

WRRDA 7001 Submissions Package
U.S. Army Corps of Engineers

Proposal Name: Tangier Island, Chesapeake Bay Study Authority

Submission Date: 09/08/2016

Proposal ID Number: 49c84b37-f08b-4108-91b2-f43b0fdef6e8

Purpose of Proposal: The Tangier Island Study is a cooperative investigation to address the loss of habitat and eroding shoreline, as well as the impacts of sea level rise, recurrent coastal flooding and coastal storms on Tangier Island, Virginia. The study will also assess the viability of using dredged material from the Chesapeake Bay to restore lost island habitat.

Tangier Island, located just south of the Virginia-Maryland state line in the Chesapeake Bay, is home to approximately 700 residents. The island has continually been eroding since accurate maps became available in 1850, and erosion appears to have accelerated over the past several decades. The most likely cause is the acceleration of relative sea level rise. Portions of Tangier Island referred to as the Uppards, a marsh island complex to the north of the main east-west channel, is predicted to entirely erode by year 2100 unless some remedial action is taken. Once the marsh complex has eroded, the town of Tangier will be directly exposed to waves generated by winds blowing from northerly directions. The presently safe harbor will disappear, and no viable alternative exists. The loss of Uppards marsh complex will lead to a loss of SAV habitat on the east side of the island. These losses will result in the elimination of ecosystem services that sustain various fisheries. Stabilization of the Tangier shoreline and Uppards through the beneficial use of dredge material is the most promising option to preserve Tangier, as well as its economy and culture.

1. Administrative Details

Proposal Name: Tangier Island, Chesapeake Bay Study Authority

by Agency: Virginia Marine Resources Commission

Locations: VA

Date Submitted: 09/08/2016

Confirmation Number: 49c84b37-f08b-4108-91b2-f43b0fdef6e8

Supporting Documents

File Name	Date Uploaded
Tangier map.pdf	09/08/2016
COE Ltr - Tangier final.pdf	09/08/2016

2. Provide the name of the primary sponsor and all non-Federal interests that have contributed or are expected to contribute toward the non-Federal share of the proposed feasibility study or modification.

Sponsor	Letter of Support
Commonwealth of Virginia(Primary)	The Commonwealth of Virginia is willing and able to participate as the Lead Sponsor for a Tangier Island Study, in partnership with the U.S. Army Corps of Engineers (USACE), to cooperatively investigate opportunities to address the loss of habitat and eroding shoreline, as well as the impacts of sea level rise, recurrent coastal flooding and coastal storms on Tangier Island, Virginia. The study will also assess the viability of using dredged material from the Chesapeake Bay to restore lost island habitat.

3. State if this proposal is for a feasibility study, a modification to an authorized USACE feasibility study or a modification to an authorized USACE project. If it is a proposal for a modification, provide the authorized water resources development feasibility study or project name.

Feasibility Study

4. Clearly articulate the specific project purpose(s) of the proposed study or modification. Demonstrate that the proposal is related to USACE mission and authorities and specifically address why additional or new authorization is needed.

The Tangier Island Study is a cooperative investigation to address the loss of habitat and eroding shoreline, as well as the impacts of sea level rise, recurrent coastal flooding and coastal storms on Tangier Island, Virginia. The study will also assess the viability of using dredged material from the Chesapeake Bay to restore lost island habitat.

Tangier Island, located just south of the Virginia-Maryland state line in the Chesapeake Bay, is home to approximately 700 residents. The island has continually been eroding since accurate maps became available in 1850, and erosion appears to have accelerated over the past several decades. The most likely cause is the acceleration of relative sea level rise. Portions of Tangier Island referred to as the Uppards, a marsh island complex to the north of the main east-west channel, is predicted to entirely erode by year 2100 unless some remedial action is taken. Once the marsh complex has eroded, the town of Tangier will be directly exposed to waves generated by winds blowing from northerly directions. The presently safe harbor will disappear, and no viable alternative exists. The loss of Uppards marsh complex will lead to a loss of SAV habitat on the east side of the island. These losses will result in the elimination of ecosystem services that sustain various fisheries. Stabilization of the Tangier shoreline and Uppards through the beneficial use of dredge material is the most promising option to preserve Tangier, as well as its economy and culture.

5. To the extent practicable, provide an estimate of the total cost, and the Federal and non-Federal share of those costs, of the proposed study and, separately, an estimate of the cost of construction or modification.

	Federal	Non-Federal	Total
Study	\$1,500,000	\$1,500,000	\$3,000,000
Construction	\$195,000,000	\$105,000,000	\$300,000,000

Explanation (if necessary)

The above numbers are placeholders as there is no construction cost estimate for this proposal. A project of this magnitude would definitely be in the greater than \$100,000,000 dollar range, but without further study, there is no good way to estimate the construction cost, Similar scale and purpose projects are in the \$100s of millions of dollars range.

