



# Mora National Fish Hatchery

January 2016

## Winter Fish Distribution

Mora staff completed fish distributions totaling 10,583 Gila trout (5.3 inches) during the first week of January. The first distribution trip occurred on January 4 with 5,030 Main Diamond lineage stocked into the Forks Area of the Gila River. Staff members Daniel Gallegos and Jeff Conway, along with assistance from intern Jeremiah Olivas, NMFWCO staff member Angela James and daughter Demesia, and Trout Unlimited member Jason Amaro spread the fish out at the Grapevine campground, and near the Gila Cliff Dwellings visitor's area.



The second trip occurred on January 6 when Project Leader Nate Wiese along with Zen Mocarski (NMDGF), Freelance Writer Etta Pettijohn, Andrew Monie and crew (also NMDGF), and U.S. Forest Service member Dustin Myers released 405 South Diamond lineage into Sapillo Creek after hiking them approximately 1 mile in; and released an additional 5,148 South Diamond lineage into Lake Roberts in the Gila National Forest.





## Glenwood SFH Visit

Project Leader Nate Wiese, NMDGF member Zen Morcarski, and TU member Jason Amaro visited the Glenwood State Fish Hatchery on January 7. Glenwood SFH is being considered as a possible future location for Gila trout. The hatchery would receive eggs from Mora once the process is completed.

## Winter is Here

Mora received three significant snowfall events in January; the largest totaled 14 inches in one event. Volunteer Sandy Kalb and staff member Richie Garcia have ensured the facility has remained open during these snowstorms by clearing roadways and sidewalks. Thanks for the Great Job Guys!



## Aquarium Transferred

Mora transferred one of its Gila Trout display aquariums to U.S. Forest Service, Gila National Forest Office in Silver City for outreach purposes. The setup contains everything needed to display Gila trout, including filter, UV sterilizer, and chiller. This display will educate visitors to the office on Gila Trout and the recovery program.

Fulfilled Stocking	Number	Length	Lineage	Comments
Frye Mesa Reservoir	6,000	3.5	MD/SD	
Black Canyon	3,514	3.5	MD	
Upper White Creek	3,317	4	WC	
Upper Langstroth	4,344	3.8	MD	
Ashe Creek, AZ	585	4.3	WC	Ad. Clipped
Willow Creek	3,520	3.6	SD	
Willow Creek (Below Barrier)	2,811	4.1	SD	Ad. Clipped
Willow Creek	1,600	3.6	SD	
Willow Creek (Below Barrier)	1,816	4.1	SD	Ad. Clipped
Little Creek	3,002	4	MD	
West Oak Creek, AZ	1,013	4.8	MD	Ad. Clipped
Dude Creek, AZ	507	4.4	SD	Ad. Clipped
Dude Creek, AZ	527	4.5	MD	
Forks Area	2,430	5.6	MD	Ad. Clipped
Forks Area	1,000	5.7	MD	
Forks Area	1,600	4.9	SD	
Sapillo Creek	405	5.2	SD	
Lake Roberts	5,148	5.2	SD	
Totals	43,139			

## Brood Year 2015 Stocking

Mora NFH completed fingerling Gila Trout stocking in January, wrapping up an outstanding season in which 43,000 plus fish were released out on the landscape.

## Velocity Study Fish Released

Fish from the Director's Fellowship Position study were released into Sapillo Creek and Lake Roberts on January 6, 2016. The fish displayed excellent coloration and fin condition, amazing some of the local volunteers with the quality of "hatchery" fish.



## Raceway Covers installed

Raceway covers were created by adding 90% shadecloth on top of the existing netting. The first batch of covers were created in 2009 during a research project by Ken Ostrand and Jeff Conway, and the original number was added to over the years. Sufficient additional covers were created to have a cover on every other raceway panel.

## Rebuilding Shady Acres

The “Shady Acres” system had received several updates over the years to ensure the system remained viable, but data collected during last year’s spawning season indicated that the system was not operating on a similar level as the other wild fish units. The decision was made last fall move the fish out and rebuild it from the ground up.

The main faults with the existing system could be categorized into three areas: 1) inefficient and insufficient influent and effluent lines; 2) an oversized bio-filter that did not function well; and 3) an overcomplicated water processing array. Staff designed a new system that addressed and corrected these shortcomings.

