

Nevada Division of
Environmental Protection
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Carson City, NV 89701

Enviro-News

Promoting **recycling** practices, **watershed** education,
and **environmental** stewardship for Nevada.

For School and Community Educators

1ST QUARTER 2013



NevadaRecycles.gov
Nevada Division of Environmental Protection



Who we are

The Nevada Division of Environmental Protection (NDEP) provides resources and funding for numerous educational and outreach programs and efforts throughout Nevada. NDEP sponsors and endorses Project WET and our Recycling curriculum through two Bureaus, Water Quality Planning and Waste Management, respectively. This newsletter endeavors to highlight and further promote our commitment to *recycling and waste reduction practices, watershed education, and environmental stewardship.*

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Recap: America Recycles Day

On November 15th, communities all around the country held over 2,000 events to promote recycling and waste reduction.

In Nevada, nine private and public events celebrated and encouraged local recycling efforts. The **NevadaRecycles** program participated by hosting vermicompost workshops at Western Nevada College in Carson City and at the University of Nevada Cooperative Extension in Las Vegas.

Never heard of “**vermicomposting**”? It’s composting with worms—little worms called red wigglers that love to consume our leftovers. This process produces a soil amendment packed with important nutrients. Vermicomposting can be done on a large scale, but also works great at home. Given that over 27% of our waste is food or yard trimmings, composting is a great way to contribute to recycling



efforts. Workshop participants constructed bins and learned how to maintain them.

If you are interested in learning more about **vermicomposting** visit

www.nevadarecycles.gov.

Christmas Tree Recycling

LET'S RECAP...

It's been another successful year of Christmas tree recycling in many Nevada communities! A big thanks to the organizers, volunteers, haulers and everyone else who made these events possible. In most of our communities the trees are mulched and then used in city parks, though several other creative uses are possible. Mulch improves moisture retention in soil.



Photo courtesy of Southern Nevada Christmas Tree Recycling Committee

Getting Down and Dirty at the Carson River



Teens from Dayton High were primed and ready to mentor 4th graders from Sutro Elementary at the annual 18th annual Carson River Workdays in Lyon County this past November. Elementary students rotated through a series of educational activities led by high school science students. These mentors learned to teach watershed lessons as part of their science class. Activity stations focused on understanding the water cycle, water quality chemistry, discovering adaptations of animals living in the river, the uniqueness of Nevada watersheds, and contributing to a **bioengineered-restoration project** on the banks of the River.

Unlike most rivers, the Carson River never reaches an ocean. It flows from the majestic Sierra Nevada range to the floor of the Great Basin, terminating at the Carson Sink where remaining water evaporates on farmlands and the wetlands of Stillwater National Wildlife Refuge. Students used the Carson River Watershed map to review the upper, middle, and lower reaches, discussing different ways the growing communities and natural ecosystem rely on the River. The lesson here is only one river to serve multiple users and our ever increasing need for water.

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FAQ: Cash for cans



Q: Why doesn't Nevada have redemption centers like California does for cans & bottles?

A: Nevada does not have a bottle bill. In states with bottle bills, such as California, consumers pay a refundable deposit on their bottle and can purchases. In Nevada, recyclers will often pay for metal cans; however, the value is typically rather low when compared to a bottle bill's redemption value.

Getting Down and Dirty at the Carson River

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Tyler B., a junior at Dayton High, enjoyed his work with 4th graders as they outfitted themselves as **Ernie the Invertebrate** and acted out how aquatic insects adapt to their environment to get oxygen and food. Tyler likes to explain concepts in different ways so the younger students will “get it”. “It’s important to have days like this because you’re teaching kids to conserve water and save the environment,” Tyler said. “Aquatic insects are good biological indicators of stream health because some are more sensitive to pollution. If insects that are sensitive to pollution aren’t found in a stream something may be wrong with the water.”

At the watershed station students handled animal pelts provided by **Nevada State Parks** and discussed what they eat and where they live. A favorite station is the **Project WET** activity, **The Incredible Journey**. Students mimic the movement of a water drop while creating colorful bracelets depicting the story of the water cycle stages, conditions necessary for movement, and the different phases water takes on its journey.

Hannah F. thought testing the river’s pH, dissolved oxygen, temperature, and turbidity helped students realize the need to keep our water clean and not pollute it. These measurements need to be within a precise range for the fish and animals to thrive.

