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Cleaning up Eureka One Property at a Time

Eureka, Juab County – Inch by inch, truckload by truckload, Eureka is shedding its skin of the contaminated mining past.

Patches of grass are now beginning to sprout from recently cleaned lawns. In other parts of the neighborhoods, rocks replace grass that once covered the contaminated ground in this historic town of around 800 people living 45 miles southwest of Provo.

And, in the midst of a massive \$80 million Superfund cleanup is new housing construction, where people are buying contaminated land to build their dream homes. It has come at a time when the U.S. Environmental Protection Agency (EPA) and its labor force of five crews are working a 10-hour six-day a week schedule to complete the cleanup as efficiently and economically as possible.

EPA is working in partnership with the Department of Environmental Quality's Division of Environmental Response and Remediation (DERR) to complete the cleanup by 2009 – seven years after Eureka was designated a Superfund site.

“We have faced some challenges,” said Paula Schmittiel, remedial project manager for EPA's Region 8 Office in Denver. “But we are feeling like we are making good progress.”

Cleanup crews have had to contend with steep slopes, broken water lines, rerouting roads to minimize truck traffic along city streets, and wariness among some local residents.

“We had people in the community recognize the need for the cleanup early on. We also had people who didn't want us here but figured if we were going to do the cleanup, they wanted it to be done quickly,” said David Bird, project manager for DERR. “We did start out slow, but I think we are hitting our stride. I think it's making progress.”

So far, over 200 of the estimated 700 residential properties are cleaned. The crews hired by Shaw Environmental Inc., under a government contract with USACE, which is conducting the cleanup under an interagency agreement with EPA, remove the top 18-inches of contaminated soil from each of the residential properties and replace it with topsoil or gravel. Steep slopes are armored with riprap. This type of project requires large quantities of water for re-vegetation and dust control. EPA obtains water for this effort by purchasing it from Eureka city and from an agreement with a Potentially Responsible Party “PRP” who has land holdings and water rights near Eureka. In two years, 130,479 cubic yards of contaminated soils have been removed. Nearly 100 acres – about 74 percent – of the mine waste piles have been re-graded and capped with rock from a nearby quarry.

In the process, some city streets are repaved due to the traffic from the heavy construction trucks. Broken water lines encountered during excavation are replaced. There’s even community interest in the restoration of the historic Shea Building on Main Street.

Most importantly: Fewer cases of children testing positive for dangerously high levels of lead in their blood.

“We are doing blood lead testing on a quarterly basis,” said Mark Jones of the Utah Department of Health. “There has been a gradual decline in the number of children tested with elevated levels of lead in their blood, from 40 in 2000 to only one in 2006,” he added.

City officials couldn’t be more pleased.

“This is the best thing that could have happened to Eureka,” said City Councilman Joel Bernini.

Eureka’s Mining Past and Promising Future

Eureka, named for the discovery of a high-grade outcropping of silver and lead, was founded in 1870. It became the center of the Tintic Mining District, which produced millions of dollars worth of silver. Then, in the early 1900s, the silver business went sour but continued until the later 1950s. Chief Consolidated Mining Co. hopes to eventually resume mining operations.

In 2001 and 2002, EPA conducted an emergency removal action to remove contaminated soils where lead concentrations were greater than 3,000 parts per million (ppm) or where children with blood lead levels greater than 10 micrograms per deciliter were living. EPA’s cleanup level for lead is 231 ppm. Other metals, including arsenic, also were detected.

Most alarming: Nearly 40 children were found to have high levels of lead in their blood, sometimes more than four times the limit established by the U.S. Centers for Disease Control and Prevention. Children are more susceptible to ingesting lead because they play in the dirt. Lead is known to harm the nervous system and can lead to infertility problems, developmental problems among children, and can cause pregnant women to miscarry.

