



## 2016 Volunteer Packet

Thank you for your willingness to participate in the *Salmon Ambassadors* program! The primary purpose of this effort is to engage anglers in providing information that will improve our understanding of how natural reproduction and stocking affect Chinook salmon fisheries. This packet contains information on the status of the salmon fishery and instructions that will help you identify fin-clipped salmon and measure salmon in a precise and consistent manner.

You are free to keep this packet and the data you collect over the course of the 2015 season for your own records, but if you wish to share your data with other anglers, students, biologists, and fisheries managers I will send you a survey at the end of September that you can answer based on your results. I will also include a return mailing envelope at that time, which can be used to submit your completed data sheets.

If you do wish to share the information you collect it is very important that you measure each and every Chinook salmon caught over the course of the fishing season (May-September) and check for an adipose fin clip. This will provide detailed information on the percentage of stocked vs. wild fish of all sizes at your port over the course of the season.

The *Salmon Ambassadors* program is a Michigan Sea Grant initiative developed in coordination with Michigan, Wisconsin, Illinois, and Indiana DNRs, and the U.S. Fish & Wildlife Service. These agencies rely on a variety of data that influence fisheries management decisions. The *Salmon Ambassadors* program will add to existing research efforts aimed at understanding the role of natural reproduction and predator-prey balance.

Don't hesitate to contact me if you have questions or comments throughout the season.

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## General Instructions

The instructions that follow refer to the data sheets included in this binder. All are printed on waterproof paper. Pencil is recommended for data recording because ink from most pens will smear on waterproof paper.

## Required and Optional Data

It is very important to accurately fill in all of the required information on the left hand (white) side of each data sheet for each trip taken and **each Chinook salmon captured** this season. The right hand (shaded) side of the data sheet is marked "OPTIONAL" and collecting this information is not as critical.

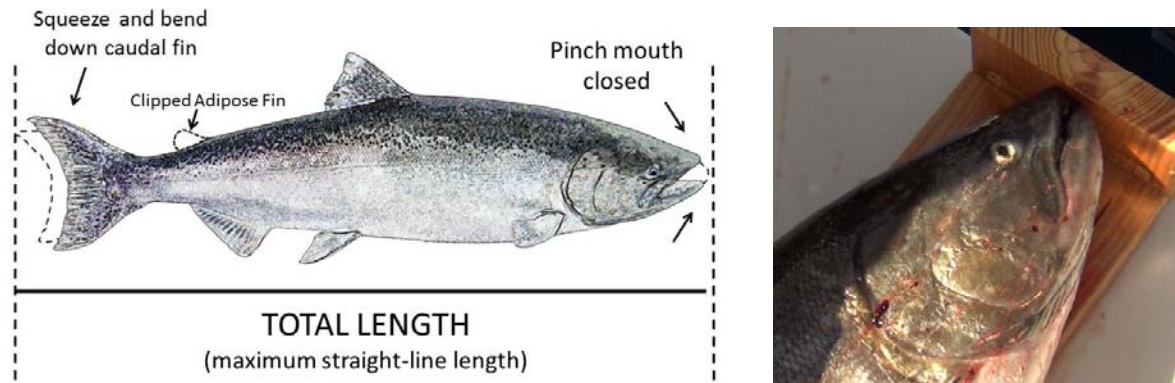
## Required Trip Details

- SA#** Your unique identifier that will be linked to the data you submit (if you choose to share data at the end of the season). This number is printed on your data sheets.
- Home Port** This is the port you indicated as your primary fishing port when you signed up for the Salmon Ambassadors program.
- Date** Record the date of each fishing trip. If you need multiple data sheets for a single trip you can indicate that the trip is continued on the second sheet (e.g., Date: 5/13/13, continued). If you take multiple trips on a single day make note of trips after the first (e.g., Date: 6/14/13, second trip).
- Port** Record the port you are fishing out of for the date noted on the data sheet.
- Notes** Use this space to help improve the program in the future. If any problems are encountered recording data or if you have any relevant observations that do not fit elsewhere make note of them here.

## Trip Details (OPTIONAL)

- # of Rods** The number of rods fished for most of the trip.
- # of Anglers** The number of anglers fishing for the majority of the trip.
- Hours Fished** Time from first rod in to last rod out; recorded to nearest half hour.
- Grid** Management agencies use a grid system for catch and effort calculation. List the four digit grid number(s) where fishing occurred during your trip (see Lake Michigan Grid Map on Page 6).

