Board of Commissioners Meeting February 21, 2015

PRELIMINARY AGENDA

FLORIDA INLAND NAVIGATION DISTRICT Board of Commissioners Meeting

9:00 a.m., Saturday, February 21, 2015

The SpringHill Suites 2000 NW Courtyard Circle Port St. Lucie (St. Lucie County) FL 34986-2500

Item 1. Call to Order.

Chair Chappell will call the meeting to order.

Item 2. Pledge of Allegiance.

Commissioner Kavanagh will lead the Pledge of Allegiance to the United States of America.

Item 3. Roll Call.

Secretary Netts will call the roll.

Item 4. Consent Agenda.

The consent agenda items are presented for approval. Commissioners may remove any items from this agenda that they have questions on or would like the Committee to discuss in depth. Any items removed would then be included in the regular agenda in an order assigned by the Chair.

(Please see back up pages following the COLOR page)

RECOMMEND: Approval of the Consent Agenda.

- A) City of Miami Biscayne Bay Spoil Island Projects Extension Requests, Miami-Dade County, FL.
- B) Keep Nassau Beautiful St. Marys River Cleanup Event Request, Nassau County, FL.
- C) Volusia County Halifax/IRL Waterway Cleanup Event Request, Volusia County, FL.
- D) Volusia County St. Johns River Waterway Cleanup Event Request, Volusia County, FL.

Item 5. Additions or Deletions.

Any additions or deletions to the meeting agenda will be announced.

RECOMMEND: <u>Approval of a final agenda.</u>

Item 6. Public Comments.

The public is invited to provide comments on issues that are NOT on today's agenda. All comments regarding a specific agenda item will be considered following Board discussion of that agenda item. Please note: Individuals who have comments concerning a specific agenda item should fill out a speaker card and communicate with staff prior to that agenda item.

Item 7. Board Meeting Minutes.

The minutes of the following meetings are presented for approval.

- January 16, 2015 Finance & Budget Committee Mtg. (Please see back up pp 6-10)
- January 16, 2015 Board Meeting (Please see back up pages 11-29)

RECOMMEND: Approval of the minutes as presented.

Item 8. Comments from the U.S. Army Corps of Engineers.

U.S. Army Corps of Engineers (USACE) Intracoastal Waterway Project Manager, Ms. Shelly Trulock is scheduled to present an update on projects and activities.

(Please see back up pages 29A-29C)

Item 9. Staff Report on St. Lucie County Area Projects.

Staff will present a report on the District's St. Lucie County area projects. (Please see back up pages 30-42)

Item 10. Presentation on Dredged Material Management Area (DMMA) BV-4B Groundwater Analysis and Design Solutions, Brevard County, FL.

Representatives from Dunkelberger Engineering & Testing Inc. (Dunkelberger) are scheduled to provide a brief presentation and answer questions concerning the design and permitting of DMMA BV-4B, particularly issues pertaining to potential groundwater intrusion from the operation of the site.

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Item 10 (cont.).

DMMA BV-4B is one of the District's primary, long-range dredged material handling sites in north Brevard County. The site is currently undergoing design, engineering and permitting (Phase II) development, as approved by the Board on February 14, 2014.

The location of this upland site warranted a detailed analysis of potential groundwater impacts for the long-term operation of the de-watering facility. Taylor Engineering enlisted the assistance of Dunkelberger to provide expert groundwater analysis and to provide the most feasible cost solution to construct this site.

Since many of the District's previously purchased permanent DMMA sites are land-locked and currently undeveloped, groundwater analysis will be necessary during the design and permitting of these facilities. The engineering and analysis applied to DMMA BV-4B, while not universal to all of our undeveloped sites, will be useful in providing information and potential solutions to the District's other similar sites.

(Please see back up pages 43-52)

RECOMMEND: (This item is presented for Board review and discussion only.)

Scope of Work and Fee Quote for Professional Engineering and Environmental Services for Dredged Material Management Area (DMMA) DU-9, Duval County, FL.

At the regular meeting on September 13, 2014, the Navigation District's Board (Board) approved a work order with Taylor Engineering to design, engineer and permit the remaining unbuilt portion of DMMA DU-9 in Duval County.

To review, the Navigation District (District) obtained a permit in 2000 to construct the site. When the initial site work uncovered soil and groundwater contamination, work was halted. In 2004, following numerous investigations and remediation by the original property owner, the District pursued the construction of that portion of the site that was NOT affected by contamination.

The previous land owner recently approached the District for concurrence of the conditional site closure conditions. Staff conferred with our attorney and our District Engineer. Subsequently, staff presented a scope and fee quote from the District Engineer for permitting the remainder of the site, and the Board approved the agenda item in September. In addition, staff was directed to work with our attorney and the previous land owner to establish an agreement limiting the District's long-term liability for contamination at this site, and to establish conditions should the future use of the site be restricted or incur additional costs to the District.

Following a pre-application meeting, site visits and follow up discussions with regulatory staff, it has become apparent that additional work will be needed due to the unique nature of this site. Taylor

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Item 11 (cont.).

Engineering has provided a scope and fee quote to modify FIND Work Order No. 14-18 pertaining to the original scope approved on September 13, 2014.

Staff has reviewed the not-to-exceed proposal, which appears both accurate and reasonable, and agrees the work will be necessary to continue with permitting DMMA DU-9.

(Please see back up pages 53-90)

RECOMMEND:

Approval of a scope of work and fee quote in the amount of \$76,018.28 from Taylor Engineering to modify Work Order No. 14-18 pertaining to the design, engineering and permitting of DMMA DU-9, Duval County, FL.

Item 12. Scope of Work and Fee Estimate for Professional Survey Services Pertaining to the Intracoastal Waterway (IWW) Deepening Project in the Vicinity of the Port of Palm Beach, Palm Beach County, FL.

At our meeting on December 13, 2014, the Board approved a Scope of Services and Fee quote from Taylor Engineering for professional engineering and construction services for the referenced project.

The initial utility and magnetometer survey found two crossing within the proposed dredge area and one within the proposed mitigation area. These "hits" will need to be diver verified.

The proposed scope and fee quote is reasonable and accurate, and within the parameters of the Consultant's Competitive Negotiation Act (CCNA). Approval of this work will keep the project on track to be constructed this year.

(Please see back up pages 91-94)

RECOMMEND:

Approval of a scope of work and fixed fee in the amount of \$20,025.50 from Taylor Engineering for professional surveying services and administration in support of the Palm Beach IWW Deepening Project, Palm Beach County, FL.

Item 13. Personnel Committee Report.

The District's Personnel Committee met prior to the Board meeting and will provide their recommendations concerning items on the Committee's agenda.

(Please refer to the Personnel Committee Agenda Package)

RECOMMEND: Approval of the recommendations of the District's Personnel Committee.

Item 14. Finance and Budget Committee Report.

The District's Finance and Budget Committee met prior to the Board meeting and will provide their recommendations concerning items on the Committee's agenda.

(Please refer to the Finance and Budget Committee Agenda Package)

RECOMMEND:

Approval of the recommendations of the District's Finance and Budget

Committee.

Item 15. Washington Report.

The District's federal governmental relations firm has submitted a status report concerning activity on the District's federal issues.

(Please see back up pages 95-101)

Item 16. Additional Staff Comments and Additional Agenda Items.

Item 17. Additional Commissioners Comments.

Item 18. Adjournment.

If a person decides to appeal any decision made by the board, agency, or commission with respect to any matter considered at such meeting or hearing, he or she will need a record of the proceedings, and that, for such purpose, he or she may need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is to be based.

MINUTES OF THE

FLORIDA INLAND NAVIGATION DISTRICT

Finance and Budget Committee Meeting

8:30 a.m., Friday, January 16, 2015

The DoubleTree by Hilton

116 San Marco Avenue

St. Augustine, St. Johns County, Florida 32084-3262

ITEM 1. Call to Order.

Committee Chair Cuozzo called the meeting to order at 8:30 a.m.

ITEM 2. Roll Call.

Assistant Executive Director Janet Zimmerman called the roll and Committee Chair Cuozzo, Vice-Chair Blow, Commissioner Bowman, Commissioner McCabe, and Commissioner Sansom were present. Ms. Zimmerman stated that a quorum was present. Secretary Netts sat in on the meeting.

ITEM 3. Additions or Deletions.

Chair Cuozzo asked if there were any additions or deletions to the meeting agenda. Mr. Crosley stated that there are no additions or deletions to the agenda.

Vice-Chair Blow made a motion to approve the agenda as presented. The motion was seconded by Commissioner McCabe. Chair Cuozzo asked for any further discussion, hearing none, a vote was taken and the motion passed.

ITEM 4. Public Comments.

Chair Cuozzo asked if there were any public comments on issues that are not on today's agenda. There were none.

ITEM 5. Financial Statements for November of 2014.

Chair Cuozzo presented the District's financial statements for November of 2014. He asked if there were any questions, there were none.

Mr. Crosley referred to the Revenue Sheet and noted the "Due from other Governments" line item. He stated that the District has received reimbursements from county tax collectors due to their overestimated costs to collect the District's tax revenue.

Mr. Crosley stated that the District had one CD mature and it was renewed with Bank United.

Mr. Crosley stated that the District will be closing two bank accounts, National City PNC and Suntrust Savings.

Mr. Crosley noted that a budget amendment will be presented next month to make adjustments for grants that were expended in the prior year that are in the current budget.

Vice-Chair Blow made a motion to approve a recommendation to the full Board of the financial statements for November of 2014. The motion was seconded by Commissioner Bowman. Chair Cuozzo asked for any additional discussion. Hearing none, a vote was taken and the motion passed.

ITEM 6. November 2014 Budget Summary and Project Status Expenditure Reports.

Mr. Crosley presented the Expenditure and Project Status Reports for November of 2014.

Mr. Crosley stated that there are a couple of line items under Operations that will be omitted with the upcoming budget amendment; Sawpit dredging, Crossroads dredging and IWW Ponce Inlet. These projects have been completed and are not expected to incur any cost this coming fiscal year.

Mr. Crosley stated that the District's Database updates are almost complete. He asked for questions.

Vice-Chair Blow asked about the data conversion from Arc View to Google Earth Pro. Mr. Crosley stated that years ago the District purchased the Arc View system and at the time it was the latest in technology. He stated that to keep the Arc View system updated, the District would spend approximately \$250,000.00 every five years to shoot our own base maps to update the system. He stated that the system has not been updated for several years. He stated that in that time, Google Earth Pro became available and staff feels that the new Google Earth Pro program would be more cost effective and better suit the District's current needs. He stated that staff has purchased four Google Earth Pro licenses and staff is transferring the District's original coverages into the Google program. He stated that with the Google program the District will not have to shoot base maps. He noted that several commissioners are using Google Earth Pro in their businesses and are very happy with the program.

Commissioner Isiminger stated that back in the 1990's he was in the FIND office obtaining photographs from the District's Arc View System, which was the best system available at that time. He stated that now, Google Earth Pro is the way to go.

Vice-Chair Blow asked if commissioners would have access to the program. Mr. Crosley stated that with the Arc View System, staff placed the maps on individual CD's by county. He stated that the coverage with the Google Earth Pro's KML files are small and can be e-mailed to commissioners. He stated that these files could be used with Google Earth for project planning purposes but not navigation purposes. He stated that once all the District's information has been updated, the Google Earth Pro files will be available on the District's web site.

Commissioner Isiminger suggested that if the information is posted on the District's web site that a disclaimer is posted that this information is not for navigation and is for planning purposes only.

ITEM 7. Review and Update of the District's Cash Management and Investment Policy.

Mr. Crosley stated that the District's Cash Management and Investment Policy has not been reviewed or updated for over ten years. He stated that staff has reviewed and updated the policy and added a new section for Automated Clearing House (ACH), or electronic payments. He stated that the title for Mr. Scambler's position was updated. He noted that previously, the District used the State Board of Administration (SBA) as a benchmark for investment returns but now, staff uses the Bauer Report. He stated that he would like to thank Mr. Scambler, the District's Finance Director for working with Attorney Breton on this new policy.

Chair Cuozzo asked if the District's auditing firm has reviewed this new policy. Mr. Crosley answered no and stated that staff can provide the current auditing firm with this policy for review. He stated that this policy was molded after the Town of Jupiter's Cash Management and Investment Policy.

Commissioner McCabe asked about the District relying on the Bauer Report for the initial bank ratings. She asked how the District knows when a banking facility rating slips. Mr. Crosley stated that Mr. Scambler continuously monitors the bank ratings.

Commissioner Sansom made a motion to approve that the District's auditor review the revised District Cash Management and Investment Policy including Attachments, and the item then be brought back to the Finance and Budget Committee for a recommendation to the full Board to approve the adoption of the Resolution 2015-02. The motion was seconded by Commissioner

McCabe. Chair Cuozzo asked for any additional discussion. Hearing none, a vote was taken and the motion passed.

<u>ITEM 8.</u> Delegation of Authority Report.

Chair Cuozzo presented for review the Executive Director's Delegation of Authority actions.

Mr. Crosley noted that with the pending Board approved changes to the Resolution, if the Executive Director is out of the office for three days, the Delegation of Authority is transferred to the Assistant Executive Director. He stated that the reason for this change is that rarely can these types of transactions wait five days. He stated that the new authority also reflects the Executive Director's administrative spending increase from \$3,000.00 to \$5,000.00.

Mr. Crosley stated that four actions were taken from December 3, 2014 through January 5, 2015. He asked for questions or discussion. There were none.

<u>ITEM 9.</u> Additional Agenda Items or Staff Comments.

Chair Cuozzo asked if there were any additional agenda items or staff comments. Staff did not have any additional comments.

ITEM 10. Additional Commissioners Comments.

Chair Cuozzo asked if there were any additional Commissioner comments. There were none.

ITEM 11. Adjournment.

Chair Cuozzo stated that hearing no further business the meeting was adjourned at 8:53 a.m.

MINUTES OF THE

FLORIDA INLAND NAVIGATION DISTRICT

Board of Commissioners Meeting

9:00 a.m., Friday, January 16, 2015

The DoubleTree by Hilton

116 San Marco Avenue

St. Augustine, St. Johns County, Florida 32084-3262

ITEM 1. Call to Order.

Chair Chappell called the meeting to order at 9:03 a.m.

ITEM 2. Pledge of Allegiance.

Vice-Chair Blow led the pledge of allegiance to the flag of the United States of America.

ITEM 3. Roll Call.

Secretary Netts called the roll and Chair Chappell, Vice-Chair Blow, Treasurer Cuozzo, Commissioners Bowman, Isiminger, McCabe, Sansom and Williams were present. Commissioner Crowley, Commissioner Dritenbas, and Commissioner Kavanagh were absent. Secretary Netts stated that a quorum was present.

ITEM 4. Consent Agenda.

Chair Chappell asked if there were any comments or questions regarding the Consent Agenda.

Secretary Netts made a motion to approve the Consent Agenda as presented. The motion was seconded by Vice-Chair Blow. Chair Chappell asked for discussion. Hearing none, a vote was taken and the motion passed.

ITEM 5. Additions or Deletions.

Chair Chappell asked if there were any additions or deletions to the meeting agenda.

Mr. Crosley stated that he would like to add to the agenda: Item 16A, Purchase of a New Color Copier.

Vice-Chair Blow made a motion to approve the final agenda as amended. The motion was seconded by Secretary Netts. Chair Chappell asked for discussion. Hearing none, a vote was taken and the motion passed.

ITEM 6. Public Comments.

Chair Chappell asked if there were any public comments on issues that are not on today's agenda. There were none.

ITEM 7. Board Meeting Minutes.

Chair Chappell asked if there were any comments or questions regarding the Board Meeting Minutes.

Commissioner Isiminger referred to paragraph 11 of Item 13 of the December 13, 2014 Board Meeting Minutes and stated that he did not make the first two comments of that paragraph, Mr. Crosley did.

Chair Chappell referred to Item 20 of the December 13, 2014 Board Meeting Minutes and stated that the Chair does not make motions.

Secretary Netts made a motion to approve the December 13, 2014 Board Meeting Minutes and Finance Committee Meeting Minutes as amended. The motion was seconded by Commissioner Isiminger. Chair Chappell asked for discussion. Hearing none, a vote was taken and the motion passed.

ITEM 8. Staff Report on St Johns County Area Projects.

Mr. Crosley stated that Phase I of the Dredged Material Management Plan (DMMP) for the Intracoastal Waterway (IWW) in St. Johns County was completed in 1989. He stated that Phase II of the DMMP was completed in 1992 and all major land acquisition was completed in 1995.

Mr. Crosley stated that the 50-year dredging projection for this area is 4.3 million cubic yards and the storage projection is 9.3 million cubic yards. He stated that Maintenance Dredging in Reach V in the vicinity of the Matanzas Inlet is 67% of the county's dredging volume, occurring approximately every 2.7 years, and this reach is the highest shoaling reach of the entire waterway.

Mr. Crosley stated that to date, two of the four upland Dredged Material Management Areas (DMMA) in the county have been fully constructed. He stated that the other two sites have had Phase I development completed. He stated that DMMA SJ-20A is now in Phase II development and is scheduled for construction next year. He stated that the District has one beach disposal area SJ-MB, located south of Matanzas Inlet.

Mr. Crosley stated that material was removed by St. Johns County from DMMA SJ-1 in 2011 to repair the sand dunes at Summerhaven Beach. He stated that at that time, the District removed material that had been blown out of the site by Tropical Storm Fay. He stated that the county recently removed additional material from the site in 2014.

Mr. Crosley stated that in 2011, Dredging Reach V near Matanzas Inlet was maintenance dredged with approximately 180,000 cubic yards of material, placed on the southern portion of Summerhaven Beach. He stated that plans & specifications for dredging this reach will again be pursued in 2015. He stated that Dredging Reach III in

the vicinity of St. Augustine Inlet was dredged in 2011, with the material being placed on the beach at Anastasia State Park.

Mr. Crosley stated that the dredging of the northern portion of Reach I, Palm Valley, was completed in early 2010, with 232,000 cubic yards of material being placed in DMMA DU-9. He stated that this project completed the maintenance of the 15 miles of channel within the Palm Valley Cut.

