UTAH Environmental Report

2009

Utah Environmental Report: 2009

Issued December 23, 2009

State of Utah
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Comments and Questions
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Message from the Executive Director

I am pleased to present the Utah Department of Environmental Quality (DEQ)'s annual State of the Environment Report for 2009. It is an honor to do so as the agency's fourth executive director in DEQ's 18 year history, having been appointed by Governor Jon Huntsman, and later confirmed by the Senate on September 16, 2009. I look forward to working with stakeholders and the Legislature to continue our strong commitment of fulfilling our mission – safeguard public health and our quality of life by protecting and enhancing the environment. I plan to continue to emphasize the best science and collaboration to achieve environmental success prompted by the foresight of my predecessors.

As we look over the past year, we see some successes – and some challenges. Clean air, land, and water continue to be the basis of Utah's quality of life and economy. We are making strides to reduce energy use, optimize efficiencies and ensure a sustainable future.

We are committed to improving our air quality. The Division of Air Quality has begun a three year process to bring into compliance the areas within our state not achieving the tougher federal air quality standards for wintertime particulate pollution and summertime ozone. The federal stimulus money provided through the American Recovery and Reinvestment Act (ARRA), along with our partnerships with schools, businesses, local governments, Environmental Protection Agency (EPA) and clean air advocates have helped advance our work to retrofit school buses with cleaner technology. And our air quality three-day forecast continues to provide valuable information about current and pending air quality conditions to help the public, and especially our school administrators and parents decide when to keep children inside during recess based on the air quality index.

As part of our commitment to joining the Western Climate Initiative (WCI), we are making progress in addressing energy and climate change issues. We are doing so by working closely with the Governor's Energy Advisor, the Legislature, other key state and local governmental agencies, and stakeholders in order to evaluate and influence federal climate change legislation and achieve regional reductions in greenhouse gasses (GHG).

In 2009, The Division of Environmental Response and Remediation received $1.9 million in federal stimulus funding to help clean up nine abandoned leaking underground storage tank sites. Through the Superfund, Brownfields and Utah's Voluntary Cleanup programs, thousands of acres of

commercial and residential properties have been cleaned and put back into beneficial use. The year ended with the announcement that US Magnesium Corp. has been added to EPA's National Priority List, making it Utah's 24th Superfund site. We will be working closely with stakeholders and the public to determine the best way to clean up the site this coming year.

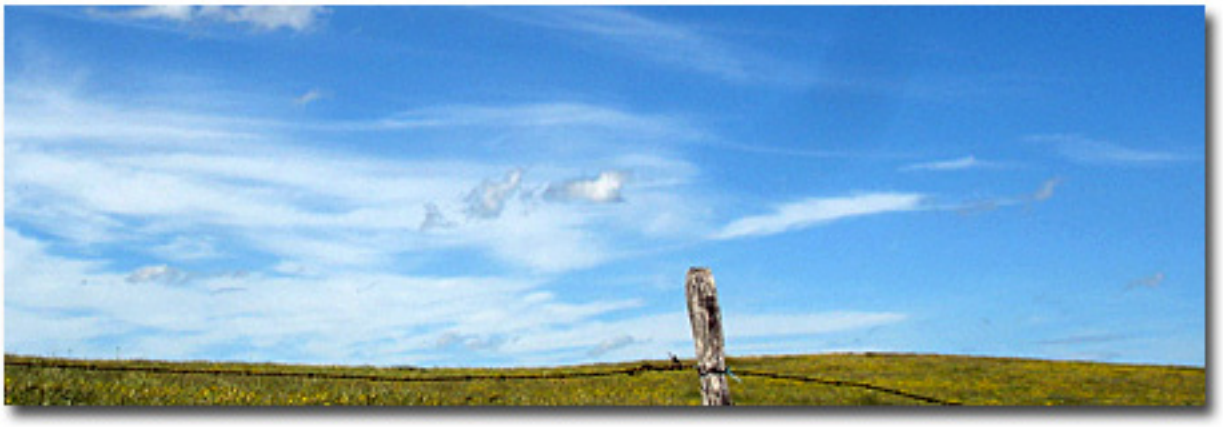
However, we are facing financial challenges in the Environmental Quality Restricted Account, a fund that waste operators pay into in order to cover the cost of state oversight. The decline in waste revenues, along with some of the money being diverted to cover other services, has left the fund short, projected to be about $2.3 million by 2011. We have been working with stakeholders to come up with a solution that could result in legislation to reform the hazardous waste fund. The legislation is expected to increase tonnage fees the state collects from landfills and hazardous waste facilities and stop an annual appropriation from being shifted to the General Fund.

Federal stimulus funding – $40 million – has helped meet water quality needs of communities. That money awarded to the Divisions of Water Quality and Drinking Water will help pay for much-needed waste-water treatment plant improvements and drinking water projects in Utah.
Meanwhile, mercury studies have begun on the Great Salt Lake and fish consumption advisories continue to be revised to waterways that yield elevated levels of mercury.

Our ongoing success continues to be our dedicated employees who work in partnership with our various stakeholders. We will continue to improve efficiencies as Governor Herbert continues the Working 4 Utah initiative, which extended government service hours from 7 a.m. to 6 p.m. Monday through Thursday, with non-essential government buildings closed on Fridays in order to save money, energy, improve air quality and enhance government services. I invite you to learn more about DEQ and the issues we are following by visiting the DEQ website (www.deq.utah.gov).

Amanda Smith
Executive Director
Department of Environmental Quality

Cleaner Air



Introduction

Utah's air quality continues to be a growing concern. Our mountain-and-valley topography, diverse economy, and a vastly growing population create some air quality challenges for the state. Despite these challenges, Utah's air continues to improve. As noted in the last three previous reports—2006, 2007, and 2008—in the early 1980s, Utah struggled to meet the health standards for four of the six criteria pollutants identified by the U.S. Environmental Protection Agency (EPA). By 2006, all Utah counties attained current federal air quality standards. Two decades later, Utah finds itself in a similar position with ozone and very fine particles, known as PM2.5, because scientific evidence shows that exposure can be much more harmful to health than previously known.

On October 8, 2009, EPA directed the state to find ways to reduce wintertime pollution because parts of the state violate the Clean Air Act's limits for PM2.5. These "nonattainment" areas in Utah include all of Salt Lake and Davis counties, portions of Cache, Utah, Weber, Box elder and Tooele counties, plus a portion of Franklin County, Idaho, near Cache Valley. The Division of Air Quality is beginning to draft a three-year plan that details how these areas will comply with the tougher limits set by EPA. As noted in the previous reports, on December 2006, the allowable daily average of fine particles (PM2.5) went into effect, reducing the standard from 65 micrograms per cubic meter (ug/m3) to 35 ug/m3. On March 12, 2008, EPA tightened the limits on the 8-hour standard for ozone from 85 parts per billion (ppb) to 75 ppb.

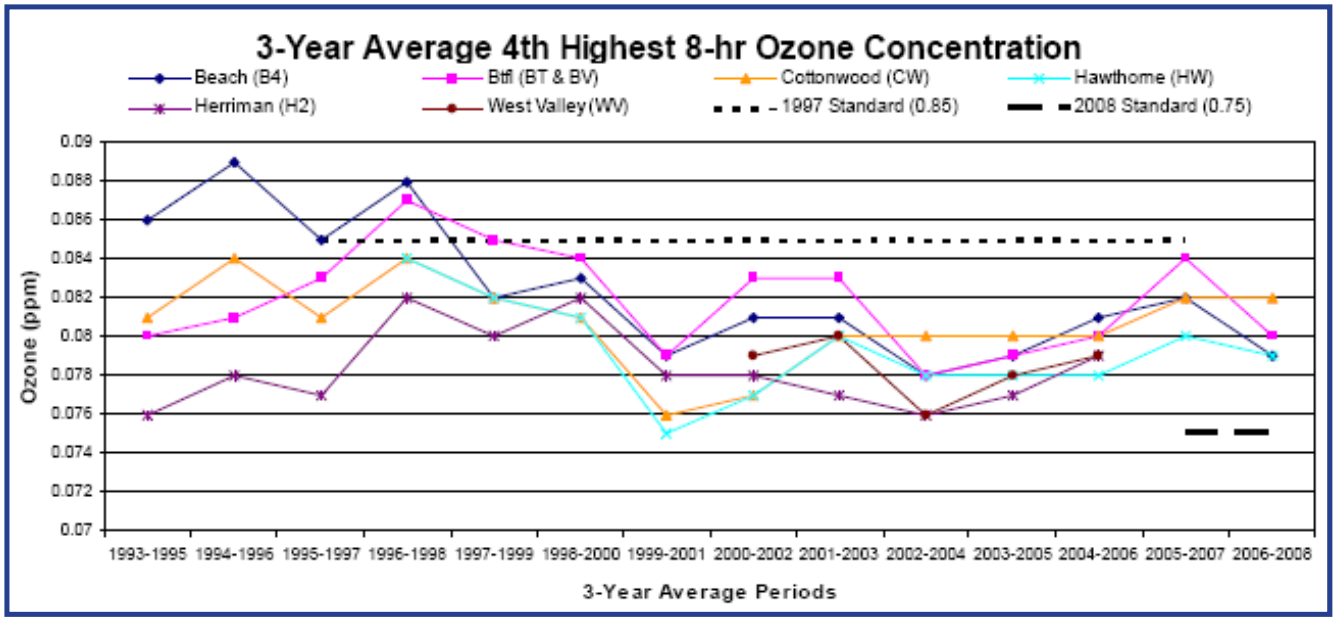
Remarkably, Utah's air is getting cleaner. We can measure that by the fact that the number of "red" air quality days declined in 2009 continuing the trend noted in 2008. The Division of Air Quality alerts people all year long to pollution conditions by issuing "green, yellow and red" air alerts. Salt Lake and Davis counties recorded only 7 "red" days during the winter season, which means that conditions were in place where the PM2.5 federal

standards could be exceeded. In the summer Ozone season of 2009, the Division issued 7 "red" days compared to 20 for the 2007 summer season.

