

# Forfeiture Data Collection

Mobile App with Collector for ArcGIS

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Allegan County GIS  
[www.allegancounty.org/gis](http://www.allegancounty.org/gis)

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## 0.1 Forfeiture Data Collection

### 0.1.1 Problem and Analysis

**Background** Treasurer department has an annual responsibility to properly document the tax forfeiture process. The LIS Department built an application in MS Access and MapInfo that consumed a daily export from BSA and was deployed to the field on a laptop. A digital camera was used for site photos and later imported into the laptop.

**Statement of Problem** Current Tax Forfeiture workflow is built on MapInfo software which has been replaced by ESRI software. The Forfeiture data collection application must be recreated in the ESRI framework.

**Analysis** Tax Forfeiture Application will facilitate:

- Mobile data collection on handheld device via Collector for ArcGIS configured with Allegan County GIS Portal (**device app**)
  - Device app will:
    - \* Synchronize with data in the office (online)
    - \* Navigate to forfeiture sites (offline)
    - \* Collect data and photos of forfeiture sites (offline)
    - \* Synchronize the collected data with data in the office (online)
- Daily form production and printing for each site visited with required data and images.

### 0.1.2 Design

**Overview** The Forfeiture Data Collection Application uses BSA, ArcGIS Desktop, ArcGIS Collector for Android, and ArcGIS Portal web maps and apps to enable forfeiture data collection. A daily routine is supported that maintains forfeiture parcel data through the notification period.

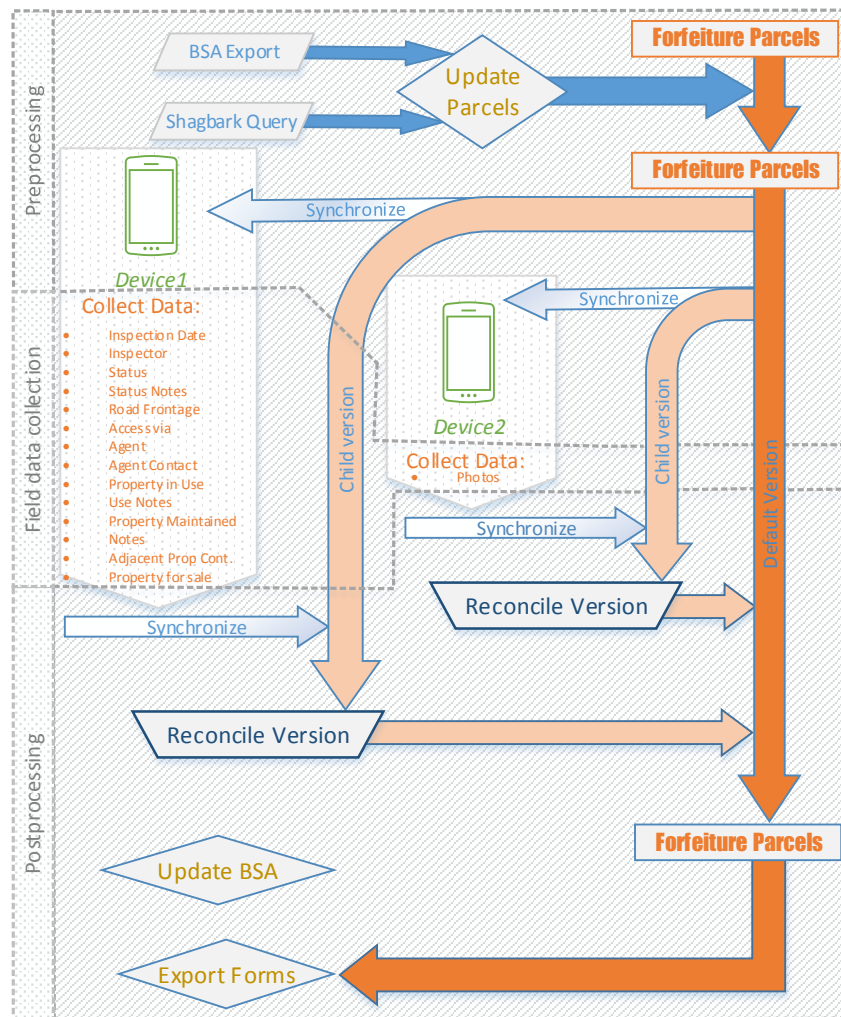


Figure 1: Project Design

**BSA data export** Details of parcels in the forfeiture process are managed in BSA Delinquent Tax.net. The Treasurer office has a BSA export the parcels

that need a site visit. Export of the updated list is the beginning of the daily routine in this workflow.

