inconsistencies*

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City Ordinance / Comprehensive Plan	Current Provision	Recommendation
	1): The Coastal high-hazard area is the area below the elevation of the Category 1 Storm Surge line as established by a Sea, Lake and Overland Surges from Hurricanes (SLOSH) computerized storm surge model. This area includes much of the City of Naples, including most of its public infrastructure. **2014 Florida Building Code** (FBC) defines Coastal high-hazard area as follows: Area within the special flood hazard area extending from offshore to the inland limit of a primary frontal dune along an open coast and any other area that is subject to high-veloCity wave action from storms or seismic sources, and shown on a Flood Insurance Rate Map (FIRM) or other flood hazard map as veloCity Zone V, VO, VE or V1-30.	will lead to confusion. **Recommendation #8 potentially serves Goal 3**
Chapter 50 - DEVELOPMENT AND DESIGN STANDARDS	**ARTICLE IV: Parking and Loading - Sec. 50-103. Design and construction standards, (c) Surfacing** **Summary:** Section describes pervious surface options and lists situations where and conditions under which pervious parking surfaces are permitted.	**Recommendation #9:** Consider expanding current conditions where pervious surfaces are allowed. Pervious surfaces such as pervious concrete or pavement, shell rock, pervious pavers, concrete grid block, etc. are examples of pervious surfaces that other municipalities have utilized in Florida. **Recommendation #9 serves Goal 3**
	ARTICLE V: DRIVEWAYS - Sec. 50-131. Location; paving, (e) Driveways shall be paved or otherwise stabilized	**Recommendation #10:** Add language to describe pervious surface options that provide stabilization similar to language in Section 50-103(c). **Recommendation #10 serves Goal 3** **Recommendation #10A:** Add language to minimize the number of driveways allowed on the property dependent on the landuse (single-family, multi-family, commercial, etc.) This recommendation reduces the amount of impervious area contributing to the stormwater system.
Chapter 52 - RESOURCE PROTECTION STANDARDS	**ARTICLE II – Coastal Construction** **Summary**: The purpose of this article is to provide minimum standards for the design and construction of buildings and structures to reduce the potential harmful effects of natural phenomena occurring along	**Recommendation #11:** Protection of dune system as provided in Chapter 52 is governed by State statute. However, per Conservation and Coastal Management Element of the Comprehensive Plan Policy 4-10, City

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City Ordinance / Comprehensive Plan	Current Provision	Recommendation
	the *coastal* areas of the City **Sec. 52-32. - Coastal construction code** **Summary:** Provides minimum standards for the design and construction of buildings and structures to reduce the harmful effects of hurricanes and other natural disasters occurring along the *coastal* areas of the City, which fronts on the Gulf of Mexico. The standards are intended to specifically address design features which affect the structural stability of the beaches, dunes and topography of adjacent properties. *Coastal building zone (CBZ)* is defined as the land area from the seasonal high-water line to a line 1,500 feet landward from the *coastal* construction control line as established pursuant to F.S. § 161.053 **Sec. 52-33. - Coastal construction setback line (CCSL)** **Summary:** Section establishes creation of CCSL and lists prohibited activities seaward of CCSL which include: constructing any structure, making any excavation, depositing any fill, removing any beach material or otherwise altering existing ground elevations, soil structure and natural formation or driving any vehicle on, over or across any sand dune or beach, or damaging sand dunes or beach or the vegetation growing thereon, seaward of the CCSL, other than normal beach maintenance and cleanup or emergency repairs, without obtaining either a variance or a permit from the City. Further, landscaping and beach/dune revegetation projects must utilize native beach-stabilizing vegetation and native species of salt-tolerant trees and shrubs which are partially listed.	should enforce (or step up enforcement of) regulations pertaining to CBZ and CCSL. **Recommendation #11 serves Goal 3**
	Sec. 52-34. - Seawalls and revetments Section refers to Chapter 16, Article VII which is shown as 'reserved' with footnote (Ord. No. 13-13302, § 1, adopted June 12, 2013, repealed Article VII, §§ 16-251—16-254, pertained to seawalls and revetments. See also the Code Comparative Table). Please note that seawalls are now addressed in Section 52-92 (below). **Sec. 52-92 – Water Resources Generally** **Summary:** Most significantly with respect to stormwater management and protection	**Recommendation #12:** Coordinate with Seawall Ordinance and the Climate Adaptation Plan in the future, should the develop and adopt a plan, to explore modifying the existing limits on seawall heights. **Recommendation #12 serves Goal 3**

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City Ordinance / Comprehensive Plan	Current Provision	Recommendation
	from flooding, this section addresses obstruction of waterways (b), and construction of seawalls, groins and other beach erosion control structures (d). While Section 54-65 (Canals) requires a minimum height for seawalls adjacent to canals, Section 52-92(d) places a limit on seawall heights (4.8 feet NAVD) and conditions on where and how new seawalls may be installed.	
	Sec. 52-93. - Dredging, filling and other marine construction in inland waters **Summary:** "…No dredging or filling shall be performed in, upon or contiguous to any inland water area of the City, including but not limited to construction under section 52-92(c) through (e), until approval of such work has been obtained in accordance with the procedures and requirements set forth in this section." Section goes on to list many environmental hurdles to clear at State and Federal level unless for boat slips and areas adjacent to docks (w/ mitigation and control requirements). New docks to include design measure to avoid future dredging. Compliant docks may be dredged.	No recommended changes. Section requirements serve to protect natural coastal features which are vital to mitigating flood damage and limiting stress on stormwater system.
	Sec. 52-155. – Additional Submittal Requirements **Summary:** Section falls under Article VI: Development of Significant Environmental Impact' which applies to conservation areas [described as Conservation District and Transitional Conservation District in Chapter 58 – Zoning (see below)]. Development permit applicants for conservation areas must submit a significant environmental impact (DSEI) assessment that addresses specified 'surface water and stormwater review' elements.	No recommended changes. Section requirements serve to protect natural coastal features which are vital to mitigating flood damage and limiting stress on stormwater system.
	Sec. 52-184. - Timing of fertilizer application; content and application rate; impervious surfaces; buffer zones; and mode of application **Summary:** As related to stormwater quality, this section prohibits application of fertilizers on impervious surfaces, how to	**Recommendation #12A:** Changes as developed by the Natural Resources Section to increase education, strengthen enforcement of violations, and reduce regulatory duplication.

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City Ordinance / Comprehensive Plan	Current Provision	Recommendation
	prevent, and redress.	
Chapter 54 - SUBDIVISION STANDARDS	**Sec. 54-6. - Flood damage prevention standards for subdivision proposals** **Summary:** Section includes four very general guidelines ('standards') for flood damage prevention that must be addressed by all subdivision proposals and other development including manufactured homes.	**Recommendation #13**: Modify items (2) and (3) to provide enforceable detail by referencing the existing minimum requirements in Chapters 16 and 30. More significantly, this would be a good place to reference the Proposed Best Management (BMP) Practice Selection Criteria and Credits as described in Recommendation #3. Many BMP measures are most efficiently incorporated in the planning stages of new subdivisions, and should be presented to the developer for consideration when preparing subdivision plans for permitting. **Recommendation #13 serves Goal 3**
	Sec. 54-31. - Approval procedure **Summary:** Section includes procedures and requirements for plat submittals. **Recommendation #14**: Revisit Section to address possible formatting issues, incorrect charging language, and apparent omissions. As accessed in Municode (3/31/17), part (b) Major Subdivisions does not include parallel list of Standards included in part (a) Minor Subdivisions, and charging language for both address minor subdivisions only.	**Recommendation #14 is primarily editorial in nature and does not necessarily serve Goals 1, 2 or 3**
	Sec. 54-64. – Drainage	No recommended changes.
	Sec. 54-65. - Canals **Summary:** In addition to canal construction standards, the section includes minimum height (relative to mean low water) for seawalls adjacent to canals.	**Recommendation #15:** Coordinate with Seawall Ordinance and Climate Adaptation Plan in the near future to explore modifying existing minimum canal seawall heights. **Recommendation #15 serves Goal 3**
	Sec. 54-68. - Recreation areas and facilities **Summary:** Section requires designation of recreational areas and facilities (or dedication of land to City for public recreational use) for new subdivisions and public beach access for Gulffront properties. Since the amount of recreational land needed varies as a function of future resident's needs, the amount of dedicated	No recommended changes.

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City Ordinance / Comprehensive Plan	Current Provision	Recommendation
	recreational land is not specified.	
	Sec. 54-74. - Land development innovations.	**Recommendation #16:** Specifically reference Low Impact Development (LID) as example of development project type that may qualify under this section. Additionally, preparation of an LID Implementation Manual is proposed to provide property owners and developers a range of options for meeting stormwater quantity, quality, and resiliency standards while maintaining contextual sensitivity. The manual would allow for flexibility to select the appropriate BMPs to that which can be integrated into the overall design of the property offering improved aesthetics and function. **Recommendation #16 serves Goal 3**
Chapter 56 – Supplemental Standards	**Sec. 56-40. - Lot coverage, maximum permitted** Current section limits percentage (19 – 25%) of lot cover by all combined principle structures, accessory structures and roofed structures for Zones R3-6, R3-12, R3T-12, R3-15, R3T-18, R3-18 and HC, and PD for multifamily residences and transient lodging facilities or nursing, group or rest homes. An additional 10% is allowed for parking structures.	**Recommendation #17:** Introduce limits for maximum lot coverage for other impervious surfaces (e.g. driveways, patios) with option for increased area limits when using pervious surfaces. Reference BMP incentive table (described in Section 54-6 review) for possible credits available for pervious surface and consider adding incentive for lots that have significantly less coverage than maximums shown in current Sec. 56-40 table. **Recommendation #17 serves Goal 3**
Chapter 58 – Zoning	**Sec. 58-60, 58-90, 58-120, 58-150, 58-180, 58-210, 58-240. - Maximum building area**	**Recommendation #18:** Consider lowering percentages for maximum building areas in the above described Residential districts. Also, introduce limits for maximum lot coverage for other impervious surfaces like driveways with option for increased area limits when using pervious surfaces. Reference BMP incentive table (described in Section 54-6 review) for possible credits available for pervious surface and consider adding incentive for lots that have significantly less coverage than maximums shown in current tables. Consider lowering minimum floor

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City Ordinance / Comprehensive Plan	Current Provision	Recommendation
		areas listed in each section as well. **Recommendation #18 serves Goal 3**
	Sec. 58-864. - Designation of districts; identification of district boundaries **Summary:** Conservation (C) districts are generally designated on Future Land Use Map. When development is proposed for the Transitional Conservation (TC) district, the prospective developer is required to complete and submit an environmental assessment, general development and site plan including proposed C/TC boundary with supporting characteristics.	No recommended changes. Section requirements serve to protect natural coastal features which are vital to mitigating flood damage and limiting stress on stormwater system.
	Sec. 58-865. - Definitions and general standards **Summary:** The conservation zoning district includes those areas having significant ecological, hydrological, physical or socioeconomic importance to the public. The principal consideration concerning uses within the conservation zoning district is the preservation of the natural functions and benefits of these areas while allowing natural uses and low intensity development which follows the guidelines outlined for each subcategory in this division. Preserving the integrity of these areas… provides a degree of natural protection against storms, helps maintain air and water quality… and promotes soil stabilization. Conservation Zoning District subcategories include: Marine grass beds, Tidal swamp/marsh areas, freshwater swamp/marsh areas, Class II waters, Gulf beaches/dunes, High-hazard areas. Permitted and conditional uses (when applicable) of each subcategory are listed in **Sections 58-870 through 58-877**.	No changes recommended. Section requirements serve to protect natural coastal features which are vital to mitigating flood damage and limiting stress on stormwater system.
	Sec. 58-875. - Transitional conservation district **Summary:** TC district functions as buffer to ensure compatible development adjacent to the conservation zoning district. Special precautions (as described in Section 58-864) are required to protect environmental resources.	No changes recommended. Section requirements serve to protect natural coastal features which are vital to mitigating flood damage and limiting stress on stormwater system.

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7.2 NFIP CRS

As of October 1, 2015 the City of Naples is a Class 5 community under the Community Rating System (CRS) of the National Flood Insurance Program (NFIP), which allows property owners in a Special Flood Hazard Area to receive up to a 25% discount on their flood insurance premium.

The next Community Verification Visit (CVV) would be in 2018, and will use the new Coordinator's Manual that is anticipated to be released in early 2017 (but has not been published at the time of preparation of this 60% draft report). Only minor changes are anticipated in the 2017 Manual.

Current efforts by the City to manage stormwater and flooding issues through the Land Development Code, especially Article IV. - Floodplain Management, have earned credit points for the City under various CRS Activities, e.g. Activity 450 - Stormwater Management, Activity 540 - Drainage System Maintenance and Activity 330 - Outreach Projects. Continuing outreach efforts and enforcement of regulations already in place will help the City maintain the previous credits. For additional credits, the City could implement other recommendations from earlier parts of this chapter and the following specific recommendations:

- **Recommendations for changes to floodplain management ordinance**
  - The City could adopt higher regulatory standards, by adopting freeboard higher than 1 foot especially for critical facilities, and enforcing V-zone regulations for Coastal A-zones, for example, prohibiting fill for structural support.

- **Recommendations for the watershed master plan** - The City can receive CRS credits under CRS Activity 452.b. Watershed Master Plan (WMP) if the plan meets the following basic requirements:
  - The plan must identify the natural drainage system and constructed channels.
  - The community must have adopted regulatory standards that are based on the plan and that receive credit under Stormwater Management Regulations (SMR under Activity 452.a). In the last cycle, the City received credit for the regulatory standards mentioned in the Land development code for Size of Development (SZ) and Design Storm (DS), but those regulations were not connected to the watershed master plan.
  - The plan's regulatory standards must manage future peak flows so that they do not increase over present values. Basin studies would achieve in determining these flows and are a recommendation in Sections 4, 11, and 15. The City could use the Comprehensive Plan's Future Land Use Map for projecting future peak flows, and then consider changes to the Comprehensive Plan to manage the future peak flows.
  - The plan's regulatory standards must require management of runoff from all storms up to and including the 25-year event.

  More background on the above recommendations is provided in the following explanation from the CRS Manual, *"CRS credits are awarded to a community regulating development according to a watershed management master plan that analyzes the combined effects of existing and expected development on drainage throughout the watershed. A stormwater management regulation credited under Section 452.a (SMR) helps to manage increased runoff from a developing watershed, but it does not solve the problem entirely. The flood peak at a point downstream in a watershed is a result of both the quantity of upstream runoff and the time it takes for water to travel down the watershed. Development within the watershed usually has an impact on both of these characteristics. The objective of watershed master planning under Section 452.b (WMP) is to provide the community with a tool it can use to make decisions that will reduce the increased flooding from development on a watershed-wide basis. Most communities have some way of dealing with drainage problems, through a capital improvement plan, planned flood control structures, or perhaps just by responding to complaints as they arise. A watershed master plan, like other community plans, allows communities within the watershed to consider future development as they work on current problems."*

- **Repetitive Loss Area Analysis (RLAA)** - The CRS is very interested in supporting local efforts to mitigate repetitive loss properties, defined as properties that have two or more claims of more than $1,000 paid by the NFIP within a 10-year period since 1978.

  An RLAA is a careful examination and mitigation assessment for a community with a high number of repetitive loss properties. Conducting the analysis can secure up to 140 points under CRS Activity 510 - Floodplain Management Planning. The 2017 Manual is expected to make this analysis mandatory for communities that have more than 50 repetitive loss properties (the County Local Mitigation Strategy states that there are 32 repetitive loss properties in the whole county, so the City does not have more than 50 repetitive loss properties at this point).

7.3 Private Development

Municipal Code Section 16-115 provides water quantity and quality standards for stormwater discharges to the City's storm drains. These guidelines are applicable to new developments, redevelopments or substantial improvement of platted properties. The following stormwater construction standards are required by the City, unless otherwise specified by previous SFWMD permits or criteria:

> *"A storm event of a one-hour duration and five-year return frequency shall be used in computing the minimum off-site discharge rates from private properties to the City's stormwater system. The stormwater conveyance system should be designed sufficiently so that the conveyance shall pass the design flow while ensuring that the backwater head does not exceed the proposed berms, walls or other containment systems in a 25-year 24-hour storm event. The side lot swales and other emergency conveyance facilities may be designed to pass the water forward to the public right-of-way.*
>
> *Water quality standards shall be determined based upon selecting the most appropriate pollutant removal presumption to the corresponding BMP technique. The BMP guidelines used must meet a presumed pollutant removal of 85 percent Total Suspended Solids (TSS), Total Nitrogen (TN), and Total Phosphorus (TP). BMPs that do not effectively remove TN and TP such as "dry detention" will be discouraged. Innovative approaches and low impact design (LID) techniques that reduce percent impervious are encouraged. Although reductions in storage volume may be given to BMPs that use "retention" and exfiltration, under no circumstances will the design storage volume be allowed to be less than half inch (0.5") of retention storage volume nor less than 1.25 inch of dry detention storage volume (based on total site area). The following special conditions shall apply in meeting the above standards: a) on single family lots no more than one-half inch of detention or retention shall be stored underground in vaults, exfiltration pipes, or French drains; b) rainfall runoff from roof drains can be disregarded from the water quality calculations but not from the conveyance calculations since roof water is not a major source of pollutant concern but it is a major concern for release into the public system for flooding considerations. Directly connected impervious area (DCIA) is discouraged for purposed of water quantity; c) retention systems shall be designed and located no less than 18 inches above the wet season water table; exfiltration and pervious pavement shall be designed to be a minimum of 24 inches above the wet season water table; d) where special filtering materials are utilized, where swimming pools and patio areas are designed for storage or where special retention provisions are provided consistent with SFWMD criteria or consistent with Chapter 62 of the Florida Administrative Code, the building official may credit such areas in the computation of total on-site storage."*

The Stormwater Standards Handbook was developed in July 2007 for the City of Naples to use in implementing the above stated code. A review of this code along with initial recommendations is listed under **Table 7-1**. Along with those recommendations, the following are some additional recommendations for private development.

- Provide a provision for the applicant to demonstrate a pre-development versus post-development analysis for the 5 year, 1 hour storm event to provide evidence that the applicant is not increasing discharge rates into the City system.
- Consider adding a 25 year and 100 year storm event analysis. The 100 year analysis would provide evidence of meeting no flooding of buildings. In addition, this would help achieve CRS ratings.
- For water quality treatment, roof tops should be included in the area to be treated and in the discharge rates, but should not be used in calculating storage for the site (i.e. building coverage).
- Section 8 should be revised to clearly illustrate an example more clearly as explained in Section 6.1.4. The sample is showing an excess amount of discharge from private properties.
- Applicants should show that they are not causing downstream impacts. A pre-development versus post-development analysis may help but if direct connections are being made to the City's system, then an analysis is necessary.

In addition to the private development, the code should include specific stormwater guidelines for different land uses such as single family, multifamily, industrial, and commercial developments. More water quality volume may be needed for higher developed properties and uses. These guidelines could specifically state which BMPs are acceptable with certain uses.

7.4 MS-4 Permit

In 1997, EPA began requiring permits for smaller municipalities under the Phase II Municipal Separate Storm Sewer program. A municipal separate storm sewer system (MS4) is a publicly-owned conveyance or system of conveyances (i.e., ditches, curbs, catch basins, underground pipes, etc.) designed or used for collecting or conveying stormwater and that discharges to surface waters of the state. Operators of a regulated MS4 are required to:

- Reduce the discharge of pollutants to the "maximum extent practicable" (MEP)
- Protect water quality
- Satisfy the water quality requirements of the Clean Water Act

The City's current Municipal National Pollutant Discharge Elimination System (NPDES) Permit ID Number FLR04E080 (Cycle 3) became effective November 1, 2013 and will expire October 31, 2018. Annual Reports summarizing the Stormwater Management Program (SWMP) implementation efforts are required for Years 2 and 4 of the five-year permit term. The Year 2 report covered from November 1, 2014 through October 31, 2015 and the Year 4 report will cover November 1, 2016 through October 31, 2017, and is due April 30, 2018.

The Permit includes six (6) Minimum Control Measures or required SWMP Elements:

1. Public Education and Outreach as to Stormwater Impacts
2. Public Involvement/Participation
3. Illicit Discharge Detection
4. Construction Site Stormwater Runoff Control
5. Post-construction Stormwater Management in New Development and Redevelopment (not required if using qualified alternative Program) – City
6. Pollution Prevention/Good Housekeeping for Municipal Operations

For each BMP, the City was required to:

- List measurable goals
- Provide a schedule for implementation/completion
- List the responsible entity/Department

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The City has selected the following BMPs to be implemented as part of their Phase II permit requirements:

1. Public Education and Outreach as to Stormwater Impacts

    a. Project Greenscape Program is designed to educate landscape companies on BMPs that promote less use of pesticide, fertilizer and irrigation which in turn educates residents. This course is required to do business with the City. The measurable goals are to document and report on an annual basis the number of educational programs conducted and the number of certified landscape companies/individuals who attend.

    b. Maintain and update the City's webpage on Stormwater Management and Natural Resources, and provide links to state and other City webpages. Measurable goal is to document the number of web age hits per year.

2. Public Involvement/Participation

    a. Public involvement in Policy, SWMP, and Ordinances – The City will involve the public in policy decisions related to SWMP, such as revisions to SWMP and relevant ordinances. Measurable goal is to document and report annually the number of Departmental reviews, number of publicly noticed comment opportunities, and the number of meeting attendees.

    b. Public Workshops and Presentations about stormwater management rules, regulations, management practices, permitting and projects. Measurable goals are to document and report the number of council workshops, City council meetings addressing stormwater issues, and the number of neighborhood association meetings and school presentations, and their attendees.

    c. Coastal Cleanup Program – Measurable goal is to document and report the number of volunteers and the amount of trash collected in annual event.

    d. Bay Days/Great American Cleanup - Measurable goal is to document and report the number of volunteers and the amount of trash collected in annual event.

3. Illicit Discharge Detection

    a. Continued improvement of the City's GIS database on the stormwater drainage collection and conveyance system from each of the 12 drainage basins. Measurable goal is to document and report the percentage of the stormwater collection and conveyance systems mapped in the GIS database, as well as to document through mapping the number of new, consolidated and net total outfalls.

    b. Enforcement of existing City of Naples Articles VII, Chapter 52; Article III, Section 16-115; Article VII, Section 16-291; Article I, Section 42-5; regarding illicit discharges into the stormwater management system and illegal dumping. Measurable goal is to document and report any changes or amendments to the applicable codes.

    c. Inspect public discharges and illegal dumping. Document and report monthly the number of proactive illicit discharges discovered, reported and confirmed, the number of illegal discharges where fines were levied, and the number of illicit discharges corrected.

    Monitor Water Quality Data and Evaluate Pollutant Loading in an effort to identify target pollutants for reduction and monitor existing efforts in pollution reduction. Document monthly and report quarterly any trends in target pollutant levels.

d. Provide public awareness to employees, residents, and businesses regarding the hazards of illegal discharges and dumping of wastes. Document and report annually the type and number of public awareness activities by target audience group.

4. Construction Site Stormwater Runoff Control

a. Maintain the City's existing City Code Article VIII pertaining to the requirement for construction contractors to maintain SWP3's on construction site, ordinance requiring erosion and sediment controls to reduce pollutants associated with stormwater discharge and prevent direct run-off to abutting properties. Document and report annually any changes to amendments to the ordinance(s)/code(s).

b. Monitor the City's existing City Code Article VIII pertaining to maintenance of BMP's on site that reduce pollutants associated with stormwater discharge. Document and report annually the number of construction sites operating with erosion control requirements.

c. Monitor existing City Code Chapter 32 requiring construction site operators to control all waste on sites, and review the code language for potential enhancement. Document and report annually the number of active construction sites operating with waste control requirements.

d. Continue to implement City Code Article VIII, Section 16-291 pertaining to the review of site development plans and the requirement for a SWP3 and BMPs during construction. Document and report annually the number of building permits issued and the number of site plans reviewed and approved requiring stormwater control.

e. Continue to implement the City's current policy to receive public complaints, questions, and comments regarding construction site stormwater management concerns. Document and report annually the number of public inquiries received and the number of follow-up actions to calls received.

f. Inspect active construction sites for proper installation and maintenance of Stormwater BMP's and construction waste control requirements. Continue to implement Section 30-340 requiring inspections of permitted Water Management Systems on private property to ensure compliance and performance with original design. Document and report the number of stormwater inspections performed per year and the number of inspections that were not in compliance and required follow-up action.

5. Post-construction Stormwater Management in New Development and Redevelopment

a. This control measure is handled by qualified local programs and therefor is not required to be addressed by the City.

6. Pollution Prevention/Good Housekeeping for Municipal Operations

a. Reduce trash and pollutant runoff from City streets by continuing to implement the City's street sweeping program. Document and report annually the number of lane-miles of streets swept and the amount of debris collected and disposed of.

City Stormwater System Operations and Maintenance Program. Inspect and maintain City stormwater structural controls including swales, treatment ponds, filter marshes, inlet/catch basins, conveyance system, and pump stations. Document and report annually the number of pond inspections and pond maintenance activities; the total linear feet of pipe maintained the amount of material removed during maintenance activities, the man-hours spent in operations and maintenance of the City's permitted stormwater management systems.

b. Employee Training – Used Oil and Hazardous Materials Handling, Storage and Disposal, and BMP's for reducing and preventing stormwater pollution from municipal activities. Document and report annually the number of employees receiving training and the number of training sessions.
Provide training/certification of appropriate stormwater staff, such as stormwater inspectors and site plan reviewers, on stormwater erosion and sedimentation controls. Document and report annually the number of staff members trained/certified.

Several of the BMPs in the NPDES SWMP are directly aligned with recommended BMPs in the Stormwater Master Plan, such as public education and continued improvement of the City's GIS database on the stormwater system.

7.5 County, State, and Federal Regulations

A detailed review of Collier County, South Florida Water Management District, Florida Department of Environmental Protection Division, or the Environmental Protection Agency regulations as it relates to the City of Naples was not part of the scope of work for this master plan. These regulations were reviewed as part of the water quality analysis as it relates to the regional water bodies such as the Gulf of Mexico, Naples Bay, Moorings Bay, Gordon River and Gordon River Extension.

Due to the current state of Naples Bay in reference to water quality and the increase of freshwater flows to Naples Bay and other affected water bodies, outside regulation appears to not be stringent enough to protect these water bodies.

A recommendation to aid and conveying the effects of the lack of regulations and the outside projects that effect these water bodies, it is recommended that the City insert itself at all advisory committees along with contacting these governmental bodies with the City concerns. By being on advisory committees or boards, the City can interject its concerns about projects that affect these water bodies.

TAB 8

Climate Adaptation

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8. Climate Adaptation

Local governments, which bear the largest responsibility for coastal planning like the City of Naples, long have struggled with balancing strong demand for increasing development with protection of fragile environmental and cultural resources. Now these same governments must consider the threats that substantial sea-level rise pose to current planning, existing development, and beleaguered ecological systems. These threats include inundation, flooding, enhanced storm surges, loss of infrastructure, destruction of wetlands and beaches, and increased risks for public health and safety. Although taking regulatory initiatives to adapt to predict future threats can be difficult, it can also conserve resources, mitigate crises, and protect ecosystems.

8.1 How does sea level rise (SLR) relate to stormwater management?

The storm sewer system in Naples is designed to convey storm water away from low-lying developed areas to stormwater ponds, canals, and ultimately, the Gulf of Mexico.

In recognition of the potential effects of sea level rise on coastal assets, the City has included stages of planning for adaptive actions into the master plan process for stormwater infrastructure and operations. One important analysis for planning adaptation is developing an understanding of the potential inundation due to sea level rise and flooding by high tides and coastal storm events. This section summarizes the work performed to assess the exposure of the Naples stormwater system assets to sea level rise.

The vulnerability of stormwater management systems to sea level rise and storm events depends on the system's current storage and flow capacity, the elevation and location of their outfalls, and whether they are gravity drained or pumped.

In general, stormwater systems have a reliance on uninterrupted power and many of the components are sensitive to water and salt exposure. The capacities to collect, convey, and discharge flows to the bays and Gulf will be reduced by higher sea levels. Outfalls that are below the future high tide or storm event levels may need to be elevated, have check valves installed to prevent backflow, and be pumped rather than gravity drained. Reduced discharge capacity and/or failures or pump stations could cause flooding of adjacent properties and disrupt access to homes, jobs, and recreation areas, leading to potentially significant consequences.

Without action, SLR poses the following threats to the stormwater system and adjacent areas:

- **Urban flooding.** The majority of the Naples stormwater system is gravity driven. Excess stormwater flows from higher elevations until reaching the Gulf and Bay. As low-lying stormwater outfalls become partially or completely inundated by rising water levels, drainage of stormwater can be impeded, resulting in inland urban flooding during storms. Difficulties draining stormwater can cause road closures, impede access to facilities, and damage private and public property.
- **Saltwater intrusion to stormwater system.** During large tide and storm events, saltwater may enter the stormwater system through open outfalls, leaky tide gates, overflow weirs, and through catch basins located in areas where coastal waters have overtopped the shoreline. Backflow of high tides into the stormwater system may cause surface flooding in low-lying areas that sit at elevations below the hydraulic grade line, even if shoreline protection systems are high enough to prevent overland flooding (Figure 8-1). Saltwater may also cause premature corrosion of pipes and equipment in the system.

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- **Elevated groundwater levels.** As sea levels rise, so will groundwater levels. SLR causes saline water to intrude into underground reservoirs, raising the historical groundwater elevation ranges beyond what the Naples utilities were planned and built to accommodate.

  The incoming saline water also changes the chemistry of the freshwater reservoir, which has the potential to increase corrosion rates of underground utilities.

Source: San Francisco Sewer System Improvement

Figure 8-1 Schematic Showing Backflow of High Tides into the Stormwater System Causing Surface Street Flooding

8.2 Sea Level Rise Projections

Sea level trends are recorded locally by tide stations, and more recently, globally by satellite altimetry. Globally, sea levels rise for two primary reasons: melting of land-based ice masses (glaciers and continental ice sheets) and expansion of seawater as it warms (thermal expansion). During the 20th century, these two processes have caused global ocean levels to increase at an average rate of 0.07 inches/year (1.8 mm/year) (NOAA, 2012). Recent observations show that this rate has accelerated to 0.13 inches/year (3.3 mm/year) in the past 20 years, roughly twice the average rate of the preceding 80 years (NOAA, 2012 and National, 2016).

Historical Sea Level Rise Trends

Tide gage records indicate that mean sea levels have risen approximately ten inches in the Naples area over the last century (Figure 8-2). The local historical sea level rise rate is faster than the global average rate. With global sea levels projected to continue to rise, public and private shoreline assets, including City stormwater infrastructure, will become more vulnerable to an increase in the frequency and magnitude of high tides and coastal flood events.

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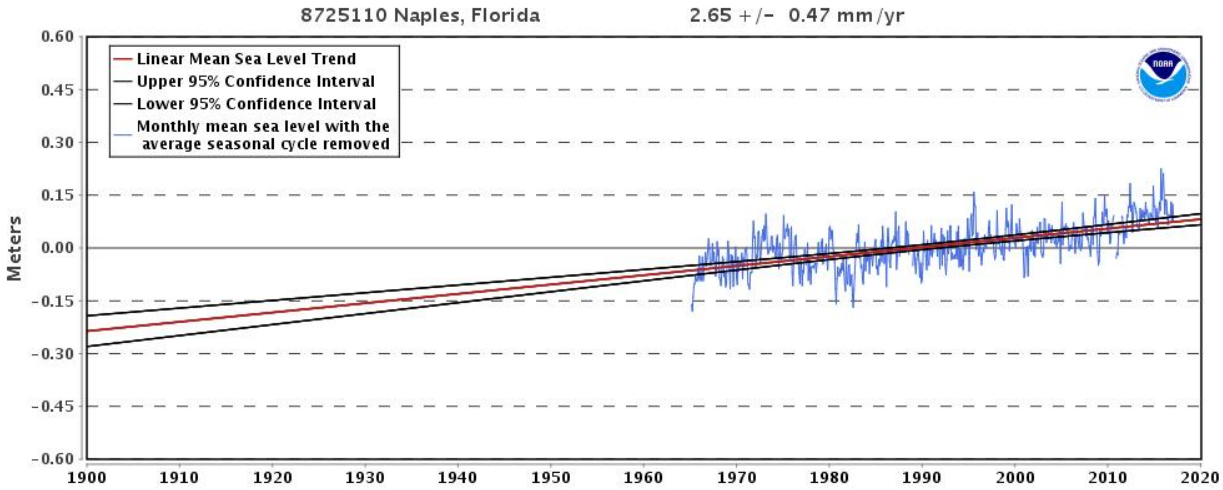
Figure 8-2 Regional Sea Level Rise Trends Observed at the Naples Tide Station



Source: National Oceanic and Atmospheric Administration (NOAA) Sea Levels Online.

Sea Level Rise Projections

Future sea level projections have been developed by scientists using coupled ocean-atmosphere models called global circulation models. The most likely projections are based on a moderate level of global greenhouse gas emissions and continued accelerating land ice melt patterns. The upper range estimates represent less likely, but possible amounts of SLR using very high greenhouse gas emission scenarios with significant land ice melt. Because there is uncertainty associated with SLR projections, it is generally recommended to consider a range of potential SLR scenarios in project planning.

Selection of the most appropriate SLR scenario to prepare for future conditions should consider the following factors:

- **Project lifespan** – how long will the project be in use?
- **Site and asset adaptability** – is there an ability to adapt to higher sea levels that may occur in the future (for example, building additional flood protection or raising site elevations in the future)?
- **Risk tolerance** – is there flexibility to accommodate flooding? Is the consequence of flooding low or high?

Although Florida does not have state-level sea level rise guidance for project planning, there are a variety of federal studies that serve as the basis for design and planning projects throughout the state. Table 8-1 lists several planning efforts in the southwest and southeast Florida region. Due to the range in SLR projections, many local planning efforts rely on a combination of multiple projection sources. For example, the Southeast Florida Regional Climate Compact's Unified Sea Level Rise Projection guidance referenced projections provided by the U.S. Army Corps of Engineers and NOAA, depending on project planning timeline.

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Table 8-1 Sea Level Rise Projections for Year 2100 Used in Florida Studies

Lead Agency *2100 Projections*	Study Description	Florida Agency/Study Using Projections
U.S. Army Corps of Engineers *SLR: 8 – 60 inches relative to 1992 mean sea level*	The U.S. Army Corps of Engineers (USACE) issued guidance in 2009 and 2011 for taking SLR into account for coastal defense projects. The guidance presents three scenarios: a low scenario that projects the historical trend; and an intermediate and high scenario, which includes the latest NRC and IPCC accelerated sea level projections and vertical land movement. SLR projections are relative to 1992 mean sea level.	Collier County/ Collier County Floodplain Management Plan (2015) Southeast Florida Regional Climate Compact / Unified Sea Level Rise Projection (2011)
Intergovernmental Panel on Climate Change *SLR: 10 – 39 inches relative to 1986-2005 mean sea level*	The Intergovernmental Panel on Climate Change (IPCC) is heavily relied on in climate change planning, as the group is responsible for developing a range of possible future emissions scenarios that are used in climate models. Since 1990, the group has released a series of reports, including the most recent in 2013, which includes their most recent future sea level rise projections.	Lee County Climate Change Vulnerability Assessment (2010)
U.S. Environmental Protection Agency *SLR: 10 – 46 inches relative to 1990 mean sea level*	In 2008, the Environmental Protection Agency (EPA) conducted an analysis of the effects that climate stressors, including SLR, may have on the southwest region of Florida. Three "severity" scenarios were initially considered: least case (90% probability of occurrence), moderate case (50% probability of occurrence), and worst case (5% probability of occurrence). The scenarios rely on the historical SLR rate at St. Petersburg, FL and the normalized future projections developed by the EPA relative to 1990 mean sea level[i].	Southwest Florida Regional Planning Council / The Comprehensive Southwest Florida / Charlotte Harbor Climate Change Vulnerability Assessment (2009) Tampa Bay Regional Planning Council / Sea Level Rise in the Tampa Bay Region (2006) Lee County Climate Change Vulnerability Assessment (2010)
National Research Council *SLR: 20-40 inches*	In 2010, the National Research Council (NRC) released a report quantifying the possible outcomes of different emissions scenarios using the latest scientific literature. The future sea levels described in the study relied on projections from the IPCC and were supplemented by additional scientific studies that account for accelerated melting of glacial ice.	Florida Oceans and Coastal Council / Climate Change and Sea-Level Rise in Florida (2010)
National Oceanic and Atmospheric Administration[ii] *SLR: 8 to 79 inches relative to 1992 mean sea level*	The National Climate Assessment (NCA), led by NOAA, synthesizes the latest sea level rise science every four years. The 2012 report described four scenarios, which relied on extrapolation of existing sea level trends, the IPCC AR4 report, and a calculation of the maximum possible glacier and ice sheet loss by the end of the century.	Southeast Florida Regional Climate Compact / Unified Sea Level Rise Projection (2011)

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8.3 Existing and Potential Future Water Levels

Selection of future water level scenarios is a key component of a sea level rise vulnerability assessment. Future water levels are an important input to the development of asset vulnerability/flood inundation maps. It is important to first define baseline conditions for the existing water elevations to provide a basis to evaluate the impacts of flooding from future sea level rise and coastal storms.

Tide elevations are measured relative to a vertical datum—a baseline starting position against which other elevations may be related. There are two types of vertical datums: orthometric and tidal. Tidal datums are elevations defined by a certain phase of the tide: e.g. mean sea level or mean higher high water (MHHW), which is commonly referred to as the "average daily high tide."

An orthometric datum is a referenced plane of zero elevation that historically attempted to approximate the average elevation of the surface of global oceans or "sea level" (such as the National Geodetic Vertical Datum of 1929 – NGVD29). The North American Vertical Datum of 1988 (NAVD88) is the current national standard reference datum and is used in this discussion of tidal elevations.

8.3.1 Daily and Storm Tide Levels – Existing Conditions

Tidal datums are estimated by the National Oceanographic and Atmospheric Administration (NOAA) using observed water level data at tide stations. The mean higher high water (MHHW) tidal datum was selected to represent the average daily high tide for the sea level rise inundation mapping at the City of Naples. The MHHW tide elevation for existing conditions was computed by NOAA using observed water level data from 1983-2001 at the Naples tide station (#8725110).

NOAA also provides estimates of storm tides at the Naples tide station. Storm tides include the effects of the astronomical tide, storm surge (due to atmospheric pressure and meteorological effects), and runoff. The existing storm tide levels were estimated by NOAA using a statistical analysis of 84 years of measured annual maximum water level data.

Daily and storm tide levels at two Naples tide stations (Naples and Naples Bay North) are shown in Table 8-2.

Table 8-2 Tidal Datums at Naples Tide Stations

	Naples (#8725110)		Naples Bay North (#8725114)	
Datum	**NAVD88‡ (feet)**	**MHHW (feet)**	**NAVD88‡ (feet)**	**MHHW (feet)**
100-year Storm Tide Level	4.31	3.73	-	-
10-year Storm Tide Level	2.67	2.09	-	-
Highest Astronomical Tide	1.51	0.93	-	-
Mean Higher High Water (MHHW)	0.58	0	0.69	0
Mean High Water (MHW)	0.33	-0.25	0.44	-0.25
North American Vertical Datum of 1988 (NAVD88)	0.0	-0.58	0.0	-0.69
Mean Tide Level (MTL)	-0.68	-1.26	-0.55	-1.24
Mean Sea Level (MSL)	-0.64	-1.22	-0.50	-1.19
Mean Low Water (MLW)	-1.68	-2.26	-1.54	-2.23
Mean Lower Low Water (MLLW)	-2.29	-2.87	-2.07	-2.76

Notes: ‡ North American Vertical Datum of 1988

The largest annual tides, often referred to king tides, occur approximately four or five days each year when a spring tide coincides with the moon being in its closest position (perigee) to the earth. King tides typically occur during the fall months in south Florida. Although king tides typically only increase sea levels several inches above spring tide levels, they can cause flooding to low-lying coastlines, particularly if coinciding with a storm event or other oceanographic condition that elevates tides above normal levels (such as during the September 2015 king tides). Because king tides often cause minor flooding and drainage issues, estimating typical king tide elevations is important in understanding high tide impacts to the Naples stormwater system.

Table 8-3 shows recent king tides at the Naples tide station relative to the MHHW tidal datum.

Table 8-3 Recent Astronomical King Tides at the Naples Tide Station (2011-2016)

	Naples (#8725110)		
Date	Predicted (feet above MHHW)	Observed (feet above MHHW)	Difference (feet)
October 27, 2011	0.83	0.93	0.10
September 19, 2013	0.59	0.95	0.36
October 19, 2013	0.43	1.15	0.72
October 7, 2014	0.44	1.00	0.56
September 28, 2015	0.73	1.53	0.80
October 28, 2015	0.70	1.83	1.13
November 26, 2015	0.63	0.29	-0.34
October 18, 2016	0.67	1.33	0.66
November 13, 2016	0.72	1.43	0.71
Average	0.64	1.16	0.52

Observed water levels during king tide events may be higher than predicted astronomical tides due to additional factors such as precipitation, storm surge, and recent sea level rise that is not captured in the predicted tides. Based on the recent king tide events listed above, the observed average king tide at the Naples tide station is approximately 1 ft above MHHW. Similarly, the calculated 10-year extreme tide is approximately 2 ft above MHHW. These relationships will be used in Section 8.3.2 to relate the MHHW, king tide, and 10-year tide elevations to help interpret the SLR inundation maps used in the SLR exposure assessment.

8.3.2 Daily and Storm Tide Levels – Future Conditions

Five SLR amounts – 1, 2, 3, 4, and 5 feet - were evaluated as a part of the SLR exposure assessment for City's stormwater system. SLR amounts of 1 to 5 feet cover the range of the USACE projections for the NOAA Naples tide station at 2100, capturing a broad range of scenarios between the most likely and high-end of the uncertainty range at both mid-century and end of the century (Figure 8-3).

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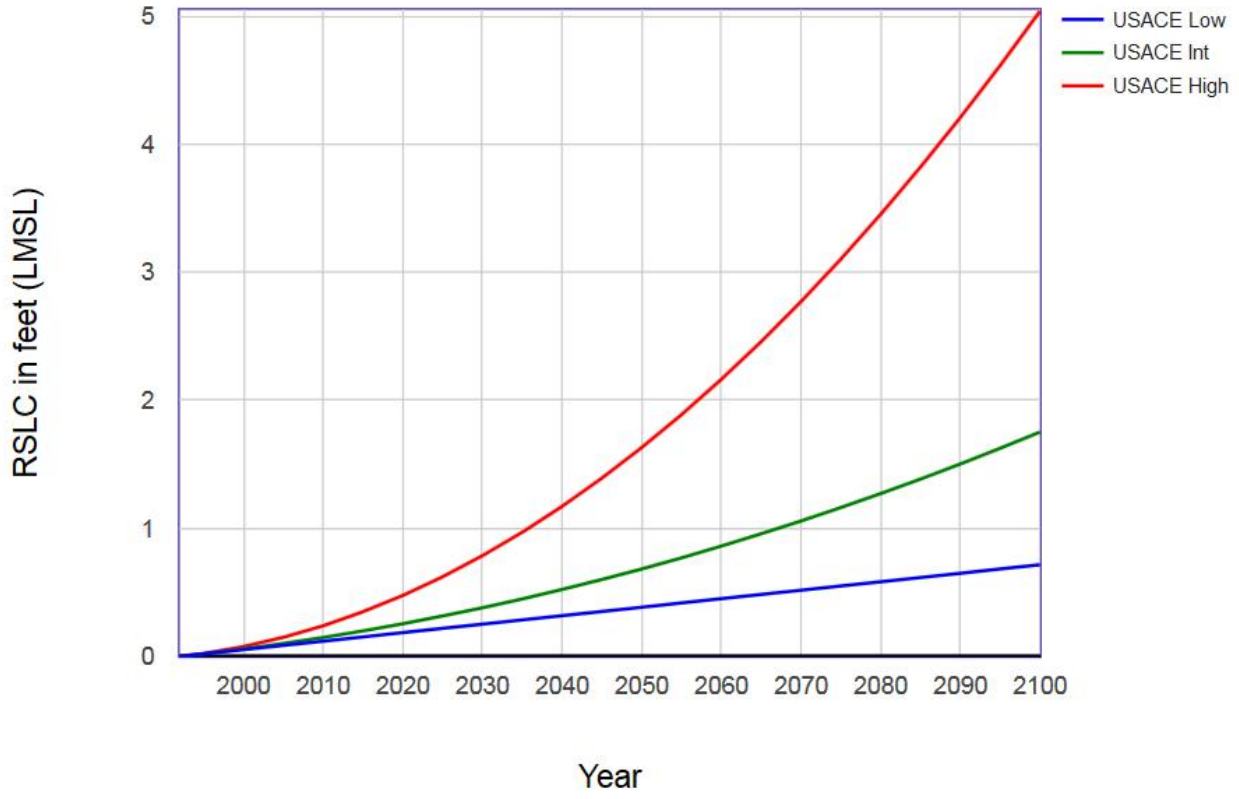
Figure 8-3 Relative Sea Level Rise Projections for Naples, FL



Note: All sea level rise projections are relative to 1992. This is the mid-point of the current National Tidal Datum Epoch, a 19-year period used by NOAA to define the tidal datums.

Each SLR amount was added to the MHHW tidal datum to create five future water level scenarios. Each scenario represents (1) permanent inundation scenarios by daily high tides or (2) temporary flood conditions from combinations of SLR and storm tides (for example, king tide or the 10-year tide). Therefore, a single water level scenario can represent either permanent inundation or temporary flooding, as shown in Table 8-4. The following water level conditions are presented in Table 8-4:

- **MHHW** – typical daily high tide (permanent inundation)
- **King tide** – typical king tide elevation (temporary condition occurring approximately four to five times each year)
- **10-year tide** – storm tide condition with a 10-percent annual chance of occurrence (temporary condition occurring approximately once every ten years)

The water level scenarios shown in Table 8-4 correspond to the SLR inundation maps discussed in Section 8.4.

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Table 8-4 Future Water Level Scenarios Representing Permanent Inundation and Temporary Flooding

Permanent Inundation	Temporary Flooding
MHHW + 1 ft SLR	King Tide
MHHW + 2 ft SLR	King Tide + 1 ft SLR or 10-year tide
MHHW + 3 ft SLR	King Tide + 2 ft SLR or 10-year tide + 1 ft SLR
MHHW + 4 ft SLR	King Tide + 3 ft SLR or 10-year tide + 2 ft SLR
MHHW + 5 ft SLR	King Tide + 4 ft SLR or 10-year tide + 3 ft SLR

8.4 Storm Surge and SLR Flood Maps

Inundation maps are a valuable tool for evaluating potential exposure of stormwater assets to future sea level rise and tide conditions. Inundation maps are typically used to evaluate when (under what amount of sea level rise and/or storm tide) and by how much (what depth of inundation) an asset will be exposed to inundation or flooding.

Future inundation layers for each of the selected sea level rise scenarios were downloaded from the NOAA Sea Level Rise and Coastal Impacts Viewer[1]. NOAA's depth of flooding raster[2] files were created by subtracting the land surface digital elevation model (DEM) from the MHHW + SLR water surface DEM. The resultant DEM (or "inundation depth raster") provides both the inland extent and the depth of inundation. The maps also differentiate between low-lying areas that have a direct flooding pathway to the flood source (such as the Gulf of Mexico or Naples Bay) and low-lying hydraulically disconnected areas. These disconnected low-lying areas are shown on the inundation maps in green instead of blue, where blue indicates low-lying areas that are exposed to direct inundation. Low-lying disconnected areas may experience drainage issues due to stormwater backflow by high tides through the stormwater collection system or due to elevated groundwater levels in the future. Figure 8-4 is a cross section that illustrates an inland disconnected low-lying area.

Example SLR inundation maps for north and south Naples are shown in Figure 8-5 and Figure 8-6 for the MHHW + 3 ft SLR permanent inundation scenario, which also represents projected temporary flooding from a king tide + 2 ft SLR or 10-year tide + 1 ft SLR. Based on the SLR inundation mapping, the Old Naples neighborhood waterfront south of 5th Avenue appears to be one of the first areas exposed to frequent tidal inundation. Additional low-lying disconnected areas such as Gulf Shore Boulevard between 13th and 20th Avenues, Gordon Drive south of 33rd Avenue, and Gulf Shore Boulevard north of Doctors Pass may experience drainage issues due to high tides backing up into the stormwater system and/or elevated groundwater levels during temporary flooding events such as king tides or storm surge events.

[1] https://coast.noaa.gov/slr/
[2] A raster consists of a matrix of pixels organized into a surface area grid where each grid cell contains a value representing information (e.g., water depth values).

