

**SUMTER COUNTY BOARD OF COMMISSIONERS
EXECUTIVE SUMMARY**

SUBJECT: SWFWMD Cooperative Funding Initiative (CFI) Project Request for FY13 (staff recommends approval)

REQUESTED ACTION: **Board Approval**

Work Session (Report Only) **DATE OF MEETING:** 11/22/2011
 Regular Meeting Special Meeting

CONTRACT: N/A Vendor/Entity: _____
Effective Date: _____ Termination Date: _____
Managing Division / Dept: Public Works/Engineering

BUDGET IMPACT: \$70,000 in FY13 (to be matched by SWFWMD)

Annual **FUNDING SOURCE:** Stormwater
 Capital **EXPENDITURE ACCOUNT:** 131-399-538-3400
 N/A

HISTORY/FACTS/ISSUES:

The Board recently approved \$129,866.40 for the development of the Stormwater Management Program for Sumter County. See attached.

One of the tasks in that program (task # 2.8) is to develop CFI applications for submission to SWFWMD for their FY13 program by 2 December 2011. At a meeting with SWFWMD and our consultant, AMEC-BCI, we discussed candidates for the CFI program including a watershed study for Jumper Creek Canal, and Channel B Maintenance (South Sumter area).

The Jumper Creek Canal Watershed is in the center of Sumter County and impacts Center Hill, Bushnell, Sumterville and parts of the Lake Panasoffkee area. It covers 79 square miles and includes 2454 parcels. While this study would be of value for long term planning and prioritization of requirements within the watershed, it would be several years before yielding that kind of information.

The PWD has been assessing the status of the canals in the South Sumter area, and recently over flew the system with the support of the SCSO helicopter. This aerial recon revealed that Channel B was in worse condition than the other channels around Gant Lake, and is in need of maintenance (see attached aerial).

PWD recommends that Sumter County submit a CFI application for Channel B Maintenance. PWD has \$100,000 in its FY13 Stormwater Budget and would use \$70,000 of that for the County's 50% match. If SWFWMD approved this application, their \$70,000 would bring the total to \$140,000 which PWD would use to issue a maintenance contract for selected portions of Channel B. The remaining \$30,000 in the FY13 Stormwater Program would be used by PWD and its consultant to continue development of the Stormwater Management Program.

PWD will work on easement and access issues along Channel B prior to the 2 December deadline for submission. The BOCC's approval of this agenda item would meet SWFWMD's CFI application needs for proof of funding. If SWFWMD does not approve the CFI then PWD would accomplish only \$70,000 of canal maintenance on its own.



2000 Edgewood Drive
 Suite 215
 Lakeland, FL 33803
 Phone (863) 667-2345
 Fax (863) 667-2662

LETTER OF TRANSMITTAL

Date: 9-14-11

To: Scott Cottrell
 Sumter County Public Works
 310 Anderson Avenue
 Bushnell, FL 33513

cc: AMEC File

Re: Sumter County Stormwater Needs
 AMEC Project No: 600053.1

We are sending you Attached Under separate cover via

Description

2 Originals of the Final Proposal – Task Assignment 2-Stormwater Needs

These are transmitted as checked below:

- | | | |
|--|---|--|
| <input type="checkbox"/> For approval | <input type="checkbox"/> For review and comment | <input type="checkbox"/> Returned for corrections |
| <input type="checkbox"/> For your information | <input type="checkbox"/> Review and correct | <input checked="" type="checkbox"/> For your files |
| <input checked="" type="checkbox"/> As requested | <input type="checkbox"/> Review and file | <input type="checkbox"/> As required |

Remarks:

Signed: Janis Caffee

Civil-Water Dept.



September 13, 2011

Mr. Scott Cottrell
Sumter County Public Works
310 Anderson Avenue
Bushnell, Florida 33513

Re: Proposal for Professional Engineering Services
Stormwater Needs Assessment - Task Assignment 2
Sumter County, Florida
AMEC-BCI Project No. 600053.1

Dear Scott:

Sumter County (County) has requested AMEC-BCI Engineers & Scientists, Inc. (AMEC) to provide professional engineering services for Task 2 Stormwater Needs Assessment. AMEC completed Task Assignment 1 in March 2011 which included a report of findings for the following tasks:

1. Identify typical elements of a rural county stormwater management program (*where do we need to be*).
2. Identify and collate all current elements that could become a stormwater management program (e.g. existing GIS layers, SWFWMD permits/operations files, existing watershed management studies, etc, etc) (*where are we*).
3. Make recommendations for next steps, and cost estimates for discrete steps. (*how do we get to where we need to be from where we are*).

