



# Newsletter

## Environmental Connection

May 2007

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Sponsored by the Utah Department of Environmental Quality

Donna Kemp Spangler, Editor

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## 50 Years of Clean Water in Utah

### Guest Editorial by Bill Damery, PG, Kiran L. Bhayani, P.E., D.EE., Utah Division of Water Quality

Prior to 1964, untreated sewage was discharged into Utah's lakes and streams. Homes not connected to public sewers used privies or cesspools for waste disposal. In 1949, Utah's first municipal mechanical treatment plant was built in Nephi City.

In 1953, Utah was one of the first states in the Nation to pass a water pollution control act that established a statutory board called Water Pollution Control Committee (now Water Quality Board) responsible for protecting water quality and public health.

The Committee adopted rules setting standards for streams and lakes as well as minimum treatment requirements for discharges.

At the time, Utah's population was just over 680,000 and nearly all communities that had sewer collection systems discharged their wastewater without treatment to nearby streams. In addition, industries such as slaughter houses, manufacturers and other industries, discharged their wastewater with no treatment. By 1964, Utah had eliminated all community raw sewage discharges into lakes and streams and was one of the first states in the nation to have achieved secondary treatment standards.

In 1972, Congress enacted the first comprehensive federal clean water legislation in response to growing public concerns for serious and widespread water pollution. The Clean Water Act is the

primary federal law that protects our nations waters including lakes, rivers, groundwater and coastal areas.

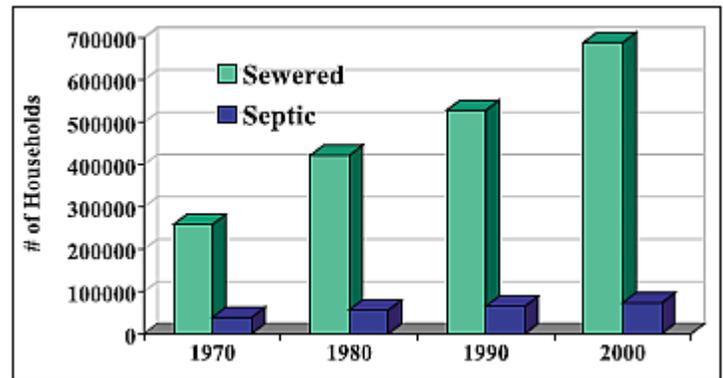
The two fundamental goals of the Clean Water Act are to eliminate the discharge of pollutants into the nation's water and to achieve water quality levels that are suitable for recreation, aquatic wildlife, and for industrial, agricultural and municipal use.

Utah participated in a nation-wide effort to help communities with the cost of constructing wastewater treatment and collection systems utilizing the Federal Construction Grants Program beginning in 1956. Since the inception of this program Utah communities have received \$225 million in grants that resulted in the construction of over \$500 million worth of wastewater facilities.

The 1972 Federal Clean Water Act required permits for all industrial and municipal discharges that polluted surface and ground water. In 1978, the Bureau of Water Pollution Control (later known as Utah Division of Water Quality issued its first municipal and industrial discharge permits. Currently there are over 1100 permits issued to control pollution discharges to surface and ground waters of the State. In 1990, the State Revolving Loan Program replaced the federal grants program which provides low interest loans to communities to build wastewater treatment and collection systems. In addition to this funding, local governments have provided approximately four times this amount for local projects.

Today, point source discharges from municipal sewers and industries are treated adequately. The remaining water pollution is mainly due to non-point sources of polluted runoff from roads and city streets and activities with urban development, agricultural activities such as animal feeding operations and runoff from irrigated fields, mining and timber activities, as well as naturally occurring sources. Ground water protection rules were adopted in 1989. These regulations are intended to provide the means and procedures for protecting ground water quality in Utah. Central to this goal is the issuance of ground water discharge permits to new and existing facilities that discharge or may discharge pollutants to ground water. These rules are designed to be preventative in their composition. That is, the regulated community is encouraged to prevent contamination of ground water underlying their facilities as a result of their activities. Utah has adopted an anti-degradation policy for ground water protection. In short, this policy recognizes and limits the negative effects of anthropogenic activities while requiring a greater degree of protection to higher quality of ground water. Also supporting the goal of ground water protection are non-regulatory activities that include interagency and local government coordination, resource assessment, technical information and data management.