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Figure 8-4 Example Shoreline Cross Section Showing Disconnected Low-Lying Area

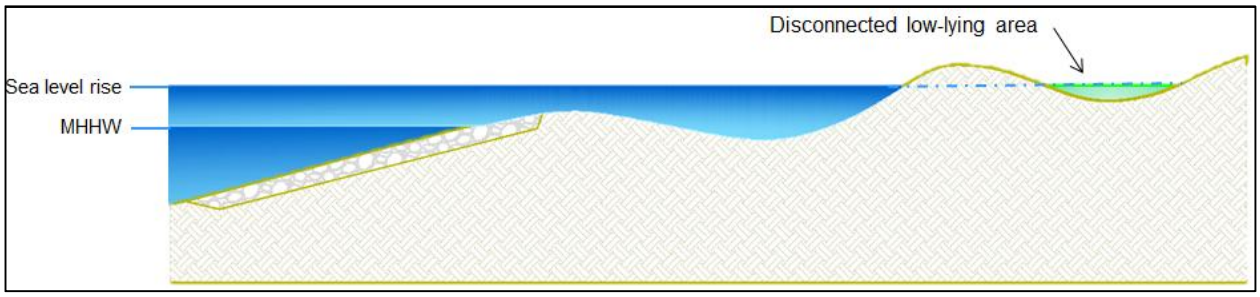

Figure 8-5 Projected Inundation for the MHHW + 3 ft Scenario in North Naples

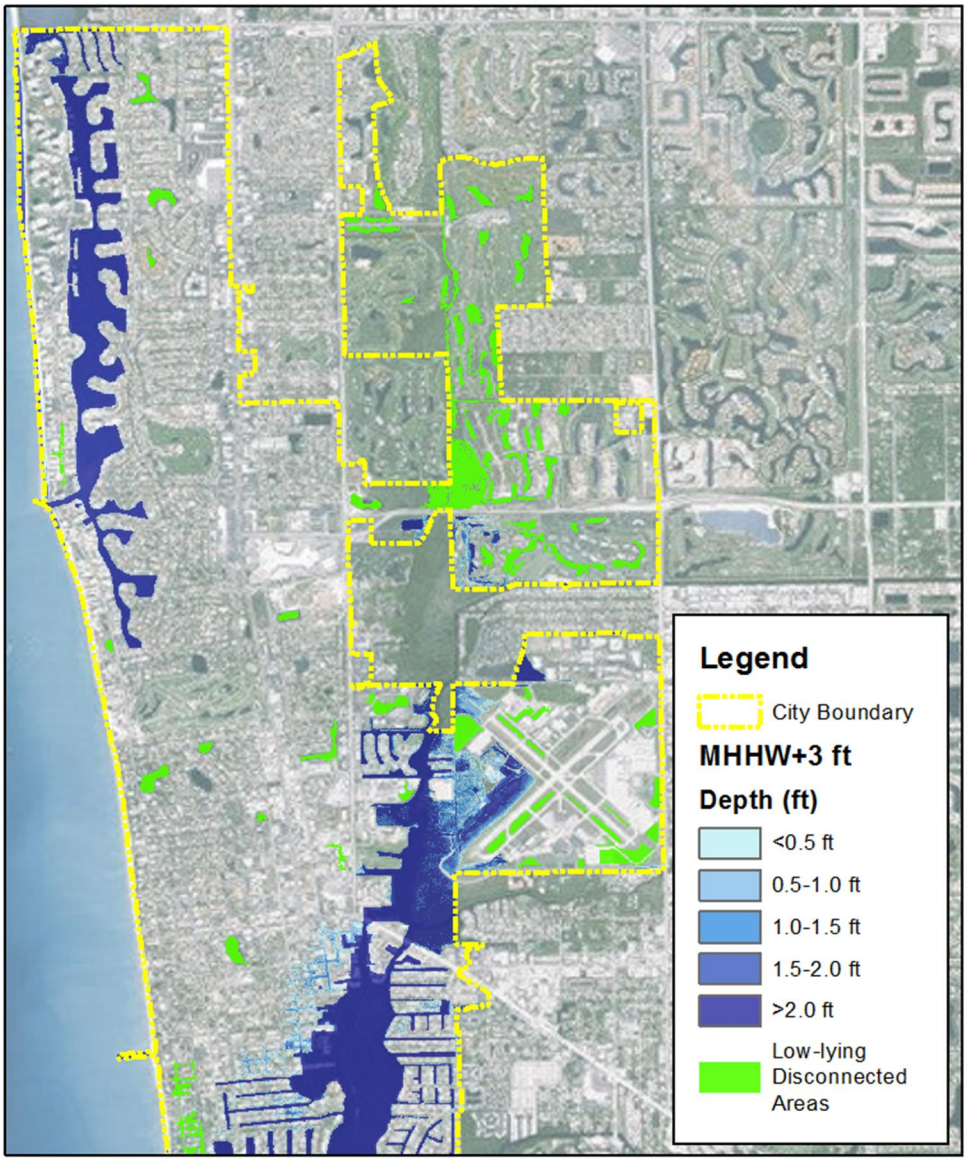

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Figure 8-6 Projected Inundation for the MHHW + 3 ft SLR Scenario in South Naples

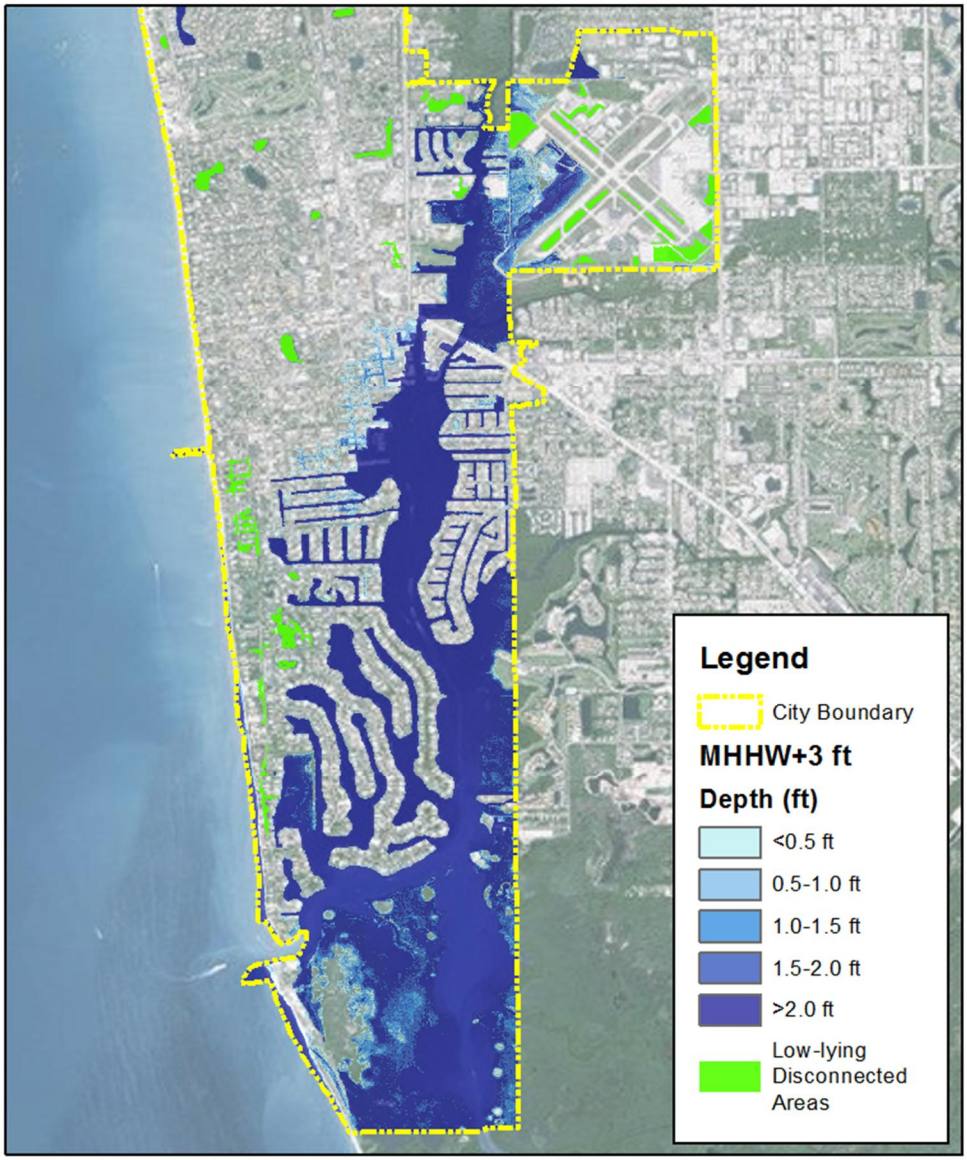

Figure 8-7 shows two zoom maps illustrating projected areas of tidal flooding (Old Naples south of 5th Avenue) and a low-lying disconnected area along Gulf Shore Boulevard north of Doctors Pass that may be exposed in the future to backflow through the stormwater collection system during extreme high tides. The SLR inundation maps for the other scenarios can be used in a similar manner to identify areas of vulnerability for each SLR scenario.

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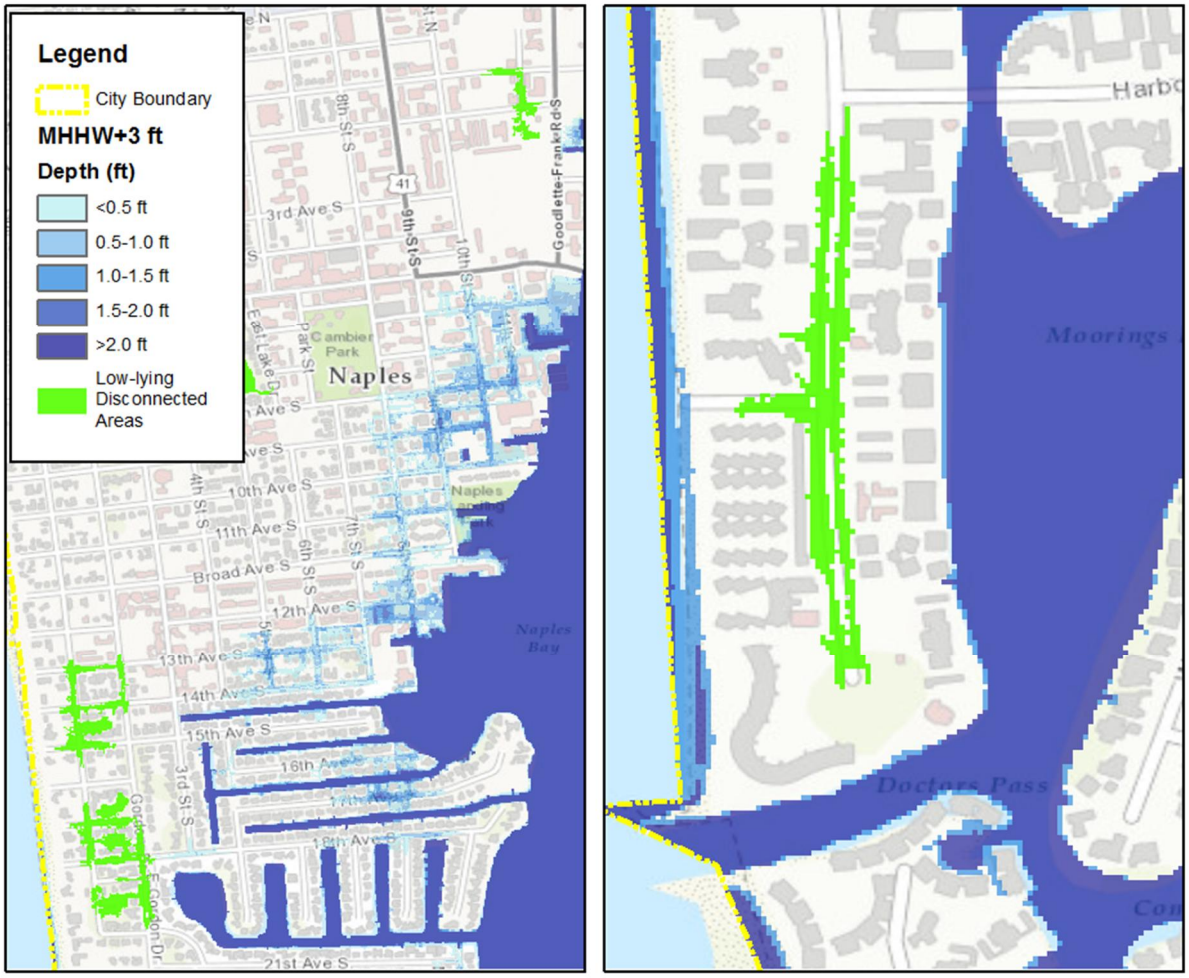
Figure 8-7 Example Areas of Projected Tidal Inundation and Flooding Under the MHHW + 3 ft SLR Scenario



Note: The left panel shows an example area of projected tidal inundation under the MHHW + 3 ft SLR scenario and the right panel shows an example area of potential street flooding due to high tides backing up through the stormwater system under the king tide + 2 ft SLR or 10-year tide + 1 ft SLR scenarios.

8.5 Summary of SLR Impacts to Stormwater System Components

Sea level rise impacts to the stormwater system were evaluated primarily through the use of the SLR inundation maps. As a result, this assessment of vulnerability is primarily an exposure assessment and does not consider other aspects of vulnerability such as sensitivity and adaptive capacity. The sections below evaluate the SLR vulnerability (exposure) of pump stations, outfalls, and inlets in Naples. Exposure to SLR inundation and flooding are evaluated for the five SLR scenarios identified in Section 8.3.2. The SLR exposure assessment focuses on the scenarios equal to and greater than the MHHW + 3 ft SLR scenario because SLR and flooding impacts to the stormwater system are negligible for lower SLR scenarios; however, it should be noted that this assessment does not evaluate the combined effects of precipitation and high tides/SLR, which would require a more rigorous assessment. It is likely that increased vulnerabilities would be identified through such an assessment even for low to moderate amounts of SLR since elevated tide levels reduce the capacity of the stormwater system to discharge precipitation runoff through gravity fed collection and discharge systems.

8.5.1 Pump Stations

Three pump stations serve the City's stormwater collection network and are used to convey excess stormwater to receiving channels or the Gulf. Flooding at any station has the potential to cause severe consequences to the overall level of service of the City's stormwater system. Many critical facilities, businesses, and residences rely on pump stations to prevent backup and overflows. Pump stations are particularly vulnerable to flooding because they rely on electrical components and have mechanical parts, which are sensitive to floodwaters.

The assessment for each pump stations draws upon the following data sources:

- 2007 LiDAR dataset (ground elevations)
- Design and as-built drawings provided by the City (ground and station component elevations)

8.5.1.1 Exposure

There are numerous potential pathways, including doorways, vents, windows, or improper seals, for floodwaters to impact sensitive pump station components housed inside the building structures. Therefore, elevations of key pump station components (e.g., lowest adjacent grade, pump motor base, and electrical equipment) were identified relative to potential future flood elevations that consider SLR and extreme tides.

Each pump station has a unique physical configuration, but each station's exposure to flooding can be evaluated by identifying the lowest elevation at which water will impact or enter into the pump station (e.g., through doorways, access hatches, or other openings near ground level) and affect water sensitive components. The lowest flood pathway elevation for each pump station was identified through review of as-build drawings. The review showed that the majority of the pump stations have flood access points that are near or at ground level. Therefore, the lowest flood pathway elevation for each pump station is assumed to be the same as its lowest adjacent grade elevation. Elevations of additional pump station components (e.g., electrical equipment, pumps, outfalls) could be compiled to further refine the vulnerability analysis and in the development of adaptation strategies.

A preliminary assessment of each pump station's exposure to SLR inundation and flooding was conducted using the adjacent ground surface elevation at each pump station relative to future water levels. The projected depth of inundation for each SLR scenario was extracted at each pump station and is presented in Table 8-5. Figure 8-8 shows the location of each pump station. The Cove Road pump station is the most vulnerable because it is exposed to inundation at the MHHW + 3 ft SLR scenario, followed by the Public Works and Port Royal pump stations, which are located at higher elevations. Note that this evaluation does not take into account the specific design and configuration of each pump station and is instead based simply on the adjacent ground surface elevation from the bare earth Lidar dataset.

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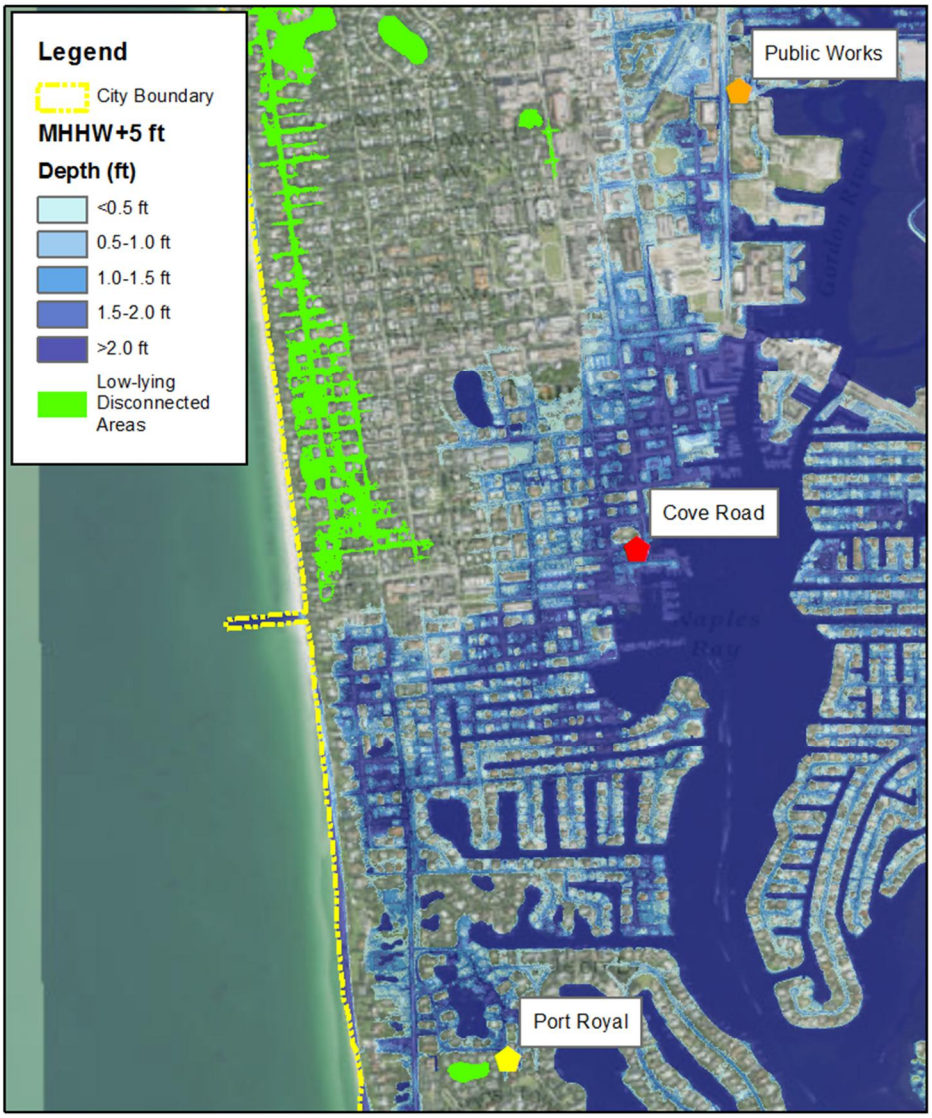
Table 8-5 SLR Exposure and Depth of Inundation at Pump Stations for each SLR Scenario

Pump Station	Scenario of First Impact	MHHW + 3 ft SLR (King Tide+2 ft 10-year tide+1 ft)	MHHW + 4 ft SLR (King Tide+3 ft 10-year tide + 2 ft)	MHHW + 5 ft SLR (King Tide+ 4 ft 10-year tide+3 ft)
Public Works	MHHW + 4 ft SLR	-	þ (0.3 ft)	þ (1.3 ft)
Cove Road	MHHW + 3 ft SLR	þ (0.1 ft)	þ (1.1 ft)	þ (2.1 ft)
Port Royal	MHHW + 5 ft SLR	-	-	þ (0.7 ft)

Note: Projected depth of inundation at each pump station for each SLR scenario is indicated in parentheses.

Figure 8-8 SLR Exposure of Naples Stormwater Pump Stations



Note: Symbol color indicates timing of SLR exposure: MHHW + 3 ft SLR (red), MHHW + 4 ft SLR (orange), and MHHW + 5 ft SLR (yellow)

8.5.1.2 Data Gaps

- This analysis has not yet incorporated the design and/or as-built drawing information from each pump station, which provides more specific information about asset-specific flood vulnerabilities.
- This analysis has not reviewed impacts to power supply to pump stations, such as buried utilities or power substations, which if flooded could result in loss of power to the pump stations.
- This analysis has not evaluated the presence of back-up generators that could supply power to the pump stations in the event of loss of power.

8.5.2 Outfalls

The Naples stormwater system has approximately 300 coastal outfalls that discharge stormwater into tidal waters:

- Gulf of Mexico (beach) – 10 outfalls
- North Naples (Moorings Bay, Outer Doctors Bay, Inner Doctors Bay, Hurricane Harbor) – 97 outfalls
- Naples Bay – 196 outfalls

Coastal outfalls are vulnerable to sea level rise because they discharge into tidal waters. As mean sea level increases as a result of sea level rise, outfalls will become submerged by high tides a greater percentage of the time. This also increases the likelihood that heavy precipitation events will coincide with moderate to high tide levels and impede gravity drainage from the stormwater system. The exposure of coastal outfalls to sea level rise is evaluated in Section 8.5.2.1.

The City is currently developing plans to remove and consolidate the beach outfalls and install pump stations due to ongoing issues with beach water quality, blocked discharges, frequent maintenance requirements, deteriorating condition, and poor level of service. If left in place, these issues would continue and likely worsen in the future as a result of sea level rise. Since plans are underway to remove the beach outfalls, they were not evaluated in this SLR vulnerability analysis.

8.5.2.1 Exposure

Table 8-6 shows the relative number of coastal outfalls within each stormwater basin. Basins 1, 4, and 7 have the largest number of coastal outfalls that may be subject to sea level rise impacts.

8.5.2.2 Data Gaps

- This analysis did not consider the invert elevations of the coastal outfalls. A more detailed evaluation of outfall vulnerability to SLR could be conducted by incorporating the outfall elevations relative to future tide levels.

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Table 8-6 Number of Coastal Outfalls within each Stormwater Basin

Basin	Approximate Number of Coastal Outfalls	Percentage of Total
Basin 1	76	25%
Basin 2	30	10%
Basin 3	21	7%
Basin 4	91	30%
Basin 5	0	0%
Basin 6	2	1%
Basin 7	43	14%
Basin 8	28	9%
Basin 9	0	0%
Basin 10	4	1%
Basin 11	0	0%
Basin 12	0	0%
Other	9	3%

8.5.3 Inlets

8.5.3.1 Exposure

Stormwater inlets can be a potential source of surface street flooding if they have open connections to tidal water bodies. High tides (such as king tides) can backflow into the storm drain system and temporarily flood low-lying areas if outfalls are not equipped with backflow prevention devices. Additionally, low-lying areas can be susceptible to elevated groundwater elevations, which can increase rates of infiltration into stormwater pipes. Areas potentially exposed to backflow flooding or groundwater impacts can be identified by overlaying the stormwater inlet locations with the low-lying hydraulically disconnected areas from the SLR inundation mapping. This exposure assessment considers the role of inlets in contributing to the SLR vulnerability of Naples' neighborhoods by acting as conduits for surface street flooding.

Using Basin 1 as an example(Figure 8-9), 11 inlets (shown in red) in the southwest portion of the basin along Gulfshore Boulevard may experience issues with backflow flooding in the street under the MHHW + 3 ft SLR scenario. At MHHW + 4 ft SLR, an additional 16 inlets (shown in orange) may be exposed to backflow flooding farther north along Gulfshore Boulevard. At MHHW + 5 ft SLR, Gulfshore Boulevard becomes exposed to overland flooding from the bay as well and an additional 100 inlets (shown in yellow) may be exposed to backflow flooding along the eastern shoreline of Venetian Bay, Inner and Outer Doctors Bay, and Moorings Bay.

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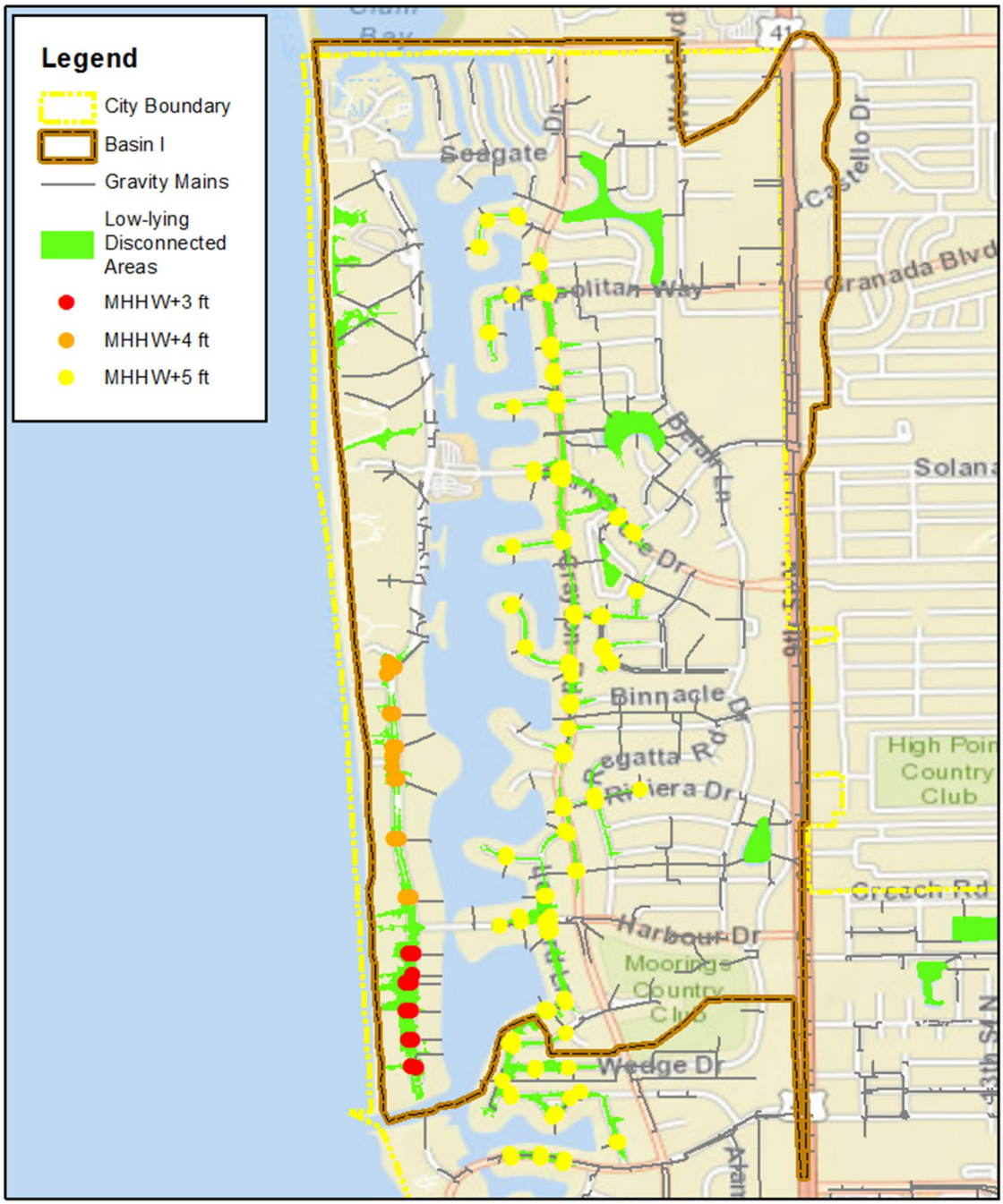

Figure 8-9 Exposure of Inlets to Backflorw Flooding and Groundwater Effects in Basin 1

Note: Green areas indicate low-lying areas that may be exposed to backflow flooding under the MHHW + 3 ft, +4 ft, and +5 ft SLR scenarios.

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Similar vulnerabilities in the other basins can be evaluated based on examination of Table 8-7 and the SLR inundation maps (Figure 8-10). This table and figure indicate the number and location of inlets that may be sources of backflow flooding or experience groundwater impacts under the MHHW + 3 ft, + 4 ft, and + 5 ft SLR scenarios. Basins 1, 3, 4, and 6 appear to be the most vulnerable to issues associated with backflow flooding and elevated groundwater under the MHHW + 3 ft SLR scenario. At the MHHW + 4 ft SLR scenario, Basins 2 and 6 show vulnerability as well. At the MHHW + 5 ft scenario, Basin 9 also shows vulnerability.

Adaptation strategies to address surface street flooding as a result of backflow may include installation of backflow prevention devices on coastal outfalls that drain the areas indicated in Figure 8-10, consolidation of outfalls, or conversion to pumping.

Table 8-7 Number of Inlets Exposed to Backflow Flooding or Groundwater Impacts for Each SLR Scenario

Basin	**MHHW+3 ft** (King Tide+2 ft 10-year tide+1 ft)	**MHHW+4 ft** (King Tide+3 ft 10-year tide + 2 ft)	**MHHW+5 ft** (King Tide+ 4 ft 10-year tide+3 ft)
1	11	27	100
2	-	24	76
3	16	47	87
4	59	7	-
5	-	6	1
6	13	18	9
7	-	-	-
8	-	-	-
9	-	-	9

Note: Number of impacted inlets in each basin is not cumulative because some inlets become exposed to overland flooding at higher scenarios and are therefore not included in the tally shown above.

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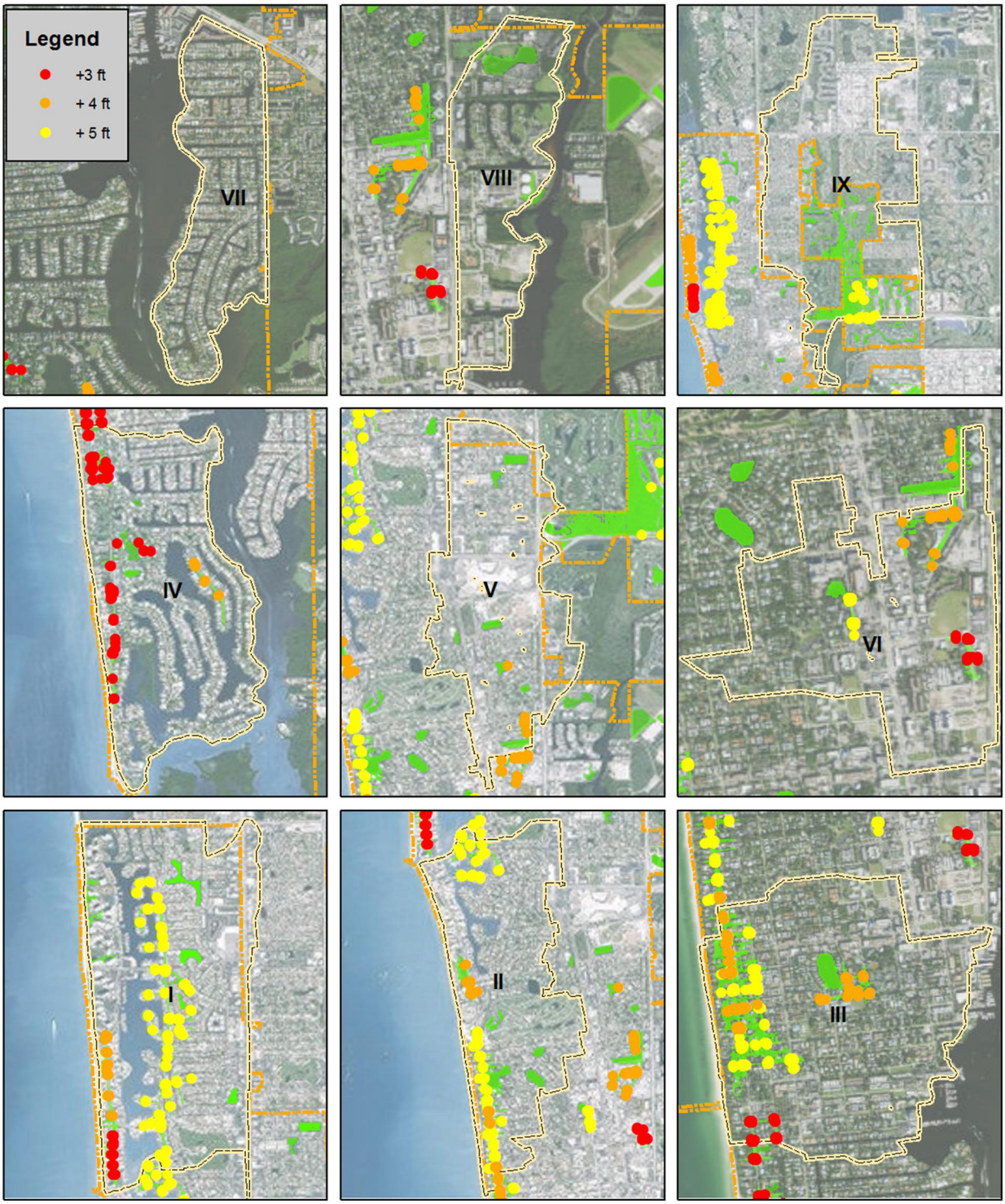

Figure 8-10 Exposure of Inlets to Backflow Flooding and Groundwater Effects in Basins 1 to 9

Note: Exposure to each SLR scenario indicated by symbol color: MHHW + 3 ft SLR (red), MHHW + 4 ft SLR (orange), and MHHW + 5 ft SLR (yellow) SLR. While inland inlets will not be exposed to tidal flooding from backflow, they are shown in the figure above to indicate potential exposure to groundwater effects as well. This assessment did not distinguish between inlets that connect to inland vs. tidal water bodies.

8.5.3.2 Data Gaps

The following data gaps were identified related to the exposure of inlets to SLR and tidal flooding:

- Tide gates and backflow prevention on outfalls may reduce backflow flooding. This assessment did not consider the ability of tide gates to prevent backflow into the stormwater system because this information was not available. It is unknown if this information is unavailable or if there are simply no tide gates on outfalls in Naples.

8.6 Potential Adaptation Strategies

8.6.1 Types of Adaptation Strategies

Adaptation consists of actions to reduce the vulnerability of natural and built systems to increase resilience in the face of expected climate change or extreme weather events. Adaptation strategies and actions need to be robust, yet flexible, with short- and long-term approaches to resilience. There are three general categories of adaptation strategies applicable to stormwater systems: information, governance, and physical strategies (Figure 8-11).

Informational strategies refer to strategies that increase our level of understanding of climate change vulnerabilities, such as case studies, gathering data, and monitoring assets. **Governance strategies** refer to policy related strategies that provide a better regulatory framework or process for addressing climate change vulnerabilities, such as updating zoning or land use, design standards, and maintenance procedures. **Physical strategies** refer to infrastructure modifications or new construction to reduce vulnerabilities, such as green infrastructure, elevating structures, and flood barriers.

The sections below provide examples of adaptation strategies in each of the three general categories – information, governance, and physical – and provides examples of comprehensive strategies which address multiple planning horizon timeframes, new daily conditions and extreme high water events, multiple impacts and vulnerabilities, and multiple assists. Specific recommendations for the Naples stormwater system are not yet identified; however, further evaluation could identify applicable strategies to pursue further.

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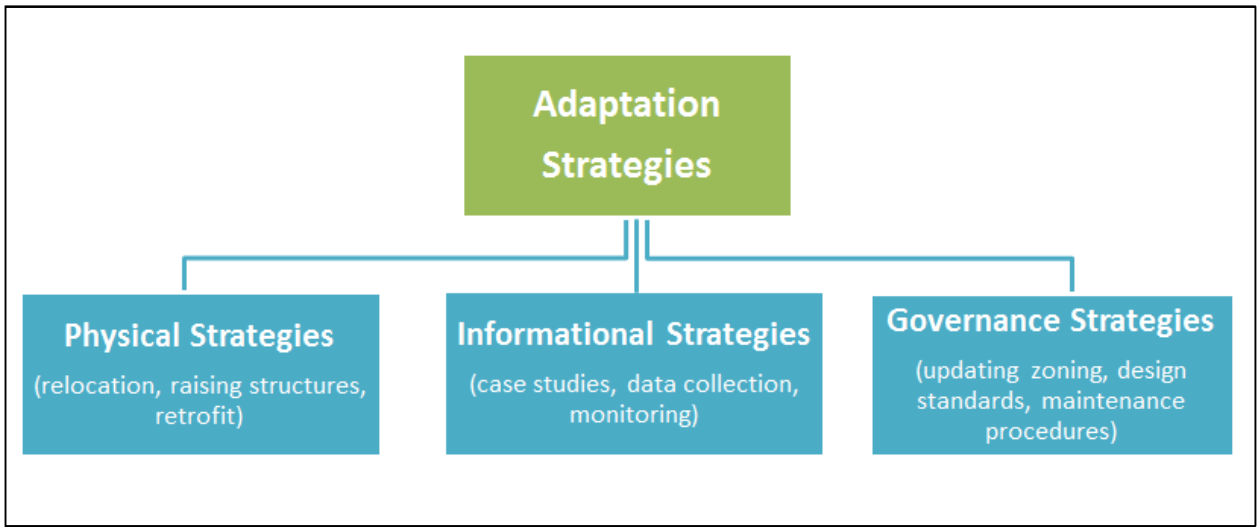

Figure 8-11 Illustration of Physical, Information, and Governance-related Adaptation Strategies

8.6.2 Physical Strategies

Physical adaptation strategies usually fall into one of three options: 1) accommodate (e.g., elevate or waterproof assets in place), 2) protect (e.g., create natural or engineered barriers, such as raised natural shorelines or levees), or 3) retreat (e.g., relocate sensitive assets to low-risk areas). Strategies should consider the scale of impact to support the resilience of the overall stormwater system, including both asset specific and regional strategies.

8.6.2.1 Temporary Measures

Temporary protection is generally erected in advance of predicted floods as part of a City's emergency response protocols. For example, temporary protection measures may be deployed around vulnerable pump stations to prevent overland flooding or around low-lying stormwater inlets with direct tidal connections to prevent flooding from backflow through the stormwater system. Example temporary flood protection strategies include:

- Traditional or self-inflating sandbags
- Reusable water-filled flood protection tubes
- Removable flood walls
- Develop emergency response protocols
- Portable pump stations

8.6.2.2 Permanent Measures

Permanently installed protection may be designed to either provide recurrent temporary protection (e.g., flood doors and self-rising flood walls), or for continual use (e.g., elevation of electrical components). The following strategies provide medium- to long-term options for adaptation to various types of climate change:

- Elevate vulnerable asset components such as mechanical and electrical equipment
- Elevate vulnerable buildings
- Dry floodproofing with barriers, waterproof membranes, sealants, or watertight doors
- Wet floodproofing such as water-resistant materials, flood vents
- Flood protection walls, levees, and berms
- Self-rising flood barriers

- Install backflow protection on stormwater outfalls
- Install back-up power for electrical systems such as pump stations

8.6.2.3 Regional Measures

In addition to asset-specific adaptation options that are intended to improve the resiliency of an individual facility or structure, regional measures can be utilized to protect assets at a neighborhood or regional scale. Regional solutions offer effective, large-scale flood protection while also providing ancillary services beyond protection of the individual asset. For example, while asset-specific adaptation strategies provide flood protection for an individual structure, regional flood protection strategies may also maintain access to the structure by protecting the surrounding area (such as streets and sidewalks). Regional solutions area can also be more cost effective than local adaptation strategies as they often involve numerous stakeholders, creating a sharing of the overall cost. However, the involvement of multiple stakeholders in regional flood protection strategies may present challenges of coordination and agreement of design.

It may be beneficial to utilize a combination of asset-specific and regional flood protection measures. While large-scale regional flood protection measures are being planned, coordinated, and implemented, asset-specific strategies can be used to protect critical facilities from episodic flood events that may occur over the short-term. Asset-specific flood protection may also be used to provide backup flood protection for critical assets in the event of a regional flood defense failure.

8.6.3 Informational Strategies

Informational strategies create a baseline by which to assess and monitor impacts and to evaluate the success of adaptation strategies. These studies help understand the interactions between rainfall, SLR, extreme tides, and urban/stormwater flooding, and to assess the vulnerability and risk of the system to climate change impacts. Monitoring adaptation projects and collecting system and background data is important to advance adaptation knowledge. Setting up systems for long-term monitoring can identify trigger points for action and can help inform whether adjustments are needed to adaptation projects and provide lessons learned that improve the design and performance of the next generation of adaptation projects. Additional information is needed to better integrate climate change adaptation into the current Naples Stormwater Master Plan.

8.6.3.1 Perform Additional Studies

This sea level rise assessment used the best available information to conduct a high-level vulnerability assessment of the Naples stormwater system. Several informational and data gaps were identified for each asset category. Future climate change adaptation planning efforts may benefit from additional studies to:

- Resolve asset data gaps identified in Section 8.5
- Conduct a more detailed vulnerability assessment at a site-specific level (for example, considering more detailed information about pump stations or modeling the stormwater system performance in response to high sea levels)
- Assess interdependences between assets
- Further analyze precipitation and tidal flooding depths at assets
- Regularly review emerging climate science and updates
- Conduct comprehensive economic risk analysis of flooding SLR impact

8.6.3.2 Data Management

The following data management actions may provide additional information related to sea level rise vulnerabilities and help plan future adaptation efforts:

- Monitor implemented adaptation projects
- Collect data on groundwater elevations and salinity
- Document location and extent of temporary flooding
- Coordinate monitoring and tracking of storm events to prepare for flooding and emergency response

8.6.4 Governance Strategies

The overall governance adaptation strategies described in this section focus on increasing public awareness of risks and employing the collaboration of many parties. These strategies include regulatory controls, land use management policies, surface and groundwater management measures, protections for buildings and infrastructure, and environmental controls.

- Assess feasibility of low-impact development stormwater practices
- Coordinate with City-wide efforts to address flood resilience in the community and identify opportunities to partner on projects
- Develop sea level rise guidance to inform planning and design of future capital projects

8.6.5 Example SLR Adaptation Strategies from South Florida Municipalities

A number of south Florida municipalities and counties have already taken steps towards incorporating SLR resilience into their planning process. A high level desktop review of readily available plans and documents identified the following actions that may be applicable to Naples:

- Delray Beach – installed valves in stormwater pipes to prevent salt water intrusion into the stormwater system
- Hallandale Beach – installed pumps on stormwater injection wells to counteract increased backpressure from elevated groundwater levels
- Fort Lauderdale
    - The City's 2016 Evaluation and Appraisal Report identified potential comprehensive plan amendments to address climate change, including updates to the future land use, infrastructure, coastal management, transportation, and climate change sections. Key recommendations included considering SLR in all government infrastructure design work, incorporating green infrastructure into stormwater management, and adoption of a new Climate Change Element in the comprehensive plan.
    - The City modified its seawall ordinance to require higher crest elevations and encouraged homeowners in future flood risk areas to incorporate seawall foundations that would allow raising of crest heights at a later date.
    - Planning to install back-flow prevention in pipes to prevent salt water intrusion into the stormwater system
- Miami Beach
    - Elevating streets and sidewalks to reduce flooding by stormwater and high tides
    - Installing new pump stations with elevated control panels that are more resistant to floodwaters
    - Adopted a new seawall ordinance requiring higher crest elevations and capability to increase to higher elevation in the future

  - Updated building code to allow elevating of structures above the Base Flood Elevation by one to five feet and calculation of building height with respect to the first finished floor (instead of relative to the adjacent ground)
  - New Sea Level Rise and Resiliency Review Criteria ordinance requiring consideration of SLR in projects
  - Ordinance requiring increased side and front yard setbacks for residences to increase permeable acres; requires higher minimum elevation of yards

- Monroe County – The 2030 Comprehensive Plan recommended that the County consider adopting planning, design, and permitting standards that consider future SLR.
- Pinellas County – Developing guidance for incorporating SLR into the capital improvement process
- Punta Gorda – Adopted a policy in the 2040 Comprehensive Plan to coordinate with the Southwest Florida Regional Planning Council to identify potential climate change impacts, including SLR impacts on the City's Coastal Planning Area
- Sarasota – Developed a Climate Adaptation Plan that identifies potential SLR adaptation strategies for stormwater infrastructure
- St. Petersburg
  - Several stormwater and wastewater infrastructure improvement projects are considering SLR in the design and implementation phase
  - Floodplain management ordinance requires structures to be elevated two feet above the Base Flood Elevation in coastal hazard areas
- St. Pete Beach
  - Installing backflow prevention devices at outfalls to reduce inundation during high tides and storm surge events
  - Stormwater master plan includes a recommendation to evaluate installing pump stations with backup generators at outfalls to reduce flooding during major storm events

8.7 Climate Adaptation Next Steps

The high-level climate assessment presented in this section represents an initial investigation into the potential effects of SLR on City's stormwater system. This assessment identified a number of potential next steps to close existing data gaps and advance climate resilience planning within the City:

- Conduct an inventory of stormwater system outfalls that discharge to tidally-influenced water bodies. The inventory would survey the invert elevation of each outfall and presence/absence of tide gates or other valves that could prevent backflow during high tide conditions. Basins 1 and 4 have the highest number of coastal outfalls and could be prioritized for this effort.
- Conduct a more detailed review of pump station design and as-built drawings to inventory the elevation of critical components (such as electrical equipment, pumps, back-up generators, vents, conduits, etc) and identify potential strategies to mitigate flood vulnerabilities.
- Monitor groundwater levels within the City to better understand how SLR may increase groundwater levels in the future, which may lead to ponding in low-lying areas and increased infiltration or uplift forces on buried infrastructure.

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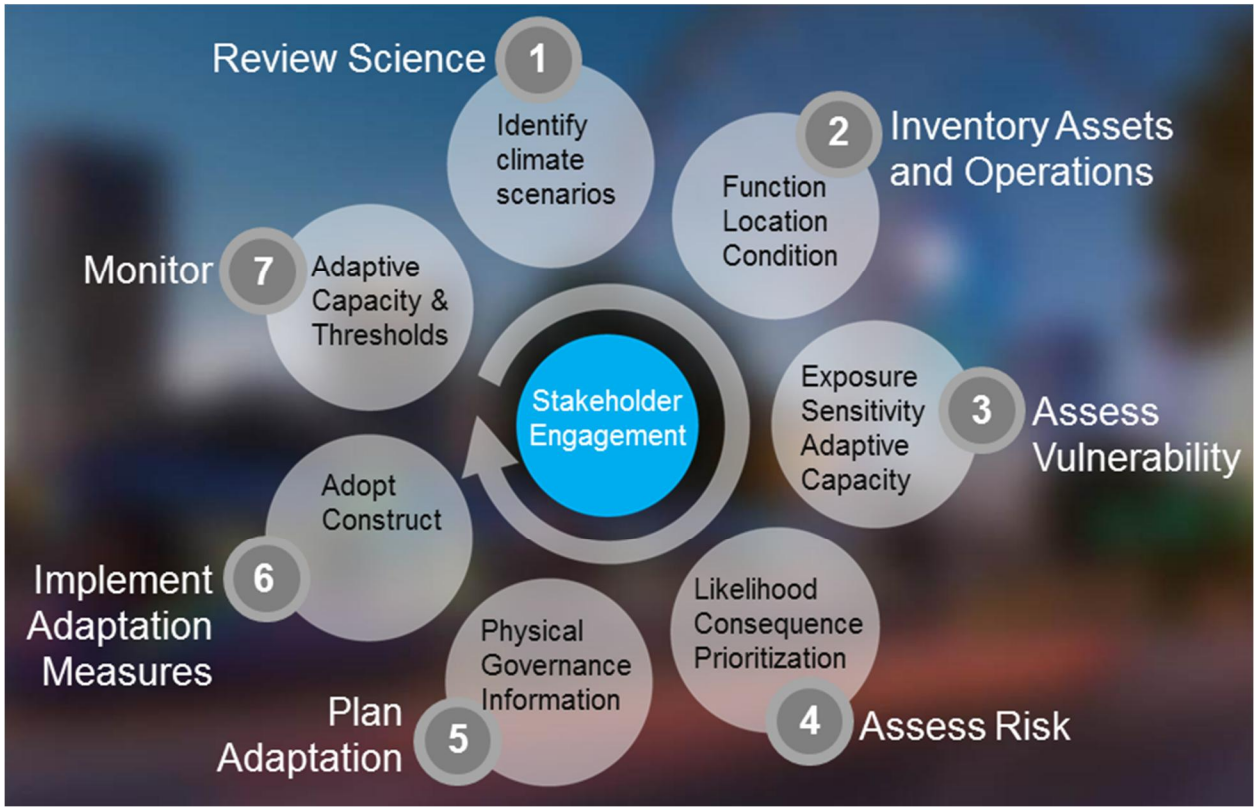
- Conduct detailed stormwater system modeling to evaluate flood vulnerabilities associated with combined precipitation and high tides for existing and future conditions (with SLR). This modeling study may identify additional vulnerabilities not identified in the current assessment, which evaluated potential flood impacts from high tides and SLR alone.
- Identify critical outfalls that may be responsible for allowing high tide waters to backflow into the stormwater system and cause surface street flooding through inlets. These outfalls could be prioritized for installation of backflow prevention. The preliminary analysis conducted in this evaluation identified Basin 1 as the highest priority for addressing potential backflow flooding through inlets.
- Conduct a study to evaluate future potential changes in precipitation intensity as a result of climate change. Changing precipitation patterns (such as an increase in precipitation intensity associated with the level of service storm event) may necessitate changes to design guidelines or standards for stormwater infrastructure.

In addition to the next steps identified above, the City may benefit from developing a more comprehensive climate adaptation plan to identify potential vulnerabilities, risks, and adaptation strategies to address climate change impacts. Climate adaptation planning is an emerging practice; however, many municipalities have adopted a climate adaptation planning process similar to that shown in the **Figure 8-12**. The figure outlines the key steps in the climate adaptation planning process. The SLR vulnerability assessment completed as part of the current stormwater master plan update addressed Steps 1 through 3 at a high level; however, a more in-depth assessment could be conducted. This more in-depth assessment could inform a citywide SLR vulnerability and risk assessment to identify potential impacts to critical assets and operations. The assessment would also include identification of key interdependencies among assets – for example, substations that supply power to stormwater pump stations. The results of an integrated, citywide, vulnerability and risk assessment could be used to prioritize adaptation actions that would address City climate impacts across multiple asset sectors (for example, a strategy that would address flooding impacts to stormwater, transportation, and residential assets in a given neighborhood).

Figure 8-12 Climate Adaption Planning Process



TAB 9

Best Management Practice (BMP) Review

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9. Best Management Practice (BMP) Review

9.1 BMP Evaluation

Low Impact Development (LID) devices are specific Best Management Practices (BMPs) intended to address stormwater management using natural processes. The integration of LID into a site plan or master plan is referred to as Integrated Management Practices (IMPs). LID is also referred to as Water Sensitive Urban Design (WSUD) or in some cases Green Infrastructure (GI).

The LID approach is intended to mimic natural processes and pre-development hydrologic patterns by minimizing impervious surfaces and capturing and retaining rainwater where it lands with the intent to infiltrate and evapotranspirate via small scale integrated devices, and also by the reuse of rainwater.

The goals and benefits of LID BMPs include improving water quality, attenuating flows, recharging groundwater, reducing potable water consumption, habitat restoration, improving aesthetics, and potentially a cost reduction in community infrastructure.

There are a variety of BMP programs that have been initiated in the past 10 years. The FDEP Green Industry/Infrastructure (GI) BMPs were developed to assist the turf and landscape industry to protect the environment. Their goals are to reduce nonpoint source pollution and promote the efficient use of water by:

- Reducing the offsite transport of sediment, nutrients and pesticides through surface and ground water.
- Using the appropriate site design and plant selection.
- Using appropriate rates and methods of applying fertilizer and irrigation.
- Using integrated pest management (IPM) to minimize pests and apply chemicals only when appropriate.

GI BMPs include: Treatment swales, Vegetated Natural Buffers, Pervious Pavements, Green Roofs with Cisterns, Stormwater Harvesting, Rain Gardens, Rainwater Harvesting systems, and Rainfall Interceptor Trees.

In addition, Site Planning BMPs and Source Control BMPs include natural area conservation, minimization of total impervious area, minimization of Directly Connected Impervious Areas, and the use of Florida Friendly Landscaping and Fertilizers.