In 2002, EPA officially designated Eureka as a Superfund site, a designation that kicks in federal funds. DEQ stepped in to provide a 10-percent funding match. Along the way, Atlantic Richfield, a “PRP” conducted the clean up of the mine waste piles in the east portion of the site. It also constructed the sedimentation ponds along Knightsville Road as well as the secondary water supply system from the Mammoth well. Union Pacific Railroad, another “PRP” contributed the cleanup work by assuming responsibility for cleaning up the Upper Eureka Gulch and by producing the rock materials need for the remediation from a nearby rock quarry under a large area mine permit obtained

by EPA and its contractor. The companies' contribution have reduced the cost of the cleanup to taxpayers by approximately \$12 million.

"I think the community sentiment has turned," said Bird. "Residents are now seeing how much better the yards look after being cleaned up and also seeing the lead levels in children coming down."

Property owners Dennis and Marilyn Mason couldn't agree more.

"This crew really took pride in how to shape our yard to help with the watershed (we were concerned about) and still make a beautiful yard," wrote the Masons in a thank you note to EPA. "We have had so many positive comments since they were here."

DEQ/Health Department Partnership Working

Midway, Wasatch County – A good working partnership between the Department of Environmental Quality (DEQ) and the local health departments has helped keep Utah's air clean, its land lush and its water pristine.

"My commitment to you is to continue our work in this partnership," Dianne Nielson, executive director of DEQ, told an audience of environmental health officers who attended the Utah Environmental Health Association's fall conference held here Oct. 11-13.

The partnership between DEQ, the U.S. Environmental Agency (EPA), and local health departments, formed in 1993, has been an important part of how DEQ does business, Nielson said.

The partnership works well because DEQ and the health departments are aligned in their priorities. State leaders also recognize the need to take a flexible approach to meeting priorities and solving problems. "The issues look differently depending on where you live," Nielson said.

Eureka and Park City took different approaches to address contaminated soils left behind by a legacy of mining. "Both are finding options to solve the problem," Nielson said. Eureka is in the midst of a massive Superfund cleanup; Park City took itself off the Superfund list and curtails exposure to contaminated soils by enforcing city ordinances.

Stakeholder involvement is an important part of the process, Nielson said. "Voters, local officials, or anyone who has an interest or a stake in what we do, can be involved in the process."

This is best illustrated through the Western Regional Air Partnership, a group of Western states and tribal governments working to help improve the visibility in national parks and western vistas.

DEQ does business today by using a set of operating principles, developed in collaboration with EPA and local health departments. Those principles are:

- Recognizing issues and conflicts;
- Focusing on results;
- Knowing and respecting the audience;
- Empathizing, listening, learning and asking;
- Being creative to find cost-effective solutions;
- Following through and sharing information; and,

- Recognizing the needs of the people and the environment in Utah.

“As partners, we make a difference,” Nielson said.

DEQ Employees Honored for Outstanding Work

Thirty-five Department of Environment Quality (DEQ) employees were lauded for their outstanding achievements at an annual awards picnic held in late September.

“The annual picnic is an opportunity to recognize the achievements of our employees,” said Dianne Nielson, executive director of DEQ.

Recognition was given to the following employees:

DEQ White Hat Award Winners for 2006



University of Utah Engineering Department partnership with DEQ division staff:

Lynn Menlove, Dave Prey and Glade Sowards, Division of Air Quality (DAQ); Mark Jensen and Don Lore, Division of Drinking Water (DDW); Keith Egan and Dan Hall, Division of Water Quality (DWQ); Doug Hansen and Mo Slam, Division of Environmental Response and Remediation (DERR); and Bronson Hawley and Roy Vanos, Division of Solid and Hazardous Waste (DSHW)

Worked with the U.S. Environmental Protection Agency’s Region 8 to meet the 2005 Government Performance and Results Act Goals:

James Lansbarkis, Brad Maulding and Rolf Johnsson, all of DSHW.

Establishing the State Drinking Water Information System:

Ken Bousfield, Mark Jensen and Tim Pine, (DDW) and Brett Shakespear, Brent Pathakis, Bob Shipman and Tad Wimmer, Department of Information Technology (DTS).