6. To the extent practicable, describe the anticipated monetary and nonmonetary benefits of the proposal including benefits to the protection of human life and property; improvement to transportation; the national economy; the environment; or the national security interests of the United States.

There would be large benefits from this project in all three primary USACE mission areas. For Aquatic Ecosystem Restoration, there would be a large increase in both the quantity and quality of island marsh habitat. It would provide greater protection and preserve and enhance existing Submerged Aquatic Vegetation habitat on the eastern and northern sides of the island. These habitats both provide areas for diverse fisheries and aquatic species as well as migratory birds. In addition, the unique cultural identity of the island and its residents would be protected - the island includes a National Register listed Historic District. The navigation benefits include a placement area for dredged material. This study could potentially provide an alternative to the current practice of unconfined open water overboard placement of material from the Baltimore Channels in the Virginia portion of the Chesapeake Bay. The current placement has been a recent issue in the mid Bay of Virginia due to concerns regarding impacts to blue crab and fishery resources. The flood risk management benefits include the potential to create a long term habitable area for the remaining residents of Tangier Island. A recent study funded by ERDC has shown that under a moderate sea level rise scenario, the town may have to be abandoned in 50 years. Both the navigation and flood risk management aspects could provide significant National Economic Development benefits, and the aquatic ecosystem restoration aspect could provide significant National Environmental Restoration benefits.

7. *Does local support exist? If 'Yes', describe the local support for the proposal.*

Yes

Local Support Description

The residents of the town of Tangier support this project.

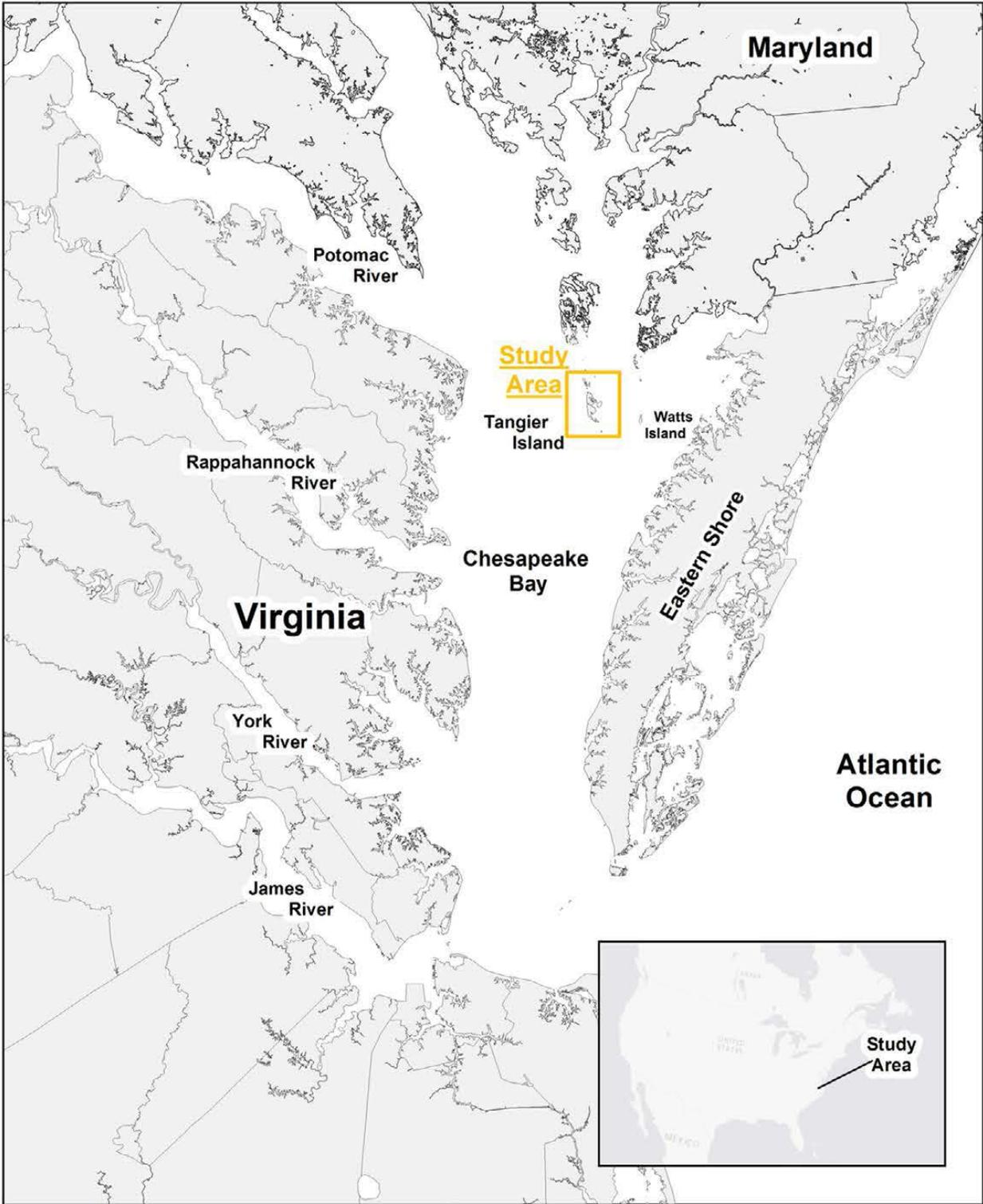
8. *Does the primary sponsor named in (2.) above have the financial ability to provide for the required cost share?*