The City of Naples Stormwater Ordinance 07-11807 encourages the use of the latest BMPs and LID approaches as defined by the State. The goal is to improve control of runoff to the City's swale system, increased retention systems on private property with more runoff percolating into the groundwater, improved pre-treatment of runoff and potentially reduced flood elevations experienced from specific storm events. The Stormwater Ordinance includes a table of BMP Selection Criteria, which includes a proposed credit for use of a BMP. The current BMP Selection Criteria table is shown in **Table 9.1**.

These BMPs are focused more towards single-family residential properties. A review of current guiding documents including USGBC LEED, US EPA and regional documents such as Pinellas County and Sarasota County was completed to examine BMPs that will help further Naples goal of reducing and treating stormwater discharges.

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Table 9-1 Best Management Selection Criteria

Proposed BMP Selection Guide			
	Additional BMP Measure Utilized	**Proposed Credit**	**Justification Explanation**
1	Common Swale on Joint Lot Line	1.0 SC	Grading disparities between properties and minimal distance between side setbacks result in difficult to construct an efficient stormwater treatment system that is difficult to maintain. Any property owner that can negotiate and develop a common swale between two lot lines provides a typically superior to maintain, problem free solution that can remove pollutants with a high efficiency as well as carry on-site stormwater in an easier to maintain technique that underground vaults and pipes.
2	Home Roof Drains Connected Directly to Swales or Exfiltration (making roof NDCIA)	1.0 SC	Because of FFE Requirements most new homes are well above the crown of the roadway and driveways have steep slopes where all impervious pollutants drain into Public Right-of-Way with little treatment. Valid techniques, such as pervious concrete, geoblocks, and other innovative landscape architectural techniques that decrease the impervious runoff and allow for some protection will provide credits.
3	Pervious Driveway · Flat (≤ 2% slope) · Med (2% > 5% slope) · Steep (≥ 5% slope)	· 1.0 SC · 0.5 SC · 0.0 SC	Driveways that are made of pervious materials that allow percolation will be given BMP credits. Their effectiveness is directly related to driveway slope.
4	Driveway Trench Drain	0.5 SC	The slope of driveways usually do not allow for reverse grading to treat on-site, thus substantial portions of impervious area go to the street untreated. Credit will be given to effective use of intercepting trench drains.
5	Driveway Runoff Collection – “Rain Gardens”	1.0 SC	Most driveways slope toward the roadway and convey runoff directly into the street without providing any treatment. A depressed landscape area located adjacent to the driveway will be encouraged through BMP credits.
6	Loop Driveway Inverted “Rain Gardens” (instead of raised islands)	1.0 SC	Most looped driveways utilize a raised landscape area that reduces potential treatment area from the very important low portion of the lot where driveways need treatment. A depressed landscape area in these locations will be encouraged through BMP credits.
7	Pool and Deck “Self-Containment” Design	0.5 SC	Designing a pool deck area to shed the runoff back to the pool instead of penetrating additional stormwater runoff will be rewarded with BMP credits.
8	Native Landscaping That Does Not Require Fertilizers/Pesticides	1.0 SC	Landscaping to be documented to be Florida native species compatible with local native soils will be presumed to not require special watering, fertilizing, and pesticide needs that waste water and penetrate pollutant runoff thus BMP credits may be assessed.
9	Home Roof Drain Fitted with Rain Barrels	0.5 SC	Most roof drains are connected to the general conveyance of the property to direct the runoff immediately offsite following a storm event. A rain barrel intercepts this runoff to be used for irrigation purposes during times with lower rainfall therein preserving potable water and its use will credit BMP’s.

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The United States EPA's National Menu of BMPs for Stormwater is based on the Phase II National Pollutant Discharge Elimination System rule's six minimum control measures:

- Public Education and Outreach on Stormwater Impacts
- Public Involvement
- Illicit Discharge Detection and Elimination
- Construction
- Post Construction
- Pollution Prevention/Good Housekeeping

The general minimum requirements allow the use of appropriate situation-specific sets of practices to achieve the minimum measures.

Introducing GI and LID provides a community based BMP framework that is applicable to residential and nonresidential developments. To apply the new approach, the following strategies are required:

- Educating the general public on the benefits of natural systems and incentivizing them to implement BMPs on their properties.
- Communities and the City retrofitting existing infrastructure to be LID compliant.
- Including GI and LID BMPs in the Land Development Code to regulate new development and redevelopment projects in the City.

9.2 Green Infrastructure and Low Impact Development

Green Infrastructure (GI) includes both natural features such as forests and wetlands as well as engineered landscapes that mimic these natural processes like a rain garden. Low Impact Development (LID) works to preserve the natural landscape and minimize impervious surfaces to keep stormwater close to the source and use it as a resource rather than a waste product. The hydrological and soil conditions in the City of Naples present unique opportunities to apply the following GI and LID BMPs to commercial, industrial and residential developments:

- Treatment Swales
- Pervious Pavements
- Rain Gardens
- Rainwater Harvesting Systems
- Bioretention Areas

A combination of the above BMPs and the BMPs in Table 9.1 can eliminate or considerably reduce stormwater volume and pollutants at source before it enters the City's storm drains. To achieve the level of nutrient treatment required for the protection and restoration of the City's surface and ground waters, greater emphasis must be placed on nonstructural BMPs which are applicable to residential and non-residential developments. Retrofitting existing infrastructure to incorporate these BMPs will substantially reduce runoff volumes entering storm drains.

9.2.1 Treatment Swales

Treatment swales are shallow stormwater conveyance channels with vegetation covering the side slopes and bottom. Treatment occurs as runoff flows through the vegetation and infiltrates into the soil matrix. Swales can as designed as part of the stormwater conveyance system and can eliminate the need for some curbs, gutters and storm drains. They are also well suited to treat runoff from roads and highways because of their linear nature. The treatment effectiveness is correlated to the residence time of the runoff in the swale, and therefore, flow-based swales tend to be considerably longer than other types of treatment

BMPs. Site applications of vegetative swales include road shoulders and medians, parking lot islands, open spaces and parks.

9.2.2 Pervious Pavements

Pervious pavement refers to any permeable or porous load bearing surface that allows runoff to pass through the surface layer and be temporarily stored in a drain rock layer. Ideally, site conditions will allow the subsurface storage layer to drain by infiltration into the subsoils. The pervious pavement system itself will provide some water quality benefits by filtering sediments and some other pollutants, but primarily will reduce peak flows due to detention in the rock layer. Infiltration functions as the primary mechanism for water treatment and volume reduction. When properly constructed, pervious pavements are durable, low maintenance and have a low life-cycle cost. Site applications of pervious pavements include parking lots or parallel parking strips, driveways and low traffic roads, sidewalks and pathways, park hardscapes and shopping plazas.

9.2.3 Rain Gardens

Rain gardens are shallow, constructed depressions that are planted with deep-rooted Florida-Friendly plants. A rain garden slows down the rush of water from impervious surfaces, holds the water for a short period of time and allows it to naturally infiltrate into the ground. Rain gardens are usually integrated into a site's landscaping to receive runoff from hard surfaces such as a roof, a sidewalk, a driveway, or parking area. This facility offer significant habitat enhancement and aesthetic value while being optimized for stormwater runoff treatment. Rainfall gardens are among the most effective at removing pollutants from stormwater. Treatment primarily occurs in the root zone and soil media, where nutrients and dissolved pollutants are removed. Site applications of rain gardens include open spaces, parks, golf courses, commercial or industrial developments and residential developments.

9.2.4 Rainwater Harvesting Systems

Rainwater harvesting involves capturing stormwater runoff and then using the stored water for a non-potable application, typically landscape irrigation. Captured runoff can be stored in anything from small hard barrels to large underground cisterns or retention ponds. A distribution system such as a pump draws stored water and delivers it to the intended use. With the right conditions, rainwater harvesting is a very effective stormwater control mechanism, as it provides substantial treatment volume reduction while also satisfying a portion of the site water demand. Site application of rainwater harvesting systems include all rooftops, golf courses and any type of land use provided there is adequate end use of the water.

9.2.5 Bioretention Areas

Bioretention areas are shallow, landscaped areas that receive and treat stormwater. Runoff is allowed to pond on the surface of the bioretention area, typically less than a foot deep, where it can filter through a vegetative layer and engineered soil media to remove sediment and pollutants. In locations of well drained subsoils, the water may then infiltrate into the subgrade. At sites or locations that will not allow for infiltration, flow-through systems are required; underdrains are installed beneath the planting soil to drain the facility and release treated water to a conveyance feature or storm drain system. Bioretention areas are very versatile facilities that can fit a wide range of settings. Site applications of bioretention areas include mixed-use and commercial areas, parks and open spaces, and residential areas.

9.2.6 Other Water Quality Improvement BMPs

Proper maintenance of existing curb inlets and outfalls are essential components of a functional stormwater system. Although GI and LIDs reduce the quantity of runoff and pollutants, residual runoff from these systems carry debris and sediments into existing storm drains. Routine maintenance of storm drains is often not adequate to prevent accumulation of debris and sediments. Installing curb inlet filters and outfall filters such as nutrient removal boxes are proven ways of preventing accumulation of debris,

nutrients and sediments. Complementing the suggested GI and LIDs with these filters provides the City of Naples with sufficient BMP tools to maintain an effective stormwater system.

9.2.6.1 Curb Inlet Filter

Curb inlet filters are synthetic or organic sag bags designed to be placed in front of a curb inlet or opening to prevent the migration of sediment into the storm drain system while allowing water to pass through. The filter allows water to temporarily pond behind the inlet which allows deposition of suspended solids. Sediment and soluble pollutants such as phosphorus and petroleum hydrocarbons are filtered from runoff water as it passes through the interior organic media. Other advantages of installing inlet filters include easy maintenance, replacement and repair.

9.2.6.2 Nutrient Removal Box

A Nutrient Removal Box is a structural BMP used for water quality treatment at the outfall of storm drains. The box primarily removes sediment and suspended solids from stormwater. The Type II boxes widely used in South Florida consist of an aluminum screen basket with a horizontal bottom at an elevation below the invert of the influent pipe but above the top of baffles. Incoming flow passes through the screen basket, which captures leaves, trash, and other large materials. In addition to capturing the large sized materials and preventing their passage into the baffle box effluent, the material captured in the screen basket is held above and out of the water column. The purported effect is to reduce or eliminate the leaching that would occur if the captured material were submerged. Since leaching of leaves would release biochemical oxygen demand, nitrogen and phosphorus, removing leaves from the stormwater and holding the captured leaves out of the water column results in a reduction of nutrient loading to the receiving water body.

9.2.7 Ecological Benefits of Green Infrastructure and Low Impact Development

Green infrastructure facilities are essential in the City of Naples because they preserve the integrity of ecological and biological systems, protect water quality by reducing pollutant loads, reduce stormwater impacts to local terrestrial and aquatic plants and animals. In addition, it preserves natural vegetation, reduce flooding potential, and even protect shellfish growing areas and beaches from bacterial contamination. Increasing vegetative areas alone will provide a favorable habitat for birds, mammals, amphibians, reptiles, and insects. Even small patches of vegetation like rain gardens can provide habitat for a variety of insects and birds. Large-scale green infrastructure, such as parks help to facilitate wildlife movement and connect wildlife populations between habitats.

Rapidly moving stormwater can result in erosion and scouring, obliterating habitat for fish and other aquatic life. Using GI and LID systems reduces the amount of stormwater reaching a surface water system and helps to maintain natural stream channel functions and habitat. By reducing erosion and sedimentation, green infrastructure can improve habitat in various types of water bodies.

9.3 BMP Matrix

Different pollutants tend to be present in runoff depending on the land use. **Table 9.2** provides general guidance as to which pollutants may be expected in higher concentrations as well as the typical ability for different BMPs to remove the pollutants.

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Table 9-2 Pollutant Removal Efficiency

Land Use	Target Pollutant				
	Sediment	Nutrients	Metals	Bacteria	Oil & Grease
Agriculture	X	X		X	
Commercial	X		X		X
Residential	X				
Industrial	X		X		X
Parks	X				
Vacant/Barren Areas	X	X			
Roads & Parking Lots	X		X		X
BMP	**Pollutant Removal Efficiency**				
	Sediment	Nutrients	Metals	Bacteria	Oil & Grease
Treatment Swales	Medium	Low	Medium	Low	Medium
Pervious Pavements	High	High	Medium	Medium	Medium
Rain Gardens	High	Medium	High	High	High
Rainwater Harvesting Systems	High	High	High	High	High
Bioretention Areas	High	Medium	Medium	High	High

Table 9.3 compares the benefits and constraints of the selected GI and LID BMPs specific to the City of Naples. Every stormwater treatment system should be designed such that the entire system meets minimum stormwater control requirements. It is important that users of this document consult with SFWMD Environmental Resource Permitting criteria and the Collier County guidance documents on land development and stormwater management, including the County Comprehensive Plan, Land Development Regulations, and Zoning Code, for any variations to these criteria or additional standards that must be followed. **Appendix J** provides detailed guidance on selection and design of GI and LID BMPs applicable to Florida. The LID BMP guidance document was originally developed by Pinellas County and Sarasota County in collaboration with EPA and UFIFAS but has been changed to apply to the City of Naples.

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Table 9-3 Benefits and Constraints of GI and LID BMPs

Constraints/Benefit	Treatment Swales	Pervious Pavements	Rain gardens	Rainwater Harvesting Systems	Bioretention Areas
Located in Floodplain					
Less than 10-foot separation to groundwater table		with underdrain			with underdrain
Sited on steep slope (> 5%)					if terraced
Sited on flat grade (< 2%)					
Less than 10-foot separation to impermeable layer		with underdrain			with underdrain
Limited available space for BMP					Utilize avail. Space
Groundwater Recharge					
Stormwater Quality Benefits (95th % storm)					
Stormwater Management Benefits (< 2-yr, 24-hr storm)					
Flood Control (> 2-yr, 24-hr storm)					

Applicable to Naples

May be Applicable to Naples

9.4 Land Development Code

Increasingly, communities are looking for ways to maximize the opportunities and benefits associated with growth while minimizing and managing the environmental impacts of development. Where and how development occurs can dramatically affect the City's watersheds, infrastructure, and water supplies. Effectively engaging developers in BMP implementation can help communities' better balance development decisions with environmental protection. Incorporating the guidance in Table 9.3 in the City's Land Development Code provides an enforcement mechanism that encourages proper application of GI and LID BMPs. The code may also include incentives that encourage implementation of the BMPs. Incentives may include reduced stormwater utility and/or application fees, expedited project review and approval, relief from specific development standards (e.g. density, lot size, setback reductions, etc.), property tax reduction for a given period, and stormwater facility size reduction if minimum thresholds are met.

For example, to decrease impervious area in the City, changes could be made to the codes or ordinances listed below.

- **Zoning ordinance** specifies the type of land uses and intensity of those uses allowed on any given parcel. A zoning ordinance can dictate single-use, low-density zoning, which spreads development out throughout the watershed, creating more pervious areas.

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- **Subdivision codes** or ordinances specify specific development elements for a parcel: housing footprint minimums, distance from the house to the road, the width of the road, street configuration, open space requirements, and lot size—all of which can lead to excess impervious cover.
- **Street standards** or road design guidelines dictate the width of the road for expected traffic, turning radius, the distance for other roads to connect to each other, and intersection design requirements. Road widths, particularly in new neighborhood developments, often tend to be too wide, creating considerable impervious cover.
- **Parking requirements** generally set the minimum, not maximum, number of parking spaces required for retail and office parking. Setting minimums leads to parking lots designed for peak demand periods, which can create acres of unused pavement during the rest of the year.
- **Minimum setback** requirements can spread development out by leading to longer driveways and larger lots. Establishing maximum setback lines for both residential and retail development brings buildings closer to the street, reducing the impervious cover associated with long driveways, walkways, and parking lots.
- **Site coverage** limits can disperse the development footprint and make each parcel farther from its neighbor, leading to more streets and roads and thereby increasing total impervious cover throughout the watershed.
- **Height limitations** limit the number of floors for any building. Limiting height can spread development out if square footage cannot be met by vertical density.

Similar code amendments can be made to address or increase the use of other green infrastructure and low impact development techniques.

The City of Naples has a lot to gain by vigorously implementing GI and LID BMPs. Widespread use of these BMPs slows and detains stormwater; resulting in fewer and less extensive flood damage events at a community wide scale. LID strategies incorporated throughout an area reduce stormwater loads to existing infrastructure, reducing the need for taxpayer funded repairs and upgrades. GI and LID techniques can improve regional water quality, resulting in reduced need for taxpayer funded water treatment facilities.

TAB 10

Operational Strategies

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10. Operational Strategies

After planning, design, and construction of the stormwater facilities that are needed to effectively convey and treat stormwater runoff, operational strategies become very important in managing stormwater infrastructure. These strategies help keep each stormwater management element functional to perform at its optimal level. In addition, good strategies help prolong the infrastructure's life span and keeping capital costs to the public down. They also help a City be proactive in its recovery and replacement program by identifying issues before they become an emergent expense.

10.1 Stormwater Infrastructure

There are several elements that combine a functional stormwater management system. The following describes the elements that the City currently maintains:

- Outfalls – Outfalls are defined as structures that ultimately discharge runoff to a receiving water body. These structures are pipe outlets, gates, control structures, or weirs. The City has identified approximately 651 outfalls that they currently monitor and maintain.
- Manholes – Manholes are identified as structures that connect pipes to convey the runoff ultimately to the outfalls. These manholes consist of catch basins with inlets, concrete manholes, junction boxes, and conflict boxes. They can also be associated with water control structures. The City has identified approximately 771 manholes that they currently monitor and maintain.
- Pipes – Pipes are the main infrastructure used to convey stormwater runoff. Pipes within the City range from 8 inches in diameter to 60 inches in diameter. They are circular, elliptical, or boxed shape and are made of material such as reinforced concrete (RCP), corrugated aluminum (CAP), or High Density Polyethylene (HDPE). These pipes can be gravity mains or force mains (when discharging from a pump station). The City has identified approximately 100 miles of pipe that they currently monitor and maintain.
- Lakes – Lakes are used to collect and treat stormwater runoff. There are approximately 350 acres of lakes within the City limits owned by over 70 different landowners. There are 28 lakes identified on the City's inventory. Of the 28 inventoried lakes, 21 receive drainage from public right-of-way (street) within the City. Although the remaining seven (7) lakes do not receive public drainage, they do discharge into the City's stormwater collection system. Five of the 28 lakes are owned by the City, 19 are privately owned, and four have "undetermined ownership". All of the privately-owned lakes that receive stormwater from City streets have a drainage easement over them. Within these lakes are aerators and vegetative islands that the City maintains.
- Pumps – There are three pump stations that the City operates and maintains. They are the Public Works Pump Station, the Cove Pump Station, and the Port Royal Pump Station.

    - Public Works Pump Station – The Public Works Pump Station is located east of the intersection of Goodlette-Frank Road and 3rd Avenue North. This pump station consists of a two main pumps (21,000 gpm each), a jockey pump (5,625 gpm), and an Aquifer Storage Recovery (ASR) pump (1,390 gpm). The Public Works Pump Station discharges to a sedimentation basin on the east side of Riverside Circle, which then flows to the Gordon River/Naples Bay. This station serves Basins 4 and 8, with a combined drainage area of over 200 acres. It also discharges excess stormwater into the City's ASR-2 Well to supplement the reclaimed water supply.

      This pump station also includes a wet well and bar screening systems and control along with the pump, motor, control equipment, and outfall structure. There is also generator and fuel tank for emergency operations.

    - Cove Pump Station – The Cove Pump Station is located at the southwest corner of Broad Avenue South and 9th Street South. This pump station consist three pumps (25,000 gpm

each). The pump station outfall is the discharge point for the City's Stormwater Basin 3, which covers approximately 477 acres, into Naples Bay. This pump station also has a 500 gallon diesel tank and standby generator.

- Port Royal Pump Station – The Port Royal Pump Station is located at 2665 Lantern Lane. This pump station consists of three pumps (2,500 gpm each). This pump station serves approximately 40 acres of residential land within Basin 4, which is characterized by the Port Royal and Aqualane Shores residential developments. The pump station discharges stormwater to Treasure Cove, which flows to Naples Bay. This pump station has telemetry, backup-electric motors, and generators.

- Streets – As part of its stormwater maintenance, the City sweeps 311 curb miles of roadways to remove any pollutants that would travel into the stormwater management system.

- Filter Marsh – The City has one filter marsh located at the City's complex on Riverside located east of Goodlette-Frank Road. This marsh is a salt marsh that treats approximately 226 acres of urban land.

Table 10-1 quantifies the City's stormwater infrastructure. This information was provided by City staff along with the data entries within the City's GIS system.

Table 10-1 Stormwater Infrastructure

Facilities	Amount	Unit
Outfalls	651	Each
Manholes	771	Each
Pipes	109	miles
Lakes (approx. 350 acres)	28	Each
3 Pump Stations		
Pumps	10	Each
Bar Screen	3	Each
ASR Well	1	Each
Street sweeping	311	Curb miles
Trench Drain	1522	LF
Inlets	3486	Each
Weirs	31	Each

10.2 Stormwater Maintenance

Maintenance activities can be classified as preventative, corrective, and reactive. Preventative activities occur on a scheduled basis. These activities aid in expanding the lifespan of infrastructure. Over time, infrastructure needs to be repaired in order to its operational time. This is considered corrective activities. Corrective activities can be cause by the age of the structure or by accidents that may occur from human or natural instances. These activities also can occur if facilities fail or when landowners call the City with a complaint. Lastly, maintenance activities can be pre-storm. City staff or contractors are used for these activities. Over the fiscal year 2015-2017, the City had 6,000 work orders. These work orders consist of mainly repair or reactive activities.

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10.2.1 Maintenance Activities

10.2.1.1 Preventative Activities

Preventative activities are scheduled activities and are considered the level of service that the City has determined these facilities should be maintained in order to protect people and property against flooding and improve water quality and the environment. The following describes preventative activities:

- Street Sweeping – The City is divided into 10 Districts that are scheduled for street sweeping activities. Each District is conducted in order with a six week turn around for each district. There are two streets that are swept more often due to the amount of activities within those areas. 3rd Street South and 5th Ave South are swept every week. Streets are swept approximately 10 times a year and are also occasional swept as part of pre-storm preparation for major storm events. The debris that is collected by the street sweeper is collected in a dumpster where it is measured.
- Control Structures – There are approximately 651 outfalls, but the City maintains 28 control structures on a regular basis. These outfalls are inspected on a quarterly basis and are also inspected during pre-storm activities. During maintenance, staff clears the outfall of any debris and inspects the structures. These maintenance and inspection activities take approximately a week of staff time.
- Outfalls, Pipes, Manholes, and Catch Basins – There is no regular schedule for this activity but staff or subcontractors clean these facilities with a vacuum truck. These activities may be reactive to a complaint or after inspection of the infrastructure. In addition to vacuuming, video is also taken of these structures to determine if maintenance, repair, or replacement needs to occur. These items are not inspected on a regular schedule.
- Pump Station – The pump station as a whole is inspected on a monthly basis. The pump station consists of the pumps, bar screen, telemetry, generators, conveyors, operators, dumpsters, and outfalls. There is a pump station check list for operators during inspection.
- Filter Marsh – The Filter Marsh is a natural system but there are manual structures that control the discharge. These structures are manual.
- Lakes – Some of the lakes have floating vegetative islands for water quality treatment. These islands receive regular maintenance depending on the vegetative growth. Subcontractors are used for this service. Some of the lakes have aerators in them. The City maintains these aerators with a subcontractor. These are inspected on a quarterly basis and the subcontractor repairs them when issues occur.
- Shoreline de-weeding – The City inspects the shoreline on a bi-monthly basis. The shoreline is de-weeded as needed.
- Beach Outfalls – There are 9 beach outfalls where one of those outfalls is private. These outfalls are inspected on a quarterly basis.
- Filter Marsh – The Filter Marsh is a natural system but there are manual structures that control the discharge. The inspection of these structures is not on a regular schedule.

10.2.1.2 Corrective Activities

Corrective activities are required on an emergency or non-routine basis to correct problems and restore operational capabilities of the facility. They often occur after an inspection or due to a complaint. These activities do not occur on a regular basis and requires a physical repair of the infrastructure. Failure to promptly address a corrective maintenance problem may jeopardize the performance and integrity of the facility. It may also present a potential safety problem to those living adjacent to or downstream of the facility. All the City's stormwater facilities may need corrective maintenance. The following describes corrective activities that may include but are not limited to:

- Repair Catch basins
- Occasional swale cleaning – Swales are usually maintained by the property owner and are considered to be their responsibility. Occasionally swales are cleaned by the City when drainage is being impacted.

- Beach Outfalls – After inspection, these outfalls are repaired or secured depending on their condition.
- Pipes – After inspection, pipes are up for repair. The City has been lining pipes in order to extend the lifespan of these facilities. For fiscal year 2017-2018, staff expects to spend $300,000 in lining pipes.
- Roadway drainage facilities – As resurfacing projects occur within the City, the drainage facilities are assessed and are being replaced as these project come on line.

10.2.1.3 Pre-Storm Activities

These occur prior to a major storm event. The following describes pre-storm activities that may include but are not limited to:

- Filter Marsh – The Filter Marsh is a natural system but there are manual structures that control the discharge. These structures are inspected during pre-storm activities.
- Pump Station – The pump stations are inspected along with emergency generators.
- Lakes – All lakes are inspected before major storms.
- Control Structures – Only 28 structures are inspected before a storm.

10.2.2 Operations

As listed in the Maintenance section, there are several facilities that the City staff maintains. Not all of the facilities are on a regular maintenance schedule nor are all the facilities inspected on a regular basis. Staff has indicated that most of their time is spent videoing infrastructure as part of their inspection activities. In addition, there is no routine for cleaning catch basins, manholes, and pipes. These are often cleaned on an as needed basis.

As part of staff's duties, they conduct pre-storm activities on all lakes and on control structures. These activities include clearing structures of debris to maximize discharge during these events.

The City has an Operations Manager that manages the operation and maintenance of the stormwater management system. There are three employees that currently work with the Operations Manager. One of these employees is full time conducting the street sweeping activities. Activities that cannot be completed by staff are conducted by contractors, which are selected on a continual basis.

In addition to operating and maintaining the facilities, operations also respond to public complaints or concerns on the stormwater activities and they respond to illicit discharges as part of the NPDES permit. They also are gathering information on existing facilities with GPS equipment. As information is being gathered, they are also reporting the condition of the facilities. The Operations Manager also spends time managing contractors.

10.2.3 Equipment

To aid in the operation and maintenance activities, the following equipment is used.

- 1 - Street sweeper
- 1 - Vacuum Truck
- 1- Utility truck with a mini crane
- 1- Pickup truck
- 1 - City Pool Truck, as needed
- 1 - Cement mixer for basin repairs
- 1- Pressure washer (3000 psi)
- 1- GPS unit

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10.3 Natural Resources Operations

In addition to the operation and maintenance of the stormwater infrastructure, the Natural Resources Division also operating expenditures as part of their goal of protecting and restoring ecological systems that work naturally to improve water quality, the environment, and the quality of life for residents and visitors. As part of its operating expenditures, the Natural Resource Division has the following duties to protect and conserve the City's natural resources:

- Replace and construct signs (as needed)
- Replace and construct buoys and markers (as needed)
- Water Quality Sampling (monthly in Naples and Moorings Bay)
- Outreach/education materials and supplies
- City Dock slip rental (monthly)
- Green Business Program
- Naples Bay trawling (bi-monthly)
- Permit Review (daily/ongoing)
- Lawn and Landscape Outreach and Education
- Environmental Monitoring (as needed)
- Sea grass monitoring (bi-annually)
- Eagle Nest Monitoring
- Shorebird monitoring
- Public Inquiries – Illicit discharges and injured animals
- Habitat management and restoration
- Oyster Reef Restoration
- Grant Proposals
- NPDES reporting (record-keeping daily, reporting every two years)

The following equipment is owned and maintained by this division:

- Water Quality Monitoring Equipment
- Boat
- One vehicle

10.4 Taxing and Special Assessment Districts

Normal operations and maintenance of the stormwater facilities are funded through the Stormwater Fund. When there are areas within the City that require additional operation and maintenance due to the facilities only benefitting a certain area, taxing and special assessment districts aid in the additional operation and maintenance cost. There are two (2) taxing districts and one (1) special assessment district.

The mission of the Taxing Districts is to accomplish dredging and canal maintenance as established by referendum. The East Naples Bay Taxing District and the Moorings Bay Taxing District were established by referendum in 1987 to accomplish maintenance dredging in the channels and waterways within the districts and to maintain necessary aids to navigation. The East Naples Bay Special Taxing District encompasses the waterfront subdivisions of Golden Shores, Oyster Bay and Royal Harbor. The Moorings Bay Special Taxing District includes all of the waterfront properties around the Moorings Bay System, from Seagate Drive south to Banyan Boulevard, including the subdivisions of Coquina Sands, the Moorings, and Park Shore. Administration of the Districts is handled by the Natural Resources Division in the Stormwater Fund. Both Districts have an advisory board to collect public input.

10.5 Operational Recommendations

After reviewing the City's current operation and maintenance practices, these practices tend to be reactive instead of proactive. The City's critical infrastructure is on a regular inspection and maintenance structure, but a lot of the secondary drainage infrastructure is not. Our first recommendation is to develop

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a comprehensive operation and maintenance plan. Since each element of the stormwater management system is unique, an operation and maintenance plan helps assure that the City knows what needs to be done to assure long term performance. This operation and maintenance plan should include but not be limited to:

- Understand and appreciate the overall inspection and maintenance requirements for each facility
- Establish a coordinated and effective implementation plan
- Establish performance goals that are understood by key people
- Plan for future expenditures needed to assure that the stormwater system continues to function as designed and permitted, if applicable.
- Should include the staff responsible for maintenance, describe the duties for the maintenance personnel along with their titles, and also, include an organization chart.
- A list and map of all stormwater system components along with their location, type, and other pertinent details.
- A list and description of each of the identified maintenance and inspection tasks for each of the system's components and for the overall system.
- Lists of all required and available equipment and material.
- All regular inspection and maintenance schedules.
- Inspection checklists.
- Copies of the pertinent sections of all regulations, permits, approvals, and agreements.
- Copies of maintenance and inspection logs.
- Specifying record keeping procedures – a record of past maintenance efforts and the results of previous inspections will greatly assist the continued effectiveness and cost-effectiveness of the maintenance program.
- An "as built" plan of the system.
- If applicable, the written plan should also include or reference other pertinent facility information such as design computations, construction and as-built plans, and emergency action plans.
- A list of off-hour telephone numbers of key maintenance personnel should be included in case of emergencies.

The City currently has parts of the above information, but it would be useful to develop a comprehensive plan. In addition to the plan, the City should consider developing maintenance zones similar to the District zones that were developed for street sweeping so that the City can maintain a regular schedule of maintenance activities for all the facilities.

Since all the facilities are not on a regular schedule, **Table 10-2** lists recommended inspection and maintenance of the City's major facilities. This table is not inclusive of all elements of the stormwater system. If the City choses to develop a operation and maintenance plan, the level of service for operation of these facilities should be determined. Table 10-2 lists recommendations based on the Environmental Protection Agency's *Stormwater Wet Pond and Wetland Management Guidebook* and other available resources. (EPA 2009 and SWFWMD 2010).

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Table 10-2 Recommended Inspection and Maintenance Frequency

Facilities	Inspection Frequency	Maintenance Frequency
Outfalls	Monthly to Quarterly and After Major Storms	Every 1 to 3 years Pipe and Riser Repair and Sediment Removal
Manholes	Every 1 to 3 years	As Needed. Every 1 to 3 years Pipe Repair and Sediment Removal
Pipes	Every 1 to 3 years	As Needed. Every 1 to 3 years Pipe Repair and Sediment Removal
Lakes (approx. 350 acres) (For more detailed inspection and maintenance of facilities, please see Table 2.2 of (EPA 2009))	Monthly to Quarterly and After Major Storms	As-needed. Remove sediment and debris (monthly). Keep side slopes vegetated (yearly). Removing Accumulated sediment on a 20-year cycle when 50% of storage has been lost.
Floating Islands	Quarterly	As-needed. Harvest and Replace Semi-Annually to Annually
Littoral Zones	Bi-yearly	As-needed. Remove invasive plants
Pump Station	Weekly	See Manufacturer's Recommendations on Equipment
Street sweeping	Monthly	Monthly
Trench Drain	Yearly, after a storm event to ensure that water has left the system within 72 hours after a storm event	As-needed. When water does not percolate, vaccum or scrape sediment or debris.
Inlets	Every 1 to 3 years	As Needed. Inlet tops need repair more often depending on location.
Weirs	Monthly to Quarterly and After Major Storms	As Needed.

After review on Table 10-2 with the City's current maintenance practices and discussing staffing needs with the Operations Manager, the City' should consider adding staff. First, the City currently sweeps streets generally 10 times per year with a full time operator and one street sweeper. In order to accommodate a monthly schedule, the City would need one more full time staff and one more street sweeper. The City also has not been able to inspect all of its facilities. Additional staff is needed to inspect and maintain the City's current facilities.

In addition to the staffing needs, staff has indicated that a commercial pressure waster is needed to maintain the outfalls. Staff currently uses a pressure washer to clear barnacles from the outfalls. Along with the pressure washer a work boat is also needed to complete the tasks.

Some of the inspection and maintenance activities are currently conducted by contractors. The City can continue to hire additional contractors to maintain its system. A cost-benefit analysis should be conducted

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to determine if it is economical to hire contractors versus staff and equipment. During a municipality comparison analysis completed in Section 12 and 13, the City of Jacksonville Beach's infrastructure is comparable to the City of Naples. Jacksonville Beach has approximately 3,000 inlets, 558 manholes, 70 outfalls, 69 miles of pipes, 2.9 miles of stormwater force mains, 89 miles of road, and 2.1 miles of canals. Jacksonville Beach has 18 streets and stormwater staff. The City of Naples has 15.5 staff for its Streets and Stormwater Program. Another difference in the programs is that the City of Jacksonville Beach has 10 maintenance staff whereas Naples has 7 maintenance staff. This is one example of justification for additional staff but further review of the maintenance practices along with the use of contractors is needed although staff has indicated a need for more staff.

As the City continues to grow and address the needs of the stormwater management system, more infrastructures will be needed to address future level of service requirements, water quantity and quality regulations, and future climate adaptation needs. Over the next 10 years, staff will need to be added to continue achieving the City's goals.

TAB 11

Capital Improvement Program

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11. Capital Improvement Program

11.1 Evaluation of Past 10-Years

The 2007 Master Plan developed a 10 Year Integrated Storm Water Management CIP List. **Tables 11-1** and **11-2** below, summarize the last 10 years of project and program accomplishments, for both water quality and water quantity.

Table 11-1 Summary of 2007 Master Plan Water Quality Project Initiatives for Naples Bay

City CIP ID #	Brief Title	Status
6.1.1	Broad Avenue South Linear and Water Quality Park	Completed
N/A	Lakes to Bay Goodlette-Frank Conservancy Filter Marsh System	Completed
N/A	Gordon River Water Quality Park	Completed
N/A	East Naples Bay Swale Restoration Improvements	Completed
N/A	Gateway Triangle Stormwater Management	Completed
N/A	Modification of Golden Gate Canal Weir #2	Completed
N/A	Modification of I-75 Canal Weir #1	Completed
6.1.2	Cove Pump Station/Naples Bay Outfall Detention Water Quality Basin	Ongoing
N/A	Golden Gate Canal Outfall Improvements	

Table 11-2 Summary of 2007 Master Capital Improvement Projects

City CIP ID #	Brief Title	Status
1.1	Primary Conveyance System Analysis & Modeling (Specific Basin Studies)	
1.1.1	Primary Conveyance System Analysis & Modeling Basin I	
1.1.2	Primary Conveyance System Analysis & Modeling Basin 2	
1.1.3	Primary Conveyance System Analysis & Modeling Basin 3	Completed
1.1.4	Primary Conveyance System Analysis & Modeling Basin 4	
1.1.5	Primary Conveyance System Analysis & Modeling Basin 5	Completed
1.1.6	Primary Conveyance System Analysis & Modeling Basin 6	Completed
1.1.7	Primary Conveyance System Analysis & Modeling Basin 7	
1.1.8	Primary Conveyance System Analysis & Modeling Basin 8	
1.1.9	Primary Conveyance System Analysis & Modeling Basin 9	
1.1.10	Primary Conveyance System Analysis & Modeling Basin 10	
1.1.11	Primary Conveyance System Analysis & Modeling Basin 11	
1.1.12	Primary Conveyance System Analysis & Modeling Basin 12	
1.2	5 and 10 year CIP Refinement	
1.3	Secondary Conveyance System Analysis/Modeling	
1.4	Naples Bay Basin Management Plan	Completed
1.5	Beach Management Plan for Removal of Ten Stormwater Outfalls	Completed
1.6	Lake Water Quality Management Plan	Completed

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1.7.2	Citywide Stormwater Master Plan Ph-2 GIS Completion & Comp Plan Adjustment	
1.7.3	Rate Study	Completed
1.8	Stormwater Drainage GIS Inventory, Inspection & Evaluation (asset management)	
3.1	Unidentified Stormwater Projects in Basin 1	
3.2	Unidentified Stormwater Projects in Basin 1	
3.3	Stormwater Projects in Basin 3	
3.3.1	Construction of Stormwater Projects in Basin 3 - Phase 1 Improvements	Completed
3.3.2	Design & Permitting of Stormwater Projects in Basin 3 - Phase 2	Completed
3.3.3	Construction of Stormwater Projects in Basin 3 - Phase 2 Improvements	Completed
3.3.4	Construction of Stormwater Projects in Basin 3 - Phase 3 PS and Treatment	Completed
3.4	Unidentified Stormwater Projects in Basin 4	
3.5	Stormwater Projects in Basin 5	
3.5.1	Add new pipe along 10th Ave. No. & 15th Ave. No.	
3.5.2	Add Parallel Storm Sewer Along 10th Street North	
3.5.3	Add Parallel Pipe, Outfall from 6th Avenue North Pond	
3.5.4	Add Parallel Pipe along 8th Avenue North	Completed
3.5.5	Detention Improvements at 13th Street North Pond	Completed
3.5.6	Pipe & detention improvements along 10th Avenue North	Completed
3.5.7	Add parallel pipe along 11th Street North	Completed
3.5.8	Add new pipe along 11th Street North	Completed
3.5.9	Add parallel pipe along 14th Avenue North	Completed
3.5.10	Pipe improvements along 12th Street North	Completed
3.5.11	Detention improvements at 15th Avenue North Pond	Completed
3.5.12	Conveyance improvements adjacent to the mall	Completed
3.5.13	Pipe improvements along Golden Gate Parkway	
3.5.14	Add parallel pipe along Golden Gate Parkway	
3.5.15	Pipe & detention improvements along Diana Ave / 10th Street N	Completed
3.5.16	Replace existing pipe under Golden Gate Parkway	
3.5.17	Pipe improvements along Royal Palm Drive	Completed
3.5.18	Add parallel pipe along Diana Avenue	Completed
3.5.19	Replace existing pipe along 26th Avenue North	Completed
3.5.20	Pipe improvements along 28th Avenue North	Completed
3.5.21	Add parallel pipe, outfall from 28th Avenue North Pond	Completed
3.5.22	Add parallel pipe, outfall from 14th Street North Pond	Completed
3.5.23	Weir modifications adjacent to Reach 03	Completed
3.5.24	Replace existing pipe under Goodlette-Frank Road	Completed
3.5.25	Widen existing channel sections along Reach 03	Completed
3.5.26	Construct 27-acre SWMF along Reach 03	
3.6	Stormwater Projects in Basin 6	
3.7	Stormwater design and permitting projects in Basin 7	

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3.8	Stormwater design and permitting projects in Basin 8	
3.9	Stormwater design and permitting projects in Basin 9	
3.10	Stormwater design and permitting projects in Basin 10	
3.11	Stormwater design and permitting projects in Basin 11	
3.12	Stormwater design and permitting projects in Basin 12	
3.13	CIP Implementation	
3.13.1	Gordon River Improvements (Alternative 1 with all 22 improvements)	Completed
4.1	Water quality swale & stormwater drainage facility reconstruction	Completed
4.2	Reconstruct drainage inlets (safety, lost capacity, & filter)	Completed
4.3	Citywide storm sewer system repair & replacement projects	Completed
4.4	Outfall storm drain pipe slip lining & replacement	Completed
4.5	Royal Harbor Water Quality Swales (Elimination of paved point discharge outfall swales)	Completed
5.1	Survey/log actual flood complaints	Completed
5.2	Inspection and cleaning structures and culverts	Completed
5.3	maintenance of canals and ditches	Completed
5.4	retention ponds and water bodies	Completed
5.5	Maintenance of Pump Stations and force mains	Completed
6.2	TMDL Programs	Completed
6.3	NPDES Programs	Completed
5.6	Pollution prevention and good housekeeping. NPDES Phase II Stormwater Public Education & Public Outreach Control Measure	Completed
6.1	SWIM Programs	
6.1.1	Stormwater Management - Broad Ave. Linear Park & Filter Marsh	
6.1.2	Cove Pump Station / Naples bay Outfall Detention Water Quality Basin	Ongoing
6.1.3	Stormwater Management - Goodlette Frank Road Water Quality Greenway	

In review of the studies, water quality and capital improvement projects completed in the past ten (10) years, since the 2007 Master Plan was completed, significant program accomplishments have been achieved:

- Seven CIP projects were completed from the Water Quality Project Initiatives for Naples Bay, and an eighth significant project, the Cove Pump Station is nearing completion.
- Seven studies, including primary conveyance modeling for Basins 3, 5 and 6, the Naples Bay Basin Management Plan, Beach Management Plan for Removal of Ten Stormwater Oufalls, and Lake Water Quality Management Plan, were competed.
- Basin 3 CIP projects were completed.
- Nineteen projects were completed in Basin 5.
- Operations and Maintenance programs such as maintenance of canals, ditches, and ponds; inspections and cleaning of structures and culverts; maintenance of pump stations and force mains; and logging, surveying and responding to flooding complaints were implemented.
- Total Maximum Daily Load and Municipal NPDES Programs were developed and implemented,

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Since 2007, the City has invested over $57,000,000 in stormwater and water quality projects and programs. Challenges to implementation of the projects include securing funding and grants, and in some cases delays in securing permitting. Additionally, without basin studies for Basins 1, 2, 4, 7, 8, 9, 10, 11, and 12, it is difficult to identify projects which will satisfy LOS requirements.

11.2 Proposed Projects

As part of the 2017 Master Plan Update, a review of the City's Complaint Log issue locations, LIDAR topography, pipe sizes and inlet locations and FEMA Flood Zone Maps by basin resulted in targeted areas for potential capital improvement projects. These locations were discussed at a meeting with City staff held on April 13, 2017. Based on those discussions, the following capital improvement projects list by basin was developed:

11.2.1 Basin 1

1. Gulfshore Blvd North south of Vedado Way to inlet (Complaint Areas 1,2 and 3)

   Project Description - A subbasin hydrologic and hydraulic analysis to determine if the existing roadway meets current LOS standards. The study would review pipe sizing, including the outfall just north of Harbor Drive.

2. East side of Gulfshore Blvd North – South of Seagate to North of Parkshore Drive (Complaint Areas 14-15)

   Project Description – In initial review of options for reclaiming swales and retention ponds to original volumes or expanding and improving ponds along with examining the potential for rain gardens. After the review, design, permit, and construct improvements.

3. Devil's Lake (Lake #1)

   Project Description - Public Education Program to educate on high level of copper due to excessive use of algacides/herbicides.

4. Seagate Drive Area

   Project Description - A subbasin hydrologic and hydraulic analysis to determine if the existing roadway meets current LOS Standards. In addition, a swale reclamation program for swales is suggested to reclaim swales that have been filled in and/or landscaped.

11.2.2 Basin 2

1. Wedge Drive (Complaint Areas 9-12)

   Project Description - Recommend a LOS Analysis due to complaints of water in swales, and road elevation is low. There is a water table issue.

2. Gulfshore Blvd South – from 3rd St. and 4th Ave. North to 1st Ave. South

   Project Description - This area is to be reviewed as part of the Ocean Outfall Study scheduled to be completed in December 2017.

11.2.3 Basin 3

1. 12th – 14th Ave. South between 3rd – 5th St. South

   Project Description - LOS Analysis for pipe size issues

2. 8th Street from 3rd Ave. south to 4th Ave. North

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Project Description - CRA Streetscape project that includes stormwater is currently under design.

11.2.4 Basin 4

1. Project Description - Study the area and provide recommendations for artesian wells in the western area.

2. Project Description - Study how large private drainage systems on the beach side impact the City's system from both a quality and quantity standpoint.

11.2.5 Basin 5

1. Mandarin Road from Orchid Drive to Allamanda Drive

   Project Description - LOS Analysis (12 inch diameter pipe)

2. Lake #19 –Fleischman Lake (15th Avenue North Lake)

   Project Description – Dredge Lake, plant littorals, etc.

3. The City received complaints on three (3) northern lakes in this Basin. Two are City owned, Sun Lake and Thurner Lake. The two northern lakes have water quality issues which can be addressed in a Lake Management Plan update. The southernmost of the lakes is owned by Collier County. Public Education is recommended.

11.2.6 Basin 6

1. 8th Street experiences flooding due to the intensity of development

   Project Description - CRA Project includes 8th St. south up to 4th Avenue North.

2. The Naples Community Hospital Lake has the highest concentration of copper of any lake.

   Project Description - This is a Public Education issue.

11.2.7 Basin 7

1. Project Description - Concrete flumes were replaced with side yard swales, which are now mostly filled in and/or landscaped.

2. Project Description - Need to update GIS in this basin.

11.2.8 Basin 8

1. No potential CIP projects identified. Localized flooding only.

11.2.9 Basin 10

1. Avion Park

   Project Description - swale reclamation and water quality issues with discharges to mangroves and vegetation accumulation

11.2.10 Lake Management Plan Projects

The Lakes Management Plan was identified as a Capital Improvement Project in the 2007 Master Plan. The Lakes Management Plan was completed in February of 2012 and included the following strategies to reduce pollution loading and increase efficiencies within the lakes:

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1. Continued Water Quality Sampling to Monitor Progress Towards Meeting Nutrient Criteria & TMDLs
2. Source Identification & Reduction of Pollutants
3. Public Outreach & Partnerships
4. Continued Implementation of Best Management Practices
5. Improving Stormwater Lake Pollutant Removal Efficiency

Using these strategies the City implemented a Tier system to prioritize restoration projects to achieve the strategies:

Tier I - Five City-owned lakes

Tier II - Seven of highest pollutant loading lakes that are either privately-owned or ownership is undetermined

Tier III - Remaining 16 lakes that are privately-owned; of these 16, only 10 receive stormwater drainage from City right-of-way

In order to continue to improve water quality within the City of Naples, it is recommended to continue to move forward with the Lake Management Capital Projects as listed in **Table 11-3**.

Table 11-3 Lake Management Plan Projects

Lake Tier	Lake No. and Name	Basin No.	Project(s)	Status
Tier I Lakes – City Owned	#19 –15th Ave North Lake	5	1. Improved stormwater infrastructure 2. Spot Dredge Muck and Sediment 3. Littoral Shelves 4. Vegetative Maintenance	Under Contract
	#22 – Lake Manor	5	1.Vegetative Maintenance 2.Spot Dredge Muck and Sediment 3. Littoral Shelves 4. Pervious Trail, Educational Signage,	Complete
	#23 - Lowdermilk Lake	2	1. Structural repairs to stormwater infrastructure	
	#6 - Mandarin Lake	5	1. Structural repairs to stormwater infrastructure 2. Vegetative Maintenance 3. Littoral Shelves	
	#31 - Lois Selfon Park Lake	3	1. Spot Dredge Muck and Sediment 2. Control Structure Installation 3. Vegetative Maintenance & Island	Complete
Tier II Lakes – High Priority Pollutant Loading	#2 – Swan Lake	1	TBD	
	#11 – Spring Lake	3	TBD	
	#8 – North Lake	2	TBD	
	#9 – South Lake	2	TBD	
	#10 – Alligator Lake	2	TBD	

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Lake Tier	Lake No. and Name	Basin No.	Project(s)	Status
	#14 – Lantern Lake	4	TBD	
	#24 – Half Moon Lake	4	TBD	
Tier III Lakes – Remaining Inventoried Lakes	#1 – Devil's Lake	1	TBD	
	#21 – Willow Lake	5	TBD	
	#25 – Unnamed Lake	4	TBD	
	#3 – Colonnade Lake	1	TBD	
	#4– Unnamed Lake	1	TBD	
	#5 – Lake Suzanne	1	TBD	
	#7 – Naples Golf & Beach Club Lake	2	TBD	
	#12– Unnamed Lake	4	TBD	
	#13– Unnamed Lake	4	TBD	
	#15 – Sun Terrace Lake	5	TBD	
	#16 – Thurner Lake	5	TBD	
	#17 – County Lake	5	TBD	
	#20 – Forest Lake	5	TBD	
	#26 – NCH Lake	6	TBD	
	#28– Unnamed Lake	4	TBD	

11.2.11 Water Quality Projects

As discussed in Section 5.5, the existing water quality loading model was developed to be representative of the current conditions, incorporating existing BMPs that currently provide treatment in the basins. Existing BMPs were identified through a variety of ways:

1. A list of implemented projects from the City of Naples
2. The 2012 Lake subbasin delineation, from the City of Naples Stormwater Quality Analysis, Pollutant Loading and Removal Efficiencies report.
3. Aerial review of the basins
4. The 2007 swale analysis by TetraTech

Using the analysis above, each basin was ranked based on TSS, TN, and TP to prioritize the top 3 basins for project selection to improve the loading contributing to the impaired waterways within the City of Naples. See **Table 11-4** below:

Table 11-4 Water Quality Basin Ranking

Basin ID	Current Water Quality Ranking Worst to Best (1 to 12)		
	TSS	TN	TP
1	1	2	1
2	7	5	5
3	3	8	4
4	6	3	3
5	2	6	6
6	4	9	9
7	10	10	10
8	9	12	12
9	5	1	2
10	8	4	8
11	12	11	11
12	11	7	7

The following is a summary of the methods used to complete Event Mean Concentration (EMC) calculations for the removal rates associated with each of the proposed project areas. These methods and modeling analyses are identical to the methods and analyses used to complete the existing EMC model for the City of Naples Major Basins, as described above and in Section 6.2. The current loading model was used as the basis of the proposed project loading model. Sub-basins were delineated for each project area to represent the area of flow projected to be directed to the proposed project area, resulting in eleven (11) project area sub-basins. The existing model loading was broken out for each sub-basin area, and then the proposed BMP implementation was applied to that sub-basin area in order to determine the appropriate TN, TP and TSS removal volumes associated with the proposed project. Each proposed project is described below and location maps, sub-basin delineation maps, and detailed conceptual plans are included in **Appendices K and L**.

