

Streamlining Operations with Collector for ArcGIS



AMERICAN WATER

Indiana

Randy Winston

GIS Project Manager

Pennsylvania

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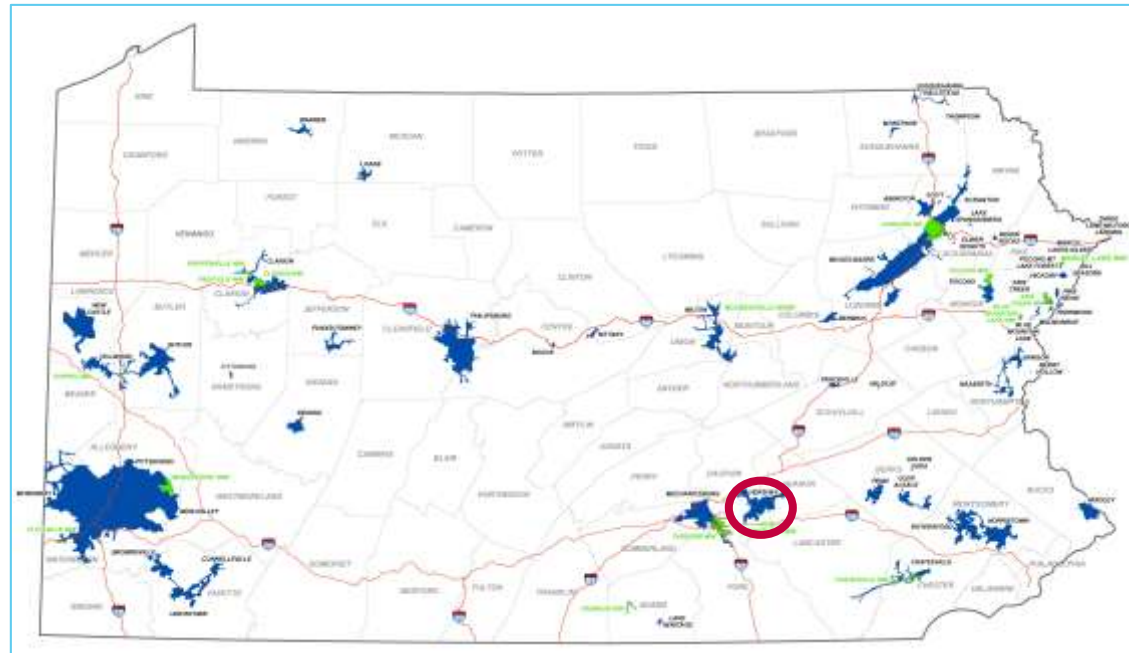
GIS Analyst