Utah, as the second-most arid state in the country, makes wise use of its water resources by using treated wastewater for agricultural irrigation. In 1997, Tooele became the first Utah community to provide extra treatment to allow reuse of treated wastewater in a public place by irrigating its municipal golf course. Developing water quality restoration plans for impaired streams and lakes is an emphasis for the Utah Division of Water Quality through the year 2010. This program will determine the maximum concentration of pollutants for each impaired water body and will limit that pollutant in each discharge. Pollutants include phosphorus, nitrates, ammonia, sediment, bacteria and increased water temperature.



Utah has also adopted rules for the use of gray water. Utah's decentralized waste water system program is also progressive with promulgation and alternative technologies rule, and certification at onsite professionals.

There are many challenges to maintaining good water quality despite dramatic population growth and increased use of public land. Utah has implemented an effective program to tackle polluted runoff watershed by watershed. Watershed restoration plans will reduce the adverse effects of erosion on agricultural land and polluted runoff from urban areas. Many growing rural Utah communities have seasonal high groundwater that can cause septic systems to fail. Many residents have had to deal with standing groundwater in their yard, including raw sewage from their drain fields. Some systems had to be drained directly from the septic tank to a drainage ditch or to back yards so that the home plumbing could continue to function. The Division of Water Quality and local city/county health departments are concerned about potential health hazards from potentially disease-causing organisms. They are working closely together to build sewer interceptor and collection systems that will convey wastewater from the community to a wastewater treatment facility.

The support of citizens and industry to implement controls and best management practices will be vital as the population continues to increase. Federal and state requirements must be achieved by identifying impaired waters and developing and implementing water quality restoration plans.

Contributions by various staff members of the Division of Water Quality and Mr. Don Ostler, P.E. are gratefully acknowledged.

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## **Activities on Tap for Water Week May 6-12**

State water agencies and organizations are planning a week-long series of activities, May 6-12, to provide an opportunity for Utahns to tap into the water all around us.

Earlier this year, Gov. Jon Huntsman, Jr. signed HB 20 into law, commemorating the first full week of May each year as State Water Week. The bill, sponsored by House Minority Leader Ralph Becker (D-Salt Lake), is intended to raise awareness of the importance of water conservation, quality and supply in the state.

"This is an important opportunity to look at ways we can conserve water, such as through more efficient landscaping, while also participating in a number of educational activities that underscore the importance of safe drinking water," said Dianne Nielson, executive director of the Department of Environmental Quality (DEQ).

Stephanie Duer, water conservation coordinator for the Salt Lake City Department of Public Utilities, worked in partnership with the Intermountain Section of the American Water Works Association (AWWA) and Rural Water Association of Utah, along with other agencies, including DEQ, to promote a Water Week for the state.

"Water is a basic and essential need of every living thing and is a finite natural resource of great value and importance to everyone in Utah," Duer said. "We want to celebrate the essence of water and what it means to all of us."

Ken Bousfield, director of the Division of Drinking Water, sent a letter to all water systems in the state, encouraging them to be involved by organizing activities, such as tours of water treatment facilities, to highlight the importance of water in the state.

“In connection with this effort, there are a number of things that individual water utilities can do, and I encourage your participation to make this a meaningful event from year to year,” Bousfield said.

Alane Boyd, executive director of the Intermountain Section of AWWA, is planning an advertising blitz to correspond with Water Week. Six-foot banners announcing Water Week will hang in schools, libraries and government buildings. Newspaper and radio advertisements will carry the theme, “Only Tap Water Delivers.” The Web site [www.waterweek.org](http://www.waterweek.org) will link people to different activities during the week.

Other activities include:

- May 4, Poetry Slam, sponsored by Barnes and Noble, IMS-AWWA, and KRCL Radio Free Utah in Sugarhouse. Poetry will highlight water and all of its benefits with prizes and awards given.
- May 10, Spring Water Quality Symposium for college students at Metropolitan Water Districts. Two \$500 scholarships will be awarded to students who present their research to drinking water industry professionals.
- May 11, golf tournament at Talons Cove Golf Course in Saratoga Springs to raise money to support the Kuntaja Water Project in the Rualblantyre District of Malai. Last year’s tournament raised more than \$6,000 to support a new water system and deep wells that provide 6,500 people in three villages with safe drinking water.