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11.2.11.1 Basin I

1. Project #1

    a. Project Purpose: Address City identified concerns with outfalls into Mooring's and Doctor's Bay

    b. Project Description: Improve stormwater outfalls within Mooring's and Doctor's Bay by implementing 63 inlet filters with connector pipe screens at main discharge points to reduce TSS while also improving TN and TP loading to Mooring's Bay. **Figure 11-1** shows a location map for this project.

    c. Cost:

        i. Install Inlet Filters - $63,000.00

        ii. Install Connector Pipe Screens - $157,500

        iii. Quarterly Vacuum Truck Maintenance per year - $8,000.00

        iv. 15% Contingency – $34,275.00

        v. Administrative & Engineering (A&E) Fees - $52,555.00

    d. Load Reduction:

Based on verified literature, an inlet filter generally removes 80% TSS (Flex Storm Inlet Filters, 2017) of nutrients from the water being directed to the system. In addition, the connector pipe screens will reduce TSS and debris, and thereby subsidiary TN and TP, within the pipe flow at the junction box inlets. Please refer to **Table 11-5** for a summary of the removal volumes and efficiencies associated with this project.

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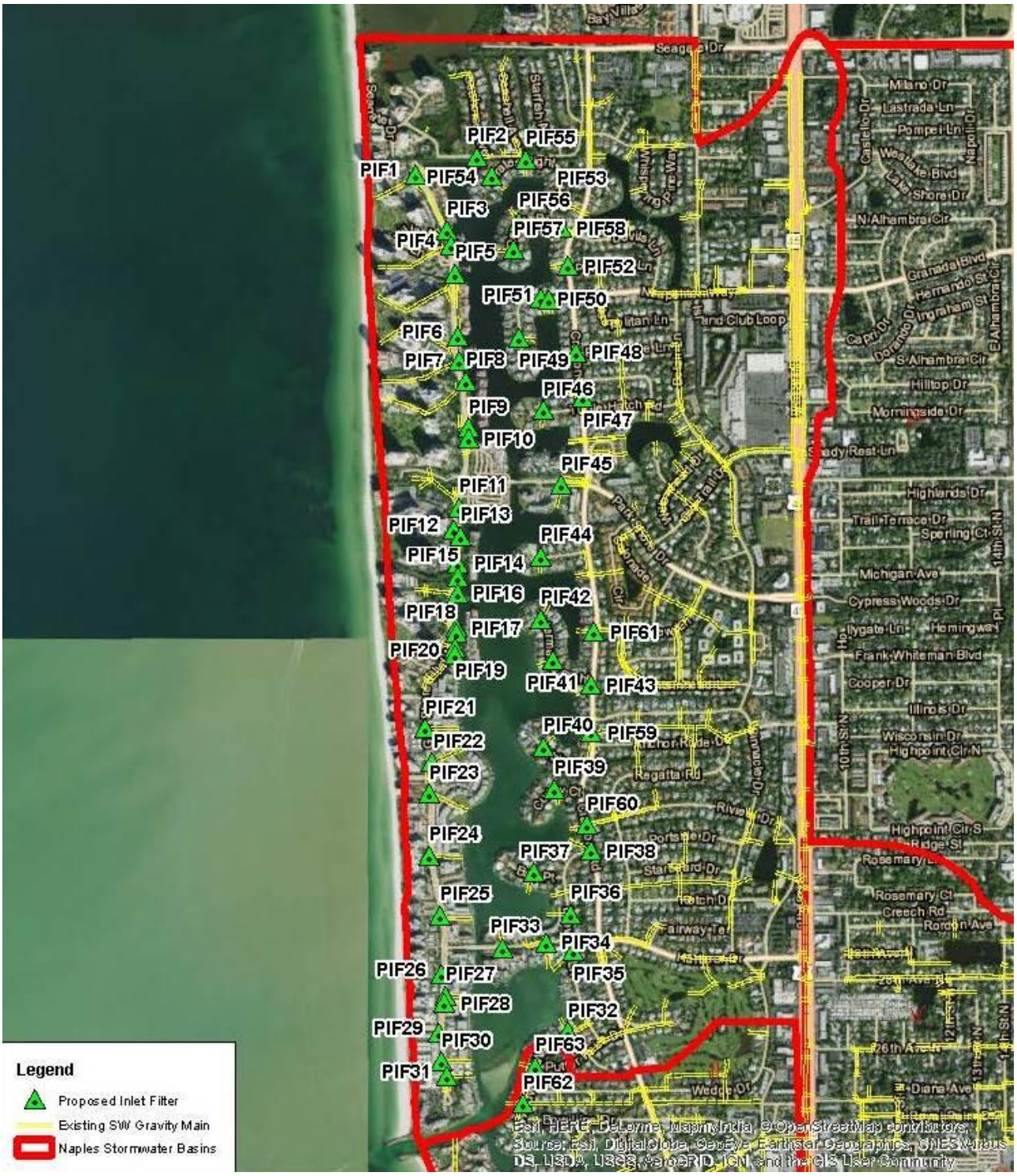
Figure 11-1 Project 1 Location Map



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2. Project #2

    a. Project Purpose: Reduce impacts of direct discharge of outflow from Lake 1 to Doctor's Bay.

    b. Project Description: Improve stormwater outfall from Lake 1 within Mooring's and Doctor's Bay by implementing a Suntree or equivalent nutrient removal box at discharge point to reduce pollutants such as TP, TN, and TSS from entering the waterway. **Figure 11-2** shows a location map for this project.

    c. Cost:

        i. Install Suntree Nutrient Removal Box - $211,250.00

        ii. Quarterly Vacuum Truck Maintenance per year - $2,000.00

        iii. 15% Contingency – $31,987.50

        iv. A&E Fees - $49,047.50

    d. Load Reduction:

        i. Based on Suntree research and data for their Nutrient Separating Baffle Boxes, the baffle box generally removes 90% TSS, 20% TN and 19% TP from the water being directed to the system. Please refer to Table 11-5 for a summary of the removal volumes and efficiencies associated with this project.

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Figure 11-2 Project 2 Location Map

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3. Project #3

    a. Project Purpose: Reduce impacts of direct discharge of stormwater from NE portion of the basin into Lake 1

    b. Project Description: Install a vegetated stormwater swale within City owned parcel along Seagate Drive and remove approximately 700 LF of 30" RCP and install 500 LF of 30" RCP to connect into stormwater swale. The project will reduce pollutants such as TP, TN, and TSS from entering the waterway. **Figure 11-3** shows a location map for this project.

    c. Cost:

        i. Vegetated Stormwater Swale - $100,000.00

        ii. Remove / Install Stormwater Infrastructure - $237,137.50

        iii. Wetland Plantings - $4,000

        iv. Bi-Annual Maintenance per year - $2,000.00

        v. 15% Contingency – $51,470.63

        vi. A&E Fees - $78,921.63

    d. Load Reduction:

        i. Based on FDEP 2010 and various filter marsh reports, a vegetated swale generally removes 80% TSS, 41% TN and 84% TP of nutrients from the water being directed to the system. Please refer to Table 11-5 for a summary of the removal volumes and efficiencies associated with this project.

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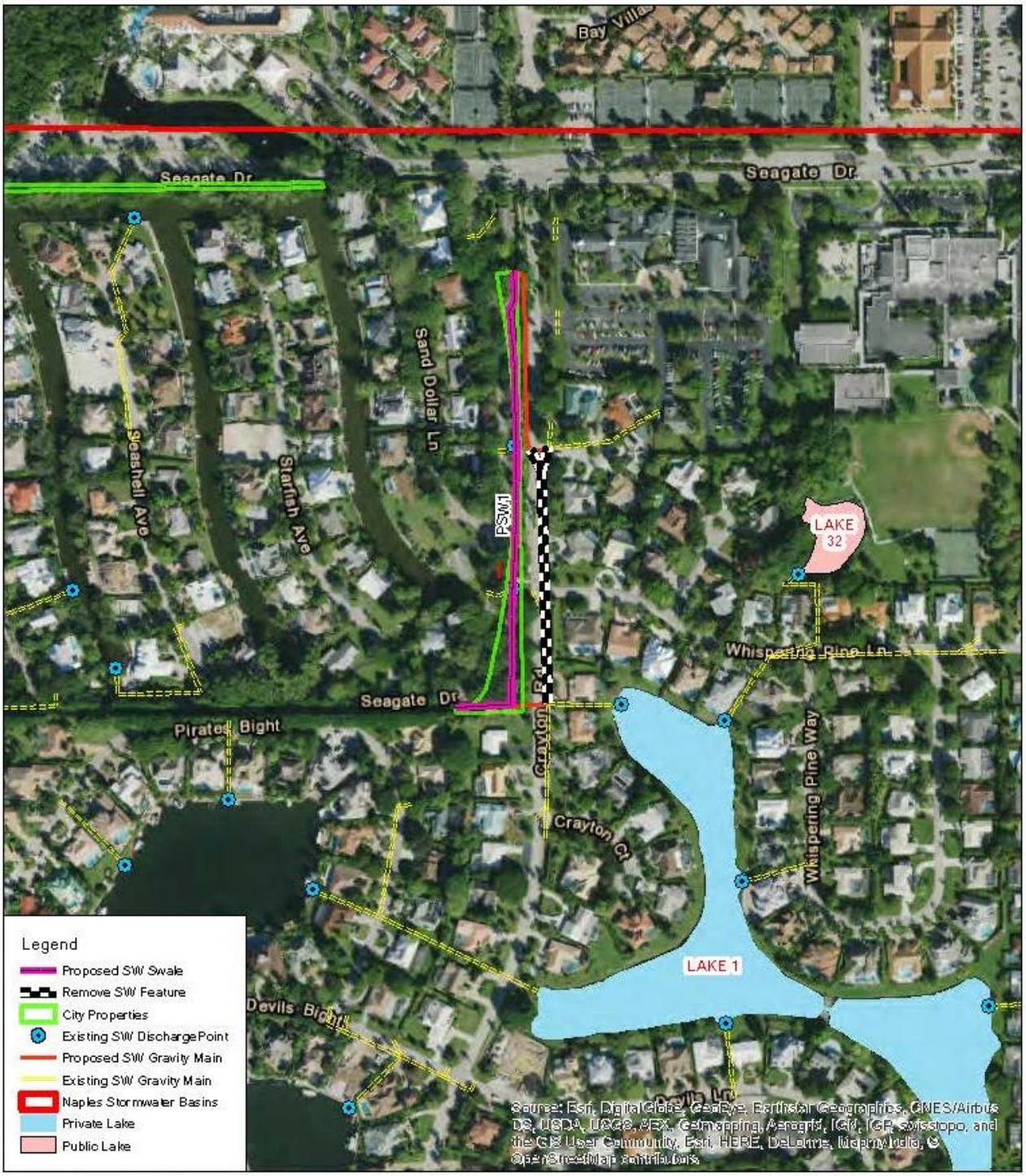
Figure 11-3 Project 3 Location Map



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4. Project #4

    a. Project Purpose: Reduce impact of direct discharge of outflow from Lake 2 to Doctor's Bay.

    b. Project Description: Improve stormwater outfall from Lake 2 within Mooring's and Doctor's Bay by implementing two Suntree or equivalent nutrient removal boxes at discharge point to reduce pollutants such as TP, TN, and TSS from entering the waterway. **Figure 11-4** shows a location map for this project.

    c. Cost:

        i. Install two (2) Suntree Nutrient Removal Boxes - $422,500.00

        ii. Quarterly Vacuum Truck Maintenance per year - $4,000.00

        iii. 15% Contingency – $63,975.00

        iv. A&E Fees - $98,095.00

    d. Load Reduction:

        i. Based on Suntree research and data for their Nutrient Separating Baffle Boxes, the baffle box generally removes 90% TSS, 20% TN and 19% TP from the water being directed to the system. Please refer to Table 11-5 for a summary of the removal volumes and efficiencies associated with this project.

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Figure 11-4 Project 4 Location Map

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5. Project #5

    a. Project Purpose: Reduce impacts of direct discharge of outflow from Lake 3 to Doctor's Bay.

    b. Project Description: Improve stormwater outfall from Lake 3 within Mooring's and Doctor's Bay by implementing a Suntree or equivalent nutrient removal box at discharge point to reduce pollutants such as TP, TN, and TSS from entering the waterway. **Figure 11-5** shows a location map for this project.

    c. Cost:

        i. Install Suntree Nutrient Removal Box - $211,250.00

        ii. Quarterly Vacuum Truck Maintenance per year - $2,000.00

        iii. 15% Contingency – $31,987.50

        iv. A&E Fees - $49,047.50

    d. Load Reduction:

        i. Based on Suntree research and data for their Nutrient Separating Baffle Boxes, the baffle box generally removes 90% TSS, 20% TN and 19% TP from the water being directed to the system. Please refer to Table 11-5 for a summary of the removal volumes and efficiencies associated with this project.

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Figure 11-5 Project 5 Location Map

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6. Project #6

    a. Project Purpose: Reduce the impacts of direct discharge of outflow from Lake Suzanne to Doctor's Bay.

    b. Project Description: Improve stormwater outfall from Lake Suzanne within Mooring's and Doctor's Bay by implementing a Suntree or equivalent nutrient removal box at discharge point to reduce pollutants such as TP, TN, and TSS from entering the waterway. **Figure 11-6** shows a location map for this project.

    c. Cost:

        i. Install Suntree Nutrient Removal Box - $211,250.00

        ii. Quarterly Vacuum Truck Maintenance per year - $2,000.00

        iii. 15% Contingency – $31,987.50

        iv. A&E Fees - $49,047.50

    d. Load Reduction:

        i. Based on Suntree research and data for their Nutrient Separating Baffle Boxes, the baffle box generally removes 90% TSS, 20% TN and 19% TP from the water being directed to the system. Please refer to Table 11-5 for a summary of the removal volumes and efficiencies associated with this project.

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Figure 11-6 Project 6 Location Map

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11.2.11.2 Basin III

1. Project #9

    a. Project Purpose: Reduce loading to Naples Bay by incorporating additional treatment area in Cambier Park

    e. Project Description: Improve treatment area south of the baseball fields to install a wet / dry retention area with planted wetlands and upgrade outfalls along 7th Avenue South to reduce pollutants such as TP, TN, and TSS from entering Naples Bay. **Figure 11-7** shows a location map for this project.

    b. Cost:

        i. Wet / Dry Detention - $390,000.00

        ii. Stormwater Infrastructure - $36,438.00

        iii. Wetland Plantings - $2,240.00

        iv. Bi-Annual Maintenance per year - $4,000.00

        v. 15% Contingency – $64,447.88

        vi. A&E Fees - $98,820.08

    c. Load Reduction:

        i. Based on FDEP 2010 and various filter marsh reports, a vegetated swale / small filter marsh system generally removes 80% TSS, 41% TN and 84% TP of nutrients from the water being directed to the system. Please refer to Table 11-5 for a summary of the removal volumes and efficiencies associated with this project.

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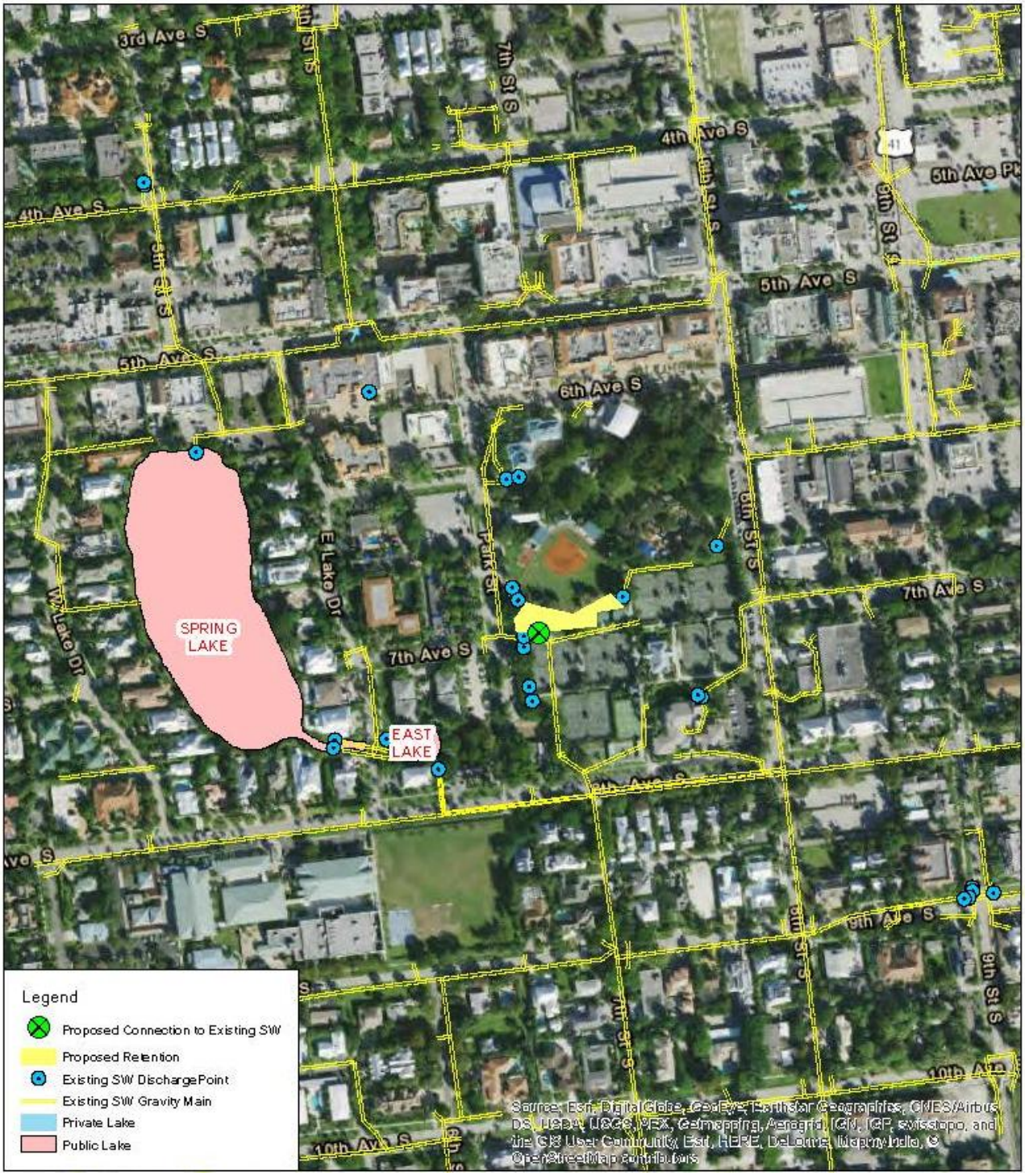
Figure 11-7 Project 9 Location Map



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11.2.11.3 Basin IV

1. Project #10

    a. Project Purpose: Reduce impacts of direct discharge of outflow from Lakes 13 and 28 to Naples Bay.

    b. Project Description: Improve stormwater outfall from Lakes 13 and 28 within Naples Bay by upgrading stormwater infrastructure and implementing a Suntree or equivalent nutrient removal box at discharge point to reduce pollutants such as TP, TN, and TSS from entering the waterway. **Figure 11-8** shows a location map for this project.

    c. Cost:

        i. Install Suntree Nutrient Removal Box - $200,000.00

        ii. Stormwater Infrastructure - $775,925.00

        iii. Quarterly Vaccum Truck Maintenance per year - $2,000.00

        iv. 15% Contingency – $146,668.75

        v. A&E Fees - $224,922.75

    d. Load Reduction:

        i. Based on Suntree research and data for their Nutrient Separating Baffle Boxes, the baffle box generally removes 90% TSS, 20% TN and 19% TP from the water being directed to the system. Please refer to Table 11-5 for a summary of the removal volumes and efficiencies associated with this project.

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Figure 11-8 Project 10 Location Map

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2. Project #11

    a. Project Purpose: Reduce impacts from direct discharge of outflow from Half Moon and Lantern Lakes to Naples Bay.

    a. Project Description: Improve stormwater outfall from Half Moon and Lantern Lakes within Naples Bay by upgrading stormwater infrastructure and implementing a Suntree or equivalent nutrient removal box at discharge point to reduce pollutants such as TP, TN, and TSS from entering the waterway. **Figure 11-9** shows a location map for this project.

    b. Cost:

        i. Install Suntree Nutrient Removal Box - $200,000.00

        ii. Stormwater Infrastructure - $127,449.00

        iii. Quarterly Vacuum Truck Maintenance per year - $2,000.00

        iv. 15% Contingency – $49,417.35

        v. A&E Fees - $75,773.27

    c. Load Reduction:

        i. Based on Suntree research and data for their Nutrient Separating Baffle Boxes, the baffle box generally removes 90% TSS, 20% TN and 19% TP from the water being directed to the system. Please refer to Table 11-5 for a summary of the removal volumes and efficiencies associated with this project.

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Figure 11-9 Project 11 Location Map

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11.2.11.4 Basin V

1. Project #7

    a. Project Purpose: Reduce impacts from direct discharge of outflow from Lakes Manor to Gordon River.

    b. Project Description: Improve stormwater outfall from Lake Manor into Gordon River by implementing a Suntree or equivalent nutrient removal box at discharge point to reduce pollutants such as TPH, TP, TN, and TSS from entering the waterway. **Figure 11-10** shows a location map for this project.

    c. Cost:

        i. Install Suntree Nutrient Removal Box - $211,250.00

        ii. Quarterly Vaccum Truck Maintenance per year - $2,000.00

        iii. 15% Contingency – $31,987.50

        iv. A&E Fees - $49,047.50

    d. Load Reduction:

        i. Based on Suntree research and data for their Nutrient Separating Baffle Boxes, the baffle box generally removes 90% TSS, 20% TN and 19% TP from the water being directed to the system. Please refer to Table 11-5 for a summary of the removal volumes and efficiencies associated with this project.

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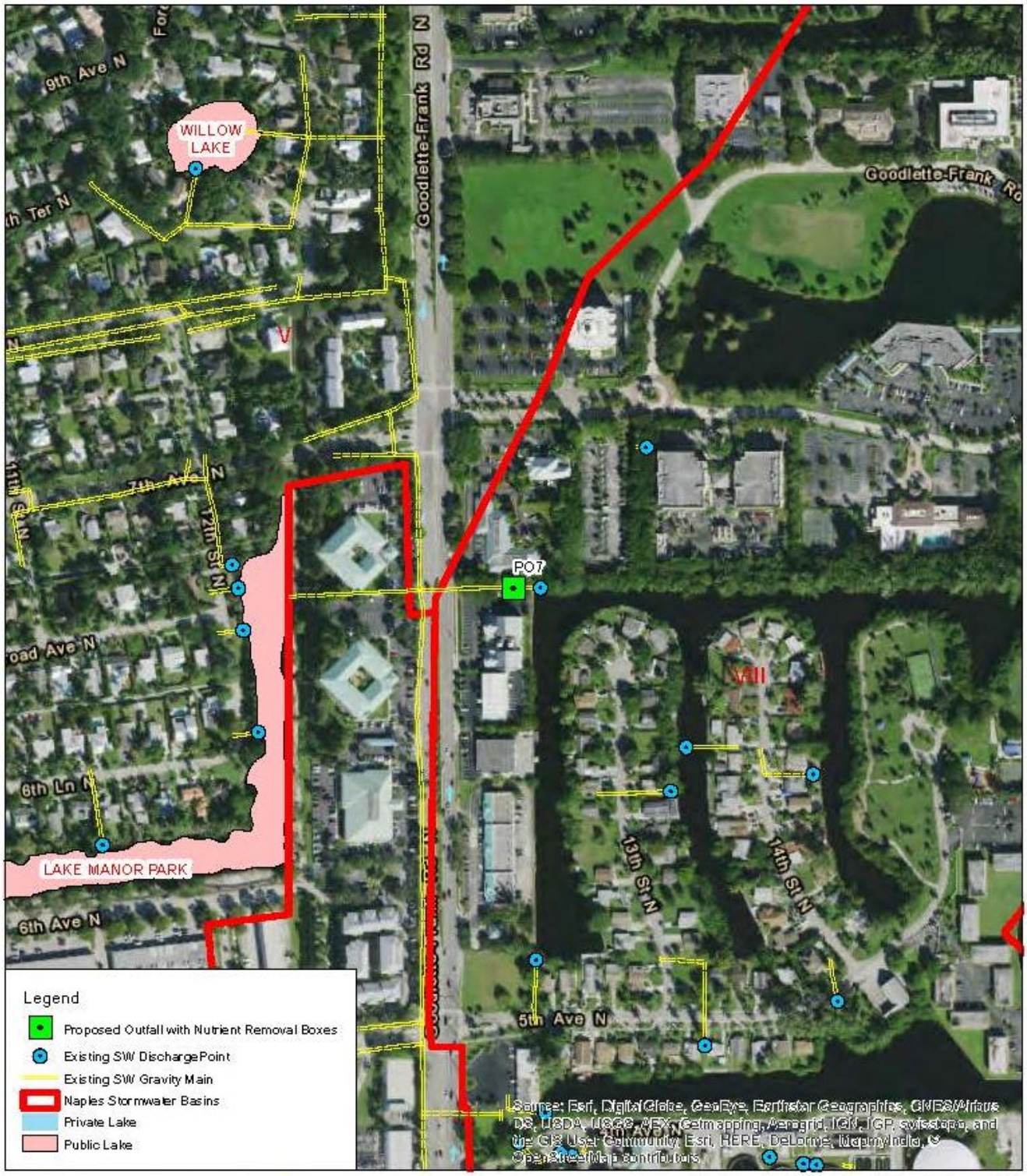
Figure 11-10 Project 7 Location Map



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2. Project #8

    a. Project Purpose: Reduce loading to Gordon River by incorporating additional treatment for Forest Lake

    b. Project Description: Purchase parcels along the western portion of the Lake and remove / redirect the three 18" RCP inflows along 7th St North into the wet / dry retention area with planted wetlands and designed concrete overflow weir back into the Lake to reduce pollutants such as TP, TN, and TSS from entering the waterway. **Figure 11-11** shows a location map for this project.

    c. Cost:

        i. Purchase Parcel - $717,686.00

        ii. Wet / Dry Detention - $390,000.00

        iii. Stormwater Infrastructure - $87,761.20

        iv. Wetland Plantings - $2,800.00

        v. Bi-Annual Maintenance per year - $4,000.00

        vi. 15% Contingency – $180,337.08

        vii. A&E Fees - $276,516.86

    d. Load Reduction:

        i. Based on FDEP 2010 and various filter marsh reports, a vegetated swale / filter marsh system generally removes 80% TSS, 41% TN and 84% TP of nutrients from the water being directed to the system. Please refer to Table 11-5 for a summary of the removal volumes and efficiencies associated with this project.

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Figure 11-11 Project 8 Location Map

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11.2.11.5 Basin IX

Due to the lack of information for this basin it is recommended that the following planning studies be implemented to focus on improving water quality treatment that directly discharges into the Gordon River:

1. Project #1
    a. Project Purpose: Collect data and assess water quality within the basin
    b. Project Description: Water quality study to evaluate the treatment capacity of the Lakes within the golf courses and private communities
    c. Cost:
        i. A&E Fees - $300,000.00
    d. Load Reduction: TBD based on study
2. Project #2
    a. Project Purpose: Assess impacts of Golden Gate Main Canal discharges
    b. Project Description: Work with Collier County and the SFWMD Big Cypress Basin to evaluate the direct impacts related to the Golden Gate Main Canal on the Gordon River
    c. Cost:
        i. A&E Fees - $100,000.00
    d. Load Reduction: TBD based on study
3. Project #3
    a. Project Purpose: Reduce fertilizer usage
    b. Project Description: Work with golf courses and private communities to evaluate fertilizer practices to reduce loading to Gordon River.
    c. Cost:
        i. A&E Fees - $100,000
    d. Load Reduction: TBD based on study

11.2.11.6 Water Quality Project Pollutant Load Reductions

As discussed in Section 5.5 of the document, **Table 5-11** presents the current annual loading with implemented BMPs from the 2007 SWMP along with the associated pollutant removal efficiencies for each of the basins within the City of Naples. Using this information, along with the implementation of the proposed aforementioned BMPs, **Table 11-5** presents the pollutant removal efficiencies within each of the subbasin delineations for the proposed projects. Comparing this data to the overall associated basin, the following removal efficiencies are improved:

- Basin 1 – Increased the removal efficiencies for TSS from 65 percent to 82 percent, TN from 41 percent to 42 percent, and TP from 50 percent to 56 percent.
- Basin 3 – Increased the removal efficiencies for TSS from 52 percent to 53 percent, TN from 39 percent to 40 percent, and TP from 43 percent to 44 percent.
- Basin 4 – Increased the removal efficiencies for TSS from 56 percent to 57 percent, TN from 33 percent to 34 percent, and TP from 38 percent to 43 percent.

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- Basin 5 – Increased the removal efficiencies for TSS from 56 percent to 58 percent, TN from 42 percent to 45 percent, and TP from 61 percent to 69 percent.

As discussed in Section 6.3 of the document, the adopted TMDL for the Gordon River Extension (affected by Basins 1, 9, and 5) requires a reduction of TN by 29 percent. In addition, the City's current water quality LOS standard is to provide a pollutant removal efficiency of 85 percent for TSS, TN, and TP. It is presumed that the aforementioned projects along with future pollutant load reductions based on new development and redevelopment would meet the objectives of the Gordon River Extension TMDL and improve the quality of surrounding waters within the City.

In summary, these removal efficiencies are still below the recommended LOS of 85 percent removal efficiencies for the aforementioned constituents, however, they exceed the TMDL reduction requirement of 29 percent. In order to increase efficiency within the basins additional water quality analysis along with treatment and storage projects such as stormwater swales, increased lake capacity, and infiltration trenches will need to be considered in strategic locations to provide the recommended removal efficiency.

Table 11-5 Water Quality Proposed Projects Removal Efficiencies

Basin ID	Project Number	Proposed Project Sub-Basin Area (Acres)	Existing Annual Loading			Proposed Annual Loading with Project Implementation			% Removal Efficiency		
			TSS (lb)	TN (lb)	TP (lb)	TSS (lb)	TN (lb)	TP (lb)	TSS (lb)	TN (lb)	TP (lb)
1	1	431.2	142,293	6,290	1,301	28,459	6,290	1,301	80%	0%	0%
1	2	63.3	3,148	628	30	2,550	503	3	19%	20%	90%
1	3	17.1	1,862	192	17	372	114	3	80%	41%	84%
1	4	74.2	8,459	539	54	6,852	431	5	19%	20%	90%
1	5	42.8	4,260	528	95	3,451	423	9	19%	20%	90%
1	6	44.8	10,624	636	110	8,606	509	11	19%	20%	90%
3	9	7.9	2,469	146	18	494	86	3	80%	41%	84%
4	10	77.5	8,303	840	114	6,725	672	11	19%	20%	90%
4	11	21.9	3,704	305	47	3,000	244	5	19%	20%	90%
5	7	144.1	23,067	1,428	196	18,676	1,142	20	19%	20%	90%
5	8	35.7	6,067	490	38	1,213	289	6	80%	41%	84%

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11.2.12 City Identified Projects

In addition to the Basin-specific projects identified above, several general projects/programs were discussed in a meeting with City staff on April 13, 2017.

- Review and update the City's GIS database for stormwater infrastructure
- Update of the 2012 Lake Management Plan
- Lining of aged stormwater trunk lines
- Review City-owned parcels for storage or water quality treatment opportunities

Major programs that have been identified by City staff include the following:

- Naples Beach Restoration and Water Quality Project (Beach Outfall Removal) - $20,000,000
- Naples Bay Water Quality Project, a.k.a. the Cove Pump Station Outfall Improvement Project - $1,000,000
- Roadway Improvements/Reconstruction) to raise the elevation of curb and road crown (resiliency) - $25,000,000
- Expand Stormwater Delivery to ASR for irrigation - $4,250,000

11.2.13 Stormwater Fund Capital Improvements Program

The City's Stormwater fund is responsible for maintaining and improving the City's stormwater management system which includes storm drainage, flood protection and water quality infrastructure and programs. The 2017-18 capital project list for the Stormwater Fund includes the following major projects:

- **Citywide Stormwater Drainage Improvements ($700,000)** – This is an ongoing annual program which may include the investigation and repair of major and minor storm sewers, drainage inlets and manholes, control structures, pump station hardware, discharge/outfall structures, culverts, concrete and grass swales and related drainage facilities. In addition, this project funds ongoing GIS Data Acquisition and mapping for all basins as required by the City's Municipal NPDES Permit.
- **Stormwater Pipe Lining ($150,000)** – Pipe lining is a less expensive alternative to pipe replacement for deteriorated pipes due to pipe cracking, disjointing, and root infiltration.
- **Citywide Stormwater Lake Improvements ($70,000)** – Minor improvements and repairs to lakes that may include spot dredging, new aeration systems, floating islands, mineral, biological and chemical treatment systems, the creation of littoral shelves and exotic vegetative removal. Design and construction of lake restoration projects is in accordance with the Citywide Lake Management Plan.
- **Beach Restoration and Water Quality Improvements ($125,000)** – In FY 17-18, funding is allocated to continue maintenance of existing outfall pipes on the beach. Following a community involvement and regulatory process, construction of Phase 1 of a beach outfall consolidation program, including two pump stations and several water quality improvement BMPs is scheduled for FY 19-20, with the goals focused on reducing flooding, improving water quality, improving beach access, reducing beach erosion, improving sea turtle habitat and aesthetics.
- **Naples Bay Water Quality Improvements at the Cove Pump Station ($1,000,000)** – This project includes the excavation and removal of accumulated sediment at the outfall to Naples Bay from the Cove Stormwater Pump Station located on Broad Avenue South and construction of an impoundment to improve water quality prior to discharging to Naples Bay.

- **Oyster Reef and Seagrass Restoration Project ($100,000)** – This funding is for matching funds for grant applications to SFWMD – Big Cypress Basin and FDEP, to create approximately 15 acres of oyster beds and 1-2 acres of seagrass beds in Naples Bay in phases. Phasing allows the City to better measure benefits and make adjustments to ensure long-term success.
- **8th Street Stormwater Improvements ($300,000)** – As part of the CRA's streetscape improvement project on 8th Street, the Stormwater Division will perform stormwater storage, conveyance and water quality upgrades.
- **Pressure Washer with Water Tank ($7,000)** – Funding for the purchase of new equipment to clean and clear infrastructure as well as removing oyster and barnacle build-up from stormwater outfall pipes.

11.3 Probable Cost Estimates

The Opinion of Probable Construction Cost (OPCC) Estimates for projects that were developed from previous studies and reports which have not been constructed were adjusted to 2017 dollars using cost indices from the Engineering News Record (ENR) Construction Cost Index. OPCC Estimates for studies and modeling were adjusted to 2017 dollars using the Consumer Price Index (CPI). OPCC Estimates for newly proposed projects were developed from a combination of sources including knowledge and past experience on similar studies and projects, vendor pricing, and previous bid information, when available. The OPCC Estimates can be found in the Cost Estimate table included in **Appendix M**.

11.4 Ranking Projects

In order to facilitate ranking of the projects, a scoring system was developed for the projects by benefits, such as Flood Protection or Water Quantity, Water Quality, Environmental/Recreation, and Costs. There was also an attempt to balance additional Primary Conveyance System Analysis and Modeling with CIP projects, as all but three of the basins have yet to be modeled and the modeling is necessary to determine where there are LOS issues and to identify CIP projects needed within those basins. The Ranking of Projects Table is included in **Appendix M**.

11.5 Proposed Capital Improvement Plan

Based on the results in the Ranking of Projects and Cost Estimate tables, the existing project list has been combined with the proposed project list to create a newly integrated 10-year CIP list. The 10-year CIP table is included in **Appendix M**.

11.6 Findings and Recommendations

Since the 2007 SWMP was completed, significant stormwater management program accomplishments have been achieved:

- Seven CIP projects were completed from the Water Quality Project Initiatives for Naples Bay, and an eighth significant project, the Cove Pump Station is nearing completion.
- Seven studies, including primary conveyance modeling for Basins 3, 5 and 6, the Naples Bay Basin Management Plan, Beach Management Plan for Removal of Ten Stormwater Oufalls, and Lake Water Quality Management Plan, were competed.
- Basin 3 CIP projects were completed.
- Nineteen projects were completed in Basin 5.

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- Operations and Maintenance programs such as maintenance of canals, ditches, and ponds; inspections and cleaning of structures and culverts; maintenance of pump stations and force mains; and logging, surveying and responding to flooding complaints were implemented.
- Total Maximum Daily Load and Municipal NPDES Programs were developed and implemented,

However, without basin studies for Basins 1, 2, 4, 7, 8, 9,10, and 11, it is difficult to identify flood protection/water quantity projects which will satisfy LOS requirements.

Eleven (11) water quality projects are proposed to increase pollutant removal efficiencies in four (4) basins which discharge to Mooring's Bay, Doctor's Bay, Naples Bay and Gordon River. These removal efficiencies are still below the recommended LOS of 85 percent removal efficiencies for TP, TN and TSS, however, they exceed the TMDL reduction requirement of 29 percent for the Gordon River Extension to which Basins 1, 9 and 5 discharge.

From a flood protection/water quantity standpoint, it is recommended that the City continue with Basin Studies for the remaining basins so that a more comprehensive City–wide stormwater management program can be developed and implemented based on meeting LOS requirements.

From a water quality standpoint, in order to increase pollutant removal efficiency within the basins, additional water quality analysis along with treatment and storage projects such as stormwater swales, increased lake capacity, infiltration trenches, and other BMPs or treatment trains will need to be considered in strategic locations to provide the recommended removal efficiency.

TAB 12

Funding

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12. Funding

12.1 Rate Methodology Evaluation

12.1.1 Overview

The focus of this section is to accomplish the following objectives:

1) Review and identify the most common stormwater utility fee collection means,
2) Identify comparable communities in Florida with stormwater utilities and identify the collection method they have implemented,
3) Evaluate the stormwater projects identified as needed versus the projected available funding and determine sufficiency, and
4) Summarize the results of the review, identification and evaluation processes.

12.1.2 Types of Stormwater Utilities

The U.S. Environmental Protection Agency (US EPA) surveyed stormwater utilities across the United States and determined that there are three (3) predominate types of stormwater utility fee collection means. They are Equivalent Residential Unit (ERU), Intensity of Development (ID) and Equivalent Hydraulic Area (EHA). A summary of each type is listed below:

Equivalent Residential Unit (ERU)

"The ERU method (also known as the Equivalent Service Unit (ESU) method) is used by more than 80 percent of all stormwater utilities. It bills an amount proportional to the impervious area on a parcel, regardless of the parcel's total area. It is therefore based on the effect of a typical single family residential (SFR) home's impervious area footprint. A representative sample of SFR parcels is reviewed to determine the impervious area of a typical SFR parcel. This amount is called one ERU. In most cases, all SFRs up to a defined maximum total area are billed a flat rate for one ERU. In some cases, several tiers of SFR flat rates are established on the basis of an analysis of SFR parcels within defined total area groups. A tiered SFR flat rate approach improves the equitability of the bills sent to homeowners. The impervious areas of non-SFR parcels are usually individually measured. Each non-SFR impervious area is divided by the impervious area of a typical SFR parcel to determine the number of ERUs to be billed to the parcel." (EPA 2009)

Intensity of Development (ID)

"This stormwater cost allocation system is based on the percentage of impervious area relative to an entire parcel's size. All parcels, including vacant/undeveloped parcels, are charged a fee. For developed parcels, fees are based on their intensity of development, which is defined as the percentage of impervious area of the parcel. Vacant or undeveloped parcels contribute to runoff and are assigned a lower fee. Rates are calculated for several ID categories and are billed at a sliding scale, as shown in the **Table 12-1**. For example, an SFR parcel, which is categorized as moderate development, would pay \$0.16/month/1,000 square foot (ft^2) (or \$1.60 for a 10,000 ft^2 lot)." (EPA 2009)

Table 12-1 Example Intensity of Development Rate Table

Category	Rate per month per 1,000 square feet of total served area (Impervious plus pervious)
Vacant/Undeveloped (0%)	$0.08
Light Development (1%-20%)	$0.12
Moderate Development (21% -40%)	$0.16
Heavy Development (41%-70%)	$0.24
Very Heavy Development (71%-100)	$0.32

Equivalent Hydraulic Area (EHA)

"Parcels are billed on the basis of the stormwater runoff generated by their impervious and pervious areas, charging impervious area a much higher rate than the pervious area."

In addition to the almost infinite number of variations to the three (3) above concepts; some communities have implemented very creative options for funding stormwater projects. They include:

1. Based on the fact that roads are a pervious surface and they support motor vehicles, "in San Mateo County in California vehicle registration fees were increased to address stormwater pollution issues associated with vehicles and transportation infrastructure." (EPA 2009)
2. Stormwater trading credits have been implemented in Washington D.C.(WEF 2014)
3. Philadelphia's Stormwater Management Incentives Program (SMIP) and Greened Acre Retrofit Program (GARP) are examples of P3s. The programs support the city's Green City, Clean Waters initiative, which launched in 2011. An objective of the initiative is to control runoff from 4050 ha (10,000 ac) and to reduce overflows by 85% over 25 years. "We are looking to transform the city, to transform a swath of impervious area," said Erin Williams, stormwater incentives manager with the Philadelphia Water Department (PWD). The program "turns rainwater into a commodity to be saved, traded, and used to stimulate our green economy." (WEF 2014)

12.1.3 Advantages and Disadvantages to each of the Types of Stormwater Utilities

Based on the feedback that the EPA received, EPA developed a list of advantages and disadvantages to each type of collection means, which are summarized in Table 12-2. (EPA 2009)

Table 12-2 Collection Means Advantages and Disadvantages

Collection Means	Advantages	Disadvantages
ERU	"The relationship (or nexus) between impervious area and stormwater impact is relatively easy to explain to the public—you pave, you pay. The number of billable ERUs can be determined by limiting the parcel area review to impervious area only. Because pervious area analysis is not required, this approach requires the least amount of time to determine the total number of billing units."	"Because the potential effect of stormwater runoff from the pervious area of a parcel is not reviewed, this method is sometimes considered to be less equitable than the Intensity of Development (ID) or Equivalent Hydraulic Area (EHA) methods (discussed below) because runoff-related expenses are recovered from a smaller area base. This method could still be used to charge a fee to all parcels - pervious as well as impervious - to cover expenses, such as administration and regulatory compliance unrelated to impervious area."
ID	"The ID method accounts for stormwater from the pervious portion of parcels. Therefore, it can be more equitable than the ERU method. If a parcel's impervious area is increased slightly because of minor construction modification, it probably would not be bounced up into the next higher ID category. This reduces the time required for staff to maintain the billable unit master file."	"The ID categories are broad, and parcels are not billed in direct proportion to their relative stormwater discharges. This method can be more difficult to implement than the ERU method because parcel pervious and impervious areas need to be reviewed. It is also more complicated to explain to customers than the ERU method. This method might also discourage urban infill and inadvertently encourage sprawl."
EHA	"The EHA method accounts for flow from the pervious portion of parcels. Therefore, it might be more equitable than the ERU method. Like the ID method, it accounts for undeveloped/vacant parcels and allows them to be billed, but it is fairer than the ID method because parcels are billed on the basis of individual measurements of pervious and impervious areas."	"Because pervious area analysis is required in addition to impervious area, this approach requires more time to determine the total number of billing units. It is also more complicated to explain to customers than the ERU method."

12.1.4 Comparable Systems

Angie Brewer and Associates (ABA) conducted extensive research during the process of selecting the comparable communities with stormwater utilities. The criteria evaluated during the selection process included population, location, median household income (MHI) and utility status. ABA reviewed more than fifteen (15) potential comparables. An important component of the selection process was to select

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comparable systems that are or it is anticipated that they will be facing similar challenges to that of the City of Naples such as sea-level rise and population fluctuations. Other factors considered included selecting a cross-section that would represent different geographical areas that had varying histories and local thought processes to ensure that this report represented more than just the local standards of the southwest Florida region. As a result of that process, the cities of Venice, Jacksonville Beach and Fort Walton Beach were selected as the three (3) best comparables.

Table 12-3 illustrates the similarities of the selected communities to the City of Naples.

Table 12-3 Comparable Communities

Community	Population*	Location Type	Median Household Income*	Stormwater Utility
City of Naples, FL	***21,512***	***Coastal***	***$79,515***	***Yes***
City of Venice, FL	22,211	Coastal	$49,926	Yes
City of Jacksonville Beach, FL	23,064	Coastal	$62,229	Yes
City of Fort Walton Beach, FL	21,817	Coastal	$47,149	Yes

* 2015 Census Estimates

12.1.5 System Descriptions

Going beyond the similarities of the communities chosen, it is important to understand the size and the scope of the systems that were selected. The size and scope of each system has an impact on the financial needs and rates that each one imposes on the customer base. Therefore it is critical to keep that in mind when evaluating how each community addresses the calculations and fees identified in sections 12.1.4 and 12.1.5. A summary of the physical infrastructure for the comparable systems is included in **Table 12-4**.

Table 12-4 Comparable Systems Infrastructure

Community	System Overview
City of Naples, FL	**Approximately 100 miles of storm drain, 5 ponds/lakes, 771 manholes, 651 outfalls and 3 pump stations.**
City of Venice, FL	Approximately 24 miles of stormwater pipes and culverts, inlets, control structures, dry retention ponds, a storm water pump station and 14 storm water outfalls.
City of Jacksonville Beach, FL	Approximately 68 miles of stormwater gravity mains, 1,456 catch basins, 558 stormwater manholes, 1,680 curb inlets, 70 stormwater outfalls, 20 ponds, 2 stilling basins with a weir, downtown underground stormwater collection vault (with 2 sand traps) and 8 stormwater pump stations.
City of Fort Walton Beach, FL	Approximately 35 miles of storm drain, 11 retention ponds and over 1,300 curb and surface inlets.

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Just as the physical infrastructure is important, understanding the size of the customer base is also a critical point. **Table 12-5** summarizes the number of customers that each of the comparable system serves.

Table 12-5 Comparable Systems Customers

Community	Number of Customers Served
City of Naples, FL	**Service population is approximately 22,000** [x]
City of Venice, FL	Service population is approximately 21,000 [X] (Approximately 11,000 accounts)
City of Jacksonville Beach, FL	Service population is approximately 21,000 [X]
City of Fort Walton Beach, FL	Service population is approximately 20,000 [X]

The research completed for this effort revealed that there are a number of different ways to define and calculate impervious area. ABA reviewed the municipal codes and ordinances to identify how each comparable system defines impervious area. It quickly becomes apparent that properly defining all aspects of impervious area can have a significant impact on any resulting calculations. **Table 12-6** summarizes how the comparable communities determine impervious areas.

12.1.6 Commonalities and Methodologies – Residential

ABA reviewed each of the communities to determine what commonalities existing in the residential stormwater fee collection process and the methodologies utilized for determining the fee. **Table 12-7** provides a detailed comparison of the following aspects: Equivalent Residential Unit or Similar Definition, Fee Types and Amounts and Fee Collection methods.

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Table 12-6 Determinations of Impervious Areas

Community	Methods for Determining Impervious Area
City of Naples, FL	**Impervious area means the percentage of the lot land area covered by impervious surfaces such as buildings or structures, swimming pools, decks, lanais, patios, driveways, and also includes any surface covered by concrete, bricks, blocks, flagstones, paving, sealant, or any other impermeable material. Standard engineering coefficients of permeability shall be used for partially pervious materials.** [x] **A certification of the property's impervious area as well as any additional portion of common area containing impervious area that is used by the property owners. The certification shall be based on a survey performed by a licensed land surveyor registered in the State of Florida within six months of the property owner's application.** [x]
City of Venice, FL	The City of Venice does not factor impervious area directly into the determination of the fee. The City does define impervious area as "those areas which prevent or impede the infiltration of stormwater into the soil as it entered in natural conditions prior to development. Common impervious surfaces include but are not limited to rooftops, sidewalks, walkways, patio areas, driveways, parking lots, storage areas, compacted gravel and soil surfaces, paver bricks, stones, swimming pools, and other surfaces." [X]
City of Jacksonville Beach, FL	Impervious area or impervious surface means a horizontal surface which has been compacted or covered with a layer of material so that it is highly resistant to infiltration by water. It includes, but is not limited to, semi-pervious surfaces such as compacted clay, as well as streets, roofs, sidewalks, parking lots and other similar surfaces. [X]
City of Fort Walton Beach, FL	The impervious surface ratio is calculated by dividing the total of all impervious surfaces on the lot by the total lot area. Water bodies are impervious surfaces. [X]

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Table 12-7 Community ERU Definitions

Community	Equivalent Residential Unit (ERU) or Similar Definition - Residential	
City of Naples, FL	Average residential unit or ARU means the average impervious area of residential developed property per dwelling unit located within the city and is established by the city council as 1,934 square feet. Single-family residential. The utility fee for developed single-family residential property shall be the ARU rate multiplied by the number of individual dwelling units on the property. Guesthouses shall be billed as an additional single-family unit(s). Multifamily residential. The utility fee for developed multifamily residential property shall be the ARU rate multiplied by the number of individual dwelling units on the property. Upon submittal of a written request by the owner or owner's representative, the computation of the utility fee may be in accordance with the following: a. The written request shall include certification of the property's impervious area as well as any additional portion of common area containing impervious area that is used by the property owners. The certification shall be based on a survey performed by a licensed land surveyor registered in the State of Florida within six months of the property owner's application. b. The certification shall be signed and sealed by the land surveyor and include the total square footage of impervious area measured and a drawing to scale of the impervious area by which the utility fee shall be computed. c. Paved areas that are excluded by the surveyor because they have been designed and constructed to either be pervious or retain stormwater shall be shown on the drawing and the applicant shall provide design calculations specifying the volume of stormwater retained by the paved pervious area. d. The utility fee shall be the ARU rate multiplied by the numerical factor obtained by dividing the total impervious area of the multi-family property by the equivalent square footage of 1 ARU. The minimum utility fee shall be equal to 2 ARU. The computation of the utility fee for multi-story buildings, multi-story parking garages or other elevated surfaces and structures shall be calculated as per the footprint of the structure only. Multiple story structures shall be calculated as if they were only ground-level structures.	1,934 sq ft

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Community	Equivalent Residential Unit (ERU) or Similar Definition - Residential	
City of Venice, FL	The City does not utilize an ERU. An Equivalent Stormwater Factor has been implemented. The stormwater management service charge is determined through an algorithm that expresses the quantity and quality of stormwater runoff from an individual property in terms of a unitless factor. The unitless factor used as a baseline for all properties is the equivalent stormwater factor (ESF). The number of ESFs for each property is determined through an algorithm that incorporates the following site-specific factors: (1) Impervious area; (2) Pervious area; (3) The type of land use; (4) The level of stormwater treatment; and (5) The amount of service provided by the city. The algorithm determines the number of ESFs per property compared to an average single-family home with 3,000 square feet of impervious area and a total lot size of 11,000 square feet. The cost per ESF is based on the annual stormwater management budget divided by the total number of ESFs within the city. The service charge for each property is the number of ESFs for the property multiplied by the city-wide cost per ESF.[X] Properties will be billed on the basis of the ESF, and the method of calculating the ESFs for a property shall be as follows: ESF = (Runoff Factor) * (Land Use Factor) * (Treatment Factor) * (Service Factor) Individual Property Service Charge = Number of ESFs for the individual property $/ESF Individual Stormwater Fee = Service Charge + Administration Charge + Public Facilities Charge + Special Charge (optional) + Special Assessment District Charge (optional)	N/A
City of Jacksonville Beach, FL	Equivalent residential unit (ERU) means the statistical average horizontal impervious area of "residential units" (single-family, mobile homes, multifamily, condominiums, etc., within the city). The horizontal impervious area includes, but is not limited to, all areas covered by structures, roof extensions, patios, porches, driveways and sidewalks. [X]	Unchanged since 1991

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Community	Equivalent Residential Unit (ERU) or Similar Definition - Residential	
City of Fort Walton Beach, FL	Dwelling Unit (Resolution 2014-21)	3,200 sq ft

ABA researched the types and amounts of stormwater fees collected in each community for residential users. Of note was that none of the communities utilized an impact/development fee to fund stormwater infrastructure improvements. **Table 12-8** summarizes these findings.

