

Watershed Connections

Delivering News to the Carson River Watershed Community

-Photo by Brenda Hunt

Inside this issue:

Hot off the press! The Carson River Watershed Map in Español!	1
Floodplain Corridor Mapping & Modeling Update	2
LEAF Interns in Action	3
Flood Reduction Projects in Douglas County	4
Weeds Know No Boundaries	5
Markleeville Creek Day: Restoring Our Watershed	6

Scan to be directed to our website:

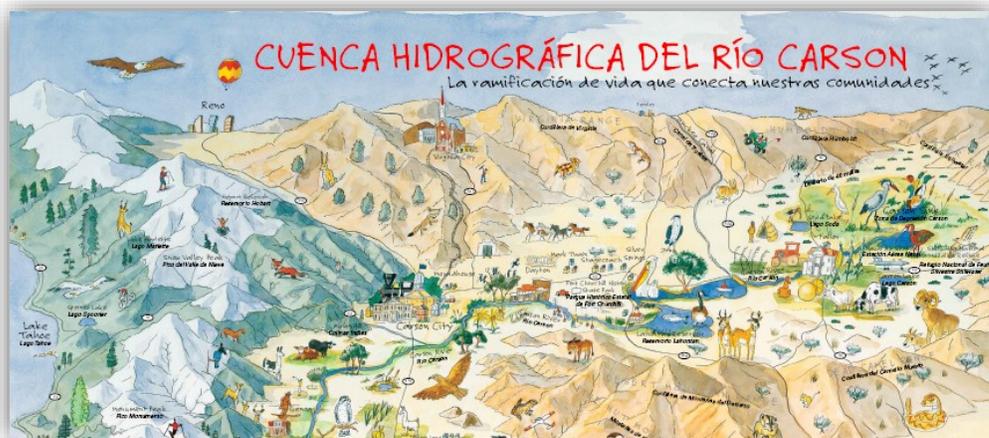


www.cwsd.org

Hot off the press!

The Carson River Watershed Map in Español! By Brenda Hunt, CWSD Watershed Program Manager

The Carson Waters Subconservancy District (CWSD) is excited to announce the [Spanish translation of our Carson River Watershed Map](#) is printed (both the front and back) and available to all. To provide some background, the Carson River Coalition's (CRC) 2015 Watershed-Literacy Survey and supplemental Latino/Hispanic focused research identified the need for outreach to this growing segment of our watershed's population.



Specifically, the 2016 Carson River Watershed Marketing and Communications Plan states the population of Spanish speaking residents in the watershed is predicted to steadily rise from 2015 through 2033. This plan, prepared by Responsive Management Inc. for the CRC, projects this demographic will increase about 5,000 persons every five years with the majority of these gains occurring in Carson City and Lyon County. Within the greater Carson River Watershed, Hispanic/Latino residents will make up a progressively larger portion, rising from 15% in 2015 to about 22% in 2033.

During her 2015 supplemental research, Melissa Shaw, a Northern Arizona University Graduate Student, observed the Spanish speaking participants surveyed enjoyed the English version of the map and inquired whether a Spanish translation was available. Given all of this information, CWSD determined the Spanish version of the watershed map would be an invaluable tool to increase environmental knowledge of the Carson River Watershed and provide an educational opportunity for an exchange of language amongst our residents. Translating the map in Spanish became a priority!

(Continued on page 3)

Floodplain Corridor Mapping & Modeling Update

By Mitchell Blum, HDR Inc.

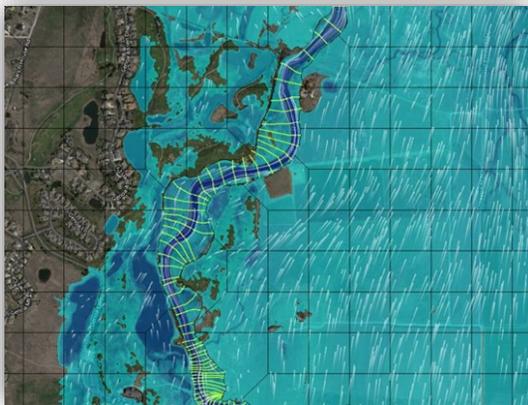
The Carson Water Subconservancy District (CWSD) continues to partner with the Federal Emergency Management Agency (FEMA) and HDR Engineering Inc. to develop detailed hydrology, hydraulic models, and floodplain mapping for an approximate 90 miles of the Carson River floodplain corridor. The study extends from Alpine County, CA to Lyon County, NV and will provide critical updated data for the management of our floodplains in the Carson River Watershed.