Mr. Crosley stated that the St. Johns County Waterways Economic Study was completed in 2005 and it found that there were 155 waterway-related businesses in the county employing 2,157 people, with salaries of \$73 million, a direct economic output of \$139 million and a total economic impact of \$213 million.

Mr. Crosley stated that since 1986, the District has provided \$5.58 million in Waterways Assistance Program funding to 57 projects in the county having a total constructed value of \$16.9 million. He stated that the District participates with all the major communities in St. Johns County.

Mr. Crosley noted that St. Johns County is the only District County without a Waterway Cleanup Program. Vice-Chair Blow stated that he has been working to promote a Waterway Cleanup Program and he noted that a large part of the county waterways are within the GTMNEER, Anastasia State Park, and other areas are bordered by marsh. He stated that what St. Johns County is interested in is funding for boat ramps, kayak docks, and dredging.

Vice-Chair Blow stated that in the northern part of Reach III, there is a natural area of the channel that has shoaled and has become a sandbar. He requested that the Corps consider dredging that area with the Currituck when it is in that area of the waterway. Mr.

Crosley suggested that in the meantime, FIND should contact the U.S. Coast Guard to install a buoy in the area for safety.

ITEM 9. Presentation on the Treasure Beach Canal Dredging Project, St. Johns County, Florida.

Vice-Chair Blow stated that the county had originally approached the District to utilize the nearby, but unconstructed, Dredged Material Management Area (DMMA) SJ-20A for the Treasure Beach Canal Dredging project in St. Johns County. He stated that when the timing and logistics of that use could not be coordinated, the county and their consultant moved forward on the hydraulic dredging project utilizing the Butler Park Boat Ramp and Geotubes for dewatering. He noted that during the project, the Butler Park Boat Ramp was closed.

Vice-Chair Blow introduced Mr. Carl Salafrio, President of Environmental Consulting & Design (ECD) to provide a presentation on the recently completed Treasure Beach Canal Dredging project in St. Johns County. Mr. Salafrio stated that the Treasure Beach community consists of approximately 400 residences with canals leading to the Intracoastal Waterway (IWW). He stated that the county owns the bottom land of these canals.

Mr. Salafrio stated that this project was a design and build contract giving the contractor the flexibility to develop dewatering options. He stated that the contract suggested using Geotubes to dewater this project and he noted that for this type of environment, it was an innovative suggestion. He stated that his company then applied for the project permits. He stated that the type of polymer used can have water quality issues and in order to get the project permitted, they had to complete toxicity testing. He stated that they also provided the testing and project reports from another project where polymers

and injected Geotubes were used. He noted that there were no toxicity problems or fish kills and the Florida Department of Environmental Protection (DEP) permitted the project.

Mr. Jack Adams, with Gator Dredging stated that the Treasure Beach Canal dredged material was typical canal material. He stated that a booster pump was used to move the material through the pipeline to the Butler Park site, where the material was moved to two settling cells. He stated that the first cell was unlined allowing the lighter material to be scooped out leaving the heavier sand. He stated that the sand was moved to the second cell, which was lined and then the water was injected with the polymer. He stated that the polymer allowed the material to be pumped into the Geotubes. He stated that the Geotubes were given three to four weeks to weep. He stated that we did not have any water quality or pipeline issues.

Mr. Crosley asked the amount of dredged material that was removed and the daily dredging volume. Mr. Salafrio stated that the contract was based on 85,000 cubic yards. He noted that the contract was not based upon yardage, it was based upon template. Mr. Adams stated that approximately 1,000 to 1,200 cubic yards of material was dredged daily. Mr. Salafrio stated that the material took approximately three weeks to dry out and consisted of 60% sand and 40% organic. He stated that the material was tested and then transported and disposed of at the county borrow pit. He stated that the material was not toxic.

Mr. Adams stated that two important aspects of this project is the regulation and measuring of the proper amount of polymer to the type of sand, and enough acreage to stack the Geotubes for drying out.

Secretary Netts asked the total length of the Treasure Beach Canal that was dredged. Mr. Adams answered 5.2 miles.

ITEM 10. Waterway Master Plan Proposal for Duval County, Florida.

Ms. Zimmerman introduced Mr. Brian Burkett with the City of Jacksonville, Parks and Recreation, in collaboration with the cities of Atlantic Beach, Neptune Beach and Jacksonville Beach, to discuss the development of a Waterway Master Plan for Duval County. She stated that this proposal is formatted and consistent with the District's rule criteria. She stated that the proposal is for a two-year agreement at fifty (50) percent cost share with \$100,000.00 in District funding.

Mr. Burkett stated that the cities within Duval County are working with the Northeast Florida Regional Council, the University of North Florida, and Jacksonville University to develop a county-wide Waterway Master Plan. He noted that the county could not complete this plan within a \$200,000.00 budget without these partners and their resources.

Mr. Burkett stated that the overall project scope will develop a comprehensive Maritime Management Plan that prioritizes waterway projects including the IWW, the St. Johns River, and connecting navigable waterways within Duval County. He stated that project identification and phasing of projects within the plan will help smooth out the Waterway Assistance Program (WAP) application process. He stated that the plan will identify waterway access points, waterway transportation, and working waterfronts.

Mr. Burkett stated that the county is requesting public input and has an online survey to collect information on the county and from social media web sites. He stated that with the input provided: Phase I, Research, will start in June of 2015; Phase II, Facility

Assessment, will start in September of 2016; Phase III, Action Plan, will start in February of 2017; Phase IV, Final Planning, will start in March of 2017. He stated that the individual phases will be summarized and consolidated into a Maritime Management Plan by May of 2017. He asked if there were any questions.

Commissioner Bowman stated that this effort will help the county develop a plan and prioritize projects eligible for FIND WAP funding. He stated that he fully supports this plan.

Vice-Chair Blow stated that Duval County is very large and the Northeast Florida Regional Council has experience with these type of projects. Commissioner Bowman noted that the Northeast Regional Council knows Jacksonville better than anybody.

Treasurer Cuozzo stated that he is glad that this plan is begin done by the cities and county. He stated that however, he does not support the District funding a project where the funding will go to the Regional Planning Council because the council obtains funding from the City of Jacksonville. He stated that he would support the project if the sponsors advertised a Request for Proposal (RFP) and hired a private consultant. Mr. Burkhart stated that the city initially considered an RFP, but as they developed the project scope, it became too large. He noted that several consultants serve on the council and they commented that if the city advertised for an RFP, the project scope would need to be reduced in order to only cost \$200,000.00. He stated that the cities would like a fully completed plan with a project priority list.

Commissioner Sansom stated that with the cities utilizing the RPC, it will allow them to complete their full plan and allow the council to provide input. Secretary Netts stated that originally, the Northeast Regional Planning Council was created to review large-scale projects for seven counties to insure that proposed developments would not have a negative impact on surrounding counties. He stated that the Northeast RPC has contracted other studies, both for the state and various counties. He stated that the RPC has the staff, expertise, and familiarity with local government. He stated that the proposed Waterway Master Plan is not something that taxpayers have already paid for and it outside of the daily scope of the RPC.

Vice-Chair Blow made a motion to approve the Waterway Master Plan Proposal for Duval County, Florida. The motion was seconded by Commissioner Sansom. Chair Chappell asked for discussion. Hearing none, a vote was taken and the motion passed. Treasurer Cuozzo voted against the motion.

ITEM 11. Dredge Material Removal Agreement – Dredged Material Management Area (DMMA) DU-2, Duval County, Florida.

Mr. Crosley stated that staff has been approached by a Florida Department of Transportation (FDOT) sub-contractor (Maer Construction) to remove suitable material from the District's Dredge Material Management Area (DMMA) DU-2 in Duval County. He stated that the contractor proposes to remove up to 300,000 cubic yards of material to be utilized for public roadway construction.

Mr. Crosley stated that the public use of the material negates the need to bid the project, however, since the amount of material to be remove exceeds the Executive Director's authority (which is 20,000 cubic yards or less), this project will require Board approval.

Mr. Crosley stated that if the Board approves this action, staff will utilize the newly developed Material Removal Agreement and continue to work with the District's attorney, our engineer and the contractor to insure all due diligence and precautions are utilized.

Mr. Crosley introduced Mr. Michael Gonzalez and Mr. Steve Gonzalez, with Maer Construction.

Commissioner Isiminger made a motion to approve an agreement with Maer Construction to remove approximately 300,000 cubic yards of material from DMMA DU-2, St. Johns County, FL. The motion was seconded by Treasurer Cuozzo. Chair Chappell asked if there was any discussion.

Vice-Chair Blow noted that Maer Construction will be a sub-contractor for the FDOT and he wants to make sure that Maer Construction understands that if they or any independent truckers or contractors are not paid by FDOT or Maer Construction, that FIND will NOT make any payments to any of these sub-contractors.

Chair Chappell asked for discussion. Hearing none, a vote was taken and the motion passed.

ITEM 12. Resolution 2015-01, revising the District Board's Delegation of Authority to the Executive Director.

Mr. Crosley stated that at the previous meeting on December 13, 2014, the Board elected to increase the Executive Director's spending authority for administrative purposes from \$3,000.00 to \$5,000.00. He stated that this action needs to be approved by Resolution of the full Board.

Mr. Crosley stated that staff is also suggesting changing the authorization period of the Assistant Executive Director from five to three days. He stated that this change more accurately reflects the operations of the District. He stated that in addition, if there are any other desired changes, they should be recommended by the Board at this time.

Secretary Netts made a motion to approve the adoption of Resolution 2015-01, revising the District Board's Delegation of Authority to the Executive Director. The motion was seconded by Vice-Chair Blow. Chair Chappell asked for discussion. Hearing none, a vote was taken and the motion passed.

ITEM 13. Taylor Engineering Hourly Rate Adjustment.

Dr. Taylor stated that for 2015 he is proposing an average 2% increase for all staff and a 2.9% adjustment for technical and professional staff. He stated that the District's Senior Advisor is Mr. John Adams who works only with FIND, and he noted that Mr. Adams has done a great job. He stated that this request is in line with industry standards and that he feels that the proposed increase is reasonable given that Taylor Engineering did not request an increase in 2013. He stated that he respectfully asks that the Board consider this request.

Chair Chappell stated that the Florida Department of Transportation (FDOT) uses the Zweig-White average negotiated salary rate and Dr. Taylor is using that information as a comparison. He asked if the raw hourly salaries reported in this survey are actual employee salaries. Dr. Taylor stated that Zweig-White surveys for salaries breakdown the request by categories and actual staff salary rates. Chair Chappell asked if the FDOT or the U. S. Army has ever asked Dr. Taylor for employee's salary rates. Dr. Taylor answered yes, and stated that he provides the information and noted that the firm has been audited as well.

Commissioner Williams asked if the District should hire in-house engineering staff. Vice-Chair Blow noted that in-house engineering staff would be expensive and noted that the District would also have to pay state benefits.

Commissioner McCabe stated that she feels that the background and institutional knowledge that Taylor Engineering has regarding the District's site and work history has value.

Secretary Netts made a motion to approve the rate adjustment requested by Taylor Engineering for 2015. The motion was seconded by Treasurer Cuozzo. Chair Chappell asked for discussion. Hearing none, a vote was taken and the motion passed.

ITEM 14. Finance and Budget Committee Report.

Committee Chair Cuozzo stated that the District's Finance and Budget Committee met before today's Board meeting and the committee reviewed and recommended approval of the November 2014 financial statements, the delegation of authority, and the expenditure and project status report.

Treasurer Cuozzo made a motion to approve the recommendations of the District's Finance and Budget Committee November, 2014 Financial Statements. The motion was seconded by Commissioner Bowman. Chair Chappell asked for discussion. Hearing none, a vote was taken and the motion passed.

Treasurer Cuozzo stated that the committee reviewed and discussed the District's proposed Cash Management and Investment Policy. He stated that the committee requested staff have the new policy reviewed by the District's current auditor and then brought back to the committee for approval.

Mr. Crosley asked that if any commissioner has comments regarding the new policy to please provide them to staff to be forwarded to the District's auditor.

ITEM 15. Washington Report.

Mr. Crosley stated that on December 16, 2014, the President signed a \$1.1 trillion spending package which includes \$600,000.00 in the President's budget for the Intracoastal Waterway (IWW). He stated that the Corps also has additional "mini-pot" funding in the amount of \$45 million and the District may be eligible for some of that funding.

Mr. Crosley stated that staff is scheduled to meet with Congresswoman Frankel, the Army Corps of Engineers, Jacksonville District, and the National Marine Fisheries Southeast Regional Office on February 18, 2015 to discuss a better path forward for the Essential Fish Habitat consultations process. He commented that Commissioner Isiminger plans to attend the meeting. Chair Chappell stated that he would like to attend the meeting. Treasurer Cuozzo stated that he will attend the meeting. He stated that if more than one commissioner attends this meeting, it will have to be noticed as a Legal Ad.

Chair Chappell asked if the National Marine Fisheries Southeast Regional Office has confirmed that they will attend the meeting. Mr. Crosley answered no. Chair Chappell suggested that the District move forward with the meeting even if the National Marine Fisheries Southeast Regional Office does not attend. Mr. Crosley noted that it would be a more productive meeting with the National Marine Fisheries Southeast Regional Office attending. Vice-Chair Blow stated that if the National Marine Fisheries Southeast Regional Office does not attend the meeting, it should be documented that all other invitees' attended the meeting and the agency did not.

Mr. Crosley stated that the Washington D.C. trip is scheduled for February 25 through February 26, 2015. He stated that commissioners interested in going should make their own hotel and travel arrangements. He asked commissioners interested in going to Washington D. C. contact him. He stated that that in the past, staff has coordinated the trip when the Atlantic Intracoastal Waterway Association (AIWA) will also be in Washington.

Vice-Chair Blow made a motion to approve the District's 2016 Federal funding requests. The motion was seconded by Commissioner Bowman. Chair Chappell asked for discussion. Hearing none, a vote was taken and the motion passed.

ITEM 16A. Purchase of a New Color Copier.

Mr. Crosley stated that the District's current Canon Image Runner C4080i color copier was purchased in August, 2008. He stated that both the unit and the service contract have supplied the District well, however, the current unit has reached the end of its service life and a new color copier is required.

Mr. Crosley stated that staff solicited three bids from competing manufacturers. He stated that the District was able to utilize the State of Florida bid price for the Canon at \$7,950.00 (low quote). He stated that the other quotes were by Xerox at \$8,943.00, and by Toshiba at \$11,900.00, for similar machines. He stated that staff recommends the purchase of the Canon copier.

Commissioner Isiminger made a motion to approve the purchase of a new Canon Image Runner color copier. The motion was seconded by Secretary Netts. Chair Chappell asked for discussion.

Chair Chappell asked if the purchase price include the monthly maintenance. Mr. Crosley stated that this price is for the purchase of the copier. He stated that the District's

negotiated monthly maintenance cost is in addition and he noted that it is less than what the District is currently paying.

Chair Chappell asked for any further discussion. Hearing none, a vote was taken and the motion passed.

ITEM 16. Additional Staff Comments and Additional Agenda Items.

Chair Chappell asked if there were any additional staff comments or agenda items.

Mr. Crosley stated that he and Vice-Chair Blow met with the Vilano residents yesterday regarding the beach erosion north of the St. Augustine Inlet. He stated that traditionally dredged material is placed south of the inlet. He stated that the St. Augustine Inlet Management Plan has identified and recommends using dredged material sand for north beach renourishment. He stated that during the meeting staff advised the residents that dredged material sand is not beach building sand, it is beach compatible but it does not stay in place very long. He stated that the residents were advised that if they could permit the area and install a pipeline easement, and it was cost effective, the District may be able to place material on the eroded beach.

Mr. Crosley stated that the District's DMMA MSA 641 site in Delray Beach has new development being constructed directly in front of the site. He stated that staff is hoping to work with the developer to maintain access to the District's site. He stated that the developer is offering a thirty-foot wide access through their newly constructed high-density residential area. He stated that staff had advised the developer that the proposed access plan would not be acceptable. The developer then offered a twelve-foot wide access point, which was not acceptable. He stated that he will be presenting recommendations at

the District's February meeting. He cautioned that this will most likely develop into legal action.

Attorney Breton stated that Zom Development are under contract to construct an apartment complex on land owned by a unit of Lennar, who purchased the land from the former owners. He noted that the former owner operated a Drive-In Movie Theater by night, and a Swap Shop by day on this property. He stated that a number of years ago, Mr. Roach negotiated a thirty-foot access easement though the site with the Drive-In Movie Theater owner. He stated that because the property was not a residential development, the easement went through the site and was not a problem. He stated that the original easement agreement had a clause allowing the owner to relocate this easement, so long as the easement was an unobstructed thirty-foot wide area. He stated that at that time, it was never considered that this property would become an apartment complex, but noted that is what is being proposed now. He stated that recently, the developer approached the District and stated that they are exercising the easement option to relocate the easement and it will be through residential parking lots and roads, but that it will continue to be thirty-feet wide. He stated that the District requires a two-lane road.

Attorney Breton stated that the developer's definition of an unobstructed easement includes a parking lot where residents are walking and/or backing out on the roadway that the District's trucks would be using.

Attorney Breton stated that the District is considering several options: 1, accept the easement but shift all risk and financial liability back to the property owner and developer through indemnification and insurance. He noted that the District would continue to have operational problems and he does not feel that this option would be acceptable to the Court;

2, The District could bring a lawsuit against the developer and property owners and ask the court to determine if this property easement relocation meets the existing easement terms; 3, exercise the District's right of Eminent Domain and take the north thirty feet of the development property as an exclusive easement; 4, take the south fifteen feet of the adjacent car dealership; 5, negotiate an easement agreement with the car dealership north of the District's site. He suggested requiring Lennar to pay for this option.

Mr. Crosley noted that the District's engineer has advised that any access easement less than 30 feet-wide is not acceptable for District use.

Treasurer Cuozzo asked if the District discussed this with the City of Delray Beach. Mr. Crosley stated that staff has been attending the city's meetings and the city has indicated that they do not want to get in the middle of this problem. He stated that the city would like ZOM and the District to work this out. He noted that he is disappointed with Zom for not proposing a solution to the District.

Treasurer Cuozzo asked if the District has hired a consultant to look at the property and the proposed development to re-design it in a way that would allow the District's easement. He noted that a new site plan could be presented to the court to show that the developer is wrong.

