



# Introduction to ArcGIS Field Maps

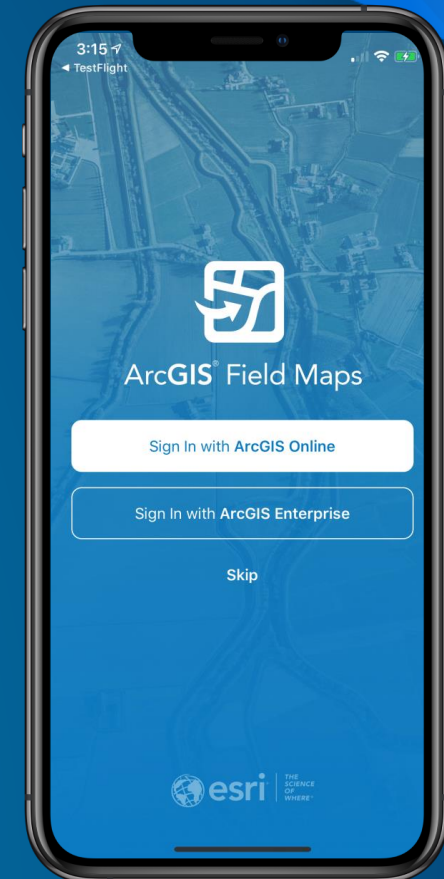
Westchester County GIS Day | November 18, 2020

Piyali Kundu | Solution Engineer



# Agenda

- Overview of Field Operations & ArcGIS Field Maps
- ArcGIS Field Maps release timelines & Licensing
- ArcGIS Field Maps Components
  - Mobile App
  - Web Builder
- ArcGIS Field Maps Resources:
  - Migrating to ArcGIS Field Maps
  - Beta Testing Program
  - Blogs and Learn Lesson
- Q&A



# Field Operations | Focused apps for each activity...



## Specialized Apps

- ArcGIS Survey123
- ArcGIS QuickCapture
- ArcGIS Mission Responder
- ArcGIS Indoors
- ArcGIS Earth
- ArcGIS BA Mobile





## ArcGIS Field Maps | 5 key benefits

1. Single app to deploy + learn
2. Sign-in once
3. Eliminate duplication of offline content
4. Smaller aggregate app footprint/download
5. Consistency across apps

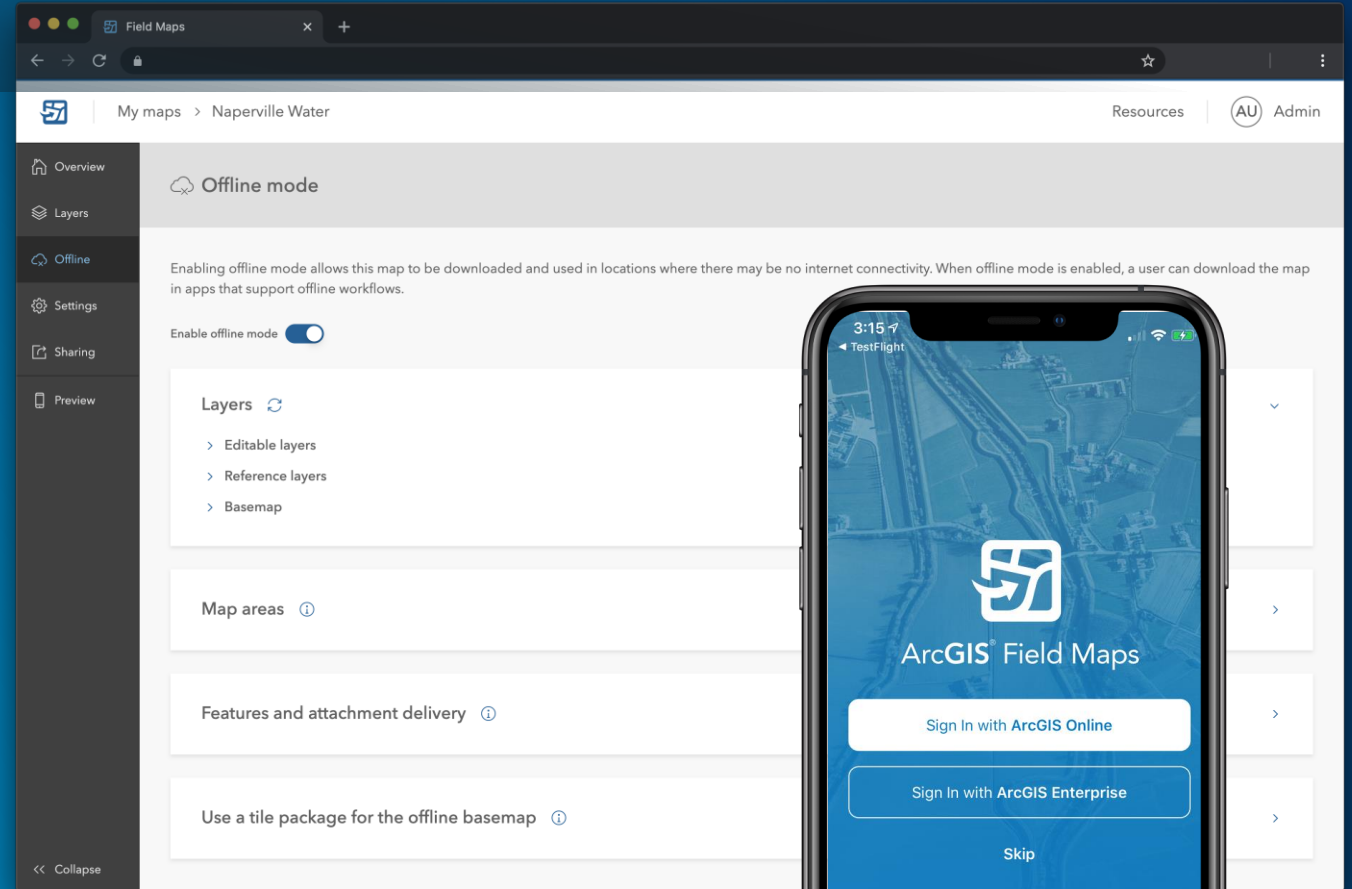


## Full featured mobile app:

- View maps
- Collect and update data
- Record and share tracks
- Indoor mapping
- Turn-by-turn navigation\*
- Receive and complete work assignments