Ozone

Ozone is formed when volatile organic compounds (VOCs) and nitrogen oxides (NOx) mix with sunlight and heat. Ozone, sometimes referred to as smog, is principally a summer time problem when temperatures are high and daylight hours are long, but it may have implications to wintertime particulate problems as well.

In March 2008, EPA's new ozone standards went into effect following mounting evidence of health risks at lower levels. The new standard of 75 ppb meant that additional areas were evaluated for inclusion in the recommendation for areas of non-attainment that the Governor submitted to EPA in March, 2009.



Success: More School Buses are Getting Cleaner with Retrofits

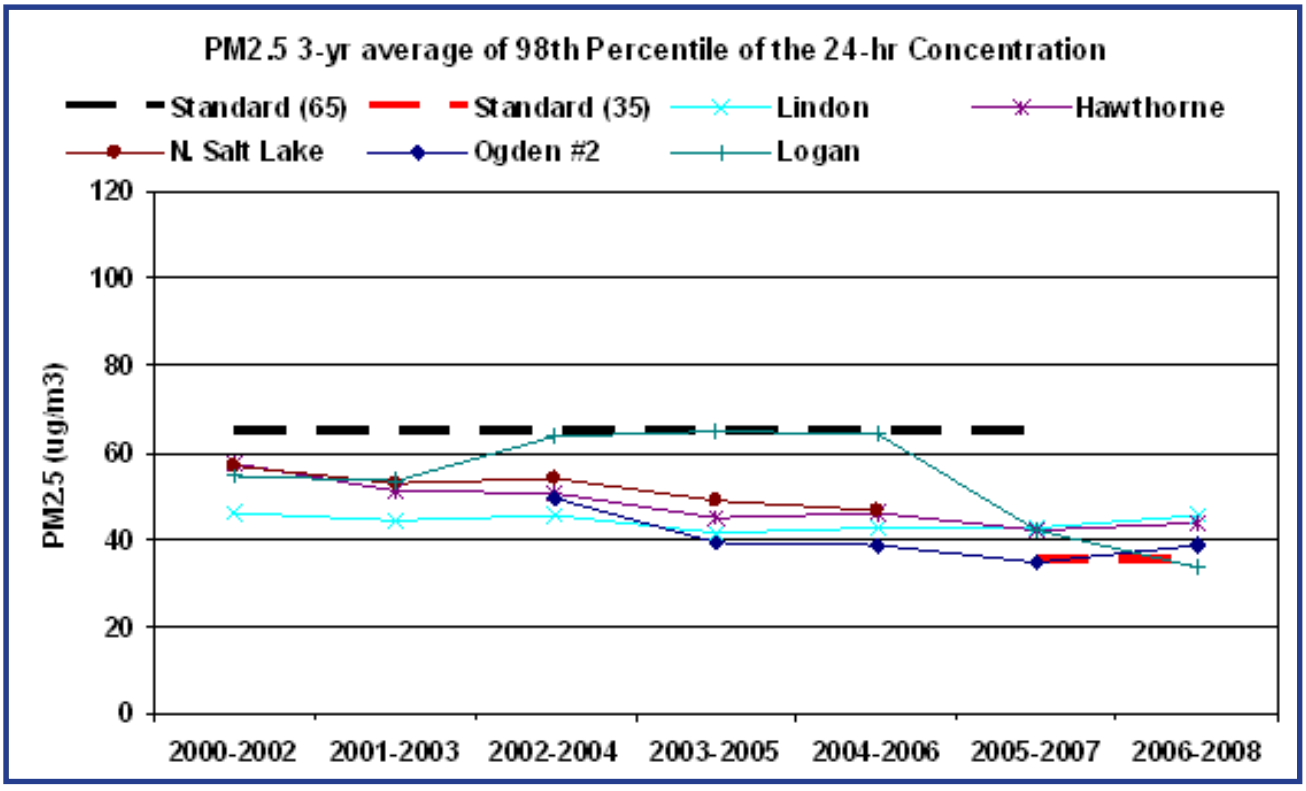
The Division of Air Quality (DAQ) received $513,486 in federal stimulus money for retrofit of 306 school buses statewide with Diesel Oxidation Catalyst and closed Crankcase Ventilation Systems and $1.2 million to partner with Utah State Office of Education and local school districts in non-attainment areas to purchase about 21 school buses. DAQ will reimburse school districts $44,000 per school bus. The following school districts will use ARRA funding to purchase new school buses: Cache, Logan, Box Elder, Weber, Ogden, Davis, Salt Lake City, Granite, Jordan, Canyons, Alpine, Nebo, Provo City, and Murray. For more information, visit the Utah Division of Air Quality's School Bus Retrofit Program Web pages.

Particulate Matter

Particulate matter refers to the tiny particles found in the atmosphere that range in size from less than one tenth of a micrometer (about one-tenth the size of a human hair) up to 50 micrometers in diameter. Fine particulate matter known as PM2.5—those particles less than or equal to 2.5 micrometers in diameter—is a more serious health problem. As noted earlier, EPA adopted new standards for PM2.5, setting the standard at 15 micrograms per cubic meter (µg/m3) on an annual basis and 35 µg/m3 for the 24-hour average—about half the limit of the previous standard.

Much of the particulate pollution can be attributable to emissions from automobiles. Industry, woodstoves, wildfires, and lawn mowers—among many other sources—also contribute to poor air quality. Because a major portion comes from automobiles, the Division of Air Quality's Choose Clean Air program continues its public outreach by encouraging people to reduce vehicle trips and take mass transit when air pollution levels are on the rise.

On November 13, 2009, EPA published the list of areas in the nation that do not meet the new federal standards. This list included much of the Wasatch Front - including all of Salt Lake and Davis Counties and portions of Weber, Box Elder and Toole counties, as well as the low-lying portions of Utah and Cache Counties. The state has until 2012 to draft a plan to EPA on how it will achieve compliance that will ultimately, improve the air quality for decades to come.



Tax Credits for Cleaner Vehicles

As of Nov. 10, 2009, about 30 vehicles received one-time tax credits from DAQ as an incentive for helping reduce air pollution with cleaner vehicles. However, that's down dramatically from last year when a record number of vehicles—1,402 received tax credits. The reduction can be attributable to the change in law. In 2008, the Utah Legislature revised the state's Clean Air and Efficient Vehicle Tax Incentives. This revision reduced the tax credit for natural gas vehicles to $2,500 or 35 percent of the vehicle's purchase price, whichever is less. Other clean fuel vehicles are eligible for a credit of up to $750 if they meet air quality and fuel economy standards. This revision also added hybrid electric vehicles as eligible for the tax credit as long as it meets the standards.

Even with the decline from the previous year, more vehicles are cleaner as shown by the numbers of vehicles eligible for tax credits. In 2002, when the tax credits were being administered by DAQ, 63 received tax credits, with each year increasing to 266 in 2005. After 2005, hybrids no longer were eligible for the tax credits until the change in 2008.

Utah's low natural gas prices have prompted a growing number of people to convert their vehicles to compressed natural gas. But the conversion kits must be EPA certified. Some self-conversion kits on the market do not meet EPA standards and can be both dangerous and dirty. For more information on tax credits, visit the Division of Air Quality's Clean Fuel Vehicle Tax Credit pages.

Agricultural Vehicles Getting Cleaner with Retrofits

DAQ partnered with the Department of Agriculture and Food to obtain $750,000 in federal stimulus money to be used to replace 11 agricultural vehicles and equipment, repower 21 engines in agricultural vehicles and equipment, and install Auxiliary Power Units on 30 agricultural vehicles. The project's scope is to ensure stricter emissions standards requirements are met and yield more diesel fuel conservation.

