

RESEARCH TEAM MEMBERS

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STUDY SITE

Sunland Park Urban Test Bed



RESEARCH QUESTION

What is the ground and surface water hydrology of the Sunland Park research site and what are the ground and surface water contaminants?

OBJECTIVES

- Monitor depth to groundwater table using a network of piezometers (SP2, SP4, SP6) at selected locations within Sunland Park research site.
- Assess site hydrology using water table elevations throughout site.
- Collect ground and surface water samples throughout site (SP2, SP4, SP6, extended drain, entrance gate, main drain, EBID well, Rio Grande River).
- Test samples for water quality (aluminum, iron, bromine, EC, salinity, pH, & TDS) to determine source and fate of contaminants.



Completed piezometer installation



Sunland Park Urban Test Bed Site Map



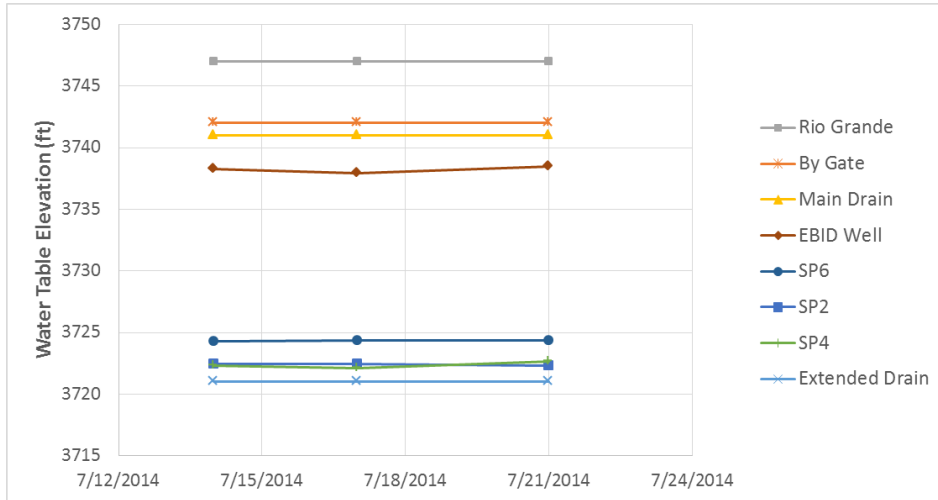
Collecting water samples from main drain



Sunland Park Urban Test Bed

MAJOR OUTCOMES

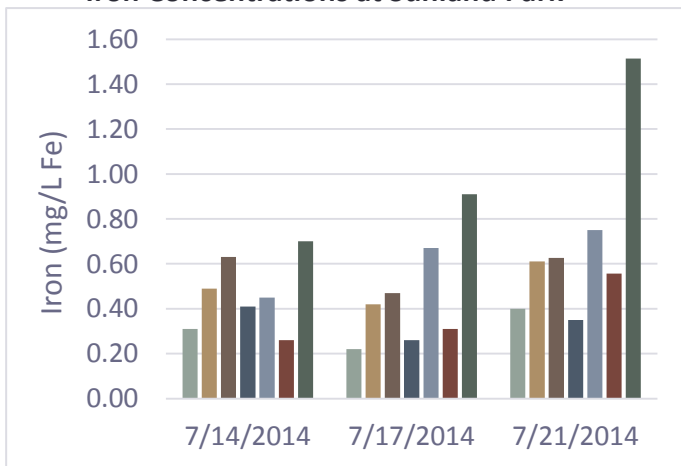
Water Table Elevations at Sunland Park



CONCLUSIONS

- The data collected will be used as a baseline for measurements taken throughout future years.
- Knowing water chemistry and depth to groundwater will assist in the selection of the most suitable native plants .
- The aluminum, iron, and bromine concentrations should have no effect on the wildlife or plants at Sunland Park. However, more research will have to be done to find the cause of the variation from the piezometer samples.
- The groundwater at Sunland Park flows towards the extended drainage canal, which confirms the site design created by Elephant Butte Irrigation District and NMSU.
- Future research: installing more piezometers throughout site, continued monitoring of water quality and movement, and determining water table levels during non-irrigation season.

Iron Concentrations at Sunland Park



Aluminum Concentrations at Sunland Park