Table 12-8 Summary of Communities Fees

Community	Impact/Development Fee (Y/N)	Impact/Development Fee Amount	Monthly Stormwater Fee (Y/N)	Monthly Stormwater Fee Amount
City of Naples, FL	**No**	**N/A**	**Yes (Bi-monthly)**	**$13.35 per month**
City of Venice, FL	No	N/A	Yes	Varies - Based on property size and pervious surface calculation
City of Jacksonville Beach, FL	No	N/A	Yes	$5.00 per month per ERU The fee imposed for residential properties shall be the rate for one (1) ERU multiplied by the number of individual dwelling units existing on the property (ERU × no. of dwelling units)
City of Fort Walton Beach, FL	No	N/A	Yes	$4.50 per month per residential dwelling unit

Based on the research completed for this effort, across the nation a variety of collection methods exist for stormwater fees. Some of the methods include an annual single bill, a monthly bill that is physically separate from the utility bill (drinking water and sewer), typical monthly bill combined with the drinking water/sewer bill and annual collection through the property tax collection process. It became clear that in Florida the standard appears to be the inclusion of the stormwater fee on the monthly combined utility bill. **Table 12-9** summarizes the collection method of the comparable systems.

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Table 12-9 Collection Methods

Community	Fee Collection Methods	
	Impact/Development Fee	Monthly Fee
City of Naples, FL	**N/A**	**Bi-monthly Utility Bill**
City of Venice, FL	N/A	City's Enterprise Fund Bill (Utility Bill)
City of Jacksonville Beach, FL	N/A	Utility Bill
City of Fort Walton Beach, FL	N/A	Utility Bill

12.1.7 Commonalities and Methodologies – Commercial

ABA reviewed each of the communities to determine what commonalities existing in the commercial stormwater fee collection process and the methodologies utilized for determining the fee. **Table 12-10** provides a detailed comparison of the following aspects: Equivalent Residential Unit or Similar Definition, Fee Types and Amounts and Fee Collection methods.

Table 12-10 Commercial ERU Definitions

Community	Equivalent Residential Unit (ERU) or Similar Definition - Commercial/Non-Residential	
City of Naples, FL	**Non-residential. The utility fee for non-residential developed property shall be the ARU rate multiplied by the numerical factor obtained by dividing the total impervious area of a nonresidential developed property by the equivalent square footage of 1 ARU. The minimum utility fee for any nonresidential developed property shall be equal to 1 ARU. The computation of the utility fee for multi-story buildings, multi-story parking garages or other elevated surfaces and structures shall be calculated as per the footprint of the structure only. Multiple story structures shall be calculated as if they were only ground-level structures. The monthly utility fee for unoccupied developed property shall be based upon the category and classification as if the property were occupied.**	**N/A**

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Community	Equivalent Residential Unit (ERU) or Similar Definition - Commercial/Non-Residential	
City of Venice, FL	The City does not utilize an ERU. An Equivalent Stormwater Factor has been implemented. The stormwater management service charge is determined through an algorithm that expresses the quantity and quality of stormwater runoff from an individual property in terms of a unitless factor. The unitless factor used as a baseline for all properties is the equivalent stormwater factor (ESF). The number of ESFs for each property is determined through an algorithm that incorporates the following site-specific factors: (1) Impervious area; (2) Pervious area; (3) The type of land use; (4) The level of stormwater treatment; and (5) The amount of service provided by the city. The algorithm determines the number of ESFs per property compared to an average single-family home with 3,000 square feet of impervious area and a total lot size of 11,000 square feet. The cost per ESF is based on the annual stormwater management budget divided by the total number of ESFs within the city. The service charge for each property is the number of ESFs for the property multiplied by the city-wide cost per ESF.[X] Properties will be billed on the basis of the ESF, and the method of calculating the ESFs for a property shall be as follows: ESF = (Runoff Factor) * (Land Use Factor) * (Treatment Factor) * (Service Factor) Individual Property Service Charge = Number of ESFs for the individual property $/ESF Individual Stormwater Fee = Service Charge + Administration Charge + Public Facilities Charge + Special Charge (optional) + Special Assessment District Charge (optional)	N/A
City of Jacksonville Beach, FL	Numerical factor obtained by dividing the total impervious area of a nonresidential property by the ERU [X]	Varies
City of Fort Walton Beach, FL	Total impervious surface on property divided by the residential ERU of 3,200 S.F. or one (1) ERU, whichever is greater (Resolution 2014-21)	3,200 sq ft

ABA researched the types and amounts of stormwater fees collected in each community for commercial users. All three communities evaluated utilized the same type and amount of fee for residential and

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commercial users. As with the residential, none of the communities utilized an impact/development fee to fund stormwater infrastructure improvements. **Table 12-11** summarizes commercial fees.

Table 12-11 Commercial Fees Summaries

Community	Impact/Development Fee (Y/N)	Impact/Development Fee Amount	Monthly Stormwater Fee (Y/N)	Monthly Stormwater Fee Amount
City of Naples, FL	**No**	**N/A**	**Yes (Bi-monthly)**	**$13.35 per month**
City of Venice, FL	No	N/A	Yes	Varies - Based on property size and pervious surface calculation
City of Jacksonville Beach, FL	No	N/A	Yes	$5.00 per month per ERU The fee imposed for nonresidential properties as defined shall be the rate for one (1) ERU, multiplied by the numerical factor obtained by dividing the total impervious area of a nonresidential property by the ERU.
City of Fort Walton Beach, FL	No	N/A	Yes	$4.50 per month per ERU calculated as total impervious surface on property divided by the residential ERU of 3,200 or one (1) ERU, whichever is greater

The commercial fee collection methods remain consistent with the methods utilized for residential collection. **Table 12-12** summarizes the collection fee methods of the comparable communities.

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Table 12-12 Commercial Collection Methods

Community	Fee Collection Methods	
	Impact/Development Fee	Monthly Fee
City of Naples, FL	N/A	Bi-monthly Utility Bill
City of Venice, FL	N/A	City's Enterprise Fund Bill (Utility Bill)
City of Jacksonville Beach, FL	N/A	Utility Bill
City of Fort Walton Beach, FL	N/A	Utility Bill

12.1.8 Current Projects versus Projected Available Funding

As a part of the review, the team compared the overall project list to the projected funding available at the City's current stormwater fee collection rates. The review is not intended as a "rate study" or a "rate sufficiency study". It is intended to view the project costs and revenue from both the annual as well as overall perspectives and then determine if they are aligned properly or if there are opportunities for realignment. **Table 12-13** demonstrates the viability of completing the projects reviewed.

Table 12-13 Revenue versus Costs

Fiscal Year	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	Total Cost
Project Costs	$43,225,682	$2,530,000	$10,150,000	$950,000	$2,450,000	$59,305,862
SW Fee Revenue Projected*	$4,649,856	$4,742,853	$4,837,710	$4,934,464	$5,033,153	$24,198,037
Yearly Capability (+/-)	-$38,576,006	$2,212,853	-$5,312,290	$3,984,464	$2,583,154	-$35,107,825
Running Capability (+/-)	-$38,576,006	-$36,363,153	-$41,675,443	-$37,690,978	-$35,107,825	

*Based on 2016 CAFR and adjusted 2% annually for inflation

The amount noted in 2017-18 includes projects which were not in the City's CIP and therefore not budgeted across the five (5) year timeframe. As a result of the data available, 2017-18 shows a substantial deficit which does not reflect the actual budgetary situation. ABA did not include the cash and cash equivalent assets on-hand when determining the surplus/short falls in the table above as information was not available on what projects, if any, that those funds may have been committed to. During the review, ABA noted that three of the five years have a surplus of funding available. When 2017-18 is eliminated from the review, the City appears to have sufficient revenue to complete the projects included in the CIP. This does not mean that the non-CIP projects were not included in the CIP because they were not important. Many of the non-CIP projects have recently come to the surface after the budgeting/CIP process as a result of recent weather events or further studies that have been completed.

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12.1.9 Observations Regarding Future Financial Viability

The following observations have been included to provide the City with actions to consider which have the potential for significantly impacting the completion of all of the City's necessary stormwater projects.

1. Update the City's CIP to include all key stormwater projects not currently included and reprioritize the projects based on available fee revenue to minimize surpluses and deficits.
2. After the CIP update is complete, consider engaging a formal rate study to confirm rate sufficiency or determine if an increase/change in fee calculation methods are advisable.
3. Seek grant funding for all projects that are determined to align with grantor goals in a calculated, purposeful manner.
4. Consider alternative funding sources such as the State Revolving Fund low-interest loan program (rates currently between 0.1-2.0% on average) to complete projects in the near-future and spread the cost over a twenty (20) year repayment term.

12.2 Funding Strategy

12.2.1 Overview

Angie Brewer and Associates, LC (ABA) has been engaged by the City of Naples to provide an analysis of potential funding opportunities related to the Stormwater Master Plan. ABA reviewed information for seventy-five (75) projects and identified eighteen (18) funding sources that are good candidates to provide additional outside funding to these projects. In is important to note that the funding sources identified for each project are not general in nature. They were selected for their specific relation to the projects(s) which they could fund. The result of the analysis is the development of the Funding Strategy.

Overall Strategy - Based on the information that was available at the time this document was developed, ABA recommends that the City pursue all eighteen (18) funding sources identified as each one is directly applicable to a specific project or projects. None of the included funding sources is considered a "long shot" or "a stretch". Each one was carefully reviewed to ensure that it was applicable and relative to the project(s) it has been matched to.

The Funding Strategy includes a detailed breakdown of the potential funding sources for the elements which were reviewed for fundability. This strategy includes information such as funding cycles, match requirements, administrative burden and special considerations.

It is important to note that this document is a snapshot in time at its completion. The current economic climate is under constant change. Pressure from the top levels of the federal and state governments to reduce budgets and eliminate programs is a constant concern. It is possible that some of these sources will not exist in the future or that currently unknown new sources will become available.

12.2.2 Leveraging, Project Consolidation and Viability versus Cost

12.2.2.1 Leveraging

Leveraging is simply using funds from one source, internal or external, as match for another funding source thereby increasing the available funding for a project. Our view on leveraging is based on the belief that evaluation of all aspects of a program, without restriction to a project level approach, greatly improves chances of success. If everything is viewed from only a project level approach, this will create gaps and the City may miss out on an opportunity to leverage funds from one source by matching another. ABA maintains a focus at a program level first to define the overall needs. Then it is possible to assist the City in identifying the specific project elements that align with specific funding sources. With that perspective in mind, ABA seeks funding sources that will accept another source as its match rather than using the City funds as the only source of match.

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12.2.2.2 Project Consolidation/Bundling

There are times when smaller project elements can be merged with other projects, or project elements, to create an application that will score higher and is more appealing to the funding source. This will be an ongoing consideration as the City moves forward with funding acquisition.

12.2.2.3 Viability versus Costs

There are many programs available to fund a multitude of projects and project elements and while it would seem appropriate to apply for all opportunities that are identified, this is not always the case. There are times when the cost of an application and the required funding administration, either by a consultant or City staff, is too onerous for the amount of money that is being awarded. This does not mean that smaller funding opportunities should be ignored, but that an evaluation of the application process and the administration requirements should be performed before moving forward. The Funding Strategy has an evaluation of these factors included in the recommendations. This will help to ensure that the associated costs of applying and administering the funding do not outweigh the financial benefit.

12.2.3 Funding Sources

12.2.3.1 Legend

Table 12-4 is an example of the Key Facts section included for each funding source identified in the Funding Strategy. The second column contains an explanation of the potential information in each cell.

Table 12-14 Key Facts for Funding Strategy

Key Facts	
Grant and/or Loan:	Identifies the funding source as a grant and/or a loan.
Terms:	N/A for a grant. If a loan, this will include an estimate of the interest rate and the maximum length of the loan repayment.
Maximum Funding per Cycle:	Identifies the maximum funding available per funding cycle.
Match Requirement:	Identifies the required match percentage and any special match conditions or exclusions.
Application Burden:	Low – Can be completed in-house or with minimal outside support Moderate – Typically completed by an in-house trained grant writer or outside consultant. High – Typically completed by a consultant and may include special technical reports or studies and planning documents.
Special Application Considerations:	Identifies important factors related to schedule and effort such as partnerships, public involvement, and special timetables.
Administrative Burden:	Low – Can be completed in-house or with minimal outside support Moderate – Typically completed by an in-house trained grant administrator or outside consultant. High – Typically completed by a consultant and may include special reports or compliance requirements such as Davis Bacon and EEO.
Special Administrative Considerations:	Identifies important factors related to schedule and effort such as Davis Bacon, EEO monitoring, and others.

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12.2.3.2 Community-based Restoration Program Coastal and Marine Habitat Restoration Grants

National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Department of Commerce

The principal objective of the NMFS Community-based Restoration Program Coastal and Marine Habitat Restoration solicitation is to support fish habitat restoration projects that use an ecosystem-based approach to foster species recovery and increase fish populations. Proposals submitted under this solicitation will be primarily evaluated based on their ability to demonstrate how the proposed habitat restoration actions will help recover threatened and endangered species listed under the Endangered Species Act (ESA). The small-tooth sawfish has been identified as a species on the ESA list and located in the waters adjacent to Naples.

Eligible Project Types			
	Planning	ü	**Infrastructure/Capital**
ü	**Design**	ü	**Programmatic**

Funding Cycle Details	
Cycle Frequency	Annually
Begin Planning	Early December
Letter of Interest Due	N/A
Application Due	Late March

Key Facts	
Grant or Loan	Grant
Terms	N/A
Maximum Funding/Cycle	$1,500,000
Match Requirement	No Match Required (50% Recommended)
Application Burden	Moderate
Special Application Considerations	None
Administrative Burden	Moderate
Special Administrative Considerations	Federal Funding Requirements

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12.2.3.3 Community Development Program

Bank of America Foundation

Community revitalization: Supporting local and regional revitalization efforts taking a comprehensive approach to create economic opportunity and communities of choice. This may include large infrastructure and cultural institutions that are economic drivers for employment and contribute to overall community vitality.

- Comprehensive placed-based revitalization: Activities leveraging Public/Private Investment and community partnerships (Choice Neighborhoods, Promise Zones, etc.)
- Fostering green communities: Activities that seek the creation, preservation or restoration of open/green/parks space
- Transit oriented development: Activities that support transit oriented development as a means to connect individuals to jobs, services and overall economic opportunity
- Economic development: Efforts that spur small business growth and healthy commercial corridors

Eligible Project Types			
	Planning	ü	**Infrastructure/Capital**
ü	**Design**	ü	**Programmatic**

Funding Cycle Details	
Cycle Frequency	Annually
Begin Planning	Early March
Letter of Interest Due	N/A
Application Due	Early May

Key Facts	
Grant or Loan	Grant
Terms	N/A
Maximum Funding/Cycle	$100,000
Match Requirement	Match Requirements Not Stated
Application Burden	Low
Special Application Considerations	None
Administrative Burden	Moderate
Special Administrative Considerations	None

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12.2.3.4 Cooperative Funding Program

South Florida Water Management District

The South Florida Water Management District provides guidelines for funding specific categories of stormwater projects. The stormwater component of the Cooperative Funding Program will share the cost of local projects that address water quality and flooding issues caused by stormwater runoff.

Examples of eligible stormwater projects in previous years include stormwater treatment areas, innovative restoration projects that improve water quality, water storage and infrastructure modifications, sediment reduction facilities and stormwater retrofits.

Eligible Project Types			
	Planning	ü	**Infrastructure/Capital**
	Design		**Programmatic**

Funding Cycle Details	
Cycle Frequency	Annual
Begin Planning	Early August
Letter of Interest Due	N/A
Application Due	Late October

Key Facts	
Grant or Loan	Grant
Terms	N/A
Maximum Funding/Cycle	$250,000 - 2,000,000
Match Requirement	Up to 60% Match Required
Application Burden	Moderate
Special Application Considerations	Attend Board Meeting
Administrative Burden	Moderate
Special Administrative Considerations	None

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12.2.3.5 Environmental Education Regional Model Grant

US Environmental Protection Agency

The goal of this competitive grant program is to enhance public awareness and knowledge about environmental issues in order to encourage the public to make informed environmental decisions and to be responsible in light of environmental issues.

Eligible Project Types			
	Planning	ü	**Infrastructure/Capital**
	Design		**Programmatic**

Funding Cycle Details	
Cycle Frequency	Annual
Begin Planning	Early October
Letter of Interest Due	N/A
Application Due	Mid-November

Key Facts	
Grant or Loan	Grant
Terms	N/A
Maximum Funding/Cycle	$91,000
Match Requirement	25% Non-Federal Match Required
Application Burden	Moderate
Special Application Considerations	None
Administrative Burden	Moderate
Special Administrative Considerations	None

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12.2.3.6 Environmental Solutions for Communities

National Fish and Wildlife Foundation/Wells Fargo

The Environmental Solutions for Communities initiative is designed to support projects that link economic development and community well-being to the stewardship and health of the environment. This initiative is supported through a $15 million contribution from Wells Fargo that will be used to leverage other investments with a total impact of over $37.5 million.

Funding priorities for this program include:

- Conserving critical land and water resources and improving local water quality
- Restoring and managing natural habitat, species and ecosystems that are important to community livelihoods
- Facilitating investments in green infrastructure, renewable energy and energy efficiency
- Encouraging broad-based citizen participation in project implementation.

Eligible Project Types			
	Planning	ü	**Infrastructure/Capital**
	Design		**Programmatic**

Funding Cycle Details	
Cycle Frequency	Annual
Begin Planning	Early October
Letter of Interest Due	N/A
Application Due	Early December

Key Facts	
Grant or Loan	Grant
Terms	N/A
Maximum Funding/Cycle	$100,000
Match Requirement	50% Match Required
Application Burden	Moderate
Special Application Considerations	None
Administrative Burden	Low
Special Administrative Considerations	None

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12.2.3.7 Five Star & Urban Water Restoration Program

National Fish and Wildlife Foundation

The Five Star and Urban Waters Restoration Grant Program seeks to develop community capacity to sustain local natural resources for future generations by providing modest financial assistance to diverse local partnerships focused on improving water quality, watersheds and the species and habitats they support. Projects include a variety of ecological improvements including: wetland, riparian, forest and coastal habitat restoration; wildlife conservation; community tree canopy enhancement; and/or water quality monitoring and stormwater management; along with targeted community outreach, education and stewardship.

Eligible Project Types			
	Planning	ü	**Infrastructure/Capital**
ü	**Design**		**Programmatic**

Funding Cycle Details	
Cycle Frequency	Annual
Begin Planning	Early November
Letter of Interest Due	N/A
Application Due	Early February

Key Facts	
Grant or Loan	Grant
Terms	N/A
Maximum Funding/Cycle	$50,000
Match Requirement	50% Non-Federal Match Required
Application Burden	Moderate
Special Application Considerations	None
Administrative Burden	Moderate
Special Administrative Considerations	None

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12.2.3.8 Healthy Watersheds Consortium Grant Program

US Endowment for Forestry and Communities - Healthy Watersheds Consortium

This program provides grants to protect watersheds and freshwater ecosystems. The primary goal of this program is the stewardship and protection of land in the watershed, rather than restoration of degraded habitats or projects with a strictly water quality improvement outcome.

Eligible Project Types			
	Planning	ü	**Infrastructure/Capital**
	Design		**Programmatic**

Funding Cycle Details	
Cycle Frequency	Annual
Begin Planning	Early December
Letter of Interest Due	N/A
Application Due	Early February

Key Facts	
Grant or Loan	Grant
Terms	N/A
Maximum Funding/Cycle	Not Stated
Match Requirement	50% Non-Federal Match Required
Application Burden	Moderate
Special Application Considerations	None
Administrative Burden	Low
Special Administrative Considerations	None

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12.2.3.9 Max and Victoria Dreyfus Foundation Grant

Max and Victoria Dreyfus Foundation

This program provides grants for museums, cultural, and performing arts programs; schools, hospitals, educational and skills training programs, and programs for youth, seniors, and the handicapped; environmental and wildlife protection activities; and other community-based organizations.

Eligible Project Types			
	Planning	ü	**Infrastructure/Capital**
	Design	ü	**Programmatic**

Funding Cycle Details	
Cycle Frequency	Annual
Begin Planning	Early March
Letter of Interest Due	N/A
Application Due	Early May

Key Facts	
Grant or Loan	Grant
Terms	N/A
Maximum Funding/Cycle	$20,000
Match Requirement	Match Requirements Not Stated
Application Burden	Moderate
Special Application Considerations	None
Administrative Burden	Moderate
Special Administrative Considerations	None

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12.2.3.10 National Estuarine Research Reserve System (NERRS) Land Acquisition and Construction Program for Fiscal Year 2018

National Ocean Service (NOS), National Oceanic and Atmospheric Administration (NOAA), Department of Commerce

This program provides grants for construction and land acquisition projects that will improve the protection of key water and land areas. NOAA provides funding to designated Reserve agencies for acquiring additional property interests and for construction projects that serve to strengthen protection of reserve key land and water areas; to enhance long-term protection of reserve areas for research and education; and provide for facility and exhibit construction. FDEP is the lead agency for NERRS and would be the lead applicant in a project.

Eligible Project Types			
	Planning	ü	**Infrastructure/Capital**
	Design	ü	**Programmatic**

Funding Cycle Details	
Cycle Frequency	Annual
Begin Planning	Early December
Letter of Interest Due	N/A
Application Due	Early February

Key Facts	
Grant or Loan	Grant
Terms	N/A
Maximum Funding/Cycle	$800,000
Match Requirement	Match Requirements Not Stated
Application Burden	Moderate
Special Application Considerations	None
Administrative Burden	Moderate
Special Administrative Considerations	None

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12.2.3.11 NOAA Gulf of Mexico Bay-Watershed Education and Training (B-WET) Program

National Oceanic and Atmospheric Administration

The primary delivery of BWET is through competitive funding that promotes Meaningful Watershed Educational Experiences (MWEEs). MWEEs are multi-stage activities that include learning both outdoors and in the classroom, and aim to increase the environmental literacy of all participants.

Additionally, Gulf of Mexico B-WET projects support the priority issues of the Gulf of Mexico Alliance, with the goal of significantly increasing regional collaboration to enhance the ecological and economic health of the Gulf of Mexico.

The Alliance has identified the following regionally significant priority issues:

-Coastal Resilience -Data & Monitoring

-Education & Engagement -Habitat Resources

-Water Resources -Wildlife & Fisheries

Eligible Project Types			
ü	**Planning**		**Infrastructure/Capital**
	Design	ü	**Programmatic**

Funding Cycle Details	
Cycle Frequency	Annual
Begin Planning	Late July
Letter of Interest Due	N/A
Application Due	Late October

Key Facts	
Grant or Loan	Grant
Terms	N/A
Maximum Funding/Cycle	$100,000
Match Requirement	None
Application Burden	Moderate
Special Application Considerations	Show partnerships
Administrative Burden	Moderate
Special Administrative Considerations	None

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12.2.3.12 Partners for Places

Funder's Network for Smart Growth

National funders invest in local projects to promote a healthy environment, a strong economy, and well-being of all residents. Through these projects, Partners for Places fosters long-term relationships that make our urban areas more prosperous, livable, and vibrant.

Eligible Project Types			
ü	**Planning**		**Infrastructure/Capital**
ü	**Design**		**Programmatic**

Funding Cycle Details	
Cycle Frequency	Annual
Begin Planning	Early November
Letter of Interest Due	N/A
Application Due	Late January

Key Facts	
Grant or Loan	Grant
Terms	N/A
Maximum Funding/Cycle	$75,000
Match Requirement	50% Match Required
Application Burden	Low
Special Application Considerations	Must have Sustainability Office
Administrative Burden	Low
Special Administrative Considerations	None

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12.2.3.13 PIG Difference Grant

New Pig Corporation

This program provides funds to improve sustainability of waterways, watersheds, estuaries, tidal pools or wetlands, or the wildlife that are directly affected by them. Most anything that improves sustainability of a body of water will be considered. Projects must be hands-on in nature. This program looks for innovative groups in local communities working to make their corner of the world more sustainable.

Eligible Project Types			
	Planning	ü	**Infrastructure/Capital**
	Design		**Programmatic**

Funding Cycle Details	
Cycle Frequency	Ongoing
Begin Planning	60 Days Prior to Submission
Letter of Interest Due	N/A
Application Due	Ongoing

Key Facts	
Grant or Loan	Grant
Terms	N/A
Maximum Funding/Cycle	$5,000 plus materials
Match Requirement	None
Application Burden	Low
Special Application Considerations	None
Administrative Burden	Low
Special Administrative Considerations	None

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12.2.3.14 Pre-Disaster Mitigation/Flood Mitigation Grant

Federal Emergency Management Administration

Funds are available to implement a sustained pre-disaster natural hazard or flood mitigation program. The goal is to reduce overall risk to the population and structures from future hazard events, while also reducing reliance on Federal funding in future disasters. This program awards planning and project grants and provides opportunities for raising public awareness about reducing future losses before disaster strikes.

Eligible Project Types			
	Planning	ü	**Infrastructure/Capital**
	Design		**Programmatic**

Funding Cycle Details	
Cycle Frequency	Ongoing
Begin Planning	60 Days Prior to Submission
Letter of Interest Due	N/A
Application Due	Ongoing

Key Facts	
Grant or Loan	Grant
Terms	N/A
Maximum Funding/Cycle	$500,000 (Estimated)
Match Requirement	None
Application Burden	High
Special Application Considerations	Data Gathering
Administrative Burden	Moderate
Special Administrative Considerations	Federal Funding Requirements

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12.2.3.15 Section 319 Grant Program

Florida Department of Environmental Protection

These grant funds can be used to implement projects or programs that will help to reduce nonpoint sources of pollution. Projects or programs must be conducted within the state's NPS priority watersheds, which are the state's SWIM watersheds and National Estuary Program waters.

Examples of fundable projects include: demonstration and evaluation of Best Management Practices (BMPs), nonpoint pollution reduction in priority watersheds, ground water protection from nonpoint sources, and public education programs on nonpoint source management.

Eligible Project Types			
	Planning	ü	**Infrastructure/Capital**
	Design	ü	**Programmatic**

Funding Cycle Details	
Cycle Frequency	Annual
Begin Planning	Early January
Letter of Interest Due	N/A
Application Due	Late May

Key Facts	
Grant or Loan	Grant
Terms	N/A
Maximum Funding/Cycle	Varies - Up to $1,000,000
Match Requirement	40% Non-Federal Match Required
Application Burden	High
Special Application Considerations	Technical Data
Administrative Burden	High
Special Administrative Considerations	Technical Data/Monitoring

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12.2.3.16 State Revolving Fund Loan Program (SRF) – Clean Water

Florida Department of Environmental Protection

The aim of the Clean Water State Revolving Fund (SRF) Program is to provide low-interest loans to eligible entities for planning, designing, and constructing public wastewater, reclaimed water and storm water facilities.

Eligible Project Types			
ü	**Planning**	ü	**Infrastructure/Capital**
ü	**Design**		**Programmatic**

Funding Cycle Details	
Cycle Frequency	Ongoing
Begin Planning	90 Days Prior to Submission
Letter of Interest Due	N/A
Application Due	Ongoing

Key Facts	
Grant or Loan	Loan
Terms	20 Years / Current Rate btw 0.00-2.00%
Maximum Funding/Cycle	Subject to Annual Segment Cap
Match Requirement	None
Application Burden	High
Special Application Considerations	Planning/Environmental Documents
Administrative Burden	High
Special Administrative Considerations	Davis Bacon / American Iron and Steel

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12.2.3.17 Sustainable Environments – Urban Water Management

Surdna Foundation

Grants for innovative stormwater run-off management and green infrastructure projects to prevent damage caused by old, inefficient water systems. Funding is intended for environmentally-conscious approaches that capture and slowly release water into existing drains, pipes and sewers, or reuse rain water where it falls, rather than building expensive pipes and sewer tunnels. To this effect, the Foundation seeks funding opportunities that:

- Create pilot projects or expand promising projects in cities and metro areas that demonstrate innovative stormwater management practices. The Foundation is particularly interested in cities that are responding to federal regulatory action regarding stormwater management. The Foundation also seeks green infrastructure solutions that create quality jobs, businesses, and other equitable economic benefits.
- Inform and build capacity of community organizers, public leaders, and others in the water field. Of particular interest are new stormwater fee structures, public private partnerships, and the development of small scale, distributed (neighborhood level) water retrofit projects. In addition, the Foundation seeks design and implementation practices that focus on equity issues and that engage and benefit the communities served.

Eligible Project Types			
	Planning	ü	**Infrastructure/Capital**
ü	**Design**		**Programmatic**

Funding Cycle Details	
Cycle Frequency	Every 4 Months
Begin Planning	90 Days Prior to Submission
Letter of Interest Due	N/A
Application Due	March / July / November

Key Facts	
Grant or Loan	Grant
Terms	N/A
Maximum Funding/Cycle	Based on Funding Availability
Match Requirement	50% Non-Federal Match Required
Application Burden	High
Special Application Considerations	Technical Data/Permitting Status
Administrative Burden	High
Special Administrative Considerations	Storm Event Monitoring

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12.2.3.18 Total Maximum Daily Load (TMDL) Water Quality Restoration Program

Florida Department of Environmental Protection

Applicants are eligible for the TMDL Water Quality Restoration Grant for the following types of projects: projects that reduce stormwater pollutant loadings from urban areas that discharge to waterbodies on the state's verified list of impaired waters; projects at least at the 60% design phase; and the construction will be completed within three years.

Eligible Project Types			
	Planning	ü	**Infrastructure/Capital**
ü	**Design**		**Programmatic**

Funding Cycle Details	
Cycle Frequency	Every 4 Months
Begin Planning	90 Days Prior to Submission
Letter of Interest Due	N/A
Application Due	March / July / November

Key Facts	
Grant or Loan	Grant
Terms	N/A
Maximum Funding/Cycle	Based on Funding Availability
Match Requirement	50% Non-Federal Match Required
Application Burden	High
Special Application Considerations	Technical Data/Permitting Status
Administrative Burden	High
Special Administrative Considerations	Storm Event Monitoring

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12.2.3.19 Urban Waters Small Grant Program

U.S. Environmental Protection Agency

The mission of EPA's Urban Waters Program is to help local residents and their organizations, particularly those in underserved communities, restore their urban waters in ways that also benefit community and economic restoration.

In general, projects should meet the following four program objectives:

- Address local water quality issues related to urban runoff pollution
- Provide additional community benefits
- Actively engage underserved communities
- Foster partnership

Eligible Project Types			
	Planning	ü	**Infrastructure/Capital**
	Design	ü	**Programmatic**

Funding Cycle Details	
Cycle Frequency	Every two (2) years
Begin Planning	120 Days Prior to Submission
Letter of Interest Due	N/A
Application Due	2018 (Date not announced)

Key Facts	
Grant or Loan	Grant
Terms	N/A
Maximum Funding/Cycle	Based on Funding Availability (Average $75,000)
Match Requirement	50% Non-Federal Match Required
Application Burden	Moderate
Special Application Considerations	Community Involvement
Administrative Burden	Moderate
Special Administrative Considerations	Federal Funding Requirements

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12.2.4 Conclusion and Strategy

The City of Naples has an opportunity to bring grant and low-cost funding dollars back into the community. The funding sources presented offer the City potential savings in the $10,000's to $1,000,000's range versus traditional project funding sources. By engaging in the development of the Funding Strategy, the City has chosen a path that should lead to an increased ability to provide valuable resources to the community at the lowest possible capital costs.

Overall Strategy and Direction - A complete review of the projects and potential funding sources clearly identifies the projects with the potential to receive outside funding and those that do not. **Appendix N** contains tables that identify potential funding sources for each proposed project. The projects that are not eligible or have a very limited number of outside funding sources are typically related to equipment acquisition or operations and maintenance type projects. These projects, as they would be in any municipality, should be considered for budgeting within the City's annual budget process as internal funding is available.

As for the projects with multiple funding sources listed, ABA recommends that the City apply for all of the grants included in this strategy as each funding cycle opens up and assuming the City meets the required planning minimums of each funding source at that time. It is outside of ABA's technical resources to assign a priority for each project so it has not been done as a part of this strategy. In the event that a funding source only allows one application, the City may have to decide to "bundle" projects as discussed earlier or which individual projects have the highest priority. Each grant included creates a direct opportunity for the City to reduce the overall cost and financial impact of the project and was selected because of its applicability. None of the grants included are deemed to be "out of reach" or "a long shot". All have been evaluated and represent a strong opportunity for success.

It is important to remember that funding opportunities become available and disappear frequently and without warning. Changes in politics, foundation focuses, and perceived needs all contribute to these frequent changes. Due to these facts, this Funding Strategy is not intended to capture all of the available funding for a particular project. It is intended to serve as a general evaluation for successfully funding the projects contained within.

While the research conducted for this Funding Strategy has identified significant amounts of potential funding, there are times when not every funding source is an exact fit for a given project. ABA cannot guarantee that any one application will result in a successful outcome, including but not limited to a funding award. We strive to only suggest pursuit of the opportunities that have the highest chance of success for the client and to submit an application which is fully compliant with program requirements.

If elements are added to the project beyond the basic understandings at the time of this report, analysis of the elements and their impact on potential funding will be required to fully understand how the grant opportunities provided in this document are affected.

TAB

13

Stormwater and Natural Resource Division

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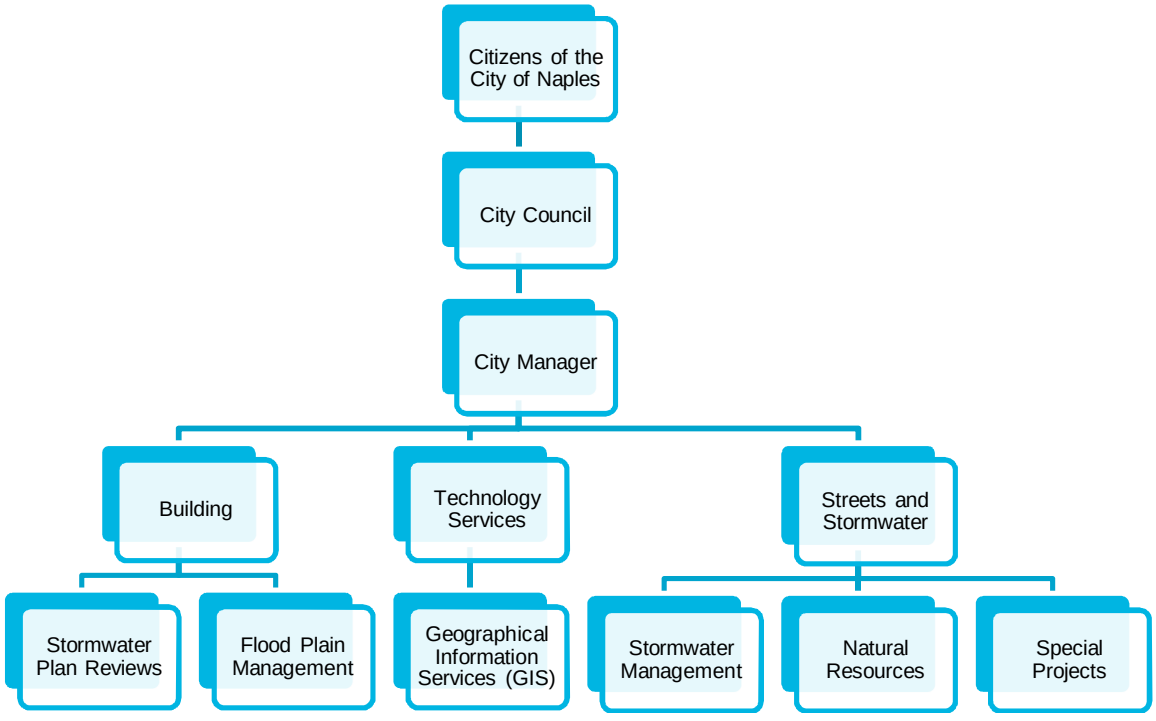
13. Stormwater & Natural Resources Divisions Review

As part of the investigation and evaluation of the stormwater management program, each division that is responsible for stormwater management was reviewed to consider strategies to more effectively deliver services, projects, and programs as well as other Division improvements in an effort to align resources with the mission and goals of each Division in the City and project and program goals proposed in the Stormwater Master Plan. In order to evaluate each division, meetings were held to interview current key staff to document the duties to each staff within each Division. These meetings not only determine staff duties but gave insight on the actions of each department.

The Stormwater Management and Natural Resources Divisions fall under the Streets and Stormwater Department of the City. This department falls under the City Manager who answers to the City Council and ultimately to the citizens of the City of Naples as shown in the organization chart in **Figure 13-1**. This chart does not represent the entire organization of the City, but only applies to those divisions that are involved in the City's stormwater management activities.

Figure 13-1 City of Naples Organizational Chart



The Streets and Stormwater Department operates in two funds under the City budget: Streets & Traffic Fund and Stormwater Fund. These functions are combined under one Director, yet operate out of two separate and independent funds. The Stormwater Fund operates as an Enterprise Fund, which is used to account for operations that are financed and operated in a manner similar to private business. The Stormwater Fund is responsible for maintaining and improving the stormwater management system which includes storm drainage, flood protection, ecological systems, and water quality infrastructure and programs.

According to the "City of Naples, Florida Fiscal Year 2017-2018 Proposed Budget", staffing is shared between the Divisions as illustrated in **Table 13-1**. The total staffing for the Stormwater Fund is 11 staff for FY 2018.

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Table 13-1 Division Staffing

Job Title	Stormwater Division	Natural Resources Division
Streets & Stormwater Director	0.75*	0
Engineering Manager	0.75*	0
Construction Project Manager	0.75*	0
Operations Supervisor	1	0
Engineering Aide	1	0
Equipment Operator III	1	0
Utility Coordinator	1	0
Utility Technician I	1	0
Administrative Coordinator	0.75*	0
Natural Resources Manager	0	1
Environmental Specialist	0	1
Project Coordinator/Public Outreach	0.5*	0.5

*Note-The remaining time for this staff member is under the streets division.

13.1 Stormwater Division

It is the responsibility of the City, through its Stormwater Management Division (in partnership with other departments such as Building, Planning and Community Services), to effectively and efficiently regulate, manage and maintain stormwater drainage infrastructure and surface water bodies to meet growth management goals of flood prevention, groundwater recharge, wetland preservation and water quality protection.

The stormwater management function is critical to achieving the City's current vision statement: "Naples shall remain a premier City by continuing to protect its natural resources, enhance City aesthetics, ensure public safety, and continue to improve the quality of life for all who live in the City and visit through the year."

13.1.1 Stormwater Division Mission

According to the "City of Naples, Florida Fiscal Year 2017-2018 Proposed Budget",

The mission of the Stormwater Division is to protect people and property against flood by maintaining and improving the public stormwater management system, while protecting and restoring ecological systems that work naturally to improve water quality, the environment and quality of life for residents and visitors.

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According to the City's website, the Stormwater Division Mission is "to improve flood protection and water quality through the construction, maintenance and operation of the public stormwater system and the preservation and restoration of area waterways."

13.1.2 Stormwater Division Goals

To comply with the City of Naples Vision Plan: the Stormwater Division has the following goals:

- As part of Vision Goal 2(a) Restore Naples Bay, protect beaches and other key waters.
- As part of Vision Goal 3(a)(Maintain and improve public amenities for residents) and Vision Goals 3(b) (Promote community health), improve stormwater conveyance system (swales, gutters, pipes, etc.) and reduce localized flooding.
- As part of Vision Goal 3d (Maintain and enhance public safety)
- As part of Vision Goal 4 (Strengthen the economic health and vitality of the City), enhance the stormwater management system.

13.1.3 Stormwater Division Objectives

According to the "City of Naples, Florida Fiscal Year 2017-2018 Proposed Budget", the overall objective is to manage stormwater in ways that reuse, store, recharge the aquifer, improve water quality, and achieve the drainage level of service as provided for within the City's Comprehensive Plan, thereby protecting public health, property and the environment.

13.1.4 Stormwater Division Budget

The Streets and Stormwater Department operates in two funds: Streets & Traffic Fund and the Stormwater Fund. These functions are combined under one Director, yet operate out of two separate and independent funds. The Stormwater Fund (Fund 470) operates as an Enterprise Fund, which is used to account for operations that are financed and operated in a manner similar to private businesses. Both the Stormwater Division and the Natural Resources Division are financed through this fund.

The revenue for this fund is primary from the stormwater fee that is collected by the bi-monthly utility bill. Other sources of revenue are from the landscape certification program, interest earned, grants, loan repayment on East Naples Bay, and other sales of assets. The revenue is shared by both divisions.

For the Stormwater Division, expenses are divided into personal services, operating expenses, and non-operating expenses. Personal Services consists of the people that work in the division and includes salaries and wages along with the benefits that the City provides for its employees such as retirement and insurance.

Operating Expenses appears to contain items that deal with the operation and maintenance of the stormwater system, overhead expenses such as telephone, electricity, water, sewer, etc., and employee costs for the operators such as uniforms and memberships. The following are identified operating expenses directly involved in the maintenance of the stormwater system:

- Street Sweepings
- Storm Drain Debris
- Tools
- Professional Services
- Contractual Services
- Equipment Repair
- Equipment Fuel
- Repair and Maintenance
- Equipment Maintenance
- Lake Maintenance
- Road Repairs
- Operating Supplies
- Fuel

Non-operating expenses consists of mainly debt service (principal and interest) related to a debt issue where the State Revolving Loans were refinanced.

13.2 Natural Resource Division

The Natural Resource Division is under the Streets and Stormwater Department. Whereas the Stormwater Division concentrates its efforts on flood control and operation and maintenance of the stormwater system, the Natural Resource Division monitors water quality, conducts environmental management, assist in reviewing and monitoring environmental permitting, and other environmental monitoring and intergovernmental coordination.

This division has evolved from a permitting office to a science, management, and education agency. The direction of the Division is in improving environmental water quality, estuarine habitat, and the overall enhancement of the City's natural environment. Further, external issues such as sea level rise and monetary constraints have created added importance to the work of the Division. Its work encompasses a wide range of duties, including scientific monitoring and research, habitat management and restoration, educational outreach, and environmental protection.

The Division is working to take many steps to improve waters and habitats of the Naples Bay estuary. Water is sampled in Naples Bay monthly. Staff also works to improve the natural habitat of the city through the establishment of oyster reefs, the protection of seagrass beds, the planning of shoreline vegetation, the promotion of the shoreline riprapping, and the restoration of dunes.

13.2.1 Natural Resource Division Mission

According to the City's website, the Natural Resource Division mission is to protect people and property against flooding by maintaining and improving the public stormwater management system, while protecting and restoring ecological systems that work naturally to improve water quality, the environment, and the quality of life for residents and visitors.

13.2.2 Natural Resource Division Goals and Objectives

The Goals and Objectives of this division are combined under this section. There was no direct document that clearly identified the goals and objectives. Since this division falls under the Stormwater Fund, the 2017-2018 Budget identifies the goals of the divisions together. The goals of this division are the same goals outlined in the City of Naples Vision Plan as the described in Section 13.1.2. To be more specific, the Natural Resource Division's main goal is to restore Naples Bay and other receiving waters by constructing artificial reefs, seagrass and oyster beds, and expanding mangrove forests.

In addition, "A Twenty Year Plan (and visionary guide) For the Restoration of Naples Bay" and the "Natural Resources Division City of Naples FY 2014-2015 Annual Report", both prepared by the Natural Resource Division, identify the vision to restore Naples Bay with a plan. In this plan, goals are identified in two layers. The first layer is based on the then current (2010) condition of water quantity and quality in the Bay, plus the state of its three main habitats: mangroves, oysters, and seagrass. The second layer is temporal and describes actions and accomplishments for each of the restoration efforts identified at three points in the future.

After reviewing these documents, a recommendation for this stormwater master plan is to utilize the two above mentioned documents along with the Naples Vision Plan to determine the Natural Resource Division Goals and Objectives as a division of the Streets and Stormwater Department.

13.2.3 Natural Resource Division Budget

The Streets and Stormwater Department operates in two funds: Streets & Traffic Fund and the Stormwater Fund. These functions are combined under one Director, yet operate out of two separate and independent funds. The Stormwater Fund (Fund 470) operates as an Enterprise Fund, which is used to

account for operations that are financed and operated in a manner similar to private business. Both the Stormwater Division and the Natural Resources Division are financed through this fund.

The revenue for this fund is primary from the stormwater fee that is collected by the bi-monthly utility bill. Other sources of revenue are from the landscape certification program, interest earned, grants, loan repayment on East Naples Bay, and other sales of assets. The revenue is shared by both divisions.

For the Natural Division, expenses are divided into personal services, operating expenses, and non-operating expenses. Personal Services consists of the people that work in the division and includes salaries and wages along with the benefits that the City provides for its employees such as retirement and insurance.

Operating Expenses appears to contain items that deal with the operating expenditures and overhead expenses such as training, communications, office supplies, and memberships. The following are identified operating expenses directly involved in the monitoring of the natural systems:

- Signs, buoys, and markers
- Water Quality supplies
- Outreach/education materials and supplies
- City Dock Slip Rental
- Water Quality Sampling Analysis
- Green Business Program
- Naples Bay trawling
- Lawn and Landscape Certification
- Equipment Services – Repair
- Equipment Services – Fuel
- Repair & Maintenance

Non-operating expenses consists of mainly debt service (principal and interest) related to a debt issue where the State Revolving Loans were refinanced.

13.3 Evaluation and Findings

Similar to the evaluation of the funding for the City, this section compares the City with other municipalities similar in size, examines duplication of activities, and develops strategies to align resources with each division.

13.3.1 Comparisons

In the Funding section of this report, three municipalities were examined due to their comparable population size, geographical location, and similar challenges. As a result of that process, the cities of Venice, Jacksonville Beach and Fort Walton Beach were selected.

13.3.1.1 Venice

The organizational structure of the City of Venice's stormwater program is within the Department of Engineering. Similar to Naples, staffing is split between the Engineering Department and the Stormwater Division. The Stormwater Division is funded by an Enterprise Fund through the stormwater utility. The City Engineer acts as the Stormwater Utility Director and the Engineering Department provides management of the development of capital project initiatives, day-to-day questions from citizens, coordination with Finance Department of the budget and stormwater account set-up. The engineering staff manages the stormwater fee database and files inspections.

There is also a Stormwater Engineering Manager. The manager coordinates the operation and maintenance tasks with the Public Works and Utilities Departments to keep the city-owned stormwater system in good working condition. Additionally, beach water quality is monitored on a regular basis and maintenance activities are conducted as necessary to protect these environmentally sensitive areas. All work performed by the stormwater division is directed toward ensuring that the city's NPDES permit conditions are met and providing safe conditions during rain events.

Many of the staffing positions are split between Engineering and Stormwater with some of the positions split between general maintenance and public works parks. Total staff for this fiscal year's budget is 9 staff members.

Venice does not have a Natural Resources division. Based on the goals and objectives for Venice, it appears that similar functions from Naples's Natural Resource division are conducted through the Venice's Stormwater Division. In addition, Venice's Stormwater Division conducts some of the same functions as Naples's Building Division in managing the Community Rating System and reviewing flood zone maps and certificates.

13.3.1.2 City of Jacksonville Beach

The City of Jacksonville Beach manages its stormwater through the Public Works Department. This department contains a Distribution & Collection Division, Pollution Control Plant Division, Water Plant Division, Streets Division, and Administration Division. It also has a Stormwater Utility Program and a Sanitation Utility Program. Based on the budget, stormwater appears to be staffed by the Streets Division, which consists of 18 staff.

The program's mission is to protect the environment and private property by providing funding for operating, maintaining and improving the stormwater collection and treatment system. Also, the programs objectives are to operate and maintain the stormwater collection and treatment infrastructure reduce localized flooding, protect environmentally sensitive estuary and ocean waters by performing effective stormwater management, and to construct localized drainage improvement projects.

There is one stormwater element that is managed in a different department. The Planning Division is responsible for floodplain management.

13.3.1.3 Fort Walton Beach

For the City of Fort Walton Beach, the Engineering & Utility Services Department is responsible for Streets, Stormwater, Sanitation, Water Operations & Distribution, Sanitary Sewer Collections, Planning & Zoning, CRA, Code Enforcement, Building Permits & Inspections, and GIS. The Department also provides internal services, including Fleet Maintenance and Facilities Management. Fort Walton Beach has a stormwater fund to support the City's activities and services and accounts for stormwater management operations. Its current mission is to improve and preserve natural water quality, comply with existing and upcoming regulatory requirements, and improve operation and management of existing stormwater infrastructure.

Upon reviewing the publicly available documents for Fort Walton Beach, it is unclear whether staff shares duties to address stormwater. According to the fund there are 6 staff funded through the Stormwater Program.

