Lessard-Sams Outdoor Heritage Council

Action Agenda Item Memo

DATE: December 12, 2013

SUBJECT: ML 2012, Ch. 264, Art. 1, Sec. 2, Subd. 5h Protect Aquatic Habitat from Asian Carp

PRESENTER: Nick Frohnauer

Background:
ML 2012, Ch. 264, Art. 1, Sec. 2, Subd. 5h Protect Aquatic Habitat from Asian Carp recommended $7.5 million to the Department of Natural Resources "to design, construct, operate, and evaluate structural deterrents for Asian carp to protect Minnesota's aquatic habitat." The council would like the DNR to provide an update on the work accomplished to-date and a plan for how the balance of the appropriation is to be spent.

Suggested Motion:
No motion suggested

Suggested Procedure:
Council members discuss program with project manager. If desired, motion is placed before the council.

Agenda Item 5

Lessard-Sams Outdoor Heritage Council

Laws of Minnesota 2013 Accomplishment Plan

Date: 8/21/12

Program Title: Protect Aquatic Habitat from Asian Carp

Manager's Name: Tim Schlagenhaft
Title: Mississippi River Planner
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Funds Recommended: $7,500,000

Legislative Citation: ML 2012, Ch. 264 Art. 1, Sec. 2, Subd. 2 (h):

(h) **Protect Aquatic Habitat from Asian Carp**

$7,500,000 in the second year is to the
of natural resources to
, construct, operate, and evaluate
deterrents for Asian carp to protect
aquatic habitat. Use of this
requires a one-to-one match for
on state boundary waters

Abstract:

Funding will be used to design, install and evaluate deterrent barriers in Minnesota and to cost share barriers in northwest Iowa to limit or slow the movement of Asian carp.

Program Narrative

Design and Scope of Work

Asian carp are threatening Minnesota. Recent captures and eDNA evidence highlight the need to limit or slow the movement of Asian carp into the Mississippi, Minnesota, St. Croix and other rivers in Minnesota to prevent damage to native fishes and ecosystems. Most recently, significant catches of bighead and silver carp in Lake Okoboji in northwest Iowa have resulted in new threats of entry into Minnesota from the Missouri River drainage as well. Where Asian carp have established reproducing populations, they have impacted native species and caused safety concerns and impacted recreational activities.

Deterrent barriers that use electricity have proven the most effective in slowing or stopping the spread of Asian carp. In addition, other technologies such as sound and bubbles have proven effective in

laboratory and small-scale field studies. Deterrent barriers are important tools for limiting or slowing the spread of Asian carp in Minnesota while other long-term control methods are developed.

Most locations on the Mississippi are unsuitable for deterrent barriers due to the nature and extent of flooding that often overtops levees and requires the Corps of Engineers to pull the gates out of the water at most locks and dams. The lock chamber at Lock and Dam 1 (Ford Dam) provides a unique opportunity in that it is one of only 3 dams on the commercially navigable portion of the Upper Mississippi River that does not have gates, and the only way fish can pass is by swimming through the lock chamber. Lock and dam 1 provides an opportunity for electric deterrent barriers to be more effective.

Recent catches of Asian carp in Lake Okoboji in northwest Iowa have prompted significant concern as there are several tributaries into which these fish could enter Minnesota waters. Constructing electrical barriers or other permanent physical barriers on these tributaries will slow or stop the spread of Asian carp. In addition, the Iowa Department of Natural Resources is proposing to construct electrical barriers at key sites in Iowa to prevent additional migration into Lake Okoboji and other tributaries. Providing cost share to construct electrical barriers at these sites would help prevent entry into Minnesota.

Electrical barriers are preferred, however, there are significant safety and structural issues associated with electrical barriers that must be addressed prior to construction, especially with construction at a lock. If these issues are unable to be resolved, other technologies would be considered.

