

# How to Use the MAPS.ME and CitSci.org Mobile Applications

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## Using MAPS.ME Mobile Application

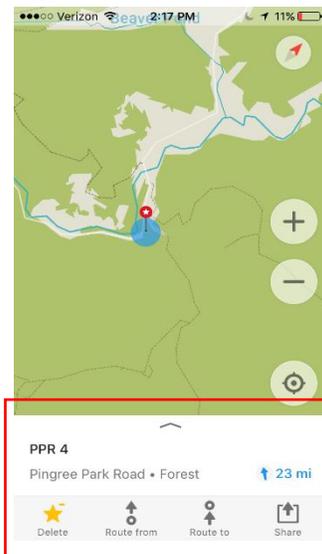
This application provides navigation capabilities of the Stream Tracker project. MAPS.ME is a free mobile application that allows you to navigate off-line to points on an uploaded .kml layer. This app provides functional base maps to aid in navigation and allows you to create and name new points in the field.

### Instructions

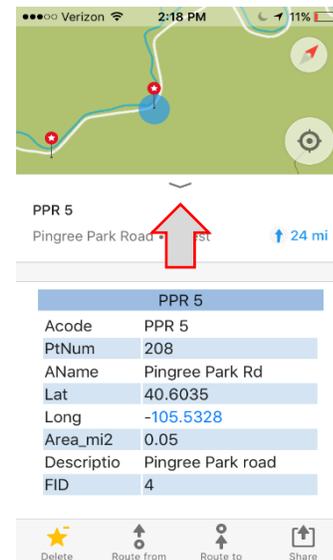
1. Download MAPS.ME app for iOS or Android. *The following images were taken from the iOS application- the Android interface may vary.*
2. Open app and allow the app to download a base map of you approximate area.
3. To add the map of Stream Tracker points to MAPS.ME, either:
  - a. Download the .kml file of all of the Stream Tracker points from <https://www.streamtracker.org/resources> . MAPS.ME should appear as an application in which to open the file on your device. An alternative is to download the file and email it to yourself where you can then open the attachment from the email on your phone.
4. The .kml files will be added to MAPS.ME as a bookmark. To navigate to Stream Tracker points:



a. Access bookmarks to make downloaded layer visible



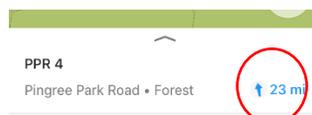
b. Click on a map pin to view point name and distance



c. Swipe up to view additional point data

TIP: You can tap on your current location or on an area on the map to be given the option to save a new point which you can then edit and give a site specific name.

TIP: You also can tap the distance tag to enter a compass screen that will count down the distance as you near a point.



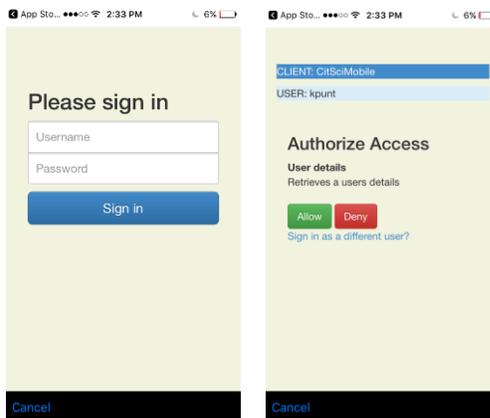


## Using CitSci.org Mobile Application for iOS

The CitSci.org mobile application allows you to record data in the field by accessing the project datasheets on your phone. App capabilities include the ability to record observations off-line, add photos, record GPS coordinates from your phone, and upload points directly to the project site once out of the field.

### Instructions

1. Download the CitSci.org mobile app for iOS.
2. Open the application. It will prompt you to login to your CitSci.org profile. If you have not joined the Stream Tracker project on CitSci.org, you will need to do this prior to using the app. Once you have logged in, you will be prompted to allow CitSci.org to retrieve your user details.



