



ALCHESAY-WILLIAMS CREEK NATIONAL FISH HATCHERY COMPLEX WHITERIVER, ARIZONA



MONTHLY ACCOMPLISHMENT REPORT

JANUARY 2014

*Bruce Thompson – Complex Manager
Patti Ferlisi – Office Assistant*

ALCHESAY UNIT

*Gene Okamoto – Unit Leader
Pete Drevnick – Maintenance Worker/Motor Vehicle Operator
Jeff Cody – Motor Vehicle Operator
Joyner George – WMAT Fisheries
Andy Quay – Volunteer*

WILLIAMS CREEK UNIT

*Bradley Clarkson – Unit Leader
Russell Wood – Fish Biologist
Dan Ragen – Maintenance Specialist
Mike Figueroa – Motor Vehicle Operator
Jimmy Smith – Motor Vehicle Operator
Isaiah Paxson – Animal Caretaker*



While much of the eastern portion of Region 2 has been experiencing a colder than normal winter, the western portion has been experiencing just the opposite. The photo, *above*, reflects typical January snow pack at the Williams Creek Unit's main spring enclosure. The photo, *below*, is of the same area now. Snowfall amounts for the year are way below normal so drought conditions are anticipated until the summer monsoon season begins in July.



PARTNERSHIP AND ACCOUNTABILITY:

- All requisite water sampling for EPA was completed for both units. A Chemical Use Report for 2013 was also submitted to the regional EPA office. The Complex received Final NPDES Permits which will become effective on February 1, 2014 and will expire on January 31, 2019.
- Alchesay-Williams Creek personnel participated in the monthly Fisheries Coordination meeting between AZFWCO (Arizona Fish and Wildlife Conservation Office) and WMAT-WORD (White Mountain Apache Tribe – Wildlife and Outdoor Recreation Division).
- Bruce Thompson and Jeremy Voeltz, Project Coordinator for AZFWCO, met with Cheryl Pailzote, Hydrologist for WMAT’s Environmental Protection Office. Bruce and Jeremy gave Cheryl a tour of the hatchery as they discussed options and requirements for establishing a potential rearing program for endangered loach minnow at the Alchesay Unit. To gain further insight, a tour of state-run Bubbling Ponds Hatchery is also being coordinated.
- Complex personnel also met with WMAT personnel who are managing the Christmas Tree Lake “Fish Camp” and “Rent-A-Lake” programs. On the agenda were fish stocking logistics and how the Complex could assist the Tribe with these high revenue-generating enterprises. The annual fishing camp at Christmas Tree Lake is a fully-outfitted fishing camp which provides anglers the opportunity to catch trophy-sized Apache trout and is a big event. The Rent-A-Lake program targets a lake reservation system for Cyclone and Hurricane Lakes. It also includes a set-aside campground at Hawley Lake. All of these waters are located on the Fort Apache Indian Reservation (FAIR).
- Stewart Jacks, Assistant Regional Director for Fisheries and Aquatic Resources Conservation for the Southwest Region, conducted a meeting at the AZFWCO office with members of WMAT-WORD. This meeting provided WMAT an opportunity to voice their comments and/or concerns regarding possible implications to hatchery production as outlined in the Service’s recently published *National Fish Hatchery System – Strategic Hatchery and Workforce Planning Report*.

AQUATIC SPECIES CONSERVATION AND MANAGEMENT:

- Hatchery personnel drove 367 miles to deliver 5,000 rainbow trout (averaging 8-inch length) to two different recreation areas on the San Carlos Apache Indian Reservation. Stocking trips continue to be consolidated whenever possible.
- The Williams Creek Unit completed Apache trout spawning activities for this season on January 28. In eight spawning sessions, a total of 722,905 eggs were taken from 632 3-year-old females for an average of 1,144 eggs per female. Through the first six spawns, the survival rate to the eyed-egg stage is 86%. Through the first four spawns, the survival rate to fry stage is 77%.

For the first time, eggs were also taken from 2-year-old females. A total of 302,983 eggs were taken from 382 females, resulting in an average of 793 eggs per female. We achieved an average survival rate of 70% to the eyed-egg stage but survival to fry stage fell to 46%. The purpose of this experimentation is three-fold:

- 1) Typically, two-year-old females are ready to spawn earlier in the season than three-year-old females. With the additional time for grow-out, a larger number of 9-inch catchable Apache trout would be available for release the following year.
- 2) Ensure that 160,000 eyed eggs are available for shipment to Arizona Game and Fish Department (AGFD) hatcheries by the end of January. In the past, later egg shipments have resulted in diminished survival rates and posed rearing problems for the state.
- 3) Studies will be conducted to determine if the inclusion of eggs from two-year-old females in our production program will provide flexibility in achieving the program's target goals. This will also provide an opportunity to evaluate alternative stocking strategies by utilizing fed fry that do not impact actual production numbers.



Russ oversees the Jennsorter[®] as it works its sorting magic, *left*. The eggs, *above*, are separated into buckets with the good eggs on the left and bad eggs on the right.

We would like to give a huge thank you to Jennifer Johnson, Fish Biologist for AZFWCO, for her assistance this year with the arduous task of spawning. The process is very time-consuming, yet daily routine fish culture activities must continue. All of the Williams Creek staff, along with Gene Okamoto, deserves a huge round of applause for their efforts.

- Apache trout eggs were shipped to AGFD's Sterling Springs Hatchery. The first shipment was 40,290 eggs on January 23 and 60,690 eggs were shipped on January 30. The last shipment will be on February 6. AGFD will raise and stock these Apache trout into various sport fishing waters outside of the FAIR yet within their historical range in the White Mountains of Arizona.



To ship these eggs, Russ first poured eggs into a foam tray lined with a damp cheesecloth-like fabric, *far left*. A full tray of eggs, *middle left*. The eggs are covered with more damp cloth, *middle right*. Two trays were then stacked and packed into the shipping container, *far right*.

PUBLIC USE AND OUTREACH:

- Alchesay High School Special Education students continue to provide valuable assistance with all manner of fish culture duties.

WORKFORCE MANAGEMENT:

- Andy Quay continues to provide valuable volunteer hours to the Alchesay Unit. He provided 110 hours this month performing fish culture duties as well as building and grounds maintenance.
- Bradley Clarkson and Gene Okamoto completed FBMS training for Custodial Property Officer. Bradley will oversee property at the Williams Creek Unit and Gene will oversee property at the Alchesay Unit. Gene and Bradley encountered and persevered through a multitude of challenges in this process ranging from access issues to navigational issues to functionality issues.
- Bruce Thompson completed the Sustainable Practices Database for FY13 and is working on the FAC Fleet Survey for the Complex.

- Isaiah Paxson completed a two-week Coldwater Fish Culture class in Phoenix. The class was presented by the Service's National Conservation Training Center. The graduating class is represented in the photo *below*.



FACILITY MAINTENANCE:

- The remodeling of Quarters 5 has been completed but final inspection has yet to be scheduled. The next phase will begin with demolition of Quarters 4.
- Pete Drevnick began repairs to the Alchesay Unit's leaking water control structure. Pete developed a method to complete these temporary repairs without shutting off the water supply to the hatchery. The fish on station are extremely grateful to Pete for this stress free repair!

Happy, stress-free fish at the Alchesay Unit



- Construction was completed on the cover over A-bank raceways. Installation of screening around the raceways will begin next month. The screening is necessary to inhibit avian predation of the smaller fish housed in these raceways.



Clockwise from top: supports arrive; supports are set; close-up of supports being set; roof truss being set; all trusses in place; roof panels installed.





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FEBRUARY 2014

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Photo credit: Patti Ferlisi



Photo credit: Bradley Clarkson



Photo credit: Gene Okamoto

Bald eagles visit the Alchesay Unit, left and above left, and the Williams Creek Unit, above. We suspect the pair of eagles has a nest in the vicinity of the Alchesay Unit.

PARTNERSHIP AND ACCOUNTABILITY:

- All requisite water sampling for EPA was completed for both units.
- The Complex hosted the monthly Fisheries Coordination meeting between AZFWCO (Arizona Fish and Wildlife Conservation Office) and WMAT-WORD (White Mountain Apache Tribe – Wildlife and Outdoor Recreation Division).

AQUATIC SPECIES CONSERVATION AND MANAGEMENT:

- Both units continue to experience low water flows and higher than normal water temperatures. This poor water quality stems from the lack of snowpack. The Complex has seen very little measurable moisture this winter. Plans are being formulated to stock fish early in an effort to avoid any possible catastrophic losses. The stockings will begin as soon as early March. While it did snow at the Alchesay Unit, *right*, the week of February 10, temperatures were warm enough that it did not stick to the ground.



- Apache trout at the Alchesay Unit were treated with applications of salt after an outbreak of the external parasite, *Gyrodactylus*. A second look after the salt treatment revealed the presence of another external parasite, *Trichodina*. A static bath treatment of Formalin, along with supplemental oxygen, *left and below*, proved successful against both parasites and a secondary fungus infection with minimal loss of fish.



- The Williams Creek Unit continues to have good survival of the Apache trout eggs taken during the 2013-2014 spawning season. All of the buttoned up fry are now on

feed. To date, survival of the eggs taken from three-year-old broodstock is just under 70%. This is the highest survival to this stage that we have seen in the last five years. A complete report documenting the procedural changes to our spawntaking process this year is forthcoming.

