

REQUEST FOR INFORMATION

STATE OF NORTH CAROLINA Department of Environmental Quality, Division of Coastal Management	REQUEST FOR INFORMATION NO. 16-32314-WA Due Date: February 4, 2016 at 2:00 PM
<i>Refer <u>ALL</u> Inquiries to:</i> Wanda Andrews Telephone No. 919-707-8538	Issue Date: January 8, 2016 Solicitation: Analysis of Removal of the Southern Component of the New Inlet Dam
Email: wanda.andrews@ncdenr.gov	Using Agency Name: NC DEQ Coastal Management

VENDOR INFORMATION

VENDOR NAME: Little Environments PLLC Vendor Name	EMAIL: joseph.little@littleenvironments.com Email address	
STREET ADDRESS: Street Address 3814 Cobb St	P.O. BOX IF APPLICABLE: P.O. Box N/A	ZIP: 00000 N/A
CITY & STATE & ZIP: City Garner State North Carolina Zip Code 27529	TELEPHONE NUMBER: xxx-xxx-xxxx +1 (919) 916 9061	
NAME & TITLE OF CONTACT PERSON: Name Joseph Little PE Title Managing Director/ Coastal Engineer/Environmental Manager		

1.0 SUBMISSION INSTRUCTIONS:

A. Email (Preferred):

Submit one emailed electronic copy of this completed Word file to Wanda Andrews at wanda.andrews@ncdenr.gov. It is the responsibility of the Vendor to submit the Request for Information (RFI) by the specified time and date of opening.

B. Mail:

Mail only one Request for Information (RFI) response per envelope. Address envelope and clearly note RFI number as shown below. It is the responsibility of the Vendor to have the RFI in this office by the specified time and date of opening.

<u>MAILING ADDRESS, IF DELIVERED BY US POSTAL SERVICE</u>	<u>OFFICE ADDRESS, IF DELIVERED BY ANY OTHER MEANS</u>
RFI NO. 16-32314-WA Department of Environmental Quality, Coastal Management Division Attn: Wanda Andrews Box: 1606 MAIL SERVICE CENTER Raleigh, NC 27699	RFI NO. 16-32314-WA Department of Environmental Quality, Coastal Management Division Attn: Wanda Andrews 217 West Jones Street, Suite 5422M, Raleigh, NC 27603-1606

IMPORTANT NOTE ABOUT MAIL SUBMISSIONS: All Vendors are urged to take the possibility of delay due to submitting via U.S. Mail into account when submitting their response to this RFI.

QUESTIONS

Submit written questions to Wanda Andrews until January 19, 2016 at 11:00 AM. Questions may be submitted by email to wanda.andrews@ncdenr.gov.

2.0 OVERVIEW

The purpose of this Request for Information (RFI) is to acquire information from Vendors regarding their capability to conduct a cost benefit analysis of removal of the Southern Component of the New Inlet Dam and an inventory of the necessary permits and approvals needed to develop and implement a removal plan. The State of North Carolina will use the information received from this RFI as input for potential future contracting strategies. Vendors interested in participating in possible future opportunities are encouraged to respond to this RFI.

It is the objective of this RFI to:

Develop an understanding of which firms are capable of conducting an analysis of the costs and benefits of removal of the Southern Component of the New Inlet Dam along the Cape Fear River as proposed in the 2015 Appropriations Act Section 14.6.(h) and an inventory of the necessary permits and approvals needed to develop and implement a removal plan.

The following are attached to the RFI as one attachment: 1. 2015 Appropriations Act Section 14.6. (h), 2. Map of the New Inlet Dam, and 3. Pictures of the Southern Component of the New Inlet Dam.

The State is seeking detailed responses to the RFI demonstrating your firm's experience in these areas.

3.0 INSTRUCTIONS

3.1. Schedule

Respondents will have four (4) weeks to prepare and return their submissions to this RFI. Responses must be received by the date, time and the location specified on the first page of this RFI.

3.2. Clarification Questions

Clarification questions will be accepted until January 19, 2016 at 11:00 AM as specified on the first page of this RFI. Clarification questions can be submitted by email (preferred method) to wanda.andrews@ncdenr.gov. An addendum containing any general clarification questions and their answers may be issued as an addendum to this RFI.