## Back-office web app:

- Simplify map deployments
- Configure and deploy maps
- Manage offline content
- Create and preview smart forms
- Dispatch and manage work



\* Coming in additional phases

# Pre-Phase 1

- Collector
- Explorer
- Tracker
- Workforce
- Navigator

# Phase 1 Fall 2020

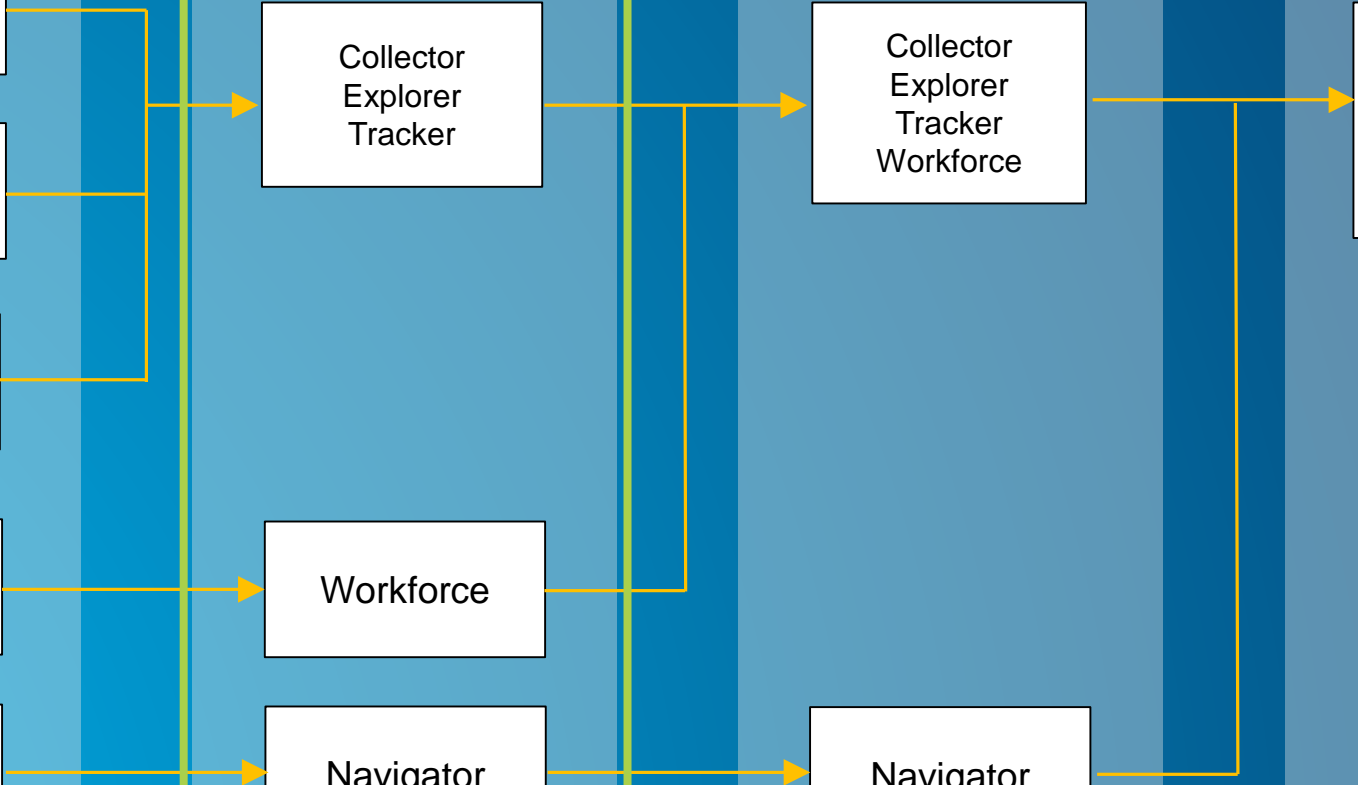
- Field Maps Web
- Field Maps Mobile
  - Collector
  - Explorer
  - Tracker
- Workforce
- Navigator

# Phase 2 TBD

- Field Maps Web
- Field Maps Mobile
  - Collector
  - Explorer
  - Tracker
  - Workforce
- Navigator

# Phase 3 TBD

- Field Maps Web
- Field Maps Mobile
  - Collector
  - Explorer
  - Tracker
  - Workforce
  - Navigator





# ArcGIS Field Maps | First release

- Field Maps Mobile App Final release (November 2nd)
  - Mobile app only release
  - Web app will remain in beta until December
  - Supported with ArcGIS Enterprise 10.6.1+ \*

- Will include capabilities of:



Collector



Explorer



Tracker

- Field Maps Web App Final release (Dec 2020)
  - Simplify field deployments
  - Smart forms capability officially released
  - Additional mobile updates for location tracking, more









# ArcGIS Field Maps | User types and licensing

## If you have a...

## In Field Maps, you can...

- |  |   |
|--|---|
|  <b>Field Worker, Creator, or GIS Pro named user</b> | Perform inspections, create or update your asset inventory, add photos/attachments, and simplify multi-app workflows        |
|  <b>Viewer named user</b>                            | Achieve situational awareness workflows, view dynamic web maps, use offline maps, create markup                             |
|  <b>ArcGIS Tracker premium app license</b>           | Enable location tracking workflows, report your location in real-time, record a 'breadcrumb' trail of your location history |
|  <b>ArcGIS Collector app license</b>                | Create and edit GIS data from your mobile device with high accuracy, add attachments, work offline                          |



