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GIS and Systems Integration for Small Water Utilities

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South Tahoe Public Utility District

Alex Johnson, PE

Arête Systems

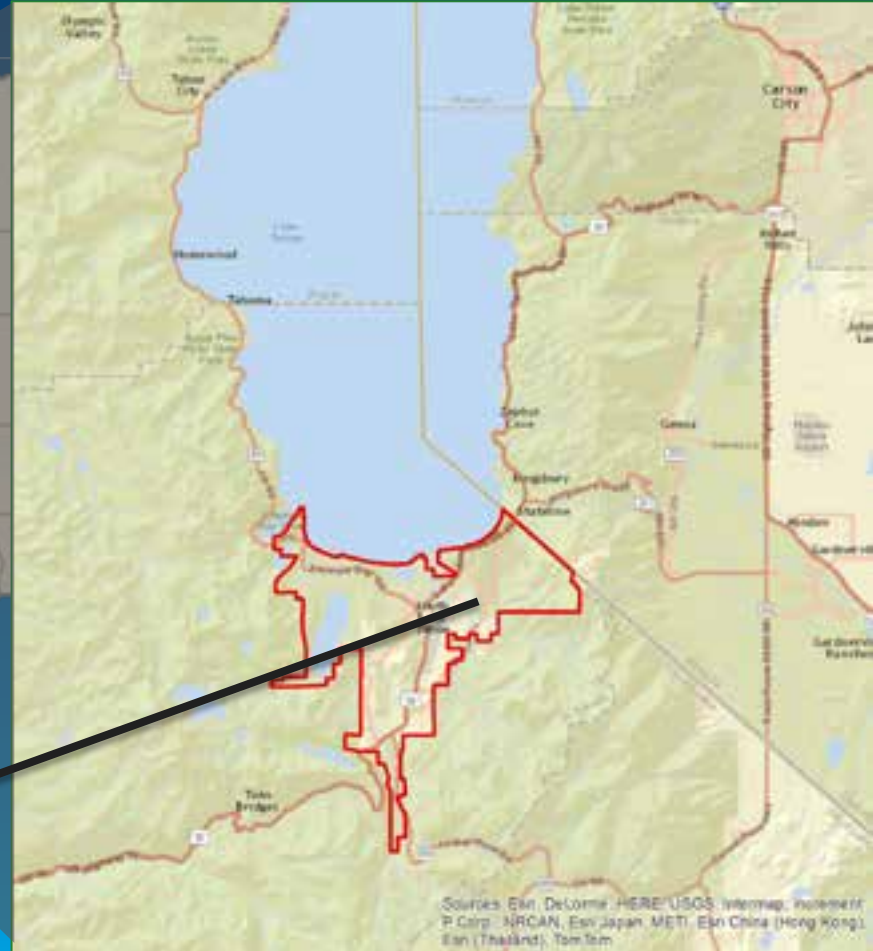
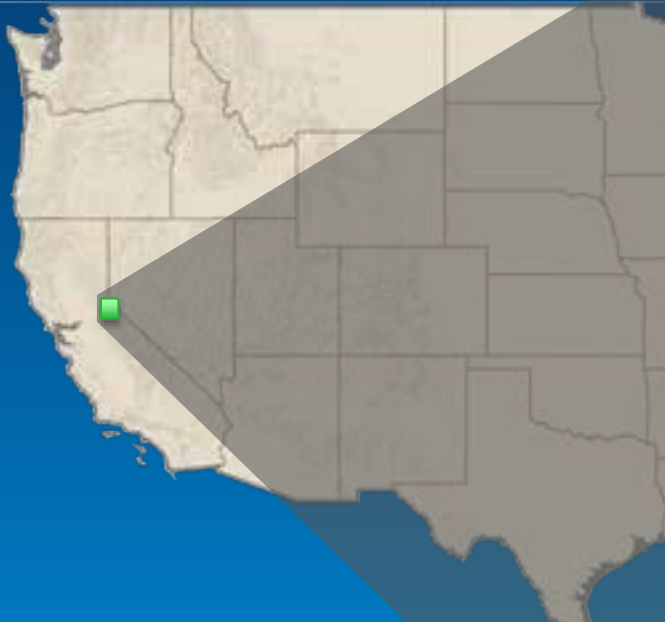


Introduction

Wanda Stanley, GISP
South Tahoe Public Utility District



South Tahoe Public Utility District - Location



**District Offices:
1275 Meadow Crest Dr.
South Lake Tahoe, CA**

Sources: Esri, DeLorme, HERE, USGS, Intermap, iSwarm, P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Swisstopo, Esri Thailand, Swisstopo

