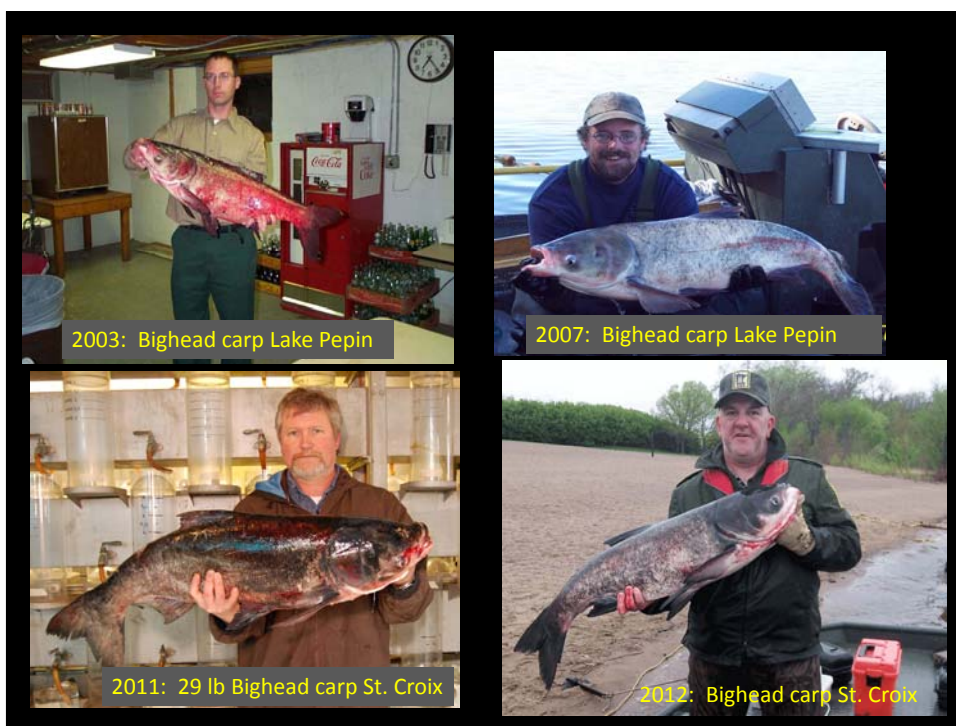


Minnesota Asian Carp Update

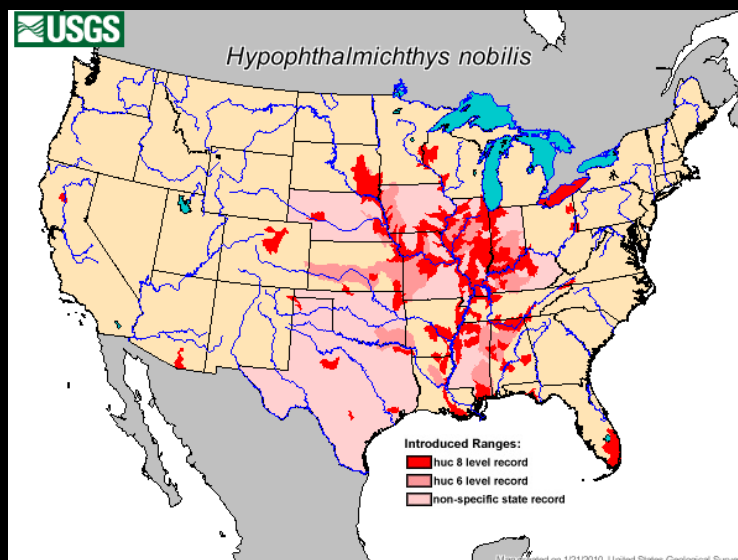
LCCMR Meeting
June 5, 2012

Why are we concerned?