The existing FEMA Flood Insurance Rate Maps were produced in the 1980's with approximate methodologies and many parts of the river lack detailed flood elevations. The new modeling and mapping provides consistent detailed information for the study area and incorporates changes in the river based on the 1997 and other more recent flood events.



1997 Flooding in the Carson Valley

-Photo by Marilyn Newton, RGJ



Example portion of HEC-RAS Model

The work is being conducted under the FEMA Cooperating Technical Partners (CTP) program. The CTP integrates and involves local communities and stakeholders into the process. This four year, multi-phase project will result in physical map revisions (PMR) to the Flood Insurance Rate Maps (FIRMs) under FEMA guidelines and specifications. The modeling and mapping may also be used for long term land use planning to allow communities to assess spatial, temporal, and volumetric flood impacts of development or land use changes in the floodplain. Once the PMRs are approved, FEMA will publish new FIRMs along the West Fork, East Fork, and main stem of the Carson River for sections of Alpine, Douglas, and Lyon Counties, and Carson City. The FIRM updates in Lyon County and Carson City are submitted and in process with FEMA.

Due to the extremely complex nature of floodplain dynamics in the Carson Valley, the analysis was completed with a one- and two-dimensional model developed by the US Army Corps of Engineers. This model represents the latest release of HEC-RAS (River Analysis System) by the Corps. This public domain model, along with detailed topographic data developed in 2013, provides the most up-to-date, state of the art analysis available. The **draft** maps of the Carson Valley area of Douglas County and portions of Alpine County, CA are currently being reviewed by stakeholders and will be available for residents to review on November 16, 2016 from 2 - 7pm at the Douglas County Community Center. Please contact Ed James at 887.7450 with questions.

ARE YOU PREPARED?

www.NevadaFloods.org



Nevada Flood Awareness Week
November 14 - 19th, 2016

Photo courtesy of USGS

LEAF Interns in Action

By Duane Petite, TNC Carson River Project Director

Teenagers across the country turned off technology this July to take a walk on the wild side, including right here in northern Nevada. A cool internship program takes urban high school students from 24 states to nature preserves where they learn how people and nature are interconnected. For some, this is their first time to see bright stars, watch the wonders of wildlife, and spend time outdoors disconnected from phones, video games, and computers.



Monitoring water quality – Amanda
-Photo by Kathleen Dawson

As part of The Nature Conservancy's (TNC) Leaders in Environmental Action for the Future (LEAF) internship program, four young women from Rhode Island traded summer vacations for green jobs at the Conservancy's River Fork Ranch in the Carson Valley.

The paid interns enhanced the schoolyard habitat at Gardnerville Elementary School, worked with NDOW biologists tracking western pond turtles and monitored water quality alongside scientists from the US, France, and Mongolia. The internship also provided opportunities to create food and recreation budgets, plan and cook their own meals, visit colleges in NV and CA, and embark on fun adventures including hiking, rafting and star-gazing. We want to thank these teens and recognize their efforts in helping make the Carson River Watershed a healthy place to live, work, and play!



River Fork Ranch - Chelsea, Jessica, Amanda and Carolina
-Photo by Kathleen Dawson

(Spanish Watershed Map, continued from page 1)

So in 2015, CWSD applied and obtained a Clean Water Act Section 319(h) grant from the Nevada Division of Environmental Protection (NDEP) to partially fund the project. CWSD contracted International Professional Development Services (IPDS) from Reno, Nevada to complete the translation. Additionally, various local Spanish speakers, including those with a natural resources background, proofed the map prior to final printing to ensure a clear and fluent translation.

