

2025 Ipswich River Herring Count Training



IPSWICH RIVER
WATERSHED ASSOCIATION

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**INTRODUCTION TO RIVER
HERRING**

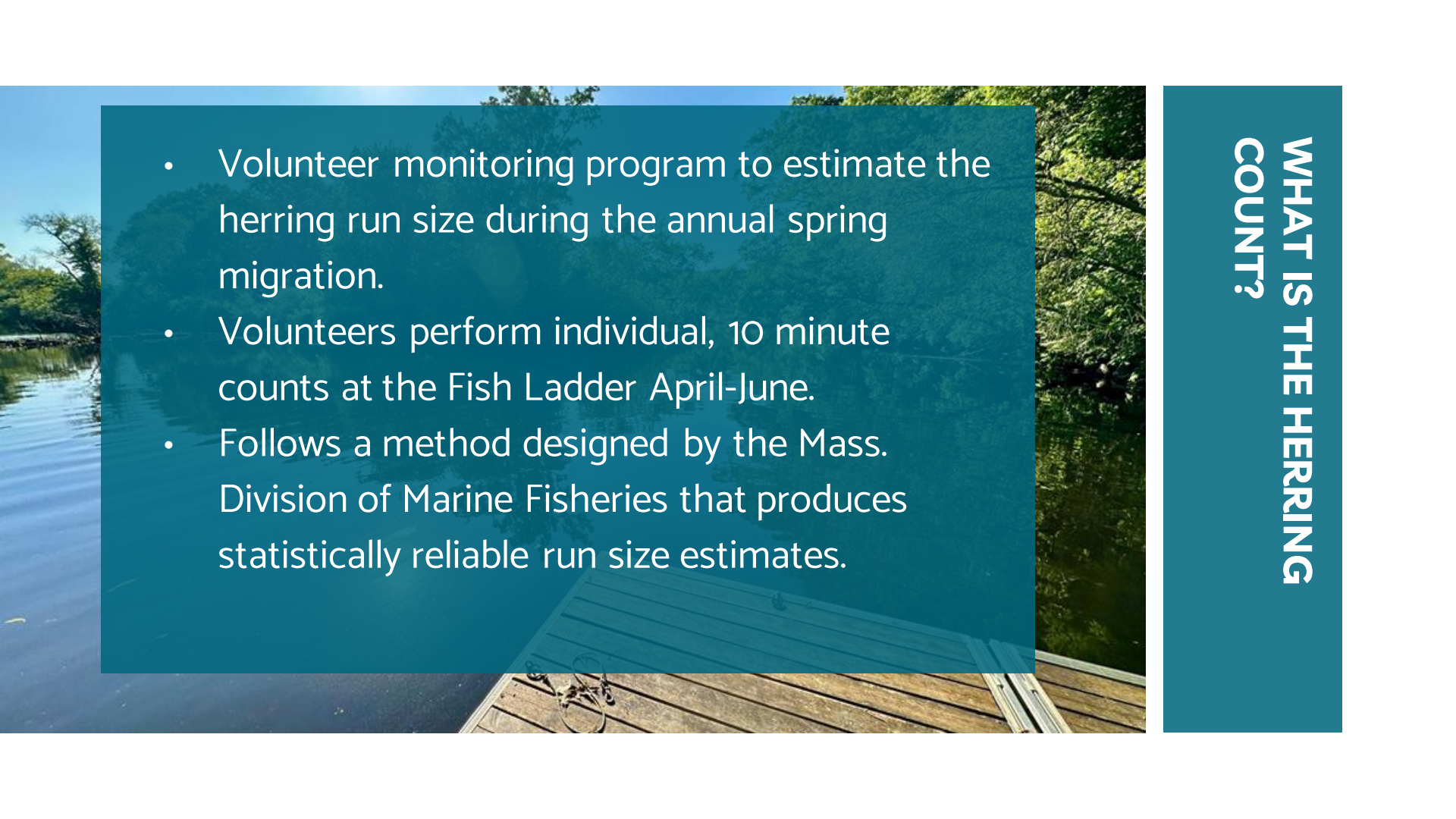
02

**LIFE CYCLE AND
CHALLENGES**

03

**ALL ABOUT THE HERRING
COUNT**

- IMPORTANCE OF DATA COLLECTION
- TRENDS
- VIDEO MONITORING
- HOW TO PERFORM A HERRING COUNT

- 
- Volunteer monitoring program to estimate the herring run size during the annual spring migration.
 - Volunteers perform individual, 10 minute counts at the Fish Ladder April-June.
 - Follows a method designed by the Mass. Division of Marine Fisheries that produces statistically reliable run size estimates.