Indoor Air: Radon

Radon is an odorless gas and the second leading cause of lung cancer behind smoking. The Division of Radiation Control's (DRC) Indoor Radon Program, funded by the State Indoor Radon Grant from EPA, attempts to reduce the indoor radon concentrations in homes throughout the state to concentrations less than EPA's current action level of 4.0 picocuries per liter of air. DRC does this through public outreach and providing individualized assistance to homeowners and public agencies on all aspects of the indoor radon hazard problem. For the past couple of years, DRC has seen a substantial increase in radon testing and mitigation.

Radon testing is on the rise. Since November 2009, approximately 2,231 radon tests were conducted throughout the state, resulting in about 457 mitigation systems installed in residential housing.

Year	Radon Tests	Radon Mitigations
2009	2,231	457
2008	2,243	629
2007	904	316
2006	2,700	372
2005	900	150

The Radon Program has continued its longstanding cooperative alliance with Intermountain Health Care Hospitals throughout the state and works in partnership with the Utah Department of Health, the American Cancer Society, the American Lung Association, the Utah Safety Council, the Wasatch Front Regional Council, the Huntsman Cancer Institute, and other community groups to provide accurate information and awareness about Radon to the general public.

Climate and Energy

Since 2007, Utah has been a partner of the Western Climate Initiative (WCI), joining Arizona, California, New Mexico, Oregon, Washington, Montana and the Canadian provinces of British Columbia, Manitoba, Ontario and Quebec, to address climate change. Fourteen other U.S. states, Canadian provinces, and Mexican states are official observers in the WCI.

As part of its commitment to joining WCI, Utah achieved two significant milestones. In June 2008, Utah pledged to reduce greenhouse gas emissions (GHG) to 2005 emissions levels by 2020 - a state goal based on an analysis of a wide range of options identified by the Governor's Blue Ribbon Advisory Council on Climate Change (BRAC). In September 2008, Utah joined WCI members in unveiling a plan for a market-based cap-and-trade program as a major tool to reduce GHG emissions regionally. Over the past year, WCI has prepared several documents providing greater detail for implementing a regional GHG reduction program.

The Climate Registry

In 2008 and continuing into 2009, various Utah businesses and government agencies have joined The Climate Registry (TCR), a non-profit organization designed to serve as a single repository or clearinghouse for public and private entities to report their GHG emissions. TCR is also developing protocols for preparing and reporting GHG emissions for individual government and business sectors as a means to ensure the quality of GHG emissions data can be used for multiple purposes, including trading in domestic and international carbon markets. DEQ serves as the primary agency for collecting and reporting GHG emissions from Utah state agencies.

Carbon Capture and Geologic Sequestration

Also in September, as directed by Senate Bill 202, the Department of Environmental Quality launched a two-year process to develop regulations for carbon capture and sequestration, an approach for reducing GHG by capturing carbon dioxide from industrial sources, such as coal-fired power plants, and storing it in deep rock formations. A diverse workgroup is divided into three subcommittees to study the environmental and health impacts of capturing the carbon from an emission source, transporting the pressurized carbon to the sequestration site, and the injection of the carbon into the ground. The group is required to submit draft regulations to the

Legislature by January 2011. During 2009, the subcommittees have made initial progress by evaluating existing technical information and similar rule development activities of other states in considering how best to tailor corresponding rules for Utah. A progress report of the workgroup was presented to the Legislature, as required by Senate Bill 202, in May, 2009. An audio archive of the presentation is available through the Legislature's Website.

Utah Agricultural Carbon Markets

During 2008, DEQ participated in the formation of an ad hoc group consisting of officials from other Utah state and federal governmental agencies, Utah State University, electrical utilities, and private companies in order to provide science-based support for evaluating and identifying the potential for agricultural carbon sequestration within Utah. During 2009, this group combined with another group also sharing a common interest in agricultural carbon market development in Utah resulting in the creation of the Utah Agriculture Carbon Team (UACT).

In October, 2009, UACT sponsored a workshop on the campus of Utah State University specifically focusing on presenting and sharing information related to establishing a science-based platform to better understand the potential for carbon sequestration on agricultural, range and forested lands for use in carbon markets. A Web site will be created to post workshop presentations as well as other ongoing activities of UACT. Given the success of the workshop, UACT members believe this initial workshop will likely serve as a genesis for subsequent workshops and conferences.

Additionally, UACT continues to meet monthly to review and discuss efforts, activities, and research studies pertinent to agricultural carbon sequestration.

Summary

Progress in addressing energy and climate change issues as they affect Utah will be made as the Department of Environmental Quality continues working closely with the Governor's Energy Advisor, the Legislature, other key state and local governmental agencies, and stakeholders in order to evaluate and influence federal climate change legislation and regional GHG reduction initiatives in an effort to balance environmental protection, economic growth and a sustainable, energy-efficient future for Utah. For more information on this issue, visit www.climatechange.utah.gov.

Energy Success

In 2008, Intermountain's Central Laundry reduced its impact on the environment by reducing energy use by 59,100 kilowatt-hours of electricity. Energy savings were achieved by:

1. installing a heat recovery unit which strips heat from outgoing wash water and using it to preheat incoming water;
2. employing an inverter drive that eliminates spikes in energy use; and,
3. utilizing equipment that removes water from the linen more efficiently prior to drying.

Further savings of 3.3 kilowatt-hours of electricity and 11.9 million pounds of CO2 were realized at five of their facilities by optimizing central plant controls and completing equipment upgrades or retrofits. These energy savings were undertaken to meet Intermountain's long-term goal of achieving an EPA Energy Star rating for all of its buildings.

Utah's Clean Diesel Trucking Industry Project

DAQ is working with the Utah Trucking Association (UTA) to identify heavy-duty diesel trucks to retrofit, repower, or replace in order to reduce diesel emissions and conserve fuel. DAQ will use $235,200 it receives in federal grants for this project. DAQ also plans to apply for additional funding through the FY 2009/2010 National Clean Diesel (DERA) and SmartWay Programs. The SmartWay funds (if made available to Utah) will be used to set up a finance program for trucking companies to have access to loans with better terms, such as low financing to purchase EPA or CARB-verified diesel emission reduction technologies.

Utah is the crossroads for freight carriers traveling from the west coast to the east coast and from Canada to Mexico. The state's highway system is a critical piece for our country's distribution of food and agriculture products. Utah's geographical location is an ideal place for the transportation industry to thrive. For these reasons, DAQ actively seeks opportunities to work with the industry in providing funding opportunities for fuel-reduction technologies that also reduce diesel emissions.

Clean Fuel Grant and Loan Program

DAQ also implemented the Utah Clean Fuels and Vehicles Technology Grant and Loan Program, which is supported by Petroleum Violation Escrow (PVE) settlement money and other public and private sources. DAQ received applications from 16 different entities and 22 different projects statewide. DAQ was able to fund 11 projects ranging from converting police vehicles and refuge trucks to building a new CNG refueling station. Annually, a total of $500,000 - $250,000 for grants and $250,000 for loans—will be available to help cover the cost of converting a vehicle to operate on clean fuel, for the purchase of Original Equipment Manufacturer clean fuel vehicle, retrofitting diesel vehicles and for the purchase of fueling equipment for public/private sector business and government vehicles.

Artspace Success Story

Artspace, a nonprofit group, purchased the former Utah Barrel and Scrap site in downtown Salt Lake City in November 2007. Artspace addressed the soil and groundwater under an Enforceable Written Assurance and the Voluntary Cleanup Program. Artspace received a Certificate of Completion in May 2009. The site is currently under construction as a mixed use development. Artspace received an award by the Pollution Prevention Association in September 2009 for its cleanup efforts.

Ironton Success Story

This former steel mill in Provo operated from the 1920s to the 1960s. Since that time, the property has been abandoned and underutilized. The United States Steel Corporation, Provo City and the DEQ collaboratively entered into a Voluntary Cleanup Agreement in 1998 to address Ironton. The site was assessed, cleaned up and a Certificate of Completion was issued in December 2008. Over 200 acres were assessed and/or cleaned up to allow the property to be returned to a state of beneficial economic reuse and developed for commercial purposes.

Ironton Site Cleanup in Progress

Ironton Site New Development: Action Target

Cleaner Land

Introduction

Protecting the environmental quality of land is integral to ensuring Utah's air is clean and its water pure. To this end, DEQ focuses on the prevention, management, control and cleanup of toxic chemicals.

Toxic Chemicals

Under the Emergency Planning and Community Right to Know Act of 1986, and the Pollution Prevention Act of 1990, facilities must report their releases of more than 650 toxic chemicals and chemical compounds to the EPA and state officials. It is important to note that the majority of the releases include properly permitted activities allowable under federal law. This data is available to the public through the Toxics Release Inventory (TRI). The latest annual TRI data available is for 2008. Estimated releases are reported to be about 212.3 million pounds of chemicals. This represents a 20 percent increase over 2007's estimated reported 177.1 million pounds. Preliminary indications are that mining operations that generate "waste rock" are most likely the cause for this increase in land releases.

