

Fisheries Updates for Connecticut B.A.S.S Nation

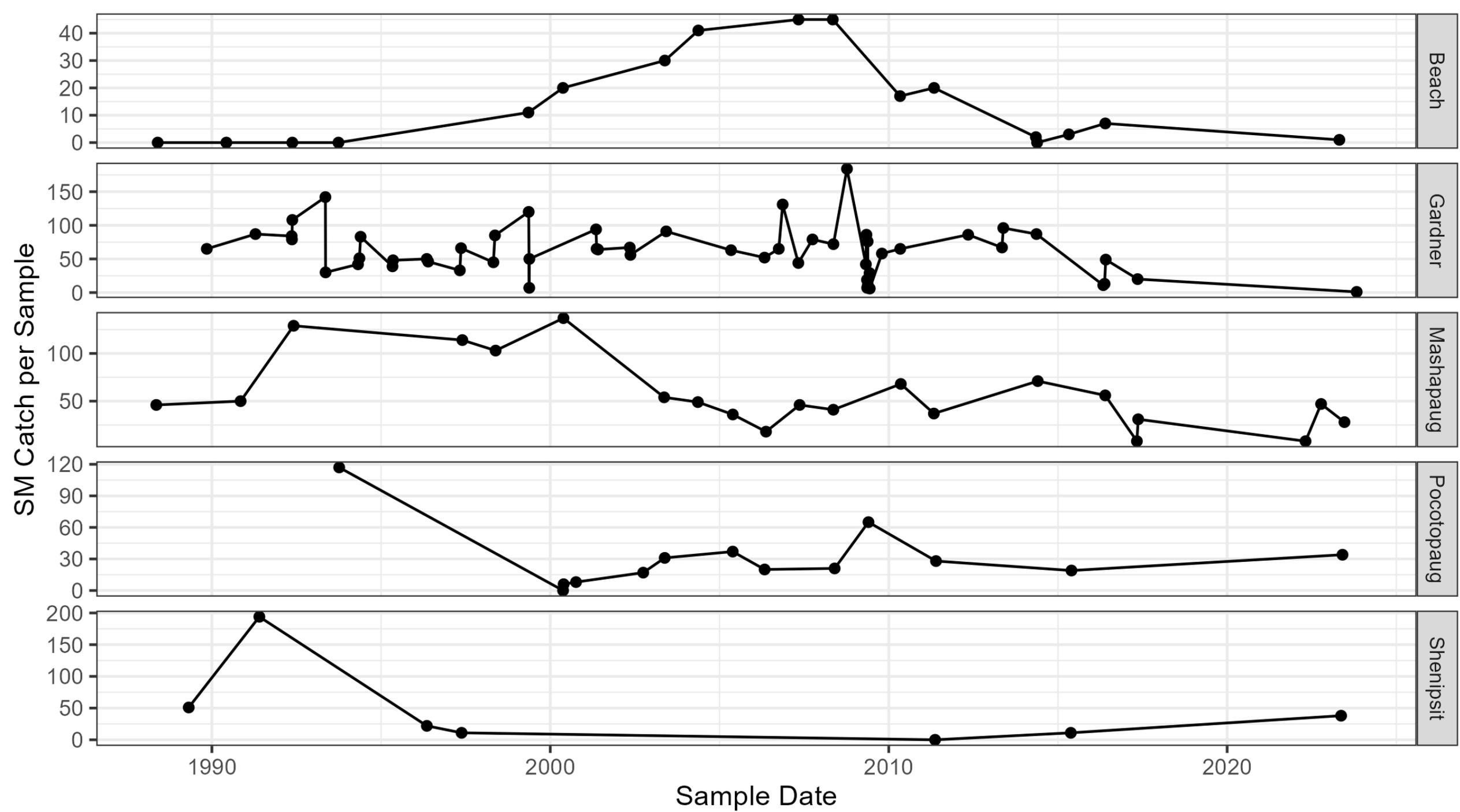
Andrew Bade and Spencer Mallette

8/28/2024



Smallmouth Bass in Decline

- Electrofishing data suggest reductions in the range and abundance of SM in CT lakes and ponds
- Part of a broader regional decline
 - Chesapeake Bay watershed, southern NY, and the southeast all experiencing dramatic declines



Why the Decline?

- Smallmouth are vulnerable to threats including:
 - Other black bass (Largemouth, Spotted, Alabama)
 - Loss of habitat (e.g., reservoir aging, invasive SAV)
 - Climate and land use changes
 - Eutrophication
 - Acidification
 - Largemouth Bass Virus
 - Endocrine disruption
 - Angling
- These stressors often cooccur



What are we Doing About it?

- Transplanting Smallmouth Bass
 - Moving Smallmouth from unfished reservoirs with a clean bill of health to locations where they are extirpated
- Enhancing habitat for reintroduced populations
 - Half-logs and nesting boxes
- Fish community sampling, tournament monitoring, and angler logs to track Smallmouth Bass populations and other fish community changes
- Fish pathology testing and habitat assessments to better understand causes of decline and identify locations for reintroduction and/or habitat enhancement
- Data rescue to better understand historical distribution (i.e., pre 1980s)

Wyassup Lake Pilot Project

- Repeated sampling, an angler survey, and angler logs document the extirpation of a once abundant Smallmouth Bass fishery that goes back to at least 1925
- Angler surveys also document strong angler support for reintroduction
- Habitat assessment shows that some high-quality Smallmouth habitat remains, and points to opportunities for effective habitat enhancement
- Accordingly, we are transplanting Smallmouth Bass into Wyassup over a 3-year period. We started with 160 this past spring.
- Those transplants are supported by several habitat structures (2 nest boxes and 21 half-logs so far) to improve reproductive success



