

## Neighborhood Problem Sidewalk Identification Application

### Introduction

We are asking you to be the data gatherers on the condition of sidewalks in Olympia by using your smartphone and a specially designed survey app. The CNA, in collaboration with Evergreen College, developed this free smartphone survey application that anyone can use to rank sidewalk problems by type and severity, take a photograph, and upload into a database that builds a map of sidewalk problems as **experienced by residents**.

### Why?

Olympia's sidewalks are recognized as being seriously deficient. Both in terms of missing sidewalks along critical areas and lack of maintenance of existing sidewalks. The city's Recognized Neighborhood Associations and the Council of Olympia Neighborhood Associations have been advocating for more attention and investment in building and maintaining sidewalks.

**Transportation Equity** - Sidewalks are a vital link for flexible, equitable and an environmentally sound transportation network. By providing access to bus stops, parks, and nearby shopping and public facilities they help contribute to the health and safety of all members of the community including those who are unable to or choose not to drive vehicles. This especially affects people at both ends of the age spectrum, the disabled and those who cannot afford cars.

**Neighborhood Quality of Life** – Sidewalks are the ribbon that ties neighbors and neighborhoods with one another – meeting at a human scale and speed that allows for real interaction that builds a sense of community in ways that car driving simply cannot. They are where children can safely play, people can stroll and runner's exercise.

### Why Neighborhood Data Collection Is Needed

When sidewalks lift, sink, or have large cracks, they pose a trip hazard or become unpassable. Some impediments are built in place such as poorly placed fire hydrants, street signs, or mailboxes. Other problems can be intermittent such as encroachment of vegetation or routine placement of waste bins or parking on the public sidewalk.

Unlike the routine pavement assessments for roads, the city does not conduct city-wide sidewalk condition assessments. Historically, the city is informed about sidewalk conditions by members of the public and through falls and injuries liability claims. The good news is the city has budgeted for contractors to conduct a city-wide survey sometime in 2024.

While such professional assessments are essential, Neighborhoods are in a unique position to provide on-the-ground knowledge about **how** the sidewalks are used, specific mobility impairments experienced by real users and where the most problematical areas are. Our intent is that this data encourage and inform maintenance and repair **priorities** by the city and property owners.

The data you will collect is in a format that is compatible with the city's GIS standards and can become a "layer" of information on the City's current and future information about sidewalks. We will also make the collection results publicly available through a web-based viewer.

Examples of the ground-level knowledge you have that contracted sidewalk surveyors are unlikely to include:

- Where vegetation overgrowing the sidewalk or low branches has become a problem.
- Seasonal issues such as snowplows using sidewalks to put snow to clear streets, autumn leaves making sidewalk slippery and hiding uneven areas, etc.
- Defects that become more dangerous in poor lighting at night.
- Daily use patterns such as high usage before and after school when waiting cars may block the sidewalk.
- Sidewalk being used by bicyclists because of inadequate bike lanes.
- Neighbors with special needs that would prioritize addressing the problem area.
- And other unique circumstances that only people who use the sidewalk frequently would know.

This app allows you to collect one sidewalk problem at a time and submit it to the central database.

***Please collect and submit as many problems as you like. There is no problem if you submit an issue that someone else has reported.***

**Thank You for Being Part of the Solution.**

**Continue to the Tutorial Below**

## A HOW TO DO IT TUTORIAL for REPORTING ON SIDEWALK PROBLEMS

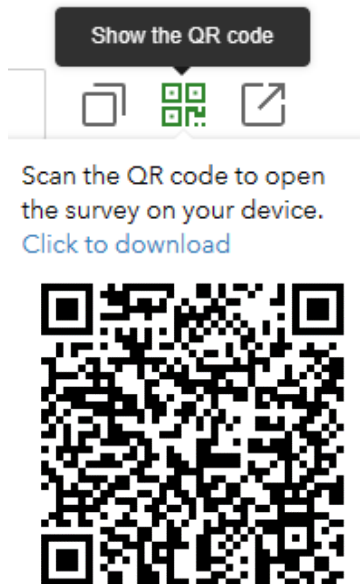
### Step1 - Get Connected

Connect your smartphone to this link:

<https://survey123.arcgis.app?itemID=7003432fd77f4285bf72c3c6e9e6ef89>

Alternatively, you can scan this QR code to open the survey. Using your **smartphone**, scan this QR code which will take you to a place to download the app.

