

2017

Inland Fisheries Program Notes & Updates (Spring)



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Inland Fish Management & Fish Culture

COLDWATER FISHERIES

2017 SPRING TROUT STOCKING. Stocking for Opening Day (OD; 2nd Saturday in April; 4/8/17) began in late February this year. All scheduled waterbodies were stocked prior to OD, but a few did not receive their full pre-season allotments due to a late winter nor' easter; postponed or "shorted" runs were later made-up during the first week after OD. Many thanks go out to DEEP Parks and Support Services staff, as well as municipalities and water companies for clearing snow prior to stocking. As well, hatchery staff once again displayed great resilience in getting every scheduled waterbody stocked before OD; at one point in time we were behind one week in stocking with only three weeks remaining prior to OD. In-season stocking went relatively smoothly and was successfully completed by mid-May.

In all, approximately 517,200 **catchable size trout**, produced by the three State Fish Hatcheries (Burlington, Kensington and Quinebaug), were stocked during spring, 2017. Numbers of catchable size fish were down from 2016 (~609,000 were stocked last spring)(see page 2 of the winter 2017 report issued in march, 2017 for more information



A photo of recently liberated Rainbow Trout in the West Branch Farmington River.

on reductions in fish available for stocking). Of those stocked this spring (2017), approximately 469,350 were adult size trout (9-12 inch fish) with approximately 59% of these fish stocked prior to OD. Approximately 46,765 trout greater than 12 inches were stocked this season. Additionally, a total of 12,000 yearling size trout (6-9 inch fish) were stocked into the Trout Management Areas on the Farmington River (5,000 fish) and the Housatonic River (7,000 fish). Finally, nearly 1,100 broodstock trout were liberated into Connecticut's waters.

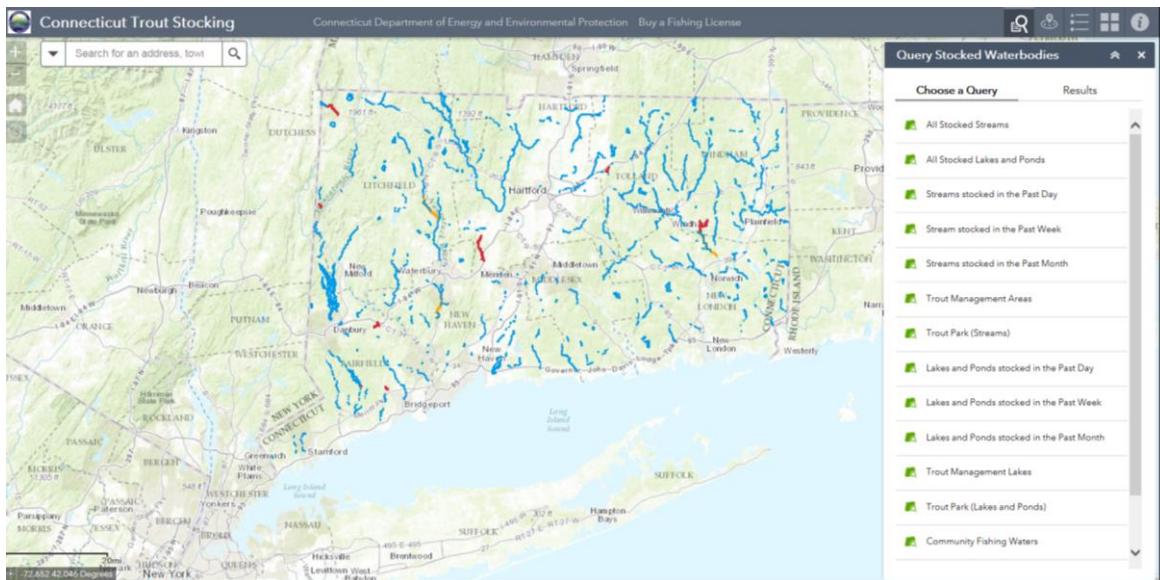
TROUT IN THE CLASSROOM (TIC). Over the last 4-6 weeks, TIC schools have all released their cultured trout fingerlings. Initial reports indicate high rates of success and many happy, enthusiastic, grade school students. It is estimated that this program allows contact with 10,000-15,000 children, teachers and parents each year.

SURVIVOR STRAIN TROUT. Fisheries Division staff elastomer marked 5,000 yearling Survivor strain brown trout in late March. These fish were subsequently stocked in the West Branch Farmington River TMA and were released with an additional 1,000, 2+ year old adult Survivor strain fish (avg. length of 14-18 inches) that had been previously marked. This year's tag color for the yearlings was an orange mark behind the right eye, while the large adults received a red tag behind the left eye. In addition, 7,000 yearling Survivor strain fish were stocked into the two Housatonic River TMA's.

