



DOWNEAST  
SALMON  
FEDERATION



## Monthly Hatchery Report September/October, 2016

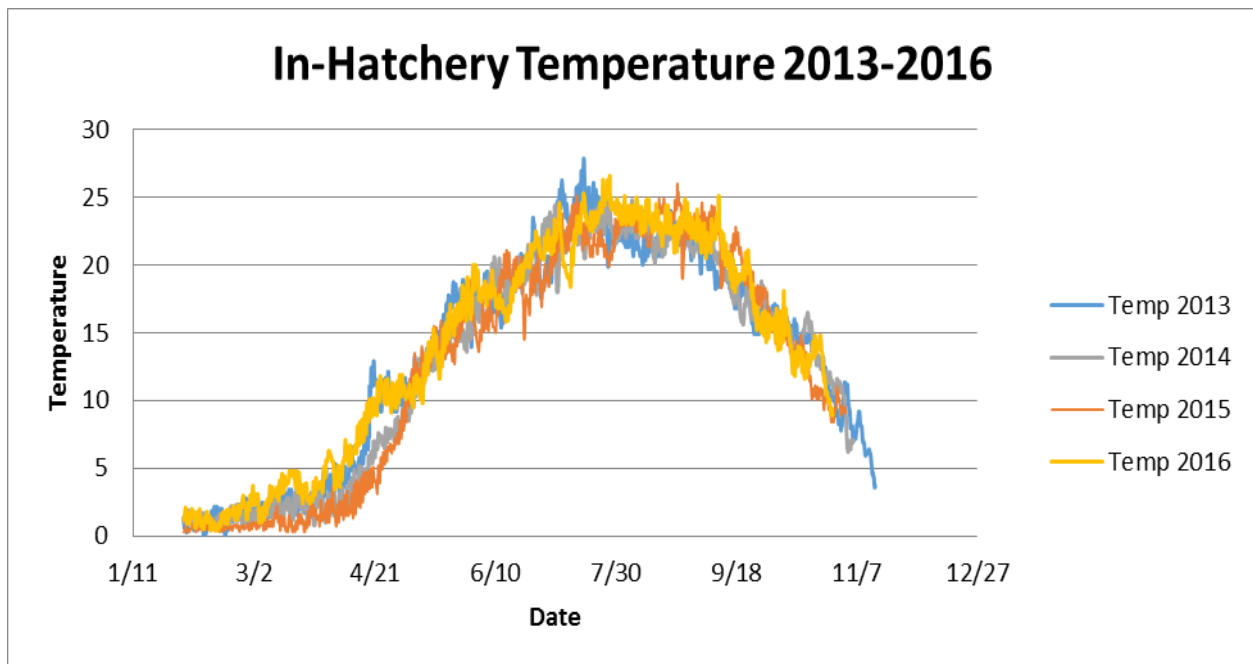


Report by: Kyle Winslow and Zach Sheller

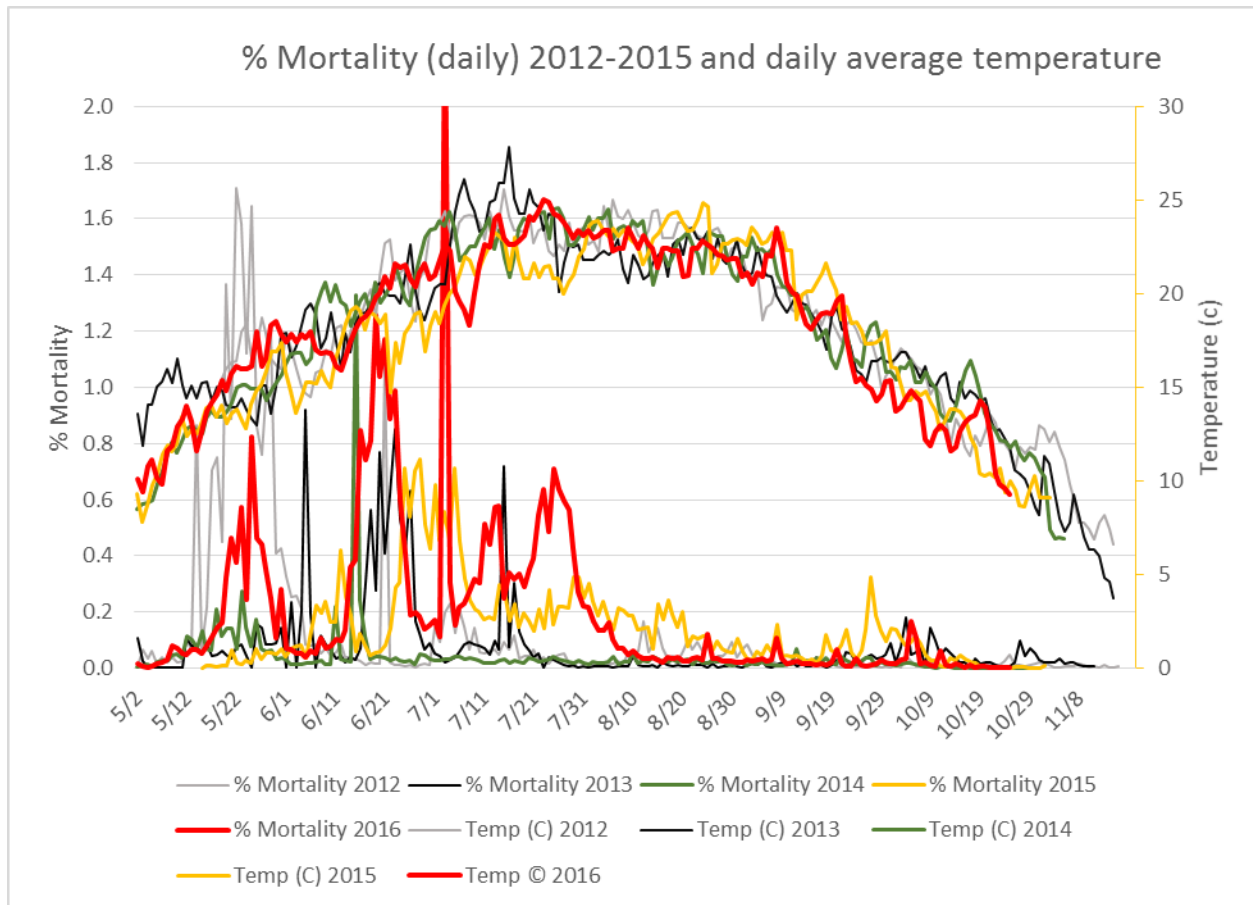
A report of monthly activities and events

Fall is a very exciting time here at the hatchery. With fall comes electrofishing, fin clipping, stocking and redd counting, and this fall was just as busy as ever!