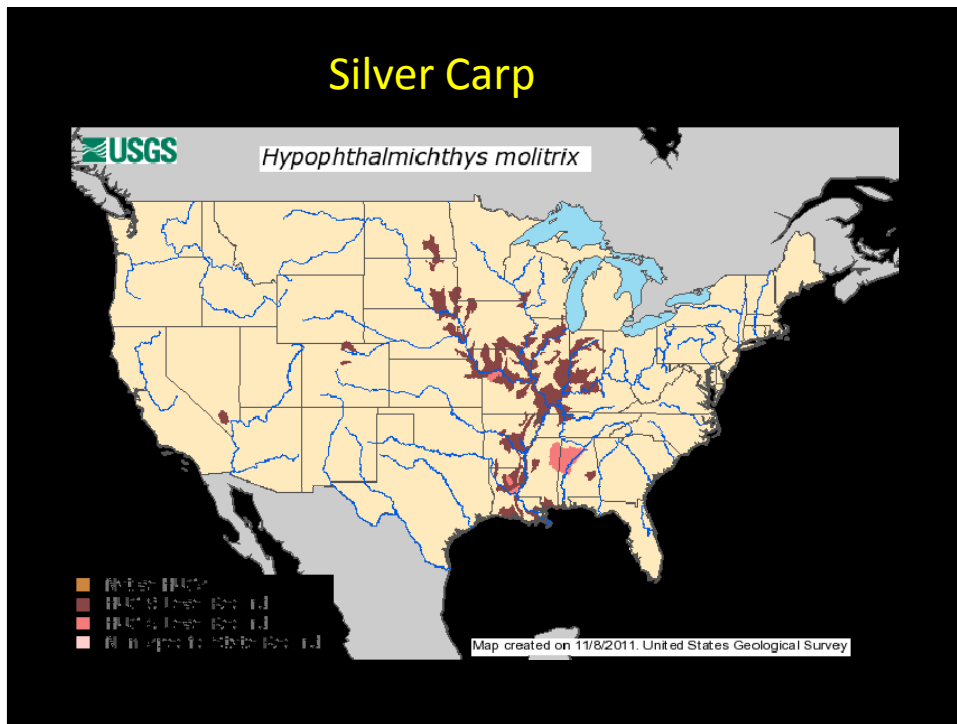
- Has been a rapid expansion within the Mississippi River basin with significant ecological and recreational impacts
- Minnesota's rivers and lakes are rich in ecological value and critical to Minnesota's economy and way of life – we are threatened by Asian carp
- Asian carp have been captured in Minnesota in low numbers, but there is still time to do something