Operations

Indiana American Water



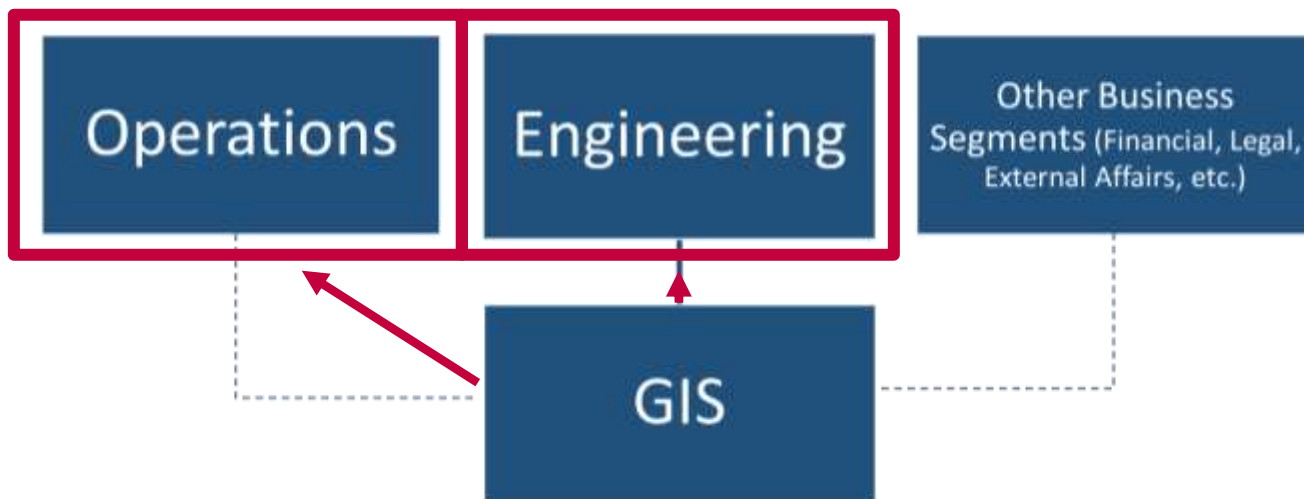
Pennsylvania American Water