	2008	2007	2006
Air Releases	9.2 million lbs.	9.3 million lbs.	9.9 million lbs.
Land Releases	203.0 million lbs.	167.6 million lbs.	135.7 million lbs.
Water Releases	92,184 lbs.	94,405 lbs.	100,741 lbs.

Reclamation Projects

The Utah Division of Environmental Response and Remediation (DERR) is charged with protecting public health and Utah's environment by administering the superfund and state voluntary cleanup programs in order to clean up chemically contaminated sites and ensuring that underground storage tanks are properly managed. DERR also helps the U.S. EPA implement its Brownfields action agenda to protect public health and return impacted or potentially impacted properties to a state of beneficial economic re-use.

During 2009, 103 sites were mitigated with a total of 4,251 Underground Storage Tank sites cleaned up as of June. This represents a slight increase from the previous year. In 2009, 67 new sites were identified to be added to the 434-site list currently undergoing remediation.

Superfund

During 2009, the DERR staff worked closely with EPA to achieve milestones in the Superfund Program. Records of Decision for Utah Air National Guard Sites 2/8 and 10 and Flagstaff/Davenport OU2 were completed and signed. Superfund State Contracts for Bountiful/Woods Cross OU2 and Eureka Mills were signed or renegotiated allowing federal stimulus dollars through the America Recovery and Reinvestment Act (ARRA) to be used in the cleanup of those sites. DERR completed Five Year Review Reports for Murray Smelter, Pallas Yard, Kennecott (South Zone areas), and Sharon Steel.

Cleanup work progressed at other Superfund National Priorities Listing (NPL) sites, including Bountiful/Woods Cross OU1, Sharon Steel ground water monitoring, and the Midvale Slag Riparian Area. DERR also coordinated with EPA as EPA responded to public comments received on the proposal to list U.S. Magnesium on the National Priorities List.

DERR also participated in EPA removal actions at the Cook Slurry and Parish Chemical sites, among others.

Voluntary Cleanup Program

The Utah Legislature in 1997 passed a law that created the Voluntary Cleanup Program (VCP). The VCP provides a mechanism to rehabilitate Brownfields and allows for property owners or others seeking to cleanup environmentally impaired sites to do so with DEQ oversight. As of June 2009, 32 Certificates of Completion have been issued under the Voluntary Cleanup Program. Two notable sites completed in 2009 include the Ironton site in Provo City (Utah County) and the Utah Scrap and Barrel site in Salt Lake City (Salt Lake County).

Waste Management

The Division of Solid and Hazardous Waste provides regulatory oversight of the management of hazardous waste generated by industries and businesses, and oversight of non-hazardous solid waste generated by individuals, businesses and industry.

Approximately 4.6 million tons of non-hazardous solid waste was disposed in permitted landfills during 2008, the most recent reporting year for non-hazardous waste generation and management – double the amount disposed in 2007. An additional 129,000 tons was disposed in approved solid waste incinerators.

Pollution Prevention

Waste Tire Program

The Waste Tire Recycling Program continues to achieve success. During fiscal year 2009, nearly 100 percent of all tires collected in the state were recycled or reused. That amounted to 33,015 tons, or 2 million tires recycled.

Used Oil Recycling

In 1993, the Utah Legislature enacted the Used Oil Management Act, which required DEQ to develop a statewide Used Oil Recycling Program. The volume of used oil recycled in 2008 from household participation was almost the same as 2007 with 476,274 gallons being recycled through the Do-It-Yourself program. The total amount of used oil recycled statewide, which includes businesses and DIYer used oil, declined slightly from 12,172,051 gallons in 2007 to 11,950,227 gallons in 2008.

Federal Facility

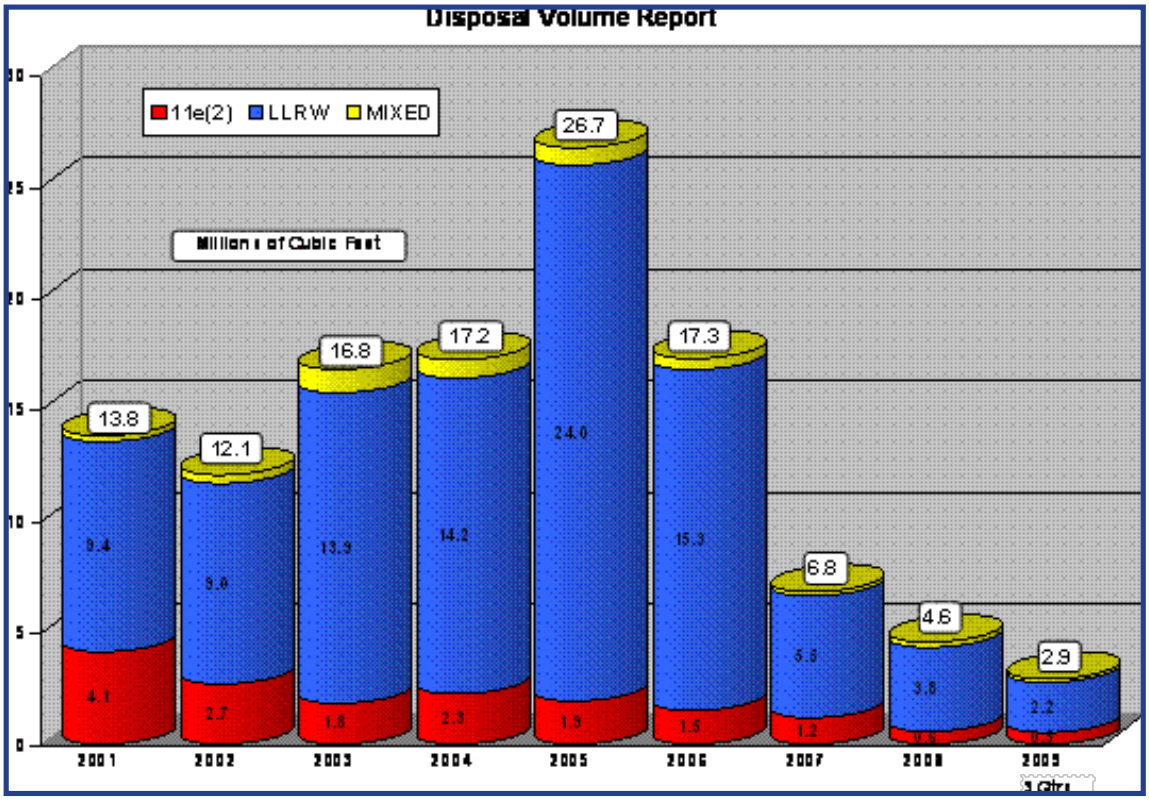
The Deseret Chemical Depot, located in Tooele County, is on schedule to close in 2011 after it finishes the mission of destroying 45 percent of the nation's chemical weapons stockpile. As of September 2009, approximately 65 percent, or 4,200, one-ton containers of the total of 6,400 containers of chemical mustard agent have been processed. One hundred percent of all stockpile nerve agents in containers and munitions, which were stored at the Depot, have been destroyed.

Low-Level Radioactive Waste Disposal

On the national front, Chem-Nuclear, LLC, a subsidiary of EnergySolutions, Inc., in Barnwell, S.C. stopped taking waste from anyone outside of the Atlantic Compact on July 1, 2008. Chem-Nuclear, LLC, receives all classes (A, B and C) of low level radioactive waste. The U.S. Ecology facility at Hanford, Wash., serving the Northwest Compact (Alaska, Hawaii, Oregon, Washington, Montana, Wyoming, Utah and Idaho) also receives all classes of low level radioactive waste and partners with the Rocky Mountain Compact (Colorado, New Mexico and Nevada) in receiving limited amounts of low level radioactive waste. A new facility, Waste Control Specialists in Texas has

received a license to dispose of low-level wastes from Texas and Vermont as well as a separate disposal option for federal government wastes.

Volumes of waste received for disposal at EnergySolutions continue to decline from a peak 26.7 million cubic feet in 2005 to the current year. This volume represents Class A low-level radioactive waste, uranium mill tailings, and mixed waste.



Foreign Waste

EnergySolutions' plans to dispose of foreign waste from Italy continue to be derailed by opposition that now includes Governor Gary Herbert. In 2007, EnergySolutions applied for a license to the Nuclear Regulatory Agency (NRC) to import up to 20,000 tons of waste from Italy's nuclear program, process it in a company-owned plant licensed in Tennessee and dispose of up to 1,600 tons of process residue at its disposal site in Tooele County, Utah. The Utah Radiation Control Board and Governor Huntsman opposed the move, contending that low-level radioactive waste disposal capacity in the United States is very limited and should be reserved for domestically generated low-level waste.