Commissioner Isiminger stated that these options may not be in parallel and may be in series. He stated that he would start with Option 2. Attorney Breton agreed.

Commissioner Sansom suggested meeting with the individual City Council representative that is responsible for that District. He suggested taking the developer's proposed plan and show the council member where the developer is suggesting the District

access the property and drive trucks. He suggested discussing the safety concerns arising from the developer's plan.

Mr. Crosley stated that he was informed last night by Ms. Trulock that the IWW Indian River Reach I dredging project is moving along very well. He stated that the project is up and running but the majority of the material is at the side of channel. He stated that Ms. Trulock suggested that there is a possibility to remove 30,000 additional cubic yards of material by performing the work in a more efficient way. He noted that the additional cost may be \$500,000.00. He stated that Ms. Trulock asked for a written estimate that could be presented to the Board.

Ms. Zimmerman stated that the General Services Administration (GSA) travel mileage was increased January 1, 2015 to \$.575 per mile.

Mr. Crosley stated that Commissioner's Bowman, Netts, Sansom, Kavanagh, Isiminger, and Crowley terms technically expired on 1/9/2015. He stated that in the past, commissioners continued to serve until the Governor makes a replacement appointment. He stated that commissioners interested in serving another term will need to complete an application for re-appointment. He noted that in the past, the appointment office does not move forward with the District's appointments until they receive at least one application from each county up for re-appointment. He noted that Commissioner's Bowman and Kavanagh will not be requesting re-appointment.

Ms. Zimmerman stated that the WAP and CAP assistance applications will be available on-line and the applications will be sent out the first week of January 2015.

ITEM 17. Additional Commissioners Comments.

Chair Chappell asked if there were any additional Commissioner comments.

Commissioner McCabe thanked Vice-Chair Blow for yesterday's Community Outreach. She noted that the event was well attended and very nice.

Commissioner Bowman stated that on Monday, the county announced that authorization was received through the WRDA Bill for the dredging of the St. Johns River to -47 feet. He stated that it is expected that the project could cost \$700 million. He stated that a lot of people are concerned about the dredging and its impact to the environment. He stated that this project will not involve FIND.

Commissioner Bowman stated that he will not apply for another term as a FIND Commissioner. He stated that he has enjoyed serving as a FIND Commissioner. He noted that he has decided to run for a City of Jacksonville Commission seat.

Vice-Chair Blow asked if perhaps the District should include a question in the assistance application form such as, "does your county have a facility/area for local marine contractors to use for storage and commercial barge loading and unloading while performing waterway work."

Secretary Netts stated that he generally opposes FIND's intrusion into local government. He stated that he does agree with Vice-Chair Blow's comment and suggested that when the other District counties ask for District funding for their Maritime Master Plan, the District should request/demand that a marine contractor facility should be part of that Master Plan.

ITEM 18. Adjournment.

Chair Chappell stated that hearing no further business the meeting was adjourned at 11:23 a.m.





WORK ACTIVITIES IN FY 15:

- 1. IWW: Indian River Reach 1(Indian River County)
- 2. DMMA O-7 (Martin County)
- 3. MISC.





AIWW = Atlantic Intracoastal Waterway Norfolk to St. Johns IWW = Intracoastal Waterway Jacksonville to Miami (12' and 10' projects)

DMMA = Dredge Material Management Area

1. WORK ACTIVITY: IWW Indian River Reach 1 (Indian River County)

CONTRACT AMOUNT: TBD

DESCRIPTION OF WORK: Development of plans and specifications for the IWW Indian River Reach 1 and procurement of the O&M dredging contract. Material from this reach is non beach quality and will be placed upland in the newly constructed DMMA IR-2. Preliminary estimates for shoaling quantities include 300,000 cy of material within Reach 1.

SCHEDULE:

Submit Exemption Letters to FDEP: 26 Nov 2013A Contract Advertisement Initiated: 31 July 2014A Bid Opening: 3 Sept 2014A Contract Award: 17 Sept 2014A NTP Issued: 6 Nov 2014A Preconstruction Conference: 21 Nov 2014A Mobilization Complete: 1 Jan 2015A Dredging Complete: 3 May 2015

FIND WORK ORDER: Work order for developing plans and specifications for Indian River Reach 1 was approved at the May 2013 FIND Board Meeting. A follow on work order was approved to fund dredging of the Indian River Reach 1 of the IWW in May 2014. Total funding for the contract is as follows: \$1,791,440.73 FIND Contributed Funds and \$4,754,734.27 Federal funding.

NAME OF CONTRACTOR: Cavache, Inc., 280 NW 12th Avenue, Pompano Beach, FL 33069 in the amount of \$6,058,675.00. An additional amount of \$487,500 was added to the contract via the modification described below.

STATUS: Dredging began on 2 January 2015. To date, approximately 30,000 cy of material has been dredged and placed in DMMA IR-2. The contractor is moving from north to south. A modification to the contract was processed that added approximately 40,000 cy of material to the contract and allowed for road improvements to the access road at the north end of the DMMA IR-2 site. As previously discussed, an additional \$3,045,291.16 in Federal funding was identified for this project therefore reducing the amount of non Federal cash that will be required to complete the dredging.





2. WORK ACTIVITY: DMMA 0-7

CONTRACT AMOUNT: TBD

DESCRIPTION OF WORK: Finalization of plans and specifications and associated environmental coordination for construction of DMMA O-7.

SCHEDULE O-7 (Tentative):

Complete Draft P&S: May 2015 Final P&S Ready to Advertise: June 2015 Contract Advertisement Initiated: July 2015 Bid Opening: August 2015 Contract Award: Sept 2015 NTP Issued: Oct 2015 Nov 2015 Mobilization Complete: Construction Complete: **TBD**

FIND WORK ORDER: Funding for completion of P&S will be funded with 100% federal funding. A work order will be presented to the FIND Board at a later date to fund construction of DMMA O-7.

NAME OF CONTRACTOR: TBD

STATUS: P&S for DMMA O-7 kicked off on 4 Dec 2014. Additional structural investigations will be needed for the road/bridge that is included as part of the site plan. Team is moving forward with P&S and anticipates being able to advertise the contract in July 2015.





3. MISC.

- a. Development of Plans and Specifications for Broward Reach 1: Corps will move forward with initiation of plans and specifications for this reach, with 100% Federal funding. Hydro survey was performed by Morgan and Ecklund and provided to the Corps on 26 June 2014. There is approximately 50k cy of material located within the federal channel down to 10' and 80k cy down to 10'+2'. Given the small quantity, the most cost effective way to pursue the dredging would be utilization of a Corps of Engineers dredge, either the Currituck or Murden, and dispose of in the nearshore. First steps will be FDEP permit and associated NEPA. The nearest approved nearshore or offshore disposal is located at Port Everglades (offshore). In order to utilize this offshore disposal option we would need to obtain an FDEP permit and perform the required NEPA documentation. From an FDEP standpoint, it may be applicable to add the IWW reach to the description of the existing Port Everglades permit, after verification of the composition of the material. The Corps will move out on this action once efforts on DMMA 07 are wrapped up.
- b. P&S/NEPA for DMMA O-23 will kick off once DMMA 07 is advertised.
- c. 2015 Funding: IWW received \$1.2M total for FY2015, \$600 from the President's budget and an additional \$600k from workplan funding. Corps PM will coordinate with FIND staff on the best utilization of this funding.
- d. IWW Boat Tour: Mark your calendars for 1-3 April 2015, beginning in Stuart and traveling north to Fernandina. Please let staff know if you will be attending.



ST. LUCIE COUNTY PROJECT STATUS UPDATE

February 2015

Dredged Material Management Plan

Phase I of the Dredged Material Management Plan for the Intracoastal Waterway in St. Lucie County was completed in 1997. Phase II of the DMMP was completed in 2001 and all major land acquisition was completed in 1999. (Please see the attached maps).

The 50-year dredging projection for this county is 29,201 yd3 and the storage projection is 62,782 yd3, which is the second lowest of the District's 12 counties. Limited dredging within Reach I will be conducted in 2015.

Waterway Dredging

Design, engineering and permitting for limited dredging of St. Lucie Dredging Reach I is underway. Dredging may occur in late 2015. There are a couple of shoals in the Intracoastal Waterway (IWW) north and south of the Fort Pierce Inlet in Reach I that have been identified as navigation problems and are expected to be corrected with this dredging effort.

Dredged Material Management Area Development

There are two Dredged Material Management Areas (DMMA) within St. Lucie County. DMMA SL-2 has been constructed and was recently inspected for the deposition of material from the forthcoming St. Lucie Dredging Reach I. DMMA M-8 has been fenced and development of this site will probably occur within a 5-year planning timeframe.

Waterways Economic Study

The St. Lucie County Waterways Economic Study was completed in 2001 and updated in 2011. The studies found that there were 125 waterway-related businesses in the county employing 1,184 people, with salaries of \$45 million and a total economic impact of \$186 million. Approximately \$8.3 million in tax revenue was generated by waterway activities. Property values were determined to be increased by \$155 to \$188 million by the presence of the IWW channel. There are 13,100 registered vessels in the county.



ST. LUCIE COUNTY PROJECT STATUS UPDATE

February 2015

Waterways Assistance Program

Since 1986, the District has provided \$5.9 million in Waterways Assistance Program funding to 56 projects in the county having a total constructed value of \$21.4 million. The County, the City of Ft. Pierce, Port St. Lucie, the Ft. Pierce Utilities Authority and the St. Lucie County Port and Airport Authority have participated in the program. See attached listing.

Notable projects funded include: the Ft. Pierce Municipal Marina; public boat ramps at St. Luciee Inlet State Park, South and North Causeways, Ft. Pierce Marina, and Jaycee Park, and; shoreline stabilization in downtown, the north and south causeways, and River Park Marina.

Cooperative Assistance Program

The District's Cooperative Assistance Program has provided funding assistance for the following projects with elements in St. Lucie County: Taylor Creek Dredging and Restoration; Florida Clean Marina Program; Florida Clean Vessel Act Program; Florida Marine Patrol Officer Funding; the Indian River Lagoon Boaters Guide; and the Indian River Lagoon Spoil Island Management Plan. The District's funding assistance for the St. Lucie County portion of these projects was approximately \$613,000.00.

Interlocal Agreements

Through Interlocal Agreements the District has provided funding assistance in the amount of \$667,000.00 for the following projects or project with elements in St. Lucie County: Taylor Creek Dredging and Restoration; Florida Clean Marina Program; Florida Clean Vessel Act Program, and the M-8 Shoreline Stabilization Project.

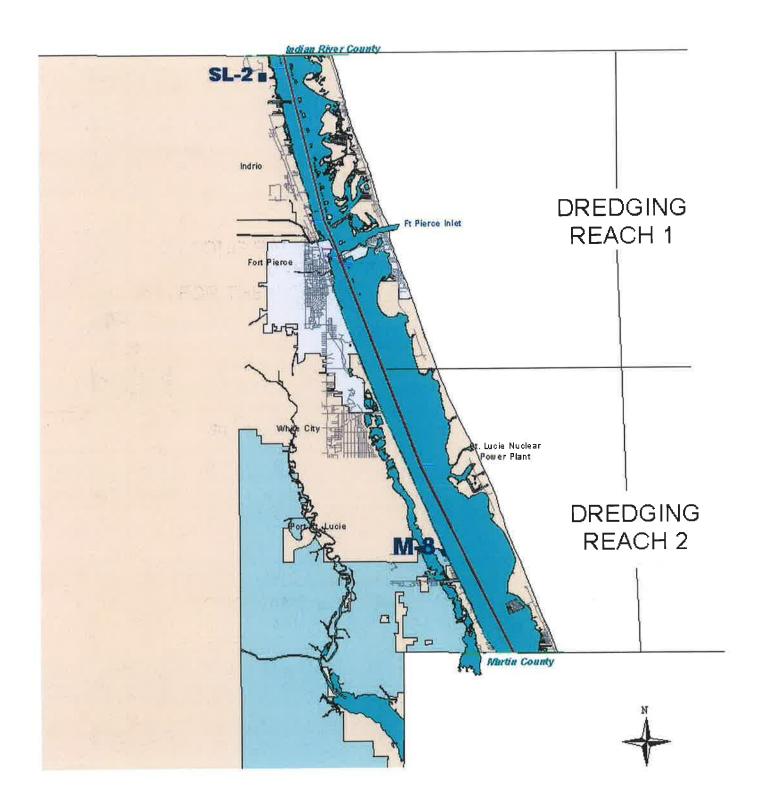
In addition, in 2013 the District provided approximately 119,000 yd3 of sand for the construction of the Ft. Pierce Waterfront Protection Project. The material originated from our DMMA M-5 site in Martin County. This project will protect the downtown waterfront and allow the rebuilding of a majority of the Ft. Pierce Municipal Marina, a WAP assistance project that was destroyed by the hurricanes of 2004.

Public Information Program

The District currently prints and distributes the following brochures with specific information about St. Lucie County Waterways: the Economic Impact of St. Lucie County Waterways; St. Lucie County Spoil Islands; St. Lucie County Manatee and Boating Safety Zones; ICW Channel Conditions; and the ICW Moveable Bridge Guide.

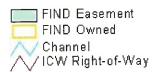


LONG RANGE DREDGED MATERIAL MANAGEMENT PLAN FOR THE INTRACOASTAL WATERWAY IN ST. LUCIE COUNTY



DMMA SL-2

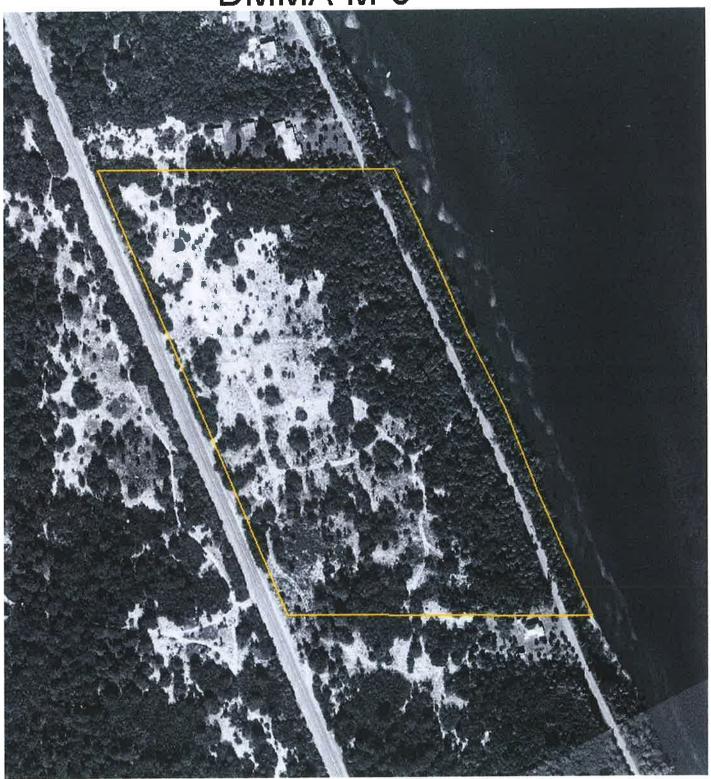


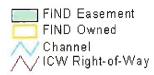




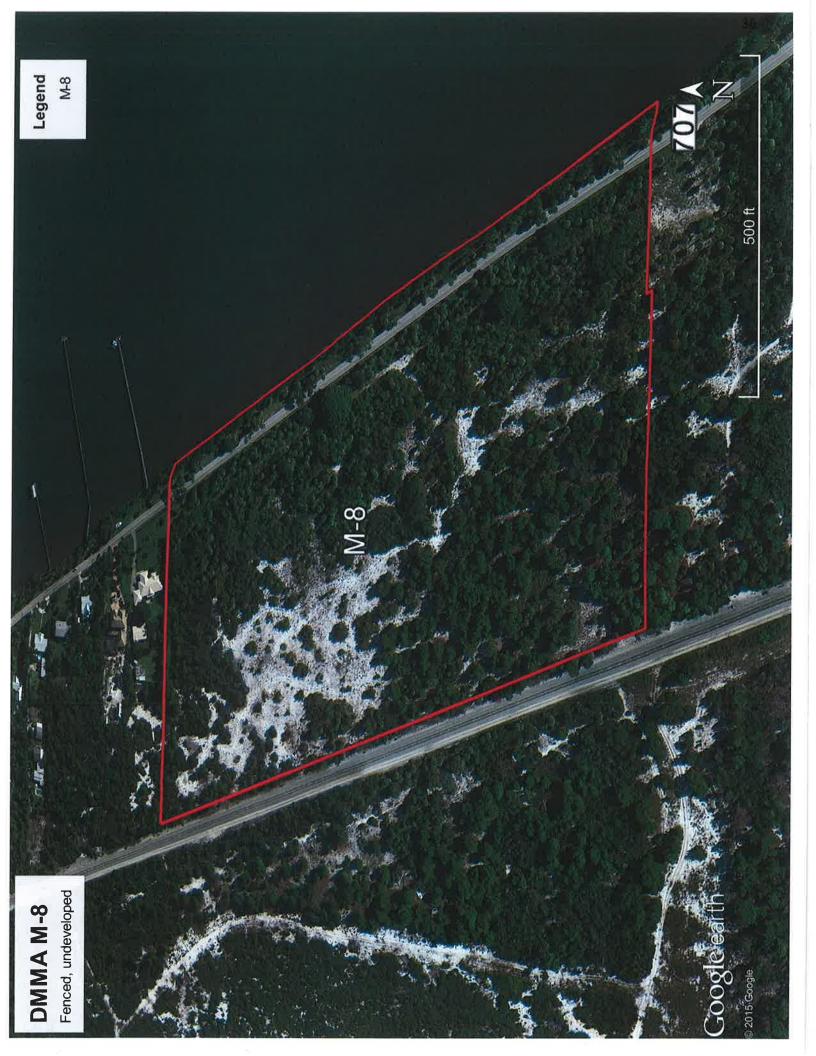
🧸 Miami, FL, USA ○ Feature 1 ₩-8 **Legend** DMMA SL-2 SL-2 Google earth Fenced, undeveloped **DMMA M-8**

DMMA M-8









ECONOMIC BENEFITS OF THE DISTRICT'S WATERWAYS



Purpose

To update economic benefits in St. Lucie
County of marine-related activities on the
District Waterways, as previously estimated in
An Economic Analysis of the District's
Waterways in St. Lucie County, June 2001, and
to provide the general public and Federal,
State, and local officials with a clear
understanding of the importance of
maintaining the waterways.