Processing

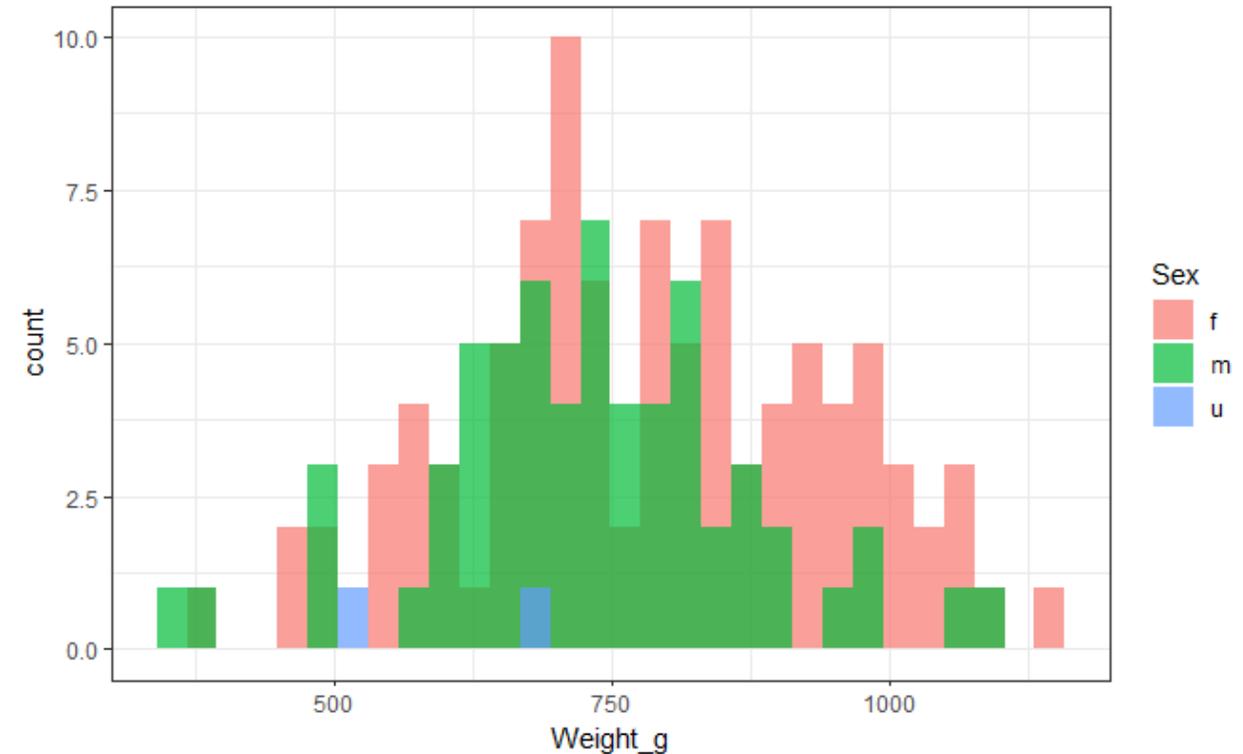
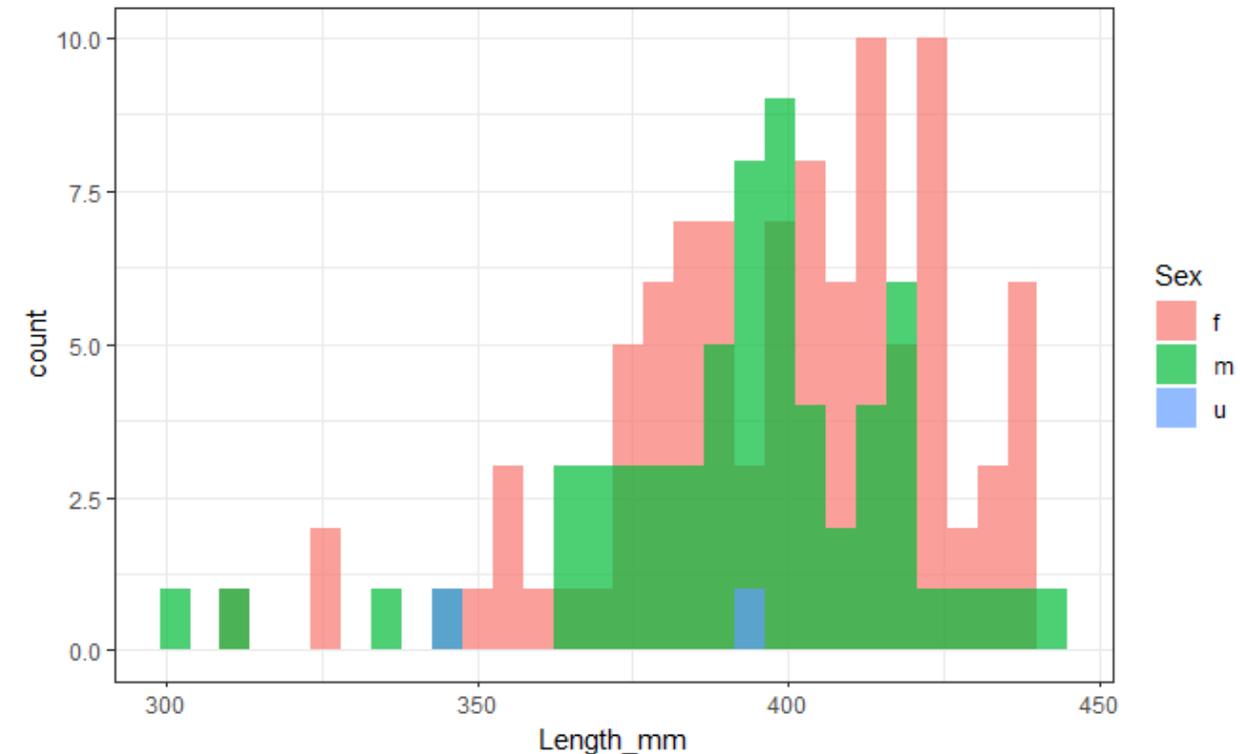
- Weighed
- Collected scales
- Sexed
- Marked





Summary Data on Transplanted Fish

- Averaged 15.6 inches and 1.7 pounds (biggest was 2.5 pounds)



Habitat Placements

- Habitats went out on 4/29 and 5/14
- Most half-logs placed around the islands
- Nest boxes were placed along western shore north of the boat launch



Snorkel Surveys



- Snorkel surveys around the islands assessed the use of habitat structures. At least 12 logs had active nests (both LM and SM)
- At least 9 actively guarded SM nests were observed
- Fall electrofishing will be used to detect the presence of young-of-year Smallmouth

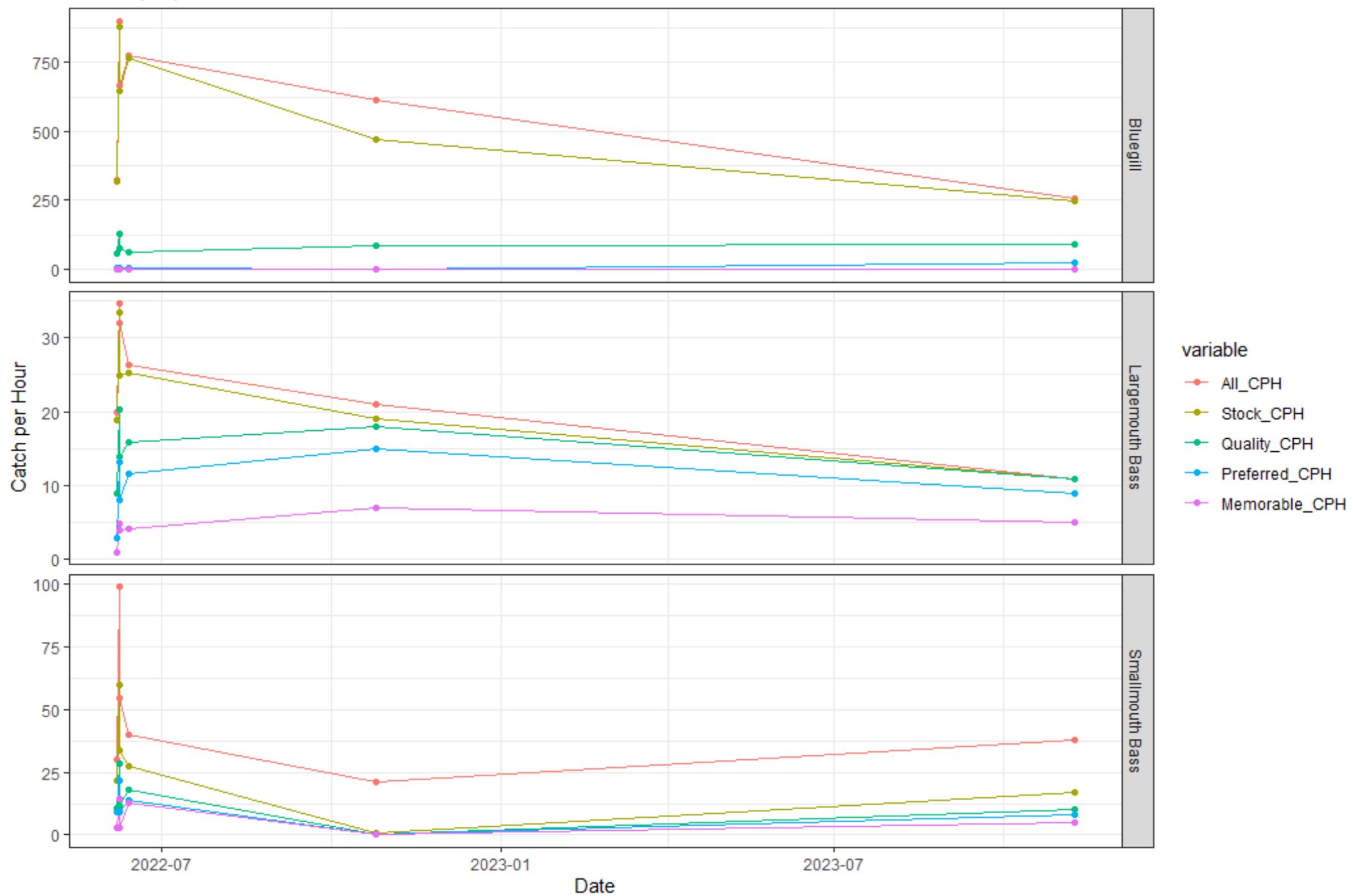
Candlewood Lake TGC Update

An estimated
656-2409 remain

- 449 Triploid Grass Carp removed so far.
- Fisheries Division removed 226 over 9 samples in 2023 and 201 over 2 samples in 2024. Anglers removed an additional 22
- Still no sustained vegetation, so removals are planned for this fall on 9/3, 9/12, 9/17, and 9/24



CPH by Species and Size Class in Candlewood Lake



UConn to the Data Rescue!