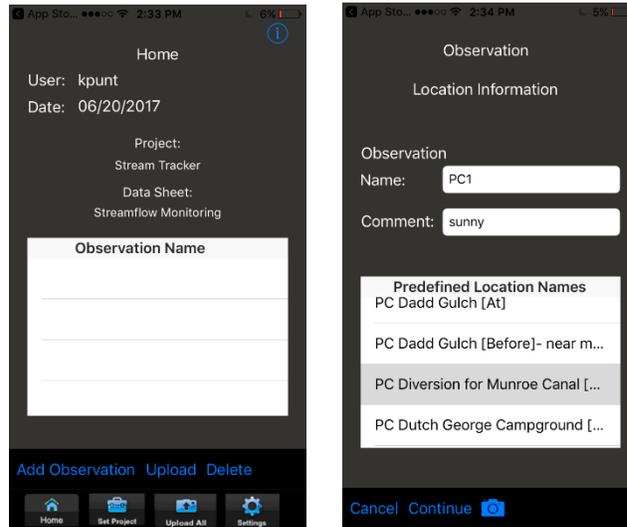
3. You should now see your project (s) you are part of. Select “Stream Tracker” and then select the datasheet you will be entering data for.

### To Make an Observation at an Established Stream Tracker Point

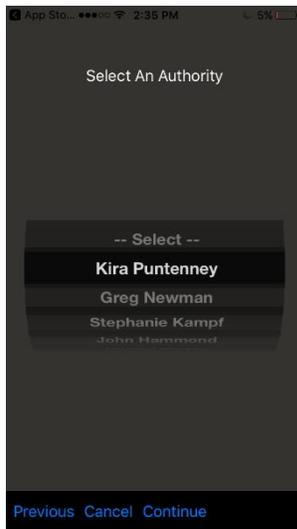
The following instructions are for adding an observation of streamflow presence/absence to a pre-existing Stream Tracker point. To do this, select the “Streamflow Monitoring” datasheet. Once the selection has saved, select “Home” at the base of the screen.

4. Select “Add observation” on the home screen. The first two fields must be filled out as a formality. For observation name, type a unique name or code - this can literally be anything as it is removed when the point is uploaded. For comments, write any field observations pertinent to that point (i.e., weather conditions, point was hard to see, channel covered).

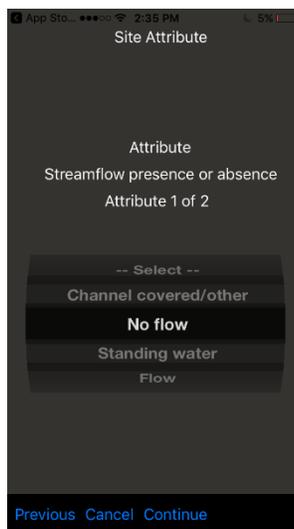
Finally, select your site name from the scrolling list. This site name will match the name given to the point on the .kml layer. ***Before selecting "Continue"***: This is also where you are able to take and add photos. To add a photo, select the camera icon to add a photo of the stream channel and flow. Photos are not required but are helpful to gauge relative flow conditions. You can take up to three photos.



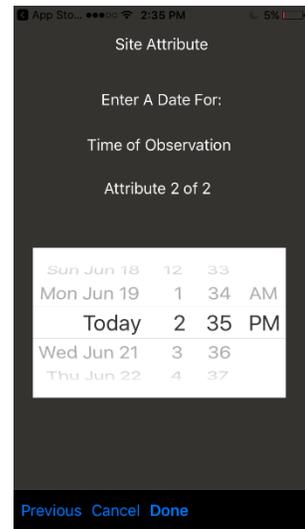
5. Now select "Continue" where you will be prompted to find your name as the recorder.
6. Once you have selected your name, continue to the next screen where you will enter your flow observation as: Flow, No flow, Standing water, or Channel covered/other.
  - a. **Flow** is any moving water from a trickle to high flows.
  - b. **No flow** is either a dry channel or a damp channel where no visible water is present.
  - c. **Standing water** is ponded or pooled water where there is no connection allowing flow.
  - d. **Channel covered/other** is if the channel is not visible or your ability to collect the point is impaired (vegetation, could not see point, drainage confusing).
7. Finally, select the time and date of the observation. The application should self-populate the current time/date but you are able to adjust this to back-date an observation, if necessary.



