the Watershed Watch

Newsletter of the Salt Lake County Watershed Planning & Restoration Program

Fall 2012, Issue 11

In This Issue

New & Noteworthy

"Wild & Scenic Film Festival"
Utah Museum of Fine Arts
November 15, 6-9pm
For tickets and more info visit www.envst.utah.edu

Check out Explore Utah Science, a new website that uncovers science stories that matter to Utahns!
www. ExploreUtahScience.org

Questions? Comments?

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SALT LAKE COUNTY

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Happy 40th Clean Water Act

Where We Are Today and Wishes for the Next 40 Years

Excerpted with permission from the River Network, original article by Todd L. Ambs, River Network President

It is 2012, a full 40 years since Congress passed the Federal Water Pollution Control Amendments of 1972, better known as the Clean Water Act (CWA). The bill was vetoed by then President Nixon, but overridden by a Congress tired of watching rivers catch on fire and raw sewage flush into community waterways. Today it seems appropriate to take stock of how far we've come thanks to this landmark legislation, as well as how far we still have to go to protect water quality and some ideas on how to get there.

Where we are today:

- We have made good progress—rivers don't catch fire anymore, raw sewage is usually not found in our waterways, and many waterbodies once thought dead are now prime recreation locations.
- Regulations to ensure that we have the most basic of human needs, clean water, produce $40 dollars in health and environmental benefits for every dollar of compliance costs.
- The federal government provided much of the funding for construction of the first generation of wastewater treatment facilities in the mid-1970's.

(continued on page 4)

Photo: Cleveland State University Library

Iconic image of Ohio's Cuyahoga River on fire in 1952. Sadly, this was not the first, or last, time that this horribly polluted river caught fire. Devastation caused by the 1969 fire spurred passage of the Clean Water Act.

Streamside Stewards

Don't Dump Lawn Debris!

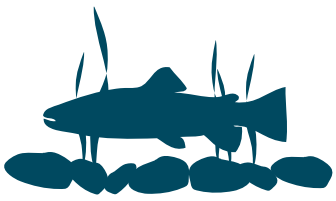
by Watershed Planning & Restoration Program Staff

With so much stream acreage in private ownership, much of the responsibility for the life and health of our streams and rivers lies with the streamside resident or land owner. Keeping yard debris off the streambank and out of the stream is one very important task for streamside stewards.

When grass clippings, leaves, and branches are piled on the streambank they smother and kill vegetation. This not only degrades habitat for animals that live in the stream corridor, it can also lead to bank erosion because riparian vegetation is critical to stabilizing streambanks. Erosion impacts water quality as increased amounts of soils and sediments flush downstream. Excess sediment harms aquatic habitat by reducing sunlight available to aquatic plants, smothering fish eggs, and more.

Problems also arise when yard debris gets into the stream. Grass clippings and branches can block culvert openings or get hung up on bridges. This can cause flooding and property damage for you and/or your downstream neighbors, especially during the high flows of spring melt runoff. Excess amounts of organic matter (grass, leaves, etc.) will deplete dissolved oxygen in water, since organic matter uses oxygen as it decomposes. This can have serious impacts on fish, insects and other aquatic life that need oxygen to survive.

Bottom line, be a good stream steward and store lawn debris far from the streambank. This simple act can go a long way toward protecting our streams and rivers. □



Watershed Symposium 2012 Six Years and Going Strong

Hosted by Salt Lake County's Watershed Planning and Restoration Program, the Salt Lake Countywide Watershed Symposium continues to provide informative and relevant workshops and field trips—all free and open to the public. Topics covered in September included climate change and water resources, invasive weeds, prior appropriation water law, green infrastructure, urban farming, riparian restoration, volunteer-citizen monitoring and Jordan River water quality studies. Comments received from attendees were overwhelmingly positive and enthusiastic. Their overall message: keep the Symposium an annual event!

Visit **www.watershed.slco.org/symposium/Symp12.html** for presentations, photos, and more information.

Photo: University of Utah Urban Water Research Group

Site 1 on the Symposium field trip "Green Infrastructure @ University of Utah", a bioretention basin at the CTI Humanities Building. This basin allows stormwater runoff to filter into soils, as opposed to flowing straight down the storm drain. Dr. Steven Burian of the UU Urban Water Research Group discussed basin construction and ongoing research at this, and other, bioretention sites on campus.

