MS-GIST Projects Summer 2023

Friday, July 28

***\* There will be 5 minute breaks between each back-to-back presentation to facilitate transitions in Zoom.
\*\* Zoom links are available on request. Please contact Andrew Grogan - atgrogan@arizona.edu***

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| **Date/Time** | **Presentation Title** | **Student Name** |
| 07/28/2303:00 - 03:25 PM | [CREATING A WEB GIS SOLUTION FOR COLLECTING, ANALYZING AND VIEWING GPSED WATER METERS IN TUCSON, ARIZONA](#Munguia) | Estevan Munguia |

**CREATING A WEB GIS SOLUTION FOR COLLECTING, ANALYZING AND VIEWING GPSED WATER METERS IN TUCSON, ARIZONA**

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07/28/23, 03:00 - 03:25 PM

**Abstract:**

Knowing the location of assets is an important part of many companies’ Geographic Information Systems and data management systems. Unfortunately, precisely accurate locations are not always available to those who would need it. This is the case at Tucson Water where the vast amount of water infrastructure is not adequately accurate. For field personnel whose duties requires locating assets, insufficiently accurate location data can add hours of unnecessary work, either searching or using old engineering documents. At Tucson Water previous efforts to collect highly accurate location data have been contracted to outside companies, costing the agency hundreds of thousands of dollars and relinquishing control on how the data was collected. Recently, Tucson Water decided to use its own Global Positioning Systems technology for geocoding water meter data, in part, to help facilitate other projects. Rather than contracting this project out, Tucson Water opted to utilize agency resources and carry out this project internally. In this paper I will demonstrate an ESRI web GIS solution to collect, store and view water meter data collected with GPS technology. I discuss the different tools used including a web map, Field Maps, Experience Builder, Dashboard and App Studio mobile app. These are combined with a Trimble Global Navigation Satellite Systems receiver to capture sub-foot accurate locations for water meters. I will show that this is an elegant, effective, and scalable solution for Tucson Water.

**Keywords:** Tucson Water, Water Meter, GPS, Field Maps, Web GIS