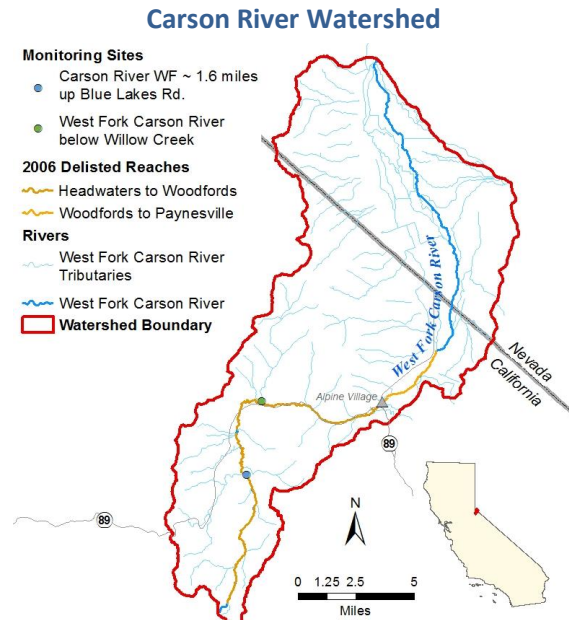


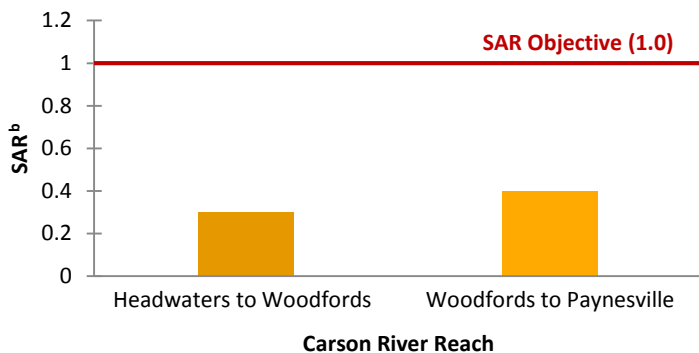
Water Quality Report Card		Sodium in West Fork Carson River	
Regional Water Board:	Lahontan, Region 6	STATUS	<input type="checkbox"/> Conditions Improving
Beneficial Uses Affected:	AGR		<input type="checkbox"/> Data Inconclusive
Implemented Through:	Revised Water Quality Objective		<input type="checkbox"/> Improvement Needed
Effective Date:	October 12, 2006		<input checked="" type="checkbox"/> Targets Achieved/Waterbody Delisted
Attainment Date:	2006	Pollutant Type:	<input type="checkbox"/> Point Source <input checked="" type="checkbox"/> Nonpoint Source <input type="checkbox"/> Legacy

Water Quality Implementation Summary

The Carson River, located in Alpine County, is the headwater of a larger, internally-drained Nevada watershed. In 2002, two reaches of the West Fork Carson River were placed on the 303(d) list for exceedance of the “percent sodium” water quality objective for the protection of crops and soils against the impacts of excess sodium in irrigation water. In October 2006, Region 6 adopted a [basin plan amendment](#) (BPA) that replaced the percent sodium objective for the Carson River and Walker Creek watersheds with a new “Sodium Adsorption Ratio” (SAR) objective. The [USDA recommends](#) SAR as the sodium standard, as it is a better indicator of the suitability of water for use in agricultural irrigation than percent sodium. The BPA also includes a natural source exclusion, exempting localized elevated SAR values due to natural (e.g., geothermal) sources from the SAR objective.



Maximum SAR Analyzed, 1984-2002^a



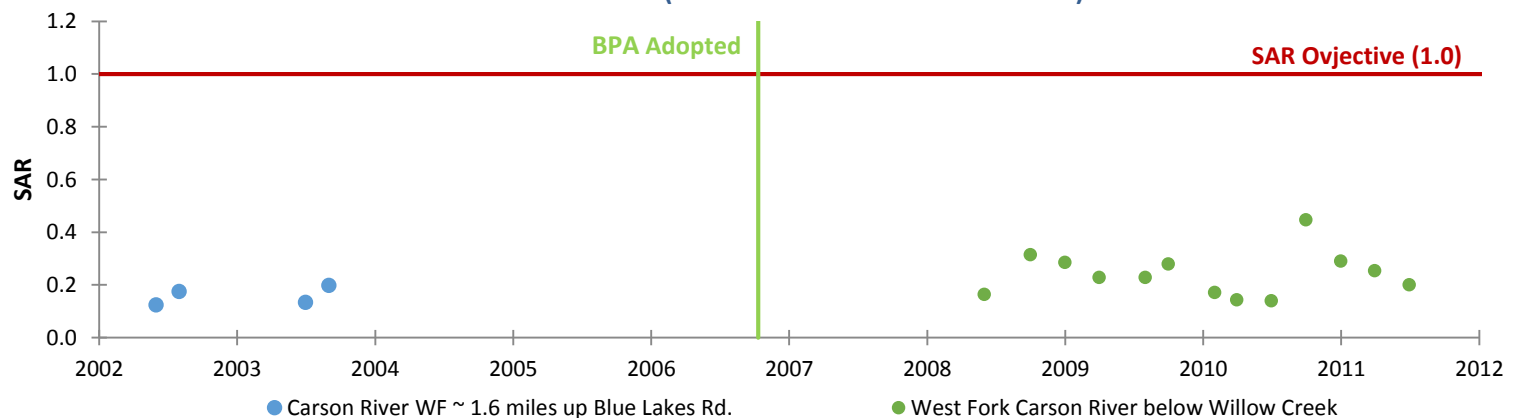
^a River segments directly downstream of geothermal activity are not included.
^b SAR relates relative concentrations of sodium (Na) to the sum of calcium (Ca) and magnesium (Mg) ions.

$$SAR = \frac{Na}{\left[\frac{Ca + Mg}{2}\right]^{0.5}}$$

Water Quality Outcomes

- Water quality data demonstrate that, with the exception of natural sources, the SAR for the West Fork Carson River never exceeded the SAR objective.
- In developing the BPA, Region 6 staff [determined](#) that adopting the SAR objective eliminated the need to develop TMDLs for the Carson River reaches as (the SAR objectives were never exceeded).
- The sodium listings for the two West Fork Carson River reaches (Headwaters to Woodfords, and Woodfords to Paynesville) were [removed](#) from the 303(d) list in 2006.

West Fork Carson River (Headwaters to Woodfords Reach) SAR^c



^c Monitoring data for monitoring stations “Carson River WF ~ 1.6 miles up Blue Lakes Rd.” and “West Fork Carson River below Willow Creek” are available on [CEDEN](#).