

Carteret County Waterways Management Committee

Carteret County Commissioners Meeting Room
302 Courthouse Square, Beaufort NC
July 26, 2017
6:00pm

1. Call to Order and Welcome—Chairman John Rouse
2. Bogue Inlet Maintenance Dredging Cost Share Request
Greg Rudolph- Shore Protection Office
3. East Taylor Creek August Maintenance Dredging Request / Discussion
4. Discussion of East Taylors Creek, Atlantic Harbor, and Wainwright
Slough Rough Estimates
Johnny Martin- Moffat Nicol
5. Waterways Maintenance Prioritization Process Update
Patrick Flanagan- Planning Director- ECC COG
6. Other Items of Interest- Waterways Management Committee
7. Adjourn

Shore Protection Manager

Greg L. Rudolph
Tel: (252) 222.5835
Fax: (252) 222.5826
grudolph@carteretcountync.gov



Memorandum

To: Carteret County Board of Commissioners (CBOC)
From: Greg "rudi" Rudolph
Date: August 21, 2017
Re: Bogue Inlet Maintenance Dredging Cost-Share Request (\$35,000)

The CBOC is respectfully asked to consider and approve a request to furnish \$35,000 towards the dredging maintenance of Bogue Inlet. If approved, these monies will be coupled with contributions from Emerald Isle, Onslow County, Swansboro, Cedar Point, Cape Carteret (i.e., local governments) and the N.C. Division of Water Resources (NCDWR) to provide a total of \$300,000, which equates to approximately 17 days of dredging (\$17,500/day) utilizing the U.S. Corps of Engineers' sidecast dredge, the *Merritt*. The cost schedule is provided in tabular form below, and would represent the fifth time the County has monetarily assisted in cost-sharing efforts to maintain the inlet since 2006.

2017 Bogue Inlet Side-Cast Dredging Cost Schedule	
State - NCDWR	\$200,000 (67%)
Local Governments	\$100,000 (33%)
Carteret County \$35,000 (11.7%)	
Onslow County \$47,500 (15.8%)	
Emerald Isle \$10,000 (3.3%)	
Swansboro \$2,500 (0.8%)	
Cedar Point \$2,500 (0.8%)	
Cape Carteret \$2,500 (0.8%)	
Total	\$300,000 (100%)

The NCDWR cost-share is emanating out of "Shallow Draft Navigation Channel Dredging and Aquatic Weed Fund" created via S.L. 2013-360 and modified in SL 2015-241, and again in S.L. 2016-94. The Fund is endowed by; (a) a portion of boat registration fees and (b) boat fuel taxes (utilizing one percent of the money allocated from the excise tax on motor fuel to the N.C. Wildlife Resources Commission's Boating Account). NCDWR manages the Fund, which generates approximately \$19 million annually. Complementing the State's Shallow Draft Navigation Channel Dredging and Aquatic Weed Fund; NCDWR and the U.S. Corps of Engineers (Corps) have a Memorandum of Agreement in place enabling the Corps to accept State/local money to utilize the government sidecast dredge (the *Merritt*). **Hence if approved, the \$35,000 of County funding would be remitted to NCDWR.**

From a historical perspective, the local governments and State furnished \$380,000 and \$182,000 in 2006 and 2011, respectively to keep Bogue Inlet navigable – the County portion was \$30,000 in 2006 and another \$30,000 in 2011. Shortly after the 2011 funding effort, the Corps received \$500,000 to dredge Bogue Inlet as a result of the Disaster Relief

Appropriations Act (H.R. 3672) related to Hurricane *Irene* and other disasters that essentially delayed the use of 2011 State/local funds. Subsequently in 2014, \$280,000 of Local and State funding was provided to the Corps – the County’s contribution was \$55,000. And lastly, by mid-2016 the funds collected in 2014 were exhausted (\$6,293 remaining from the 2014 collection effort) predicating the most recent 2016 State/local funding partnership. Initially the 2016 State/local partnership was \$300,000 total, but only \$262,500 was made available because Onslow County did not provide the full amount requested, which reduced the compulsory State contribution level as well (see tabular summary immediately below).