Cover: *a seasonal resource Assistant releasing trout into the upper West Branch Farmington River. DEEP recently wrapped up its 2017 spring trout stockings.*

ONLINE STOCKING MAPS. All online, stream stocking maps (67 total) in western CT were updated and uploaded to the website prior to OD 2017. This was one of the outcomes from the stocking site assessment carried out in recent years. All eastern CT online stream stocking maps have been updated and will be uploaded in the near future.

In addition to updated downloadable PDF stocking maps, a new Interactive Trout Stocking Map went live just days before OD. This map is updated each evening during the in-season stocking season and allows Connecticut’s anglers to query all trout stocked waterbodies in the State and determine when they were last stocked. The interactive map was warmly received and utilized by thousands of anglers.



Screenshot of the new interactive stocking map that went live before OD 2017.

STREAM SURVEY DATA MANAGEMENT AND MAPPING. Twenty-eight years of stream sampling data collected by FD staff have been initially proofed for errors and entered into the GIS mapping coverages at DEEP. This data is currently being matched and cross-referenced with a geo-referenced numbering system formulated by staff in the Water Planning and Management Division, Bureau of Water Protection and Land Reuse. Proofing and matching of data is on-going and should be completed sometime in the next 3-6 months. This data management system allows the data to be incorporated into a statewide stream fish and insect database that is available for public use through the UCONN-CLEAR portal.

MANAGEMENT WATERBODY SIGN CHECKS AND RE-POSTING. This spring FD staff visited 21 management waterbodies (Trout Management Areas, Trout Parks, and Trophy Trout Areas) in western CT and re-posted informational/regulation signage as needed.

Two types of special trout management signs that were re-posted this spring.



WATER TEMPERATURE LOGGER DEPLOYMENT. More than 60 water temperature loggers were set in streams to track long-term trends in water temperature and the effects of changes on fish communities. In most cases this water temperature data is reviewed and coupled with sampling and assessments of the fish populations in these monitored streams. Additionally, water temperature data collected from last fall was uploaded into the ECOSHEDS website which makes data available to the public and aids in regional modeling efforts.

STREAM MONITORING. A planning meeting took place to determine the focus of stream monitoring efforts this coming sampling season. Areas to be sampled include historic stream monitoring sites, long-term reference streams, previously un-sampled headwater streams, streams found to be dry in 2016 (due to severe drought conditions), and Trout Management Areas. Sampling efforts will focus on revisiting old monitoring sites where Brook Trout were present and potentially identifying brook trout populations in streams previously not sampled.

STREAM ANGLER SURVEY. Stream angler surveys were conducted on four western CT waterbodies: Hall Meadow Brook (Torrington), Naugatuck River (upper; Torrington-Litchfield), Nepaug River (New Hartford), and Sandy Brook (Colebrook), this spring from OD through May 14th. Surveys were conducted to assess angler effort and catch in these streams/ivers during the early trout fishing season. It is anticipated that the data obtained will be used to refine/improve current stocking practices. In addition to the aforementioned waterbodies, nearly 30 additional locations were surveyed on OD by Fisheries Division (FD) staff to gather information regarding trout fishing effort and catch. Over the last ten years considerable effort by FD staff has been expended on OD morning to promote family friendly/new stocking locations and monitor effort on what is considered the “most important day of the angling year” in CT. Many major trout rivers/streams were surveyed multiple time throughout this day to help evaluate stocking practices and angler turn-out. Higher than normal flows and low air temperatures appeared to effect OD turnout this year in many areas.

KOKANEE STOCKING. Three waterbodies were stocked by boat with kokanee fry this spring; Beach Pond (25,000 total, Voluntown/Exeter, RI), East Twin Lake (70,000, Salisbury), and West Hill Pond (25,000, New Hartford/Barkhamsted). West Hill will receive another stocking by mid-June (25,000). This is the second year of experimentally stocking kokanee into Beach Pond; sampling for reproductively mature adults will need to be conducted in the fall of 2018 or 2019 to determine if stocking was successful.

RAINBOW SMELT REINTRODUCTION. For the fourth straight year, work continued to restore the historic smelt population into West Hill Pond (New Hartford/Barkhamsted). Artificial spawning mats originally constructed with materials donated from a local sportsman’s organization (Northwest CT Sportsman’s Council) were refurbished and deployed in a private water company reservoir this spring. Rainbow smelt successful utilized several of the mats which were then transferred to West Hill Pond. Later observations indicated that the eggs had successfully hatched. Unlike last year, no natural spawning was observed in West Hill Pond, despite several nighttime visits. Angler catches will be monitored to determine if this re-introduction has been successful.