There also will be exhibits at various local libraries. Elementary schools will include lessons about water conservation and protecting watersheds in their curriculum during Water Week. And, the Utah League of Cities and Towns will have their water seminar during Water Week.

“We are excited the Legislature and Governor set aside one week each year to highlight the great successes of Utah’s water systems,” said Dale Pierson, executive director of Rural Water Association of Utah. “Water Week should be a week marked by celebration of the value of water and educational programs relating to the importance of water conservation.”

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## **DEQ Employees Take the Radon Challenge**

Radon was on the radar screen of the 265 Department of Environmental Quality (DEQ) employees who participated in a challenge to get their own homes tested for indoor radon gas.

Dianne Nielson, executive director of DEQ, kicked off National Radon Awareness Month in January by challenging all employees to test their homes for radon gas, an odorless gas and the second leading cause of respiratory problems, second only to smoking. And the results are in.

Employees were encouraged to pick up a free test kit provided by the Division of Radiation Control (DRC), place it in their home and mail in the detectors when the test period concluded. The Office or Division with the highest percentage of employee participation was treated with a pizza lunch. In late March, the 25 winners were announced: DRC’s x-ray and radioactive licensing section and the Office of Support Services – both with 100 percent employee participation.

Radon occurs naturally from decaying radium and can build to unhealthy levels when it seeps through the foundation and into a home. The U.S. Environmental Protection Agency's (EPA) current action level for residential radon is 4.0 picocuries per liter.

"Testing for radon is the only way to find out if a radon problem exists," said John Hultquist, health physics support manager for DRC who oversees the state's Indoor Radon Program, funded by an EPA grant.

Environmental officials estimate that radon may cause up to 20,000 lung cancer deaths each year nationwide.

Lori Walker, executive assistant in the Office of Planning and Public Affairs, was among the organizers of the radon challenge. She said the campaign helped her become more aware of the dangers of radon.

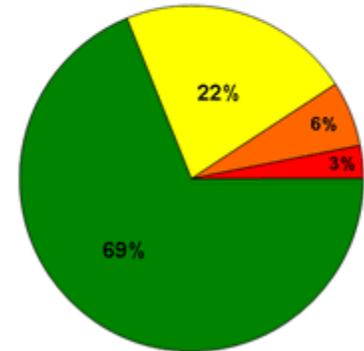
"I had never thought about it before. Getting my house tested made me more aware of my surroundings," she said. "It really eased my mind when the results came back low."

Others weren't so fortunate.

"I was surprised to learn that I had dangerous levels of radon in my home," said another employee. "I had such high levels, I took steps to remediate it."

### Residential Indoor Radon(Rn-222) Concentration

Statewide 1990-2006  
6162 Results  
Average 4.6 pCi/L  
Maximum 664 pCi/L



■ <4 pCi/L ■ 4-10 pCi/L ■ 10-20 pCi/L ■ >20 pCi/L

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## DEQ Goes Greener: Ramps up Recycling, Energy and Air Quality

The Utah Department of Environmental Quality (DEQ) is stepping up its own recycling, energy efficiency and air quality efforts in order to reduce its ecological footprint, and set an example for other state agencies to follow.

"We want DEQ to serve as a model for work place recycling, energy efficiency and air quality," said Dianne Nielson, executive director of DEQ.

On April 19 – three days before Earth Day – Nielson kicked off the "green" initiative, presenting each employee with an Energy Star Compact Fluorescent Light Bulb (CFL) and asking employees to sign the Energy Star National "Change a Light, Change the World" pledge to save energy and help reduce the impacts of greenhouse gases by replacing at least one incandescent light with a CFL one.

DEQ employees already are good stewards of the environment, noted Leah Ann Lamb, director of the Office of Planning and Public Affairs. "But, I think there are other opportunities we can explore that go beyond what we are doing now."

Recycling, for example, is practiced throughout the three DEQ buildings where recycling bins are prominently placed to encourage employees to recycle aluminum cans and plastic bottles, instead of throwing them in the trash. DEQ recycled 20,628 pounds of office paper last year alone. Other items

collected also include newspapers, phone books, magazines and cardboard. Batteries, cell phones and toner cartridges also are collected as well as computers for reuse.

On the air quality side, DEQ offers its 420 employees discounted UTA bus passes to encourage employees to take mass transit to work. Many employees also are given flexibility to telecommute, particularly on days when pollution levels are high. And some employees drive hybrid cars, which also make up part of DEQ's motor pool.