- “Data rescue” refers to preserving and organizing data that are at risk of loss or disuse
 - Data can be stored in a variety of locations and mediums, lacking metadata, lacking backups, etc.
- Failing to access these data leads to a host of problems
 - Loss of knowledge transfer across time
 - Redundant effort
 - Functionally limited time-series
 - Wasted time and money
- In a data rescue, these data are transformed to modern media and collated into a small number of user-friendly databases, complete with metadata and maintenance plans

Inland Fisheries Programs are Embarking on a Data Rescue

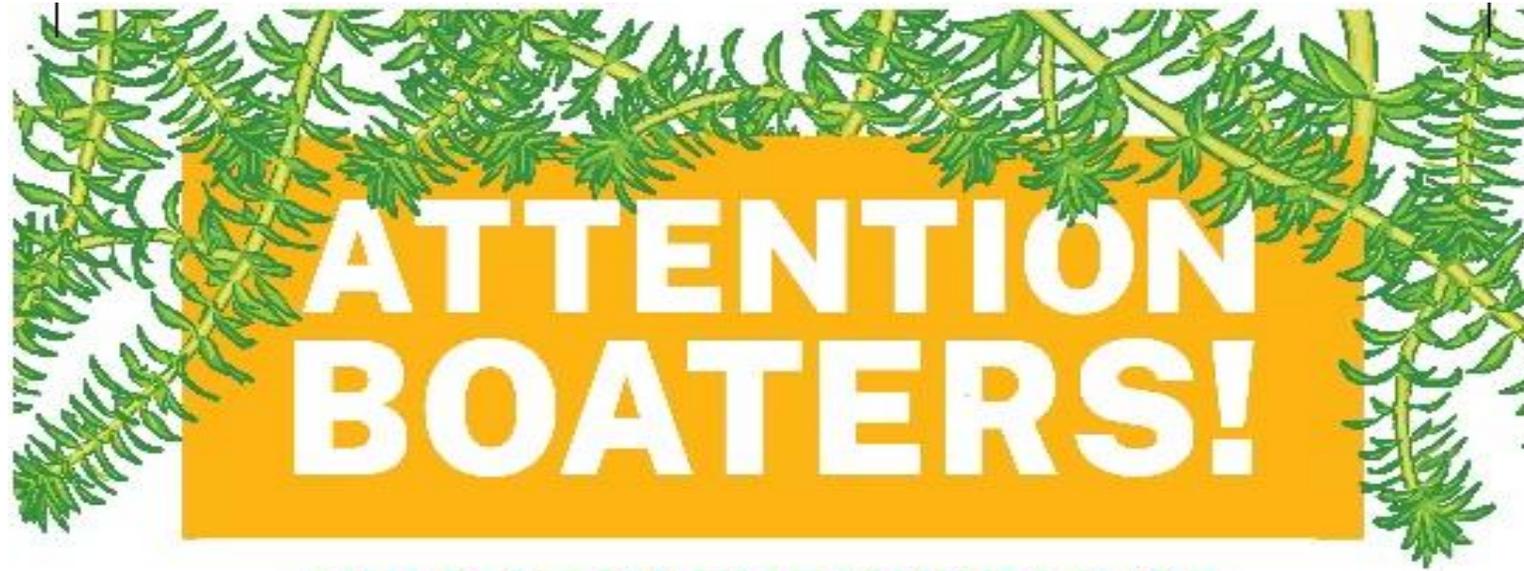
- “Historic Connecticut Fisheries Data Digitization and Organization for Management Decision Support” is the title of a new MOA to perform a data rescue with UConn.
- Jason Vokoun is recruited a post-doc to lead the project, which includes identifying, digitizing, and organizing all available electrofishing, angler survey, fish ageing, and stocking data, among other data sets of interest.
- The project lead will also undertake analyses and publish papers using the resultant datasets to better understand changes in Connecticut’s inland fisheries over time.
- Lastly, the lead will develop training material on how the database(s) were used to complete the aforementioned analyses and offer training opportunities to ensure Fisheries Division staff can continue to maintain and use these data moving forward.

Deliverables

- Comprehensive file of all fisheries data found and associated metadata.
- Relational database(s) containing, at minimum, lake and pond electrofishing, stream electrofishing, lake and pond angler surveys, stream angler surveys, fish ageing data, and fish distribution (stocking) by DEEP and other permitted entities where these data are available.
- Process document that provides detailed instruction on how to use the database and includes example analysis on topic/data chosen by the Fisheries Division.
- At least one training session with Fisheries Division staff on using the database.
- **The Fisheries Division being a better partner to the public and sister agencies/nonprofits by sharing data quickly and efficiently!**

The Spread Of Hydrilla In CT

How big a deal is this, anyway?



**HELP STOP THE SPREAD OF
HYDRILLA**

HYDRILLA IS RAPIDLY SPREADING THROUGHOUT CT AND HAS BEEN RECENTLY FOUND IN THIS WATERBODY. It grows quickly and forms dense patches. It can displace native plants, impact fish and wildlife habitat, and interfere with boating, paddling and fishing.

General Info

- Fast growing, widely adaptable SAV that grows and propagates itself rapidly
- Capable of growing >1” per day at each growth point
- Multiple modes of reproduction



