

4 Water with high bicarbonate makes for a sodic soil.

<i>Water report</i>	<i>Soil salinity report</i>	<i>Texture report</i>
Total Salts 416 mg/L, Good	TSS 1530 mg/L, Normal	22% Sand
SAR 3.2, Fair	SAR 13 , Sodic	40% Silt
HCO ₃ 305 mg/L; Adj SAR 4.2 , Poor	Boron 0.15 mg/L, No Concern	38% Clay
Boron 0.06 mg/L, No Concern		

This irrigation water is classified as **Poor** because of the high Adj SAR of **4.2**; this Adj SAR poses a potential, long-term soil problem where calcium is removed from the soil.

This soil is classified as **Sodic** with an SAR of 13 because of the high Adj SAR in the water.

This soil is classified as a **Clay Loam** with low permeability.

Plant symptoms. Brown areas, similar to drought stress; soil water fails to drain.

Management strategy. Aerify soil and sand topdress; apply 10 pounds pelletized gypsum/1,000 sq. ft. and repeat in 30 days. Leach regularly with best available water. Investigate the possibility of acidifying this water because of the bicarbonates, but consult with a water quality specialist.

5 Water with high boron makes for a soil with high boron.

<i>Water report</i>	<i>Soil salinity report</i>	<i>Texture report</i>
Total Salts 756 mg/L, Good	TSS 1,260 mg/L, Normal	40% Sand
SAR 0.7, Excellent	SAR 0.9, Normal	40% Silt
HCO ₃ 0.0 mg/L; No Adj SAR	Boron 3.50 mg/L , Concern	20% Clay
Boron 1.93 mg/L , Concern	for Sensitive Plant	

This irrigation water is classified as **Good** because of the low total salts, but the high boron makes it potentially harmful to sensitive plants such as Kentucky bluegrass and ornamentals.

This soil is classified as **Normal** because of the TSS and SAR, but boron in this soil can be a problem; most turf can tolerate relatively high concentrations of boron, but ornamentals such as trees cannot.

This soil is classified as a **Loam** with moderate permeability.

Plant symptoms. Burnt leaf tips; however, frequent mowing removes the problem.

Management strategy. Do not use this water on ornamental trees and cool season grasses; consult a water quality specialist if necessary.

6 Water from very heavy rainfall makes for unexpected results.

<i>Water report</i>	<i>Soil salinity report</i>	<i>Texture report</i>
Total Salts 0 mg/L, Excellent	TSS 95 mg/L, Normal	93% Sand
SAR 0.0, Excellent	SAR 0.1, Normal	4% Silt
HCO ₃ 0.0 mg/L; No Adj SAR	Boron 0.00 mg/L, No Concern	3% Clay
Boron 0.00 mg/L, No Concern		

This rainfall water is classified as **Excellent** because of the very low total salts and the very low SAR, but the very low salts may be too much of a good thing in sandy soils.

This soil is classified as **Normal**, but very heavy rainfall leaches minerals and nutrients.

This soil is classified as a **Sand** with very high permeability.

Plant symptoms. Yellowing from nutrient deficiencies.

Management strategy. Test soil for nutrient deficiencies; apply 1 lb N/1,000 sq. ft. per month during the growing season; monitor turf.

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