CWSD would like to thank all our partners for collaborating and making this important resource available to our residents. CWSD, the CRC and NDEP plan to distribute over 1600 Spanish maps in the next 12 months with the help of the United Latino Community Center in Carson City, ethnic grocery markets/stores, churches, English as a second language (ESL) classes, and local libraries and visitor bureaus.

If you are interested in receiving a physical copy of the Spanish version or a quantity of maps for your business or school, please call 775.887.9005 or email Brenda Hunt, Watershed Program Manager, brenda@cwsd.org or Shane Fryer, Watershed Program Specialist, shane@cwsd.org. Follow the link to download the Spanish map version [here](#).

Flood Reduction Projects in Douglas County

By Karen Johnson, NV Division of Emergency Management

Douglas County Community Development Department along with the Federal Emergency Management Agency (FEMA) and Nevada’s Department of Public Safety - Division of Emergency Management are actively pursuing funding opportunities to complete projects that reduce flooding in Douglas County communities. Due to the complexity of the problem, many engineering designs, environmental planning, and grant funding efforts have been in the works for years. This continual hard work will make Douglas County less prone to the effects of flooding from the melting snow pack and summer thunderstorms. Douglas County staff are currently pursuing the following projects:

US 395 at Martin Slough –FEMA has provided a grant for \$875,916, and contributions from Douglas County and Nevada Department of Transportation (NDOT) totaling \$92,000 to expand an existing six foot wide, four foot tall double box culvert under Martin Slough at US 395. The new culvert will be a twelve foot wide by five foot tall triple box culvert which will allow floodwaters to pass without overtopping the roadway. During past large flood events, US 395 has been closed. This project will eliminate ponding water on the east side of US 395 and remove parcels out of the FEMA mapped flood zone. This project is currently under design and construction should be complete by late 2017.

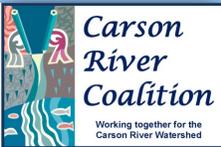
State Route 88 –FEMA has provided grant funding for an amount of \$1,606,500 and contributions from NDOT, the Town of Minden, the Carson Water Subconservancy District, East Fork Fire and Paramedic District, and Douglas County for an amount of \$530,000 to construct a culvert under State Route 88. The project will install four fourteen foot wide, six foot tall box culverts between the East Fork of the Carson River and the Cottonwood Slough (south of the Douglas County Swim Center). As floodwaters rise, State Route 88 acts as a levee causing water to pond on the east side of the roadway. This new culvert will allow floodwater to pass under the roadway and has the potential to eliminate or reduce flood risk to 204 parcels. The project is beginning design and is scheduled to be completed by fall 2018.

Burke Creek US Highway 50 – Burke Creek is a small stream that crosses US Highway 50 just north of the junction with Kingsbury Grade. Due to development decades ago, the stream was moved north of its historic location and is perched on the side of a hill. This loss of historic floodplain causes the stream to overflow its banks even during minor events. Although the Burke Creek restoration is primarily a water quality project, it does have flood benefits. The culvert that crosses US Highway 50 will be upgraded from a two foot diameter culvert to a 57 inch x 38 inch arch culvert. The new culvert will eliminate floodwaters overtopping US Highway 50 during the 50-year storm event. The restoration of Burke Creek to its natural floodplain will provide additional flow capacity and keep the runoff in its banks during larger storms. This \$1.9 million dollar project is being funded by the US Forest Service (\$957,000), Nevada Division of State Lands (\$587,000), NDOT (\$330,000), and Douglas County (\$100,000).

Free Tour
Seating
Limited

**“Get on the Van Man”
Carson River Mercury
Superfund Site Tour
November 1st**

<p>Speakers: David Friedman NDEP Andrew .W Bain EPA</p>	<p>Topics Include: History & Location Risk & Investigation Next Steps</p>
--	--


I - 4pm
Meet @ Morgan Mill
Road River Access Area

To RSVP contact Shane
@ 775-887-9005
or
Shane@CWSD.org

Johnson Lane Flood Risk Assessment – CWSD received a grant from FEMA to undertake an engineering study to assess and determine the storm water management problem within Johnson Lane area. This study will identify current flow paths and drainage patterns, assess deficiencies in current drainage infrastructure, and list and prioritize infrastructure. The main criteria will weigh how to protect the largest number of residences for the least amount of money. Cost estimates will be provided for all necessary improvements. The notice of grant award was just received mid-September by the Carson Water Subconservancy District and the consultant selection and kickoff will begin in the upcoming months.