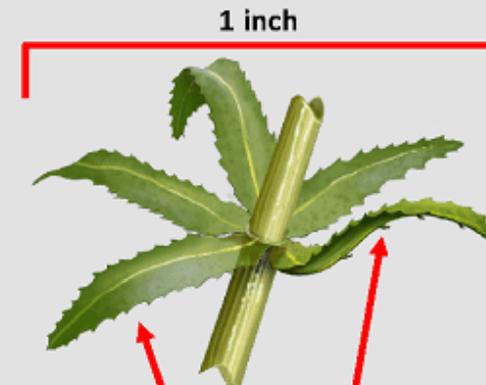
Hydrilla

Hydrilla verticillata



Plant

- Submerged
- Rooted or free-floating



Leaves

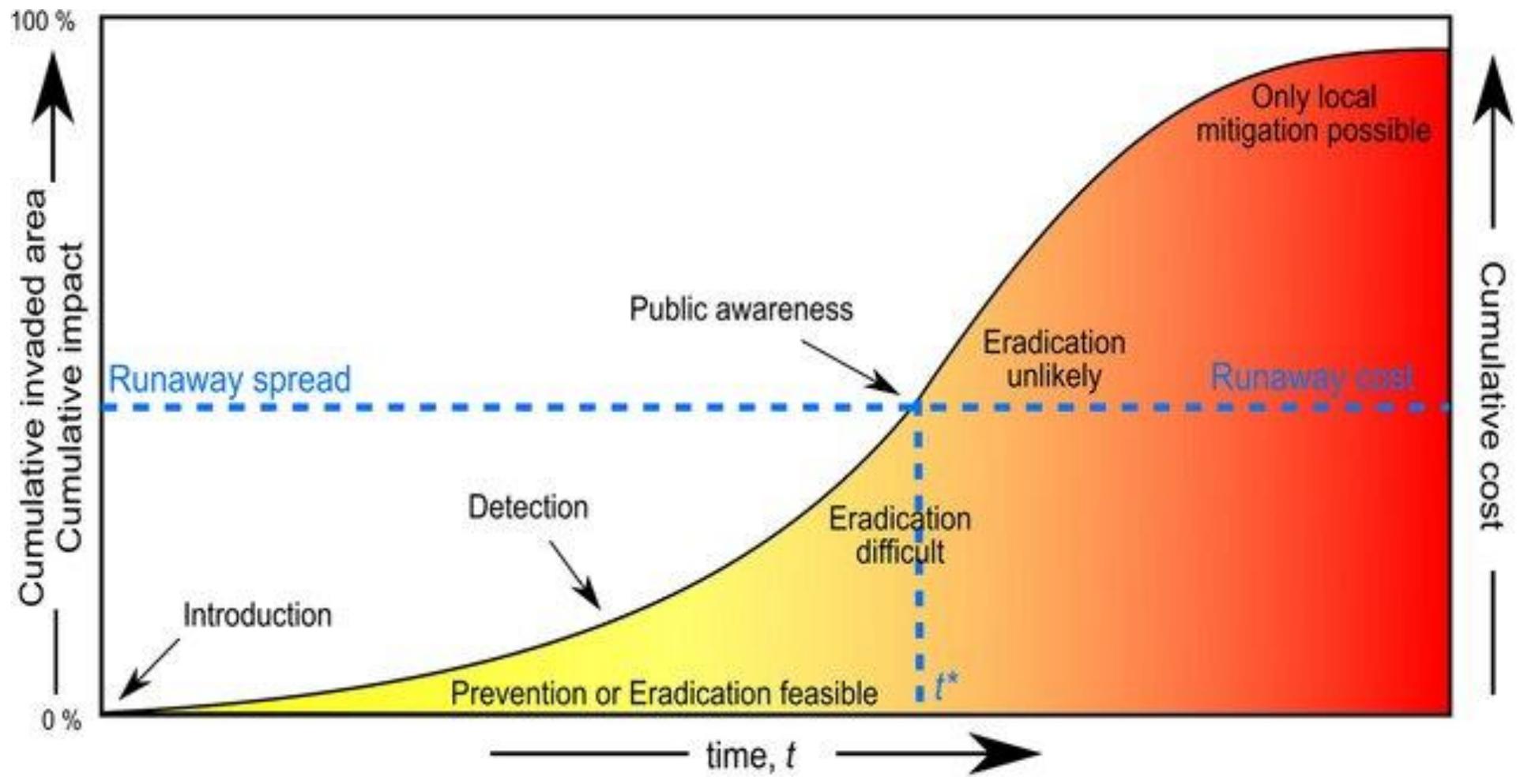
- Serrated edges
- Mid-vein has spines
- Arranged in whorls
- 4-8 leaves/whorl



Expansion of Hydrilla in CT



- Pre 2010 – a few small private ponds
- 2015 – Coventry Lake
- 2016 – CT River*
- 2023
 - East Twin Lake *
 - Meckaur Park Pond
 - Amos Lake*
 - Lake Pocotopaug*
 - Lake Lillinonah
 - Middle Bolton Lake*
 - Congamond Lake*
 - Pameacha Pond*
- 2024
 - Gardner Lake*
 - Pachaug Pond*
 - Bashan Lake*



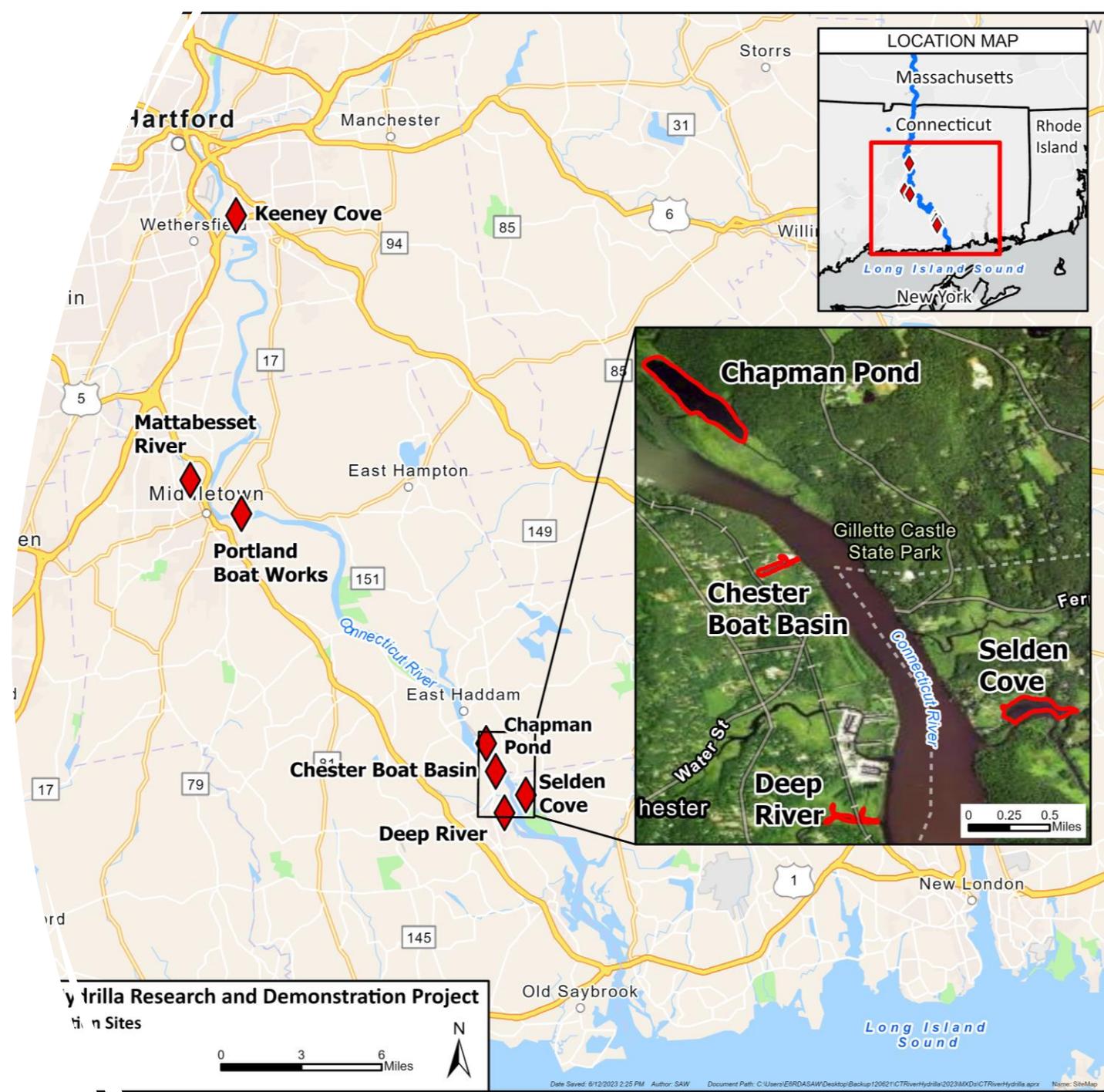
How is this stuff getting around?





What is being done?

