

Amended June 2023

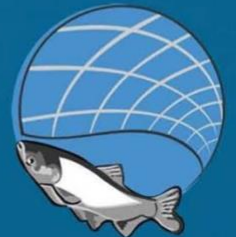
2022

INVASIVE CARP

ACTION PLAN



INVASIVE CARP REGIONAL
COORDINATING COMMITTEE



FY 2022 Invasive Carp Action Plan Amendment

Members of the Invasive Carp Regional Coordinating Committee (ICRCC) members are committed to the goal of developing and implementing a comprehensive strategy to prevent the introduction and establishment of invasive carp in the Great Lakes. This amendment adds an additional strategic control measure to support the ICRCC mission to protect the Great Lakes from invasive carp.

At the request of U.S. Army Corps of Engineers (USACE), project GC-13: *Development of a Feasibility Study to Evaluate Alternatives to Impede the Upstream Movement of Grass Carp in the Sandusky River* is added by amendment to the FY 2022 Invasive Carp Action Plan. This project will be funded through FY 2022 funding from the Energy and Water Development and Related Agencies Appropriations Act, 2022 (which is title of section D of the Consolidated Appropriations Act of 2022). USACE's FY 2022 work plan subsequently provided \$2,822,000 through the Great Lakes Fishery and Ecosystem Restoration Program (GLFER). The USACE will use \$402,500 of unobligated FY22 GLFER funding for the project. Non-federal cost-share will be \$297,500.

This Action Item package is an amendment to the approved FY 2022 Invasive Carp Action Plan and includes a new action item, as described above, for the control and management of invasive carp the Great Lakes. This package also revises Appendix A FY 2022 Funding Matrix.

FY 2022 Invasive Carp Action Plan Appendix B Amendment

The following project is added to the Action Plan:

GC-14: Development of a Feasibility Study to Evaluate Alternatives to Impede the Upstream Movement of Grass Carp in the Sandusky River

Lead Agency: USACE

Agency Collaboration: GLFC, OH DNR, MI DNR, USGS

GLRI Funding: \$0

Agency Funding: \$404,775 (GLFER); \$297,500 non-federal Cost-share

Project Summary

This project will result in the development of a feasibility study that will evaluate a suite of alternatives based on project objectives of a barrier designed to impede upstream movement of grass carp to known spawning grounds in the Sandusky River, Ohio. This project is part of an adaptive response strategy endorsed by the Lake Erie Committee to control and possibly prevent establishment of grass carp in the Great Lakes by limiting access to 11,000 acres of spawning habitat through employment of one or more barrier technologies, to include behavioral barrier systems and physical-hydraulic barrier systems. The barrier will minimize disturbance to native migratory fish species that also use the Sandusky River for spawning. The barrier will also minimize impacts to recreational navigation.

Project Description

Grass carp (*Ctenopharyngodon idella*) is an invasive aquatic nuisance species (ANS) and has been identified in Lake Erie in the Sandusky River. Grass carp are highly adaptable and pose a threat to the fishery if population expansion and population growth are not effectively controlled. Currently, state and federal agencies are pursuing control of grass carp through targeted removals as part of the Lake Erie Committee's Adaptive Response Strategy, but a bi-national structured decision-making (SDM) process identified that a seasonal barrier in the Sandusky River would improve the control effort. If left unmanaged, grass carp can have broad ecologic impacts including habitat alteration and disruption of the food web.

Potential locations for a behavioral and/or a physical-hydraulic grass carp barrier have been identified at the downstream extent of Brady's Island and downstream of State Street Bridge in the Sandusky River at Fremont, OH.

Construction of a barrier focused on impeding upstream movement of grass carp to suitable spawning habitat in the river and tributaries will have benefits that outweigh the negative impacts of grass carp.

Project benefits would consist of prevention of grass carp from accessing 3,696 RM or 11,826 acres of spawning habitat in the Sandusky River watershed, thereby reducing grass carp populations in Lake Erie and in turn reducing impacts on habitat and native species. Barriers would reduce grass carp impacts, while maintaining river connectivity and not impairing native migratory fish species or current recreational use of the water body.

Figure B-44 — Proposed Barrier Locations and Areas Protected in the Sandusky River



