

ArcGIS Collector App for 4FRI Springs Monitoring Instructions

Introduction:

If you have trouble, please contact jeri@springstewardship.org, and let me know exactly what you were trying to do when the problem occurred, and what device you were using. If you have suggestions, please be as specific as possible.

We have only tested this on an iPhone, iPad, a Samsung Tablet, and an Android phone. The larger the screen is on your device, the happier you will be. This app can not be installed on older devices, such as iPhone 4. We are working to come up with a list of devices that it will or won't work on. Keep in mind that these images are from an iPhone 5s; it will likely look different on whatever device you use.

- 1. Download App:** From your chosen device, go to the app store. Search for and get Collector for ArcGIS; it's free.
- 2. Sign In:** Once it is installed, open Collector. Click on ArcGIS Online, then enter your username and password. If you don't have one, contact lance@springstewardship.org. You should see a list of available maps (Fig. 1). There are two tabs – All and On Device; make sure you have All selected.
- 3. Open the map:** Click on the Citizen Science Springs Monitoring map, and the map should open (Fig. 2). It may ask if you want to share your location. Accepting this allows you to see where you are on

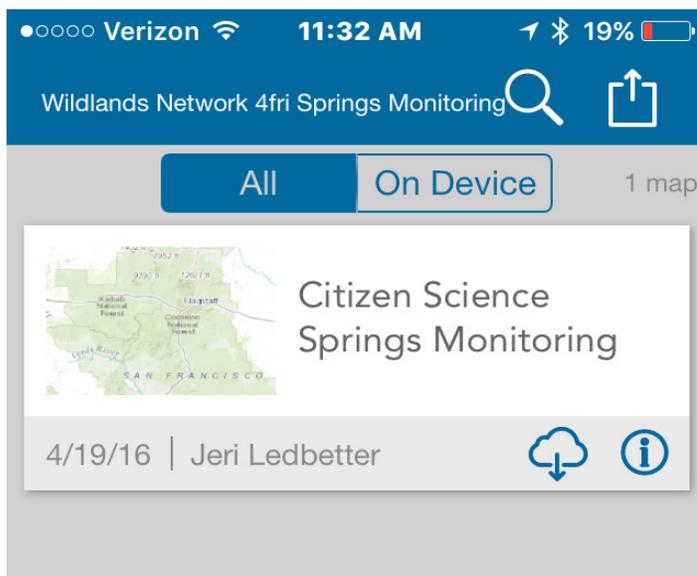


Fig. 1. Map list. Select All tab to view all available maps, or On Device to view downloaded maps.

the map (the blue dot,). You may need to click on the location icon (red arrow in Fig. 2), and the map should zoom into your location.