Employee of the Year Nominees:

Steve McCann, (DTS for DAQ) and Theron Miller, (DWQ)

State Manager of the Year Nominees:

Kevin Brown, (DDW), Ed Macauley, (DWQ), and Brad Maulding, (DSHW)

Governor's Science and Technology Award:

Loren Morton, Division of Radiation Control (DRC).

Water Quality Service Award: Paul Krauth, (DWQ).

White Hat Customer Service Award for 2006:

Sandy Davis, (DAQ); Frank Roberts, (DDW); Therron Blatter, (DERR); Doug Wong, (DRC); Monique Rodriguez, (DWQ); Debbie Oberndorfer, (EDO); and Terry Montgomery, (DSHW).

Drinking Water is Safe, Clean and Taste Great Too

The Utah Drinking Water Board Makes Sure of It

A little known fact: Taste tests show that the best-tasting drinking water in the nation comes from Beaver City in Utah's Beaver County.

Utah's great-quality drinking water is not surprising to the Drinking Water Board, a diverse 11-member group dedicated to helping the 938 public water supply systems in Utah meet federal standards protective of public health. The great taste is simply a bonus.

"Utah is well known for its quality of drinking water," said Board Chairwoman Anne Erickson, a retired academic vice president of Salt Lake Community College who is serving her second term on the Board, representing the Public-At-Large.

At this year's National Rural Water Association convention, Beaver City's water won the best-tasting drinking water in a taste test contest.

Since the Drinking Water Board's creation in 1979, the Board has been dedicated to ensuring that Utahns and its visitors are provided with safe and ample drinking water supplies. The Board also administers federal and state funds to help water systems make improvements. It's a diverse group comprised of members representing local elected officials, water districts, academia, consulting engineering, industry, general public, and local health departments. Since the Drinking Water Board's creation, there have been five chairpersons: Bob Hilbert, Dan McArthur, Boyd Workman, Dale Pierson, and Anne Erickson.

Hilbert, a retired manager of the Salt Lake County Water Conservancy District, now known as the Jordan Valley Water Conservancy District, was the original charter member of the Board, serving as chairman for 16 years. Hilbert was instrumental in helping the Legislature draft language that created the Board that gave Utah primacy over meeting the federal Safe Drinking Water Act. "Rather than having the Environmental Protection Agency (EPA) as the primary oversight for Utah's drinking water systems, I felt we had an opportunity to do it ourselves." He said he is most proud of creating the loan program and holding Board meetings in rural locations throughout the state. "It was important to me that we get out of our Board room and visit rural communities."

"It has been the Board philosophy to follow the laws by working with the local water suppliers to make sure that it is done efficiently and protective of public health," said Dale Pierson, a former Board chairman and executive director of the Rural Water Association of Utah.

“One of the major challenges the Drinking Water Board faces is to ensure the loan and grant program is used wisely to protect public health,” Pierson said. “Basically the Board makes sure the state is getting the biggest bang for the buck and public health is protected.”

To that end, the Board spends a great deal of its time helping smaller, rural drinking water systems comply with drinking water standards in a highly regulated environment.

“The water industry in Utah is a very dedicated, professional group that has a very succinct and common goal of protecting public health,” said Kevin Brown, director of the Division of Drinking Water who serves as the Executive Secretary to the Drinking Water Board.

“We all work hand in hand,” agreed Pierson, who served as the Board’s chair from 2003 to 2005. He resigned from the Board to become the executive director of the Rural Water Association of Utah.

For instance, when EPA’s new regulations for arsenic levels went into effect early this year, the Board had granted three-year extensions to 32 water utilities to allow them more time to meet the new standard of 10 parts per billion (ppb) arsenic in drinking water – much lower than the 50 ppb once considered safe to drink.

Rather than fighting EPA over the rule, the Board simply gave water suppliers more time and flexibility to make sure they can meet the standard.

“For the small water systems, an extension is very important,” Pierson said. “For one thing, technology is rapidly changing and by giving water suppliers additional time they may end up with cheaper solutions down the road.”

Providing smaller water suppliers the financial assistance they need to make improvements is one of the satisfactions to Highland City Mayor Jay Franson in serving on the Board.