PUBLIC OUTREACH. FD Coldwater staff participated in multiple public outreach opportunities including staffing booths at the Fishing and Hunting show, Fly-Fishing Expo’s and numerous talks to local fishing clubs and organizations. It is estimated that Coldwater staff had direct contact with 500+ individuals during these events.

WARMWATER FISHERIES

WARMWATER FISHERIES MONITORING. The 2017 spring boat electrofishing field season (April – June) is nearly complete. A total of 17 lakes have been sampled and work should be completed by June 8. Of note was the confirmation that a population of Warmouth (a species of sunfish not native to Connecticut) has become established in Toby’s Pond (A.K.A. Beacon Falls Reservoir) and that Lake Saltonstall now contains a population of Smallmouth Bass. These species were probably introduced illegally by anglers. The introduction of Smallmouth Bass into Lake Saltonstall is not so troubling because Saltonstall is a large lake with ample forage that can support the addition of an apex-predator. However, the introduction of a potentially prolific (as are all sunfish) intermediate predator such as the Warmouth into a small pond such as Toby’s (approximately 27 acres) is much more likely to negatively affect the resident fish community. DEEP Fisheries continues to advise constituents to not transplant plants and animals among waterbodies. Such well-meaning, but uninformed (and completely illegal) actions can result in unpredictable damage to aquatic ecosystems.



Warmouth photo provided by angler David Van Allen, who caught the fish last June in Toby’s Pond.

LAKE & POND ANGLER SURVEYS. Open water angler surveys began on Opening Day of trout season (April 8, 2017) at **Beach Pond** (Voluntown/Exeter, RI), **Pachaug Pond** (Griswold), and **Amos Lake** (Preston). Surveys assess angler catch, effort, and opinions of the Fisheries Division’s (FD) management in these lakes. Data obtained will be used by a variety of FD management endeavors, including the Bass, Northern Pike and Walleye Management Projects. These surveys will continue until the end of October.

CATFISH. The annual Channel Catfish stocking occurred on May 23, 2017. A total of 6,733 adult (14-18 inch fish) and 11,438 yearling catfish (9-12-inch fish) were stocked into 24 waterbodies statewide. This marks the eleventh consecutive year DEEP has stocked catfish since the inception of the program in 2007. The fish were in excellent condition upon arrival and there were few mortalities.

- **Adult catfish** were released into 13 Community Fishing Waters: Beaver Park Lagoon (New Haven), Birge Pond (Bristol), Bunnells Pond (Bridgeport), Butternut Park Pond (aka Rowans Pond, Middletown), Center Springs Park Pond (Manchester), Freshwater Pond (Enfield), Keney Park Pond (Hartford), Lake Wintergreen (Hamden), Lakewood Lake (Waterbury), Mirror Lake (Meriden), Mohegan Park Pond (aka Spaulding Pond, Norwich), Pickett’s Pond (in Osborndale State Park, Derby) and Stanley Quarter Pond (New Britain).
- **Yearling catfish** were stocked into 11 Catfish Management Lakes: Batterson Park Pond (Farmington/New Britain), Black Pond (Middlefield), Burr Pond (Torrington), Hopeville Pond

(Griswold), Lake Kenosia (Danbury), Maltby Lakes 2 & 3 (Orange/West Haven), Quinebaug Lake (aka Wauregan Reservoir, Killingly), Scoville Reservoir (Wolcott), Silver Lake (Berlin/Meriden) and Stillwater Pond (Torrington). In addition, two Community Fishing Waters (Lakewood Lake and Lake Wintergreen) were also stocked with yearling catfish.

NORTHERN PIKE.

- **Broodstock Collection.** Weather and ice conditions were favorable this spring for the collection and stocking of Northern Pike broodstock adults into the managed spawning marshes in Eastern Connecticut (Mansfield Hollow and Lower Haddam). Broodstock pike were stocked into the Mansfield and Lower Haddam marshes. Instead of using broodstock, pike fry obtained free from the State of New Jersey Hackettstown Fish Hatchery were directly stocked into Wyantenock #3 on March 30th.
- **Northern Pike Rearing Experiment.** FD Fish Management and hatchery personnel continued the second year of a Northern Pike culture experiment at Burlington State Fish Hatchery. This year, two ponds (Punch Brook Pond #5 and #6) were stocked with pike fry obtained free of cost from the State of New Jersey Hackettstown Fish Hatchery and stocked into the pond on March 30th. The pond was fertilized with alfalfa meal to promote zooplankton growth. Once the fry are large enough, the pond will be stocked with forage fish to facilitate growing them to fingerling stocking size.

