MULTI-AGENCY HIGH FLOW COLLECTOR APPLICATION USED FOR MONITORING THE 2019 RIO GRANDE RUNOFF

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US Army Corps of Engineers®

2019 High River Flow

- The winter of 2018-2019 has seen extremely large above average snow packs in the upper Rio Grande watershed resulting in much higher than average runoff levels through this reach
- This year's forecasted high runoff provided an opportunity, led by the Corps of Engineers, to enlist multi-agency participation toward the objective of monitoring and documenting the effects of high flow runoff
  - Levee integrity
  - Inundation and overbanking extents
  - Fish spawning Habitat

What is Collector for ArcGIS

- Part of the ESRI Geospatial Cloud, Collector for ArcGIS is a mobile data collection app
- Collector for ArcGIS allows you to collect and share maps for data collection
- You can create the data that matters to your organization by easily including images and videos
- The App uses the built-in GPS hardware in portable devices such as smartphones or tablets to obtain the geographic coordinates for data points made in the Collector App
- Data points taken in the field without internet access may be synchronized with ArcGIS Online when an internet connection is restored

Collector for ArcGIS

- Collector OS support includes 

- Horizontal accuracy – varies by individual device and current network/cell coverage
- GPS booster options:
  - Trimble R1 GNSS Receiver – Bluetooth GPS booster 50cm max precision
  - Bad Elf Flex – Horizontal accuracy of 1cm
  - Bad Elf GNSS Surveyor – Horizontal 1m Accuracy

2019 High River Flow Collection

- Purpose: Attempt to capture data concerning floodway issues in the Middle Valley during the 2019 Spring Run-off season

- Participating Agencies:
  - Albuquerque Metropolitan Arroyo Flood Control (AMAFCA)
  - Interstate Stream Commission (ISC)
  - Middle Rio Grande Conservancy District (MRGCD)
  - Isleta and Sandia Pueblos
  - Bureau of Reclamation (BOR)
  - Southern Sandoval County Arroyo Flood Authority (SSCAFCA)
  - United States Army Corps of Engineers (USACE)

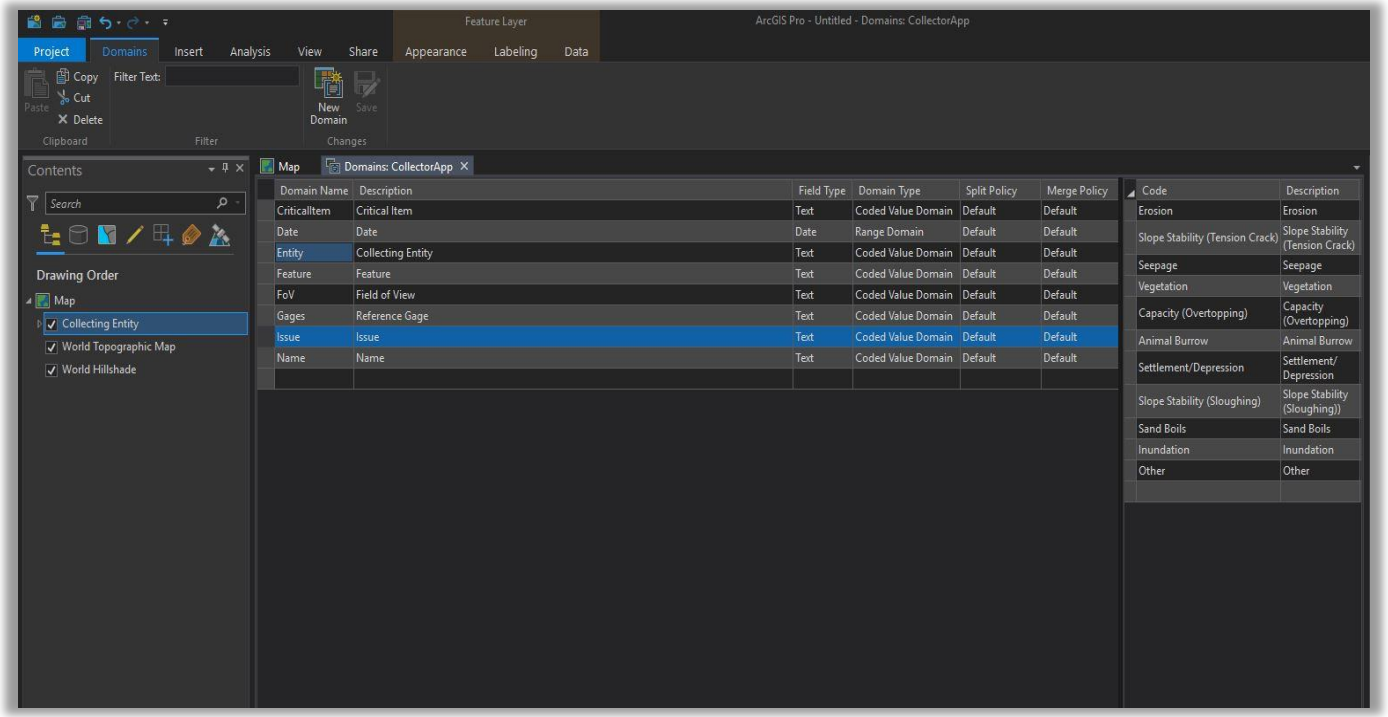
- With use, will allow decision makers to view near real time documentation (descriptions, photos, videos) of issues identified by personnel out in the field