Smelter Creek Flood Detention Basin – A preliminary engineering study and grant application has been completed for a detention basin on US Bureau of Land Management (BLM) land and will be submitted to FEMA in 2017 to reduce flooding in the Ruhenstroth subdivision. Placement of a detention basin would eliminate the floodplain in this area and therefore, eliminate the requirement for flood insurance in this neighborhood. FEMA flood maps would be modified accordingly. The proposed detention basin would remove from the flood maps 117 structures in the 100-floodplain and 195 structures from the 500-year floodplain. The cost of the infrastructure is estimated at \$3.1 million with 75% of the cost eligible for FEMA funding.

Stephanie Way Flood Detention Basin – A preliminary engineering study has been completed for a detention basin on BLM land between Stephanie Way and the Buckbrush Wash. Two small drainages have deposited significant amounts of sediment and debris during flash flood events in the summers of 2014 and 2015. The structure is estimated to relieve approximately 300 parcels from flood danger. The preliminary cost of the structure is estimated at \$1.3 million. Most of the properties affected are not located within a mapped FEMA 100-year floodplain; therefore, receiving federal grant money for construction of the project may prove difficult. It is anticipated this project will be evaluated during the proposed Johnson Lane Flood Risk Assessment project (*discussed above*) to determine where this project would rank in urgency and whether it is the cost effective use of public funds.

If there are any questions regarding the listed Douglas County projects, general stormwater issues, or to find out your property's flood zone, please contact Erik Nilssen, Douglas County Engineer at 775-782-9063 or Courtney Walker, Douglas County Stormwater Program Manager at 775-782-6215.

Washoe Tribe's Nonpoint Source Pollution Program

Request for Comments

[Link to Documents](#)

Comments must be submitted to
Tribal Headquarters or
the WEPD office by 11/15/2016

By phone @ 775-265-8682, or
email at
norman.harry@washoetribe.us.



CELEBRATE THE FALL COLORS
AND THE SOURCE OF YOUR WATERS - FROM TREES TO TAP

**Alpine Aspen
Festival**
Alpine Watershed Group
& Friends of Hope Valley

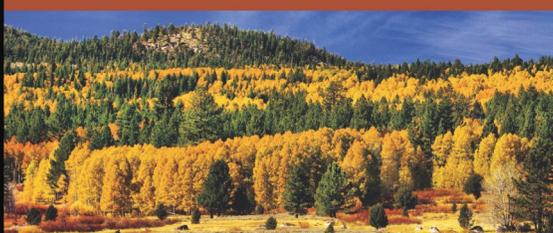
OCTOBER 8TH & 9TH 2016 - 10AM-4PM
AT BLUE LAKES ROAD IN HOPE VALLEY, CA

FLY FISHING • HORSEBACK RIDING • PHOTOGRAPHY TOUR
ASPENS • MINING HISTORY HIKE • PAINTING CLASSES

FREE ADMISSION! FREE LIVE MUSIC! FAMILY & DOG FRIENDLY!

VISIT BEAUTIFUL ALPINE COUNTY!
RESERVE YOUR ADVENTURE TODAY
www.AspenFest.org

SPONSORED BY: River Wranglers, Sorensen's Resort, Carson Water Subconservancy District, Alpine County Chamber of Commerce, US Forest Service & Lahontan Regional Water Quality Control Board



Weeds Know No Boundaries

By Shane Fryer, CWSD Watershed Specialist

Weeds know no boundaries, and readily spread between public and private land. The Carson Water Subconservancy District (CWSD) recognizes the necessity to foster cooperative partnerships to bridge these gaps and help disrupt the spread of weeds. Recently CWSD entered into an agreement between the United States Bureau of Land Management (BLM) and participating Cooperative Weed Management Areas (CWMA) to begin spanning these jurisdictional boundaries. The agreement will allow county CWMA's to begin managing weeds on designated BLM land. This arrangement also sets up a "cost share" where existing weed management funding is leveraged to allow BLM to provide similar funding for weed removal projects. These funds will be utilized by the CWMA's to treat BLM land and adjacent public and private lands with contiguous weed infestations.

