City of North Port

Professional Engineering Services for the Big Slough Flood Reduction Study

Agreement #2016-48
Department of Public Works

PROJECT PLAN

November 2016

DeLoach Engineering Science, PLLC
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DeLoach Engineering Science
water resources and civil engineering

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Big Slough Flood Reduction Study

PROJECT PLAN

The purpose of this project plan is to document the approach to executing pending project tasks and to identify outstanding project-related issues. This is the first draft of project development for the Big Slough Flood Reduction Study. *This document will periodically be revisited to assess overall progress, describe upcoming tasks and deliverables, evaluate staff allocations, and describe deficiencies and recovery actions completed and/or planned*.

Introduction

The Big Slough Flood Reduction Study, cooperatively funded by and between the City of North Port and the Southwest Florida Water Management District (SWFWMD), is being performed for the Department of Public Works under City of North Port Agreement #2016-48. Notice to Proceed to conduct the flood study was issued to DeLoach Engineering Science, PLLC (DES) on October 13, 2016. Per the agreement, DES will evaluate feasibility and cost effectiveness of various solutions intended to reduce flooding in the City of North Port within the Big Slough Watershed.

More specifically, the Big Slough Flood Reduction Feasibility Study is comprised of two distinct parts:

- Part 1 is to evaluate localized flooding along Myakkahatchee Creek within the I-75 and Jockey Club Study Areas and recommend construction projects or other methods to mitigate flooding.
- Part 2 is to evaluate preliminary regional concepts including, but not limited to, those previously developed by others, with the intent to advance large scale solutions to mitigate flooding throughout the City of North Port.

Stormwater evaluations performed by DES will employ data and a watershed model previously developed by Ardaman & Associates, Inc. (Ardaman) for the North Port/Big Slough Watershed Management Program (WMP) project. That prior project was also cooperatively funded by the City of North Port and the SWFWMD and was completed in 2014. The existing watershed model was developed by Ardaman using CHAN Version 2.03 (Aquarian Software, Inc.). All data collected, work products generated, and reports submitted under the prior North Port/Big Slough WMP project will be obtained by the City and provided to DES for use in performing this flood reduction study.

Basic Watershed Information

The Big Slough Watershed is in southeastern Sarasota County and is tributary to the Myakka River. Portions of the City of North Port located east of the Myakka River are within the southern portion of the Big Slough Watershed. The Big Slough Canal (also called Myakkahatchee Creek in its lower reaches) passes from north to south and receives inflows from numerous waterways within the City. Discharge of waters from the City and upstream offsite areas occurs primarily via Myakkahatchee Creek as it passes beneath US 41. Lesser discharges occur southward through several open weirs, drop structures, and culverts along Hillsborough Boulevard into waterways which continue through Port Charlotte. Several of those downstream waterways are controlled by structures while others are tidally influenced.

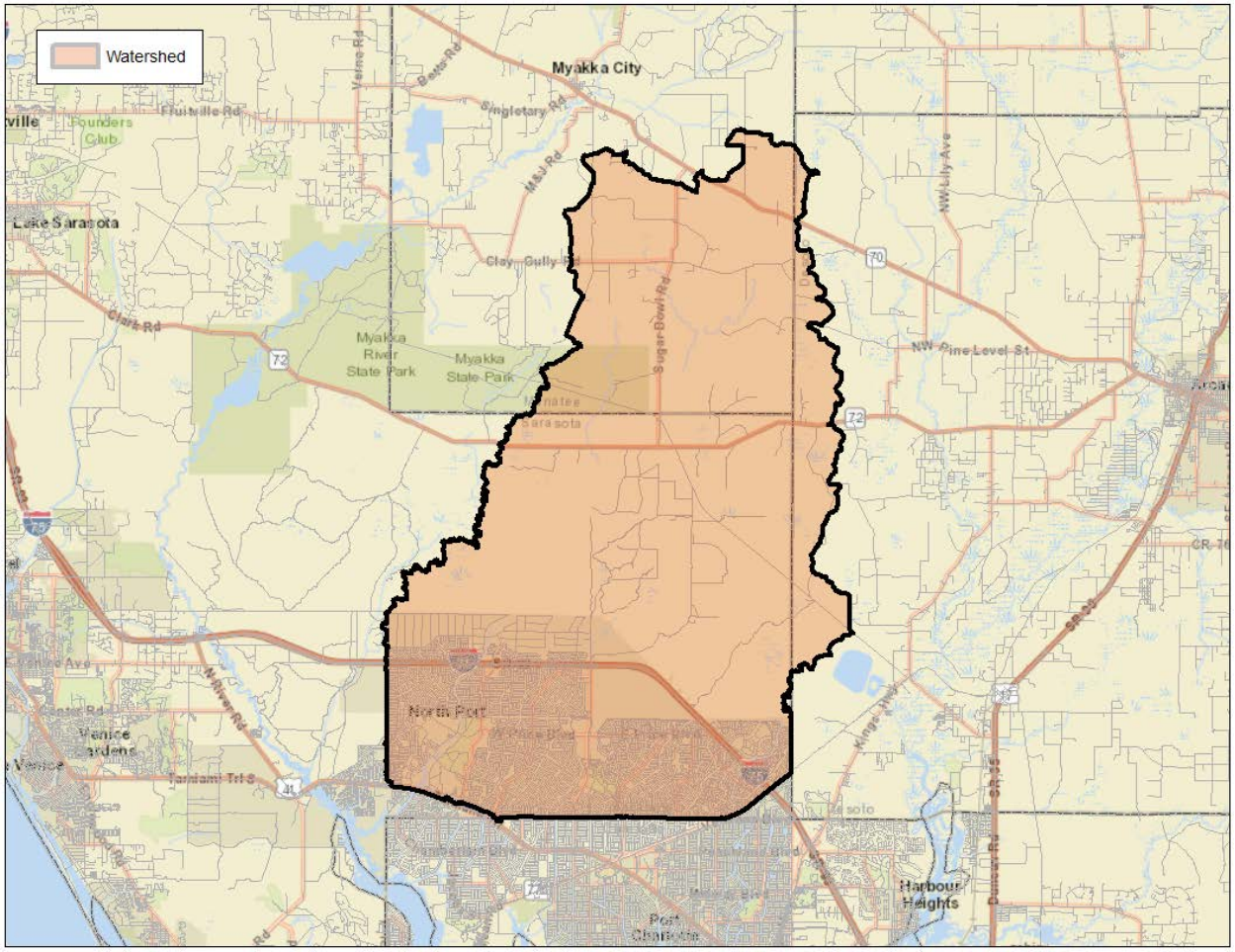


Figure 1: The Big Slough Watershed Area

The City has routinely experienced flooding in the Big Slough Watershed. Two such flood zones are the areas near Myakkahatchee Creek at I-75 and the areas in and around the Jockey Club.

- The Myakkahatchee Creek at I-75 Study Area covers approximately 335 acres adjacent to the Myakkahatchee Creek. The area is bounded on the east by Sumter Boulevard and traversed from east to west by Interstate Highway 75.
- The northern section of the Jockey Club Study Area covers approximately 62 acres and is bounded on the north by Appomattox Drive, on the west by Pan American Boulevard, and on the east by Myakkahatchee Creek. The southern section of the Jockey Club Study Area near Ketona Road is also included and is approximately 82 acres in size.

Figure 2a depicts existing mean annual and 10-year floodplains within the I-75 study area adjacent to Myakkahatchee Creek, both north and south of the interstate, as developed during the North Port/Big Slough WMP project. Figure 2b shows sub-basin delineations and the model network features used to simulate response to rainfall during the WMP project. Figure 2c depicts hydrologic soils groups. Figures 3a, 3b, and 3c illustrate the same information within and surrounding the Jockey Club study area.

