

Adult Assessment Protocol**Field Procedures**

- 1) **SURVEY** the area to make sure that the site around the trap or net is safe from hazardous conditions (sharp objects, slippery areas, water depth, fast current, etc.).
- 2) **POSITION** mesh bags (and hand-held counters if being used) for sorting procedures. Have a small notebook/pen with you to record counts.
- 3) **REMOVE** sea lampreys from survey equipment:
 - **Trap:**
 - i) Unlock chain, if needed, which secures the trap to the wall and bring trap to shore.
 - ii) Clean debris off trap and fingers. Do not leave on bank.
 - **Fyke net:**
 - iii) Shake and/or brush off the wings of the net to release accumulated debris.
 - iv) Check the net for lamprey and fish by lifting up on the rings.
 - v) If there are animals in the net, release the rope that is attached to the stakes behind the net and grab hold of the cod end of the net. Walk, with the cod end of the funnel, towards the frame lifting the rings up and forcing the animals into the cod end of the net.
 - vi) Untie the cod end of the net (Note: For easier servicing, rest the rings on the frame of the net).
 - vii) Empty and clean out the net, placing lamprey into the bucket or mesh bag.
- 4) **SORT and COUNT** all sea lampreys and other fish species.
 - Sort sea lampreys with marks (1,1 v-notches on their fins) from those without marks.
 - Set sea lampreys with marks aside in a 5-gallon bucket for processing at the end.
 - Unmarked sea lampreys should be counted and placed into mesh bags (limit 25 per bag).
 - Unmarked sea lampreys must remain healthy during the counting process. If the mesh bags can be held in the water during processing, continue sorting and counting until the trap is empty. If the mesh bags are used on land (and not submerged in water), each bag should be moved to the water after it is filled (25 sea lampreys) until the trap is emptied.
 - Determine the number of sea lampreys you need to mark. Refer to **Table 1** below to see how many sea lampreys you need to mark each day.
 - Randomly select enough sea lampreys to meet the guidelines in **Table 1**. Attempt to get a representative sample (i.e., don't just choose from the sea lampreys on the top).
 - As soon as possible move **ONLY** sea lampreys to be marked to an aerated cooler or tank in vehicle following the guidelines in the fish health standard operating procedure (Appendix V). After you have moved the required number to the aerated tank to be marked, set aside any remaining sea lampreys for disposal or transport.
 - Ensure that sea lampreys are not out of the water any longer than five minutes during the sorting process by adapting procedures as needed.
 - Record all other fish species, specifically noting in comments any **round goby or ruffe captures** (see invasive species identification sheets). **Record date, stream caught, length, take a picture and freeze with an identification tag.** Notify Matt Symbal via email immediately (Matthew_Symbal@fws.gov).

5) **MARK** sea lampreys.

- Mark lamprey dorsal fins with a 1,1 mark using v-notch clips, one clip to the front dorsal fin and one clip to the rear dorsal fin.
- The number to mark at each trapping location can be found in **Table 1**. Always round up to the nearest whole number when marking. For example, if you only capture two lampreys and you are to mark 20%, you should still mark one lamprey.
- **Do not mark and release any sea lampreys during the final week of trapping.**

Table 1. Guidelines for number of lampreys to mark each day.

Lake #	Lake Name	Stream #	Stream Name	% Release*	Daily Cap
1	Superior	22	Tahquamenon River	50%	30
1	Superior	27	Betsy River	50%	30
1	Superior	115	Rock River	50%	25
1	Superior	284	Misery River	No release	N/A
1	Superior	611	Bad River	100%	30
1	Superior	679	Brule River	100%	30
1	Superior	703	Middle River	100%	30
2	Michigan	59	Manistique River	10%	25
2	Michigan	200	Peshtigo River	10%	25
2	Michigan	369	Grand River	100%	30
2	Michigan	433	Carp Lake Outlet	10%	25
2	Michigan	501	Boardman River	100%	20
2	Michigan	523	Betsie River	50%	25
2	Michigan	534	Big Manistee River	100%	20
2	Michigan	707	St. Joseph River	100	25
2	Michigan	739	Trail Creek	No release	N/A
3	Huron	144	Cheboygan River	10%	25
3	Huron	202	Ocqueoc River	10%	25
3	Huron	286	East Au Gres River	50	25
3	Huron	990	St. Marys River	10%	N/A
4	Erie	23	Cattaraugus Creek	100%	25
4	Erie	196	Grand River	100%	25
4	Erie	153	Conneaut Creek	100%	N/A
5	Ontario	19	Black River	100%	25
5	Ontario	53	Orwell Brook	100%	20
5	Ontario	73	Sterling Creek	100%	25

* Research protocol may supersede standard marking percentage.

6) RELEASE sea lampreys.

- As quickly as possible after marking the sea lampreys, release them at a designated location downstream of the traps.
- If a sea lamprey dies or is unable to swim away, **do not** count it as a release (note on trap catch entry).

7) PROCESS remaining sea lampreys

- For all recaptured sea lampreys (sea lampreys with v-notches in the fins), determine the gender of the sea lampreys and record the total number of males and females recaptured. Measure and weigh a **maximum of 25 males and 25 females per day**. Once 25 of both males and females have been recorded, no additional sea lampreys need to be weighed and measured.
- Ensure sea lampreys are measured in millimeters (mm) and weighed in grams (g). Care must be taken to ensure a random sample when a sub-sample of catch is processed. Sea lampreys contained in a small, enclosed area, such as a pail or trap, exhibit behavior where large animals congregate at the top and bias the sample.

8) INSPECT trap/net for any damages and repair accordingly.**9) REPLACE** survey equipment:

- Trap:
 - i) Lock chain, if needed, which secures the trap to the wall.
 - ii) Reposition so trap fishes along barrier wall and the top is just above the water surface.
- Fyke net:
 - i) Retie the cod end of net.
 - ii) Walk the funnel back to the posts, making sure the funnel is open and not collapsing in on itself.
 - iii) Secure the rope to the posts.

10) CHECK area to make sure tools, records, etc. are picked up and placed in the truck.**11) COMPLETE** standard trap catch form or field notes.

- Your data must be entered each time the trap is serviced regardless of whether sea lampreys were captured.
- Refer to *INSTRUCTIONS FOR COMPLETING AND SUBMITTING ADULT ASSESSMENT TRAP CATCH DATA*.

12) DISPOSE of any sea lampreys remaining after marking and processing requirements have been met from Steps 5 and 6.**13) DISPOSAL** of sea lampreys captured from Tahquamenon (Superior), Betsy (Superior), Manistique (Huron), Betsie (Michigan), Boardman (Michigan), Peshtigo (Michigan), St. Marys (Huron), and the Brule (Superior) requires sea lampreys to be bagged and placed into freezers owned by biological supply companies. These freezers are placed in designated areas easily accessible by staff or contractors.