



The Flow

Delivering News from the Carson River Watershed Community

Winter 2014

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DVCD Receives Critical Funding to Rehabilitate the Middle Carson River Floodplain

By Richard Wilkinson, Dayton Valley Conservation District

The Dayton Valley Conservation District (DVCD) was recently awarded funding through the National Fish and Wildlife Foundation to rehabilitate critical floodplain habitat along the Middle Carson River. The project targets areas that are infested with invasive weeds that, in turn, negatively impact water quality, wildlife habitat, and surrounding agricultural crop production.

DVCD plans to re-establish native and desirable vegetation in areas where agriculture has been abandoned and, in most cases, water rights removed. Weed treatments will begin in Spring 2015 after the environmental review process is completed. The work will focus on the removal of decaying weed debris and the treatment of weeds on the nearly 893 acres. Approximately 340 acres will be re-seeded post weed treatment in hopes these seedlings will out-compete invasive weeds. DVCD expects to complete the work by December 2015, with planned follow-up treatments to continue for the next several years.

DVCD has noted an increase in invasive weeds in this area since the 1997 flood event. Invasive weeds are detrimental to our riparian corridors and floodplain areas, causing mono-cultures that reduce wildlife diversity, limit habitat regeneration, act as a seed source to surrounding areas, and destabilize river banks. DVCD has worked with many local, state and federal partners to restore the floodplain, benefitting wildlife habitat and improving water quality. This funding will supplement the work already being accomplished to treat weeds and assist local agricultural producers with crop and pasture management.

DVCD thanks all of our federal, state, and local project partners! For more information, contact Richard Wilkinson at (775) 246-1999 or Richard.wilkinson@nv.nacdn.net.



DVCD mows Perennial Pepperweed at the Rolling A Ranch prior to re-seeding in 2008. Treatment resulted in a 90% reduction of Perennial Pepperweed and an establishment of native grasses. Photo by DVCD

Carson River Delta Proposed Designated Habitat for the Threatened Western Yellow-Billed Cuckoo

By Brenda Hunt, Carson Water Subconservancy District

The United States Fish and Wildlife Service (USFWS) has proposed a portion of the Carson River delta riparian area (see map) as critical habitat for the federally threatened western yellow-billed cuckoo (*Coccyzus americanus occidentalis*). The Carson River delta is a Nevada Important Bird Area as identified by the Lahontan Audubon Society (LAS) and considered to be “the last best remnant of a cottonwood-willow forest (their preferred habitat) in northwestern Nevada.” According to the USFWS Species Fact Sheet, the western yellow-billed cuckoo is a Distinct Population Segment from its counterpart, the eastern yellow-billed cuckoo (*Coccyzus americanus americanus*).

Historically, this species occurred throughout the west from British Columbia to Northern Mexico; however, populations have declined extensively and breeding birds are now found mainly along rivers in Arizona, California, and New Mexico. Records indicate that birds have been sighted during breeding season in the Carson River Delta within the past 15 years, which is one criteria for determining critical

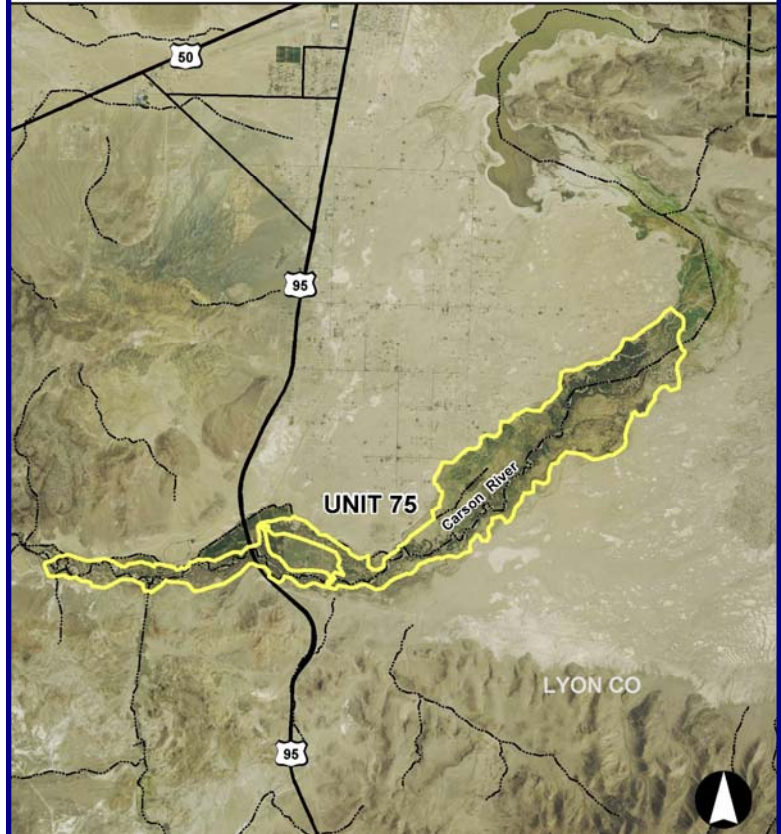


Threatened Western Yellow-Billed Cuckoo
Photo with permission and courtesy of David Spear

