United States Army Corps of Engineers, Philadelphia District
Great Egg Harbor Inlet to Townsends Inlet Coastal Storm Risk Management Project
General Conformity Determination

The Philadelphia District, U.S. Army Corps of Engineers (USACE), initiated construction of the congressionally authorized Great Egg Harbor Inlet to Townsends Inlet, New Jersey Federal Coastal Storm Risk Management Project, (GET-CSRM) in 2015. The Federally designed and constructed project is located in Cape May County, New Jersey. The GET-CSRM project provides for restoration and maintenance of the protective dune and berm along approximately 15 miles of shoreline in Cape May County between Ocean City and Sea Isle City. The project also provides constructed dune crossings to maintain public access and public safety throughout the project area. The GET-CSRM project is scheduled to undergo periodic nourishment to restore the design template of the beach within a portion of Sea Isle City and Strathmere (Upper Township) in 2026. This document represents the General Conformity Determination required under 40CFR§93.154. USACE is the lead Federal agency that will contract, oversee, approve, and fund the project's work, and thus is responsible for making the General Conformity determination for this project.

USACE has coordinated the procedures under which this determination has been made with the New Jersey Department of Environmental Protection (NJDEP) and Region 2 of the U.S. Environmental Protection Agency (EPA). Relative to the National Ambient Air Quality Standards (NAAQS), the project area is within Cape May County, New Jersey which is currently classified as "marginal" nonattainment for the 2008 8-hour ozone standard, and "serious" nonattainment for the 2015 8-hour ozone standard (40CFR§81.331). The ozone nonattainment county is part of the Ozone Transport Region. Ozone is controlled through the regulation of its precursor emissions, which include oxides of nitrogen (NOx) and volatile organic compounds (VOCs).

The equipment associated with this project that is evaluated under General Conformity (40CFR§93.153) includes direct and indirect nonroad diesel powered emission sources, such as dredging equipment and support vessels. The primary pollutant of concern with this type of equipment is NOx, because VOCs are generated at significantly lower rates. The NOx emissions associated with the project are estimated to total as much as 62 tons during calendar year 2026. Emission estimates are provided as Attachment A. The project exceeds the NOx trigger level of 50 tons in any calendar year and as a result, the USACE is required to fully offset the NOx emissions from this project. The project will not exceed the ozone-related VOC trigger level of 50 tons (for areas in an ozone transport region) in any calendar year.

The USACE is committed to fully offsetting the NOx emissions generated because of the work associated with this project. USACE recognizes that the feasibility and cost-effectiveness of each offset option is influenced by whether the emission reductions can be achieved without introducing delay to the construction schedule that would prevent timely completion of the project to provide the benefits for which the project is being undertaken.

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The USACE will demonstrate conformity with the New Jersey State Implementation Plan by utilizing the emission offset options listed below. The demonstration can consist of any combination of options and is not required to include all or any single option to meet conformity. The options for meeting general conformity requirements include the following:

a. Emission reductions from project and/or non-project related sources in an appropriately close vicinity to the project location. In assessing the potential impact of this offset option, USACE recognizes the possibility of lengthening the time period in which offsets can be generated as appropriate and allowable under the general conformity rule (40CFR§93.163 and §93.165).

b. Development of a Marine Vessel Engine Repower Program (MVERP) which replaces older, higher emitting marine engines with cleaner engines, the delta in emissions being used to offset project emissions. The MVERP approach worked successfully for offsetting the New York Harbor Deepening Project (HDP) construction emissions. The details of the MVERP, its implementation, and tracking would be coordinated with the Regional Air Team (RAT). The RAT is comprised of the USACE, NYSDEC, NJDEP, US Environmental Protection Agency (EPA) Region 2, and other stakeholders.

c. Use of Cross-State Air Pollution Rule (CSAPR) annual NOx Allowances with a distance ratio applied to allowances, similar to the one used by stationary sources.

Due to the unpredictable nature of dredge-related construction, the project emissions will be monitored as appropriate and regularly reported to the RAT to assist the USACE in ensuring that the project is fully offset.

In summary, USACE will achieve conformity for NOx using the options outlined above, as coordinated with the NJDEP, NYSDEC, and EPA, and coordinated through the RAT.