WHAT IS THE HERRING COUNT?

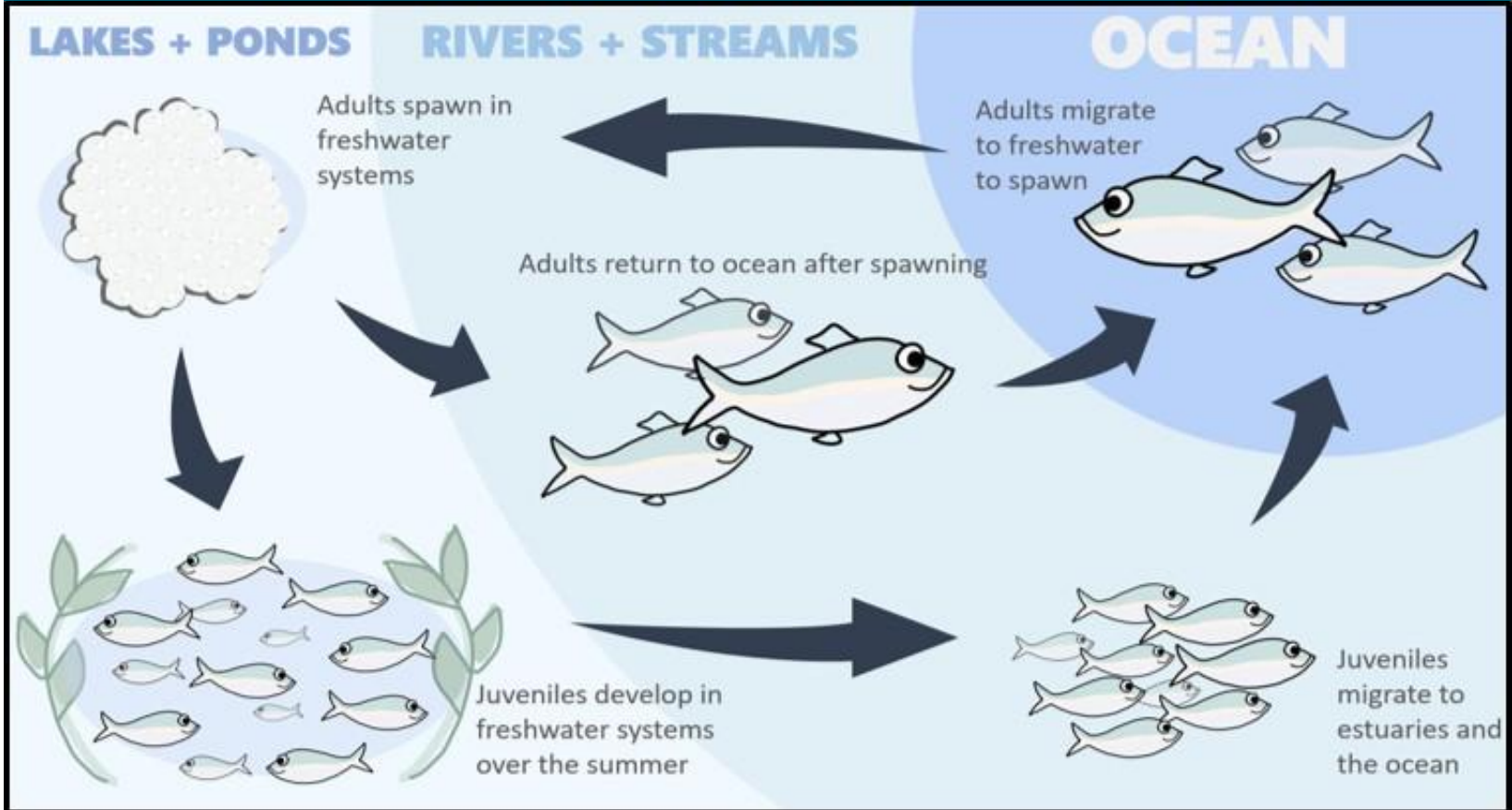
MIGRATORY FISH IN THE IPSWICH RIVER

- River Herring
 - Alewife
 - Blueback
- American Shad
- Rainbow Smelt
- American Eel
- Sea Lamprey
- Atlantic Salmon*
- Atlantic and Shortnose Sturgeon*