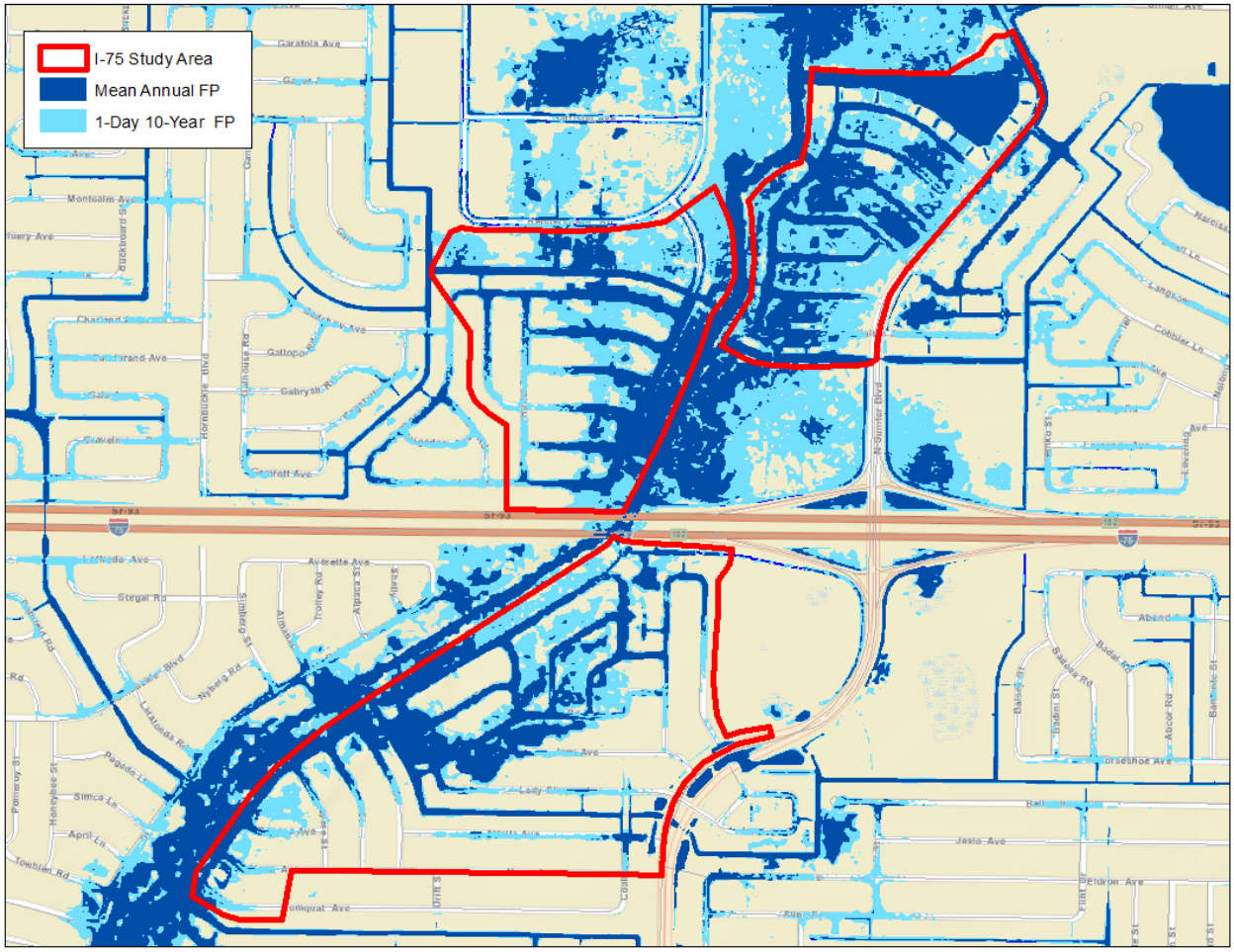


Figure 2a: I-75 Study Area, Mean Annual and 10-Year Floodplains

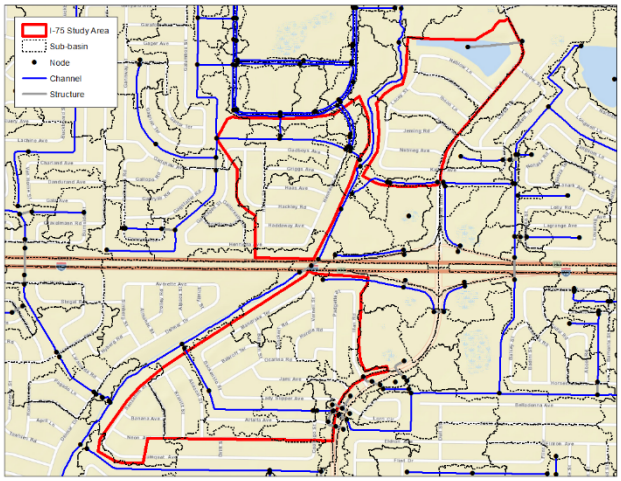


Figure 2b: I-75 Study Area, Model Network

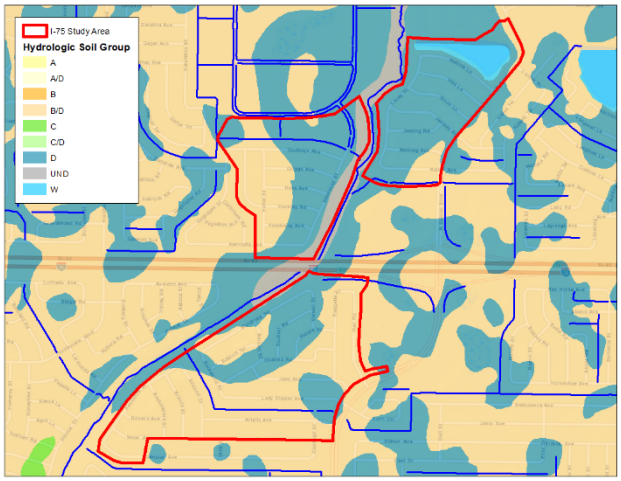


Figure 2c: I-75 Study Area, Hydrologic Soil Groups

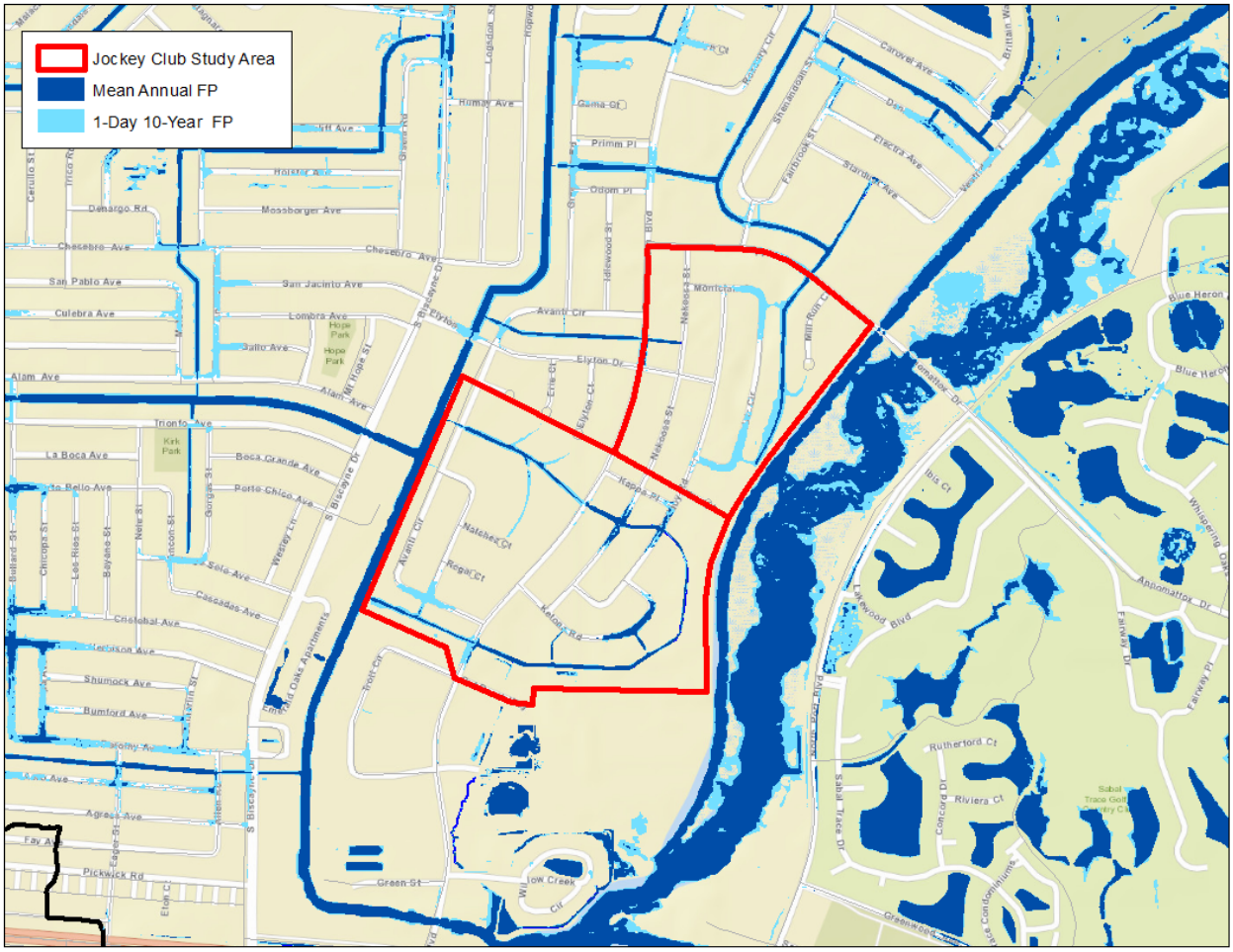


Figure 3a: Jockey Club Study Area, Mean Annual and 10-Year Floodplains

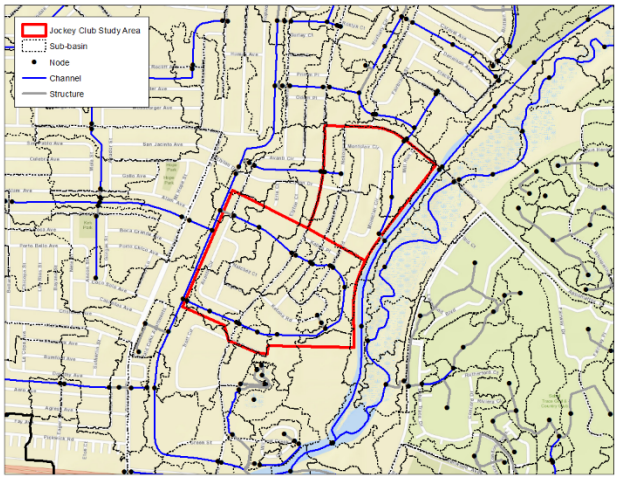


Figure 3b: Jockey Club Study Area, Model Network

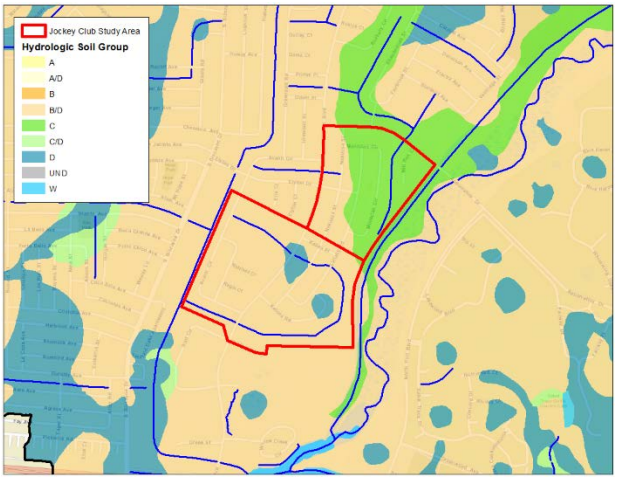


Figure 3c: Jockey Club Study Area, Hydrologic Soil Groups

Previous Work Completed

The Big Slough watershed and City of North Port stormwater management system have been the subjects of prior investigations. Reference will be made to the following reports:

- North Port Water Control District Phase I Report, Inventory and Approach to Analysis, for General Development Utilities, Inc., by R. D. Ghioto & Associates, Inc. (1984) presents data and information that describes NPWCD facilities, their function and condition.
- City of North Port Big Slough Watershed Study Phase III Task 2 Final Report, Stormwater Management Master Plan, by Camp, Dresser & McKee, Inc. (1993) presents conceptual solutions for flooding as well as assessments of potential water supplies and of nonpoint source pollution and describes a stormwater management plan to reduce flooding during extreme storm events.
- Watershed Management Program Consulting Services in the Big Slough Watershed (K883), Best Management Practices (BMP) Analysis Final Report, for Southwest Florida Water Management District and City of North Port, by Ardaman & Associates, Inc. (2014) evaluates BMP alternatives to address flooding conditions based on effectiveness, permittability, and economic viability.

The 1993 Stormwater Management Master Plan was partially implemented, providing increased local conveyance through replacement of culvert structures at four locations. Those improvements are accounted for in more recent model development. Other plan components were not completed including those for storage and flow diversion, apparently due to regulatory and financial constraints.

Under the WMP project, the 2012 Version of 2004 Condition model was developed and six regional BMP alternatives were evaluated that could potentially reduce flooding through combinations of conveyance improvements, stormwater management storage areas, flood proofing, and flow diversion. Although the regional alternatives developed under the WMP project were not incorporated into a specific plan for implementation, the work provides insight to the system's hydraulic response and BMP limitations.

Additionally, hydraulic performance and effects of potential local conveyance improvements were analyzed at the following sites:

- R-36 Canal at I-75
- Myakkahatchee Creek at I-75
- R-36 Canal at Tropicaire Boulevard
- Myakkahatchee Creek at Tropicaire Boulevard
- WCS-162 location on the R-36 Canal (possibility of adding gates to the existing structure)
- Price Boulevard drainage system (five alternative sets of improvements)

Results from each BMP evaluation were compared the 24-hour 100-year existing condition model.

The Big Slough Flood Reduction Study will build upon all prior work to advance previously developed and new concepts to achieve flood mitigation in areas where residential structures are shown as flooding in the recently updated Flood Insurance Rate Maps (FIRMs). Performance of proposed improvements will be considered relative to lesser storm events from mean annual up to and including the 100-year storm event to evaluate cost and benefit relationships across a broader range of conditions.

Potential Issues

There are currently no technical issues which would prevent moving forward with the flood reduction study per the project scope of work. When issues do arise, discussion will occur with the City project manager. The project plan will be updated to reflect discussions, corrective actions, and outcomes.