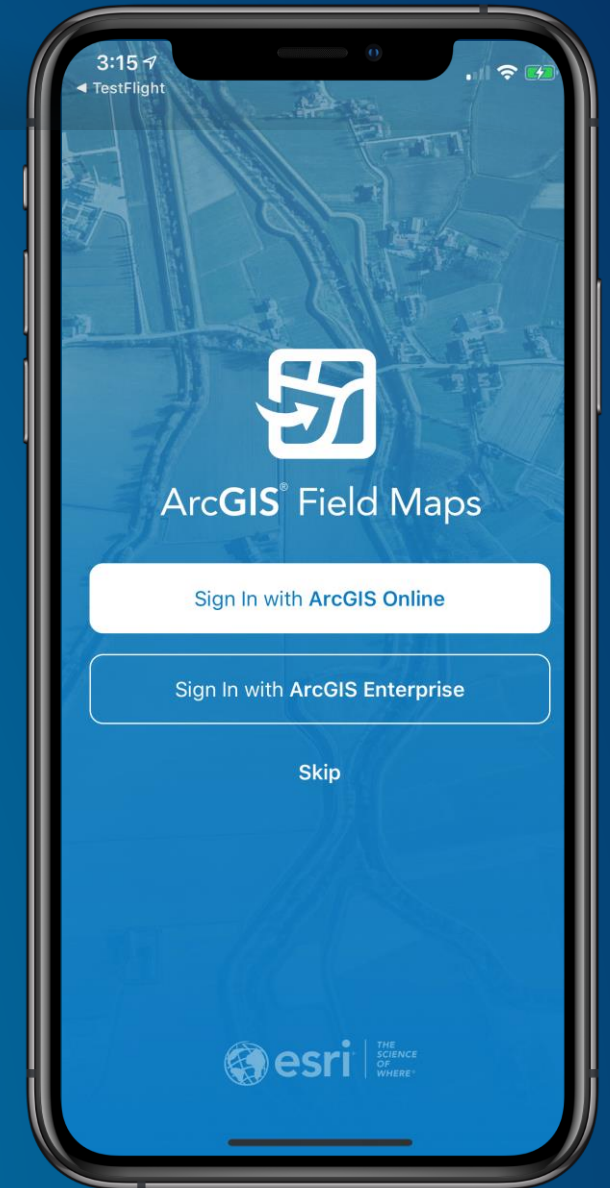
*ArcGIS Field Maps does not require any additional licensing.*



# ArcGIS Field Maps | Mobile app

## Key capabilities (as of Nov 2<sup>nd</sup>, 2020)

- **Anonymous map use**
  - Browse public maps and map packages
- **Map viewing**
  - View rich cartographic maps, update in real-time
  - Search location, addresses, features
- **Map markup**
  - Freehand sketch, marker placement
  - Share peer-to-peer, by email, to organization
- **High accuracy data collection**
  - Capture point, line, area features
  - Use external GPS or map
- **Robust smart form editing for inspections**
  - Enter required information, supports conditional visibility
- **View, record and share location tracks**
- **Indoor mapping support**



*Field Maps requires iOS 13.5, Android 8 (API 26)*

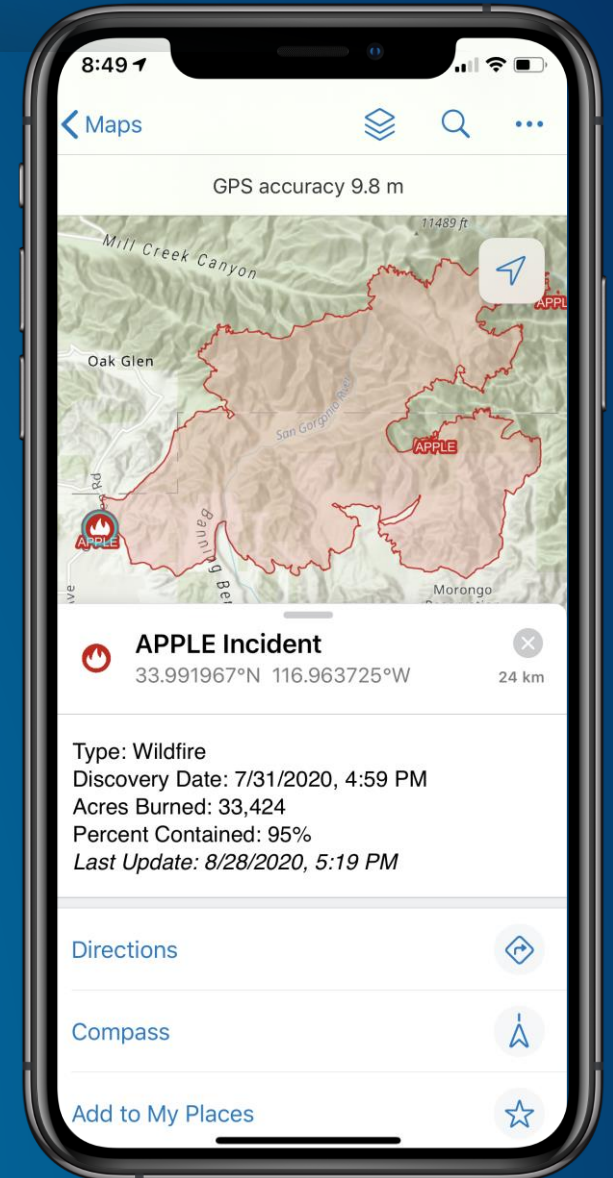


## Map Support

- Advanced symbology/Labeling (w/Arcade)
- Group layers, Annotation
- Popups (w/Arcade including feature sets)
- Layer refresh for auto-updates

## Map Tools

- GPS (rotate using compass)
- Basemaps, Bookmarks, Layers, Legend
- Measure (lines, areas)
- Search (locations, coordinates, features)
- Share Map
- Sync map changes (when offline)
- Directions (Navigator, Google Maps, Apple Maps)
- Compass





