



**CRASC Technical Committee Meeting  
June 15, 2022**

**Agenda Item**

**3. Coordinator's Report - Sprinkle**

**A. Connecticut River and tributary fish counting facilities 2022 (Table 1)**

Table 1. Most current as made available fishway counts data, as of June 14, 2022

| <div style="display: flex; justify-content: space-between; align-items: center;">  <div> <b>Connecticut River Basin Fishway Passage Counts</b><br/> <i>Report Date: 06/14/2022</i> </div>  </div>   |             |               |         |                  |                 |              |             |              |              |                    |                                     |
|---|-------------|---------------|---------|------------------|-----------------|--------------|-------------|--------------|--------------|--------------------|-------------------------------------|
| This report is compiled by the U.S. Fish and Wildlife Service, CT River Fish and Wildlife Conservation Office using fishway count data provided by several agencies as well as power companies and is dependent in most cases on the review of video counts, that have an associated time lag for updates. Please visit <a href="http://www.fws.gov/r5cra">http://www.fws.gov/r5cra</a> for more information. |             |               |         |                  |                 |              |             |              |              |                    |                                     |
| Fishway, River - State  | Data as of: | American Shad | Alewife | Blueback Herring | Atlantic Salmon | American Eel | Sea Lamprey | Striped Bass | Gizzard Shad | Shortnose Sturgeon | Other/ comment                      |
| Rogers Lake-CT  | final       |               | 246     |                  |                 |              |             |              |              |                    | 2,506 in 2021                       |
| Mary Steube, Mill-CT  | final       |               | 3,944   |                  |                 |              |             |              |              |                    | 20K in 2021                         |
| Mill Pond, Falls -CT (NEW Fishway)  | final       |               | 280     |                  |                 |              |             |              |              |                    |                                     |
| Moulson Pond, Eightmile-CT  | 5/10        |               | 2       | 87               |                 |              | 1           |              |              |                    |                                     |
| Leesville, Salmon-CT  | open        |               |         |                  |                 |              |             |              |              |                    |                                     |
| StanChem, Mattabesset-CT  | 4/29        |               | 2,221   |                  |                 |              |             |              |              |                    | image data in review                |
| Rainbow, Farmington-CT  | open        | 2             |         |                  | 1               |              |             |              |              |                    |                                     |
| W. Springfield, Westfield-MA  | 5/31        | 1,100         |         |                  |                 |              | 503         |              |              |                    | 724 white suckers                   |
| Holyoke, Connecticut-MA   | 6/13        | 183,861       |         | 283              |                 | 843          | 22,227      | 258          | 60           | 6                  |                                     |
| Easthampton, Manhan-MA  |             |               |         |                  |                 |              |             |              |              |                    | operating, unmonitored              |
| **Turners Falls-Gatehouse, Connecticut-MA   | 5/23        | 17,414        |         |                  |                 |              | 1,500       |              |              |                    | Gatehouse visitor center opens 5/14 |
| Vernon, Connecticut-VT  | 5/21        | 6,830         |         |                  |                 |              | 163         |              |              |                    |                                     |
| Bellows Falls, Connecticut-VT   | opened 5/19 |               |         |                  |                 |              |             |              |              |                    |                                     |
| <i>Total to basin, only first barrier counts</i>  |             | 184,963       | 6,167   | 370              | 1               | 843          | 22,731      | 258          | 60           | 6                  |                                     |
| <i>Last year totals</i>   |             | 237,355       | 26,863  | 3,019            | 4               | 12,952       | 20,620      | 352          | 54           | 11                 |                                     |
| ** Spillway Fish Ladder - at the dam # shad, # sea lamprey; Cabot Station Ladder, base of canal, # shad, and # sea lamprey. Note that at Turners Falls Project (Dam/Canal) fish must use one of these two fishways first before having the opportunity to pass the final required ladder (Gatehouse).   |             |               |         |                  |                 |              |             |              |              |                    |                                     |

- The spring fish passage season started slowly in 2022 with river discharge in an expected range of variability but river water temperatures remaining relatively cool in April and into May. The cool water temps are not as apparent in Figure 2, noting that the shown median is only based on

last 2 years. Both mainstem and tributary discharge shifted to below average to well below average levels beginning in late April, with only a brief period of higher flow, in typical range (around the 3<sup>rd</sup> week in May). Since late May flows again dropped to very low levels and then spiked back up ~ June 10<sup>th</sup> to “median range”.