- Brook trout eggs were received from J Perry Egan Hatchery in Bicknell, UT. Setbacks were experienced with the Utah Division of Natural Resources' brook trout broodstock when they were moved to Mammoth Creek Hatchery outside of Hatch, UT. Our shipment was significantly delayed, the number of eggs received was short of our request and the eggs were of poor quality when they arrived at the Williams Creek Unit.
- Sorting of Apache trout broodstock, *right*, began in anticipation of stocking those excess fish into WMAT's Christmas Tree Lake for their fish camp in May.



Transferring rainbow trout fingerlings from the production tankhouse to the raceways at the Williams Creek Unit utilizing a pipeline transportation system, *left*.

- Hatchery personnel drove 365 miles to deliver 5,000 trout (averaging 8" in length) to two different recreation areas on the San Carlos Indian Reservation. Stocking trips continue to be consolidated whenever possible.

PUBLIC USE AND OUTREACH:

- The students from Alchesay High School's Special Education Department provided valuable volunteer assistance at the Williams Creek Unit again this month. This month, the students and their supervisors have provided over 20 hours of assistance in all manner of fish culture duties.

- Russ Wood guided a tour of the Williams Creek Unit for 12 American Indian Christian Mission members from Colorado, *right*. They were shown all aspects of our trout culture operation.

WORKFORCE MANAGEMENT:

- Andy Quay continues to provide valuable volunteer hours to the Alchesay Unit. He provided about 100 hours this month performing fish culture duties as well as building and grounds maintenance. Chadwick “Sharkey” Amos also assisted the hatchery with sign and grounds maintenance. The Complex received over 200 hours of assistance from our two volunteers this month.
- Bruce Thompson and Gene Okamoto attended the region’s quarterly safety teleconference.
- Dan Ragen delivered the cracked fish tank to the manufacturer in Bakersfield, CA. The manufacturer has agreed to perform the necessary repairs at a much reduced price as it seems the tank appeared to have been built incorrectly.
- Minor personnel quarters repair and maintenance have been performed by staff living on station at the Williams Creek Unit.



FACILITY MAINTENANCE:

- Pete Drevnick carries on with final touches on the cover over the A-bank raceways and radial flow settler (RFS) units. The newest additions include a concrete threshold drainage system and steps facilitating access to the walkway over the head-raceway, *right*. Pete, Jeff Cody and Joyner George are also installing fencing around the perimeter of these raceways and RFS units. These protected raceways will be utilized for rearing brown trout when they are transferred to the Alchesay Unit in mid-March.
- Despite passing the final inspection, additional issues were noted with the Quarters 5 remodel. The interior doors did not latch/unlatch properly, which presented a safety issue. The hot and cold water hookups were switched, which also presented a possible safety concern. These issues were corrected under the contract’s warranty.



LEADERSHIP IN SCIENCE AND TECHNOLOGY:

- Fish oil was utilized to “top-dress” medication into the fish feed. Fish oil is more palatable and subsequently, the treated fish continue to feed vigorously in spite of consuming the distasteful chemical therapeutents that are mixed into the feed.
- Russ Wood worked to connect the Williams Creek Unit’s new 6” fish pump to the 8” dewatering tower. The 8” Aqualife Harvester pump and tower were transferred to the Complex when Mescalero National Fish Hatchery closed. The unit has been rarely used because the three foot tall 8” submersible pump is not compatible with this Complex’s shallow raceways. The new pump is not submersible and is also better suited to transferring smaller fish.





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March 2014

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ALCHESAY UNIT

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This great horned owl, *left*, was rescued by a hatchery worker (see page 2 for full story)

PARTNERSHIP AND ACCOUNTABILITY:

- All requisite water sampling for EPA was completed for both units.
- Alchesay-Williams Creek personnel participated in the monthly Fisheries Coordination meeting between AZFWCO (Arizona Fish and Wildlife Conservation Office) and WMAT-

WORD (White Mountain Apache Tribe – Wildlife and Outdoor Recreation Division). Chris Kitcheyan of New Mexico Fish and Wildlife Conservation Office was a guest at this meeting.

- A great horned owl was rescued from one of the raceways at the Williams Creek Unit. Mike Figueroa noticed the owl was trapped in the raceway and enlisted the help of co-worker Isaiah Paxson to free the bird. The owl was so tired from the ordeal of trying to escape, and so appreciative of Mike's assistance, that he posed for this picture, *right*, before flying off to a nearby tree branch to recuperate. We suspect the owl was hunting a small rodent(s) that was feasting on the small amount of spilled fish feed around the raceway when it became trapped.
- Gene Okamoto completed the Complex's annual safety plan. This plan, along with minutes of safety meetings, has been filed with the Region's Safety Office in Albuquerque, NM.
- The annual revalidation for Quicktime and FPPS was completed for Bruce Thompson, Patti Ferlisi, Gene Okamoto and Bradley Clarkson.



AQUATIC SPECIES CONSERVATION AND MANAGEMENT:

- The complex continues to experience drought conditions and the resulting poor water quality. In response, we continue our aggressive early stocking schedule.
- Hatchery personnel drove 3,932 miles to deliver about 115,000 rainbow trout (averaging 5" length); 55,000 rainbow trout (averaging 6-8" length); 20,000 brown trout (averaging 2.5" length); and 5,000 Apache trout (averaging 10" length) to seven reservations in Arizona and New Mexico. An additional 5,000 (averaging 10" length) Apache trout were stocked into rivers and streams on the Fort Apache Indian Reservation. Stocking trips continue to be consolidated whenever possible.
- In early March, there was an emergency stocking due to low dissolved oxygen levels at the Williams Creek Unit. Approximately 35,000 rainbow trout were stocked into two lakes on the Fort Apache Indian Reservation.
- In addition, 66,975 brown trout were transferred from the Williams Creek Unit to the Alchesay Unit. These fish averaged 2.5" in length and were put into four of the newly covered and enclosed A-Bank raceways.
- The Alchesay Unit continues efforts to discourage bird predation on the production ponds. Common mergansers and great blue herons seem to have an endless appetite for trout! The

draw curtains were installed on A-bank raceways. This bank of raceways, along with the adjacent radial flow settlers, is now completely enclosed with fencing/screening, *below left*.



- Formalin treatments continued for the Apache trout at the Alchesay Unit. An outbreak of external parasites has been alleviated but a secondary fungal infection set in, *above right*. This lot of excess Apache trout broodstock has had a difficult time dealing with current spring-time water quality issues at the Alchesay Unit.
- Future broodstock were selected at the Williams Creek Unit. Twelve hundred males and females were selected from this year's spawning.
- The Apache trout eggs from this season's last spawning effort are now on feed. We took a total of 1,025,888 eggs, shipped 161,492 eggs to the State of Arizona, and have 448,600 Apache trout fry currently on feed.
- The Williams Creek Unit received 385,000 rainbow trout eggs from White Sulphur Springs National Fish Hatchery in White Sulphur Springs, WV.

PUBLIC USE AND OUTREACH:

- The Complex had approximately 200 visitors this month. Several birthday celebrations were enjoyed at the park adjacent to the Alchesay Unit office. Local school tours are starting to be scheduled at the Williams Creek Unit. Youth from the McNary Wellness Center toured the Williams Creek Unit this month. The 15 youth and two adults were shown all areas of the hatchery including putting eggs down in the production tankhouse, *below left*, and C-bank raceways, *below right*.



WORKFORCE MANAGEMENT:

- Andy Quay continues to provide valuable volunteer hours to the Alchesay Unit. He provided 94.5 hours this month performing fish culture duties as well as building and grounds maintenance. Sharkey Amos was busy this month with his duties as lead ranger for the White Mountain Apache Tribe Game and Fish Department. In spite of his busy schedule, Sharkey was able to volunteer approximately 40 hours this month.
- Mario Cisneros spent a week at the Complex upgrading computers to Windows 7 and attending to a multitude of smaller issues that had been placed on the back burner due to time constraints or could not be accomplished via telephone. Mario, big kudos and a huge thank you!!
- Jeff Cody graded the road up to the spring at the Alchesay Unit. One of our infrequent rain showers caused a rock slide across the road, preventing access to that remote part of the hatchery.
- Dan Ragen picked up the repaired fish tank for the Williams Creek Unit's fish distribution truck (FDU). The manufacturer paid for half of the total repair costs. The remainder of the repair bill was charged to the FDU charge card. As an added bonus, the rear bumper was removed and reinstalled about 6" higher. The lower bumper tended to hang up or catch on the ground when traversing uneven terrain.
- Hiring waivers were submitted for skilled laborers and the administrative technician position. The laborers will assist with the Pond 3 modification project; the administrative technician position has been vacant since October 2012.

FACILITY MAINTENANCE:

- The remodel on Quarters 5 is complete and volunteer Sharkey Amos and his family has relocated from Quarters 4 to Quarters 5. Demolition of Quarters 4 is slated to begin in early April.

LEADERSHIP IN SCIENCE AND TECHNOLOGY:

- The Alchesay Unit staff received training on the newly installed radial flow settlers. The training included how to adjust the valves to control water flows.
- A liquid oxygen system is being installed at the Williams Creek Unit. This system is much more efficient and reliable than the oxygen generator that was previously in use. The generator will be maintained as backup to the liquid oxygen system.