Participant	2017 (proposed)		2016		2014		2011		2006	
	\$	%	\$	%	\$	%	\$	%	\$	%
NCDWR	\$200,000	66.7%	\$195,000	66.7%	\$140,000	50.0%	\$91,000	50.0%	\$285,000	75.0%
Carteret County	\$35,000	11.7%	\$35,000	12.0%	\$55,000	19.6%	\$30,000	16.5%	\$30,000	7.9%
Onslow County	\$47,500	15.8%	\$35,000	12.0%	\$55,000	19.6%	\$30,000	16.5%	\$30,000	7.9%
Emerald Isle	\$10,000	3.3%	\$20,000*	6.8%	\$15,000	5.4%	\$16,000	8.8%	\$15,000	3.9%
Swansboro	\$2,500	0.8%	\$2,500	0.9%	\$5,000	1.8%	\$6,000	3.3%	\$8,000	2.1%
Cedar Point	\$2,500	0.8%	\$2,500	0.9%	\$5,000	1.8%	\$6,000	3.3%	\$6,000	1.6%
Cape Carteret	\$2,500	0.8%	\$2,500	0.9%	\$5,000	1.8%	\$3,000	1.6%	\$6,000	1.6%
	\$300,000	100.0%	\$272,500	100.0%	\$280,000	100.0%	\$182,000	100.0%	\$380,000	100.0%

* Additional \$10,000 provided as emergency dredging funds to re-establish ATON.

The 2016 local/State partnership funds were utilized for dredging activities recently completed this past April (2017) and later in June. Additional emergency dredging was required subsequent to the April event in order for the U.S. Coast Guard to re-establish the Aids To Navigation (ATON) in Bogue Inlet, which during this latter effort, exhausted all the funds from the 2016 State/local partnership. To ensure the June 2017 emergency dredging event would provide channel conditions necessary to reinstate the ATON; Emerald Isle provided an additional \$10,000, which was matched with \$20,000 from NCDWR.

The proposed 2017 local/State partnership cost-sharing effort, if approved by all parties, would be \$300,000 and as mentioned earlier in this memorandum; should provide ~17 days of dredging and conduct ancillary “before dredge” and “after dredge” hydrographic surveying. Ideally this is envisioned to support one, or possibly two, dredging events and cover the next year’s worth of maintenance dredging.

This is also the second time for Bogue Inlet whereby we will be leveraging the new cost share formula instituted in S.L. 2015-241, which changed the ratio from “50% – 50%” State - local governments to “2 State dollars for 1 local dollar” for Economic Tier II and III Counties such as Carteret (or in essence a 66% State - 33% local governments cost share). Again this is reflected in the summary table above.

I look forward to discussing the subject cost-sharing request and other matters related to Bogue Inlet with the CBOC on August 21st; and an Emerald Isle representative(s) will also be in attendance at your meeting to answer questions you may have. The Town has coordinated this and previous efforts in the past with other local governments and are very well-versed in the subject.

Board of Commissioners
Mark Mansfield, Chair
Robin Comer, Vice-Chair
Bob Cavanaugh
Jimmy Farrington
Jonathan Robinson
Bill Smith
Ed Wheatly



County Manager
Tommy R. Burns
tommy.burns@carteretcountync.gov

Clerk to the Board
Rachel B. Hammer
rachel.hammer@carteretcountync.gov

August 21, 2017

Darren M. England
Water Projects Manager
N.C. Division of Water Resources, NCDEQ
1611 Mail Service Center
Raleigh, North Carolina 27526

Re: **Request & Funding Submission for East Taylor's Creek Dredging**
August 2017

Dear Mr. England,

This evening the Carteret County Board of Commissioners approved the authorization of \$12,000 to be cost-shared with the Shallow Draft Navigation Channel and Aquatic Weed Fund (Shallow Draft Fund) for the maintenance dredging of East Taylor's Creek consistent with the conditions in the State's Long-Term Memorandum of Agreement with the U.S. Army Corps of Engineers (Corps). Attached is the Corps estimate for the work, totaling \$36,000. Using the "2 State dollars for 1 local dollar" formula guiding the Shallow Draft Fund, this should equate to \$12,000 County (1:3) and \$24,000 (2:3) Shallow Draft Fund. We have directed our Finance Department to prepare and submit the \$12,000 check immediately.

We request the Division of Water Resources use these monies for the maintenance dredging at East Taylor's Creek consistent with that proposed by the Corps. Also, we would like to thank the Corps for limiting our exposure to mobilization costs as their special use (hopper) dredge, the *Murden*, will be heading to the shipyard and the work conducted at East Taylor's Creek (and Bulkhead Channel) will be considered *en route* rather than a full-fledged call of operation.

Please don't hesitate to contact me if you have any questions and thank you.