- Data entered can be used to generate reports into an editable word document

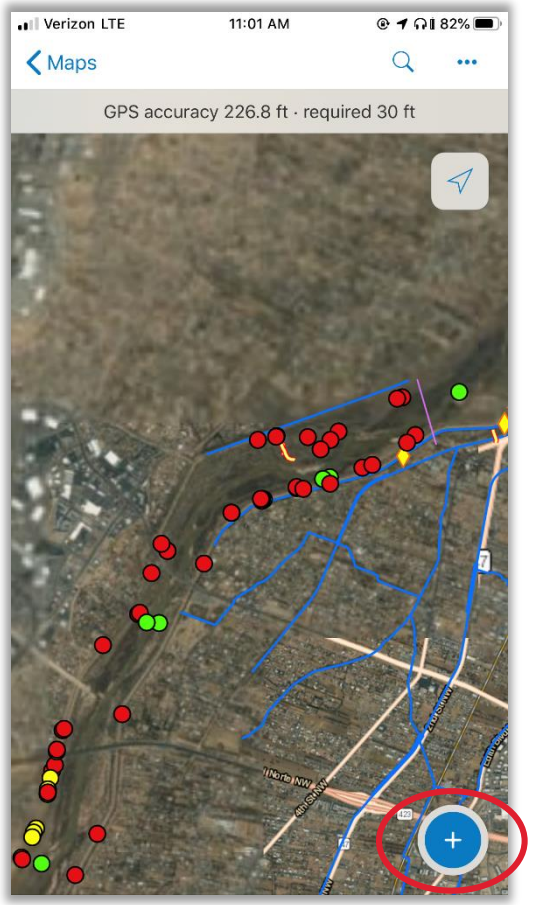
Collector App Setup

- Setting up the attributes and pick lists :
  - Collecting Entity* – pick list
  - Critical Item* – pick list
  - Date*
  - Feature– pick list
  - Field of View – pick list
  - Issue – pick list
  - Name*
  - Reference Gage – pick list

