

**FOCUSED FEASIBILITY STUDY REPORT
FOR
40TH AVENUE PROJECT AREA
IN THE ST. LOUIS RIVER AREA OF CONCERN**

August 28, 2015

**APPENDIX K. PUBLIC OUTREACH EXHIBITS AND SUBSTANTIAL
CORRESPONDENCE**

Presented in this Appendix are comments received during public outreach efforts at the 2015 St. Louis River Summit Poster and June 3, 2015 Duluth Harbor Technical Advisory Committee (HTAC) Meeting. The Appendix also includes the poster presented at the 2015 St. Louis River Summit.

Only comment card received during 2015 St. Louis River Summit Poster Presentation, March 31, 2015 through April 1, 2015.



Comment Card
40th Avenue West
Remediation to Restoration
Project
St Louis River AOC

Email your comments to:
ed.lilla@jewellassoc.com or
Return this comment form to the
address on the reverse side.


Comments:

Multiple small islands seem
an odd design for the St. Louis
R estuary - most bays are
enclosed by long curving
sandspits, e.g. Rush Bay,
North Bay, or the long curving
island in Spirit Lake. Seems like
a long curving sandspit from
RR peninsula, enclosing most of
bay south of Steamplant makes
more sense than several small
islands. Imitate natural fluvial
features in the St. Louis R. estuary.

Place
Stamp
Here

Jewell Associates Engineers
Attn: Ed Lilla
560 Sunrise Drive
Spring Green WI
53588

40th Avenue Remediation to Restoration - St. Louis River AOC

Zachary Jorgenson, USFWS; Ed Lilla, PE, Jewell; Jon Gumtow, PWS, Stantec

Abstract

Through the GLRI, the US Fish and Wildlife Service has completed a preliminary assessment, ecological design and Focused Feasibility Study (FFS) of the 40th Avenue Remediation to Restoration Project, a 330-acre segment of the St. Louis River estuary located in the City of Duluth. The restoration plan was completed with stakeholder involvement and will be implemented in phases as funding and future maintenance dredging activities are completed in the St. Louis River.

Goals and Objectives

Goal:

Delist the St. Louis River as an AOC by improving aquatic habitat and removing Beneficial Use Impairments (BUIs).

Objectives:

1. Improve benthic habitat
 - Remove sediment contamination
 - Remove anthropogenic substrate
2. Improve fish habitat
 - Reduce wind fetch and wave action
 - Restore submerged, floating, and emergent habitat
 - Create acres of overwinter habitat
3. Improve wildlife habitat
 - Restore nearshore habitats for water birds
 - Naturalize shoreline for herps and furbearers
4. Protect cultural resources
5. Improve eco-recreational use
6. Maintain industrial uses

Anticipated Implementation Timeline

Task	2014	2015	2016	2017	2018	2019
Feasibility Study						
Design						
AOC Construction						



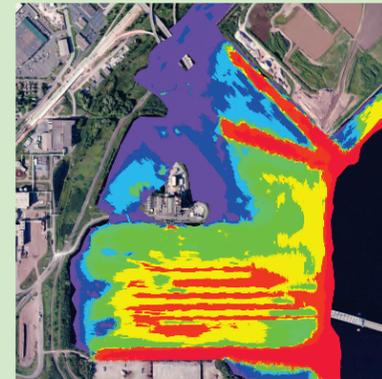
Comment Card
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Email your comments to:
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address on the reverse side.

Please provide written comments on this project using the comment card or via email to: ed.lilla@jewellassoc.com

Assessments

Bathymetry



Bathymetry shows a mix of shallow water and dredged slips from historic industrial use.

Wind Fetch



Wind fetch from the northeast increases wave action and seiche limiting aquatic vegetation habitat to sheltered areas.

Sediment



Sediment assessment shows limited areas of contaminated sediment and extensive anthropogenic substrate.

Shoreline



Shoreline mapping shows 12 different habitats, armored (55%) and naturalized (35%) banks. Invasive phragmites, buckthorn, reed canary grass plants also present.