*Disappeared by the 1800's

RIVER HERRING LIFE CYCLE



Bostik Dam (no fish passage)



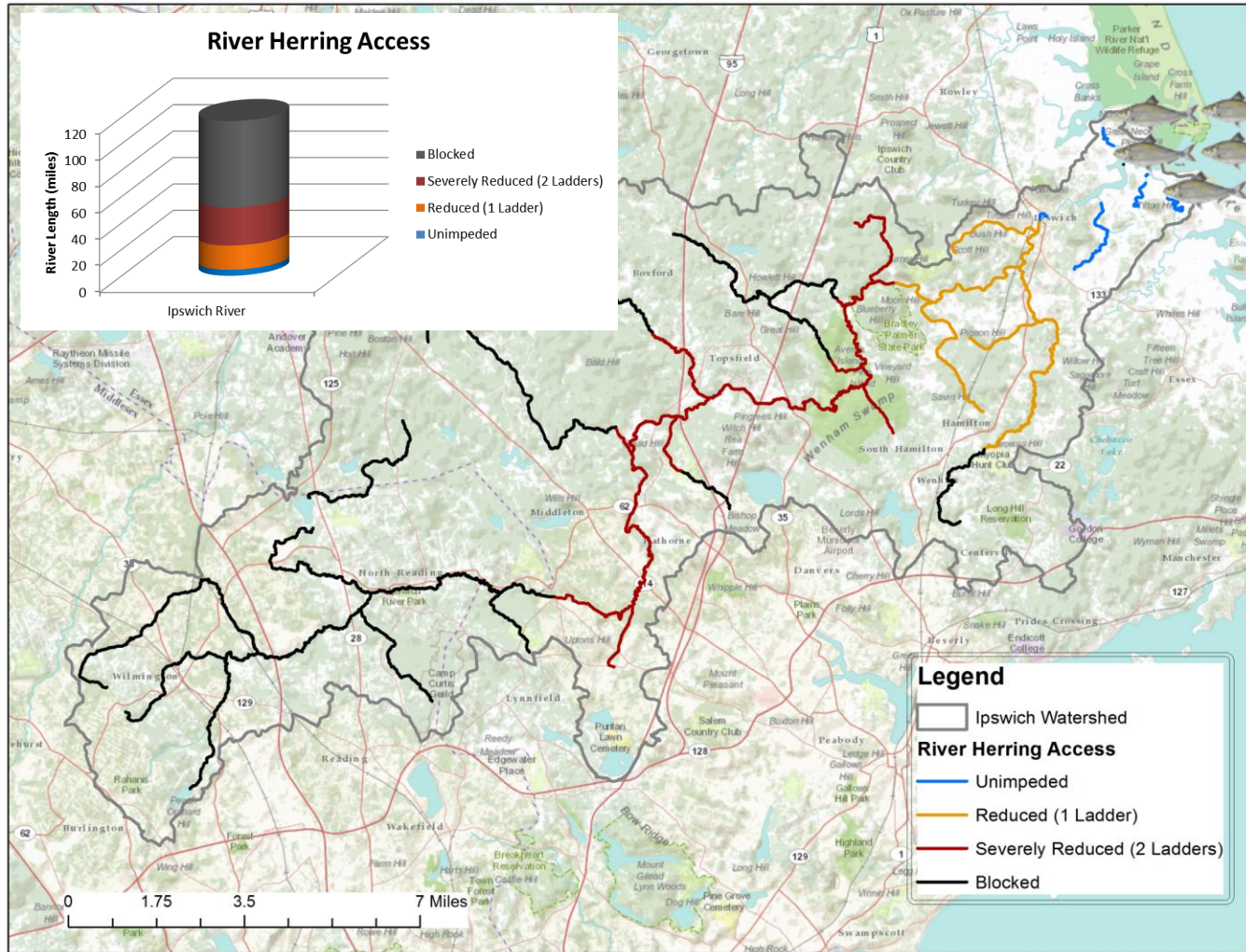
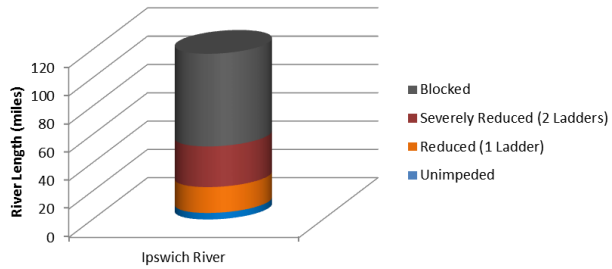
Willowdale Dam