3.3. Response

Please note this is a request for information only and not a request for goods or services. The Vendor must bear all costs for preparing this RFI.

4.0 RESPONSE

4.1 Instructions:

Vendors are requested to respond to the requested information below. A response does not bind or obligate the responder to the State of North Carolina to any agreement of provision or procurement of products referenced. No contract can or will be awarded based on submissions.

In order to facilitate the review of the questions, please provide the information in the exact order as below and do not alter the format of this document. You may put responses within this document directly below each question. Please rename this document NC Analysis of Removal of the Southern Component of the New Inlet Dam RFI_VENDOR NAME.doc (.docx also acceptable). In the renamed document title VENDOR NAME should be substituted with your company's name.

4.2 Requested Information:

1. Topic 1: State and Federal Permits, Approvals, and Studies

Question 1: What types of permits, approvals, and environmental studies will likely be needed to develop and implement a removal plan for the Southern Component of the New Inlet Dam? Describe the approach the firm will take to inventory these.

RESPONSE: The removal of part of the New Inlet dam is expected to require consultation with the State Historic Preservation Office, Permits with CAMA, permits with the Army Corps of Engineers, an Environmental Impact Assessment or Environmental Impact Statement for public solicitation, potential permits with New Hanover County, and depending on the deconstruction method 401 water quality permits. Depending on the scope the removal may affect flood insurance maps with FEMA and require a CLOMR or similar notice. Little Environments' approach is to solicit and submit to each entity for conditions and whether a permit is require and apply design strategy to satisfy these conditions.

Question 2: Describe the firm's experience working with the types of permits, approvals, and environmental studies identified in Question 1 above. List all certifications and licenses the firm holds that are relevant to this work.

RESPONSE: Little Environments PLLC is a NC registered engineering Firm based in Raleigh NC(p-1292). Little Environments PLLC is experienced in processing permits across the US in the coastal zone and applying innovative construction methods to streamline projects while also achieving improved environmental outcomes. Little Environments PLLC has engineering licenses in SC, NC, HI, and Australia. Little Environments PLLC team has operated in coastal zones around the world and has contributed to major infrastructure projects. Little Environments PLLC recently deconstructed a stone revetment in Plymouth MA for natural phased restoration to its vegetative and aquatic environment.

2. Topic 2: Costs and Benefits Analysis

Question 1: Describe the firm's experience in conducting costs and benefits analyses. List all certifications and licenses the firm holds that are relevant to this work.

RESPONSE: Little Environments PLLC has staffed trained in life cycle analysis that are also coastal engineers. This is a very valuable tool when it comes to cost/benefit estimation and analysis as various other methods and alternatives may be considered simultaneously. Trade-off benefits, alternatives, phased methods, trials, and innovative approaches are all key tools to correctly managing a coastline and the structures that surround it. Little Environments is experienced in providing cost benefit analyses that consider economic risk and economic reward for the local community. In 2013 Little Environments PLLC composed a cost analysis for the Hatteras Island Business owners that considered an additional off shore ree

Question 2: Describe the firm's ability and approach to conduct a costs and benefits analysis on the following topics as they relate to the proposal to remove the Southern Component of the New Inlet Dam:

- a. Environmental impacts including hydrology (e.g., salinity regime, tidal prism, and currents), sediment dynamics, habitat distribution, species distribution and utilization, and water quality to the Zeke's Island Reserve, lower Cape Fear River, and other special economic and natural resource assets in the immediate vicinity of the New Inlet Dam;
- b. Navigational access impacts to the Port of Wilmington and for other commercial and recreational vessels;
- c. Economic factors including cost and maintenance of removal, cost and maintenance of restored condition, and changes to commercial and recreational use of the area;
- d. Beach erosion and sand management for adjacent and surrounding beach communities; and
- e. Storm vulnerability to the Zeke's Island Reserve, lower Cape Fear River, adjacent and surrounding communities, and other special economic and natural resource assets in the immediate vicinity of the New Inlet Dam.