To view the entire determination, with attachments, please see the District's website at: https://www.nap.usace.army.mil/Missions/Civil-Works/Public-Notices-Reports/ Comments may be submitted via e-mail to PDPA-NAP@usace.army.mil.

Approved:

Sig.:_____ Scott A. Sanderson _____Date: 5/21/2026_____

Scott Sanderson
Chief, Planning Division

Emissions have been estimated using project planning information developed by the Philadelphia District, consisting of anticipated equipment types and estimates of the horsepower and operating hours of the diesel engines powering the equipment. In addition to this planning information, conservative factors have been used to represent the average level of engine load of operating engines (load factors) and the average emissions of typical engines used to power the equipment (emission factors). The basic emission estimating equation is the following:

E = hrs x LF x EF

Where:

E = Emissions per period of time such as a year or the entire project.

hrs = Number of operating hours in the period of time (e.g., hours per year, hours per project).

LF = Load factor, an estimate of the average percentage of full load an engine is run at in its usual operating mode.

EF = Emission factor, an estimate of the amount of a pollutant (such as NOx) that an engine emits while performing a defined amount of work.

In these estimates, the emission factors are in units of grams of pollutant per horsepower hour (g/hphr). For each piece of equipment, the number of horsepower hours (hphr) is calculated by multiplying the engine's horsepower by the load factor assigned to the type of equipment and the number of hours that piece of equipment is anticipated to work during the year or during the project. For example, a crane with a 250-horsepower engine would have a load factor of 0.43 (meaning on average the crane's engine operates at 43% of its maximum rated power output). If the crane were anticipated to operate 1,000 hours during the course of the project, the horsepower hours would be calculated by:

250 horsepower x 0.43 x 1,000 hours = 107,500 hp-hr

The emissions from diesel engines vary with the age of an engine and, most importantly, with when it was built. Newer engines of a given size and function typically emit lower levels of most pollutants than older engines. The emission factors used in these calculations assume that the equipment pre-dates most emission control requirements (known as Tier 0 engines in most cases), to provide a reasonable "upper bound" to the

emission estimates. If newer engines are actually used in the work, then emissions will be lower than estimated for the same amount of work. In the example of the crane engine, a NOx emission factor of 9.5 g/hphr would be used to estimate emissions from this crane on the project by the following equation:

107,500 hphr x 9.5 g NOx/hphr = 1.1 tons of NOx

453.59 g/lb x 2,000 lbs/ton

As noted above, information on the equipment types, horsepower, and hours of operation associated with the project have been obtained from the project's plans and represent current best estimates of the equipment and work that will be required. Load factors have been obtained from various sources depending on the type of equipment. Land-side nonroad equipment load factors are from the documentation for EPA's NONROAD emission estimating model, "Median Life, Annual Activity, and Load Factor Values for Nonroad Engine Emissions Modeling, EPA420-P-04-005, April 2004."

Emission factors have also been sourced from a variety of documents and other sources depending on engine type and pollutant. Nonroad equipment NOx and other emission factors have been derived from EPA emission standards and documentation.

As noted above, the emission factors have been chosen to be moderately conservative so as not to underestimate project emissions. Equipment turnover by the time the project is undertaken will likely result in newer equipment performing the work than assumed in this analysis, meaning the emissions presented in this analysis are likely higher than will actually occur.

The following pages summarize the estimated emissions in sum for the project including the anticipated equipment and engine information developed by the Philadelphia District, the load factors and emission factors as discussed above, and the estimated emissions for the project.

Great Egg Harbor Inlet to Townsends Inlet Emissions Summary for Calendar Year 2026	**VOL. CY**	**NOx (tons)**	**VOCs (tons)**
SEA ISLE CITY - CENTRAL (HOPPER)	270,000	33.9	0.83
SEA ISLE CITY - NORTH & UPPER TWP. (CUTTER)	780,000	28.4	0.77
TOTAL	**1,050,000**	**62.3**	**1.6**

