

# Carson River Watershed Adaptive Stewardship Plan

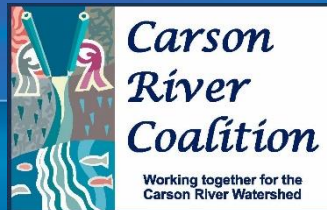
April 18, 2023

Carson River Watershed Forum

*Brenda Hunt*

*Watershed Program Manager*

*Made possible by:*

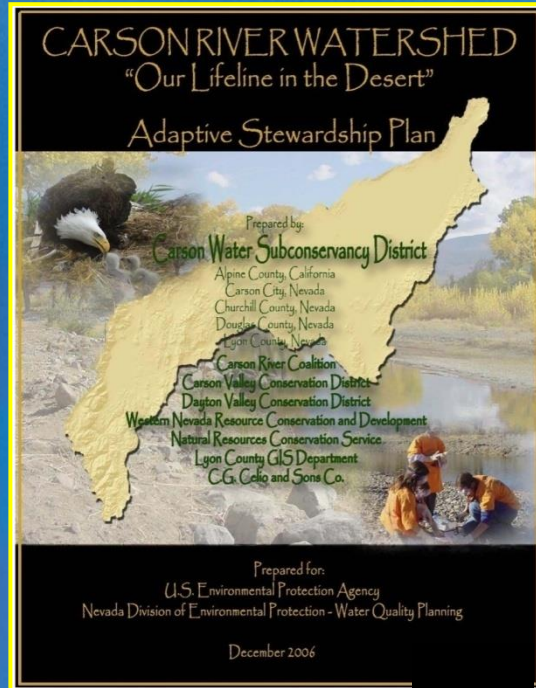


Feb 2017 Emergency Release from V-Line via Lahontan Reservoir

*Photo by Pete Olsen*

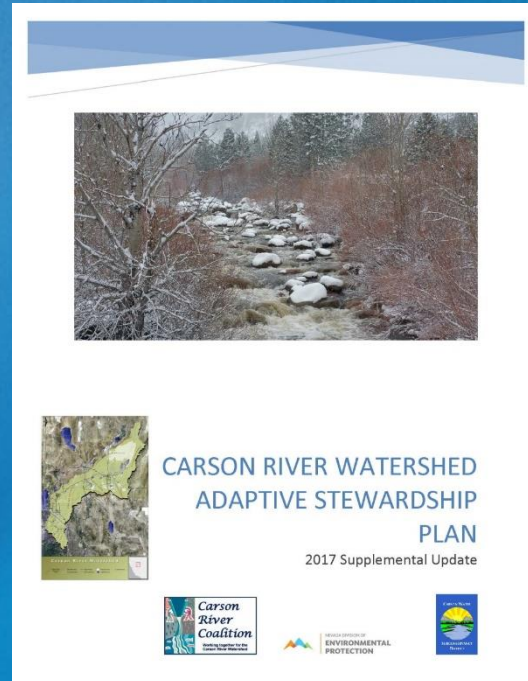


# Effective Planning

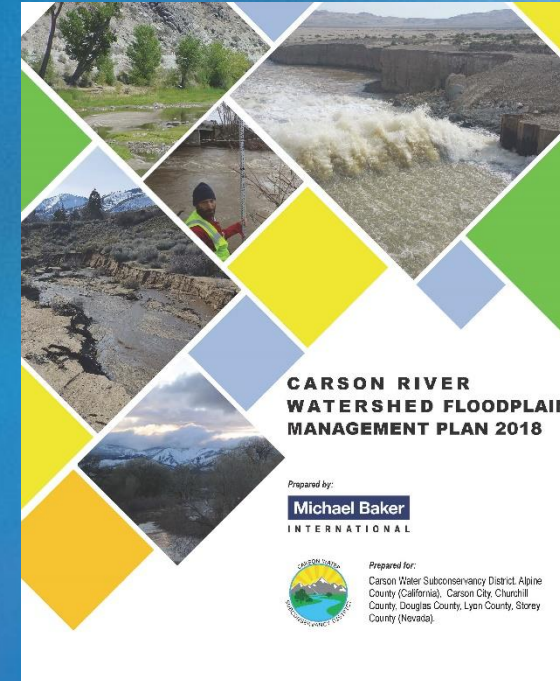


***Adopted by  
CWSD in 2007***

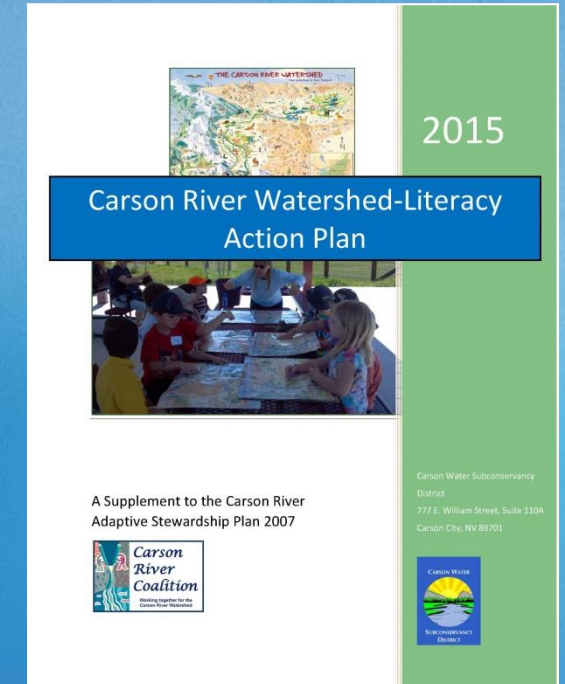
***Both original and updated Stewardship  
Plans meet EPA 319 criteria for  
watershed plans***



***Adopted by  
CWSD Jan 2018***



***Formally adopted  
by all 5 counties  
along the Carson  
River in 2008 and  
2018***



***Adopted by  
CWSD in  
April 2015***



## Plan Purpose:

- Accepted by USEPA and certified by NDEP as an updated 9-element Watershed Plan for 319 funding purposes Oct 2017.
- Water Quality (WQ) impairment data and WQ objectives.
- Provide progress on projects and programs implemented to date.
- Lists proposed projects and suggested actions for WQ improvements and all other IWM Categories.



# Integrated Watershed Planning and Management

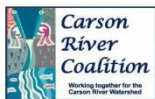
The plan identifies projects and programs in the following categories:

- Floodplain Management
- River Restoration/Rehabilitation
- Water Quality
- Water Supply
- Invasive Species
- Outreach and Education
- Recreation



## CARSON RIVER WATERSHED ADAPTIVE STEWARDSHIP PLAN

2017 Supplemental Update



