



Mora National Fish Hatchery

May 2016

2016 Year Class

The 2016 year class continues to have great performance in growth and survival. Average survival is up 17.7% over last year in the Main Diamond, 22.2% in the South Diamond lineage, and 6.9% in the Whiskey Creek lineage. Staff credits the increase in survival to two main factors. First, the Ultra-Violet disinfection unit has operated at 100% all season. Secondly, staff has exclusively used Bio-Oregon's BioVita diet, eliminating other starter diets and Cyclop-EEZE. The BioVita diet contains only fish meal and fish oil in its protein content, eliminating alternative ingredients such as blood meal, feather meal and/or any poultry by-products.

Enumeration this year was accomplished by using egg displacement, instead of hand counting every egg. Due to the extreme variation in egg size in each year class and lineage, staff will be truth-checking the numbers next month to develop a confidence interval for this method going forward.

Lineage	Projected Survival (%)	Broodstock Number	Broodstock Survival (%)	Recovery Number	Recovery Survival (%)	4-D Recovery Number	4-D Recovery Survival (%)
Main Diamond	70	5,221	81.9	21,102	90.0	29,945	86.6
South Diamond	70	3,753	81.4	17,631	90.6	19,459	80.3
Whiskey Creek	60	787	66.1	1,718	60.7	X	X
Spruce Creek	60	38	80.9	X	X	X	X



Mora School District Field Day

Hatchery staff attended the Mora School District's Field Day on May 24. The hatchery displayed adult Gila trout to the children along with providing information on the Hatchery and its mission. Hatchery staff also provided an archery instruction station where the school children were taught the fundamentals of the sport.

Nate on Detail

Project Leader Nate Wiese started a 2-month work detail to Region 1 as the acting Columbia Gorge Complex Manager, supervising six hatcheries located on or near the Columbia River. Nate has said while the work is very interesting, his home is at Mora NFH. Nate will return to the hatchery on July 5.



Dustin Wagner Starts

Dustin Wagner, Mora's new Biological Science Technician started on May 2. Dustin hails from Colville, WA. Dustin has worked for FWS in Region 1 and 7. Dustin has a fisheries degree from Bellingham Technical College and he is currently finishing up a degree from the University of Alaska at Fairbanks. Please welcome Dustin to the Region!



OSU Visits

The Oklahoma State University Natural Resource Ecology and Management Summer Forestry Camp visited Mora NFH on May 16. The students were given a detailed history and current mission of the Fisheries program. They were then given a walking tour of the facility which covered all aspects of Gila trout recovery and the hatchery's water recirculation technology. After the tour, the students were eager to assist hatchery staff with various tasks around the hatchery including grading fish and sampling counting. Participants remarked, as in past years, that this visit was the most fun that they had during the program and a welcome change from lecture style tours.

Volunteer Levi Hartzler

Levi Hartzler, a volunteer from Phoenix, AZ, joined the hatchery on May 16 for a two-week volunteer experience at Mora NFH. Levi is currently pursuing a general biology degree, and is very interested in fish and wildlife management. Levi assisted staff with all aspects of Gila trout care and had a great time. Staff also arranged for Levi to spend a day at the Las Vegas NWR. THANKS for the help, Levi!



Fish Selected

Hatchery staff selected 50 fish from both the 2013 Main and South Diamond lineages to retain for broodstock as four-year old fish. Spawning multiple year classes into each brood year ensure that there is genetic flow throughout the lineage instead of stratifying each brood year. The remainder of the fish will be stocked next month for the kids fishing derbies in Arizona and New Mexico.