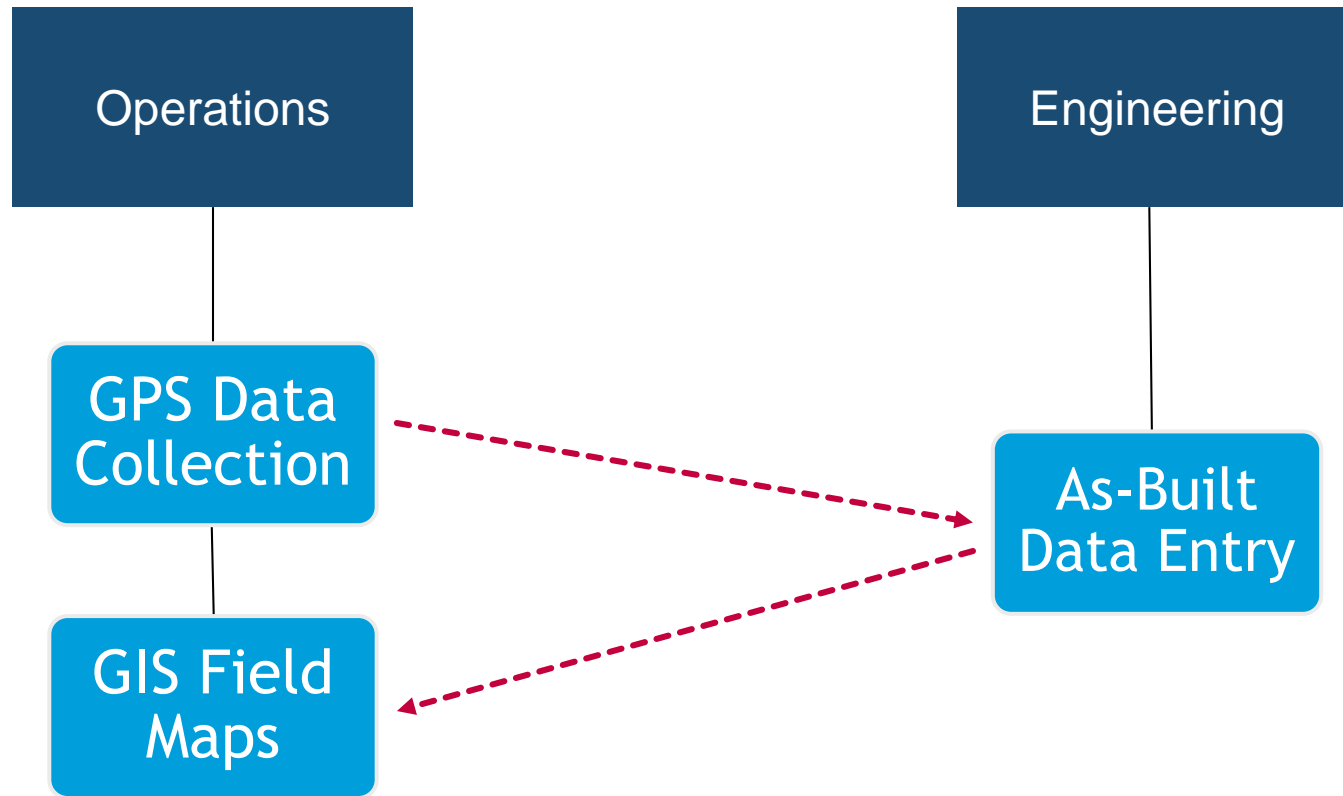
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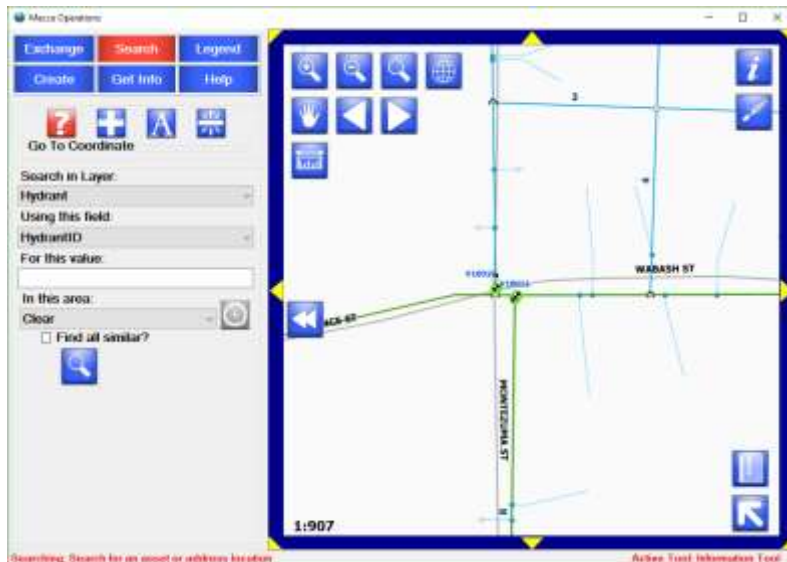