Climate and energy issues also have received more attention under Gov. Jon Huntsman's PowerForward initiative that requires DEQ to submit an annual report on efforts to support the Governor's goal of 20 percent increase in energy efficiency by 2015.

"Even so, we can do better to reduce the garbage and air pollution we produce while cutting back on the amount of energy," said Steve Higley, director of Support Services. "In recycling we need to review our current purchasing procedures and find opportunities to purchase more recycled products."

Working under the leadership of Lamb and Higley, Sonja Wallace, pollution prevention coordinator, and Daryl Cramer, facilities coordinator, will head a group of employees dubbed the "Green Team" to help develop strategies.

"This initiative will require renewed enthusiasm from employees," said Wallace. "I look forward to brainstorming ideas on ways we can become more active in promoting sustainability at DEQ."

Going green also means setting goals and measuring results, noted Nielson. "We need to show measurable results that could serve as a model for other agencies."

For more information and ideas on making green choices, visit: [www.greenchoices.utah.gov](http://www.greenchoices.utah.gov).

### **Green Team Members**

- Sonja Wallace and Daryl Cramer (EDO), co-chairs
- Glade Sowards (DAQ)
- Jodi Gardberg (DWQ)
- Doug Wong (DRC)
- Ric Ombach, Robin Davis, Bruce Hagans and Michael Pereira (DERR)
- Helge Gabert, Rolf Johnsson and Bill Wallner (DSHW)
- Dave Hansen (DDW)

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## **DEQ Hosts "Bring Your Child to Work" Day**

DEQ hosted its annual "Bring A Child To Work" day on Thursday, April 26th, 2007.

## AGENDA

9:30 - Room 101

Continental breakfast (muffins/juice)

Name tags

10:00 - Room 101

Welcome/Introduction/Opening Remarks

Bill Sinclair

10:20 - Room 101

Recycling Presentation, Sonja Wallace

Recycling 101 Movie and Popcorn

Recycling Fashion Show

12:00-1:00

Lunch on your own

1:30 - Tour of Salt Lake Valley Landfill

6030 W. California Ave. (1400 S.)

End of formal activities



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## Gov Honors DEQ Leadership Grads for Report

Gov. Jon Huntsman, Jr. honored the Department of Environmental Quality's (DEQ) Leadership Development Group who prepared the first Utah Report on the Environment for 2006.

"This is really A plus," Huntsman told the group, honored on March 22. "I really appreciate what you do. This report is groundbreaking."

The report, released in January, highlights the environmental progress made in air, land and water quality over the last few decades. It also includes discussions on the environmental challenges facing the state, such as mercury contamination that affects all aspects of Utah's landscape. More

importantly, it highlights the successes of environmental improvements as a result of partnerships with local governments, individuals and businesses.

“The report highlights environmental improvements as well as challenges,” said Dianne Nielson, executive director of DEQ.

The report will be updated annually, with additional sections added to reflect current issues.

The Leadership Group developed the report as part of a year-long project. Members of the group, as shown in the photo from the left, are: Harry Campbell (Division of Water Quality) and Kate Johnson (Division of Drinking Water). From the right: Jeff Emmons (Division of Solid and Hazardous Waste); Jon Black (Division of Air Quality) and Brad Johnson, director of the Division of Environmental Response and Remediation, who led the group’s efforts. To the Governor’s right is Donna Kemp Spangler, public information officer who edited the report. On Huntsman’s left is Bill Sinclair, deputy director of DEQ, who oversees the Leadership Development Training program intended to provide the skills to employees to prepare them for a leadership position.



The report is available on the Internet at [www.deq.utah.gov/envrpt](http://www.deq.utah.gov/envrpt)

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## Partners Turn Park City mine into “Green” Resort

Park City, Utah – Cleanup of the toxic remains of Empire Canyon’s mining heyday here has a silver lining.



*Dianne Nielson with Gov. Huntsman and EPA Administrator Stephen Johnson and regional administrator Robbie Roberts*

Private developers are transforming the once contaminated 16-acre Daly West Mine site near the Deer Valley ski resort into an environmentally sensitive resort and spa under the Environmental Protection Agency’s (EPA) first pilot project Environmentally Responsible Redevelopment and Reuse, which removes liability obstacles to encourage environmentally beneficial redevelopment projects.