Utah petitioned to intervene in the NRC import licensing proceeding. NRC also received over 2,500 public comments relating to the import request. A requirement for NRC to issue an import license is that "an appropriate facility has agreed to accept the waste for management or disposal." A dispute over whether the Northwest Interstate Compact on

Low-Level Radioactive Waste Management may control the flow of waste to EnergySolutions' Clive site led NRC to hold the license application in abeyance.

Utah is a member of the Northwest Compact and as such it requires EnergySolutions to obtain Compact approval before low-level waste may be disposed of at Clive. The Compact voted that its existing approval, allowing out-of-Compact waste access to the Clive facility, did not extend to imported radioactive waste. EnergySolutions filed a lawsuit in Utah federal district court challenging the authority of the Compact over the Clive facility. The district court ruled that because the Clive facility is not a "regional disposal facility" (like the Compact's disposal site at Richland, Washington), the Compact does not have authority to control the flow of out-of-Compact waste to Clive. The State of Utah and the Compact appealed the decision to the 10th Circuit Court of Appeals, pointing out that Congress granted approval to the Compact to control waste coming to any "facility" (i.e., any site used for the storage or disposal of low-level waste, excluding federal waste facilities) in the Compact region.

Federal legislation, The Radioactive Import Deterrence Act, H.R. 515, currently under consideration before the House Energy and Commerce Committee (and sponsored by Reps. Matheson and Chaffetz, among others), would ban the import of radioactive waste, except under certain limited circumstances.

The current status is that EnergySolutions cannot import radioactive waste from Italy until the NRC approves its import license application. NRC will likely wait for the 10th Circuit Court of Appeal to make a decision (not expected until late next year) before it addresses EnergySolutions' import license application.

Recycling Successes

In 2009, the Division of Solid and Hazardous Waste continued its support for the Electronic Recycling Steering Committee and helped develop an Electronic Recycling Joint Resolution which was passed by the Legislature. The resolution encourages electronics recycling. The Division also provided funding to assist with several single-day electronic recycling collection events held in Salt Lake City, Provo, Tooele, and Summit and Wasatch Counties. DEQ's oversight of the Mercury Switch Removal Program has resulted in 8,909 mercury switches removed from automobiles and 19.6 pounds of mercury collected that might otherwise been put in the trash and ultimately ended in a landfill or put into the air as emissions during scrap car recycling.

Depleted Uranium

On December 17, 2009, Governor Gary Herbert and the U.S. Department of Energy (DOE) negotiated a deal that allows a trainload of depleted uranium (DU) shipped from the Savannah River cleanup in South Carolina to EnergySolutions' landfill in Clive, Utah. But, the waste will be stockpiled at the low-level landfill and additional shipments of DU will be suspended pending a site-safety analysis, which is kunder way.

On December 15, Governor Herbert sent a letter to Energy Secretary Steven Chu urging him to halt the shipments until a safety analysis on DU disposal is completed. On November 10, 2009, the Utah Radiation Control Board decided to seek rulemaking that would require a technical study of proper disposal methods for DU. Armed with federal stimulus funding the Energy Department decided to go ahead and ship to Utah even though the rulemaking process won't be completed until about May, 2010. DU is a by-

product of the uranium enrichment process that becomes more radioactive over time for up to 2 million years. EnergySolutions sought to dispose of the waste before the Nuclear Regulatory Commission (NRC) completes a new rule on disposal of significant quantities of DU in three years.

Despite pressure from some environmental groups, NRC earlier in the year decided against reclassifying DU as a "hotter" waste – a move which would have changed disposal requirements. DU is classified as a low-level (or Class A) radioactive waste. It has some commercial use. However, demand is currently much less than the amounts generated. Disposal is the only option for the rest. Under federal law, the Department of Energy is required to accept DU from an NRC licensed uranium enrichment facility. DU can also be accepted by a licensed commercial disposal site. EnergySolutions' Clive facility holds a Class A radioactive waste license and currently has DU disposed at its facility.

Blending of Low-Level Radioactive Waste

The issue of blending higher concentrated low-level waste (Class B and C waste) with lower concentration waste (Class A) waste has come to the forefront because of lack of disposal access for 36 states for Class B and C radioactive waste. One of the problematic low-level waste streams is ion exchange resins generated at nuclear power plants throughout the United States. The Nuclear Energy Institute and the Electric Power Research Institute have conducted studies on blending during the previous two years. These resins, small beads of plastic, remove radioactive material from waters used for cooling nuclear reactors. Depending on how often the resins are changed, they can be the higher classification B and C low-level wastes. NRC estimates that power plants throughout the United States generate roughly 85,000 cubic feet of reins annually. Class A waste makes up ninety percent of the annual resin production.

A proposal to blend ion-exchange resins from power plants at EnergySolutions Bear Creek Facility in Tennessee is under evaluation. Under this effort, Class B and C resins would be downblended to Class A waste and eventually shipped to the Clive facility.

Currently NRC only has guidance to address the blending of waste. Blending of waste typically occurs during cleanup of a site where lower and higher concentration of waste is blended into a homogeneous final form. Blending of clean and concentrated soils for purposes of dilution to change waste classification is not allowed under the current guidance. Blended materials require disposal at a licensed low-level waste facility.

On October 8, 2009 the NRC Commission directed the NRC staff to make recommendations on blending of low-level waste. Commissioner Jaczko indicated that the NRC has received several inquiries from stakeholders asking the NRC to clarify the agency's position on blending and what is

acceptable under NRC regulations and guidance, especially with respect to blending that result in a change in classification of the waste. Commissioner Jaczko indicated a certainty that the are policy issues that will need to be considered by the Commission.

Commissioner Jaczko indicated that the NRC staff should specifically consider:

- issues relating to intentional changes in waste classification due to blending, including safety, security, and policy considerations;
- protection of the public, the intruder, and the environment;
- mathematical concentration averaging and homogeneous physical mixing;
- practical considerations in operating a waste treatment facility, disposal facility, or other facilities, including the appropriate point at which waste should be classified; and,
- recommendations for revisions, if necessary, to existing regulations, requirements, guidance, or oversight relating to blending of low-level radioactive waste.

Uranium Mills

Denison Mines (USA) Corporation, (formerly International Uranium Corporation) operates a mill in Blanding, Utah, where it extracts uranium from ores and alternate feed materials. The mill processed 44,136 tons of alternate feed material in 2007. Only 500 tons of alternate feed materials were processed in 2008 before switching to conventional ores. The Mill processed 250,746 tons of conventional ore in 2008 and 144,434 tons of conventional ore in 2009. The Mill has processed 92.17 tons of alternate feed material in 2009 up to September 30, 2009, and is expected to process a total of 119 tons of alternate feed material in 2009.

Uranium One Utah (formerly Plateau Resources) near Ticaboo, Garfield County has submitted a license amendment request to resume operations. The Division of Radiation Control is currently working through the technical issues regarding the amendment. Another facility, Rio Algom in Lisbon Valley, southeast of Moab, is in the process of reclamation activities. The reclamation activities are completed and the Division of Radiation Control is waiting for the completion report to be submitted by the licensee prior to License termination.

Proper Medication Disposal Success

In 2009, the Division of Water Quality (DWQ) has collected over 300 pounds of unused medications through various "Medication Take-Back Events" co-sponsored by various agencies and businesses throughout the state that offer Utahns a chance to discard their unwanted drugs safely. DWQ provides $1,000 grants to law enforcement agencies to establish a "Drug Collection for Proper Disposal" program that have resulted in 30 locations throughout Utah where highly secured collection bins are placed in the lobbies of law enforcement stations where consumers bring unwanted medications and drop them in the box.

The materials are then transported to a hazardous waste site for incineration. The reason it's so important to properly dispose of medications is that flushing medicines down the toilet or sink enter the water because wastewater treatment plants are not designed to remove them. Evidence of the medication's harmful effects has been surfacing in our waterways. Putting medicines in the garbage or keeping them in an unlocked medicine cabinet create an invitation for abuse. Studies show that one in five teens report intentionally misusing someone else's prescription drugs to get high. Many of these are obtained by raiding a medicine cabinet or obtaining them from a friend. Local health departments welcome the idea of collection bins.

Because of the strict laws governing the handling of prescription drugs, the take-back collection programs must be administered by law enforcement agencies. Otherwise, the options of disposal of drugs are limited to the trash, if it is mixed with kitty litter or coffee grounds and put in a sealed container before throwing them away. For more information, visit www.medicationdisposal.utah.gov/index.htm.

Cleaner Water

Introduction

Utahns and countless visitors continue to enjoy safe drinking water and many relatively pristine waterways for numerous industrial, agricultural, and recreational purposes. Given that Utah is the second driest state in the nation, it goes without saying that water is a precious resource needed to maintain our communities and many aspects of our economy. Given its importance, water conservation efforts are critical, but so is the need to maintain the quality of water if this precious resource is to continue to meet the needs of current and future generations.