The 2016-17 pilot year will be modestly funded, with around \$35,000 to devote to the CWMA's. Still as procedures, collaborations, and relations begin to coalesce the cost share agreement has room to grow and accept further match over the next 4 years. For over one and half decades the CWSD has worked closely with the counties of the Carson River Watershed and their supporting CWMA's. Since 2003 the CWSD has contributed over \$1.5 million in targeted weed funding from grants and base support.



Russian Thistle

This year the CWSD budgeted \$75,000 to sustain county CWMA's within the watershed. The CWSD also received an additional \$80,000 from a grant through the National Fish and Wildlife Foundation (NFWF) to augment the capabilities of county CWMA's. In total the BLM cost share, NFWF, and CWSD funding will amount to a rarely reached \$195,000 for weed management funding in the Carson River Watershed. The CWSD hopes to sustain this trend in funding through grant writing, efficiently leveraging monies, and continuing to build upon the excellent partnerships in the watershed.

Even with all this funding, our most important partner in managing weeds will always be the residents of the Carson River Watershed. Though we are still in drought, this year has been wetter than previously, with many weed species flourishing. Present conditions allow hoary cress to envelop your property and move to your neighbor's. Musk thistle and perennial pepper weed take over river banks and expand up connecting tributaries. Knapweed will spread along road shoulders and into adjacent properties. The weeds mentioned above are just four of the listed 47 species designated as "noxious weeds" in Nevada. These species have been determined to cause severe ecological harm and to be economically costly to agriculture and ranching across the state. Help us protect the Carson River Watershed by learning how to identify, manage, and report your weeds. With this year's additional funding for our CWMA's, there will be additional opportunity to give support to our residents.

Cooperative Weed Management Areas (CWMA)

Alpine County/Upper Carson River Watershed Cooperative Weed Management Area

General contact: LeeAnne Mila at (530) 621-7403, LeeAnne.Mila@co.el-dorado.ca.us

Douglas County Weed District

General contact: Jeff Begovich at (775) 721-7165 JBegovich@douglasnv.us

Carson City Weed Coalition

General contact: Dan Anderson at (775) 887- 2262 Ext. 7035 dhanderson@carson.org

West Central Lyon County Weed Management Area

General contact: Rob Holley at (775) 246-1999 rholley.dvcd@yahoo.com

Churchill County Mosquito and Weed Abatement District

General contact: Nancy Upham at 775 423-2828 ccmosquito@cccomm.net

Markleeville Creek Day: Restoring Our Watershed

By Hannah Drummond, AWG Watershed Program Assistant

On Saturday, September 10, 85 individuals participated in the 17th Annual Markleeville Creek Day, hosted by the Alpine Watershed Group. This volunteer work day is held every year to complete projects that improve the health of Alpine County's watersheds. This year included attendees of all ages and representatives from a variety of local and regional organizations. After meeting in Markleeville on Saturday morning, groups dispersed to seven different project sites along the East and West Forks of the Carson River. Thanks to our amazing volunteers, we were able to complete the following:

- 30 native perennials planted in the Grover Native Plant Demonstration Garden
- 810 lbs. of invasive weeds removed
- 250 willow stakes, 150 potted willows, and 40 cottonwoods planted
- 20 native trees protected from beaver
- 3,500 sq. ft. of slope seeded and stabilized with jute matting
- 20 pounds of native seed spread
- Improvements to Elizabeth Coyan Park including picnic table staining, stairway cleaning, and tree trimming
- 60 lbs of trash removed from our local waterways



Restoring Head Cut in Hope Valley

We would like to thank our partners who supported the event or helped lead projects, which include Alpine County, Alpine Garden Club, Alpine/Upper Carson Weed Management Group, American Rivers, California State Parks, California Conservation Corps (CCC), Carson Water Subconservancy District, Friends of Hope Valley, Great Sierra River Cleanup, and the Sierra Nevada AmeriCorps Partnership.



