

9/10/2009 FAC Meeting: Inland Fisheries Update

Inland Fish Management and Fish Culture

- **Completed 2009 electrofishing survey** of small to moderate-size streams, despite high summer flows. Approximately 50 streams were sampled to assess water quality in cooperation with other units of the DEP. Another 50 plus sites on small headwater streams were sampled to assess abundance of native brook trout, and 14 sites were sampled to assess the before and after effects of habitat alterations. Native brook trout were found to be present in many of the mid-size streams, and it appears that their populations have expanded after several years of contractions.



Electrofishing crew using two backpack units along the margin of a small stream.

Most stream sampling was conducted on **Wild Trout Management Areas** (106 sites totaling over 14 miles). Sampling was performed to determine the relative abundance of wild trout and trout that had been stocked into selected streams as fry or fingerlings. Approximately 9,000 trout were netted and measured (95% wild or stocked as fry; 5% stocked as adults). Although wild trout abundance varied from stream to stream, brown trout stocked as fry contributed greatly to semi-wild trout populations in nearly all 30 miles of stream seeded with fry each spring. Stocked fry survived well with few exceptions in 2009. With this summer's high flows and cool temperatures, some wild trout populations have shown signs of rebounding from previous weather-related declines, while other wild populations still remain lower than average.



Beautiful 18-inch Seeforellen-strain brown trout that had been stocked as a 1-inch fry into the Little River 4 ½ years ago.

- Deployed **Temperature recorders** at 41 locations in streams during the summer to determine suitability of summer temperatures for trout and other species. Recorders will be retrieved and data downloaded in September. These data will be very useful in documenting the effect of the unusually cool, rainy weather on streams this summer. Although these conditions were atypical, data from the recorders will nonetheless provide insights about ground water/surface flow relationships in many of our trout streams. It appears that many marginal trout streams had better than usual temperatures, but interestingly, some of the better trout streams had higher than

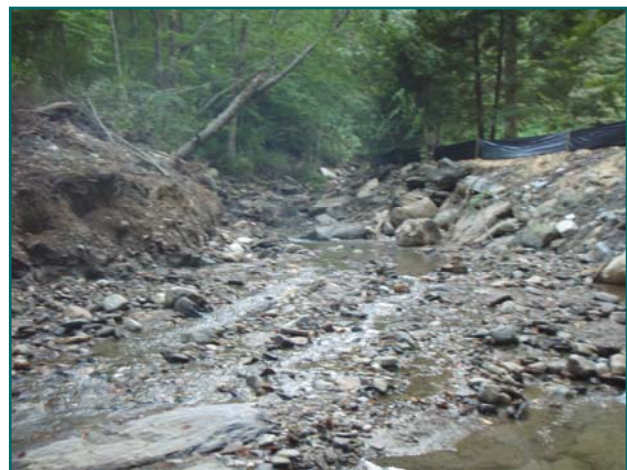
normal water temperatures due to groundwater inputs being overwhelmed by high surface flows.