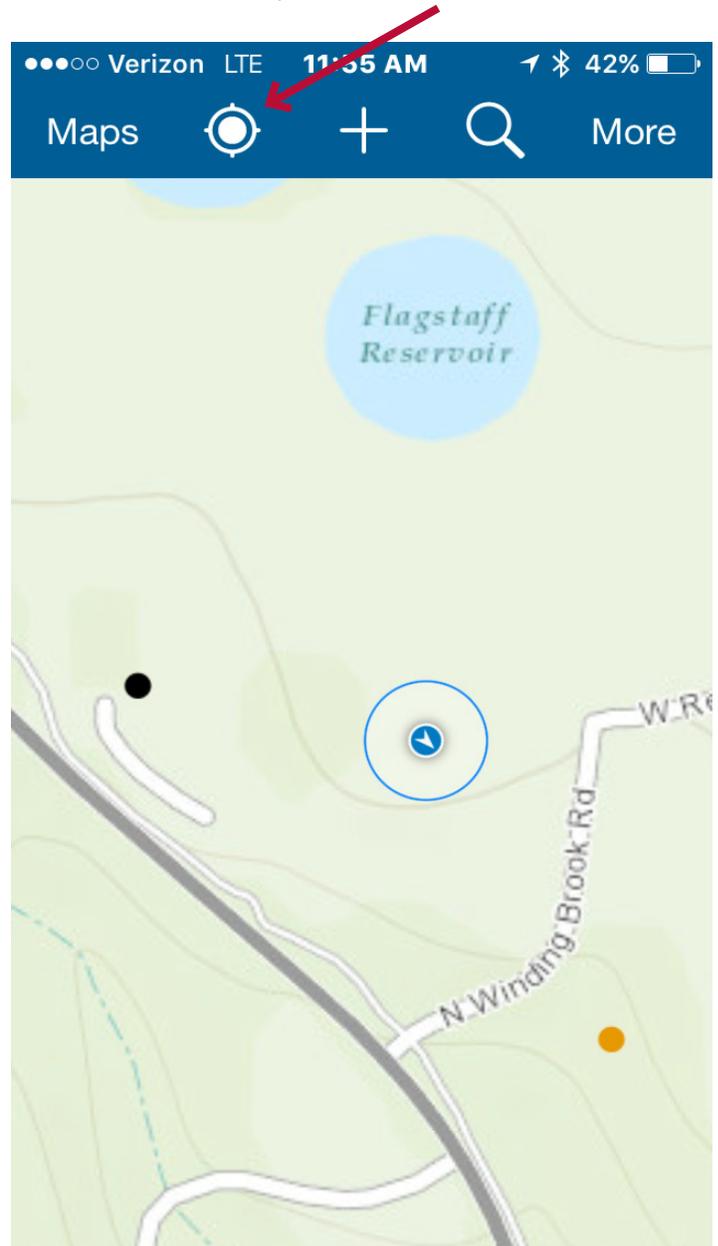


Fig. 2. The arrow points to the location icon. Click this to zoom the map to your current location.

- 4. Pan and Zoom:** Use the touch screen to zoom back out and pan around. Clicking the location button again brings you back to your location.
- 5. Top toolbar:** The + sign allows users to add a new spring, but that really isn't the purpose of this exercise. The Search icon allows users to search for places. This toolbar looked different on the Samsung tablet, but the functions all worked the same.

6. **Second toolbar row:** Click “More” to view another row of tools (Fig. 3). The bookmarks symbol on the left will return you to the full (default) extent of the map.

7. **View layers:** The layers symbol just shows what layers are on the map. These can be turned on or off here.

8. **Measure distance:** The ruler symbol allows users to measure distances (probably very helpful) and areas (not so much.) Once you select this tool, click on the starting point, then the end point that you want to measure. A distance shows up in the menu bar. To delete the segment, click the trash can. When you are finished measuring, click “Done”.

9. **Change basemaps:** The map icon on the far right of the second toolbar row will open a selection of basemaps that users can apply (Fig 4). The imagery basemap is often quite helpful for determining routes (Fig. 5). Some areas have better imagery than others. The USA Topo maps (at the bottom on the left) often has more detail than the standard basemap (Topographic).

10. **Springs symbols:** Springs are symbolized based on how many surveys have been collected (Fig. 6). Springs with no surveys are gray, then they turn red and work their way up to green, then a star. This key is available on the right side of the screen. You can drag it out or hide it.

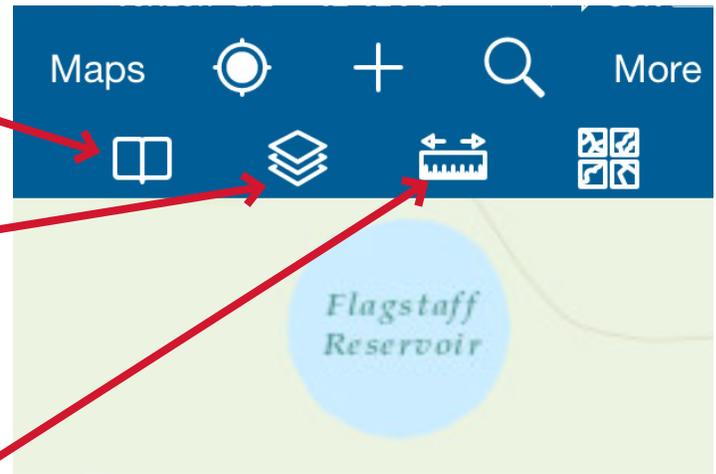


Fig. 3. Clicking “More” opens a second row of tools.

