



Minnesota DNR Invasive Carp Briefing

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Background on Invasive Carp in Minnesota

Earliest Captures



Grass Carp (1977)



Bighead Carp (1996)

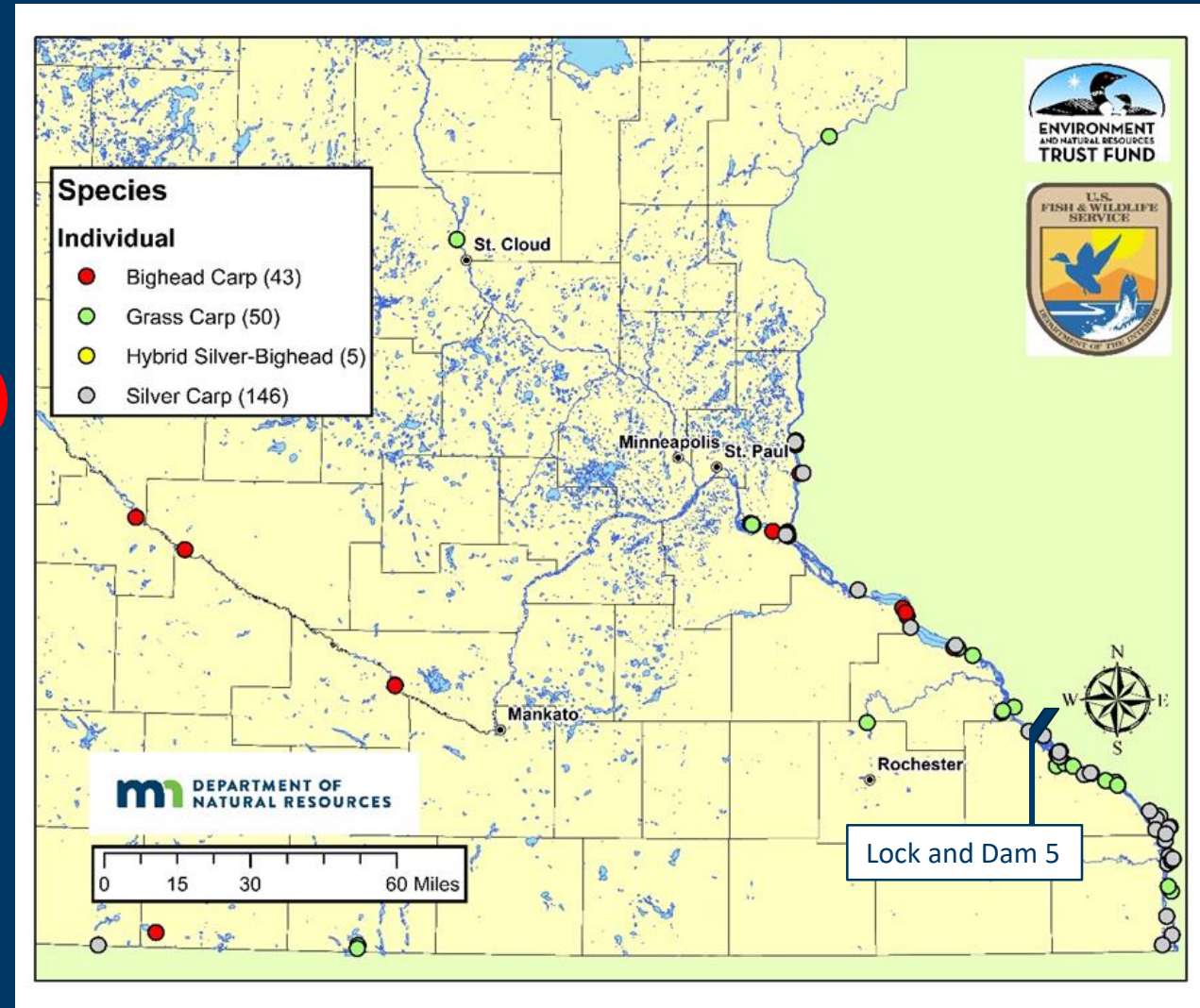


Silver Carp (2008)



Black Carp (N/A)

