CONNECTICUT WEEKLY DIADROMOUS FISH REPORT

Report Date: June 16, 2015

This is a report generated by the Connecticut Department of Environmental Protection/ Inland Fisheries Division- Diadromous Program. For more information, contact Steve Gephard, 860/447-4316. For more information about fish runs on the Connecticut River call the USFWS Hotline at 413/548-9628 or visit the USFWS website at www.fws.gov/r5crc. For more information about Atlantic salmon, visit the Connecticut River Salmon Association at www.ctriversalmon.org.

CONNECTICUT RIVER LOCATIONS

FISHWAY (RIVER)	ATLANTIC SALMON	AMER. SHAD	ALEWIFE	BLUEBACK HERRING	GIZZARD SHAD	STRIPED BASS	SEA LAMPREY	SEA-RUN TROUT	AMER. EEL
Rainbow* (Farmington)	3	310	0	18	0	0	1,567	2	29
Leesville (Salmon)	0	-	-	0	-	-	0***	0	0
StanChem* (Mattabesset)	0	15	31	18	9	-	46	7	0
Moulson Pond* (Eightmile)	1	19	72	11,690	0	0	34	0	-
Mary Steube+ (Mill Brook)	-	-	134 - **FINAL**	-	-	-	-	-	
Rogers Lake+ (Mill Brook)	-	-	0 (but all 134 from Mary Steube trucked to Rogers Lake) - **FINAL**-						
West Springfield (Westfield- MA)	2	3,341	0	1	0	0	214	0	16
Holyoke (Connecticut- MA)	11	409,158	0	87	82	18	22,241	0	9,157
Manhan River* (Manhan- MA)	0	0	0	0	0	0	yes	0	0
Turners Falls* (Connecticut- MA)	3	54,009	-	0	0	0	8,238	-	-
Vernon* (Connecticut- VT)	1	17,498	-	0	0	0	360	-	0
Bellows Falls* (Connecticut- VT)	0	0	-	0	0	0	26	-	0
Wilder* (Connecticut- VT)	0	-	-	-	-	-	0	-	0
Other (all sites)	0								
TOTALS=	16	412,843	237	11,814	91	18	24,102	9	9,202
(last year's totals)	**31**	374,232	1,549	942	475	61	27,585	4	17

Fishways listed in gray font above are not yet opened for the season. In some cases, the fishways will be opened soon. In the case of the fishways on the Connecticut River, some fishways are not opened until significant numbers of fish pass through the fishway immediately downstream of them. If that never happens, the fishway may not be opened during the season.

*There is a video camera that records passage. There is a considerable lag between the date a tape is recorded and when staff is able to count fish from the tape, so these numbers will not represent up-to-date counts until after the end of spring season.*** Population estimates based on end-of-the-season nest surveys.– +There is an electronic fish counter at this fishway.

NOTE: All fish that pass through the Turners Falls, Vernon, Bellows Falls, and Wilder fishways had to first go through the Holyoke Fishlift where they were counted. Therefore those fish are not included in the totals at the bottom.

COMMENTS:

Although the shad run is definitely winding down, it's not done yet. Holyoke lifted nearly 900 yesterday. The water temperature is still moderate at 19 C (66 F) and the flow shot back up to 24,000 cfs. The river is a bit muddy today after all the rain. The shad count at Holyoke has surpassed 400,000. We had a good year in 2012 (490,000) but you have to go back to 1991 after that to find a year in which we lifted more than 400,000. So it appears the shad population is finally on the mend. Upriver fishways are passing more shad this year, too. Turners Falls has passed more than it did even in 2012 and those counts are not up to date yet. Vernon has passed quite a few and its video counts are three weeks behind so expect that number to keep going up. With improvements to downstream passage under construction now at Holyoke and big improvements to upstream passage expected at Turners Falls in the upcoming years, things look more promising. We're also seeing more shad in small fishways on the tributaries like the Eightmile and Mattabesset rivers. Hopefully we'll start seeing them going up the fishway on the Manhan River in a few years.

