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COMMISSIONER/CEO

NEW YORK STATE
DIVISION OF HOUSING
& COMMUNITY
RENEWAL

February 3, 2014

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VIA FIRST CLASS & ELECTRONIC MAIL

Tennille Smith Parker
Acting Director/Assistant Director, Disaster Recovery and Special Issues Division
Office of Block Grant Assistance
U.S. Department of Housing & Urban Development
451 7th Street SW
Washington, DC 20410

RE: RROF and Environmental Certification
NYS CDBG-DR: Robert Moses State Park Boat Channel Dredging &
Beach Stabilization Project

Dear Ms. Parker:

Attached is a Request for Release of Funds and Environmental Certification for the above referenced project, which involves restoration of sections of the beach at Robert Moses State Park using sand dredged from the nearby Captree Boat Channel to their pre-Superstorm Sandy conditions. The project is located in the Towns of Babylon and Islip, Suffolk County, New York.

This action does not meet criteria for Categorical Exclusion according to HUD environmental review regulations. Pursuant to 24 CFR Part 58.33, the combined Notice of Finding of No Significant Impact and Notice of Intent to Request Release of Funds was published on January 13, 2014 and distributed by mail to interested individuals and groups, also on January 13, 2014. Copies of the published notice and Affidavit of Publication are included with this submission.

New York State Homes and Community Renewal ("HCR") accepted comments on the environmental review until January 28, 2014 and received one comment from the U.S. Environmental Protection Agency. The EPA's comment and HCR's response may be found in the attached Addendum to the Environmental Assessment.

The funds are needed immediately to stabilize public park infrastructure and to restore the adjoining beach, natural habitat and boat channel to their conditions prior to Superstorm Sandy. As a result, in accordance with HUD policy and as stated in the FONSI/NOIRROF, the comment periods for the FONSI/NOIRROF and the RROF are combined and HCR estimates that the final date for comments to HUD was January 29, 2014.

If you have any questions regarding this submission, you may call me at (518) 486-3379, or send me an email at hspitzberg@nyshcr.org.

Sincerely,



Heather Spitzberg
Environmental Analyst

Enclosures:

Request for Release of Funds and Certification
Proof of Publication
Addendum to Environmental Assessment

cc: Jeffrey D'Agostino, HUD
Jay Juergensen, HCR
Kathleen Martens, OPRHP

Request for Release of Funds and Certification

U.S. Department of Housing and Urban Development
Office of Community Planning and Development

OMB No. 2506-0087
(exp. 10/31/2014)

This form is to be used by Responsible Entities and Recipients (as defined in 24 CFR 58.2) when requesting the release of funds, and requesting the authority to use such funds, for HUD programs identified by statutes that provide for the assumption of the environmental review responsibility by units of general local government and States. Public reporting burden for this collection of information is estimated to average 36 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. This agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless that collection displays a valid OMB control number.

Part 1. Program Description and Request for Release of Funds (to be completed by Responsible Entity)

1. Program Title(s) Community Development Block Grant -- Disaster Recovery (CDBG-DR)		2. HUD/State Identification Number B-12-DT-36-001	3. Recipient Identification Number (optional)
4. OMB Catalog Number(s)		5. Name and address of responsible entity New York State Homes and Community Renewal 38-40 State Street Hampton Plaza Albany, NY 12207	
6. For information about this request, contact (name & phone number) Ms. Heather Spitzberg, (518) 486-3379		7. Name and address of recipient (if different than responsible entity)	
8. HUD or State Agency and office unit to receive request HUD, Office of Block Grant Assistance Disaster Recovery and Special Issues Div. 451 7th Street SW Washington, DC 20410			

The recipient(s) of assistance under the program(s) listed above requests the release of funds and removal of environmental grant conditions governing the use of the assistance for the following

