



Mora  
National  
Fish  
Hatchery  
March 2016

Mick Brown holds the next Potential World Record Gila Trout

## Spawning Continues

The 2016 spawning season continued during March. Main and South Diamond spawning had wrapped up by the close of the month, while Whiskey and Spruce Creek lineage spawning will continue into April. Enumeration will occur once hatching is completed, but all indications thus far indicate a great spawning season at Mora NFH.



Jason Amaro, Andrew Miller, Isaiah Reynolds, and Joseph Morales



Andrew Miller checking Main Diamond broodstock



Mick Brown and Grant Langmaid spawning Whiskey Creek wild Gila Trout

## 2016 Spawning Volunteers



Art Vollmer, Bill Zenger, and Jim Brooks with South Diamond broodstock



Gene Harrell going in for the catch!



Tyler Pilger and Christine Trahan collecting South Diamond eggs.



Tom Ryan pouring eggs into incubation trays



Sara Stienecker and Tyler Pilger grading Main Diamond one-year old broodstock.



Eastern New Mexico University Students scanning PIT tags



Angela James and Grant Langmaid, Photo Credit: Angela James



Joseph Morales and Isaiah Reynolds stripping eggs



Demi James picking eyed eggs, Photo Credit, Angela James USFWS



Eastern New Mexico University Students checking readiness



Eastern New Mexico University Students fertilizing eggs

## Thank You!

The staff of the Mora National Fish Hatchery wishes to thank all of the volunteers that assisted with this year's spawning that made this season an incredible success!



## SCADA Consultation

Leo Hayward from Border States Electric in Albuquerque visited the hatchery on March 3rd to evaluate the existing SCADA system. He received input from all staff members on the current challenges involving the system's operation. Leo suggested restoring some functionality of the system in the near future, before exploring a more permanent solution in the form of a total upgrade to bring the software and hardware to current standards.

## Well Valve Inspection

Nate Wiese and Richie Garcia removed and inspected the water diversion valve on Well #3 for proper operation. Staff noticed that the valve was very "noisy" and Richie wanted to ensure the valve was not damaged. Nate and Richie also cleaned the valve assembly prior to re-installing it.



## Milt Cyro-preservation

Bill Wayman and Jaclyn Zelko from the Warm Springs Fish Technology Center in Georgia returned in 2016 to collect additional milt samples from the rare Gila trout lineages. Samples were collected from Whiskey, Spruce, Iron and wild South Diamond. Bill noted that the viability in the Iron and Whiskey Creek lineages had decreased significantly, probably due to the age of the fish. Bill and Jaclyn will return in 2017 to continue their work.

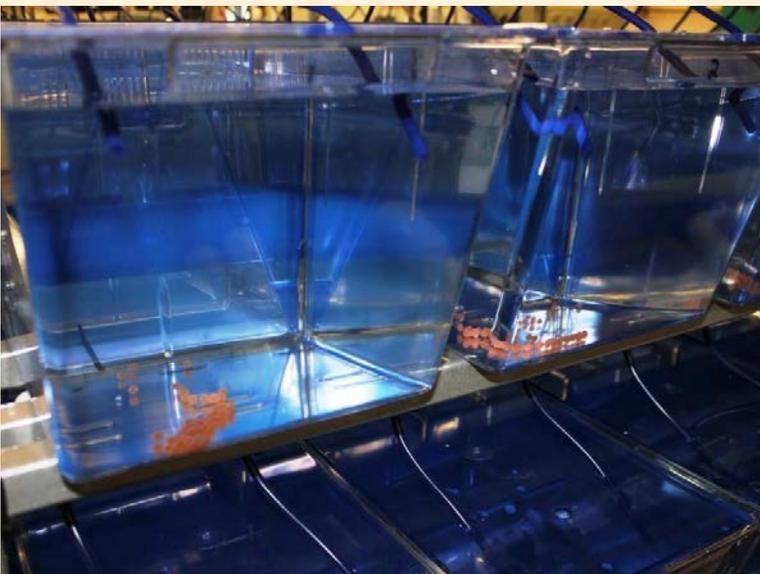


## Bonytail Arrive

1,267 Bonytail arrived on March 18 from the Southwestern Native ARRC. These fish were stocked into the renovated Shady Acres system. Mora will act as a back-up broodstock facility for the population held at Southwestern Native Aquatic Resources and Recovery Center. Jamie and Jeremiah weighed the fish after tempering so that the tanks were stocked with equal numbers of fish.

