Commonwealth of Massachusetts
Executive Office of Environmental Affairs ■ MEPA Office

ENF Environmental Notification Form

For Office Use Only *Executive Office of Environmental Affairs*
EOEA No.: 13131
MEPA Analyst: ~~JUNE CANADAY~~
Phone: 617-626-1035

The information requested on this form must be completed to begin MEPA Review in accordance with the provisions of the Massachusetts Environmental Policy Act, 301 CMR 11.00.

Project Name: CHELSEA SANDCATCHER STABILIZATION		
Street: Marginal Street		
Municipality: Chelsea	Watershed: Boston Harbor	
Universal Tranverse Mercator Coordinates:	Latitude: 42° 23' 12" Longitude: -71° 1' 26"	
Estimated commencement date: June 2004	Estimated completion date: December 2004	
Approximate cost: $158,000.	Status of project design: 100% complete	
Proponent: Massachusetts Water Resources Authority (MWRA)		
Street: 100 First Avenue		
Municipality: Boston	State: MA	Zip Code: 02129
Name of Contact Person From Whom Copies of this ENF May Be Obtained: Roy Perry, Project Manager		
Firm/Agency: MWRA	Street: 2 Griffin Way	
Municipality: Chelsea	State: MA	Zip Code: 02150
Phone: 617-305-5767	Fax: 617-371-1607	E-mail: roy.perry@mwra.state.ma.us

Does this project meet or exceed a mandatory EIR threshold (see 301 CMR 11.03)?
☐Yes ☒No

Has this project been filed with MEPA before?
☐ Yes (EOEA No._____) ☒No

Has any project on this site been filed with MEPA before?
☐ Yes (EOEA No._____) ☒No

Is this an Expanded ENF (see 301 CMR 11.05(7)) requesting:
a Single EIR? (see 301 CMR 11.06(8)) ☐Yes ☒No
a Special Review Procedure? (see 301CMR 11.09) ☐Yes ☒No
a Waiver of mandatory EIR? (see 301 CMR 11.11) ☐Yes ☒No
a Phase I Waiver? (see 301 CMR 11.11) ☐Yes ☒No

Identify any financial assistance or land transfer from an agency of the Commonwealth, including the agency name and the amount of funding or land area (in acres):_____None_____

Are you requesting coordinated review with any other federal, state, regional, or local agency?
☐Yes (Specify_____) ☒No

List Local or Federal Permits and Approvals: Notice of Intent; CZM Consistency Review: DEP c. 91 License; ACOE Section 10/404 Permits; MWRA 8M Permits

Which ENF or EIR review threshold(s) does the project meet or exceed (see 301 CMR 11.03):

☐ Land	☐ Rare Species	☒ Wetlands, Waterways, & Tidelands
☐ Water	☐ Wastewater	☐ Transportation
☐ Energy	☐ Air	☐ Solid & Hazardous Waste
☐ ACEC	☐ Regulations	☐ Historical & Archaeological Resources

Summary of Project Size & Environmental Impacts	Existing	Change	Total
LAND			
Total site acreage	28,320 sq. ft.		
New acres of land altered		800 sq. ft.	
Acres of impervious area	27,520 sq. ft.	800 sq. ft.	28,320 sq. ft.
Square feet of new bordering vegetated wetlands alteration		0	
Square feet of new other wetland alteration		800 sq. ft.	
Acres of new non-water dependent use of tidelands or waterways		0	
STRUCTURES			
Gross square footage Sandcatcher Structure	3,100 sq. ft.		3,100 sq. ft.
Number of housing units			
Maximum height (in feet)			
TRANSPORTATION			
Vehicle trips per day			
Parking spaces			
WASTEWATER			
Gallons/day (GPD) of water use			
GPD water withdrawal			
GPD wastewater generation/ treatment			
Length of water/sewer mains (in miles)			

State Permits & Approvals

- ☒ Order of Conditions
- ☐ Superseding Order of Conditions
- ☒ Chapter 91 License
- ☐ 401 Water Quality Certification
- ☐ MHD or MDC Access Permit
- ☐ Water Management Act Permit
- ☐ New Source Approval
- ☐ DEP or MWRA Sewer Connection/ Extension Permit
- ☒ Other Permits (*including Legislative Approvals*) – Specify:

CZM Consistency Review

ACOE Section 10/404 Permit _____

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CONSERVATION LAND: Will the project involve the conversion of public parkland or other Article 97 public natural resources to any purpose not in accordance with Article 97?

☐Yes (Specify_____) ☒No

Will it involve the release of any conservation restriction, preservation restriction, agricultural preservation restriction, or watershed preservation restriction?

☐Yes (Specify_____) ☒No

RARE SPECIES: Does the project site include Estimated Habitat of Rare Species, Vernal Pools, Priority Sites of Rare Species, or Exemplary Natural Communities?

☐Yes (Specify_____) ☒No

HISTORICAL /ARCHAEOLOGICAL RESOURCES: Does the project site include any structure, site or district listed in the State Register of Historic Place or the inventory of Historic and Archaeological Assets of the Commonwealth?

☐Yes (Specify_____) ☒No According to the "Programmatic Memorandum of Agreement between the MWRA and the Massachusetts Historical Commission" dated September 15, 1994, this work is covered under permitted routine maintenance.

If yes, does the project involve any demolition or destruction of any listed or inventoried historic or archaeological resources?

☐Yes (Specify_____) ☒No

AREAS OF CRITICAL ENVIRONMENTAL CONCERN: Is the project in or adjacent to an Area of Critical Environmental Concern?

