



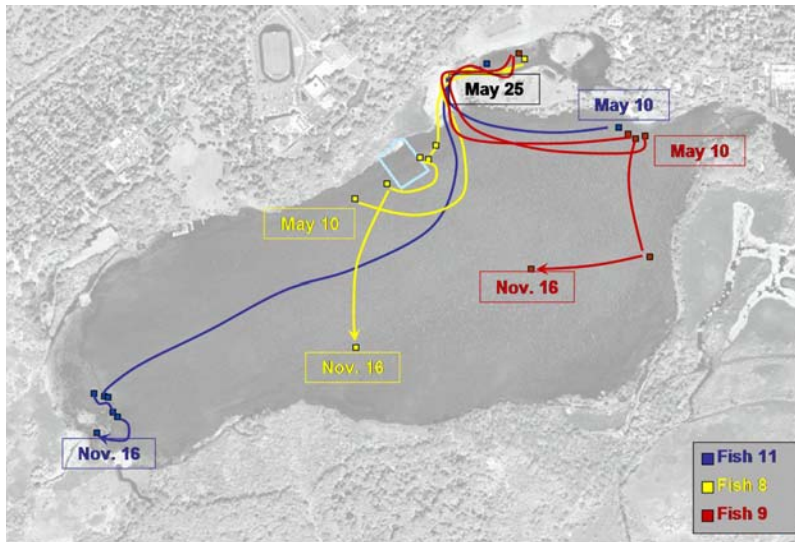
1) The culprits, a pair of common carp *cyprinus carpio*. Note the clipped pectoral fin on the upper specimen, used for calculating the population.



2) This is why they need to be removed from the lake. The clear water of the carp enclosure is the goal for the entire lake.



3) Our secret weapon: DNR fisheries biologist Kurt Welke implanting one of 14 radio transmitters.

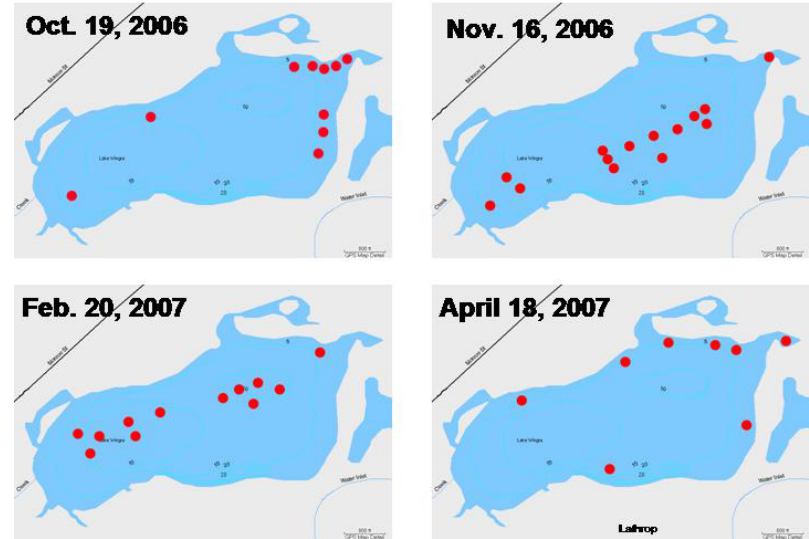


4) Using the radio transmitters, we were able to track the movements of individual fish over several seasons.



6) Commercial fishermen setting up on the ice in the middle of Lake Wingra in March 2008.

Carp are in deep water during late fall and under the ice



5) What we learned: Carp aggregate under the ice, making them good targets for winter seining.



7) Augering the pilot holes for the chainsaw.



8) Sawing out the hole for feeding the 3,000 foot seine.



9) The ice block is pushed under to open the hole, then replaced when finished.



10) The second of two submarines that haul the lead lines.



11) Down it goes...the other sub is headed toward the opposite shore.



12) Paying out the lead line (~100 yds long).