District Facts



- 14,000 Water Customers
- 18,000 Sewer Customers
- 109 Full-Time Employees
- 5 Elected Board Members
- 7.7 MGD Treatment Plant Capacity
- Full-time GIS Staff: 1
- GIS Consultant: Alex Johnson, Arete Systems

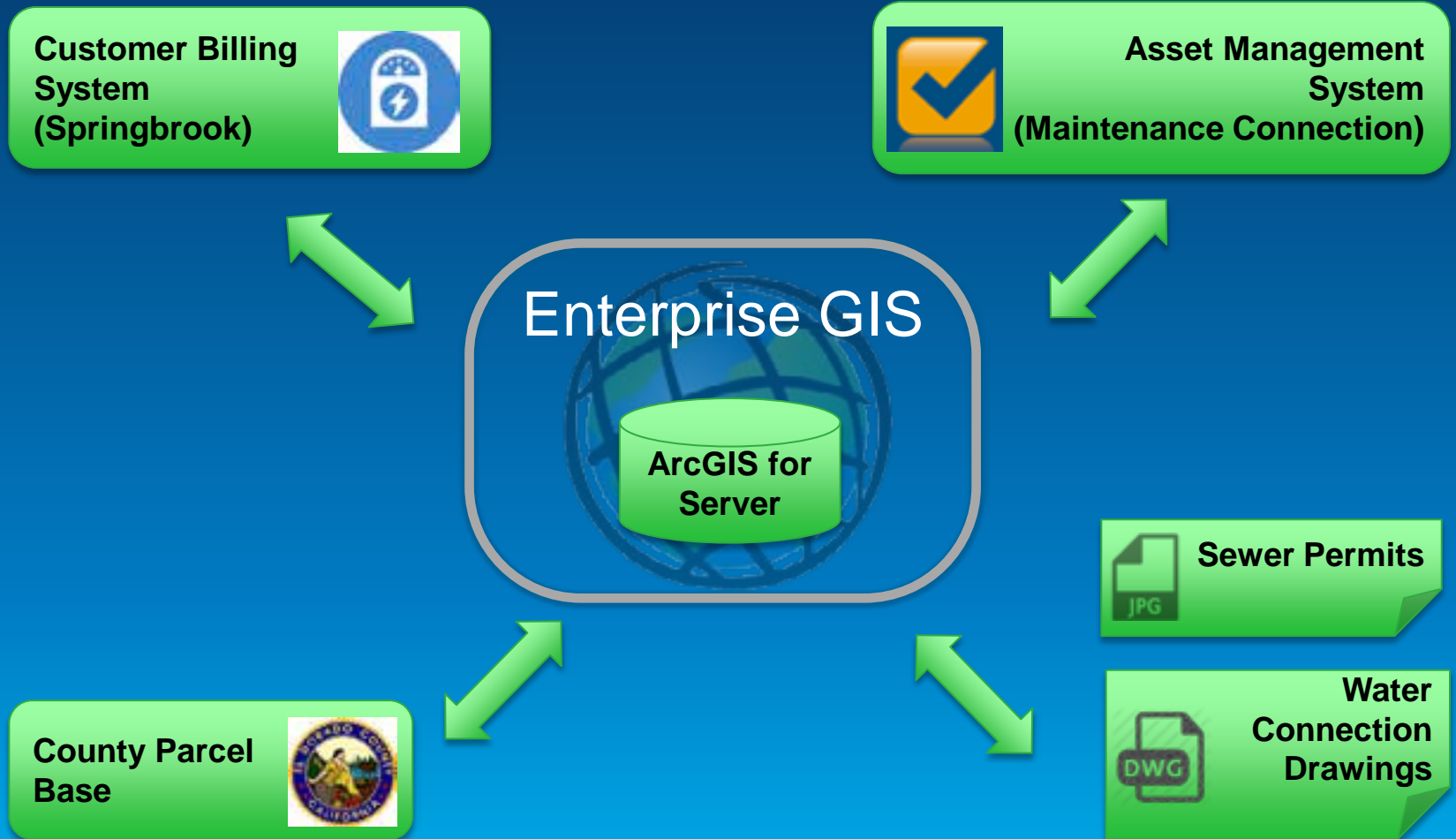
Systems Integration

Alex Johnson, P.E.
Arête Systems



District Systems

Pieces of the Puzzle



Data Management

Best Practices

- **Unique Identifiers**
- **System of Record**
- **Store Data in One Place**
- **Replicate Where Needed**
- **Mature, Documented,
and Consistent Data Models**