## Markup Layers

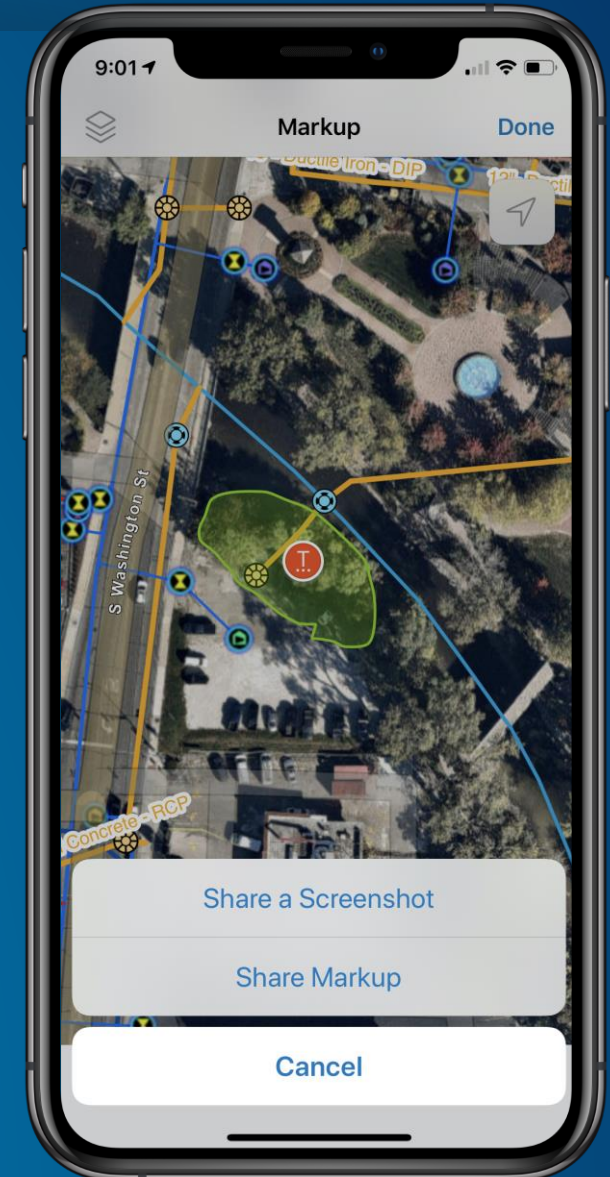
- Markers, lines, arrows, areas
  - Choose color
  - Label and note attributes
- Save markup in one or more layers
- Turn markup layers on/off with Layers tool

## Markup Tool

- Place a marker
- Freehand sketch lines and areas
- Recognize shapes
- Move graphics

## Share Markup

- OTA, by email, text message
- ArcGIS organization





- GPS Capture capabilities
  - Single Point/vertex capture (w/ Z-value)
  - Streaming data capture (lines/areas)
  - Averaging
- Understanding Accuracy
  - GPS bar
  - GPS metadata
  - Required accuracy
  - Confidence level
- Connecting to Receiver
  - Location Provider
  - Location Profile

**Profile Accuracy**

Distance (centimeters) 5

Set required location accuracy for data collection.

Centimeters

Meters

95% Confidence

Report horizontal and vertical accuracy at a higher confidence level.

**GPS Details**

Updated Just Now

Provider R2, 5544S01871: Trimble

Altitude (HAE) 1,183.9 ft

Horizontal Accuracy (RMS) 0.6 in

Vertical Accuracy (RMS) 1 in

Fix Type RTK Fixed

Station ID --

Correction Age 1 sec

Satellites (Used/Visible) 13/31

Current Location Profile Esri base station

Correction Source NTRIP

Battery 52 %

**Profile Streaming**

Time

Distance

Distance (meters) 3

Set how often to collect a new point while streaming.

GPS Averaging

Points to Average 5

Set the number of points you would like to average. Minimum number of points is 2.

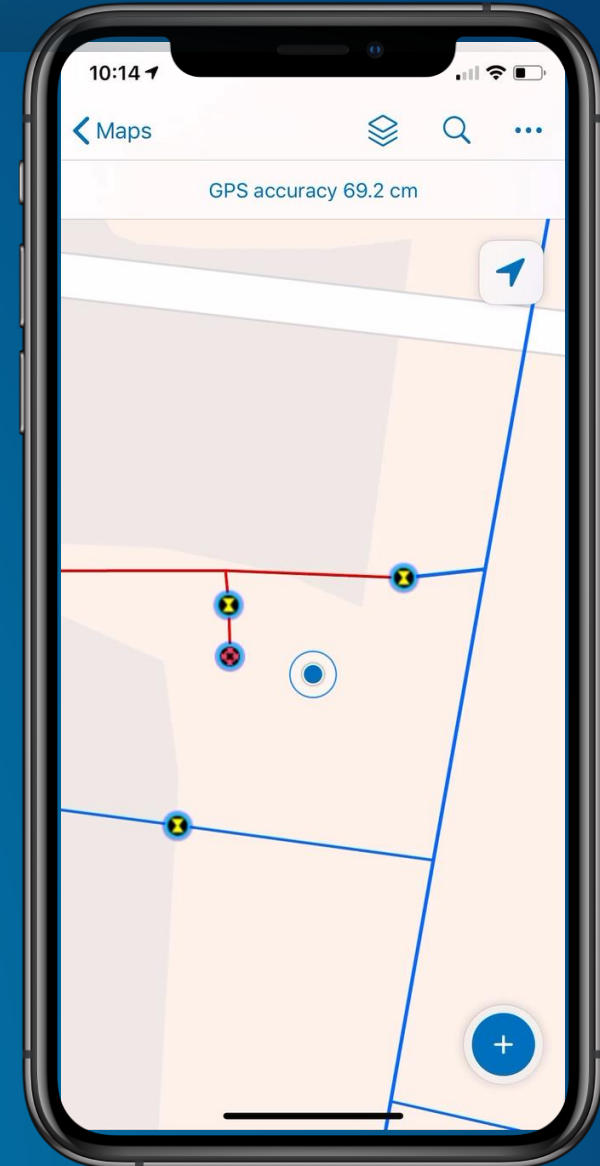
**Cancel Add Provider**

Bad Elf #145285 Add

To pair a new receiver to your device, go to Bluetooth Settings.

