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Mining Update:

TYRONE LAYOFFS ANNOUNCED; NM SUPREME COURT TO REVIEW COPPER RULE

by Allyson Siwik, Executive Director

Given weak prices for copper, gold, molybdenum, oil and gas, global mining giant Freeport-McMoRan announced at the end of August that it would cut production by 50% and lay off 210 employees at the Tyrone mine, part of a company-wide operating plan aimed at cutting capital spending and operating costs. As many as 100 employees could be rehired at Chino filling existing vacancies, while 88 are eligible for retirement, resulting in a net loss of 28 jobs.

Shares of Freeport stock have lost half their value this year given a \$20-billion debt burden and continuing low commodity prices. At press time, shares were trading at \$10-\$11 per share, down from \$38 per share a year ago and an all time high of \$62 per share in May 2008.

Re-opening of the **Cobre mine** is a major change in Freeport's 5-year capital spending plan in Grant County. The company will continue to move forward with permitting, however construction of the haul road to Chino and the associated bridge over Highway 152 will not be initiated until better economic conditions take hold.

Chino and Little Rock at the moment are the most profitable of Freeport's Grant County operations. Although the SX-EW plants at both

SEE MINING UPDATE ON P. 3

TAKE ACTION NOW!

FREEPORT-MCMORAN TO EXPAND LITTLE ROCK MINE— TELL MINING AND MINERALS DIVISION TO STRICTLY ENFORCE THE NEW MEXICO MINING ACT

Freeport-McMoRan Tyrone Operations has submitted an application to the state Mining and Minerals Division for a permit to expand the Little Rock mine and update the associated closure-closeout plan.

Located to the west of the Tyrone mine, Freeport is proposing to expand the existing Little Rock mine permit boundary by approximately 68 acres to account for the projected expansion of the open pit and associated disturbance areas outside the current permit boundary limits. At mine closure when dewatering concludes, a pit lake is expected to slowly form within the Little Rock Mine open pit. After approximately 80 years, the pit lake will cover approximately 42 acres and hold an estimated 5,290 acre-feet of water, nearly twice the amount of water that Silver City currently uses every year.

Freeport-McMoRan and the NM Mining and Minerals Division should explore partial backfill options that would avoid

SEE FREEPORT ON P. 5



(PHOTO BY JERRY MCBRIDE/DURANGO HERALD
VIA AP)

COLORADO'S GOLD KING MINE SPILL

*A tragic reminder of the need for
responsible cleanup of hardrock mines*

by Allyson Siwik, Executive Director

[A version of this article appeared in the Albuquerque Journal and Silver City Daily Press on Aug. 24, 2015]

We watched in horror and sadness the images of an orange, heavy metal-laden plume of mine wastewater flow down the Animas River from a recent accidental release at the inactive Gold King Mine in Colorado, impacting communities, farmers, wildlife, and recreation along the way. Our thoughts are with the people who were adversely affected, and those who are working around the clock to clean up and restore the watersheds contaminated by the accident.

What has slowly emerged through the media frenzy and blame game is that EPA was attempting to clean up the inactive Gold King Mine to stop the on-going release of contaminated water when a plug holding back rising groundwater burst. The Gold King Mine is just one of hundreds of thousands of abandoned mines in our country, mostly in the West. 15,000 abandoned mine features can be found here in New Mexico according to the state Abandoned Mine Lands program. These sites are the legacy of the federal 1872 Mining Law that to this day still allows hardrock mining companies free reign to mine anywhere on our public lands without paying any royalties on the minerals extracted and without any federal environmental requirements for operations and cleanup.

Because of the lack of environmental safeguards, mining companies historically walked away from their operations leaving a toxic mess behind. These abandoned mine lands continue to degrade surface and ground water quality, affect wildlife and

SEE GOLD KING ON P. 3



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Mission Statement

Recognizing that human and environmental systems are inseparable and interdependent, Gila Resources Information Project pursues two goals: to protect and nurture human communities by safeguarding the natural resources that sustain us all; and to safeguard natural resources by facilitating informed public participation in resource use decisions.

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To become a member and receive a copy of *Get A GRIP*, a minimum annual donation of \$20.00 is appreciated. (\$10 for students and low-income residents.) GRIP is a 501(c)(3), tax-exempt organization; your contribution is tax-deductible.