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April 2014

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ALCHESAY UNIT

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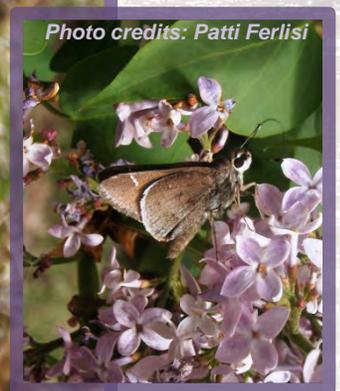


Photo credits: Patti Ferlisi

The Alchesay Diner’s lilac bushes provide lunch to a plethora of visitors

PARTNERSHIP AND ACCOUNTABILITY:

- All requisite water sampling for EPA was completed for both units.
- Alchesay-Williams Creek personnel participated in the monthly Fisheries Coordination meeting between AZFWCO (Arizona Fish and Wildlife Conservation Office) and WMAT-WORD (White Mountain Apache Tribe – Wildlife and Outdoor Recreation Division).
- Both the Alchesay and Williams Creek Units received their annual fish health inspection by personnel from the Southwest Native Aquatic Resources and Recovery Center in Dexter, NM. Jason Woodland, Dave Hampton and Ashlie Rademacher conducted the inspection at Williams Creek Unit on April 1, 2014, *right*. The inspection at the Alchesay Unit was conducted by Teresa Lewis and Marlene Rodarte on April 15, 2014. Both units received “A” classification ratings (no reportable pathogens).
- The Williams Creek Unit received 81,000 rainbow trout eggs from White Sulphur Springs National Fish Hatchery in White Sulphur Springs, WV.
- The Complex received a request from Eastern Arizona College for assistance with a project defining populations of porcupines in the state of Arizona. The request included forms to document any sightings and encompasses behaviors, feeding habits, shelter structures and movements. While hiking Mt. Baldy in the Apache-Sitgreaves National Forest, Dan Ragen encountered two of the creatures on the trail. After a brief stand-off to determine who was “sharpest”, they wandered off to shelter under a large downed tree, and Dan continued on his way.
- Should it become necessary, Alchesay Unit’s Pond 5 and Williams Creek Unit’s Pond 3 will be made available to serve as “dipping ponds” to assist in wildland firefighting efforts during the 2014 fire season. There are a number of environmental concerns regarding indiscriminate dipping such as lake drawdowns, inadvertent sportfish species transfer, habitat degradation, invasive species introduction, and potential disease pathogen introduction/transfer. Both hatchery ponds will be empty of production fish, filled with excess running water from the facilities and pose no safety concerns (trees or power lines in the immediate vicinity) for medium helicopter access. Having suitable water available for firefighting efforts during these extreme drought conditions is paramount.
- The water temperatures continue to rise and water flows continue to decrease as the season progresses. Efforts continue to reduce the numbers of fish held at both stations.



AQUATIC SPECIES CONSERVATION AND MANAGEMENT:

- Hatchery personnel drove 6,971 miles in 36 trips to deliver 34,416 brook trout at 1 inch in length; 43,189 rainbow trout at 5 inches in length; 120,382 rainbow trout at 6 to 9 inches in length; and 66,616 Apache trout at 9 to 17 inches in length. These fish were stocked in the waters of seven separate reservations including 22 different recreation areas on the Fort Apache Indian Reservation (FAIR). Stocking trips continue to be consolidated whenever possible. Early fish transfers from the Williams Creek Unit to the Alchesay Unit consisted of 50,000 3.5 inch rainbow trout fingerling.

A savings of approximately \$800 was recognized by reducing the number of distribution trips to one of our New Mexico tribal partners while still meeting our stocking obligations. Nice job, Gene! Thank you to the entire staff as well, for transporting a total of 314,666 fish in a very short time.

- Excess Apache trout broodstock were stocked into WMAT's Christmas Tree Lake for their upcoming fish camp, *right*.
- A local veterinarian was contacted to prescribe Aquaflor for treating bacterial coldwater disease in the Apache trout fry at the Williams Creek Unit. A prescription is required by feed companies for the manufacture of specialized medicated feed.
- Gene Okamoto and Joyner George seine Pond 4 at the Alchesay Unit as Pete Drevnick stands by to record the data, *below left*. The fish are being transferred from the pond to raceways due to deteriorating water quality in the pond.
- Some of the crew at the Williams Creek Unit seining Pond 4, *below right*. These fish are slated for stocking into waters on the Fort Apache Indian Reservation.



- Bruce Thompson and Gene Okamoto joined Jess Newton and Jeremy Voeltz of AZFWCO, Steve Spangle of Ecological Services, and Cynthia Dale and Cheryl Pailzote of WMAT for a tour of Arizona Game and Fish Department's Bubbling Ponds Native Fish Facility. This hatchery has a very advanced loach minnow propagation program and the tour was intended as research for a possible loach minnow propagation program at the Alchesay Unit. We would like to thank our host, Matt O'Neill, for his hospitality in sharing his wealth of knowledge regarding propagation of this species. Thanks, Matt!
- The Alchesay Unit's WMAT Animal Caretaker, Joyner George, averted a catastrophic loss when he noticed the fish in Pond 2 were stressing because there was no incoming water during raceway loading of hatchery trucks. He quickly refilled two raceways which in turn restored water flow, and the oxygen level, to the pond. The fish recovered and there were no mortalities. Great job, Joyner!!

PUBLIC USE AND OUTREACH:

- A total of 193 people visited the Williams Creek Unit in April and approximately 412 people visited the Alchesay Unit.
- Two classes of approximately 100 Head Start students visited the Alchesay Unit on April 16, 2014, for a bit of pre-Easter egg hunting. In addition to egg hunting, the students toured the hatchery and enjoyed lunch at the adjacent park. Thank you, Patti, for showing these students around!
- Mike Figueroa guided a tour of the Williams Creek Unit for 60 students from Cibique Elementary School on April 3, 2014.
- On April 14, 2014, four guided tours were given to Whiteriver Elementary's 3rd grade class.
- Whiteriver Elementary School's 5th grade class visited the hatchery on April 24, 2014. Jimmy Smith provided a guided tour to the 20 students and three teachers.



WORKFORCE MANAGEMENT:

- Andy Quay continues to provide valuable volunteer hours to the Alchesay Unit. He provided 133 hours (valued at almost \$3,000) this month performing fish culture duties as well as building and grounds maintenance.
- Pete Drevnick and Dan Ragen performed routine maintenance and repairs on several vehicles this month. The vehicles are getting a good work out as they are constantly on the road. Stocking trips are being performed “non-stop” in an effort to reduce the number of fish on station before water quality issues force our hand.
- Jennifer Johnson, Fish Biologist with AZFWCO, loaned her electroshocking skills to the Williams Creek Unit so that “escaped” rainbow trout could be collected, *right*. Typically, these fish have can achieve a rather large size and are stocked out as incentive fish.



FACILITY MAINTENANCE:

- So-long, Quarters 4! The building was scheduled for demolition, and has been completely razed.



LEADERSHIP IN SCIENCE AND TECHNOLOGY:

- Work continues on the installation of a liquid oxygen system at the Williams Creek Unit. Concrete was poured for the parking pad. Pete Drevnick and Dan Ragen screed the concrete, *below left*. The tank is set, *below right*. This system is much more efficient and reliable than the oxygen generator that was previously in use. The generator will be maintained as backup to the liquid oxygen system.





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Isaiah Paxson – Animal Caretaker
Clayton Lupe – K-INBRE Summer Intern*

General store and fishing pier at Hawley Lake on Fort Apache Indian Reservation



Photo credit: Jefferson Cody

PARTNERSHIP AND ACCOUNTABILITY:

- All requisite water sampling for EPA was completed for both units.
- Alchesay-Williams Creek hosted the monthly Fisheries Coordination meeting between AZFWCO (Arizona Fish and Wildlife Conservation Office) and WMAT-WORD (White Mountain Apache Tribe – Wildlife and Outdoor Recreation Division).
- Jennifer Johnson, Collateral Duty Safety Office for AZFWCO, completed the annual safety inspection at both units. There were 10 safety hazards listed as needing an abatement plan of corrective actions. The majority of these centered around training needs and safety plan development.
- The Bureau of Indian Affairs, Fort Apache Agency, implemented modified Stage 2 Fire Restrictions on the Fort Apache Indian Reservation (FAIR) effective May 23, 2014. The restrictions are in place until further notice and specifically prohibit campfires or charcoal devices between the hours of 7:00am to 7:00pm (no fires at all during red flag conditions); smoking except inside a vehicle or building; operating an internal combustion engine other than a motor vehicle in forest and woodland areas; and welding or operating an acetylene torch or other open flame in forest and woodland areas. Other industrial restrictions are also in place.
- Fire safety, precautions and alternate evacuation routes and procedures have been discussed at each unit should a wildland fire impede normal exit route(s). Other safety topics discussed at the Williams Creek Unit are rattlesnakes and indigenous poisonous plants.
- As mentioned last month, Alchesay Unit's Pond 5 and Williams Creek Unit's Pond 3 have been made available to serve as "dipping ponds" to assist in wildland firefighting efforts during the 2014 fire season should it become necessary. In preparation, Jeff Cody, Pete Drevnick and Andy Quay dismantled the bird wires from Alchesay's Pond 5 and the pond was then filled with water. Williams Creek Unit's Pond 3 is readily accessible as it is not utilized for fish production.
- Dan Ragen provided a tour of the Williams Creek Unit to five members of the White Mountain Apache Tribe's Hydrology Department. Hydrologist Cheryl Pailzote and four coworkers were shown the domestic water service including the well, pumps and storage tank.

AQUATIC SPECIES CONSERVATION AND MANAGEMENT:

- Hatchery personnel drove 4,241 miles in 28 trips to deliver 67,055 rainbow trout at 8 to 9 inches in length; 24,054 rainbow trout at 6 inches in length; and 7,742 Apache trout at 8 to 17 inches in length. These fish were stocked in the waters of eight separate tribal reservations including 26 different recreation areas on the FAIR. Stocking trips continue to be consolidated whenever possible.