Significant strides have been made in protecting water resources since passage of the 1972 federal Clean Water Act (CWA). The vast majority of Utah's waters are of sufficient quality to meet the uses required of them, but 30 percent are partially impaired. High levels of mercury continue to be found in some fish species in waters throughout Utah. The Division of Water Quality (DWQ) continually works toward not simply identifying problems, but searching for solutions for continued improvements in waters throughout the state.

DWQ continues to make strides to better understand the Great Salt Lake - a truly unique ecosystem that has worldwide significance as a refueling stop for millions of migratory birds. Last year, a DWQ passed a water quality standard that protects GSL birds from toxic selenium concentrations. A detailed implementation strategy is also under development that will provide an early warning mechanism should selenium levels begin to increase significantly. Initial investigations into how best to protect the Great Salt Lake ecosystem from mercury problems are nearly complete. Last summer a study was initiated that will use sediment cores as a time machine to place current water quality observations in context with past conditions, dating back to pre-European settlement.

Protecting, Maintaining, and Restoring Utah's Waters

Nationwide, all waters are classified with numerous beneficial uses that reflect the services that each waterbody provides to society and the environment. In Utah, these uses include protection of aquatic organisms (fish and other important organisms upon which they depend), recreational uses, agricultural uses, and drinking water sources. Standards, developed with numerous scientifically rigorous studies conducted over the past 30 years, are applied to each of these uses and represent the core of Utah's efforts to ensure that healthy waters can continue to be enjoyed by all. Simply put, standards are the rules that establish pollutant concentrations that ensure protection of the beneficial uses of all waters.

Federal law requires states to carefully revisit their water quality standards every three years. In 2008 DWQ undertook this "triennial review" and proposed numerous changes to our water quality standards based on the recommendations of a stakeholder workgroup representing the interests of the environment, industry, and agriculture. EPA approved most of the proposed changes to our standards, but a couple of provisions were rejected in response to a Federal Court ruling in Kentucky. DWQ is in the process of working with stakeholders to make immediate changes to the rule to comply with the court ruling, and to develop a detailed implementation strategy for elements that have the potential to place unreasonable regulatory burdens on industry.

Measuring Current Conditions

The federal CWA requires that Utah monitor current conditions and water quality trends for all 14,250 miles of rivers and streams and nearly 3000 lakes and reservoirs. To accomplish this task DWQ implemented a Probabilistic Survey in the fall of 2009 incorporating a random site selection and biological indicators to better and more efficiently assess all waters of the state. To increase its capacity and network of monitoring locations, DWQ intends to expand partnerships with other state and federal agencies, broadening its cooperative monitoring to include other groups such as citizen monitors with the formation of a Statewide Monitoring Council. DWQ also received over $170,000 in federal funds to assist with monitoring efforts, which continues to become a growing need as Utah's population expands. To qualify for these funds on a yearly basis, DWQ developed a 10-year strategic monitoring plan in 2009 and began implementing the strategy in the fall of 2009.

The monitoring information is included in a biennial report to Congress that evaluates whether water quality is sufficient to maintain their uses. Development of this report, required under section 303(d) and 305(b) of the Clean Water Act, involves analysis and interpretation of thousands of data points, which must be placed in context of local beneficial uses and water quality standards. This process allows DWQ to identify "impaired" waters that are in need of improvement. Trends in water quality are also evaluated in this report, which measures the progress made in protecting

Utah's waters. DWQ recently completed a draft of this Integrated Report, which will be available for public comment in early 2010. New in 2009 are mathematical models that allow DWQ to more efficiently and effectively evaluate the overall condition of these waters.

Improving Utah's Waters

If impaired waters are identified, the next challenge is to determine how to restore its uses. One way this is accomplished is with a required restoration plan based on a "Total Maximum Daily Load" (TMDL) study that calculates the maximum amount of pollution a body of water can receive in order to still meet water quality standards. This plan also identifies sources of pollution so that subsequent restoration efforts can be prioritized.

DWQ also partners with other agencies, such as the Division of Wildlife Resources, Utah Department of Agriculture and Food, Farm Bureau and the Utah Association of Conservation Districts to combine resources and avoid duplication of efforts in watershed protection programs. An example of that effort is the Utah Nonpoint Source Pollution Management Program, which helps landowners obtain funding to implement restoration practices on private land.

Several watershed studies were completed in 2008 that outline the causes and sources of impairments as well as the actions needed to restore water quality. Studies were completed for Brough, Steinaker, and Red Fleet reservoirs in the Uintah Basin and Newcastle Reservoir in Iron County in cooperation with local, state and federal stakeholders.

Also in 2008, DWQ completed a final report on PCBs found in Utah Lake after the discovery two years earlier that elevated levels were found in carp during Division of Natural Resources' (DNR) efforts to restore the endangered June Sucker. The report concluded that the sediment PCB concentrations are below ecological screening levels that scientists have set as a protective benchmark. PCB concentrations in fish from Utah Lake were also found to be comparable to those sold in the supermarket. These studies will allow DNR to proceed with their market-based restoration plans.

Permitting Surface Water Discharges

Another way DWQ protects the quality of our waters is by issuing permits to all entities that discharge pollutants to surface waters, including: discharges of domestic and industrial wastewater, and more diffuse sources like storm water. These permits establish allowable concentrations of pollutants and monitoring requirements to ensure that industry can continue to operate without degrading the uses of Utah's waters. DWQ utilizes an inspection program coupled with review of water quality data from each discharger to ensure that the terms of these permits are followed. Also, a careful review of each permit is conducted every five years to accommodate growth or respond to unforeseen environmental consequences of these discharges.

Numerous studies have identified storm water as one of the most significant threats to water quality in suburban and urban areas. Federal law requires that some industrial facilities and construction projects develop plans to minimize stormwater problems and apply for a permit from DWQ who ensures compliance. Currently there are approximately 1,130 active construction storm water permits and 1,033 presently active industrial storm water permits. Storm water permits are also required for municipal separate storm sewer systems that serve communities with more than 10,000 people and a population density of at least 1000 people per square mile. These permits require that DWQ works with communities to develop a comprehensive storm water management program that evaluates potential sources of stormwater pollution, and then establishes ordinances and public outreach efforts to minimize potential water quality problems. Currently 80 communities in Utah have stormwater permits that have been completed or are under development.

DWQ currently oversees 129 domestic and industrial entities that have individual permits to discharge treated industrial or domestic wastewater in Utah's waters. These include industries or cities and towns which have treatment facilities that discharge effluents to surface waters. Another 137 specialty permits have been issued, which cover discharges from activities such as coal mines, construction de-watering and pipeline hydro testing projects, fish hatcheries, drinking water plants, ground water remediation projects, biosolids (sewage sludge) processing projects, and industrial pre-treatment facilities. In addition there are 57 permits for "Concentrated Animal Feeding Operations (CAFO)," which will be discussed in a separate section of this report.

Permits typically define a sampling schedule that allows DWQ to ensure that the discharge does not impair the beneficial uses of the receiving water. On average, there was a 94 percent compliance rate for all the regulated domestic and industrial facilities in 2008.

Drinking Water

The vast majority—99.86 percent—of Utahns drink water from approved public water systems, while a small number of individuals and businesses get their drinking water from private wells. Most public drinking water systems get their water from groundwater sources. DWQ helps protect groundwater sources from being contaminated by pollution (see below), whereas Utah's Division of Drinking Water (DDW) helps ensure that all of our citizens can enjoy clean and healthy drinking water by assisting with testing treatment and delivery systems, conducting inspections of water systems, and by enforcing the Drinking Water Source Protection program. These programs are a success as 95.7 percent of the public water systems meet all health-based standards of the Safe Drinking Water Act.