Estimated NOX and VOX emissions calculator - SIC-Central 1 HOPPER												
Project:	**FY26 Great Egg to Townsends**											
Mob/Demob duration (days):*	5.5											
Volume (CY):	270,000											
Estimated production rate (CY/day):*	24,189											
Percent Effective Time (EWT):*	82%											
*based on W912BU-19-C-0063 recorded data												
									NOx	NOx	VOC	VOC
Equipment		**# of Engines**	**HP**	**Load Factor (LF)**	**Days of Operation**	**Hrs/Day**	**Total Hours**	**hp-hr**	**Emission Factor (g/hp-hr)**	**Emissions (tons)**	**Emission Factor (g/hp-hr)**	**Emissions (tons)**
Water equipment (assumes tier 2 engines)												
Mob/Demob												
Hopper Dredge, propulsion	Port Main Engine	1	4,962	0.66	1.00	6	6.00	19,649.52	9.70	0.21	0.07	0.00
Hopper Dredge, propulsion	STBD Main Engine	1	4,962	0.66	1.00	6	6.00	19,649.52	9.70	0.21	0.07	0.00
Hopper Dredge, auxiliary	Port Generator	0	2,549	0.40	1.00	6	0.00	0.00	7.50	0.00	0.56	0.00
Hopper Dredge, auxiliary	STBD Generator	0	2,549	0.40	1.00	6	0.00	0.00	7.50	0.00	0.56	0.00
Hopper Dredge, pumps	Port Dredge Pump	0	4,831	0.80	1.00	6	0.00	0.00	7.50	0.00	0.07	0.00
Hopper Dredge, pumps	STBD Dredge Pump	0	4,831	0.80	1.00	6	0.00	0.00	7.50	0.00	0.07	0.00
Hopper Dredge, pumps	Port Jet Pump	0	1,157	0.80	1.00	6	0.00	0.00	7.50	0.00	0.07	0.00
Hopper Dredge, pumps	STBD Jet Pump	0	1,157	0.80	1.00	6	0.00	0.00	7.50	0.00	0.07	0.00
Hopper Dredge, propulsion	Bow Thruster	0	1,070	0.66	1.00	6	0.00	0.00	9.70	0.00	0.07	0.00

WORK TUG, PRIMARY		1	4000	0.69	5.50	12	66.00	182,160.00	9.70	1.95	0.37	0.07
WORK TUG, SECONDARY Electric		1	50	0.40	5.50	12	66.00	1,320.00	7.50	0.01	0.20	0.00
SURVEY BOAT, SHORE		1	210	0.50	5.50	12	66.00	6,930.00	9.70	0.07	0.37	0.00
SURVEY BOAT, SHORE, SECONDARY Electric		1	40	0.40	5.50	12	66.00	1,056.00	7.50	0.01	0.20	0.00
DERRICK, PRIMARY		1	200	0.40	5.50	12	66.00	5,280.00	7.50	0.04	0.20	0.00
DERRICK, SECONDARY Electric		1	40	0.20	5.50	12	66.00	528.00	7.50	0.00	0.20	0.00
TENDER TUG, PROPULSION		1	4000	0.69	5.50	12	66.00	182,160.00	9.70	1.95	0.37	0.07
TENDER TUG, SECONDARY		1	50	0.40	5.50	12	66.00	1,320.00	7.50	0.01	0.20	0.00
SUVEY BOAT, OFFSHORE		1	500	0.50	5.50	12	66.00	16,500.00	9.70	0.18	0.20	0.00
SUVEY BOAT, OFFSHORE, SECONDARY Electric		1	40	0.40	5.50	12	66.00	1,056.00	7.50	0.01	0.20	0.00
Beach Replenishment												
Hopper Dredge, propulsion	Port Main Engine	1	4,962	0.66	11.16	19.68	219.67	719,402.00	9.70	7.69	0.07	0.06
Hopper Dredge, propulsion	STBD Main Engine	1	4,962	0.66	11.16	19.68	219.67	719,402.00	9.70	7.69	0.07	0.06
Hopper Dredge, auxiliary	Port Generator	1	2,549	0.40	11.16	19.68	219.67	223,975.63	7.50	1.85	0.56	0.14
Hopper Dredge, auxiliary	STBD Generator	1	2,549	0.40	11.16	19.68	219.67	223,975.63	7.50	1.85	0.56	0.14
Hopper Dredge, pumps	Port Dredge Pump	1	4,831	0.80	11.16	4.92	54.92	212,245.25	7.50	1.75	0.07	0.02
Hopper Dredge, pumps	STBD Dredge Pump	1	4,831	0.80	11.16	4.92	54.92	212,245.25	7.50	1.75	0.07	0.02
Hopper Dredge, pumps	Port Jet Pump	1	1,157	0.80	11.16	4.92	54.92	50,831.66	7.50	0.42	0.07	0.00
Hopper Dredge, pumps	STBD Jet Pump	1	1,157	0.80	11.16	4.92	54.92	50,831.66	7.50	0.42	0.07	0.00
Hopper Dredge, propulsion	Bow Thruster	1	1,070	0.66	11.16	1.97	21.97	15,513.10	9.70	0.17	0.07	0.00
WORK TUG, PRIMARY		0	4000	0.69	11.16	19.68	0.00	0.00	9.70	0.00	0.37	0.00
WORK TUG, SECONDARY Electric		0	50	0.40	11.16	19.68	0.00	0.00	7.50	0.00	0.20	0.00