RESPONSE:

Little Environments PLLC is well equipped to perform a cost and benefit analysis on the proposed removal of the southern portion of New Inlet Dam. The Dam is a man made structure and prior to its creation the area was already natural, however since the time of its construction, many other changes have occurred in the local environment associated with human developments and changes in the local environmental equilibrium. Little Environments team is experienced with hydrodynamic modeling, environmental assessments, water quality(including salinity), endangered species, currents, local biology, and especially semi human/historically impacted environments. Little Environments team is experienced with vessel and navigation issues such as creation of moorings, berths, and marinas. Little Environments PLLC would never recommend a change that impacts commercial vessel issues unless there was a significant community benefit to be won. Little Environments PLLC understand the ecological, commercial, and environmental components and how a strong robust environment leads to a strong robust community. Little Environments' team is qualified in sand erosion, storm protection, sand management, and recreational evaluations. Little Environments PLLC has conducted wave run-up analysis for storm surge consideration and prefers to use multiple models when evaluating a project of high importance. The following team is put forward for this project and the accomplishments of our team speak for themselves. Please see the accompanying document.

Little Environments approach to this project would first involve solicitation to local permitting entities, followed by a probable impact analysis. From here other alternatives would be considered such as portion removal, total removal, terminating maintenance, and partial height deconstruction. Where solutions are achievable, the cost and benefits(Social, Economic, Ecological, Commercial, Recreational, and Environmental) would then be analyzed in detail.

LITTLE ENVIRONMENTS PLLC's TEAM

Little Environments PLLC has assembled a team of specialist, tailored to fit this project. Our available team resources are listed below. Our team travels the world and can be on site virtually in a days notice.

Joseph Little PE, Coastal Engineer, Environmental Manager, Managing Director

Joseph Little has extensive experience in salt water pumping, coastal management, water supply, aquaculture, salt-water intakes, coastal engineering, coastal processes, sediment management, and civil engineering. Some of Joseph's previous exemplary experience includes importing innovative solution from abroad for coastal management solutions in the US where they had never been applied before along with developed new coastal product in the US. Joseph has consulted on and managed coastal erosion and engineering projects in Australia, Hawaii, Puerto Rico, Massachusetts, Papua New Guinea, and North Carolina. Joseph is a registered engineer in North Carolina and holds a bachelor degree in Civil Engineering Fluids from Clemson University, a Minor in Environmental Engineering from Clemson University, and masters in Environmental management from Macquarie University. Joseph has lead projects in North Carolina that evaluated and researched mechanisms of natural marine growth, similar to bio fouling, but in a manner to establish artificially stabilized natural Reefs (ASNR). These ASNRs proved to be more economical from a technical standpoint where previous dredging was already planned to provide longevity. Joseph is experienced in various materials, traditional and innovative, to withstand the harsh corrosive coastal conditions. Joseph has experience composing environmental assessments, environmental impact statements, and consulting on a wide array of environmental issues from contamination to erosion. Joseph's has contributed to multiple feasibility studies for the application of coastal protection strategies. Joseph enjoys recreational diving and recreational fishing as hobbies along with finding solutions to hard to solve problems. Joseph has 10 years of experience managing and solving complicated environmental problems.

Brett Kettle PhD

Brett Kettle is a veteran marine biologist, maritime planner, and oceanographic expert. Brett has advised communities, governments, and industry groups in regards to coastal matters. Brett has technical strengths in marine science, dredging, ports and harbours, shipping/oils/gas industries, Brett has developed portable diagnostic instruments and developed softwares to better evaluate marine conditions. Brett has experience in and expertise in environmental surveying, natural damage assessments, Environmental Impact Analysis, environmental monitoring, environmental emergency response, natural resource damage assessments, and environmental management planning. Brett has completed over 40 environmental impact assessments over his career. Brett has experience with contaminated sediments and remediation. Brett has dealt with chemical spill in national heritage sites as well as Brett recently has served as a consultant on the opening of freight channels adjacent the Great Barrier Reef in Australia. Brett has consulted and advised on the sea dumping act in Australia as well as reviewed marine waste dumping stations. Brett has reviewed and provided technical insight on over 15 large-scale dredging projects across the south pacific. Brett is responsible for pioneering "adaptive dredge management" principles in Australia and has applied these in vicious Tasmania Sea. This included high frequency reporting on 30-minute intervals of telemetered data streams. Brett has a bachelor in zoology and marine biology from James Cook University, a bachelors degree in fisheries, and a PhD in Animal Physiology.

