# Smart Selection of Digital Tools

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## **Types of Digital Tools**

- Assets/Maintenance:
  - Asset management systems CMMS, WMS, EAMS
  - Financial forecasting Historians, ODMS, LIMS
  - Predictive maintenance technologies machine condition monitoring, oil analysis, heat, vibration etc.
  - Condition assessment technologies cctv, leak detection, drone surveys etc.
  - sensors new instrumentation, cameras, drones etc.
  - data analytics finding patterns, anomalies etc.

Sharon Peters, EMA Inc. Water Environment Federation Transformative Issues Workshop, Washington, D.C. July 2019

GUAYAQUIL, ECUADOR 30.9. -

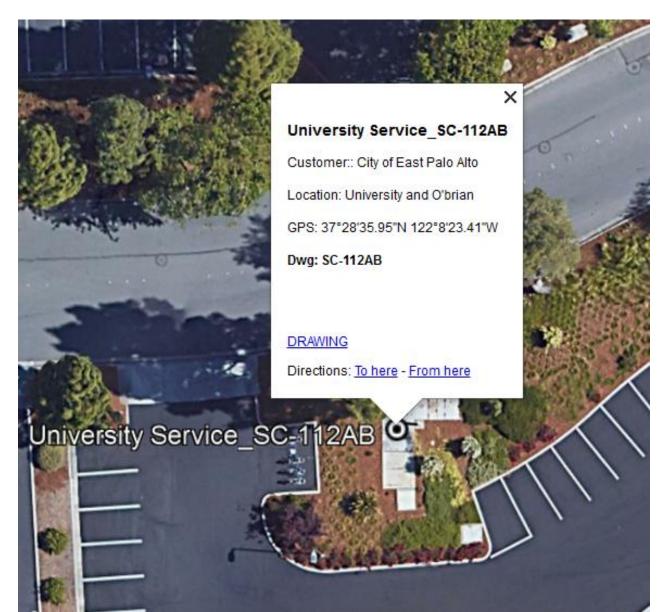
3.10.2019







## Knowledge with GIS



Service Connections Pop-up Info

> New service connections database will allow the easy integration of information and links to Sharepoint documents via Google Earth pop-up windows

*Pictured left: current SC GIS layer* 

### **AWMP Implementation Lessons Learned**

Yesterday or Tomorrow

• Which model to use and is it okay to change your mind halfway?

#### Field surprises – Anticipated 3-31/2% battery failure but did not anticipate other failures and maintenance obstacles due to

- Deferred maintenance- bad services
- Records inconsistencies
- Odd meter configurations

   manifolds, distributers
- Rats chew wires, rats like meter boxes
- Hazards in meter pits, debris and needles





IWA-IDB INNOVATION CONFERENCE ON SUSTAINABLE USE OF WATER: Cities, Industry and Agriculture

## Utilities sometimes lack the skills to fully utilize the capabilities of smart tools

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Escuela Superior Politécnica del Litora Potential for utilities to learn from each other at the regional, national, and international level

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