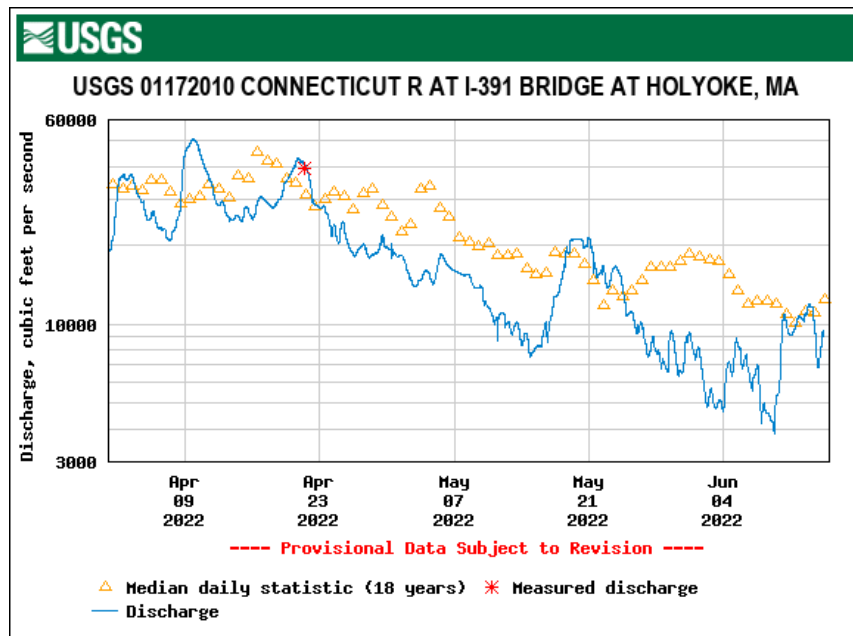


Figure 1. Daily river discharge (4/1 - 6/14/22) several kilometers downstream of the Holyoke Dam with mean daily values (USGS).

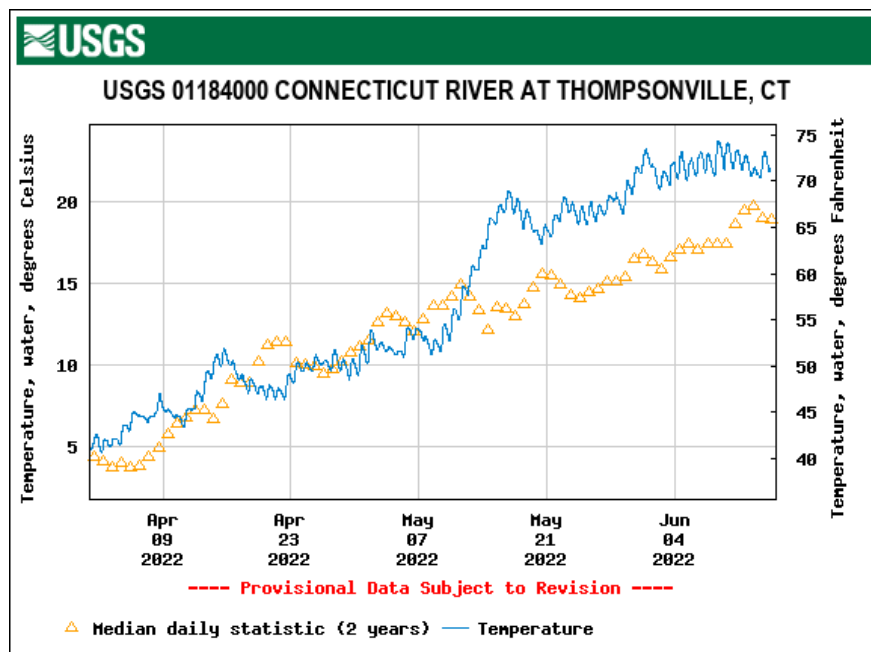


Figure 2. Daily water temperatures from USGS Thompsonville (Enfield), CT (4/1 – 6/14/22). Note the median daily statistic is only based previous 2 years.

- The HFL shad passage for 2022 is low for the time series at this time with daily counts <900 since 6/9 to 6/14 (Figure 3). The mean annual shad passage count since 1976 is 316K and is 288K since 2000. In many years age-5 and 6 shad make up the majority of the run age structure. The

CTDEEP Juvenile index in for age-5 (2017) was below the long-term average while the age-6 (2016) index was near average. Note that the 2018 CTDEEP JI for shad was a record high for the time-series.

