



Mass Marking Program Chinook salmon

The Great Lakes Mass Marking Program is a collaboration between federal, state and tribal fishery agencies, coordinated by the U.S. Fish and Wildlife Service, to answer questions critical for sustaining Great Lakes fisheries and native species restoration. The program is funded by the USEPA's Great Lakes Restoration Initiative.



State agencies began stocking Chinook salmon in the 1960s to diversify the sport fishery and to feed on abundant non-native forage fish. Alewife, the main prey for Chinook salmon, is now at historically low abundance in Lake Michigan and is nearly absent from Lake Huron. This has raised concerns over the future of the salmon fishery in both lakes. The U.S. Fish and Wildlife Service coordinates with state hatcheries to apply coded wire tags (CWT) and/or clip the adipose fin of all Chinook salmon stocked into lakes Michigan and Huron. Recovery of marked (i.e., hatchery) and unmarked (i.e., wild) fish and associated data allows managers to track the performance, movement, survival and growth of hatchery reared fish, and estimate the numbers of wild fish produced each year.

The science behind management of the fishery



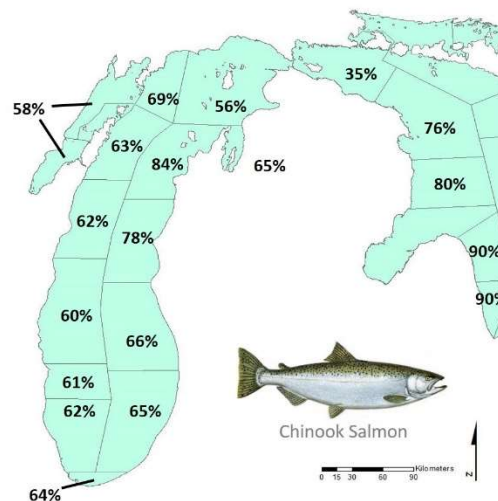
Tagging and fin clipping all hatchery Chinook salmon allows managers to evaluate survival, movement, growth, and levels of natural reproduction in lakes Michigan and Huron. We collect biological data from angler-caught Chinook salmon at over 40 ports across lakes Michigan and Huron. This allows us to:

- Measure wild Chinook salmon production used by the states to inform stocking decisions.
- Document Chinook salmon movement within and between lakes.
- Evaluate the relative contribution to the fishery of fish stocked at different locations.
- Compare survival of fish from different stocking strategies (e.g., net pen vs. truck releases).
- Assign the age and year class of hatchery fish using the CWT, and of wild fish by examining scales
- Determine growth rates using size and age information



State hatcheries where Chinook salmon are tagged and fin clipped before stocking into lakes Michigan and Huron.

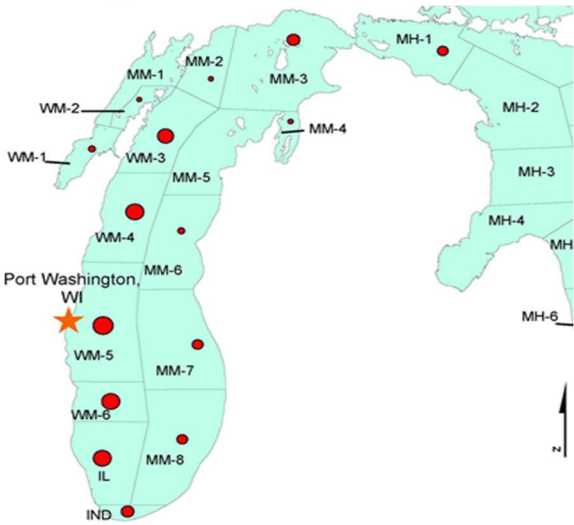
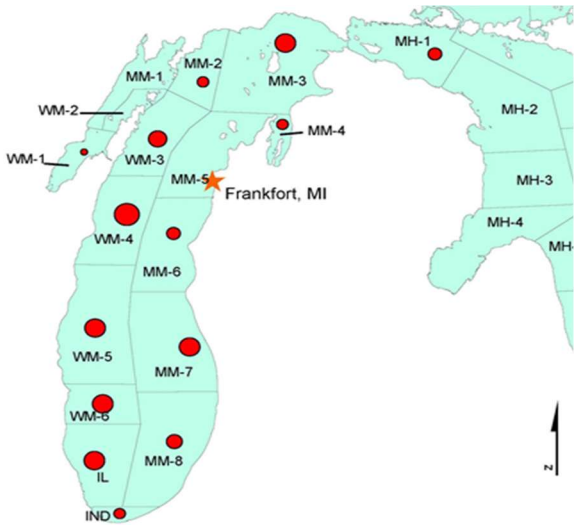
Most Chinook salmon are wild!