Fish transfers from the Williams Creek Unit to the Alchesay Unit consisted of 123,605 4 to 6 inch rainbow trout fingerling.

As one of several changes made to the stocking program this year, a greater number of incentive Apache trout were stocked into rivers/streams on the FAIR, *right*. This was incorporated as a means to “make fishing better” before the drought conditions restrict/disallow mid-summer stocking operations.



- The newly constructed A-Bank awning has significantly improved hatchery production. Brown trout growth while under cover in A-bank has averaged 0.70” to 0.75” per month since they were transferred to this facility in late April. Previously recorded growth rates for this species in uncovered raceways averaged less than 0.50” per month. These brown trout should be ready to stock by early August depending on receiving water conditions.
- It seems the drought conditions are having an adverse effect on some of the wildlife around both units. Great Blue Herons are becoming uncharacteristically bold at the Alchesay Unit.



Netting was installed on the gable ends of the A-bank raceway cover, *left*. The previously installed monofilament lines were proving to be no match against the voracious birds. The birds are also getting into E- and F-bank raceways at the Williams Creek Unit.

Raccoons are also finding their way into some of the raceways at the Williams Creek Unit. The cover over C-Bank raceways, which hold the Apache trout broodstock, continues to exclude predators.

A bear wreaked havoc on the trash bin at the Alchesay Unit, completely demolishing one side of the cover. Staff spent quite a bit of time rounding up the trash that was strewn about after the nighttime raid. Natural forage is in short supply this year due to lack of moisture.

- The Williams Creek Unit experienced another outbreak of Bacterial Coldwater Disease in the Production Tankhouse. TM200 medicated feed will be mixed into the regular feed to treat this outbreak in the rainbow trout fry. The Apache trout fry have remained healthy after last month’s 10-day treatment with AquaFlor medicated feed.

PUBLIC USE AND OUTREACH:

- An Alchesay Head Start class (of approximately 75 students) enjoyed a picnic at the park adjacent to the Alchesay Unit, *right*.



- Approximately 140 graduating seniors from Alchesay High School's Class of 2014 also enjoyed their Senior Day picnic at the Alchesay Unit, *below*.



- Mike Figueroa conducted a tour of the Williams Creek Unit for 10 staff members of Indian Health Services.
- Mike also conducted a tour of the Williams Creek Unit for 28 students and 2 adults from Valley High School in Sanders, AZ, *right*.
- Total visitors to the Alchesay Unit were 452; the Williams Creek Unit received a total of 159 visitors.
- K-INBRE Scholar Award recipient, Clayton Lupe, began his summer internship at the Williams Creek Unit this month. Clayton has been assisting with a variety of hatchery duties, including loading fish, *right*. Along with working with native Apache trout, his area of interest is water quality/chemistry so he has also been measuring and recording data such as dissolved oxygen, temperature and total gas saturation.



WORKFORCE MANAGEMENT:

- Andy Quay continues to provide valuable volunteer hours to the Alchesay Unit. He provided 126.5 hours this month performing fish culture duties as well as building and grounds maintenance.
- The waiver request to hire five temporary intermittent laborers was approved. The positions were announced and interviews will begin early next month. These laborers will assist Pete Drevnick with the Pond 3 Modification project later this summer.

- Gene Okamoto, Collateral Duty Safety Officer for the Complex, completed the annual safety inspection at AZFWCO's Whiteriver office.
- Dan Ragen announced that he has accepted a position with Grand Canyon National Park. An exact departure date has yet to be determined. While we wish Dan all the best on his new adventure, he leaves some mighty big shoes to fill. The waiver request to fill his vacated wage grade Maintenance Worker position is being processed.

FACILITY MAINTENANCE:

- Pete Drevnick repaired a leak in the domestic water line to the Alchesay Unit's service buildings.

LEADERSHIP IN SCIENCE AND TECHNOLOGY:

- The new liquid oxygen system was completed at the Williams Creek Unit. This new system will replace the labor-intensive oxygen generator, which will become the backup system. Highlights of the process are pictured *below*.





ALCHESAY-WILLIAMS CREEK NATIONAL FISH HATCHERY COMPLEX WHITERIVER, ARIZONA



MONTHLY ACCOMPLISHMENT REPORT

JUNE 2014

*Bruce Thompson – Complex Manager
Patti Ferlisi – Office Assistant*

ALCHESAY UNIT

*Gene Okamoto – Unit Leader
Pete Drevnick – Maintenance Worker/Motor Vehicle Operator
Jeff Cody – Motor Vehicle Operator
Joyner George – WMAT Fisheries
Andy Quay – Volunteer
Chadwick “Sharkey” Amos – Volunteer*

WILLIAMS CREEK UNIT

*Bradley Clarkson – Unit Leader
Russell Wood – Fish Biologist
Dan Ragen – Maintenance Specialist
Mike Figueroa – Motor Vehicle Operator
Jimmy Smith – Motor Vehicle Operator
Isaiah Paxson – Animal Caretaker
Clayton Lupe – K-INBRE Summer Intern
Kit Palmer – Youth Conservation Corps*

Our own Jimmy Smith and Isaiah Paxson enjoy the annual Bog Tank Kids Fishing Derby on the Fort Apache Indian Reservation

Three generations of the Smith family enjoyed the fishing derby. Jimmy, along with his wife and daughter, showed granddaughter, Kyla, some of the finer points of fishing, *right*. Jimmy participates in fishing tournaments against fishing guides and other experts so Kyla is very lucky she’s got such an experienced teacher!



Photo credit: Gene Okamoto



Isaiah proves he’s ambidextrous by showing his son, Caiokee, how to hold the rod and reel and take a quick snap with his camera phone at the same time, *left*.

PARTNERSHIP AND ACCOUNTABILITY:

- All requisite water sampling for EPA was completed for both units.
- Alchesay-Williams Creek personnel participated in the monthly Fisheries Coordination meeting between AZFWCO (Arizona Fish and Wildlife Conservation Office) and WMAT-WORD (White Mountain Apache Tribe – Wildlife and Outdoor Recreation Division).
- As a requisite part of his internship duties, Clayton Lupe, with assistance from Jimmy Smith, collected water quality data on some of the Fort Apache Indian Reservation (FAIR) waters.
- Russ Wood, Isaiah Paxson, Pete Drevnick and Joyner George attended CPR certification training provided by Jennifer Johnson of AZFWCO.

AQUATIC SPECIES CONSERVATION AND MANAGEMENT:

- Hatchery personnel drove 835 miles to deliver 2,000 Apache trout (8-17” in length) and 125,000 rainbow trout (averaging 5-6” in length) to ten different recreation areas on the FAIR. Five of these trips were classified as emergency stocking due to deteriorating water quality at the Alchesay Unit caused by the ongoing drought. The 6” rainbow trout are considered sub-catchable size and were stocked out as part of the September sub-catchable requests for the FAIR. Hopefully, traditional monsoon rains will arrive by the 4th of July. Meanwhile, fish health, flows and water quality are being closely monitored at both units.
- As noted above, the Complex continues to battle poor water quality, increased temperatures and decreased water flows. The Alchesay Unit lost approximately 15,000 rainbow trout due to these less than optimum water conditions. Losses would have been much greater if not for the quick actions of the entire Complex staff.

While a combination of problems is likely the culprit, salt treatment and medicated feed were initiated when it was determined that the fish were suffering from severe stress. Environmental internal and external bacteria were taking their toll on the fishes’ overtaxed immune system. Plywood covers were placed over portions of the raceways to provide the fish with shade and a place to “hide” in an effort to reduce stress levels, *above*. One radial flow settler was bypassed and raceway water levels were lowered to increase flows through all of the fish.





This all began on June 5th. On June 13th, a drawdown of Hawley Lake (for dam repairs), which is located upstream of the Alchesay Unit, increased water flow with a surge of very murky water. At that time the fish were not clearly visible and were once again “stressing out”. The silt and detritus eventually cleared up and the increased flows ended up being very beneficial. The photos above show the before drawdown, *above left*, and after drawdown, *above right*, water levels.

Currently, the 180,000 fish remaining at the Alchesay Unit are doing well.

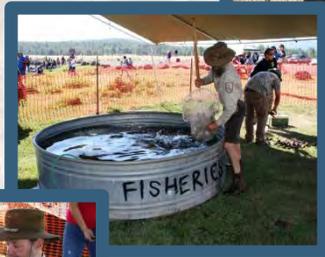
PUBLIC USE AND OUTREACH:

- Alchesay had approximately 450 visitors this month. This includes a reception hosted by the local college, Northland Pioneer College, and TERO (Tribal Employment Rights Office) for the graduating construction/carpentry class and their families (approximately 75 people), *below left*, and approximately 35 children and adults from the WMAT’s Summer Program. After the tour, the Summer Program children were treated to a wade in the river, *below right*.



- The Alchesay Unit provided 3,500 rainbow trout for the WMAT's annual Bog Tank Kids Fishing Derby. According to the local newspaper, the event drew a crowd of approximately 2,000 people.

Jeff Cody unloaded and Dan Ragen placed the fish in the troughs. Dan periodically checked water quality throughout the day, *near right*.



The derby is a colossal hit again this year and drew a big crowd, *right*.



- The Williams Creek Unit had approximately 435 visitors this month, including the San Carlos Apache Young Warriors Youth Group. Russ Wood provided the tour for this group of 27 youth and 19 counselors, *below*.