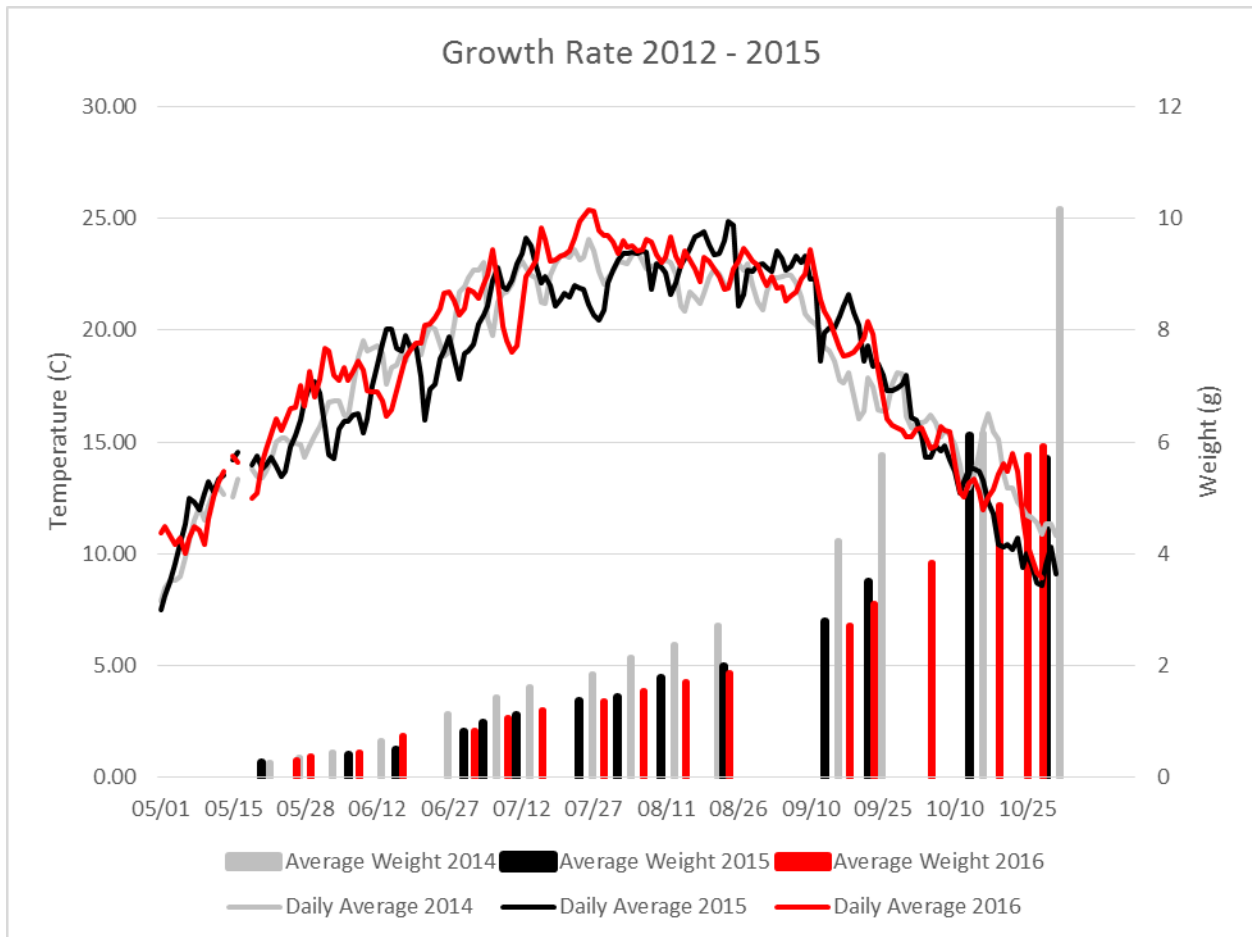
Temperatures in the hatchery fell sharply in mid-September, just in time for fin clipping. In fact, the week prior to fin clipping remained warm, and there was some concern the activity would have to be pushed back as a result. However, temperatures fell as they typically do as summer retreats. It has been a rather atypical fall thus far, with some warm temperatures driving water temperatures back into the mid-teens late in October. Temperatures have dropped back but the weather for November has remained warm, keeping temperatures steady. With any luck, this will prolong the spawning season while we continue to wait for some much needed precipitation.



Mortality through September and October remained low, with only a slight increase in early October as a result of fin clipping. Mortality through fin clipping was quite low, and there were no significant issues throughout the marking process.



We have kept growth rate relatively consistent this year with last year, which was our goal. We want our fish naturally sized – large enough to evade predators, feed well and seek shelter for the winter, but not so large that they smolt the first spring after stocking. This gives our hatchery population of fish in the river a higher proportion of p20 and p32 smolts, which mimics the wild age-2 and age-3 smolts leaving the East Machias River. The average size at stocking was 82mm, compared to 84mm last year.



