

Six Illustrative Case Studies for Bermudagrass Lawns

1 Water with high total salts makes for a saline soil.

<i>Water report</i>	<i>Soil salinity report</i>	<i>Texture report</i>
Total Salts 2,700 mg/L , Poor	TSS 6,000 mg/L , Saline	35% Sand
SAR 1.5, Good	SAR 2.2, Normal	30% Silt
HCO ₃ 0.0 mg/L; No Adj SAR	Boron 0.03 mg/L, No Concern	35% Clay
Boron 0.05 mg/L, No Concern		

This irrigation water is classified as **Poor** because of the high total salts.

This soil is classified as **Saline** because of the high TSS.

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

Plant symptoms. Brown areas, similar to drought stress.

Management strategy. Regularly use excess irrigation water to leach salts from the soil. Use best available water.

2 Water with high sodium makes for a sodic soil.

<i>Water report</i>	<i>Soil salinity report</i>	<i>Texture report</i>
Total Salts 1,320 mg/L, Fair	TSS 2,000 mg/L, Normal	35% Sand
SAR 7.0 , Poor	SAR 16 , Sodic	20% Silt
HCO ₃ 0.0 mg/L; No Adj SAR	Boron 0.45 mg/L, No Concern	45% Clay
Boron 0.12 mg/L, No Concern		

This irrigation water is classified as **Poor** because of the high SAR.

This soil is classified as **Sodic** because of the high SAR.

This soil is classified as a **Clay** with very 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. Utilize a maintenance program of 5 pounds pelletized gypsum/1,000 sq. ft. per month during growing season. Leach regularly with best available water.

3 Water with both high total salts and high sodium makes for a saline-sodic soil.

<i>Water report</i>	<i>Soil salinity report</i>	<i>Texture report</i>
Total Salts 2,120 mg/L , Poor	TSS 5,400 mg/L , Saline	40% Sand
SAR 6.6 , Poor	SAR 14 , Sodic	40% Silt
HCO ₃ 0.0 mg/L; No Adj SAR	Boron 0.95 mg/L , Concern for	20% Clay
Boron 0.55 mg/L, No Concern	Sensitive Ornamentals	

This irrigation water is classified as **Poor** because of high total salts and high SAR.

This soil is classified as **Saline-Sodic** because of the high TSS and the high SAR.

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

Plant symptoms. Brown areas, similar but not identical to drought stress.

Management strategy. Aerify soil and sand topdress; apply 10 pounds pelletized gypsum/1,000 sq. ft. and repeat in 30 days; utilize a maintenance program of 5 pounds pelletized gypsum/1,000 sq. ft. per month during growing season. Leach regularly with best available water. Use different water supply for ornamental trees.