Supported Workflows

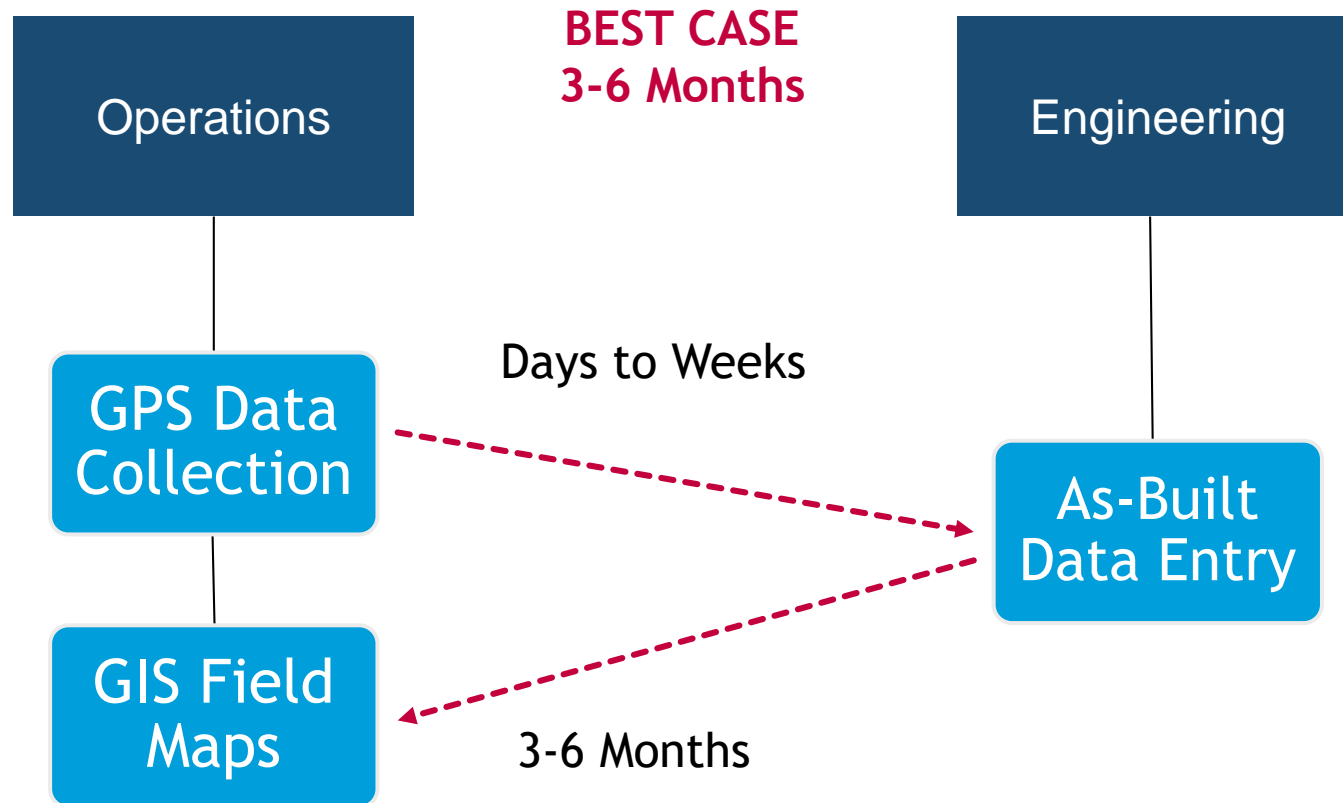


GIS Applications 2011-2016

| State | Use | Hardware | Software | RTK Network |
|--------------------------|-----------------|----------------------------|---------------------------|------------------|
| Indiana and Pennsylvania | GIS Field Maps | Windows PC | Water Utility Mobile Map | |
| Indiana | Data Collection | Trimble GeoExplorer 6000 | ArcPad, Trimble Positions | INDOT INCORS RTK |
| Pennsylvania | Data Collection | Panasonic Toughpad SX Blue | Water Utility Mobile Map | Paid Service |

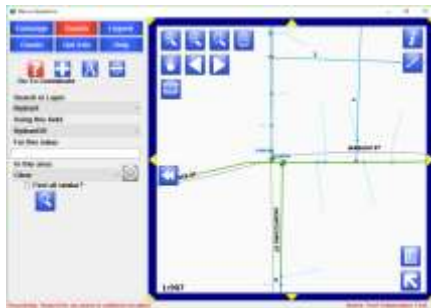


Supported Workflows 2011-2016



Applications 2011-2016 - Challenges

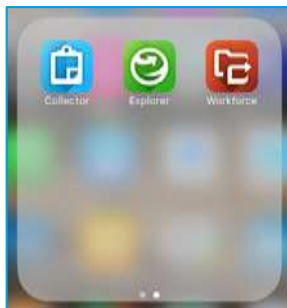
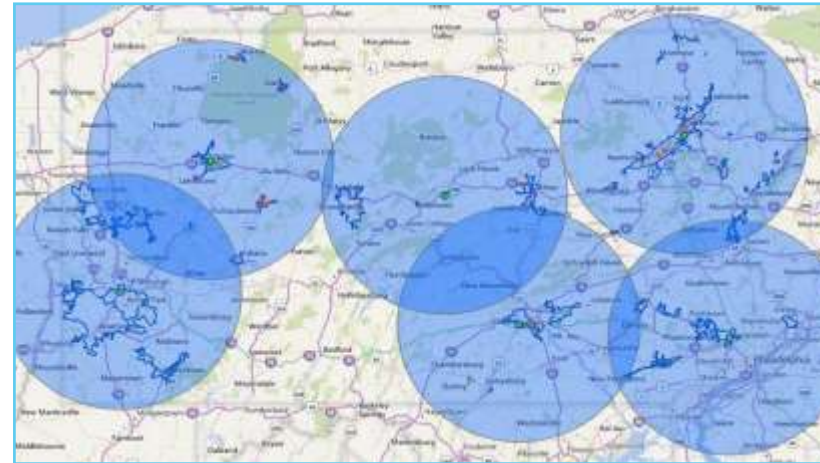
| Water Utility Mobile Map | ArcPad, Trimble Positions (RTK) | SX Blue (RTK), Panasonic Toughpad, Water Utility Mobile Map |
|--|---|---|
| Must know XML to configure | Small Screens | Occasional reimaging &/or recalibrating required on Tough Pad |
| Installed on Computer System | Interface (Slow, Not Intuitive) | Expensive interface component |
| Changes to data schema can break the application | Takes 5 to 15 minutes to connect to RTK | Had to ensure that all devices were synced twice (once for upload, once for completion of download) |
| Utilitarian, not a dynamic solution | Slow to receive Field Data | |
| | All-in-One: Must replace whole device if it cannot support new software | |