Angus Jackson Coastal and Civil Engineer

Angus Jackson is a veteran to the coastal engineering field. Angus is a certified engineer by reciprocity under the Washington accord. Angus' experience spans any type of coastal project one could imagine. Sample projects Angus has contributed to include: Breakwaters, retaining walls, wharfs, sea defence structures, submariner utilities, recreational boating facilities, yacht facilities and moorings, artificial dive reefs, land reclamation studies, erosion management studies, canal management, navigational dredging, sea level rise studies, master planning, sandbar fluidization, near shore nourishment, and creation of islands. Angus is also an adjunct professor at Griffith University. Angus has over 37 years of engineering experience with 30 of those years specific to coastal engineering and developing the industry.

Randy Parker PE, PLS

Randy Parker, originally from New Bern, NC, has engineering and survey experience that stretches for 40+ years. Randy Parker has permitted 100+ projects on the east coast of the United States and is experienced with FEMA and USACE procedures. Randy has worked on projects involving seawalls, revetments, open beach profiles, boardwalks, piers, bulkheads, lifts, and marinas. Randy holds degrees from North Eastern University and the University of Massachusetts. Randy has other experience in subdivision control, zoning, storm water management, wetlands, flood zone determinations and soils and material analysis. Parker has served as faculty with attorneys and planners at seminars dealing with coastal subdivision and zoning issues.

Sea Chris Metcalf Fisheries Specialist

Chris has over 14 years of experience in civil engineering, habitat assessment, and restoration projects in southeastern US. Chris has a masters of science in aquatic ecology from the University of Louisiana-Monroe and a Bachelors degree in Fish Biology. Chris is a member of the North American Water Resources Association and the American Fisheries Society. Chris previously worked for the US department of Energy as a Fisheries Biologist and for the US Fish and Wildlife service as a fish biologist and Hydrologist. Chris' experience includes working for landowners, governmental agencies, non-governmental agencies, and environmental groups. Chris has been involved in all phases of NEPA policy review act as well as EIA, EA coordination. Chris has successfully down-listed a species from the endangered species list, known as the Okaloosa Darter. Chris understands alternatives, alternative benefit/drawback analysis, and alternatives design considerations extensively.

Bobbie Corbett Senior Coastal Engineer

Bobbie Corbett has 12 years experience in Coastal engineering and estuarine project. Bobbie is experienced in project management, option assessment/coastal management studies, design, design review, physical and numerical modelling, environmental management plans, contract administration, and post construction monitoring and assessment. Bobbie has a Bachelor of Civil Engineering with Honors from the University of Queensland as well as a bachelor of business management. Bobbie has experience in developing surf reefs, developing erosion protection strategies, mitigating algal problems, mass beach nourishment, inshore and offshore dredging projects, dune work, beach accessibility, vessel access, mooring design, and alluvial/oceanic interactions.

Cameron Morris Alluvial and Coastal Process Scientist

Cameron has 10 years experience in fisheries restoration, civil engineering, and environmental consultation. Cameron, previously working for the US fish and Wildlife service, has extensive knowledge in water quality supportive of aquatic species. Cameron has a masters degree in Civil engineering from Florida State university and a bachelors degree in ecology from the university of Georgia. Cameron is a member of the North American Water Resources Association and the American fisheries society. Cameron has been involved in various flora fauna identification projects, shoreline stabilization projects, turtle habitat protection projects, and dredging projects.

Aaron Salyer International Coastal Engineer

Aaron Salyer is a Coastal with experience in a wide range of national and international projects. Aaron has 7 years of coastal engineering experience spanning projects from inception to completion. Aaron has specialist expertise in coastal engineering design, coastal modeling, project construction, and contract administration. Aaron has a Bachelor Degree in Civil/Coastal engineering from Griffith University, Griffith NSW. Aaron has experience composing large-scale nourishment strategies and management plans around the world along with shoreline erosion management plans [SEMPs]. Aaron has evaluated backpassing solutions in Australia along with evaluation of terminal structures. Aaron is also trained as a rescue diver along with many logged recreational dives. Aaron is a pro when it comes to GIS data collection and interpretation along with carrying out bathymetric surveys and processing large amounts of data. One of Aaron's projects includes the compilation of all marine structures in a database for ease of access. Other specialties' of Aaron's include the design of breakwater, semi-emergent breakwaters, seawalls, Marinas and navigable channels, large-scale land reclamation, and groins.