## March Holdover Stocking

3,690 holdover fish were stocked during March to three sites in the Gila National Forest. Staff from the Glenwood State Fish Hatchery graciously assisted in the effort due spawning commitments on Mora staff. 1,552 Main Diamond fish averaging 8.2 inches were released into the Forks Area on March 16. 1,123 South Diamond fish averaging 6.6 inches were stocked into Sapillo Creek on March 23; and 1,015 Main Diamond fish at 6.2 inches were stocked into Black Canyon on March 29.



## Z-Habitats

Upon eye-up, approximately 50 eggs, randomly selected to be broodstock from each genetically appropriate cross were stocked into the new 10 liter Z-habitat rearing units. This new rearing system will provide 60 tanks in less floor space than the current set-up of 16 glass aquariums. These systems have doubled the family cross holding capacity at Mora.



Production Lineage	Brood Year	Purpose	Location	Number	Mortality	Sample (fpp)	Length (in)	Biomass (lbs)
Main Diamond	2013	Brood	Raceway 5T	311	34	0.5	17.1	622
	2014	Brood	Raceway 6	930	20	0.9	14.1	1,032
	2014	Wild	VC East 2	65	2	7.7	6.9	9
	2015	Brood	R1T	865	0	5.2	7.7	166
	<b>Total</b>				<b>2,171</b>	<b>56</b>	<b>1.2</b>	<b>12.8</b>

South Diamond	2012	Wild	VC West 1,2,3	70	0	0.7	15.2	100
	2013	Brood	Raceway 5B	315	8	0.5	17.2	630
	2014	Brood	Raceway 7	575	15	1	13.7	575
	2015	Brood	R2T	819	1	7.5	6.8	107
	2015	Recovery	R2B	1,253	0	7.5	6.8	163
	<b>Total</b>				<b>3,032</b>	<b>24</b>	<b>1.9</b>	<b>11.0</b>

Whiskey Creek	2011	Wild	Whiskey Creek	59	1	0.3	20.3	197
	2014	Brood	Raceway 8	548	2	1.2	12.7	455
	2015	Brood	R3T	615	0	6.3	7.2	98
	2015	Recovery	R3B	2,093	1	6.1	7.2	335
	<b>Total</b>				<b>3,315</b>	<b>4</b>	<b>3.1</b>	<b>9.1</b>

Spruce Creek	2010/2013	Wild	Spruce Creek 1	27	0	1.2	12.8	22
	2014	Brood	RW Circular	35	12*	0.7	15.6	49
	2014	Wild	Spruce Creek 2	10	0	3.1	9.3	3
	<b>Total</b>			<b>72</b>	<b>12</b>	<b>1.0</b>	<b>13.6</b>	<b>74</b>

Iron Creek	2011	Wild	Spruce Creek 3,4	32	0	0.7	15.2	46
	2013	Wild	VC East 3,4	92	2	5.0	7.9	18
	<b>Total</b>			<b>124</b>	<b>2</b>	<b>1.9</b>	<b>11.0</b>	<b>64</b>

<b>Total All Lineages</b>				<b>8,714</b>	<b>98</b>	<b>1.9</b>	<b>11.0</b>	<b>4,627</b>
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BonyTail	2011	Wild	Shady Acres	1,262	5	4.3	9.4	290
	<b>Total</b>			<b>1,262</b>	<b>5</b>	<b>4.3</b>	<b>9.4</b>	<b>290</b>

\* Spruce Creek treated with formalin to control spawning mortality from Southwestern Fish Health Unit recommendation



## Daniel on Detail

Pathways student Daniel Gallegos performed a detail at Tishomingo NFH during his spring break week on March 13th through the 18th. Daniel assisted with spawning paddlefish and other duties around the hatchery.

## Upcoming Events

- Fish Distribution at the Forks Area on April 7.
- Annual WET testing on April 3-8
- Outdoor Classroom on April 14
- Grant Langmaid at the Annual Broodstock Meeting on April 18-21 in Charleston, SC.
- Grant Garnett, Bureau of Reclamation, to visit the hatchery on April 22.
- Nate Wiese at the Native Trout Workshop in Arizona on April 20-22.
- Safety Inspection on April 27.

## In Brief

Diane Moore from Luna Community College visited the hatchery on March 11 to check on Jamie Conway's Internship.

Students from the Fish and Wildlife Club at Eastern New Mexico University visited the hatchery and assisted with spawning on March 21.

## Maintenance

Richie Garcia procured food grade oil and inspected the sprocket and chain on the System 2 drum filter. The chain and sprocket were ordered from PR Aqua for replacement.

## Hatchery Staff

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

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