WALLEYE. Adult Walleye sampling was conducted at Beach Pond, Cedar Lake, and West Thompson Reservoir via night boat electrofishing in April, 2017. Lake Zoar was scheduled to be sampled, but high flow conditions thwarted attempts. Twelve Walleye were sampled at Beach Pond; of which two were legal size (≥ 18 in). Only three Walleye were sampled at Cedar Lake, but all were legal size (≥ 18 in). Only one 6.3-inch Walleye was sampled in West Thompson Reservoir. For some reason, Walleye are either leaving or are not surviving in West Thompson and it is likely we will discontinue stocking at this lake.

The Walleye population in Gardner Lake has been in decline for the last several years and fingerling survival at Mashapaug Lake has been mediocre at best. Because of this, we stocked both lakes with large fingerlings (7-inch fish instead of the typical 4-inch fish) in October 2015 and 2016 in hopes that fingerling survival would improve. The 2016 and 2017 May electrofishing samples showed promising results. Catch rates of the yearling Walleye were much higher in Gardner Lake (20/hr in 2016 and 42/hr in 2017) compared to the last 10 years (range = 0 – 15/hr, mean = 3.7/hr). Similarly at Mashapaug Lake, yearling Walleye were more numerous in the 2017 May sample than in any previous one (7.9/hr in 2017 vs. 2003-14 mean = 1.2/hr, range = 0 – 3.6).

A Walleye fingerling awaiting stocking into Batterson Park Pond.



CARE & Constituent Services

FAMILY FISHING COURSES. Family Fishing Courses taught by certified volunteer CARE Instructors attracted over 400 students in 15 towns this spring. Courses consist of two hours of classroom instruction followed by a fishing trip to a local waterbody. Special courses included:

- **“Mom and Me”** course in partnership with Chief CARE Instructor and Winding Trails naturalist Judy Witzke.
- **“Cops and Bobbers”** course in partnership with the U.S. Fish and Wildlife Service, Hartford YMCA, Police Activities League (PAL), and the Hartford Police and Fire departments. An evening of classroom instruction at the YMCA was followed by fishing events at Keney Park and Riverfront Park on the Connecticut River.
- **“Introduction to Bass Fishing”** in partnership with Winding Trails, Inc. and CT BASS Nation. All students were taken out on boats to test their new skills during the fishing experience.

***FAMILY FISHING COURSES.** A happy family put their newly learned skills to the test and were rewarded with a great largemouth bass during a Family Fishing Course field experience in Farmington.*



CARE CENTER PROGRAMS. Hosted 20 field trips focused on angling instruction and fishing at the CARE Center on Forster Pond this spring. A total of 600 sixth graders and parents from Hamden Public Schools and East Lyme Middle School attended. Prior to the field trip, teachers included lessons on fish habitat, identification, anatomy, and ecology in their classrooms. At the CARE Center on Forster Pond, students enjoy a day of hands-on angling skills building and a fishing trip.



***CARE CENTER COURSES.** The CARE Center on Forster Pond hosted 600 sixth grade students this spring. “First Fish” memories and future anglers were produced during these field trips!*

SPECIAL FISHING EVENTS. CARE Instructors taught an additional 20 special fishing events this spring for over 1,700 students. These highly-variable events provide services to people of all ages, abilities and skill-levels. Notable highlights include:

- **FREE Family Fishing Day** was held on May 13th in partnership with State Parks *No Child Left Inside*[®] program at Chatfield Hollow State Park. Close to 1,000 people attended on this rainy day! Highlights include excellent trout fishing, smiles on families as they stocked trout together, fly tying and casting stations (thanks to the Hammonasset Trout Unlimited chapter), and of course the fish filleting and fresh fried fish sampling. Thirty-three volunteer CARE instructors chipped in to make this day a huge success!



***FREE FISHING DAY** – Close to 1,000 participants enjoyed a memorable FREE Fishing Day at Chatfield Hollow State Park! Huge thanks to all the dedicated CARE volunteer instructors who gave up their Saturday to make this event a success.*

- **Ladies Range Day** is an annual event hosted at Rockville Fish and Game club. CARE Instructors teach seven – 1 hour long sessions to participants. Each session included a fishing trip.
- **White Memorial Conservation Day** attracted 140 sixth grade students from Litchfield, Warren, and Morris. CARE staff hosted a fish identification and ecology station where all students were able to learn about freshwater fish and local fishing opportunities.
- **Colony Pond** in Ansonia is a designated “Community Fishing Water”. Chief CARE Instructor Dave Connelly has been working feverishly this spring to engage residents in this unique fishery. In addition to teaching two Family Fishing Courses and leading fishing trips to Colony Pond, Dave has coordinated a trout stocking event with 4th grade students and organized a memorial fishing event.