Scenarios Evaluated

- 1. Current Existing Conditions
- 2. Cessation of Waterways Maintenance
- 3. Increase in Waterways Maintenance
- 4. Estimated impact of the 2007-2009 U.S. economic recession

ECONOMIC IMPACTS

Current Existing Impacts

- \$186.0 million in business volume
- \$45.0 million in personal income
- 1,184 jobs
- \$8.3 million in tax revenue

Impacts of Cessation of Waterways Maintenance

- Decrease of \$90.3 million in business volume
- Decrease of \$23.7 million in personal income
- Decrease of 69 jobs
- Decrease of \$3.8 million in tax revenue



Impacts of an Increase in Waterways Maintenance

- Increase of \$19.55 million in business volume
- Increase of \$4.77 million in personal income
- Increase of 133 jobs
- Increase of \$0.9 million in tax revenue

Impact of the 2007-2009 U.S. Economic Recession

- Decrease of \$284.4 million in business volume
- Decrease of \$69.8 million in personal income
- Decrease of 1,815 jobs
- Decrease of \$10.9 million in tax revenue

Economic Benefits as of April 2011



ECONOMIC BENEFITS OF THE DISTRICT'S WATERWAYS

The Intracoastal Waterway

The Atlantic Intracoastal Waterway (AICW) is a 1,391-mile channel between Trenton, New Jersey, and Miami, Florida. The Waterway along Florida's eastern seaboard is 406 miles long and follows coastal rivers and lagoons past numerous tourism-oriented communities. The channel is authorized to a depth of 12 feet from Nassau County to Fort Pierce, and a 10 foot depth south through Miami-Dade County. Boating activities on the waterways contribute to the existence of numerous marine-related businesses such as marinas and boatyards and have stimulated development of residential properties on the Waterways.

The Navigation District

The Florida Inland Navigation District, created in 1927, is the local sponsor for the AICW in Florida. In cooperation with the Jacksonville District of the U.S. Army Corps of Engineers, the Navigation District is responsible for maintenance of the AICW in Florida. To maintain navigation, the waterways need to be periodically dredged due to shoaling from currents, upland soil erosion, and the movement of offshore sands through the ocean inlets. Maintenance dredging is projected to cost approximately \$12 to \$16 million annually during the next 50 years, of which 50 percent of the costs are expected to be borne by property owners within the Navigation District's jurisdiction.

The Navigation District also partners with other governments to provide waterway access and improvement facilities for our mutual constituents. These projects include public boat ramps, marinas, side channels, parks, fishing piers, boardwalks, navigation aids, derelict vessel removal, shoreline stabilization, and waterway cleanups.

Source of Data Used in This Analysis

The economic benefits of the Waterways were estimated in June 2001 in *An Economic Analysis of the District's Waterways in St. Lucie County.*

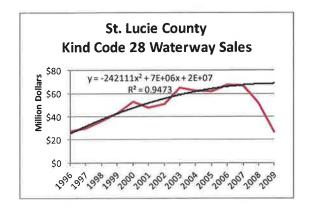
Updating of Previously Estimated Benefits

The benefits presented in this analysis were estimated by updating the direct marine-business

impacts in the original analysis to current values using the change in gross sales reported by boat dealers to the Florida Department of Revenue (FDOR). The updated direct impacts were used in conjunction with an IMPLAN input/output model to estimate total economic benefits.

Estimating the Impact of the Recession

The impact of the recession was estimated by determining the trend in gross sales of boat dealers over the 20-year period prior to the onset of the recession. This trend was used to estimate the theoretical gross sales if sales had continued to increase at the rates previously experienced. The red line in the figure below illustrates reported actual gross sales of boat dealers and the black line illustrates the trend of those sales. From 2007 to 2009 gross boat dealer sales in St. Lucie County decreased by 60 percent; if the recession had not occurred, it is estimated that gross sales from 2007 to 2009 would have increased by six percent.



Annual Boater Spending on Gas, Food, and Drinks at Non-Marine-Related Establishments

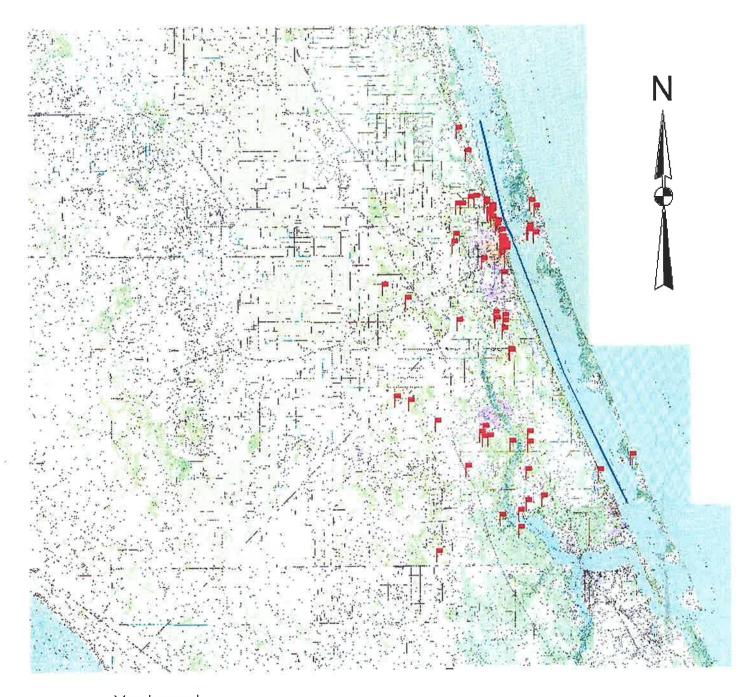
- Current existing conditions: \$12.8 million
- Cessation of maintenance: \$10.7 million
- Increased maintenance: \$12.8 million
- Assuming no recession: \$18.2 million

Vessel Draft Restrictions Assumed for Each Scenario

- Current existing conditions: 6.5 feet MLW
- Cessation of maintenance: 3 feet MLW
- Increased maintenance: 10 feet MLW
- Assuming no recession: 6.5 feet MLW

LOCATION MAP

WATERWAY RELATED BUSINESSES IN ST. LUCIE COUNTY



Map Legend



FLORIDA INLAND NAVIGATION DISTRICT - WATERWAYS ASSISTANCE PROGRAM PROJECTS IN ST. LUCIE COUNTY 1986-2012

Ft. Pierce Inlet Boat Launch	SL-00-29	St. Lucie County	\$251,986.00	\$875,900.00
Shoreline Stabilization At South Causeway Island	SL-01-30	St. Lucie County	\$224,668.00	\$500,000.00
Law Enforcement Patrol & Rescue Vessel	SL-01-31	St. Lucie County	\$29,335.00	\$77,088.00
Vitolo Park/ Middle Cove - Public/ A.D.A. Access	SL-02-32	St. Lucie County	\$50,000.00	\$108,716.00
Blind Creek Public Access Improvements	SL-03-34	St. Lucie County	\$50,000.00	\$107,150.00
Shoreline Stablization Project - North Causeway Island	SL-03-35	St. Lucie County	\$100,000.00	\$200,000.00
Wildcat Cove Preserve/ Observation Pier	SL-04-36	St. Lucie County	\$22,500.00	\$45,000.00
Indrio Blueway Preserve	SL-05-38	St. Lucie County	\$20,000.00	\$40,000.00
Ocean Bay Preserve Improvements	SL-05-39	St. Lucie County	\$25,000.00	\$50,000.00
Queens Island Preserve	SL-05-40	St. Lucie County	\$35,000.00	\$70,000.00
River Park Marina	SL-05-41	St. Lucie County	\$32,500.00	\$65,000.00
River Park Marina	SL-06-44	St. Lucie County	\$122,000.00	\$244,000.00
South Causeway Park Shoreline Restoration	SL-06-45	St. Lucie County	\$258,300.00	\$516,600.00
Stan Blum Boat Ramp Restrooms - Phase I	SL-08-48	St. Lucie County	\$18,000.00	\$36,000.00
Little Mud Creek Boat Ramp & Kayak Launch	SL-09-49	St. Lucie County	\$40,000.00	\$113,800.00
Stan Blum Boat Ramp Restrooms - Phase I I	ST-09-50	St. Lucie County	\$99,113.00	\$198,226.00
South Causeway Island Boat Docks	SL-87-2	St. Lucie County	\$105,000.00	\$210,000.00
4-H Sea Grant Environmental Education	SL-91-7	St. Lucie County	\$14,000.00	\$14,000.00
South Beach Causeway Boat Ramp Maintenance Project	SL-92-8	St. Lucie County	\$65,975.00	\$99,875.00
Boat Ramp Parking Improvement	SL-94-13	St. Lucie County	\$145,000.00	\$375,000.00
Fort Pierce Harbor Mitigation	SL-94-14	SLC Port & Airport Auth.	\$170,000.00	\$1,262,100.00
Fort Pierce Harbor Navigation Improvements	SL-95-15	SLC Port & Airport Auth.	\$168,079.00	\$1,262,100.00
South Causeway Island Improvement - Phase I I	SL-95-18	St. Lucie County	\$16,000.00	\$32,000.00
Inlet Spur Jetty	SL-97-22	St. Lucie County	\$220,000.00	\$782,000.00
Fort Pierce Shore Protection Project	SL-97-23	St. Lucie County	\$36,245.00	\$2,950,000.00
Law Enforcement Patrol & Rescue Vessel	SL-98-26	St. Lucie County	\$32,063.00	\$70,248.00
Fort Pierce City Marina North Channel	SL-FP-03-33	City Of Fort Pierce	\$94,481.00	\$206,445.00
Fort Pierce City Marina - North Access Channel Dredging	SL-FP-05-37ER	City Of Fort Pierce	\$318,000.00	\$991,437.16
City Of Marina Dredging Of Internal Basin	SL-FP-06-42	City Of Fort Pierce	\$18,000.00	\$36,000.00
City Marina Fuel Tank Replacement	SL-FP-06-43	City Of Fort Pierce	\$205,000.00	\$517,000.00
Veteran's Memorial Park (Withdrawn)	SL-FP-07-46	City Of Fort Pierce	\$285,000.00	\$570,000.00
Repair and Expansion of City Marina	SL-FP-1	City of Fort Pierce	\$100,000.00	\$2,023,660.00
Marine Law Enforcement & Boating Safety Program	SL-FP-10-51	Fort Pierce Police Dept.	\$30,000.00	\$70,085.00

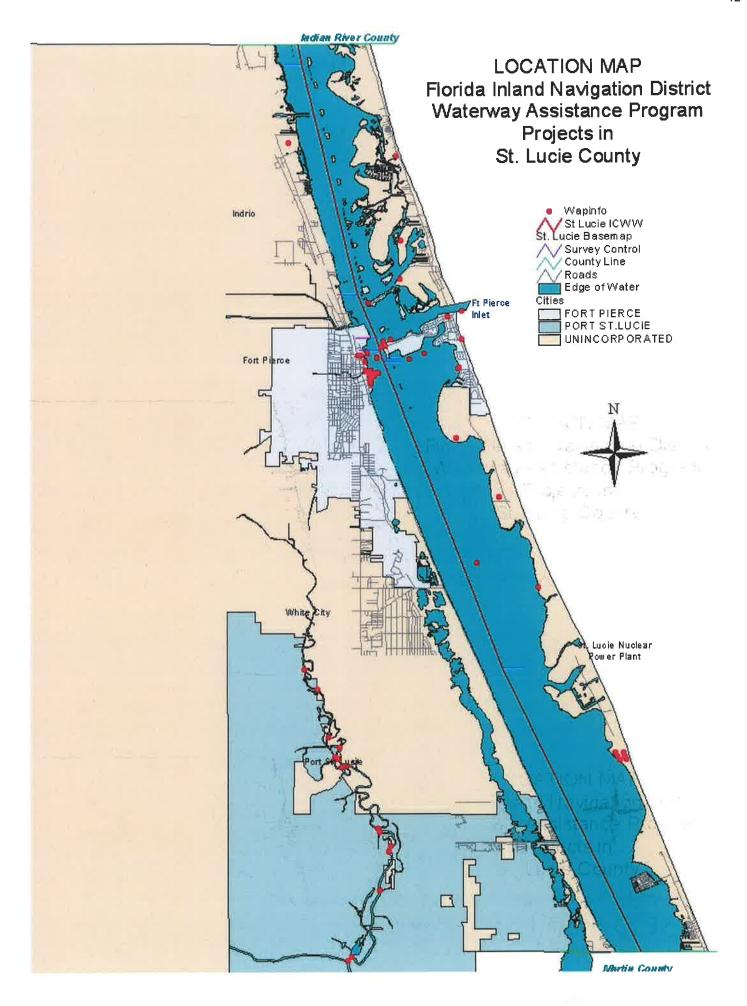
\$21,407,265.66

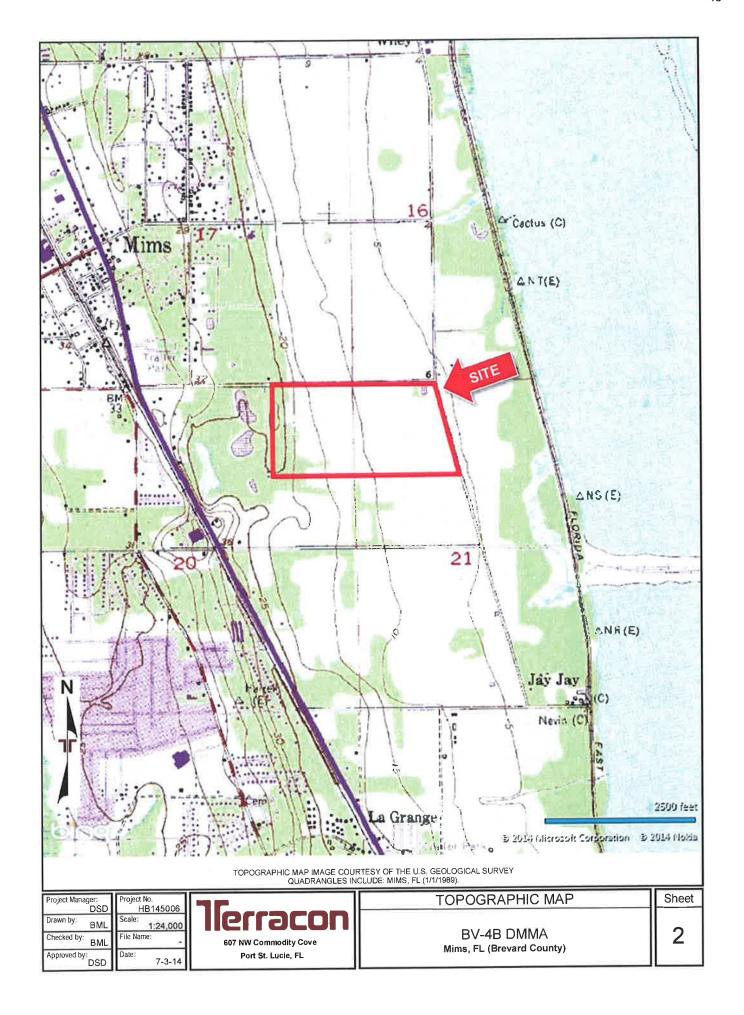
\$5,944,951.25

Project Totals

FLORIDA INLAND NAVIGATION DISTRICT - WATERWAYS ASSISTANCE PROGRAM PROJECTS IN ST. LUCIE COUNTY 1986-2012

Public Fishing Pier Cleaning Station @ City Marina	SL-FP-11-53	City Of Fort Pierce	\$16,420.00	\$32,840.00
Dredge Mouth Of Moores Creek	SL-FP-12-54	City Of Fort Pierce	\$47,726.00	\$102,060.00
Repair And Expansion Of City Marina - Phase I I	SL-FP-87-3	City of Fort Pierce	\$93,000.00	\$186,000.00
Melody Lane Seawall/Public Recreation Area	SL-FP-88-4	City of Fort Pierce	\$125,000.00	\$410,000.00
Melody Lane Seawall Restoration	SL-FP-89-5	City of Fort Pierce	\$130,000.00	\$325,000.00
Melody Lane Public Recreation Area	SL-FP-90-6	City of Fort Pierce	\$55,000.00	\$110,000.00
Manatee Observation & Education Center - Phase I	SL-FP-93-10	City Of Fort Pierce	\$199,150.00	\$256,900.00
Dredging Of Entrance Channel To Marina/ Boat Launches	SL-FP-93-9	City Of Fort Pierce	\$70,000.00	\$72,800.00
Jaycee Park Boat Ramps Reconstruction - Phase I	SL-FP-94-12	City Of Fort Pierce	\$7,500.00	\$15,000.00
Jaycee Park Boat Ramps Reconstruction	SL-FP-95-16	City Of Fort Pierce	\$50,000.00	\$100,000.00
Design Of Lagoon Life - A Touch Screen Kiosk Exhibit	SL-FP-95-17	Ft. Pierce Utilities Authority	\$33,291.00	\$41,891.00
Manatee Observation & Education Center	SL-FP-96-19	City Of Fort Pierce	\$153,453.00	\$153,453.00
City Marina Entrance Channel Dredging	SL-FP-96-20	City Of Fort Pierce	\$70,000.00	\$70,500.00
City Marina Access Channel Dredging	SL-FP-97-21	City Of Fort Pierce	\$84,926.25	\$94,362.50
Indian River Memorial Park Riverwalk	SL-FP-98-24	City Of Fort Pierce	\$204,505.00	\$409,010.00
Fisherman's Wharf Fishing & Viewing Piers	SL-FP-98-25	City Of Fort Pierce	\$54,448.00	\$231,520.00
Library Square Park	SL-FP-99-27	City Of Fort Pierce	\$122,486.00	\$245,814.00
Riverwalk Boardwalk Reconstruction	SL-PSL-07-47	City Of Port St. Lucie	\$396,125.00	\$856,000.00
North Fork St. Lucie River Channel Marker Replacement	SL-PSL-10-52	City Of Port St. Lucie	\$7,500.00	\$15,000.00
Waterway Improvement Project	SL-PSL-93-11	City Of Port St. Lucie	\$8,250.00	\$11,000.00
Fishing Pier & Fish Cleaning Station on Melody Lane	SL-FP-13-55	City of Fort Pierce	\$100,000	\$517,880
C-24 Canal Park Boat Ramp	SL-PSL-13-56	City of Port St. Lucie	\$302,426	\$2,005,805
Fishing Pier & Fish Cleaning Station on Melody Lane Ph IIA	SL-FP-14-57	City of Fort Pierce	\$212,500.00	\$425,000.00







Preliminary Geotechnical Engineering Report

Phase I

BV-4B Dredged Material Management Area (DMMA)

Brevard County, Florida

July 15, 2014 Terracon Project No. HB145006

Prepared for:

Taylor Engineering, Inc. Jacksonville, Florida

Prepared by:

Dunkelberger Engineering & Testing, A Terracon Company Port St. Lucie, Florida

Offices Nationwide Employee-Owned Established in 1965 terracon.com



July 15, 2014



Taylor Engineering, Inc. 10151 Deerwood Park Blvd. Jacksonville, Florida 32256

Attn: Lori Brownell, P.E. ... via e-mail (Ibrownell@taylorengineering.com)

Re: Preliminary Geotechnical Engineering Report – Phase I

BV-4B Dredged Material Management Area (DMMA)

Brevard County, Florida

Terracon Project Number: HB145006

Dear Ms. Brownell:

Dunkelberger Engineering and Testing, A Terracon Company (DUNKELBERGER) has substantially completed the initial phase of geotechnical engineering services for the above referenced project. This study was carried out in general accordance with our subcontract agreement (Taylor Contract No. C2014-026) dated March 25, 2014.