# Required Catch Data for Each Chinook Salmon



*A measuring board should be used for length measurements whenever possible. Make sure the mouth is closed and pressed firmly to the front of the board before reading the length at the tail end.*

**Total Length** Record to nearest **quarter inch** (1/4 in). If you were not already provided with a folding measuring board marked to the quarter inch, one will be provided upon request.

The total length of a fish is measured from the tip of the snout to the tip of the longest lobe of the caudal (tail) fin when the mouth is closed and caudal lobes are squeezed together. The tip of the snout should be pushed against the front (zero-end) of the board as in the photo above, and the measurement is taken at the tip of the tail.

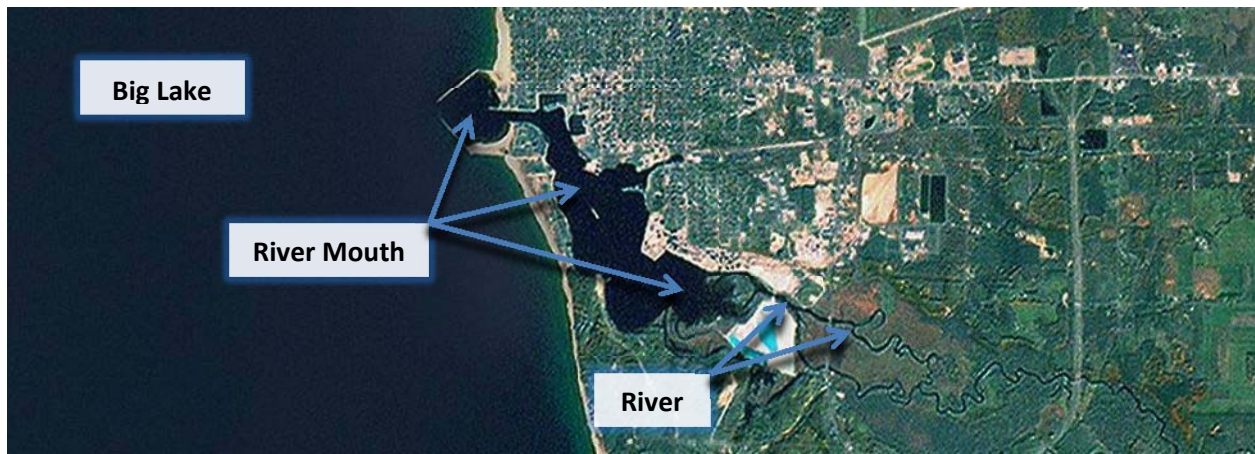
In large Chinook salmon, the caudal rays are stiff and the tail fin cannot be squeezed tightly together. Bending the upper lobe down slightly allow for measurement of total length for large Chinooks.

NOTE: It is very important to record measurements to the nearest quarter inch. If you return data sheets that include only measurements to the nearest whole inch or half inch they will not be useable.

**AD Clip** An adipose (AD) clip indicates a stocked Chinook salmon carrying a coded wire tag (CWT) in its snout. It is critically important to record data for **un-clipped Chinooks as well as clipped fish**. If your fish does have an adipose fin, mark "NO" in the AD Clip column. If the fish is clipped and has no adipose fin, mark "YES" in the AD Clip column.

**Location** The general location (Big Lake, River Mouth, or River) should be noted for each Chinook caught. We will assume that fish caught in a river or river mouth are returning mature fish (if you believe otherwise on a given date then make a note of it on that data sheet).

Check only one box for each fish caught.



In harbor areas like Pere Marquette Lake it can be hard to determine where the boundary between river and lake occurs. For purposes of this study, fish caught in the entire drowned river mouth lake and protected area between the outer piers should be recorded as "River Mouth." Salmon caught in the river plume beyond the piers should be recorded as "Big Lake" catches.