9. Program Activity(ies)/Project Name(s) Robert Moses State Park Boat Channel Dredging & Beach Stabilization Project	10. Location (Street address, city, county, State) Robert Moses State Park, Towns of Babylon and Islip, Suffolk County, NY
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11. Program Activity/Project Description
New York State Homes and Community Renewal proposes to provide up to \$40 million in funding to the New York State Office of Parks, Recreation and Historic Preservation (OPRHP) for the Robert Moses State Park Boat Channel Dredging & Beach Stabilization Project (the "Project"), to restore sections of the beach at Robert Moses State Park and the nearby Captree Boat Channel to their pre-Superstorm Sandy conditions. The Project involves dredging in the Captree Boat Channel approximately 400,000 cubic yards of material and pumping the material onto the beach at Robert Moses State Park in the area adjacent to Parking Fields 3, 4 and 5. The Project also involves grading of the beach to required beach profiles. The Project is necessary to stabilize and restore the Robert Moses Beach to its pre-Superstorm Sandy condition and to prevent continued beach erosion that can negatively impact the natural environment of Robert Moses State Park. Under the Project, OPRHP may also seek to use CDBG-DR funds to acquire additional stockpile sand (up to 200,000 cubic yards) should it become available from other sources.

Part 2. Environmental Certification (to be completed by responsible entity)

With reference to the above Program Activity(ies)/Project(s), I, the undersigned officer of the responsible entity, certify that:

1. The responsible entity has fully carried out its responsibilities for environmental review, decision-making and action pertaining to the project(s) named above.
2. The responsible entity has assumed responsibility for and complied with and will continue to comply with, the National Environmental Policy Act of 1969, as amended, and the environmental procedures, permit requirements and statutory obligations of the laws cited in 24 CFR 58.5; and also agrees to comply with the authorities in 24 CFR 58.6 and applicable State and local laws.
3. The responsible entity has assumed responsibility for and complied with and will continue to comply with Section 106 of the National Historic Preservation Act, and its implementing regulations 36 CFR 800, including consultation with the State Historic Preservation Officer, Indian tribes and Native Hawaiian organizations, and the public.
4. After considering the type and degree of environmental effects identified by the environmental review completed for the proposed project described in Part 1 of this request, I have found that the proposal did did not require the preparation and dissemination of an environmental impact statement.
5. The responsible entity has disseminated and/or published in the manner prescribed by 24 CFR 58.43 and 58.55 a notice to the public in accordance with 24 CFR 58.70 and as evidenced by the attached copy (copies) or evidence of posting and mailing procedure.
6. The dates for all statutory and regulatory time periods for review, comment or other action are in compliance with procedures and requirements of 24 CFR Part 58.
7. In accordance with 24 CFR 58.71(b), the responsible entity will advise the recipient (if different from the responsible entity) of any special environmental conditions that must be adhered to in carrying out the project.

As the duly designated certifying official of the responsible entity, I also certify that:

8. I am authorized to and do consent to assume the status of Federal official under the National Environmental Policy Act of 1969 and each provision of law designated in the 24 CFR 58.5 list of NEPA-related authorities insofar as the provisions of these laws apply to the HUD responsibilities for environmental review, decision-making and action that have been assumed by the responsible entity.
9. I am authorized to and do accept, on behalf of the recipient personally, the jurisdiction of the Federal courts for the enforcement of all these responsibilities, in my capacity as certifying officer of the responsible entity.

Signature of Certifying Officer of the Responsible Entity

Ekashu Fitzberg

X

Title of Certifying Officer

Certifying Officer, New York State Homes and Community Renewal

Date signed

2/3/14

Address of Certifying Officer

New York State Homes and Community Renewal, 38-40 State Street, Hampton Plaza, Albany, NY 12207

Part 3. To be completed when the Recipient is not the Responsible Entity

The recipient requests the release of funds for the programs and activities identified in Part 1 and agrees to abide by the special conditions, procedures and requirements of the environmental review and to advise the responsible entity of any proposed change in the scope of the project or any change in environmental conditions in accordance with 24 CFR 58.71(b).