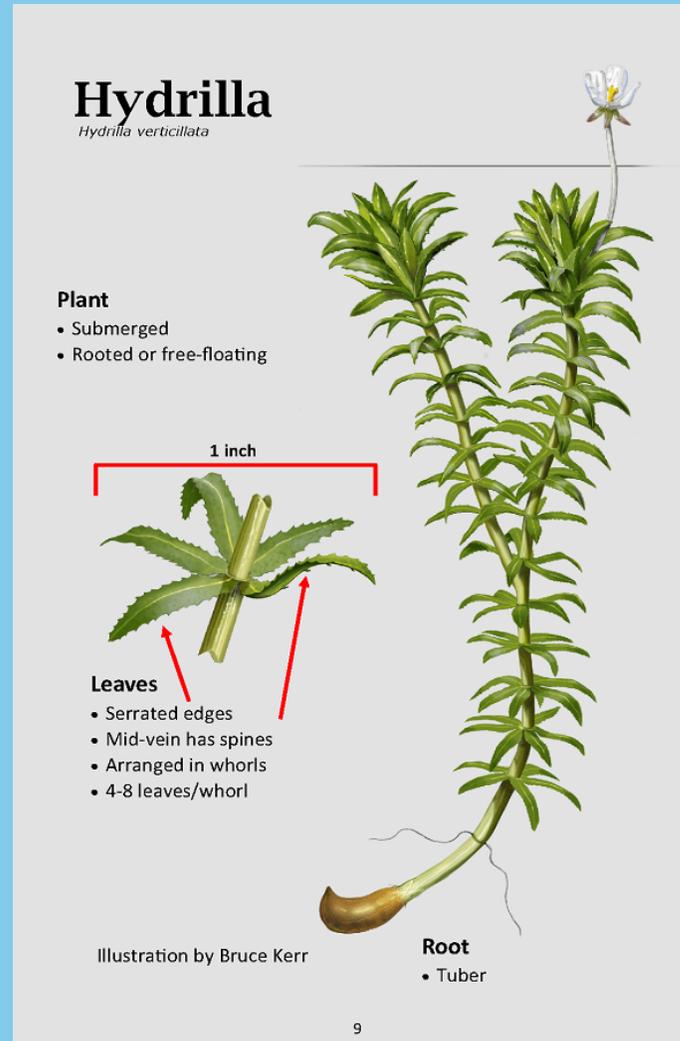
- Education and outreach
- Funding opportunities
- Collaboration with other organizations (Fisheries, Boating, CAES Office of AIS, etc.)
- USACE research project



Hydrilla Locations in Connecticut

Northern Hydrilla (CT River strain)

- Amos Lake*
- Bashan Lake*
- Congamond Lake
- Connecticut River*
- East Twin Lake*
- Gardner Lake*
- Middle Bolton Lake
- Pachaug Pond*
- Pameacha Pond
- Pocotopaug Lake



Wandering Hydrilla (monecious strain)

- City Lake
- Coventry Lake*
- Held Pond
- Lake Lillinonah*
- Laurel Reservoir
- Meckauer Park Pond
- Mystic Seaport Pond
- Masons Island
- Silvermine River
- Popes Pond



Memorandum

To: Derby/Tournament Applicant

From: William Foreman
Fisheries Division

Subject: FISHING DERBY/TOURNAMENT and AIS SPREAD PREVENTION REMINDERS

FISHING TOURNAMENT REMINDERS

Enclosed is your approved derby/tournament permit. Remember that you or your representative should have a copy of the approved permit on-site at the tournament.

Remember to complete and submit the report form with the results of the derby/tournament. Black bass tournaments should also complete and return the supplemental report form. We need your cooperation in providing accurate tournament results. These reports, if complete, are a valuable source of data that can be used to help guide our efforts to improve Connecticut's fisheries.

If this tournament is at a **Bass Management Lake** and you have been granted an exemption from the Bass Management regulations, **you must also have a copy of the one-page permit summary with you during the tournament** as it indicates that the tournament was granted an exemption from the bass management lake regulations.

Please review both the enclosed permit form and the enclosed guidelines for conducting a fishing tournament. Note that your **permit can be immediately revoked for failure to adhere to either the permit requirements/conditions** (such as location, start time, maximum number of boats, etc.) **or the tournament guidelines**. The approval of future permit applications can also be affected.

AQUATIC INVASIVE SPECIES SPREAD PREVENTION REMINDERS

Also, as you may be aware, an increasing number of damaging aquatic invasive species are invading the waters of Connecticut. Of most concern is the continued expansion of a new strain of hydrilla found throughout the Connecticut River and now in other waters, most notably Amos Lake, East Twin Lake, Gardner Lake, Middle Bolton Lake and Lake Pocotopaug. Additionally the more typical strain continues to hold on at Coventry Lake and has recently also been found in Lake Lillinonah. Other concerns include the presence of zebra mussels in Candlewood Lake, East Twin Lake and in the Housatonic River and its impoundments. Please see the reverse side for the latest information on preventing further spread of aquatic invasive species into Connecticut's waters and how to obtain your 2024 Aquatic Invasive Species Stamp.

If there are any questions, please contact me by phone at 860-424-3868 or 860-424-FISH-(3474), or email William.foreman@ct.gov. Your cooperation is appreciated.

GOOD FISHING!!!

OF MOST CONCERN:

HYDRILLA, a highly invasive aquatic plant, is now fully established at a several locations throughout the state, including the entire Connecticut River from the Massachusetts border downstream to Old Saybrook and in Coventry Lake. It is now also invading a number of other waters, most notably Amos Lake, East Twin Lake, Gardner Lake, Lake Pocotopaug, Lake Lillinonah and Middle Bolton Lake.

ZEBRA MUSSELS are found in Candlewood Lake, East Twin Lake, the Housatonic River, and are well established in its major impoundments (Lakes Housatonic, Lillinonah and Zoar).

BEFORE LEAVING THE BOAT LAUNCH

CLEAN

- ✓ Inspected all areas of their boats, trailers and vehicles used to trailer boats.
- ✓ Remove all plants, plant fragments, mud, fish or animals.

DRAIN

- ✓ Eliminate water from boat and all equipment, including motors, jet drives, bilges, live wells and storage compartments.

AT HOME (before launching elsewhere)

DRY or WASH

- ✓ Dry anything that came in contact with the water (boats, trailers, trailering vehicle) **for at least 7 days.**

OR

- ✓ Wash boat (including bilge area, livewells and engine cooling system), trailer and equipment with one or a combination of the following:
 - **Hot or high-pressure water.**
 - **Chlorine/bleach solution** (1 ounce per gallon of water).
 - **Vinegar** (as sold).

THANK YOU FOR YOUR COOPERATION!

REMEMBER – IT IS THE LAW! (CGS sec. 15-180): **Boaters must inspect their vessel and trailer for vegetation and aquatic invasive species and properly remove and dispose of any vegetation and aquatic invasive species before transporting the vessel.** You can be fined \$95 per violation.

FINALLY, DON'T FORGET YOUR 2024 AQUATIC INVASIVE SPECIES STAMP:

FOR VESSELS REGISTERED IN CONNECTICUT- This fee (\$5.00) is automatically included in the boat registration renewal fee (the vessel registration decal will serve as confirmation of the AIS fee payment).

FOR VESSELS REGISTERED IN OTHER STATES- This fee (\$20.00) must be paid prior to operating the vessel on inland waters in Connecticut. The non-resident vessel AIS fee can be paid in the same way that Connecticut fishing and hunting licenses are obtained, online at <https://portal.ct.gov/CTOutdoorLicenses>, or in person at one of DEEP's offices, a town hall that has opted to sell sportsmen's licenses, or at a number of other vendors that sell fishing equipment. View [TownClerkRetailAgentspdf.pdf \(ct.gov\)](#) on the DEEP website or call DEEP Licensing and Revenue (860-424-3105) for the vendor list.