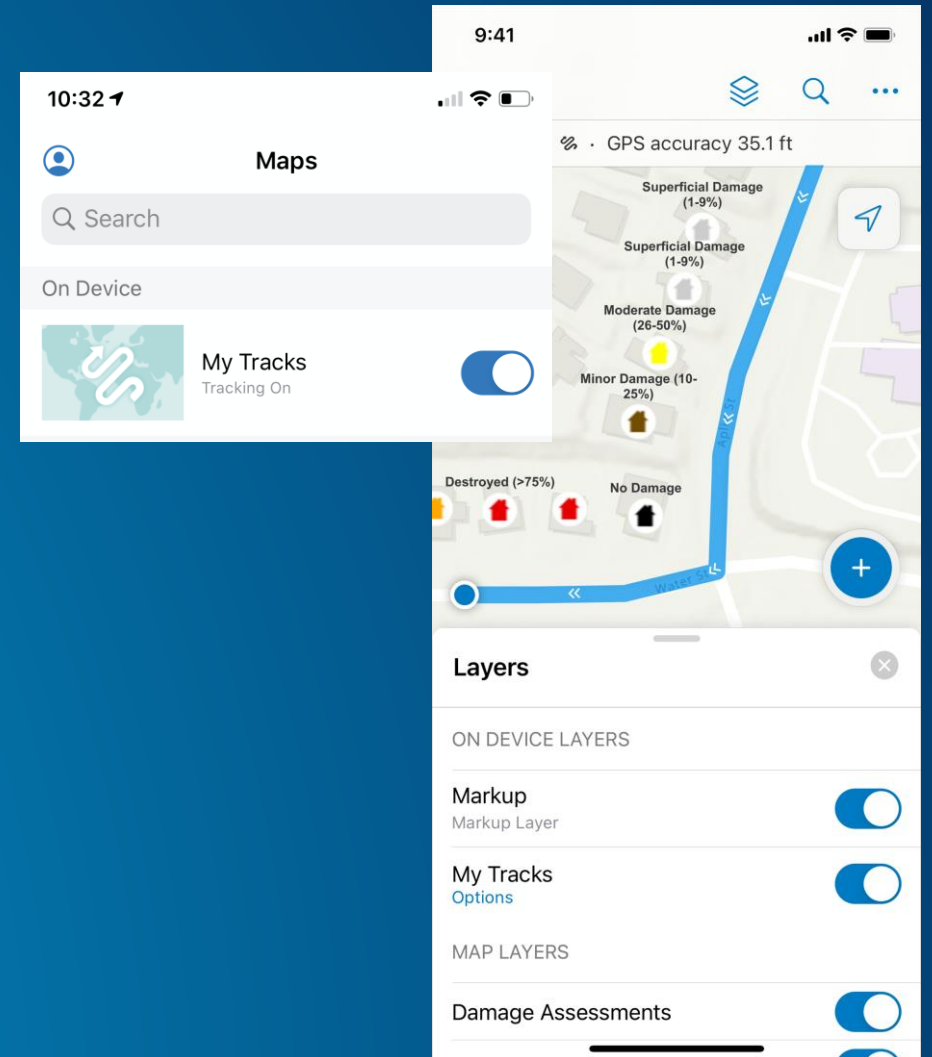


- Transaction model support
  - Non-versioned
  - Traditional versioning
  - Offline Branch versioning (10.8.1+)
- Historical inspections
  - Model using 1:M relationships
- Smart forms capability
  - Organize attributes
  - Conditional visibility
  - Pick lists
  - Required fields





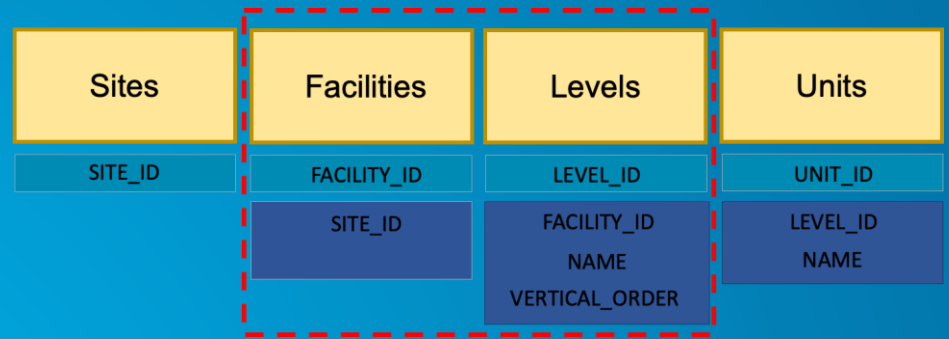
- Supports Viewer user type + ArcGIS Tracker license
- Special map card to turn tracking on/off from maps screen
  - Open map card for advanced viewing capabilities
- Battery savings location tracking capability
- Switch available on the GPS bar
- View location tracks in any map (iOS/Android)
  - Turn tracks layer on/off