**STEP 5**

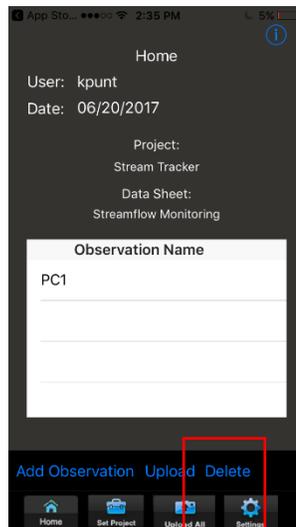


**STEP 6**



**STEP 7**

- Your observation has now been recorded and will be stored offline on your phone. As soon as you are able to access Wi-Fi, select “Upload” or “Upload All” (for multiple points) to upload data points to CitSci.org. **The data will not be visible on CitSci.org until you complete this final step.**



### To Add a New Site (less common)

You are able to establish your own Stream Tracker point(s) where you encounter a stream channel you believe does not flow year round. Keep in mind you are looking for channels that look like they are intermittent and have discernable channel and drainage so that others may easily navigate to your point. Please also be mindful of private and public lands and keep points where they intersect roads and trails on public land.

1. To create a new site, navigate to “Home” and select “Set Project”. Select Stream Tracker and the “Site Identification” datasheet.
2. Add a new observation. You will enter a unique name/code for “Observation Name” (anything will work), and any relevant field observations under “Comment”.
3. For the Latitude (Lat) and Longitude (Lon) you can either select “GPS” from the bottom of the screen to populate the coordinates, altitude, and accuracy using your phone GPS based off your current location or manually enter coordinates in decimal degrees. *Before selecting continue:* This is also the screen you can add photos by selecting the camera icon. Field photos are especially helpful for documenting the site you wish to establish. Please take up to three photos.
4. Select “Continue” to then enter your name as the recorder.
5. The next screen will take you to where you can enter a site description. Enter flow conditions and any other markers or distinguishing features that would help in locating this point. Continue.
6. Enter the date and time of the observation and click “Done”
7. Your observation has now been recorded and will be stored offline on your phone. As soon as you are able to access Wi-Fi, select “Upload” or “Upload All” (for multiple points) to upload data points to CitSci.org. **The data will not be visible on CitSci.org until you complete this final step.**

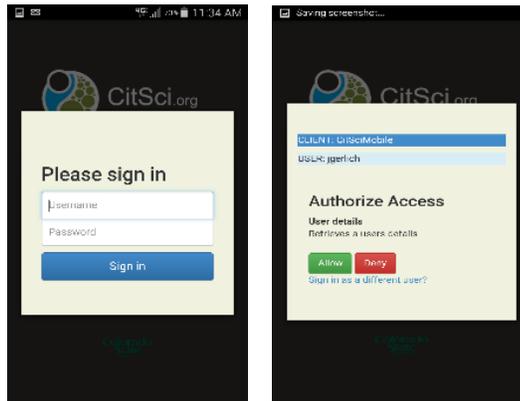


## Using CitSci.org Mobile Application for Android

The CitSci.org mobile application allows you to record data in the field by accessing the project datasheets on your phone. App capabilities include the ability to record observations off-line, add photos, record GPS coordinates from your phone, and upload points directly to the project site once out of the field.

### Instructions

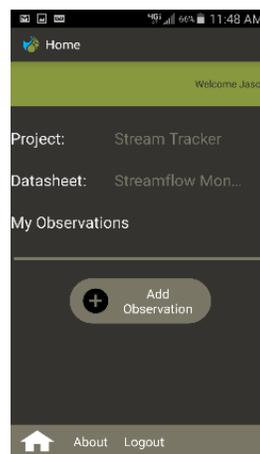
1. Download the CitSci.org mobile app for Android and open the app.
2. Sign into your CiSci.org profile. If you have not joined the Stream Tracker project on CitSci.org, you will need to do this prior to using the app. Once you have logged in, you will be prompted to allow CitSci.org to retrieve your user details.



3. Once logged in, the home screen will show your CitSci.org projects. Select “Stream Tracker”.

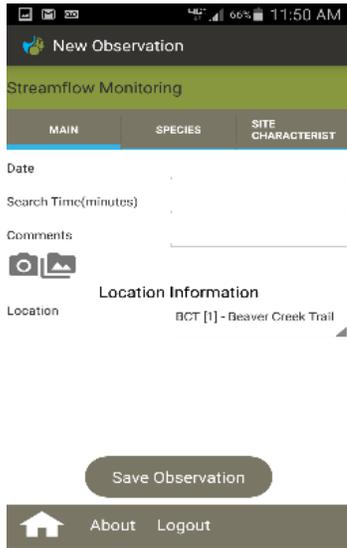
### To Make an Observation at an Established Stream Tracker Point

The following instructions are for adding an observation of streamflow presence/absence to a pre-existing point.