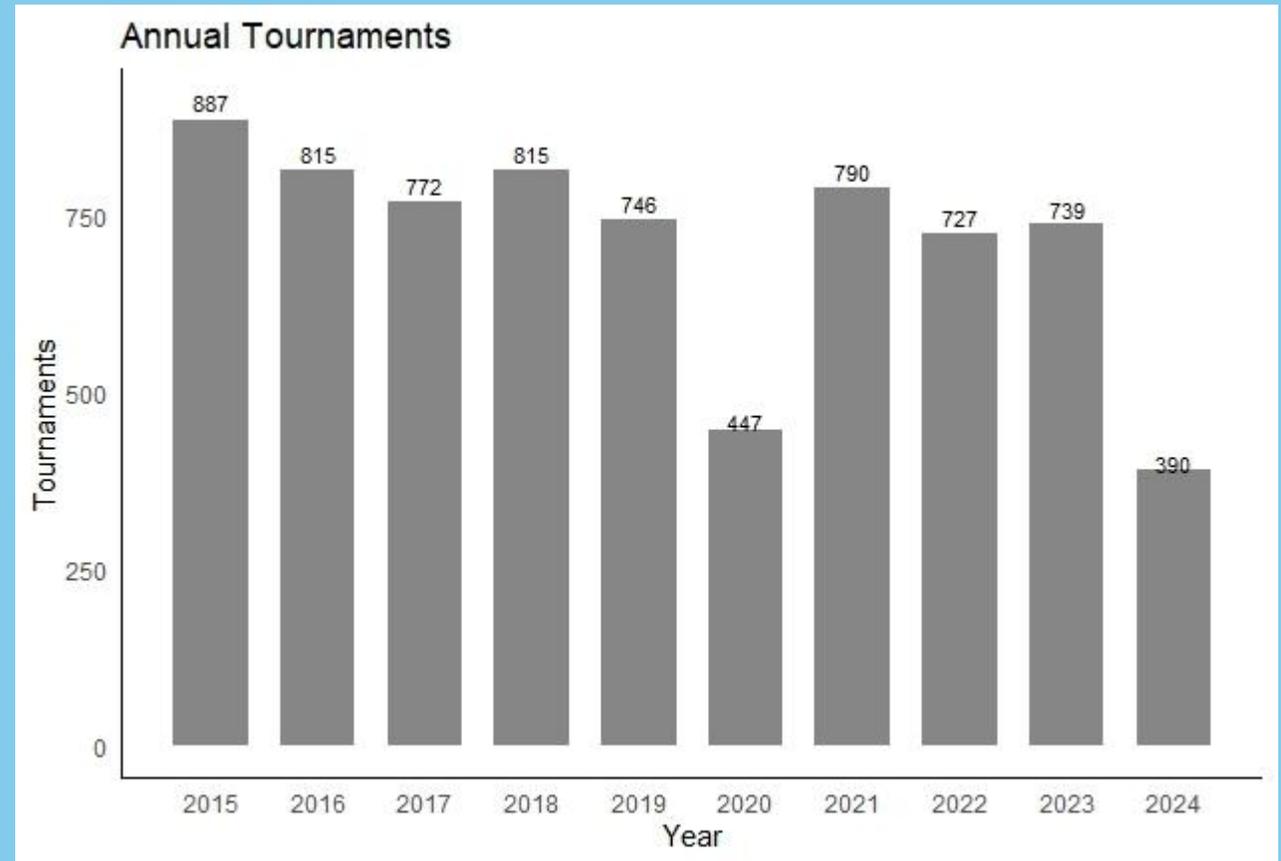
Be aware of debris on trailer!

- Check trailer both before AND after you launch, and then again when you retrieve
- Drain your boat at the lake when you leave best you can
- Clean, Drain, Dry after each use
- **BE OBNOXIOUS WHEN CHECKING AND CLEANING!**



Bass Tournaments in CT

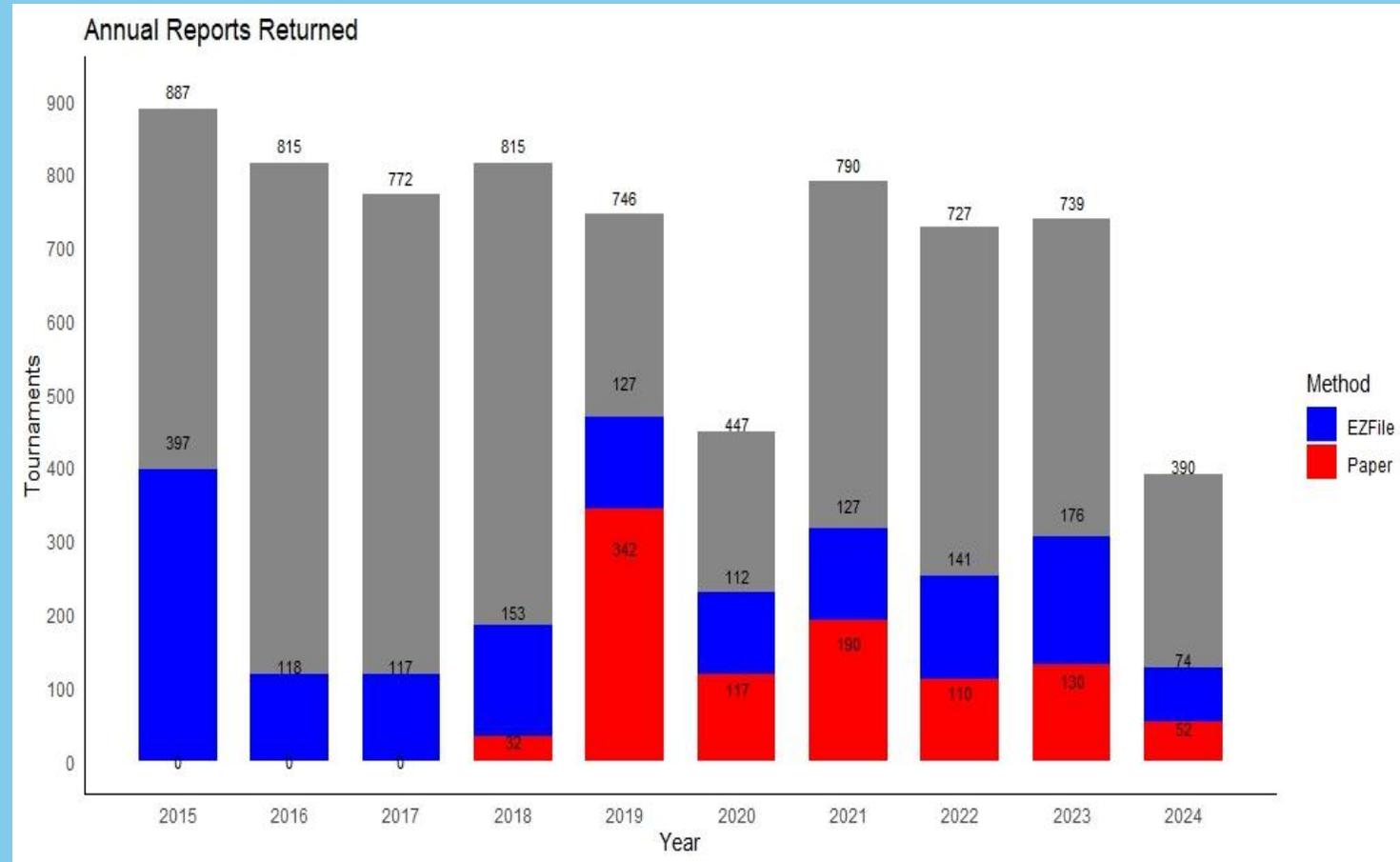
- Over 700 Tournaments take place a year in CT since EZFile system began
 - A maximum of 887 in 2015
 - This does not include denied or cancelled permits
- Currently on pace for 710 tournaments for 2024
 - Continues general downward trend in annual tournaments from 2015