“It’s seeing those accomplishments,” Franson said. “Vernon in Tooele County, for instance, is building a major distribution line to serve its community. Smaller systems like this have a harder time keeping up with growth. But when it comes down to it, everyone deserves good drinking water.”

In Memory of...

The Department of Environmental Quality would like to pay tribute to the following employees who passed away in 2006:

Mary Besst, an administrative secretary for the Division of Environmental Response and Remediation (DERR), died on May 27. She was hired May 6, 2004 after working three months as a temporary employee for the Division of Radiation Control. She later transferred to DERR. Previous to her employment at DEQ, she worked for the Department of Human Services for over 20 years. Friends and colleagues describe her as a loving, kind and dependable person who enjoyed bringing treats for the office. “Mary was such a pleasure to work with because of her positive outlook on life,” said Shane Bekkemellom, administrative secretary for DERR.



“This was partly due to the fact that she always had a friendly smile and a piece of candy to send you on your way.”

Jeff Dean, a long-time compliance manager for the Division of Air Quality, died on Sept. 28. He was hired on Dec. 1, 1978 as an environmental scientist, and nine years later promoted as a manager. Rick Sprott, director of Air Quality, said Dean made a significant contribution to the environmental quality of Utah. “He ran a tight ship and made tough decisions every day. When a decision was made, he supported it. Jeff was fair and meticulous in how he and his people went about the compliance work,” Sprott said. “Jeff was an innovator who used Supplemental Environmental Projects that benefited the local community as part of enforcement agreements more extensively than any other air agency in the nation. He was loyal and someone I could count on. He made a difference.”



Utah Businesses Honored for Green Practices

La-Z-Boy Utah sees every waste stream as an opportunity to recycle material and in the process the Tremonton manufacturer of upholstered furniture has managed to cut its waste by 15 percent.

Those efforts, along with the similar successes of five other businesses in Utah, were praised at the Utah Pollution Prevention Association’s annual luncheon on Oct. 4.



Steve Kuftinec, Uinta Brewing Company is presented with the P2 Achievement Award

“I applaud your efforts and encourage you to continue your progress,” Dianne Nielson, executive director of the Department of Environmental Quality, told an audience of about 30 industry executives and award recipients.

Pollution Prevention Association, a nonprofit group dedicated to reducing pollution through practical, cost-saving methods, has come along way since it was formed in 1991.

“It’s an incredible evolution when you look at pollution prevention,” noted Nielson. “It began as experimental. We were all focused on the right ideas but we didn’t have a lot of examples. We were trail blazers in the many projects we under took. That’s changed. Today, you can’t go to a business or a national park without seeing some indication of the focus on the environment or sustainability that is making a green footprint.”

Take Uinta Brewing, an Achievement Award recipient. The company has cut its water use by more than 1 million gallons a year. It powers its delivery trucks with bio-diesel and sends 3 million pounds of spent grain to farms for animal feed, rather than throwing it in the Dumpster.

Another award winner, Ben Louge of LaPorte Properties, remodels old buildings, converting them into energy efficient low-income housing. He recently upgraded 54 low-income housing units with photovoltaic panels that cut down on the utility expenses for tenants.

“I can do this because the state is committed to financing such projects,” Louge said. “The tenants love it. They are proud of the building. We have 100 percent occupancy.”

The University of Utah and The Associated Students of the University of Utah also were recognized for buying 25 kilowatt-hours of renewable energy, which avoids carbon dioxide (CO₂) emissions equivalent to taking over 3,000 vehicles off the road.

Two others, ARAMARK Lake Powell Resort and Marinas and Utah Wild Oats Market were praised for similar efforts. ARAMARK recycled 917,000 pounds of aluminum and cardboard in 2005. Utah Wild Oats Market has purchased over 24 percent of its energy use from wind power, thereby avoiding over 1,400 tons of CO₂ emissions.

For more information on Pollution Prevention visit:
http://www.deq.utah.gov/Pollution_Prevention/index.htm