Nikolai Simonsen, Scientist

Nikolai Simonsen has a comprehensive understanding of principles of physical and biological oceanography. Studying oceanography at both the United States Naval Academy and North Carolina State University, he has gained extensive first hand experience with renowned professionals in the oceanographic field. Nikolai has been aboard several research vessels examining chemical, biological, and physical processes in the Chesapeake Bay and Atlantic Ocean. Mr. Simonsen is a strong believer in conserving and utilizing natural resources and actively pursues a healthier anthropogenic and natural environment for the future. He uses his knowledge and experience of marine science to help promote sustainable practices in coastal management. His understanding of biological sciences allows him to not only protect the physical coast but also it's zoological inhabitants. Mr. Simonsen is a strong and dedicated member to have on your team in any coastal project.

Brad Butler, Professional Diver

Brad butler has over 300 logged dives in the waters of North Carolina. Brad is experienced at marine sampling and carrying out marine transect evaluations. Brad has his captain's license allowing him to operate maritime vessels. Brad is experienced at diving around and through complicated structures at low visibility to carry out inspections and has experience in high velocity waters. Brad has experience with large vessels and maintenance of large vessels. Brad is also currently enrolled at NCSU in the final year of his mechanical engineering degree.



PAT MCCRORY
Governor

DONALD R. VAN DER VAART
Secretary

BID ADDENDUM

FAILURE TO RETURN THIS BID ADDENDUM IN ACCORDANCE WITH INSTRUCTIONS MAY SUBJECT YOUR BID TO REJECTION.

Bid Number: 16-32314-WA Bid opening Date/Time remains: February 04, 2016

DISCRIPTION: Analysis of removal of the Southern Component of the New Inlet Dam

Addendum Number: 2

Addendum Date: January 11, 2016

INSTRUCTIONS:

On addendum number 1, the captions of the pictures are not clear and some of the letters have been cut off. The pictures are in the correct order. I have copied the captions on to a separate document as addendum number 2. It is not necessary for this addendum to be signed and returned along with your completed RFI but it is acceptable should you chose to do so.

1. Check ONE of the following options:

Bid has not been sent. Any changes resulting from this addendum are included in our bid.

Bid has already been sent. No changes resulted from this addendum.



State of North Carolina | Environmental Quality
1601 Mail Service Center | Raleigh, North Carolina 27699-1601
919-707-8600



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DONALD R. VAN DER VAART
Secretary

Bid has already been sent. Changed resulting from this addendum is as follows:

Execute Addendum:

Bidder: Little Environments PLLC

Authorized Signature:

A handwritten signature in black ink, appearing to read 'Joseph Little', written over a horizontal line.

Name and Title (Typed):

Joseph Little PE, Managing Director

Date: 4 February 2016



Figure 1. Photograph taken 12.11.2015 on the New Inlet Dam approximately 0.25 miles south of Zeke's Island looking south along the dam at low tide. Photograph is for informational purposes only to support the Request for Information per 2015 Appropriations Act Section 14.6. (h) and does not necessarily represent conditions along the entire length of the New Inlet Dam.

Figure 2. Photograph taken 12.11.2015 on the New Inlet Dam approximately 0.25 miles south of Zeke's Island looking north along the dam at low tide. Photograph is for informational purposes only to support the Request for Information per 2015 Appropriations Act Section 14.6.(h) and does not necessarily represent conditions along the entire length of the New Inlet Dam.

Figure 3. Photograph taken 12.11.2015 on the New Inlet Dam at low tide depicting a more intact portion of the dam surface. Photograph is for informational purposes only to support the Request for Information per 2015 Appropriations Act Section 14.6. (h) and does not necessarily represent conditions along the entire length of the New Inlet Dam.

Figure 4. Photograph taken 12.11.2015 on the New Inlet Dam at low tide depicting a less intact portion of the dam surface. Photograph is for informational purposes only to support the Request for Information per 2015 Appropriations Act Section 14.6. (h) and does not necessarily represent conditions along the entire length of the New Inlet Dam.

Figure 5. Photograph taken 12.11.2015 on the New Inlet Dam at low tide depicting a concrete cap on a portion of the dam surface. Photograph is for informational purposes only to support the Request for Information per 2015 Appropriations Act Section 14.6.(h) and does not necessarily represent conditions along the entire length of the New Inlet Dam.