If you have never done this before here is some guidance.



By going to your camera on your phone, center on the QR code and a pop-up will show the location where the application is that says, "arcgis.app" and you should press on it. If you have trouble following this, you can get an example of how to use a QR code from [this video](#).

That will take you to a screen in which you download the ArcGIS Survey123 App if you have never downloaded it before.

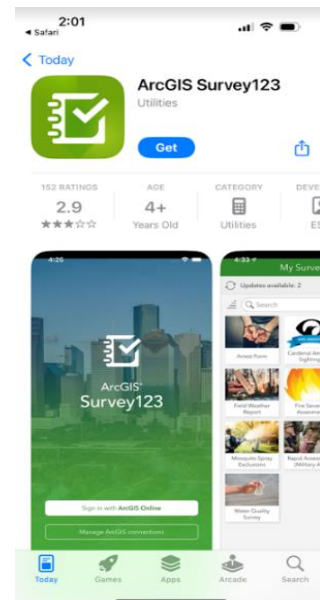
Continue down to the next page.



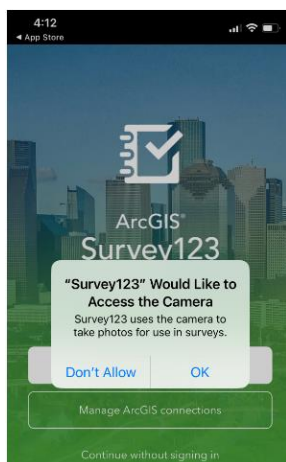
Depending upon the kind of phone you have press on the appropriate button. For example, Apple I-phones go to the App Store and for Android devices go to Google Play.

Here is an example of what you would see on an Apple device: ➔

Press the “Get” button and install as you would other applications.



When it is downloaded, a blue “Open” button becomes visible. Press on that button.



You are now taken to the ArcGIS **Survey123** page and will be asked to allow the application to have access to your camera. Press “OK”.

Then you may see a pop-up that asks if it is ok for Survey123 to use your location. Press “Allow While Using App”.

In most cases you will need to repeat the QR process again to load the Sidewalk Survey form for use in Survey123.

Go back to your camera and scan the QR code again or if you used the <https://> link, click on that. *Yes, you are repeating this a second time.* That should result in you downloading the survey form.

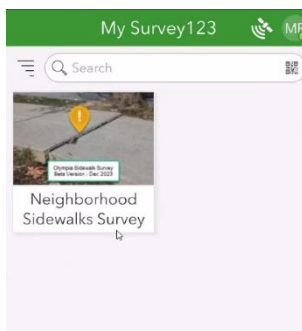
When you see the webpage for ArcGIS Survey123. Press “**Continue without signing in**”.

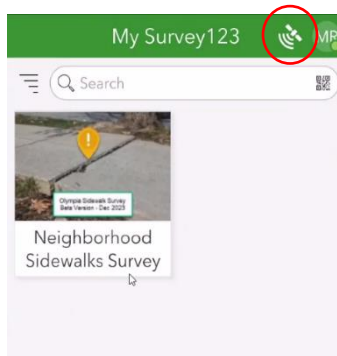
See below for example.



Press Here

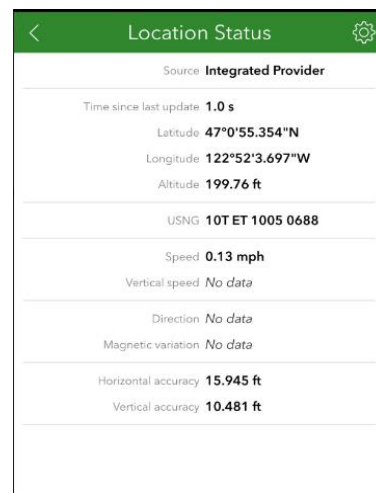
On most devices you will see the “Survey Version 1.0” on your screen. If not, and you are given a choice of surveys, Choose the survey called “**Neighborhood Sidewalks Survey**”.