Data Management

Approach

- GeoProcessing Models
- GeoProcessing Scripts (ArcPy)
- Administrative Processes

County Parcel Base



County Parcel Base

Considerations

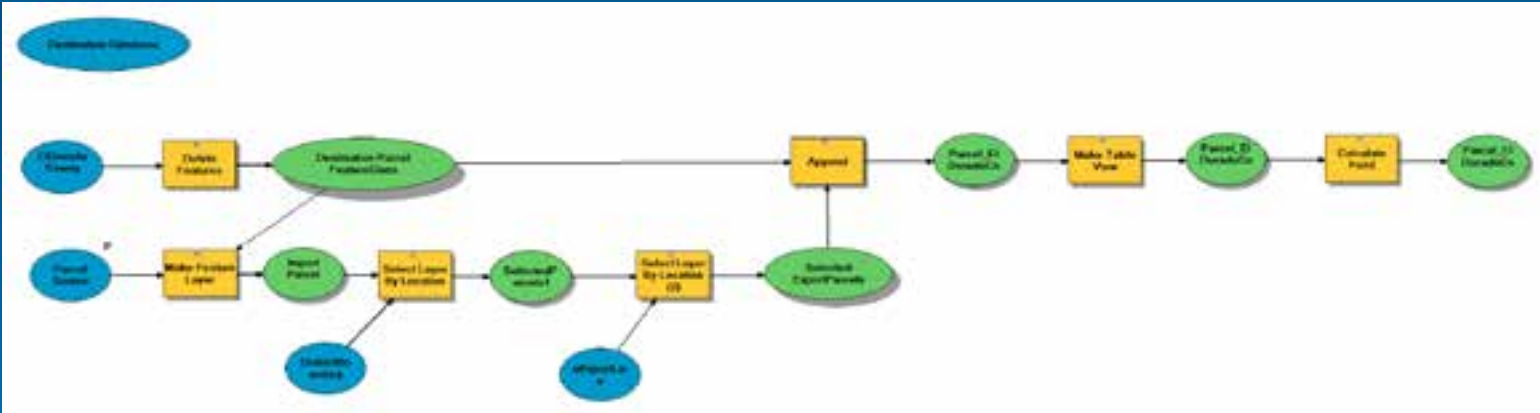
County Parcel
Base



- Shapefile format
- System of Record for Parcel geometry
 - Replaces all parcels in GIS
- Only import parcels in local area
- APN needs formatting
 - 03367306 è 3367306
- Imported once a year

County Parcel Base

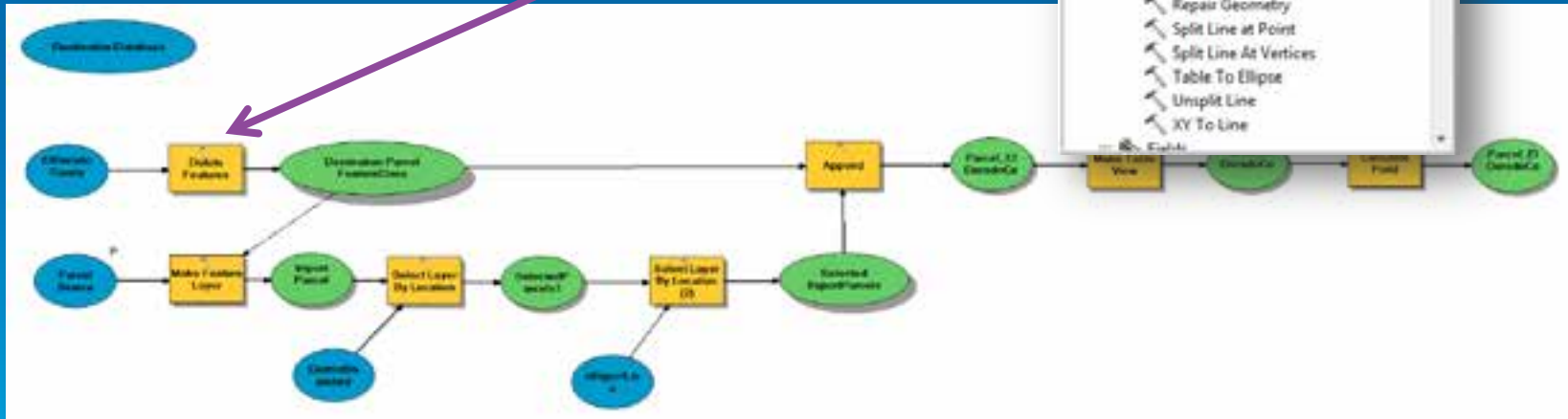
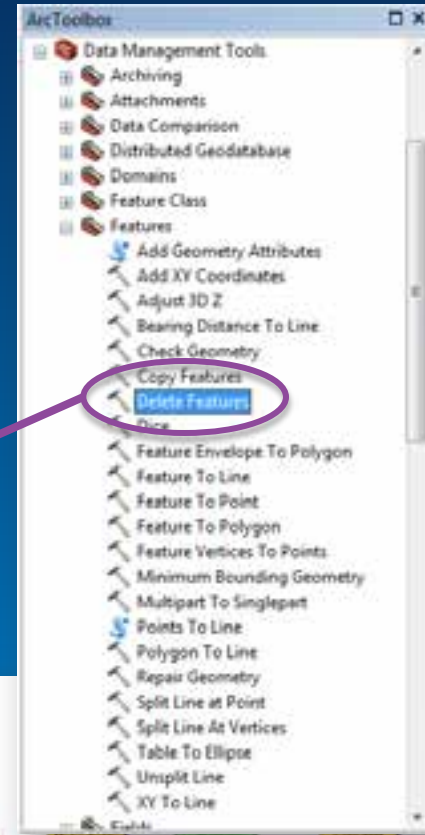
GeoProcessing Model