www.lilibirds.com

U.S. FISH AND WILDLIFE SERVICE

Yellow Billed Cuckoo Critical Habitat
Unit 75: NV-4 Carson River
Lyon County, Nevada



Map of proposed critical habitat along the Carson River in Lyon County.

habitat designations. Eighty separate units in Arizona, California, Colorado, Idaho, Nevada, New Mexico, Texas, Utah and Wyoming are also being proposed as designated critical habitat. The USFWS is expected to rule on the western yellow-billed cuckoo's designated critical habitat by late 2015. Public comments on the proposed habitat designations are being sought by the USFWS and are due by January 12, 2015. For more information on the western yellow-billed cuckoo, the proposed critical habitat, and to submit public comment, please visit the USFWS – Sacramento Office [Public Advisory](#) webpage, or contact the CWSD office at 775-887-7450.

Successful Inaugural Nevada Flood Awareness Week

By John Cobourn, University of Nevada Cooperative Extension

Thank you to everyone who participated in making Nevada's first official Flood Awareness Week a success. Held November 10-15, 2014, the week was the culmination of over a year's worth of planning by the Flood Awareness Advisory Committee. Since winter is the time when Northern Nevada historically gets its largest floods, a comprehensive media campaign advertised "Nevada Floods" on the radio, television, billboards and the internet. The committee members spearheaded the week's events designed to promote flood preparedness in Nevada. We hope you (and the general public) determined your flood risk after visiting the website, www.NevadaFloods.org as prompted in the media. The website won the Floodplain Management Association's *Communication and Outreach Award* for 2014.

On October 10, Governor Sandoval kicked off this inaugural event by proclaiming Flood Awareness Week on the banks of the Truckee River to an audience of elected officials, weather forecasters, and federal, state, and local agency representatives. The event was emceed by Jeff Thompson, Chief Meteorologist at Channel 8 News.

Specific events were held during the week to raise awareness about the risk of floods in Nevada. The US Army Corps Flood Risk Manager, the State Floodplain Manager, and county engineering staff were available on three separate days to discuss flood issues with citizens in Douglas County and Carson City. These events drew residents, many with questions regarding the summer flash flooding. An interactive floodplain model was used to demonstrate various flooding scenarios each day.

School events held during the week at Carson Montessori and Grace Christian Academy enabled students to work with the floodplain model. The students simulated rainstorms to experiment with different types of floods to learn how flood waters can affect homes in the floodplain.

University of Nevada Cooperative Extension and Division of Water Resources staff members led the effort, teaming up with resource professionals from several federal, state, regional, and local agencies. We hope to continue Flood Awareness Week annually each November and increase the number of Nevada communities offering flood awareness activities for their communities.



Governor Sandoval proclaims Nevada Flood Awareness Week at the media event. Photo by Courtney Walker

ARE YOU PREPARED?

www.NevadaFloods.org



Photo courtesy of USGS

Meet Douglas County's New Stormwater Program Manager

By Karin Peternel, Douglas County

On September 29, 2014, Douglas County welcomed Karin Peternel as its new Stormwater Program Manager. Karin previously worked with the Nevada Tahoe Conservation District on water quality projects in the Tahoe Basin on behalf of Douglas County. Prior to that Karin was a long-time employee of Kennedy Jenks Consultants in their Reno and San Francisco offices. Karin holds bachelor's and master's degrees from University Nevada Reno in Hydrology.

Karin has three primary functions for Douglas County:

- Implementing the Lake Tahoe Total Maximum Daily Load,
- Submitting the county's annual MS4 permit to the Nevada Division of Environmental Protection, and
- Maintaining of Douglas County's community rating (described below) under the Federal Emergency Management Agency's (FEMA) Community Rating System (CRS).



Karin Peternel working in the Truckee River

Douglas County annually completes certain tasks defined by FEMA's program to receive a CRS rating. Costs of flood insurance are reduced depending on a county's CRS rating. Currently, Douglas County residents receive a 20% discount on their premiums through this program. Mapping county storm drain infrastructure, inspecting items annually to schedule maintenance, and providing public outreach and education are some of the duties Karin completes so Douglas County can receive this discount. For more information contact Karin at 775-782-6215 or via email KPeternel@co.douglas.nv.us.