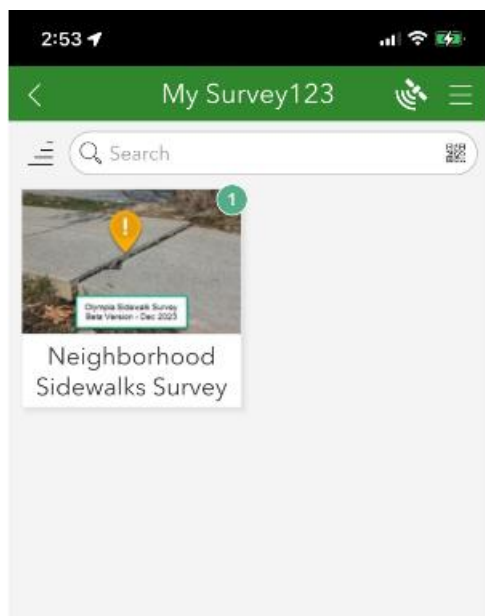
To ensure that your location services are working, click the little satellite icon top right.

It should show you something like the following display:



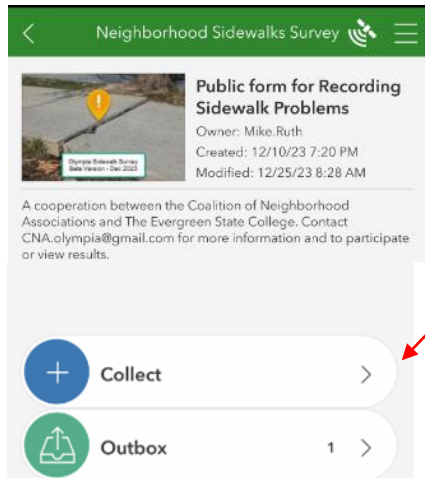
This Location Status tells you that you are now using the GPS on your smartphone (the “Integrated Provider”). It will show that you are getting a Latitude and Longitude coordinates that will be tied to the photo you take of the sidewalk problem. This display means your location status is OK to continue.

Click the back arrow top left to return to the survey menu.



Select the Neighborhood Sidewalks Survey.

You will see the “Collect” button at the bottom. Click it and you will start the survey form to fill out your observations.



Press the Collect Button and you are on your way to collect data on problem sidewalks.

The survey application will fill-in the date of the observation.

And it will populate the location information.

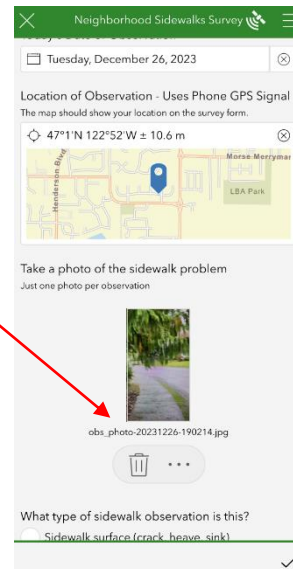
**It's time to take a photo of the problem sidewalk.**

Press on the camera icon.

If you already have taken more than one photo of the problem sidewalk can choose which one to use by pressing on the **file folder icon**.

You can make the picture larger by pressing on the image. If you are not satisfied with it, you can press the **garbage can icon and retake it**. Only one picture is allowed for each report.

Scroll down (swipe upwards on screen) to go to the next section.



Neighborhood Sidewalks Survey

Tuesday, December 26, 2023

Location of Observation - Uses Phone GPS Signal  
The map should show your location on the survey form.  
47°1'N 122°52'W ± 10.6 m

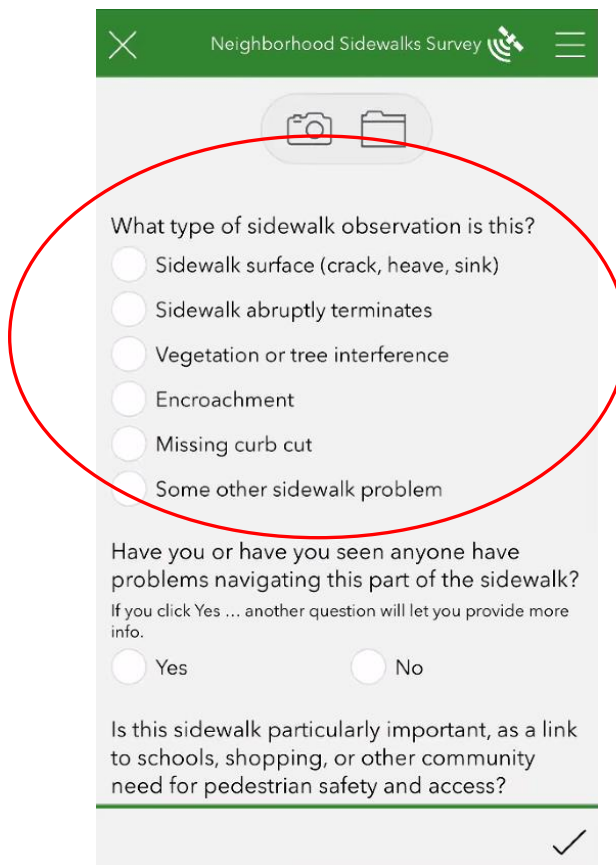
Take a photo of the sidewalk problem  
Just one photo per observation