County Parcel Base

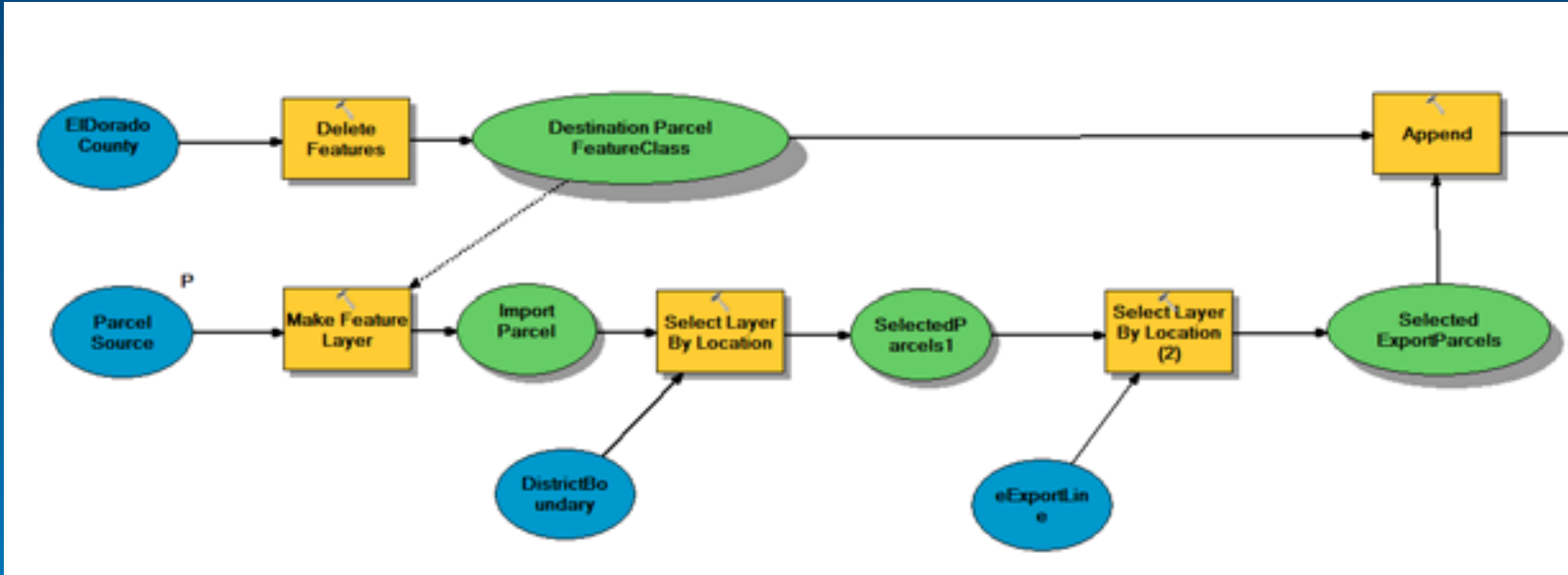
What is a GeoProcessing Model?