2024 as of July 17

Tournament Reporting in CT

- Well below 50% on average
 - 2 years above ('19, '20)
 - 6 of 10 years below 40%
- Data becomes messy when there are multiple sources
 - Paper copies may be missing important information
 - EZFile submissions don't allow for more fine-tuned results



2024 as of July 17



Connecticut Department of
Energy & Environmental Protection
Bureau of Natural Resources
Inland Fisheries Division

Application for an Inland Fish Tournament or Fishing Derby

DEEP USE ONLY

App #: _____

Date Received: _____

A permit is required to conduct, on waters open to public fishing, a fishing tournament or derby which is open to persons sixteen years of age or older. A tournament/derby permit does not confer any special privileges. The permittee and participants must comply with all laws and regulations relating to inland sport fishing. A permittee must report the results of the tournament or derby to the Department, on the [Derby Post Event Report](#), within seven days after the date of the tournament or derby. A [Supplemental Report](#) form is also required for Black Bass Tournaments. Representatives of the Department may collect biological and statistical information on any or all fish caught by participants at a permitted tournament or derby. Please complete this form in accordance with the [Regulations of Connecticut State Agencies \(RCSA\) section 26-112-42](#)

There is no fee associated with this permit application.

Part I: Applicant Information

Filing # 116706

1. **Applicant Name (Association/Club/Group):** _____

Mailing Address: _____

Address Line 2: _____

City/Town: _____ State: CT Zip Code: _____

Business Phone: _____ ext.: _____

2. **Primary contact for departmental correspondence and inquiries, if different than the applicant.**

Name: _____

Home Phone: _____ Cell Phone: _____

*E-mail: _____

*By providing this e-mail address you are agreeing to receive official correspondence from DEEP, at this electronic address, concerning the subject application. Please remember to check your security settings to be sure you can receive e-mails from ".ct.gov" addresses. Also, please notify DEEP if your e-mail address changes.

Part VI: Participant Information

Number of boats: 15 Number of vehicles: 16

Number of parking spaces requested: 16

Number of additional parking spaces requested (if any): 0

Location of off-site parking (if being used): _____

Name of safety monitor (if 50 or more participants): none

What is the entry fee? 0.00

Which type of awards will be provided? Cash

Total value of all awards: 100.00

Maximum number of participants: Under 16 (specify number): 0
Over 16 (specify number): 30

Part VII: Certification

William Foreman	25 Jul 2024
Signature of Applicant	Date

Note: Please submit this completed Application Form and supporting documents, if applicable to:

INLAND FISHERIES
DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION
79 ELM STREET
HARTFORD, CT 06106-5127

Note: The attached Post Event Form must be completed and submitted, to the address indicated on the form, within seven days after the event.

Bass Tournament events also require a separate supplemental report form also attached, in addition to the Post Event Form.

Any questions, please call 860-424-3474 or by email at: DEEP.Inland.Fisheries@ct.gov

***** (for agency use only) *****

Inland Fish Tournament/Derby Permit	
<input checked="" type="checkbox"/> Approved	<input type="checkbox"/> Disapproved
Permit Number: _____	
Issue Date: 25 Jul 2024	Effective date: 20 Aug 2024 to 20 Aug 2024
Permit Conditions:	BOATS SHOULD BE INSPECTED FOR ALL PLANT MATERIAL AND AQUATIC INVASIVE SPECIES AND CLEANED APPROPRIATELY PRIOR TO LAUNCHING AND AGAIN BEFORE LEAVING AFTER THE TOURNAMENT.
Issued by:	Peter J. Aarrestad, Director Inland Fisheries Division



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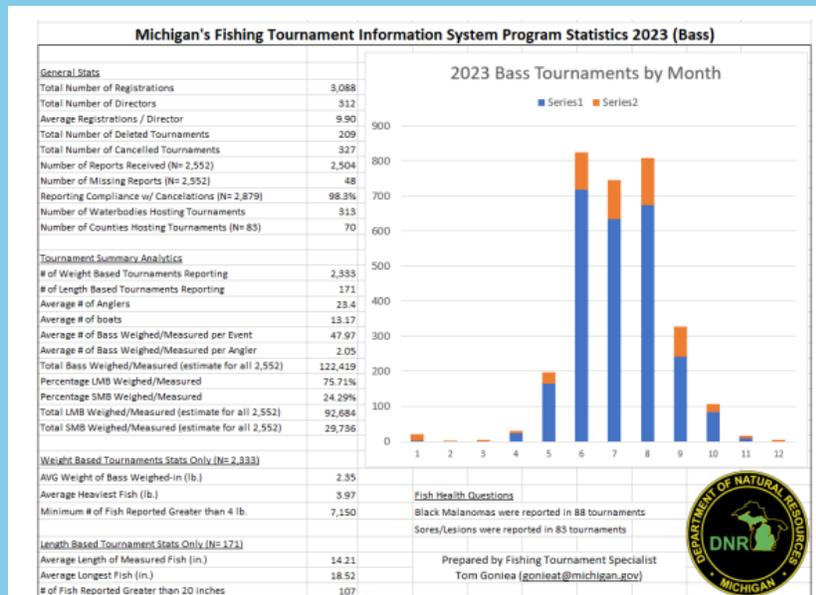
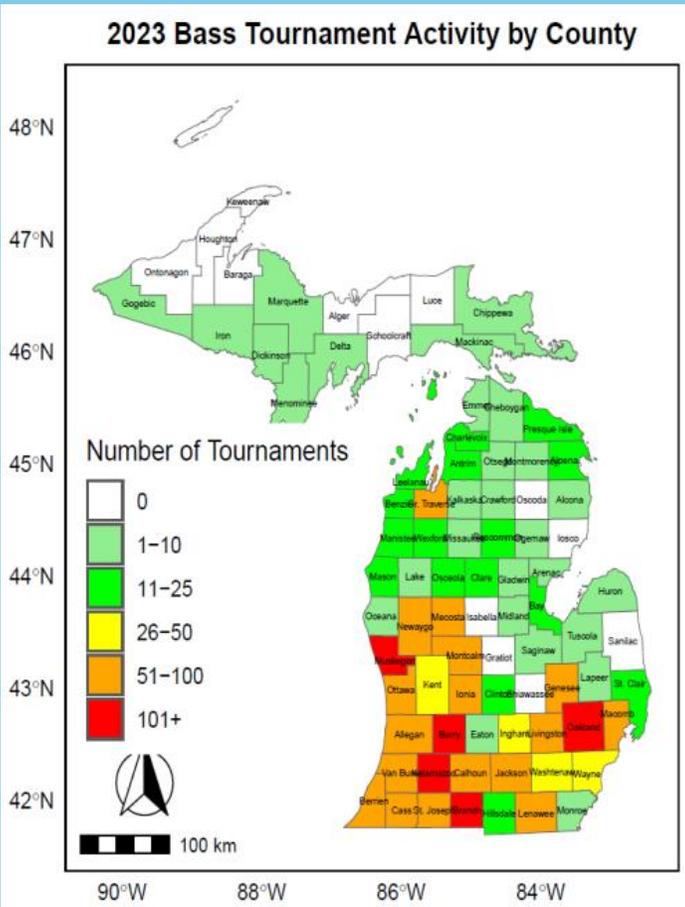
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Why are the reports important? What purpose will they serve?

- Give Fisheries Biologists for CT DEEP the ability to look at trends over time in catch rates, mortality rates, and fish size structure.
 - Look for possible warning signs of a collapse in a fishery
 - Possibly spread out pressure across lakes that may be “hidden gems”
- Gives Fisheries Biologists another tool to make possible changes to regulations to protect black bass
 - Higher reporting rates also can be used to show outside organizations that tournaments follow the rules
- But what does this give the anglers?

Access to more information!