Sincerely,

Mark Mansfield, Chairman
Carteret County Board of Commissioners

Murden: Taylors Creek East End Maintenance Dredging cost estimate - Summer 2017 (7' + 2' Project Depth)									
									7/24/2017
		Amount	Unit		Unit Rate			Total Cost	
									NOTES
Mob & Demob		0	Day	@	\$21,600.00			\$0.00	1. Murden will stop in route to the shipyard
Murden:		1	Days	@	\$21,600.00			\$21,600.00	
Weather Day		0	Days	@	\$18,000.00			\$0.00	2. Project will be conducted with the Murden on
Crew Change Day		0	Day	@	\$18,000.00			\$0.00	12hr days.
Survey Cost		1	Before Dredge Survey	@	\$2,600.00			\$2,600.00	3. Funds should be received by Corps 3 weeks before the project begins.
Data Quality Management System		1	Days	@	\$385.00			\$385.00	4. Estimate is based off of survey data from 30 June 2017
Program and Project Management		1	Each	@	\$500.00			\$1,000.00	
							Subtotal	\$25,585.00	
							Funds on Hand	\$11,585.00	
							Minimum Required	\$14,000.00	
US Army Corps of Engineers POCs:					Phone Number		Contingency Day	\$22,000.00	
Project POC	Joen Petersen				(910)251-4983		Recommended Funding	\$36,000.00	
Project Manager	Jim Medlock				(910)251-4836				
Alternate Responsible	Selika Newton				(910)251-4801	State of North Carolina		\$24,000.00	
Financial POC	Shari Sterling				(910)251-4779	Local Share		\$12,000.00	
Technical POC	Selika Newton				(910)251-4801				

Carteret County
Rough Order of Magnitude (ROM) Estimate
East Taylors Creek

General Scope: Expand the authorized template of East Taylors Creek to match the remainder of Taylors Creek. USACE has historically maintained the passage, but increased boat traffic and other issues have prompted the County to look at expansion options.

Overall Assumptions: Construction will be conducted by either the USACE under the State MOA or more likely by the County. If the project is completed by the USACE, the material disposal will be in ODMMS and all material expected to be non-compatible. The project is expected to require sediment testing equivalent to new dredging for areas that have not been previously dredged (sieve analysis, calcium carbonate, chemical analysis). Since there are very few commercially available small hopper dredges similar to the Murden, (able to work in shallow waters) the estimate includes upland disposal as an option for a cutterhead dredge. This would increase the opportunity for County to construct the project separate of the USACE as stated above. However, an upland site would likely require sediment testing, topo survey, and site improvements. Note, the estimate below does not include construction related activities such as site improvements, final design, bidding, plans & specs, etc. The estimate does assume some coordination will be necessary to conduct the work under the State's MOA agreement. Also, the estimate assumes any 408 coordination would be minimal and **no modeling would be required for the expanded dredge footprint**. (Section 408 coordination is required when the USACE believes a non-federal project may affect an authorized federal project.)

Permitting Assumptions: This project is authorized by the US Army Corps of Engineers (USACE) and dredging can be funded under current appropriations. However, the County would like to consider deepening and widening the channel beyond what is currently authorized. The current authorized and approved depth is 7 feet + 2. The County wishes to consider expansion to 100 feet in width and 12 feet deep to match other areas of Taylors Creek. This will require the County getting appropriate state and federal permits. This work will require a CAMA major permit, USACE authorization (probably under GP 291), 401 Water Quality Certification and 408 review and authorization. As part of this effort, the process will involve preparing an Essential Fish Habitat (EFH) assessment, review of Submerged Aquatic Vegetation (SAV) in the area, and preparation of a Biological Assessment (BA) for protected species. In addition a new Memorandum of Agreement (MOA) must be negotiated with USACE to do the work (if desired). USACE will be able to do future dredging work on behalf of the County under the new County permits.

ROM Estimate

Task		Fee
Project Coordination (Inclusive of Agency Meeting)		\$35,000
Hydrographic Survey (Channel)		\$20,000
Sediment Sampling & Analysis (Channel)		\$25,000
Channel Design (Permit Drawings)		\$10,000
Upland Disposal Site		\$60,000
Topo Survey	\$20,000	
Sediment Analysis	\$25,000	
Design (Permit Drawings)	\$15,000	
EFH (Essential Fish Habitat Assessment)		\$20,000
SAV (Submerged Aquatic Vegetation Survey)		\$20,000
BA (Biological Assessment)		\$10,000
Permit Documentation (GP291)		\$15,000
USACE Coordination (MOA & 408)		\$15,000
TOTAL:		\$230,000

Carteret County
Rough Order of Magnitude (ROM) Estimate
Wainwright Slough

General Scope: Obtain state and federal permits to allow dredging work for the currently authorized channel dimensions to follow the deep water path similar to USACE authorization to minimize future costs and potential environmental effects.