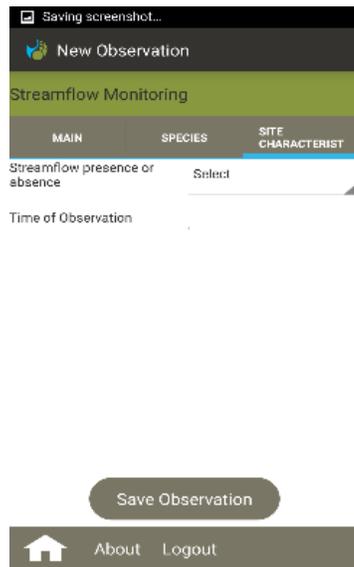
4. Select “Streamflow Monitoring” as your datasheet then press “Add Observation”

5. Now you are able to record:



- a. **Date:** your phone will automatically select the correct date
- b. **Search Time (minutes):** SKIP THIS FIELD
- c. **Comments:** any observations relevant to the point like weather conditions, visibility of the channel, level of flow (rushing, trickle, wet ground)
- d. **Photo(s):** Take or add photos of the channel and flow condition
- e. **Location:** Select the name of your site from the scroll list. This name should correspond with the name on the .kml file you used to navigate to the point.

6. To record flow condition, select “Site Characteristics” from the menu bar and record streamflow presence or absence. Select “Time of Observation” and the current time will self-populate.



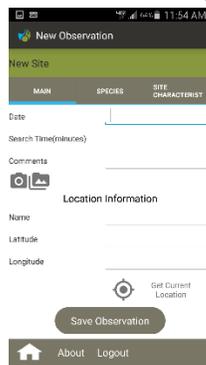
- a. **Flow** is any moving water from a trickle to high flows.
- b. **No flow** is either a dry channel or a damp channel where no visible water is present.
- c. **Standing water** is ponded or pooled water where there is no connection allowing flow.
- d. **Channel covered/other** is if the channel is not visible or your ability to collect the point is impaired (vegetation, could not see point, drainage confusing).

7. Save Observation. Your observation has now been recorded and will be stored offline on your phone. As soon as you are able to access Wi-Fi, select “Upload” to choose data points to upload to CitSci.org. **The data will not be visible on CitSci.org until you complete this final step.**

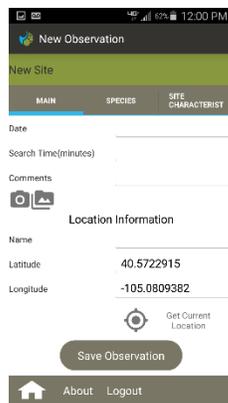
### To Add a New Site (less common)

You are able to establish your own Stream Tracker point(s) where you encounter a stream channel you believe does not flow year round. See New Site Selection for further guidance on site selection criteria. Keep in mind you are looking for channels that look like they are intermittent and have discernable channel and drainage so that others may easily navigate to your point. Please also be mindful of private and public lands and keep points where they intersect roads and trails on public land.

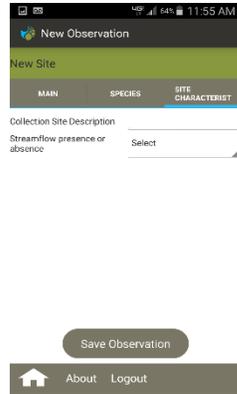
1. Navigate back to the home screen and in datasheet select “Site Identification”. Push “Add Observation” to navigate to the next screen.
2. Under the main tab input the Date (will self-populate), omit Search Time, insert comments, and select the camera icon to take a photo of the site.



3. To input your location push the cross hairs and latitude and longitude will automatically self-populate. Type in the name of the site.