Outline of This Document

This document:

- provides an overview of the Big Slough Flood Reduction Study and includes the following:
    - Goals and Objectives
    - Work Breakdown Structure
    - Project Schedule
    - Project Costs
    - Staff Allocations
- describes the scope of work for all project activities (Task List, Deliverables, and Approach)
- includes a brief narrative describing current assumptions, issues, and issue management
- presents updated plans for Quality Assurance, Quality Control, and Communications

Goals and Objectives

The City of North Port has partnered with SWFWMD through the District's Cooperative Funding Initiative (CFI) to oversee completion of the Big Slough Flood Reduction Study. The CFI allows local governments to share costs for projects that assist in creating sustainable water resources, provide flood protection, and enhance conservation efforts. As such, cooperatively funded WMP projects must meet various goals and objectives of both the District and the local partners.

Agency Goals

Local governments often partner in the District's CFI program because they need better floodplain information to make good land use (building and zoning) decisions. The program also routinely develops recommendations to improve deficiencies in flood protection level of service and to implement BMPs for water quality improvement. The goal of the Big Slough Flood Reduction Study is to develop BMPs to address existing recurrent flooding.

Study Objectives

The flood reduction study will be performed in two distinct parts.

Part 1 is a concentrated effort which considers solutions to reduce flooding through implementing localized improvements within certain identified neighborhoods that are adjacent to Myakkahatchee Creek at I-75 and at the Jockey Club while Part 2 is a broader study which considers a regional approach to reduce flooding in other portions of the City.

More specifically, this study will:

- Develop projects to reduce flooding along Myakkahatchee Creek near I-75 and the Jockey Club

- Produce a conceptual plan for improvements covering multiple sites and facilities serving those two areas and submit a State-wide Environmental Resource Permit (SWERP) for Conceptual Approval of the plan for flood reduction
- Evaluate & advance a set of BMP concepts to reduce flood risk in North Port on a regional scale
- Produce a planning-level document describing a small number of regional projects which exhibit potential flood reduction benefits based upon screening-level hydraulic evaluations
- Produce a planning-level cost estimate that addresses additional (i.e., future) analyses as well as engineering design, environmental permitting, land acquisition, construction, and other costs

Work Breakdown Structure

The Big Slough Flood Reduction Study includes the following major elements:

- Big Slough Flood Reduction Study
  - Project Development
  - Part 1 - Problem Definition, Field Visits, and Team Coordination
  - Part 1 - Alternatives Formulation and Community Outreach
  - Part 1 - Plan Development, Reporting, and Conceptual Permitting
  - Part 2 - Regional Flood Reduction Concept Formulation
  - Part 2 - Performance Evaluation and Agency Outreach
  - Part 2 - Planning Level Report on Regional Improvement Projects

Key project milestones for the Big Slough Flood Reduction Study are as follows:

1.1 Project Development
- 1.1.1 Kickoff Meeting and Initial Field Visit
- 1.1.2 Data Collection and Assembly
  - 1.1.2.1 CHAN Model from North Port/Big Slough WMP Project
  - 1.1.2.2 Geodatabase from North Port/Big Slough WMP Project
  - 1.1.2.3 Terrain from North Port/Big Slough WMP Project
  - 1.1.2.4 PLS Survey from North Port/Big Slough WMP Project
  - 1.1.2.5 Land Use from North Port/Big Slough WMP Project
  - 1.1.2.6 Parcels from Sarasota County Property Appraiser
  - 1.1.2.7 Utilities from City of North Port (for specific areas)
- 1.1.3 Summary of Prior Work Performed
  - 1.1.3.1 Ardaman
  - 1.1.3.2 CDM
- 1.1.4 Project Plan Formulation