- Eleven members of the Arizona Conservation Corp spent two days volunteering at the Williams Creek Unit. These young men and women provided invaluable assistance with nature trail maintenance, perimeter fence mending/repair and general grounds maintenance.



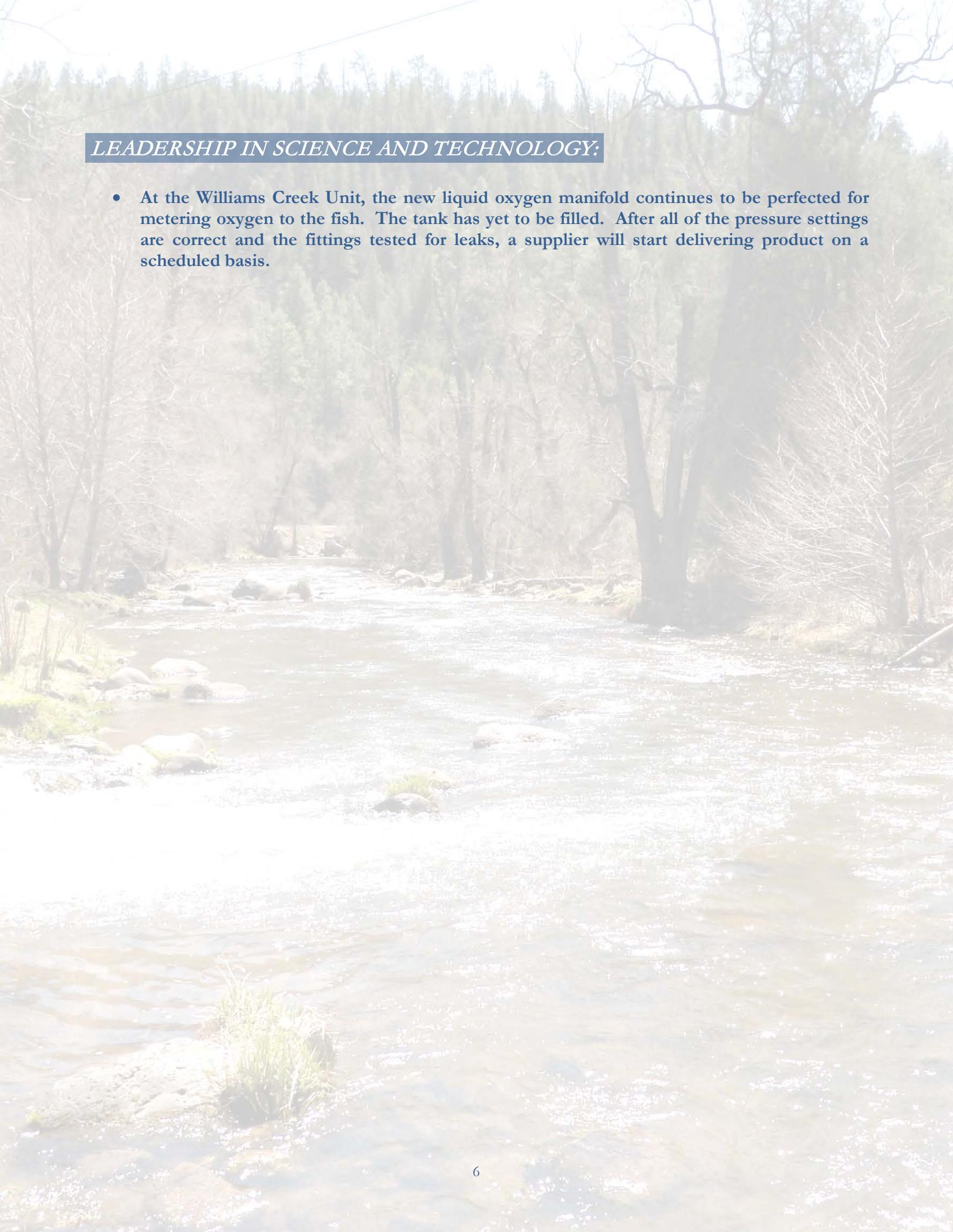
WORKFORCE MANAGEMENT:

- Kit Palmer joined the Williams Creek Unit on June 2 as part of the Service's YCC (Youth Conservation Corps) program. Kit got right to work assisting with loading fish for distribution, *right*.
- Andy Quay continues to provide valuable volunteer hours to the Alchesay Unit. He provided 126.5 hours this month performing fish culture duties as well as building and grounds maintenance.



- Dan Ragen, *below in center*, after almost ten years of dedicated service to the hatchery Complex, left us for his new position with Grand Canyon National Park. At his request, just a simple send-off luncheon was given in his honor. Dan will be sorely missed but we wish him all the best in his new assignment.





LEADERSHIP IN SCIENCE AND TECHNOLOGY:

- At the Williams Creek Unit, the new liquid oxygen manifold continues to be perfected for metering oxygen to the fish. The tank has yet to be filled. After all of the pressure settings are correct and the fittings tested for leaks, a supplier will start delivering product on a scheduled basis.



ALCHESAY-WILLIAMS CREEK NATIONAL FISH HATCHERY COMPLEX WHITERIVER, ARIZONA



MONTHLY ACCOMPLISHMENT REPORT

July 2014

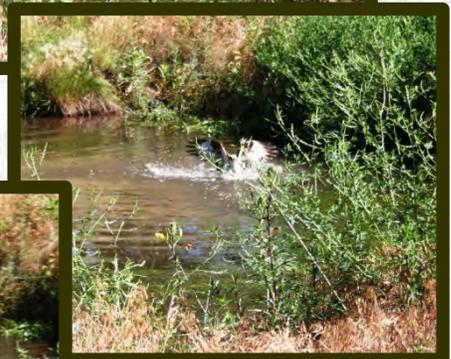
*Bruce Thompson – Complex Manager
Patti Ferlisi – Office Assistant*

ALCHESAY UNIT

*Gene Okamoto – Unit Leader
Pete Drevnick – Maintenance Worker/Motor Vehicle Operator
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WILLIAMS CREEK UNIT

*Bradley Clarkson – Unit Leader
Russell Wood – Fish Biologist
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Jimmy Smith – Motor Vehicle Operator
Isaiah Paxson – Animal Caretaker
Clayton Lupe – K-INBRE Summer Intern
Kit Palmer – Youth Conservation Corps*



**An osprey makes
off with lunch at the
Alchesay Unit**

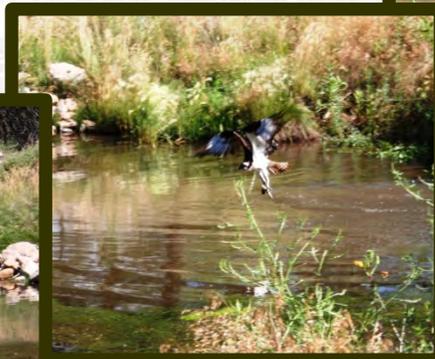


Photo sequence credit: Gene Okamoto

PARTNERSHIP AND ACCOUNTABILITY:

- All requisite water sampling for EPA was completed for both units.
- Alchesay-Williams Creek personnel participated in the monthly Fisheries Coordination meeting between AZFWCO (Arizona Fish and Wildlife Conservation Office) and WMAT-WORD (White Mountain Apache Tribe – Wildlife and Outdoor Recreation Division).
- Bruce Thompson provided a tour of the Alchesay Unit to personnel from Salt River Project (SRP) and WMAT's Hydrology Department. The discussion centered on recent and ongoing hatchery improvements. The Coanda weir design was of particular interest and the group consensus was the visit was very educational.
- Pete Drevnick provided a tour of both units' domestic water chlorination system to a representative of RCAC. Discussion turned to finding a safer and lower maintenance alternative for drinking water disinfection than the chlorine gas currently being used.

AQUATIC SPECIES CONSERVATION AND MANAGEMENT:

- Hatchery personnel drove 2,030 miles to deliver trout to the Jicarilla Apache and White Mountain Apache Tribes. A total of 56,266 rainbow trout (averaging 5" length), 28,200 brown trout (averaging 5" length) and 6,433 Apache trout (averaging 8.6" length) were released this month. Twelve different recreation areas on the Fort Apache Indian Reservation (FAIR) were stocked. Stocking was extremely curtailed due to poor water quality on most of the waters originally scheduled to receive fish in July. Poor hatchery rearing conditions necessitated early stocking; the rainbow and brown trout releases were fish that were originally scheduled for September distributions. Stocking trips continue to be consolidated whenever possible. Kit Palmer stocks Apache trout, *above right*.
- Chris Kitcheyan, Fish Biologist with the New Mexico Fish and Wildlife Conservation Office, visited the Alchesay Unit to discuss the feasibility of a propagation program for the newly listed Zuni bluehead sucker. The Zuni bluehead sucker – a small, slender, torpedo-shaped fish – is endemic to the headwaters of the Little Colorado River and the Zuni River watersheds in east-central Arizona and west-central New Mexico. The Zuni bluehead sucker is in decline due to the combined effects of the following factors: habitat destruction, modification, and degradation resulting from water withdrawal (stream drying); sedimentation; impoundments; livestock grazing; spread of non-native species; and predation by non-native species such as the green sunfish, northern crayfish and red swamp crayfish. The idea of artificial propagation of this unique species is in its infancy and could be explored further should it be deemed warranted in the future.