**ArcGIS Desktop tasks** Tools are designed to preprocess and postprocess forfeiture parcel data for fieldwork. The user will execute a preprocess script tool that prepares the data for field deployment. After fieldwork, a post process script tool synchronizes data from the fieldwork with the live data on the Allegan County network.

**ArcGIS Collector** A free mobile application developed and tested on Android is deployed to the field for data collection. The application is configured to work offline(without an internet or cellular connection) by synchronizing before and after fieldwork.

**ArcGIS Portal Webmaps and Apps** Live data from a publishing (replica of ACPro) enterprise geodatabase (ACPub) running on SQL Server database server (acintsql01) is provided through a feature service (REST service) named TaxReversionParcels. A webmap called Forfeiture Field Map consumes the TaxReversionParcels feature service exposing the forfeiture parcels, for editing. The Forfeiture Field Map is configured to work in the ArcGIS Collector App. The app downloads the webmap, allowing the user to collect the necessary information on each forfeiture parcel in the field disconnected and uploads the changes when reconnected.

**Forfeiture Data Collection** Three parts of the daily routine:

1. Pre-processing (in the office):
  - Export current forfeiture list from BSA
  - Update webmap layers with results from BSA export
  - Synchronize from webmap layers to field collection device (**device app**)
2. Field data collection with device app:
  - Support navigation to forfeiture sites
  - Provide a checklist of data points about the site
  - Attach photos to the site
  - Save results for synchronization in post-processing
3. Post-processing (in the office)
  - Synchronize data and images collected in device app to webmap layers

## Backend data details

### Location of production data

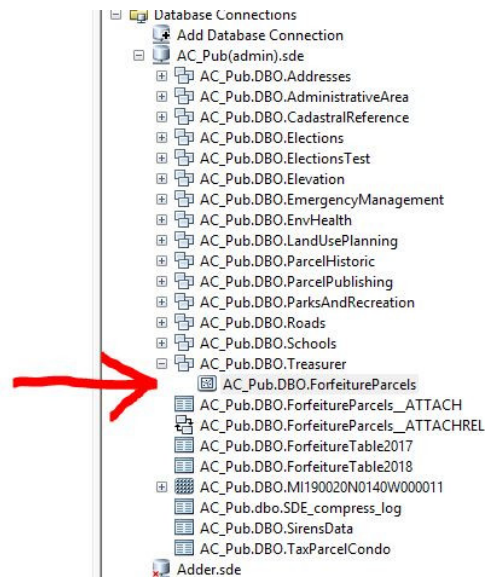


Figure 2: live data

### ForfeitureParcels feature class

## Collector for ArcGIS

## Webmap details

### **0.1.3 Hard Copy Record**

#### 0.1.4 User Manual

##### Admin Tasks

**Setup Users in ArcGIS** Users that will run Pre and Post processing scripts must be created and given privileges on ACPub Treasurer Feature Data Set.

**Setup users in Portal for ArcGIS** Users that will use the Collector for ArcGIS must have profiles added to and managed in the Allegan County GIS Portal site.

##### Collector Setup Details

###### Install Collector for ArcGIS

- Available from the Google Play Store

###### Configure Collector

- Connect to Allegan County GIS
  - Choose or add the connection:  
`https://gis.allegancounty.org/portal\_webadaptor`

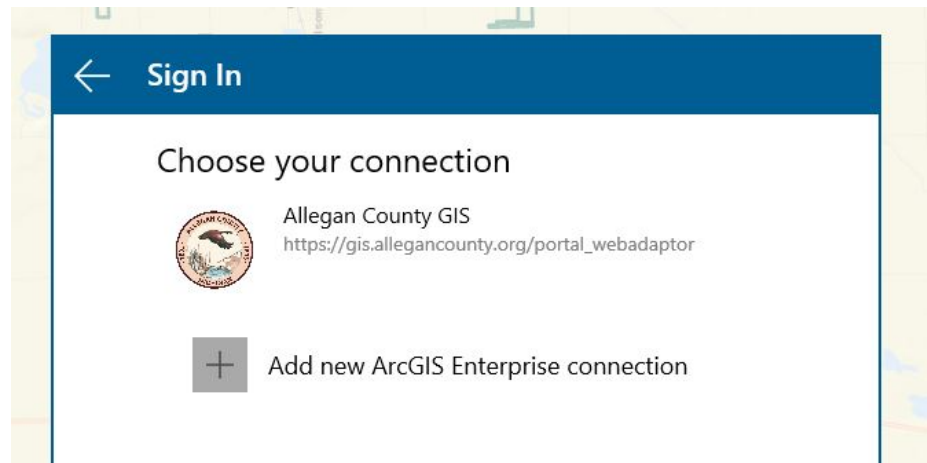


Figure 3: Collector Connection

- Username is JMorris or CAndress



– Password: (enter password)