Deconstruction began in January with staff removing lines and equipment from the system. PVC piping, especially valves, were saved to be reused, where possible. The bio-filter, chiller, UV unit, and pumps were removed and saved for future reuse.

The new design uses four-inch water supply lines for six tanks (old system used a two inch line for 12 tanks), 3hp variable frequency pumps to supply water to a bank of six tanks (old system used 1.5hp pump to supply 12 tanks), more efficient drain lines, optimized water processing, and increased UV sterilization.

After completion (est. February 23rd), the system is tentatively scheduled to receive Bonytail from Southwestern ARRC in March under a reimbursable agreement with the Bureau of Reclamation, once an accord has been reached.





Production Lineage	Brood Year	Purpose	Location	Number	Mortality	Sample (fpp)	Length (in)	Biomass (lbs)
Main Diamond	2013	Brood	Raceway 5T	385	3	0.5	17.1	770
	2014	Brood	Raceway 6	956	3	1	13.5	956
	2014	Wild	VC East 2	67	1	12.8	5.8	5
	2015	Brood	380: 5,6	868	3	9	6.7	96
	2015	Recovery	R1B	2,580	20	10	6.3	258
	<b>Total</b>				<b>4,856</b>	<b>30</b>	<b>2.3</b>	<b>10.3</b>
South Diamond	2012	Wild	VC West 1,2,3	72	2	0.7	15.2	103
	2013	Brood	Raceway 5B	325	2	0.5	17.2	650
	2014	Brood	Raceway 7	598	1	1.1	13.5	544
	2015	Brood	380: 3,4	821	7	14	5.9	59
	2015	Recovery	2500: 4	2,383	2	10.9	6.1	219
	<b>Total</b>				<b>4,199</b>	<b>14</b>	<b>2.7</b>	<b>9.8</b>
Whiskey Creek	2011	Wild	Whiskey Creek	62	7*	0.3	20.3	207
	2014	Brood	Raceway 8	559	0	1.4	11.7	397
	2015	Brood	380:1,2	616	8	11.5	6.0	105
	2015	Recovery	2500: 3	2,096	2	10.9	6.1	335
	<b>Total</b>				<b>3,333</b>	<b>17</b>	<b>3.2</b>	<b>9.2</b>
Spruce Creek	2010/2013	Wild	Spruce Creek 1	27	0	1.3	12.4	21
	2014	Brood	RW Circular	47	1	0.8	14.8	59
	2014	Wild	Spruce Creek 2	10	0	3.7	8.8	3
	<b>Total</b>			<b>84</b>	<b>1</b>	<b>1</b>	<b>13.6</b>	<b>83</b>
Iron Creek	2011	Wild	Spruce Creek 3,4	32	0	0.7	15.2	46
	2013	Wild	VC East 3,4	96	0	22.3	4.8	4
	<b>Total</b>			<b>128</b>	<b>0</b>	<b>2.3</b>	<b>10.3</b>	<b>50</b>
<b>Total All Lineages</b>				<b>12,600</b>	<b>62</b>	<b>2.6</b>	<b>9.9</b>	<b>4,837</b>

\* Staff feels that this will be the last spawning season for these fish, estimated between 5-8 years old. Chris Kitcheyan, NMFWCO, will be aging some of the mortalities by otolith



## Polar Bear Plunge

Project Leader Nate Wiese once again represented the Hatchery at the Twentieth Annual Storrie Lake Polar Bear Plunge. While not quite as cold as last year, Park personnel still had to break the ice around the boat dock so participants could take the plunge.

## Upcoming Events

- Lori Casados at the Fisheries Administrative Conference in the Regional Office on February 1-5.
- Nate Wiese to attend the Arizona Coordination Meeting on February 4 via teleconference.
- Grant Langmaid to attend Fisheries Academy on February 21 through March 4.
- Border States Electric to visit the hatchery on February 25 concerning SCADA work

## In Brief

Martha Keller, Fish Health Unit Leader for Southwestern ARRC, visited the hatchery on January 11.

Project Leader Nate Wiese and staff members Grant Langmaid and Jeff Conway attended the Gila Trout Recovery Team Meeting on January 13 and 14.

Wade Wilson, Research Unit Leader for Southern ARRC visited the hatchery on January 25 to discuss the upcoming spawning season.

Jeremiah Olivas returned to the hatchery as a volunteer in January. He is currently working for the Help-New Mexico office which pays him a wage to work at the hatchery to gain work experience in his chosen field.

## 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

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