Amended FY 2022 Invasive Carp Action Plan

Action	Lead Agency	Project Title	GLRI Funding	Agency Funding
Prevention Action P-1	IL DNR	Alternate Pathway Surveillance in Illinois	\$150,000	\$0
Prevention Action P-2	USACE	Electric Dispersal Barrier System	\$0	\$19,498,000
Prevention Action P-3	USGS	USGS Support of the GLMRIS Brandon Road Project	\$80,000	\$0
Prevention Action P-4	USACE	Design and Construction of the Brandon Road Lock and Dam Aquatic Nuisance Species Barrier Project	\$0	\$230,778,000
Technology Action T-1	IL DNR	Evaluation of Fish Sorting Technology to Promote Invasive Carp Harvest and Native Species Passage	\$625,000	\$0
Technology Action T-2	USACE	Acoustic Deterrents for Invasive Carp	\$1,469,700	\$0
Technology Action T-3	USFWS	Acoustic Deterrents for Invasive Carp	\$1,150,000	\$800,000
Technology Action T-4	USGS	Acoustic Deterrents for Invasive Carp	\$1,695,000	\$469,000
Technology Action T-5	USACE	Carbon Dioxide Deterrence for Invasive Carp	\$350,000	\$0
Technology Action T-6	USGS	Implementation and Planning for a Carbon Dioxide Deployment	\$200,000	\$0
Technology Action T-7	USGS	Carbon Dioxide Deterrence for Invasive Carp	\$150,000	\$360,000
Technology Action T-8	USACE	Experimental Field Testing of Longitudinal Bubbler Arrays for Barge Entrainment Mitigation	\$1,600,000	\$0
Technology Action T-9	USFWS	Experimental Field Testing of Longitudinal Bubbler Arrays for Barge Entrainment Mitigation	\$250,000	\$0
Technology Action T-10	USGS	Prevention of Barge-Induced Transport of Aquatic Nuisance Species	\$100,000	\$0

Action	Lead Agency	Project Title	GLRI Funding	Agency Funding
Technology Action T11	USGS	Science Support for Control Efforts in the Illinois Waterway and Other Priority Sites	\$100,000	\$75,000
Technology Action T-12	USFWS	Technology Registration and Environmental Review	\$40,000	\$15,000
Technology Action T-13	USGS	USGS Multi-Deterrent Efficacy and Operations	\$50,000	\$0
Technology Action T-14	USACE	USACE Multi-Deterrent Efficacy and Operations	\$527,900	\$0
Monitoring Action M-1	IL DNR	Illinois Waterway Detection, Management and Control, and Contingency Planning for Invasive Carp	\$3,973,800	\$0
Monitoring Action M-2	IL DNR	Assessment of Invasive Carp Reproduction and Ecosystem Response in the Illinois Waterway	\$462,000	\$0
Monitoring Action M-3	IL DNR	Invasive Carp Stock Assessment in the Illinois River/Management Alternatives	\$550,000	\$0
Monitoring Action M-4	USFWS	Great Lakes Early Detection, Monitoring, and Evaluation	\$350,000	\$1,400,000
Monitoring Action M-5	USFWS	Invasive Carp Demographics	\$240,000	\$120,000
Monitoring Action M-6	USFWS	Des Plaines River Overflow Monitoring	\$15,000	\$0
Monitoring Action M-7	USFWS	Illinois River Monitoring and Response Team Support	\$70,000	\$275,000
Monitoring Action M-8	USFWS	Midwest Region Fisheries Program Capacity for eDNA Sampling and eDNA Processing	\$0	\$2,400,000
Monitoring Action M-9	USACE	Telemetry in the Upper Illinois River	\$0	\$200,000
Monitoring Action M-10	USFWS	Telemetry Support for the Spatially Explicit Invasive Carp Population (SEICarP) Model	\$110,000	\$250,000
Monitoring Action M-11	USFWS	Illinois River Hydroacoustics	\$125,000	\$0
Monitoring Action M-12	USGS	Real-Time Telemetry and Multi-State Modeling	\$105,000	\$104,000

Action	Lead Agency	Project Title	GLRI Funding	Agency Funding
Monitoring Action M-13	USFWS	Early Detection of Invasive Carp in the Upper Illinois Waterway	\$350,000	\$600,000
Monitoring Action M-14	USFWS	Upper Illinois Waterway Small Invasive Carp Distribution Monitoring	\$150,000	\$200,000
Control Action C-1	IL DNR	Contract Fishing for Invasive Carp Detection and Removal	\$1,600,000	\$0
Control Action C-2	IL DNR	Invasive Carp Enhanced Contract Removal	\$885,300	\$0
Grass Carp Action GC-1	Ohio DNR	Adaptive Management Framework for Grass Carp in Lake Erie	\$600,000	\$0
Grass Carp Action GC-2	MI DNR	Implementation of an Adaptive Management Framework for Grass Carp in Lake Erie	\$325,000	\$150,000
Grass Carp Action GC-3	USFWS	Implementation of an Adaptive Management Framework for Grass Carp for the Great Lakes	\$1,160,000	\$650,000
Grass Carp Action GC4	USGS	SpawnCast - A Grass Carp Spawning Event Prediction Tool	\$90,000	\$0
Grass Carp Action GC-5	USGS	Identification of Optimal River Conditions for Spawning and Recruitment of Invasive Carps in Tributaries of the Western Basin of Lake Erie	\$85,000	\$0
Grass Carp Action GC-6	USGS	Evaluation of Bait and Attractants to Increase Aggregation and Harvest of Grass Carp in the Lake Erie Basin	\$175,000	\$1,075,687
Grass Carp Action GC-7	USGS	Efficacy of an Oblique Bubble Screen System as a Two-Way Dispersal Barrier for Invasive Carp	\$205,000	\$205,000
Grass Carp Action GC-8	USGS	Improved Control Efficiency through Better Understanding of Grass Carp Movements and Habitat Use	\$200,000	\$630,000
Grass Carp Action GC-9	USGS	Identifying Spawning Tributaries and Specific Spawning Areas of Grass Carp	\$200,000	\$485,067
Grass Carp Action GC-10	USGS	Characterization of Hydrology and Sediment Mobility to Inform Design of a Seasonal Barrier in the Sandusky River	\$280,000	\$0
Grass Carp Action GC-11	USGS	Development and Testing of Deterrent Technologies for Grass Carp	\$195,000	\$0