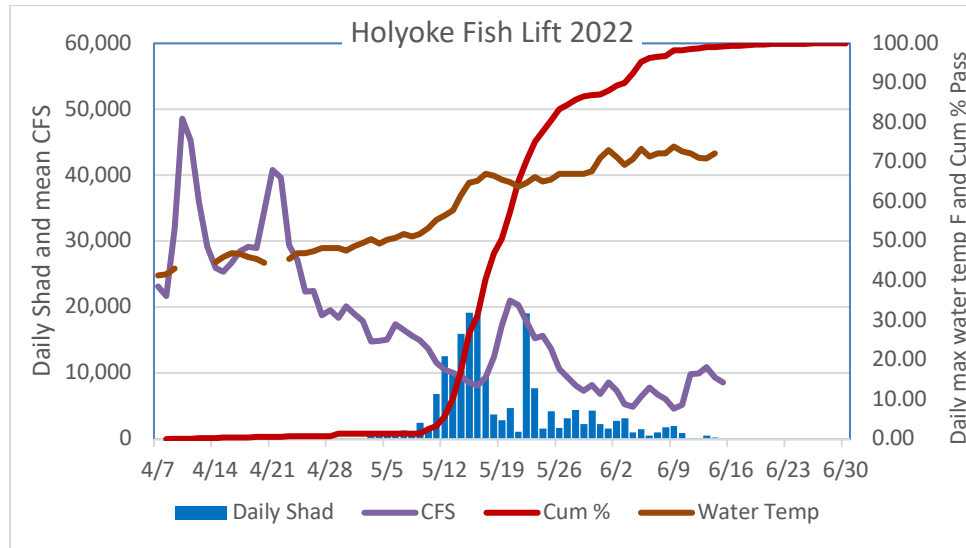


Figure 3. Daily American Shad fish lifted counts from Holyoke Fish Lift (2022) and cumulative % passed, daily river discharge (CFS) from USGS RTI391 gauge, daily max water temperature reported by HFL Fish Staff..

- The current shad passage total may increase slightly in next weeks, seemingly destined to be under 190K. The last year we had <200K shad passed at HFL was 2010, which was a sustained period of low passage counts <200K for 7 consecutive years (2004-2010) refer to Figure 4.
- Holyoke has reported six SNS captured to date; Sea Lamprey passage seems to have concluded with this being a low return year (long-term avg is 33K).
- Sierra at HFL reported a high observed occurrence of small sea lamprey (larger than transformers) attached to passing shad. The observations are being tracked and she reported “current count sits at 626- for reference last year the count was <100. Some fish having 2-3 attached, a good deal of them larger in size than we typically see here at Holyoke.”
- Blueback Herring counts for HFL is very low this year, not surprising given the very poor catch rates I have observed in our assessments this spring. River Herring passage counts were extremely low on the Southern New England coast this year. More information on that topic later in the report.
- The West Springfield Fish Ladder on the Westfield is passing low numbers of shad and lamprey which usually tracks Holyoke passage trends.
- The passage counts at Turners Falls and Vernon are ongoing and appear to be tracking in normal lag phase given date and data.
- Ask for any notable items for people operating fishways – comments?