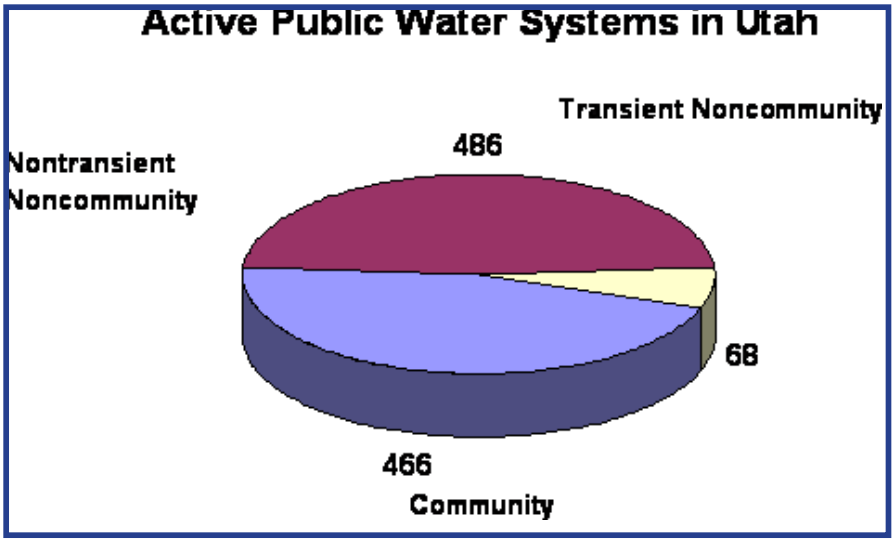
DDW's programs are intended and designed to protect people's health and that Utah's citizen's drinking water is safe. Through a grant from the Utah Department of Homeland Security, DDW assists water systems in developing Emergency Response plans and Vulnerability Assessments. The training includes mock disaster scenarios (tabletop exercises) that allow water systems to practice and test their ability to deal with an emergency.

Over 2400 water distribution and water treatment operators are currently certified by DDW. Operators are tested periodically, and must receive continuing education in order to maintain and renew their certifications. As a result of the professionalism of the water operators in the State, water systems have fewer compliance problems, and the number of approved systems has increased.

Division of Drinking Water has a plan review and operating permit process to ensure proper design and construction of public drinking water facilities such as water treatment plants, wells, springs, storage tanks, pumps. In 2008, the Division of Drinking Water staff conducted engineering reviews of 366 public drinking water projects (a total of 1,236 submittals). Among the 366 projects received in 2008, 273 have received operating permits.

Public Drinking Water Systems

Utah has 1020 water supply systems. A public water system is defined as any water system, either publicly or privately owed, which provides drinking water for 15 or more connections, or 25 or more people, at least 60 days of the year. These include community systems serving people year round; non-transient non-community water systems that serve workers at a factory, and transient non-community water systems such as seasonal campgrounds or highway rest stops.



Groundwater Protection

The Groundwater Protection Section in the Division of Water Quality administers two primary programs to protect the quality of Utah's groundwater resources:

1. the federal Underground Injection Control (UIC) Program; and
2. the State Ground Water Discharge Permit Program.

The UIC Program protects underground sources of drinking water by reviewing and approving numerous small-scale injection activities such as storm water dry wells, ground water remediation wells, and domestic underground drain fields. A major effort is underway to identify and close motor vehicle waste disposal wells that have been banned by EPA. The UIC Program also issues permits for aquifer storage and recovery operations to allow municipal water districts to capture spring runoff water and store it in drinking water aquifers for future use. The UIC Program Coordinator recently assembled a diverse work group to develop rules for the capture, transportation, and geologic storage of carbon dioxide into deep saline aquifers in response to 2008 legislation.

The Ground Water Discharge Permit Program protects ground water quality by issuing permits to agricultural and industrial facilities that have the potential to discharge pollutants into ground water. Agricultural facilities include large concentrated animal feeding operations such as dairies and swine, and industrial facilities include fossil fuel power plants, mining and processing operations for copper, gold, phosphates, tar sands, and uranium.

The two primary elements of ground water discharge permits are:

1. best available technology to minimize subsurface discharge; and,
2. ground water quality monitoring.

Currently there are 35 active groundwater discharge permits regulating about 90 facilities.This program also reviews aquifer classification petitions for approval by the Water Quality Board, which may used as a planning tool by local governmental agencies. The Board has approved 11 aquifer classifications throughout the state including the recent Salt Lake Valley classification.

Utah's Water Loan Programs

In 2009, the Drinking Water Board funded 37 projects, totaling $38.4 million through the State Revolving Fund. These loans are being used to help construct new water treatment plants, replace aging water pipes and storage tanks, develop new sources of drinking water (wells and springs), and perform planning studies to determine the community needs and best alternatives to correct system problems. Since 1983, 356 projects have been funded at a cost of $245.1 million.

Out of the 37 projects funded in Fiscal Year 2009, 14 projects totaling over $18 million are a direct result of the stimulus funding passed by Congress earlier this year, called the American Reinvestment and Recovery Act of 2009 (ARRA).

The development and maintenance of Wastewater Treatment Plants that use the best available science and technology to remove pollutants from wastewater remains a critical part of DWQ's efforts to protect the quality of Utah's waters. Construction of new sewer plants or major upgrades to existing plans can cost millions of dollars, yet these expenses are sometimes necessary to accommodate economic growth. DWQ works with local communities to find the resources to meet the challenging needs of their communities. These efforts include helping communities seek federal grants and with programs that provide low interest loans, with payments going back into a pool of funds to pay for future development needs.
The Utah Water Quality Board funded 10 wastewater projects in 2008 with the assistance of EPA grants, the State Revolving Fund or the Utah Wastewater Loan Program. As of December 31, 2008, these projects have totaled $734 million - an increase from the $683 million since 1972. The number of wastewater projects as of December 31, 2008 that have received funding total 304.

As of October 31, 2009, the Water Quality Board funded three traditional point source projects, providing a total of $8.6 million in funding through the State Revolving Fund to leverage almost $20 million of construction projects. The Board also funded thirty-seven (37) nonpoint source projects totaling over $7.2 million in funding assistance for nonpoint source projects with a significant impact on the environment.

The Water Quality Board received almost $20 million in stimulus funding through the American Recovery and Reinvestment Act of 2009 (ARRA). To date, $6.7 million of these funds have been obligated for projects complying with ARRA requirements, and the balance has been authorized for projects that are expected to meet ARRA compliance requirements by the end of calendar year 2009.

Business Assistance Success

DEQ's Business Assistance program is committed to providing Utah companies with strategies to remain competitive, while ensuring companies reduce waste, save energy, and conserve natural resources. Under the Business Assistance program, DEQ participated as an ad-hoc member of Intermountain Healthcare's (Intermountain) Green Strategies team. Intermountain's Central Laundry demonstrated its commitment to conserving natural resources by saving over 13 million gallons of water in 2008. Water savings were achieved by converting to an efficient continuous batch washer that uses .56 gallons of water per pound of laundry, compared to the national benchmark of 1 gallon per pound. Further water savings were achieved by recycling rinse water into wash water, reducing water consumption by 40 percent.

Great Salt Lake Water Quality Steering Committee

The Great Salt Lake (GSL) is a critical resource to our economy, supporting multimillion dollar commercial/industrial uses such as brine shrimp harvesting and mineral extraction. Further uses that have significant economic impacts include waterfowl hunting, tourism and other recreational practices. The lake is also important to the environment, providing critical habitat to millions of birds. Overall, the lake is truly unique resource to Utah.

However, the lake's unique characteristics also make it difficult to apply water quality practices employed elsewhere to ensure that the many

Great Salt Lake Advisory Council

In 2008, Governor Huntsman appointed a 12-person Great Salt Lake Advisory Council to decide how to manage the lake for future generations. Increasing pressures from development, mineral extraction, pollution, and drilling have increased pressure on this unparalleled resource. A common forum or governance structure, similar to those which oversee other water bodies of national importance, could help guide protection and management of the lake. The Council is considering the creation of an overarching commission similar to those in the Great Lakes, Chesapeake Bay and the Puget Sound. In May 2009, the Council made its recommendations to Governor Huntsman, some of which could be taken up by the Legislature in 2010. For more information, visit www.gslcouncil.utah.gov.

benefits the lake provides can continue to be enjoyed by future generation. Developing programs to protect the lake continues to be a DWQ priority.