Task Assignment 2 includes the following tasks:

1. Identify all existing basin studies within Sumter County, along with the date the study was completed, on a map. Evaluate the need for updates to the study, and recommend additional studies.
2. Update and expand existing GIS database with all stormwater-related structures and features within the County.

AMEC
2000 E. Edgewood Drive, Suite 215
Lakeland, Florida
USA 33803
Tel (863) 667-2345
Fax (863) 667-2662

www.amec.com
www.bcieng.com

3. Develop a plan for maintenance of the County's drainage ditches, and bridges.
4. Research documentation related to existing legal access for the County's canals.
5. Identify parcels and structures impacted by changes to the FEMA DFIRMS.
6. Evaluate the County's growth trends including the rate of growth and the geographic locations of growth. Make recommendations for steps the County should take relative to stormwater management to minimize risk to the County from unplanned growth, and plan for stormwater management.
7. Evaluate the County's short term priorities related to stormwater management.
8. Prepare two concept projects and applications for submission to Southwest Florida Water Management District's Cooperative Funding Initiative.
9. Prepare a report of Findings for Tasks 2.1-2.7, which includes the cooperative funding application from Task 2.8.

The tasks to accomplish this project are described in detail below:

Task 2.1 IDENTIFY EXISTING BASIN STUDIES

A number of existing studies related to stormwater were referenced in the report delivered during Task 1. AMEC performed a search for any other existing studies available, using the internet, and by contacting FDEP, SWFWMD, and FEMA. The geographical (basin) limits of the studies and the completion dates of the studies will be listed. A map outlining the limits of all existing stormwater studies will be generated.

Task 2.2 UPDATE AND EXPAND EXISTING GIS DATABASE

The County owns and operates approximately 700 miles of roadway, 27 bridges, 20 stormwater ponds, numerous stormwater structures within the rights of way (mainly in The Villages where there are 235 miles of roadway), the South Sumter Canals and Jumper Creek Canal. AMEC will prepare a geo-database containing pertinent information for these stormwater features. The geo-database formatting will be coordinated with the formatting of the County's Pavement Management data. We will rely on existing plans made available by the County for this data. AMEC will coordinate with County staff prior to beginning any field work to understand the general locations for the stormwater features that will be located in the field. We have included time for two AMEC personnel for 30 days in the field to collect data for cross culverts, stormwater manholes and inlets, ponds and pond control structures, and bridges.

The following data will be collected:

County Roadways – Existing roadway shapefiles will be used to create a county roadway feature. Data will include road name, and length. We will coordinate with the County to include additional information for each road that has been documented as a part of the pavement management study.

Bridges – AMEC will add bridge data which has been collected by FDOT to the database. Data will include latitude, longitude, road name, bridge number, structure name, facility crossed, average daily traffic, year built, year reconstructed, last inspection date, sufficiency rating, health index NBI rating. Each bridge will be photographed during the field investigation.

Inlets/control structures – AMEC will use GPS to collect coordinates for all inlets/control structures maintained by the County. Data will include latitude, longitude, structure type, condition, and photograph for data collected in the field.

Pipes – AMEC will use GPS to create a line file for pipes maintained by the County. This information will be obtained from plans and/or field investigation. Data will include diameter, shape, upstream end and downstream end, length, and material for data collected from plans. Invert elevation data for pipes in grated inlets and at outfalls will be collected using GPS.

Mitered End Sections – AMEC will use GPS to collect coordinates for mitered end sections maintained by the County. Data will include latitude and longitude, size, shape, condition, and a photograph.

South Sumter Canals – AMEC will use existing plans, structure locations from SWFWMD and existing aerial photography to map the South Sumter Canals. Data will include canal name and canal length.

Jumper Creek – AMEC will use the existing survey and cross-sections available from SWFWMD to map Jumper Creek. Data will include canal name length, and cross section information.

