

# Watershed Connections

*Delivering News to the Carson River Watershed Community*

Carson City from Prison Hill, photo by Loren Secor

## Carson River Watershed Forum 2020 Focuses on Water Quality

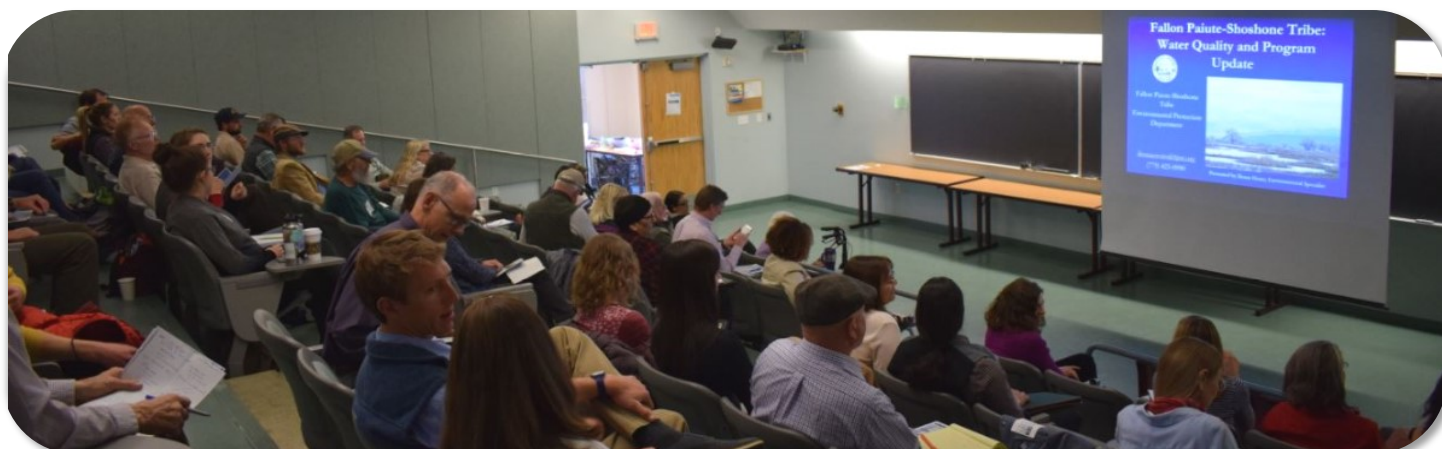
*By: Brenda Hunt, Watershed Program Manager, CWSD*

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Wow, how time flies! Although the Watershed Forum wasn't that long ago, it truly feels like it was another time. On March 10<sup>th</sup> & 11<sup>th</sup> CWSD's 2020 Carson River Watershed Forum shined a light on water quality issues and work being implemented to improve water quality throughout the watershed. Over two days, 36 speakers and panelists updated our audience on topics relating to surface and groundwater water quality planning, science, monitoring, education, and on-the-ground implementation.

The first day looked at the State of the Watershed from a planning and science perspective, while the second day focusing on program and project implementation efforts aimed at improving the watershed's water quality. The event culminated with a Water Quality Implementation Workshop where attendees were placed in break out groups associated with each county. Participants detailed the status of proposed projects and programs listed in the Carson River Watershed Adaptive Stewardship Plan and listed new projects/programs currently not in the plan. This critical information will be used to update the Carson River Watershed Adaptive Stewardship Plan and track project implementation. *(Continued on page 6)*



Forum attendees socialize while waiting for a presentation to commence. Photo by Daniel Correa.



## Alpine Watershed Group's 2019 Upper Carson River Watershed Report Card Is In!

*By Alpine Watershed Group*

In 2019, Alpine Watershed Group volunteers collected their sixteenth year of water quality data on the headwaters of the Carson River watershed. Data from these observations give us the big picture of overall ambient water quality conditions and provide scientific basis for management and action needed in the Carson River watershed. By continuing long-term monitoring at the same sites at approximately the same time every year, this data can be compared from year to year to better understand if our watershed health is stable, improving, or deteriorating.