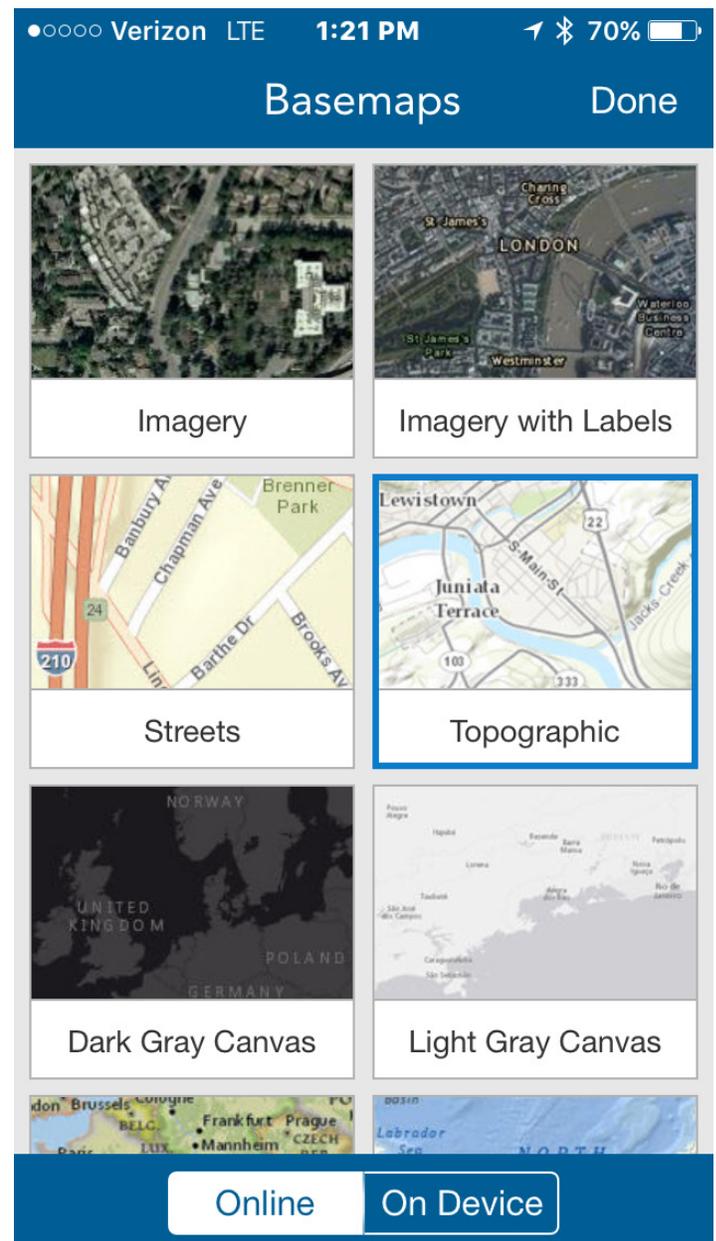


Fig. 4. Basemap selection opened by clicking the map icon.



Fig. 5. Imagery can provide helpful information for finding routes. Also on the basemaps, the USA Topo Maps (bottom left map) provides a bit more (or different) information. Touch a nearby spring to select it. When selected, the point will have a blue circle around it, and the spring name will show up underneath.



Fig. 6. Legend for the number of surveys at each spring.

11. **View Data:** Search for Coyote Springs, just east of the Museum of Northern Arizona, so that you will be looking at the same information. Click the icon to the right of the spring name (the red arrow in Fig. 5) to open a list of options (Fig 7). The Edit selection will allow you to edit some fields, such as access directions. More on that later.

12. **Options:** Clicking the Zoom to button will zoom the map to the selected spring. Clicking “Directions to here” will calculate a route from your current location to the selected site. Please use caution with this option, as Google mapping often doesn’t reflect the status of roads closed by the US Forest Service.