- ArcToolbox Tools
- String them together
- Graphical program



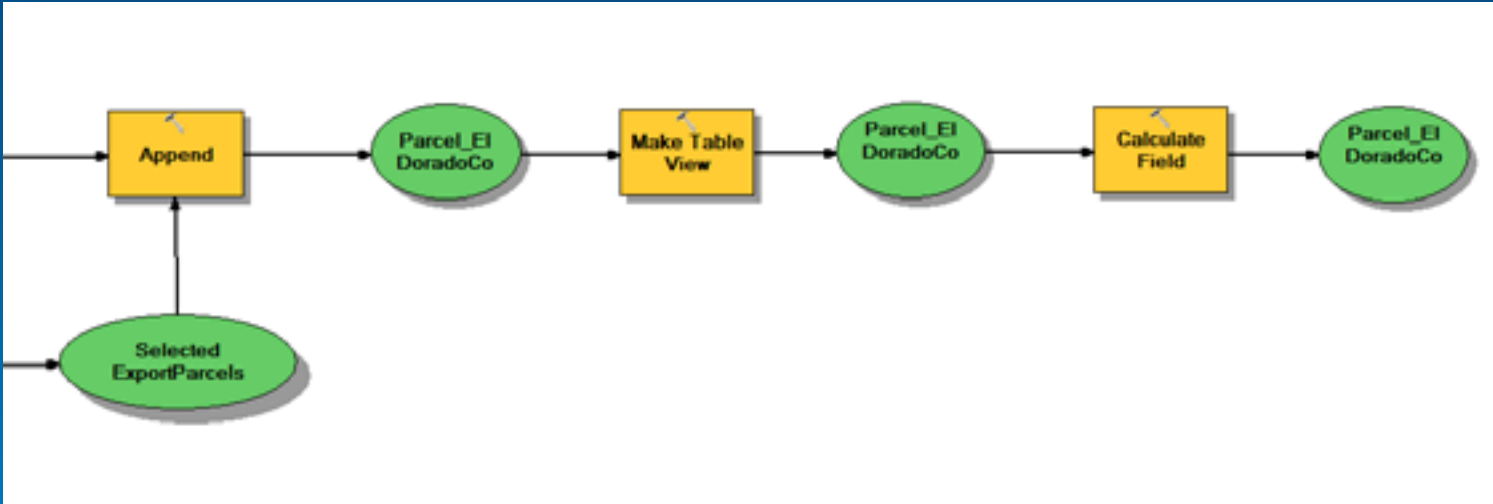
County Parcel Base

How it works...