## Select Fish Passage Count Annual Summaries 1976-2021

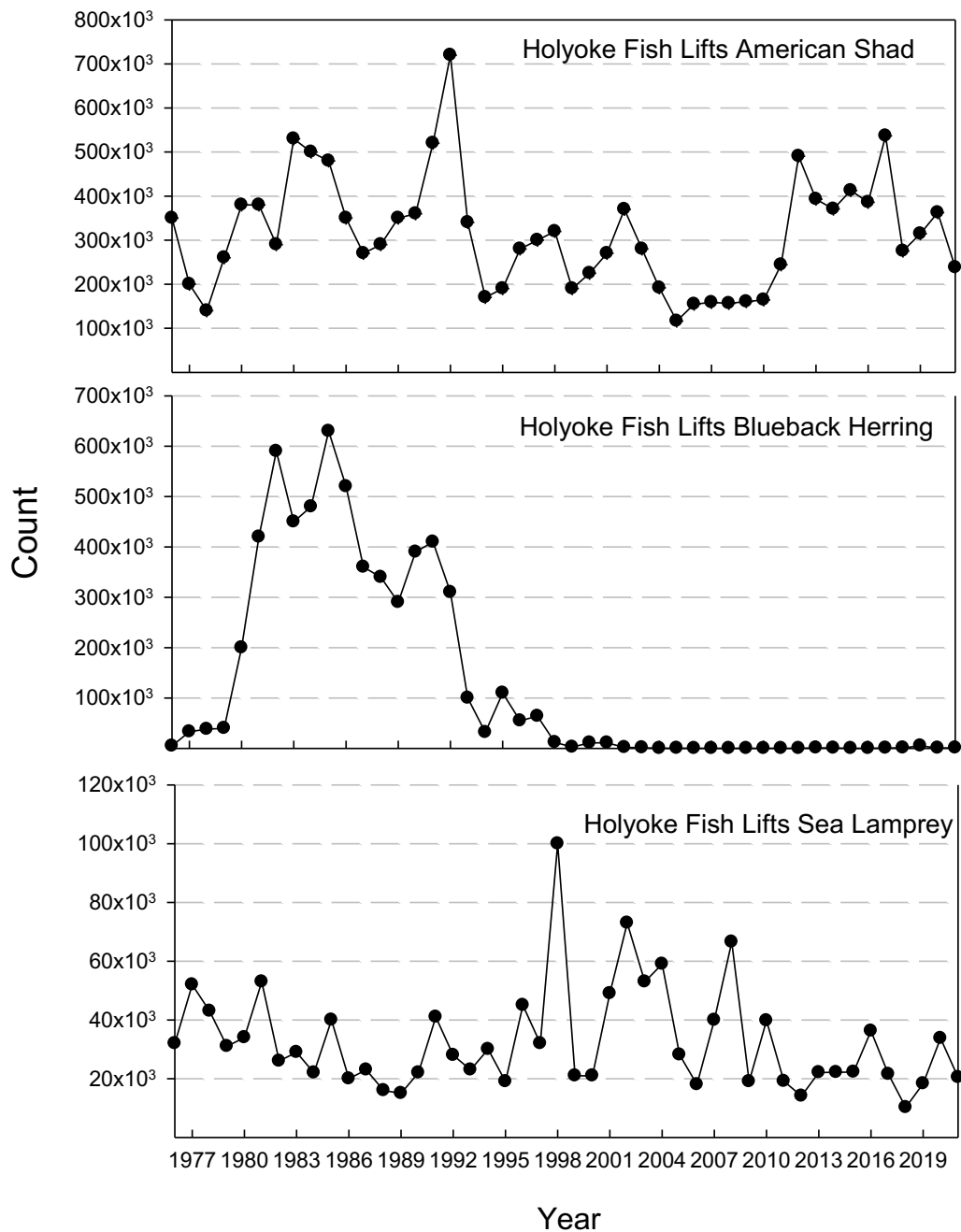


Figure 4. Select species Holyoke Fish Lift annual count totals.

### B. Trap and Trucking Report for Holyoke Fish Lift

Holyoke Gas and Electric's Fish Lift Crew Leader, Sierra Humiston reported the following activity summary from the HGE T&T facility that she and her crew coordinated over the spring season (Table 2). Thanks to HGE and their staff for supporting the agencies important work.

Table 2. Summary of agency, date of visit, species and number, and status of fish (from HGE data) with additional details.