Any barriers would be evaluated pre and post construction to determine their effectiveness in blocking fish movement, including impacts to native species. Evaluations would be completed by implanting radio tags in native fish, including surrogate species for Asian carp, and tracking movements using stationary receivers deployed at locations within the Mississippi River near Lock and Dam 1. This evaluation would document native fish movement around barriers and their potential impacts to native species.

Planning

Preventing negative impacts from invasive species is a critical component of Minnesota's State Management Plan for Invasive Species. Specific to Asian carp, the plan identifies barriers as a tool for minimizing impacts. Minnesota's Asian Carp prevention plan, and a 2004 study evaluating alternatives to minimize the spread of Asian carp into Minnesota also identify deterrent barriers as a potential tool.

Many tools are needed to combat invasive species, and barriers are part of an overall strategy that includes education, prevention, control, and improved habitat for native species. Barriers could concentrate Asian carp and other invasive species to more effectively utilize attractants, toxicants, fish traps, and other tools designed to reduce or control populations.

The feasibility of deterrent barriers at various locations in Minnesota has been evaluated. At this time, lock and dam 1 and several tributaries in the Little Sioux River watershed in southwest Minnesota and northwest Iowa are considered the best sites. These locations are suited to modifying existing barriers or constructing new barriers and are considered sites at high risk from Asian carp. Additional locations have been evaluated including the mouth of the St. Croix River, Mississippi River lock and dam #2 at Hastings, and the Minnesota River at Mankato. Barriers at these locations would be very costly and may not prove effective. Nevertheless, more information is needed before determining whether a barrier could be effective at these sites. Funding will be used to hire an impartial contractor to continue

evaluating the feasibility of barriers at these sites. DNR has been advised that there is no constitutional, statutory, or legislative appropriation language that would prohibit using OHF appropriation for a project located out-of-state, as long as the project is meant to restore, protect, and enhance habitat for fish, game, and wildlife in Minnesota.

Relationship to Other Constitutional Funds

A one-to-one match is required for any funds that would be used for barriers in IA. Any costs related to operation and maintenance of these barriers would be the responsibility of the state of Iowa.

Relationship to Current Organizational Budget

Traditional sources of funding are not available to construct a deterrent barrier. Without Outdoor Heritage funding this project is not likely to be completed.

Sustainability and Maintenance

Intention would be to maintain and operate barriers as long as necessary to minimize impacts from Asian carp.

Outcomes

Asian carp have less impact on native species and ecosystems. Fishing and boating will not be negatively affected.

Accomplishment Timeline

Activity	Milestone	Date completed
Complete design and specifications and all permit requirements for electric barrier at Lock and Dam 1 and deterrent barriers at five locations in Southwestern MN	design and specifications report, approved Corps of Engineers Section 408 permit for lock 1, and any permits required for SW MN barriers	8/15/2013
Construct electric barrier at Lock and Dam 1 and deterrent barriers at five locations in Southwestern MN	Complete construction	Installation completed by 3/31/2014
Develop cost share agreement with State of Iowa to construct barrier at Lower Gar Outlet	Signed cost share agreement	10/1/2012

Table B-2. Other Outcome Table

(This table should be used instead of attachment B for activities that are not counted in acres, miles etc. If you use attachment B you can delete this table from the accomplishment plan.)

Goal 1	Activity – P/R/E	Measure	Impact	Ecological Type
Slow spread of Asian Carp into Upper Mississippi	Protect	Asian carp populations above and below	Asian carp populations remain low and native species are not being	Aquatic habitat

River and Southwestern Minnesota		the barriers	impacted by Asian carp. Native species are minimally affected by the barrier.*	

*evaluating the impact on native species will include fish tagging and movement studies.

Attachments *(on spreadsheet workbook – 3 separate tabs):*

A. Budget
C. Parcel List
No Map is needed for the accomplishment plan

Attachment A. Budget Spreadsheet

Name of Proposal:	Protect Aquatic Habitat from Asian Carp
Legislative Citation:	
Date:	8/21/2012

Link HERE to definitions of the budget items below.