## Catch Data (OPTIONAL)

**Depth** The depth of water (not lure) where the fish was caught (to nearest foot).

**Weight** Record to nearest 0.1 pound.

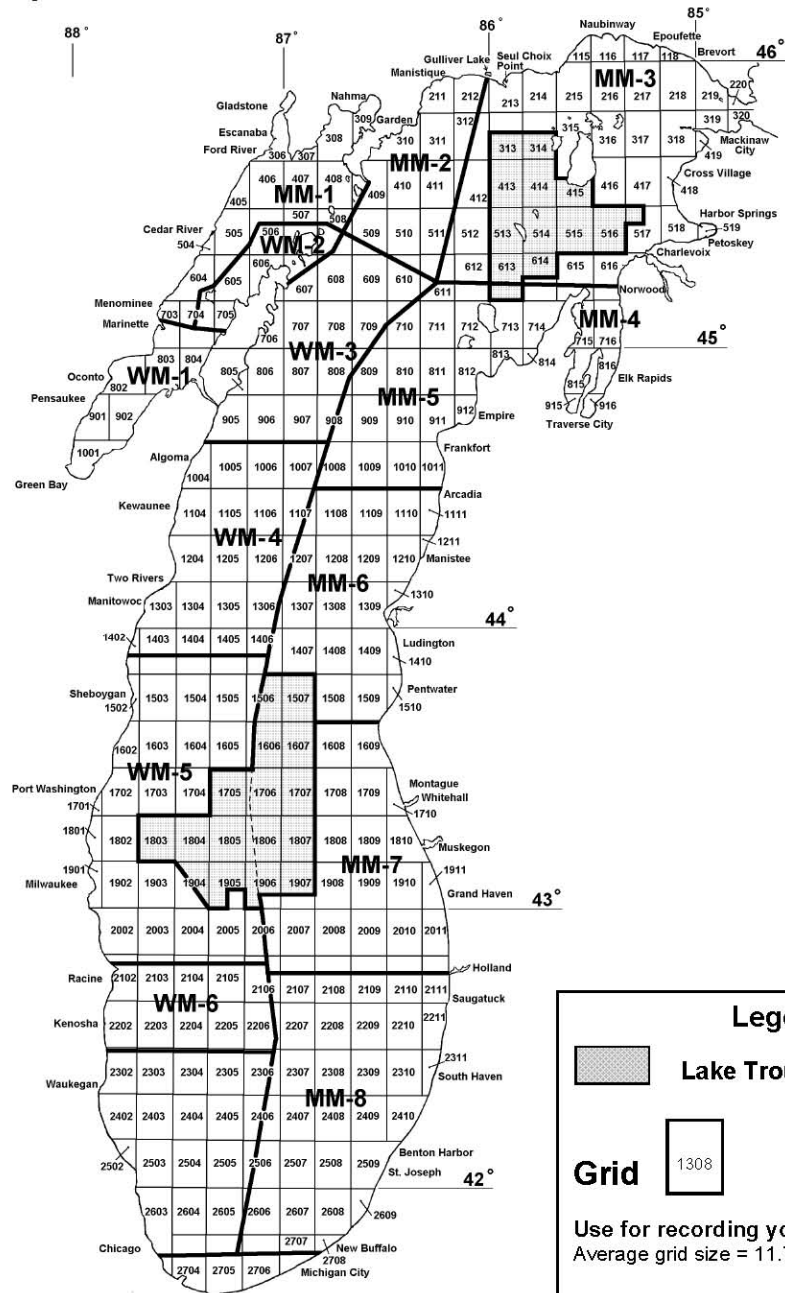
**Sex** If known, record as male (M) or female (F). This will not be possible for immature released fish.

**Bag #** Use this column to record the number printed on pre-numbered bags used for snout and Coded Wire Tag (CWT) collection. If you plan to collect snouts from all fin clipped Chinook salmon in 2016, e-mail Dan at [okeefed@msu.edu](mailto:okeefed@msu.edu) and ask about availability of pre-numbered bags.


Trip Details				OPTIONAL				
Date:	1-1-15	SA#:	999	Number of Rods:	_____			
Port:	Grand Haven	Home Port:	Grand Haven	Number of Anglers:	_____			
Notes:	Great day on the water! Stomachs were full of alewife.			Hours Fished:	_____			
				Grid (see map):	_____			
Catch Data for Each Chinook Salmon Caught				OPTIONAL				
Total Length (to nearest 1/4 in)	AD Clip (Yes or No)	Location			Depth (ft.)	Weight (to 0.1 lb.)	Sex (M or F)	Bag # (CWT Snout)
		Big Lake	River Mouth	River				
33 3/4	Yes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	110	15.6	M	63517
34 1/4	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	75			
25	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				


Completed data sheets should have all of the information on the-left hand (unshaded) side filled in. The right-hand (shaded) side is optional; missing depth, weight, and sex data for some or all fish is fine.

# Lake Michigan Grid Map



**Legend:**

 **Lake Trout Refuge**

**Grid**  1308

Use for recording your fishing location  
Average grid size = 11.7 X 8.3 miles

**MM-6** Statistical Management Unit  
Reference use only, NOT for fishing location

Grid map for recording the location of your fishing trip (optional). NOTE: Record only the four digit grid number if you are recording the optional trip effort data; DO NOT record the Statistical Management Unit (MM-#).