Map of Captures 1977-2021



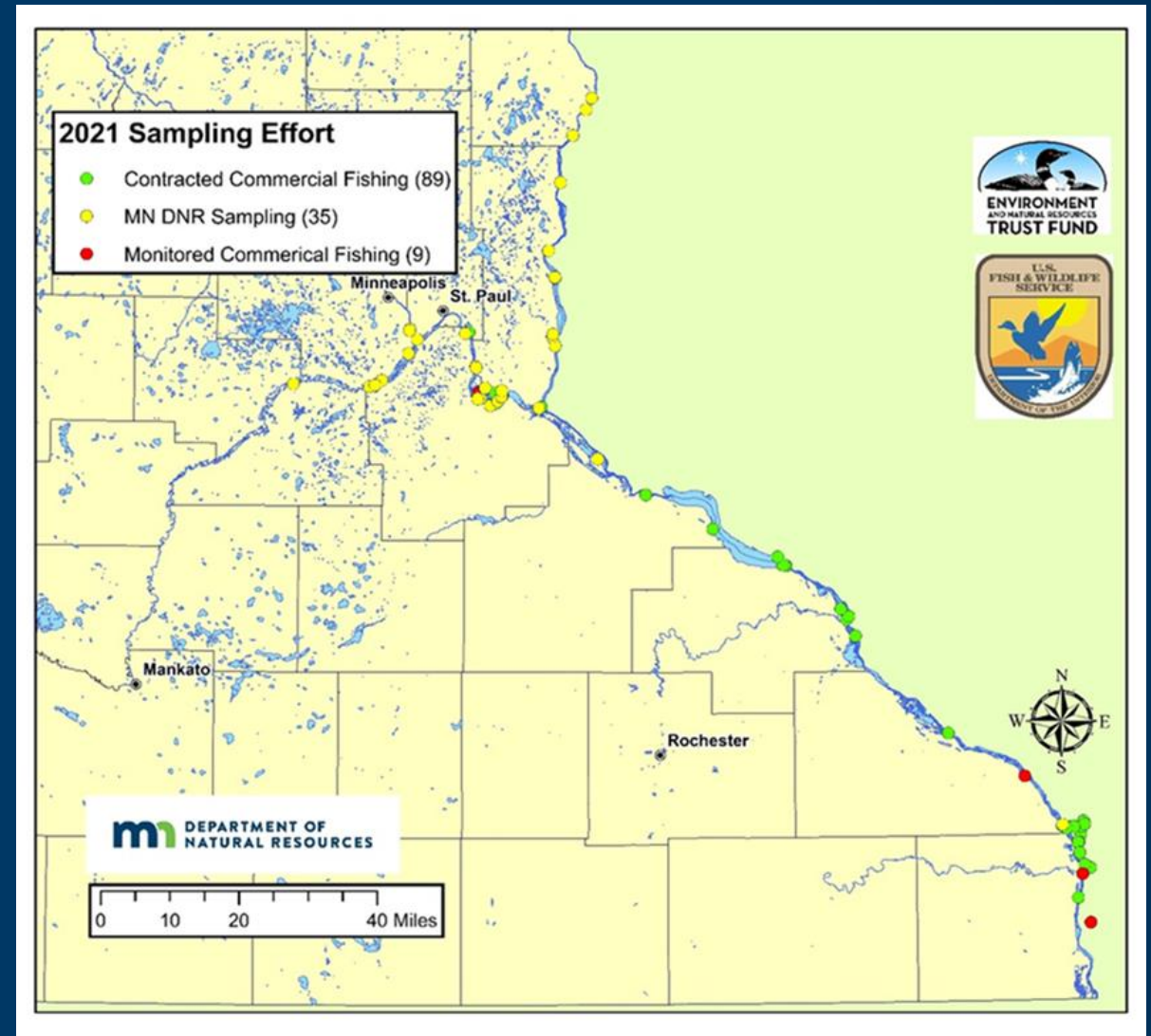
MNDNR Invasive Carp Program

- Working on invasive carp since Governor Dayton's summit in 2011
- Funded by combination of base funds, ENRTF, and USFWS grants
- Prevention, monitoring, research, coordination, and response activities



MNDNR Invasive Carp Monitoring and Response Actions

- Work with contracted commercial fishers to capture invasive carp
- Conduct targeted sampling for adults, juveniles, eggs, larvae
 - No reproduction detected in Minnesota
- Work with the public and other commercial fishers to verify reports of encounters
- Tag and track invasive carp to learn movement patterns and use as traitor fish
 - Current tagged invasive carp known to be in Minnesota waters: 1 bighead carp in St. Croix, 1 silver carp in Pool 5A, 1 silver carp in Pool 9
- Test new technologies for monitoring and response
- Lead Modified Unified Method events