Other Sites:

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LANDSCAPE NEAR ONE OF THE PROPOSED GILA RIVER DIVERSION SITES. (GRIP PHOTO)

AWSA Update:

NM CAP Entity's Financial Capacity Called Into Question as Deadline Looms

Parties discuss supplemental terms to NM Unit Agreement

by Allyson Siwik, Executive Director

Given concerns over financing of the Gila diversion, the Bureau of Reclamation has requested that the NM Unit Agreement be amended to include "supplemental terms" to clarify legal and financial roles and responsibilities between the federal government and the NM CAP Entity for the planning, construction and operation of the NM Unit. The supplemental terms outlined by the BOR at a recent legislative committee meeting provide the Department of Interior with legal protections and assurances related to the NM CAP Entity's financial capability to carry out its responsibilities for the NM Unit, environmental compliance and NM Unit design and operational standards.

The NM Unit Agreement must be signed by the NM CAP Entity and the Secretary of the Interior by November 23, 2015. At press time, the parties were still negotiating the amendments.

Locals Don't Want to Pay the \$1B+ Price Tag for the Gila Diversion

Problems surfaced quickly this past summer during the negotiations of the Joint Powers Agreement (JPA) that formed the NM CAP (Central Arizona Project) Entity. The Entity wants full responsibility to design, construct, operate and maintain the NM Unit. However, because local parties to the JPA did not want to commit to funding the Gila River diversion, they required language that would allow a CAP Entity member to withdraw from the JPA at any time.

The Entity is comprised of 13 local governmental organizations (Grant, Luna, Hidalgo, Catron counties; Deming, Lordsburg and Santa Clara; four irrigation ditch associations; and two soil and water conservation districts) and the New Mexico Interstate Stream Commission. Silver City, Bayard and Columbus opted to not join the NM CAP Entity.

In response, the NM Interstate Stream Commission (ISC), the lead state agency charged with implementing the Arizona Water Settlements Act (AWSA) in New Mexico, made it clear that water users must pay for the NM Unit and that the state and ISC are not on the hook for any funding beyond the AWSA subsidy funds. This means that locals would be responsible for the \$900M+ shortfall in costs.

SEE AWSA UPDATE ON P. 5



TYRONE MINE RECLAMATION, 2008. (GRIPPHOTO)

Chino and Tyrone are running, Tyrone has no active mining going on. Ore from Little Rock is hauled to Tyrone for processing.

What does this mean for our environment in Grant County? Company officials have said that cuts in spending under the new operating plan did not come out of safety or environmental compliance budgets. That may be true, but GRIP remains very concerned that FMI will continue to lean on state regulators to relax environmental rules as a means to cut corners and save money on reclamation requirements for upcoming closure-closeout permits.

Meanwhile, the New Mexico Supreme Court announced that it would review the **Copper Rule**, a regulation issued by the NM Environment Department under the NM Water Quality Act that allows copper mines to pollute rather than prevent contamination at mine sites. After the NM Court of Appeals upheld the rule in April 2015, GRIP, Amigos Bravos, and Turner Ranch Properties as represented by the NM Environmental Law Center, as well as the NM Attorney General filed petitions for review of the rule.

The Supreme Court order states a briefing schedule, if any, will follow.

Our thanks to all who participated in the April public meeting on the **Tyrone Stage 2 Abatement Plan** at which Freeport-McMoRan's consultant outlined the company's plans to clean up contaminated groundwater at the Tyrone mine. Monitoring data show that the shallow and regional aquifers around the mine site are polluted with sulfate, total dissolved solids and heavy metals.

Although GRIP concurred with much of Freeport's plans to capture, contain, and treat the existing groundwater contamination that its operations have caused, the migration of polluted groundwater down gradient of the mine site is particularly troubling to us. Given the fractured nature of the underlying geology and faults that occur throughout this area, we have great concern about further transport of pollution into the regional aquifer. The Tyrone Stage 2 Abatement Plan did not adequately address this issue.

The regional aquifer, known as the Mimbres-Mangas Trench, contains 15 million acre-feet of water. This regional aquifer currently serves as one of the main sources of drinking water for 20,000 people in Silver City, Tyrone, and surrounding

SEE MINING UPDATE ON P. 5

impact recreational opportunities. The Environmental Protection Agency estimates that 40% of the headwaters of Western watersheds have been polluted by mining, and it will take \$50 billion to clean up these environmental liabilities.