SOCIAL MEDIA - STREAMING LIVE-INFORMATIONAL SESSIONS. Using nothing more than an iPhone 6 and the dedication and experience of Fisheries staff we have been able to connect with our supporters in a new and exciting way. Using the live streaming feature made available by Facebook, we have hosted a series of informational sessions Live from the field. These live videos are an extremely efficient way to talk one-on-one so to speak with hundreds to thousands of viewers simultaneously. The LIVE feature is popular with many due to the unscripted and spontaneous nature of LIVE content. People watching are able to interact with the host by posting comments and questions immediately

during the conversation (without having to raise their hand). Many of the comments are in favor of these live-streaming informational sessions as they provide a glimpse into day-to-day fisheries operations that the public would otherwise have no idea existed.

The average length of the session is about 25 minutes and usually has about 100 people tuned in as the session is live. The remaining and majority of the views happen within 24 hours of after the session is complete. All sessions are archived on the CTfishandWildlife Facebook Page in the “video” tab.

<i>Facebook LIVE topic</i>	<i>Staff</i>	<i>views</i>
Northern Pike Adult trapping – Haddam Marsh	Chris McDowell	7,000
Burlington Hatchery loading trucks (preopening day motivator)	Hatchery Staff	10,800
lioki strain Sea-Run Trout (At Burlington Hatchery)	Tim Wildman	6,500
Trout stocking at Salmon River	Chris McDowell	4,100
Trout stocking Salmon River wrap up	Mike Beauchene	3,100
Latimer Brook fishway/Alewife	Dave Ellis	2,225
Brown Trout fry stocking East Aspetuck River	Mike Humphreys	3,100
Free Fishing Day Chatfield Hollow State Park	Mike Beauchene	3,100
Rainbow Dam Fish Way (open house promotion)	Bruce Williams	3,700
Catfish stocking- Bunnells Pond	Mike Beauchene	2,300
Catfish stocking- loading trucks for statewide stocking	Mike Beauchene and various staff	3,000
Catfish stocking- Birge Pond	Mike Beauchene	2,500

Upcoming topics include:

- Pike marsh draw down
- Fish community sampling (stream, lake and pond, CT River, Long Island Sound)
- Walleye Stocking
- Kokanee Salmon Trap Netting
- Pike Trap Netting
- Sturgeon Work

Diadromous Fisheries Restoration

SEA-RUN TROUT

- In mid-March, 5,083 smolts raised at the Burlington State Fish Hatchery (BSFH) were stocked into Latimer Brook approximately 3.5 miles upstream of the head-of-tide and 4,719 smolts were stocked into the Menunketesuck River approximately 3 miles upstream of the head-of-tide. These fish originated from eggs imported from Finland as the Division experiments with stocks of fish that will produce more returning sea-run trout.
- Prior to smolt stocking, an 'imprint fence' was installed downstream of the stocking site at the outflow of a small pond through which Latimer Brook flows. This fence prevented the smolts from leaving the brook before they imprinted to the unique chemical signature of Latimer Brook. If imprinting was successful, these smolts will want to return to Latimer Brook as adult Sea-Run Brown Trout.



Stocking Sea-Run Brown Trout Smolts. Bruce Williams releases a tankful of smolts into Latimer Brook

- The 2018 smolts (imported as eggs in 2016) continue to be raised at BSFH and are doing well. There currently are 15,000 in the hatchery and it appears that we will hit our annual production goal of 12,000 smolts for stocking next spring.
- The Sea-Run Brown Trout eggs imported this year (2019 smolts) had a high rate of hatch-out and successfully made the transition to hatchery feed with very low mortality.
- A total of 2,398 Sea-run Brown Trout unfed fry was stocked into suitable habitat in Dickinson Creek. These fish were from the 2017 egg importation and were surplus to the 2019 smolt production needs.



A little over 1,000 unfed Sea-run Brown Trout fry in each bucket were stocked into Dickinson Creek in March, 2017.

AMERICAN EEL

- Opened the Fishing Brook Eel Pass in Old Saybrook in early April to monitor the annual glass eel run, as mandated by the Atlantic States Marine Fisheries Commission (ASMFC). As of May 25, this device had passed 8,214 glass eels (a bit better than last year's May 25 count of 6,078).
- As of May 29th the Mill River Eel Pass (Hamden) had passed 274 American Eels, and as of May 19th the Greenville Eel Pass (Norwich) had passed 190 American eels.

RIVER HERRING

- Transplanted 5,100 adult pre-spawn Alewife from the Brides Lake trap to spawning habitat upstream of fishways to accelerate restoration (Patchaug River-400 fish; East Branch Eightmile River-200 fish; Fishing Brook- 200 fish; Falls River- 400 fish; Quinnipiac River- 500 fish; Poquetanuck Brook- 200 fish; Rogers Lake- 2,800 fish).

Diadromous transport truck being set up for discharge by Seasonal Resource Assistant Zack Skelton.



