



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."

May 2020

Spawning

May is walleye spawning in North Dakota. There were eleven days spent on Lake Sakakawea netting and spawning walleye with the assistance of the North Dakota Game and Fish Department. Crews began on the upper end of the lake on April 27th and continued on to the lower end with the final egg collections taking place May 14th. A total of 602 quarts were taken which equates to just over 72 million eggs.

Fish Culture

Northern pike production this year was exceptional at the Garrison Dam NFH with an average survival from eyed eggs to fingerlings of 61%. Twelve ponds were stocked to fill our 673,000 fingerling request and with the great survival and growth seen, 1.66 million fingerlings were harvested and stocked in forty lakes over the course of the month. The fingerlings at an average of 900 fish per pound were by far the largest produced here in years.

Garrison Dam NFH shipped 5.5 million walleye eggs to the Pueblo State Fish Hatchery in Colorado and the Rathbun State Fish Hatchery in Iowa.



Some of the 72 million walleye eggs on the incubator battery at Garrison Dam NFH



Jerry loading walleye fry in Fearnow pails on the way to stocking hatchery ponds.

Stocking and fertilizing walleye ponds at Garrison and Valley City has kept the crews busy. Between the three hatcheries we have 98 ponds of walleye to manage. We have been shuttling walleye fry between Garrison Dam NFH where they are incubated and hatched to Valley City NFH and Baldhill Dam NFH three hours away. To date over 8 million fry have been sent to Valley City NFH and 13 million stocked at Garrison Dam NFH. Biologists have been monitoring water quality and zooplankton to adjust stocking and fertilization applications. If all goes as planned we hope to harvest over 11 million walleye fingerlings in June and July. Just a FYI - the Fearnow pails used are a throwback to the 1930's when rail cars were used to transport fish across country and are still our go to equipment today.

May was also a busy month stocking catchable rainbow trout with 39,000 of the total 67,000 eleven inch fish stocked in 39 waters across the state. The rainbow trout stockings provide a popular put-and-take fishery for North Dakota anglers with many strategically stocked in 'urban' ponds targeting our youth.

Chinook salmon mitigation stockings were also accomplished this month with 425,000 five inch smolts being released in Lake Sakakawea. Due to COVID-19 we were unable to coded wire tag these fish so the research objectives will not be met but they will be available over the next few years to the anglers.

Northern pike were stocked in 20 ponds at Baldhill National Fish Hatchery in the month of May and all were harvested before the end of the month. Over 810,000 Northern Pike fingerlings were harvested from the ponds and brought down to the holding house for a 24 hour quarantine flush with filtered and UV treated water. Samples were taken from ponds during draw down, external kettles, filtered water going to the fish, and from the holding house



Loading pike from external pond kettles to the ND Game and Fish distribution truck



Sean loading Chinooks on the ND Game and Fish distribution truck

raceways to monitor for zebra mussel veligers that may be present in the source water. No veligers were detected in any samples from the 2020 northern pike production seasons and these fish were shipped by the state of North Dakota. Additionally 1,500 fish were shipped overnight to the USGS in La Crosse, WI for research. A total of 756,000 northern pike were shipped from Valley City NFH resulting in a 93% survival during the 24-hour quarantine period.

Upcoming Activities

Shovelnose restoration activities assisting the Wyoming Game and Fish locate broodstock in cooperation with the Montana Fish Wildlife and Parks in the Yellowstone River tributaries. The shovelnose will be brought back to the hatchery for spawning. Progeny will be released into the Bighorn River in support of ongoing restoration work.

If conditions warrant and crews can safely set trammel nets, pallid broodstock collections may occur. Currently the hatchery has two male fish from the extant population that will be spawned and milt cryopreserved to add to the genetic repository. Hopefully a female can be located to add progeny to the population as last year no suitable fish were found for stocking augmentation.

Diet trials will resume evaluating the suitability of processed larval feeds and/or combinations of frozen and processed diets to increase survival during the transition to exogenous feeding.

Walleye harvest will be in full swing during the month of June with a stocking request in excess of 11 million fingerling and advanced fingerlings to be harvested from the ponds at Garrison Dam and Valley City National Fish Hatcheries.