1.2 Define Existing Flooding Problems
- 1.2.1 Confirm Ability to Reproduce WMP Project Model Results
  - 1.2.1.1 Simulations of Mean Annual to 100-Year Events
  - 1.2.1.2 Flood Mapping and Comparison to Ardaman Results
  - 1.2.1.3 Update Model to include a Small Number of Prior Conveyance Improvements
  - 1.2.1.4 Flood Mapping and Comparison of Updated Model to Ardaman Results
- 1.2.2 Characterize Local Flooding Conditions
  - 1.2.2.1 Myakkahatchee Creek at I-75
  - 1.2.2.2 Jockey Club

1.3 Operations Staff Meeting and Team Field Visit
- 1.3.1 Meeting Topics

1.3.1.1 Prior Work and Project Plan
1.3.1.2 Existing Flooding Problems and Potential Solutions – with Operations Staff Input
1.3.1.3 Approach to Evaluation of Hydraulic Performance of Potential Solutions
1.3.1.4 Cost-Benefit and Other Project Considerations and Constraints
1.3.1.5 Refinements and Development of a Recommended Plan
1.3.1.6 Remaining Project Schedule and Upcoming Community Meeting

1.4 Formulate List of Potential Solutions for Hydraulic Evaluation
1.4.1 Describe Each Potential Solution and Any Known or Expected Obstacles to Success
1.4.2 Identify Additional Data Needs to Support Hydraulic Evaluation
1.4.3 Meeting to Review and Discuss List of Potential Solutions
1.4.4 Select a Set of Alternatives from Among Potential Solutions for Hydraulic Evaluation

1.5 Evaluate Hydraulic Performance of Selected Set of Alternatives
1.5.1 Perform Hydraulic Analyses
1.5.2 Summarize Hydraulic Performance
1.5.3 Meeting to Review and Discuss Performance of Alternatives
1.5.4 Identify Preferred Plan(s) of Improvements

1.6 Refine Preferred Plan(s) of Improvements
1.6.1 Evaluate Site Conditions and Design/Permitting Constraints of Preferred Plan(s)
1.6.2 Refine Preferred Plan(s) to Address Site Conditions and Design/Permitting Constraints
1.6.3 Perform Hydraulic Analyses of Refined Plan(s)
1.6.4 Perform Cost-Benefit Analysis of Refined Plan(s)
1.6.5 Meeting to Review and Discuss Refined Plan(s)
1.6.6 Select Recommended Plan

1.7 Community Outreach Meeting
1.7.1 Meeting Topics
1.7.1.1 Project Update
1.7.1.2 Summary of Plan Development
1.7.1.3 Description of Recommended Plan
1.7.1.4 Performance of Recommended Plan
1.7.1.5 Cost-Benefit
1.7.1.6 Public Input
1.7.1.7 Remaining Project Schedule and Upcoming Presentation to City

1.8 Summarize and Present Recommended Plan of Improvements
1.8.1 Finalize Recommended Plan and Project Deliverables
1.8.1.1 Pre/Post Models and Result Tabulations
1.8.1.2 Conceptual-Level Design Drawings
1.8.1.3 Opinion of Probable Cost (incl. detailed design, permitting, land, and construction)
1.8.1.4 Cost-Benefit
1.8.1.5 Report and Mapping
1.8.1.6 Training City staff in use of CHAN Modeling Software
1.8.2 Meeting with City Administrative Staff
1.8.3 Statewide Environmental Resource Permitting
1.8.3.1 SWFWMD Pre-App Meeting for Statewide Conceptual (or simple Standard) ERP
1.8.3.2 Application Preparation/Submittal and Response to Two (2) Requests for Additional Information (RAIs)

2.1 Formulate List of Regional Flood Reduction Concepts
2.1.1 Describe Each Potential Solution and Known or Expected Obstacles to Success
2.1.2 Identify Additional Data Needs to Support Hydraulic Evaluation
2.1.3 Meeting to Review and Discuss List of Potential Solutions
2.1.4 Select a Set of Alternatives for Further Evaluation

2.2 Landowner & Regulatory Outreach Meeting(s)
2.3 Evaluate Hydraulic Performance of Selected Set of Alternatives
  2.3.1 Perform Screening-Level Hydraulic Analyses
  2.3.2 Summarize Hydraulic Performance
  2.3.3 Meeting to Review and Discuss Performance of Alternatives
  2.3.4 Identify Preferred Plans for Regional Improvements
2.4 Summarize and Present Preferred Plan(s) for Regional Improvements
  2.4.1 Screening-Level Hydraulic Model Pre/Post and Result Tabulations
  2.4.2 Conceptual-Level Drawings and Plan Descriptions
  2.4.3 Site Conditions and Design Constraints
  2.4.4 Relevant Permitting Requirements
  2.4.5 Opinion of Probable Cost (for detailed analysis, design, permitting, land, and construction)
  2.4.6 Planning-Level Report and Mapping

Project Schedule

An accelerated schedule for the Big Slough Flood Reduction Study dictates completion of all Part 1 and Part 2 tasks within about nine (9) months of receiving Notice to Proceed. Table 1 presents the agreed upon performance schedule for the project. The performance schedule is also depicted in a project Gantt chart, provided in Appendix A.

Generally, the following task durations are expected (Part 1 and Part 2 tasks completed concurrently):

- Project Plan, 1 month
- Part 1 - Problem Definition, Field Visits, and Initial Team Coordination, 1 month
- Part 1 - Alternatives Formulation and Community Outreach, 3 months
- Part 1 - Plan Development, Reporting, and Conceptual Permitting, 4 months
- Part 2 - Regional Flood Reduction Concept Formulation, 2 months
- Part 2 - Performance Evaluation and Agency Outreach, 2 months
- Part 2 - Planning Level Report on Plan(s) for Regional Improvements, 4 months

Critical Path

All project tasks are to be performed expeditiously and in the sequence depicted in the project Gantt chart. Note that Part 1 and Part 2 project tasks are to be performed concurrently. A critical component of the project timeline is the identification and collection of field survey data by a Professional Land Surveyor to support model evaluations of Part 1 flood reduction alternatives. A qualified local PLS firm is to be identified during the second month and field work is to be performed early in the third month of the project. Field survey by a PLS should be completed within 2 weeks.

Project Invoice Schedule

Invoicing for the Big Slough Flood Reduction Study is progress-based with monthly lump sum fee amounts generally aligned with scheduled work product submittals. The lump sum fees are based upon labor estimates and other costs to produce those work products. A projected monthly invoice schedule is presented in Table 2.

Project Cost

The budget for the Big Slough Flood Reduction Study is $300,000, allocating approximately $250K for Part 1 activities and $50K for Part 2 activities.

Itemized Cost of Services Performed

An itemized project cost spreadsheet for all tasks that have been authorized by the City of North Port under Agreement #2016-48 is provided in Appendix B.

The itemized project cost spreadsheet reflects expected staff assignments and man-hour requirements to successfully provide the contracted services, and applies labor rates from the Agreement Consultant Fee Schedule to arrive at cost, by task, to perform the work. Staffing, man-hour requirements, and associated costs contained in the itemized project cost spreadsheet reflect the considered agreement between the City of North Port and DES, attained through discussion and negotiation, as to the level of detail desired and the effort required to satisfactorily complete the Big Slough Flood Reduction Study.

Staff Allocation

Project team members and their roles are summarized in the following:

Agreement #2016-48 identifies **Ms. Elizabeth Wong, PE** and **Mr. David DeLoach, PE** as project managers and prime contacts for the City and DES, respectively. **Ms. Jezabel Pagan Garcia** will serve as the project manager and lead point of contact for the SWFWMD. Ms. Wong, Mr. DeLoach, and Ms. Garcia will collaborate over the course of the project to update the project timeline, resource allocations, and budget in response to circumstances that may arise over the course of completing the project. Project deliverables, technical reviews, and related invoicing will also be managed by these individuals.

DES has assigned **Ms. Trillian Baldassari, PE** as the team's Lead Project Engineer, responsible for technical execution and oversight of project-related activities, as well as for supporting Mr. DeLoach on certain duties related to project management. Ms. Baldassari will serve as Deputy Project Manager, will be knowledgeable in all technical aspects of the project, and will remain cognizant of the project's status, providing the City and District with access to a second, high-level point of contact at DES.

Mr. Christopher Hardin, PE will serve as Project Engineer, responsible for technical execution of select project tasks, and, along with Mr. DeLoach and Ms. Baldassari, will contribute to the performance and timely completion of the project. **Mr. Chris Gilhooley** will serve as GIS Analyst, taking the lead role in geodatabase development, geoprocessing, and GIS deliverables production. **Mr. Rod Ghioto, PE** will serve as a Senior Consultant, also contributing to the performance of project tasks.