13.3.1.4 Summary

Through comparisons of the City of Venice, City of Jacksonville Beach, and City of Fort Walton Beach along with a brief review of other municipalities, the division of duties for stormwater management varies. All three municipalities conduct similar services. Even the maintenance of infrastructure is similar. The difference between these municipalities and the City of Naples is providing a division for Natural Resources. The other municipalities perform the same duties for Natural Resources but do not have a division for it. They simply conduct those duties under their stormwater divisions.

13.3.2 Observations

The stormwater program contains the following main functions:

- Operation and Maintenance of Existing Stormwater Infrastructure – This function includes the operation and maintenance of the stormwater assets which include but are not limited to swales,

inlets, outfalls, pipes, pumps, stormwater retention/detention facilities, filter marshes, curbs, street sweeping, floating islands, and aerators. Also included in this function is the repair and replacement of these assets.

- Capital Improvements for Infrastructure to Achieve Level of Service Goals – This function includes new projects that address water quantity and quality level of service deficiencies or projects that increase the level of service in needed areas.
- Management of the NPDES Permit – This function is to satisfy the requirements of the City's Phase II NPDES Permit which allows the City to discharge stormwater into major water bodies.
- Floodplain Management – This function requires the monitoring of development activities that effect the City's stormwater management system and impacts to flood management from development. In addition, this function requires coordination with FEMA and the management of the City's CRS rating.
- Natural Resource Protection – This function requires the monitoring and protection of the natural resources which include major water bodies such as Naples Bay, Moorings Bay, the Gordon River, and the Gulf of Mexico and natural systems such as preserve and conservation areas. It also includes the monitoring of the quality of water entering these water bodies as well as water bodies that the City owns and operates.

These functions have been divided into three (3) main divisions. The Stormwater Division handles the operation and maintenance of existing Stormwater Infrastructure. The Natural Resources Division handles Natural Resource Protection and the Management of the NPDES Permit with assistance from the Stormwater Division. Capital Improvements for Infrastructure to Achieve Level of Service Goals is shared between the Stormwater Division and the Natural Resource Division. In the final function, Floodplain Management is managed by the Building Department.

In reviewing each division's activities as shown in the budget, there appears to be duplication of activities for water quality sampling. Under both divisions' operating expenses, professional services for water quality monitoring are listed. It is unclear as to the purpose of the water quality sampling for each division, but under the budget water quality monitoring is a function of the natural resource protection and possible as part of the management of the NPDES permitting if illicit discharges need to be sampled.

13.3.3 Management Strategies

Although during our comparison of other municipalities a Natural Resource Division was not a defined department/division of a stormwater management program, the functions of this division was managed by the stormwater management program. Therefore for the City of Naples, it makes sense to devote functions of stormwater management to the Natural Resource Division. Other municipalities have a Natural Resource Division or Environmental Division that is separate from the stormwater management program. Often these divisions concentrate on ecosystems and not necessary concentrate on water quality concerns.

The City could consider this as a management strategy but the current functions of this department would need to be turned over to the Stormwater Division and then it would not be able to receive funds from the Stormwater Enterprise since its function would shift. The Natural Resource Divisions current function works well since water quality effects the ecosystems that this division currently monitors and manages. Therefore, there is no recommendation to change the function of the Natural Resource Division.

If this division broadens its functions beyond ecosystems that are affected by stormwater quality concerns then a separate funding source should be allocated to those services. For instance, Eagle nest monitoring may not be directly related to stormwater activities and could be considered more of an ecosystem function.

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As for the function of floodplain management, most municipalities have this function lie within the building department and often the floodplain manager is a building official. During the interview process with staff, the building department receives permit applications and site development applications. These applications are passed on to the Natural Resources and Stormwater Divisions for review depending on the application. Some of the items the Natural Resources Division reviews are:

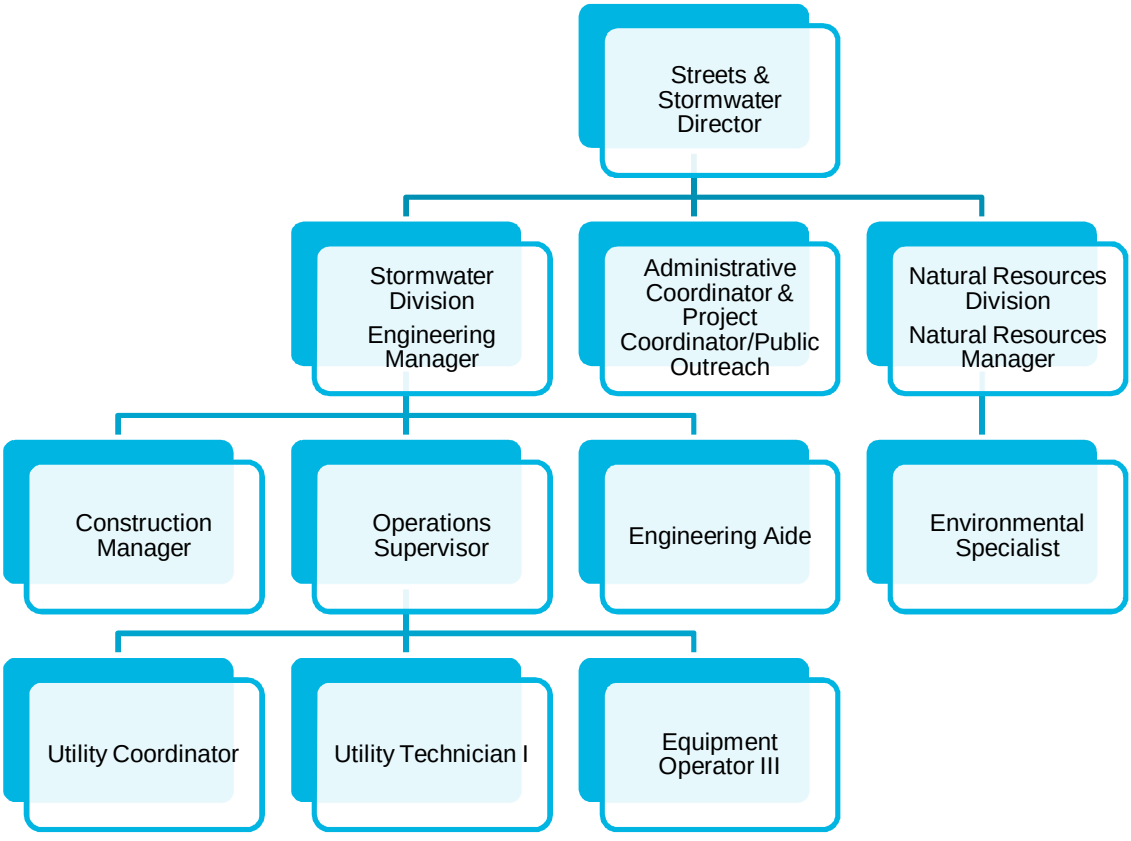
- Coastal Construction Set-back Line
- Lake Fill Petition
- Dredge and Fill Petition
- Marine Permit Application
- Worksite permit for mitigation
- Dock and Seawall Permits

Since the Natural Resources Division is in the Stormwater Fund, it is the only division that can review permitting activities that involve the water or natural systems. Other municipalities have a department within Planning and Zoning that can review these types of activities, therefore, the Natural Resources Division involvement should pertain to only review the impact to a water or ecosystems. The structural aspects of those applications should remain with the Building Department. To better manage these activities, the building department could receive an initial guidance from the Natural Resources Division on how to review these types of applications and only consult the Natural Resources Division when questions occur. This would free up staff time to concentrate on its primary mission and goals even though the review of these applications by experts in the field is beneficial.

13.4 Staffing Levels

Based on interviews with staff and the information provided in Table 13-1, Division Staffing, the following organization chart, Figure 13-2, shows the stormwater program organization:

Figure 13-2 Stormwater Program Org Chart



The current staffing levels appear in line with covering the functions of the stormwater program. If the program decides to complete some in house design work for minor rehabilitation projects, an Engineer II or III position under the Engineering Manager could assist in immediate design needs for repair and replacement projects and to assist in going after additional funding sources. This person could also monitor changes in regulations.

Based on conversations with staff, GIS activities are shared with the Technology Services Department. The Engineering Aide has been assisting the Engineering Manager, but the Engineering Aide could be under the Engineer II or III position and be dedicated to updating the complaint database and the GIS system. In addition, the Engineering Aide could provide CADD services to minor in house design needs.

The Operations Supervisor has various rolls. Along with managing the operations staff, this position manages sub-contractors that are repairing or maintaining infrastructure, which tends to take most of his time. There is a utility coordinator position that could be alleviating some of this load from the Operations Supervisor. Perhaps, the Utility Coordinator should have some contracting experience.

According to the Operations Supervisor, most of the staff time is spent on taking video of existing infrastructure. This activity could be done by a sub consultant on an as needed basis along with a regular routine to monitor existing infrastructure. The information gained could be recorded in the GIS system as part of a regular maintenance routine.

Another position that could be added is a NPDES Coordinator to assist with the requirements of the permit. These duties are currently being conducted by the Environmental Specialist. The NPDES Coordinators duties could be expanded as public education and outreach since this is an essential part of the NPDES program. This would allow the Environmental Specialist to work on the review of permit applications from the Building Department and to have more time on the water quality monitoring of the City's system.

The Natural Resources Manager needs to take an active role in advisory committees and regional organizations to ensure that the City's interest are taken into account on all projects and programs that affect the City's Natural Resources. This will require more time for this position.

The Stormwater Division and the Natural Resources Division need to work closely together to achieve each of its goals and mission. The Stormwater Division concentrates more on Flood Control and Protection while the Natural Resources Division concentrates on Water Quality and Ecology. Both are needed for successful projects for the City.

13.5 Recommendations

The following are some preliminary recommendations for the organization of the division.

- The information found was clear concerning the Stormwater Division concerning mission, goals, and objectives. As for the Natural Resource Division, these were not clearly stated. There are some generalities and a plan for Naples Bay but not as a Division as a whole.
- In general, regulation continues as well as the City's desire to address stormwater management and the protection of its regional water bodies, Naples Bay and Naples Beaches. Due to these reasons and interviewing staff on workload, the City will need to hire more staff to operate and manage its stormwater infrastructure.
- In the future, more subcontracting may be needed to monitor water quality, infrastructure assessments, and to assist in operations and maintenance.

TAB 14

Public Involvement

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14. Public Involvement

Public involvement, participation and education in stormwater management are prerequisites to the City successfully executing its duties and responsibilities under the Phase II NPDES Permit. Since stormwater management's main purpose is to provide flood protection and to treat runoff in order to protect the public and the environment, the public involvement process consisted of providing:

- information to the public on the stormwater master planning process and elements of a stormwater management plan
- gathering information from the public on their concerns to stormwater management (etc. flooding and water quality)
- gather information on the public's priorities concerning stormwater management
- provide recommendations and planning elements as a result of the analysis and priorities

The public involvement plan for the stormwater master plan consisted of two (2) public meetings where the public participated in the process of information gathering, a survey that was available on the City's website to provide input, and two (2) City council workshops that consist of a 60% meeting of the document and 100% meeting of the document. The purpose of the 60% meeting is to provide the findings on the current stormwater management plan and along with suggested recommendations and gather feedback from the council, and the 100% meeting is to provide the entire final document.

14.1 Public Meeting Summary

There were two public information workshops on Monday, January 23, 2017 and on Wednesday, February 22, 2017 at the River Park Community Center, 301 11th Street North, Naples Florida. **Appendix O** contains a summary of the Public Meeting. The public meeting was conducted in an "open house" format. There were 10 stations were the public visited to receive information and provide feedback. The first station was a presentation describing what a stormwater masterplan is and what the elements of a stormwater master plan are. The other nine (9) stations were display boards that explained each element of the master plan and required the public to provide feedback on questions. These display boards along with the presentation are located in **Appendix O**.

In addition to the public information workshop, a survey was available on the City's website for additional information gathering through the Survey Monkey website service. The survey was uploaded on February 22, 2017 and was emailed to the homeowners associations and City Council on March 15, 2017. The survey was deactivated on July 11, 2017. The following are the results from the responses to the display boards and the survey.

14.1.1 Station 1 – Presentation

Station 1 consisted of the presentation. The purpose of this station was to inform the public that the meeting was intended to be informative and interactive. The presentation gave a brief history of the City's stormwater master planning process, why it was important to develop a stormwater master plan, what are the elements of a stormwater master plan, and what information the public could provide for the master planning process.

14.1.2 Station 2 – Overview Map

This station provided an overview map of the City where the public could place a dot in locations were they indicated there was a concern in water quantity – flooding, water quality and ecology, operation and maintenance, or other issues that they had witnessed throughout the City. The following issues were identified:

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- Water Quantity
    - Alley between 10th Avenue and 11th Avenue
    - South of the intersection of 9th Avenue and 10th Street
    - Intersection of 8th Avenue and 2nd Street
    - Intersection of 3rd Avenue and 10th Street
    - Southwest corner of the intersection of 5th Avenue and Goodlette-Frank Road
    - Mid-block of Hurricane Harbor Lane
- Water Quality
    - On the beach, approximately 800 feet south of the intersection of Galleon Drive and Gordon Drive. Claim that there is an artesian well on the beach
    - Strong odor near the Coast Guard Station at the park

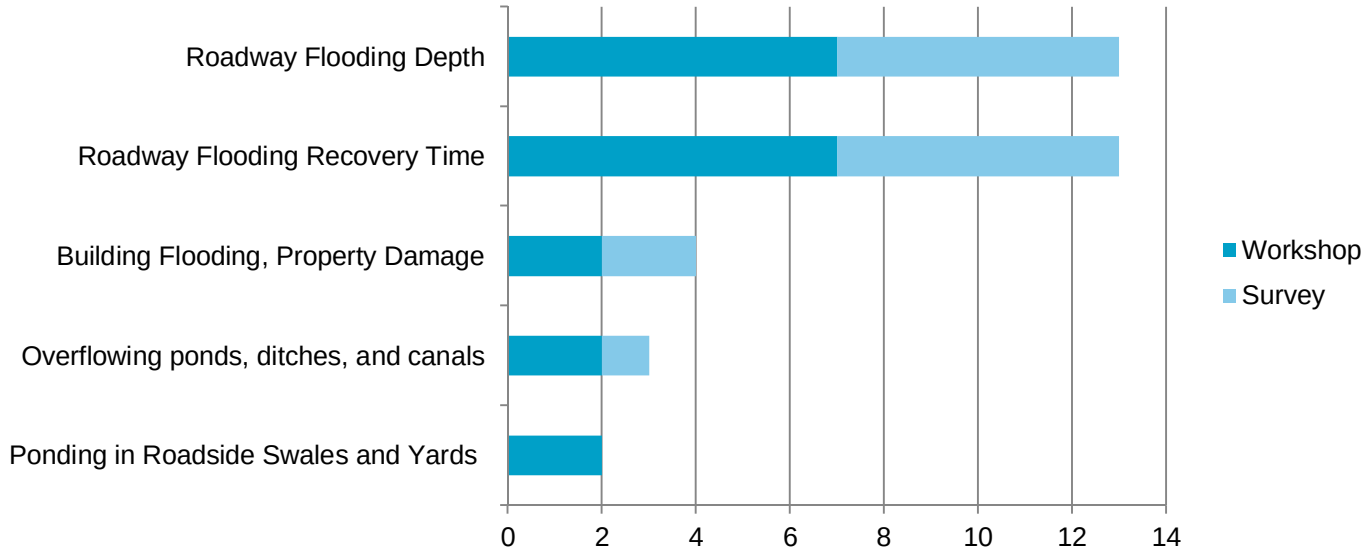
14.1.3 Station 3 - Water Quantity (Flooding and Recovery)

This station provided information concerning water quantity. The display board described what water quantity was and stated:

Water Quantity refers to the amount of stormwater runoff that is produced from a rainfall event. Water quantity impacts the public through flooding conditions and recovery time. It is often managed by creating storage and conveyance systems such as local lakes and ponds, ditches, canals, and pipes/inlets, prior to discharge into receiving water bodies such as the Gulf of Mexico and Naples Bay. Stormwater runoff also infiltrates into the groundwater system.

The display board asked for the public to provide information for one question. The following is the one request along with the results:

When it comes to Water Quantity, which items concern you most?



Based on the results of this station, the public is more concerned with roadway flooding and recovery time of the flood events.

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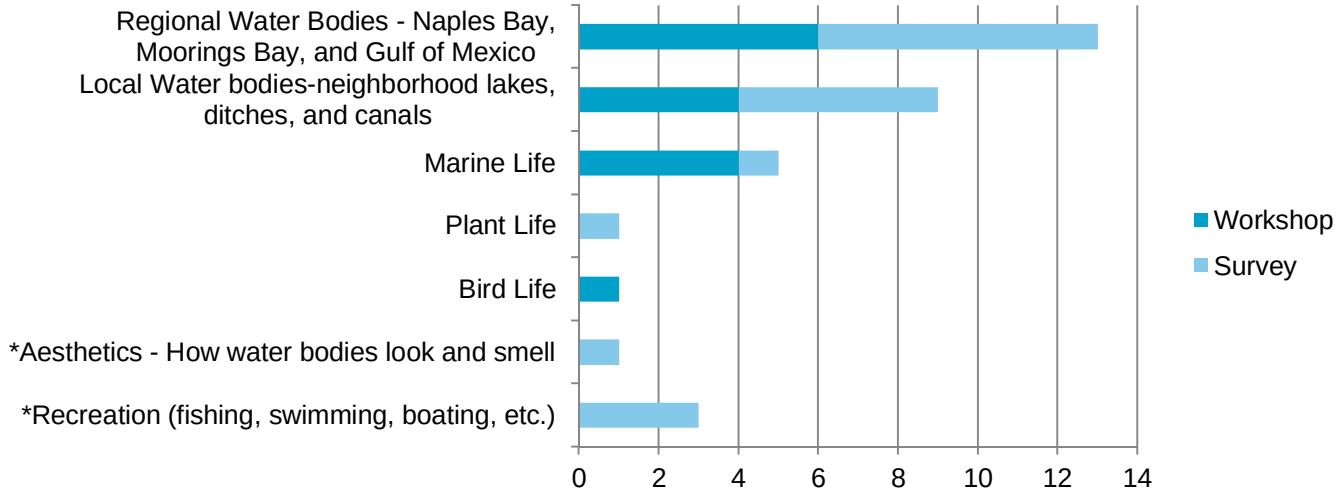
14.1.4 Station 4 - Water Quality and Ecology

This station provided information concerning water quality and ecology. The display board described what water quality and ecology was and stated:

Water Quality refers to the nutrients or pollutants that are found in the stormwater runoff. As stormwater flows across the land it picks up pollutants such as bacteria, fertilizers oil and soil; this can affect the ecology of receiving water bodies (canals, lakes, rivers, and the gulf).

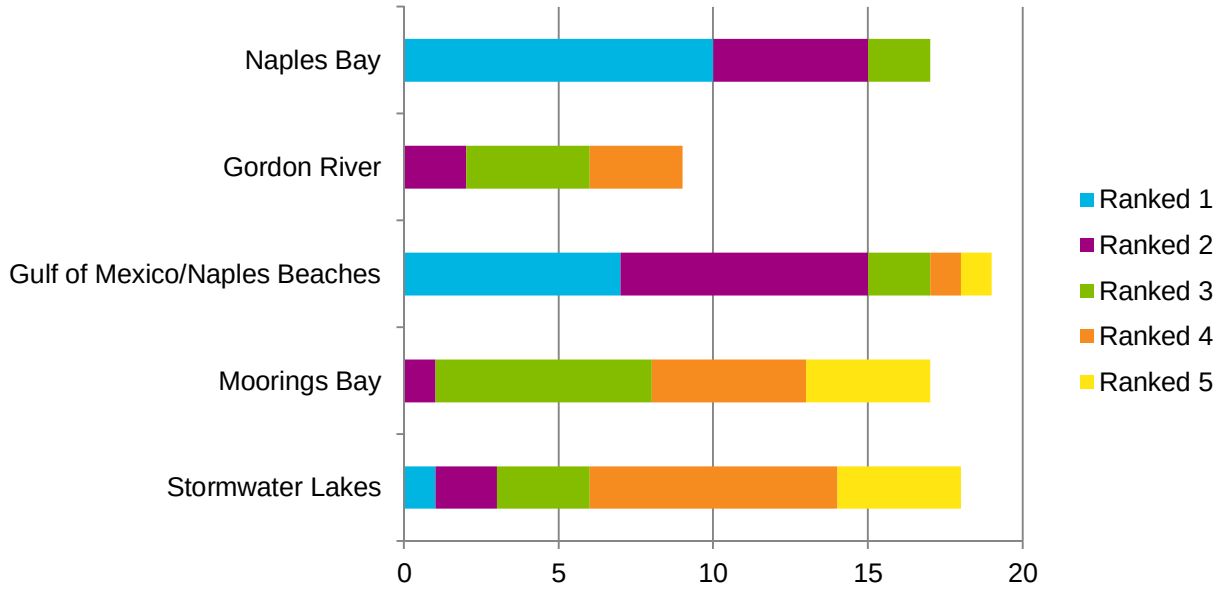
The display board asked for the public to provide information for two questions. The following are two requests along with the results.

When it comes to Water Quality, which items concern you most?



*Note – This option was only available through the survey.

Please rank, in priority order, the water body that you are most interested in improving/restoring (1-4):



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Based on the results of this section, the public was more concerned with water quality issues in both regional and local waterbodies. Also, the public is more interested in improving/restoring Naples Bay and Gulf of Mexico/Naples Beaches over other water bodies.

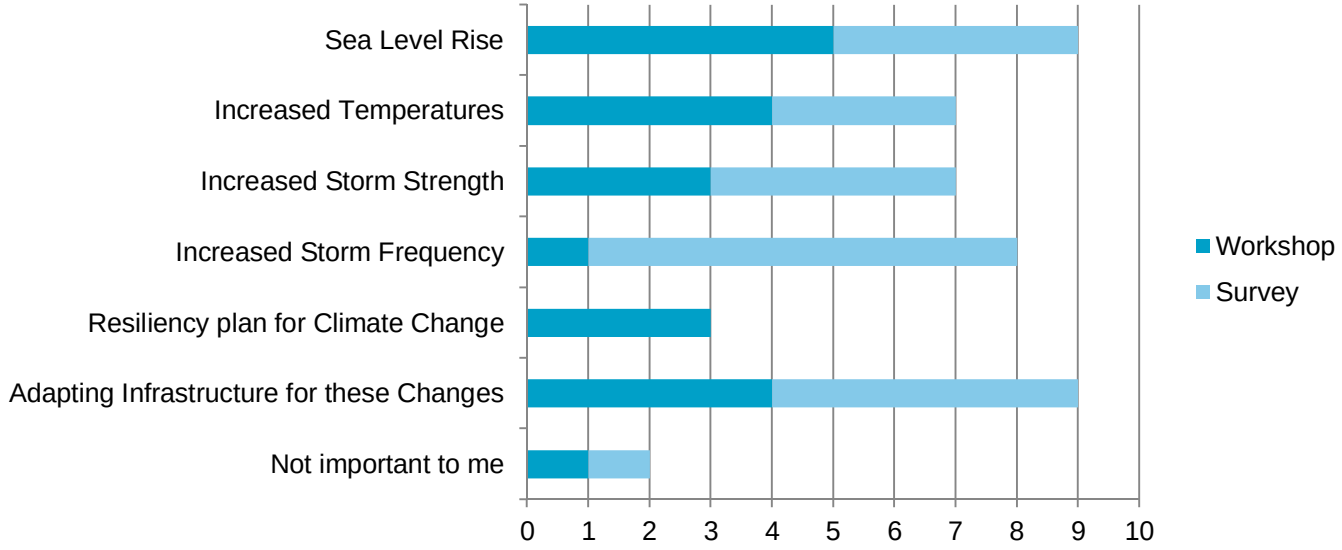
14.1.5 Station 5 - Climate Adaptation (Sea Level Rise and Resiliency)

This station provided information concerning climate adaptation – sea level rise and resiliency. The display board described what climate adaptation was and stated:

Climate Change is a debated issue, yet many municipalities are planning infrastructure projects and studies to account for sea level rise, increase storm strength and frequencies, and increased temperatures. Climate Adaptation includes preparing or planning for infrastructure that can withstand these changes.

The display board requested input from the public on one item. The following is the one request along with the results.

When it comes to Climate Adaptation, which items concern you most?



Based on the results, the public has concern with sea level rise and would like to see the City adapting infrastructure for these changes.

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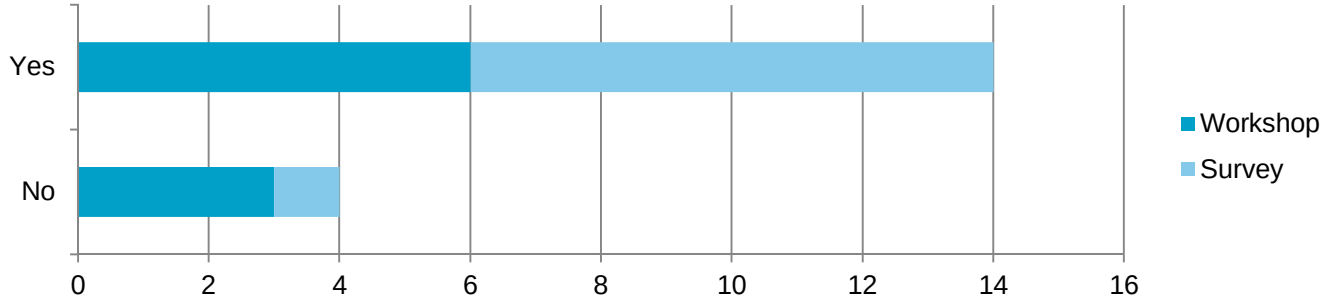
14.1.6 Station 6 - Operation and Maintenance

This station provided information concerning operation and maintenance. This display board described what operation and maintenance was and stated:

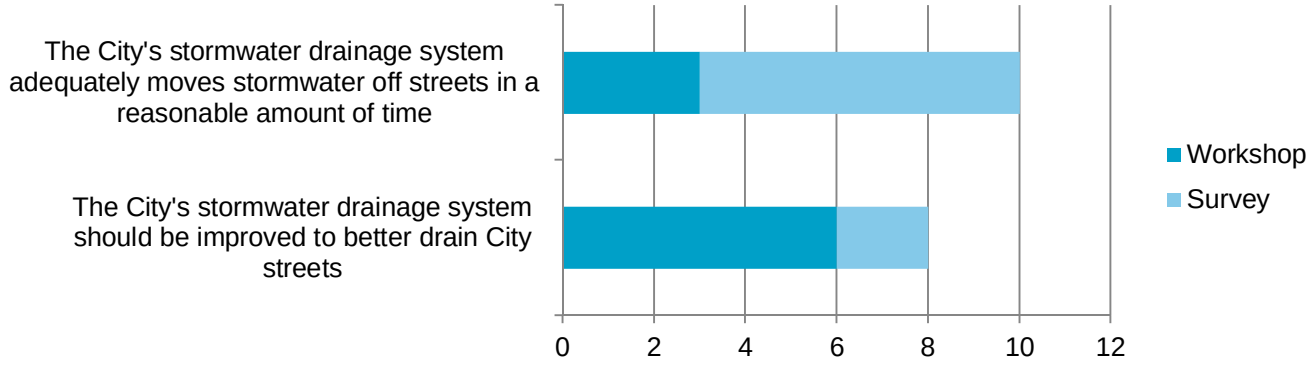
The City currently operates and maintains 651 Outfalls, 3,648 Catch Basins, 771 Manholes, 100 miles of pipe, 28 lakes, and 3 pump stations. It also sweeps 311 curb miles of streets in order to remove potential pollutants before they enter the stormwater system. It is important for the City to maintain stormwater facilities frequently enough to prevent flooding and pollutants from entering water bodies.

The board requested information from the public on two items. The following are the results of those requests.

When it comes to Operation and Maintenance, do you feel there is adequate maintenance of the system?



For an Average Wet-Season Rainfall, Select the Response is Most Accurate



Based on the response of the public, the public believes there is adequate operation and maintenance of the stormwater management system. In addition, the information gathered by the public leans toward the City's stormwater drainage system adequately moves stormwater off streets in a reasonable amount of time. Since the results are close, this question is hard to determine the public's opinion concerning the drainage system during the wet-season.

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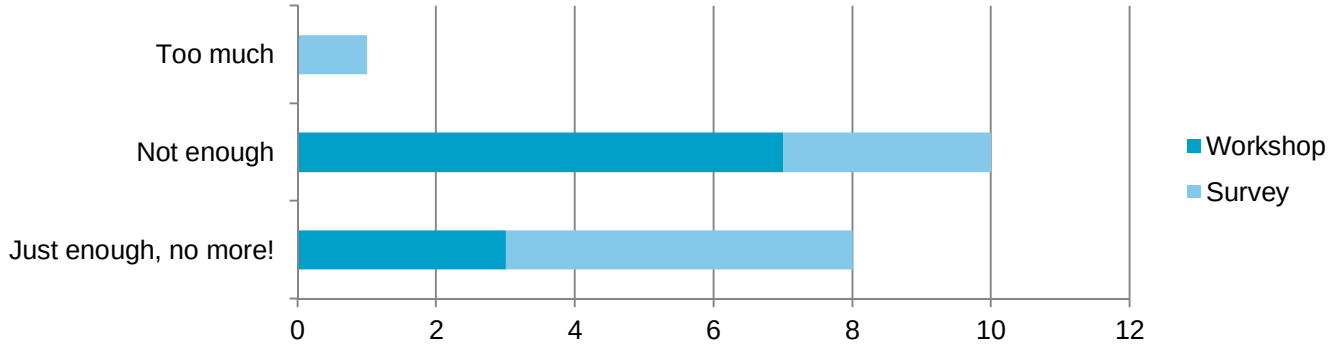
14.1.7 Station 7 - Regulation

This station provided information concerning regulation. The display board described what regulation was and stated:

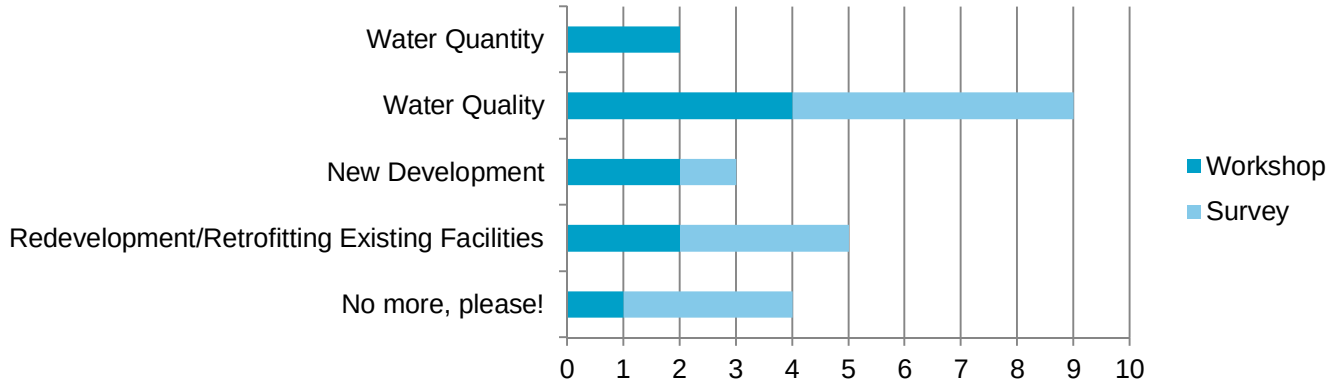
Stormwater management is regulated at the Federal, State, County, and City levels. These regulations help protect our water resources from both a water quantity and quality standpoint.

The display board requested information from the public on two items. The following are the two items along with the results.

When it comes to Regulations, do you believe there are too much or not enough regulations?



Where would you like to see more regulations?



Based on the results, the public believes that there is not enough regulation and that they would like to see more regulation in water quality.

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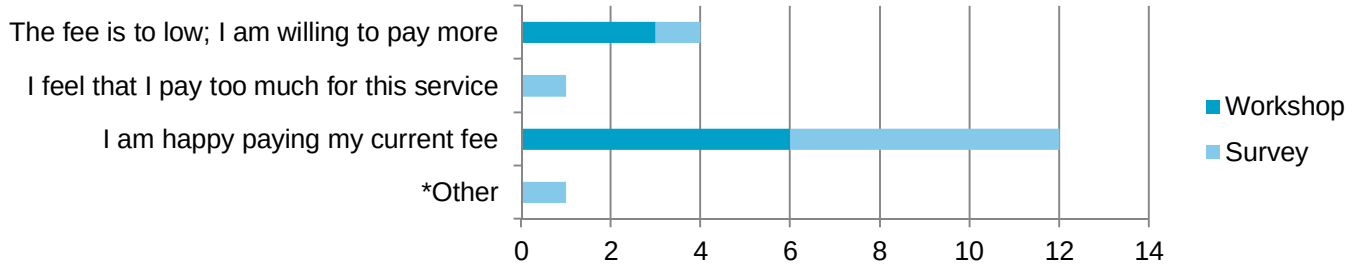
14.1.8 Station 8 – Funding (Stormwater Utility Fees and Grants)

This station provided information concerning funding. The display boards described what funding was and stated:

Effective Stormwater Management programs require adequate funding. Funding is needed for new infrastructure, repairing old infrastructure, and for the operation and maintenance of the structures. Where does this funding come from? The City currently has a stormwater utility fee, which equates to $13.06 per month per average residential unit (ARU). This fee, along with grants, allows the City to manage stormwater. The City is always investigating other financial resources to ease the burden on tax payers.

The display board requested the public to provide information for one item. The following is the one item along with the result.

When it comes to the existing Stormwater Utility Fee, what do you think about the fee?



*Note – This option was provided in the survey only and no response was given

Based on the results, the public is content with its current stormwater utility fee.

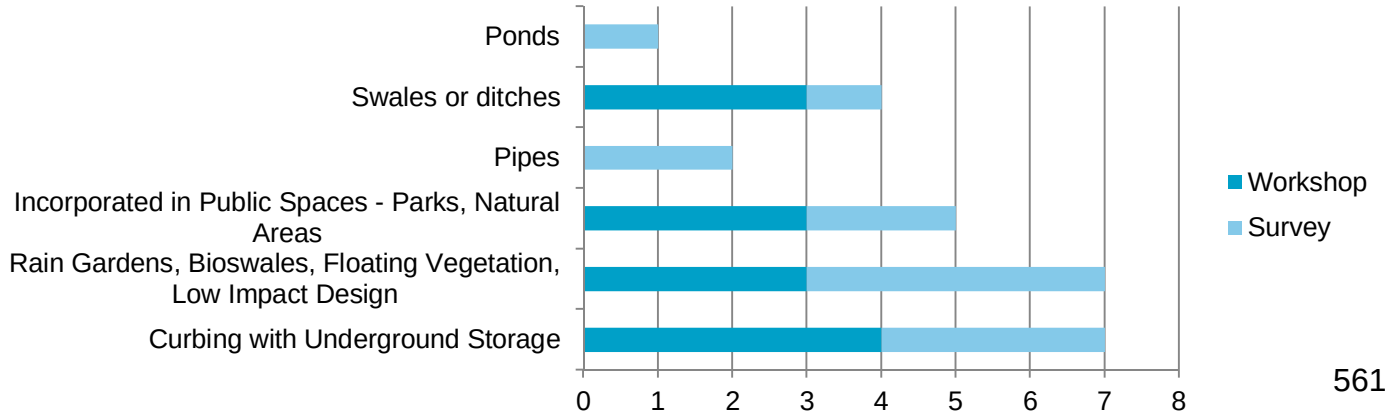
14.1.9 Station 9 - Capital Improvements

This station provided information concerning capital improvements. The display board described what capital improvements were and stated:

Capital Improvements are vital to managing a stormwater system. These improvements can be new projects, capital purchases, or recovery and replacement projects.

The display board requested the public to provide input in three areas. The following are the results of the requests along with the results.

When it comes to Capital Improvements, I prefer projects that are…?



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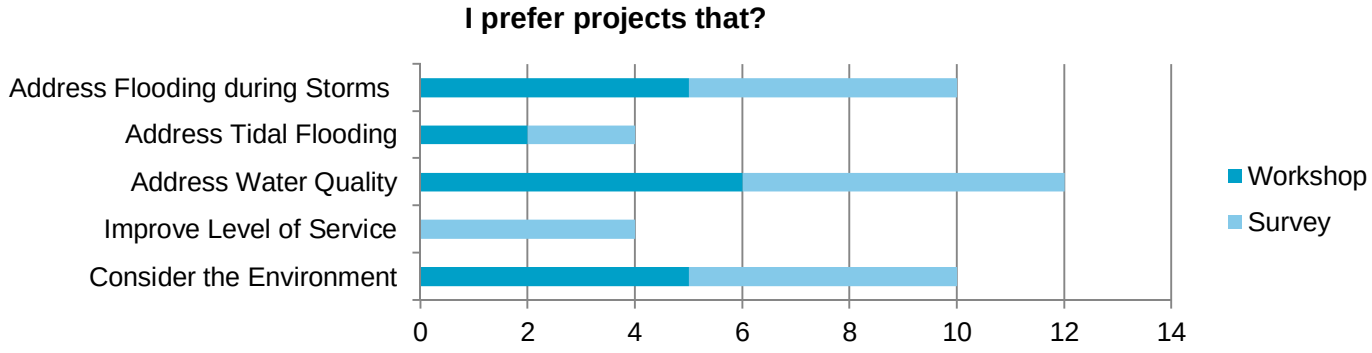

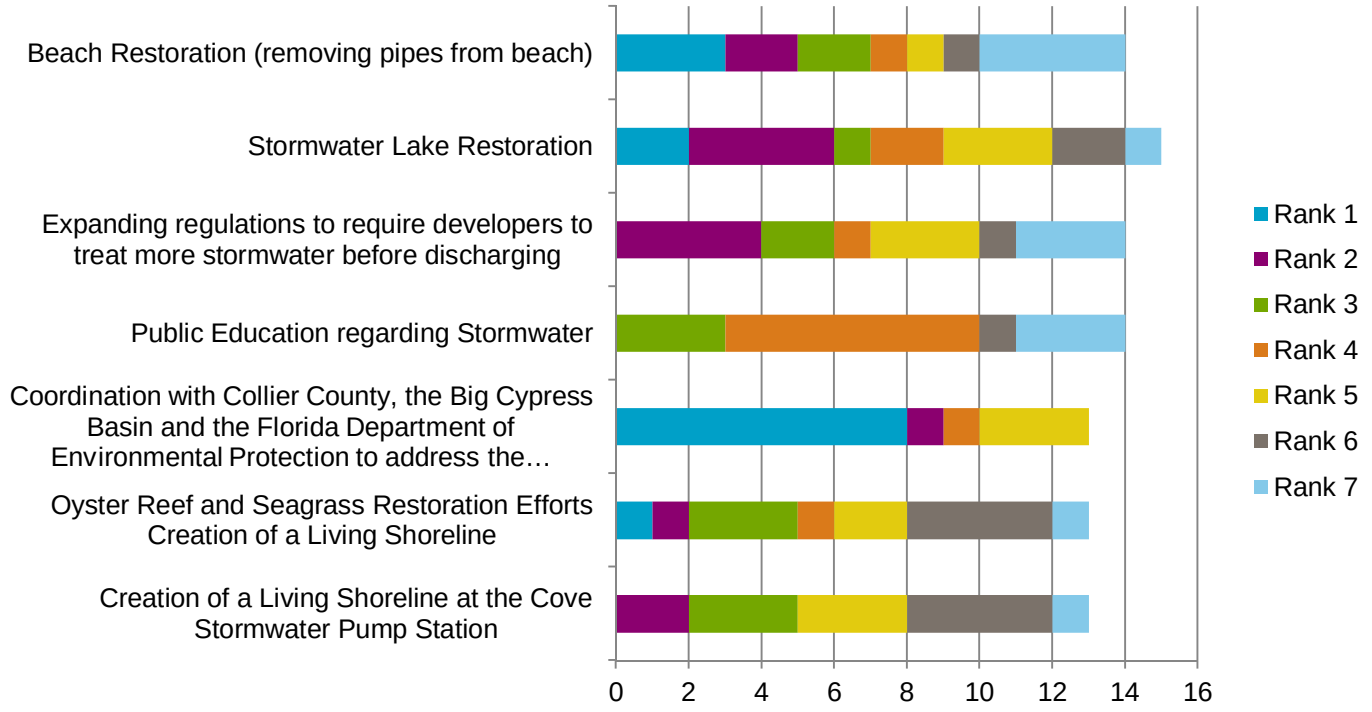

Based on the results of the information provided by the public, the public preferred curbing with underground storage and rain gardens, bioswales, floating vegetation and low impact design. As to preference on the function of a project, the public preferred water quality by two votes over projects that address flooding and the environment. Lastly, when ranking in priority order the stormwater projects/programs, the public felt it was more important to coordinate with Collier County, the Big Cypress Basin, and the Florida Department of Environmental Protection first, and then, stormwater lake and beach restoration.

14.1.10 Station 10 - Summary of Priorities

After the public had visited all of the stations to understand each component of the stormwater master plan, the purpose of the last station was for the public to give their opinion of the top 4 priorities the City should take into consideration during its master planning process.

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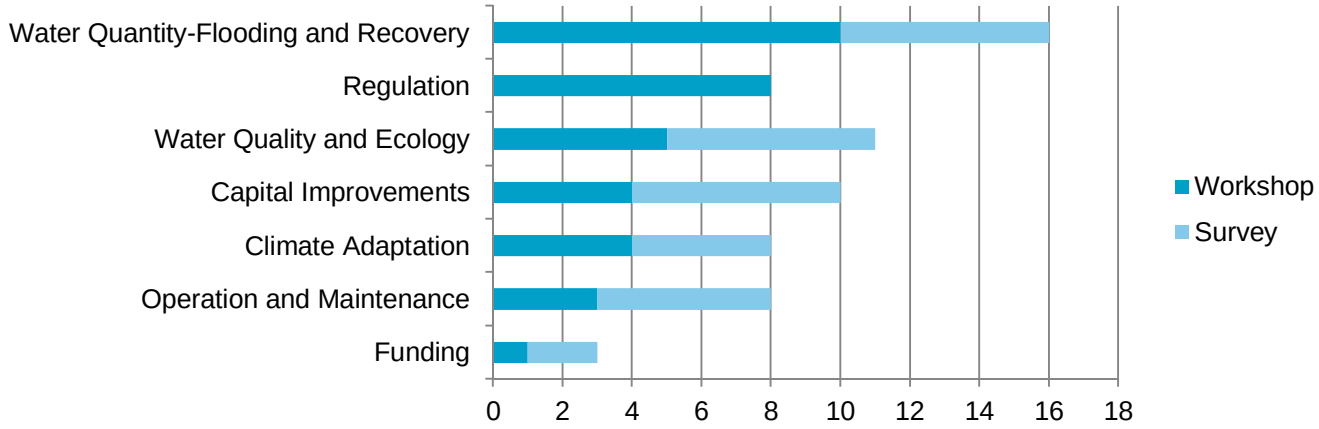
Select 4 Components that are the Most Important to You



The top priority is Water Quantity-Flooding and Recovery and the least priority is funding.

14.2 City Council Workshops

The purpose of the City Council Workshops are to presents the initial findings and preliminary recommendations in the 60% review workshop and to present the plan in its entirely in the 100% review workshop. These workshops are meant to be informative and to gather additional information on the City's vision in the master stormwater system.

14.2.1 60% Review

The 60% Review workshop was held on September 6, 2017. The AECOM Team presented a powerpoint presentation on the overview of the 60% document. The team consisted of Amy Eason, PE with AECOM Technical Services, Inc., Greg Corning, PE and William Tucker, PhD with AMEC, and Kevin Sudbury with Angie Brewer and Associates. The team explained that the main purpose of the 60% document is to provide information on the data collection efforts along with initial assessments on water quantity, water quality, level of service, regulatory and development code review, and climate adaptation. Other topics briefly discussed were operational strategies, capital improvement program, funding, and Stormwater and Natural Resources Divisions Review. Additionally, a description of the public involvement process was provided.

As each section was explained, initial recommendations were provided with the caveat that more details to the recommendations would be provided at the 90% presentation. Council was supportive of the process and comments were considered for the 90% deliverable of the document. The presentation along with the meeting minutes is located within **Appendix O**.

14.2.2 90% Review

This section will be included in the 100% document. The 90% Review Presentation is scheduled for February 21, 2018.

14.3 Results

Public Involvement is important in the planning process especially receiving comments from the city council and staff. Most planning activities do not receive a lot of public involvement unless the activities occur directly with the public. For instance, a new project within a neighborhood would receive more public involvement due to the fact that actual activities will be witnessed in the area. Planning processes do not receive a lot of public engagement unless it is specific to a community. This project is a city wide

stormwater master plan. This plan is a bigger picture evaluation of the system as a whole. As the city evaluate site specific areas or evaluates the basins individually, the public will become more engaged.

Although the public meetings that were held did not receive a lot of attendance, the outcomes of the survey brought information to the team and determining the public's interest. The following summarizes those results:

- The public is more concerned with roadway flooding and recovery time of the flood events.
- The public was more concerned with water quality issues in both regional and local waterbodies. Also, the public is more interested in improving/restoring Naples Bay and Gulf of Mexico/Naples Beaches over other water bodies.
- The public has concern with sea level rise and would like to see the City adapting infrastructure for these changes.
- The public believes there is adequate operation and maintenance of the stormwater management system. In addition, the information gathered by the public leans toward the City's stormwater drainage system adequately moves stormwater off streets in a reasonable amount of time. Since the results are close, this question is hard to determine the public's opinion concerning the drainage system during the wet-season.
- The public believes that there is not enough regulation and that they would like to see more regulation in water quality.
- The public is content with its current stormwater utility fee.
- The public preferred curbing with underground storage and rain gardens, bioswales, floating vegetation and low impact design. As to preference on the function of a project, the public preferred water quality by two votes over projects that address flooding and the environment. Lastly, when ranking in priority order the stormwater projects/programs, the public felt it was more important to coordinate with Collier County, the Big Cypress Basin, and the Florida Department of Environmental Protection first, and then, stormwater lake and beach restoration.

TAB 15

Recommendations

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15. Recommendations

The following are some general recommendations based on the initial review of the information gathered to date. The recommendations have been grouped by section from which they were generated for the benefit of the reader.

15.1 Section 3 - Information and Data Collection

- The City should invest in reconciling its current assess management tool, GIS, for its stormwater infrastructure. The current tool needs to be reconciled into an understandable data set. The City needs to continue to gather data on its stormwater master system. By updating the GIS system, the City will save money and time from staff to determine where problems occur in the drainage system, document the stormwater infrastructure to determine the cost to maintain the system, and assist the City in determining recover and restoration costs of an aging system to better plan operation and maintenance costs and future capital costs.
- The City should input data of new capital improvements as they are completed in the GIS system. A GIS manager can take the as-built information from a completed CIP so that the City can maintain a record of its infrastructure and will be able to record data on that infrastructure during its life. For example, operation and maintenance activities can be recorded.
- The City could contract with a surveyor with global positioning system (GPS) equipment to obtain information on existing infrastructure that is missing from the database.

15.2 Section 4 - Water Quantity

- Complete the recommended Capital Improvement Projects identified in Section 11. Most importantly, hydrologic and hydraulic modeling of each of the basins should be completed to aid in the verification and determination of level of service and to aid in planning additional capital improvement projects that address localized issues.
- Complete basin assessments for all basins.

15.3 Section 5 - Water Quality

- The City should continue implementing best management practices and low impact development devices to reduce water quality pollutants from enter the waterways. Rain gardens, filter marshes, and stormwater ponds aid in reducing pollutants.
- The City should gather stakeholders together on preparing a reasonable assurance plan (RAP) for Naples Bay and other regional water bodies that are showing impairments. A RAP is a stakeholder driven process with FDEP guidance. A RAP prevents a water body from establishing a TMDL because the stakeholders are actively preparing solutions to address water quality concerns.
- Due to the fact that the City contributes to a small percentage of the actual flows to Naples Bay, the City should be active with Collier County, Big Cypress Basin, and South Florida Water Management District. It important to work with these entities to protect these water bodies from further degradation.
- The City should support Collier County to develop a stormwater utility to fund their stormwater program as well as the development of a master plan to aid in the treatment and reduction of freshwater to Naples Bay. The City should also support the South Bell Mead Canal to aid in the recharge to the surficial aquifer and any other County project that reduces freshwater discharges.

- The City should encourage agencies to operate the weir to allow for recharge into the aquifer instead of discharging to the Gordon River and Naples Bay.
- The City should implement the recommendations provided within the Naples Bay Monitoring Design report by Cardno (2015b), which were identified in Section 5.4.3 of this report.

15.4 Section 6 – Level of Service

- The City should investigate the current level of service of its existing stormwater management system. The information provided for this master plan was inconclusive on whether the main conveyance systems perform at the City's current level of service requirement. A basin by basin analysis should be conducted to determine what the existing level of service should be and then evaluate whether the infrastructure is meeting the existing level of service. By conducting basin studies, flood prone areas can be better identified and proactive solutions can be determine to aid in achieving the established level of service. In addition, each basin can be reviewed as to whether the level of service for new development or retrofit needs to be more stringent.
- The City should re-examine the samples shown in Section 8 of the Stormwater Manual. The sample is misleading on how a lot owner should calculate their stormwater management for re-development and could allow more stormwater discharge than what is intended.
- The City should consider a pre-development versus post-development analysis to ensure that no added stormwater discharge is entering the system.
- The City should reconcile the Stormwater Manual and the Public Right-of-Way Construction Standards Handbook.
- For water quality, the City should consider a basin by basin analysis for determining confirming level of service.

15.5 Section 7 – Regulatory and Development Code Review

- Over the next 10 years, the City should develop and implement code changes that assist the City in obtaining a better Community Rating from the national Flood Insurance Program. Although the City currently has a rating of 5 out of 10, the recommendations outlined in Section 7 of this report were identified to better position the City for future flood mapping, NFIP reform, and protection from future flood events. Beside code changes for the Flood Insurance Program, the code may need to be revised to better protect downstream water bodies and to keep up with the changing state regulations through the years.
- Another recommendation to aid in receiving credits for the CRS, the City needs to state in its regulatory standards that future peak flows do not increase over present values.
- The Stormwater Standards Handbook should be updated with the following recommendations:
    - Provide a provision for the applicant to demonstrate a pre-development versus post-development analysis for the 5 year, 1 hour storm event to provide evidence that the applicant is not increasing discharge rates into the City system.
    - Consider adding a 25 year and 100 year storm event analysis. The 100 year analysis would provide evidence of meeting no flooding of buildings. In addition, this would help achieve CRS ratings.
    - For water quality treatment, roof tops should be included in the area to be treated and in the discharge rates, but should not be used in calculating storage for the site (i.e. building coverage).
    - Section 8 should be revised to clearly illustrate an example more clearly as explained in Section 6.1.4. The sample is showing an excess amount of discharge from private properties.