The federal Superfund Program, created to clean up toxic waste sites, is significantly underfunded and insufficient to address the magnitude of this problem. Across the state of New Mexico clean up of abandoned mine sites has been hampered by lack of funding.

In southwest New Mexico, reclamation of abandoned mine sites is far from complete. Although some of the most contaminated sites have been cleaned up, such as the Cleveland Mill site, funding is a critical obstacle to remediation.

Cleanup of the San Vicente tailings floundered for years given lack of funding. Monies from a natural resource damage claim settlement against Freeport-McMoRan for contamination of thousands of acre-feet of groundwater at its mines was used to reclaim the San Vicente tailings site and implement other groundwater restoration projects.

More cleanup is needed. The Pinos Altos Mining District site has 800,000 cubic yards of soil with heavy metal concentrations above EPA health screening levels. GRIP and community partners are working with state and federal regulators to go ahead with risk assessment and reclamation at the site.

What can we do to clean up the hundreds of thousands of abandoned mine sites across the nation and prevent future impacts to our environment from mining activities?

Clearly the 143-year old mining law needs to be reformed. We need to establish mining-specific environmental safeguards, clean up abandoned mines through creation of an "Abandoned Mine Land Fund", charge royalties on minerals taken from public lands, and require that companies put in place reclamation bonding with clear environmental standards to protect taxpayers from footing the bill for cleanup.

Rep. Raul Grijalva (D-Arizona) has introduced HR 963, the Hardrock Mining and Reclamation Act of 2015, and Sen. Martin Heinrich (D-New Mexico) has announced that he will introduce a mining reform bill in the U.S. Senate this month.

At the state level, we need strong environmental laws and enforcement of those laws to ensure that our water supplies and environment are protected from current mining operations.

Yet, recent efforts here in New Mexico have focused on relaxing environmental protections, putting our groundwater and environment at risk. The Martinez administration's promulgation of the "Copper Rule" allows copper mines to pollute groundwater at mine sites rather than prevent contamination. The Copper Rule is now under review by the New Mexico Supreme Court.

Additionally, global mining giant Freeport-McMoRan attempted this last legislative session to weaken the New Mexico Mining Act, potentially relieving mining companies from cleanup at inactive mine sites on "standby status," as well as other roll-backs. That bill died in committee thanks to key legislators and community activists that were quick to respond at the eleventh-hour attempt to gut this important piece of legislation.

Let the Gold King Mine accident be a reminder that there is much work to be done to ensure that all mines are cleaned up responsibly to protect our environment and public.

11TH ANNUAL GILA RIVER FESTIVAL SEEKS “BALANCE IN A CHANGING WORLD”

Filmmaker Godfrey Reggio delivers keynote address and call to action

by Richard Mahler, Newsletter Editor

As this year's theme, the upcoming (Sept. 24-27) eleventh annual Gila River Festival will explore the inherent—and rapidly increasing—tension between modern society and the natural world, particularly as it pertains to New Mexico's last wild river and its watershed. The Gila bioregion—currently threatened with a billion-dollar river diversion project—will be examined and celebrated through a wide and stimulating array of films, lectures, field trips, panel discussions, artworks, and activities as varied as a brunch, bicycle tour, street party, puppet parade, fly fishing class, studio tour, Apache rock art survey, fossil field excursion, and kayak trip.

Some events will be free and open to the public, others have limited availability and require advance registration, due by September 17. Credit card payment and online registration is available at www.gilaconservation.org/wp/?page_id=345

Highlights this year include the rare public presentation of all three titles in the acclaimed QATSI trilogy of groundbreaking documentary filmmaker Godfrey Reggio: *Koyaanisqatsi*, *Powaqqatsi*, and *Nagoyqatsi*. (*Qatsi* translates as “life” in the Hopi language.)

In a keynote address on Sept. 24, Reggio will talk about the ongoing imbalance between human beings and the natural world, including the very processes on Earth that sustain us. The filmmaker, a former monk and longtime New Mexico resident, has achieved international recognition for his poetic essays of visual images and sound that chronicle the destructive impact of modern technology on our environment. Reggio's newest (and not yet released) film is *Visitors*, produced in association with music composer Philip Glass and director Jon Kane.