With increasing numbers of shad entering the river to spawn, we see increasing numbers of shad dying after spawning. South of North Carolina, all shad die after they spawn—like Pacific salmon. Shad north of North Carolina can survive after spawning with increasing percentages as they progress northward. In the Connecticut River, most shad survive spawning, although in the past maybe only a third typically were repeat spawners. There is a concern that ineffective downstream passage at some dams could be artificially reducing the number of fish that make it out to sea and therefore make it back to spawn again. Furthermore, the south-north trend I described is thought to be due to energetics and thus maybe linked to water temperature. So as Climate Change warms the Connecticut River, that could be another factor that will decrease post-spawning survival. Therefore, after this year's strong run of shad we are seeing more post-spawning mortality and right now the river is full of dead shad. While dead fish are never pleasant, this is natural and nothing to be concerned about (unless walking your dog near the river).

A few more salmon came in and the salmon headline for the week is that an adult salmon returned to the Eightmile River and went up the Moulson Pond Fishway, caught by our video camera. (See photo at end of next report section.) This is the first adult salmon to be confirmed in the Eightmile River after many years of stocking. There were past reports/rumors of salmon but they could never be verified and we never had a camera on the fishway before. The last time the river was stocked was 2011, when we put in 30,000 fry. This fish likely went out as a two-year old smolt in 2013 and stayed at sea for two years.

This year, many of the returning salmon at Holyoke are being taken to the Silvio Conte Anadromous Fish Research Center in Turners Falls, MA to undergo swimming tests. (It's sad when a salmon flunks a swimming test.) The lab specializes in fish passage research and has built a Burst Speed Testing Flume in which they introduce anadromous fish species to test how fast and long each species can swim. We have these data for some species and but much of it have been collected in a manner in which the fish are forced to swim whereas the facility now at Conte places the fish in a large tank and allows them to swim up the flume at their own will. It is felt that this method gets more accurate results. The flume, which uses natural, gravity-fed river water, can be adjusted in terms of slope and volume of water to achieve different velocities and different conditions. Some of the salmon made headway in the flume when it was running at over 5 meters per section (~18 feet per second!). After the fish are tested, they are released back in the river below the Turners Falls dam (which is where they would have ended up had they been released at Holyoke) and they can choose where they want to go from there. You can see that three have gone up through the Turners Falls fishways and one through the Vernon fishway.

Most other runs (blueback herring, striped bass, sea lamprey) are coming to an end. Sea lamprey are actively spawning in most rivers.

There are many dead shad in the Connecticut River. Some shad die each year after spawning but the seagulls can usually keep up with the pace. This year, the numbers of shad spawning in the river has been high so the number of shad that die has likewise been high. These carcasses can been seen throughout the lower 50 miles of the river. Yesterday's rains may have flushed many out to sea.

Dr. Ted Castro-Santos of the Conte Lab explains the Burst Speed Test Flume in the background. At the time, lots of water was racing down the flume and the upper part (to the left) was at what is referred to as super-critical flow. The lower part was sub-critical flow and you can see the turbulent hydraulic jump in the middle. Such a 'jump' often occurs below dams where water is coming off a spillway.

OTHER LOCATIONS WITHIN CONNECTICUT

FISHWAY (RIVER)	AMER. SHAD	ALEWIFE	BLUEBACK HERRING	GIZZARD SHAD	STRIPED BASS	SEA LAMPREY	SEA-RUN TROUT	AMER. EEL
Greeneville* (Shetucket R., Norwich)	1,919	502	10	5	5	1	0	3
Taftville* (Shetucket R., Norwich)	18	0	0	0	0	0	0	0
Occum* (Shetucket R., Norwich)	0	0	0	0	0	0	0	0
Tunnel* (Quinebaug R., Preston)	36	21	0	0	0	0	0	0
Kinneytown* (Naugatuck R., Seymour)	0	1	0	0	3	136	0	0
Hallville Pond* (Poquetanuck Br. Preston)	-	32	0	0	-	0	5	1
Latimers Brook** (Latimers Br., E.Lyme)	-	4,926	**FINAL**					
Gorton Pond (Pattagansett R., E.Lyme)	-	0	0					
Brides Brook** (Brides Brook, E.Lyme)		218,076	**FINAL**					
Clarks Pond (Indian River, Milford)		34	0	-		-	-	
Branford Supply Pond Dam** (Queach Br., Branford)	538			**FINAL**-	-	-	-	
Lower Guilford Lake** (East River, Guilford)		2,414	**FINAL**		-	0	0	
Haakonsen Fishway* (Quinnipiac R., Wallingford)	2	1,289	159	15	1	198	0	
Bunnells Pond* (Peqonnock R., Bridgeport)		Camera troubles persist!		0	0	0		
Wood Dam** (Saugatuck R., Westport)		2,994	0	0				
Mianus River Pond* ** (Mianus R., Greenwich)		13,935	4,313	0	0	0	0	-