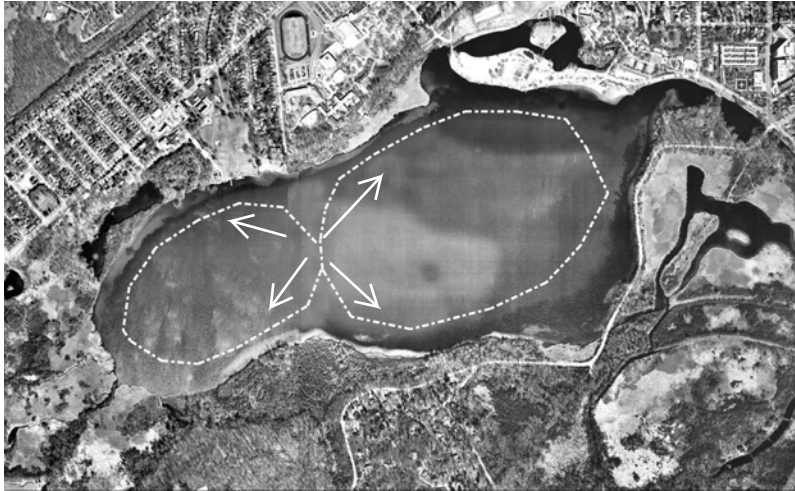
13) Steering the sub (by ear) with the remote control.



14) After snagging the lead line through an auger hole, a winch is used to pull the seine to that point. Then the sub goes on another 100 yards.



15) Paying out the 3,000 foot seine. Corks on the right (white), leads on the left (black). The net will stretch between the lake bottom and the ice.



16) It takes some time for two teams to encircle each basin, 100 yards at a time. Day 1 west basin; day 2 east basin; day 3 east basin again.



17) When the subs meet at the far shore, a large hole is opened to pull out the seine (and hopefully some fish).



18) Yes, they are standing on a floating block of ice.



19) Much easier to slide it under than to lift it out.



20) Whoops! what happened to the floor?



21) Here comes a sub with the lead line.



22) These subs were made in Finland, where they fish all winter through many feet of ice.



23) The winches are used to pull the two ends of the seine up through the ice. The men in the water are holding the lead-line down with their feet. The fish are now encircled.



24) It takes a while to haul in 3,000 feet of seine.



25) After ten years on the bottom, this canoe decided to hitch a ride in the net.



26) Finally the net draws close, and the fish try to escape by "charging" the opening. It's gettin' kinda hectic!



27) The "bag end" of the seine is filled with fish. DNR staff dip net the game fish and return them to the lake.



28) If these muskies see their own shadow do we have six more weeks of winter?



29) A 35lb buffalo *Ictiobus cyprinellus*, headed for market.



30) This is what happens when "we put the goldfish back in the lake". [boot at left for scale]



31) While the fish waited in nets under the ice, arrangements were made to ship them live to market. This tank truck is from Erie, Michigan.



32) Warmer weather brings fog and slush on the Lake. This boat is equipped with a boom and sorting table.



33) Not warm enough for an outboard motor however.



34) Before loading fish, canoe #2 needs to be cleared from the net. (Wingra...a canoe graveyard?)



35) The storage net is hauled up through a fresh hole in the ice.



36) The dipping basket at work.



37) Unloading into the sorting tray to separate buffalo from carp.



38) Counting the carp and inspecting them for fin clips.



39) Then, loaded into bins...



40) Then back to shore (one of many, many trips)....



41) Loaded into the "live truck".....



42) And off to a Brooklyn, NY fish market, and someone's dinner table.



43) It took a couple days to line-up another truckload, by which time the ice was too soft for ATVs. Fortunately, an airboat proved capable.



44) Closer to shore things got tricky as the ice began to break up.



45) Once safely ashore, the loader....



46) Dumped the fish into bins...



46) That were packed into the refrigerated truck...



47) Really! packed in.



48) 10:00pm and the last load is headed for Clinton, Iowa to be processed.



49) Steve Kallenbach, John Bruring and their crew, having a little cook-out on the lake.



50) Many, many thanks to the DNR South Central Region fisheries staff. You guys can really count clips!

So how did we do?

6,308 carp removed from Lake Wingra

256 carp were marked (fin clip or transmitter)

537 marked carp originally in the lake

= 13,200 carp prior to seining, or 48% removed from lake

Estimated weight: 26 ton carp, 4 ton buffalo

And the future?

- Continued removal over coming years through small scale netting, sport fishing or other means.
- Ongoing measurement of water clarity improvement.