Current Applications

| | Hardware | Software |
|---------------------|--|--|
| GIS Field Map | Windows PC, Smart Phones (Android & iOS) | ArcGIS Online and Collector for ArcGIS |
| GPS Data Collection | EOS Arrow w/ iPad | Collector for ArcGIS |

| | GNSS Correction |
|--------------|---------------------------|
| Indiana | INDOT INCORS RTK |
| Pennsylvania | PAAW Base Station Network |



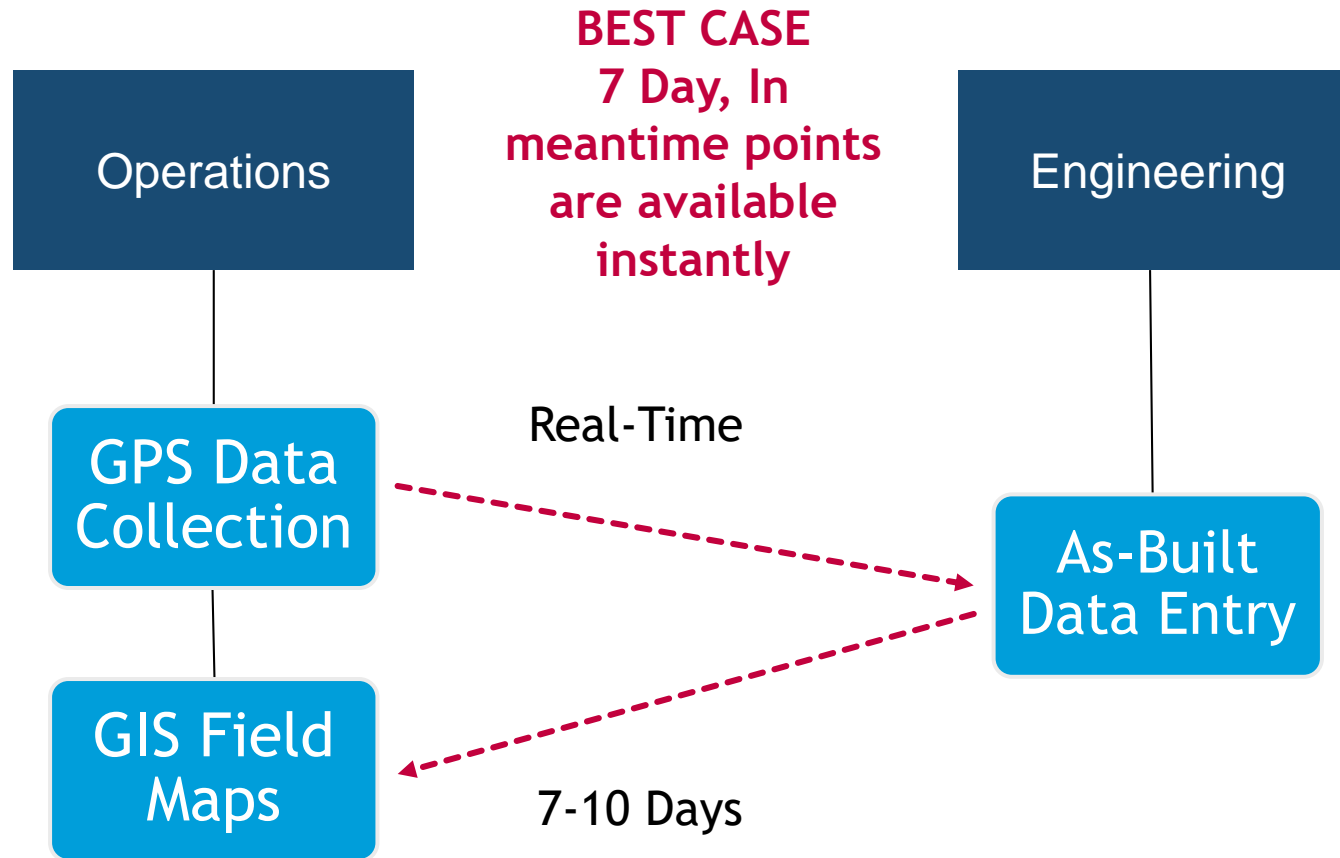
Current Applications - Benefits



| ArcGIS Online & Collector for ArcGIS | Bluetooth GPS with Collector for ArcGIS |
|--|---|
| Web-based GUI Map Configuration | Screen is a relatively inexpensive accessory. Can use most Bluetooth enabled iOS and Android devices. |