Projected staff utilization is provided in Table 3. Generally, utilization is expected to be within desirable levels across all project tasks. Actual utilization and work progress will be closely monitored by Mr. DeLoach to ensure that the schedule is adhered to. As Principal of the company, Mr. DeLoach can make and act upon staffing decisions quickly. He will shift project team member responsibilities or bring additional resources to assist with the project as needed.

Description of Project Activities

Scope of Work

City of North Port Agreement #2016-48 was issued to DES on October 13, 2016 to evaluate feasibility and cost effectiveness of various solutions intended to reduce flooding in the City of North Port within the Big Slough Watershed. The work includes minor model updates, conceptualization and performance evaluation of various BMP alternatives, agency and public outreach, development of plans for improvements, conceptual permitting, and reporting.

Project Startup

Key points about project startup and model preparation are provided in the following:

Project development. DES will meet and coordinate with staff of the City of North Port and SWFWMD to discuss project goals and objectives. The Scope of Work, schedule, and list of deliverables for Agreement #2016-48 will be reviewed during the meeting, with opportunities for all team members to offer input and share concerns regarding any aspect of the project. Based upon those discussions, the Project Plan (this document) will be updated and submitted to the City for approval.

Update of Selected Model Parameters. This project builds upon prior work performed, and utilizes modeling tools previously developed, by others under the SWFWMD WMP. The base model is the SWFWMD Governing Board-approved 2012 Version of 2004 Condition model. DES will utilize field survey data and other information provided by the City to add and/or update a small number of hydraulic features. The resulting model will be called the 2016 Version of 2004 Condition model. It should be noted that this model will not include any other revisions beyond those items listed here:

- For model refinements in the Myakkahatchee at I-75 and at Jockey club areas, DES will:
  - perform engineering-level field visits to review and verify site conditions to be modeled
  - develop local field survey requirements for collection by a third party PLS
  - incorporate collected field survey data into the model to reflect local site conditions
- For model revisions to more accurately reflect current conditions at several sites, DES will:
  - add a single 24-inch PVC pipe from Public Works site to Creighton WW (check)
  - utilize available as-built survey data and add two (2) gates at WCS 101
  - incorporate available survey and storm pipe data in Price Blvd area
  - change 30-inch ADS pipe, flowing from Price Blvd to R-32, to 36-inch ADS
  - add three (3) 48-inch CMP beneath Appomattox Blvd (Stantec plans available)

Update Model Specific Geodatabase. DES will update parameters in the project geodatabase to reflect changes made to selected model parameters (above).

Model Replication and Design Storm Simulations. Simulations will be performed to predict the response of the Big Slough Watershed to a range of synthetic rainfall events with 1-day and 5-day durations and recurrence intervals from 2.33 to 100 years. Depth of rainfall, in inches, for each rainfall event will match those used for the prior WMP work. The Florida Type II Modified Rainfall Distribution provided in the SWFWMD ERP Information Manual will be used to distribute rainfall over 24-hours. Distribution of the rainfall over the 5-day period will be based on a 5-day dimensionless curve also provided by the District.

DES will first confirm that prior simulation results can be replicated within a reasonable tolerance (generally on the order of 0.01 feet) for all design storms using the 2012 Version of 2004 Condition model. The 2016 Version of 2004 Condition model will then be used to simulate response to the same suite of design storms. A table of elevation differences will be developed summarizing computed peak water surface elevations for the original 2012 Version of 2004 Condition model (by Ardaman), the replicated 2012 Version of 2004 Condition model (by DES), and the updated 2016 Version of 2004 Condition model (by DES).

Floodplain Delineation. DES will delineate floodplains without transition zone extents based on digital topographic information and model-predicted peak stages of each storm event. The delineated floodplain area will be compared across the original 2012 Version of 2004 Condition, replicated 2012 Version of 2004 Condition, and updated 2016 Version of 2004 Condition models.

Project Approach

The Big Slough Flood Reduction Feasibility Study will be performed per the project scope of work contained in Agreement #2016-48.

Part 1 activities shall include field surveying, hydraulic modeling, alternatives analyses, and cost benefit assessments needed to evaluate feasibility of options to alleviate flooding in the local neighborhoods. The project shall include community outreach meetings to receive input of concerns from residents. The study shall include a determination of the reasons for flooding, either from conditions within the neighborhoods or from backwater of the Myakkahatchee Creek and interconnected waterways and retention ditches. Solutions may include, but not be limited to: storm sewer construction, pump stations, raised road elevations, flood walls, flood gates, land acquisition, and any combination thereof. The study shall include, but not be limited to, evaluating mean annual, 10-, 25-, and 100-year 1-day and 100-year 5-day storm events.

The CONSULTANT shall determine which solution for these storm events provides the best cost/benefit. In assessing feasibility of various solutions, it should be noted that drainage improvements may not eliminate flooding entirely but instead may reduce the depth, duration, and/or frequency of flooding to levels that still result in reduced annualized damages and a substantial benefit to the community.

The study will focus principally on quantifying hydraulic performance, cost of implementation, and value of benefits derived from reduced flooding and will address other equally important issues qualitatively. For example, hydraulic performance will be summarized with simulation pre vs post peak stage and peak discharge tables for use in demonstrating no adverse impacts in a Statewide Environmental Resource permit (SWERP) application. On the other hand, wetland impacts associated with implementing the various solutions will be addressed qualitatively. For example, while no formal wetland jurisdictional boundary will be developed, potential wetland impacts will be identified based on engineering-level site visits, review of aerial photography, National Wetlands Inventory (NWI), and hydric soil mapping, etc., to estimate potential mitigation requirements and associated costs. Wetland impacts and other factors that are addressed qualitatively during this study would need to be deferred in any Statewide Conceptual ERP application and later resolved during subsequent construction permitting (when final design of the improvements has been completed, wetland jurisdiction has been properly established, wetland impacts and mitigation have been quantified, etc.).

It is anticipated that Part 1 will result in a conceptual plan for improvements covering multiple sites and facilities and that a Statewide Environmental Resource Permit (SWERP) will be submitted for Conceptual Approval of the plan for flood reduction in these areas. The SWERP application would include: conceptual-level drawings and/or diagrams describing the plan for improvements in general terms; a narrative including summary of project purpose, proposed facilities, and pre/post hydraulic performance; and calculations (pre/post storm event simulation results) to demonstrate no adverse impacts with respect to water quantity. Site-specific design and environmental matters (including wetland impacts and mitigation) would be deferred to one or more future SWERP construction applications for implementation of the proposed improvements.

The CONSULTANT shall review and provide a timely response to up to two (2) Requests for Additional Information (RAIs) from SWFWMD. It is expected that District review times will be on the order of one (1) month each and that CONSULTANT response times will be on the order of two (2) weeks each.

Part 2 activities shall include field investigations, hydraulic modeling, alternatives analyses, and cost benefit assessments needed to advance preliminary concepts to achieve flood mitigation in areas where residential structures are shown as flooding in the recently updated Flood Insurance Rate Maps (FIRMs) including, but not limited to, those previously suggested in the North Port/Big Slough WMP project by Ardaman & Associates, Inc. and/or in the Big Slough Watershed Study by Camp Dresser & McKee, Inc. The work will include identification of candidate site(s), citing of relevant permitting requirements for construction and operation of facilities, and providing cost estimates for detailed design, permitting, land acquisition, and construction. The CONSULTANT shall consider mixed use of regional facilities such as, but not limited to, storage for water supply to the City's water treatment plant, recreational activities, and environmental opportunities such as preserves and water quality improvement.

Using the previously developed CHAN model, the CONSULTANT shall perform a limited number of screening-level simulations to evaluate feasibility of regional concepts to achieve flood reduction. In assessing feasibility of various solutions, it should be noted that improvements may not eliminate flooding entirely but instead may reduce the depth, duration, and/or frequency of flooding to levels that nevertheless result in reduced annualized damages and a substantial benefit to the community.

It is anticipated that Part 2 will result in a detailed planning-level document describing a small number of regional projects which exhibit potential flood reduction benefits based upon screening-level hydraulic evaluations performed as part of this project. The planning document would include: conceptual-level drawings and/or diagrams describing the regional plan(s) for improvements in general terms; a narrative including summary of project purpose, proposed facilities, environmental and other constraints, and expected hydraulic performance; and calculations (screening-level pre/post storm event simulation results) to demonstrate anticipated flood reduction and identify potential adverse impacts with respect to water quantity. A project plan and cost estimate for each regional flood reduction concept would be provided along with a discussion on future SWERP application(s) for implementation of the proposed improvements.