obs\_photo-20231226-190214.jpg

What type of sidewalk observation is this?  
☒ Sidewalk surface (crack, heave, sink)

## Instructions on Describing the Sidewalk Condition

The first question you need to answer is “What type of sidewalk observation is this?”. Your choice will activate a context sensitive rating scale. You will see six choices. Each choice will activate a follow-up question. Let’s go over what happens with each choice.



Neighborhood Sidewalks Survey

What type of sidewalk observation is this?

- ☐ Sidewalk surface (crack, heave, sink)
- ☐ Sidewalk abruptly terminates
- ☐ Vegetation or tree interference
- ☐ Encroachment
- ☐ Missing curb cut
- ☐ Some other sidewalk problem

Have you or have you seen anyone have problems navigating this part of the sidewalk?  
If you click Yes ... another question will let you provide more info.

☐ Yes ☐ No

Is this sidewalk particularly important, as a link to schools, shopping, or other community need for pedestrian safety and access?



### Sidewalk observation Type: Sidewalk surface (crack, heave, sink)

This will produce a list of severity choices ranging from Very bad to Excellent.

If you press on any of the pictured sidewalks, it will enlarge the picture and make it easier to compare condition choices.

The screenshot shows the 'Neighborhood Sidewalks Survey' app interface. The first question is 'What type of sidewalk observation is this?' with radio button options: 'Sidewalk surface (crack, heave, sink)' (selected), 'Sidewalk abruptly terminates', 'Vegetation or tree interference', 'Encroachment', 'Missing curb cut', and 'Some other sidewalk problem'. Below this is a section to 'Rate the severity of the sidewalk surface problem.' with a scale from 1 (very bad) to 5 (excellent). A dropdown menu is open, showing a list of severity levels with corresponding images: 'Very bad surface', 'Bad condition', 'Neutral, oK', 'Good condition', and 'Excellent condition'. The 'Bad condition' option is currently selected in the dropdown.

After selecting a severity level, another context question is activated that asks about whether the crack or offset is greater than one inch. If you select Yes, it activates a menu of heights.

This screenshot shows the app after a severity level has been selected. The 'Rate the severity of the sidewalk surface problem.' section now has a dropdown menu set to 'Bad condition'. Below this, a new question is displayed: 'Is there a crack with an offset height greater than one inch?' with instructions to answer 'Yes' if there is a significant offset. Radio button options are 'Yes' (selected) and 'No'. A second question follows: 'How deep is the surface crack offset height?' with instructions to estimate from the list below. The options are: 'Less than 1 inch', '1 to 2 inches', '2 to 4 inches', 'Greater than 4 inches', and 'Can't tell the offset reliably'.

### Sidewalk observation Type: Sidewalk abruptly terminates

Selecting this item brings up a list of choices. If the choice is “Something else” you will be presented with a textbox in which to enter the description.

What type of sidewalk observation is this?

☐ Sidewalk surface (crack, heave, sink)

☒ Sidewalk abruptly terminates

☐ Vegetation or tree interference

☐ Encroachment

☐ Missing curb cut

☐ Some other sidewalk problem

What is the nature of the sidewalk termination?

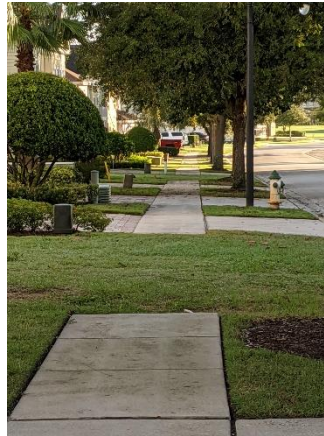
Select type of sidewalk termination ^

☐ Termination is a gap, can see other sidewalk ahead

☐ Sidewalk switches to other side of road

☐ Next section is more than a block away

☐ Something else related to sidewalk termination



### Sidewalk observation Type: Vegetation or tree interference

What type of sidewalk observation is this?