# Frequently Asked Questions (FAQs)

**Creel clerks from my state's DNR sometimes ask for interviews after a day's fishing. Should I answer their questions if I am already recording data for the Salmon Ambassadors program?**

Yes, you should participate in creel surveys as you normally would. The creel programs typically ask for more trip details and do not focus specifically on Chinook salmon. This is because creel program goals are more focused on estimating total angler effort and catch while the *Salmon Ambassadors* program is specifically geared toward describing how wild-spawned and stocked Chinooks contribute to fisheries over the course of the fishing season. While there is some overlap between the information on your data sheets and the questions creel clerks ask, the two programs are different and complementary efforts.

**Does my participation in Salmon Ambassadors mean that I need to collect heads or snouts from all clipped Chinook salmon?**

No. Collection of heads (or snouts) for removal of Coded Wire Tags is a separate program that complements the *Salmon Ambassadors* effort. You can return heads/snouts from adipose fin-clipped fish at drop off locations in MI, WI, and IN (see CWT section), but this is not required. Contact me ([okeefed@msu.edu](mailto:okeefed@msu.edu)) if you have a strong desire to collect heads/snouts from every clipped Chinook over the course of the entire season. Wisconsin DNR encourages anglers to collect as many heads as possible (see CWT section).

**Should I let head hunters examine my catch?**

Yes. Head hunters typically target tournaments for collection of Coded Wire Tags that can be used to determine the stocking location for each clipped fish. They also collect data from a variety of species other than Chinook salmon. Although there is some overlap in the data collected by head hunters and the *Salmon Ambassadors* program, there are also differences between the two complementary efforts. One major difference is that head hunters probably only target your port at specific times when tournaments are held. This does not allow for a full understanding of how the percentage of wild and stocked Chinooks changes over the course of the season. In contrast the *Salmon Ambassadors* program looks at the whole season and includes small fish that may be avoided (or released if undersized) during tournament fishing, but does not include head collection to determine stocking location.

**Why is it so important to take required data on every single Chinook caught?**

Every data collection effort has the potential for bias. Taking data on every Chinook caught makes this program unique in its ability to describe exactly how stocked and wild fish are contributing to your catch. Whether they are brought to dock in the morning or after dark, during a tournament or on a quiet weekday in June, we will know that your data give the complete picture. For this program, the bias involves the possibility of differences between volunteer and non-volunteer catches rather than sampling at a specific time of day or year.

### **What if I miss data from a couple of trips?**

At the end of the season you will receive a short survey that will include questions about missed trips. In general, we won't be able to use most of your information if you don't record data from even a small number of trips taken at your home port. However, there may be times when you fish away from home as part of a tournament team or on a friend's boat. In these cases it is not as critical to record information because the trips are not taken at your home port. Be sure to make note on another data sheet if you did miss data from a trip because it will be important to accurately describe all missed trips at the end of the year.

### **What if I miss required data from a couple of Chinooks?**

This also has the potential to affect how we can use your information. If a small Chinook is accidentally released before measuring then make a best guess at its length and note that the fish was not actually measured on your data sheet. Again, it is very important to measure even the smallest fish and check them for fin clips because they are the future of your fishery.

### **Can I just report a range of lengths if I bring back a full box of salmon and don't have time to measure each one?**

No. Reporting a range of lengths is the same as reporting lengths on two fish and ignoring the rest. The total length measurement will be used for size structure indices that tell us how the percentage of stocked fish varies according to the size of the fish, among other things. Size can also be used to estimate the age of the fish and determine how specific year-classes of fish contribute to the fishery.

### **I heard that some agencies use yellow dye to mark fish. Should I record Chinooks with yellow spots as marked fish?**