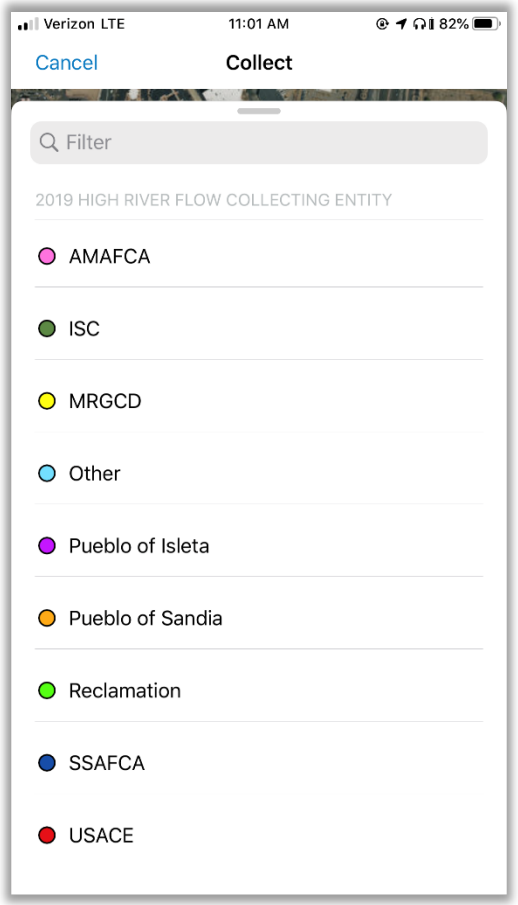
- Fields with a * must be filled in



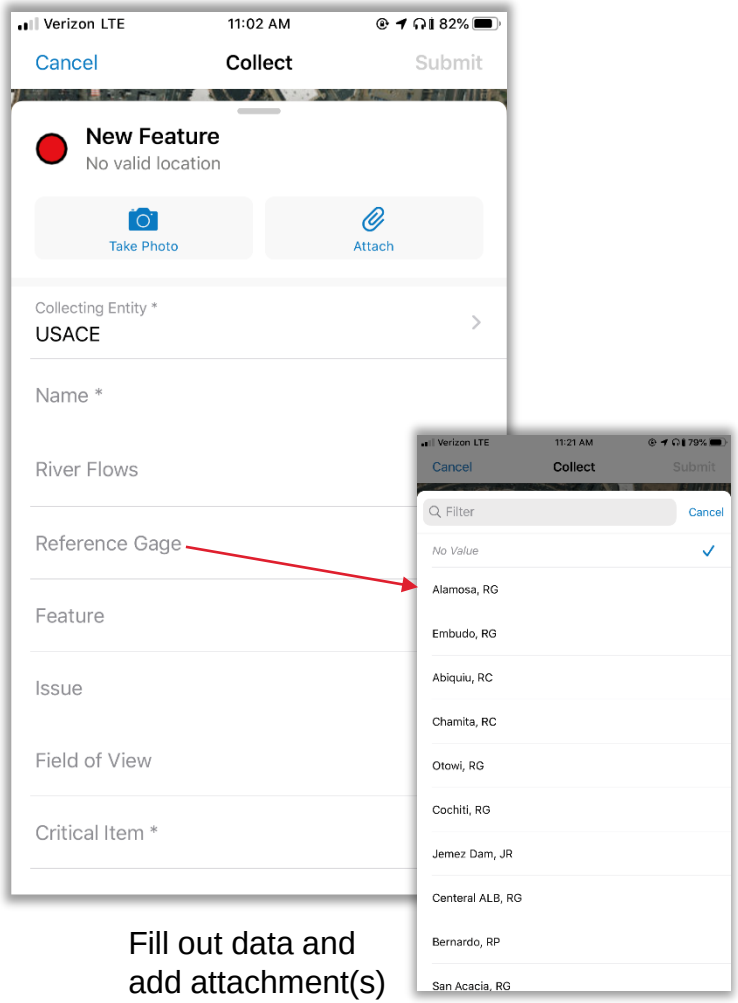
Using the Collector App