Overall Assumptions: Material placement will be in Wainwright Island, and all material is expected to be compatible with this placement. The estimate assumes a larger area than the dredge footprint would need to be permitted to allow the permitted channel width and depth to follow deep water. Thus, survey work and sediment analysis estimate assume a greater coverage area. It is also expected that the post construction survey of Wainwright Island would be sufficient for permits with expectation a BD and AD survey would be required at construction. (Elevation tolerance would still be expected similar to original 2017 project for material placement island.) Note, the estimate does not include construction related activities such as final design, bidding, plans & specs, etc. and 408 coordination is assumed to be minimal. (Section 408 coordination is required when the USACE believes a non-federal project may affect an authorized federal project.) **2D modeling of the area is not included.**

Permitting Assumptions: The County permitted this dredging project within designated federal channel limits in December 2016. However, the County wishes to consider moving to deeper water on the “dogleg” portion of the alignment. In order to allow for this flexibility, the County would like to request a “corridor” in which it would be allowed dredge the channel (channel width and depth would continue to be the same as currently permitted). Agencies have indicated that this flexibility would need to be discussed during scoping or pre-application. Also, as the footprint of the “corridor” widens, the more concern expected by the agencies. EFH, SAV, BA studies may not be needed in light of previous permitting, but the wider the corridor, and the more movement to the west, the more concern due to potential SAV effects (so a line item for additional SAV work is included). This will probably be at the least a major modification to the existing CAMA permit, and perhaps a new permit; USACE has not indicated whether this could be done under the 0291 General Permit or if a USACE Section 10 permit would be need. Agency coordination early in the process is critical.

ROM Estimate

Task	Fee
Project Coordination (Inclusive of Agency Meeting)	\$35,000
Hydrographic Survey (Channel)	\$25,000
Sediment Sampling & Analysis (Channel)	\$50,000
Channel & Disposal Island Design (Permit Drawings)	\$20,000
SAV (Submerged Aquatic Vegetation Survey)	\$25,000
Permit Documentation	\$20,000
TOTAL:	\$175,000

Carteret County
Rough Order of Magnitude (ROM) Estimate
Atlantic Harbor

General Scope: Permit an already identified upland material placement site for non-compatible material in Atlantic Harbor. Material will be dewatered in permitted site and trucked to final destination. (Permits required for both sites).

Overall Assumptions: Construction will be conducted by USACE under the State MOA or by the County depending on timing and funding availability. Material placement will be in an upland site as permitted for non-compatible material. The dredge footprint has been established at approx. 3,500 feet in length. Thus, survey work and sediment analysis estimate assume a coverage area based on the 3,500 ft. Sediment analysis will include chemical analysis and grain size distribution. Hydrographic/topographic surveys and sediment testing are anticipated for both the placement area and channel. Material will be dewatered and trucked to an additional site. Note, estimate does not include construction related activities such as final design, bidding, plans & specs, etc.

Permitting Assumptions: USACE has funds under Section 107 for maintenance dredging using Bird Island for disposal. However, due to finding heavy silt in certain sections of the channel, the USACE is unable to complete dredging due to lack of disposal sites for this unsuitable material. The County, as a non-federal Sponsor, will be responsible for locating and permitting an alternative disposal site(s). USACE has noted that this unsuitable material is “smelly” and may contain petroleum byproducts; this suggests that additional sediment testing will be required. The County has identified a possible de-watering site and a possible upland disposal location for drained material. This work will require a CAMA major permit and probably a USACE Individual Permit. Environmental documentation (EA) may be required.

ROM Estimate

Task	Fee
Project Coordination (Inclusive of Agency Meeting)	\$35,000
Hydrographic Survey (Channel)	\$25,000
Topographic Survey (Upland Dewatering Site)	\$30,000
Topographic Survey (Final Placement Site)	\$20,000
Sediment Sampling & Analysis (Channel)	\$25,000
Sediment Sampling & Analysis (Upland Sites) ^{1,2}	\$45,000
Channel & Disposal Island Design (Permit Drawings)	\$35,000
(EA) Environmental Assessment	\$50,000
Allowance for Additional Environmental Testing, Documentation, Etc.	\$60,000
Permit Documentation (GP291)	\$20,000
TOTAL:	\$345,000

1. Sediment sampling of upland site assumes vehicle access to site from roadway.
2. Estimate assumes sediment testing and survey work will be required at both upland material placement sites.