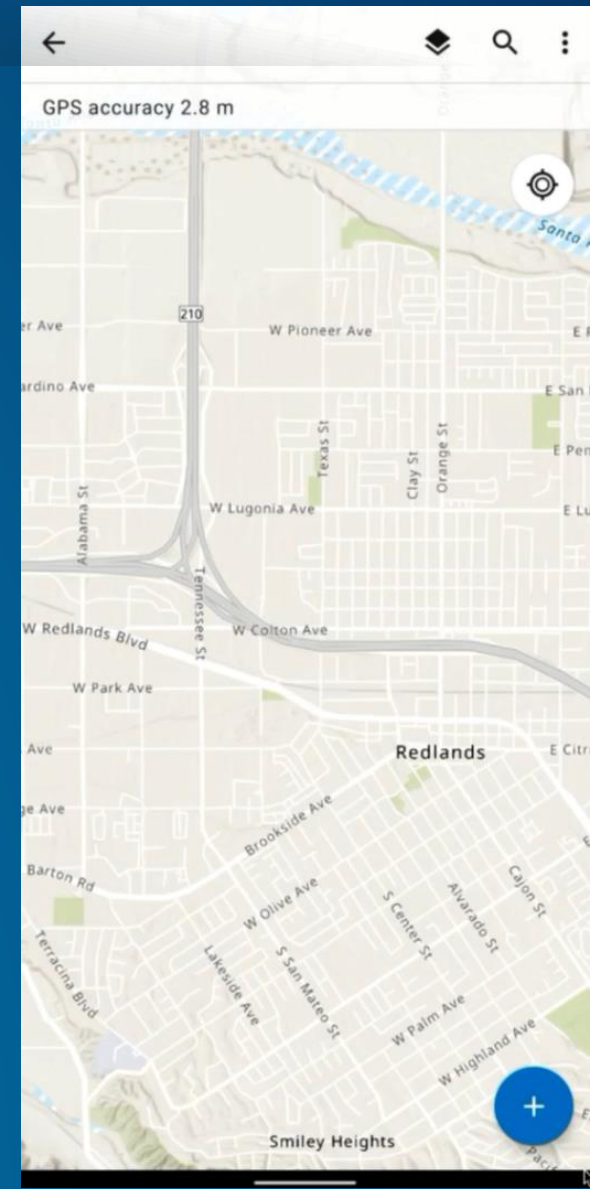


## ArcGIS Field Maps supports the Indoors information model

- Map packages
- Web maps
- Floor picker and floor panel
  - Available when Facilities, Levels layers are present in the map



- Additional web feature layers that conform to the model will be filtered as well.
  - Including editable feature layers



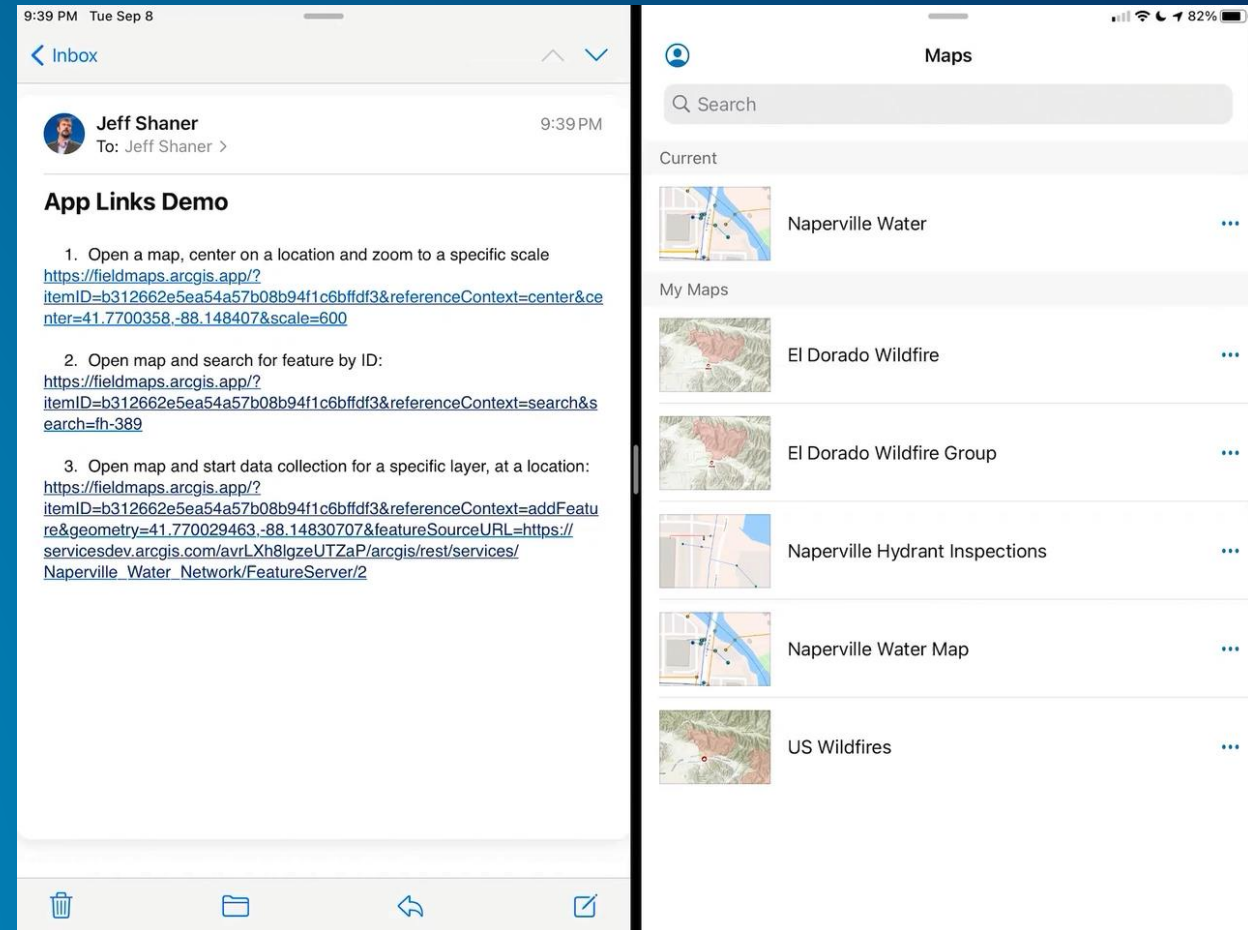


## Remotely control Field Maps using App Links:

- From another app
- From an email or text message

## App Link capabilities include:

- Opening a map or map package
- Centering a map at a certain location/scale
- Searching a map using coordinates, locations, feature attributes
- Starting data collection (with a location, spatial reference, collection of attributes)
- Updating attributes of an existing feature
- Callback to another application





## Benefits

- Easily manage devices in your organization
- Improve efficiency of app deployments
- Keep apps and data secure
- Active monitoring for malware and other threats

## Field Maps capability

- Application configuration keywords
  - portalURL key/value pair
  - anonymousAccess key/value pair
- App-level VPN

Field Maps - Assignment

Distribution

Restrictions

Tunnel & Other Attributes

**Application Configuration**

### Application Configuration

EMM Managed Access

Only devices enrolled in EMM will be allowed to install the app and receive policies below.