Ipswich Mills Dam



River Herring Access

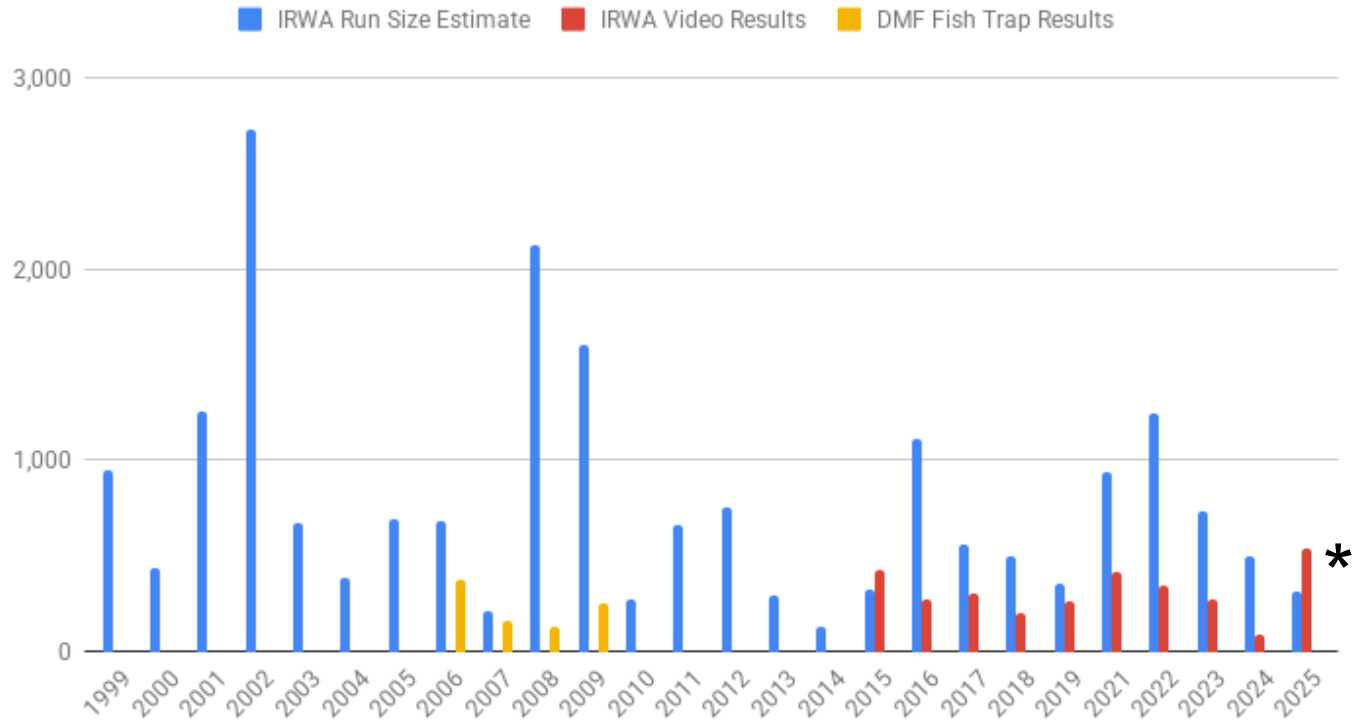


Legend

- Ipswich Watershed
- Unimpeded
- Reduced (1 Ladder)
- Severely Reduced (2 Ladders)
- Blocked



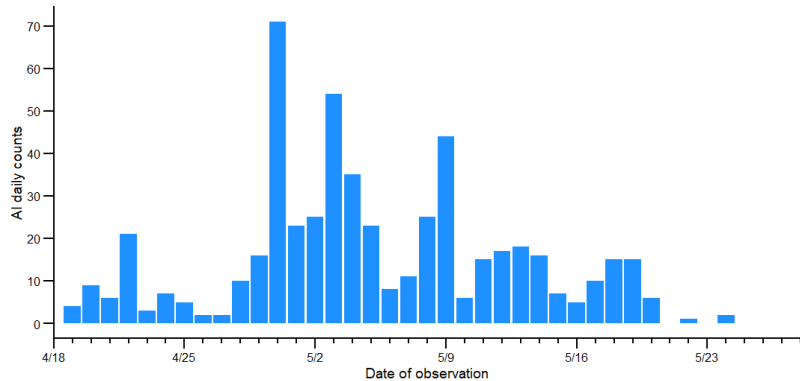
Annual Run Size Estimates, Video Results and Trap Results



*

2025 Video count performed using an automated AI machine learning tool.

CURRENT TRENDS



- The goal is to achieve at least an 80% accuracy compared to a human reviewing the same footage.
- In some cases it can achieve 90% or greater.