Juvenile assessment (electrofishing) took place during September. DSF and DMR staff worked together to complete the thorough electrofishing effort for the East Machias River and the Parr Project. DMR biologists are still crunching the numbers on the data, but given the extremely low water throughout the watershed, there seemed to be decent numbers of parr in the river. The collection of parr from the river to be used as broodstock for future generations of salmon for the Parr Project was easily accomplished during assessment sampling. Look for more detailed information on electrofishing results in upcoming hatchery reports as the data is analyzed.

Fin clipping went very well this year. We began clipping on September 26<sup>th</sup> and worked for three weeks to finish marking each salmon. We had another great turnout from local school groups and volunteers with 280 students and volunteers helping mark our fish. We hired three people to help full time for the three weeks of clipping and that made a huge difference in efficiency and getting the work done on time.



Stocking went as well as could be expected this year. The prevalent issue of low water impacted our stocking effort to a degree. We had three sites we typically stock that were not accessible this year due to the low water. Fish that would have been stocked in these sites were stocked at an alternative site within the tributary so that habitat was stocked with the number of fish we had planned, they just were not as spread out as typical in a couple cases. These sites were on Seavey stream and Long Lake Stream. We also visited each stocking site multiple times over the course of about three weeks, stocking a portion of the fish dedicated to that site each visit. We did this so we were not putting a full allotment of fish in at once, but rather, putting a portion of the allotment in giving the fish time to spread out, and then returning to stock the remainder at each site. This made for more trips to each site, but was well worth the effort to spread the fish out and hopefully reduce the stress on the fish during the stocking process. I have included a map indicating stocking sites below.

During fin clipping and stocking multiple news sources (t.v., radio, and newspapers) came to EMARC and wrote articles, filmed stocking, and took pictures of the events taking place. This provided great exposure for the goals of the Parr Project and also highlighted our work with the community and educational institutions. Here are a few links to stories done this fall!

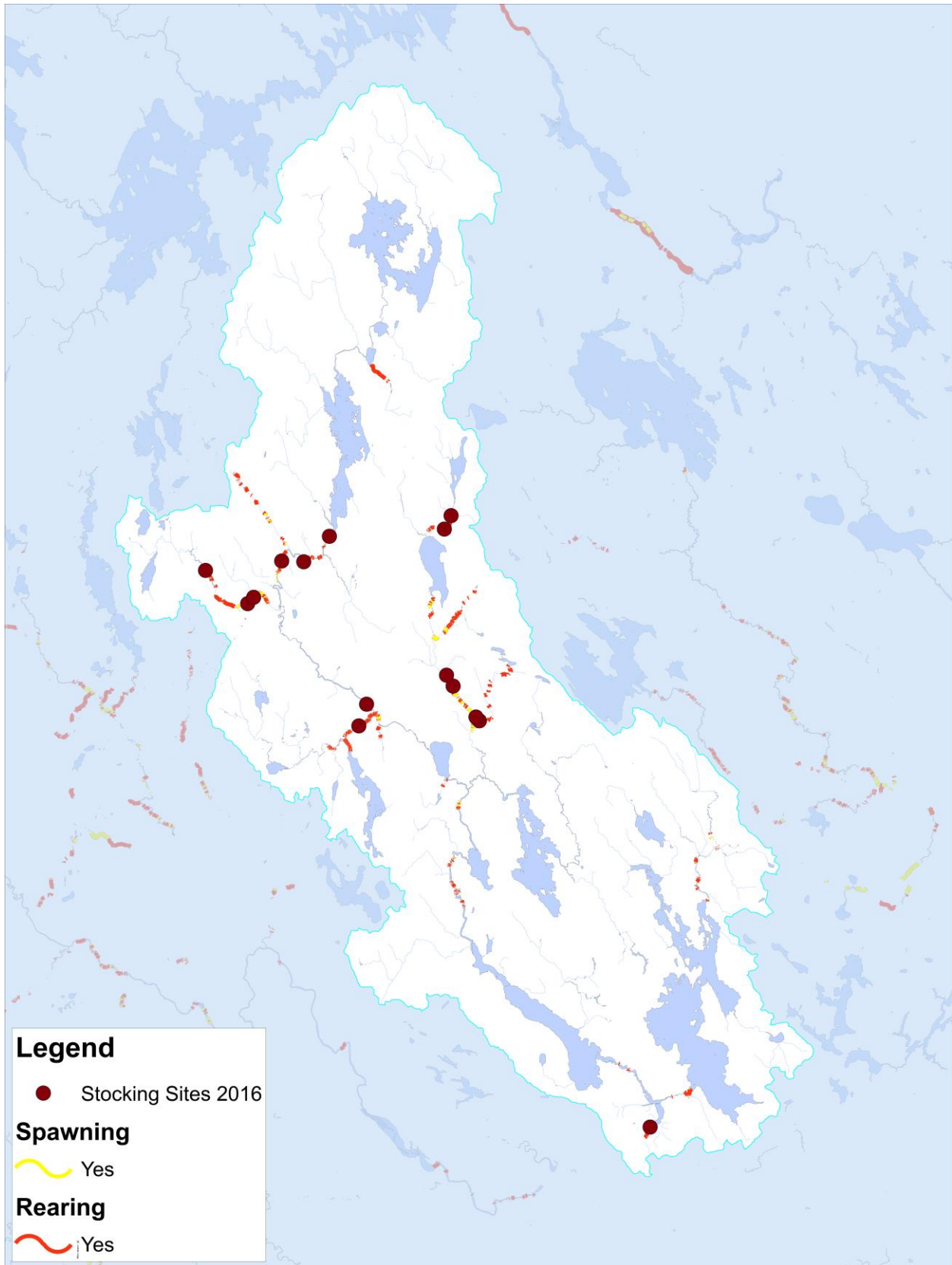
<https://bangordailynews.com/2016/10/27/news/down-east/200000-salmon-being-released-into-down-east-river/?ref=regiondowneast>