Action	Lead Agency	Project Title	GLRI Funding	Agency Funding
Grass Carp Action GC-12	USFWS	Grass Carp Ploidy Analysis to Assess Reproductive Risk of Detected Populations	\$65,000	\$110,590
Grass Carp Action GC-13	USACE	Sandusky River Grass Carp Barrier	\$250,000	\$0
Grass Carp Action GC-14	USACE	Development of a Feasibility Study to Evaluate Alternatives to Impede the Upstream Movement of Grass Carp in the Sandusky River	\$0	Agency Funding: \$404,775 (GLFER); \$297,500 non-federal Cost-share***
N/A	GLFC	Grass Carp Control in the Lake Erie Basin	\$0	\$1,000,000
Black Carp Action BC-1	IL DNR	Enhanced Detection of Black Carp in the Lower Illinois River	\$188,000	\$0
Black Carp Action BC-2	IL DNR	Black Carp Management and Control-Coordination and Support	\$68,500	\$61,000
Black Carp Action BC-3	USGS	Black Carp Monitoring, Assessment and Control	\$450,000	\$120,000
Decision Support Action DS-1	IL DNR	Invasive Carp Enhanced Contract Removal, Marketing, Assessment, and Management	\$188,600	\$0
Decision Support Action DS-2	NOAA	Modeling Potential Invasive Carp Recruitment, Population Growth, and Food Web Effects in Great Lakes Tributaries	\$110,800	\$60,000
Decision Support Action DS-3	USFWS	Invasive Carp Population Modeling to Support an Adaptive Management Framework	\$200,000	\$100,000
Decision Support Action DS-4	USGS	Invasive Carp Population Modeling to Support an Adaptive Management Framework	\$100,000	\$270,000
Decision Support Action DS-5	USGS	Invasive Carp Database Management and Integration Support	\$82,000	\$378,000
Communication Action COMM-1	USFWS	ICRCC Strategic Communications	\$200,000	\$100,000
Partnership Operations Action PO-1	USFWS	ACRCC Partnership Operations Assistance	\$41,000	\$41,000

Action	Lead Agency	Project Title	GLRI Funding	Agency Funding
Partnership Operations Action PO-2	USFWS	Coordination and Facilitation for the Chicago Area Waterway System Aquatic Invasive Species Stakeholder Group	\$54,000	\$0
Partnership Operations Action PO-1	USACE	GLMRIS Program Management	\$0	**
Total Funding			\$23,136,600	\$262,980,344
FY 2022 GLRI Funding			\$21,000,000	
FY 2021 Carry-over Funding			\$2,136,600	

*Agency funding subject to final appropriation. All FY 2022 funding projections are based on appropriations provided by H.R. 6119, the “Further Extending Government Funding Act” which includes a short-term continuing resolution that provides fiscal year 2022 appropriations to Federal agencies through February 18, 2022.

**Funding for GLMRIS Program Management is included in USACE Base funding under Coordination with Other Water Resource Agencies.

*** Agency Funding: \$404,775 (GLFER); \$297,500 non-federal Cost-share

Amended FY 2022 Invasive Carp Action Plan Funding by Agency

Agency	GLRI Funding FY 2022	Agency Funding FY 2023
IL DNR	\$8,722,700	\$0
OH DNR	\$600,000	\$0
MI DNR	\$325,000	\$150,000
NOAA	\$110,800	\$60,000
GLFC	\$0	\$1,000,000
USACE	\$4,197,600	\$250,476,000*
USFWS	\$4,638,500	\$7,122,590
USGS	\$4,542,000	\$4,171,754
Total	\$23,136,600	\$262,980,344

*USACE Agency Funding amended to include: Development of a Feasibility Study to Evaluate Alternatives to Impede the Upstream Movement of Grass Carp in the Sandusky River, Agency Funding: \$404,775 (GLFER); \$297,500 non-federal Cost-share***