| Easy to deploy. Website and Collector only require a login. | Familiar Interface |
| Dynamic Solution. Changes to Maps are applied instantly to everyone. | RTK normally connected in under 3 minutes. |
| Usage tracking available | Collected Field Data is available instantly |
| | Interface can be upgraded without upgrading the GPS Device. |



Current Supported Workflows



DEMOS

- Device Configurations
- Collector for ArcGIS - High Accuracy GPS Data Collection
- ArcGIS Online Digital As-Built
- ArcGIS Online System Maps



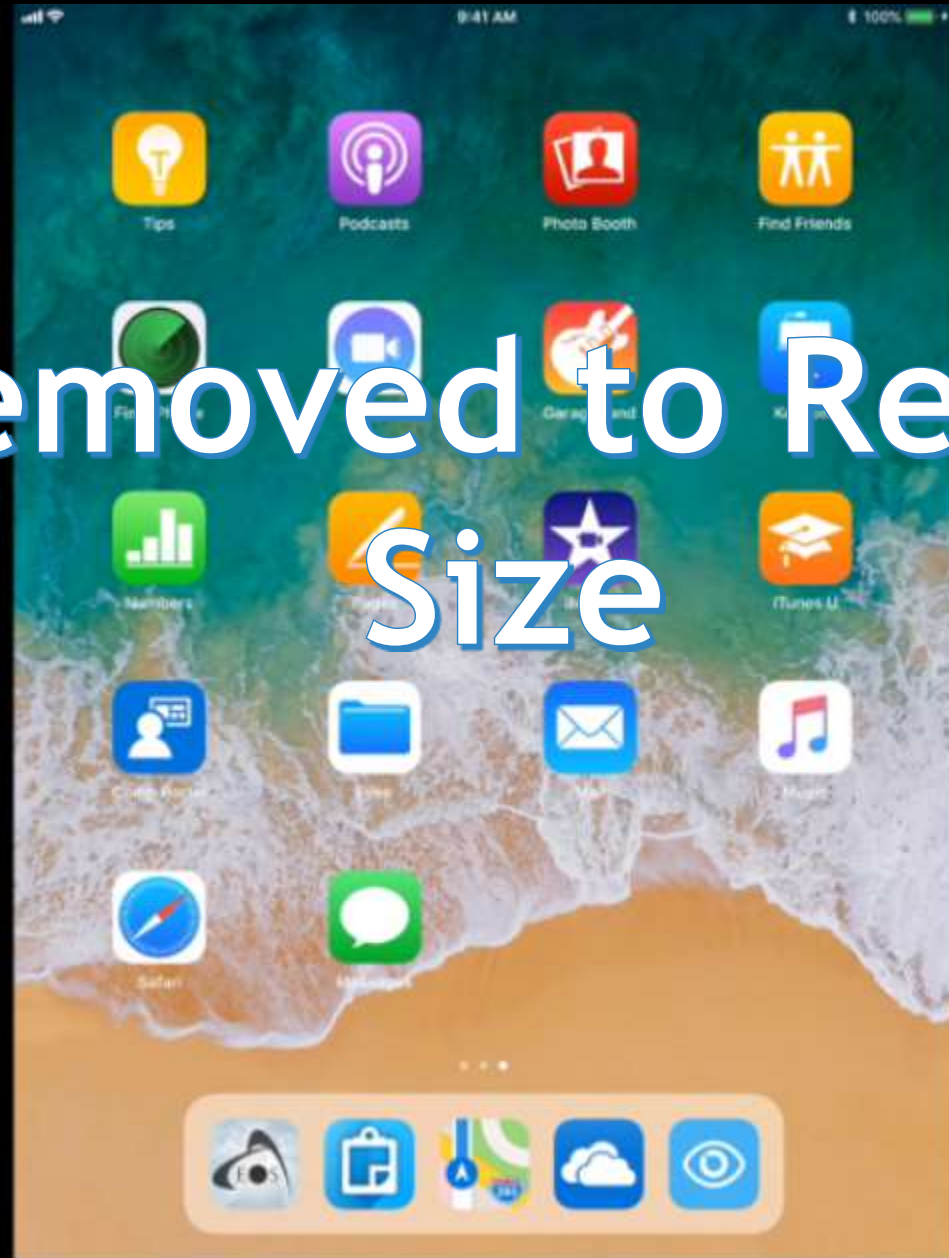
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Device Configurations