**Fish passage is video-recorded and counts are made off of tapes several days later so these data are always lagged a little behind. This report covers passage up to the following dates for these fishways:*

Greeneville= 6/11 Taftville= n.a. Occum= n.a. Tunnel= 6/13 Kinneytown= 6/11 Haakonsen= 6/11 Hallville= 6/07

**These locations have an electronic fish counter and are used as index sites for river herring runs. The counter is checked daily Monday-Friday. Monday counts typically include all weekend passage. These counts are usually up-to-date but some may lag behind a day or two, occasionally.

+This location has a fish trap and fish are enumerated prior to release.

Counts in parentheses indicate numbers seen in a run that is now over and no further fish were counted during the past week. Typically used for alewife runs later in June.

COMMENTS:

Runs along the shoreline are pretty much over. A few more fish drift into the Shetucket River at Greeneville and they got a few more clicks on the counter at Wood Dam on the Saugatuck, but most of the counts have not changed since last week and we continue to close fishways for the summer. First Light Power is still way behind on counts at Taftville so we trust that number will increase. We've begun to tackle the video backlog at Occum (upstream of Taftville) and hope to have some numbers to show before these reports end in a couple of weeks. When you look at the counts in the table above, recall that we only report diadromous fish and many of the larger fishways are passing many other species. Lots of suckers, trout, bass, carp and other species go up these fishways. We stock Atlantic salmon broodstock into the Shetucket and Naugatuck rivers to support a fishery and some of these end up using fishways (e.g. Greeneville= 11, Kinneytown= 8) but we don't report them so as not to confuse them with wild, sea-run salmon that are in the Connecticut River system.

This time of year, our focus along the shoreline shifts from uprunning adults to downrunning juveniles. Many juvenile river herring stay in freshwater until the fall, feeding on aquatic insects and growing. But some, especially early hatching alewives, start emigrating to the ocean now before some of the small, coastal streams (e.g. Queach Brook, Bride Brook, Wequetequock Brook, Jordan Brook, Indian River) dry up and block their exit. We had a bit of problem at Bride Brook where it crosses the beach at Rocky Neck State Park and empties out into Long Island Sound. Coastal currents had brought lots of sand into the mouth of the brook and due to the lack of rain, the brook didn't have the volume to cut through it. At low tide, the brook backed up and fish could not get out (see photo below). At high tide, some fish could wiggle over the sand bar but were vulnerable to predation by gulls, etc. The crew at Rocky Neck State Park look after those alewives and sounded the alarm and our Department jumped into action and dug out the sand before this last rain, reconnecting the brook to the Sound. I'm sure that most of the fish that wanted to get out got out yesterday with the rain. A big thanks to DEEP staff who made that happen, including Deb Corcoran, Gary Nasiatka, Mike Dewire, Frank Shaw, and Micheal Grzywinski.

I made a typo in last week's report on the talk about alewife restoration to Rogers Lake by Dr. David Post from Yale University, noted naturalist author Richard Conniff, and myself at the Lyme Land Conservation Trust's annual meeting. I typed July but meant June. It is June 19th—this Friday—at 6 pm at the Lyme Public Hall, 249 Hamburg Road (Rte 156) Hamburg, CT. http://www.lymelandtrust.org/event/our-annual-meeting-the-reunion-of-alewives-in-roger-lake/ .

Juvenile eels- Fishing Brook = 11,442 glass eels/96 elvers; Mill River Eel Trap= 6 glass eels/73 elvers; Greeneville Eel Lift= 86 glass eels/1,122 elvers,

So much sand washed up at Rocky Neck State Park that the mouth of Bride Brook closed off, blocking alewife emigration. Staff dug it out and reconnected the brook to the sea, allowing fish to get out.

The first video freeze frame of several we have showing an adult salmon exiting the steeppass section of the Moulson Pond Fishway and heading into the old millrace. The vertical bands in the back mark 6 inch intervals. The time and date stamp on to the lower right. No mistaking this species.