SURVEY BOAT, SHORE		1	210	0.50	11.16	19.68	219.67	23,065.36	9.70	0.25	0.37	0.01
SURVEY BOAT, SHORE, SECONDARY Electric		1	40	0.40	11.16	19.68	219.67	3,514.72	7.50	0.03	0.20	0.00
DERRICK, PRIMARY		1	200	0.40	11.16	19.68	219.67	17,573.61	7.50	0.15	0.20	0.00
DERRICK, SECONDARY Electric		1	40	0.20	11.16	19.68	219.67	1,757.36	7.50	0.01	0.20	0.00
TENDER TUG, PROPULSION		1	1000	0.69	11.16	19.68	219.67	151,572.37	9.70	1.62	0.37	0.06
TENDER TUG, SECONDARY		1	50	0.40	11.16	19.68	219.67	4,393.40	7.50	0.04	0.20	0.00
SURVEY BOAT, OFFSHORE		1	500	0.50	11.16	19.68	219.67	54,917.52	9.70	0.59	0.20	0.01
SURVEY BOAT, OFFSHORE, SECONDARY Electric		1	40	0.40	11.16	19.68	219.67	3,514.72	7.50	0.03	0.20	0.00
Land equipment (assumes tier 2 engines)												
Mob/Demob												
TRUCK TRAILER, LOWBOY, 75 TON, 3 AXLE (ADD TOWING TRUCK)		0	310	0.59	5.50	8	0.00	0.00	10.72	0.00	0.66	0.00
TRUCK, HIGHWAY, 55,000 LBS (24,948KG) GVW, 6X4, 3 AXLE, (ADD ACCESSORIES)		0	310	0.59	5.50	8	0.00	0.00	10.72	0.00	0.66	0.00
LOADER/BACKHOE, WHEEL, 0.80 CY FRONT END BUCKET, 9.8' DEPTH OF HOE, 24" DIPPER, 4X4		0	78	0.59	5.50	8	0.00	0.00	9.50	0.00	1.30	0.00
TRUCK, HIGHWAY, CONVENTIONAL, 8,600 LBS (3,901KG)GVW, 4X2, 2 AXLE, 3/4 TON -PICKUP		4	135	0.59	5.50	8	176.00	14,018.40	10.33	0.16	0.54	0.01
Beach replenishment												
TRUCK, HIGHWAY, 8,600 GVW, 4X4 (SUBURBAN)		4	135	0.59	11.16	19.68	878.68	69,986.89	10.33	0.80	0.54	0.04
TRACTOR ATTACHMENTS, BLADE, UNIVERSAL, HYDRAULIC, FOR D9, 21.40 CY (ADD D9 TRACTOR)		0	0	0	11.16	19.68	0.00	0.00	4.90	0.00	1.30	0.00