Bighead Carp

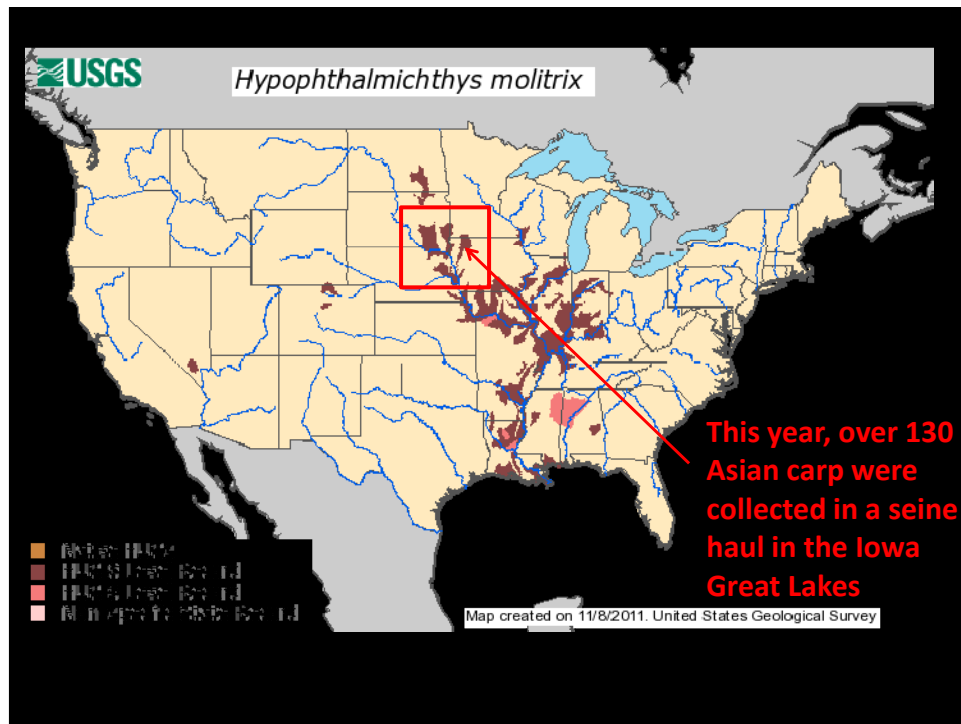


Silver Carp

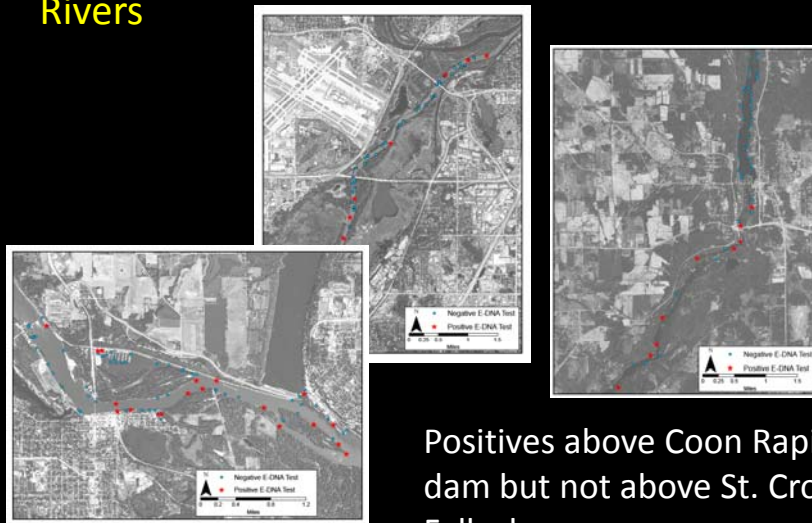


Upper Mississippi River System





Consistent positive eDNA results for Silver carp in the Upper Mississippi, St. Croix, Minnesota Rivers



eDNA Next Steps

- Challenges in understanding a positive
- Assume there is a high likelihood that Asian carp are present and that we need to take immediate action
- Working closely with Corps and other partners to verify results by testing duplicate samples – will determine future eDNA applications in MN

Asian Carp Task Force – formed in January, 2011

Agency or organization representatives

- National Park Service (co-chair)
 - Mississippi National River and Recreation Area
 - St. Croix National Scenic Riverway
- Minnesota Department of Natural Resources (co-chair)
- US Fish and Wildlife Service
- US Geological Survey
- Minnesota Department of Transportation
- Wisconsin Department of Natural Resources
- City of Minneapolis
- City of St. Paul
- City of Hastings
- Prairie Island Indian Community
- Shakopee Mdewakanton Sioux Community
- Three Rivers Park District
- Saint Paul Port Authority

Technical advisors

- University of Minnesota (Peter Sorensen, Loren Miller)
- US Army Corps of Engineers, St. Paul District
- Mississippi River Fund
- St. Croix Valley Foundation

Observers

- Friends of the Mississippi
- Upper Mississippi River Waterways Association
- St. Croix River Association

Task Force Action Plan

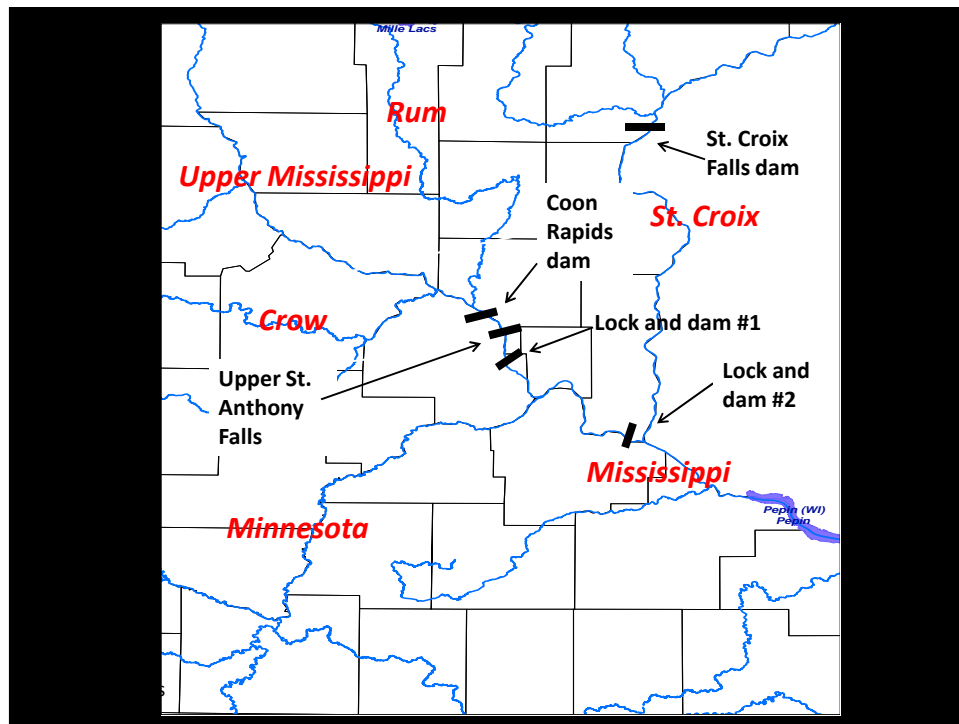
- Early detection and response
- Prevention and deterrence
- Mitigation and control
- Communication and outreach