- Conducted biological sampling of 420 adult Alewife entering Brides Lake. Data will allow staff to track changes in cohort strength, growth, and the percentage of repeat spawners in the population, which will aid in monitoring the status of the run as well as expand our knowledge of Alewife biology.
- Assisted Yale University in the collection of genetic samples of all Alewife entering Rogers Lake. The run to the Rogers Lake Fishway was so poor this year that fish were transplanted from Bride Lake into Rogers Lake to support the time-critical research.

DEEP and Yale staff on the shore of Rogers Lake collecting genetic samples.



- **Monitoring spring runs-** The Alewife run is over in the eastern part of the state but they are still running to the west. Blueback Herring runs continue, especially up the Connecticut River. Even though the runs are not over, it is clear that the 2017 Alewife runs are far better than last year and in some cases the best in twenty years! It is likely that the Blueback Herring run will be poor.

AMERICAN SHAD

- Transplanted 190 adult pre-spawn American Shad from the Holyoke Fishlift (Connecticut River, MA) to spawning habitat upstream of the Rainbow Fishway on the Farmington River and at Hanover Pond on the Quinnipiac River to accelerate restoration. Stocking will continue into June for other rivers as numbers of shad at Holyoke permit.

Holyoke Dam Fishlift (MA) Trap Tank- These 80 plus American Shad were collected and held in a tank while waiting to be sluiced into CT DEEP's transport truck.



ATLANTIC SALMON

- Stocked a total of 177,917 Atlantic salmon fry in the Farmington and Salmon River watersheds. The fry were produced by the Kensington State Fish Hatchery in Berlin, CT (127,317) and the Tributary Mill Conservancy in Old Lyme, CT (50,600). Stocking was completed with the help of 27 volunteers. To date, one adult Atlantic Salmon has been passed at the Rainbow Dam Fishway.

This male Atlantic Salmon returned to the Rainbow Dam Fishway on May 29. It was tagged, measured, and released to continue upstream in the Farmington River.



FISH PASSAGE PROJECTS

- Staff continued to work with applicants, licensees and partners on the following fish passage projects: Flock Process Dam Removal (Norwalk River, Norwalk), Derby Dam Fishlift (Housatonic River, Shelton), Papermill Pond Dam Removal (East Aspetuck River, New Milford), Hanover Pond Dam fish passage evaluation studies (Quinnipiac River, Meriden), Dolan and Millpond dams fishways (Falls River, Essex), Rainbow Dam Fishlift design (Farmington River, Windsor), Upper Collinsville Dam Fishway (Farmington River, Canton), Springborn Dam Removal (Scantic River, Enfield), Blackledge River Dam (Blackledge River, Glastonbury), Slocum Dam Removal (Roaring Brook, Glastonbury), Coventry Lake Dam eel pass (Coventry Lake Brook, Coventry), Scotland Dam Fishlift (Shetucket River, Windham), and fish passage issues associated with the re-licensing of the Turners Falls Dam hydroelectric project (Connecticut River, Montague, MA). Although the last project is not in Connecticut, it affects the Connecticut River shad run, which is an important resource to people in Connecticut. The Fisheries Division is involved through its participation in the Connecticut River

Atlantic Salmon Commission, which manages interstate efforts to restore all diadromous fish species to the basin.

- Staff has assisted Save the Sound and the U.S. Fish & Wildlife Service with their project to monitor sites in Connecticut where dams have been removed, to verify fish passage through the former dam pond sites. Specific locations include Pond Lily damsite (West River, New Haven), Norton Mill damsite (Jeremy River, Colchester), and Hyde Pond damsite (Whitford Brook, Stonington).

FISHWAY OPERATIONS

- Opened fishways across the state and maintained monitoring equipment to enumerate river herring (as well as other species) at 20 fishways; seven electronic fish counters, ten digital imaging systems and three fishway traps.
- The Rainbow Dam (Farmington River, Windsor) was opened on April 17th and as of May 23th passed a total of 360 American shad, 645 sea lamprey, 12 blueback herring, and numerous non-diadromous fish.
- The Leesville fishway (Salmon River, East Haddam) was opened on April 3rd and as of May 30th has passed sea lamprey and numerous non-diadromous fish.
- The StanChem fishway (Mattabesset River, East Berlin) was opened on April 3rd and as of May 23rd has passed 2 American shad, 80 alewives, 12 sea lamprey, 79 gizzard shad, and numerous non-diadromous fish.
- Staff completed construction of a downstream bypass collection tank and pipe at the Chapman's Pond fishway (Menunketesuck River, Clinton). The bypass will aid in the downstream passage of alewives and sea-run brown trout.

As water passes through a notch in the dam at Chapman's Pond (Menunketesuck River, Clinton), it plunges into a pool that is drained by the green pipe. Downstream migrating fish will follow that water and be safely delivered to below the dam, avoiding rocks below the spillway.