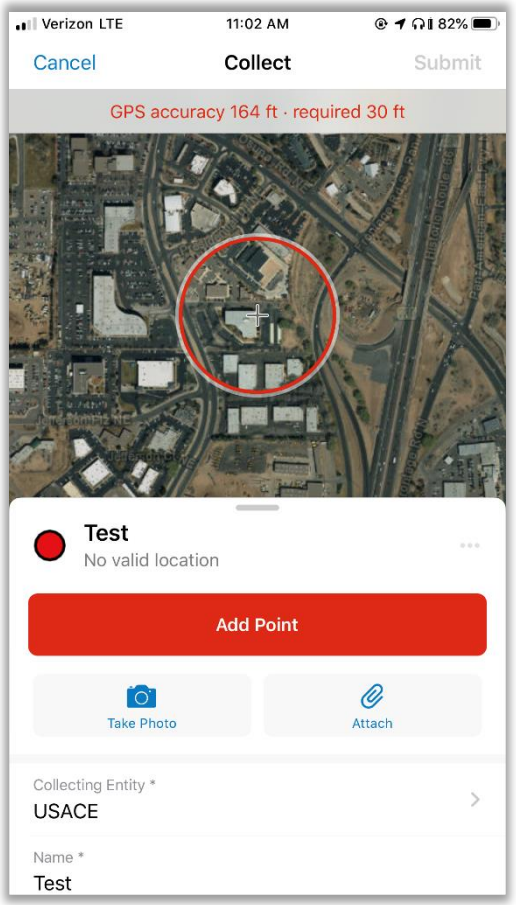
Press plus icon to add a point



Select collecting entity

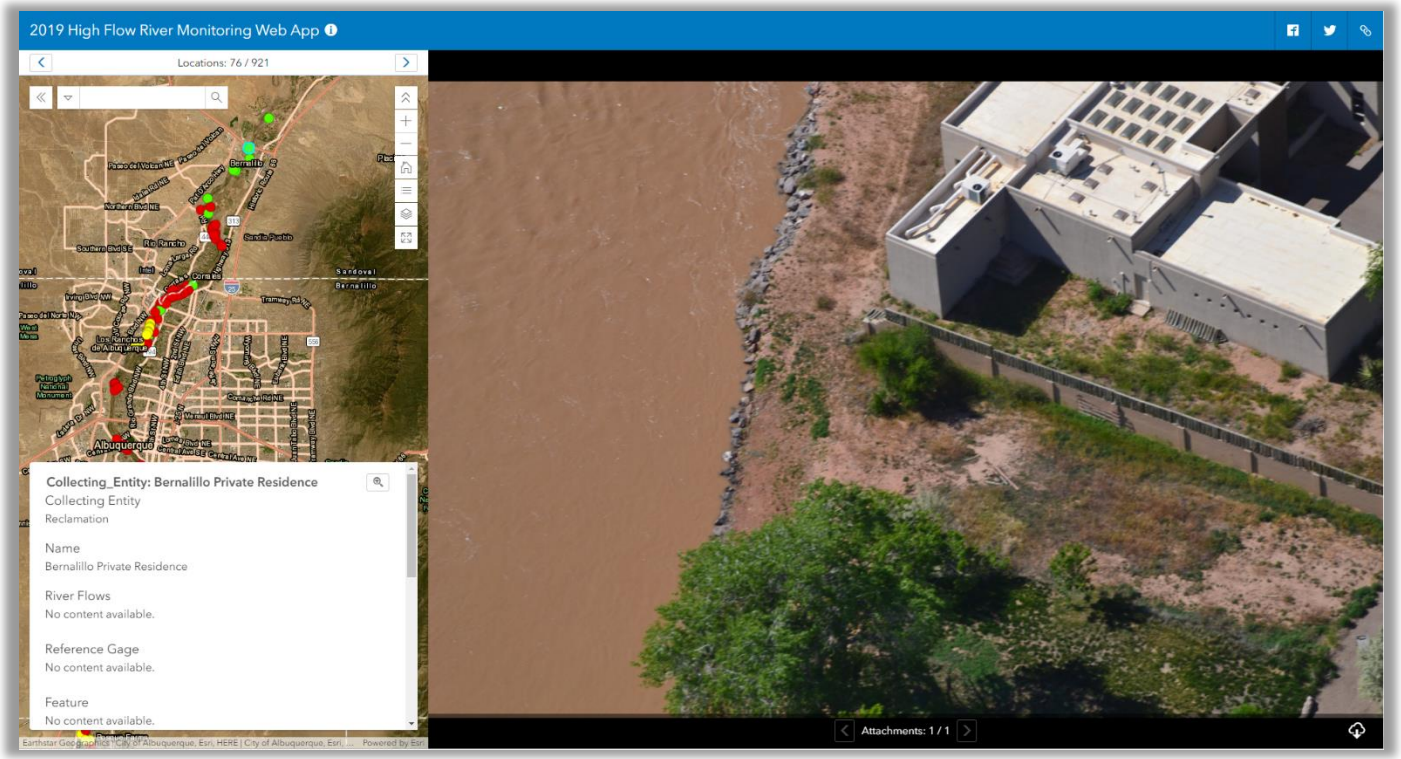


Fill out data and add attachment(s)