FEMA MAS #5 Projects Underway

By Debbie Neddenriep, Carson Water Subconservancy District

Carson Water Subconservancy District has received a grant under the Cooperating Technical Partner program with Federal Emergency Management Agency (FEMA). The funding from FEMA will be used to conduct several projects throughout the Carson River Watershed. These projects were identified in 2012 Carson Watershed Risk MAP Discovery Report. The Discovery Report identified projects that would protect various communities in the watershed from flood related events. The list of projects below will be funded from the 2014 FEMA grant:

- Smelter Creek Identification and Mitigation Project – Douglas County
- Alpine View Estates Restudy and Remapping Project – Douglas County
- Eagle Valley Golf Course A & B Drainage Restudy and Remapping – Carson City
- Water Shunt Identification and Mitigation Project below Lahontan Dam – Churchill County
- Flood Inundation Maps for the Upper Carson River Watershed
- Public Outreach Flood Awareness Program

These projects results will provide each county with additional information on how to reduce flood risk in their community. For more information, contact Ed James at 775-887-7456 or edjames@cwdsd.org.

Cooperative Extension Offers “Agriculture in Times of Drought”

By John Cobourn, University of Nevada Cooperative Extension

Nevada's drought has now lasted three years, and people have been wondering if this winter will be another dry one. Since farmers and ranchers are particularly hard-hit by low water years, University of Nevada Cooperative Extension (UNCE) held a class in November called “Agriculture in Times of Drought”. The class featured experts in grazing, crop management, and irrigation efficiency, and weather forecasting. Evening workshops were held at Cooperative Extension offices in Gardnerville, Fallon, and Yerington, Nevada.

Weather and irrigation water supply can be extremely variable in our region. In the Carson, Truckee, and Walker Watersheds the total annual flow in very dry years is about one tenth as much as the total flow for a very wet year! In Nevada, multi-year droughts sometimes end with large destructive floods. How are farmers and ranchers to plan for success given this large variability of water supply?

Jay Davison of UNCE recommended that in a dry year, alfalfa growers irrigate to establish adequate soil moisture as early as possible and continue to irrigate until their water supply ends. It is best to produce decent yields and not try to stretch their water out over the growing season because harvest costs are similar no matter what the yield. Extension Educator Seth Urbanowitz recommended the use of soil moisture sensors to assist in meeting the evapotranspiration needs of the crop in an efficient manner. Sherman Swanson endorsed the concept of additional grazing in the fall after wet years, when cattle can be

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Lahontan Reservoir in October 2012, second year of the current drought. Photo by CWSD

Thank you Joe Ricci and John McKenna

By Ed James, Carson Water Subconservancy District



The Carson Water Subconservancy District would like to recognize the services of Joe Ricci and John McKenna on our board from 2011-2014. Joe and his family are long time farmers in the Lyon County area. Joe also serves on the Dayton Valley Conservation District Board. Joe brought to the board a real understanding of the pressures of farming during a drought period. Joe's insight from actual on-the-ground experience of living with a limited supply of water will be missed. Joe, we wish you a good snow pack this year!

John McKenna served on Carson City's Board of Supervisors, which led him to being appointed to the CWSD board. Over these four years, John has been a very active board member and has served as Treasurer for the past two years. John did his homework to understand water issues and asked timely questions. We will miss John's thoughtful decision making, sense of humor, and sage advice. John, you are always welcome to come join us as a volunteer to move downed trees at Lost Lakes!



Washoe Tribe Efforts Protect Clear Creek

By Dan Greytak, Washoe Tribe of Nevada and California

The July and August 2014 flash flood events caused a plume of sediment to rush down the Topsy Lane drainage. A Washoe Tribe owned detention basin quickly filled with sand, averting damage and sediment loads from entering Clear Creek. Although this is not the first storm event that the detention basin experienced, it certainly was the largest since it was built in 2007. Located along the Topsy Lane drainage (see map on page 7), the detention basin was built by the Washoe Environmental Protection Department (WEPD) to protect Clear Creek from receiving sediment-laden stormwater.



Detention basin when constructed in 2007.

The Washoe Tribe of Nevada and California (the Washoe Tribe) owns and manages 2.5 miles of creekside property in both the upper and lower watershed of Clear Creek. Clear Creek, the only perennial tributary to the Carson River, begins in the Sierra northeast of Spooner Summit and runs east parallel with Highway 50, crossing under Highway 395 near Fuji Park and traveling through a portion of the Stewart Indian School to its confluence with the Carson River.