TRACTOR, CRAWLER (DOZER), 410 HP, POWERSHIFT, W/17.7 CY SEMI-U BLADE (ADD ATTACHMENTS)		3	410	0.59	11.16	19.68	659.01	159,414.59	9.50	1.67	0.19	0.03
LOADER, FRONT END, WHEEL, INTEGRATED TOOL CARRIER, 1.75 CY (1.3 M3) LOADER; 6,303 LB (2,859 KG) @ 12.17' (3.7 M) HIGH, FORK LIFT, OR 1,841 LB (835 KG) @ 22.42' (6.8 M) HIGH, MATERIAL HANDLING ARM		2	90	0.59	11.16	19.68	439.34	23,328.96	9.50	0.24	0.19	0.00
LOADER/BACKHOE, WHEEL, 0.80 CY FRONT END BUCKET, 9.8' DEPTH OF HOE, 24" DIPPER, 4X4		1	78	0.59	11.16	19.68	219.67	10,109.22	9.50	0.11	0.19	0.00
TOTAL EMISSIONS (tons)										**33.94**		**0.77**
CLEAN AIR ACT GENERAL CONFORMITY RULE LIMIT										**50.00**		**50.00**

Estimated NOX and VOX emissions calculator - SIC - N and UT 1 CUTTERHEAD DREDGE												
Project:	**FY26 Great Egg to Townsends**											
Mob/Demob duration (days):*	10											
Volume (CY):	780,000											
Estimated production rate (CY/day):*	36,560											
Percent Effective Time (EWT):*	50%											
*based on W912BU-19-C-0063 recorded data												
									NOx	NOx	VOC	VOC
Equipment		**# of Engines**	**HP**	**Load Factor (LF)**	**Days of Operation**	**Hrs/Day**	**Total Hours**	**hp-hr**	**Emission Factor (g/hp-hr)**	**Emissions (tons)**	**Emission Factor (g/hp-hr)**	**Emissions (tons)**
Water equipment (assumes tier 2 engines)												
Mob/Demob												
CSD, Suction Pump	Port Pump**	0	3600	0.8	0.50	12	0.00	0.00	8.20	0.00	0.20	0.00
CSD, Suction Pump	Starboard Pump**	0	3600	0.80	0.50	12	0.00	0.00	8.20	0.00	0.20	0.00
CSD, auxilliary	Generator #1**	0	3600	0.40	0.50	12	0.00	0.00	8.20	0.00	0.20	0.00
CSD, auxilliary	#2**	1	269	0.40	0.50	24	12.00	1,291.20	3.00	0.00	0.20	0.00
WORK TUG, PRIMARY		1	4000	0.69	5.00	12	60.00	165,600.00	9.70	1.77	0.37	0.07
WORK TUG, SECONDARY Electric		1	50	0.40	5.00	12	60.00	1,200.00	7.50	0.01	0.20	0.00
SURVEY BOAT, SHORE		1	210	0.50	5.00	12	60.00	6,300.00	9.70	0.07	0.37	0.00
SURVEY BOAT, SHORE, SECONDARY Electric		1	40	0.40	5.00	12	60.00	960.00	7.50	0.01	0.20	0.00

DERRICK, PRIMARY		1	200	0.40	5.00	12	60.00	4,800.00	7.50	0.04	0.20	0.00
DERRICK, SECONDARY Electric		1	40	0.20	5.00	12	60.00	480.00	7.50	0.00	0.20	0.00
TENDER TUG, PROPULSION		1	4000	0.69	5.00	12	60.00	165,600.00	9.70	1.77	0.37	0.07
TENDER TUG, SECONDARY		1	50	0.40	5.00	12	60.00	1,200.00	7.50	0.01	0.20	0.00
SUVEY BOAT, OFFSHORE		1	500	0.50	5.00	12	60.00	15,000.00	9.70	0.16	0.20	0.00
SUVEY BOAT, OFFSHORE, SECONDARY Electric		1	40	0.40	5.00	12	60.00	960.00	7.50	0.01	0.20	0.00
Beach Replenishment												
CSD, Suction Pump	Port Pump**	1	3600	0.8	21.33	12.07	257.55	741,754.40	8.20	6.70	0.20	0.16
CSD, Suction Pump	Starboard Pump**	1	3600	0.80	21.33	12.07	257.55	741,754.40	8.20	6.70	0.20	0.16
CSD, auxilliary	Generator #1**	1	3600	0.40	21.33	12.07	257.55	370,877.20	8.20	3.35	0.20	0.08
CSD, auxilliary	#2**	1	269	0.40	21.33	12.07	257.55	27,712.77	3.00	0.09	0.20	0.01
WORK TUG, PRIMARY		0	4000	0.69	21.33	12.07	0.00	0.00	9.70	0.00	0.37	0.00
WORK TUG, SECONDARY Electric		0	50	0.40	21.33	12.07	0.00	0.00	7.50	0.00	0.20	0.00
SURVEY BOAT, SHORE		1	210	0.50	21.33	12.07	257.55	27,043.13	9.70	0.29	0.37	0.01
SURVEY BOAT, SHORE, SECONDARY Electric		1	40	0.40	21.33	12.07	257.55	4,120.86	7.50	0.03	0.20	0.00
DERRICK, PRIMARY		1	200	0.40	21.33	12.07	257.55	20,604.29	7.50	0.17	0.20	0.00
DERRICK, SECONDARY Electric		1	40	0.20	21.33	12.07	257.55	2,060.43	7.50	0.02	0.20	0.00
TENDER TUG, PROPULSION		1	1000	0.69	21.33	12.07	257.55	177,711.99	9.70	1.90	0.37	0.07
TENDER TUG, SECONDARY		1	50	0.40	21.33	12.07	257.55	5,151.07	7.50	0.04	0.20	0.00
SURVEY BOAT, OFFSHORE		1	500	0.50	21.33	12.07	257.55	64,388.40	9.70	0.69	0.20	0.01
SURVEY BOAT, OFFSHORE, SECONDARY Electric		1	40	0.40	21.33	12.07	257.55	4,120.86	7.50	0.03	0.20	0.00