| Date   | Agency | Species      | Count | Live/Sacrificed | Details   |
|--------|--------|--------------|-------|-----------------|---|
| 25-May | CTDEEP | Lamprey      | 132   | Live            | Used for restoration purposes in and out of basin (sum 232)   |
| 26-May | CTDEEP | Lamprey      | 100   | Live            |   |
| 12-May | CTDEEP | Shad         | 90    | Live            | Used for restoration purposes in and out of basin (sum 360)   |
| 13-May | CTDEEP | Shad         | 90    | Live            |   |
| 16-May | CTDEEP | Shad         | 90    | Live            |   |
| 17-May | CTDEEP | Shad         | 90    | Live            |   |
| 17-May | RI DEM | Shad         | 80    | Live            | Moved to Ashuelot R for out-of basin transfers by USFWS program to support RI   |
| 19-May | RI DEM | Shad         | 80    | Live            |   |
| 3-May  | USFWS  | Shad         | 100   | Live            | Used for hatchery brood to support restoration in coastal MA, RI and NH rivers (sum 364)  |
| 4-May  | USFWS  | Shad         | 64    | Live            |   |
| 10-May | USFWS  | Shad         | 100   | Live            |   |
| 11-May | USFWS  | Shad         | 100   | Live            |   |
| 10-May | USFWS  | Shad         | 60    | Sacrificed      | annual fish health testing (CTRFWCO)  |
| 6-May  | USGS   | Shad         | 100   | Live            | Used for experimental trial runs of fishway entrance designs and different treatments (sum of 1,120). Fish released after short holding/trial run period. |
| 10-May | USGS   | Shad         | 100   | Live            |   |
| 11-May | USGS   | Shad         | 100   | Live            |   |
| 16-May | USGS   | Shad         | 90    | Live            |   |
| 17-May | USGS   | Shad         | 80    | Live            |   |
| 18-May | USGS   | Shad         | 80    | Live            |   |
| 19-May | USGS   | Shad         | 80    | Live            |   |
| 23-May | USGS   | Shad         | 100   | Live            |   |
| 24-May | USGS   | Shad         | 100   | Live            |   |
| 25-May | USGS   | Shad         | 100   | Live            |   |
| 31-May | USGS   | Shad         | 80    | Live            |   |
| 1-Jun  | USGS   | Shad         | 110   | Live            |   |
| 3-May  | USGS   | White Sucker | 15    | Live            | Used for swimming performance studies   |

### C. Regional Fish Passage Counts Review

#### New Hampshire Coastal Systems (Mike Dionne, NHFG) –

For the most part we had a great year here on the coast. These numbers are all preliminary. The Cocheco continues to be a problem with a return of just 4451 fish. This was the best return in 4 years, but still way below the average return of 28k or so. The Oyster had a good year with a return of 11248, that's the highest in at least 16 years or so. The Lamprey had another tremendous year with a second consecutive year with about 80k herring returning, that more than doubles average annual total. I haven't calculated return to the Exeter, but based on time counts it likely will exceed a run of 150k.

Also, it is not a required river to monitor but we continued with a counter in the Salmon Falls this year. Looking like passage there will exceed 50k.

All in all a great year, it was slow to start, but ended strong.

## Merrimack River and Massachusetts Coastal (Ben Gahagan, MADMF) –

Mass report: Runs similar to CT and RI (not good to barely existent) for many locations Cape Cod and South. The South and North Shores mostly seemed to do better, although we are still awaiting estimates on some.

I've attached a spreadsheet with some time series and provisional 2022 counts. The Mystic and Town Brook counts are estimates from crowd sourcing video counts on the web. Still in progress. The Lawrence count (Essex Dam, first on Merrimack R) is not reflective of fish available to pass. A herd of 30-45" stripers set up shop in the tailrace and prevented any herring from entering the ladder for weeks. Matt C. can provide more details if he is on the call.

| Drainage | Merrimack    | North Coast | Boston HBR   | Boston HBR              | South Coast | South Coast    | South Coast     | Buzzards Bay | Buzzards Bay        | Cape Cod N  | Cape Cod S |
|----------|--------------|-------------|--------------|-------------------------|-------------|----------------|-----------------|--------------|---------------------|-------------|------------|
| Town     | Lawrence     | Essex       | Medford      | Weymouth                | Bourne      | Plymouth       | Pembroke        | Wareham      | Acushnet R.         | Brewster    | Harwich    |
| Method   | Visual/Video | Counter     | Video        | ~Visual/Counter 2015+   | Counter     | Counter/Visual | Counter (2015+) | Counter      | Fish trap/Counter   | Counter     | Counter    |
| Year     | *Merrimack   | Essex R.    | Mystic River | Back River              | Monument R. | Town Brook     | Herring B.      | Agawam R.    | Acushnet R.         | Stony Brook | Herring R. |
| 2010     | 518          |             |              | 200,000                 | 106,210     | 195,091        |                 | 30,057       | 2,710               |             |            |
| 2011     | 740          |             |              | 252,711                 | 68,639      | 142,633        |                 | 19,064       | 3,679               |             |            |
| 2012     | 8,992        |             |              | 384,650                 | 180,082     | *171,141       |                 | 73,186       | 3,220               |             |            |
| 2013     | 17,359       |             |              | 380,000                 | 252,871     | *107,413       |                 | 33,637       | 6,033               |             |            |
| 2014     | 57,213       | 14,572      |              | 455,000                 | 278,134     | 135,738        |                 | 48,873       | 10,144 <sup>c</sup> |             |            |
| 2015     | 128,692      | 14,583      |              | 440,000 (V)/399,554 (C) | 240,372     | 173,567        | 125,010         | 24,398       | 3,673               |             |            |
| 2016     | 417,240      | 43,326      |              | 362,174                 | 144,963     | 199,368        | 238,410         | 25,098       | 4,930               |             | 348,000    |
| 2017     | 91,616       | 38,808      |              | 203,242                 | 143,424     | 160,668        | 307,832         | 31,077       | 8,365               | 139,944     | 284,936    |
| 2018     | 449,346      | 28,260      | 758,469      | 333,209                 | 316,618     | 185,071        | 348,634         | 63,010       | 6,354               | 201,703     | 864,748    |
| 2019     | 143,541      | 9,505       | 652,463      | 282,816                 | 526,929     | 230,860        | 476,609         | 102,105      | 14,385              | 434,583     | 1,223,263  |
| 2020     | 87,150       | 4,722       | 369,217      | 283,749                 | 302,095     | 190,810        | 187,776         | 73,934       | 3,254               |             | 887,724    |
| 2021     | 203,000(P)   | 8,453       | 284,594      | 231,106                 | 117,075     | 136,626        | 38,117          | 53,381       | 5,714               | 96,839      | 436,090    |
| 2022     | 50,535       | 31,000      | >261,000     | 280,000                 | 127,426     | >154,000       | 40,000          | 44,084       | 3,842               | 90,000      | 291,000    |