Signature of Authorized Officer of the Recipient

Title of Authorized Officer

Date signed

X

Warning: HUD will prosecute false claims and statements. Conviction may result in criminal and/or civil penalties. (18 U.S.C. 1001, 1010, 1012; 31 U.S.C. 3729, 3802)

NEWSDAY
AFFIDAVIT OF PUBLICATION

CARTER LEDYARD & MILBURN
2 WALL STREET
NEW YORK , NY 10005-2001

STATE OF NEW YORK)
SS.:
COUNTY OF SUFFOLK)

Legal Notice No. 17206013

R. Lopes

of Newsday LLC, Suffolk County, N.Y., being duly sworn, says that such person is, and at the time of publication of the annexed Notice was a duly authorized custodian of records of Newsday LLC, the publisher of NEWSDAY, a newspaper published in the County of Suffolk, County of Nassau, County of Queens, and elsewhere in the State of New York and other places, and that the Notice of which the annexed is a true copy, was published in the following editions/ counties of said newspaper on the following dates:

MONDAY JANUARY 13 2014 Suffolk

SWORN to before me this
13 Day of January, 2014.

Guy P. Wasser
Notary Public, State of New York
No. 01WA6045924
Commission Expires 10/20/2014
Qualified in Suffolk County



Legal Notice 17206013

PUBLIC NOTICE
COMBINED NOTICE OF FINDING OF NO SIGNIFICANT IMPACT (FONSI) AND NOTICE OF INTENT TO REQUEST RELEASE OF FUNDS (NOIRROF); FINAL NOTICE AND PUBLIC EXPLANATION OF PROPOSED ACTIVITY IN A 100-YEAR FLOODPLAIN AND WETLAND.

ROBERT MOSES STATE PARK BOAT CHANNEL DREDGING & BEACH STABILIZATION PROJECT
January 13, 2014
New York State Housing Trust Fund Corporation (HTFC)

38-40 State Street Albany, NY 12207 (518)486-3379
Name of Responsible Entity and Recipient: New York State Homes and Community Renewal (HCR), 3840 State Street, Hampton Plaza, Albany, NY 12207, in cooperation with the New York State Housing Trust Fund Corporation (HTFC) of the same address. Contact: Heather Spitzberg.

This combined notice satisfies four separate procedural requirements for project activities proposed to be undertaken. Per 24 C.F.R. Part 58.33, this combined Notice of Finding of No Significant Impact, Notice of Intent to Request Release of Funds (FONSI/NOIRROF) and Final Notice and Public Explanation of a Proposed Activity in a 100-Year Floodplain/ Wetland will be published simultaneously with the submission of a Request for Release of Funds (RROF) to the U.S. Department of Housing and Urban Development (HUD). The funds are needed immediately to stabilize public park infrastructure and to restore the adjoining beach, natural habitat and boat channel to their conditions prior to Superstorm Sandy. As a result, the comment periods for the FONSI/NOIRROF and RROF have been combined.

Project Description: HCR, acting by and through HTFC, a public benefit corporation of the State of New York, proposes to provide funding to the New York State Office of Parks, Recreation and Historic Preservation (OPRHP) for the Robert Moses State Park Boat Channel Dredging & Beach Stabilization Project (the "Project"), to restore sections of the beach at Robert Moses State Park and the nearby Captree Boat Channel, located in the Towns of Babylon and Islip, Suffolk County, New York, to their pre-Superstorm Sandy conditions. The Project involves dredging in the Captree Boat Channel approximately 400,000 cubic yards of material and pumping the material onto the beach at Robert Moses State Park in the area adjacent to Parking Fields 3, 4 and 5. The Project also involves grading of the beach to required beach profiles. The Project is necessary to stabilize and restore the Robert Moses Beach to its pre-Superstorm Sandy condition and to prevent continued beach erosion that can negatively impact the natural environment of Robert Moses State Park. Approximately \$40 million of Community Development Block Grant Disaster Recovery (CDBG-DR) funds from HUD through Grant Number B-12-DT-38-0001 would support the Project. This is the first tier of review in a 2-tiered process. Under the Project, OPRHP may also seek to use CDBG-DR funds to acquire additional stockpile sand (up to 200,000 cubic yards) should it

become available from other sources. OPRHP has stated that it would not undertake any dredging to obtain this additional sand. All stockpile sand would be tested for contaminants and grain size in accordance with state and federal permits, and then placed in previously approved stockpile areas in a manner that avoids impacts to natural resources. Because it is not yet known from what source the additional sand would be obtained, the amount of sand, or whether the sand can be obtained at all within the Project schedule, a Tier 2 review will be completed under 24 CFR Part 58.15 (Tiering) and 24 CFR Part 58.32 (Project Aggregation) and any required permits would be obtained before any stockpiling of this additional sand could begin.