GODFREY REGGIO
(COURTESY PHOTO)

As a companion to Reggio's documentaries and talk, three short films by Hopi independent filmmaker Victor Masayesva will be shown on Sept. 25. Masayesva will be on hand to introduce his work and to provide an indigenous perspective on time, water, and environmental discord. The filmmaker still lives in his native village and is a prominent advocate for the indigenous aesthetic in media. Masayesva has a unique viewpoint on water in the Southwest desert and how we can meet our water needs without taking more than our fair share.

Also appearing at the 2015 festival is Santa Fe-based author, activist, and aural historian Jack Loeffler, who will moderate a Sept. 25 panel discussion—Thinking Like a Wa-

tershed—that will include remarks by northern New Mexico acequia expert and cultural scholar Lamadrid, Santa Clara Pueblo writer and artist Rina Swentzell, and Río Grande river runner and activist Steve Harris. Presenters will talk about the possibility of our living more in sync with the flow of nature rather than the demands of contemporary economics and consumerism. In a Sept. 26 presentation, Loeffler will discuss over a festival brunch his long-time friendship with the late author and environmental philosopher Edward Abbey.



JACK LOEFFLER
(COURTESY PHOTO)

On Sept. 24, the time-lapse films will be shown, each with some aspect of the Gila River or its watershed as a theme. They are being presented by Peter Bill, a professor of new media at WNMU whose time-lapse creations have been exhibited internationally and won many awards. The films will also be shown on Saturday evening in downtown Silver City as part of the festival's downtown street party.

Former New Mexico Interstate Stream Commission Director Norm Gaume will discuss on Sept. 25 the topic of “Creating Water Supply Resilience for Southwest New Mexico in a Changing World.” Gaume, a Deming native and longtime civil engineer who directed the ISC for six years, will offer his expert analysis of the proposed Gila River diversion project and suggest other, less expensive opportunities for ensuring a future water supply for southwestern New Mexico.

The possible effects of a Gila River diversion will be discussed in several other festival sessions, including presentations focusing on native fish populations, riparian ecology, bird habitat, river hydrology, recreational opportunities, and the watershed's unique aesthetic beauty. Presenters include photographer Michael Berman, Ft. Sill Apache tribal chair Jeff Haozous, naturalist Cynthia Hunter, geologist Dave Menzie, water engineer Mark Stone, meteorologist David Gutzler, Diné educator Alex Mares, biologist David Propst, archaeologist Karen Schollmeyer, and water harvesters Van Clothier and Claire Catlett.

As a partner in the Gila Conservation Coalition (GCC), GRIP helped to coordinate and present this annual event, along with the Upper Gila Watershed Alliance (UGWA) and the Center for Biological Diversity. Learn more about the Gila River Festival via its Facebook page at www.facebook.com/GilaRiverFestival or www.gilaconservation.org.

2016 STATE LEGISLATURE CONVENES

Stay informed on key environmental and conservation legislation during the upcoming 30-day (Jan. 19-Feb. 18) session in Santa Fe. We'll keep you posted through e-mail updates, Facebook, and Twitter.

More info? See www.gilaresources.com

water associations. The Town intends to rely on this ground-water supply for hundreds of years. With the regionalization of the water distribution infrastructure, Silver City will provide water from this regional aquifer to 26,000 people in Silver City and the Mining District well into the future.

GRIP contracted with groundwater hydrologist George Rice to review and evaluate the Tyrone Stage 2 Abatement Plan Proposal, the groundwater monitoring network and water quality data. His conclusion is that Tyrone's current monitor well network in the regional aquifer is not adequate because there are large distances (gaps) between network wells. As a result, contaminants may not be detected; contaminants may be detected only after significant volumes of groundwater have been contaminated; and it may not be possible to identify the source of the contaminants. Therefore, it may not be possible to design an effective and efficient cleanup system.

The New Mexico Environment Department granted conditional approval of the Tyrone Stage 2 Abatement Plan and has required that Tyrone evaluate the existing monitoring network and address GRIP concerns regarding transport of contaminants away from the mine site. Freeport has 120 days to respond.