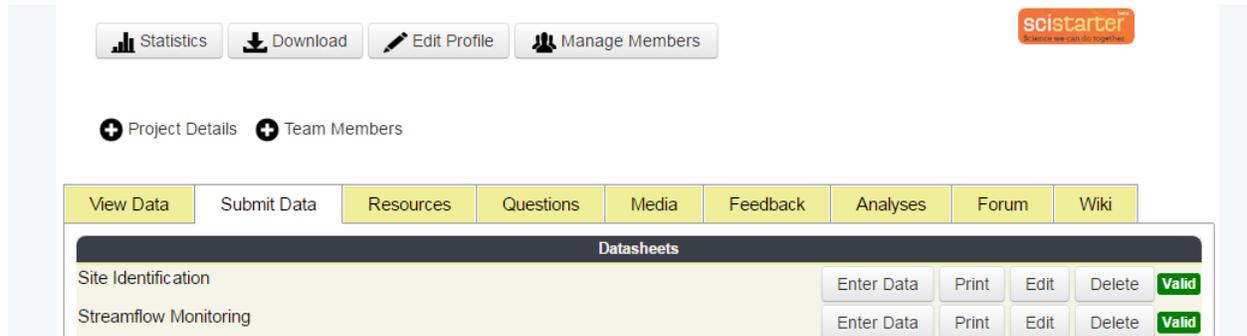
4. Select the “Site Characteristics” tab to input Site Description as well as Streamflow Presence or Absence. Then push Save Observation to save your site.



5. Once back in service or on Wi-Fi your observations will be automatically uploaded on to the CitSci.org

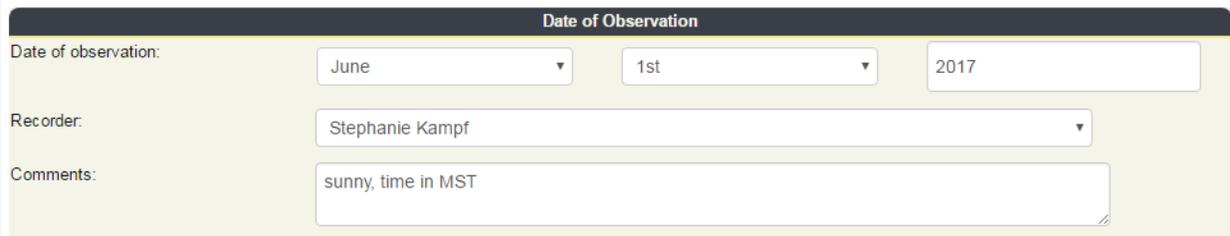
## To Upload Data onto CitSci.org (non-mobile app option)

- a) When you return from the field locations, click on the “Submit Data” tab for the Stream Tracker project on CitSci.org.



The screenshot shows the CitSci.org interface. At the top, there are navigation buttons: Statistics, Download, Edit Profile, and Manage Members. A 'scistarter' logo is in the top right. Below these are tabs for Project Details and Team Members. A main navigation bar includes View Data, Submit Data, Resources, Questions, Media, Feedback, Analyses, Forum, and Wiki. The 'Submit Data' tab is active, showing a 'Datasheets' section with two rows: 'Site Identification' and 'Streamflow Monitoring'. Each row has buttons for 'Enter Data', 'Print', 'Edit', 'Delete', and a green 'Valid' button.

- b) Click on the “Enter Data” for the “Streamflow Monitoring” sheet
- c) Enter the date of the observation, your name, and any comments. Comments may include the weather, information about the site, time zone, etc.



The screenshot shows the 'Date of Observation' form. It has three rows: 'Date of observation:' with dropdowns for 'June', '1st', and a text input for '2017'; 'Recorder:' with a dropdown menu showing 'Stephanie Kampf'; and 'Comments:' with a text area containing 'sunny, time in MST'.

- d) Select the location you visited
- e) Select the appropriate option under “streamflow presence or absence”
- f) Under “Time of Observation”, please enter the time you observed the stream
- g) Upload any photos you took
- h) Click “Submit”

Site Characteristics

Streamflow presence or absence : No flow

Time of Observation : 06/01/2017 9:30 AM

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Photo

Photo file ('jpg' or 'png'):  Datasheet\_1660\_0[1].jpg

Photo file ('jpg' or 'png'):  No file chosen

Photo file ('jpg' or 'png'):  No file chosen

- 2) If you would like to view the data you entered, hit the “back” arrow on your browser window to get to the main Stream Tracker page, and click on the “Analyses” tab. Select your site from the dropdown window. Note that Stream Tracker measurements are not numeric values, so the Summary Statistics window will display “NaN” (not a number):