PUBLIC USE AND OUTREACH:

- The Alchesay Unit had approximately 243 visitors and the Williams Creek Unit had over 450 visitors.
- Gene Okamoto provided a tour of the Alchesay Unit to a group of five high school age students and their counselor from Apache Behavioral Health Services. These students, most living just down the road from the hatchery, have not had the opportunity to experience any of the great outdoors. They appeared to enjoy their time outdoors and were engaged in the discussions as evidenced by the many questions. *At right*, the debate is which is the largest fish in the raceway.
- Bradley Clarkson and Jimmy Smith teamed up to provide a unique tour of the Williams Creek Unit. Grandparents Pete and Chris Lumianski bring their grandchildren to Greer each summer for their own special outdoor experience, which they call Camp Loomie-Goomie. The week-long camp included such activities as wacky science games, building racing boats and hiking/touring local landmarks. Bradley shared some Apache historical facts with the happy campers, *below*, and Jimmy provided a tour of the facility. Goodie bags were provided for the kids, courtesy of Jennifer Johnson of AZFWCO. A great time was had by all!



- Bradley Clarkson gave a presentation about the various careers available with the US Fish and Wildlife Service to members of the White Mountain Youth Corp, *right*.



WORKFORCE MANAGEMENT:

- Andy Quay continues to provide valuable volunteer hours to the Alchesay Unit. He provided 143 hours this month performing fish culture duties as well as building and grounds maintenance.
- Clayton Lupe and Kit Palmer both finished up their summer internships with the Complex this month. Both of these young men were a huge asset to the Williams Creek Unit. Their hard work and dedication is greatly appreciated and both will be sorely missed!
- All staff has completed mandatory Federal Information Systems Security Awareness + Privacy and Records Management training.

FACILITY MAINTENANCE:

- Pete Drevnick, along with volunteer Travis Taylor, began Alchesay's Pond 3 Modification project by excavating materials, digging trenches, removing rocks and reshaping the sides of the pond, *below*.



TIDBITS:





ALCHESAY-WILLIAMS CREEK NATIONAL FISH HATCHERY COMPLEX WHITERIVER, ARIZONA



MONTHLY ACCOMPLISHMENT REPORT

August 2014

*Bruce Thompson – Complex Manager
Patti Ferlisi – Office Assistant*

ALCHESAY UNIT

*Gene Okamoto – Unit Leader
Pete Drevnick – Maintenance Worker/Motor Vehicle Operator
Jeff Cody – Motor Vehicle Operator
Joyner George – WMAT Fisheries
Andy Quay – Volunteer
Chadwick “Sharkey” Amos – Volunteer
Travis Taylor – Laborer*

WILLIAMS CREEK UNIT

*Bradley Clarkson – Unit Leader
Russell Wood – Fish Biologist
Dan Ragen – Maintenance Specialist
Mike Figueroa – Motor Vehicle Operator
Jimmy Smith – Motor Vehicle Operator
Isaiah Paxson – Animal Caretaker
Mary Zyló – Volunteer
Carol Walker – Volunteer*

Mrs. Belted Kingfisher takes a break from fishing at the Alchesay Unit



Photo credit Gene Okamoto

PARTNERSHIP AND ACCOUNTABILITY:

- All requisite water sampling for EPA was completed for both units.
- Alchesay-Williams Creek personnel hosted the monthly Fisheries Coordination meeting between AZFWCO (Arizona Fish and Wildlife Conservation Office) and WMAT-WORD (White Mountain Apache Tribe – Wildlife and Outdoor Recreation Division).
- Bruce Thompson provided a tour of the Williams Creek Unit to personnel from Salt River Project (SRP) and WMAT’s Hydrology Department.

AQUATIC SPECIES CONSERVATION AND MANAGEMENT:

- Hatchery personnel drove 1,012 miles to deliver 7,139 rainbow trout (~5” length); 2,935 rainbow trout (~9” length); 9,738 brown trout (~5” length); and 11,167 Apache trout (~9” length) to 16 different recreation areas on the Fort Apache Indian Reservation (FAIR). Stocking trips continue to be consolidated whenever possible.
- Both units continue to experience poor water quality. Runoff from the much needed monsoon rains are causing very muddy water at the Alchesay Unit. Along with causing muddy waters, the runoff washed away a portion of the road leading to the spring and flooded the feed storage room. While adjustments have been made to the incoming flows, the rainbow trout remain stressed and salt is being used to treat parasites. Approximately 4,600 rainbow trout were lost in a six- to eight-day span.

With low flows at the Williams Creek Unit, the dissolved oxygen level in lower Pond 4 fell drastically overnight, resulting in the loss of approximately 2,000 rainbow trout. Apache trout are being fed with medicated feed in an effort to combat coldwater disease.

- Russ Wood participated in a Zuni bluehead sucker sampling trip to the box canyon area of Rio Nutria on lands owned by The Nature Conservancy. Participants included representatives from Zuni Fish and Wildlife Department, New Mexico Department of Game and Fish, Cibola National Forest and US Fish and Wildlife Service (Ecological Services and New Mexico Fish and Wildlife Conservation Office). Young of year to mature adults were sampled.



- The Williams Creek Unit assisted AZFWCO with channel catfish stocking on the FAIR. Jimmy Smith met the large Regional Distribution Unit (from Inks Dam National Fish Hatchery in Burnet, Texas) at the San Carlos Recreation and Wildlife Department. The catfish were offloaded into our smaller truck and transported to the FAIR where some were offloaded again to WORD personnel for stocking. Jimmy stocked the remainder of the catfish into FAIR waters.
- The Williams Creek Unit received almost 348,000 rainbow trout eggs from Erwin National Fish Hatchery in Erwin, TN. These eggs represent the beginnings of next year's stocking commitments.

PUBLIC USE AND OUTREACH:

- The Williams Creek Unit provided two large Apache trout for AZFWCO's booth at the 9th annual Woodland Wildlife and Science Festival. This event attracts visitors from all over the state and is well-attended every year.
- The Williams Creek Unit received almost 200 two- and four-legged visitors this month. The Alchesay Unit received 125 visitors.

WORKFORCE MANAGEMENT:

- Andy Quay continues to provide valuable volunteer hours to the Alchesay Unit. He provided 149 hours this month performing fish culture duties, *right*, as well as building and grounds maintenance.
- The Williams Creek Unit welcomed two new volunteers, Mary Zylo and Carol Walker. Mary is assisting with grounds maintenance and Carol has been "shadowing" Mike Figueroa to learn the basics of fish culture. We greatly appreciate the assistance these ladies are providing.



- Pete Drevnick and Travis Taylor continue to make progress on the Pond 3 Modification project. Removing rock from the excavated earth is accomplished using a rock bucket. When the dirt is scooped, the rocks remain in the bucket while the smaller particles fall through the tines, *below left*. The effluent drain line has been installed, *below right*. The water control structure has been formed, *bottom*; concrete will be poured as weather permits.



- Bruce Thompson, Gene Okamoto and Bradley Clarkson continue to work on mandatory supervisory training including EEO and Diversity.
- Interviews were conducted and an applicant selected for the Administrative Technician position. We anticipate a mid-September start date.

LEADERSHIP IN SCIENCE AND TECHNOLOGY:

- Finding a supplier for the Williams Creek Unit's liquid oxygen system continues to be easier said than done. Bruce Thompson and Pete Drevnick met with the representative of another supplier and logistics and details are being ironed out.



ALCHESAY-WILLIAMS CREEK NATIONAL FISH HATCHERY COMPLEX WHITERIVER, ARIZONA



MONTHLY ACCOMPLISHMENT REPORT September 2014

*Bruce Thompson – Complex Manager
Carrie Gregory – Administrative Technician*

ALCHESAY UNIT

*Gene Okamoto – Unit Leader
Pete Drevnick – Maintenance Worker/Motor Vehicle Operator
Jeff Cody – Motor Vehicle Operator
Joyner George – WMAT Fisheries
Andy Quay – Volunteer
Chadwick “Sharkey” Amos – Volunteer
Travis Taylor – Laborer*

WILLIAMS CREEK UNIT

*Bradley Clarkson – Unit Leader
Russell Wood – Fish Biologist
Vacant – Maintenance Specialist
Mike Figueroa – Motor Vehicle Operator
Jimmy Smith – Motor Vehicle Operator
Isaiah Paxson – Animal Caretaker
Mary Zyllo – Volunteer
Carol Walker – Volunteer*



A celebration honoring Anderson Quay, who served his last day at Alchesay National Fish Hatchery this month after volunteering more than 20,000 hours over twelve years.

PARTNERSHIP AND ACCOUNTABILITY:

- All requisite water sampling for EPA was completed for both units.
- The monthly Fisheries Coordination meeting between AZFWCO (Arizona Fish and Wildlife Conservation Office) and WMAT-WORD (White Mountain Apache Tribe – Wildlife and Outdoor Recreation Division) was cancelled this month. Several key participants were unable to attend due to scheduling conflicts or illness.
- A conference call was conducted with Chris Kitcheyan of New Mexico Fish and Wildlife Conservation Office to discuss specifics of this fall's stocking requests for the New Mexico tribes. Change orders will be forthcoming.

AQUATIC SPECIES CONSERVATION AND MANAGEMENT:

- Hatchery personnel drove 1,058 miles to deliver 67,000 rainbow trout (6" length) to the White Mountain Apache Tribe and 9,700 brown trout (6" length) to the San Carlos Apache Tribe. In addition, almost 14,000 six inch rainbow trout were transferred from the Williams Creek facility to the Alchessay facility in an effort to reduce overcrowding due to declining flows at Williams Creek. Flows dropped about 150 gallons per minute from the end of August through the month of September.
- Both units continue to battle poor water quality conditions such as muddy runoff, low flows and low dissolved oxygen levels. The Williams Creek facility had the second lowest water flows in the hatchery's history during the month of September and the trend seems likely to continue. These conditions necessitated locating appropriate waters to receive emergency stockings.
- The Williams Creek Unit took delivery of the new Dodge Ram 4500 4x4 truck that was ordered in October 2013. It will be retrofitted with one to two 250 gallon tanks temporarily mounted on the flat bed and will be dual purposed as a fish distribution unit and a flatbed truck with stake sides for hauling large loads.