The New Mexico Mining and Minerals Division (MMD) held a public hearing on September 2 on Freeport's plans to expand the **Little Rock mine**, located west of the Tyrone mine. GRIP is very concerned that the closure-closeout plan proposes formation of a pit lake at closure and use of unapproved leach cap cover material in reclamation. Please take action today to tell MMD to strictly enforce the New Mexico Mining Act in order to protect our water quality and environment. (See *Action Alert* on p. 1)

"perpetual care" of the pit lake for surface water quality and wildlife protection. Although Freeport says that there is low acid-generating potential and sufficient neutralizing capacity to prevent an acidic lake from forming at Little Rock, extensive experience at copper mines around the world indicates that most pit lakes in sulfide rocks become acidic over time. Since the post-mining land use for the pit lake is proposed as wildlife habitat, attracting wildlife to a potentially toxic water body is not allowed under the Mining Act.

The NM Mining and Minerals Division has not yet approved the cover material that Freeport proposes to use to reclaim stockpiles at the Little Rock mine. The company has not demonstrated that the coarse rock material called "leach cap" will meet reclamation requirements to control erosion, prevent release of acid or other toxic substances, and support plant growth sufficient to create a "self-sustaining ecosystem," the standard mandated in the New Mexico Mining Act.

Here is a link to an on-line petition expressing concern to the MMD that we encourage you to sign:
<https://www.change.org/p/fernando-martinez-director-of-nm-mining-and-minerals-division-protect-our-water-quality-and-wildlife-from-little-rock-mine-expansion>

Feds Won't Be the Gila Diversion Sugar Daddy

The BOR on behalf of the Department of Interior (DOI) provided "full disclosure" to the NM CAP Entity through its supplemental terms that the federal government won't pay for the Gila diversion beyond the AWSA subsidy of \$66M and explained that the availability of the second increment of \$36M is very uncertain and the third increment of \$28M highly unlikely. Because the DOI must comply with the Anti-Deficiency Act when implementing the NM Unit, the federal government would not be able to initiate construction of the NM Unit unless full funding is committed.

Additionally, BOR is concerned that the JPA calls into question the CAP Entity's ability to fulfill the requirements of the AWSA. The Secretary of Interior in response reserves her right to come back to the table if there are any changes with the composition or roles/responsibilities of the Entity.

Some of the other terms clarify that the NM Unit must be designed, built and operated in compliance with BOR standards and that a separate Memorandum of Agreement will be required to lay out roles and responsibilities with respect to environmental compliance.

Next Steps

If supplemental terms are agreed to, the revised NM Unit Agreement will have to be approved by each of the governmental organizations party to the NM CAP Entity before the end of September. Stay tuned for meeting dates and times so that you can lend your voice to that process. More information can be found at www.gilaconservation.org.

Gila Conservation Coalition presents
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AML PROGRAM MANAGER JOHN KRETZMANN AND ASLA ASSOCIATE KEN ROMIG DISCUSS SAFEGUARDING OPTIONS AT BOSTON HILL'S LEGAL TENDER MINE COMPLEX. (GRIP FILE PHOTO, 2013)

BOSTON HILL: Abandoned Mine Land project enters design phase

by Richard Mahler, Newsletter Editor

The initial design of improvements phase of the State of New Mexico's Boston Hill project will be underway over the next year, according to manager James R. Smith, an environmental engineer in the Abandoned Mine Land (AML) Program of the Energy, Minerals and Natural Resources Department.

Boston Hill is a 550-acre public open space on the south side of Silver City. Mining, primarily of manganese and iron ore, occurred on the hill from 1870 into the late 1970s. Since its 1999 acquisition by the Town of Silver City it has been a popular destination for bicycling, hiking, jogging and dog walking.

Due to the considerable size and extent of the mining features on Boston Hill, the project is split up into four project phases: Assessment, Planning, Design, and Construction. The multi-year effort is part of a program overseen by the Mining & Minerals Division of EMNRD that works with federal grants to identify, safeguard, and reclaim pre-1977 mines that have been abandoned and present either a public safety hazard or an environmental detriment. Federal funds administered by the state are available to mitigate hazards associated with Boston Hill's remaining open pits, tunnels, steep slopes and deep shafts.

A draft "phase one and two" plan for safeguarding abandoned mine features and making recreational improvements on Boston Hill was released in August 2014, after assessment studies and public outreach were conducted during the preceding two years.