Managed Access

Send Configuration

UPLOAD XML

Configuration Key	Value Type	Configuration Value
portalURL	String	https://myportal.mycompany.com/arcgis
anonymousAccess	Boolean	true

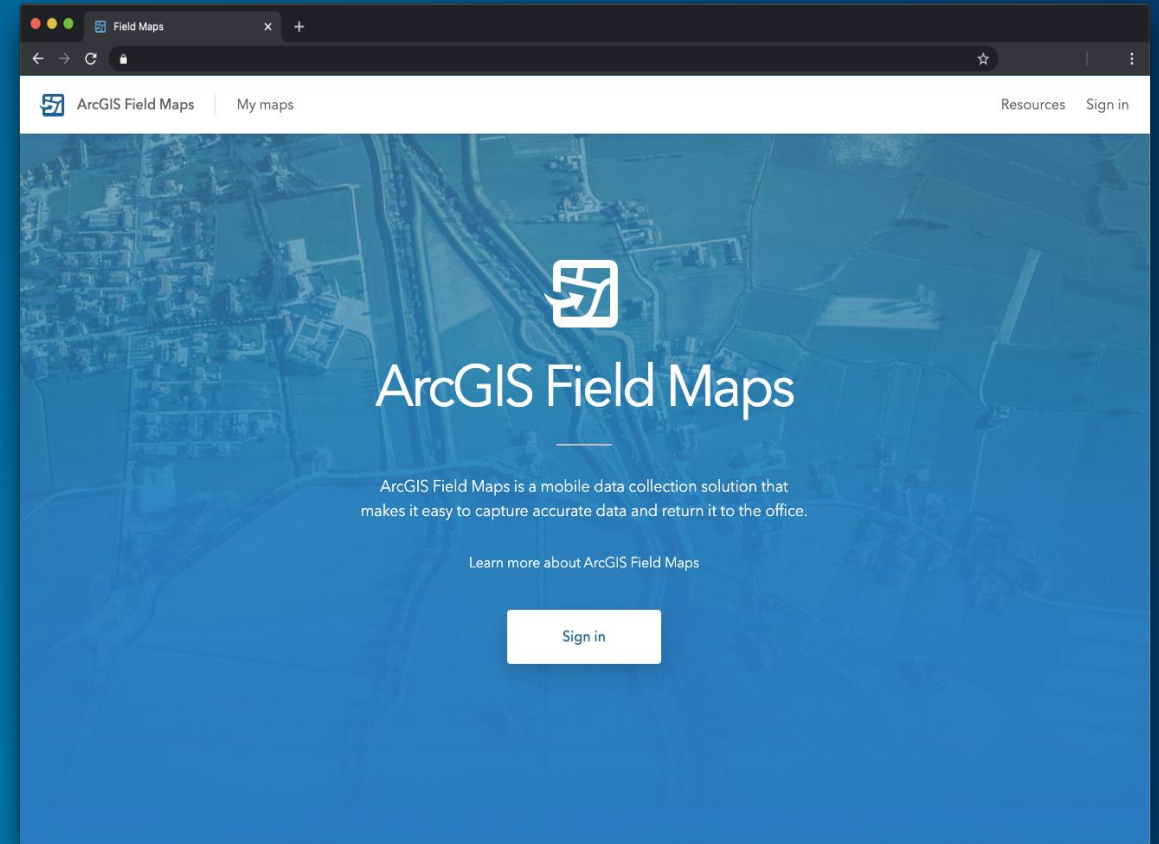
+ ADD





## Key capabilities (Dec 2020)

- Integrated into App Launcher
- Centralized experience for deploying maps
- Configure map layer capabilities
  - Manage templates and default values
  - Create smart forms
- Manage offline capabilities
  - Quickly configure settings
  - Manage offline map areas
  - Configure download and sync settings
- Preview forms
- Share and deploy maps





## Feature Templates

- Unique types of features you create in a feature layer using the map or GPS
- Include a symbol, name, description, and set of values
- Configuration Capabilities
  - Order Feature Templates and Types
  - Alter name and description
  - Apply default values per template
  - Delete templates
  - Duplicate templates

The screenshot displays the ArcGIS Field Maps interface for a map titled "El Dorado Fire - Templates" with a feature layer named "Damage Assessments". The interface is divided into several sections:

- Layers:** A sidebar on the left showing the "Damage Assessments" layer selected.
- Templates:** A central panel showing a list of feature templates for the "Damage Assessments" layer. The templates are:
  - Destroyed (>75%)
  - No Damage
  - Superficial Damage (1-9%)
  - Minor Damage (10-25%)
- Properties:** A panel on the right showing the configuration for the selected "Destroyed (>75%)" template, including display name, description, and default values.
- Map:** A small map view in the bottom right showing a red fire icon on a building, labeled "Destroyed (>75%)".
- Filter:** A dropdown menu below the map showing a list of damage assessment categories: Destroyed (>75%), No Damage, Superficial Damage (1-9%), Minor Damage (10-25%), Moderate Damage (26-50%), and Major Damage (51-75%).

Blue arrows point from the text "Feature templates" to the "Minor Damage (10-25%)" template in the list and to the "Filter" dropdown menu.



## Smart forms

- New way to create and edit attributes
- Included in the [web map specification](#)
- Simplifies field editing experience

## Key capabilities

- Convert pop-ups to forms
- Organize Attributes using groups
- Qualify required fields
- Apply conditional visibility to fields using Arcade expressions

ArcGIS Field Maps | My Maps > Naperville Water | Account Name | account id

Layers | Find layers | Editable layers | Hydrants | Reference layers

Templates | Form | Save form

### Hydrant Inspections

Inspection Information

Inspector

Inspection Date Time

Hydrant Flush

Flush Required

Pressure (PSI)

Flow Duration

Flow Rate

Hydrant Maintenance Inspection

Paint Required

Lubrication Required

Chains Required

Greased

Properties

Formatting

Conditional visibility

Show input when matches all conditions

Flush Required is Yes

9:41 | Collect | Submit

Hydrant Inspection Number:

INSPECTION INFORMATION >

HYDRANT FLUSH >

Recorded details about flushing.