This report presents the findings of the *Geotechnical Field Investigation and Laboratory Analysis* phase of the contract work scope and includes set-up and calibration parameters for groundwater flow models (MODFLOW and MT3D).

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning this report, please contact us.

Sincerely,

Dunkelberger Engineering and Testing, Inc. A Terracon Company

Brent M. Langlois, E.I. Project Geotechnical Engineer Douglas S. Dunkelberger, P.E. Principal FL Registration No. 33317

Terracon Consultants, Inc. 607 N.W. Commodity Cove Port St. Lucie, Florida 34986 P [772] 343 9787 F [772] 343 9404 terracon.com

Geotechnical Engineering Report
BV-4B DMMA ■ Brevard County, Florida
July 15, 2014 ■ Terracon Project No. HB145006



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Geotechnical Engineering Report

BV-4B DMMA ■ Brevard County, Florida

July 15, 2014 ■ Terracon Project No. HB145006



Sheet 1 Site Vicinity Map

Sheet 2 Topographic Vicinity Map

Sheet 3 U.S.D.A Soils Map

Sheet 4 Hydrological Data Inventory

Sheet 5 Boring Location Plan
Sheet 6-11 Subsurface Profiles

Sheet 12 Monitoring Well Location Plan
Tables 1.1 to 1.2 Summary of Index Property Results
Tables 2.1 to 2.3 Summary of Gradation Results

Table 3 Summary of Modified Proctor Compaction Results
Table 4 Summary of Limerock Bearing Ratio (LBR) Results

Tables 5.1 to 5.2 Summary of Hydraulic Conductivity Results
Table 6 Summary of Triaxial Shear Strength Results

Table 7 Summary of Consolidation Results

APPENDIX A – CONE PENETROMETER TEST (CPT) LOGS

Exhibits A-1 to A-9 CPT Sounding Logs

Exhibits A-10 to A-18 CPT Correlative Parameter Logs

APPENDIX B - LABORATORY TESTING REPORTS

Exhibits B-1 to B-25 Sieve Analysis

Exhibits B-26 to B-27 Hydrometer Analysis
Exhibits B-28 to B-41 Hydraulic Conductivity
Exhibits B-42 to B-47 Triaxial Shear Strength

Exhibits B-48 to B-49 Consolidation

APPENDIX C - DREDGED MATERIAL LABORATORY RESULTS

Exhibits C-1 to C-11 Sieve Analysis
Exhibits C-12 to C-17 Leach Test Results

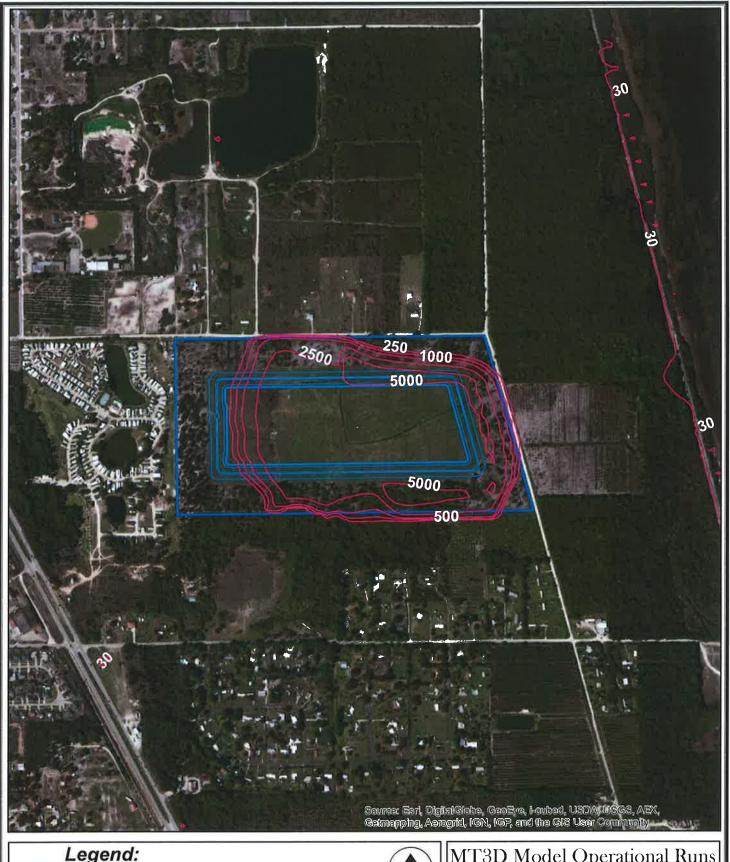
APPENDIX D - GROUNDWATER MODELING

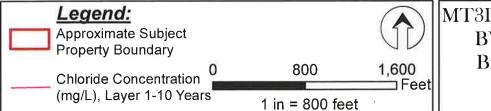
Exhibit D-1 Steady State MODFLOW Model

Exhibit D-2 Transient MT3D Model

Exhibit D-3 Calibrated Site-Specific Steady State MODFLOW Model

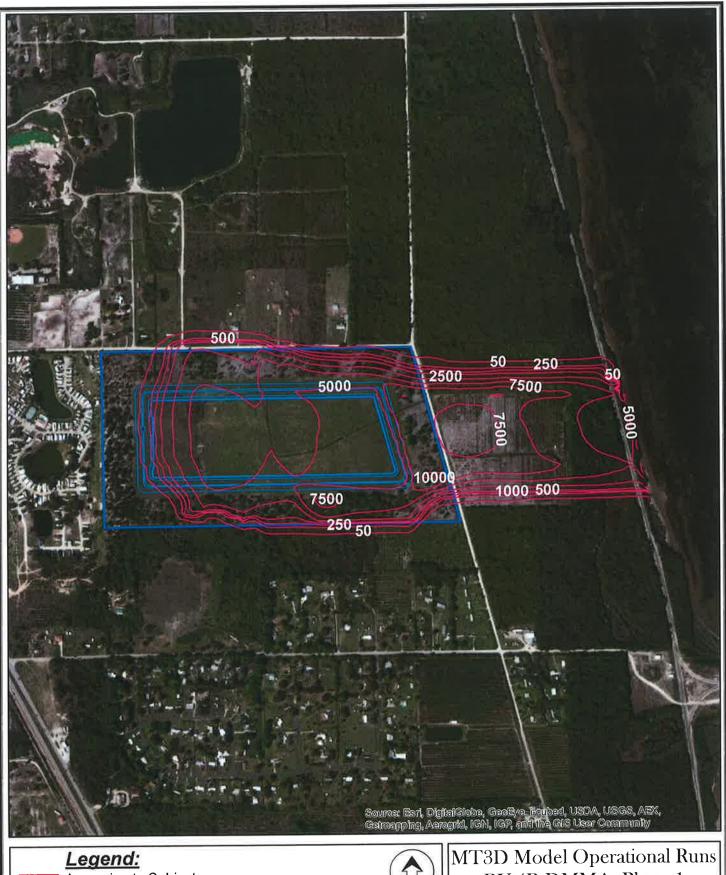
Exhibit D-4 Calibration of Representative Column MT3D Model





MT3D Model Operational Runs BV-4B DMMA, Phase 1 Brevard County, Florida

EXHIBIT D-7



Legend: Approximate Subject Property Boundary Chloride Concentration (mg/L), Layer 1-50 Years Legend: 0 800 1,600 Feet

MT3D Model Operational Runs BV-4B DMMA, Phase 1 Brevard County, Florida

EXHIBIT D-31



Geotechnical Engineering Report
BV-4B DMMA Brevard County, Florida
December 8, 2014 DUNKELBERGER Project No. HB145006

DUNKELBERGER engineering & testing, Inc.



9.4.3 Operational Controls

The ditch and drain control systems will produce discharge flow rates up to 180 gpm and therefore will require hydraulic connection to the DMMA outfall pipe. The ditch system will need other operational features to increase its efficiency. The primary feature will be control structures to allow for a range of ditch water levels. A control structure at the low (east) end of the system should be positioned and designed to adjust ditch water levels within an operational range of +1.5 to +4 feet NAVD. Accordingly, ditch bottom elevations should range from about +0 (east end) to + 3 feet NAVD at the west end. A ditch section is not necessary along the west side of the DMMA for operational (chloride plume) control but will be constructed as a stormwater drainage feature for the perimeter access road. We anticipate that the drainage control in that ditch segment will be comparatively high in elevation, close to the ambient groundwater elevation at the west end of the DMMA, and will connect to the balance of the ditch system via an overflow structure.

The ability to adjust the ditch water level up or down by about 2 ½ feet will increase the efficiency of chloride plume capture during seasonal changes in groundwater elevations around the DMMA footprint. The ditch water level will be adjusted upward to as high as +4 feet NAVD during wet (rainy) periods to reduce unnecessary inflow of groundwater into the system. Conversely, the ditch water level should be dropped during dry seasons to maintain a preferential flow path of impounded water towards the ditch.

February 3, 2015

Mr. Mark Crosley Executive Director Florida Inland Navigation District 1314 Marcinski Rd Jupiter, FL 33477

RF

Scope of Professional Engineering and Environmental Services DMMA DU-9 Work Order Modification Request St. Johns County, Florida

Mr. Crosley:

Under Task 1.1 (Pre-Application Meetings) and Task 2.1 (Site Reconnaissance Visit) of the original Work Order 14-18, dated August 29, 2014, Taylor Engineering conducted a pre-application meeting on November 19 and provided a Site Reconnaissance report dated December 22, 2014 (Attachment A). Based on the outcome of the pre-application meeting, on-site visit, and subsequent discussions with regulatory staff, this modification request adds the following three tasks to the scope of work: (1) U.S. Army Corps of Engineers permit application, (2) limited geotechnical investigation, and (3) dewatering plan. We have enclosed a Scope of Work (Attachment B) and Cost Proposal (Attachment C) to modify FIND Work Order No. 14-18.

Taylor Engineering will perform these services on a cost-plus basis, for a total cost not-to-exceed fee of \$76,018.28. Of this amount, \$49,025.00 represents the proposed fee for our geotechnical (AMEC Foster Wheeler, Inc.) sub-consultant. Taylor Engineering selected AMEC Foster Wheeler based on its previous site experience with the DU-9 bentonite slurry wall and buried pipeline installation. Attachment D provides the individual Scope of Work and Cost Proposal for our selected sub-consultant.

Please contact me with any questions you have regarding this effort. We can begin work upon your notice to proceed.

Sincerely,

John Adams, P.E.

Senior Advisor, Waterfront Engineering

JMJ adams

Attachments (4)

WORK ORDER MODIFICATION PERMITTING AND FINAL ENGINEERING DESIGN FOR DREDGED MATERIAL MANAGEMENT AREA DU-9 ST. JOHNS COUNTY, FLORIDA

ATTACHMENT A

Site Reconnaissance Report



Delivering Leading-Edge Solutions

December 22, 2014

Mr. Mark Crosley Executive Director Florida Inland Navigation District 1314 Marcinski Road Jupiter, FL 33477

Re: Permitting and Final Engineering Design, Task 2.1 Site Reconnaissance

Dredged Material Management Area DU-9

FIND Work Order 14-18; TE Contract C2014-075

Dear Mr. Crosley:

This letter report documents the results of our December 5 and 6, 2014 site visit to Dredged Material Management Area (DMMA) DU-9. Primary goals of the site visit included evaluation and documentation of geotechnical conditions, weir structural issues, and overall environmental site conditions. The sections below detail our findings. Attachments A and B provide a plan view of the existing and planned expanded containment basin and photographic documentation of referenced site features.

Geotechnical Conditions and Weir Structural Issues

Taylor Engineering staff observed the site to evaluate and document any readily visible geotechnical issues (e.g., erosion, settling, and cracking of the existing DMMA dike and access road) and weir structural issues. Staff walked the top of the dike to document the condition of the interior and exterior dike faces and perimeter access road. Overall, staff did not identify any critical areas of immediate concern; however, the following summary of potential issues — that we intend to address during construction of the expanded containment basin — follows below.

- (1) The containment basin currently holds approximately 260,000 CY (based on a 2009 USACE ICWW As-Built dredging survey) of mixed material ranging from coarse sand to silty organic (muck).
 - a. Based on field measurements, approximately 6 inches of water exists over ½ of the existing basin.
 - b. Muck material measured approximately 5.2 feet deep at the weir.
 - c. A large portion of dredged material appears unsuitable for dike construction.
- (2) Some of the seepage drains (particularly in the northeast corner of the dike) between the exterior dike face and perimeter road were not visible due to either overgrown vegetation or filling in of the exterior swale (between the DMMA and perimeter road).
- (3) The dike is well vegetated; however, trees and woody vegetation are of potential concern to the long-term dike stability.

The overall weir condition appeared relatively good. The timber decking was weathered and minor rust occurred on the steel components. The weir structure showed no readily visible evidence of settling, cracking, or warping. We noted rot on the exterior of one timber walkway pile located in the water on the south side of the structure. Finally, the shut-off valve and HDPE weir outfall appeared in good condition. We did not inspect the buried pipeline. Attachments B, Photographs B1 – B16 document the appearance of the overall DMMA, containment basin, dike and weir structure.

Environmental Conditions

Taylor Engineering staff also investigated the entire site (existing containment basin and expanded basin footprint) to identify potential environmental issues within the basins and pipeline corridor. An earlier site investigation (August 2014), revealed that wetland features had developed within the former Estuary Corp. sludge disposal area (located within the expanded basin footprint). These wetland features did not exist at the time of the 1998 wetlands delineation completed by Lotspeich and Associates, Inc. The wetlands consist of a series of linear ditches created by the removal of contaminated material during site remediation that occurred over 10 years ago. The contaminated material excavation extended to an elevation near or below the groundwater table, providing the necessary hydrology for wetland development. On-site wetland verification occurred with the FDEP (Aaron Sarchet) on December 5, 2014. Mr. Sarchet indicated that the FDEP would not require mitigation for impacting these wetlands. Coordination with the USACE, not present at the December 5 meeting, indicated that further field investigation is necessary to determine whether a hydrologic connection exists between the on-site ditches and navigable waters. We also reviewed the on-site wetland mitigation area constructed in 2005. The site is performing reasonably well, but may require some minor maintenance to control undesirable species that have recruited into the mitigation area.

We observed gopher tortoise activity on the property, mostly within the buffer zone. The Florida Fish and Wildlife Conservation Commission (FWC) issued a Gopher Tortoise Incidental Take Permit (STJ-24) in 2000 in coordination with the original FDEP permit. We believe that the Incidental Take Permit is still valid; however, we are coordinating with the FWC for a final determination

We also noted a tree clearing located in the northwest corner of the property. We recall that Estuary Corp. requested and moved forward with this clearing in 2013 or 2014 due to a southern pine beetle infestation. Finally, in the area of the Estuary Corp. sludge disposal area, we noted a large portion of debris (remnant wells, contamination clean up equipment, barrels, waste, etc.) that need to be removed by Estuary Corp. prior to the Conditional Closure agreement.

Attachment B, Photographs B17 – B26 document the overall environmental site conditions.

Summary and Recommendations

The site reconnaissance visit proved useful in determining any potential geotechnical, structural, and environmental on-site issues. Moving forward, Taylor Engineering recommends the following actions:

- (1) To obtain the sediment characteristics, associated geotechnical properties, and estimated quantity (of each sediment type) within the existing containment basin, conduct a limited geotechnical analysis and topographic survey of the dredged sediment.
- (2) During site construction:
 - a. Locate, repair, and clean out all underdrains.
 - b. Regrade the exterior swale at outside toe of dike.
 - c. Replace timber decking on weir walkway
 - d. Inspect timber pilings and include budget for material testing and potential replacement of timber piles deemed structurally unfit.
 - e. Prepare surface of weirs steel components (where rusting occurs) and recoat.
- (3) Investigate the hydrologic connection between the on-site ditches and navigable waters and engage the USACE (Mr. Mark Evans) concerning the need for a Department of the Army dredge and fill permit.
- (4) Coordinate the debris removal with Estuary Corp. on their former sludge disposal area.

Finally, the following recommendations regarding the removal of trees and other woody vegetation fall in general accordance with Federal Emergency Management Agency's (FEMA's) Technical Manual for Dam Owners; Impacts of Plants on Earthen Dams, FEMA Publication No. 534, September 2005 and Dunkelberger Engineering & Testing, Inc. previous recommendations for a similar DMMA dike (DMMA M-5):

- (5) All trees and woody vegetation should be removed from the embankment slopes and crest to a minimum distance of 25 feet beyond the exterior toe of the embankment.
- (6) Cut all trees and woody vegetation having a trunk diameter less than 4 inches flush with the ground and treat the stumps with a wood preservative to slow decay.
- (7) Remove the stumps and root bulbs of all trees having a trunk diameter of 4 inches or greater. Backfill the bulb excavations with sand and compact to a minimum of 95% of the soil's maximum dry density as determined by ASTM D 698.