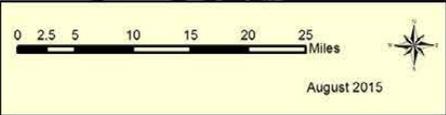
Yes

Map Document

(This is as uploaded, a blank page will show if nothing was submitted)

Tangier map.pdf



	<p>LOCATION MAP Tangier Island Accomack County, VA</p>	<p>0 2.5 5 10 15 20 25 Miles</p>  <p>August 2015</p>	<p>Projection: Virginia State Plane South Zone - NAD 83 U.S. Survey Foot</p>
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Legend

Shorelines by Year

- 1850
- 1905
- 1938
- 1943
- 1960
- 1987
- 2001
- 2009
- 2013

0 1,000 2,000 3,000 Meters

PM: David Schulte
Map: All_shorelines.mxd
Geospatial: Karin Dridge
Date of Map: 9/25/2014

Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Historical Shoreline
Tangier Island Area
Accomack County, VA



Primary Sponsor Letter of Support

(As uploaded)

COE Ltr - Tangier final.pdf



COMMONWEALTH of VIRGINIA

*Marine Resources Commission
2600 Washington Avenue
Third Floor
Newport News, Virginia 23607*

Molly Joseph Ward
Secretary of Natural Resources

John M.R. Bull
Commissioner

September 8, 2016

Colonel Jason E. Kelly
Commander, Norfolk District
U.S. Army Corps of Engineers
803 Front Street
Norfolk, Virginia 23510

Dear Colonel Kelly:

The Commonwealth of Virginia is willing and able to participate as the Lead Sponsor for the Tangier Island Aquatic Ecosystem Restoration Study, in partnership with the U.S. Army Corps of Engineers (USACE), to cooperatively investigate opportunities to address the loss of habitat and eroding shoreline, as well as the impacts of sea level rise, recurrent coastal flooding and coastal storms on Tangier Island, Virginia. The study will also assess the viability of using dredged material from the Chesapeake Bay to restore lost island habitat.

The Commonwealth of Virginia understands that a study cannot be initiated unless it is selected as a new start study with associated allocation of Federal Funds provided through the annual Congressional appropriations process. If selected, we intend to sign a Feasibility Cost Sharing Agreement (FCSA) to initiate the study with USACE. It is our understanding the FCSA targets completion of the feasibility study within three years at a total cost of no more than three million dollars. After signing the FCSA, a Project Management Plan will be developed and agreed upon by the Commonwealth of Virginia, other interested local non-Federal Sponsors and the USACE. The study will be conducted and managed by USACE. The cost-sharing for the study is based on a 50% contribution by the Federal government and a 50% contribution provided by the non-Federal Sponsors that can be satisfied in cash, or by a portion or all of the contributions provided through in-kind non-monetary services.

An Agency of the Natural Resources Secretariat

www.mrc.virginia.gov

Telephone (757) 247-2200 (757) 247-2292 V/TDD Information and Emergency Hotline 1-800-541-4646 V/TDD

Colonel Jason E. Kelly
September 8, 2016
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The Commonwealth of Virginia is aware that this letter constitutes an expression of intent to initiate a study partnership to address the specified water resources problems and is not a contractual obligation. We understand that work on the study cannot commence until it is included in the Administration's budget request, funds are appropriated by the Congress, and an FCSA is signed. It is understood that we or USACE may opt to discontinue the study at any time after the FCSA is signed but will commit to work together as partners from the scoping phase, and subsequent decision points throughout the feasibility study, on providing the necessary support to risk-informed decision making. If it is determined that additional time or funding is necessary to support decisions to be made in order to complete the study, we will work with USACE to determine the appropriate course of action.

If you require additional information, please contact me at 757-247-2205 or by e-mail John.bull@mrc.virginia.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "John M.R. Bull". The signature is fluid and cursive, with the first name "John" being the most prominent.

John M.R. Bull
Commissioner

JMRB:blh
CO

cc: The Honorable Molly Ward, Secretary of Natural Resources