Land equipment (assumes tier 2 engines)												
Mob/Demob												
TRUCK TRAILER, LOWBOY, 75 TON, 3 AXLE (ADD TOWING TRUCK)		4	310	0.59	10.00	8	320.00	58,528.00	10.72	0.69	0.66	0.04
TRUCK, HIGHWAY, 55,000 LBS (24,948KG) GVW, 6X4, 3 AXLE, (ADD ACCESSORIES)		1	310	0.59	10.00	8	80.00	14,632.00	10.72	0.17	0.66	0.01
LOADER/BACKHOE, WHEEL, 0.80 CY FRONT END BUCKET, 9.8' DEPTH OF HOE, 24" DIPPER, 4X4		1	78	0.59	10.00	8	80.00	3,681.60	9.50	0.04	1.30	0.01
TRUCK, HIGHWAY, CONVENTIONAL, 8,600 LBS (3,901KG)GVW, 4X2, 2 AXLE, 3/4 TON -PICKUP		4	135	0.59	10.00	8	320.00	25,488.00	10.33	0.29	0.54	0.02
Beach replenishment												
TRUCK, HIGHWAY, 8,600 GVW, 4X4 (SUBURBAN)		4	135	0.59	21.33	12.07	1,030.21	82,056.58	10.33	0.93	0.54	0.05
TRACTOR ATTACHMENTS, BLADE, UNIVERSAL, HYDRAULIC, FOR D9, 21.40 CY (ADD D9 TRACTOR)		0	0	0	21.33	12.07	0.00	0.00	4.90	0.00	1.30	0.00
TRACTOR, CRAWLER (DOZER), 410 HP, POWERSHIFT, W/17.7 CY SEMI-U BLADE (ADD ATTACHMENTS)		3	410	0.59	21.33	12.07	772.66	186,906.66	9.50	1.96	0.19	0.04
LOADER, FRONT END, WHEEL, INTEGRATED TOOL CARRIER, 1.75 CY (1.3 M3) LOADER; 6,303 LB (2,859 KG) @ 12.17' (3.7 M) HIGH, FORK LIFT, OR 1,841 LB (835 KG) @ 22.42' (6.8 M) HIGH, MATERIAL HANDLING ARM		2	90	0.59	21.33	12.07	515.11	27,352.19	9.50	0.29	0.19	0.01

LOADER/BACKHOE, WHEEL, 0.80 CY FRONT END BUCKET, 9.8' DEPTH OF HOE, 24" DIPPER, 4X4		1	78	0.59	21.33	12.07	257.55	11,852.62	9.50	0.12	0.19	0.00
TOTAL EMISSIONS (tons)										**28.38**		**0.83**
CLEAN AIR ACT GENERAL CONFORMITY RULE LIMIT										**50.00**		**50.00**
**CSD Engine Data provided by GLDD under W912BU24C0044												