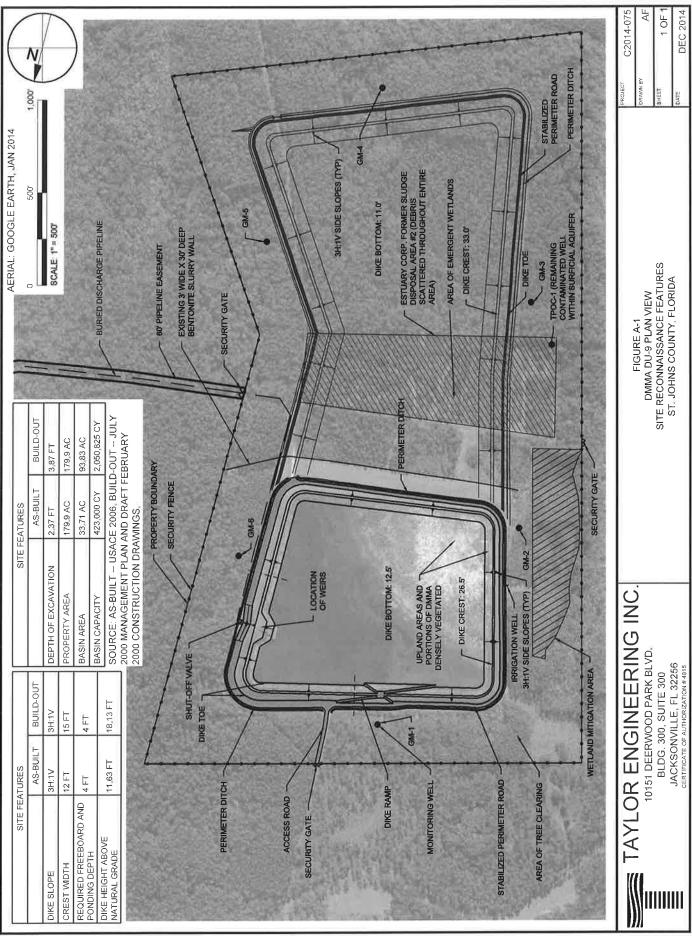
Please contact me with any questions you have regarding this report.

Sincerely,

Lori S. Brownell, P.E.

Director, Waterfront Engineering

Attachments (2)



ATTACHMENT A

GEOTECHNICAL CONDITIONS



Photograph B1. Northern portion of DU-9 containment basin (looking northeast)



Photograph B2. Wetland fringe in northeast corner of DU-9 containment basin (looking north)

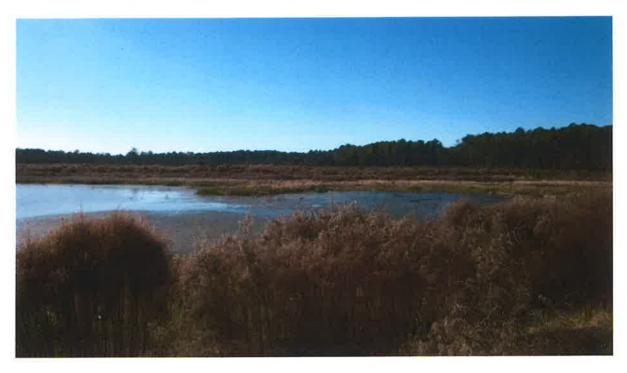


Photograph B3. Overgrown inlet drain (looking northwest)



Photograph B4. Overgrown inlet drain (looking south)

ATTACHMENT B



Photograph B5. Northern portion of DU-9 containment basin (looking northwest)



Photograph B6. Western interior portion of DU-9 containment basin (looking east)



Photograph B7. Southwest portion of DU-9 containment basin (looking north)



Photograph B8. South-central portion of DU-9 containment basins (looking north)

DMMA DU-9 SITE RECONNAISSANCE PHOTOGRAPHS DATED: DECEMBER 5 AND 6, 2014

WEIR STRUCTURAL CONDITION



Photograph B9. Timber weir stairs (looking west)



Photograph B10. Timber weir deck (looking west)



Photograph B11. DMMA DU-9 timber weir deck and weir structure (looking northwest)



Photograph B12. DMMA DU-9 weir

ATTACHMENT B



Photograph B13. Weir structure (looking northeast)



Photograph B14. Pile rot on exterior and gauge

ATTACHMENT B

DMMA DU-9 SITE RECONNAISSANCE PHOTOGRAPHS DATED: DECEMBER 5 AND 6, 2014

BURIED PIPELINE (SHUT-OFF VALVE AND HDPE OUTFALL)



Photograph B15. DMMA DU-9 shut-off valve (looking northeast)



Photograph B16. DMMA DU-9 buried pipeline discharge (contained within rip-rap pad area) (looking east)

DMMA DU-9 SITE RECONNAISSANCE PHOTOGRAPHS DATED: DECEMBER 5 AND 6, 2014

ENVIRONMENTAL CONDITIONS



Photograph B17. Emergent wetlands within former sludge ditches (looking south)



Photograph B18. Emergent wetlands within former sludge ditches (looking south)



Photograph B19. DMMA DU-9 wetland mitigation area (looking west)



Photograph B20. DMMA DU-9 wetland mitigation area (looking northwest)



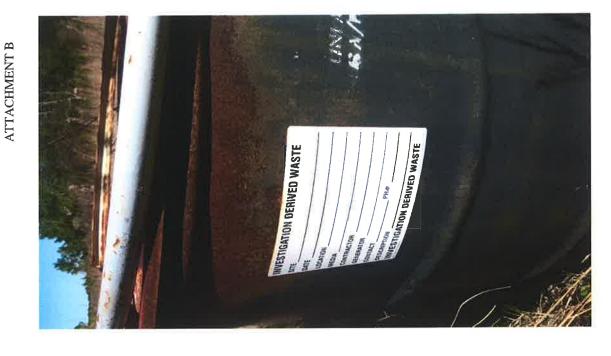
Photograph B21. Remnant waste from Estuary Corp. remediation (looking north)



Photograph 22. Remnant pipe and metal bin from Estuary Corp. remediation (looking south)



Photograph B23. Remnant waste barrel (looking north)



Photograph B24. Remnant waste barrel label (looking north)



Photograph B25. Remnant pipe from Estuary Corp. remediation (looking east)



Photograph B26. Remnant pipe and gauge from Estuary Corp. remediation (looking east)

WORK ORDER MODIFICATION PERMITTING AND FINAL ENGINEERING DESIGN FOR DREDGED MATERIAL MANAGEMENT AREA DU-9 ST. JOHNS COUNTY, FLORIDA

ATTACHMENT B

Scope of Work

WORK ORDER MODIFICATION PERMITTING AND FINAL ENGINEERING DESIGN FOR DREDGED MATERIAL MANAGEMENT AREA DU-9 ST. JOHNS COUNTY, FLORIDA

The following tasks constitute modifications to Florida Inland Navigation District (FIND) Work Order Number 14-18. Based on the outcome of our on-site wetlands reconnaissance and November 2014 pre-application meeting, this modification request adds the following three tasks to the scope of work: (1) USACE permit application, (2) limited geotechnical investigation, and (3) dewatering plan. Due to the varied and complexity of each task, we have added background information supporting the need for additional work within each task item.

TASK 1 USACE PERMIT APPLICATION

Our original FIND Work Order did not include the application for a U.S. Army Corps of Engineers (USACE) permit. Taylor Engineering based this assumption on the original wetland delineation report (Lotspeich and Associates, Inc., 1998) and lack of reported wetlands within the expanded containment area footprint. However, our site investigation revealed that wetland features had developed within the former Estuary Corp. sludge disposal area (located within the expanded basin footprint). The wetlands consist of a series of linear ditches created by the excavation of contaminated material during site remediation that occurred over 10 years ago. The contaminated material excavation extended to elevations near or below the groundwater table, providing the necessary hydrology for wetland development.

On-site wetland verification occurred with the FDEP (Aaron Sarchet) on December 5, 2014. Mr. Sarchet verbally indicated that the FDEP would not require mitigation for impacting these wetlands. Coordination with the USACE, not present at the December 5 meeting, indicated that further field investigation is necessary to determine whether a hydrologic connection exists between the on-site ditches and navigable waters. On January 15 Taylor Engineering completed an on-site wetland investigation and determined the following:

- 1. A few of the excavated ditches on the west side of the property have direct connections to the natural wetland located on the west-central part of the site. Currently, the ditches exhibit wetland properties (soils, hydrology, and vegetation). Based on our review of historical aerials and CH2MHILL reports documenting site clean-up, we believe that the ditches were excavated from uplands in 2003-2004 to remove contaminated sludge. The excavation extended to an elevation near or below the groundwater table. Following sludge removal, the ditches were left open and developed into wetlands.
- 2. The natural wetland located on the west-central part of the site portion the excavated ditches that directly connect to it are hydrologically connected through offsite wetlands to a navigable waterbody. Therefore, the USACE would likely claim jurisdiction over those excavated ditches and require a DOA permit for impacts to those wetlands. We believe we can make a case that most of the excavated ditches are hydrologically isolated. If the USACE agrees, impacts to the isolated ditches would not require a permit. Taylor Engineering (Chris Ellis) has an on-site meeting with the USACE (Mark Evans) on February 6 to review the site and make a determination.
- 3. The natural wetland and directly connected ditches slightly encroach into the DMMA design footprint. If the USACE agrees (at our February 6 meeting) that these are the only jurisdictional areas, we will have two options:
 - a. Retain the original design footprint and acquire a USACE permit. We could likely

ATTACHMENT B

SCOPE OF PROFESSIONAL ENGINEERING AND ENVIRONMENTAL SERVICES DMMA DU-9 WORK ORDER MODFICATION REQUEST ST. JOHNS COUNTY, FLORIDA

mitigate for the wetland impact by applying a "ditch-to-ditch" offset based recent experience with DMMA O-7.

b. Shift the original design layout (DMMA, Perimeter Road, and Perimeter Ditch) 55-75 ft east of the existing site footprint (see attached figure) to avoid wetland impacts and decrease buffer on eastern side to offset capacity differences. Avoiding all impacts to wetlands under USACE jurisdiction would eliminate the need for a USACE permit.

Given the information outlined above and pending the outcome of our February 6 meeting with the USACE, it may be necessary to perform a (1) natural resources survey; (2) develop a mitigation plan; (3) conduct a pre-application meeting; and (4) submit a permit application. If USACE does not assert jurisdiction or FIND decides to shift the dike as noted in paragraph 3.b. above, we will not implement Task 1.

1.1 Natural Resources Survey

State and federal regulatory agency policy requires wetland delineation for permit applications. Taylor Engineering will delineate on-site wetlands and use the Florida Land Use, Cover and Forms Classification System (FLUCCS) to map natural communities within the project area. This work will provide information necessary to characterize natural resources and identify potential impacts requiring mitigation (if any).

1.1.1 Wetlands Delineation

Taylor Engineering will perform a jurisdictional wetlands delineation of the DMMA DU-9 property. The wetlands delineation methodologies will follow the protocols mandated by the FDEP and USACE. Taylor Engineering will install sequentially-numbered stakes and/or flags to mark the wetland-upland interface. Succeeding flags/stakes will be clearly visible from the previous flag location, and the distance between flags will not exceed 100 feet. Taylor Engineering will fill out all necessary data sheets as required by the USACE wetlands delineation methodology and regional supplements. Taylor Engineering will schedule and lead an on-site meeting with regulatory staff to verify the jurisdictional wetland boundaries and, if necessary, adjust boundaries based on agency staff field observations and comments.

1.1.2 Habitat Characterization and Listed Species Assessment

Taylor Engineering will use the FLUCCS to map (via aerial interpretation and groundtruthing) and characterize natural communities within the DMMA DU-9 property. Characterizations will include qualitative description of each identified community, lists of dominant vegetation by species, and documentation of observed and likely occurrences of wildlife. Taylor Engineering will also assess the property for potential use by state and federally listed species.

1.1.3 Reporting

Taylor Engineering will develop a report summarizing the results of the natural resources field investigation. The report will include

- descriptions of the methods and results of the field investigation
- qualitative descriptions of natural communities including uplands and wetlands
- FLUCCS map including acreages for each community type
- wetland boundary map (showing GPS-line verified by agency staff)

75

SCOPE OF PROFESSIONAL ENGINEERING AND ENVIRONMENTAL SERVICES DMMA DU-9 WORK ORDER MODFICATION REQUEST ST. JOHNS COUNTY, FLORIDA

ATTACHMENT B

- completed wetland delineation forms
- descriptions of wildlife utilization (both observed and likely occurring)
- an assessment of potential use by threatened and endangered species

The threatened and endangered species assessment will identify the state and federal status of each species discussed. The report will also discuss the results of the meeting with agency staff to verify the wetland line and make any agency-requested adjustments.

1.2 Pre-Application Meeting

Taylor Engineering will coordinate and attend a pre-application meeting with the USACE. During this meeting (potentially located on-site), we will introduce the project to regulatory staff, discuss foreseeable permit application issues, and solicit agency recommendations concerning the content and format of the permit application materials. Following completion of the pre-application meetings, Taylor Engineering will compile and submit meeting minutes to all attending parties.

1.3 Natural Resource Impact Analysis and Mitigation

Based on findings of Tasks 1.1 and 1.2, Taylor Engineering will overlay the project footprint on the natural resources and wetlands features maps to locate and quantify natural resource impacts areas. We will apply the appropriate functional assessment methodology (e.g. UMAM, WRAP) to assess natural resource impacts and mitigation requirements. Taylor Engineering will employ the results of the functional assessment to develop a mitigation plan for unavoidable impacts. If needed, we will assess potential on- and off-site mitigation opportunities to identify the most cost effective mitigation solution.

1.4 Joint Environmental Resources Permit Application (USACE Supplement)

Based on data collected and agency comments made during the pre-application meetings, Taylor Engineering will prepare and submit a Joint ERP application to the USACE. Nearly identical to the FDEP ERP application — detailing the (1) overall project and conceptual design, (2) location of on-site sensitive natural habitats, (3) best management practices and impact avoidance/minimization techniques, (4) natural resource impact analysis and mitigation (if necessary), and (5) construction methodology and schedule — the USACE application will also include the natural resources report and recommended mitigation.

TASK 2 LIMITED GEOTECHNICAL INVESTIGATION

Based on a 2009 USACE ICWW as-built dredging survey (the dredged material was deposited in DU-9) and our December 2014 site reconnaissance, DU-9 likely contains about 260,000 CY of mixed material ranging from coarse sand to organic silt (muck). Since a good portion of this material is not suitable for dike construction, Taylor Engineering needs to characterize and quantify the material. This will allow us to a) determine construction quantities and b) determine the most efficient means to handle and store the unsuitable material during construction.

Taylor Engineering selected subconsultant AMEC Foster Wheeler (AMEC) to complete a limited geotechnical investigation of the dredged material within the existing containment basin. AMEC will begin with a field investigation to include 31 Standard Penetration Test (SPT) borings with variable depths extending to the original containment basin floor elevation of 11.5 ft NGVD. Work will continue with necessary laboratory and geotechnical engineering analysis. The deliverable for this task will comprise a report to establish geotechnical parameters for use in designing the expanded containment

ATTACHMENT B

SCOPE OF PROFESSIONAL ENGINEERING AND ENVIRONMENTAL SERVICES DMMA DU-9 WORK ORDER MODFICATION REQUEST ST. JOHNS COUNTY, FLORIDA

basin. Attachment D provides AMEC's scope of services in its entirety.

Using information gathered from AMEC, Taylor Engineering will develop the digital terrain models and grading plan. This will determine the quantity of suitable material, quantity of unsuitable material, and the basin excavation depth required to provide adequate suitable dike material.

TASK 3 DEWATERING PLAN

On November 19, 2014, Taylor Engineering conducted a pre-application meeting with the FDEP. Given the proposed DMMA expansion over and into the remediated area, FDEP repeated (from the August 2014 pre-application meeting) that a major issue for permit issuance centered on construction and operational assurances stemming from

site dewatering for construction and (1)

displacement and discharge of surficial ground water into the ICWW during construction (2) and use of the site (i.e., construction would result in the bottom of the DMMA intersecting the seasonal high groundwater table and during use water filling the DMMA would displace ground water).

To address Item (1), Taylor Engineering proposed on-site discharge of any construction dewatering (as opposed to off-site surface water discharge). FDEP indicated that this option would eliminate the need for a wastewater permit (as originally stated at the August 2014 meeting) provided we prove that dewatering and infiltration would not cause lateral or vertical displacement of the remaining contaminant plume. Follow up discussions with Estuary Corp., CH2MHILL (Estuary Corp. engineering consultant), and FDEP revealed

1. A 3-D model does not exist of the remaining D-Dot Ranch contaminant plume boundary

2. The accepted CH2MHILL groundwater model indicated that the contaminated groundwater would not reach the ICWW. Estuary Corp. stated that it would take responsibility for any contamination that left the immediate area (because the contamination is on Estuary Corp. property).

3. A MODFLOW analysis is not required to prove that construction and operation will not exacerbate (i.e., spread) the remaining on-site contaminant plume; however, we must prove that

dewatering will not withdraw contaminated water.

4. A MODRET analysis is acceptable to establish that construction and operation will not impact groundwater in vicinity of TPOC-01 (the remaining hot well within the surficial aquifer) and the four cleanest wells within the vicinity.

a. Site design to avoid these impacts may result in portions of the interior berm and exterior perimeter ditch not being dug to the original site design grade.

5. Alternatively, we can design a hydraulic barrier that will isolate the area in vicinity of TPOC-01, and the four cleanest wells, allowing retention of the original DMMA design.

This scenario would likely result in surficial aquifer water being drawn into the constructed DMMA interior and would likely require additional proof (via testing or some other means) to prove that the water contained within the floor of the DMMA is not contaminated.