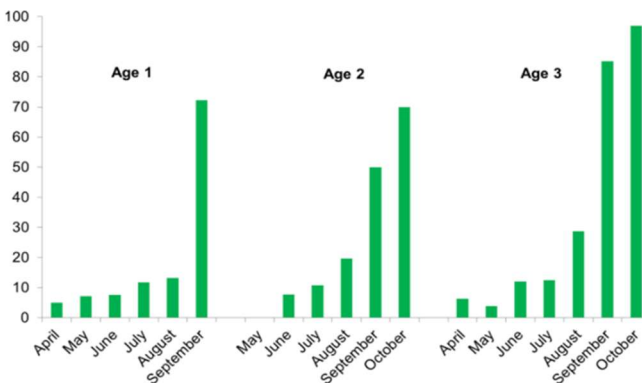
Percent of Chinook salmon caught in lakes Michigan and Huron that are wild (2014 - 2021 average). We know this since all hatchery reared Chinook salmon have an adipose fin clip and/or a CWT.

Where did your fish come from?

Chinook salmon caught during the spring and summer could have been stocked anywhere in Lake Michigan or even Lake Huron. The maps below show the origin of fish landed at Frankfort, MI (top) and at Port Washington, WI (bottom). The red circles indicate the management district where the fish were stocked, with circle size proportional to that district's contribution to the catch at those ports.

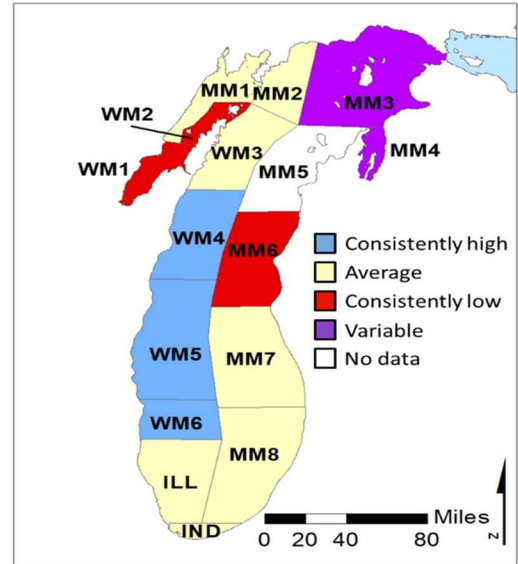


Chinook salmon return to their to stocking areas in fall



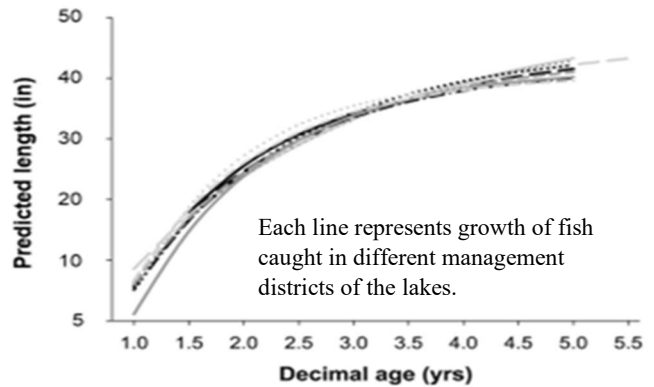
Percent of Chinook salmon recovered in the management district where they were stocked, by age and by recovery month.

Chinook salmon survival varies by stocking location



Management districts where Chinook salmon had consistently high survival (blue); average survival (yellow); variable survival (purple); and consistently low survival (red).

Chinook salmon growth is similar lake wide



How old is your Chinook salmon?

Use the length of your Chinook salmon to estimate the probable age from the following table.

Length (Inches)	Probable Age (Years)
Less than 11	Age 0 (stocked that year)
11 to 15	Either Age 0 or 1
15 to 24	Age 1
24 to 31	Age 2
31 to 32	Either Age 2 or 3
Over 32	Either Age 3 or 4

The Great Lakes Fish Tag and Recovery Laboratory is located at the Green Bay Fish and Wildlife Conservation Office, our office website is: <https://www.fws.gov/midwest/greenbayfisheries/programs.html>

Our Facebook page is: <https://www.facebook.com/GreenBayFWCO/>