AI Machine Learning*

*Zhongqi Chen - Woodwell Climate Research Center,
Rob Vincent - MIT Sea Grant

WHERE DO I COUNT?

IPSWICH MILLS DAM



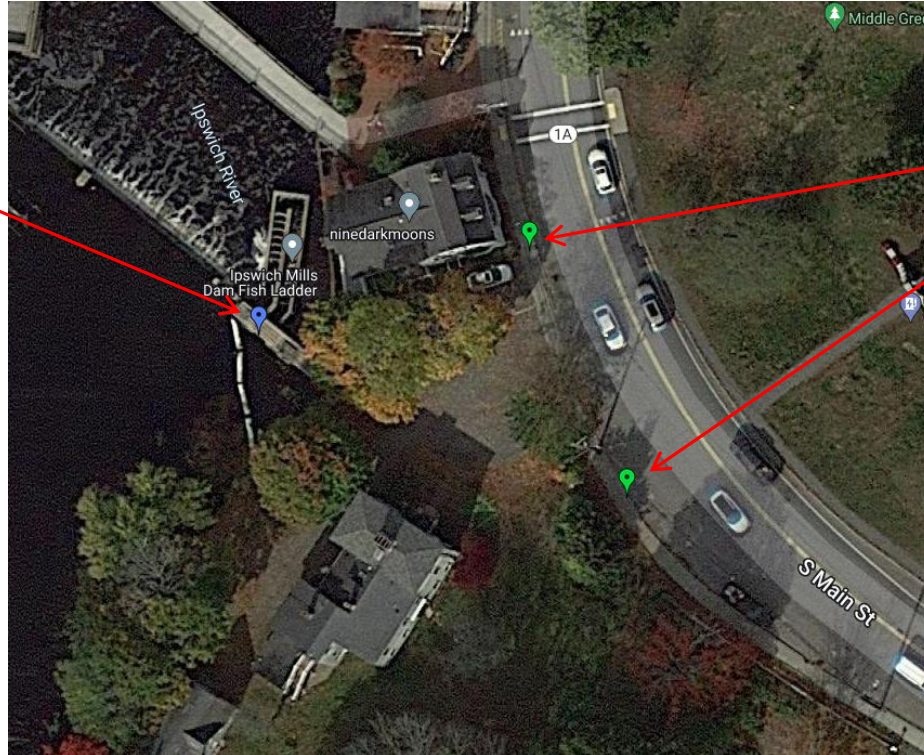
WHERE DO I COUNT?



WHERE IS IT?

See the [map](#) with directions on the IRWA website.

Fish Count
Location



PARKING:
ON-STREET PARKING
ON SOUTH MAIN ST.
ALSO IN MUNICIPAL
LOT ACROSS THE
STREET (OUT OF VIEW).
-DO NOT PARK IN
GRAVEL DRIVEWAY

HOW DO I COUNT?

STEP 1: Find box on fence



STEP 2: Remove everything you will need.



- CLIPBOARD
- PENCIL
- STOPWATCH

STEP 3:

Record your name and date in the columns on the data sheet.



2023

Ipswich River, Ipswich Mills Dam

PLEASE RECORD FISH GOING UPSTREAM ONLY

Observation	Name	Date	Weather (see key below)	Water Temp C	Air Temp C	AM/PM	Time	# Fish (ONLY record herring)
<i>Example</i>	<i>Henrietta Herring</i>	<i>04/12/23</i>	<i>5</i>	<i>15</i>	<i>19</i>	<i>PM</i>	<i>1:00-1:10</i>	<i>1</i>
1								
2								
3								
4								
5								
6								

Weather Key: 1= no clouds (sunny); 2= 1%-25% clouds; 3=26%-50% clouds; 4=51%-75% clouds; 5=76%-100% clouds; 6= drizzle/light rain; 7=rain/moderate-heavy; 8=sleet/snow; 9=other

Additional Observations:

STEP 4: Record the weather on the data sheet.