<http://www.pressherald.com/2016/10/16/volunteers-aid-in-the-effort-to-revitalize-atlantic-salmon/>

<http://www.foxbangor.com/news/item/17067-east-machias-river-stocked-with-50-000-salmon>

A continual issue we have been facing is water levels in the river. In some places, we are 10 inches below our average rainfall for the year, and this has resulted in very low water conditions heading into the fall. To give some perspective, Old Stream, a tributary of the Machias River system, has a stream stage monitoring system operated by the USGS. It is currently flowing at a rate of 4.5 cubic feet per second (cfs) – the average for this time of year for this stream is 85 cfs. As a result of this low water, fish will be less likely to make it into many tributaries to spawn, beaver have been more heavily damming the main stem of our rivers, and a lot of spawning gravel typically under a foot or more of water is high and dry. We will have a better idea of how this will impact fall spawning as we complete our redd surveys. We will be surveying through late fall and into the winter if rivers are accessible to be sure we don't miss late spawners, especially if water levels come up with any rain we get this fall.







Just over 200,000 0+ parr were stocked this year. Though this year again had its challenges, we have been successful in many ways, and the results are proving it. We were met with another challenging year in terms of weather conditions and mortality through the summer in the hatchery. We can only control so much, but we are working to improve what we can control. We have speculated that high rearing densities in the hatchery may be a contributing factor to the increased mortality we have seen the past two years, or at the very least, exacerbated issues that may have been minor in tanks with fewer fish. To address this issue, we have begun the early stages of planning for a hatchery expansion. The idea would be to expand off of the back of the building, essentially elongating the hatchery, doubling the rearing capacity. This would give us much more flexibility in terms of rearing space, and would give us the option of rearing fish at lower densities addressing the issue of increased mortality in the hatchery. This is an exciting time here at the hatchery and we are very much looking forward to the year to come!

If you would like to help contribute to this project, please contact Heather Andrews at [heather@mainesalmonrivers.org](mailto:heather@mainesalmonrivers.org).