Mixing runoff from our land with water produces turbid (cloudy) water. Fish and other aquatic life in the stream have a hard time with turbid water.



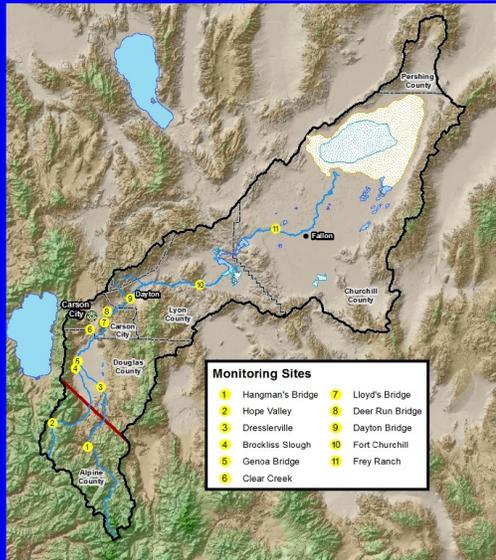
Water quality standards are set to protect the fish and aquatic life that depend on clean water to survive. The station with the most grit and place-based learning is where students dealt with erosion. Students learned that erosion is a process, and can be caused naturally or through artificial means.

During major storm events, high flows in the river can cause excessive streambank erosion. Stormwater and increased runoff from impervious surfaces (i.e. roads, rooftops, and parking lots) carry an increased volume of water and a discharge of accumulated pollutants into the river. These forces damage streamside vegetation and wipe out aquatic habitat. Students learned the value of **riparian systems** and developed a better understanding of stream dynamics. Rich Wilkinson, bioengineer and district manager of the Dayton Valley Conservation District simply stated “We plant willows because willows are water loving plants and will sprout roots easily. They are laid horizontally so the sprouting can occur across the entire length of the section.” Most importantly, the abundant root system of the willow holds the soil in place.

Conserve Carson River Work Days are annual events that provide opportunities for elementary school children to visit the river and learn about the watershed they live in. It is a watershed event, happening along the Carson River from the headwaters in Alpine County, CA to the terminus of the river in Churchill County, NV.



A Snapshot of the Carson River — Watershed Education, Water Quality Monitoring & Stewardship



Information is gathered from each monitoring site at the same time on the same day, documenting an annual "snapshot" of the river.

THANK YOU team leaders, students, and teachers. With deep appreciation for the positive difference **YOU** make.

In the fall when irrigation ceases from the Carson River, students converge on the river to engage in a unique experience beyond the walls of their classroom. This event, known as Snapshot Day, offers students, parents and educators the chance to experience the river first-hand and to interact with resource professionals who care for this lifeline of Nevada's high desert.

October 19th, 2012, marked the 7th Annual Snapshot Day. Schools from the Alpine County,

CA headwaters to the Churchill County, NV terminus sent 254 students ranging from 4th grade through high school to participate in the event. The students conducted field studies at eleven pre-selected monitoring sites with guidance from trained team leaders. Each team assessed the water quality and riparian habitat of their assigned site and collected debris, trash, and clutter.

The primary purpose of Snapshot Day is to document and study the riparian habitat,

Education Partners

Diamond Valley School
Pau Wa Lu Middle School
Carson Valley Middle School
Gardnerville Elementary
Rite of Passage
Silver State Charter High School
Hugh Gallagher Elementary
Silver Springs Elementary
Churchill County High School
Great Basin Institute's Conservation Corps

measure water quality and increase understanding within the community about issues facing the watershed. Field tests are conducted for dissolved oxygen, conductivity, pH and temperature. Other water "grab" samples are collected for laboratory analysis of nutrients, turbidity and bacteria.



The students completed habitat assessments of their sites, which included visual observations and photo documentation of vegetation and stream conditions.

It's remarkable how spending a morning by the

river enjoying fall can instill a desire to learn about our natural environment. These young stewards are tomorrow's decision-makers. They are curious and enthusiastic to gain the skills to protect their watershed.

Another valued outcome of this annual event is the opportunity for students to learn and work alongside natural resource professionals. This job shadow experience exposes students to exciting potential career opportunities and transfers ecological stewardship principles to a new batch of field recruits.