Given the above-outlined summary and outlined goals and restrictions, Taylor Engineering subcontracted to AMEC to provide a dewatering plan that will provide FDEP construction and operational assurances necessary to move forward with the permit application. Attachment D provides AMEC's scope of services in its entirety.

ATTACHMENT B

SCOPE OF PROFESSIONAL ENGINEERING AND ENVIRONMENTAL SERVICES DMMA DU-9 WORK ORDER MODFICATION REQUEST ST. JOHNS COUNTY, FLORIDA

ESTIMATED SCHEDULE

7	77. 1	Months from Notice to Proceed					
No.	Task	1	2	3	4	5	6
1	USACE Permit Application		Trans 1				
2	Limited Geotechnical Investigation						
3	Dewatering Plan						

WORK ORDER MODIFICATION PERMITTING AND FINAL ENGINEERING DESIGN FOR DREDGED MATERIAL MANAGEMENT AREA DU-9 ST. JOHNS COUNTY, FLORIDA

ATTACHMENT C

Cost Proposal

ATTACHMENT C

TAYLOR ENGINEERING, INC. COST SUMMARY BY TASK P2015-027: DU-9 WORK ORDER MODIFICATION REQUEST; ST. JOHNS COUNTY, FLORIDA

TASK 1: USACE PERMIT APPLICATION			
Labor	Hours	Cost (\$)	Task Totals
Director	10.0	1,590.00	
Senior Professional	52.0	7,332.00	
Project Professional	40.0	4,240.00	
Editor	4.0	396.00	
Administrative	8.0	416.00	
Total Man-Hours Labor Cost	114.0		13,974.00
Non-Labor	Units	Cost (\$)	
MILEAGE (3 Trips)	60.0	34.80	
Fee @ 10.0%	-	3.48	
Total Non-Labor Cost			38.28

TASK 2: LIMITED GEOTECHNICAL INVESTIGATION

Total Task 1

Labor	Hours	Cost (\$)	Task Totals
Director	3.0	477.00	
Senior Professional	8.0	1,128.00	
Staff Professional	20.0	1,720.00	
Senior Technical Support	34.0	3,672.00	
Administrative	4.0	208.00	
_			20
Total Man-Hours	69.0		
Labor Cost			7,205.00
Non-Labor_	Units	Cost (\$)	
Geotechical Investigation (AMEC)	1.0	49,025.00	
Fee @ 10.0%		4,902.50	
Total Non-Labor Cost			53,927.50
Total Task 2			\$ 61,132.50

TASK 3: DEWATERING PLAN

Labor	Hours	Cost (\$)	Task Totals
Vice President	0.5	92.50	
Senior Advisor	0.5	93.00	
Director	4.0	636.00	
Administrative	1.0	52.00	
Total Man-Hours Labor Cost	6.0		873.50
Total Task 3			\$ 873.50

\$ 14,012.28

WORK ORDER MODIFICATION PERMITTING AND FINAL ENGINEERING DESIGN FOR DREDGED MATERIAL MANAGEMENT AREA DU-9 ST. JOHNS COUNTY, FLORIDA

ATTACHMENT D

AMEC Foster Wheeler Scope of Work and Cost Proposal



February 2, 2015

Ms. Lori S. Brownell, P.E. Director, Waterfront Engineering Taylor Engineering, Inc. 10151 Deerwood Park Boulevard Building 300, Suite 300 Jacksonville, Florida 32256

Subject: Proposal for Geotechnical Engineering and Groundwater Modeling Services

FIND DU-9 Dredged Material Management Area (DMMA)

St. Johns County, Florida

Amec Foster Wheeler Proposal No. 15PROPJAXV.031

Dear Ms. Brownell:

AMEC Environment & Infrastructure, Inc., a wholly owned subsidiary of Amec Foster Wheeler plc, is pleased to submit this proposal to provide geotechnical engineering and groundwater modeling services for the subject project. Included in this proposal is our understanding of the project, an outline of the proposed services, a fee estimate, and our anticipated schedule.

Project Information

You have provided project information during the period of January 7-30, 2015. We have been furnished with the following items related to the subject site:

Table 1: Furnished Documents

Title	Author	Date
Summary of Desired Scope of Work - Geotechnical Investigation	Taylor Engineering, Inc.	Undated, received on 1/7/2015
Topographic & Specific Purpose Survey (4 sheets)	Arc Surveying & Mapping, Inc.	4/7/2010
Figure 4.11, DMMA DU-9 Plan View	Taylor Engineering, Inc.	6/2014
Figure 4.12, DMMA DU-9 Section View	Taylor Engineering, Inc.	6/2014
Groundwater Mounding Evaluation Report (MACTEC Project No. 6734-03-8695)	MACTEC Engineering & Consulting, Inc.*	10/1/2003
Preliminary Report of Geotechnical Exploration (MACTEC Project No. 6734-03-8695)	MACTEC Engineering & Consulting, Inc.*	8/11/2003
Report of Geotechnical Exploration (E&A Project No. 99-1018)	Ellis & Associates, Inc.	3/10/1999
Figure A-1, DMMA DU-9 Plan View, Site Reconnaissance Features	Taylor Engineering, Inc.	12/2014
Supplemental Groundwater Sampling Results and Evaluation, Dee Dot Sludge Disposal Area No. 2	CH2M HILL	11/25/2013
DU-9 Management Plan Figures	Taylor Engineering, Inc.	7/2000
DU-9 USACE Record Drawings	Taylor Engineering, Inc.	9/2004
DU-9 Plans	Taylor Engineering, Inc.	2/2000
Pre-Application Meeting Minutes	Florida Inland Navigation District (FIND)	11/19/2014

Florida Department of Environmental Protection (FDEP) files – Estuary Corp. (59 documents)	Various	Various
Groundwater Modeling Report, Consent Order No. 01-0219, Dee Dot Sludge Land Farm Disposal Area No. 2	CH2M HILL	3/3/2014
Response to CH2M HILL's Groundwater Modeling Report	Taylor Engineering, Inc.	3/13/2014
Response to CH2M HILL's Groundwater Modeling Report	FDEP	3/17/2014

^{*}Predecessor company to Amec Foster Wheeler

We understand the existing DU-9 DMMA site is located approximately ½ mile west of the Intracoastal Waterway and 2 miles south of J. Turner Butler Boulevard (S.R. 202) in northeastern St. Johns County, Florida, on the Dee Dot Ranch property. The design for this DMMA was performed in 2000, and called for a basin with overall plan dimensions of approximately 3,200 feet in the north-south direction by 1,100 to 1,500 feet in the east-west direction. Due to contamination found within the center of the site during preliminary construction activities in 2001, we understand a smaller basin was designed and constructed north of the contaminated area (referred to as Dee Dot Sludge Disposal Area No. 2) in 2006. This basin has overall plan dimensions of approximately 1,150 feet in the north-south direction by 1,200 to 1,500 feet in the east-west direction. The existing dike is approximately 6½ feet lower than the full design height and occupies approximately 1/3 of the full design footprint. We understand the U.S. Army Corps of Engineers (USACE) deposited approximately 260,000 cubic yards of material into the DMMA in 2006.

The DMMA currently has a perimeter dike with a crest elevation of +26.5 feet (NGVD29), an interior dike bottom elevation of +11.0 feet, an exterior dike bottom elevation that varies from about +13 to +20 feet, a dike crest width of 12 feet, and side slopes of 3:1 (H:V). The surface elevation of the dredge spoil material ranges from about +23 to +29 feet in the southwest quadrant, where sandy soils are exposed, to +22 feet in the remainder of the basin, where the soils are under a few feet of water.

We understand it is desired to utilize the existing suitable materials within the DMMA as an on-site fill source to build out the DU-9 site to the full design height and footprint. As such, geotechnical exploration of the soils within the basin has been requested to assist Taylor Engineering with their estimate of the quantity of material that is suitable for dike construction.

We understand that since 2000, the owner of Dee Dot Ranch (Estuary Corporation) and its engineering consultant, CH2M HILL, have worked to remediate the contaminated area. As of March 2014, the Florida Department of Environmental Protection (FDEP) had granted conditional closure (i.e., no further cleanup required) pending the FIND acceptance of institutional controls. At this point, FIND is investigating and moving forward with the expansion of the existing cell to its original 2000 design.

The area of the existing basin reportedly does not contain contaminated groundwater. We understand, however, that contamination still exists in the surficial aquifer south of the existing basin based on the results of testing performed on groundwater samples from Well No. TPOC-1, which is located about 1,000 feet south of the southwest corner of the existing basin. In addition to the requested geotechnical services, we understand it is desired for Amec Foster Wheeler to provide assistance in developing a dewatering plan for the construction of the DMMA expansion



that will not extract contaminated groundwater or cause migration of the contaminant plume into the project site.

Proposed Geotechnical Exploration

Our geotechnical exploration will consist of field testing, laboratory testing, geotechnical engineering, and reporting. These services are discussed in more detail in the following paragraphs.

Field Exploration

The following table presents our proposed scope of field exploration services inside the existing basin:

Table 2: Proposed Field Exploration Program

Area	Boring Type	Drill Rig Type	Boring Depth (ft)*	Sampling Depth Interval (ft)	Quantity of Borings
Southwestern quadrant, where sandy soils are exposed	SPT**	Track- mounted	20	2.5	9
Remainder of basin, where standing water and/or fine-grained soils are exposed	SPT	Amphibious	20	5	22

^{*} Below ground or mudline

As requested, we have proposed a horizontal boring spacing of approximately 250 feet, as shown on the attached figure. As requested, boring layout will be accomplished by a survey crew from our Orlando office. The survey crew will record each boring's horizontal position in state plane coordinates and vertical elevation in NGVD29. The surveyor will also provide the elevation difference to convert the boring elevations to NAVD88.

We have included an allowance for obtaining seven thin-walled (Shelby) tube samples of soft clay or silt. We do not plan to backfill the completed boreholes due to the remote location of the site.

In addition to the borings, we plan to obtain four bulk samples of soil in the area of the exposed sandy soils for subsequent laboratory compaction, permeability, Limerock Bearing Ratio (LBR), and direct shear testing. We plan to obtain enough soil at each location to fill two 5-gallon buckets. These samples will be obtained using a continuous flight auger attached to the track-mounted drill rig, in general accordance with ASTM D1452. The auger will be rotated into the ground to a depth of 20 feet and withdrawn, and soil will be removed manually from the auger to fill the 5-gallon sample buckets. If one auger run is insufficient to fill two buckets at a particular sampling location, then a second auger run will be performed.

We propose to utilize Independent Drilling, Inc. (IDI) to perform the drilling services under subcontract to AMEC. A representative from our office will be present during the drilling operations to observe and document the borings on a full-time basis.



^{**}Standard Penetration Test (ASTM D1586)

Drilling, testing, and sampling will be conducted in general accordance with applicable ASTM standards. At the completion of drilling, we will transport the recovered soil samples to our laboratory where they will be examined by a geotechnical engineer and visually classified according to the Unified Soil Classification System. The engineer will then select samples for laboratory classification testing.

Laboratory Testing

We plan to conduct laboratory classification and index property tests on representative soil samples we obtain during drilling to help us classify the soils. Additional testing will be conducted on samples of the suitable sandy soils (which we understand are to be defined as material containing less than or equal to 12% fine material (passing the No. 200 mesh sieve) and less than or equal to 4% organic material by weight) to estimate the shear strength, permeability (hydraulic conductivity), and compaction characteristics of these soils under overburden and compaction pressures expected during use as dike material, as requested. Laboratory tests will also be conducted on samples of the fine-grained soils to help evaluate the difficultly of handling, storing, dewatering, and stacking this unsuitable material during construction. The following table presents our proposed laboratory test types and quantities:

Table 3: Proposed Laboratory Test Program

	ASTM	Estimated Quantity	
Test Description	Designation	Suitable Soils*	Unsuitable Soils**
Moisture Content	D2216	10	15
Fines Content	D1140		15
Organic Content	D2974	9	15
Grain Size Distribution	D422	18	
Atterberg Limits	D4318	10	10
Unit Weight (of thin-walled tube samples)	D7263		7
Specific Gravity (of thin-walled tube samples)	D854		7
Triaxial Compression (of thin-walled tube samples)	D4767		4
Modified Proctor Compaction (of bulk auger samples)	D1557	4	
Hydraulic Conductivity (of remolded bulk auger samples)	D2434	4	
Direct Shear (of remolded bulk auger samples)	D3080	4	

^{*}Sands with a fines content not exceeding 12% material passing the No. 200 mesh sieve, and an organic content not exceeding 4% by weight.

The actual quantity of each test may vary from what is shown above, depending on the subsurface conditions that are encountered by the borings. We will conduct laboratory tests in general accordance with ASTM or other widely accepted standards.



^{**}Soils not meeting the criteria for suitable soils.

Geotechnical Engineering and Reporting

A registered professional engineer who has specialized in geotechnical engineering will direct and supervise our services. A report that describes our exploration and recommendations will be provided for you. This report will include the following:

- A brief review of our test procedures and the results of all field and laboratory tests conducted. This will include a plan illustrating the location and reference number of each soil boring, and logs of each boring. State plane coordinates of each boring location will be provided. The boring logs will include the measured groundwater levels.
- 2. Estimated subsurface profiles to illustrate the subsurface conditions including standard penetration resistance test data and groundwater levels.
- 3. A general geotechnical evaluation considering the proposed project and estimated subsurface conditions.
- 4. An evaluation of the suitability of the soils to be excavated from the proposed basin for re-use as structural fill material for construction of the dike expansion.
- 5. Guideline recommendations for handling, storing, dewatering, and stacking of the unsuitable fine-grained materials during construction.

Our proposed scope excludes the following:

- 1. The assessment of site environmental conditions or the presence of pollutants in the soil, rock or groundwater of the site.
- 2. The preparation of design drawings or specifications for the proposed dike construction.
- 3. Analyses of dike bearing capacity, settlement, seepage, and stability.
- 4. Recommendations for dike construction.
- 5. Analysis of pile capacity and settlement, as well as recommendations for pile design, installation, load testing, and installation monitoring.

Proposed Groundwater Modeling Services

The primary objective of the proposed groundwater modeling is to assist Taylor Engineering in developing a dewatering plan for the construction of the DMMA expansion that will not extract contaminated groundwater or cause migration of the contaminant plume into the project site.

We will review historical groundwater contamination reports and records with respect to the remediation efforts undertaken at the Dee Dot Ranch Sludge Disposal Area No. 2 and coordinate with regulatory staff at the FDEP to obtain the most current records and status information with



respect to known groundwater contamination in the vicinity of the project area. Following our records review, we will prepare a groundwater model using PONDS 3.2 software to predict the influence of dewatering the area adjacent to the proposed dike to allow for compaction as required for construction purposes. We will develop a model with multiple time-dependent outputs so that we may recommend how long a dewatering system may operate in the vicinity of the known nearby contaminated well, TPOC-1, before it is expected to cause migration, if any, of the contaminant plume towards the project site.

Our model input will be based on previously determined hydraulic conductivity values determined by field and laboratory measurements in our Groundwater Modeling Evaluation Report (MACTEC Project No. 6734-03-8695) dated October 1, 2003. The depth to the seasonal high water table (SHWT) will be based on the data presented in our Preliminary Report of Geotechnical Exploration (MACTEC Project No. 6734-03-8695) dated August 11, 2003. Following the development of our model simulation, we will prepare a summary report of our findings, conclusions, and recommendations, intended for regulatory submittal and review.

Estimated Fees

Since the site and subsurface conditions are not precisely known, it is not possible to accurately determine all types of analyses and related studies that may be necessary. In addition, boring, sampling, and testing requirements are a function of the subsurface conditions that are actually encountered. Based upon our experience and our understanding of the project requirements, we propose to perform the outlined scope of services for a total not-to-exceed fee of \$48,375, which is summarized below.

Table 4: Summary of Estimated Fees

Table 4: Summary of Estimated Fees Task	Estimated Fees
Geotechnical Field Services	
Mobilization, SPT Borings, Thin-Walled Tube Samples, Bulk Samples	\$22,020
Surveying Services to Stake Borings and Determine Coordinates and Elevations	\$3,920
Geotechnical Laboratory Testing Services	
Classification Testing	\$4,360
Hydraulic Conductivity Testing	\$1,020
Unit Weight and Moisture Content (thin-walled tube samples)	\$385
Triaxial Compression Testing	\$1,920
Direct Shear Testing	\$2,040
Modified Proctor Compaction Testing	\$480
Geotechnical Engineering Services	
Geotechnical Engineering / Report Preparation	\$9,630
Geotechnical Subtotal:	\$45,775
Groundwater Modeling Services	
Groundwater Modeling Subtotal:	\$3,250
Total Estimated Fee:	\$49,025



Our fee estimate assumes that the site is accessible to IDI's track-mounted and amphibious drilling equipment. We assume the field services may be performed during normal business hours (Monday through Friday, 7:00 a.m. to 6:00 p.m.), and that our operations will not be hindered by any on-site activities of others.

Invoicing

We plan to submit invoices every four to five weeks, and following the conclusion of our services. Compensation for the services outlined above, or any additional services you may request, will be based upon the actual time spent and tests performed in accordance with our attached Fee Schedule. We will not exceed our total estimated fee without an extension of the scope of services by your office.

Schedule

Based upon our present schedule we can begin this project within about one to two weeks after we receive written authorization to proceed. The field services should take four to five days to complete, and laboratory testing services should take about two to three weeks to complete. We anticipate that our report will be available about five to seven weeks after our receipt of written authorization. We can, however, provide preliminary verbal results and recommendations as tests and analyses are completed in order to help expedite the project.

IDI will call Sunshine State One Call of Florida (Sunshine 811) to locate and mark underground utilities prior to the field exploration. Once the locate ticket has been requested and issued, at least two business days (not including the day of the request) will be required for utility locators to locate and mark underground utilities. We assume that any information you have regarding known underground utility locations will be provided to us prior to the field exploration.

Our groundwater modeling report can be submitted within two to three weeks following our receipt of authorization to proceed.

Authorization

We assume a subcontract with mutually agreeable terms and conditions will be issued by Taylor Engineering, Inc. to authorize us for the services proposed herein.