PUBLIC EXPLANATION OF A PROPOSED ACTIVITY IN A 100-YEAR FLOODPLAIN AND WETLAND

This notice also serves to give notice that HCR has conducted evaluations of the Project as required by Executive Orders 11988 and 11990, in accordance with HUD regulations at 24 CFR § 55.20 Subpart C Procedures for Making Determinations on Floodplain Management and Wetlands Protection. Significant portions of the beach to be restored at Robert Moses State Park are tidal wetlands or adjacent buffer areas located in the 100 year floodplain. HCR has determined that the Project would not: (a) adversely affect the floodplain's ability to contain flood waters, (b) exacerbate flooding conditions on the Project Site or its immediate vicinity, or (c) adversely affect tidal wetlands. Rather the Project is expected to improve the site's resiliency to storm and flood events and prevent the further deterioration of tidal wetlands. Because the purpose of the Project is to stabilize and restore the Robert Moses Beach to its pre-Superstorm Sandy condition, there is no practicable alternative to conducting this activity in a tidal wetland or a 100-year floodplain. The no action alternative is expected to result in the destruction of natural habitat (including tidal wetlands) and park infrastructure and to severely impact public enjoyment of the Robert Moses State Park, which hosts approximately 3.5 million visitors each year. Under the no action alternative, the beach would no longer function as part of the coastal barrier system that helps minimize the impacts of storm events on the park and shore communities. The Project would affect approximately 72 acres of wetlands and adjacent buffer areas, all of which are also in the 100-year floodplain.

There are three primary purposes for this notice. First, people who may be affected by activities in floodplains/wetlands and those who have an interest in the protection of the natural environment have an opportunity to express their concerns and provide information about these areas. Second, adequate public notice is an important public education tool. The dissemination of information and request for public comment about floodplains/wetlands can facilitate and enhance federal efforts to reduce the risks associated with the occupancy and modification of these special areas. Third, as a matter of fairness, when the federal government determines it will participate

in actions taking place in floodplains/wetlands, it must inform those who may be put at greater or continued risk.

FINDING OF NO SIGNIFICANT IMPACT

A Tier 1 Environmental Review Record (ERR) has been prepared and is maintained on file. The ERR is incorporated by reference into this FONSI. The ERR constitutes the complete environmental assessment of the 400,000 cubic yard dredging and placement of sand in the Robert Moses State Park. Subject to public comments, no further review of that portion of the Project is anticipated. A full copy of the ERR, including a completed National Environmental Policy Act of 1969 (NEPA) Environmental Assessment Checklist and an area map, is available for public inspection during normal business hours in accordance with 24 CFR Part 58 at the office listed below or online at http://www.nyschcr.org/Programs/NYS-CDBG-DR-EnvironmentalReview.htm. HCR has determined that the ERR for the project identified herein complies with the requirements of HUD environmental review regulations at 24 CFR Part 58, et al.

HCR has also determined that the Project, as proposed, will have no significant adverse environmental or socioeconomic impacts, direct, indirect, or cumulative. There will be no significant impact on the human environment, and the Project will not negatively impact the quality of the environment. Therefore, HCR has determined that the Project does not require the preparation of an environmental impact statement under NEPA. Pursuant to Section 106 of the National Historic Preservation Act, the Project would also have no adverse effect on historic properties.