Resource Partners

Alpine Watershed Council
CRC - Education Working Group
Washoe Tribe of NV
The Nature Conservancy
NDEP and Tribal liaison staff
Resource Concepts Inc.
Sierra Nevada Journeys
U.S. Geological Survey
Dayton Valley Conservation District
Lahontan Valley Conservation District
NV State Parks
Carson City Public Work and Parks & Rec Dept.
Natural Resource Conservation Service

Tim Rowe receives Wendell McCurry Excellence in Water Quality Award

Nevada Division of Environmental Protection was honored to present the 2012 Wendell McCurry Award to Mr. Tim Rowe in recognition of a career of professional and personal contributions to water quality protection and environmental education at Lake Tahoe and in many of Nevada watersheds.

Tim worked more than 30 years for the U.S. Geological Survey (USGS) - Water Science Center in Carson City. He earned himself a reputation as a distinguished hydrologist as a Project Chief on numerous water quality studies throughout Nevada and for work on the Great Basin and Range Study Unit for the National Water Quality Assessment (NAWQA) Program. Over his career, Tim has sampled and collected water quality and biological data from many of Nevada's watersheds, and served as USGS Liaison to multiple agencies in the Lake Tahoe Basin and as a mentor for the USGS Formal Mentoring Program.

Tim Rowe made numerous contribution to environmental education efforts in northern Nevada; serving as Adjunct Faculty member – Lake Tahoe Community College, leading students in monitoring the Tahoe-Truckee River and the Carson River Snapshot Days, facilitating River Workdays and the Carson River Video Contest. He has always been an early volunteer to involve himself with public education and outreach efforts for our students and adult learners.

Congratulations Tim on all your accomplishments. We wish you the very best success in your future endeavors. You make us all proud!



L to R: Dave Gaskin, NDEP Deputy Administrator; Colleen Cripps, NDEP Administrator; with Tim Rowe.

As a knowledgeable leader in watershed practices, Tim was actively involved in planning numerous Nevada Water Resources Association, Truckee River and Lake Tahoe conferences and symposiums. Tim recently retired from the USGS and is now pursuing another one of his great passions, *cycling*. He currently works for Nevada Department of Transportation as a Transportation Planner in the Bicycle and Pedestrian Section and for our **Safe Routes to School** program. Tim may not be getting up at 3am to sample storm water, but he continues to be a role model and community steward.



The Wendell McCurry Excellence in Water Quality Award was established in 1999 to honor Wendell McCurry and to memorialize his long-term commitment to water quality protection and improvement. This Award is presented annually to recognize individuals, agencies and other organizations for outstanding water quality protection efforts.

To find out who Wendell McCurry was and who the past recipients were of this notable award, visit http://ndep.nv.gov/admin/wendll_master.htm.

We Are the Stewards

We value all individuals and organizations that make a difference, and proudly introduce you to Tahnee Praiswater, an Environmental Specialist for the Department of Environmental Protection with the Washoe Tribe of Nevada and California. She works on and monitors water resource projects; collects and analyzes water data on tribal lands; and conducts watershed education and outreach.

As a mother, Tahnee imparts the value of the natural world to her own children. “Without it we wouldn’t be here and it’s our job to protect it. When I’m conducting field work or weekend hiking, I pick up any trash I come across. That’s one of my personal efforts to care for the environment. I figure if I don’t, who will? And it’s the right thing to do.”

Tahnee offered her services for the Carson River Snapshot Day to lead students at the Dresslerville site. “It’s important for the youth to be involved with the natural world and to be able to be in an outdoor classroom. You only learn so much from a book. The most beneficial experience for them is to be outdoors and experience biology, ecology, and the environment for themselves. It’s really exciting for me to see a young person get inspired and want to learn about the environment. Snapshot Day is very important in many respects. For one it is the only day that the entire watershed gets sampled in different locations at the same time on the same day. You can get a lot of good information with this method of sampling. Second, the educational experience for participants that are not in the water profession is very valuable; it helps people realize the importance of river stewardship and watershed health as well as experience sampling and taking scientific data. And third, it brings people together. One of my goals when doing educational outreach is to inspire future generations to take science classes and become biologists, hydrologists, ecologists, water operators, or water stewards so that we continue efforts to understand and preserve our natural resources.”

