



Garrison Dam National Fish Hatchery Complex

Restoring America's Fisheries

"We work with our partners and engage the public, using a science-based approach, to conserve, restore and enhance fish and other aquatic resources for the continuing benefit of the American people."

July 2020

Fish Culture



Advanced walleye

Extensive fish culture at Garrison Dam NFH focused on maintaining water quality and fertility in the advanced walleye ponds. The states of Wyoming and North Dakota requested 201,000 three inch walleye for stocking selected waters in August. Typically our walleye stockings are accomplished with inch and a half fingerlings. Success of stockings smaller fingerlings in some waters is

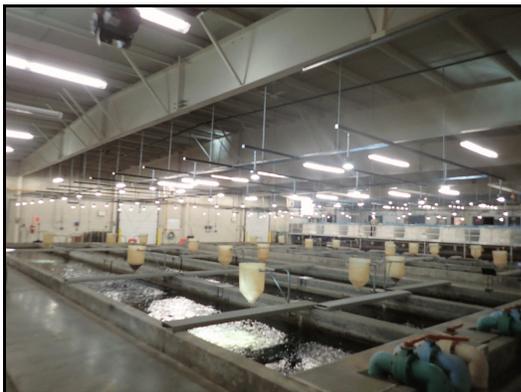
marginal due to competition for food or predation by larger, would be, prey fish. Stocking walleye at a three inch size achieves the success fishery managers are looking for.



Shovelnose fingerlings

Shovelnose propagation has our Sturgeon Building occupied as no pallid sturgeon propagation occurred due to COVID-19 shutting down broodstock collections. There are 5,700 four inch shovelnose fingerlings currently being

propagated to meet restoration stocking goals in the Bighorn River. These fish will be PIT tagged and released in the Bighorn near the town of Basin, Wyoming in late September.



Salmonid Building trout production raceways

Walleye larviculture is ongoing in our Isolation Room to develop our intensive culture techniques. We hope to have our infrastructure and techniques refined to achieve success with the YY walleye broodstock in the future provided we get approval from FDA for the use of estradiol. Our plans are to work cooperatively with the Idaho DNR to refine the process and make use the YY broodstock to eradicate unwanted walleye populations.

Trout propagation is ongoing with 88,000 seven inch fish on station from three lots as well as a couple lots being propagated for muskellunge forage later in the summer. We are experimenting with nanobubble generation to reduce TDG issues that have been problematic in our salmonid culture for years. We are

also in the process of installing additional monitoring equipment to assess water quality throughout the hatchery facilities. Having water quality logging information available illustrates the impacts of feeding and cleaning as well as clarifying changes that occur after hours. The cloud based information and dashboard provided by the manufacturer has a learning curve associated for the not so tech savvy fish biologists, but we can see the benefits both in the monitoring aspects and alarming capabilities. Losing fish to mechanical failures at the hatchery should be a thing of the past with the appropriate alarming capabilities. Today's technology should provide adequate protection at a reasonable cost.

The remainder of the fish were harvested from Baldhill NFH in July with over 280,000 juvenile walleye being harvested and stocked. These fish were split up between the only two zebra mussel positive waters in North Dakota (Lake Ashtabula, and Lake Lamoure). Additionally largemouth bass ponds were harvested and 8,700 were stocked out. Staff was temporarily set back on harvesting ponds for a period of 10 days due to flooding. A rain event which brought 4-7 inches of rain the Sheyenne River watershed resulted in the opening of gates on Baldhill Dam and raising water levels in the river to where external kettles were submerged. In total over 2.1 million walleye, 755,000 northern pike, and 8,700 were raised and stocked out of Valley City NFH this year.



Inundated external kettle at Baldhill Dam NFH

Upcoming Activities

Advanced fingerling walleye harvest will be occurring to fill requests in Wyoming and North Dakota.

Continued monitoring of our sensors and tweaking of the oxygen generation to provide optimal water quality.