- Applicants should show that they are not causing downstream impacts. A pre-development versus post-development analysis may help but if direct connections are being made to the City's system, then an analysis is necessary.

- The City should consider code to include specific stormwater guidelines for different land uses such as single family, multifamily, industrial, and commercial developments. More water quality volume may be needed for higher developed properties and uses. These guidelines could specifically state which BMPs are acceptable with certain uses.

- In reviewing the county, state, and federal regulations, a recommendation to the City is to insert itself at all advisory committees along with contacting these governmental bodies with the City concerns. By being on advisory committees or boards, the City can interject its concerns about projects that affect these water bodies.

15.6 Section 8 – Climate Adaptation

- Conduct an inventory of stormwater system outfalls that discharge to tidally-influenced water bodies. The inventory would survey the invert elevation of each outfall and presence/absence of tide gates or other valves that could prevent backflow during high tide conditions. Basins 1 and 4 have the highest number of coastal outfalls and could be prioritized for this effort.

- Conduct a more detailed review of pump station design and as-built drawings to inventory the elevation of critical components (such as electrical equipment, pumps, back-up generators, vents, conduits, etc) and identify potential strategies to mitigate flood vulnerabilities.

- Monitor groundwater levels within the City to better understand how SLR may increase groundwater levels in the future, which may lead to ponding in low-lying areas and increased infiltration or uplift forces on buried infrastructure.

- Conduct detailed stormwater system modeling to evaluate flood vulnerabilities associated with combined precipitation and high tides for existing and future conditions (with SLR). This modeling study may identify additional vulnerabilities not identified in the current assessment, which evaluated potential flood impacts from high tides and SLR alone.

- Identify critical outfalls that may be responsible for allowing high tide waters to backflow into the stormwater system and cause surface street flooding through inlets. These outfalls could be prioritized for installation of backflow prevention. The preliminary analysis conducted in this evaluation identified Basin 1 as the highest priority for addressing potential backflow flooding through inlets.

- Conduct a study to evaluate future potential changes in precipitation intensity as a result of climate change. Changing precipitation patterns (such as an increase in precipitation intensity associated with the level of service storm event) may necessitate changes to design guidelines or standards for stormwater infrastructure.

- City should consider preparing a Climate Adaptation plan that would look into vulnerabilities and provide specific adaptation strategies, physical strategies, informational strategies, and governance strategies for adaption to climate change events.

- City should consider retrofitting outfalls to include tidal valves to prevent water from backing into the stormwater management system.

15.7 Section 9 – Best management Practices (BMP) Review

- The current Stormwater management manual should be expanded upon showing BMPs that are desirable and recommended design standards for the BMPs.

- Appendix J contains sample BMPs that could be used in the Stormwater Management Manual once further developed for the City of Naples
- City could encourage a wider use of BMPs for all land uses (commercial, industrial, multifamily, residential, etc.) In addition, the City could provide wider options of BMPs that apply for the area.
- The City should consider a comprehensive BMP manual where users could obtain design standards for BMPs.

15.8 Section 10 – Operational Strategies

- The City should consider developing a comprehensive stormwater management operation and maintenance plan. This plan should include a regular maintenance schedule for all of its facilities.
- The City's should consider increasing the level of service on maintenance on its existing infrastructure.
- By increasing the level of service and by adding new infrastructure staffing will need to be increased to accommodate the operation and maintenance of the facilities.
- In addition to staff, more equipment will be needed as the City addresses maintenance needs. Currently, staff is requesting a commercial grade pressure washer, a work boat, and a street sweeper.
- The City should consider conducting a cost-benefit analysis on hiring contractors versus adding staff to its maintenance program.

15.9 Section 11 – Capital Improvement Program

- An update to the current Lake Maintenance Plan should be implemented. Based on the water quality from these lakes, a clear strategy with capital improvements to improve these lakes should be developed to reduce the pollutants that are entering into waterways.
- Eleven (11) water quality projects are proposed to increase pollutant removal efficiencies in four (4) basins which discharge to Mooring's Bay, Doctor's Bay, Naples Bay and Gordon River. These removal efficiencies are still below the recommended LOS of 85 percent removal efficiencies for TP, TN and TSS, however, they exceed the TMDL reduction requirement of 29 percent for the Gordon River Extension to which Basins 1, 9 and 5 discharge.
- From a flood protection/water quantity standpoint, it is recommended that the City continue with Basin Studies for the remaining basins so that a more comprehensive City–wide stormwater management program can be developed and implemented based on meeting LOS requirements.
- From a water quality standpoint, in order to increase pollutant removal efficiency within the basins, additional water quality analysis along with treatment and storage projects such as stormwater swales, increased lake capacity, infiltration trenches, and other BMPs or treatment trains will need to be considered in strategic locations to provide the recommended removal efficiency.
- The City should consider implement the projects listed in Section 11 as a Capital Improvement Program.

15.10 Section 12 – Funding

- The City should consider a rate study to support the proposed capital improvement plan within this document to determine if rates should be adjusted. In addition, it should consider re-

evaluating its ERU methodology in the process or consider an update to its current assessment program.

- This City should consider other funding sources for its stormwater program.

15.11 Section 13 – Stormwater & Natural Resource Divisions Review

- Due to the increase in regulation, aging infrastructure, level of service, retrofitting existing stormwater facilities, and increase in stormwater infrastructure that deals with water quantity and quality, increased staff will be needed to maintain and monitor the stormwater infrastructure.
- Some of the current City's duties bay need to be outsourced after further analysis is completed on the budget and future capital improvements and operation and maintenance activities. For instance, some water quality monitoring may be outsourced.
- Due to the City of Naples being a stakeholder in several environmentally sensitive areas, the Natural Resources division will need to take a more active role in securing the City's interest in regional activities.
- The information found was clear concerning the Stormwater Division concerning mission, goals, and objectives. As for the Natural Resource Division, these were not clearly stated. There are some generalities and a plan for Naples Bay but not as a Division as a whole.
- In general, regulation continues as well as the City's desire to address stormwater management and the protection of its regional water bodies, Naples Bay and Naples Beaches. Due to these reasons and interviewing staff on workload, the City will need to hire more staff to operate and manage its stormwater infrastructure.
- In the future, more subcontracting may be needed to monitor water quality, infrastructure assessments, and to assist in operations and maintenance.

15.12 Section 14 – Public Involvement

- Although there are no specific recommendations within this section, since the initial purpose of this section was to provide public involvement for this plan, the City should consider a similar public involvement approach when evaluating each basin when conducting the basin studies. Public Involvement can be used at the beginning of the project to receive localized issues within each basin and then it could be used again when projects are being conceptualized in each basin.
- The City should continue its public outreach campaign to inform the public about stormwater issues for instance informing neighborhood associations on the use of algaecides, reporting illicit discharges, and other information that will aid in the public's understanding on the stormwater management program.

TAB

16

Conclusions

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16. Conclusions

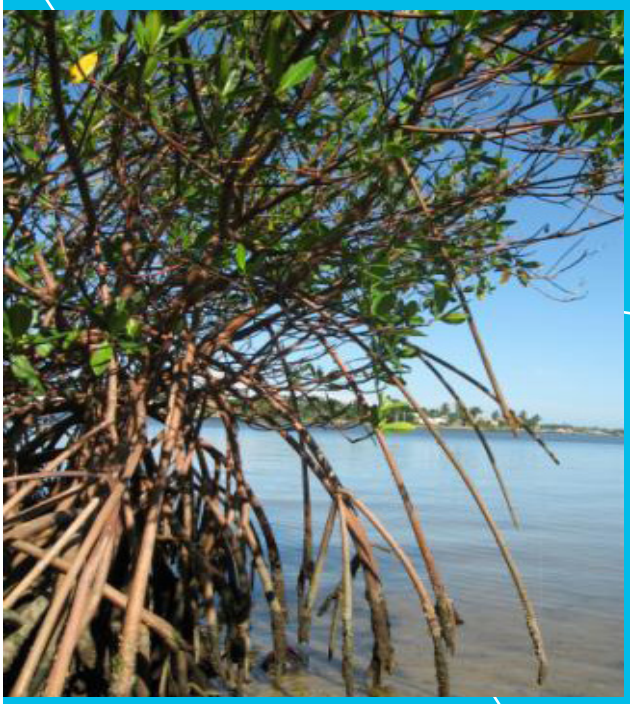
Stormwater Management Programs have evolved over the years. There was a time where flood control was the main priority, but now, water quality and climate adaptation has become the focus. The City has done a great job at shifting its focus since the last master plan update. Over the past 10 years, water quality projects have been a greater focus.

Although there was not a lot of progress in accessing each basin as recommended in the 2007 Master Plan Update, the City has implemented projects that address flooding concerns as well as water quality concerns. They have also completed some major rehabilitation on their existing stormwater pump stations and have been working diligently on repairing failing infrastructure.

There is still a lot that can be accomplished in organizing and managing the City's stormwater management program so that the City becomes an innovative and premier stormwater master system. Implementing new technologies in BMPs and addressing future concerns with climate change will help the City achieve its goals.

The City's existing mission and goals are in line with the activities the City has conducted over the past 10 years. Now is a new age with the consideration of climate adaptation and rehabilitating and increasing the stormwater infrastructures level of service. As climate adaptation becomes more needed, knowing the sensitivities of the level of services for all basins within the City will become imperative.

This master plan takes the City into the next age of stormwater management and will give its residence assurances that the City is actively implementing projects and operation and maintenance activities that "*manage stormwater in ways to reuse, store, recharge the aquifer, improve water quality, and achieve the drainage level of service as provided for within the City's Comprehensive Plan, thereby protecting public health, property and the environment*."



TAB 17

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Appendices

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Appendix A Documents Reviewed

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Appendix B Naples Municipal Airport Station USW00012897

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Appendix C Groundwater Information

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Appendix D Basin Maps

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Appendix E Soil Survey

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Appendix F GIS Database Information

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Appendix G FEMA Maps per Basin

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Appendix H Complaint Maps per Basin

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Appendix I Analytical Water Quality Modeling

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Appendix J Draft Detailed BMPs

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Appendix K Conceptual Plans for Water Quality Projects

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Appendix L Proposed Water Quality Loading Reductions

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Appendix M CIP Details

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Appendix N Projects with Potential Funding Sources

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Appendix O Public Meeting Information

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February 7, 2018 *Sent via email*

Gregg Strakaluse, Director
City of Naples Streets & Stormwater Department
295 Riverside Circle
Naples, FL 34102

Re: Naples Stormwater Master Plan Update

Dear Mr. Strakaluse:

The Conservancy of Southwest Florida, on behalf of our more than 7,000 supporting member families, appreciates the City of Naples' efforts to improve stormwater management and enhance water quality. We are concerned with both maintaining and restoring the health of our region's waters. As such, the Conservancy has been closely following the reports and presentations pertaining to the Stormwater Master Plan Update, as well as conducting our own research and analysis with the assistance of Eric Livingston of Watershed Management Services, LLC.

Overall, we applaud the City's dedication to protecting our water resources through more stringent stormwater standards, particularly the goal of an 85% pollutant load reduction for both phosphorus and nitrogen. We would like to point out that although we are thrilled the City has set protective standards and goals for pollutant load reduction in Policy 1-11 of the Public Facilities and Water Resources Element of the Comprehensive Plan, the Stormwater Master Plan refers several times to South Florida Water Management District (SFWMD) permitting criteria, Best Management Practices (BMPs), and treatment volumes. Since 2007 it has been widely understood that the current Environmental Resource Permit (ERP) BMP design criteria do not achieve the minimum level of treatment set in 62-40.432, F.A.C., and do not assure that discharges will not cause or contribute to violations of water quality standards. Therefore, the Conservancy suggests that, in order to meet this 85% pollutant load reduction target, the City must adopt a significant incentive-based system for entities that implement BMP's, Low Impact Development (LID) design standards or other stormwater management practices. In addition, enforceable requirements for stormwater systems utilizing the BMPTrains approach will need to be developed to meet the 85% treatment performance standard.

Additionally, if the City wants to promote the use of LID BMPs to get to an 85% treatment level, it needs to develop and adopt a BMP Manual that achieves that level of treatment. The current Water Management District ERP Applicant Handbooks do not include design criteria for LID BMPs. The recently

adopted Pinellas County BMP Manual includes these design criteria and should be used as a reference by the City. The BMPTRAINS model can be used to calculate the expected load reduction from a BMP or series of BMPs, including LID BMPs, to ensure the 85% reduction is met.

The draft Stormwater Master Plan currently lacks a reference to the Net Improvement performance standard for projects that will ultimately discharge to impaired waters. Section 373.414(1)(b)3. F.S., establishes the concept of net environmental improvement for discharges to a water body that is not meeting its applicable water quality standards. In such cases, the post-development pollutant loading must not exceed the pre-development pollutant loading for the pollutant of concern. Unfortunately, the Net Improvement stormwater treatment performance standard is not being enforced by FDEP or the WMDs leading to the discharge of additional pollutant loading to impaired waters. Typically the discharge is into a permitted MS4, such as the City of Naples, meaning the City and its taxpayers will be responsible for reducing this additional pollutant loading when a TMDL is adopted. It is for this reason that the City needs to carefully review and approve the stormwater treatment plans for any new development. This is especially true for those projects that "self permit" themselves using the 10/2 stormwater general permit.

In reference to our January 9th, 2018 meeting, we strongly support an additional 50% volumetric treatment capacity for all stormwater systems that discharge within city limits. As discussed in this meeting, all waterbodies in the area are important, and we should take proactive measures to help protect local waterbodies from new or continued impairment. The Conservancy supports revising the Land Development Code to reflect the additional requirement of 50% volumetric treatment capacity for all new development or redevelopment stormwater systems, as one of the strategies to assist in meeting the 85% pollutant reduction goal.

The Conservancy understands that the Stormwater Master Plan provides the framework for the City's stormwater management and provides goals the City hopes to achieve; however, it is necessary to also provide direct linkages to regulatory code. The Conservancy supports regulatory changes, to either the LDC or Comprehensive Plan, which will allow for the implementation of all aspects of the Stormwater Master Plan. We have made comments on specific chapters and subsections from the 60% Stormwater Master Plan Update below.

Chapter 3

In each of the Basin descriptions, a paragraph is included that summarizes the major soil types and some of their characteristics. However, description defaults to the "Urban Land Soil" classification which is not useful for determining the soil characteristics, such as drainage class, depth to water table, infiltration properties, which are so important to stormwater management. The earlier NRCS Detailed Soils Surveys can be accessed on-line, including maps and GIS coverages, that provide information on the actual soil type and characteristics before urban development occurred.

Chapter 5

5.1.2.1 Description of City of Naples's Stormwater System

In response to the first paragraph, we suggest the terminology for retention basins should be changed. The city has 28 stormwater detention ponds, not retention basins. Retention basins reduce flooding by reducing stormwater volume through infiltration, evaporation, and evapotranspiration. Additionally, these are permitted stormwater systems, not "lakes "which are defined by Florida statute and rule as public water bodies that are subject to water quality standards. Calling stormwater detention ponds "lakes" creates certain expectations among the public and can lead to confusion about the purpose and management of the stormwater systems.

5.2 Receiving Waters Considerations

This section should include all water bodies for which the Florida Department of Environmental Protection (FDEP) has assigned a Water Body Identification Number (WBID), not just the final receiving waters. It should include a map of the water bodies and a table with their name, WBID number, and impairment and Total Maximum Daily Load (TMDL) status.

Section 5.2.2 Gulf of Mexico

This section should explicitly describe how stormwater treatment will be accomplished in the ECE 30% Design Technical Report (2016) when stormwater outfalls are removed from the beach. What level of pollutant load reduction will be achieved?

5.3.1 Water Quality Standard 62-302 F.A.C.

We suggest revising the first sentence to read: "Florida's surface water quality standards system, first adopted in March 1979 and subsequently revised, are published in 62-302 F.A.C (and 62-302.530 F.A.C.), are designed to protect human and ecosystem health and to enhance the quality of waters according to their intended use and value.

To better organize the information on Florida's Impaired Waters and TMDL programs the insertion of the following section is recommended:

Proposed 5.3.2 Florida Watershed Restoration Program

In 1999, Section 403.067, Florida Statutes, was enacted by the Legislature. This is known as the "Florida Watershed Restoration Act." It establishes the legal framework for Florida's Impaired Waters, Total Maximum Daily Load, and Basin Management Action Planning programs. In 2004, the Act was amended to add greater specificity on TMDL implementation through existing regulatory and management programs or through the development, adoption, and implementation of BMAPs.

To implement this program, FDEP implemented the Rotating Basin Cycle in 2000. The state's 29 major basins were divided into five Groups (Group 1,2,3,4,5) in which a five-year cycle of activities are conducted. The activities include watershed assessment, targeted monitoring, development and adoption of the Verified List of Impaired Surface Waters, development and adoption of TMDLs, and TMDL implementation including the development and adoption of BMAPs.

Water bodies within the City of Naples are in Group 1 – Everglades West Coast Basin. Subsequent sections will discuss in more depth each of the activities within the Rotating Basin Cycle.

5.3.2 Impaired Waters Rule 62-303 F.A.C.

Suggested revision for the second sentence in the subsection entitled "How is the IWR Implemented": "Once a water body is classified as impaired, FDEP must develop and adopt a Total Maximum Daily Load (TMDL) that establishes a pollutant loading cap and equitably allocates pollutant load reductions to discharges."

With respect to the sentence: "However, the current verified list of impaired waters, has no mention of Naples Estuary or WBID 3278Q2." Please note that WBID 3278Q is assigned to the Moorings Bay System not to Naples Estuary.

5.3.3 TMDLs, Reasonable Assurance Plans, and Basin Management Action Plans

We recommend the first sentence be revised to read: "The Total Maximum Daily Load (TMDL) program was established in 1972 through Section 303(d) of the federal Clean Water Act (CWA). Within Florida, the program is implemented pursuant to the Florida Watershed Restoration Act, Section 403.067, F.S., as discussed in Section 5.3.2."

Please modify 6 of the Basic Steps of the TMDL Program to include: Measure the effectiveness of TMDL implementation activities by documenting pollutant load reductions and monitoring the water body to determine if water quality is improving.

By inserting Proposed Section 5.3.2, the paragraph "To streamline...improve it" can be deleted. In addition, the next paragraph can be revised to read: "The City of Naples is part of the Group 1 Basin, Everglades West Coast Planning Unit in the South District. FDEP has not developed and adopted TMDLs for all listed impaired waters in City of Naples. In September 2015, FDEP submitted its TMDL Priority Framework to the EPA. This framework requires FDEP to establish a schedule for developing and adopting TMDLs for water bodies on the Verified List of Impaired Waters. The current schedule does not include the development of TMDLs for impaired water bodies in the City of Naples. These include the Gordon River Marine Segment which is impaired for iron and copper, and the Naples Bay Coastal area impaired for iron, copper, and mercury."

Recommend deletion of the final paragraph as the changes in WBIDs already has been discussed.

5.3.3.2 Basin Management Action Plans (BMAPs)

Recommend revising the first paragraph to read: "Section 403.067(7), F.S., sets forth the legal framework for implementing TMDLs within Florida. FDEP may develop and adopt a Basin Management Action Plan 403.067(7)(a) or use existing regulatory and other management programs specified in 403.067(7)(b) to implement a TMDL. BMAPs establish a five-year blueprint by specifying projects, programs, or other activities that will be undertaken to reduce pollutant loadings of the causative pollutant(s). FDEP and the affected stakeholders collaborate to develop BMAPs or other implementation approaches. An impaired water body with an adopted TMDL may have more than one BMAP if the water body is impaired for multiple pollutants."

Recommend the following revision to the last sentence: "Progress assessments of adopted BMAPs are conducted every five years and the BMAP is revised to set forth the projects, programs, and other activities that will be implemented during the next five years to continue progress in reducing pollutant loadings to achieve the TMDL. In addition, annual reports are completed to document interim progress towards meeting the associated TMDL and BMAP goals."

5.3.4 NPDES Program

We recommend the following revision to paragraph 1: "The National Pollutant Discharge Elimination System (NPDES) was developed by the U.S. Environmental Protection Agency (EPA), as part of the Clean Water Act of 1972. The 1987 Clean Water Act Amendments established the NPDES stormwater permitting program which was developed in two phases. Phase I was implemented in 1990, and addresses requirements for municipal storm sewer systems (MS4s) for large municipalities (population ≥ 100,000) and other industrial activities that disturbs >5 acres of land. Phase II was promulgated in 1999, and addresses additional sources, including MS4s not regulated under Phase I, and small construction activities disturbing between 1 and 5 acres of land."

5.3.6 City's Stormwater Management Regulation Program

This section needs to include the specific local regulatory authority and actions that the City takes to regulate stormwater. Two general vision statements do not constitute a Stormwater Management Regulation Program. We suggest discussing City Comprehensive Plan and Land Development Code (LDC) requirements including the requirements of Ordinance 07-1807 along with the role of the 2007 Naples Stormwater Standards Handbook. There is also a need to identify and discuss any impediments to using LID BMPs that exist within the City's Comprehensive Plan and LDC.

5.4 Evaluation of the City's Water Quality Monitoring Program

We recommend the following revision in the first sentence under Water Quality Sampling: "According to the Florida Department of Environmental Protection (DEP), the number one source of pollutant loading to Florida's surface waters in Florida is stormwater runoff, and the City's stormwater system conveys runoff laden with pollution to natural water bodies."

In the "Urban Stormwater Runoff "section, please clarify that the 28 "stormwater lakes" are actually wet detention ponds that are not waters of the state. We recommend conducting stormwater loading monitoring to document the pollutant loads discharged to downstream receiving waters in addition to periodic water column sampling.

5.4.3 Recommendations for Improvement of the Water Quality and Biological Monitoring Programs

Since the recommendations are taken verbatim from the Naples Bay Monitoring Design report done in 2015, a status report on implementing each of the recommendations is needed.

Chapter 6

Section 6.2.1 Existing Requirements for Pollution Abatement

With respect to Stormwater Quality Level of Service, this section needs to be revised to clarify that it is a Stormwater LOS, not a Water Quality LOS. Specifically, what level of stormwater treatment will be required by the City to protect healthy water bodies and restore impaired water bodies? It is stated in Section 6.2.1: "The current water quality requirements are listed in Table 6.1 in Section 6.4 of this document." However, the SWMP document does not include a Section 6.4 nor Table 6.1. Perhaps you were referring to Table 6-2 in Section 6.2.2?

Consequently, we believe that the City needs to carefully reconsider its Stormwater Quality LOS and its reliance on the SFWMD ERP requirements to protect and restore water quality within the City. We understand that the City currently is revising the Comprehensive Plan and we have provided recommendations in a separate letter to the City.

Section 6.2.2.1 BMAPs and TMDLs should discuss the requirement for the Net Improvement Performance Standard to be met by all new development and redevelopment projects within the contributing drainage basin of a Verified Impaired Water Body or water body with an adopted TMDL. It should also discuss how the City will ensure that all new development and redevelopment discharging into the City's permitted MS4 meets the Net Improvement Performance Standard. The current information should be deleted as this information has been previously discussed.

6.2.1.2 New Construction Standards

The first sentence needs revising since FDEP, not the City, establishes water quality standards. Rather than repeating SFWMD ERP BMP design criteria this section should discuss the actual level of treatment that the SFWMD systems are obtaining. For example, wet detention systems are the most widely used BMPs in the City of Naples yet they only get 35% TN load reduction and 60% TP load reduction. SFWMD dry detention systems get virtually no reduction in stormwater pollutant concentrations with the load reduction associated only with the volume of stormwater that is infiltrated and not discharged.

Please correct the following: "Please see Table 6.1 in Section 6.4 for a summary of the above referenced City of Naples and SFWMD water quality design criteria." We believe you are referring to Table 6-2 in Section 6.2.2.

Chapter 7

Given the City's desire to improve stormwater treatment and to promote using LID BMPs, the review of the Comprehensive Plan and LDC should include identifying current impediments to using LID BMPs and recommending revisions that promote and incentivize using LID BMPs as part of a stormwater BMP treatment train.

With respect to the Recommendations in Table 7-1, we offer the following comments:

- Recommendation #3, Section 16-115 –Add 3 BMP Selection Tables from Policy 1-11 to end of section.
    - Tables are proposed for deletion from Policy 1-11 and they are out of date.
- Recommendation #4. Utilize Low-Impact Development (LID) approach to stormwater management by capturing and retaining the Design Storm (as defined under Technical Criteria (A)) on-site. Alternatives (e.g., capture/retain 95th percentile average annual rainfall event) and fees-in-lieu option should be addressed where required volume creates a hardship or is technically infeasible.
    - The design storm concept is for flood control, not for stormwater treatment. If the City wants to promote the use of LID BMPs to get 85% treatment, it needs to develop and adopt a BMP Manual that achieves that level of treatment. The current WMD ERP Applicant Handbooks do not include design criteria for LID BMPs. The recently adopted Pinellas County BMP Manual includes them. The BMPTRAINS model can be used to calculate the expected load reduction from a BMP or series of BMPs, including LID BMPs, to ensure the 85% reduction is met.
- Recommendation #5 Section 16-291: Consider requiring or incentivizing final grading/drainage plan that retains design storm surface water in excess of pre-construction discharge amount.
    - Is "preconstruction discharge amount" referring to the preconstruction average annual stormwater volume? If so, use that term to provide clarity.
- Recommendation #6, Article VI: Add definition for new term - Best Management Practice (BMP) Selection Criteria and Credits. BMP incentive plan described in Policy 1-11 of the Comprehensive Plan's Public Facilities and Water Resources Element has many stormwater management-related credits available.
    - The credits need to be based on the volume of stormwater to be infiltrated which directly translates to pollutant load reductions achieved.
- Recommendation #7, Section 30-340: Expand existing credit system by adding reference to new Best Management Selection Criteria Tables recommended for Section 16-115. Describe City council authorization to administer the credit system in Section 30-340 or elsewhere in Chapter 30.
    - We recommend that the credit system be based on actual load reductions achieved as documented with BMPTRAINS.
- Recommendation #9, Section 50-103: Consider expanding current conditions where pervious surfaces are allowed.
    - We strongly support this recommendation. We suggest the City look at recently revised Pinellas County or Alachua County BMP manuals and Land Development Codes for suggested language. Same comment for Recommendation #10.
- Section 52-184. Timing of fertilizer application – No recommended changes

  - Please see Conservancy's letter regarding the City of Naples fertilizer ordinance dated October 24, 2017.

- Recommendation #15. Sec. 54-74. - Land development innovations. Specifically reference Low Impact Development (LID) as example of development project type that may qualify under this section. Additionally, preparation of a LID Implementation Manual is proposed to provide property owners and developers a range of options for meeting stormwater quantity, quality, and resiliency standards while maintaining contextual sensitivity. The manual would allow for flexibility to select the appropriate BMPs to that which can be integrated into the overall design of the property offering improved aesthetics and function.
  - We support and agree with the recommendation. However, to promote LID the City needs to include incentives in the LDC to promote LID, such as open space or landscaping credits, increased density, etc.
- Recommendation #16, Sec. 56-40. - Lot coverage, maximum permitted. Introduce limits for maximum lot coverage for other impervious surfaces (e.g. driveways, patios) with option for increased area limits when using pervious surfaces. Reference BMP incentive table (described in Section 54-6 review) for possible credits available for pervious surface and consider adding incentive for lots that have significantly less coverage than maximums shown in current Sec. 56-40 table.
  - This is a good concept. Any stormwater credits should be based on the actual reduction in stormwater volume achieved with pervious pavements.
- Recommendation #17, Sec. 58-60, 58-90, 58-120, 58-150, 58-180, 58-210, 58-240. - Maximum building area: Consider lowering percentages for maximum building areas in the above described Residential districts. Also, introduce limits for maximum lot coverage for other impervious surfaces like driveways with option for increased area limits when using pervious surfaces. Reference BMP incentive table (described in Section 54-6 review) for possible credits available for pervious surface and consider adding incentive for lots that have significantly less coverage than maximums shown in current tables. Consider lowering minimum floor areas listed in each section as well.
  - We would like to be involved in the discussions to further refine and implement these revisions.

Chapter 9

With respect to: "A description and evaluation of up to five agreed upon Green Infrastructure (GI) and Low Impact Development (LID) BMPs for their applicability in the City of Naples will be prepared after the five BMPs are discussed and selected with City staff." We suggest including the complete list of LID BMP's, not limiting to just five. The Pinellas, Alachua, and Escambia County Stomwater Manuals, along with BMPTRAINS, include 12 Site Planning BMPs, 10 Source Control BMPs, and 14 Structural BMPs that include 10 LID BMPs.

These Manuals are available on-line at:

- Pinellas County - http://www.pinellascounty.org/plan/stormwater_manual.htm
- Alachua County - http://www.alachuacounty.us/Depts/epd/WaterResources/Pages/Stormwater-Manual.aspx
- Escambia County - https://www.myescambia.com/our-services/natural-resources-management/water-quality-land-management/low-impact-design

We offer the following revision of this chapter to incorporate Florida stormwater BMP and LID information rather than using EPA information:

9.1 BMP Evaluation

Low Impact Development (LID) is a comprehensive approach to managing stormwater using hydrology as the integrating framework. LID is also referred to as "Low Impact Design", "Green Infrastructure", or "Water Sensitive Urban Design".

The LID approach incorporates natural processes to maintain pre-development hydrologic patterns by using nonstructural and structural BMPs to control stormwater at the source using decentralized BMPs integrated into a BMP Treatment Train. A major LID principle is to minimize impervious surfaces and reduce stormwater volume and pollutant loading by capturing and retaining rainwater where it lands using infiltration, evapotranspiration, and stormwater harvesting. The goals and benefits of LID BMPs include improving water quality, attenuating flows, recharging groundwater, reducing potable water consumption, habitat restoration, improving aesthetics, and potentially a cost reduction in community infrastructure.

Table 1 lists the primary nonstructural and structural LID BMPs being used in Florida. Since LID BMPs include Site Planning BMPs and Source Control BMPs, an integrated site design process is needed as are clear guidelines for using LID BMPs within a local government's Land Development Codes. During the past three years, several Florida local governments have developed and implemented LID BMP Manuals and revised their Land Development Codes to encourage and incentivize using LID BMPs for stormwater management. These include Pinellas County, Alachua County, and Escambia County.

Site Planning BMPs	Conceptual Site Planning	Load Reduction Credit
SP1	Inventory Site Assets: Hydrology	
SP2	Inventory Site Assets: Topography	
SP3	Inventory Site Assets: Soils	
SP4	Inventory Site Assets: Vegetation	
SP5	Protect Surface Waters and Wetlands	
SP6	Preserve Open Space	
SP7	Natural Area Conservation - Retain Tree Canopy and Native Landscapes	√

SP8	Cluster Design and Maximize Gross Density	
SP9	Minimize Building Footprint	
SP10	Minimize Total Impervious Area	√
SP11	Minimize Directly-Connected Impervious Area	√
SP12	Curb Elimination and Curb Cuts	

Source Control BMPs	Source Control Techniques	Load Reduction Credit
SC1	Retain Natural Landscape Depressions	
SC2	Minimize Clearing and Grading	
SC3	Minimize Soil Disturbance and Compaction	
SC4	Build with Landscape Slope	
SC5	Retain Native Landscapes at the Lot Level	
SC6	Florida-friendly Landscapes and Fertilizers	√
SC7	Rainfall Interceptor Trees	√
SC8	Install Efficient Irrigation Systems	
SC9	Use Non-potable Water Supply for Irrigation	
SC10	Community and Home Owner Education	
Structural BMPs	**Structural Stormwater BMPs**	**Load Reduction Credit**
SW1	Retention Basin	√
SW2	Exfiltration Trench	√
SW3	Underground Storage and Retention	√
SW4	Rain Gardens	√
SW5	Treatment Swales	√
SW6	Vegetate Natural Buffers	√
SW7	Pervious Pavements	√
SW8	Green Roofs with Cisterns	√
SW9	Rainwater Harvesting/Cisterns	√
SW10	Wet Detention Systems	√
SW11	Stormwater Harvesting/ Horizontal Wells	√
SW12	Filter Systems	√
SW13	Managed Aquatic Plant Systems	√
SW14	Biofiltration Systems/Tree Box Filters	√

The City of Naples Stormwater Ordinance 07-11807 encourages the use of the latest BMPs and LID approaches as defined by the State. The goal is to improve control of runoff to the City's swale system, increased retention systems on private property with more runoff percolating into the groundwater, improved pre-treatment of runoff and potentially reduced flood elevations experienced from specific storm events. The Stormwater Ordinance includes a table of BMP Selection Criteria, which includes a proposed credit for use of a BMP. The current BMP Selection Criteria table is shown in Table 9-1.

Table 9-1 Best Management Selection Criteria

Proposed BMP Selection Guide			
	Additional BMP Measure Utilized	Proposed Credit	Justification Explanation
1	Common Swale on Joint Lot Line		Grading disparities between properties and minimal distance between side setbacks result in difficult to construct an efficient stormwater treatment system that is difficult to maintain. Any property owner that can negotiate and develop a common swale between two lot lines provides a typically superior to maintain, problem free solution that can remove pollutants with a high efficiency as well as carry on-site stormwater in an easier to maintain technique than underground vaults and pipes.
2	Driveway Runoff Management		Because of FFE requirements most new homes are well above the crown of the roadway and driveways have steep slopes where all impervious pollutants drain into Public Right-of-Way with little treatment. Valid techniques, such as pervious pavement, intercepting driveway trench drains, and roof

			runoff management can decrease imperviousness, stormwater volume, and pollutant loadings.
3	Pervious Driveway · Flat (≤ 2% slope) · Med (2% > 5% slope) · Steep (≥ 5% slope		Driveways that are made of pervious materials that allow percolation will be given BMP credits. Their effectiveness is directly related to the pervious pavement used and the driveway slope.
	Roof Runoff Management		Often roof runoff is directed onto impervious driveways that discharge stormwater off-site. Roof gutters can be used to direct the runoff to pervious areas such as rain gardens or to rain barrels or cisterns where the water can be used for irrigation.
5	"Rain Gardens" – recessed landscaping		Rain gardens are small, shallow depressions within the landscaping that are designed to retain stormwater and allow it to infiltrate or evaporate. They can be used to collect roof runoff or runoff from driveways, parking lots, or roads. Recessed landscape islands in looped driveways, parking lots or within cul-de-sacs are good examples.
7	Pool and Deck "Self-Containment" Design		Designing a pool deck area to shed the runoff back to the pool instead of penetrating additional stormwater runoff will be rewarded with BMP credits.
8	Florida-friendly Landscaping and Fertilizers		Florida-friendly landscaping and fertilizers can be used to

			minimize the nutrients in runoff or leaching.

While many of the above BMPs are focused more towards single-family residential properties they also are very applicable to commercial land uses, office parks, and government facilities.

9.1.1 BMP Matrix

Include matrix to be used as an implementation guide including metrics such as retrofit opportunities, benefits, potential constraints, siting applications, and general performance criteria.

9.1.2 Land Development Code

Review the current LDC to determine existing impediments to using LID BMPs and revise the code to eliminate them and to add incentives for using LID BMPs. Pinellas County has included incentives within its Land Development Code that allow open space requirements, landscaping requirements, and more intensive mixed use developments when LID BMPs are used in a BMP treatment train.

Conclusion

Thank you for your time and consideration of our issues and concerns. If you have any questions or need additional information, please feel free to contact me at 236-262-0304 x 267 or kellym@conservancy.org .

Sincerely,

Kelly McNab
Environmental Planning Specialist

CC: Andrew Holland
Marisa Carrozzo

City Council Agenda Item Report

Submitted by: Ann Marie Ricardi
Submitting Department: Finance
Meeting Date: February 21, 2018

SUBJECT
(1) Resolution amending the Fiscal Year 2017-18 budget adopted by Resolution 2017-14027 to appropriate $105,000 for Closed Captioning of City meetings broadcast via the internet and television.

(2) City Council is asked to approve a contract with Encore Broadcast Solutions in the amount of $93,102.55 for a digital solution for closed captioning services for City meetings broadcast via the internet and television.

Legislative Type:
Legislative Item

Funding Source:
Appropriate General Fund Contingency

Recommendation:
(1) Approve the Resolution; and (2) Approve a contract with Encore Broadcast Solutions in the amount of $93,102.55.

ATTACHMENTS
- Agenda Memorandum
- Resolution
- Encore Quote
- Granicus quote

AGENDA MEMORANDUM **Finance Department**

Regular Meeting Date: **February 21, 2018**

To: City Council

From: Ann Marie S. Ricardi, Director

Date: February 1, 2018

Legislative ☒ Quasi-Judicial ☐

SUBJECT:

1. A Resolution amending the FY 2017-18 budget adopted by Resolution 2017-14027 to appropriate $105,000 from General Fund Contingency, add project 18A13 Meeting Closed Captioning to the budget; and
2. Approve a contract with Encore Broadcast Solutions in the amount of $93,102.55.

SUMMARY:

City Council is asked to consider

1. A Resolution amending the Fiscal Year 2017-18 budget adopted by Resolution 2017-14027, by appropriating $105,000 from the General Fund Contingency and adding project 18A13 Meeting Closed Captioning, to meet the requirements and intent of the Rehabilitation Act of 1973, the Americans with Disabilities Act (ADA) and other federal laws related to the accommodations for deaf and hard of hearing people.
2. Approve a contract with Encore Broadcast Solutions in the amount of $93,102.55 for a digital solution for closed captioning services for City meetings broadcast via the internet and television.

BACKGROUND:

Captioning is the process of converting the audio content of a television broadcast, webcast, film, or other production into text and displaying the text on a screen, monitor, or other visual display system. Federal law has developed rules for closed captioning to ensure that viewers who are deaf and hard of hearing have full access to programming. Although some of the City's transmissions are exempt, certain federal regulations require that the City's meetings broadcast via internet and television should be closed captioned.

The City's Council meetings and the meetings of its advisory boards are broadcast over the internet and television, and at this time, do not have either of the preferred methods of accessibility, which includes ASL (American Sign Language) translation or digital text translation. Both options have been discussed, but the ASL option was quickly vetoed due to its dependency on the availability of a translator, including multiple translators for longer meetings, and because the funding of a human translator can escalate into the unknown, as it is an hourly cost, and not all hard of hearing guests understand ASL. Digital text translation (captioning) has the ability to

assist a broader audience than ASL. This system will also enable text captioning in Chambers for the benefit of guests present.

Staff researched options and found that the Hillsborough County Public School recently bid for studio equipment, with Encore Broadcast Solutions being awarded the contract, and the city could “piggy back” this bid, to ensure a prompt reaction to this need for meeting accessibility. The contracted cost of the project is $103,402, which includes $93,102.55 for the contract with Encore Broadcast Solutions as within the quote, $9,100 for a Granicus upgrade, $1,200 for Granicus software, and approximately $1,600 for any other minor requirements that could be found during this installation process, such as additional switches, consoles or cables. Future annual costs are $13,700 for software maintenance and quarterly support.

The budget request is for $105,000.

FUNDING SOURCE:
General Fund Contingency has $500,000 and is the recommended source from which to appropriate $105,000 for project 18A13.

RECOMMENDED ACTION:

1. Approve a Resolution amending the Fiscal Year 2017-18 budget adopted by Resolution 17-14027, by appropriating $105,000 from the General Fund Contingency and add project 18A13 Meeting Closed Captioning; and

2. Approve a contract with Encore Broadcast Solutions in the amount of $93,102.55.

RESOLUTION 2018-

A RESOLUTION AMENDING THE FISCAL YEAR 2017-18 BUDGET ADOPTED BY RESOLUTION 2017-14027 TO APPROPRIATE FUNDS FOR CLOSED CAPTIONING OF CITY MEETINGS BROADCAST VIA THE INTERNET AND TELEVISION; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the City of Naples adopted a budget on September 20, 2017 via Resolution 2017-14027; and

WHEREAS, the Rehabilitation Act of 1973, the Americans with Disabilities Act (ADA) and other federal laws require the provisioning of accommodations such as captioning to ensure equal access and effective communication with people who are deaf or hard of hearing; and

WHEREAS, the City's council meetings and other meetings broadcast via the internet and television must meet the closed captioning requirements; and

WHEREAS, the City has received a quote from Encore Broadcast solutions of $93,102.55 to achieve the closed captioning requirements; and

WHEREAS, additional costs include $9,100 for Granicus integration and $1,200 for Granicus software update; and

WHEREAS, funds for this may be appropriated from the City's General Fund Contingency.

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF NAPLES, FLORIDA:

Section 1. That the FY 2017-18 project 18A13 is created entitled Meeting Closed Captioning.

Section 2. That the City of Naples FY 2017-18 budget, adopted by Resolution 2017-14027, is hereby amended to appropriate funds for the contracts related to enabling closed captioning for the City's meetings broadcast via the internet and television.

Section 3. That $105,000 is appropriated from the General Fund Contingency for this project.

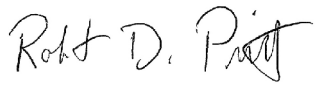
Section 4. This resolution will take effect immediately.

PASSED IN OPEN AND REGULAR SESSION OF THE CITY COUNCIL OF THE CITY OF NAPLES, FLORIDA, THIS 21ST DAY OF FEBRUARY 2018.

Attest:

Patricia L. Rambosk, City Clerk	Bill Barnett, Mayor

Approved as to form and legality:



Robert D. Pritt, City Attorney

Date filed with City Clerk:_____

L\LEGISLATIONCITYCOUNCILPENDING

ENCORE BROADCAST SOLUTIONS

2104 W. KENNEDY BOULEVARD
TAMPA, FL 33606-1535
PH (813) 253-2774 / FAX (813) 254-5907
DTAYLOR@ENCOREBROADCAST.COM

PRO FORMA **2/1/2018**

COMPANY:	**City of Naples-Communications Mgr**	**FOB:**	**Destination**
ATTENTION:	**David Fralick**	**DELIVERY:**	**45-60 Days ARO**
ADDRESS:	**735 8th Street S.**	**VALID:**	**30 Days**
CITY/STATE/ZIP:	**Naples, FL 34102**	**TERMS:**	**Net 30 w/ APO**
PHONE/CELL:	**239-213-1054**	**NOTES:**	**Closed Caption and HD/SD-SDI Upgrade**
EMAIL:	dfralick@naplesgov.com		

Item	Qty.	Mfg.	Model	Description	Listt Price		Ext. Cost
1	1	Tightrope		2ch HD/SD-SDI Video Server-4TB	$ 9,595.00	15.00%	$ 8,155.75
2	1	Tightrope		Carousel Bulletin Board Server HD/SD-SDI	$ 3,295.00	15.00%	$ 2,800.75
3	1	BMD		12x12 Smart Videohub HD/SD-SDI	$ 1,645.00	15.00%	$ 1,398.25
4	1	BMD		Smartscope Dual 4K Monitor w/ WV (SDI)	$ 895.00	15.00%	$ 760.75
5	1	Tightrope		Hardware & Software Assurance (5 yr wty)	$ 3,380.00	0.00%	$ 3,380.00
7	8	Tightrope		On-Line Support & Training (hourly)	$ -	0.00%	$ -
8	1	Link		CC Server w/ CC Encoder System	$ 49,975.00	15.00%	$ 42,478.75
9	1	BMD		HD/SD-SDI Rack Mount Audio Monitor	$ 1,645.00	15.00%	$ 1,398.25
10	1	AJA		HD/SD A/V Frame Sync/Converter	$ 2,995.00	15.00%	$ 2,545.75
11	1	AJA		HD/SD Sync Generator	$ 395.00	15.00%	$ 335.75
12	1	BMD		1x8 HD/SD-SDI Distribution Amplifier	$ 525.00	15.00%	$ 446.25
13	1	BMD		SDI Analog Audio Embedder	$ 525.00	15.00%	$ 446.25
14	1	BMD		Rack Frame	$ 95.00	15.00%	$ 80.75
15	1	Ensemble		1x4 Analog Audio Distribution Amplifier	$ 279.00	15.00%	$ 237.15
16	1	Raritan		8-Port DVI IP KVM Switch	$ 995.00	15.00%	$ 845.75
17	1	Raritan		17" LCD Rackmount Console	$ 1,495.00	15.00%	$ 1,270.75
18	3	Raritan		DVI / USB Interface for KVM	$ 179.00	15.00%	$ 456.45
19	1	RCC		HD/SD Encoder w/ SDI to ASI	$ 3,595.00	15.00%	$ 3,055.75
20	1	RCC		Single Mode Fiber TX ASI/SDI w/ Embedded Audio	$ 2,450.00	15.00%	$ 2,082.50
21	1	RCC		Single Mode Fiber RX ASI/SDI w/ Embedded Audio	$ 2,450.00	15.00%	$ 2,082.50
22	1	Hosa		DB25 to XLRM Cable	$ 69.00	15.00%	$ 58.65
23	1	Install		Labor, Cables & Connectors	$ 14,750.00	0.00%	$ 14,750.00
24	1	MAP		44RU, 26"D A/V Configured Rack	$ 3,477.00	15.00%	$ 2,955.45
25	1	MAP		2200VA Rack Mount UPS	$ 1,271.00	15.00%	$ 1,080.35

Notes:

The Tightrope System is quoted with a 5 year hardware and software support warranty.

The Link Closed Captioning System has a 1 year hardware and software warranty included.
After the first year, Link charges $6000 per year for software support and system upgrades.

The balance of items come with 1 year parts and labor warranty.

Encore includes 1 year support with the quote, after one year from date of install,
Encore charges $6500 per year for quarterly support visits (total of 4 per year)
and 10 hours of telephone support.

Encore's above pricing is based off Hillsborough County Public Schools - ITB 14115-EST
and as allowed under their ITB Specifications Item 2.6.5

TOTAL $ 93,102.55

TERMS:

*Quoted price does not include applicable Sales Tax or shipping charges unless indicated above.
*Shipping is FOB Origin - Pre Paid and added to invoice unless indicated above.
*All credit card payments will be assessed a 3% convenience fee unless otherwise noted.

ACCEPTED AND AGREED BY:

PRINT NAME: _____ **DATE:** _____

SIGNATURE: _____

ENCORE REPRESENTATIVE: DOUGLAS TAYLOR *"Experience Empowering Excellence"*

GRANICUS

Procurement Vehicle: Direct
In Support of: Naples, FL

Quote Number: Q-20882
Quote Prepared On: 2/2/2018
Quote Valid Through: 2/25/2018
Payment Terms: Net 30

Granicus Contact:
Name: Chavin Muniz
Phone: 720-240-9586 x1039
Email: chavin.muniz@granicus.com

ONE-TIME FEE

Product Name	Product Description	Invoice Schedule	Quantity	One-Time Total
Granicus Encoding Appliance Hardware - SDI (AMAX) (GT)	AMAX Encoder with Osprey SDI Card. Used to pass commands and data from LiveManager that include Start/Stop of webcast, indexing, and document display. Also serves to distribute video and captions to be distributed to the CDN or Performance Accelerator.	50% Up Front 50% Upon Delivery	1 Each	$3,500.00
Granicus Encoding Appliance Hardware Configuration (GT)	Remote configuration and deployment of an encoding appliance.	Milestones	1 Each	$875.00
US Shipping Charge C - Large Item	US shipping of a large item	Up Front	1 Each	$125.00
Performance Accelerator Hardware (Purchase)	Performance Accelerator (Standard) Server is hardware utilized to distribute video/indexing/documents within a local network. This distribution is utilized to eliminate the bandwidth impact local viewers would have accessing data from the Granicus Data Center.	50% Up Front 50% Upon Delivery	1 Each	$3,600.00
Performance Accelerator Installation Services	Remote configuration and deployment of the Performance Accelerator.	Milestones	1 Each	$875.00
US Shipping Charge C - Large Item	US shipping of a large item	Up Front	1 Each	$125.00
			TOTAL	$9,100.00

ANNUAL SUBSCRIPTION FEE

Product Name	Product Description	Invoice Schedule	Quantity	Annual Total
Granicus Encoding Appliance Software (GT)	Granicus Encoding Appliance Software (GT) This includes the LiveManager Software solution where webcasts are started/stopped, agendas amended and indexed, votes and attendance recorded, and minutes created.	Annual	1 Each	$1,200.00
			TOTAL	$1,200.00

TERMS AND CONDITIONS

- Payment terms: net 30
- Any lapse in payment may result in suspension of service and will require the payment of a setup fee to reinstate the subscription.
- This quote is exclusive of applicable state, local, and federal taxes, which, if any, will be included in the invoice. It is the responsibility of ***Naples, FL*** to provide applicable exemption certificate(s).

City Council Agenda Item Report

Submitted by: Bob Pritt
Submitting Department: City Attorney
Meeting Date: February 21, 2018

SUBJECT
Review and discussion of Ethics disclosure form.

Legislative Type:
Legislative Item

Funding Source:
N/A

Recommendation:
Review and consider options for disclosure form.

ATTACHMENTS
- Agenda Memorandum
- City Attorney Memorandum - Ethics Disclosure Form

AGENDA MEMORANDUM *City Attorney*

Regular Meeting Date: **February 21, 2018**

To: City Council

From: Robert D. Pritt, City Attorney

Date: February 6, 2018

Re: Ethics-Disclosure Forms

Legislative ☒ Quasi-Judicial ☐

SUBJECT:
Ethics—Disclosure Form—Review and Discussion.

SUMMARY:
Review and discussion of the Disclosure of Interest Form that was put in place after Council's Adoption of the new Ethics Ordinance in 2017.

BACKGROUND:
In 2017 Council adopted a new Ethics ordinance that included a requirement for Disclosure of Interest of property owners in land use hearings. A City Attorney memo, with enclosures, is attached.

FUNDING SOURCE:
N/A

RECOMMENDED ACTION:
Review and consider options for disclosures including any changes to disclosures and the need, if any, for ordinance amendment.

Memo

Office of the City Attorney

TO: City Council and City Manager

FROM: Robert D. Pritt, City Attorney

DATE: December 19, 2017

SUBJECT: City Disclosure Form

Background

On December 6, 2017, Council directed the city attorney to review the disclosure provisions of the City Ethics Code to determine the scope of the required disclosures and to evaluate the disclosure form prepared by the city manager with assistance of the city attorney.

One Council Member requested that the Collier County form be considered as a pattern.

Law

The actual ordinance provision adopted by Council in 2017 as part of the Ethics Code reads as follows:

Sec. 2-982. - Disclosures in applications.

Applications and petitions for permitting for land use shall be on a form provided by the city manager. Where the owner is an entity other than an individual, the application or petition shall contain a disclosure of all persons who have a material interest more than five percent in the entity. If an inaccurate disclosure or non-disclosure is found to have been willful and corrupt, it is subject to the penalties set out in subsection 2-983(1) or (2). (Emphasis highlighted) (Ord. No. 2017-13939, § 1, 3-15-2017).