Details about the design phase are not being released, but should become available in early 2016. The 2014 draft plan report considers not only hazards and current human usage, but wildlife and plant habitat as the "preferred design for safeguarding hazardous mine features." The report concludes that some of the mine features on Boston Hill "represent significant dangers to public health, safety, and welfare and the public does not recognize what constitutes a hazardous condition or what existing hazardous conditions are present." Public feedback to the AML staffers determined that while safeguarding

measures should be taken, they should be undertaken "with the goal of enhancing the exploratory experience of the Legal Tender Mine Complex and protecting animal habitat."

Of particular interest and concern is the Legal Tender, which sits on both BLM and private property near the Spring Street trailhead. Hazards found by the assessment team included unstable rock formations, open pits, and dark underground chambers. Parts of the mine have been confirmed as hibernation and breeding habitat for bats, which are easily disturbed by human visitation. Although fencing surrounds most of the Legal Tender, it is in a state of disrepair and does not stop visitors from entering the complex.

"Lack of landowner attention is perhaps the most difficult hurdle to overcome in the planning and implementation for safeguarding measures on Boston Hill," the AML report concludes. The open space, it adds, is "a neglected resource. The Friends of Boston Hill secured Boston Hill but are not currently organized to fully care for [the open space] beyond periodic trash collections. The Town and other organizations have not assumed responsibilities for the care and protection of the area either. Trail maintenance is through the AmeriCorps volunteers through The Wellness Coalition, however the volunteers cannot cover all the needs of the area. There is a public perception that trails are abused. Many new trails are being developed in an ad hoc fashion. The team understands that community regulation of misuse such as off-trail bike riding is conducted through peer pressure."

The report contends that "all stewardship efforts hinge on the development of a local group that advocates for Boston Hill. Currently the Grant County trails group is the most active organization with an interest in the trails of Boston Hill. An ideal advocacy group would include different user types and adjacent landowners who have an interest and investment in maintaining the natural state of Boston Hill."

Anticipated "next steps" in the project include additional assessment of Boston Hill's archaeological and environmental features, design of an improved gateway at the Spring Street trailhead, and implementation of more safeguarding measures.

AML's involvement with Boston Hill dates back to the mid-1980s, when it documented over 300 mine features and safeguarded 37 mine openings. Project reports and other information may be accessed on line via www.emnrd.nm.us/MMD/AML/BostnHill/Documents.html



TORN FENCE SURROUNDING BOSTON HILL'S LEGAL TENDER MINE COMPLEX. (GRIP FILE PHOTO, 2013)



HIGH SCHOOL ECO-MONITORS FROM ALDO LEOPOLD CHARTER SCHOOL MEASURE SAN VICENTE CREEK WATER QUALITY AS PART OF SILVER CITY WATERSHED KEEPERS. (GRIP PHOTO)

Silver City Watershed Keepers update: Aldo Leopold students now monitoring

by Richard Mahler, Newsletter Editor

Water quality monitoring of San Vicente Creek is continuing in the 2015-2016 school year under the leadership of the new project field coordinator for Silver City Watershed Keepers, Madeleine Alfero. As the science teacher for Aldo Leopold Charter High School, Alfero is supervising eight of her students in the ongoing study of the waterway, which flows through downtown Silver City before disappearing underground south of town.

On Aug. 28, Alfero and her students met for their initial training in Big Ditch Park with recently retired geologist Dave Menzie (formerly with the Environment Department's Surface Water Quality Bureau), GRIP Executive Director Allyson Siwik, and Susan Ossim, an environmental scientist in the Watershed Protection Section of the state's Environment Department. As an enthusiastic volunteer and the Quality Assurance Manager for the project, Menzie continues to mentor the Watershed Keepers, which he helped GRIP establish in 2011. Siwik continues to serve as project manager.

Under the direction of Menzie, the group conducted its first guided observations of the creek, measuring turbidity, conductivity, pH, and other metrics while noting an apparent increase in volume apparently due to recent rainstorms. Aldo Leopold student Daniel Gruszka said members of his class were taught how to measure "dissolved oxygen, pH levels, temperature, and other aspects of water in the creek." He said such training may help him decide whether to pursue a career in science.

According to Alfero, the students will convene most Fridays to update their observations, to include "a rapid physical assessment of water quality in San Vicente Creek" as well as other activities related to the local environment. "Our class members now serve as investigators for the Watershed Keepers."