Public Review: Public viewing of the ERR is available online at the website listed above and is also available in person Monday - Friday, 9:00 AM - 5:00 PM at the following address:

Housing Trust Fund Office
25 Beaver Street, Fifth Floor
New York, NY 10004
Contact: Jay C. Juergensen
(212) 480-2370

Further information may be requested at NYS-CDBG-DR-ER@nyschcr.org or by calling HTFC at (518)486-3379. This combined notice is being sent to individuals and groups known to be interested in these activities, local news media, appropriate local, state and federal agencies, the regional office of the U.S. Environmental Protection Agency having jurisdiction, and to the HUD Field Office, and is being published in a newspaper of general circulation in the affected community.

Public Comments on FONSI/Findings, NOIRROF & Actions in Floodplain/Wetland

Any individual, group, or agency may submit written comments on the Project. Those wishing to comment should specify in their comments which distinct part(s) of this Combined Notice they intend to address. Comments should be submitted via email, in the proper format, on or before Tuesday, January 28, 2014 at: NYS-CDBG-DR-ER@nyschcr.org. Written comments may also be submitted at the following address, or by mail, in the proper format, to be received on or before Tuesday, January 28, 2014: Ms. Heather Spitzberg, Cer-

tifying Officer Office of Community Renewal
New York State Homes & Community Renewal 38-40 State Street
Hampton Plaza
Albany, NY 12207

If modifications result from public comment, these will be made prior to proceeding with the expenditure of funds.

REQUEST FOR RELEASE OF FUNDS

Written notice of environmental clearance will be required prior to the removal of any limitation on commitment of federal funds in accordance with regulations at 24 CFR Part 58.70.

On Monday, January 13, 2014, the HCR certifying officer will submit a request and certification to HUD for the release of CDBG-DR funds as authorized by related laws and policies for the purpose of implementing this part of the New York CDBG-DR program.

HCR certifies to HUD that Heather Spitzberg, in her capacity as Certifying Officer, consents to accept the jurisdiction of the U.S. federal courts if an action is brought to enforce responsibilities in relation to the environmental review process, decision-making, and action, and that these responsibilities have been satisfied. Moreover, HCR certifies that a Tier 1 environmental review of the Project described herein has been completed and that additional Tier 2 site-specific review may occur before the sponsor is authorized to acquire amounts of sand in addition to the 400,000 cubic yards specified above. HUD's approval of the certification satisfies its responsibilities under NEPA and related laws and authorities, and allows HTFC/HCR to use CDBG-DR program funds.

Objection to Release of Funds: HUD will accept objections to the RROF and/or FONSI certification for a period of fifteen (15) days. The last day of the objection period is Wednesday, January 29, 2014. Potential objectors may contact HUD to verify the actual last day of the objection period.

The only permissible grounds for objections claiming a responsible entity's non-compliance with 24 CFR Part 58 are:

- (a) Certification was not executed by the responsible entity's Certifying Officer;
(b) The responsible entity has omitted a step or failed to make a decision or finding required by HUD regulations at 24 CFR Part 58;
(c) The responsible entity has committed funds or incurred costs not authorized by 24 CFR Part 58 before release of funds and approval of environmental certification; or
(d) Federal agency acting pursuant to 40 CFR Part 1504 has submitted a written finding that the project is unsatisfactory from the standpoint of environmental quality.
Objections must be prepared and submitted in accordance with the required procedures (24 CFR Part 58) and shall be addressed to Tennille Smith Parker, Acting Director/Assistant Director, Disaster Recovery and Special Issues Division, Office of Block Grant Assistance, U.S. Department of Housing & Urban Development, 451 7th Street SW, Washington, DC 20410. Phone: (202) 402-4649. Heather Spitzberg, HCR Certifying Officer, January 13, 2014.