New truck is delivered to Williams Creek



Engine of the Williams Creek's new Dodge Ram 4500 4x4 truck

- The Williams Creek Unit received a shipment of 65,586 rainbow trout eggs from Erwin National Fish Hatchery in Erwin, TN. This smaller second shipment of eggs will be transferred to Alchesay in April to fulfill fall 2015 catchable trout requests.
- Preparations for this season's spawning activities began with the separation of the two-year-old male and female broodstock. Apache trout spawn-taking will commence in December 2014.

PUBLIC USE AND OUTREACH:

- Of the 41 visitors to the Alchesay Unit this month, approximately 30 were Whiteriver Social Services employees and their families, who enjoyed their annual bar-be-que at the adjacent park.
- The Williams Creek Unit received 85 visitors this month. Eleven students and 3 teachers from Orme School in Mayer, Arizona, were given a tour of the hatchery by Russ Wood.

WORKFORCE MANAGEMENT:

- Andy Quay's valuable contributions to the Alchesay Unit came to an end this month. A luncheon was given in Andy's honor on September 25th. After volunteering over 20,000 hours Andy will be sorely missed, but we wish him all the best. We might even be lucky enough to have Andy occasionally volunteer his services again!
- Pete Drevnick and Travis Taylor continue with Pond 3 modifications. The concrete was poured for the water control structure, a 10" gate valve was installed at the inflow control box and installation began on the sheet pile walls.



Left: Effluent control structure taking shape for concrete pour. Above: Securing sheet pile together with support beams

- Mary Zyló provided 36 volunteer hours at the Williams Creek Unit, where she assisted with routine office paperwork and fish culture duties. Carol Walker provided 130 volunteer hours at the Williams Creek Unit, assisting with fish culture duties, as well as building and grounds maintenance.

- Bruce Thompson, Gene Okamoto and Bradley Clarkson completed mandatory supervisory training including EEO and Diversity.
- All staff have completed mandatory defensive driving training.
- Bruce Thompson attended a meeting in Albuquerque of all regional project leaders and Regional Office Fisheries' staff. The meeting was very informative and it was a good opportunity to meet new fisheries leaders and renew old acquaintances. New business discussed included developing annual work plans for each field station based on the new draft "FAC Strategic Plan" to document program accountability.
- Carrie Gregory joined us on September 15th as the new Administrative Technician for the Complex. We are very excited to have Carrie join us!

LEADERSHIP IN SCIENCE AND TECHNOLOGY:

- Air Products has been selected as the supplier for the Williams Creek Unit's liquid oxygen system. The first delivery was on September 11, 2014. With a few "start-up" glitches ironed out, the system appears to be working as intended. This system will reduce increasing maintenance costs inherent in the 10 year old oxygen generation system previously utilized. The oxygen generation blowers will be utilized for emergency back-up as long as the dated equipment is operational.



Above: Liquid Oxygen is delivered to Williams Creek



ALCHESAY-WILLIAMS CREEK NATIONAL FISH HATCHERY COMPLEX WHITERIVER, ARIZONA



MONTHLY ACCOMPLISHMENT REPORT

October 2014

*Bruce Thompson – Complex Manager
Carrie Gregory – Administrative Technician*

ALCHESAY UNIT

*Gene Okamoto – Unit Leader
Pete Drevnick – Maintenance Worker/Motor Vehicle Operator
Jeff Cody – Motor Vehicle Operator
Joyner George – WMAT Fisheries
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Isaiah Paxson – Animal Caretaker
Mary Zyllo – Volunteer
Carol Walker – Volunteer*



Ms. Whitetail Deer and fawn visit the Williams Creek Unit

Photo credit: Russ Wood

PARTNERSHIP AND ACCOUNTABILITY:

- All requisite water sampling for the EPA was completed for both units.
- Alchesay-Williams Creek personnel participated in the monthly Fisheries Coordination meeting between AZFWCO (Arizona Fish and Wildlife Conservation Office) and WMAT-WORD (White Mountain Apache Tribe – Wildlife and Outdoor Recreation Division).
- The Alchesay Unit was under Level 2 Emergency Action Plan evacuation status due to a potential breach of the dam at Hawley Lake. Level 2 indicates the conditions at the dam could rapidly escalate into potentially large flow releases or potential dam failure. In addition to ensuring all personnel were informed of evacuation protocols, precautions were taken regarding the hatchery grounds. Measurements of the elevation at strategic points around the hatchery grounds, including ponds and raceways, were taken to determine how/if each site would be affected.

The conditions at the dam necessitated an emergency 100% drawdown of Hawley Lake via three 8,000 gallon-per-minute pumps. On October 8, 2014, Bruce Thompson attended the White Mountain Apache Tribal Council meeting to voice concerns about the possible impacts to hatchery operations. The following week, Richard DiValentino and Waylon Truax of WMAT's Department of Lands visited the Alchesay Unit to witness first-hand, and discuss concerns with, the turbidity levels. The Complex's operational needs and the economic value of our fish to both Tribal and local economies was also discussed. Many meaningful dialogues continue between all entities involved in the Davis Dam Emergency Repair project. Currently, despite intermittent high turbidity levels, overall fish health remains good. Let's hope that trend continues.

Below, the North Fork of the White River during the drawdown of Hawley Lake for dam repairs culminates in poor water quality at the Alchesay Unit. Scheduled fall transfers from the Williams Creek Unit to the Alchesay Unit grow-out station are being delayed due to these poor water quality conditions.



- The Complex provided assistance to WMAT-WORD with fish salvage at Hawley Lake. Over the course of several days, Joyner George and Jimmy Smith provided assistance using smaller fish distribution trucks to relocate the fish to tribal waters in close proximity to Hawley Lake. Over 10,000 trout were salvaged. A large number of these fish were trophy-size brown and rainbow trout.
- Lightning protection was installed at the fueling station at the Williams Creek Unit, *below*. Safety bollards were also installed around the fueling station pumps and an adjacent propane tank as part of the Safety Modification Project for the unit.



- The Alchesay Unit has taken first steps in a project that will include plantings to attract a wide variety of winged pollinators to the hatchery. The plants will be placed around and between the production ponds. As well as beautifying the grounds, the plants will provide food and shelter for the pollinating insects and birds.

AQUATIC SPECIES CONSERVATION AND MANAGEMENT:

- Hatchery personnel drove 2,112 miles to deliver 35,600 rainbow trout (~7" length) to San Carlos Apache, Jicarilla Apache, and Navajo Nation Tribal partners. In addition, 148,346 5" rainbow trout were transferred from the Williams Creek Unit to the Alchesay Unit during the first half of the month. As noted above, fish transfers have now been halted pending improvement in North Fork water quality due to the pumping operation at Davis Dam. There are currently approximately 160,000 rainbow trout at the Williams Creek Unit awaiting their move to the Alchesay Unit for further grow-out.
- As cooler weather sets in, the Williams Creek Unit has to be creative in their critter deterrent methods. Protective screens are being constructed to place over the raceways to prevent raccoons and great blue herons from feasting on the easily accessible fish. Bird spikes along the bottoms of fences were also incorporated in an effort to dissuade all avian and mammalian piscivorous predators.

- Preparations and logistical planning continue for this season's Apache trout spawning activities. Both male and female broodstock have been placed on enhanced feed. In the past, the enhanced feed has proven to be beneficial in boosting egg and milt production, as well as viability.

PUBLIC USE AND OUTREACH:

- The Williams Creek Unit received 128 visitors this month. Included were 32 visitors from The Meadows in Wickenburg, Arizona, and 12 visitors from the WMAT's Rainbow Treatment Center.
- The Alchesay Unit received 25 visitors this month. As the weather gets colder, fewer and fewer people come to visit the hatchery, hike the trails, utilize the picnic areas or pursue other recreational activities.

WORKFORCE MANAGEMENT:

- Williams Creek volunteer Mary Zylo managed to provide 11 hours of valuable assistance at the Williams Creek Unit despite her preparations to move to the Grand Canyon area. Mary's always-smiling face and positivity will surely be missed, but we wish her all the best in her new adventures.
- Carol Walker continues to provide valuable assistance at the Williams Creek Unit. She provided 133 hours this month with fish culture duties, as well as building and grounds maintenance. Carol measures and weighs fish feed, *below*.



- To ensure continued computer access to DOI systems and programs, all staff have completed the mandatory DOI "Smartcard"/PIV recertification process.
- Annual Employee Performance Appraisal Plans have been completed for each employee.

- Pete Drevnick and Travis Taylor prepared Alchesay's Pond 5 to receive transfer fish from the Williams Creek Unit. The fish waste from the pond bottom was removed and the sides were contoured to ease the removal of the fish at stocking time. Monofilament bird wire was also installed over the pond in an effort to deter avian predators.

LEADERSHIP IN SCIENCE AND TECHNOLOGY:

- Pete Drevnick and Travis Taylor continue with Pond 3 modifications. The water control structure and sheet pile walls are coming together, *below*. This project is over 85% complete.