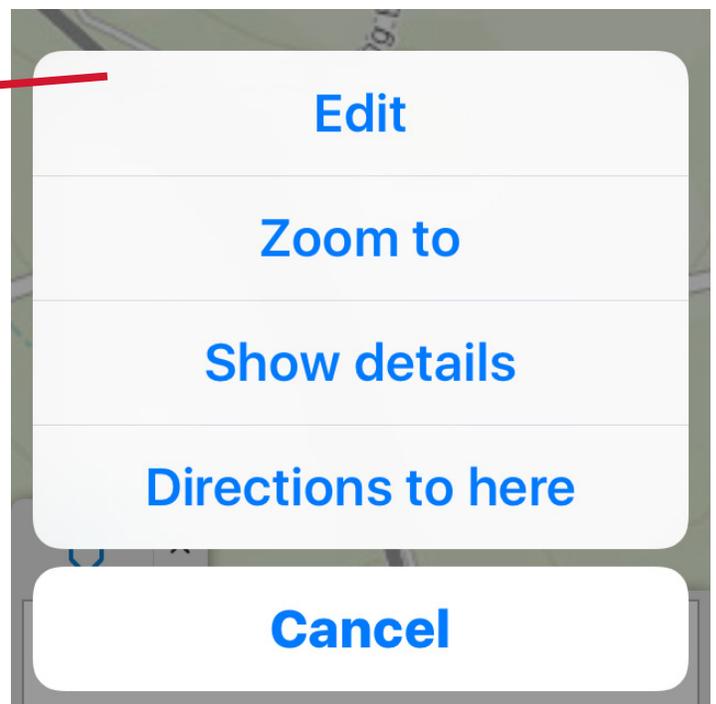


Fig. 7. List of options after selecting a site.

13. **Details:** The Details button opens a screen with information about the site, such as access directions, coordinates, elevation, and a description. Scroll down to view more information (Fig. 8 and 9). To edit any of these, click the icon at the top right (or select Edit from the previous screen. If the access directions are inaccurate, for example, it would be a great help if you updated them. The “Vehicle Access” field should be set to “No” if the spring is more than 150 meters or so from a road, or is difficult to access. Updating these values will assist future surveyors. Hit “Cancel” or “Update” at the top of the screen to exit the site edit mode.

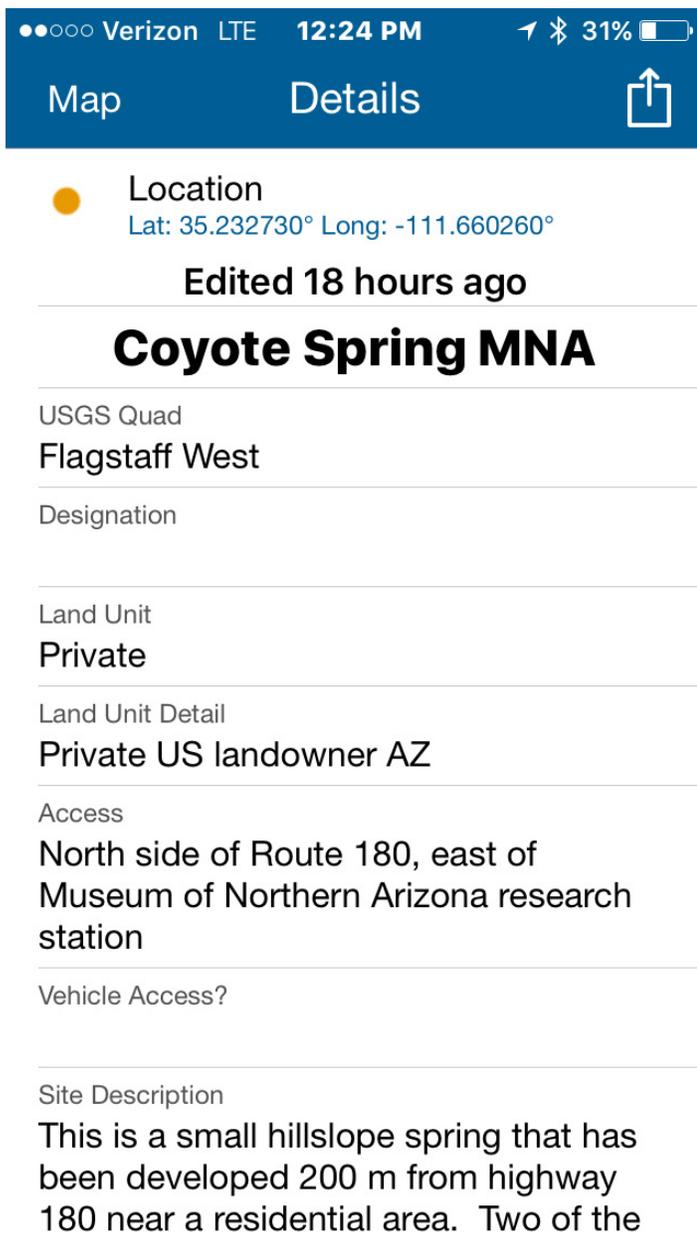


Fig. 8. Fields related to the site.