**Rhode Island (Pat McGee, RIDEM) –** “We had an extremely poor season state-wide as far as river herring.”

| Gilbert Stuart |          | Nonquit |          |
|----------------|----------|---------|----------|
| Year           | Alewives | Year    | Alewives |
| 2000           | 290,814  | 2000    | 185,524  |
| 2001           | 254,948  | 2001    | 129,518  |
| 2002           | 152,056  | 2002    | 97,444   |
| 2003           | 67,172   | 2003    | 74,998   |
| 2004           | 15,376   | 2004    | 25,417   |
| 2005           | 7,776    | 2005    | 42,192   |
| 2006           | 21,744   | 2006    | 74,902   |
| 2007           | 36,864   | 2007    | 59,380   |
| 2008           | 58,640   | 2008    | 224,506  |
| 2009           | 34,835   | 2009    | 49,841   |
| 2010           | 110,287  | 2010    | 38,516   |
| 2011           | 64,500   | 2011    | 30,126   |
| 2012           | 107,901  | 2012    | 60,132   |
| 2013           | 91,240   | 2013    | 52,563   |
| 2014           | 102,408  | 2014    | 71,501   |
| 2015           | 11,135   | 2015    | 32,330   |
| 2016           | 74,304   | 2016    | 9,664    |
| 2017           | 72,664   | 2017    | 8,647    |

|      |         |  |      |         |
|------|---------|--|------|---------|
| 2018 | 88,080  |  | 2018 | 32,653  |
| 2019 | 35,832  |  | 2019 | 101,714 |
| 2020 | 125,196 |  | 2020 | 94,851  |
| 2021 | 32,760  |  | 2021 | 44,341  |
| 2022 | <5,000  |  | 2022 | 23,753  |

**Connecticut** (Kevin Job, CTDEEP) – CTR in basin reports/comments and other CT summaries to be shared.

Mill Pond (Falls River) (FINAL): **280** (First year of monitoring)

Rogers Lake (Mill Brook) (FINAL): **246** (2020: **2,842** 2021: **2,506**)

Mary Steube (Mill Brook) (FINAL): **3,944** (2020: **37,886** 2021: **20,731**)

Fishing Brook (Oyster River) (FINAL): **3,221** (2020: **12,963** 2021: **3,639**)

Moulson (Eightmile River): ALE: **2** BBH: **87** Through May 10<sup>th</sup> (2020: **Ale: 107 BBH: 150** 2021: **Ale: 934 BBH: 1179**)

StanChem (Mattabasset): ALE: **2,221** Through April 29<sup>th</sup> (2020: **63** 2021: **5,394**) **\*our one bright point follow heavy stocking efforts upstream, but still a drop of over 50% from last year.**

Rainbow (Farmington): Ale: **0** BBH: **0** Through April 30<sup>th</sup> (No change from 2020/2021)