Current Priorities

- Monitoring and detection
- Barriers
- Research
- Habitat restoration

Monitoring - accelerated commercial fishing





Lock Closure – Upper St. Anthony Falls

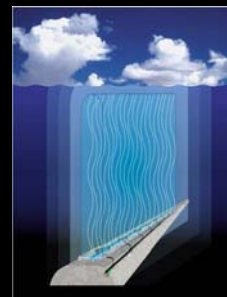
- Top DNR priority - only 100% effective way to prevent Asian carp from swimming further upstream
- May be needed under emergency conditions while investigating other options to prevent movement through lock
- Important to understand impacts

s.2164 Upper Mississippi Carp Act

- Feasibility study on temporary lock closure at Upper St. Anthony Falls (USAF)
- Requires lock closure if adult Asian carp collected upstream L&D 2 and juvenile collected upstream L&D 4
- Requires incorporating UMR into federal framework
- Encourages federal agencies conducting research to partner and cost share with states

Deterrent Barriers

- \$7.5 million approved Outdoor Heritage funding
- Lock chamber at L&D 1 top priority, also considering locations in SW MN
- L&D 2 and mouth St. Croix being considered but very expensive and unlikely to be effective
- Electricity most effective, but need to work through safety and other issues
-



Lock and Dam 2

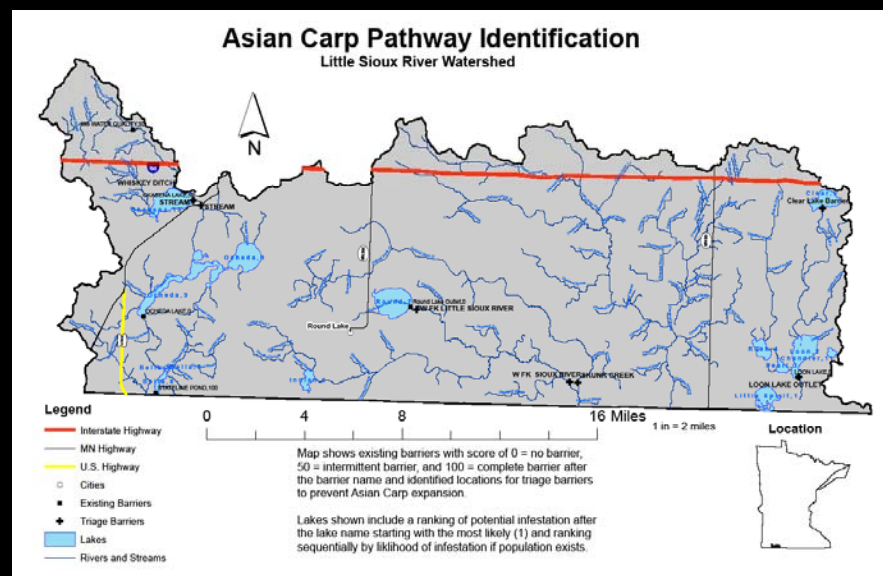
- Velocities through gates thought to be high enough to prevent fish passage
- Swimming speeds of Asian carp likely similar to Pacific salmon – 17 ft/second sustained, 23 ft/second burst
- 19 of the past 20 years sustained speed exceeded gate velocities (average 50 days/year)
- 20 of the past 20 years burst speed exceeded gate velocities (average 98 days/year)

Lock and Dam 19 – Keokuk, IA

- High head dam similar to L&D 1 where fish can pass only through lock
- Would prevent other species (black carp, snakehead) from getting upstream
- Require leadership from federal gov't and cooperation of IA and IL
- Minnesota willing to assist

Statewide risk assessment

- Identify existing barriers, access to key tribs and lakes
- Identify potential connections between watersheds
- Identify areas most at risk
 - Plankton availability
 - Spawning and nursery habitat
- Identify opportunities to slow, stop, or control populations



Habitat restoration

- Improves resiliency of native species so they can better compete with Asian carp
- Utilize tools that have been successful further downstream in the Mississippi River
 - Water level drawdown
 - Island construction



Research

- Critical need for controlling Asian carp long-term
- Legislature approved \$3.8 million funding for Aquatic Invasive Species Research Center at University of MN
- Build upon and apply research being conducted through GLMRIS and other Great Lakes related work

Research examples

- Chemical toxins specific to Asian carp
- Chemical attractants to concentrate fish for removal
- Genetic/reproduction manipulation
- Barrier types and effectiveness
- Water cannons to deter or kill fish

Minnesota Leadership and Commitment

- Governor Dayton hosted three summits with agency leaders, legislators, conservation NGO's
- State legislature and Governor's office working to provide funding
- Federal legislators introduced bill to address Asian carp in Minnesota
- Multi agency/NGO task force
- DNR dedicated staff time and funding