



Great Lakes-Mississippi River Interbasin Study Background, Notes, and Caveats

Authorization

- WRDA 2007 – original study authorization
- MAP-21 – accelerated due date to January 2014; placed emphasis on Chicago Area Waterway System and required consideration of hydrologic separation

Report Contents

- Objectives
 - Prevent Aquatic Nuisance Species (ANS) Transfer
 - User and Resource Mitigation
- Main Strategies
 - Nonstructural
 - Technologies
 - Hydrologic Separation
 - Combo of Technologies and Hydrologic Separation
- Alternatives – Eight total; all relevant only to Chicago Area Waterway System
 - 18 other potential paths – Appendix N and previous interim reports
- Species considered
 - 13 Species pose High or Medium Risk
 - 3 threaten Great Lakes – all Medium Risk
 - 10 threaten Mississippi River – 2 High Risk
- New Technologies
 - GLMRIS Lock – active pumping out of water while ANS-free water pumped in
 - ANS Treatment Plant – a wastewater treatment plant specifically for providing ANS-free water for buffer zone, GLMRIS locks, etc.; screens, filters, and UV

Caveats

- No National Environmental Protection Act (NEPA) Analysis included
- Does not address: invasions via non-aquatic pathways; invasive species in nearby basins; future potential invaders not identified
- Vessel movement of commercial vessels considered but not recreational vessels portaged over land (or trailered)
- Potential for Adaptive Management (i.e. use of Buffer Zones)
- Nonstructural technologies not traditionally within purview of Army Corps – would require partnership implementation
- Risks to implementation: Funding, Real Estate, Permitting

Next steps

- Stakeholder engagement
- Identification of non-federal sponsor (35% cost-share of environmental restoration projects plus O&M) or waiver of statutory requirement
- National Environmental Protection Act (NEPA) analysis

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Alternative	Total Costs	Timeline (Yr)	Annual O&M Costs	Technology	Buffer Zone	Physical Barriers	Reduces ANS Impacts to Low*	Mitigation Measures	Water Quality Mitigation Costs	Flood Mitigation Costs	Navigation Impact Costs	Additional Notes
1 – No New Action	-	Immediate	\$51.7 M (FY12)	-	-	-	No	-	-	-	-	Continues Status quo
2 – Nonstructural	-	Immediate	\$68 M	-	-	-	Yes - 2 species	N/A	N/A	N/A	Minimal	Implemented w/all Alternatives 3-8
3 – Midsystem control NO Buffer Zone	\$15.5 B	25	\$210 M	GLMRIS Locks (2) ANS Treatment Plants (2)	No	None	Yes - 8 species	Stormwater Reservoirs (3) Conveyance Tunnels	N/A	\$9.1 B	\$0.75 M	
4 – Control Technology w/ANS Buffer Zone	\$7.8 B	10	\$220 M	GLMRIS Locks (3) ANS Treatment Plants (3) Screened Sluice Gates (3)	B/T Lake Michigan & Brandon Rd (IL)	State Line (IL/IN) Hammond (IN)	Yes - 8 species	Stormwater Reservoirs (2) Conveyance Tunnels	\$1.6 B	\$2 B	\$0.5 M	
5 – Lakefront Hydrologic Separation	\$18.3 B	25	\$160 M	ANS Treatment Plants (3)	No	Wilmette (IL) Chicago (IL) Calumet City (IL) Hammond (IN)	Yes - all 13 species	Stormwater Reservoirs (2) Conveyance Tunnels	\$0.5 B	\$14.5 B	\$210 M	Positive water quality impacts on Lake Michigan
6 – Mid-System Hydrologic Separation	\$15.5 B	25	\$140 M	ANS Treatment Plants (2)	No	Stickney (IL) Alsip (IL)	Yes - all 13 species	Stormwater Reservoirs (3) Conveyance Tunnels Relocate WRP outfalls (2) Sediment Remediation	\$12.9 B	\$0.024 B	\$250 M	Separation near original divide Minimizes flooding impacts to Chicago
7 – Mid-System Separation Cal-Sag Open Control Technologies w/ANS Buffer Zone	\$15.1 B	25	\$180 M	GLMRIS Locks (2) ANS Treatment Plants (2) Screened Sluice Gates (1)	B/T T.J. O'Brien & Brandon Rd (IL)	Stickney (IL) State Line (IL/IN) Hammond (IL)	Yes - 8 species	Stormwater Reservoirs (3) Conveyance Tunnels Relocate WRP outfall (1) Sediment Remediation	\$8.3 B	\$1.9 B	\$7.3 M	
8 – Mid-System Separation Chicago Open Control Technologies w/ANS Buffer Zone	\$8.3 B	25	\$160 M	GLMRIS Locks (2) ANS Treatment Plants (3) Screened Sluice Gates (2)	B/T Wilmette & Brandon Rd (IL)	Alsip (IL)	Yes - 8 species	Stormwater Reservoirs (2) Conveyance Tunnels Relocate WRP outfall (1) Sediment Remediation	\$4.3 B	\$0.145 B	\$8.8 M	

KEY

O&M: Operation and Maintenance Costs. Includes costs of non-structural measures for Alternatives 3-8

GLMRIS: Great Lakes-Mississippi River Interbasin Study

ANS: Aquatic Nuisance Species

*Reduction of impacts of ANS assessed at the 50-year timeframe. All Structural Alternatives 3-8 reduce risk of Asian carp species to low



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