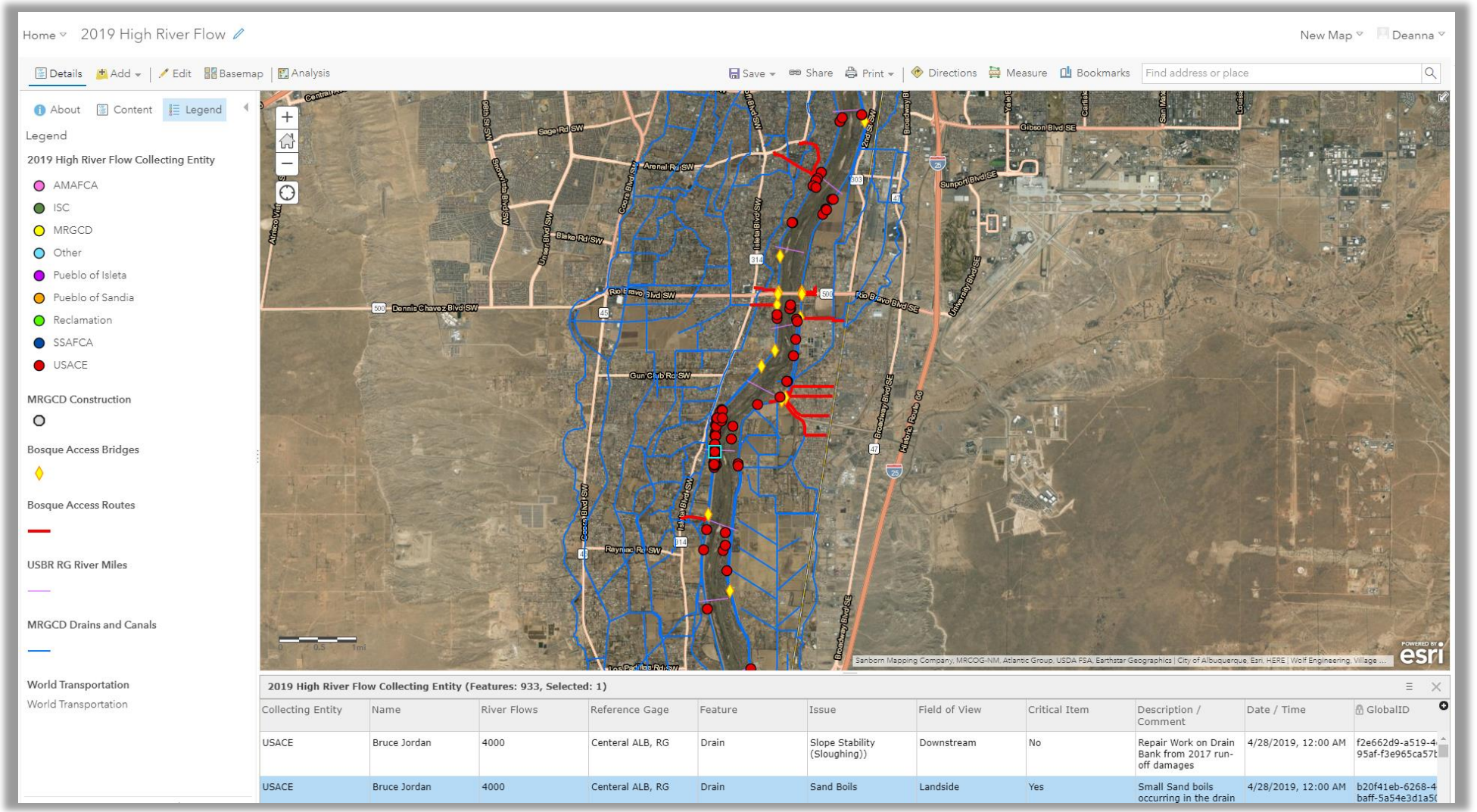
Submit point

ArcGIS Online – Accessing Your Collector Data