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Signature of Approval: _____ Date: _____

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ADDENDUM TO ENVIRONMENTAL ASSESSMENT
**ROBERT MOSES STATE PARK BOAT CHANNEL DREDGING & BEACH
STABILIZATION PROJECT**
PUBLIC COMMENT AND RESPONSE

U.S. Environmental Protection Agency Comment: EPA requested that HCR demonstrate the conformity of the action to New York’s State Implementation Plan for non-attainment areas as required for certain federally funded projects under the rules implementing the federal Clean Air Act at Subpart B of 40 CFR § 93. Alternatively EPA requested that HCR demonstrate that temporary construction emissions from the project are not anticipated to equal or exceed de minimis levels for any criteria pollutant or precursor for which the project area is in non-attainment, as provided in 40 CFR 93.153(b)(1), noting that such demonstration would exempt the project from the other requirements of Subpart B.

HCR Response: HCR performed an analysis of potential construction emissions for ozone and PM 2.5, using conservative estimates based on construction costs for non-transportation based projects and emission data for the specific equipment expected to be used for the project. Based on these analyses, HCR has determined that any temporary emissions will be well below the de minimis thresholds that trigger a general conformity analysis.

APPLICABILITY ANALYSIS FOR CONFORMITY DETERMINATION
DREDGING STATE BOAT CHANNEL
ROBERT MOSES STATE PARK
PROJECT RM 2013-1

Prepared for:

Cashin Associates, Inc.
1200 Veterans Memorial Highway
Hauppauge, New York 11788

Prepared by:



RTP Environmental Associates, Inc.
400 Post Avenue
Westbury, New York

January 31, 2014

APPLICABILITY ANALYSIS FOR CONFORMITY DETERMINATION
DREDGING STATE BOAT CHANNEL
AT ROBERT MOSES STATE PARK

Introduction

Super Storm Sandy significantly diminished the beach and dune system at Robert Moses State Park in Suffolk County, New York. The New York State Office of Parks, Recreation and Historic Preservation (NYSOPRHC) is undertaking a project to restore and repair the damage to the beach and dune system. Material will be dredged from the State Boat Channel in the vicinity of Captree State Park and placed on the ocean beach/dune system at Robert Moses State Park. The work also includes grading of the beach to required beach profiles.

The project will receive federal funds and, as such, is subject to the general conformity rules of the Clean Air Act (CAA). The project emissions are temporary and no permit emission sources will be created. In order to determine if a conformity analysis under the CAA would be required, an applicability analysis has been prepared to estimate project construction-related emissions for direct comparisons to the threshold limits specified in 40CFR§93.153(b)(1) that defines whether a conformity determination is warranted.

Based on the estimated construction related-emissions, a conformity determination is not required.

Applicability Analysis

The proposed project is located in Suffolk County and the county is currently designed as a non-attainment area (NAA) for fine particulates (PM_{2.5}), and moderate/marginal non-attainment for 8-hour ozone (1997/2008). The area is in attainment for all other criteria pollutants. For this project, the lead agency is required to make a conformity determination if the predicted increase in emissions of a non-attainment pollutant or precursor due to a federal action exceeds the limits specified in 40CFR§93.153(b)(1). In this case, the *de minimis* annual emission rates for volatile organic compounds (VOCs) and nitrogen oxides (both precursor pollutants for ozone) are 50 and 100 tons per year, respectively. The *de minimis* levels for PM_{2.5} and PM_{2.5} precursors is 100 tons per year.

The primary sources of air emissions for the project will be the engines on the dredging barges, a positioning vessel (push boat) and the associated equipment used to reposition dredged materials on shore. The inventory of equipment was provided to RTP Environmental Associates, Inc.

(RTP) by Cashin Associates, Inc. (Cashin). In all, the air emissions from a total of seven (7) engines were calculated based on United States Environmental Protection Agency (EPA) emission factors as published by the EPA Office of Transportation and Air Quality for Nonroad engines as defined in: *Exhaust and Crankcase Emission Factors for Nonroad Engine Modeling – Compression – Ignition Report No. NR-009d*. Emission factors for sulfur dioxide (SO₂) were based on EPA publication AP42 and ultra low sulfur in fuel requirement.