*Longtime River Monitors Jim and Paula collect water quality data on the East Fork Carson River. Photo by Mo Loden.*

The water quality parameters measured for AWG's river monitoring program are stream temperature, dissolved oxygen, pH, turbidity, and conductivity/total dissolved solids. Overall, 80% of the measurements collected in 2019 meet water quality objectives. Compared to all years, only two parameters, pH and turbidity, show a decline in the amount of measurements that meet objectives. The [2019 Upper Carson River Watershed Water Quality Objectives Report](#), produced by Helen Fillmore, provides an overview of AWG's river monitoring program. The report analyzes the 2019 data and discusses the variables that influence, and are influenced by, the water quality parameters that AWG measures.

The Hope Valley Restoration and Aquatic Habitat Enhancement Project, going to construction later this year, is an AWG project that is designed to help reduce turbidity in the West Fork Carson River. The contractor will dig a trench behind the failing bank, filling it with live sod blocks, willow stakes, and live willow shrubs. The goal is to create a more stable and capable streambank behind the current failing bank. Once the bank erodes to this created oxbow feature, AWG expects a reduction in sedimentation and lower water temperature in shaded areas, improving fish habitat. For more information on the upcoming project, read the project flyer on AWG's homepage, [www.alpinewatershedgroup.org](http://www.alpinewatershedgroup.org), under Latest News.

Click [here](#) to access the *2019 Upper Carson River Watershed Water Quality Objectives Report*. For more information or if you have questions, please contact AWG Watershed Program Manager Mo Loden at [awg.mo.loden@gmail.com](mailto:awg.mo.loden@gmail.com).



# Nevada's 2016-2018 Water Quality Integrated Report

*By: Mary Siders, Environmental Scientist IV, NDEP*



*Photos in this article provided by NDEP.*

Every two years, the Nevada Division of Environmental Protection (NDEP) evaluates water quality data for waterbodies throughout Nevada, and publishes the results in the “Integrated Report.” Out of the nearly 700 waterbodies assessed for the *2016-2018 Water Quality Integrated Report*, approximately one-third are meeting standards for all or some beneficial uses. The data is insufficient to assess about one-third of Nevada’s waterbodies, and another third are not meeting beneficial use standards for one or more parameters. NDEP has also created a web map application to display the water quality monitoring locations and assessment results documented in the *2016-2018 Water Quality Integrated Report* <http://webgis.ndep.nv.gov/>.

Total phosphorus causes the greatest number of impairments in Nevada (21.1% of all impairments), followed by temperature (12.6% of all impairments). *Escherichia (E.) coli*, mercury in fish tissue, iron, and total dissolved solids (TDS) each contribute more than 5% of the total impairments. A portion of phosphorus may come from nonpoint sources. Working on strategies to reduce concentrations of total phosphorus would provide the greatest

improvement in water quality across the state. Elevated water temperatures may be the result of destruction of riparian vegetation that shades the waterway. In such cases, a stream restoration plan may be needed to address temperature for some waters.



*(Continued on page 7)*

## River Wranglers Navigates Uncharted Waters

*By Darcy Phillips, Executive Director, River Wranglers*

Like every other organization, River Wranglers is navigating uncharted waters as a result of COVID-19. How can we adjust our message and content to continue reaching our students, families and educators both during the current shutdown and after? Will we be able to do field trips and workdays again anytime soon, and if so, should we? Will it be a year of adjustments followed by a return to what we were doing pre-virus? River Wranglers is responding to the uncertainty in several ways and we are learning as we go.

First, we started a series on YouTube called “Watershed Adventures,” posting videos several times a week. These short videos focus on an educational topic, a view of somewhere special in our watershed, or an educational activity that can be done at home with supplies on hand. Subject matter includes petroglyphs, beavers, irrigation, Lahontan Reservoir, surface tension, non-point source pollution, and many others. We are filming all throughout the Carson River watershed and beyond, with both staff and board members sharing their knowledge.

This time away from the classroom and students is a good opportunity to focus on social media, and we are working to engage our followers with meaningful content. Our new “Tuesday Teacher Feature” on both Facebook and Instagram highlights our favorite classroom teachers by posting some of their nature pictures and comments from them. Our teachers are a wonderful resource and support to their students, and we want to highlight their passion for the outdoors. We encourage teachers to share these highlights with their students and their families.

Finally, we are looking ahead to what happens this fall, especially if field trips and workdays need to be put on hold. How do we continue to use our model of kids-educating-kids and connect the high school students with their elementary school workday partners? How can we virtually visit a classroom and still be hands-on in our teaching? These are all questions we are working to answer, and with our communities help, we will.