Total Amount of Request $ 7,500,000 *From page 1 on the funding form.*

Personnel

	FTE	Over # of years	LSOHC Request	Anticipated Cash Leverage	Cash Leverage Source	Total
Position breakdown here						
Fisheries Specialist	*1*	1	$ *60,000*			$ 60,000
Admin Asst						$ -
position 3						$ -
position 4						$ -
position 5						$ -
position 6						$ -
position 7						$ -
Total	1		$ 60,000	$ -	$ -	$ 60,000

Budget and Cash Leverage *(All your LSOHC Request Funds must be direct to and necessary for program outcomes.)*

Please describe how you intend to spend the requested funds.

Budget Item	LSOHC Request	Anticipated Cash Leverage	Cash Leverage Source	Total
Personnel - *auto entered from above*	$ 60,000	$ -	$ -	$ 60,000
Contracts	$ *6,991,000*			$ 6,991,000
Fee Acquisition w/ PILT ***(breakout in table 7)***				$ -
Fee Acquisition w/o PILT ***(breakout in table 7)***				$ -
Easement Acquisition				$ -
Easement Stewardship				$ -
Travel (in-state)				$ -
Professional Services	$ *261,000*			$ 261,000
Direct Support Services	$ *98,000*			$ 98,000
DNR Land Acquisition Costs				$ -
Other				$ 180,000
Capital Equipment (*auto entered from below*)				$ -
Other Equipment/Tools	$ *90,000*			
Supplies/Materials				$ -
	$ 7,500,000	$ -	$ -	$ 7,590,000

Capital Equipment *(single items over $10,000 - auto entered into table above)*

Item Name	LSOHC Request	Leverage
Truck		
Item 2 enter here		
Item 3 enter here		
Item 4 enter here		
Item 5 enter here		
Item 6 enter here		
Item 7 enter here		
Item 8 enter here		
Total	-	-

Attachment C. Parcel List

Name of Proposal: Protect Aquatic Habitat from Asian Carp
Legislative Citation:
Date: 8/21/2012

Parcel Name	County	Township (25-258)	Range (01-51)	Direction most parcels are 2 with the exception of some areas of Cook County which is 1	Section (01 thru 36)	TRDS	# of acres	Budgetary Estimate (includes administrative, restoration or other related costs and do not include matching money contributed or earned by the transaction)	Description	Activity PF=Protect Fee PE=Protect Easement PO=Protect Other R=Restore E=Enhance	If Easement, what is the easement cost as a % of the fee acquisition?	Any existing protection? (yes/no)	Open to hunting and fishing? (yes/no)
Lock and Dam #1 lock chamber	Hennepin	28	23	2	17	282317	N/A	$5,580,000	Install electric barrier	PO		N	*Y*
Site 1: Okabena Breach 1	Jackson	102	38	2	5	1023825	N/A	$600,000	dike or electrical barrier	PO		N	
Site 2: Heron Lake Breach	Jackson	102	37	2	4	1023724	N/A	$40,000	reinforce dike	PO		Partial	
Site 3: Okabena Breach 2	Jackson	102	38	2	7	1023827	N/A	$30,000	reinforce dike	PO		Partial	
Site 4: Herlein-Boote WMA	Jackson	102	41	2	12	10241212	N/A	$150,000	water control structure	PO		Partial	
Site 5: Lower Gar Lake outlet	Dickenson, IA	98	36	2	6	983626	N/A	$500,000	cost share agreement with IA to construct electric barrier	PO		N	
Site 6: Indian/Iowa	Jackson	101	37	2	28	10137228	N/A	$400,000	electric barrier	PO		N	
Evaluate barrier sites							N/A	200,000	evaluate lock and dam 2, St. Croix River, Minnesota River at Mankato as barrier sites	PO		N	

Information provided will be used to map project locations. Incomplete or inaccurate information will result in that parcel or program not being mapped.