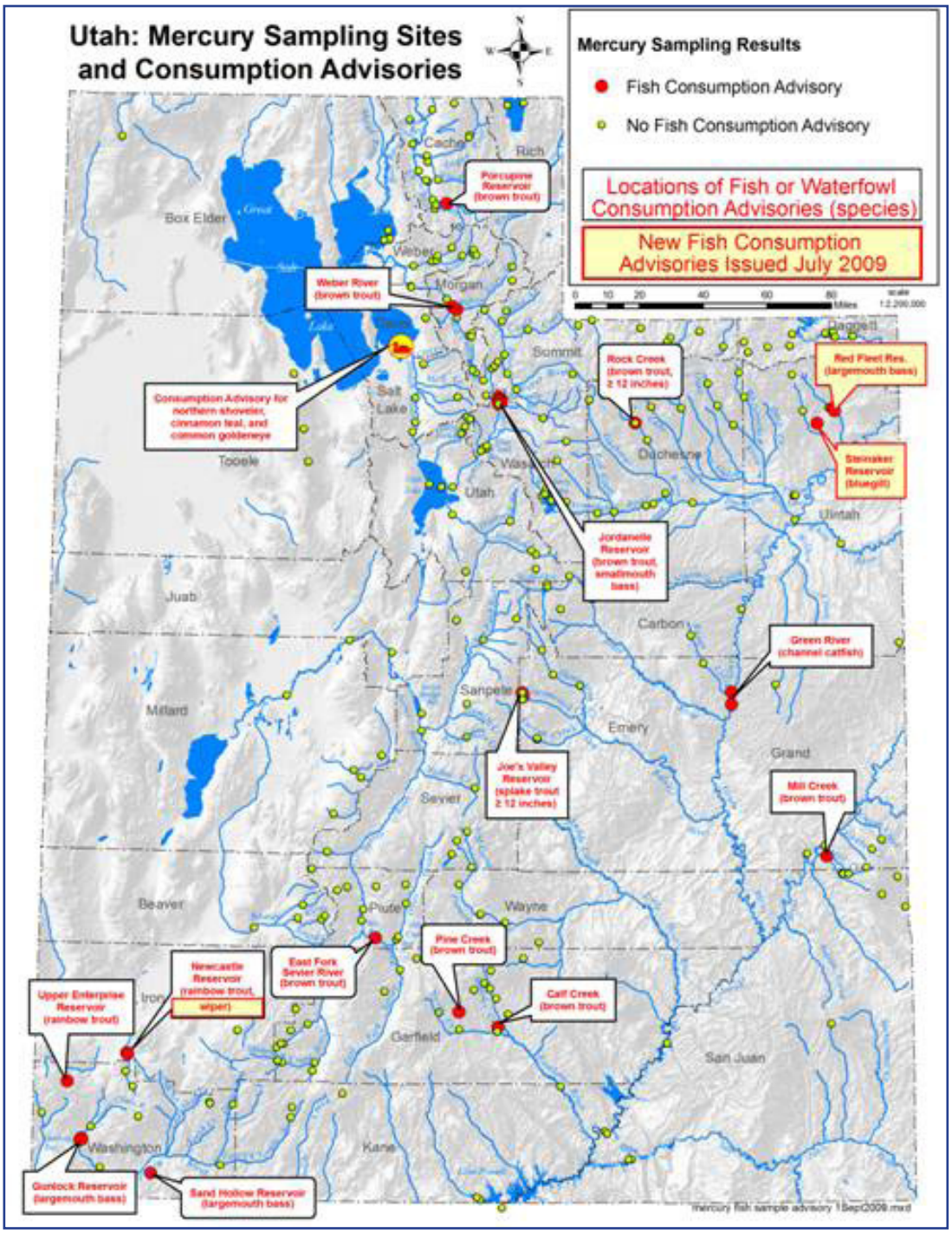
The high salinity of GSL prohibits application of water quality standards applied elsewhere. In 2008, the culmination of a four-year-long process was completed to develop a selenium standard based on bird egg tissue concentrations. This effort was overseen by a committee, composed of diverse stakeholders, who in turn oversaw a science panel of international experts of selenium toxicity. The standard was adopted by the Water Quality Board. Both the standard itself and the open collaborative process used to generate the rule have received national attention.

The selenium standard, while a good start, only represents the first step in developing a water quality program for the GSL. DWQ worked with EPA and others to develop a framework that identifies methods to assess the overall condition of the GSL ecosystem. Also, DWQ is currently involved in a multi-agency collaboration that is attempting to better understand the overall effects of mercury in the lake; this study also hope to quantify mercury sources and estimate the potential for rehabilitation in areas where mercury levels are high. DWQ is also in the final phases of recommending an assessment method for the impounded wetlands surrounding the GSL, which will allow DWQ to measure the overall health of these critical nesting habitats. While all of these studies are ongoing, many of the results are already becoming available. 2010 promises to be a landmark year in taking significant strides forward with GSL water quality programs. For more information, visit www.waterquality.utah.gov/WQM/index.htm.

Additional Mercury Tests in Fish Yield More Advisories

Since 2000, the Division of Water Quality has tested fish for mercury contamination in 285 bodies of water in Utah, which includes 195 streams and rivers and 90 lakes and reservoirs. Fish in 16 of those waterways tested (only 5 percent of waters tested) have elevated levels of mercury. Annually, new and revised fish consumption advisories are issued if warranted. When mercury is deposited in waterways, bacteria convert it to methylmercury, which can build up in the tissue of fish and other wildlife, which may be eaten by wildlife and people. Exposure to mercury occurs most frequently through eating contaminated fish.

The 2009 fish consumption advisories recommend that pregnant woman and children should not eat Largemeouth Bass from Red Fleet Reservoir or Bluegill from Steinaker Reservoir and adults should limit their consumption of these fish to two 8-ounce servings per month and no one should eat Wiper from Newcastle Reservoir. For a complete list, visit www.fishadvisories.utah.gov/.



Limited funding could slow down fish testing in 2010. However, given their importance to Utahns DWQ hopes to continue work in Lake Powell and the Great Salt Lake (GSL).

Fish have been collected and analyzed in the south portion of Lake Powell and DWQ is attempting to leverage the funds to collect and process samples from the northern portion. In the GSL, research to analyze water, sediment, waterfowl and organisms in their foodchain is near completion.

Meanwhile, the Division of Air Quality will track the deposition of mercury from the air, including evaluations of mercury emitted by industrial sources. These air deposition studies were made possible by mercury monitors purchased in 2007 and late 2008. These GSL studies were prompted by U.S. Geological Survey studies that found some of the highest levels of water column mercury in the country and subsequent investigations that found high concentrations in some duck species.

DWQ is facilitating the Statewide Mercury Work Group to coordinate and collaborate mercury studies and investigations ongoing in Utah. Stakeholders from a broad base of state, federal, and non-profit agencies, industries, and the public, participate to maximize the group's effectiveness. There is much collaboration with the Great Basin Regional Mercury Work Group to solve these important issues that affect our waters.

Animal Feeding Operations and Concentrated Animal Feeding Operations

The Animal Feeding Operations (AFOs) Committee is a partnership of the Division of Water Quality, Utah Department of Agriculture and Food, Utah Farm Bureau, Utah Association of Conservation Districts, Utah State University Extension, United States Department of Agriculture Natural Resources Conservation Service, United States Environmental Protection Agency (Region 8), and Utah's animal producer groups.

In 2001, the AFO/CAFO Committee developed the Utah Strategy which is a compliance assistance agreement to help animal feeding operations with compliance to environmental regulations to improve water quality. AFOs are animal production facilities where animals are confined, such as dairies and feedlots.

On Dec. 31, 2008, the Utah Strategy expired; a draft strategy has been prepared to continue the Utah Strategy work. In addition, DWQ has entered into two agreements to provide funding to Utah Farm Bureau and the Utah Association of Conservation Districts to continue compliance assistance. Also, DWQ entered into a contract with Utah State University Extension to provide educational outreach to AFOs in the state.

Working through the Utah Strategy and the new contracts, experts of the AFO Committee partnership provide assistance to AFOs through compliance and technical assistance. The agricultural partners conduct on-farm assessments, prepare nutrient management plans, help design and fund new waste containment structures, and assist in the implementation of proper management practices at AFOs. The partners assist producers in obtaining cost-share and loan funding to address manure management problems. The Utah Strategy focuses compliance assistance on smaller AFOs which do not require discharge permits.

As of December 31, 2008, nearly 3,000 facilities have been assessed. Of those, 393 are AFOs with compliance problems. Since 2001, 98 percent of the problem AFOs have had management plans prepared and 80 percent are in full compliance. More work needs to done, but the Utah Strategy, AFO Committee, and the agricultural partnership have been very successful in improving water quality in Utah by reducing water quality impacts by AFOs and CAFOs. This success is a result of the cooperation and expertise of the AFO Committee organizations and producer groups.

In 2010, DWQ will amend Utah Administrative Code and will issue a new Utah Pollutant Discharge Elimination System CAFO General permit to reflect recent federal CAFO Rule changes. Compliance assistance and educational outreach will be provided by DWQ and the agricultural partners. This will include compliance worksheets for producers, educational workshops throughout the state, and information on the USU Producer's website.

Successful Partnerships with Local Health Departments

The Utah Department of Environmental Quality and Local Health Departments are updating the roles and responsibilities identified in the, "Environmental Service Delivery Plan"—a process aimed at addressing environmental issues at both the State and Local levels while avoiding duplication of services. That plan, established when DEQ ceded from the Department of Health and became its own Department on July 1, 1991, outlines the working relationship between DEQ and each of the 12 local health departments. Each year DEQ provides a portion of its General Fund money plus other funding to local Health Departments for specified services, such as surveying water systems, providing underground tank inspections and responding to environmental emergencies like chemical spills. Specific duties are renegotiated every three years. Because a new contract period will begin in July, 2010, DEQ leadership visited each local health department to listen to concerns and discuss priorities. Funding is currently a challenge. DEQ took significant budget cuts in the FY2010 budget and anticipates a reduction in General Fund money for FY 2011, a reality that is felt by both. The partners continue to discuss ways to meet critical services.