Modified-Unified Method (MUM) Events

- In response to increased captures in Pool 8
- Modified-Unified Method uses sound, electricity to herd carp into blocked off “cells”, progressively moving fish to a designated site for removal
- Partnership between MNDNR, Wisconsin DNR, USFWS, USGS, NPS, and Wild Rivers Conservancy
- Have removed a total of 37 silver carp



Plans for Continued Monitoring and Response

- 1-2 MUM events / year
- Increased tagging and tracking
- Additional commercial fishing
- Continued monitoring for all life stages
- Testing algae pellet attractant
- Encourage and facilitate public reporting
- Update Invasive Carp Action Plan



Update of Invasive Carp Action Plan

- Transparent, comprehensive, inclusive process
- Include diverse stakeholders and experts
- Examine all potential management options including Lock and Dam 5 option
- Analyze tradeoffs to arrive at best management actions
- DNR has laid groundwork to begin this process in the immediate future



MNDNR Interaction with Lock and Dam 5 Project

- DNR is grateful for the researchers' efforts in support of invasive carp management
- DNR has provided staff support for ongoing fish passage studies at Lock and Dam 5
- DNR and the study authors have been in regular communication about the project
- DNR has provided feedback including at a stakeholder meeting
- Several questions remain



Pending Questions on Model

- Model estimates an average of 2.8% of invasive carp can currently pass through the pair of dams; improvements should be viewed with this baseline in mind
- Model is for a generic pair of 2 locks and dams, not for Locks and Dams 4 and 5
- Range of possible outcomes with improvements often overlap with or are very near baseline



Pending Questions on Design

- Site has 3 culverts that were identified by 2019 study as passable by invasive carp
 - Contracted Dr. Allen Mensinger-UMD for study; he recommended against installing a BAFF at L&D 5
 - Direct measurements of water flow in culverts
 - Not addressed in current design
- Preliminary data from BAFF in Kentucky shows 57% deterrence during spring and summer
 - 1 year of data
 - Unclear how Kentucky location relates to L&D 5
- How will deterrent impact native fish passage and native mussel communities?



Pending Questions on Funding

- Current estimate is 10% design
 - Addressing culverts or other additions such as flushing systems to clear barges will raise cost
 - Does not include operations and maintenance
- Current estimate does not include removal portion of solution
- Unclear who is responsible for funding



Conclusions

- Minnesota DNR is committed to invasive carp prevention and management.
- We are supportive of finding new solutions to manage invasive carp, and are grateful for our robust partnerships with everyone here today.
- We will continue to review the Lock and Dam 5 option in pursuit of the best solution for Minnesota.



Thank You!

For more information please visit our website:
mndnr.gov/invasivecarp

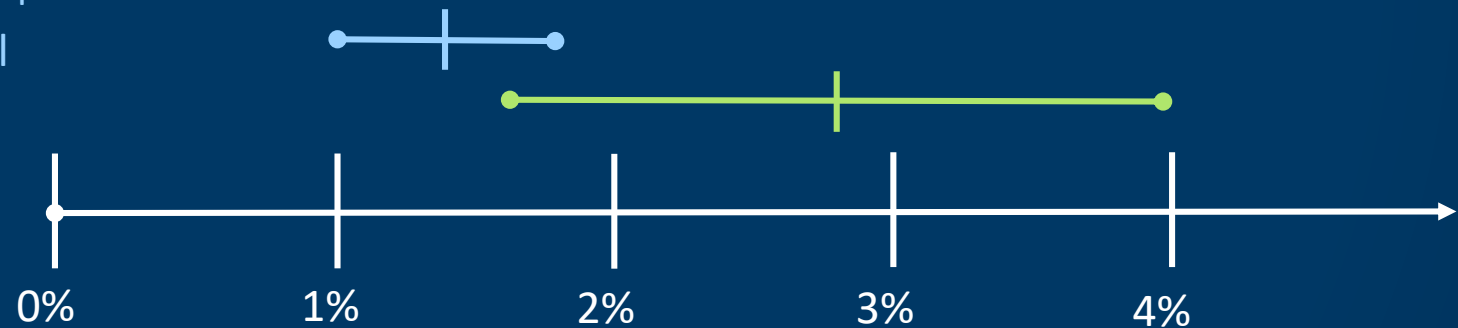
Additional Information: Pending Questions on Model

- One example of overlap is shown below
- Ranges show 95% confidence intervals for invasive carp passage (assuming model is accurate, we are 95% confident the real value lies in this range)

Gate modifications at 2 dams +
50% deterrent + 10% removal

Baseline

Estimated rate of silver
carp passage



Data courtesy of Drs.
Zielinski and Sorensen