- Completed collection of **temperature and dissolved oxygen** measurements at 12 lakes. Most lakes had more cold-oxygenated water (required by trout) than normal within their thermoclines due to the cool summer of 2009.
- Completed **collection of pike fingerlings** at spawning marshes. Total fingerling production was 737 (averaging 5 inches) at the two Bantam Lake marshes, 4,918 (averaging 4 inches) at the two Haddam marshes, and 4,674 (averaging 4.8 inches) at the Mansfield Hollow Reservoir marsh. Total production of fingerling pike (10,329) was lower than project goals (15,700 fingerlings per year). The fingerlings were stocked as follows: Bantam Lake - 327, Lower Connecticut River - 1,712, Pachaug Pond - 2,759, Quaddick Reservoir - 4,488 and Winchester Lake - 410.
- Completed **fall stocking plans**. Approximately 34,500 trout (15,000 adult-size rainbow trout, 16,500 trophy-size brown trout and 3,000 yearling-size brown trout) have been scheduled for stocking this fall. All Trout Management Areas (TMA) and most Trout Parks will be stocked. However, Stratton Brook Park Pond and Southford Falls Park Pond will not be stocked this fall due to planned dredging projects. Because of plentiful stream flows and cool temperatures, many TMAs can be stocked in early September (Housatonic River-Upper TMA and Bull's Bridge TMA, Farmington River-Lower TMA, Mill River TMA-Hamden, Mill River TMA-Fairfield, Saugatuck River TMA, Mianus River TMA and Naugatuck River TMA). All remaining TMAs and Trout Parks will be stocked by mid to late September. Approximately two dozen trout ponds and several streams where harvest is allowed will be stocked later in the season (mid October to early November).
- Completed the annual **Labor Day stocking of the West Branch Farmington River** (West Branch Reservoir to the West Branch TMA upper boundary). A total of 2,500 brown trout (12 inches and larger fish) were released just prior to Labor Day weekend.
- Completed 2009 **water chestnut survey/removal** activities. Beginning in 2005, IFD staff and DEP Field Data Collection staff have collaborated to survey the mainstem CT River and associated coves from Hartford to Essex for the highly invasive water chestnut. USFWS staff coordinate and lead water chestnut control activities from Hartford north into Massachusetts including major infestations on the Hockanum River and several other sites in the Hartford area. Both DEP and USFWS found (and removed) significantly less plants than in previous years. DEP IFD staff also located and removed several plants from the confluence of the Still River and Lake Lillinonah. Plants have been found and removed from this location annually beginning in 2006.
- Completed the summer portion of the roving **creel surveys** on three Bass Management Lakes (Coventry, Gardner, and Mansfield Hollow). Begun on Opening Day, these surveys will continue through the fall and ice fishing seasons to evaluate angler effort, catch and harvest of the important fisheries in each lake.
- Largemouth bass and smallmouth bass were measured during the weigh-ins of bass fishing tournaments by IFD personnel at Candlewood Lake (7 tournaments), Coventry Lake (4 tournaments), Gardner Lake (10 tournaments) and Mansfield Hollow Reservoir (12 tournaments). Data will be analyzed in conjunction with creel surveys and bass population sampling (electrofishing) that occurred in 2009 at each of the lakes.

- Continued the **Candlewood Lake Angler Survey** that began on Opening Day. The survey is designed to quantify angler effort and catch during the open-water fishing season throughout the State's largest lake. Preliminary results indicate a minimum of 45,000-50,000 angler hours of usage from Opening Day (April 18th) through June 15th. Survey agents have been conducting boat counts and angler interviews on the lake an average of three days per week. Data from the survey should allow the Inland Fisheries Division to determine the seasonality of the cold-water and warm-water fisheries on Candlewood. Additionally, boating usage data is being shared with the DEP Boating Division to assess recently enacted legislation regarding potential boating restrictions on Candlewood.
- Continued work on the **Connecticut River Angler Survey**. The 2009 survey focused on the segment between Middletown and Old Saybrook. This survey is intended to assess angler effort, catch and harvest during the open-water fishing season (March–October). Data on angler avidity, opinions and demographics have been collected, as well as information concerning boating activity on the river. IFD personnel have interviewed approximately 1,800 anglers so far in 2009. The 2009 survey results will be combined with 2008 results for the river stretch from Middletown north to the state line and then the 2008-09 data will be compared to those from a similar survey conducted in 1997-98 to assess changes in angler use of the Connecticut River over the last decade.
- Continued to collect **crayfish** during normal lake and stream fish sampling operations. Crayfish are very important components of aquatic ecosystems, yet very little is known on crayfish distributions in Connecticut. DEP Environmental Quality Inland Waters Monitoring personnel are also contributing to this effort by collecting crayfish during routine invertebrate sampling. During the course of this spring-summer, 176 species locations were recorded (152 streams and 20 ponds), and 70 specimens were submitted to the Connecticut Natural History Museum at UConn for preservation and future study.

Habitat Conservation and Enhancement:

- Assisted the USDA Natural Resources Conservation Service and the CT DEP Inland Water Resources Division in reviewing unauthorized modifications made to Morrissey Brook on private property in Sherman and to provide recommendations for restoration. The environmental attributes and stability of the subject reach have been severely compromised by the activities of the landowner and their contractor. It was recommended that the subject stream reach be restored to a stable channel-floodplain system, based on natural channel design (NCD) principles, which strive to achieve stream channel stability consistent with the stream's natural tendencies. The goal is to create a stable stream with little erosion that will maintain its physical form and biological function over time.