Water quality monitoring and condition equipment will be put into use with representatives from In-Situ and Moleaer visiting the hatchery in June to evaluate their products in the field. The Moleaer representative has asked that we provide side by side comparisons of rainbow trout performance between a control raceway and one conditioned with nanobubbles. The Bozeman Fish Health Center will be evaluating the condition of the fish monthly until they are stocked next May.

Zebra mussel monitoring will be ongoing through the summer to evaluate our ability to propagate and stock fish in spite of our water source being positive for the mussel.

Partnerships

Our partnership with the North Dakota Game and Fish Department continues to grow. The finding of zebra mussels in the Valley City NFH water supply prompted the Department to bring on additional ANS staff, which we are incorporating into our hatchery programs monitoring fish production and assisting with fish culture and outreach.

Public Use

Volunteers arrived just in time to spruce up the visitor center displays prior to the opening of the hatchery and visitor center. COVID-19 had shut down the hatchery's outreach program and based on the calls to the hatchery, the public was anxiously awaiting the chance to come back for a visit.

Maintenance

The oxygen supplementation system at the hatchery is getting a workout and with that, maintenance needs are on the rise. We are testing the nanobubble technology as a means of reducing gas supersaturation in our water supply. The installation of the nanobubble generator was completed and for it to operate needed a continuous oxygen supply. We currently use oxygen injection as a means of stripping nitrogen from our water so have a compressor system coupled with three AirSep oxygen generators that are available to supply the oxygen demand. With the additional hours of use, maintenance was needed on the system as well as a complete rebuild on the oxygen booster pump.

Water supply and drain lines to the external kettles at Baldhill Dam NFH have separated again in new locations. The hatchery has been plagued by frost heave cycles damaging water lines for several years and the issue is increasing in frequency. Unfortunately fish losses are occurring. The project is in Engineering where design and cost estimated are being determined with the project scheduled for construction funds in 2027.

Rehabilitation on the intensive culture building and water supply line at Valley City NFH is ongoing when time permits between fish culture work.

Hatchery Quarters

Finished up installing deck railings on Quarters 2 at Garrison Dam NFH. Looking into new siding at two of the residences at Valley City NFH. The two North Dakota ANS employees are now occupying the volunteer bunkhouse (A.K.A. FEMA trailer) at Garrison after a thorough cleaning on their part.

Salmonid Production Summary

Station:	Garrison Dam NFH		Period Covered:	October 1, 2019		Through	April 30, 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	41,908	19,956	11.1	0.41	1.03	13,214	23,130	\$13,864	14,200	6,870	99.6%	1.75
RBT-SSD-20-ENN	74,166	534	2.7	0.35	1.22	550	445	\$514			98.7	0.81
BNT-PRD-18-SAR			10.4			1,066	6,250	\$6,023	11,600	5,157	61.3%	5.86
BNT-PRD-19-SAR	18,473	440	3.9	0.41	1.41	440	468	\$477			96.3%	1.06
RBT-HCD-18-WY			11.0			2,911	6,000	\$3,566	14,422	6,868	92.3%	2.06
FCS-LSW-19-FR	430,794	13,590	4.7	0.46	1.6	13,441	11,849	\$11,605			98.1%	0.88
Totals/Averages	565,341	34,520				31,622	48,142	\$36,049	40,224	18,895		1.52

<i>Hatchery Complex Personnel</i>		
<i>Employee</i>	<i>Functional Title</i>	<i>Grade</i>
<i>Robert Holm</i>	<i>Project Leader</i>	<i>GS-13</i>
<i>Jerry Tishmack</i>	<i>Fishery Biologist</i>	<i>GS-11</i>
<i>Sean Henderson</i>	<i>Fishery Biologist</i>	<i>GS-11</i>
<i>Shawn Cole</i>	<i>Fishery Biologist</i>	<i>GS-7</i>
<i>Toni Ganje</i>	<i>Administrative Support</i>	<i>GS-7</i>
<i>Ben Oldenburg</i>	<i>Fisheries Technician</i>	<i>NDGF</i>
<i>Aaron Von Eschen</i>	<i>Assistant Project Leader</i>	<i>GS-12</i>
<i>Vacant</i>	<i>Biological Technician</i>	<i>GS-5</i>
<i>Paul Drabus</i>	<i>Maintenance Worker</i>	<i>GS-7</i>

Biological technician positions at both Valley City NFH and Garrison Dam NFH are currently being advertized on USA Jobs.