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Laura Yonkers, PE
Indian River County Engineering — Stormwater Division
1801 27th Street, Building A
Vero Beach, FL 32960

Subject: Indian River County Stormwater Management Plan Scope of Services and Fee Estimate

Dear Ms. Yonkers,

ESA is pleased to present this scope of services and associated fee estimate to Indian River County (IRC) to develop a stormwater management plan (SMP). The plan will focus on the identification of capital improvement needs and recommendations with respect to optimizing flood protection and water quality improvement.

Background

IRC has collected and catalogued the conveyance and treatment structures throughout IRC jurisdiction and assembled this information into a Geographic Information System (GIS) database. IRC would like ESA to apply this database in conjunction with existing reports, Federal Emergency Management Agency (FEMA) Flood Maps, and sea-level rise projections to develop conceptual projects which address resiliency, stormwater flooding and/or provide water quality improvement. Each project will subsequently be prioritized using a tailored matrix based upon the project's anticipated level of magnitude to provide flood reduction, estimated implementation cost, and likelihood to generate water quality Basin Management Action Plan (BMAP) credits. This initial effort will identify areas and projects that will provide the maximum BMAP benefit to the County, where the reduction to flooding is advantageous. The County has provided ESA with a list of priority areas based on past flooding concerns that can be modified based on the information assembled during the discovery phase of the project. Priority areas include, but should not be limited to as follows:

1) 90th Ave. Drainage
2) Rockridge Area (SR60 to 12th St.
3) 6th Ave. to IRL – within the County)
4) College Lane (between 58th Ave. & 66th Ave.)
5) 37th St. to Royal Palm Place (US 1 to IR Blvd.)
6) Fellsmere (County Only)
7) Riviera Lakes (4th St. & 27th Ave.)
8) 4th St. & 8th St. (58th to 66th Ave.)
9) Indian River Drive — County maintained ROWs
10) Indian River Lagoon Outfall Replacement/Upgrades

If new priority areas are identified that provide the County more benefit, then the initial priority project area list may be amended to add projects for consideration. It is anticipated that full evaluation of additional areas will be completed as part of future work efforts.

ESA will conduct the following tasks to create the SMP as follows:

Task 1— Stormwater and Water Quality Database Review

Task 1.1 — Desktop Database Review & Coordination

ESA will review existing design reports, IRC' s GIS database, and other engineering report documentation, as provided to ESA by IRC, to better understand the project history at the county-level and the current purpose and need for each priority project area. Based on information provided by IRC, the report reviews will include:

1) Indian River County 2030 Comprehensive Plan
2) Indian River Lagoon Management Plan
3) Indian River County Public Works Department Technical Specifications for Stormwater Pollution Control Systems
4) East Roseland Stormwater Improvements Contract Documents, Addendum #1 & #2.
5) Rockridge Subdivision Surge Protection Project
6) Vero Lake Estates Master Drainage Plan
7) Gifford Stormwater Project
8) East Indian River County Master Stormwater Management Plan
9) East Indian River County Engineering Evaluation Report
10) Indian River County Vulnerability Analysis (when complete)

Based on review of the IRC GIS database and reports, ESA will refine the boundary of each priority project area.

ESA Staff will inventory current and future water quality and ecology issues through the review of existing data, applicable regulatory standards, and established water quality management plans. Water quality data available from the Impaired Water Rule (IWR) database and the Watershed Information Network (WIN) database maintained by the Florida Department of Environmental Protection (FDEP) as well as data obtained from IRC and St. Johns River Water Management District (SJRWMD) will be evaluated.

Task 1.2 — Site Visits

After conducting a thorough desktop review, ESA Staff will perform site visits at up to ten (10) priority project areas to independently verify collected information on water control structures including condition, invert elevation, etc. The boundaries of each priority area will be delineated in the desktop review and confirmed during the site visit. If the boundary varies by more than 1,000 feet in any direction, the area may be classified as a separate priority area to be assessed under a future efforts. ESA will collect additional data on the condition of each site utilizing an EOS Arrow Gold Real-time Kinematic Global Positioning System connected to ArcGIS Field Maps Application, or other platform that is compatible with IRC's database. It is anticipated that two site

visits will be completed per day at the priority sites. ESA may request data on the County's five (5) regional stormwater treatment facilities at Osprey Acres, Osprey Marsh, Egret Marsh, Moorhen Marsh and the PC Main Screening facilities to help provide a comprehensive assessment of the water quality represented in the adjacent canals.

Staff will review the status of the Central Indian River Lagoon (IRL) Basin Management Action Plan (BMAP) and inventory existing best management practices (BMPs) to establish projected load reduction credits within IRC.