What's up with the Jordan River?

Division of Water Quality Update on Phase 1 & 2 of the Jordan River TMDL

by Hilary Arens, Jordan Basin Coordinator for Utah Division of Water Quality

The Division of Water Quality (DWQ), in partnership with stakeholders, has made huge strides in understanding the dynamics associated with the Dissolved Oxygen impairment in the Jordan River. Phase 1 of the Total Maximum Daily Load (TMDL) water quality study identified decomposition of excess organic matter, such as leaf litter and grass clippings, as the root of the problem. A water quality model, called QUAL2K, was the tool used to make this determination. Phase 1 tells us how much pollution, both point and nonpoint source, the stream can handle. Phase 1 was approved by the Utah Water Quality Board, incorporated into rule, and submitted to EPA for their approval in late September.

The focus of Phase 2 shifts to better understand water quality concerns, and further refine pollution quantity and source information. Intensive data collection will be conducted to accurately measure the amount of organic matter (OM) the river can handle. Changes in behavior and water management strategies to reduce OM loading into the Jordan River will also be investigated. To accomplish these goals, there are a number of special studies and improvement projects currently in progress and planned, including:

- Continuous water quality monitoring stations at Utah Lake Outlet, Jordan River at 1700 South, Surplus Canal, 500 North, Cudahy Lane, Burnham Dam and State Canal in partnership with the Jordan River/Farmington Bay Water Quality Council
- A joint study by researchers at the University of Utah and Utah State University to quantify OM fluxes in the Jordan River including a detailed speciation of OM in the water column and bottom sediments
- A pilot study on the feasibility of direct aeration to the lower Jordan River in partnership with Salt Lake City Public Utilities
- A flow management study, in partnership with the River Network and Salt Lake City, that will explore alternative flow management scenarios to improve water quality and habitat conditions in the lower Jordan River
- Wetland enhancement project at Liberty Park Lake to reduce pollutant inflow into the Jordan
- Habitat improvements and a stormwater retention basin upgrade at 900 South

The DWQ and our water quality partners are excited about moving forward to better understand the Jordan River, improve water quality, and work together to create a healthier environment for all that enjoy this special resource.

For more information, go to *www.waterquality.utah.gov/TMDL/JORDAN/index.htm*. □

Photo: Utah Department of Environmental Quality

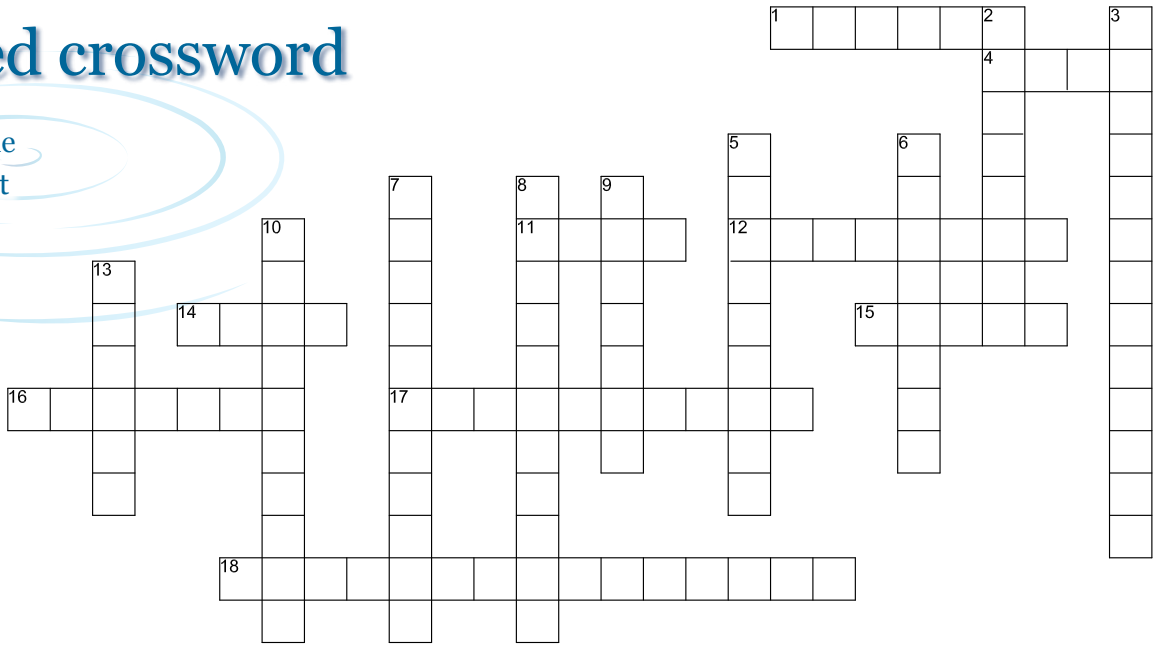
Processing water quality samples in the Division of Water Quality lab.