Top 15 Waterbodies for Bass Tournaments in 2023

Rank	Waterbody	Counties	# of Tournaments
1	Lake Saint Clair	Macomb-Saint Clair	96
2	Gull Lake	Barry	66
3	Muskegon Lake	Muskegon	65
4	Grand River including Lloyd Bayou	Ingham - Ionia - Kent - Ottawa	50
5	Gun Lake	Allegan-Barry	49
6	Upper Crooked Lake	Barry	48
7	Austin Lake	Kalamazoo	43
7	White Lake	Muskegon	43
9	Morrison Lake	Ionia	41
10	Pine Lake	Barry	40
11	Jordan Lake	Barry	37
11	Lake Ponemah	Genesee	37
13	Paw Paw Lake	Berrien	35
14	Lobdell Lake	Genesee	34
14	Portage Lake	Saint Joseph	34

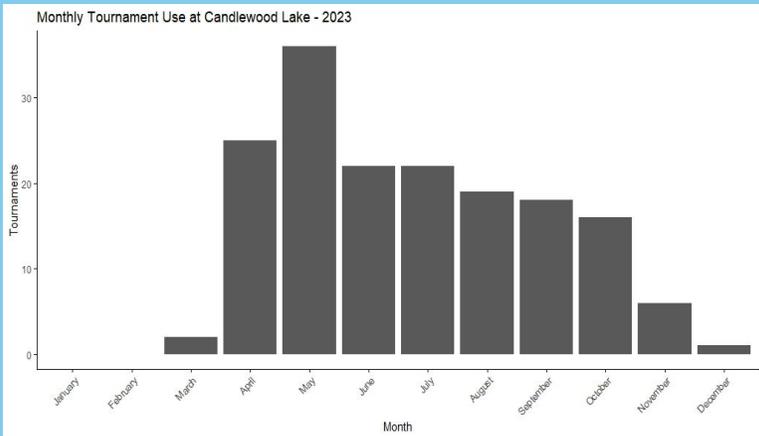
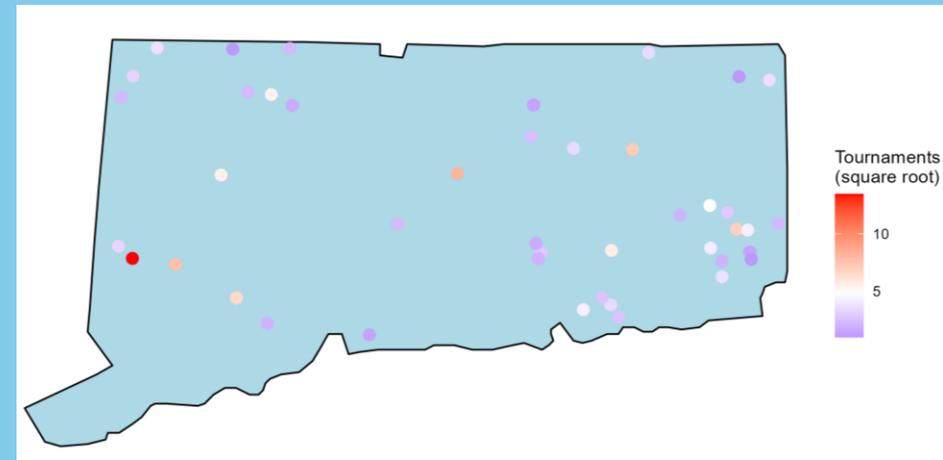
Top 25 "Heaviest" Bass Reported by Tournaments from 2023

Rank	Waterbody	County	Heaviest Fish (lb.)
1	Lake Skegemog	Grand Traverse	7.83
2	Clam Lake	Antrim	7.46
3	Indian River	Cheboygan	7.32
4	Lake Saint Clair	Saint Clair	7.05
5	Lake Saint Clair	Macomb	7.01
6	Lake Skegemog	Grand Traverse	7.00
7	Lake Charlevoix	Charlevoix	6.97
8	Lake Saint Clair	Macomb	6.96
9	Lake Skegemog	Grand Traverse	6.90
10	Lake Saint Clair	Saint Clair	6.78
10	Lake Michigan	Antrim	6.78
12	Lake Saint Clair	Macomb	6.67
13	Grand River including Lloyd Bayou	Ottawa	6.65
13	Lake Saint Clair	Macomb	6.65
15	Indian River	Cheboygan	6.63
16	Pickarel Lake	Newaygo	6.61
17	Lake Saint Clair	Macomb	6.60
18	Platte Lake	Benzie	6.56
18	Lake Charlevoix	Charlevoix	6.56
20	George Lake	Branch	6.50
20	Pine Lake	Barry	6.50
20	Lake Saint Clair	Macomb	6.50
23	Lake Erie	Wayne	6.48
24	Lake Huron	Alpena	6.46
25	Lake Saint Clair	Macomb	6.44

Michigan DNR "Annual Summary Report of Bass Tournaments" (2023)

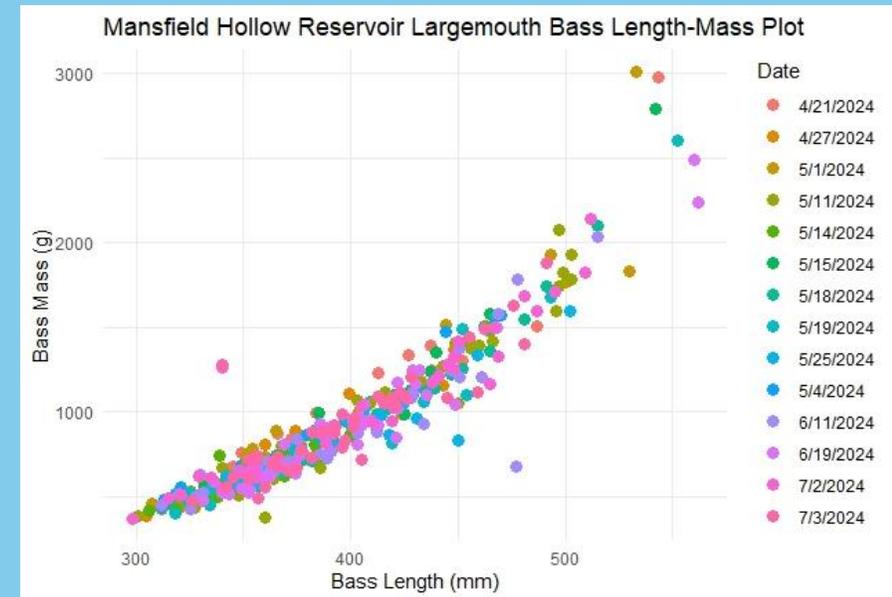
CT Version of Annual Report

- Statewide breakdown of tournaments
 - Total tournaments, waterbody usage, total groups, “Biggest” fish
- Waterbody breakdown
 - For the most used waterbodies, can create figures that will show success rate of anglers, fish size structure, and “Biggest” fish reports



Top 10 “Biggest” Fish Weighed in at Bass Tournaments Across Connecticut Waterbodies in 2023

Rank	Waterbody	Length (in)	Fish Weight (lb.)
1	Glasgo Pond	22.25	6.94
2	Glasgo Pond	22.25	6.50
3	Candlewood Lake	23.14	6.27
4	Highland Lake	21.00	6.25
5	Pachaug Pond	23.00	6.24
6	Pachaug Pond	23.00	6.24
7	Candlewood Lake	-	6.19
8	Candlewood Lake	-	6.06
9	Shenipsit Lake	22.00	6.00
10	Lake Lillinonah	-	5.94



Why are we not receiving reports in the first place?

- Lack of enforcement on CT DEEP side
 - Historically, we have not pressured directors to report results after a tournament is complete
- The system is not user-friendly
 - EZFile has its issues and may not save results properly, or allow for proper reporting of results
- No incentive to do so, no punishment if you don't

Thank you! Questions? Comments?