Morrissey Brook, Sherman

- Met with ConnDOT design consultants, and staff from several other DEP units (Inland Water Resources Division, State Parks and Public Outreach Division, and the Office of Planning and Program Development) at the Tuttle Avenue Bridge crossing of the Mill River, Hamden. The Town of Hamden, with funding from ConnDOT, is proposing to replace the twin span structure with a single span. Although the proposed bridge structure is not anticipated to adversely impact the habitats or fisheries of the Mill River, plans submitted to the Inland Water Resources Division indicated that guide rails along the roadway approaches to the bridge would eliminate roadside parking and would hinder pedestrian access to the river reach within the Sleeping Giant State Park. The Inland Fisheries Division established special regulations for the Mill River trout fishery in 2007 to which anglers have responded favorably. The preservation of both parking and pedestrian access was deemed critical, and as a result of IFD guidance, the ConnDOT design consultants agreed to redesign the guiderail system and submit a revised permit application.
- Provided onsite technical guidance to a ConnDOT contractor with the installation of a rock vane in the Five Mile River, New Canaan. The vane was installed in the river immediately upstream of the Route 15 (Merritt Parkway) bridge and is intended to direct river flow into the central cell of the triple cell culvert and improve overall fish habitat. All three culvert cells were recently rehabilitated.



Installation of a rock vane in the Five Mile River, New Canaan.

- Reviewed two coastal applications for projects that have significant recreational fishing components. As part of the City of New Haven's River Street Redevelopment Plan, a linear park will be constructed along 2,100 feet of the Quinnipiac River shoreline from the confluence with the Mill River north to Poplar Street. HCE staff coordinated with Marine Fisheries Division to provide fishing access guidance to the City's design consultant. Fishing will be possible from a number of locations along the river and from a dedicated fishing pier. The facility will be ADA accessible. The other project is the replacement of the Amtrak Niantic River Bridge. Existing fishing access on the East Lyme side will be maintained, with possibilities for improvement. Efforts to ensure adequate fishing access on the Waterford side are ongoing. A third project with significant fishing opportunities still in the pre-application review phase is the development of Steel Point in Bridgeport Harbor. Staff continue to advise the developer on how best to provide adequate fishing access, and will work with the Office of Long Island Sound Programs (the DEP permitting office) to ensure sufficient angler access is incorporated into the development plan.

- Initiated work on the **Shetucket River Habitat Enhancement project**. The project entails the addition of Large Woody Habitat (LWH) in the form of three Constructed Log Jams and three Floating Log Covers within pool mesohabitats adjacent to the Salt Rock State Park. Habitat structures enhance instream fish habitats, trap naturally recruited wood and other organic materials such as leaves and provide a food source for aquatic insects. Structures are anchored in place with cable and soil anchor devices. IFD has received grant assistance from the NRCS Wildlife Habitat Incentive program (WHIP) to fund project implementation. The habitat structures are being installed by the DEP Wildlife Division's Wetland Habitat and Mosquito Management Program (WHAMM).



One of the log jams recently constructed in the Shetucket River.

- Coordinated and assisted an herbicide application for the second consecutive year at the only known CT site for **yellow floating heart**, a highly invasive non –native aquatic plant. DEP Wildlife Division staff conducted the herbicide application. Last year's control work resulted in a 60% decline in the population. We expect that control work will be required for at least 3 more years at this site.
- Assisted the Town of New Fairfield in sampling aquatic vegetation in Ball Pond to assess the efficacy of triploid grass carp stocked in 2004, 2006, and 2008. Sampling has been done annually since 1997 when Ball Pond was first stocked with triploid grass carp to control dense and vigorous growth of Eurasian watermilfoil, a non-native invasive aquatic plant. Fish sampling conducted to date by the Inland Fisheries Division's Lake and Pond Survey has found no evidence that the triploid grass carp introductions have had deleterious effects on Ball Pond's fish community. Through careful and deliberate stocking based on annual monitoring, triploid grass carp have proven to be an effective tool in managing Eurasian watermilfoil in Ball Pond. The distribution and abundance of this plant has been greatly reduced and the plant community is currently dominated by coontail and Southern naiad.