Due to the size and scope of those solutions, additional funding would be required to fully develop and implement the regional projects. It should also be noted that additional analyses required to support design and permitting of mixed-use regional solutions may include additional storm event hydraulic modeling as well as continuous simulations, water quality evaluations, hydroperiod analyses, water

quality studies, water supply evaluations, etc. Planning-level cost estimates will address those additional analyses as well as engineering design, environmental permitting, land acquisition, construction, and other costs.

Assumptions and Issue Management

Several assumptions were made in developing this project plan. Key assumptions were related to the magnitude (level of detail) of the work effort, accuracy of available as-built drawings and other supporting data, availability of staff resources, and reliance on a third-party survey firm for performance of certain field data collection tasks.

It is expected that the current level of detail of the model is sufficient to evaluate regional alternatives at a conceptual level, sufficient to develop plans for future, more detailed work. It was also assumed that the amount of additional model detail to be provided in the Myakkahatchee at I-75 and Jockey Club areas is moderate and a $10,000 estimate was used to allow for supplemental field survey to support model refinement in those areas.

It is assumed that model results will be replicated easily from the prior WMP work. If, for some reason, DES is unable to replicate prior results, then we would rely upon City and District staff to assist in coordination with the prior contractor to resolve the matter quickly.

Staffing and assignment of key personnel to the project is considered appropriate for this project. Any staffing deficiencies that could impact the project timeline or quality of work will be identified quickly and effectively mitigated by shifting of responsibilities and addition of staff, if needed, with City approval. Progress of third-party firms in performing support activities (i.e., for field survey by a PLS) will be monitored and adjustments will be made, if necessary, to adhere to the project schedule.

This Project Plan will be updated periodically. Revisions may include minor editorial changes to clarify project background and goals, changes to better define task objectives and approach to performing the work, and/or updates to Quality Assurance, Quality Control, and Communications.

Quality Assurance Plan

DES is committed to the concept of Total Quality Management (TQM), where everyone involved with development and delivery of our work product is responsible for its quality. TQM requires effort and accountability from management, staff, and all other project participants, and it is the Project Manager's responsibility to ensure that all are capable and eager to deliver a high-quality product.

Quality Assurance

Quality Assurance (QA) is achieved through appropriate assignment of project tasks and responsibilities to team members, staff training, development of and adherence to protocols (including protocols for quality control), adherence to the baseline schedule and budget, and daily task oversight.

Assignment of Team Members. The Big Slough Flood Reduction Feasibility Study consists of a set of discrete project tasks. DES staff members will be assigned to each task team by the Project Manager, taking into consideration capabilities and experience. A Task Leader will be assigned to direct the work

of each task team. In most cases, Ms. Baldassari will serve as Task Leader, and will see that all work is performed in accordance with established protocols.

Development and Adherence to Protocols. Where appropriate, task-specific DES Protocols will be developed and serve as a supplement to the District's WMP Guidance documents, and would include procedures for documentation of work, frequent communication, and quality control checks throughout task completion. Task Protocols indicate team member assignments and encourage acceptance of individual responsibilities. Each protocol includes the following elements:

- Task Name
- Task Description
- Prerequisite Tasks
- Required Data Resources
- Initial Quality Control Procedures
- Approach to Task Completion
- Schedule for Task Completion
- Estimated Cost for Task Completion
- Anticipated Correspondence
- Approach to Quality Assurance
- Task Completion QC Procedures
- Task Reporting, Mapping & Deliverables
- Summary and Sign-off Responsibilities
- Project Debrief Checklist

Prior to initiating work, the associated task protocol document(s) are reviewed by and discussed among assigned team members in a task kickoff meeting. Based on team discussion, a determination is made whether the standard protocols can be applied to the project. Deviations from the standard protocols will be identified and a description provided of the special conditions necessitating those deviations.

Adherence to Baseline Schedule and Budget. An initial project timeline, extending approximately nine (9) months from Notice to Proceed (NTP), was developed and incorporated into Agreement #2016-48. Support documents contain initial staff allocations, man-hour estimates, and associated costs for each discrete task that makes up the overall project. Both the project schedule and the budget contained in the agreement are judged to be accurate, and staff allocations appear sufficient.

DES management and staff fully understand the critical importance of the expeditious completion of the project and are committed to meeting the timeline as it has been developed and within the allocated budget. As work proceeds, DES will provide monthly updates to the City regarding both the schedule and the budget. As project tasks are completed and project needs and data limitations (if any) are better understood, recommendations may be made to the City's Project Manager for changes to staffing allocations and/or project approach, including potential adjustments to the timeline and costs.

Daily Task Oversight. As discussed above, DES has assigned Ms. Trillian Baldassari, PE as the team's Lead Project Engineer. Ms. Baldassari will be responsible for daily oversight of project-related activities. Mr. DeLoach will also be fully engaged in the management of all aspects of the work, and will be intimately involved in the day-to-day operation. As such, two experienced professional engineers will be performing the oversight needed to provide for quality assurance on this important project.

Quality Control

Quality Control (QC) is the process where raw data, data manipulation, and calculations; parameter selection, processing, and computations; reporting, mapping, and deliverables production are subject to verification checks and validation. QC is performed according to well-designed protocols to check for

errors and omissions, to verify that staff are using tools and following procedures correctly and effectively, and to fully understand why certain processes result in certain outcomes.

Project Task Protocols include the District's Guidelines and Specifications and other task-specific procedures for performance and documentation of work performed and results achieved. The protocols also outline task-specific procedures for team communication and for quality control checks at multiple steps through project completion and acceptance.

A rigorous internal peer review will be performed as part of our standard QA/QC protocol for all tasks, consisting of:

- protocol review by Task Leader and team member(s) assigned to a task, prior to start of work
- self-check of work by team members while performing project tasks
- handoff of task materials to QA/QC Team Leader (DeLoach)
- QA review and QC checks by QA/QC Team (Baldassari and/or Hardin)
- return of task materials, comments and QA/QC report from QA/QC Team Leader (DeLoach)
- review of third-party findings by DES Project Manager and DES Task Manager for resolution
- incorporation of QA/QC work products and reports into project deliverables for City review

Communication Plan

Frequent and effective communication, whether internal between project team members or external with City or District staff, will carry a high priority throughout the project. Protocols for each distinct task will include a description of the purpose, frequency, method and participants to be involved, and the DES Project Manager will see that communications requirements are met, documented, and fulfill their intended purpose. Communication responsibilities that are unique to a specific task, if needed, will become part of the protocol for that task, and will be documented in memorandum form.

Internal Communication

Internal communication regarding project work assignments will be conducted by and between the Project Manager, Lead Project Engineer and/or Task Leader, and will primarily be in the form of email exchange. Internal staff meetings will be held for kickoff of each discrete project task, regularly thereafter for team updates to the Project Manager, prior to and following exchanges with the third-party QA/QC consultant, and prior to the delivery of task deliverables to the City.

External Communication

At the onset of the project, the DES Project Manager will communicate with the City Project Manager and others to understand expectations of all involved parties, including City and District staff, other agency officials, and the affected public. The DES Project Manager and Lead Project Engineer will, at a minimum, talk directly with the City Project Manager once each week to discuss progress on current activities, resolve outstanding issues, and coordinate future tasks, and will employ methods and measures to track and report monthly progress relative to scope, schedule, resource allocations, and budget.

External project communications may be in person or via phone/internet (using collaboration software such as GoTo Meeting) at the City's discretion. Routine exchange of written messages and accompanying data will be by email, while exchange of larger documents and data will be accomplished using the City and/or DES FTP sites. Very large data exchanges, as in the transfer of project deliverables, will be made using portable hard drives.

Meetings

The DES Project Manager and Lead Project Engineer will attend regularly-scheduled project status meetings with representatives of the City of North Port and SWFWMD to discuss project goals and objectives and the team's progress toward completing current project tasks. The DES Project Manager, Lead Project Engineer, and other DES staff will attend other task-related meetings as may be deemed necessary by the project team. A brief agenda will be provided for all meetings, and a recap memorandum will be developed by DES staff to document the meeting, ensuing discussion, and resulting action items. Meetings may be in person or via phone/internet (using collaboration software such as GoTo Meeting) at the City's discretion.