☐ Sidewalk surface (crack, heave, sink)

☐ Sidewalk abruptly terminates

☒ Vegetation or tree interference

☐ Encroachment

☐ Missing curb cut

☐ Some other sidewalk problem

Rate the severity of vegetation or tree interference.

1 is minimal problem, 5 is severe

Select vegetation interference from list ^

☒ Select vegetation interference from list

☐ Impossible to pass - must walk on road

☐ Difficult to remain on sidewalk

☐ Somewhat obstructed

☐ Some interference - possible to walk around it

☐ Barely any interference

This selection includes a variety of situations that you may be aware of. You may wish to include examples of seasonal problems (i.e., fallen leaves, slippery moss build-up).



## Sidewalk observation Type: Encroachment

What type of sidewalk observation is this?

- ☐ Sidewalk surface (crack, heave, sink)
- ☐ Sidewalk abruptly terminates
- ☐ Vegetation or tree interference
- ☒ Encroachment
- ☐ Missing curb cut
- ☐ Some other sidewalk problem

Select the type of encroachment.

Select from list

Click here to select encroachment type

- ☒ Click here to select encroachment type
- ☐ Private garden or lawn
- ☐ Vehicle or parking
- ☐ Built structure (garage, shed)
- ☐ Recreational item (pool, swings)
- ☐ Mail Delivery Box
- ☐ Waste or garbage receptacle
- ☐ Vehicle charger
- ☐ Signs
- ☐ Electric or water or other utility box
- ☐ Other (type below)

Encroachment covers a variety of situations, and you can choose from among the most common or type in an observation that doesn't fit into the preset choices by selecting the "Other" option.



## Sidewalk observation Type: Missing Curb Cut



There is no drop-down detail for this observation. Please note any missing or incomplete curb cuts that would cause problems.



### Sidewalk observation Type: Some other sidewalk problem

If you observe an issue not listed on the previous selection options, please enter your findings here.

What type of sidewalk observation is this?

- ☐ Sidewalk surface (crack, heave, sink)
- ☐ Sidewalk abruptly terminates
- ☐ Vegetation or tree interference
- ☐ Encroachment
- ☐ Missing curb cut
- ☒ Some other sidewalk problem

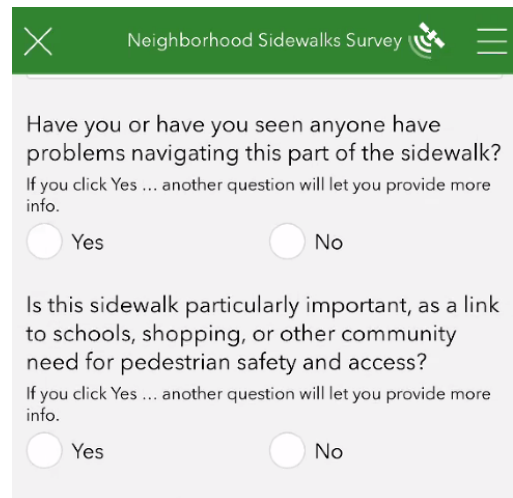
Type a short description

If your sidewalk observation is not one of the listed types, above

Have you or have you seen anyone have problems navigating this part of the sidewalk?

After completing the Sidewalk Observation section, the next two questions are about whether you have seen anyone have a problem navigating this part of the sidewalk and the role that the sidewalk has for users.

This is where your familiarity with the neighborhood can provide useful information.



Neighborhood Sidewalks Survey

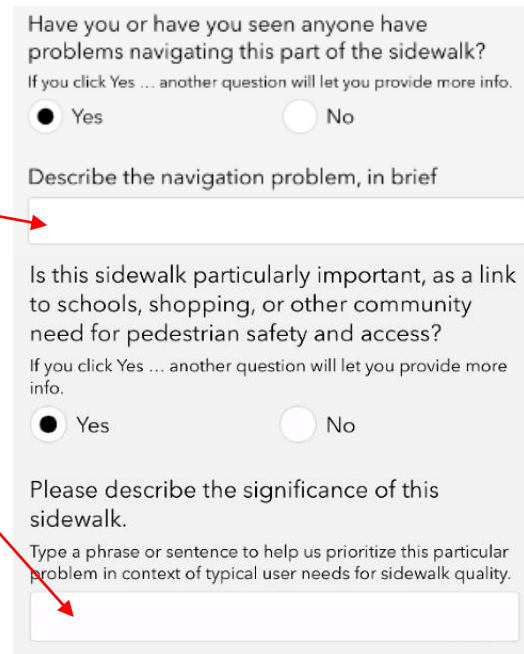
Have you or have you seen anyone have problems navigating this part of the sidewalk?  
If you click Yes ... another question will let you provide more info.