PUBLIC OUTREACH

- Staff provided three “Facebook Live” video sessions: Rainbow dam fishway (Bruce Williams), fishway tour/River Herring talk at the Latimer Brook Fishway (Dave Ellis), and the Sea-run Trout Program (Tim Wildman). See page XX for more information on the “Facebook Live” streaming informational videos.

- Staff provided a talk about the Diadromous Fishes of Connecticut to a UConn biology lab class at the Bride Brook fish counter and trap.
- Staff presented talks on the restoration of migratory fishes to the Quinnipiac River in Wallingford and on the American Shad in Essex.
- Staff presented testimony on the status of river herring in Connecticut to the New England Fisheries Management Council.
- Staff participated in a celebration event at the site where The Nature Conservancy removed the Norton Mill Dam on the Jeremy River in Colchester. Atlantic Salmon fry from the Kensington State Fish Hatchery were stocked by volunteer attendees as part of the event.
- Staff resumed a weekly Wednesday morning radio program about diadromous fish on iCRV on-line radio out of Essex, CT. www.iCRVradio.com
- On Saturday April 8th staff participated in the statewide opening day creel surveys of trout anglers.
- Staff conducted six tours of the Rainbow Dam fishway for school and civic groups. A total of 118 people attended the annual open house at the Rainbow Dam Fishway on Saturday May 20th.
- Staff were interviewed for a National Public Radio broadcast on Atlantic salmon fry stocking in Connecticut. The segment was broadcast on WNPR on Tuesday, May 30.

Habitat Conservation and Enhancement

Special note!

DON MYSLING RETIRES

Don started with the DEP Fisheries Division in western CT as a seasonal Resource Assistant in 1978, became full-time in 1982 as a Maintainer for the Fisheries Division, then became a Fisheries Resource Technician in 1984 and a Fisheries biologist in 1984.

In 1987 Don began serving as the Habitat Conservation and Enhancement Program's Habitat Biologist in the Western District (Harwinton/Litchfield offices). For thirty years in this role, Don was involved with the review of a vast array of permitted activities that had the potential to affect fish and fish habitat in western CT. Included among those activities were things like bridge and culvert construction/reconstruction, water withdrawals from surface and groundwater resources, aquatic herbicide and algaecide applications in public lakes, and review of forest management lands. Don developed a very productive and mutually respectful working relationship with staff from the CT DOT and was very successful in getting additional fish habitat benefits incorporated into the permits issued for bridge and culvert construction/reconstruction. Don had an incredible ability to avoid getting rattled when projects became contentious or there were unanticipated challenges or bottlenecks to success. Don also conducted numerous fish surveys and reviewed projects for municipalities as part of the King Mark's Environmental Review Team. Finally, Don was directly involved with numerous habitat restoration and enhancement projects over the years that were designed to benefit trout and other coldwater fisheries resources. Many of these projects were done in collaboration with Trout Unlimited and other conservation minded organizations.

WE WISH DON WELL IN HIS RETIREMENT.



Interestingly, although Don maintained extensive collections of photos of the many projects he worked on, it appears that Don managed to keep himself out of most. Above are a few of the ones that include Don.

CTDOT CULVERT PROJECTS, FISH PASSAGE AND INSTREAM HABITAT ENHANCEMENTS

HCE staff review all Connecticut Department of Transportation (DOT) bridge and culvert replacement projects as well as many locally regulated projects. Staff ensure that such projects are designed to allow the unrestricted movement of fish upstream and downstream and do not degrade aquatic and riparian habitats. In addition, instream habitat structures are often recommended to restore/enhance instream habitat features or to mitigate unavoidable habitat losses. Permit conditions require HCE staff to assist project contractors during construction to ensure the proper installation of fish passage and habitat structures. During the last quarter our program reviewed over **20** proposed bridge and culvert replacement projects. Onsite construction management services were provided for the following projects:

▪ **GULF STREAM, Litchfield**

DOT Project 73-179 – staff provided guidance on the installation of a rock weir downstream of a bridge over an unnamed tributary of Gulf Stream in Litchfield. The weir will aid in fish passage by increasing water depth at the upstream bridge.

The completed rock weir on Gulf Stream.



▪ **BEAVER POND BROOK, Waterbury**

DOT Project 151-273 - Provided technical assistance on the installation of “Lunker” style fish habitat structures in a relocated stretch of Beaver Pond Brook along I-84 in Waterbury. The structures provide fish habitat underneath the stream banks similar to that found in naturally undercut stream banks. This work is part of the ongoing widening of I-84.

“Lunker” style fish habitat structure being lowered into the water.