“Events like this don’t just happen,” said EPA Administrator Stephen L. Johnson at a gathering to commemorate the project in Park City on April 17. “It takes partnerships.”

In December 2003, EPA and United Park City Mines entered into an agreement to clean up mine-related contamination in Empire Canyon. The Department of Environmental Quality (DEQ) provided oversight of the removal of the tailings pile that remained after the mine closed in the 1920s. The cleanup also included restoring the Silver Creek stream channel through efforts led by Mo Slam, an environmental scientist with the Division of Environmental Response and Remediation (DERR).

“Mo Slam has kept us on track,” said Kerry Gee, vice president of United Park City Mines. “This is a partnership made possible by EPA, the state of Utah and Park City.”

United Park City Mines agreed to lease the Daly West site to DV Luxury Resort, LLC, which will incorporate extensive green features into the design, construction and operation of the Montage Resort and Spa, a 178 guest room and 94 resort residential development to begin this summer with completion in 2010. Such features include incorporating energy-efficient measures in the building design, including the purchase of wind energy; setting aside an open space easement, planting native vegetation, constructing wetlands and using chlorine alternatives for resort pools and spas.

To help facilitate the redevelopment project, EPA and the Department of Justice agreed to provide the company with liability relief in exchange for the company’s commitment to develop a resort in an environmentally sensitive manner.

“Through the work of EPA and our partners, Empire Canyon will be a success story of restoring contaminated properties back into community assets,” Johnson said.

Park City Mayor Dana Williams admitted he was skeptical at first. “The fact that 3,500 acres will permanently be protected is the biggest selling point,” he said.

Dianne Nielson, executive director of DEQ, said partnerships are the way DEQ does business. “This is a great example of what can be accomplished through public-private partnerships. I am proud DEQ has participated in this landmark achievement.”

Gov. Jon Huntsman sang his praises at the ceremony to kick off the development. “It is extraordinary how all the stakeholders got together and made this happen. Cleaning up the environment is not only good environmental policy but good economic development.”

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## **Water Quality Board Member gets Presidential Award**

Jay Olsen, a four-year member of the Water Quality Board who represents the agriculture community, is the recipient of President Bush’s Volunteer Service Award for his work to improve local watersheds in Utah.

Environmental Protection Agency Administrator Stephen L. Johnson presented Olsen with the award at Gov. Jon Huntsman’s Energy Summit on April 17.

“Today we honor Jay Olsen for answering President Bush’s call to serve a cause greater than himself,” Johnson said. “Dedicated volunteers like Jay are inspiring others to join them in delivering America a brighter, healthier future.”



*Jay Olsen with his wife, Tawny and son, Shad next to Gov. Huntsman and EPA Administrator Stephen Johnson.*

Olsen, who lives in Ephraim with his wife, Tawny and their nine children, is a leader in watershed protection in Utah. As chairman of the San Pitch River Watershed Stewardship Group, a water quality steering committee started by the Farm Bureau, Olsen has helped secure more than \$1 million in water quality grants. Under his guidance, the watershed group developed the Water Quality Management Plan for the San Pitch River Watershed. Also while he was chairman, some of the group’s projects included a fourth grade watershed education day program, now in its third year, which reaches 400 students in Sanpete County.

The watershed group also offers free soil testing to Sanpete County farmers while educating them about applying fertilizer properly. As a result, fertilizer application rates have declined, benefiting water quality and saving farmers thousands of dollars in fertilizer costs. Olsen also initiated the first Farm Works training class in Utah, teaching about farm management programs which track fertilizer application rates and soil testing data. He has been helping local water users cope with landslides of Twelve Mile Canyon near Mayfield, which have resulted in millions of dollars in crop loss due to excess sediment.

In April 2003, he was appointed by Gov. Olene Walker to serve on the Water Quality Board as a representative of agriculture and livestock interests.

Walt Baker, director of Division of Water Quality, praised Olsen for his outstanding contributions. “Jay Olsen is a leader in this state and is a valuable member of the Water Quality Board. He is most deserving of this prestigious award,” Baker said.

President Bush, in his January 2002 State of Union Address, called on all Americans to make a difference in their communities through volunteer service. He created USA Freedom Corps, an Office of the White House, to strengthen and expand volunteer service. For more information visit [www.volunteer.gov](http://www.volunteer.gov) or call 1-877-USA-CORPS to find an existing volunteer service opportunity in your area.