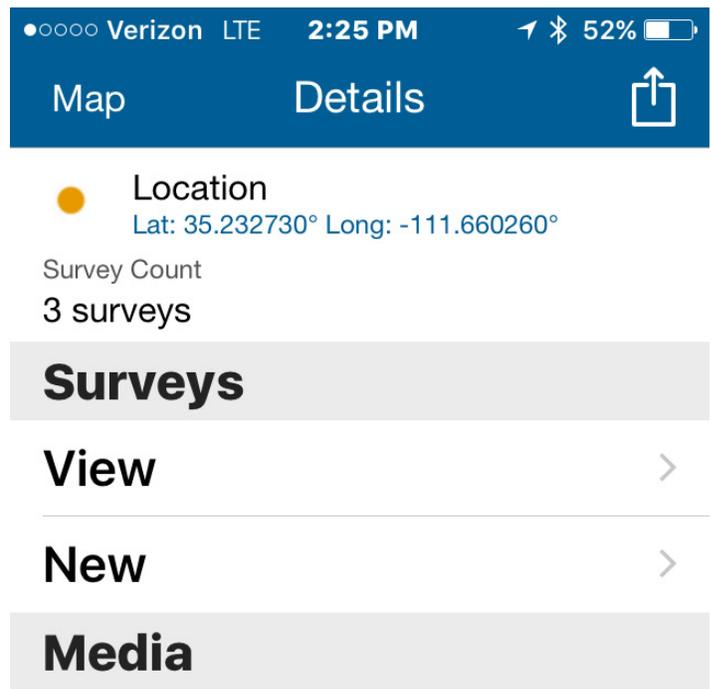
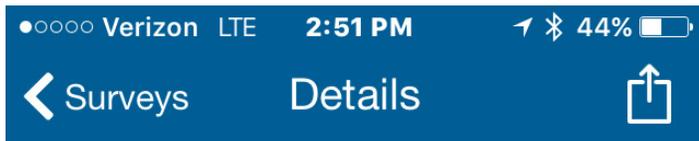


Fig. 9. Bottom of Details page after scrolling down. If an image has been attached it will appear here.

14. **View survey data:** Back in the Details screen, scroll down to the bottom to the Surveys section, and click View to see any surveys that have been entered. Surveys are listed by the surveyor’s name and the date. Click one of these to view the survey details. This should open the survey details (Figs 10 and 11).

15. **Survey data fields:** Most of these fields are drop-down lists. The flow notes, survey notes, and fauna notes are free text fields. Water quality values must be numeric.

16. **View vertebrate data:** In the Vertebrates section, click View to open the list of vertebrate species observed (Fig 12).



Surveys: Jeri Ledbetter March 17, 2016

GeomorphicCondition

Natural geomorphology and soils apparently functioning naturally

HabitatCondition

Good habitat quality with some impairment

BioticCondition

Native biota dominant and nonnative species rare

HumanInfluenceCondition

Limited negative human influences

SurveyNotes

The site has been heavily trampled by elk in recent days.

Flow

Between 1 and 10 liters per second

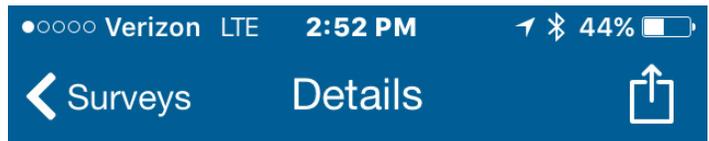
FlowNotes

Estimate

SurveyDate

March 17, 2016

Fig. 10. First page of survey notes. Scroll down to view more (Fig. 11).



Surveyor

Jeri Ledbetter

Weather

Recent rain

WaterPresence

Extensive standing water

WaterTempC

15.00

pH

6.80

Salinity

4.50

DeviceWQ

Hanna Combo

FaunaNotes

Many birds were at the site upon our arrival.

Vertebrates

View >

New >

Fig. 11. Second page of survey notes.

17. Click the name "Desert Mule Deer" entry to view details about the observation. Or click the symbol on the right of the entry, then "show details" to edit the entry (Fig 13).