Who must disclose?

Answer: Persons-(individuals)
Who have material interest (some type of ownership interest)
More than 5%.

What is “material interest”?

Answer: Sec. 2-972.-Definitions. *Material interest* means direct or indirect ownership of more than five percent of the total assets or capital stock of any business entity. For the purposes of this article, indirect ownership does include ownership by a spouse and/or minor child.

What Disclosure form is used?

Answer: The form developed by the city attorney and approved by the city manager is attached as Exhibit A.

The form used by Collier County has been amended in September 2017 and is attached as Exhibit B. (Note: It still does not contain a place for disclosure of Limited Liability Companies (LLCs) which are the most common forms of non-individual ownership for property development.)

Comment

The City Disclosure Form actually goes beyond the scope of the ordinance in that it requires disclosure of applicants and petitioners in addition to owners. This is also beyond the scope of the County Disclosure requirement and form. It also requires a statement that there is no known conflict with any City board member or council member. This requirement has met with opposition from some applicants and petitioners.

Recommendation

Revise the City Disclosure form to conform precisely to the scope of the City Ethics Ordinance. If it is deemed inadequate, amend the ordinance.

L: Ethics--Memo-Disclosure Form 12.19.17 for CC 2-21-18

EXHIBIT A

CITY DISCLOSURE FORM

City of Naples, Florida
Disclosure of Interest

The City's Ethics Code requires disclosure of interests of individual owners, applicants and petitioners for city land use and development permits where the entity is OTHER THAN an individual and the individual's interest exceeds 5%. If so, please fill out the information provided below. If additional space is needed, attach it to this form.

Failure to provide accurate information violates the Ethics Ordinance and is also grounds for rejection of the application or petition.

Petitioner ____ Owner____ Other (Explain) _____

1. Nature of Ownership (check one)
Fee Simple __ Tenancy in common __ Tenancy by Entireties __ Life Estate__ Trust__ Court Order__
Other (specify) _____

2. Owner(s) (List ALL owners exceeding 5% interest).
Name _____ Address _____%_____
_____
_____
_____
_____
_____

3. If other than an individual, list the type of entity (e.g., corporation, partnership, trust, LLC, LLP, Other) and Address:
Type of entity _____
Authorized to do business in Florida Yes (attach proof)____ No_____
Address _____
_____

Name & Address (or contact information) of each stockholder, member, partner or other owner (exceeding 5% interest).
_____
_____
_____
_____
_____

4. Is entity registered upon any stock or securities exchange, or otherwise regulated where disclosures of ownership are required and on file? Yes____ No___ (If yes, provide name) _____
(NOTE: If so, no need to name all owners.)

5. If information above cannot be provided in full, explain why.

_____

Certifications: I certify that the information provided is a true, correct and full disclosure of ownership in the property or the petitioner that is the subject of the Application or Petition for a permit.

I certify that there is no known conflict of interest between any owner and any City board or council member that may review the Application or Petition ____, or that there is a potential conflict _____

with Name _____ Position_____ Describe

_____

_____

Signed: _____ Date: _____

Relationship to Property: _____

Petitioner, Owner or Other

EXHIBIT B

COLLIER COUNTY DISCLOSURE FORM

COLLIER COUNTY GOVERNMENT
GROWTH MANAGEMENT DEPARTMENT
www.colliergov.net

2800 NORTH HORSESHOE DRIVE
NAPLES, FLORIDA 34104
(239) 252-2400 FAX: (239) 252-6358

PROPERTY OWNERSHIP DISCLOSURE FORM

This is a required form with all land use petitions, except for Appeals and Zoning Verification Letters.

Should any changes of ownership or changes in contracts for purchase occur subsequent to the date of application, but prior to the date of the final public hearing, it is the responsibility of the applicant, or agent on his behalf, to submit a supplemental disclosure of interest form.

Please complete the following, use additional sheets if necessary.

a. If the property is owned fee simple by an INDIVIDUAL, tenancy by the entirety, tenancy in common, or joint tenancy, list all parties with an ownership interest as well as the percentage of such interest:

Name and Address	% of Ownership

b. If the property is owned by a CORPORATION, list the officers and stockholders and the percentage of stock owned by each:

Name and Address	% of Ownership

c. If the property is in the name of a TRUSTEE, list the beneficiaries of the trust with the percentage of interest:

Name and Address	% of Ownership

COLLIER COUNTY GOVERNMENT
GROWTH MANAGEMENT DEPARTMENT
www.colliergov.net

2800 NORTH HORSESHOE DRIVE
NAPLES, FLORIDA 34104
(239) 252-2400 FAX: (239) 252-6358

d. If the property is in the name of a GENERAL or LIMITED PARTNERSHIP, list the name of the general and/or limited partners:

Name and Address	% of Ownership

e. If there is a CONTRACT FOR PURCHASE, with an individual or individuals, a Corporation, Trustee, or a Partnership, list the names of the contract purchasers below, including the officers, stockholders, beneficiaries, or partners:

Name and Address	% of Ownership

Date of Contract: _____

f. If any contingency clause or contract terms involve additional parties, list all individuals or officers, if a corporation, partnership, or trust:

Name and Address

g. Date subject property acquired _____

☐ **Leased: Term of lease _____ years /months**

If, Petitioner has option to buy, indicate the following:

COLLIER COUNTY GOVERNMENT
GROWTH MANAGEMENT DEPARTMENT
www.colliergov.net

2800 NORTH HORSESHOE DRIVE
NAPLES, FLORIDA 34104
(239) 252-2400 FAX: (239) 252-6358

Date of option: _____

Date option terminates: _____, or

Anticipated closing date: _____

AFFIRM PROPERTY OWNERSHIP INFORMATION

Any petition required to have Property Ownership Disclosure, will not be accepted without this form. Requirements for petition types are located on the associated application form. Any change in ownership whether individually or with a Trustee, Company or other interest-holding party, must be disclosed to Collier County immediately if such change occurs prior to the petition's final public hearing.

As the authorized agent/applicant for this petition, I attest that all of the information indicated on this checklist is included in this submittal package. I understand that failure to include all necessary submittal information may result in the delay of processing this petition.

The completed application, all required submittal materials, and fees shall be submitted to:

Growth Management Department
ATTN: Business Center
2800 North Horseshoe Drive
Naples, FL 34104

_____ _____
Agent/Owner Signature Date

_____
Agent/Owner Name (please print)

City Council Agenda Item Report

Submitted by: Roger Jacobsen
Submitting Department: Code Enforcement
Meeting Date: February 21, 2018

SUBJECT
A Resolution determining a request to compromise and reduce the fine imposed by the City of Naples Code Enforcement Board under Code Enforcement Board under Case No. 17-406473 and refund the difference.

Legislative Type:
Legislative Item

Funding Source:
N/A

Recommendation:
Consider the Resolution.

ATTACHMENTS

- Agenda Memorandum
- Resolution
- December 20, 2017 Letter
- Notice of Violation
- Notice of Hearing
- Finding of Facts/Order May 2017
- Finding of Facts/Order December 2017
- September 1, 2017 Letter
- Email Correspondence

AGENDA MEMORANDUM ***Code Enforcement Division***

Regular Meeting Date: **February 21, 2018**

To: City Council

From: Roger Jacobsen, Code Enforcement Manager

Date: February 6, 2018

Legislative ☒ Quasi-Judicial ☐

SUBJECT:
A Resolution determining a request to compromise and reduce the fine imposed by the City of Naples Code Enforcement Board under Code Enforcement Board Case No. 17-406473 and refund the difference; and providing an effective date.

SUMMARY:
City Council is asked to consider a Resolution determining a request to compromise and reduce the fine imposed by the City of Naples Code Enforcement Board under Code Enforcement Board Case No. 17-406473 for a property owned by Gurmeet S. Dhillon and Lisa A. Hansen and located at 490 Banyan Boulevard.

BACKGROUND:

The property owners at 490 Banyan Boulevard were found in violation of City code as work was performed at the home they owned without the required permits. The violation was eventually brought into compliance and the Code Enforcement Board (CEB) determined a fine of $7,800 should be imposed and declined a request for a reduction of the fine. The owners paid the fine and now request City Council consider a reduction of the fine imposed and paid. A detailed timeline is presented below for information.

On February 24, 2017, Collier County Contractor Licensing issued a Stop Work order for construction work for a property owned by Gurmeet S. Dhillon and Lisa A. Hansen and located at 490 Banyan Boulevard and a Notice of Violation was issued to the property owners by Naples Code Enforcement staff for performing work (renovations) without the required permit.

On May 9, 2017, a Notice of Hearing before the CEB was issued to the property owners.

On May 25, 2017, the CEB Hearing was held and the Board issued a Finding of Fact, Conclusions of Law and an Order determining that a violation existed at 490 Banyan Boulevard, and was to be corrected by July 6, 2017, or a daily fine of $100 for each day thereafter that the violation was not corrected be imposed.

The property was not brought into compliance by July 6, 2017 and daily fines accrued. A letter dated September 1, 2017 was received from the property owner providing an explanation in response to the order of the Board.

On October 13, 2017, the property was brought into compliance.

On November 9, 2017, the property owners received a Notice of Hearing for Imposition of Fines/Liens. The Hearing was scheduled for December 7, 2017.

On December 7, 2017, a hearing of the CEB was held to consider imposing a total fine of $7,800. At the same hearing the CEB considered a request by the respondent to reduce the fine. It had been explained to Mr. Dhillon by phone that the December 7th Hearing was the beginning of a two-step process. Part-one being the Code Enforcement Board imposing a fine and lien and, part-two being the ability for Mr. Dhillon to appeal the CEB decision to City Council as the final authority. At the conclusion of the December 7th hearing, the CEB voted to deny a reduction and to impose a fine and lien in the full amount of $7,800.

On December 11, 2017, Mr. Dhillon paid the $7,800 fine due and the case was closed. A lien was not recorded.

On December 19, 2017, Ms. Hansen, Mr. Dhillon's wife and co-owner of the property, contacted Mr. Jacobsen to request a reduction of fine be considered by Council. A letter dated December 20, 2017 was received from Ms. Hansen.

On February 5, 2018, an email was received from Ms. Hansen reiterating the request for a consideration of a reduction in the fine by Council, asking that it be heard on February 21, 2018 despite the fact that neither she nor her husband could be present due to a death in the family.

FUNDING SOURCE:
N/A

RESOLUTION 2018-

A RESOLUTION DETERMINING A REQUEST TO COMPROMISE AND REDUCE THE FINE IMPOSED BY THE CITY OF NAPLES CODE ENFORCEMENT BOARD UNDER CODE ENFORCEMENT BOARD CASE NO. 17-406473 AND REFUND THE DIFFERENCE; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, on May 25, 2017, the City of Naples Code Enforcement Board heard and determined Case No. 17-406473; and

WHEREAS, said Board issued a Finding of Fact, Conclusions of Law and an Order determining that a violation existed at 490 Banyan Boulevard, and was to be corrected by July 6, 2017, or a daily fine of $100 for each day thereafter that the violation was not corrected be imposed, eventually resulting in a fine in the total amount of $7,800; and

WHEREAS, on December 7, 2017, the Code Enforcement Board heard and determined a request from the owners, Gurmeet S. Dhillon and Lisa A. Hansen, for a reduction of accumulated daily fines and declined to reduce the amount of accrued daily fines; imposing a fine and lien in the amount of $7,800; and

WHEREAS, on December 11, 2017, the owners, Gurmeet S. Dhillon and Lisa A. Hansen, paid the full amount of $7,800 due to the City of Naples; and

WHEREAS, on December 20, 2017, Lisa A. Hansen, submitted a letter to the Code Enforcement Manager requesting an appeal of the Code Enforcement Board's Order; and

WHEREAS, the owners, Gurmeet S. Dhillon and Lisa A. Hansen, have requested that the accumulated daily fines be reduced from $7,800 and their payment above the reduced amount be refunded; and

WHEREAS, the City Council has considered the request;

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF NAPLES, FLORIDA:

Section 1. That the request of Gurmeet S. Dhillon and Lisa A. Hansen to reduce a fine imposed by the City of Naples Code Enforcement Board is hereby APPROVED / DENIED.

Section 2. That the request of Gurmeet S. Dhillon and Lisa A. Hansen to reduce the amount of fine imposed by the City of Naples Code Enforcement Board is hereby APPROVED / DENIED by reduction of the fine and lien from $7,800 to $_____.

Section 3. That the request of Gurmeet S. Dhillon and Lisa A. Hansen to refund the amount of the difference between the $7,800 fine paid by them and the reduced fine determined by City Council is hereby

APPROVED / DENIED.

Section 4. The City Manager and City Attorney are authorized and directed to execute and file all documents necessary to implement this resolution.

Section 5. This resolution shall take effect immediately upon adoption.

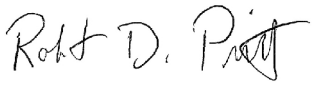
PASSED IN OPEN AND REGULAR SESSION OF THE CITY COUNCIL OF THE CITY OF NAPLES, FLORIDA, THIS 21ST DAY OF FEBRUARY 2018.

Attest:

Patricia L. Rambosk, City Clerk

Bill Barnett, Mayor

Approved as to form and legality:



Robert D. Pritt, City Attorney

Date filed with City Clerk:_____

L\LEGISLATIONCITYCOUNCIL\PENDING

December 20, 2017 Code Enforcement Case number 17-406473

I, Lisa Hansen, respectfully submit this letter to Mr. Roger Jacobsen to deliver to City Council as a request for an appeal to the decision of the City of Naples Code Enforcement hearing of December 2, 2017. I was deeply disappointed by the outcome of the hearing, that the fines against us were not reduced, and spoke with Mr. Jacobsen. He kindly offered to deliver my petition to the City Council for review. I include my original letter of September 1, 2017 for background on this matter.

I supplement the original letter with these extreme details about the situation with our original contractor, Andrew G. Spurgeon, in an effort to explain why we did not try to locate and prosecute him for the circumstances that have resulted in a violation with the Code Enforcement Department. I also seek to explain rationale behind the actions we took upon receiving the letters from the City of Naples Code Enforcement department.

Ours is an unfortunate situation of being taken advantage of by a lying and unscrupulous contractor who had no City of Naples license and had not obtained permits for work on our home, 490 Banyan Boulevard. We had worked and saved for years to be able to purchase this home and wanted to update it and make it fresh for our family. A garden designer recommended by a realtor from John R. Wood Properties, Beth Williams, had recommended Andrew based on work she had seen him complete at the home and office of one of her clients. I had spoken with that client, Mary A. Goddard, executive director of the George and Mary Kremer Foundation, who had glowing reviews of Andrew's work and his character. Beth had made her recommendation in good faith and for this reason we seek no recourse from her. She has apologized for the referral and is as shocked at the outcome with Andrew as we are.

We received letters from the Code Enforcement Department. These letters were extremely distressing to us and upon receiving the first one dated May 3 2017, I immediately contacted Andrew about it. He stated there was nothing to worry about, a misunderstanding, that all was fine and that he would straighten out the issue. I believed him as I did not know his true character and had never worked with a contractor before and I assumed he was an honest professional. I trusted his judgment. When the next letter dated May 9 2017 arrived, I called him back and said that his course of action didn't seem to be satisfactory in resolving the problem. He replied that he had spoken with the Buildings Inspector, a man whom he knew well, and that this man had said Andrew's work was in compliance, that this man would speak with the head of Code Enforcement and the two department heads would sort this out. Again, I trusted and believed Andrew's story, never having been in this kind of situation before and feeling reassured that he knew how things worked in the construction world and with the city. I told him we were extremely concerned about the violation letters and he reassured me that the issue would be solved before the hearing date of May 25th, but if need be, he would attend the hearing itself. He

continued to state that he could solve this issue himself, that he was the construction professional and that we as homeowners should not become directly involved. When we did not receive subsequent communication from the Code enforcement until the letter of August 3 2017, we had believed Andrew that he had solved the issue and things were resolved with the Naples Code Enforcement Department. The receipt of that August 3, 2017 letter showed otherwise. I urged Andrew to have a face- to –face discussion with the head of the Code Enforcement Department in order to address the matter immediately. Andrew stated to me that he would spend the morning at the Code Enforcement office and speak with them to straighten out the misunderstanding. He said he spoke with Paola, a woman who worked in the Code Enforcement office, and explained to her that his work had been approved by the Buildings Inspector and that he wanted to file a complaint against the Code Enforcement Department for harassment. He told me that Mr. Jacobsen was not present at the time he visited the office and that he would return just before the date of the hearing. Andrew stated that Mr. Jacobsen had taken a vacation. I subsequently attempted to contact Andrew on the status of his visit to the Code Enforcement office, but he could not be reached directly by telephone, and so I left him urgent voicemails, texts, and emails. He then became unreachable despite numerous attempts to contact him. We considered coming down to Naples, but were concerned about encountering him as he previously told us he had a gun and was a manager of properties and carried the gun with him. As we could not go down together because of work and childcare commitments, we were worried about one of us encountering Andrew and his gun and we felt it safer for us not to be anywhere near him. He lost his father to cancer before the project began and has no friends or family in the area except for a woman that he called his girlfriend, Teresa Araque Director of Communications at Florida Southwestern State University. Searching his " Linked In profile" provided a reference to her, and I contacted her after many days of Andrew not answering communication (emails, texts, voicemail messages) to determine if he was alright and to follow up with him about the issues with the Code Enforcement. She stated they had broken up 2 years ago due to his " terrible temper" and that the home he told me he had purchased to renovate and flip for himself was not actually his. Andrew had lied to us about so many things and I believe it is possible that he may have become mentally unhinged upon the death of his father, his only other relative. I googled him today and found warnings of criminal behavior and liens for him (https://www.mylife.com/andrew-spurgeon/agsvette). For these reasons, we do not feel comfortable or safe to pursue him with legal recourse. It was after this August 3rd letter that we realized he would not be communicating with us and we would have to proceed on our own. Gurmeet was in contact with Mr. Roger Jacobsen and explained this dire situation to him. He delayed the public hearing planned for August 24, 2017 in light of the situation. Teresa Araque was sympathetic to our plight and recommended Mr. Anthony Persichilli, owner of Green Mountain Builders, a licensed contracting firm, and we immediately contacted him. He agreed to meet Lisa with Mr. Daniel Thron, Director of Business Development at the property on Sunday August 27th. Lisa flew to Naples from Sunday 8/27 to Monday 8/28 in order to assess the property, meet with Mr. Persichilli and Mr. Thron, and to see if a meeting with Mr. Jacobsen,

head of the City of Naples Code Enforcement would be helpful and if it could be obtained. Gurmeet again contacted Mr. Roger Jacobsen to ask him if I (Lisa) should meet with him on Monday while she was still in Naples before flying back to Buffalo later Monday afternoon. He did not think it necessary, as it would not stop the daily fines although there was no work occurring in the property, and stated that the fines would stop once permitting was issued. At this point (the August 3rd letter), the fines were stated to be $2700.00 . Mr. Persichilli suggested a letter be written to Mr. Jacobsen to address the issues and Lisa drafted a letter dated September 1 2017 that was delivered to Mr. Jacobsen through Mr. Persichilli. It explained our situation and apologized for the sequence of events leading to the violation. No contracting work was ever performed on the property subsequent to this time and may have even ceased earlier than that date (likely early August) as Andrew had disappeared off the job. Regardless, the fines continued to accrue and Gurmeet spoke with Mr. Jacobsen again in an attempt to stop the fines from growing despite no further work being performed at the property. Hurricane Irma touched down in Naples September 10th and no routine contracting work could even possibly have been performed from that date to several weeks afterward due to the need for emergency work at homes destroyed by the devastating hurricane. Green Mountain Builders applied for permits and submitted their request September 21, 2017. They were granted permits for the project on October 24, 2017 with permit number 74787. Work had not been performed for months and permits were obtained, but fines continued to accrue. The final letter dated October 9, stated that a hearing date of October 26, 2017 had been set and fines now totaled $7800.00. The hearing was delayed until December 2, 2017 at which time it took place and Mr. Persichilli attended and spoke as our representative. He explained to me that the hearing had resulted in the Code Enforcement Board levying the full fine of $7800.00 . If not paid, this would result in a lien on the property. Gurmeet immediately paid the fine to avoid any lien.

I wish to express how extremely sorry we are that our project under Andrew has caused problems with the city as it did not proceed in accordance with city laws. This is our first time renovating a home and unfortunately we did not have an honest contractor to lawfully guide us in our endeavor. I am truly apologetic for the concerns created by Andrew's unorthodox work and behavior, but I am hoping that the Council realizes we took steps to rectify the matter as soon as Andrew broke off communication with us. Gurmeet immediately began communicating with Mr. Jacobsen about the matter and updated him about our efforts to proceed in accordance with Naples laws by working with a licensed professional who would obtain permits. Through referral from Teresa Araque, we have obtained the services of a licensed contractor, Mr. Persichilli of Green Mountain Builders. Mr. Persichilli filed for and obtained the necessary permits to begin work.

We have had insurmountable difficulties and anguish dealing with the aftermath of an unscrupulous contractor but are trying to go forward with the efforts of Green Mountain Builders

in a proper manner that is respectful of the city's laws. Thank you for considering our unfortunate situation as victims of an unscrupulous man, and we earnestly hope you will consider leniency towards us by reducing the fines associated with the code violation. If it pleases the Council, I will be happy to be present at the meeting for any discussion or questions you may have. We look forward and hope to join the Naples community in good standing.

Thank you very much and Happy Holidays,

Lisa A. Hansen

City of Naples
TELEPHONE (239) 213-5030 • FACSIMILE (239) 213-1845
735 8TH STREET SOUTH • NAPLES, FLORIDA 34102-6796

CODE ENFORCEMENT
NOTICE OF VIOLATION

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

DHILLON, GURMEET S
HANSEN, LISA A
65 LINCOLN PKWY
BUFFALO, NY 14222

Re: Code Enforcement Board - Case No. **17-406473**

Violation location: **490 BANYAN BOULEVARD**

Date violation found: **02/24/2017**

The above property has been found in violation of the code(s) listed on the attached.

The violation must be brought into compliance by **05/10/2017**.

ROGER JACOBSEN
Code Enforcement Manager
Contact Number: (239) 213-5030

Date: May 3, 2017

FAILURE TO COMPLY WITH THIS NOTICE OR IF THE VIOLATION IS CORRECTED AND THEN RECURS MAY RESULT IN THE ISSUANCE OF A NOTICE OF HEARING BEFORE THE CITY'S CODE ENFORCEMENT BOARD, A CITATION, OR A NOTICE TO APPEAR IN COLLIER COUNTY COURT.

AFTER THE HEARING, THE BOARD MAY IMPOSE A MAXIMUM FINE OF UP TO $250.00 PER DAY PER INCIDENT (ss. 162.09) OR UP TO $500.00 PER DAY PER INCIDENT FOR REPEAT VIOLATIONS.

REQUIRED ACTION: APPLY FOR AND OBTAIN THE NECESSARY PERMITS TO COMPLETE THE RENOVATION.

Section 16-112. Florida Building Code Adopted; amendments.

SECTION 105 PERMITS

105.1 Required.

Any owner or authorized agent who intends to construct, enlarge, alter, repair, move, demolish, or change the occupancy of a building or structure, or to erect, install, enlarge, alter, repair, remove, convert or replace any impact resistant coverings, electrical, gas, mechanical or plumbing system, the installation of which is regulated by this code, or to cause any such work to be done, shall first make application to the building official and obtain the required permit.

DO NOT REMOVE 5015

City of Naples

BUILDING DEPARTMENT

STOP ORDER

ALL WORK SUSPENDED

PER FLORIDA BUILDING CODE

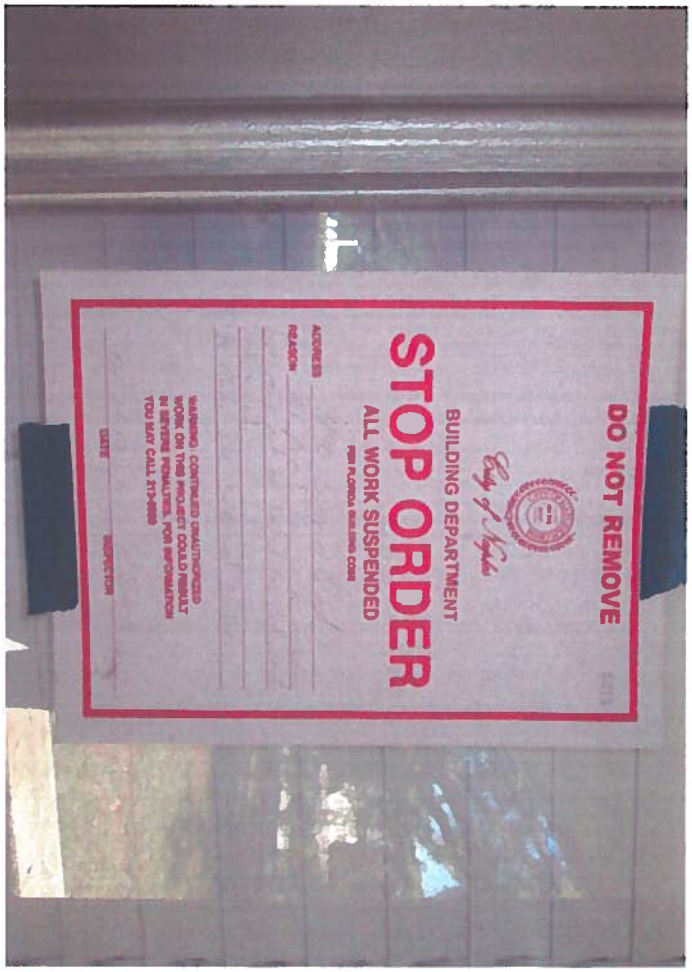
ADDRESS 490 Banyan Blvd

REASON No permit for work including but may not be limited to; Bath remodel, electrical.
to Make site safe and secure.

WARNING: CONTINUED UNAUTHORIZED WORK ON THIS PROJECT COULD RESULT IN SEVERE PENALTIES. FOR INFORMATION YOU MAY CALL 213-5020

02-24-17 DATE

R. Smith INSPECTOR



City of Naples
TELEPHONE (239) 213-5030 • FACSIMILE (239) 213-1845
735 8TH STREET SOUTH • NAPLES, FLORIDA 34102-6796

CODE ENFORCEMENT BOARD
NOTICE OF HEARING

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

TO: DHILLON, GURMEET S
HANSEN, LISA A
65 LINCOLN PKWY
BUFFALO, NY 14222

Date: May 9, 2017

Re: Code Enforcement Board - Case No. **17-406473**

Gentlemen/Madams:

The City of Naples Code Enforcement Board is created pursuant to Chapter 162, Florida Statutes and Section 2-431 of the Code of Ordinances of the City of Naples. The purpose of the seven (7) member citizen board is the enforcement of certain codes and ordinances of the City of Naples by rendering decisions concerning alleged violation of these codes and ordinances.

This is a formal notification that on **May 25, 2017** at **2:00 P.M.,** a Public Hearing will be held at Naples City Hall, 735 8th Street South, Naples, Florida, concerning the alleged violation by you, or on your property, of **Section 16-112. Florida Building Code Adopted; amendments. Section 105 Permits 105.1 Required.** of the Code of Ordinances of the City of Naples, at **490 Banyan Boulevard** located in the City of Naples, Florida. (See attached "Notice of Violation.")

You have a right to appear before the Code Enforcement Board on that date to respond to these charges and to present relevant facts. Failure to appear may result in the Board proceeding to make a determination in your absence.

Should you be found in violation, the Code Enforcement Board, upon notification by the code inspector that an order of the Code Enforcement Board has not been complied with by the set time or, upon finding that a repeat violation has been committed, may order the violator to pay a fine of $250.00 for each day the violation continues past the date set by the Board for compliance or, in the case of a repeat violation, $500.00 for each day the repeat violation

continues past the date of notice to the violator of the repeat violation

A lien may also be placed against your real or personal property, which lien will be foreclosed against if the fine is not paid.

Should you desire, you have the right to an attorney, at your own expense, to represent you before the Board. You will also have the opportunity to present witnesses and to question the Code Enforcement Officer or other witnesses against you at the hearing.

Please be prepared to present evidence at this hearing including the amount of time necessary to correct the alleged violation if you are found in violation of the Code of Ordinances of the City of Naples.

Should you have any questions, or wish to admit the alleged violation and enter into a stipulation certifying that you will cease the violation, please contact Code Enforcement within five (5) days at (239) 213-5030.

Sincerely,

Karla Gibbs
Secretary for the Board

Enclosure: Notice of Violation

City of Naples
TELEPHONE (239) 213-5030 • FACSIMILE (239) 213-1845
735 8TH STREET SOUTH • NAPLES, FLORIDA 34102-6796

CODE ENFORCEMENT
NOTICE OF VIOLATION

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

DHILLON, GURMEET S
HANSEN, LISA A
65 LINCOLN PKWY
BUFFALO, NY 14222

Re: Code Enforcement Board - Case No. **17-406473**

Violation location: **490 BANYAN BOULEVARD**

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The violation must be brought into compliance by **05/10/2017**.

ROGER JACOBSEN
Code Enforcement Manager
Contact Number: (239) 213-5030

Date: May 3, 2017

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Section 16-112. Florida Building Code Adopted; amendments.

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DO NOT REMOVE 5015

City of Naples

BUILDING DEPARTMENT

STOP ORDER

ALL WORK SUSPENDED

PER FLORIDA BUILDING CODE

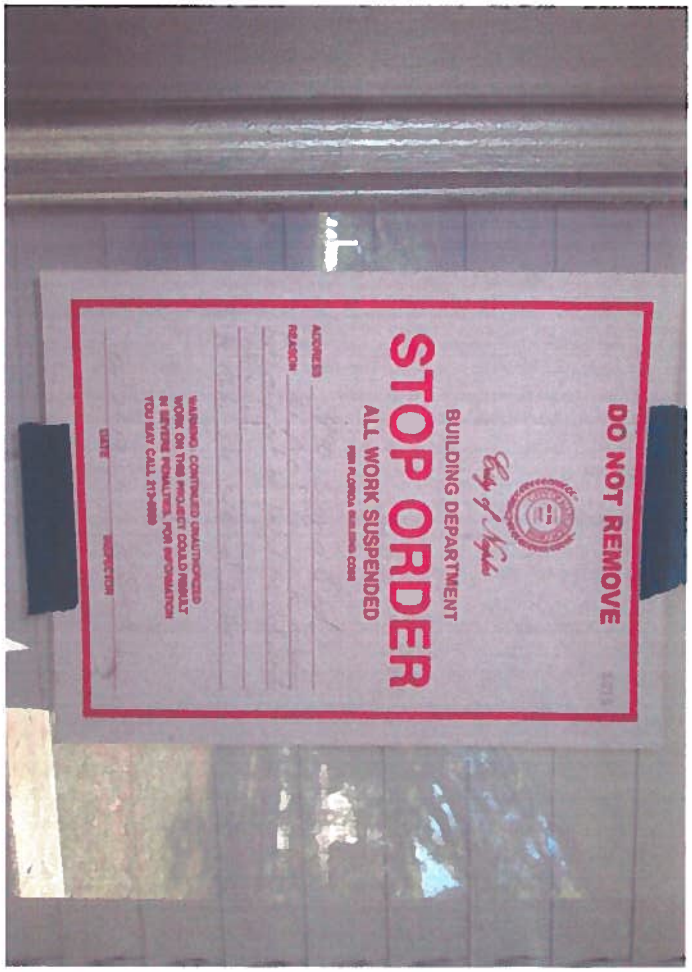
ADDRESS 490 Banyan Blvd

REASON No permit for work including but may not be limited to; Bath remodel, electrical.
to Make site safe and secure.

WARNING: CONTINUED UNAUTHORIZED WORK ON THIS PROJECT COULD RESULT IN SEVERE PENALTIES. FOR INFORMATION YOU MAY CALL 213-5020

02-24-17 DATE

R. Smith INSPECTOR



CODE ENFORCEMENT BOARD
OF THE
CITY OF NAPLES, FLORIDA

CITY OF NAPLES,	)	
	)	
Petitioner,	)	**CASE NO. 17-406473**
	)	
vs.	)	
	)	
	)	
GURMEET S. DHILLON AND LISA A. HANSEN	)	
	)	
	)	
Respondents.	)	
	)	

FINDINGS OF FACT, CONCLUSIONS OF LAW, AND ORDER

THIS CAUSE came on for public hearing before the Board on the 25th day of May 2017, after due notice to the Respondent, and the Board having heard testimony under oath and received evidence, thereupon issues its Findings of Fact, Conclusions of Law, and Order as follows:

I. FINDINGS OF FACT:

The Board FINDS that the condition of performing construction work without a permit, as described by the Code Enforcement Officer in the Notice of Violation and in the testimony and documentary evidence presented at this hearing, did exist on the date(s), time(s) and at the place alleged.

II. CONCLUSIONS OF LAW

The Board, upon MOTION by Kohls, SECONDED by Johnson, in Case No. 17-406473 CONCLUDES that based upon the testimony and evidence presented, the conditions described at 490 Banyan Boulevard, constitute a violation of Section 16-112. Florida Building Code Adopted; amendments. Section 105 Permits 105.1 Required, of the Code of Ordinances of the City of Naples.

III. **ORDER**

The Board, upon MOTION by Kohls, SECONDED by Johnson, ORDERS:

a. The Respondent to correct the violation by applying for and obtaining a permit within 30 days of rendition of this Order, and

b. If the violation is not corrected within such period of time, a fine of $100.00 is imposed for each day thereafter that the violation has not been corrected.

DONE AND ORDERED the 25th day of May, 2017 at Naples, Collier County, Florida.

CODE ENFORCEMENT BOARD OF
THE CITY OF NAPLES, FLORIDA

James Moon, Chairman

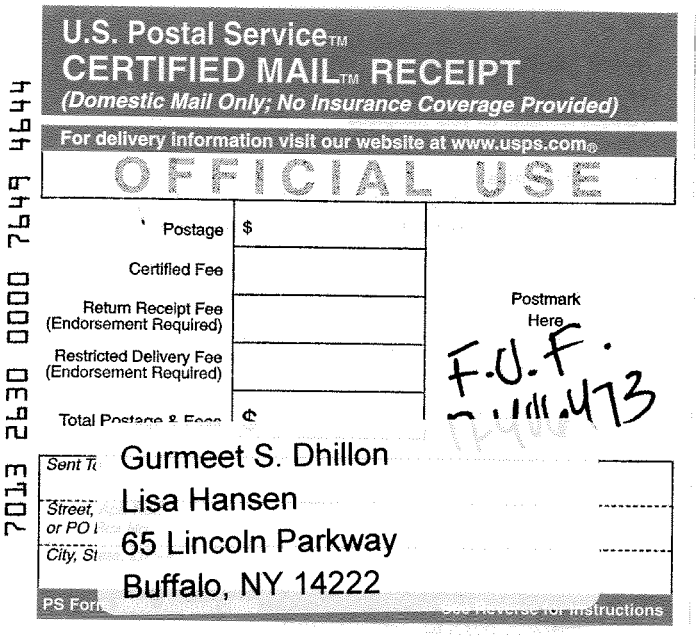
Approved as to form and legality:

Robert D. Pritt
Attorney for the Code Enforcement Board

I CERTIFY that the foregoing Findings of Fact, Conclusions of Law, and Order have been furnished by certified and regular mail to **Gurmeet S. Dhillon and Lisa A. Hansen, 65 Lincoln Parkway, Buffalo, NY 14222** this 6th day of June, 2017

Karla Gibbs
Secretary for the Code Enforcement Board

Date Filed with Clerk: 6/6/17



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Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$

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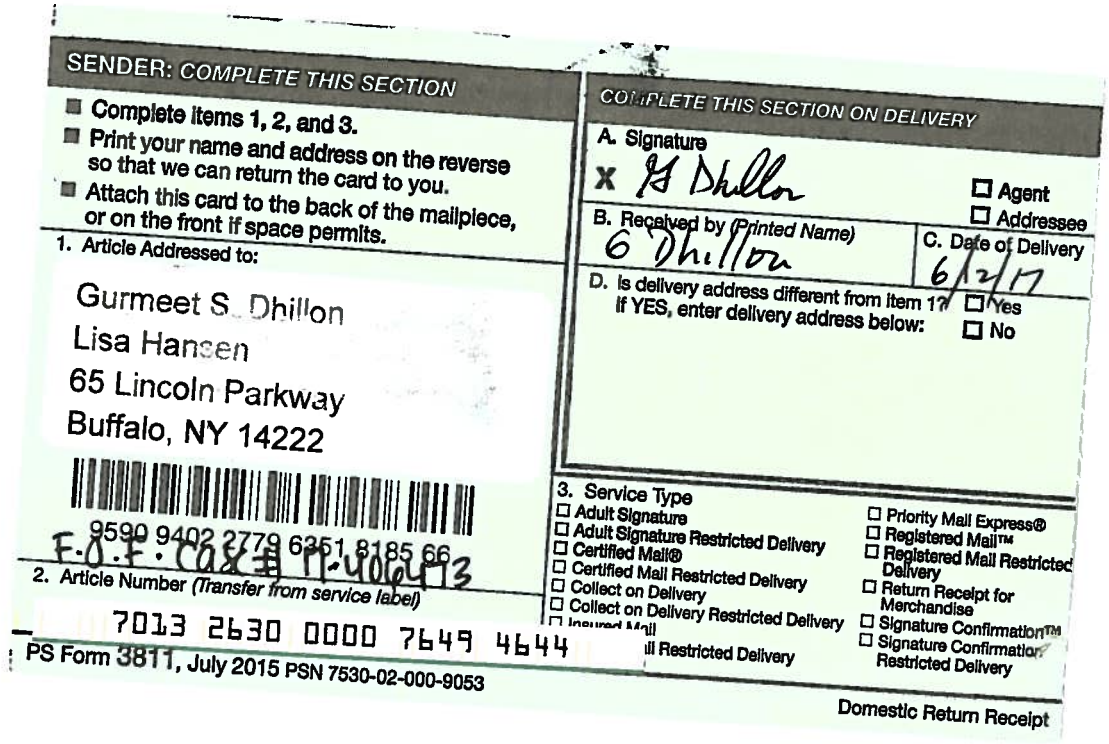
7013 2630 0000 7649 4644

Sent To Gurmeet S. Dhillon
Street, Apt. No., or PO Box No. Lisa Hansen
City, State, ZIP+4 65 Lincoln Parkway
Buffalo, NY 14222

PS Form ... See Reverse for Instructions



SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Gurmeet S. Dhillon
Lisa Hansen
65 Lincoln Parkway
Buffalo, NY 14222

9590 9402 2779 6351 8185 66

F.O.F. Case # 11-40644

2. Article Number (Transfer from service label)

7013 2630 0000 7649 4644

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X G Dhillon ☐ Agent ☐ Addressee

B. Received by (Printed Name) G Dhillon

C. Date of Delivery 6/2/17

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type

- ☐ Adult Signature
- ☐ Adult Signature Restricted Delivery
- ☐ Certified Mail®
- ☐ Certified Mail Restricted Delivery
- ☐ Collect on Delivery
- ☐ Collect on Delivery Restricted Delivery
- ☐ Insured Mail
- ☐ Priority Mail Express®
- ☐ Registered Mail™
- ☐ Registered Mail Restricted Delivery
- ☐ Return Receipt for Merchandise
- ☐ Signature Confirmation™
- ☐ Signature Confirmation Restricted Delivery

PS Form 3811, July 2015 PSN 7530-02-000-9053

Domestic Return Receipt

City of Naples Florida

Finance

735 8th St S

Naples, FL 34102

055839-0011 Albert C. 12/11/2017 02:48PM

MISCELLANEOUS
Reference 1: GS DHILLON
2018 Item: CODE
1.00 @ 7,800.00
Code Enforcement Fines
(CODE) 7,800.00

7,800.00

Subtotal 7,800.00

Total 7,800.00

CREDIT CARD 7,800.00
Visa **********2719
Ref=40454303551
Auth=05728D
2719
1

Change due 0.00

Paid by: GURMEET S. DHILLON

Comments: CASE NO. #17-406473 490 BANYAN BLVD.GURMEET S. DHILLON AND LISA A. HANSEN

Signature: GURMEET DHILLON PHONED IN

Thank you for your payment

CODE ENFORCEMENT BOARD
OF THE
CITY OF NAPLES, FLORIDA

CITY OF NAPLES,	)	
	)	
Petitioner,	)	**CASE NO. 17-406473**
	)	
vs.	)	
	)	
	)	
GURMEET S. DHILLON AND	)	
LISA A. HANSEN	)	
	)	
Respondents.	)	
	)	

FINDINGS OF FACT, CONCLUSIONS OF LAW, AND ORDER (DECLINING REDUCTION OF FINE AND IMPOSING LIEN)

THIS CAUSE came on for public hearing before the Board on the 7th day of December, 2017, after due notice to the Respondents, and the Board having heard testimony under oath and received evidence, thereupon issues its Findings of Fact, Conclusions of Law, and Order as follows:

I. FINDINGS OF FACT

The Board FINDS that:

1) The Respondents were previously ordered by this Board to correct the violation as set out in the previous Findings of Fact, Conclusions of Law and Order dated May 25, 2017.

2) Said Order required Respondents to correct the violation by July 6, 2017, and failing same, a fine of $100 per day for each day of non-compliance thereafter, is imposed,

3) The Code Enforcement Officer provided an affidavit and testimony at the hearing that: a) the violation continued after the correction deadline, b) corrective action was taken on September 23, 2017, and c) a fine be imposed in the amount of $100 per day for 78 days for a total of $7,800.

4) The Respondents request a reduction in Code Enforcement Fines.

II. CONCLUSIONS OF LAW

The Board, based upon the testimony and evidence presented in Case No. 17-406473, CONCLUDES that the violation at 490 Banyan Boulevard has been corrected.

III. ORDER

The Board, upon MOTION by Johnson, SECONDED by Sansbury, ORDERS, declines to reduce the fine, and imposes a lien in the amount of $7,800.

DONE AND ORDERED the 7th day of December, 2017 at Naples, Collier County, Florida.

CODE ENFORCEMENT BOARD OF
THE CITY OF NAPLES, FLORIDA

William Bibb

William Bibb, Chairman

Approved as to form:

Robert D. Pritt

Robert D. Pritt
Attorney for the Board

I CERTIFY that the foregoing Findings of Fact, Conclusions of Law, and Order have been furnished by, certified and regular mail, to **Gurmeet S. Dhillon and Lisa A. Hansen, 65 Lincoln Parkway, Buffalo, New York 14222** this 14th day of December, 2017.

Karla Gibbs

Karla Gibbs
Secretary for the Board

Date Filed with Clerk: 12/14/17

September 1, 2017
Dear Mr. Jacobsen,

We would like to take the opportunity to introduce ourselves, explain the situation, and apologize for what has happened. We are Gurmeet Dhillon and Lisa Hansen, a married couple with two teenage sons from Buffalo, New York. We purchased 490 Banyan Blvd Naples FL 34102 and closed on the property Aug 7, 2015. I (Lisa) was in the house once prior to purchase for about two hours and neither Gurmeet nor our sons have ever been to the property.

Our realtor, Jordan Delaney of John R. Wood realtors, provided us with a decorator/designer, his mother, Tammy Delaney, of Well Dressed Home and Window. She was going to spearhead the renovation project since we live so far away. We would not be able to be in Florida to supervise because of work and extensive care of our sons which keep us in Buffalo. Mrs. Delaney worked with two different independent licensed contractors, but after five months of evaluating our project goals, both decided the job was too small for them. She was unable to find us a contractor, so we ended our relationship with her amicably. Through a lady who plans and designs gardens, Beth Williams of Greenery Wizard, also referred to us by the realty office, we received a referral for a contractor, Andrew G. Spurgeon. We spoke in May 2016 with Andrew who stated he and his father would do our project. The father died a few weeks before they were about to begin (throat cancer), so Andrew started it alone in June 2016.

When we received the first certified letter from the City of Naples Code Enforcement (May 3, 2017), I (Lisa) immediately called Andrew and asked him about it. He stated he had spoken to the head of the Building Department who had approved his work and that the letter represented a misunderstanding between Code Enforcement and Building Department offices. He stated it was “his responsibility” and he would address the matter. I told him we were very concerned about this and grateful for his immediate attention to the matter. He did not speak about it again. We received the second certified letter (May 9, 2017) and immediately contacted Andrew, explaining the matter was not resolved and had escalated. He became irritated that his earlier attempt had not rectified the matter and stated he would straighten out what he perceived to be a misunderstanding between the departments. I offered to participate in addressing the issue but he insisted that he, not we, be the point of contact to the City of Naples Code Enforcement Department. He stated he had a close relationship with the head of the Buildings Department and that all of his work was in compliance with city bylaws and that this letter was simply a lack of communication between departments within the City of Naples. He confirmed this by showing us a text message from the Buildings Department official. I told him we were very concerned about this and very grateful for his efforts to resolve the matter. Once the third certified letter arrived (August 3, 2017), indicating an ongoing fine, we became extremely concerned and spoke with Andrew again. He stated he had filed a written complaint with the Office of Code Enforcement and that he had explained in detail the situation of approval from

the Building Department to Paola, a woman who worked in the Code Enforcement Office. The hearing was scheduled for August 25, 2017 but Andrew stated that Mr. Jacobsen was “on vacation” and would likely return the last week of August just before the hearing. He stated that Paola would go on a “fact finding mission” with the Buildings Department and present her information to her boss, Mr. Jacobsen, when he returned from vacation. As the situation had become so urgent and we were extremely concerned by the course of events, Gurmeet contacted Mr. Jacobsen directly and learned that none of the communication Andrew stated had occurred was true. We left Andrew a voice message to this effect as we had not been able to reach him by phone, text, or email since early August 2017. He never responded. He is unreachable and his whereabouts are unknown to us.

At this point, we were very afraid that he had lied to us, defrauded us, and was not a licensed contractor. After contacting a few licensed contracting firms provided by recent referrals, Lisa flew down to Naples 8/27/17-8/28/17 to meet with them, assess the status of the house, and try to salvage this grave situation. Mr. Anthony Persichilli, owner and CEO of Green Mountain Builders, together with Mr. Daniel Thron, Director of Business Development at Green Mountain Builders, assessed the house with Lisa. Mr. Persichilli is in the process of assessing it with an engineer, applying for permits and proposing how to proceed with the renovation goals to bring the project back on track and perform the appropriate renovation.

We are sincerely apologetic for how Andrew and our project behaved to the City of Naples. We have been visiting Naples for 10 years with Lisa’s mother and have been dreaming of owning a place of our own here so our small family could enjoy Naples and be a part of this community. We worked very hard and made many sacrifices to obtain this property and are devastated by the dishonesty of Andrew which has resulted in our current predicament. We are truly sorry for not having addressed the correspondence from the City of Naples Code Enforcement ourselves, but he kept reassuring us it was “his business” and he was “handling it”. Please accept our sincere apologies and know that we are striving to make things right with the City, get the project on the proper and approved course, with a goal of becoming a valued part of the Naples community.

Most sincerely,

Gurmeet, Lisa, Stephen, and Eric
The Dhillon family

Roger Jacobsen

From: gurmeet dhillon <DhillonG@msn.com>
Sent: Monday, February 5, 2018 11:32 AM
To: Roger Jacobsen
Subject: Re: 490 Banyan Blvd- City Council appeal

Hi Mr. Jacobsen,

Thank you for your kind words of concern.
My mom passed away on Friday and we are doing arrangements for services today and tomorrow. I think it best if you
proceed with the appeal without my presence. This was a sudden death and we are very distraught. I don't think I could add
anything to the appeal beyond what my two letters have expressed. Thank you for contacting me. I look forward to hearing
from the Council.

Many thanks,
Lisa Hansen

From: Roger Jacobsen <rjacobsen@naplesgov.com>
Sent: Monday, February 5, 2018 5:09 AM
To: gurmeet dhillon
Subject: RE: 490 Banyan Blvd- City Council appeal

Good morning Sir. First of all, my prayers are with you. I can delay the Council meeting till a future date if you so desire, or we can proceed without you attending.

Please let me know your decision.

Roger Jacobsen

From: gurmeet dhillon [mailto:DhillonG@msn.com]
Sent: Friday, February 2, 2018 2:08 AM
To: Roger Jacobsen <rjacobsen@naplesgov.com>
Subject: Re: 490 Banyan Blvd- City Council appeal

Hi Mr. Jacobsen,

I have been communicating with Tony Persichilli of Green Mountain Builders, our contractor, and he is planning to contact you regarding
the upcoming City Council appeal. He may have contacted you already. A recent turn of events with my Mother (she is just 96 today) has put her
in the hospital and she has chosen to refuse surgery and die with comfort care. We have been in the hospital each day to spend what little time
we have with her. I do not think I can make it for the hearing given this turn of events. She was seemingly completely healthy on Monday and I was planning
on taking her out for dinner on her birthday, but things changed quickly. I cannot be certain how long this will be going on, but the medical staff do not feel she will be here
very long. I am sure this is more detail than you may like, but I wasn't sure what the communication has been and I felt it was
important to communicate with you directly so you would know what is going on and why I cannot be present at the appeal. I hope my 2 letters will stand to
explain my situation and request, and I can only hope you will consider presenting our situation to the council in a sympathetic way. Thank you in advance for your understanding. Please feel free to contact me if you wish.

Thank you
Lisa Hansen
cell 716-361-3707
email dhillong@msn.com

From: Roger Jacobsen <rjacobsen@naplesgov.com>
Sent: Friday, January 26, 2018 4:43 AM
To: Tony Persichilli; GDHillon@proscan.com
Cc: DhillonG@msn.com
Subject: FW: 490 Bayan Blvd

Unless I hear different from the owners, the meeting will continue for February 21st, 2018.

Roger Jacobsen
Code Enforcement Manager
City of Naples

From: Roger Jacobsen
Sent: Monday, January 22, 2018 7:12 AM
To: 'Tony Persichilli' <TonyP@GreenMountainBuildersSWFL.com>
Subject: RE: 490 Bayan Blvd

I was told the owners were appearing.

Roger

From: Tony Persichilli [mailto:TonyP@GreenMountainBuildersSWFL.com]
Sent: Monday, January 22, 2018 6:24 AM
To: Roger Jacobsen <rjacobsen@naplesgov.com>
Subject: 490 Bayan Blvd

Mr. Jacobsen

I will not be able to attend the appeal on February. How do we push it back to the next board meeting?

GREEN MOUNTAIN BUILDERS

Your Dream, Our Expertise, An Exceptional Home

Sincerely

Anthony Persichilli

Anthony Persichilli
Cell 239-940-9345
Office 239-466-1801

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