We appreciate your consideration of Amec Foster Wheeler for these services and look forward to serving as your geotechnical and groundwater modeling consultant on this and other future projects. If you have any questions regarding this proposal, please contact us.

Sincerely,

AMEC ENVIRONMENT & INFRASTRUCTURE, INC.

Michael B. Woodward, P.E. Principal Geotechnical Engineer

Melivodwans

Kirk A. McIntosh, P.E., D.GE Senior Principal

Kirin G. Mc Juliah

Attachments: Proposed Boring Plan (aerial photograph with grids)

Fee Schedule

<u>Distribution</u>: Taylor Engineering, Inc. (e-mail)

File (1)





AMEC ENVIRONMENT & INFRASTRUCTURE, INC. FEE SCHEDULE

Makilianian and Turnamentation of Dvilling Equipment:	
Mobilization and Transportation of Drilling Equipment: Amphibious/Barge, Lump Sum\$	4 600 00
Track-Mounted Rig, Lump Sum\$	690.00
SPT Borings (Amphibious/Barge):	
0 to 50 foot depth range, per lineal foot\$	13.80
SPT Borings (Track-Mounted Rig):	
0 to 50 foot depth range, per lineal foot\$	13.80
Extra Split-Spoon Samples (Track-Mounted Rig), each\$	32.20
Hourly Crew Rates (Amphibious/Barge or Track-Mounted Rig):	
Difficult moving or drilling through rubble fill, per hour\$	287.50
Standby Time at Client's Request, per hour\$	287.50
Sampling and testing not included above and boring layout\$	287.50
Thin-Walled (Shelby) Tube Samples (Amphibious/Barge), each\$	132.25
Drill Crew Per Diem, three-man crew, per day\$	431.25
Two-Man Survey Crew, per hour\$	125.00
Reimbursable Expenses, actual cost times 1.15\$	
LABORATORY SERVICES	
Water Content, each\$	12.50
Fines Content, each\$	32.50
Grain Size Determination, including wash No. 200 sieve, each	48.00
Atterberg Limits (Plasticity), each\$	70.00
Unit Weight and Natural Moisture Content (thin-walled tube sample), each	55.00
Specific Gravity, each\$	65.00
Consolidation, each	475.00
Organic Content, each\$	35.00
Hydraulic Conductivity, each	225.00
Limerock Bearing Ratio (LBR), each\$	350.00
Triaxial Shear (three points), each\$	480.00
Direct Shear (three points), each\$	480.00
Standard or Modified Proctor Compaction, each\$	120.00
Remold Samples, each\$	30.00
ENGINEERING AND TECHNICIAN SERVICES	
Staff Engineer, per hour\$	80.00
Project Engineer, per hour	90.00
Senior Engineer, per hour	132.00
Principal Engineer, per hour	155.00
Senior Principal, per hour	165.00
CAD Operator, per hour\$	72.00
Senior Engineering Technician, per hour\$	65.00
Engineering Technician, per hour\$	45.00
Engineering Technician, per hour\$	45.00
Survey Technician, per hour\$	79.00
Professional Land Surveyor, per hour\$	110.00
Professional Land Surveyor Supervisor, per hour\$	155.00
Truck Usage (survey crew), per day\$	50.00
Reimbursable Expenses, actual cost times 1.15\$	

NOTE: The above engineering technician hourly rates will be multiplied by a factor of 1.50 for services that are performed before 7:30 a.m., after 4:00 p.m., or on weekends and State of Florida/Georgia recognized holidays.



February 4, 2015

Mr. Mark Crosley Executive Director Florida Inland Navigation District 1314 Marcinski Rd Jupiter, FL 33477

RE:

Scope of Professional Surveying Services

Intracoastal Waterway (ICWW) Deepening in vicinity of the Port of Palm Beach

Palm Beach County, Florida

Mr. Crosley:

Under Task 1.1 of the original Work Order 14-21, dated November 26, 2014, Morgan & Eklund, under subcontract to Taylor Engineering, conducted a utility and magnetometer survey in the area of both the dredging and Sugar Sands mitigation area. Morgan & Eklund's scope of work did not include diver verification of utility lines because the total number of crossings requiring verification was unknown.

On receipt of the preliminary deliverables for the survey (identifying two crossings within the dredging area and one crossing within the mitigation area), we requested and received the attached scope of work (Attachment A) for diver verification of the three utilities. Taylor Engineering will perform these services for a fixed fee of \$20,025.50. Of this amount, \$18,205.00 represents the proposed fee for our surveying (Morgan & Eklund) sub-consultant. We understand from our correspondence with John Morgan that this effort will result in a detailed cross-section view showing the utility location, depth of burial, and the dredge design/mitigation area template.

Please contact me with any questions you have regarding this effort. We can begin work upon your notice to proceed.

Sincerely,

John Adams, P.E.

Senior Advisor, Waterfront Engineering

IND adams

Attachments (1)



MORGAN & EKLUND, INC.

PROFESSIONAL SURVEY CONSULTANTS

February 3, 2015

Taylor Engineering, Inc. Attn: Lori Brownell, PE 10151 Deerwood Park Blvd. Bldg. 300, Suite 300 Jacksonville, Florida 32256

RE: Diver Verification of Utility Location and Depth for the Palm Beach County ICWW Deepening Project.

Dear Lori:

Morgan & Eklund, Inc. (in conjunction with Underwater Engineering, Inc.) is pleased to provide you with the following proposal to furnish professional hydrographic survey and diver verification services for the above referenced project.

In accordance with the scope of work as discussed, I estimate our costs to be as follows:

I. Establish Horizontal/Vertical Control for Buoy Locations

Chief Surveyor		12
1 hour @ \$135/hr\$	135.0	0
Project Surveyor		
4 hours @ \$75/hr\$	300.0	0
<u> </u>	1	
Three Man Survey Crew		
8 hours @ \$135/hr\$	1,080.0	0
RTK/GPS		
1 day @ \$450/day <u>\$</u>	450.0	0
	1,965.0	

II. Buoy Existing Submarine Utility Lines (Sugar Sands and Peanut Island)

A. Morgan & Eklund, Inc.

	<u>Cc</u>	st/10 Hour Day
Project Surveyor	\$	850.00
Survey Boat		
Two Man Survey Crew		
•		2,450.00/day
x 3 days =	\$	7,350.00

Lori Brownell, PE February 3, 2015 Page (2)

B. Underwater Engineering, Inc.

Total II, A-B\$	14,850.00
x 3 days =\$	7,500.00
\$	2,500/day*
Dive Boat\$	250.00
Jet Pump\$	100.00
Surface Supplied Air (Package)\$	150.00
Dive Crew\$	2,000.00
	lost/10 Hour Day

III. Plot Location and Depth of Utility in Plan and Profile View

Chief Surveyor 2 hours @ \$135/hr\$	270.00
Project Surveyor 8 hours @ \$75/hr\$	600.00
Computer Draftsperson 8 hours @ \$65/hr\$	520.00 1,390.00
Total Cost I-III\$	18,205.00

<u>As always</u>, Morgan & Eklund, Inc. is looking forward to working with you and Taylor Engineering, Inc. on this project.

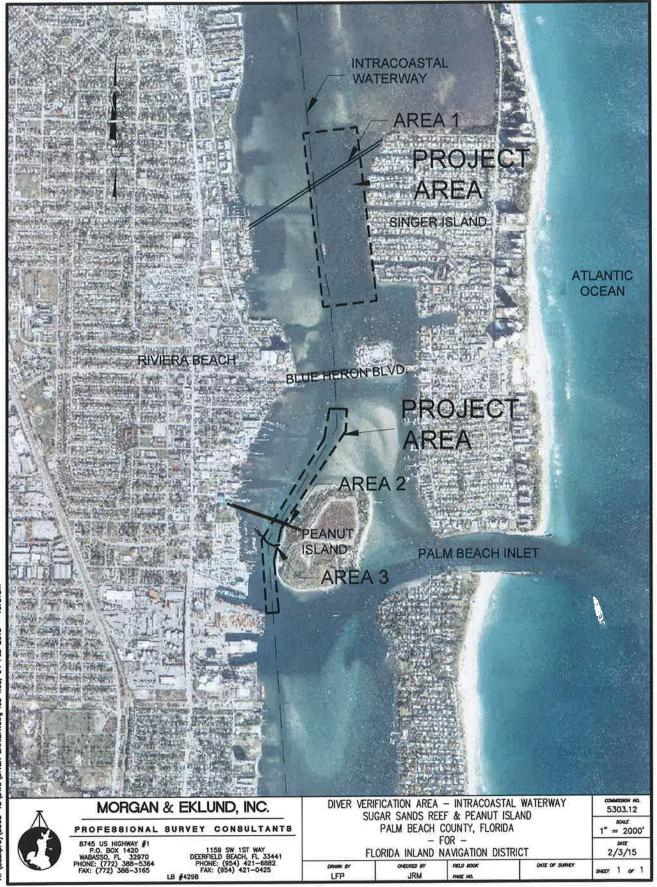
John R. Morgan, II, PLS

President

JRM:sm

^{*}See Attached

ATTACHMENT A



H: \Sdakpro \5303-12\DWG\DIVER EXHIBIT.dwg lou Wed, 04 Feb 2015 - 10:5

ALCALDE & FAY

GOVERNMENT & PUBLIC AFFAIRS CONSULTANTS

February 6, 2015

MEMORANDUM

TO:

Mark Crosley, Executive Director

FROM:

Jim Davenport

SUBJECT:

Federal Legislative Report

FISCAL YEAR 2015 FUNDING FOR THE INTRACOASTAL WATERWAY

As you know, on February 3rd the U.S. Army Corps of Engineers (USACE) released its fiscal year (FY) 2015 Work Plan, which includes \$1.2 million for the Intracoastal Waterway. On the same day, the President's FY 2016 Budget Proposal was released, which included \$700,000 for the IWW for 2016.

In regard to the Work Plan, the Corps first begins with their commercial ton/mile criteria. The Corps was further directed by Congress to prioritize ability to complete ongoing maintenance of harbor and shipping channels; critical maintenance backlogs; presence of the U.S. Coast Guard; projects that enhanced national, regional or local economic development, including domestic manufacturing; and the number of jobs created directly by the funded activity, among other things.

Since passage of H.R. 83, we had been communicating with USACE Headquarters in Washington, D.C., the USACE Jacksonville District Office and your congressional delegation to obtain additional funding for the IWW in the Work Plan. First, we had to ensure that the Jacksonville Corps submitted a funding request to USACE HQ, which they did. Second, we had to galvanize support from FIND's congressional delegation to contact USACE HQ and request additional funding. To that end, we drafted a letter on behalf of the delegation to USACE Secretary Jo-Ellen Darcy and asked Representatives Lois Frankel and Bill Posey to take the lead on the letter since most of FIND's 2015 projects are in their districts. Reps. Frankel and Posey took the lead on the letter and we worked to obtain additional signatories, which included Reps. Alcee Hastings, Ileana Ros-Lehtinen, Corrine Brown, Mario Diaz-Balart, Debbie Wasserman Schultz, Tom Rooney, Ted Deutch, Carlos Curbelo, Frederica Wilson and Patrick Murphy. In

addition, Senator Bill Nelson's office indicated that they contacted the USACE on our behalf.

We thanked your congressional delegation for their support of FIND's FY 2015 projects and will continue working with them to submit FY 2016 appropriations requests for navigation and inland waterways.

MEETING WITH NATIONAL MARINE FISHERIES SERVICE AND ARMY CORPS OF ENGINEERS

As you know, we arranged a meeting on your behalf with the National Marine Fisheries Service (NMFS) Southeast Regional Office, Jacksonville Corps, and Representative Lois Frankel and staff to discuss a better path forward for the Essential Fish Habitat consultation process. The meeting will take place on February 18th in West Palm Beach.

In preparation for the meeting, we have been in regular contact with the Corps, Representative Frankel's staff and you to confirm our strategy for the meeting. We plan to have an additional call with the Corps prior to the meeting.

We intend to discuss expediting permits, the inequity of mitigating for maintenance dredging and the possibility of a programmatic consultation.

We plan to discuss the issues in this memo with members of Congress and staff as well as the USACE during your trip to Washington at the end of the month. In the meantime, please contact me with any questions.

Congress of the United States Washington, DC 20515

January 23, 2015

The Honorable Jo-Ellen Darcy Assistant Secretary of the Army for Civil Works Headquarters, US Army Corps of Engineers 441 G. Street, NW Washington, DC 20314-1000

Dear Secretary Darcy:

We are writing on behalf of the Florida Inland Navigation District, the state sponsor of the Intracoastal Waterway (IWW), Atlantic Intracoastal Waterway (AIWW) and Okeechobee Waterway (OWW) in Florida, to request fiscal year 2015 funding for maintenance dredging projects in the IWW and OWW.

The continued maintenance of the IWW and OWW in Florida are vital to the State's economy. The Intracoastal Waterway annually transports over 500,000 recreational vessels; provides \$11.9 billion in economic output, which includes \$3 billion in personal wages and 66,631 jobs; generates \$540 million in tax revenues and increases property values by \$19.4 billion. Studies have shown that these benefits would be reduced by 45% if the waterway is not properly maintained.

The OWW annually transports tons of commercial cargo, has recreation visitation by 6.6 million people and a National Economic Development (NED) value of over \$55 million. The Corps of Engineers has estimated the average annual NED impact to navigation and recreation through the loss of operation and maintenance activities to be \$22.7 million.

As the Army Corps of Engineers reviews projects that are ready to be executed in FY 2015, we ask that you give strong consideration to funding Florida's IWW and OWW dredging projects. Details on the specific projects are attached.

Thank you for your careful consideration of our request.

Sincerely,

Lois Frankel

Member of Congress

Bill Posey

Member of Congress

Ohned Hacking &

Alcee L. Hastings Member of Congress

Corrine Brown Member of Congress

Debbie Wasserman Schultz Member of Congress

> Theodore E. Deutch Member of Congress

> Frederica S. Wilson Member of Congress

Mario Diaz Balart Member of Congress

Member of Congress

Thomas J. Rooney Member of Congress

Carlos Curbelo Member of Congress

Patrick E. Murphy Member of Congress

Mark Crosley

From: James Davenport <davenport@alcalde-fay.com>

Sent: Friday, January 09, 2015 1:41 PM

To: jocelyn.karazsia@noaa.gov; Ginny Fay (Virginia.Fay@noaa.gov); roy.crabtree@noaa.gov;

david.bernhart@noaa.gov; tori.white@usace.army.mil; Shelley Trulock

(shelley.f.trulock@usace.army.mil)

Cc: Mark Crosley; jadams@taylorengineering.com; Goldstein, Felicia

(Felicia.Goldstein@mail.house.gov); Cho, James (James.Cho@mail.house.gov)

Subject: Meeting Request on behalf of the Florida Inland Navigation District

Follow Up Flag: Follow up Flag Status: Flagged

The Florida Inland Navigation District (FIND) has asked that Representative Lois Frankel host a meeting in West Palm Beach to discuss the National Marine Fisheries Service (NMFS) Essential Fish Habitat (EFH) consultation process as it applies to the Army Corps of Engineers permitting process.

The purpose of the meeting is to discuss ways in which NMFS, the Corps of Engineers and FIND can proceed expeditiously with future maintenance dredging permits.

The meeting will be held on February 18th at 10:00 a.m. at the following location:

Mandel Public Library - Hibiscus Room 401 Clematis Street West Palm Beach, FL 33401

We anticipate the meeting to be finished by 11:30 a.m.

Please confirm your attendance with me and I will continue to coordinate with Felicia Goldstein, District Director for Representative Lois Frankel.

If you have any questions, please contact me at any of the numbers below.

Thank you and have a nice weekend! Jim Davenport

JIM DAVENPORT, ESQ., PARTNER

ALCALDE & FAY 2111 WILSON BOULEVARD, 8TH FLOOR ARLINGTON, VA 22201 OFFICE: (703) 841-0626 DIRECT: (703) 516-4119

CELL: (703) 597-2009 FAX: (703) 243-2874

DAVENPORT@ALCALDE-FAY.COM

Mark Crosley

From: Bohnsack, Brian <bri>brian_bohnsack@fws.gov>

Sent: Friday, January 30, 2015 2:30 PM

To: wcind200@aol.com; Mark Crosley; Virginia.Fay@noaa.gov; david.bernhart@noaa.gov;

White, Tori SAJ

Cc: John Sprague

Subject: Sport Fishing and Boating Partnership Council meeting- Boating access pilot project-

Feb 24th, Sanibel

The Sport Fishing and Boating Partnership Council, a Federal Advisory Committee Act council of the Department of Interior, invites you to participate in a facilitated discussion on boating access infrastructure permitting processes in Florida and the possible development of a pilot project to evaluate ways to increase the efficiency of the permitting processes required for many projects. This discussion is an agenda item on the Council's upcoming winter meeting scheduled for February 24 and 25 at the J.N. "Ding" Darling National Wildlife Refuge in Sanibel, Florida. Specifically, this topic is scheduled to occur between 9:00-12:00 on February 24th.

As proposed, the Council's meeting will include an overview of the topic with input provided from a variety of government and private organizations that are the developing, operating and maintaining boating facilities throughout Florida. This discussion will be followed by summary presentations by yourself and others regarding the permitting processes. The session will then discuss a proposed pilot project that seeks to identify ways that the government permitting processes can be made more efficient and perhaps eventually be expanded to other states or regions.

The Council has a long record of success with assisting the Department of Interior's angling and boating programs and appreciates your consideration of this request.

The meeting will be held at the "Ding" Darling National Wildlife Refuge headquarters on Sanibel Island. A block of hotel rooms is available at the Hampton Inn- Fort Myers Beach/Sanibel Gateway, 11281 Summerlin Square Drive, Ft. Myers, FL 33931. Reservations can be made by contacting the hotel directly at 239-437-8888. The rooms are reserved under the group "U.S. Fish and Wildlife Service" and are for \$199 a night.

Please feel free to contact me with any questions. An official invitation letter from the Council is forthcoming.

Brian Bohnsack

Brian Bohnsack, PhD.

SFBPC Coordinator/Recreational Boating and Fishing Liaison

U.S. Fish and Wildlife Service 5275 Leesburg Pike Falls Church, VA 22041-3803 703-358-2435 (Office) 703-358-2487 (Fax)