

INVESTIGATIONS OF SELECT SALTWATER IMPACTS

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Undesirable saline groundwater seeping into rivers and streams and their tributaries can provide a continual impact to surface waters in Texas. Overland runoff mobilizing salts and other contaminants may also produce an intermittent impact in these watershed basins. Some of these impacts, which result in unacceptable salt loading on surface water bodies, may result from historical oil and gas extraction activities. In an attempt to identify, and, where possible, to remediate these impacts, the Railroad Commission of Texas (RRC) has embarked on several nonpoint source projects in Texas that are jointly funded by the RRC and EPA. Investigations of these impacts include traditional contaminant source identification, delineation, and fate and transport approaches (historical research, geophysical methods, impacted media sampling, etc.). Abatement of the salt load to surface waters may include remedial strategies such as source removal of impacted soils and hydraulic control/removal of groundwater. Experiences with groundwater interceptor trenches has demonstrated, for example, that the salt load to the Upper Colorado River from groundwater with chloride concentrations of 30,000 mg/L can be reduced as much as 3,000 to 5,000 pounds daily.