WEPD has and continues to implement projects that protect Clear Creek and ultimately the Carson River. In 1982, a portion of the Stewart Indian School containing Clear Creek was transferred to the Washoe Tribe. This section of the creek has a rich cultural history; it was the site of the first trading post in

Carson City, it became a semi-permanent campsite for families visiting their children attending the Indian school, and the meadow was farmed by the school. This history also brought ecological disturbance. The land near the creek was designated as culturally and environmentally sensitive, prohibiting development and encouraging preservation. WEPD has conducted restoration work within Clear Creek to stabilize the creek banks, limit sediment transport, and improve wildlife habitat.

In more recent history, the lower watershed has seen an increase in commercial and residential development. This increase in impervious coverage and the grading and removal of native vegetation in the surrounding area has contributed to an increase in runoff reaching Clear Creek during storm events. WEPD built the detention basin along the Topsy Lane drainage in response to observed increases in erosion and sedimentation starting in 2005. In a flood event in 2006, the Shultz irrigation ditch was overwhelmed and sent a plume of sediment out of the mouth of the Topsy drainage into Clear Creek.

The Schultz ditch crosses the Topsy Lane drainage and has carried irrigation water from a diversion in the Fuji park area since the 1800's to ranch lands in the Carson River Floodplain. WEPD maintains the ditch and owns 47% of the Clear Creek water rights. This ditch was stable and carried water until the 2006 flood event. The ditch is now piped where it crosses the Topsy drainage area so it can continue to carry water.



Detention basin in 2014 after flash flood events.

(Continued on page 7)



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Sometime after 2007, a large cross-channel rock dam was placed on private land above the Washoe land in an attempt to slow down and infiltrate the stormwater. The dam filled with sediment and overtopped after several years of minor storm events. During the July and August flash flooding, it washed out entirely (see map).

Maintenance of WEPD's detention basin is essential to continue to protect the creek. The collection and concentration of stormwater flows entering the Topsy Lane drainage continues to incise the drainage channel and deposit sediment in the basin. WEPD crews removed 350 cubic yards of sand from the basin in 2011 and 960 cubic yards in September 2014. Clear Creek and the Carson River continue to benefit from these efforts! Permanent, cost effective solutions need be explored to address stormwater management in this area. Contact Dan Greytak at (775) 721-2548 or dan.greytak@washoetribe.us for additional information.

(Continued from page 5)

managed to eat dry cheatgrass in selected areas to reduce fuels, creating fuel breaks for the following fire season.

After the presentations, participants were asked to help define "climate-smart agriculture" for our region. The group discussion was lively and the participants in all three locations stayed after the class to continue the discussion. More drought related information can be found on Cooperative Extension's "Living With Drought" website: <http://www.unce.unr.edu/programs/sites/drought/info/>.

Nevada's six multi-year droughts in the past 85 years:

1928-37: Nine year drought

1953-55: Drought ended by 1955 Flood

1959-62: 3-4 years depending on location

1976-77: Severe drought

1987-92: Six year drought

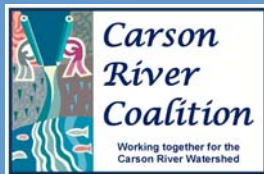
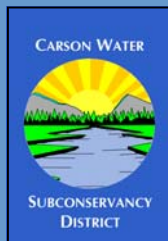
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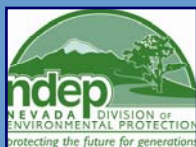
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Thanks to Staff &
Contributors!

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Karin Peternel
Debbie Neddenriep
Dan Greytak
Ed James



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UPCOMING EVENTS

**Eastern Nevada Landscape Coalition
Winter Weed Conference January 8-9, 2015.** Bristlecone Convention Center, Ely, Nevada. www.envlc.org

**Nevada Water Resources Association
2015 Annual Conference**
January 26-29, 2015, Reno, Nevada.
www.nvwra.org

GreenPower Teacher Training
January 31, 2015, Desert Research
Institute, Reno, Nevada.
[http://www.dri.edu/events/4943-
greenpower-winter-teacher-trainings](http://www.dri.edu/events/4943-greenpower-winter-teacher-trainings)

Eagles and Agriculture
February 19-22, 2015, Carson Valley Inn,
Minden, Nevada.
[http://www.carsonvalleynv.org/pages/
EaglesAg/](http://www.carsonvalleynv.org/pages/EaglesAg/)

CWSD and the Carson River
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