Tables

Table 1. Project Schedule		
PART 1		
Task	Start Date	Completion Date
Project Development	October 13, 2016	November 4, 2016
Define Existing Flooding Problems	October 31, 2016	November 18, 2016
Operations Staff Meeting and Team Field Visit	November 14, 2016	November 18, 2016
Formulate Potential Solutions for Hydraulic Evaluation	November 14, 2016	December 9, 2016
Evaluate Performance of Selected Set of Alternatives	December 5, 2016	January 27, 2017
Refine Preferred Plan(s) of Improvements	January 30, 2017	March 31, 2017
Community Outreach Meeting	March 27, 2017	March 31, 2017
Present Recommended Plan of Improvements	April 3, 2017	July 31, 2017
Project Management and QA/QC	*October 13, 2016*	*July 31, 2017*
PART 2		
Task	Start Date	Completion Date
Formulate List of Regional Flood Reduction Concepts	December 5, 2016	January 13, 2017
Landowner Outreach (including State agencies)	December 5, 2016	January 13, 2017
Evaluate Performance of Selected Set of Alternatives	January 16, 2017	March 31, 2017
Present Preferred Plan(s) for Regional Improvements	April 3, 2017	May 26, 2017
Project Management and QA/QC	*December 5, 2016*	*May 26, 2017*

Table 2. Projected Invoice Schedule, by Month							
	Part 1		Part 2		Project		
Month	% Complete	Invoice Amount	% Complete	Invoice Amount	% Complete	Invoice Amount	Cumulative Fees
1	11%	$28,110	0%	$0	9%	$28,110	$28,110
2	19%	$18,300	0%	$0	15%	$18,300	$46,410
3	30%	$29,520	32%	$15,870	31%	$45,390	$91,800
4	36%	$15,300	32%	$0	36%	$15,300	$107,100
5	54%	$43,240	63%	$15,540	55%	$58,780	$165,880
6	65%	$28,860	63%	$0	65%	$28,860	$194,740
7	80%	$36,040	63%	$0	77%	$36,040	$230,780
8	91%	$28,760	100%	$18,620	93%	$47,380	$278,160
9	100%	$21,840	100%	$0	100%	$21,840	$300,000

Table 3. Projected Staff Utilization, by Month					
Month	DeLoach	Baldassari	Hardin	Gilhooley	Ghioto
1	26%	26%	13%	26%	26%
2	23%	16%	09%	2%	20%
3	20%	48%	24%	4%	46%
4	13%	15%	8%	10%	18%
5	28%	85%	43%	35%	60%
6	23%	45%	23%	15%	18%
7	13%	60%	30%	35%	25%
8	45%	55%	28%	48%	29%
9	31%	25%	13%	18%	5%
Average	24%	42%	21%	21%	27%

Appendices

Project Plan attachments and appendices, to be added over the course of the project, include progress reports, meeting minutes, memoranda, and other related documents. Project Plan appendices and documents that have been attached to date include the following:

Appendix A

Project Gantt Chart

Appendix B

Itemized Project Cost Spreadsheet

Appendix A

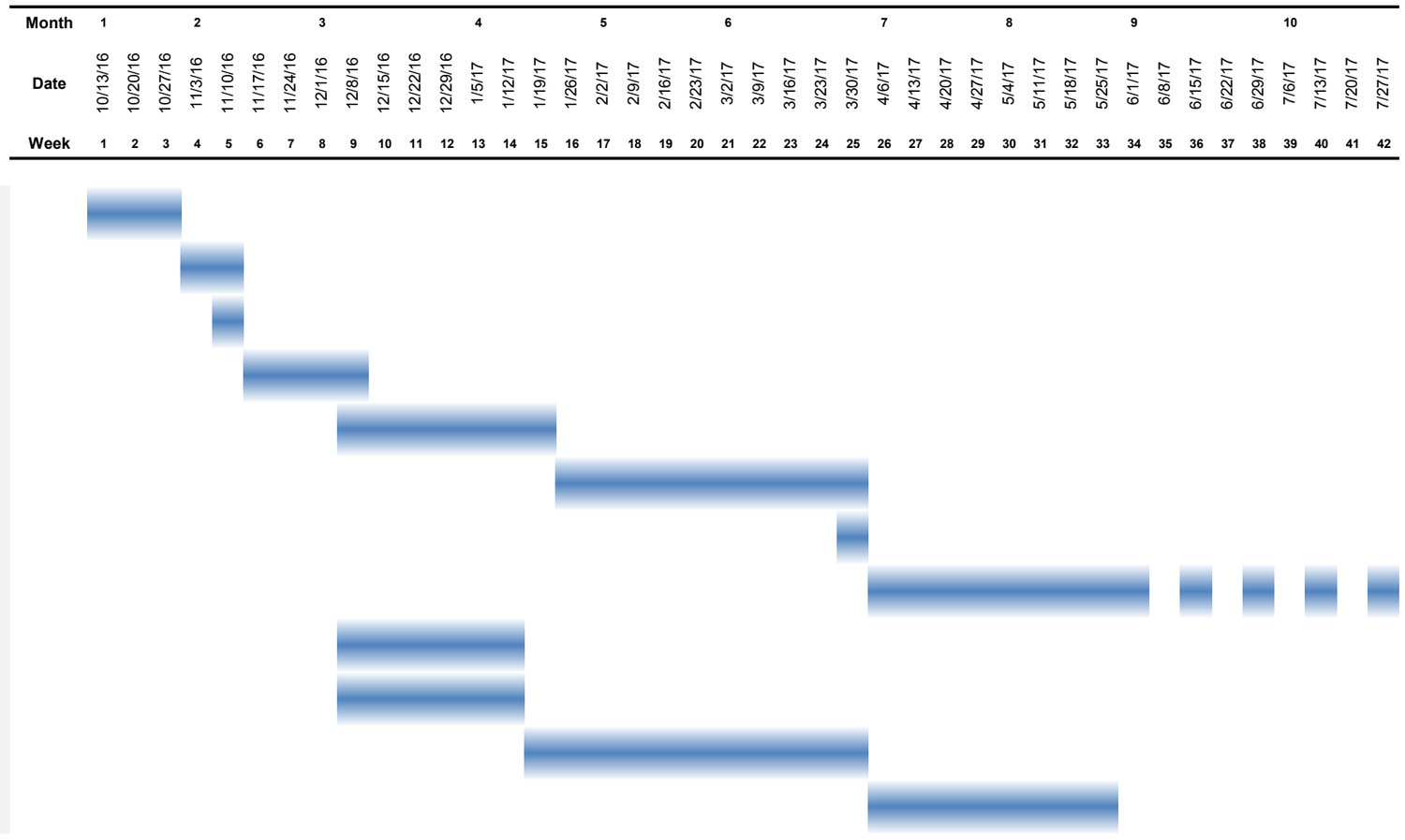
Project Gantt Chart

BIG SLOUGH FLOOD REDUCTION FEASIBILITY STUDY for CITY OF NORTH PORT

DeLoach Engineering Science, PLLC - Project Timeline

Task Descriptions

1.1	Project Development
1.2	Define Existing Flooding Problems
1.3	Operations Staff Meeting and Team Field Visit
1.4	Formulate List of Potential Solutions for Hydraulic Evaluation
1.5	Evaluate Hydraulic Performance of Selected Set of Alternatives
1.6	Refine Preferred Plan(s) of Improvements
1.7	Community Outreach Meeting
1.8	Summarize and Present Recommended Plan of Improvements
2.1	Formulate List of Regional Flood Reduction Concepts
2.2	Landowner Outreach Meeting(s) (including State agencies)
2.3	Evaluate Hydraulic Performance of Selected Set of Alternatives
2.4	Summarize and Present Preferred Plan(s) for Regional Improvements



Appendix B

Itemized Project Cost Spreadsheet

BIG SLOUGH FLOOD REDUCTION FEASIBILITY STUDY for CITY OF NORTH PORT

DeLoach Engineering Science, PLLC - Project Plan with Timeline, Manhour and Fee Estimate