**River Wranglers**

May 11 at 9:05 AM • 🌐

In today's informative video, Eric shares with us the real reason for Lahontan Reservoir in Nevada, agriculture!



YOUTUBE.COM

**Carson River Irrigation**

RIVER WRANGLERS Eric talks about some of the uses...



*Another 'Watershed Adventure': Paddle boarding the Carson River! Photo by Shane Fryer*



## Throw a Disk for the Carson River Watershed

*By Shane Fryer, Watershed Program Specialist, CWSD*

Disc golf may be more than just a bit of exercise and a good time. It is now taking on a comparable role to traditional golf in preserving Carson River Watershed open space and helping maintain the undeveloped nature of its floodplain and alluvial fans. For decades traditional golf courses have played an important land use role of limiting development in the floodplain, while maintaining open space important to the public. Genoa Lakes, Sun Ridge and Empire Ranch Golf Courses are good examples of floodplain utilization without substantial infrastructural development along the Carson River. Absent levees, flood waters can inundate the roughs and fairways of these courses. This allows flood waters to spread out, slow down and sink in contributing to groundwater recharge, while alleviating some downstream flood risk.

Disc golf in contrast to traditional golf requires much less infrastructure, and no need for pesticides or fertilizers. Disc golf courses use existing vegetation and original landforms to challenge participants. You may be surprised at how close a disc course is to you! Currently six-disc golf courses operate in our watershed. These disc golf courses can be found adjacent to the Carson River ([Dayton Disc Golf Course](#)), along Carson's tributaries ([Indian Hills Disc Golf Course](#)), or on alluvial fans and upland recharge zones ([Carson Ridge Disc Golf Park](#)). Best of all these courses are free to play!

[Carson Ridge Disc Golf Park](#) (Flint Rd.): Carson City - 9-hole beginner course, 18-hole course

[Indian Hills Disc Golf Course](#) (James Lee Park): Douglas County, 7-hole beginner course, 20-hole course

[Pine Nuts Disc Golf Course](#) (Douglas County Fairgrounds): Douglas County 18-hole course

[Turtle Rock Park Disc Golf Course](#) (Turtle Rock Park): Alpine County, 18-hole course

[Dayton Disc Golf Course](#) (Rolling A Ranch Park): Lyon County, 18-hole course

[Churchill County Disc Golf Course](#) (Churchill County Regional Park): Churchill County, 9-hole course



Photo by Brenda Hunt.

Disc golf shares some similarities with traditional golf but instead of holes there are baskets. You start at a tee box and try to throw your disc into a chain lined basket. Usually this takes repeated throws. Each basket has a par number, or the suggested number of throws to complete. They even make multiple kinds of discs for different throws like putting (short) and drives (long); however all you really need is a regular Frisbee™ to have a lot of fun! Why don't you try giving a disc a toss at one of our local courses? It is a low impact way of enjoying open space, while keeping our floodplains and alluvial fans undeveloped! While on the course, please help preserve our watershed by picking up after your pet, collecting trash you see, and brushing shoes to limit the spread of weeds. Disc golf! Another opportunity to get outside and explore your watershed!



## Water Quality Focus of the Carson River Watershed Forum

*(Continued from page 1)*

In case you missed the Forum, links to the PowerPoints and Forum resources can be found [here](#). We are so appreciative we were able to share so much with everyone during these information packed two days. Given the circumstances we are all facing with COVID-19, CWSD hopes this Forum will not be the last time we will host an in-person event this year. We have currently put the “Get on the Bus” Watershed Tour on hold and will send out updates via eblast when we know more.



*Carlos Rendo, NDWR, demonstrates the floodplain model.  
Photo by Daniel Correa.*



*Brenda Hunt, CWSD, announces speakers. Photo by Daniel Correa.*

Thank you to all our speakers and panelists, Western Nevada College for the venue, the Wildcat Den café for catering lunch, my fellow CWSD staff's event organization skills and muscles, and for all of you who attended! Your dedication to the Carson River Watershed and the work being done is astounding and we sincerely appreciate all of you! For more information, contact Brenda Hunt, [brenda@cwsd.org](mailto:brenda@cwsd.org)

## 2020 Peak Flow Contest Winners Revealed!

*By Shane Fryer, Watershed Program Specialist, CWSD*

Thanks to everyone who participated in this year's 2020 Peak Runoff Prediction Contest! In total we had 18 participants who dissected the data, scrutinized the forecasts and read their tea leaves. So, what did this season look like? The average daily flow on the Carson peaked **April 30<sup>th</sup>** (June 7 in 2019). The average daily flow was **1300** cubic feet per second (3290 cfs in 2019)!

