

**NEW ENGLAND DISTRICT
US ARMY CORPS OF ENGINEERS, CONCORD, MA
CLEAN WATER ACT
SECTION 404(b)(1) EVALUATION**

PROJECT: Malden River Ecosystem Restoration

PROJECT MANAGER: Mr. Michael Tuttle

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FORM COMPLETED BY: Mr. Todd Randall

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DESCRIPTION: The proposed plan involves restoring various components of the Malden River ecosystem. The plan includes the restoration of impacted wetland and riparian habitat, the creation of wetland habitat, and physical improvements to riverine habitat for native fish species.

Specific activities include the removal of approximately 14.9 acres of invasive species and 36,000 cubic yards of soil along the riverbank corridor and the replanting of the 14.9 acres of wetland area with native wetland species; the creation of 5.4 acres of emergent wetland within the river; debris removal and disposal within the construction work limits; the placement of 4,400 cubic yards of gravel/sand substrate in various areas of the river to create 2.86 acres of fish spawning habitat; and operational changes at the Amelia Earhart Dam to improve fish passage.

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EVALUATION OF SECTION 404(b)(1) GUIDELINES

PROJECT: Malden River Ecosystem Restoration Project

1. Review of Compliance (Section 230.10(a)-(d)).

- a. The discharge represents the least environmentally damaging practicable alternative and if in a special aquatic site, the activity associated with the discharge must have direct access or proximity to, or be located in the aquatic ecosystem to fulfill its basic purpose;
- X
YES NO
- b. The activity does not appear to:
- 1) violate applicable state water quality standards or effluent standards prohibited under Section 307 of the CWA; 2) jeopardize the existence of Federally listed threatened and endangered species or their critical habitat; and 3) violate requirements of any Federally designated marine sanctuary (if no, see section 2b and check responses from resource and water quality certifying agencies);
- X
YES NO
- c. The activity will not cause or contribute to significant degradation of waters of the U.S. including adverse effects on human health, life stages of organisms dependent on the aquatic ecosystem, ecosystem diversity, productivity and stability, and recreational, aesthetic, and economic values (if no, see section 2);
- X
YES NO
- d. Appropriate and practicable steps have been taken to minimize potential adverse impacts of the discharge on the aquatic ecosystem (if no, see section 5).
- X
YES NO

2. Technical Evaluation Factors (Subparts C-F).

	N/A	Not Signif icant	Signif icant
a. Potential Impacts on Physical and Chemical Characteristics of the Aquatic Ecosystem (Subpart C).			
1) Substrate		X	
2) Suspended particulates/turbidity		X	
3) Water		X	
4) Current patterns and water circulation		X	
5) Normal water fluctuations		X	
6) Salinity gradients		X	
b. Potential Impacts on Biological Characteristics of the Aquatic Ecosystem (Subpart D).			
1) Threatened/ endangered species		X	
2) Fish, crustaceans, mollusks and other aquatic organisms in the food web		X	
3) Other wildlife		X	
c. Potential Impacts on Special Aquatic Sites (Subpart E).			
1) Sanctuaries and refuges	X		
2) Wetlands		X	
3) Mud flats	X		
4) Vegetated shallows		X	
5) Coral reefs	X		
6) Riffle and pool complexes	X		
d. Potential Effects on Human Use Characteristics (Subpart F).			
1) Municipal and private water supplies	X		
2) Recreational and commercial fisheries		X	
3) Water-related recreation		X	
4) Aesthetics		X	
5) Parks, national and historic monuments, national seashores, wilderness areas, research sites, and similar preserves	X		

3. Evaluation and Testing (Subpart G).

a. The following information has been considered in evaluating the biological availability of possible contaminants in dredged or fill material. (Check only those appropriate.)

- 1) Physical characteristics..... X
- 2) Hydrography in relation to known or anticipated sources of contaminants..... X
- 3) Results from previous testing of the material or similar material in the vicinity of the project..... X
- 4) Known, significant sources of persistent pesticides from land runoff or percolation..... _____
- 5) Spill records for petroleum products or designated hazardous substances (Section 311 of CWA)..... X
- 6) Public records of significant introduction of contaminants from industries, municipalities, or other sources..... X
- 7) Known existence of substantial material deposits of substances which could be released in harmful quantities to the aquatic environment by man-induced discharge activities.. _____
- 8) Other sources (specify)..... _____

List appropriate references.

The Environmental Assessment of the Malden River Restoration Project, Malden, Everett, and Medford, Massachusetts.

5. Actions To Minimize Adverse Effects (Subpart H).

All appropriate and practicable steps have been taken, through application of recommendation of Section 230.70-230.77 to ensure minimal adverse effects of the proposed discharge.

<u>X</u>	<u> </u>
YES	NO

6. Factual Determination (Section 230.11).

A review of appropriate information as identified in items 2 - 5 above indicates that there is minimal potential for short or long term environmental effects of the proposed discharge as related to:

- | | | |
|--|----------|-------------------|
| a. Physical substrate
(review sections 2a, 3, 4, and 5 above). | <u>X</u> | <u> </u> |
| | YES | NO |
| b. Water circulation, fluctuation and salinity
(review sections 2a, 3, 4, and 5). | <u>X</u> | <u> </u> |
| | YES | NO |
| c. Suspended particulates/turbidity
(review sections 2a, 3, 4, and 5). | <u>X</u> | <u> </u> |
| | YES | NO |
| d. Contaminant availability
(review sections 2a, 3, and 4). | <u>X</u> | <u> </u> |
| | YES | NO |
| e. Aquatic ecosystem structure, function
and organisms(review sections 2b and
c, 3, and 5) | <u>X</u> | <u> </u> |
| | YES | NO |
| f. Proposed disposal site
(review sections 2, 4, and 5). | <u>X</u> | <u> </u> |
| | YES | NO |
| g. Cumulative effects on the aquatic
ecosystem. | <u>X</u> | <u> </u> |
| | YES | NO |
| h. Secondary effects on the aquatic
ecosystem. | <u>X</u> | <u> </u> |
| | YES | NO |