CCC & Volunteers at Hangman's Bridge

The day could not have been a success without the support from our sponsors. Thanks to Broadbent Associates Inc., Alpine County Chamber of Commerce, Nature's Bakery, CA Off-Highway Motor Vehicle Grant Program, Phoenix Pharms, and Greenhouse Garden Center for making it possible for us to provide tools and supplies.

AWG is very appreciative of everyone who dedicated their time to make this year's Creek Day the largest turnout ever! More photos can be found on the [Alpine Watershed Group's Facebook page](#).

Editors Note: As she leaves this position, CWSD would like to thank Hannah Drummond, AmeriCorp member, for all her work with the Alpine Watershed Group. We enjoyed her smile and "can do" attitude! We will miss her and wish her luck in all her future endeavors!

(Weeds, continued from page 6)

Please help us by reporting any infestations you see, whether it's in the backcountry or just down the block, by contacting your local CWMA (see contacts), by using the [Eddmaps West website](#), or download the ap. Your local CWMA is there to help!

We want to thank all our partners for helping make these new weed funding opportunities available and with your help we can limit the spread of weeds throughout the watershed!

Save a Stamp!
Sign up for
CWSD's e-blast list
for a digital
newsletter copy.
cwsd@cwsd.org

Editor:
Brenda Hunt

Production:
Shane Fryer

Thanks to Contributors!

Mitchell Blum
Duane Petite
Karen Johnson
Hannah Drummond

**Save the Date for these
Upcoming Events**

**October 5, 2016, 10:00 - 4:00 pm: 2016
RCAP Outreach & Well Assessment
Workshop**, Register at:
www.events.rcac.org/assnfe/ev.asp?ID=900

**October 8-9, 2016, 10:00 - 4:00 pm:
2016 Alpine Aspen Festival:** For more
information, contact awg.gavinf@gmail.com
or call 530-694-2327

**October 12 (Minden) or 13 (Reno), 2016,
9:00am - 2:30 pm: Non-Structural Measures
for Flood Risk Management**
RSVP to Margaret Engesser:
Margaret.C.Engesser@usace.army.mil

**October 15, 2016, 8:00 - 9:00 am:
Muscle Powered's Trash Mob in Carson City**
Muscle Powered **Facebook Book** or email
RandallGaa@gmail.com

**October 17, 2016, 7:00pm - 8:30 pm: Meet
& Greet Leadership Social**
Carson Valley Trails Association
Contact info@carsonvalleytrails.org

**October 24-25, 2016, 10:00 - 4:00 pm:
History of Water in Nevada Event**
Nevada Water Resources Association
www.nvwra.org/2016-water-history-event

**October 27, 2016 1:00 - 5:00 pm:
Mining & Public Lands**
Nevada Water Resources Association
www.nvwra.org/publiclandsmining

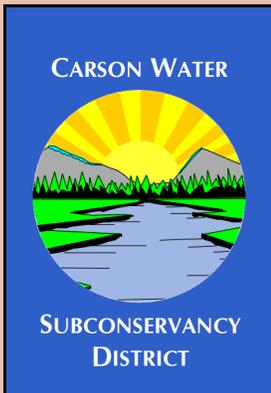
**November 1, 2017, 1:00pm - 4:00pm
Carson Mercury Superfund Site Tour**
Contact shane@cwsd.org

**November 14-19, 2016:
Flood Awareness Week, Nevadafloods.org**

**January 26-28, 2017: Eagles & Ag in Douglas
County,**
[www.carsonvalleynv.org/
pages/eaglesag/](http://www.carsonvalleynv.org/pages/eaglesag/)



This newsletter has been developed in part
with Clean Water Act 319 (h) funds from the
Nevada Division of Environmental Protection.



CARSON WATER SUBCONSERVANCY DISTRICT
777 E. William St., #110A
Carson City, NV 89701