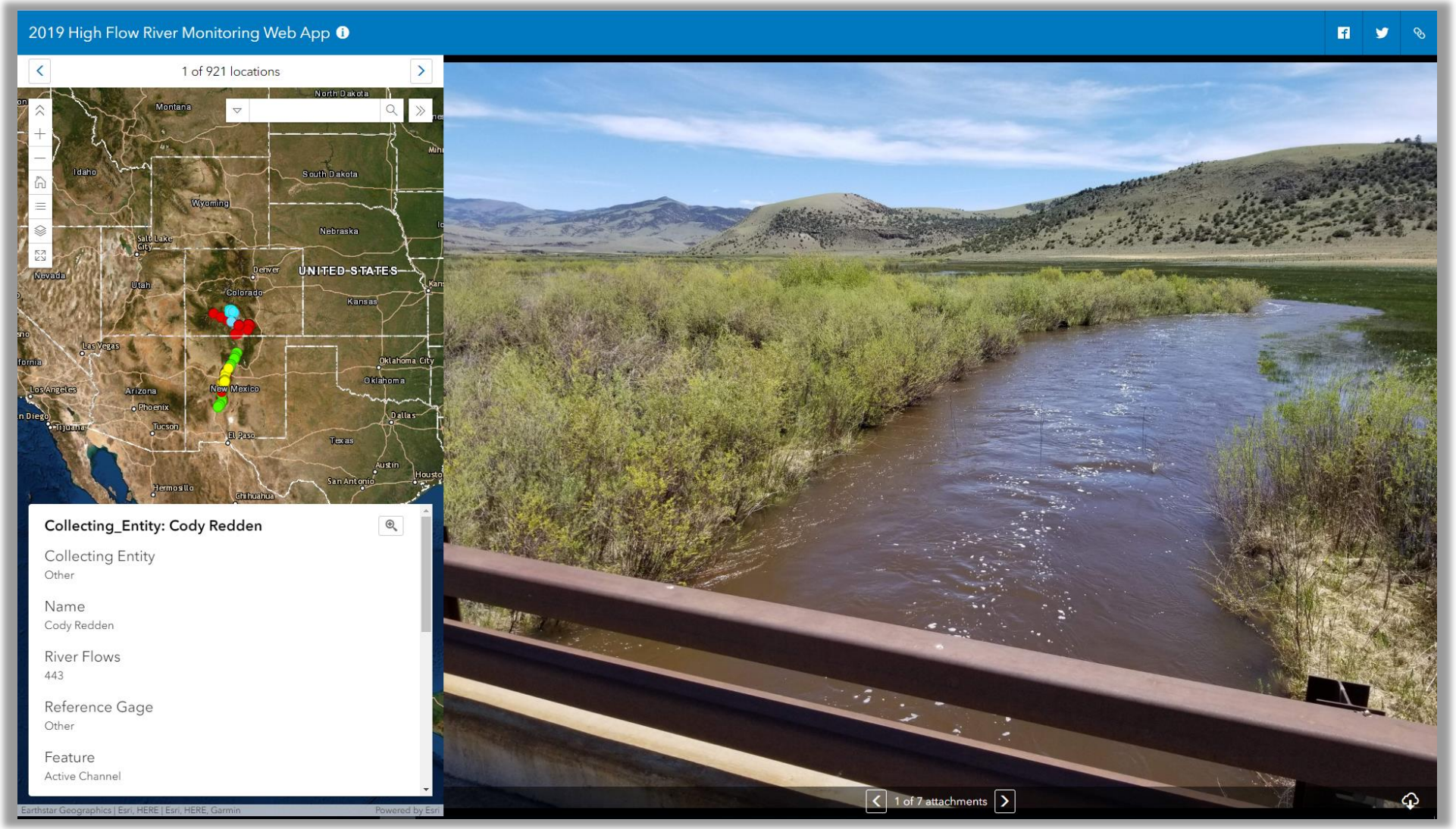
Bureau of Reclamation

ArcGIS Online – Accessing Your Collector Data