Location of Complaints Submitted to the County – Data will include latitude and longitude for the location of the problem, problem description, name address and contact information of person submitting complaint, date of complaint, date of County response, name of staff responding, action taken. We assume that County staff has obtained the information listed above.

Deliverable: Geo-database and hard copy of all data.

Task 2.3 DEVELOP MAINTENANCE PLAN FOR CANALS

AMEC will prepare a maintenance plan for canals maintained by the County. The plan will include recommendations for frequency of maintenance, type of maintenance, and regulatory information as it applies to herbicide or mechanical plant management. We will include an analysis of the annual cost of maintenance for using County staff and hiring a contractor. Costs will include cost of disposal of materials if required.

Task 2.4 **RESEARCH LEGAL ACCESS DOCUMENTATION FOR COUNTY CANALS**

AMEC will gather information related to easements/ rights of way/ or license agreements for access to the South Sumter ditches and Jumper Creek Canal. Additional research will include ownership/easements and responsibility for maintenance of the small concrete slabs and concrete double T bridges that were placed over several canals at several locations. Our approach to collecting this information will be to utilize information previously collected by County staff, interview SWFWMD staff including Gene Altman and Mike Bartlett, as well as gather information from the property appraiser and the clerk of courts for recorded legal documentation. Findings will be compiled and delivered to the County, and included in the final report to the County.

Task 2.5 **IDENTIFY PARCELS AND STRUCTURES IMPACTED BY CHANGES TO FEMA DFIRMS**

AMEC will overlay the County's parcel coverage with the existing DFIRM and the proposed 2012 DFIRM in order to identify parcels that will be impacted by the DFIRM changes. AMEC understands that a coverage containing finished floor elevation information exists. This coverage will also be used for an overlay analysis with the existing and proposed 2012 DFIRM to determine structures that will be impacted by the DFIRM changes. AMEC will assess the County's floodplain review process and will make recommendations for ensuring compliance with base flood elevation standards.

Task 2.6 **ANALYSES FOR STORMWATER NEEDS RELATED TO GROWTH**

AMEC will gather population data for 2000 and 2010 for the County and for municipalities within the County and for The Villages within Sumter County. The sources of this data will be the U.S Census which reports data for the County and The Villages and other sites which report population data for Cities. We will also contact local planning and development staff for data. We analyze this information relative to population density within contributing basins for TMDL "listed water bodies". This analysis will be performed using GIS software for modeling and assigning a risk factor.

We will also make recommendations for actions pertaining to numeric nutrient criteria (NNC) and/or the need for site specific alternative criteria (SSAC) for the County's lakes and flowing waters. The status of the NNC regulation is currently in flux. EPA is prepared to withdraw the federal standards for lakes and flowing waters established in November 2010 if FDEP adopts and EPA approves their own protective and scientifically sound numeric standards by January 2012. Our analysis will include review of existing data for the County's lakes and flowing waters relative to the NNC standards that are in effect as of January 2012. Water bodies that are listed as "impaired" on that date (under the FDEP impaired waters rule), or that are not meeting the NNC recognized at that time by EPA, will be recommended for further evaluation. The evaluation will include the technical validity of any TMDLs that have been proposed or adopted by EPA or FDEP, and a range of potential actions (including SSAC development) that the County may wish to consider to address potential NNC- and TMDL- related issues.

Results of these analyses will be summarized in the final report to the County.

Task 2.7 **EVALUATE SHORT TERM PRIORITIES FOR STORMWATER PROJECTS**

The results of Tasks 2.1-2.6 will be used as input to a cost benefit analysis for prioritizing stormwater projects for the County. A list of projects will be developed, and prioritization parameters for the matrix will include but not be limited to:

- Condition
- Acres (or persons) effected
- Cost to correct
- Required by regulation
- Discharges to TMDL listed water body
- Safety Hazard
- Health Hazard
- Cost to ignore
- Complaint submitted

AMEC will produce a draft of the priority matrix for delivery to the County. We will meet with County staff to discuss the results, and will incorporate comments into a final priority matrix that will become a part of the final report for this task.