Tahnee completed facilitator training for Project WET this October. She looks forward to working with Nevada educators on lessons to incorporate an understanding of watersheds and best management practices. “Project WET gives educational leaders the tools to teach kids about water. It provides educators with lesson plans so diverse they can even tailor their music class to incorporate a lesson on water.” You can bet that Tahnee’s workshops will include native culture and influence.



Tahnee Praiswater enjoys judging Science Fair projects at CC Meneley Elementary School in Gardnerville.

If there are educators interested in learning more about workshops or help with lesson plans, contact Tahnee at tahnee.praiswater@washoetribe.us.

Please let us know how you like this publication. Our contacts are on the final page of this newsletter. Also freely contribute your thoughts and stories for possible inclusion.





Latest Buzz: Single Stream Recycling Coming to Reno

Steps toward problem solving and solutions

This image describes one of many environmental education (EE) models designed to encourage environmentally responsible citizens or in our case, solutions to water resource problems. This is not to suggest that the objective of EE is for all of us to become renowned environmental problem solvers. But outcomes from EE efforts can make participants more aware and responsible for their footprint on the environment, and local and regional water resources.

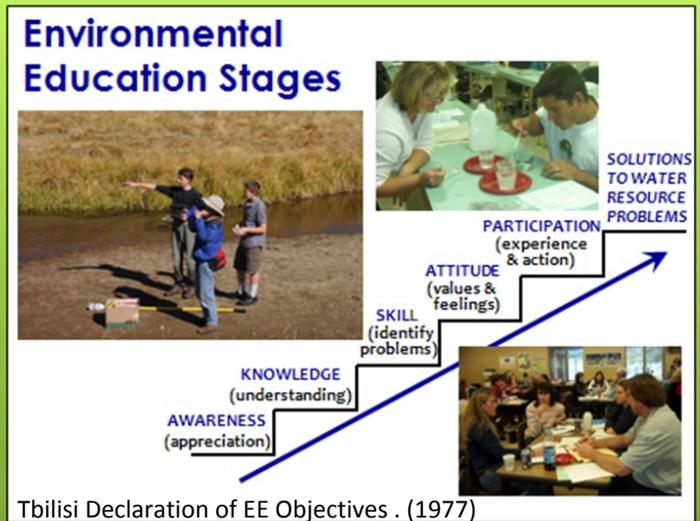
Let's examine the steps toward problem solving and solutions:

Awareness brings sensitivity to the environment, its natural systems and phenomena. In recent years, environmental awareness has spawned a more conscious effort toward environmental ethics and sustainability.

Knowledge broadens our experience and discovery. It includes appreciation and understanding of the natural world. A level of EE knowledge is needed to understand our relationship to the environment, and intrinsic systems and relationships both large and small. Communities rely on healthy environmental resources; however, few communities escape the environmental impact of growth and increased human activities. For learners to comprehend, they must be offered the resources for knowledge. A Chinese proverb holds true, "Tell me and I'll forget. Show me and I may remember. Involve me and I will understand."

From knowledge stems **Skill** necessary to identify problems, gather information, and produce solutions. Humans are a part of the natural environment, but modernization of industry and technology tend to lead to over-use of the environment and natural resources.

This fall Waste Management, Inc. will roll out its new and improved curbside recycling program in Reno. The program gives residents a 96 gallon tote for recyclables instead of the 2-bin sorted recycling system. The list of materials collected will expand to additionally include cardboard, plastics (not just bottles), paper and paperboard.



Today, environmental managers ask for skill to achieve a balance between use and protection and to moderate our impact in ways to help the environment, or to prevent harm. Only by managing water sustainably can we safeguard our quality of life along with our social and economic stability in a healthy environment.

NDEP believes that watershed awareness helps instill an **Attitude** of concern for the environment at all levels of society. Children, families, business owners, community planners, and policy makers all play important roles in the future of communities and local watersheds. Water is important for all users (farmers, ranchers, wildlife, industry, and communities). Environmental Education starts by teaching students **HOW** to think, not **WHAT** to think. EE nurtures understanding and acquisition of skills with meaningful opportunities to be actively involved at all levels. In the early years, we start with a simple appreciation for nature; discovery of the Great Basin, the beauty of the Sierras . . . can result in a personal, lifelong commitment of responsible community **Participation** and perhaps opportunities to be involved in working toward resolutions of environmental issues.