# Chapter 8 Tables:

## Critical Area Management Measures and Water Quality Objectives

Critical Areas	Category 5 Impairment and/or TMDL parameters from Integrated Report	Potential Source	Recommended Management Measure to be implemented	Performance Indicator	Milestone measuring progress towards attaining WQ Objective
<b>EF Carson River-Stateline to Genoa including Bryant Creek</b>  <b>Mainstem Carson River Genoa Lane to Lahontan</b>	TP, TSS, NTU, DO, T, Phosphorus TDS (Arsenic, Iron, Nickel-Bryant Creek only)	Hydrologic Modification – channel & flow alteration  Sediment Transport from upstream	❖ 250 linear feet of River bank stabilization, rehabilitation, floodplain restoration or revegetation per year (NV SMP Milestone) including weed removal and reseeding/revegetation.	❖ 50 lbs/yr TP & 50 tons/yr TSS kept out of river ❖ (R5 model estimate)	Decreasing trend in concentration or standard/TMDL exceedance
		Urban Development & Runoff	❖ Implement at least one LID/urban runoff project in the next 5 years	❖ Determine appropriate load reduction as part of LID/urban runoff infrastructure project	
		Agriculture – crop & livestock management	❖ Install cattle exclusions along River and irrigation return flow ditches where appropriate and if feasible ❖ Install stock watering systems ❖ Floodplain remains agricultural, removed from development, established as a conservation easement or designated as open space where feasible.	❖ Feet of fencing installed ❖ # of stock water systems installed ❖ Increase in acres of floodplain preserved or conserved above 2015 baseline	