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Additional Observations:

STEP 5: Record the air and water temperature in degrees Celsius.

- Be sure to turn the air temp. board away from direct sunlight.



STEP 5 (CONT.): Record water and air temperature on data sheet.



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Additional Observations:

STEP 6:

Record the time interval and write “AM” or “PM” in the columns



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Additional Observations:

STEP 7:

- look down at the counting board and begin the stopwatch.
- Watch continuously for TEN minutes.
 - Note: New for 2025! The counting box will be completely open, no lid to open and close



WHAT AM I LOOKING FOR?

- Watch this [video](#) to see what herring and other fish look like.
- This was recorded when there was a specialized trap at the top of the fishladder and is clearer than what the current view looks like.



STEP 8:

- Record the number of any HERRING GOING UPSTREAM (and only herring going upstream) in the “fish” column of the data sheet.
- If any herring are observed going back downstream, subtract that from your total.



Ipswich River, Ipswich Mills Dam



2023

PLEASE RECORD FISH GOING UPSTREAM ONLY

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Additional Observations:

STEP 9:

- Make any other notable observations about wildlife or other activity around the fish ladder.
- Record these at the bottom of the data sheet.
- Examples:
 - I saw a huge snapping turtle!
 - Fifteen lamprey came up during my count!
 - I dropped the pencil in the river, sorry :(
 - A river otter ran up the ladder!



STEP 10:

- Return all counting tools to the boxes.
- If the data sheet is full, place it in the plastic bag in the box.
- Multiple dates can go on one sheet.
- Hang box back up on fence if you removed it.
- You're done! Thanks! :)

TYPES OF FISH YOU MIGHT SEE

2008 TRAP RESULTS MOST COMMON FISH



1021 SEA LAMPREY



130 ALEWIFE



18 RED BREASTED
SUNFISH



23 GOLDEN SHINERS



42 WHITE SUCKERS



22 PUMPKINSEED



20 YELLOW PERCH

TYPES OF FISH YOU MIGHT SEE

2008 TRAP RESULTS

LESS COMMON FISH



1 BLUEBACK HERRING



1 PICKEREL



6 LARGEMOUTH BASS



0 AMERICAN SHAD



3 BULLHEAD

2 AMERICAN
EEL



1 CREEK CHUBSUCKER

HOW OFTEN DO I COUNT?

- As often or as little as you want!
- Once a day, once a week, one time only, up to you! **

WHEN DO I COUNT?

- There are THREE time periods every day:
 - 7 AM to 11 AM
 - 11 AM to 3 PM
 - 3 PM to 7 PM

**Goals: At least 3, 10 min. counts per period (9 per day) and for counts to be as random as possible

HOW DO I SIGN UP?

- Request email will go out every Thursday for the following week.
- Go to the [Ipswich River Herring Count Page](#) on SignUp.com.
- You can sign up anytime. Go to a date and click the Sign Up button
- You can see who is already signed up in each time block (7am-11am, 11am-3pm, 3pm-7pm).
- Pick a block Enter your information and click Save
- You should receive an automatic email showing your sign up times.
- Save the link, plus will be sent out weekly with any updates.
- Drop-in counters: check the calendar in the box to see if that time is already covered.

Counting Guidelines

The goal is to do a ten minute count at some point within the time period you sign up for, ideally with 3 counters signed up for each time period for a total of 9 counts a day.

The time periods in which to count are:

7AM - 11 AM

11AM - 3 PM

3PM - 7 PM

Three Rules:

- 1) Randomness is better, so if you do a count in the same time slot regularly try to not have it be at exactly the same time.
- 2) Please, **no back to back counts**, meaning if you sign up for more than one count in a given time slot please leave at least 10 minutes in between.
- 3) If you do a drop-in count (don't sign up ahead but pop by when you have time) ***please, please check the data sheet to make sure a count is needed and fill in your name on the hard copy schedule in the box.*** Otherwise a scheduled counter might get bumped from their planned slot.


What do I do if I have questions?

Contact Ryan

- rodonnell@ipswichriver.org
- (978) 412-8200 (Mon, Wed. and Thurs. during business hours)

VIDEO CAMERA EXAMPLES





**THANKS FOR
COUNTING.
REMEMBER,
EVERY COUNT
COUNTS!**