Maintenance on the hatchery's equipment and grounds.

Public Use

The visitor center and hatchery at Garrison Dam remained opened to the public until July 28th when an increase in COVID -19 cases (including one of our volunteers) weighed in on the decision to close the facilities. There were 2600 visitors to the hatchery for the two month period it was open.



Canoe launch site at the hatchery

Valley City's Annual Riverfest has had a change of plans in response to COVID -19 as well this year. Instead of holding an all day event for people to participate in paddling the Sheyenne River and visiting the hatchery, the event is now being stretched out across a whole week. Participants are encouraged to visit the hatchery and paddle the Sheyenne River at multiple access points, one being the hatchery's canoe/kayak launch.

Maintenance

Pond bottoms at both locations have been sprayed to eradicate sapling trees that are starting to grow in nearly every pond. Further pond maintenance scheduled for the summer and fall includes hauling in dirt and regrading to achieve the proper slope to harvest ponds most efficiently.



Valley City NFH pond maintenance



Isolation Building new siding

The rotted cedar siding on the Isolation Building was replaced with vertical steel siding and the trim on the roof was replaced to match the brown steel currently on the roof. Plumbing and electrical work has been completed in the Isolation building and the building can now operate as a flow through or recirculating system. Remaining work to be done in the building includes installation of 4 foot tanks, and alarm installation.



Isolation Building recirculating aquaculture system



Using a vacuum, mud and debris is removed exposing the line break

Staff began repairing multiple drain line and fresh water line breaks at Baldhill NFH in July. Two of the leaks/breaks have established sink holes near the external kettles. One leak was a failure of a compression fitting installed some time ago that continued to wash away dirt behind the kettle. A freshwater line break significantly reduced flows to the external kettle resulting in a loss of fish. Staff has dug up both line failures and are in the process of repairing the breaks.

Salmonid Production Summary

Station:	Garrison Dam NFH	Period Covered:	October 1, 2019	Through	July 31, 2020							
Fish on Hand the Last Day of the Period						To Date This Fiscal Year						
Lot Number	Number	Weight (Lbs)	Length (in)	Density Index	Flow Index	Weight Gain	Feed Expended		Fish Shipped		% Survival	Feed Conversion
							Pounds	Cost	Number	Weight		
RBT-SSD-19-ENN	1,747	1,560	13.7	0.08	0.38	14,881	24,172	\$14,438	55,323	26,933	100	1.63
RBT-SSD-20-ENN	68,611	7,125	6.7	0.15	0.64	7,301	5,948	\$4,708			100	0.81
BNT-PRD-18-SAR			10.4						11,602	5,157	61	5.86
BNT-PRD-19-SAR	18,414	2,100	5.6	0.18	0.48	2,100	2,164	\$1,656			96	1.03
RBT-HCD-18-WY			11.2			2,911	6,000	\$3,566	14,422	6,868	92	2.06
FCS-LSW-19-FR			5.1			16,252	14,092	\$13,341	424,945	16,400	97	0.87
Totals/Averages	88,772	10,785				44,511	58,646	\$43,731	506,292	55,358		1.32

Hatchery Complex Personnel

Employee	Functional Title	Grade
Robert Holm	Project Leader	GS-13
Jerry Tishmack	Fishery Biologist	GS-11
Sean Henderson	Fishery Biologist	GS-11
Shawn Cole	Fishery Biologist	GS-7
Toni Ganje	Administrative Support	GS-7
Ben Oldenburg	Biological Technician	GS-6
Aaron Von Eschen	Assistant Project Leader	GS-12
Tyler Sexton	Biological Technician	GS-7
Paul Drabus	Maintenance Worker	GS-7

Ben Oldenburg was selected to fill the vacant biological technician position at Garrison Dam NFH and Terry Sexton at Valley City NFH. Welcome onboard! I can't recall the last time the hatchery complex had a full crew.