UPCOMING *Mark Your Calendars* EVENTS



School and Community Educators Water Education Workshop

Facilitator's Training - Friday, February 22nd 4:00-8:00pm
Light dinner will be provided!

Educator's Workshop - Saturday, February 23rd 8:30-5:30pm
Please bring your own Lunch.

Humboldt County School District 310 E. Fourth Street, Winnemucca

The Nevada Project WET program is seeking community leaders and teachers to help facilitate water education and workshops in rural Nevada. As a facilitator, you can help plan creative educational watershed workshops.

Friday evening prepares participants to be part of a trained team of Project WET Facilitators. Saturday engages all participants in activities that are beneficial and relevant to the community, and offers their ideas for lessons and workshops suited to their audience.

All participants will receive the new *Project WET Curriculum and Activity Guide 2.0* and 0.5 Nevada State Recertification Credit.

The new Project WET program encompasses not only the new guide but a Web Portal, expanded resources and networking opportunities.

Contact: Jessica Snaman 775-623-5656
Jessica.Snaman@NevadaOutdoorSchool.org

REGISTRATION WILL CLOSE MONDAY, FEBRUARY 18TH



Nevada Project WET is sponsored by the US Environmental Protection Agency and the Nevada Division of Environmental Protection.

Clark County Teacher Workshop March 9&16

Nevada Recycles . . . This annual workshop explores NDEP's Recycling and Waste Reduction Curriculum.

The first Saturday is spent in the classroom.

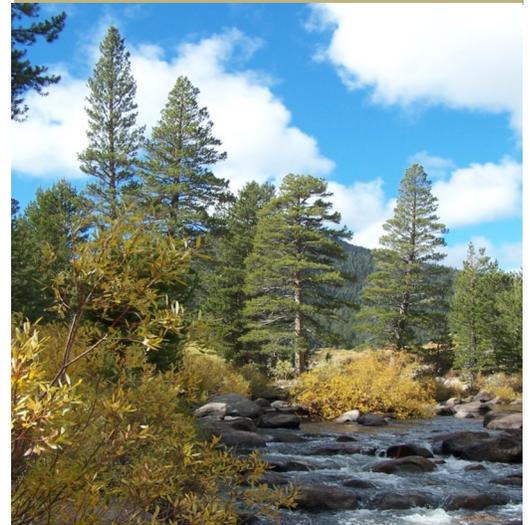
The second Saturday is an amazing field trip.



2013 Keep Streamsidess Greener Keep Water Cleaner Video Contest

Eligible Entrants:

Residents of the Carson River Watershed



Entries:

30 or 60-second-long Public Service Announcements (PSAs) that urge viewers to take actions to keep water clean.

MORE Contest Info:

<http://tiny.cc/carsonriver>

Scan this QR code with your smartphone to be taken to the contest website:



EARTH DAY NETWORK

Earth Day, April 22, 2013
 Check NDEP's [Earth Day page](#) in March for a list of events around the state.

W-A-T-E-R:

this simple chemical compound that is vital for life, essential in nature and connects us all in life. Without this precious resource being available in a sufficient quality and quantity, life is compromised.

Water was formally recognized as a human right on November 27, 2002, when the United Nations Committee on Economic, Social and Cultural Rights adopted the 'General Comment' on the right to water. "The human right to drinking water is fundamental to life and health. Sufficient and safe drinking water is a precondition for the realization of human rights."

(UNESCO 2002-11-27)

Help close the loop! In order for recycling to be economically viable, there must be demand for recycled products.
Buy recycled!

WORD SCRAMBLER	
coilhorygd	
sehdeatrwr	
waitraultyqe	
paiinrar	
ihabtat	
mcipegvonotrsmi	
ewdrats	
stndemei	
stebciatcpsre	
oecaitern	



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Nicole Goehring and Elsa Romero
(e: ngoehring@ndep.nv.gov, eromero@ndep.nv.gov)
Northern and Southern Nevada Recycling Coordinators
Bureau of Waste Management

p: 1-800-597-5865 (Recycling Hotline)
NevadaRecycles.gov



ANSWERS: 1. hydrologic 2. watershed 3. water quality 4. riparian 5. habitat 6. vermicomposting 7. steward 8. sediment 9. best practices 10. recreation.