Because San Vicente Creek is monitored by regulators only once every seven years, data collected by the Watershed Keepers is shared with the New Mexico Environment Department, Environmental Protection Agency, other enti-

ties, and the public at large, and is an important tool to track water quality on a regular basis.

Asked to summarize the quality of water in San Vicente Creek over the past four years, Menzie said it reliably "meets state standards in general" for its stream classification. He also noted that it has enough dissolved oxygen to sustain fish populations in two locations, but that impairment by the presence of *E. coli* bacteria is a recurring issue. Such bacteria enter the environment through animal feces, which can be transported to surface waters. Most strains of *E. coli* are not harmful to humans, but *E. coli* 0157 is toxic and sometimes indicates the possible presence of the more toxic pathogens such as those associated with typhoid, hepatitis, cholera, and dysentery. Menzie said likely sources of *E. coli* in the San Vicente include wild birds as well as domestic dogs and cats. The Town of Silver City recently obtained state funding to divert some of the run-off water on its streets in an attempt, among other goals, to reduce contamination of the creek by domestic animal waste.

"We continue to have three observation points on San Vicente Creek," said Menzie. "But the one near the reconstruction site of the Hudson Street Bridge will not be accessible to us until after the new bridge is finished, theoretically in December." Other monitoring sites are upstream and downstream from the bridge.

The Silver City Watershed Keepers program is guided by a Technical Advisory Committee that includes representatives of GRIP, Aldo Leopold Charter School, Western New Mexico University, and the New Mexico Environment Department. Learn more at the program's Facebook page.



STATE ENVIRONMENTAL SCIENTIST SUSAN OSSIM (UPPER LEFT) AND GEOLOGIST DAVE MENIZE (LOWER LEFT) DEMONSTRATE WATER MEASUREMENT EQUIPMENT TO WATERSHED KEEPERS FROM ALDO LEOPOLD CHARTER SCHOOL. (ALLYSON SIWIK PHOTO)



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IN THIS ISSUE:

- **LITTLE ROCK MINE EXPANSION**
- **COLORADO GOLD MINE SPILL**
- **TYRONE LAYOFFS**
- **COPPER RULE REVIEW**
- **EARTH MATTERS RADIO**
- **GILA DIVERSION NEWS**
- **BOSTON HILL UPDATE**
- **11TH GILA RIVER FESTIVAL**
- **SILVER CITY WATERSHED KEEPERS**

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CALENDAR OF UPCOMING EVENTS

Sept. 24-27 - 11th Annual Gila River Festival: Finding Balance in a Changing World - Various locations, including the Gila River and Silver City. Schedule and registration at www.gilaconservation.org. Info: www.facebook.com/GilaRiverFestival, or 575.538.8078.

Sept. 24-27 - Gila Time-lapse Film Festival - Part of Gila River Festival. Info at www.gilaconservation.org or facebook.com/GilaTimeLapseFilmFestival.

Sept. 23 - Sign petition to Mining and Minerals Division on Little Rock Mine Expansion. Go to <https://www.change.org/p/fernando-martinez-director-of-nm-mining-and-minerals-division-protect-our-water-quality-and-wildlife-from-little-rock-mine-expansion> See *Action Alert* on front page.

Sept. 23 - Interfaith candlelight prayer vigil on eve of Pope Francis's address to Congress on "Caring for Our Common Home." 7:30 pm, Gough Park Picnic Shelter, Silver City. Info: Deb James, debauraperu@gmail.com. Listen to podcast of *Earth Matters* interview with Sister Joan Brown of NM Interfaith Power and Light to learn more about the Pope's encyclical <http://gmcr.org/earth-matters-sister-joan-brown/>

Oct. 14 - People's Climate Movement National Day of Action. This will call attention to the urgent need for bold steps to be taken to address the global climate crisis. Events all day at Silver City Office of Sustainability, The Volunteer Center of Grant County, and WNMU Light Hall. Info: Nick Sussillo nick-52rc@gmail.com, 575.654.0690, or facebook.com/PCMSilverCityNM?ref=ts

Jan. 8-9, 2016 - 5th Annual Wild & Scenic Film Festival. 6:30 - 9:00 pm at WNMU's Light Hall. More information at www.gilaconservation.org

Jan. 19 - Feb. 18, 2016 - New Mexico Legislative Session (at state capitol in Santa Fe, 30 days long this year)

Earth Matters

A show about earthly matters that impact us all!



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