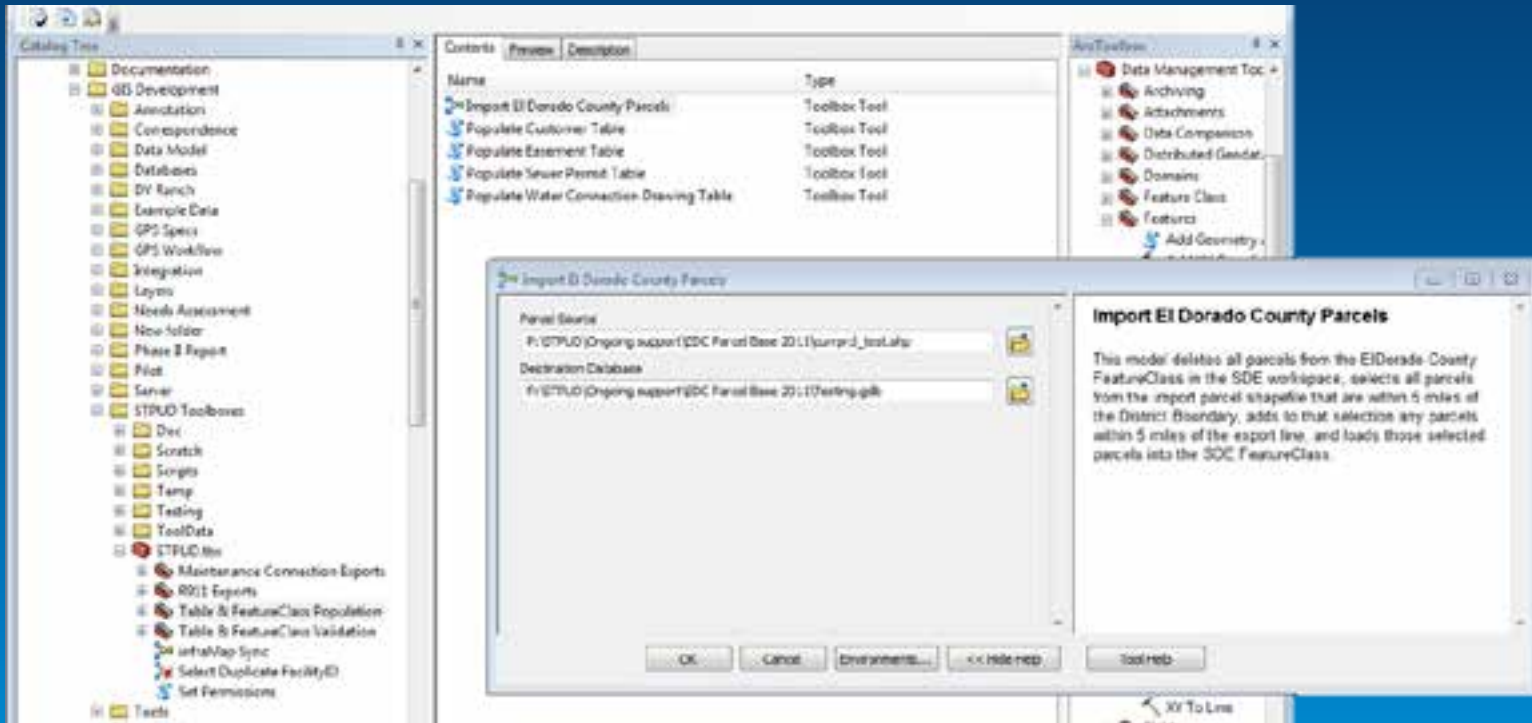
County Parcel Base

How it works...



County Parcel Base

GeoProcessing Tool



Customer List



Customer List

Considerations

**Customer Billing
System
(Springbrook)**



- Updated frequently
- System of Record for customer information
- Multiple tables in Springbrook
- Formatting for display
 - Phone Numbers
 - Addresses

Customer List

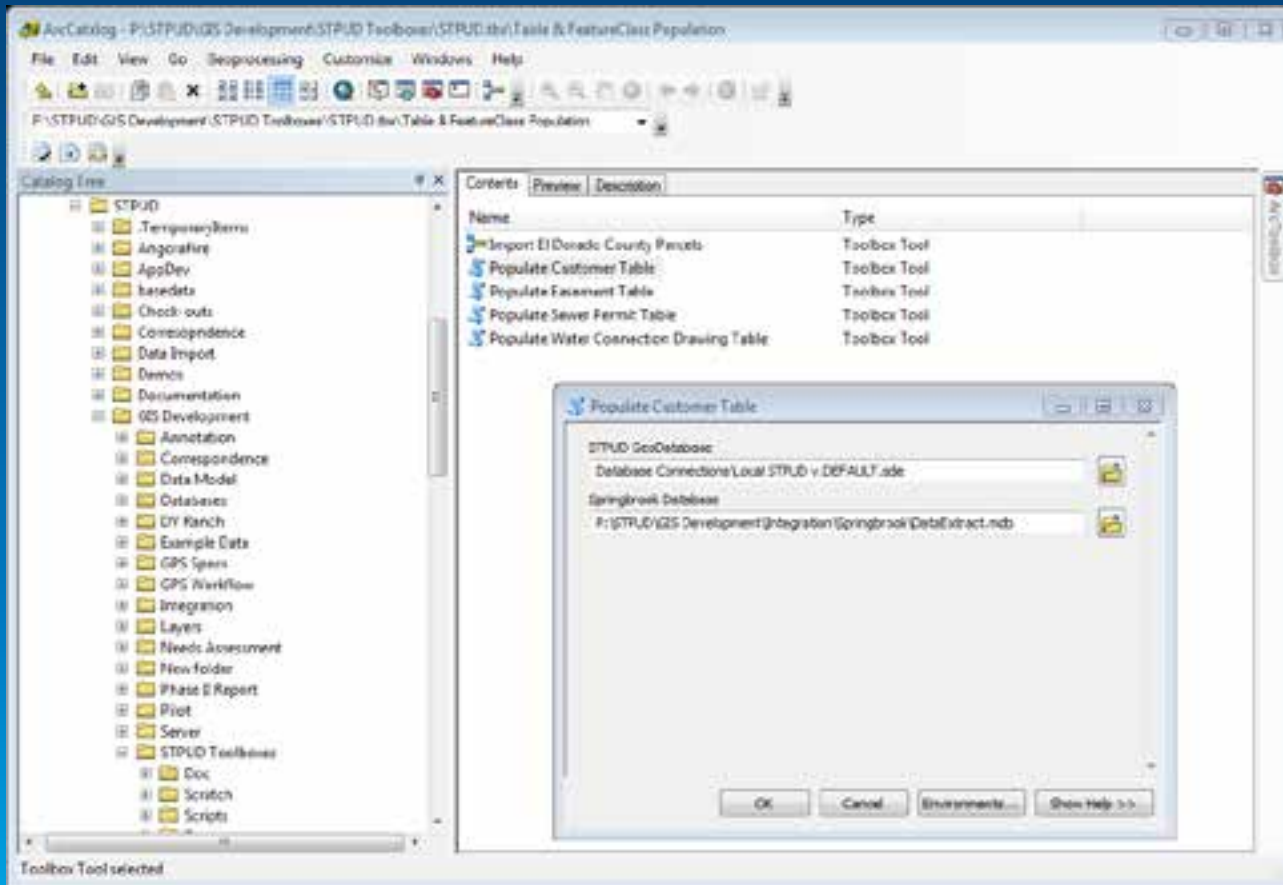
How it works...