Diadromous Fish Program

- Conducted a public 'Open House' at the Rainbow Dam Fishway on June 6. The event was held in cooperation with the dam owners (The StanleyWorks) and was attended by 135 people.
- Captured 12 **Atlantic salmon** at the Rainbow Fishway and 2 at the Leesville Fishway. Total Atlantic salmon returns to the Connecticut River to date number 76, compared to 140 in 2008.
- Transported 297 **American shad** to the Shetucket and Quinebaug rivers from the Holyoke (MA) fishlift to support shad restoration efforts (additional shad were trucked to other rivers in May). The shad truck was also used to assist with the in-state distribution of channel catfish.
- Most fishways were closed between the end of June and mid-July. Due to the unusually high flows this year, some fishways were left open without the fear of drawing down the headponds.
- Constructed and installed an interim eel pass inside the Rainbow Dam Fishway. This eel pass is designed to pass eels during the summer when the fishway is closed (July – September) and will

be removed in October when the fishway is re-opened. To date it has passed over 1,200 eels upstream of the 60 foot dam. It will be re-installed next July.

- This summer has been a **record year for eel passage**, probably due to high water. Eel passes at dams at Kinneytown, Greeneville, Bunnells, and Mill River exceeded 1,000 eels each, surpassing previous years. Other eel passes are also performing well.
- Electrofished yellow eel index sites in the Housatonic, Natchaug, and Scantic river drainages. These sites, located in tributary streams, allow staff to compare local American eel densities with the number of dams above Long Island Sound where each site is located. It will also allow staff to monitor the progress on re-colonization as efforts to improve passage for American eel at these dams continues.
- Electrofished the Hammonasset, Eightmile, Shunock rivers and Latimer and Whitford brooks to assess sea-run brown trout stocking survival and found above average survival in most streams sampled. The Farm River will be sampled in September.
- Continued to work with other DEP units in preparation for the fall construction start of the Tingué Dam (Naugatuck River) fishway, which received a NOAA grant with economic stimulus money.
- Continued to attend meetings and provide comments to FERC relative to the competitive re-licensing process for the Scotland Dam Hydroelectric Project. The City of Norwich is competing with the current owner, FirstLight Power Resources for the new FERC license.
- Assisted the Farmington River Watershed Association with its bidding for engineering firms to design the removal of the remnant Spoonville Dam (East Granby) and a fish bypass channel around the Winchell-Smith Dam (Farmington) to help pass diadromous fishes. Both dams are on the Farmington River. The FRWA had received a grant to fund these engineering studies. Late in August, FRWA chose Princeton Hydro to perform the engineering studies.

The Davis Pond Fishway is a semi-natural bypass channel below the dam but passes through the earthen portion of the dam via this concrete channel and pool-and-weir fishway. The August rehab project consisted of replacing these weirboards and adding another set.



- During the summer shut-down period, staff performed necessary repairs and upgrades to State-owned fishways and assisted others in the repairs to municipal and privately-owned fishways:
 - Replaced weirboards and rebuilt storm-damaged rock weirs at the **Davis Pond fishway** (Silvermine River, Norwalk);
 - Replaced wooden weirboard and supports on the **Mary Steube Fishway** (Mill Brook, Old Lyme);
 - Removed dangerous loose fencing, cleared the access path, and replaced the netting in the eel pass and the **Lees Pond Dam Fishway** (Saugatuck River, Westport);
 - Built an access footbridge over the **Low Dam Fishway** (Saugatuck River, Weston) to assist safe access to the river, per agreement with landowner;

- Cut and installed new weirboards for the **Moulson Pond Fishway** (Eightmile River, Lyme) to replace rotting boards as well as re-attaching a wandering trash boom;
- Installed hand railings and other improvements at the Trading Cove Brook Fishway (Trading Cove Brook, Montville) in anticipation of the use of an electronic fish counter on site by 2011;
- Improved access and signage at the **Hanover Pond Fishway** (Quinnipiac River, Meriden);
- Improved the eel pass at the **Jordan Millpond Dam Fishway** (Jordan Brook, Waterford);
- Consulted with City of Stamford staff during a visit to the Main Street Dam Removal project, currently underway on the Rippowam River. This Army Corps of Engineers/City project will remove the first dam at tidewater and open miles of diadromous fish habitat.