Landownership



Landowners include a mix of public and private properties. Majority of the area is owned by the City (yellow) and State (magenta) intermixed with railroad (orange) and utility (blue) parcels.

Watershed



Watershed includes a 2.7 sq. mi. area of Duluth. Predominant land uses are open space (38%), residential (27%), commercial (16%), and industrial (14%).

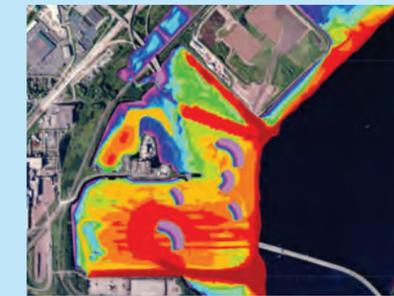
Design Concepts

Stormwater Design



Stormwater treatment design will decrease sedimentation and improve water quality from urban runoff.

Restoration Design

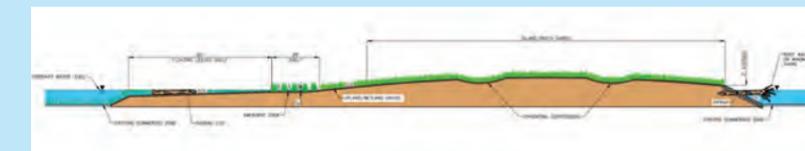


Restoration plan includes islands or shoals to control wind fetch and a combination of deep and shallow water habitat areas.

Island Rendering and Cross-Section

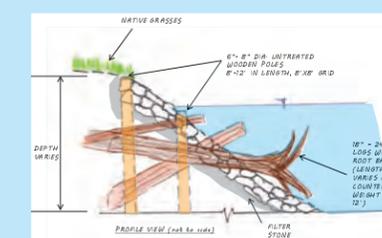


Left: Rendering showing islands and enhanced shallow water aquatic habitat on leeward side.



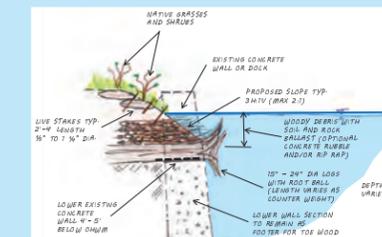
Below: Island cross-section showing deep water to shallow littoral zone and upland island habitats.

Rip-Rap Shoreline Enhancement Design Option



Existing rip-rap shoreline can be enhanced with woody debris, live staking and native vegetation to soften shoreline and improve habitat.

Concrete / Dock Enhancement Design Option



Existing concrete seawall can be enhanced by removing concrete below the water line and adding woody debris and native vegetation including live stakes to soften the shoreline and improve habitat.

June 3, 2015 Duluth Harbor Technical Advisory Committee (HTAC) presentation comments.

- Gary Glass of the Izaak Walton League of America questioned how big an issue the wood chips are and if they need to be removed. Diane Desotelle stated the worst wood waste sites like Grassy Point are being addressed. Other wood waste sites may have to wait for future projects.
 - Gary Glass was also concerned if the projects considered invasives such as viral hemorrhagic septicemia (VHS). He stated that we “might want to add VHS to the list of contaminants to show shippers.”
 - Howard McCormick of the St. Louis River Alliance was concerned about fisherman access to the 40th Project Area. Diane Desotelle stated fisherman will have access to any habitat features but there may not be access from shore. Several projects being worked on with the City of Duluth have shoreline fishing access addressed.
 - Howard McCormick suggested dividing the islands even further to limit territorial issues with bird nesting.
 - Andy McDonald, MIC Principal Planner, asked if the Berwind (MN Power/New Page) Dock access will be maintained. He was told the conceptual designs do not impact the future use of the slip.
 - Deborah DeLuca with the Duluth Seaway Port Authority thanked USFWS and MPCA and the rest of the Restoration Site Team for being open to changes in the concept designs based on stakeholder and public input.
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