▪ **TRIBUTARY to LYMAN BROOK, Marlborough (Route 2) - Fish Passage Monitoring,)**

This project is part of a three-year study conducted by HCE staff to evaluate native Brook Trout passage performance at a culvert slipline project that was retrofitted with an outlet fishway and culvert baffles. Project equipment was funded by CTDOT. Passage is being assessed with the use of passive integrated transponder (PIT) tag monitoring system. The PIT tag monitoring system was installed last fall and Brook Trout movements were monitored before, during and after the October

2016 spawning season. Preliminary review of 2016 data indicate that several fish tagged below the fishway/culvert have successfully passed upstream. Preliminary data and results were discussed in a presentation provided to CTDOT environmental planning and engineering staff.

View of pool/weir fishway constructed at the tributary to Lyman Brook outlet.



■ **MOOSUP RIVER, Brunswick Mill Dam #1 removal**

American Rivers, in partnership with the HCE program and the USDA Natural Resources Conservation Service, continue to work on the Moosup River dam removal project. This project, being implemented over a ten-year period, includes the removal of five dams, two of which have been removed since 2013. When completed, the project will reconnect fish habitats to over 6.9 miles of the mainstem Moosup River. The partnership is currently focusing on the Brunswick Mill Dam #1 in Plainfield. Final engineering and design has been completed with plans being submitted for State/Federal regulatory approval. Pending regulatory approval, removal of this dam is expected to occur in the fall 2017.

Remnants of Brunswick Mill Dam # 1. This dam was constructed of timber and rock.



GRASS CARP PERMITTING

The program received 65 permit applications for the liberation of triploid grass carp during the last quarter. Of those, 17 were new applications that required a site inspection and the remaining applications were for the restocking of previously permitted ponds. All applications were checked through the DEEP Natural Diversity Database for locations of threatened or endangered species. To date (June 1) this year, 40 of the 65 applications have been permitted for the liberation of triploid grass carp. Fish have been released into ponds in 34 towns across the state. Included in the new applications were several for public and private lakes across the state requiring more research, meetings with lake association members, extensive site visits, and collaboration with DEEP, Water Planning and Management Division, Infrastructure Management, and Dam Safety.

CANDLEWOOD LAKE TRIPLOID GRASS CARP STOCKING

One of the approved permits was issued to the Candlewood Lake Authority (CLA) for the supplemental stocking of triploid grass carp in Candlewood Lake, the largest lake in the State. Candlewood Lake was permitted for 4,450 additional grass carp to supplement the 2015 stocking of 3,815 fish bringing the

stocking density to the desired 15 triploid grass carp per vegetated acre of Eurasian Watermilfoil. The stocking is expected to take place on June 8. Candlewood Lake is located in the towns of Brookfield, New Fairfield, New Milford and Sherman, and the City of Danbury. The process to reach this supplemental stocking number required review of the vegetation mapping performed by Connecticut Agriculture Experiment Station (CAES) and multiple meetings between the CLA and Fisheries Division Staff. Staff believes that the use of triploid grass carp in Candlewood Lake represents a feasible and appropriate means to combat the invasive aquatic plant, Eurasian Watermilfoil.

A tagging study conducted by CLA, Western Connecticut State University and other interested parties is currently underway documenting the post-stocking movements of triploid grass carp stocked in Candlewood Lake. A total of 48 triploid grass carp was tagged with radio transmitters and stocked into Candlewood Lake in June of 2016. This study is ongoing and complete data are not yet available. This study is the first of its kind in Connecticut and will provide valuable information for future permitting decisions.

SQUANTZ POND TRIPLOID GRASS CARP STOCKING

A permit was also issued to the Town of New Fairfield to stock 585 triploid grass carp into Squantz Pond, which is directly connected to and shares the same water surface elevation as Candlewood Lake. The stocking density was decided based on the CAES vegetation mapping of Squantz Pond and puts it at 15 triploid grass carp per vegetated acre of Eurasian Watermilfoil, the same as Candlewood Lake. The process to reach permit approval required multiple meetings between the Town of New Fairfield and Fisheries Division Staff. Fisheries Division Staff also held a public information meeting. The triploid grass carp are expected to be stocked on June 8 coincident with the Candlewood Lake stocking.

COASTAL PERMITTING

Reviews include projects proposed for tidal waters. Staff reviewed five dredging projects in tidal waters and one bridge inspection project. Measures were recommended, as needed, to maintain fish migratory corridors, avoid interference with river herring spawning migrations, and avoid impacts to winter flounder reproduction. Additionally, three applications to deploy shellfish and kelp aquaculture gear in Long Island Sound were reviewed to ensure that the aquaculture gear is not deployed within popular recreational fishing locations. Staff also reviewed a conceptual plan in New Haven Harbor to develop a tidal wetlands area near the Sandy Point area.

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