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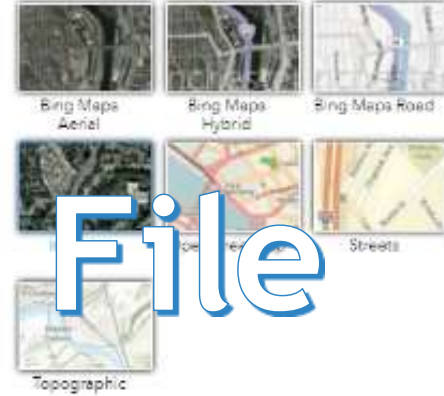
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Find address or place

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Basemap Gallery

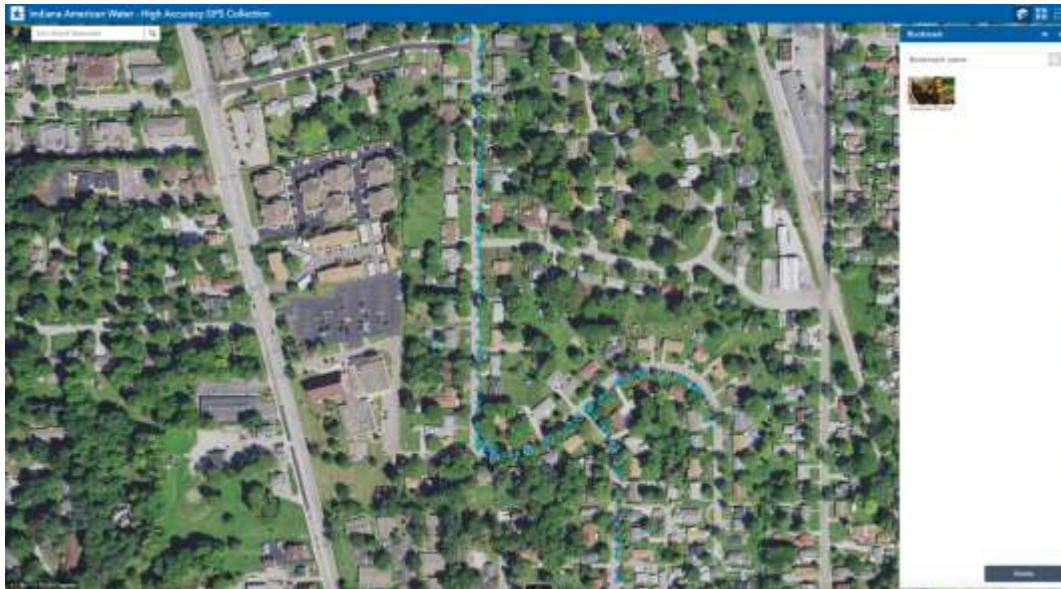


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Improvements

- ▶ Easier and more efficient GPS data collection
- ▶ Greater GPS hardware flexibility
- ▶ Zero GPS post-processing (no check-ins)
- ▶ Faster data entry (due to instant access to data)
- ▶ Increased efficiency in field map development



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Increased interest in GIS results in greater use across the business.

| Mapping Application | Customer Served |
|---|--------------------------|
| Leak Detection Mapping w/ Field Surveys | Engineering & Operations |
| Hydrant Flushing Map | Operations |
| Planned Project Extents | Engineering |
| Plant Asset Mapping w/ maintenance logs | Operations |
| Street Cut Mapping | Operations |



Thank You

Questions?



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