https://arcg.is/0buSvO

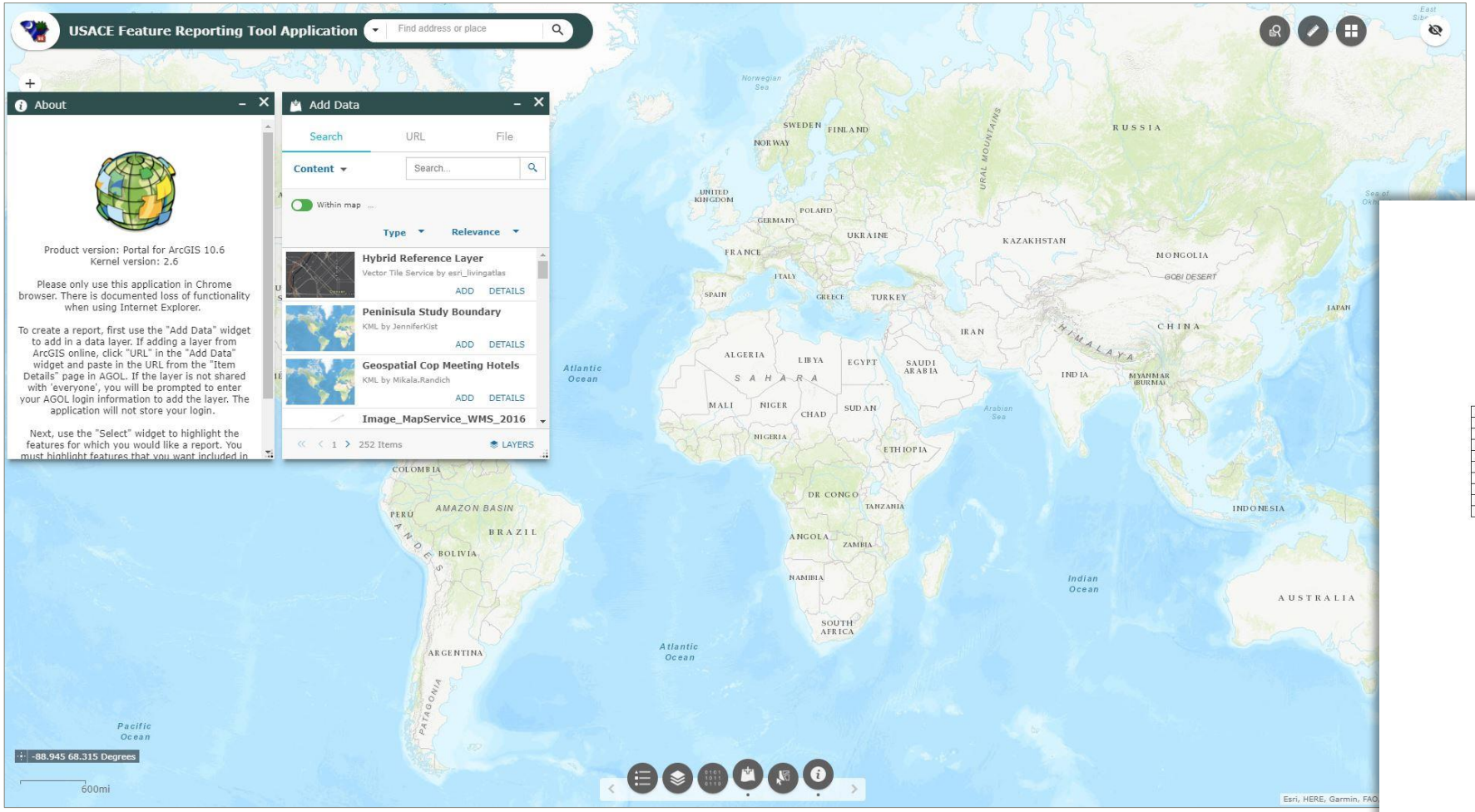
ArcGIS Online – Accessing Your Collector Data