Production Lineage	Brood Year	Purpose	Location	Number	Mortality	Sample (fpp)	Length (in)	Biomass (lbs)
Main Diamond	2013	Brood	Raceway 5T	246	28	0.37	18.6	664
	2014	Brood	Raceway 6	815	71	0.7	15.5	1165
	2014	Wild	VC East 2	65	0	5	8.0	13
	2015	Brood	R1T	851	12	3.03	8.8	281
	2016	Brood	ZHAB, 30	5,221	602	500	1.7	10.5
	2016	Recovery	SR:1,7 250's, 30	21,102	980	500	1.7	42.2
	2016	4D	SR, 380, 250	29,945	2,107	500	1.7	59.9
	Total				58,245	3,800	26.3	4.6
South Diamond	2012	Wild	VC West 1,2,3	70	0	0.7	15.7	100
	2013	Brood	Raceway 5B	285	11	0.37	18.6	770
	2014	Brood	Raceway 7	536	18	0.7	15.5	767
	2015	Brood	R2T	795	16	4.34	8.3	183
	2016	Brood	ZHAB, 30	3,753	164	500	1.7	7.5
	2016	Recovery	SR, 250	17,631	808	500	1.7	35.3
	2016	4D	SR, 30	19,459	1,912	500	1.7	38.9
	Total				42,529	2,929	22.2	4.8
Whiskey Creek	2011	Wild	Whiskey Creek	42	15	0.3	20.3	140
	2014	Brood	Raceway 8	465	15	0.8	14.2	581
	2015	Brood	R3T	614	0	3.58	8.6	172
	2015	Recovery	R3B	2,089	2	5	7.0	418
	2016	Brood	AQ	787	209	500	1.7	1.6
	2016	Recovery	250, 30	1,718	602	500	1.7	3.4
	Total				5,715	843	4.4	8.1
Spruce Creek	2010/2013	Wild	Spruce Creek 1	26	1	1.0	13.2	26
	2014	Brood	RW Circular	35	0	0.65	15.3	54
	2014	Wild	Spruce Creek 2	10	0	2.3	10.0	4
	2016	Brood	C8	38	9	750	1.5	0
	Total				109	10	1.3	12.1
Iron Creek	2011	Wild	Spruce Creek 3,4	31	1	0.60	15.3	52
	2013	Wild	VC East 3,4	92	0	7.2	7.0	13
	Total				123	1	1.9	11.0
Total All Lineages				106,721	7,583	18.9	5.1	5,603

BonyTail	2011	Wild	Shady Acres	1,262	0	3.9	9.7	323
	Total			1,262	0	3.9	9.7	323



Photo credit: D. Wagner

Mineral Creek Stocking

Hatchery staff stocked 320 Whiskey Creek fish at 7.6 inches and 0.19 pounds each in Mineral Creek, New Mexico. The fish were distributed into creek by coordination between the Service, the US Forest Service, and New Mexico Department of Game and Fish. This creek is a new location for Whiskey Creek lineage Gila Trout.

Upcoming Events

- Staff from Arizona Game and Fish to visit and volunteer at the hatchery on June 2 and 3.
- Goldwater Lake, AZ and Lake Roberts, NM fishing derbies on June 4.
- Hatchery staff to assist with the Heartbar non-native removal project on June 6-10.
- 4 YCC students to start on June 6.
- Dr. Wade Wilson on-site to update the broodstock management plan on June 7-9.
- Living Stream display to Maxwell NWR's 50 anniversary on June 11.
- CPR class for hatchery staff on June 15
- Nate Wiese to assist with instruction at the Cold Water Fish Culture class on June 20 through July 1
- Colleen Grant, Mora's 2016 DFP, to start on June 20
- Daniel Gallegos on detail at Region 6's Saratoga NFH on June 27 to July 9.
- Hatchery staff to assist to the Turkey Creek non-native removal project on June 27 to July 1.

In Brief

The drum screen sprayer bar failed on system 1 during May. A replacement was ordered and installed.

The effluent bio-filter spider broke on system 1 during May and was repaired.

The a replacement exhaust manifold was installed on the oxygen generator allowing the resumption of operation.

Richie Garcia and Dustin Wagner replaced the decking on one of the hatchery's cargo trailers.

Volunteer Sandy Kalb continued renovations on quarters #2.

Hatchery Staff

Nate Wiese, Project Leader
Lori Casados, Admin. Assistant
Jeff Conway, Fish Biologist
Grant Langmaid, Fish Biologist
Richie Garcia, Maintenance Worker
Dustin Wagner Biological Technician
Daniel Gallegos, Intern
Vacant, Biological Technician
Sandy Kalb, Volunteer

Contact Us

Mora NFH
PO Box 689
Highway 434 Mile Marker 2
Mora, NM 87732
575-387-6022
575-387-9030 (fax)