**Table 8.3 Proposed Projects**

<b>Critical Area*/Tributary Reach/ Project Area</b>	<b>Interfluve Sub-Reach**</b>	<b>Project Title/Description</b>	<b>Project Manager &amp; Partners *****</b>	<b>Estimated Completion Date</b>	<b>Estimated Completion Costs</b>	<b>Map I.D. Code***</b>
<b>Floodplain Management/Meadow Restoration Projects</b>						
<b>Alpine County</b>						
<b>West Fork Carson River Headwaters to Paynesville*</b>	N/A	Upper Hope Valley Meadow Restoration and Aquatic Habitat Enhancement - Implementation	USFS, CWSD, AWG, FOHV, Alpine County, American Rivers, Trout Unlimited	Contingent upon funding availability	\$243,870	AWG-5
<b>Markleeville Creek/ Upper East Fork Carson River*</b>	N/A	Markleeville Creek Floodplain Restoration Project (Floodplain restoration/river rehabilitation) - Implementation	Alpine County, Alpine Watershed Group, Markleeville Public Utility District, U.S. Forest Service	Contingent upon funding availability	\$1,750,000	AWG-1
<b>Also See River Rehabilitation</b>						
<b>Douglas County</b>						
<b>EF Carson River Stateline to Genoa</b>	E-5,E-6 88 to Muller Muller to Genoa	Park Property Potential Conservation Easement for Floodplain & Riparian Corridor Preservation	Private Property Owner, Legacy Land & Water, TNC, Douglas County	Contingent upon easement agreement & funding	TBD	TBD



**Carson River Adaptive Stewardship Plan Suggested Actions  
for Future Management and Implementation**

SA- #	Critical Area	Suggested Action	Responsible or Suggested Responsible Party	Potential Funding Sources
<b>Floodplain Conservation</b>				
SA-1	Watershed wide	Continue to implement Carson River Floodplain Management Plan 2008 and supplemental update 2013 Summary of Suggested Actions Table 4.7-1, pages 52-55 and any adopted updates.	CWSD, Counties, Other agencies	FEMA, CWSD, Counties, other relevant entities
SA-2	Watershed wide	Continue to implement Carson River Discovery Report 2012 Recommended Watershed Projects Table and any adopted updates.	CWSD, Counties, Other agencies	FEMA, CWSD, Counties, other relevant entities
SA-3	Watershed wide	Complete projects outlined in Current and Proposed Project Tables 8.3-8.7 relating to Floodplain/ Meadow Conservation	Relevant entities	Relevant entities
<b>River Rehabilitation/Stabilization</b>				
SA-4	Watershed Wide	Evaluate Carson River diversion structures to determine the feasibility and priority of replacement/retrofitting with permanent structures that transport sediment, allow fish passage, and provide recreational boat passage.	CWSD, NDOW, NDEP	NRCS, NDOW, CWSD, NDEP
SA-5	Watershed Wide	Investigate what type or level of sediment transport study would be feasible for the Carson River.	CWSD, NDEP, USACE	CWSD, NDEP
SA-6	Watershed Wide	Identify priority areas requiring bank stabilization/rehabilitation within each County's river and tributary reaches.	CWSD, Counties, Conservation Districts, NGO, Ag Community	CWSD, NDEP, NRCS, NDOW, FEMA, EPA

# Questions?