Task Descriptions	Principal Engineer	Project Engineer	GIS Analyst	Sub-Consultant	Reimb. Expenses	Estimated Fee	Start Date	End Date	Task Duration	Project Duration
1.1 Project Development						**$13,290.00**				
1.1.1 Kickoff Meeting and Initial Field Visit	**8**	**8**	0	**8**	$0.00	$4,040.00	13-Oct-16	14-Oct-16	2	2
1.1.2 Data Collection and Assembly	**4**	**6**	**10**	**4**	$0.00	$3,290.00	13-Oct-16	21-Oct-16	9	9
1.1.3 Summary of Prior Work Performed, Alternatives and Findings	**8**	0	0	**8**	$0.00	$2,960.00	13-Oct-16	28-Oct-16	16	16
1.1.4 Project Plan Formulation	**12**	0	0	**4**	$0.00	$3,000.00	13-Oct-16	4-Nov-16	23	23
1.2 Define Existing Flooding Problems						**$14,820.00**				
1.2.1 Confirm Ability to Reproduce WMP Project Model Results	**2**	**32**	**16**	**2**	$0.00	$6,660.00	31-Oct-16	11-Nov-16	12	30
1.2.2 Characterize Local Flooding Conditions	**8**	**16**	**16**	**16**	$0.00	$8,160.00	7-Nov-16	18-Nov-16	12	37
1.3 Operations Staff Meeting and Team Field Visit						**$5,340.00**				
1.3.1 Meeting Topics (Preparation, Attendance, and Field Visit)	**12**	**12**	0	**8**	$0.00	$5,340.00	14-Nov-16	18-Nov-16	5	37
1.4 Formulate List of Potential Solutions for Hydraulic Evaluation						**$12,960.00**				
1.4.1 Describe Each Potential Solution and Any Known or Expected Obstacles to Success	**8**	**8**	0	**8**	$0.00	$4,040.00	14-Nov-16	25-Nov-16	12	44
1.4.2 Identify Additional Data Needs to Support Hydraulic Evaluation	**4**	**8**	**3**	**4**	$0.00	$2,860.00	21-Nov-16	25-Nov-16	5	44
1.4.3 Meeting to Review and Discuss List of Potential Solutions	**8**	**8**	0	**8**	$0.00	$4,040.00	28-Nov-16	2-Dec-16	5	51
1.4.4 Select a Set of Alternatives from Among Potential Solutions for Hydraulic Evaluation	**4**	**4**	0	**4**	$0.00	$2,020.00	28-Nov-16	9-Dec-16	12	58
1.5 Evaluate Hydraulic Performance of Selected Set of Alternatives						**$44,820.00**				
1.5.1 Perform Hydraulic Analyses (w/ estimated $10,000 Field Survey by PLS)	**8**	**80**	0	**40**	**$10,000.00**	$29,520.00	5-Dec-16	30-Dec-16	26	79
1.5.2 Summarize Hydraulic Performance	**8**	**24**	**16**	**16**	$0.00	$9,240.00	2-Jan-17	13-Jan-17	12	93
1.5.3 Meeting to Review and Discuss Performance of Alternatives	**8**	**8**	0	**8**	$0.00	$4,040.00	16-Jan-17	20-Jan-17	5	100
1.5.4 Identify Preferred Plan(s) of Improvements	**4**	**4**	0	**4**	$0.00	$2,020.00	23-Jan-17	27-Jan-17	5	107
1.6 Refine Preferred Plan(s) of Improvements						**$66,220.00**				
1.6.1 Evaluate Site Conditions and Design/Permitting Constraints of Preferred Plan(s)	**8**	**40**	**16**	**16**	$0.00	$11,400.00	30-Jan-17	3-Feb-17	5	114
1.6.2 Refine Preferred Plan(s) to Address Site Conditions and Design/Permitting Constraints	**12**	**40**	**16**	**24**	$0.00	$13,600.00	6-Feb-17	10-Feb-17	5	121
1.6.3 Perform Hydraulic Analyses of Refined Plan(s)	**8**	**80**	**16**	**24**	$0.00	$18,240.00	13-Feb-17	3-Mar-17	19	142
1.6.4 Perform Cost-Benefit Analysis of Refined Plan(s)	**12**	**80**	**24**	**8**	$0.00	$16,920.00	6-Mar-17	17-Mar-17	12	156
1.6.5 Meeting to Review and Discuss Refined Plan(s)	**8**	**8**	0	**8**	$0.00	$4,040.00	20-Mar-17	24-Mar-17	5	163
1.6.6 Select Recommended Plan	**4**	**4**	0	**4**	$0.00	$2,020.00	27-Mar-17	31-Mar-17	5	170
1.7 Community Outreach Meeting						**$5,880.00**				
1.7.1 Meeting Topics	**12**	**16**	0	**8**	**$0.00**	$5,880.00	27-Mar-17	31-Mar-17	5	170
1.8 Summarize and Present Recommended Plan of Improvements						**$86,640.00**				
1.8.1 Finalize Recommended Plan and Project Deliverables	0	0	0	0	$0.00	$0.00	3-Apr-17	2-Jun-17	61	233
1.8.1.1 Pre/Post Models and Result Tabulations	**8**	**24**	0	**8**	$0.00	$6,200.00	3-Apr-17	14-Apr-17	12	184
1.8.1.2 Conceptual-Level Design Drawings	**4**	**60**	**40**	**16**	$0.00	$15,740.00	3-Apr-17	28-Apr-17	26	198
1.8.1.3 Opinion of Probable Cost (incl. detailed design, permitting, land, and construction)	**8**	**60**	**16**	**16**	$0.00	$14,100.00	3-Apr-17	28-Apr-17	26	198
1.8.1.4 Cost-Benefit	**8**	**40**	0	**8**	$0.00	$8,360.00	1-May-17	12-May-17	12	212
1.8.1.5 Report and Mapping	**32**	**16**	**40**	**16**	$0.00	$15,120.00	1-May-17	26-May-17	26	226
1.8.1.6 Training City staff in use of CHAN Modeling Software	0	**8**	0	0	$0.00	$1,080.00	1-May-17	26-May-17	26	226
1.8.2 Meeting with City Administrative Staff	**8**	**8**	**16**	0	$0.00	$4,200.00	29-May-17	2-Jun-17	5	233
1.8.3 Statewide Environmental Resource Permitting (with Response to 2 RAIs)	**50**	**60**	**28**	**8**	$0.00	$21,840.00	29-May-17	31-Jul-17	64	292
2.1 Formulate List of Regional Flood Reduction Concepts						**$7,790.00**				
2.1.1 Describe Each Potential Solution and Known or Expected Obstacles to Success	**2**	**4**	**2**	**4**	$0.00	$1,840.00	5-Dec-16	30-Dec-16	26	79
2.1.2 Identify Additional Data Needs to Support Hydraulic Evaluation	**2**	**8**	**2**	**8**	$0.00	$3,100.00	5-Dec-16	30-Dec-16	26	79
2.1.3 Meeting to Review and Discuss List of Potential Solutions	**2**	**4**	**2**	**4**	$0.00	$1,840.00	5-Dec-16	30-Dec-16	26	79
2.1.4 Select a Set of Alternatives for Further Evaluation	**2**	**2**	0	**2**	$0.00	$1,010.00	2-Jan-17	13-Jan-17	12	93
2.2 Landowner Outreach Meeting(s) (including State agencies)						**$8,080.00**				
2.2.1 Meeting Topics	**16**	**16**	0	**16**	$0.00	$8,080.00	5-Dec-16	13-Jan-17	40	93
2.3 Evaluate Hydraulic Performance of Selected Set of Alternatives						**$15,540.00**				
2.3.1 Perform screening-level Hydraulic Analyses	**8**	**24**	0	**16**	$0.00	$7,640.00	16-Jan-17	10-Feb-17	26	121
2.3.2 Summarize Hydraulic Performance	**2**	**12**	**8**	**8**	$0.00	$4,240.00	13-Feb-17	24-Feb-17	12	135
2.3.3 Meeting to Review and Discuss Performance of Alternatives	**4**	**4**	0	**4**	$0.00	$2,020.00	27-Feb-17	10-Mar-17	12	149
2.3.4 Identify Preferred Plan(s) for Regional Improvements	**2**	**4**	0	**4**	$0.00	$1,640.00	13-Mar-17	31-Mar-17	19	170
2.4 Summarize and Present Preferred Plan(s) for Regional Improvements						**$18,620.00**				
2.4.1 Screening-Level Hydraulic Model Pre/Post and Result Tabulations	**2**	**12**	0	**8**	$0.00	$3,440.00	3-Apr-17	26-May-17	54	226
2.4.2 Conceptual-Level Drawings and Plan Descriptions	**2**	**12**	**8**	**2**	$0.00	$3,160.00	3-Apr-17	28-Apr-17	26	198
2.4.3 Site Conditions and Design Constraints	**2**	**8**	**8**	**4**	$0.00	$2,980.00	3-Apr-17	28-Apr-17	26	198
2.4.4 Relevant Permitting Requirements	**2**	**8**	0	**4**	$0.00	$2,180.00	3-Apr-17	28-Apr-17	26	198
2.4.5 Opinion of Probable Cost (for detailed analysis, design, permitting, land, and construction)	**8**	**16**	0	0	$0.00	$3,680.00	1-May-17	12-May-17	12	212
2.4.6 Planning-Level Report and Mapping	**8**	**4**	**4**	**4**	$0.00	$3,180.00	1-May-17	26-May-17	26	226
Task 4 - Survey (future task)			0	0						
Task 5 - Geotechnical (future task)			0	0						
Task 6 - Design (future task)			0	0						
Task 7 - Permitting (future task)			0	0						
Labor Hours	**352**	**900**	**307**	**394**						
Hourly Rate	**$190.00**	**$135.00**	**$100.00**	**$180.00**						
Labor Fee	**$66,880.00**	**$121,500.00**	**$30,700.00**	**$70,920.00**	**$10,000.00**					
Total Estimated Fees	**Part 1 :**	**$249,970.00**	**Part 2 :**	**$50,030.00**		**$300,000.00**			**Total Duration**	**292**