The analysis combines EPA published emission factors along with the various equipment, operational hours and engine specifications required to calculate the potential-to-emit (PTE) annual emissions for the proposed project. This information is provided in Table 1. Table 2 provides a summary of the project emissions per pollutant and the threshold emission limits stipulated in Section 93.153(b)(1). Based on the comparison of project total annual emissions per pollutant to the threshold limits, no air pollutant exceeds the limits specified in Section 93.153(b)(1). Based on this comparison, the project would be exempt from preparing a conformity determination as specified in 40CFR93.

It should also be noted that the project emissions have been conservatively estimated based on equipment that will likely to be required and the duration of the project. Since the estimates are significantly below the *de minimis* thresholds, the project could elect to use equipment with higher actual emissions as long as the total emissions remain within the thresholds set in 40CFR93.153.

Table 1: Captree Channel Dredging Project Emission Rates

Estimated Emission Rate Basis:

- The following diesel engine designations were used to estimate air emissions for comparison to applicability limits.
- Emission factors based on Exhaust and Crankcase Emission Factors EPA Report No. NR-009d Table 1 for Nonroad Engine Modeling Compression - Ignition Engines, OTAQ, dated: July 2010
- Where emission factors for NMHC and NOx are combined the VOC factor is zero.
- Sulfur dioxide (SO_x) emission rates for the project will be below 0.1 tons per year based on the use of ultra low sulfur diesel fuel in Suffolk County EPA AP42 Table 3.4.1.
- Conservatively assume PM is equal to PM₁₀ and PM_{2.5}.
- VOC emission factor considered conservative as it includes total organic compounds (TOC).
- tpy = tons per year
- hp = horsepower
- NMHC = non methane hydrocarbons

Pollutant	Engine Size (hp)	Number of units	Operation (hr/yr)	Emission Factor (lb/hp-hr)	PTE tpy
16" Hydro Dredge engine built 2010					
NOx and NMHC	1,200	1	1920	0.01060	12.21
CO				0.00574	6.61
PM/PM10/PM2.5				0.00033	0.38
VOC				0	0.00
16" Booster engine built 2010					
NOx and NMHC	800	1	1920	0.01060	8.14
CO				0.00574	4.41
PM/PM10/PM2.5				0.00033	0.25
VOC				0	0.00
Push Boat engine built 2013					
NOx and NMHC	266	2	80	0.00662	0.14
CO				0.00574	0.12
PM/PM10/PM2.5				0.00033	0.01
VOC				0	0.00
Hydro Hoe engine built 2013					
NOx	257	1	640	0.00007	0.01
CO				0.00574	0.47
PM/PM10/PM2.5				0.00002	0.00
VOC				0.00031	0.03
Hydro Excavator engine built 2013					
NOx and NMHC	148	1	640	0.00620	0.29
CO				0.00817	0.39
PM/PM10/PM2.5				0.00049	0.02
VOC				0	0.00
Dozer engine built 2012					
NOx	205	1	640	0.00007	0.00
CO				0.00574	0.38
PM/PM10/PM2.5				0.00002	0.00
VOC				0.00031	0.02
Project Total Annual Emissions					
NOx and NMHC					20.80
CO					12.38
PM/PM10/PM2.5					0.67
VOC					0.05

Table 2: Captree Channel Dredge Project

Project-Wide Potential To Emit Summary (TPY)

Emission Sources	NOx	VOC	CO	PM2.5
16" Hydro Dredge	12.21	0.0	6.6	0.4
16" Booster Barge	8.14	0.0	4.4	0.3
Push Boat	0.14	0.00	0.12	0.01
Hydro Hoe	0.01	0.03	0.47	0.00
Excavator	0.29	0.00	0.39	0.02
Dozer	0.00	0.02	0.38	0.00
Project PTE Total	20.80	0.05	12.38	0.67
EPA Conformity TPY Thresholds	100	50	100	100

Notes:

- The emissions are based on EPA OTAQ Exhaust and Crankcase Nonroad Compression - Ignition Engines Report No. NR-009d, Table 1.
- TPY = tons per year.
- As noted on Table 1, sulfur dioxide emissions will be less than 0.1 TPY. Sulfur dioxide is considered a precursor for PM_{2.5}.