ESA will collect and review readily available and pertinent data prior to conducting field reviews. These materials include, but are not limited to:

- Current FDEP and USACE environmental permitting regulations and permit thresholds;
- Site permitting compliance history information;
- Existing engineering reports:
- Site topography/bathymetry;
- FEMA Flood Maps;
- Resident flooding complaints;
- Spatial Watershed Iterative Loading (SWIL) Tool;
- U.S. Geological Survey (USGS) Quadrangle maps;
- National Wetland Inventory mapping;
- Natural Resources Conservation Service soil maps;
- Florida Fish and Wildlife Conservation Commission (FWC) eagle nest locations;
- FWC and USFWS threatened and endangered species observation records (GIS data);
- Florida Natural Areas Inventory (FNAI) data records;
- And readily available historic black & white, full spectrum color, and/or infrared aerial photography.
- Indian River Farms Water Control District - data/coordination pertinent to the modeling of the County
- City of Vero Beach - data/coordination pertinent to the modeling of the County
- City of Fellsmere Water Control District - data/coordination pertinent to the modeling of the County
- City of Sebastian - data/coordination pertinent to the modeling of the County
- St. Johns River Water Management District (SJRWMD) - data/coordination pertinent to the modeling of the County
- Florida Department of Environmental Protection (FDEP) - data/coordination pertinent to the modeling of the County

This data will be used to validate existing sub-basins or develop sub-basins for each of the ten (10) identified priority areas (An additional area can be added to the priority list based on the findings from Task 1.1-1.2).

Note, basins and sub-basins will be preliminary and subject to additional field verification and refinement during subsequent phases or future modeling efforts outside the extent of this scope. The culmination of the information gleamed during Task 1 will be used to develop the matrix for project prioritization.

Task 1.3 — Data Gaps Coordination

ESA will coordinate closely with IRC Stormwater and Survey Staff to identify and address any data gaps prior to launching the stormwater management review in Task 2. This may require additional site visits, meetings or conference calls to request and review the data requested. Note, this assumes a 30-day coordination and additional data gathering timeframe. Should this exceed the 30-day timeframe, subsequent timeframes will need to be adjusted accordingly.

Task 1.4 — Database Review Memorandum

Upon completion of the Database Review Process (Task 1.1 through Task 1.3), ESA will provide a memorandum detailing the findings of the above tasks, where the data were sufficient to proceed forward and perform the review in Task 2 of a priority area and where there are identified data gaps. The memorandum will include site descriptions, review of data density and data quality as well as include site photos and figures from desktop data collected. The memorandum will be incoporated into the SMP as Part 1 of the report.

Schedule: 180 days from NTP

Deliverables: ESA will work with IRC GIS Staff to update the existing IRC Stormwater GIS database with new data collected (i.e. invert locations & elevations, boundaries high water marks) and provide IRC with a memorandum detailing new data and discrepancies found during field visits. Any changes noted by ESA will be reviewed by IRC Stormwater and GIS staff prior to updating the database. The memorandum will also provide recommendations related to the water quality data sampling regimen, including parameters, frequency, and reporting.

Task 2 — Stormwater Management Plan Report

As previously stated, Part 1 of the SMP will include the Task 1 technical memorandum including any outstanding issues with the data collected and proposed additional data collection needs. Part 2 will present an overall countywide framework to stormwater management including the effects of climate change and sea-level rise on conveyance to the IRL and overall water quality. The plan will then implement that framework by assessing the conceptual improvement project(s) developed for each of the ten (10) priority areas. The level which each of the priority area can be assessed will be dependent upon the data assimilated in Task 1. If there is not enough data for a priority area to be fully assessed for comparison, this will be documented in the report and that priority area may be removed from consideration as part of this iteration of the SMP and replaced this with another priority area that may be identified (no more than 10 projects will be made a priority). For each

conceptual project presented, ESA will provide identified data needs, permit application/compliance concerns and/or anticipated future stormwater modeling needs.

A matrix will be developed to rank each of the proposed conceptual improvements projects based on the anticipation to address the following, but not limited to:

- Alleviate stormwater flooding;
- Provide resiliency;
- Provide water quality improvement/BMAP credits;
- WBID TMDL/Impairment List;
- Activity 420 (Natural shoreline protection) criteria for the Community Rating System (CRS);
- Activity 450 (Stormwater management) criteria for the CRS;
- Magnitude of Cost;
- Permit complexity;
- Design efficiency.