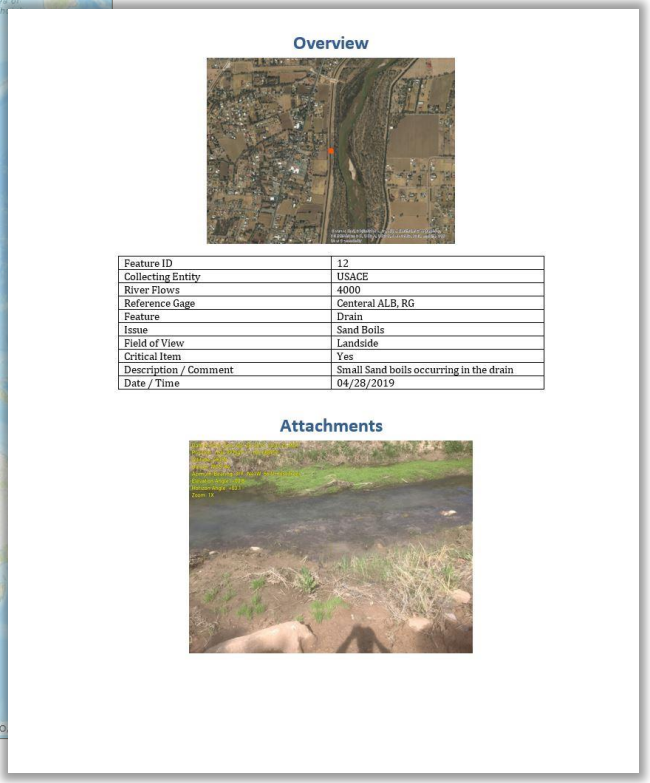


https://arcg.is/19Sy5L

Feature reporting tool application

- This application was initiated by Charleston GIS Staff, Mikala Randich & Michael Sarhan, working with an ESRI developer through the EEAP (ESRI Enterprise Advantage Program)





Feature ID	12
Collecting Entity	USACE
River Flows	4000
Reference Gage	Centeral ALB, RG
Feature	Drain
Issue	Sand Boils
Field of View	Landside
Critical Item	Yes
Description / Comment	Small Sand boils occurring in the drain
Date / Time	04/28/2019

Questions?