Task 2.8 **PREPARE COOPERATIVE FUNDING APPLICATIONS TO SWFWMD**

Applications for cooperative funding projects with SWFWMD must be filed annually by the first Friday in December. AMEC will work with Cara Martin, SWFWMD's community affairs program coordinator for Sumter County, to prepare applications for two projects for the December 2011 deadline. We understand that this application will be submitted prior to completion of the final report for this task. AMEC will meet with the County prior to final determination of the project to be submitted, review SWFWMD evaluation parameters, and research projects that have been approved within the region, in order to improve the potential for capitalizing on this funding.

Task 2.9 **TV STORMWATER PIPES**

The County has requested that AMEC include a line item in this proposal for inspecting stormwater pipes using closed circuit televising. The cost of televising pipes varies by pipe size and length per job, and will range from \$0.55 to \$1.20 per linear foot. Additional services provided by these contractors includes but is not limited to mechanical cleaning, root and tap removals, chemical and cementitious sealing, epoxy and cementitious coatings, joint sealing, point repairs, slip lining, and specialized custom reports. (*Fees not included in this proposal*)

TASK 3.0 PREPARE A REPORT OF FINDINGS FOR TASKS 2.1-2.7

AMEC will prepare a draft report of findings for Tasks 2.1-2.7. We will meet with County staff to review the report and incorporate County comments into a final report. Ten copies of the final report will be delivered.

The estimated budget for this project is listed by task below.

BUDGET ESTIMATE AND SCHEDULE

Task	Description	Cost
2.1	Identify Existing Basin Studies	\$2,756.00
2.2	Update and Expand Existing GIS Database (not to exceed)	\$67,046.96
2.3	Develop Maintenance Plan for Canals and Bridges	\$5,083.68
2.4	Research Legal Access Documentation for County Canals	\$3,682.56
2.5	Identify Parcels and Structures Impacted by Changes to FEMA DFIRMS	\$3,850.24
2.6	Analyses for Stormwater Needs Related to Growth	\$17,724.80
2.7	Evaluate Short-Term Priorities for Stormwater Projects	\$7,538.72
2.8	Prepare Cooperative Funding Applications to SWFWMD	\$9,422.56
2.9	TV Stormwater Pipes (As a separate Task Order)	\$0.00
3.0	Prepare a Report of Findings for Tasks 2.1-2.7	\$12,760.88
Total		\$129,866.40

We have provided this schedule as an estimate of the time required to complete each task. We have assumed that we will receive a Task Assignment for this project by October 17, 2011. We will prepare a more detailed work plan for delivery to the County upon receiving the task assignment.

SCHEDULE

Task Description	Begin Task	Complete Task
Prepare Cooperative Funding Applications to SWFWMD	October 17, 2011	November 28, 2011
Update and Expand Existing GIS Database	October 17, 2011	Jan 31, 2012
Identify Parcels and Structures Impacted by Changes to FEMA DFIRMS	October 31, 2011	November 14, 2011
Identify Existing Basin Studies	November 1, 2011	November 30, 2011
Analyses for Stormwater Needs Related to Growth	November 14, 2011	January 30, 2012
Develop Maintenance Plan for Canals and Bridges	December 1, 2011	December 30, 2011
Research Legal Access Documentation for County Canals	January 2, 2012	January 30, 2012
Evaluate Short-Term Priorities for Stormwater Projects	January 31, 2012	February 21, 2012
Prepare a Report of Findings for Tasks 2.1-2.7	February 22, 2012	April 23, 2012

We appreciate this opportunity to work with Sumter County. If you have any questions please do not hesitate to contact me at 352-536-7126.

Sincerely,



Terry Dykehouse, P.E.
Senior Project Manager



David W. Butcher PE, LEED AP
Director of Civil Engineering
& Water Resources

TD: jc
cc: Christopher Wert



Canal B

Bridge 1

Crossing 2

Bridge 3

Bridge or Culvert 5

Culvert 6

Culvert or Crossing 4

Bridge 7

Culvert 8

Culvert 9

Culvert 11

Bridge 5

Locks 2

Crossing 3

Bridge 1



1:23,500

CHANNEL C-7

CR 753

C-478A

SE 117th LN

SE 118th LN

SE 6th DR

SW 97th PL

SW 98th AVE

SW 103rd AVE

CR 738

CR 738E

CR 738G

CR 753 S

CR 783

CR 782 CR 782A

S US 301

Bridge 3