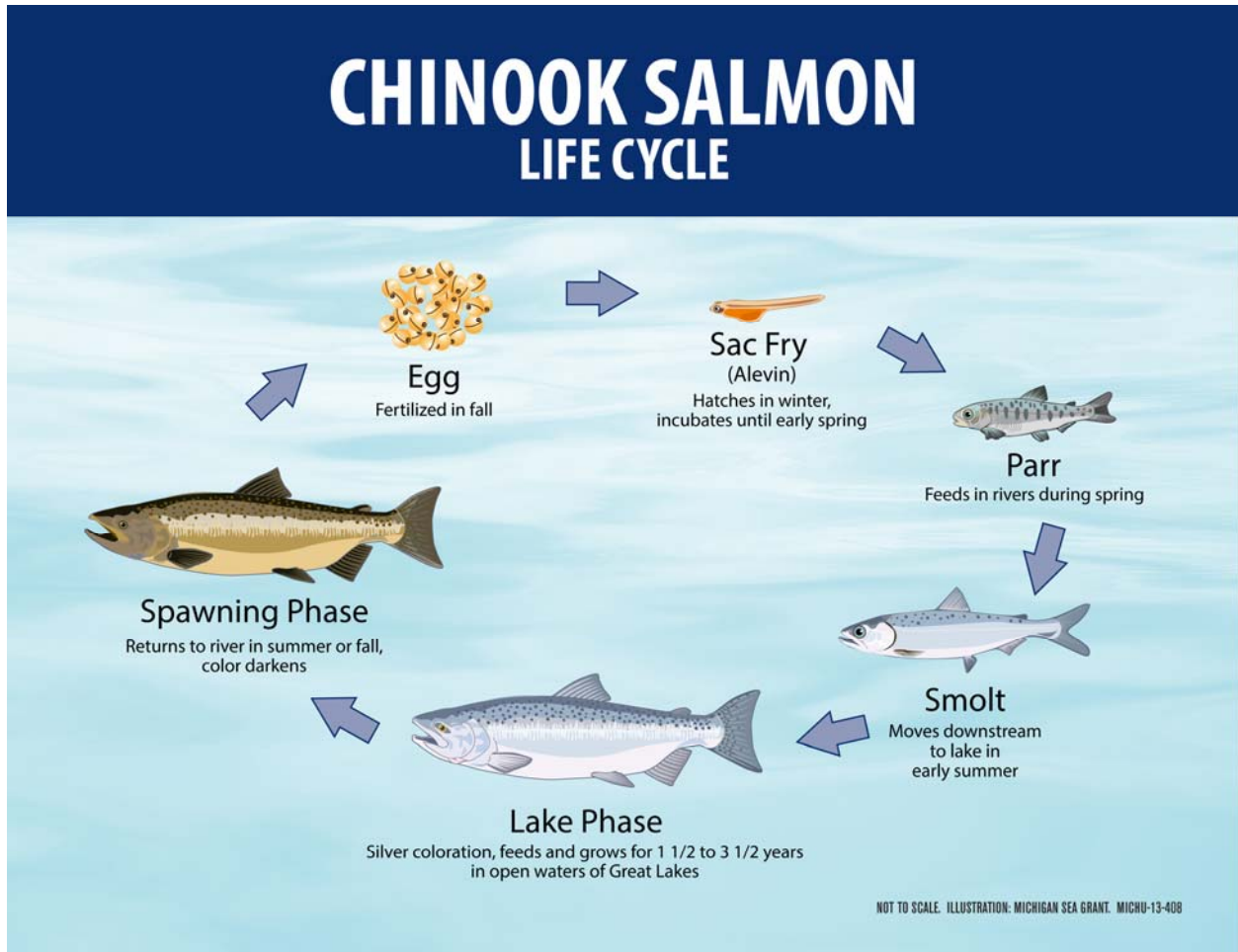
No. The only mark that indicates a stocked Chinook is the adipose fin clip. The yellow spots seen on some Chinooks look like artificial dye but they occur naturally. As a salmon begins to mature it changes from silver to drab olive-brown and in the early stages of this process yellow spots sometimes appear on an otherwise silver fish.



*Even though this Chinook salmon was caught offshore in mid-July it was beginning to mature.*

Many schools participate in raising salmon from egg to smolt as part of MDNR's Salmon in the Classroom program. Are those fish marked, and if so how do we identify them?

Most of the salmon raised in classrooms are not marked. This contributes to a small margin of error when assuming that all Chinook salmon without an adipose fin clip are wild-spawned. However, only a small percentage of all stocked fish come from classroom tanks (less than 2% in Michigan).



*The life cycle of Chinook salmon is well-suited to the Lake Michigan basin in many ways. Eggs hatch in streams instead of open water areas where plankton is now scarce and predators are abundant. Parr transform into smolt and leave the river before the heat of summer makes survival difficult. This gives young Chinook an advantage over coho salmon and steelhead that spend a full summer in the stream.*



# Program Partners

The *Salmon Ambassadors* program is a Michigan Sea Grant initiative developed in coordination with Michigan, Wisconsin, Illinois, and Indiana DNRs. These state agencies rely on a variety of data that influence fisheries management decisions. The *Salmon Ambassadors* program will add to existing research efforts aimed at understanding the role of natural reproduction and predator-prey balance.

This program would not be possible without the Great Lakes mass-marking program led by the U.S. Fish & Wildlife Service and the support and guidance of associations including Michigan Steelhead & Salmon Fishermen's Association, and Michigan Charter Boat Association.

Special thanks go out to Detroit Area Steelheaders, who supported the 2015 season of *Salmon Ambassadors* through a generous donation.