So, the winners are:

**Justin Bedocs:** Predicted 1200 cfs, just 100 cfs off the average daily flow!!

**Will Boyer** guessed April 27 and **Ed James** guessed May 2, both 3 days from the peak.

Congratulations to the great oracles of 2020! Your divinations are truly impressive; may you receive much adulation from your colleagues...until next year!



## Nevada's 2016-2018 Water Quality Integrated Report

(Continued from page 3)

In the Carson River region, 50 waterbodies were assessed for the *Integrated Report*. Of these 50 waterbodies, 27 are streams or stream segments totaling 265 miles. A legacy of Nevada's historical gold mining and milling, Mercury in fish tissue impairs nearly 71% of these stream miles. Other water quality impairments—including temperature, total phosphorus, mercury in sediment, iron, and dissolved oxygen—affect about 64% of the stream miles for aquatic life. Approximately 20% of stream miles had water quality impairments related to the beneficial uses of municipal or domestic supply, recreation with contact, and irrigation. Identifying impairments helps focus attention on areas that would benefit from improving water quality.

Results of NDEP's latest statewide water quality assessment provide some of the information needed to prioritize waterbodies and parameters that require further investigation. Some of these waterbodies may benefit from the development of TMDLs\* (Total Maximum Daily Loads) and watershed management plans or alternative approaches. Alternative approaches incorporate adaptive management and are tailored to specific circumstances. Such approaches may be better suited to implement priority watershed or water actions that achieve the water quality goals of Nevada, including identifying and reducing nonpoint sources of pollution. Time, energy, and community involvement is required to address Nevada's nonpoint source pollution concerns. NDEP continues to work with our partners to find innovative solutions to this critical water quality issue.



\* A TMDL or "total maximum daily load" is a numerical tool that specifies the maximum amount of a pollutant that a body of water can receive while still meeting water quality standards.

To learn more, see NDEP's latest Integrated Report, which is available on-line at:

[https://ndep.nv.gov/uploads/water-wqm-docs/IR2018\\_FINAL\\_IR\\_April\\_2020.pdf](https://ndep.nv.gov/uploads/water-wqm-docs/IR2018_FINAL_IR_April_2020.pdf)







# ★ The AMERICORNER ★



## Appreciating the Smaller Residents of the Carson River Watershed

*By Loren Secor, Watershed Technician, CWSD*



*Clockwise: Leopard lizard (Gambelia), desert horned lizard (Phrynosoma), moth caterpillar.  
Photos by Loren Secor and Patricia Tierney.*

The past several months have proven to be a difficult time for everyone and it's been all too easy to fall into a routine of staying indoors. With mild weather upon us and summer just on the horizon, now is an excellent time to get out and explore the watershed. The amazing views and scenery so prevalent in our watershed often means the smaller things might be overlooked. Taking time to slow down the pace and take greater notice of our surroundings can lead to some interesting discoveries.

Reptiles are one of the more common watershed residents and certainly not an unfamiliar sight to hikers. A closer inspection however, reveals a wide variety of species, each with their own unique niche. Likewise, birds, insects, and plants, can display an intriguing range of colors and varieties. So the next time you're hiking Prison Hill or birding at the Stillwater National Wildlife Refuge, take a few minutes to slow down and take a closer look. You might be pleasantly surprised by what you find!



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*CWSD works within existing governmental frameworks to promote cooperative action for the watershed that crosses both agency and political boundaries.*

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Follow us!



### UPCOMING EVENTS

**Alpine Watershed Group Webinar Meeting:**

**July 14, 5:30-7:00 PM—Craig Oehrli on Blackwood Creek Restoration—Holistic Restoration Opportunities in Riparian Forest Environment**

**Nevada Department of Wildlife Webinars:**

**June 11 5:00 PM—Fish Food**

**June 12 5:00 PM—Elusive Animals Part 3**

**Carson City Parks, Recreation & Open Space Department**

**June 20 10AM—Trails and Tails**

**Click to view the I am Carson River Watershed campaign video!**

