

Information for File #2012-04057-NJC

Applicant: Wisconsin Department of Natural Resources

Corps Contact: Nathan Campbell

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Primary County: Pepin

Section: 30

Township: 25 N

Range: 12 W

Information Complete On: December 21, 2012

Posting Expires On: February 11, 2013

Authorization Type: Section 404

This application is being reviewed in accordance with the practices for documenting Corps jurisdiction under Sections 9 & 10 of the Rivers and Harbor Act of 1899 and Section 404 of the Clean Water Act identified in Regulatory Guidance Letter 07-01. We have made a preliminary determination that the aquatic resources that would be impacted by the proposed project are regulated by the Corps of Engineers under Section 404 of the Clean Water Act. Our jurisdictional review and final jurisdictional determination could result in modifications to the scope of the project's regulated waterbody/wetland impacts and compensatory mitigation requirements identified above. An approved jurisdictional determination will be made prior to reaching a permit decision, and will be posted on the St. Paul District web page at <http://www.mvp.usace.army.mil/>.

Project AFTER-THE-FACT APPLICATION? No

PROJECT INVOLVES:

THREATENED OF ENDANGERED SPECIES? No
TRIBAL TRUST OR OTHER RESOURCES? No
A LISTED STATE-IMPAIRED WATER? No
FEMA 100-YEAR FLOODPLAIN? No

COASTAL RIDGE&SWALE CMPLX? No
MINK, KAKAGON OR BAD RIVER? No
PLEASANT PRAIRIE ADID? No

PROJECT DESCRIPTION AND PURPOSE: The proposed project involves the stabilization and fish habitat enhancement project along a 1570 foot reach of Bear Creek in Pepin County Wisconsin. The site location was highly disturbed in the past during construction and realignment of highway 10 during a recent bridge construction. Flow restriction through the bridge creates increased velocity during high flood events which are further restricted by a 25 foot bedrock wall. The site closely parallels highway 10 which further reduces flood plain relief. The trees, soil and undergrowth along the reach have sheared and collapsed off the south bank as the creek undercut the toe of the slope. The instability and collapse has continued to migrate downstream as the stream cuts away the exposed toe-slope. The north bank of the creek has become steeply levied as the extreme sand bed-load from this site and upstream sources has built up during flood events.

The sandy north stream bank will be reshaped to a gradual 4 to 1 angle to reduce shear stress. Riprap will then be keyed into the toe substrate and carried upslope to the ordinary high water level. Riprap depth will be approximately 2 feet in depth. The south stream bank will require construction of a riprap bench along the base of the high collapsing scarp. Spoil material from the south bank will be used to backfill the bench and contour the bank to a natural appearance. All riprap will be covered with soil to approximately 1' above the base-flow waterline, seeded with grasses and immediately mulched. Approximately 35-8 foot Lunker structures will be placed on the outside bends of the reach to provide overhead cover habitat for trout. Root wads, logs and midstream boulders will provide further stabile cover for trout.

NAME, AREA AND TYPES OF WATERS (INCLUDING WETLANDS) SUBJECT TO LOSS: Fill will be placed in the entire 1570 foot reach of bear creek. No loss is expected as the stream function will only be improved flowing project completion. Temporary wetland impacts would be minimized by crossing the wetland areas and staging rock within the winter months when the soils are frozen sufficiently to support trucks. Staging sites for rock will be limited to the elevated levied margin of the creek. Excavation and soil disturbance will be within the wide creek channel or the narrow sand banks immediately next to the creek. No net loss of wetland will occur by these actions and any potential impacts will be limited to vegetation. Following procedures carried out at similar restoration sites following stabilization, native wetland prairie and trees will be planted where suitable.

ALTERNATIVES CONSIDERED: Without aggressive toe slope stabilization throughout the entire reach, collapse will migrate upstream until reaching the broader, lower elevation flood plain. The alternative of addressing or “spot treating” only areas of extreme collapse has passed as signs of slump and instability are evident throughout the reach. Any bioengineering alternatives are also unlikely to succeed as much of the topsoil and formerly stable forest is collapsing into the creek channel as the toe is carried away. Placement of grade controls alone to halt channel down cutting and lateral channel instability is no longer viable as the scale of instability has progressed beyond this alternative. A “no action” alternative would result in continued collapse and massive erosion within the reach before any channel equilibrium is attained. The added massive bed-load of sediment and debris would further result in degradation and initiation of a cycle of instability of costly restored sections of creek immediately downstream.

COMPENSATORY MITIGATION: No mitigation has been proposed.

Drawings See attached.

Map Created on Dec 28, 2012



Legend

Major Highways

- Interstate
- State Highway
- U.S. Highways
- County Roads
- Local Roads
- 24K County Boundaries
- Civil Towns**
- Civil Town
- PRF Other River Public Rights Features
- PRF Sensitive Rivers
- PRF Other Public Rights Features
- PRF Sensitive Areas of Lakes
- ASNRI Wild Rice Streams
- ASNRI Outstanding and Exceptional Streams
- ERW
- ORW
- ORW
- ASNRI Wild and Scenic Rivers
- ASNRI Trout Streams
- Class I Trout
- Class II Trout
- Class III Trout
- ASNRI Wild Rice Areas
- ASNRI Outstanding and Exceptional Lakes
- ERW

0 325 650 975 ft.



Scale: 1:3,440

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