☐Yes (Specify_____) ☒No

PROJECT DESCRIPTION: The project description should include **(a)** a description of the project site, **(b)** a description of both on-site and off-site alternatives and the impacts associated with each alternative, and **(c)** potential on-site and off-site mitigation measures for each alternative (*You may attach one additional page, if necessary.*)

The purpose of this project is to stabilize an existing sewerage system structure that has deteriorated and now poses a hazard to the public and MWRA staff.

The grit chamber, or sandcatcher as it is commonly called, on Section 10 of the MWRA sewerage system was constructed in 1895 as part of the Section 10 sewer and siphon across the Chelsea River. The structure is located along the westerly bank of the Chelsea River, east of the intersection of Marginal Street and Eastern Avenue and just to the southwest of the Chelsea Street Bridge. The structure is a 200 feet long by 15.5 feet wide by 16 feet deep grit collection chamber constructed primarily of concrete with granite blocks placed along the eastern end abutting the river. Of the 200' length, 20' extends below grade into the public right of way. The remaining 180', where the work will occur, is on land owned by the MWRA. The structure was built on a wood pile foundation.

The purpose of the sandcatcher was to capture the grit and sediment from the Sewer Sections 12, 11 and 61 prior to the flow entering the 10' diameter siphon under the river. Flow from the siphon was received at an MDC pump station on the opposite river bank in East Boston.

In 1942, the Section 10 siphon was replaced and other improvements made, rendering the sandcatcher obsolete as a grit collection system. The structure was modified to direct wastewater westerly towards a new screen house and the Section 101 siphon. Modifications included a 12-foot high cut-off wall and cap with the area below the cap filled with compacted gravel. The northeasterly wall of the sandcatcher was opened to divert flows towards the new screenhouse. Improvements in 1942 also included construction of an overflow along the easterly wall of the sandcatcher which directed wet weather flows to Chelsea River. Recent site investigations indicated that this overflow arrangement (w/stop planks) has been sealed with concrete to prevent overflows and to prevent river water from entering the sewer system. Subsequently, construction of the Chelsea Headworks facility allowed flows to be diverted to the Headworks upstream of the sandcatcher. Although the sandcatcher no longer serves as a grit collection chamber, the west end of the structure continues to divert

wastewater flows from the MWRA Section 12 North Metropolitan Trunk Sewer to the Chelsea Headworks facility so the structure cannot be completely abandoned.

The easterly end of the sandcatcher extends approximately 55 feet towards the Chelsea River from the top of the waterway bank. It is this exposed portion of the structure that has suffered the most significant damage with many of the granite slabs having become dislodged and the concrete cracked and broken. Several granite blocks have fallen into the water leaving large holes in the structure. The remaining portion of the concrete end wall is barely being held in place by reinforcing steel. The concrete along a portion of the top of the structure has cracked and is overgrown with brush. In addition a 1997 inspection revealed that the structure contains sediment and construction debris including pieces of concrete, brick, wood and other solids. Preliminary estimates are that 83 cubic yards of material are contained within the sandcatcher that must be removed. Overall, the site poses a hazard to the public and to maintenance workers accessing the area. Further deterioration of the structure will only exacerbate the hazard.

Alternatives evaluated to prevent further deterioration of the structure included stabilization and demolition. Stabilization would remove unstable and collapsed granite blocks at the structure's perimeter and would entail driving steel sheeting along the existing edge of the sandcatcher with concrete poured to fill the void. Riprap would blend the sheeting with the existing shoreline. However, sheeting may be difficult to install in this area due to other utilities and because the 1942 modifications encased the former shaft and siphon in concrete.

Demolition was eliminated from further consideration due to the uncertainty surrounding the structural integrity of the granite block sea wall that retains the abutting embankment. This seawall may have been a part of the old Chelsea Street Bridge, long since relocated. The granite block wall extends approximately 45' beyond the sandcatcher into the Chelsea River and it supports an active gas main and other MWRA (water) utilities are in the vicinity so the wall and embankment must be maintained. Without extensive additional investigations, including partial demolition, it is impossible to determine whether the granite wall extends through the sandcatcher and separates it from the embankment. Construction of both a temporary cofferdam of steel sheet piles and a new seawall may potentially be required. The costs of this alternative would significantly exceed the cost of the recommended plan.

The recommended alternative blends these options and entails the removal of damaged corners and dislodged or broken concrete to a point at which "sound" concrete is reached. Following the removal of the approximately 83 cubic yards of debris, cavities in the structure will be filled with flowable fill, (i.e. low strength concrete), and the exposed sandcatcher walls will be covered with stone riprap. The riprap will begin approximately 20' back from the river end of the existing seawall and then extend 15' to the sandcatcher wall. The riprap will then continue along the side face of the sandcatcher approximately 35' to the edge of the river bank. The width of the riprap along the side varies from 10 feet to two feet at the bank. The riprap slope is 1.3 foot horizontal to 1.0 foot vertical. On the top surface, the broken concrete deck surface will be cleared of overgrown brush and a new 4-6 inch thick concrete deck will be constructed over the existing concrete and stone surface.

This recommended alternative appears to require the least disturbance and eliminates most, if not all, of the deep subsurface excavation required for other alternatives. Thus, this option will not impact the other utilities in the vicinity and it will also provide a smooth transition between the existing riprapped shore line and the seawall which abuts the sandcatcher on the southwest side adjacent to the paved parking lot. This seawall currently supports a natural gas main and other utilities that cross the Chelsea River. The seawall does have a large vertical crack and the additional riprap will partially cover this area and will help provide additional support to this structure as well.