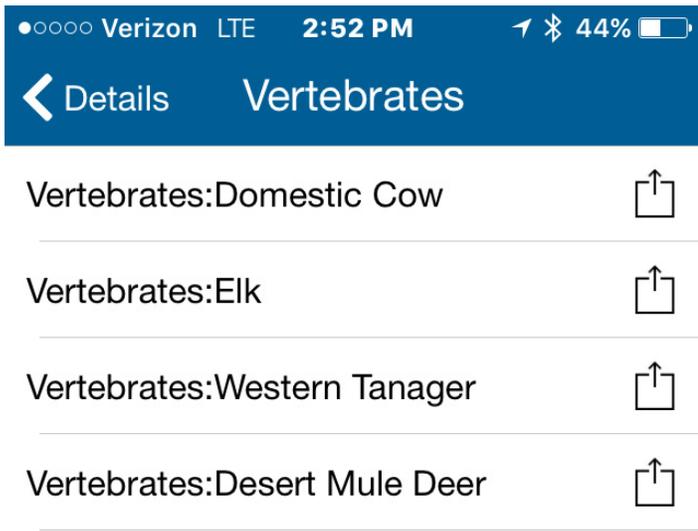


Fig. 12. Vertebrates list.

18. *Back out to return to previous screens:* Then click the Vertebrates back arrow to return to the vertebrates list, and the Details back arrow to return to

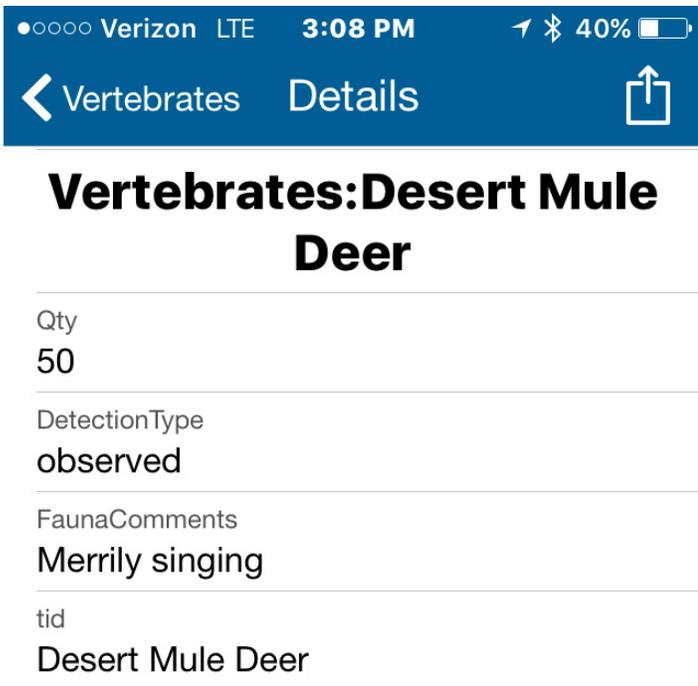


Fig. 13. Vertebrate observation.

the survey. Keep clicking the back arrows until you are back at the Coyote Springs location data.

19. *Add a new survey:* To add a new survey, scroll down toward the bottom and click “New” under Surveys. Fill in the survey data (don’t worry; this is just for testing and the data won’t be saved. Then

click “Submit”. It will close out the survey, but you can get back to it by selecting the spring, clicking “show details”, scrolling down to the surveys, clicking “view”, and selecting the survey. Click the select icon at the top right and select Edit.

20. *Attach a survey photo:* Surveyors should attach an image to a survey, not a site. We have provided representative photos for many of the sites, but want individual repeat photos for each survey. This is a fairly important distinction. From the survey details form, click the photograph icon in the middle at the top. You can either take a photograph or browse to one on your device. Once you select it or take the photo, then click “Done”. The photo will be added to the survey.

21. Users can also upload an image of a vertebrate species. If you are unable to identify it, other users

22. *Number of Surveys:* The survey count will automatically update regularly throughout the day.

23. *Moving a site:* It is possible for a surveyor to move a site to a different location. In some cases, we may not have the site mapped in the correct location. However, it is easy to move a site accidentally. Please use caution with this. If you should inadvertently move a site, please hit cancel to discard the changes.