ALCHESAY-WILLIAMS CREEK NATIONAL FISH HATCHERY COMPLEX WHITERIVER, ARIZONA



MONTHLY ACCOMPLISHMENT REPORT

November 2014

*Bruce Thompson – Complex Manager
Carrie Gregory – Administrative Technician*

ALCHESAY UNIT

*Gene Okamoto – Unit Leader
Pete Drevnick – Maintenance Worker/Motor Vehicle Operator
Jeff Cody – Motor Vehicle Operator
Joyner George – WMAT Fisheries
Chadwick “Sharkey” Amos – Volunteer
Travis Taylor – Laborer*

WILLIAMS CREEK UNIT

*Bradley Clarkson – Unit Leader
Russell Wood – Fish Biologist
Vacant – Maintenance Specialist
Mike Figueroa – Motor Vehicle Operator
Jimmy Smith – Motor Vehicle Operator
Isaiah Paxson – Animal Caretaker
Mary Zylo – Volunteer
Carol Walker – Volunteer*



ANFH: North Fork White River: Reduced flows at diversion dam.

PARTNERSHIP AND ACCOUNTABILITY:

- All requisite water sampling for the EPA was completed for both units.
- The Monthly Fisheries Coordination meeting between Alchesay-Williams Creek personnel, AZFWCO (Arizona Fish and Wildlife Conservation Office), and WMAT-WORD (White Mountain Apache Tribe – Wildlife and Outdoor Recreation Division) was cancelled due to Veteran’s Day event scheduling conflicts.
- The Level 2 Emergency Action Plan evacuation status in effect at Alchesay, due to a potential breach of Davis Dam at Hawley Lake, was downgraded to Level 1. Level 1 indicates that the public safety risk has been substantially reduced by the lowering of the lake. A Level 1 condition calls for continued monitoring of the dam. At this time the lake is completely drained and the pipe that threatened Davis Dam is being repaired. Water quality at Alchesay remained good throughout the drawdown, largely in part to the consideration and cooperation of the WMAT Water Resources Department. The conditions at the dam are no longer a threat to Alchesay.
- There has been zero precipitation during the month of November within the locality. On November 25th, unseasonably cold weather in the headwaters of the White River drainage led to the freeze-up of Alchesay’s water supply. Early that morning, after loading one of the fish transports from a B-bank raceway, staff noticed there was no flow to A-Bank. Fish were stressed, and many had died, or were in the process of oxygen starvation. Travis Taylor, Jeff Cody, Joyner George, and Gene Okamoto responded quickly, diverting all flows to A-bank as first run water. Later that morning it was determined that biomass reduction was also prudent as flows continued to remain at an extremely low level. Three A-bank raceways were immediately loaded into the 1800 gallon fish distribution truck and stocked into Horseshoe Lake as an emergency measure. Without this quick action, it is possible all 60,000 rainbow trout in A-Bank could have been lost. Due to an efficient teamwork response of all of the Alchesay staff, losses were minimal. It was later determined that all hatchery sustaining flows were coming from the severely depleted Alchesay Spring (below). The water temperature going into the facility was an unseasonable 50 degrees Fahrenheit (F). The river water temperature was 39.5 degrees F.



Alchesay Springs- Low flow, atypical for this time of year, impacted water flows to A-bank raceways.

AQUATIC SPECIES CONSERVATION AND MANAGEMENT:

- Fall fish transfers from the Williams Creek Unit to the Alchesay Unit occurred during the first half of the month. Fifty thousand rainbow trout remain at Williams Creek NFH and await transfer pending adequate water quality at Alchesay.
- Hatchery personnel drove 3,840 miles to deliver 32,160 rainbow trout (~8"-9" length) to Zuni, Pueblo, Ohkay Owingeh Pueblo, Santa Clara Pueblo, Navajo Nation, and Colorado River Indian Tribal (CRIT) partners. The Complex assisted Willow Beach NFH by providing 3,000 8-inch rainbow trout. These trout were offloaded onto a Willow Beach fish distribution truck in Flagstaff, Arizona where they were then transported to select waters of the CRIT. In addition, 23,801 5" rainbow trout were stocked into Horseshoe Lake on an emergency basis, due to the above mentioned low flows at the Alchesay Unit.
- The annual Apache trout spawning season at Williams Creek is "just around the corner". In late November, staff began sorting and stripping out any overripe eggs from 2 and 3 year old brood stock to prepare them for spawning.
- Williams Creek accepted and put into upwell incubators a delivery of 260,000 eyed rainbow trout eggs from Erwin NFH.

PUBLIC USE AND OUTREACH:

- The Williams Creek Unit received 31 visitors this month while the Alchesay Unit received only 9 visitors for the month. The holidays and cold weather have led to a reduction in visitation at both facilities.

WORKFORCE MANAGEMENT:

- Williams Creek volunteer Mary Zylo helped winterized Quarters 3 in early November.
- Carol Walker continues to provide valuable assistance at the Williams Creek Unit. She provided 138 hours this month with fish culture duties and building maintenance.
- Bruce Thompson traveled to Albuquerque to attend the Southwest Region Tribal Relations Meeting held in the Indian Pueblo Cultural Center. It was a very productive meeting.
- Carrie Gregory also travelled to Albuquerque to meet the personnel in the regional office and to train in FBMS, FPPS, Concur, and FIS.
- Annual fire extinguisher inspections were completed at both units.
- Due to the busy schedule, the selection deadline for filling the vacant Maintenance Worker position at Williams Creek was extended for another 30 days.

LEADERSHIP IN SCIENCE AND TECHNOLOGY:

- **Pete Drevnick and Travis Taylor continue with Pond 3 modifications. Tie rods were installed to support the pond wall. This project is over 85% complete.**



Tie rods in place and ready for concrete

UPCOMING EVENTS:

- **On December 17th personnel from the New Mexico Fish and Wildlife Conservation Office , members of the Zuni Bluehead Sucker Recovery team, and several various Tribal personnel will meet with Alchesay-Williams Creek employees to discuss the long-range feasibility and logistics of using the Alchesay unit to hold captive Zuni bluehead sucker populations.**



ALCHESAY-WILLIAMS CREEK NATIONAL FISH HATCHERY COMPLEX WHITERIVER, ARIZONA



MONTHLY ACCOMPLISHMENT REPORT

December 2014

*Bruce Thompson – Complex Manager
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ALCHESAY UNIT

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Jeff Cody – Motor Vehicle Operator
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Mike Figueroa – Motor Vehicle Operator
Jimmy Smith – Motor Vehicle Operator
Isaiah Paxson – Animal Caretaker
Carol Walker – Volunteer
Jonathon Walker – Volunteer*



PARTNERSHIP AND ACCOUNTABILITY:

- All requisite water sampling for the EPA was completed for both units.
- On December 17th the Alchesay unit hosted a meeting between members of New Mexico Game and Fish and the Navajo and Zuni tribes to discuss the use of the facility as a refuge for the Zuni Bluehead Sucker. This was a cursory meeting, that involved touring the grounds, and at this time there is no plan in place for the Zuni Bluehead Sucker to be reared at Alchesay.
- Due to the Holidays and conflicting schedules, there was no WMAT-WORD/USFWS Tribal Coordination meeting held during the month of December.

AQUATIC SPECIES CONSERVATION AND MANAGEMENT:

- Hatchery personnel drove 1,212 miles to deliver 12,650 rainbow trout (~8-9.5” length) to Pueblo and Navajo Nation Tribal partners. In addition, 60,978 6” rainbow trout were transferred from the Williams Creek unit to the Alchesay unit during the first half of the month.
- Apache trout spawning season at Williams Creek is in full force. In December eggs were taken from 650 three year old brood stock females and 75 two year old females. Approximately 650,000 eggs were fertilized and are in incubation in 62 vertical flow incubation trays. Both the male and female brood-stock were fed enhanced nutritional feed three months prior to spawntaking. The first lots are just now beginning to “eye up”. Eye-up survivals will be reported next month after additional lots have been shocked and picked.



Photo 1: APT females are anesthetized to reduce stress and allow handling to check for egg maturation and viability.



Photo 2: APT eggs are expressed from female fish into a bowl and shortly thereafter are fertilized with milt from 2 yr. old males.

- Ovarian fluid samples were taken from 150 Apache trout and shipped to Dexter, New Mexico where they will be evaluated for fish health pathogens.
- The Williams Creek unit received a shipment of 90,354 brown trout eggs from Saratoga National Fish Hatchery.

PUBLIC USE AND OUTREACH:

- The complex received 11 visitors this month. The holidays and cold weather have led to a reduction in visitors at both units.

WORKFORCE MANAGEMENT:

- Carol Walker continues to provide valuable assistance at the Williams Creek unit. She provided 138 hours this month with fish culture duties and building maintenance.
- Carol's son, Jonathon Walker, joined the volunteer workforce at Williams Creek in December and provided 108 hours toward outside fish culture duties and grounds maintenance. We are very happy to have Jonathon and Carol as a part of our team!



- All supervisors completed their annual supervisor safety training.
- Staff began conducting interviews for the maintenance worker position at the Williams Creek unit. A candidate has not been selected yet, but interviews will continue into January.
- The annual Christmas party was held on December 19th. Staff from both facilities and their families gathered at Williams Creek for an informal potluck and white elephant gift exchange.



LEADERSHIP IN SCIENCE AND TECHNOLOGY:

- **Pete Drevnick and Travis Taylor continue with Pond 3 modifications. During December concrete and rock were delivered and tie rods were secured to prevent shifting during concrete pouring. Unfortunately progress has been slow due to rain, snow, mud, cold, and other adverse weather conditions in the area.**



ANFH: Concrete truck ready to unload cement into trench to secure tie rods as deadheads to anchor panels.