ESA staff will solicit feedback from IRC staff regarding the relative importance of identified matrix factors prior to project prioritization. Qualification indices (e.g., low, medium, high) will be populated for each matrix factor(s) by project based on the specific design components. Finally, the projects will be ranked based upon the implementation of the matrix resulting in a prioritized list of projects for consideration. Subsequently, additional feasibility studies can be implemented dependent upon project readiness and funding. It is anticipated that the SMP would be updated on a five to ten-year interval to address changes to the County's stormwater infrastructure, climate change and sea level rise projections and the priority projects list will be updated as well to remove completed projects and add new projects.

The report will include graphics and figures along with narrative explanation of the matrix ranking for each of the ten (10) priority areas. The report will be presented to IRC and stakeholders for review and comment. All comments will be tracked and incorporated in the final report within 30 days of receipt of final comments from IRC.
Schedule: 300 days from NTP

Deliverables: ESA will provide a draft stormwater management plan report in Word and PDF versions for tracking comments/edits. Once reviewed by IRC and stakeholders, ESA will incorporate the edits and track responses to comments /edits in a separate spreadsheet or similar tracking database. The final report and the tracking spreadsheet will be submitted to IRC. Three (3) hard copies and an electronic copy of the report will be submitted.

Task 3 —Public Outreach & Involvement

ESA will support IRC to engage the local community and stakeholders in the project process. Focus will be placed on communicating progress, notification for field activities, garnering local knowledge, and education.

ESA will provide support to IRC in reviewing narrative language and graphics for use at the public meeting. ESA senior staff will prepare for and attend an initial public meeting with IRC staff to gather initial feedback and concerns. A follow-up meeting will be conducted after submittal of the SMP Report to present the update to interested stakeholders on project progress. Meetings will be hosted by IRC, at a public facility and ESA will prepare figures for slides from the SMP for a PowerPoint presentation and up to four (4) foam boards as needed for the meeting.

Schedule: Two (2) meetings will be held30 days after submittal of the draft SMP (one daytime and one evening available in person and by virtual attendance).

Deliverables: The deliverables associated with the public outreach task will include electronic copies of materials produced for each of the outreach events and meeting minutes.

Task 4 — Project Meetings, Management, and Administration

ESA will participate in an initial kick-off meeting with IRC staff to discuss the existing data collected by IRC, coordinate the site visits and GIS integration, and layout the outline for the SMP. ESA anticipates up to two (2) additional meetings with IRC, which will include a mid-study status meeting and an end-study results meeting. ESA assumes that these meetings will be hybrid virtual and in-person. As-needed, but no less frequently than monthly coordination, communications, and updates may include progress meetings, calls/emails, or other virtual communications. Project administration will include project management, meeting documentation, invoicing, and other project administration.

Schedule: Three (3) meetings. The initial one within 15 days of notice of proceed and two (2) additional meetings with status updates via zoom.

Deliverables: Minutes from meetings and monthly email status updates.

FEE ESTIMATE

The fee estimate for the tasks listed above total **$475,629.00.** This is a Lump Sum (Fixed Fee) estimate and will not be exceeded without prior written authorization from IRC. ESA will revisit these fees at the end of each Task respectively and provide updated fee estimates, if necessary. ESA may move budget between tasks without exceeding the overall budget with email permission from IRC.

Indian River County Stormwater Management Plan			
Task	**Description**		**ESA Total Fee**
1.0	Stormwater and Water Quality Database Review		
1.1	Desktop Database Review & Coordination		$98,806
1.2	Site Visits		$49,172
1.3	Data Gaps Coordination		$25,169
1.4	Database Review Memorandum		$8,855
	Task 1 Subtotal		**$182,002.00**
2.0	Stormwater Management Plan Report		$229,620.00
3.0	Public Outreach & Involvement		$20,257.00
4.0	Project Meetings, Management, and Administration		$43,750.00
	Grand Total		**$475,629.00**

If additional work time is required due to the inaccuracy of these assumptions, or future changes in scope, additional fees will be billed on a time and materials basis in accordance with ESA's standard billing rates. Written authorization will be obtained from IRC prior to ESA conducting additional work and incurring the associated fees. This project will be billed monthly, in accordance with the percent complete of each task.

Please note that the following assumptions and exclusions were used for development of the fee estimate:

1. This scope of work does not include water quality sample collection, laboratory assessment, topographic/bathymetric surveys, or geotechnical investigations.
2. This scope of work does not include any contamination screening services.
3. This scope of work does not include engineering design and modeling for stormwater conveyance or drainage.
4. All available electronic design files and database access will be provided by IRC to facilitate the database review in Task 1 upon contract execution.

We appreciate the opportunity to provide these services. ESA can begin work immediately upon receiving your authorization. We look forward to working with you on this project and if you have any questions or require additional information, please do not hesitate to call us.

Sincerely,

Environmental Science Associates

Bryan Flynn, PE
Program Manager
Environmental Restoration and Design

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Biological Resources Director