- Find the map Forfeiture Field Map under Treasury Services
- Download the field map
- Select area needed and detail needed and download the webmap

### **Daily Preprocessing Routine**

**Execute Preprocessing Script** A tool in ArcGIS that:

- Exports current forfeiture list from BSA
- Updates webmap layers with results from BSA export

**Synchronize Webmap** In Collector for ArcGIS, push the sync button on the Forfeiture Field Map

### **Forfeiture Data Collection**

**Navigation** Either device can be used to search for parcels and navigate to them.

**Device 1 Field Operation** In the Forfeiture Field Map, for each site visited, select the desired parcel, push the edit button and collect the following attributes. Save at the end of each parcel collection:

Field Name	Entry Type	Note
Property Number	Prefilled	NA
Inspection Date	Autofill or Dropdown	NA
Inspector	Dropdown	NA
Class	Prefilled	Missing!
Acres	Prefilled	Missing!
Address	Prefilled	NA
Status	Dropdown	NA
Status Notes	Open entry	254 Character limit
Road Frontage	Dropdown	Yes or No
Access via	Open entry	30 Character Limit
Agent	Open entry	30 Character Limit
Agent Contact	Open entry	30 Character Limit
Property in use	Dropdown	Yes or No Missing!
Use Notes	Open entry	254 Character limit
Property Maintained	Dropdown	Yes or No Missing!
Notes	Dropdown	254 Character Limit(maintNotes!)
Property Contaminated	Dropdown	Yes or No Missing!
Notes	Open entry	254 Character limit Missing!
Adjacent Property Contaminated	Dropdown	Missing!
Notes	Open entry	254 Character limit Missing!
Property for sale	Dropdown	Yes or No
Posted	Prefilled	Handled in Pre and Postprocessing
InList	Prefilled	Handled in Preprocessing
PostedInList	Prefilled	Handled in Preprocessing
Print Today	Dropdown	Yes or No

**Device 2 Field Operation** In the Forfeiture Field Map, for each site visited, select the desired parcel, push the edit button and then the add attachment button. Select photo, and take a photo.

**Daily Postprocessing Routine** Back at the office

**Sync Edits** Lorem ipsum dolor sit amet, consectetur adipiscing elit. Etiam lobortis facilisis sem. Nullam nec mi et neque pharetra sollicitudin. Praesent imperdiet mi nec ante. Donec ullamcorper, felis non sodales commodo, lectus velit ultrices augue, a dignissim nibh lectus placerat pede. Vivamus nunc nunc, molestie ut, ultricies vel, semper in, velit. Ut portitor. Praesent in sapien. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Duis fringilla tristique neque. Sed interdum libero ut metus. Pellentesque placerat. Nam rutrum augue a leo. Morbi sed elit sit amet ante lobortis sollicitudin. Praesent blandit blandit mauris. Praesent lectus tellus, aliquet aliquam, luctus a, egestas a, turpis. Mauris lacinia lorem sit amet ipsum. Nunc quis urna dictum turpis accumsan semper.

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**Update BSA** Lorem ipsum dolor sit amet, consectetur adipiscing elit. Etiam lobortis facilisis sem. Nullam nec mi et neque pharetra sollicitudin. Praesent imperdiet mi nec ante. Donec ullamcorper, felis non sodales commodo, lectus velit ultrices augue, a dignissim nibh lectus placerat pede. Vivamus nunc nunc, molestie ut, ultricies vel, semper in, velit. Ut porttitor. Praesent in sapien. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Duis fringilla tristique neque. Sed interdum libero ut metus. Pellentesque placerat. Nam rutrum augue a leo. Morbi sed elit sit amet ante lobortis sollicitudin. Praesent blandit blandit mauris. Praesent lectus tellus, aliquet aliquam, luctus a, egestas a, turpis. Mauris lacinia lorem sit amet ipsum. Nunc quis urna dictum turpis accumsan semper.

### **0.1.5 Software**

#### **ESRI Licensed Products**

**ArcDesktop**

**Enterprise ArcGIS Deployment**

**Collector for ArcGIS** Developed and tested on Android(7.0)