- Copies customer table from Springbrook
- Maps source to destination fields
 - E.g. Cust_No → CustomerID
- Populates APN, service type fields
- Formats phone numbers, service addresses
- Clears customer table in GIS
- Copies new records into GIS

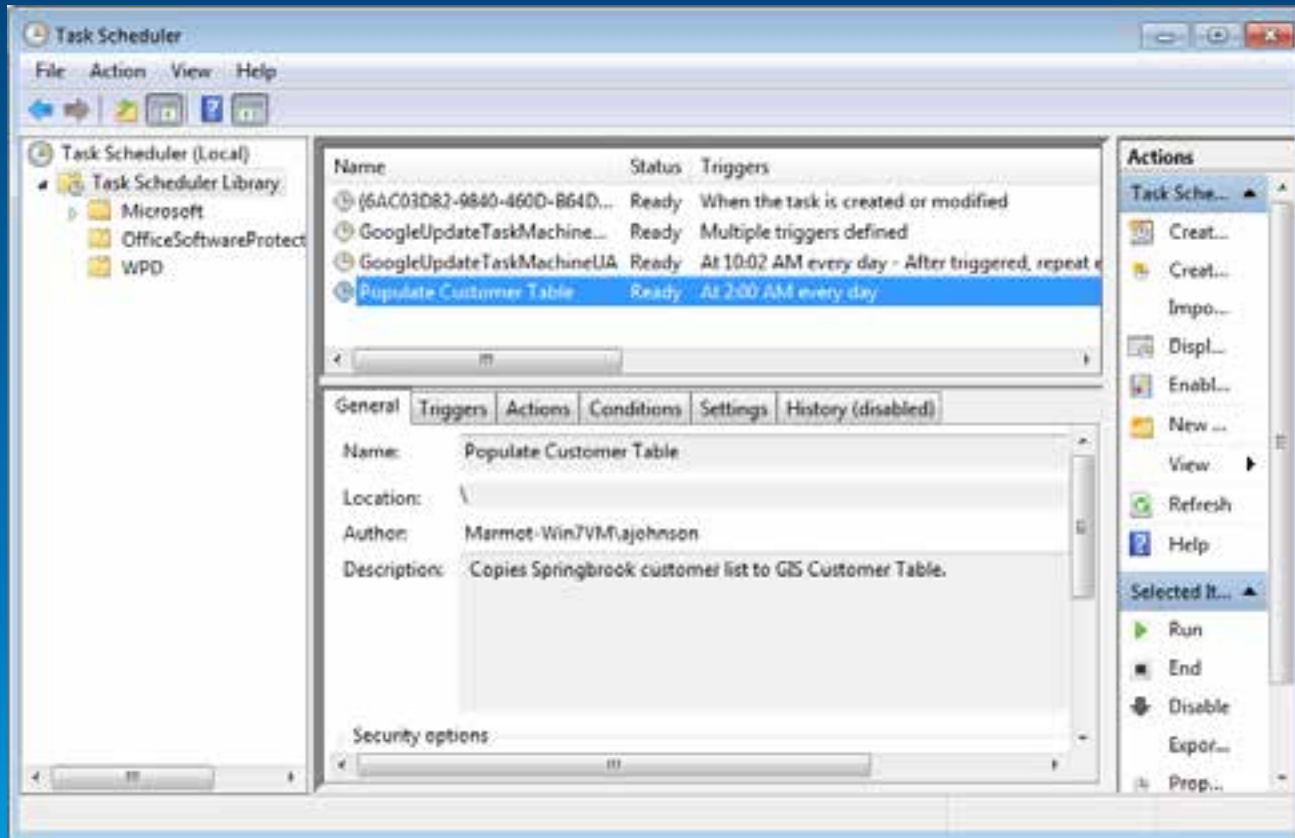
Customer List

GeoProcessing Script Tool

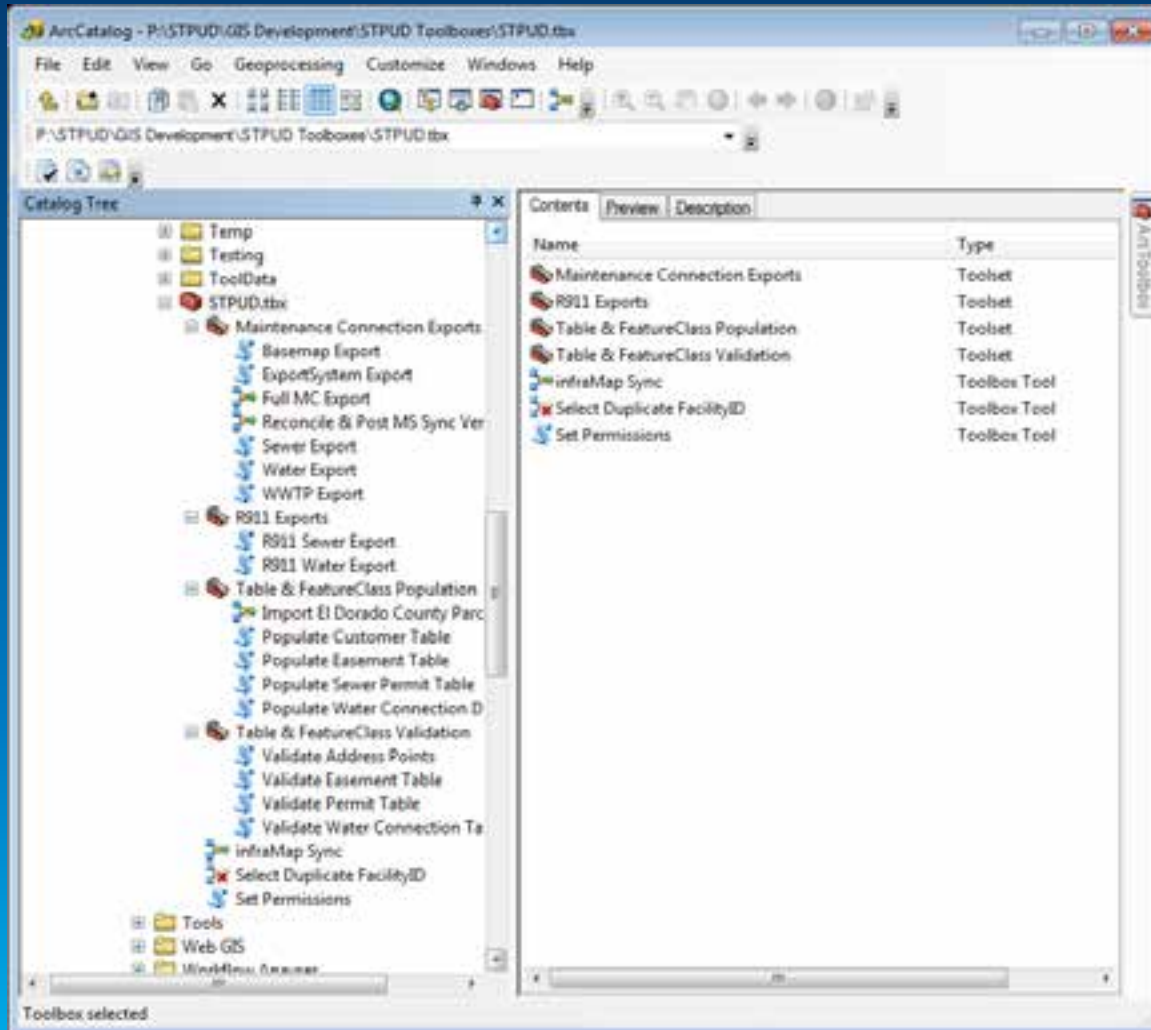


Customer List

Run as Scheduled Task



STPUD Toolbox



District Systems

Pieces of the Puzzle



Thank you

Question/Answer