During the dam removal project, the Main Street Dam will be initially breached on the east side (behind sheet piling) and the river will be diverted down that isolated channel. This will de-water the rest of the headpond, which will be dredged and the rest of the dam removed before the river is restored back to its normal channel.

CARE and Constituent Services:

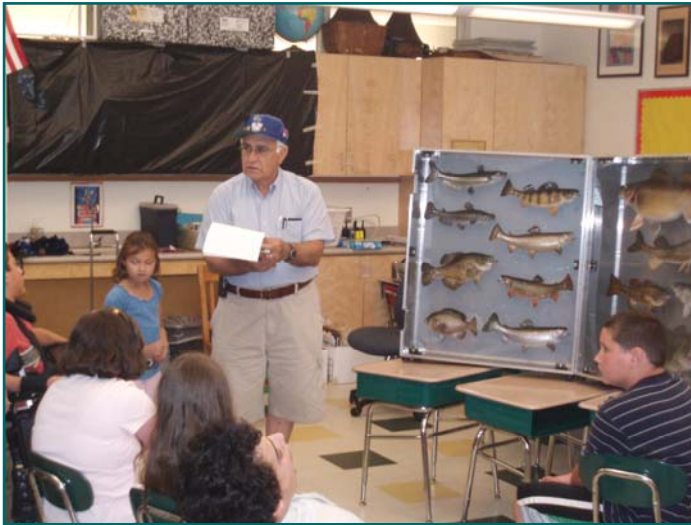
- Taught 58 **Summer Fishing** classes for 1,768 youth in camps across the State. This summer rates as one of the most productive *Summer Fishing* seasons in CARE program history, with classes in Hartford, Bridgeport, New Britain, Torrington, Bristol, Norwalk, Portland, Hamden, West Haven, Norwich, Meriden, Fairfield, New London, Stamford, Killingworth, New Haven and Middletown. Students learned to reduce non-point sources of pollution, aquatic ecology, fish adaptations, fish identification, and basic fishing skills. Classes included a fishing trip!

CARE Interpretive Guide, Martin Vito, leads an activity called "Who Polluted the Pond?" at a Summer Fishing class. The message of many people affect aquatic environments in many ways gets through loud and clear in a fun, interactive way. Students then reply with ways they have thought of to protect aquatic habitats in their communities.



- Taught over 2,000 additional students at summertime events. These ranged from 4-meeting courses in classrooms to half-day clinics on the water. Summer activity now contributes substantially to our **annual student total (7,054 so far in 2009)**. Volunteer Instructors donated

500 hours of their own time this summer providing families with many, different opportunities to learn more about water, fish, and fishing.



We've encouraged volunteers to teach more summertime courses in recent years. Chief Instructor Fred Frillici, who has been passing along his experience and expertise for 23-years, started a class in Fairfield. The students, shown learning about fish adaptations, are the most recent of the 4,300 students Fred has taught so far.

- Taught 84 Girl Scouts and their leaders at their *Outdoor Education Weekend* in Killingworth. All students learned about habitat protection, basic fishing tackle, regulations, and freshwater fish identification. They also practiced casting and completed their day fishing in the pond.
- **Take A Vet Fishing** has become a productive partnership between CARE and First Congregational Church, Branford. The program gets veterans of WWII, Korea, Vietnam, Desert Storm, and Iraq out of their clinical environment and into the great outdoors! CARE Instructors have spent hundreds of hours (including 8 Saturdays) with these American heroes.
- Trained and certified **7 new CARE Instructors** at our education center in Killingworth. The 6-hour training focused on methods and materials used when teaching a Family Fishing Course. Some of these instructors wasted no time and went on to teach a course in their hometown this summer.

Seven of our newest CARE volunteers are pictured along with Justin Wiggins and George Babey. Some of these Certified Instructors have already started teaching families about water, fish and fishing in their hometowns.