nonpoint•source•pollution *noun*

Pollution that originates from multiple sources over a relatively large area, as opposed to Point Source pollution that originates from a pipe (e.g. industrial discharge). Nonpoint sources can be divided into activities related either to land or water use including failing septic tanks, improper animal-keeping practices, forestry practices, and urban and rural stormwater runoff.

watershed crossword

Find answers in the articles throughout this newsletter!



ACROSS

1. ___ sediment harms aquatic life
4. Phase 1 of this has been approved by the State of Utah
11. One should have ___ when boating on the Jordan River
12. What the DWQ does at various spots along the river
14. A ___ management study will explore scenarios for the Jordan River
15. ___ clippings should be disposed of properly
16. This will be added at Liberty Park Lake to help reduce pollutants
17. One thing we need to keep out of the creeks and rivers (2 words)
18. The Jordan River is impaired concerning this (2 words)
18. Alternative clue: Aquatic life need a certain level of ____ to survive

DOWN

2. We should all be ___ for the environment
3. In 2012, this turned 40 (3 words)
5. Salt Lake County held their 6th one this year
6. A creek or a river is also called this
7. The CWA is a landmark piece of ___
8. The river in Salt Lake County (2 words)
9. Structures over water
10. We wish building was prohibited in this area
13. Bioretention basins allow stormwater to ___ into soil

CLEAN WATER ACT
continued from cover

- The CWA was a great piece of legislation in 1972, but the law in its current form will not enable us to achieve the physical and biological integrity goals that produce truly healthy waterways.
- Stormwater regulations were not really contemplated 40 years ago, and only now are we beginning to get a handle on how to address this problematic vector for pollutants.
- Excessive nutrients, such as phosphorus and nitrogen, are a large and still-growing problem causing deadly algae blooms in thousands of lakes and streams and a massive dead zone in the Gulf of Mexico.
- Most Americans don't realize that we haven't even assessed the quality of many of the nation's waterways, let alone determined whether they are impaired and why.

Wishes for the next 40 years:

- The definition of Waters of the United States is expanded to be broad and inclusive to ensure that we have clean water in all parts of the natural hydrologic cycle.
- Americans no longer fall ill due to pollutants, pathogens or other contaminants in public drinking water supplies.
- The number of waterways in the nation that are impaired due to excess pollutants, is zero.
- Every watershed in the country is home to a citizen-led nonprofit organization that works to protect and restore the health of the waters in that watershed.
- No elected official would even think of suggesting that environmental regulations cost jobs.
- Building in floodplains is prohibited.
- The term Gulf Hypoxia is routinely taught in high school science and history classes, but it no longer happens in the Gulf of Mexico.
- With appropriate training, volunteer citizen monitoring data is widely used across the country for education, water quality assessments and enforcement actions.
- Old, centralized gray water systems are replaced with new technologies. Green infrastructure, decentralized systems (where appropriate), and efforts to restore functions of the natural hydrologic system all play a part in the re-plumbing of America.
- All data from regulated facilities is accessible online, in a uniform format and is the basis for an annual report card on the health of the nation's waters.

Read the River Network's full article at *www.rivernetwork.org/blog/34/2012/01/26/forty-thoughts-forty-years-clean-water-act-four-decades-later.* □

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