Flush Required Yes

Pressure (PSI)

Flow Duration

Flow Rate

HYDRANT MAINTENANCE INSPECTION >

Details about the materials used.

Paint Req'd?

Lubrication Req'd?

Chains Req'd?

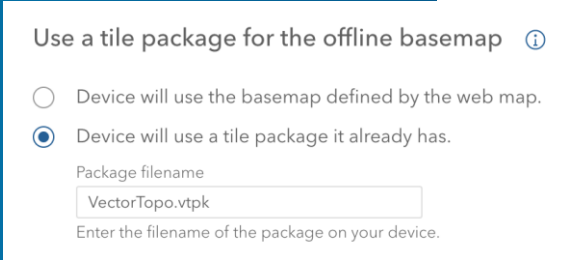
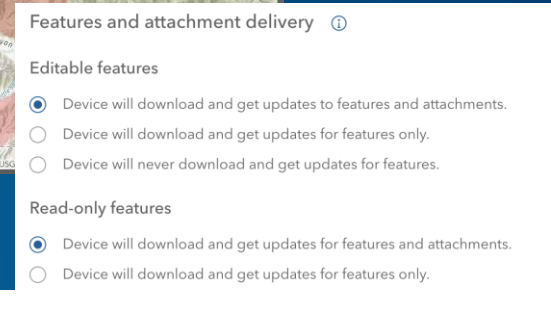
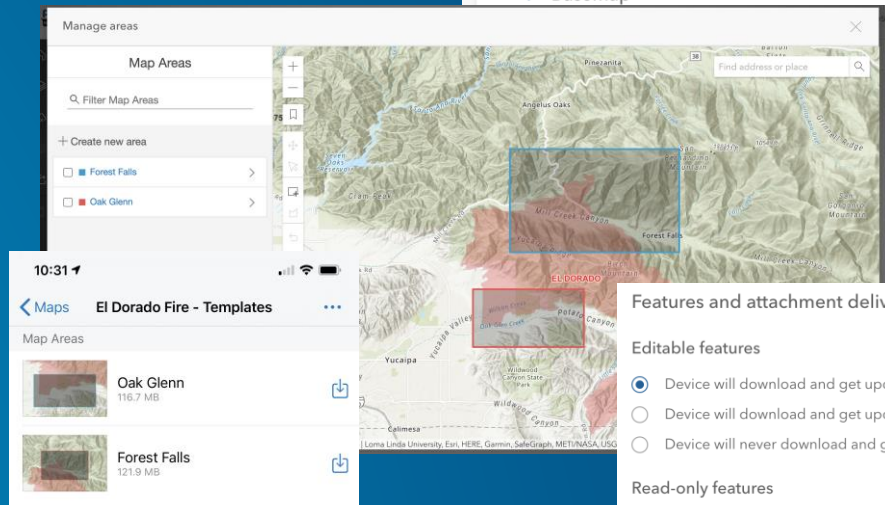
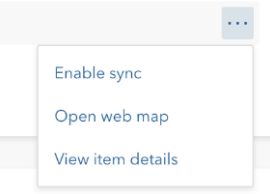
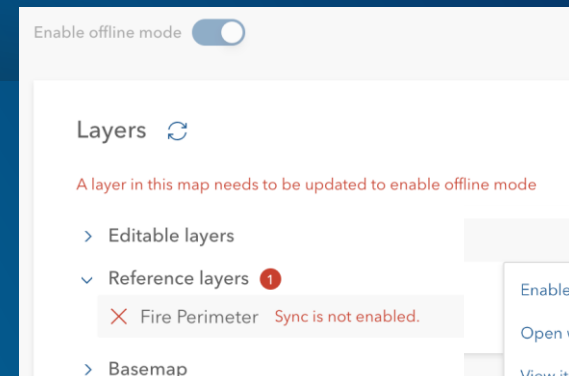
Greased?

*Much more to come in future phased releases...*



## Manage Offline Map Capabilities

- Enable/Disable offline mode
- Diagnose and fix map layer issues
- Create and manage offline map areas
- Adjust delivery of features and attachments
- Reference offline basemaps





## Manage Offline Map Capabilities

- **Mobile Workers** → UI nearly identical to Collector/Explorer
  - Incorporates Tracker in settings
- **Maps** → Maps accessible in Collector and Explorer are accessible in Field Maps
  - Downloaded maps should be copied into the “Field Maps Map Packages” folder on device
- **App Linking** → Base URL and some parameters might be different for Field Maps.



Publication Date: November 2020

## ArcGIS Field Maps

### Migration Guide

Essential tasks for migrating your organization from Collector, Explorer, and Tracker to ArcGIS Field Maps.

*Click the image link above to view the Migration Guide*



- **Open beta available now!**

- Mobile App

- Both iOS and Android platforms
    - All field data collection capabilities (latest Collector releases)
    - All Explorer capabilities
    - Sign in and browse support for maps
    - App Links
    - Smart forms

- Web App

- Browse maps
    - Configure offline capabilities
    - Template and default value configuration
    - Sharing
    - Smart forms

- Several beta updates to come before release



<https://earlyadopter.esri.com/key/ArcGISFieldMaps>

[ArcGISFieldMapsBeta@esri.com](mailto:ArcGISFieldMapsBeta@esri.com)



## Useful Links

- [Announcing ArcGIS Field Maps](#)
- [Migrating to ArcGIS Field Maps](#)
- [5 things to try in ArcGIS Field Maps](#)
- [Early Adopter Site](#) – for the web beta program
- Team Email Alias (customers and distributors) - [ArcGISFieldMaps@esri.com](mailto:ArcGISFieldMaps@esri.com)

Gallery / Paths



## Try ArcGIS Field Maps

Get started with common field activities like finding assets, capturing data, and tracking your mobile workforce.

*Click the image link above to view the Learn Lesson*