☐ Yes ☐ No

Is this sidewalk particularly important, as a link to schools, shopping, or other community need for pedestrian safety and access?  
If you click Yes ... another question will let you provide more info.

☐ Yes ☐ No

When you select the “Yes” button, please describe the navigation and/or importance of the sidewalk’s use.



Have you or have you seen anyone have problems navigating this part of the sidewalk?  
If you click Yes ... another question will let you provide more info.

☒ Yes ☐ No

Describe the navigation problem, in brief

Is this sidewalk particularly important, as a link to schools, shopping, or other community need for pedestrian safety and access?  
If you click Yes ... another question will let you provide more info.

☒ Yes ☐ No

Please describe the significance of this sidewalk.  
Type a phrase or sentence to help us prioritize this particular problem in context of typical user needs for sidewalk quality.

When you touch inside the white box, your keyboard will pop-up for you to type in your description of the problem navigating the sidewalk you have observed. Navigation examples might be “saw a person using a walker struggling to get over the sidewalk lift” or “person walked into the street to get around low hanging vegetation”. Significance examples may be “this is the only sidewalk that connects to the bus stop”, “this sidewalk is heavily used by school children to get to Madison Elementary” or “the sidewalk is the only safe place for walking or rolling because of the narrowness and traffic on the street”.

This question provides an opportunity to avoid taking multiple photographs and entering the same data repeatedly for sidewalks that have problems that extend further than one or two sidewalk panels. For example, in some areas where pervious concrete has been used entire blocks are eroded and difficult to traverse.

In the example below where the problem extends for a long stretch of sidewalk you might write, “the problem of uneven sidewalk panels and obstructions extend for over 150 feet.



Does the problem at this location extend for significant linear distance?

Or is this a single point of observation? If it is extensive, please describe below.



Yes



No

Please tell us roughly how far the problem extends from this observation point.

For example: “~50 feet” or “the entire block” ... or similar. This does not have to be highly precise.

The last question is whether you want to be contacted about your observations.

If yes, please type in your email.

Do You Wish to be Contacted About Your Sidewalk Observation?

You have the option to enter your email below



Yes



No

Type your preferred email address

Someone will contact you to learn more about the sidewalk observation you recorded.

Thanks for sending us data about sidewalks in Olympia.

A map and other data of observations will be published on the CNA website, once we have enough data collected by the community.

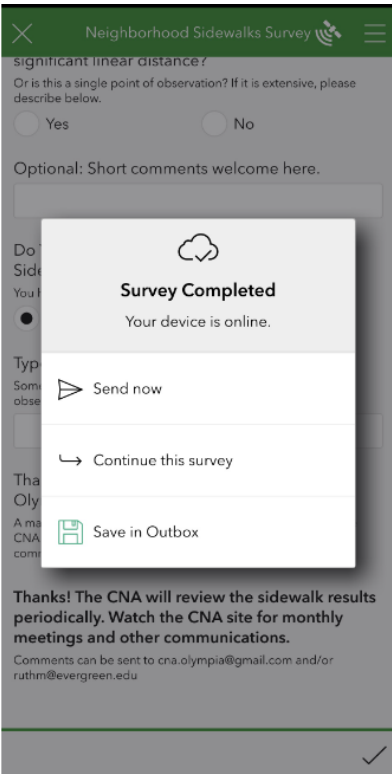
**Thanks! The CNA will review the sidewalk results periodically. Watch the CNA site for monthly meetings and other communications.**

Comments can be sent to [cna.olympia@gmail.com](mailto:cna.olympia@gmail.com) and/or [ruthm@evergreen.edu](mailto:ruthm@evergreen.edu)



When you are ready to send your observation, click on the check mark at the lower right.

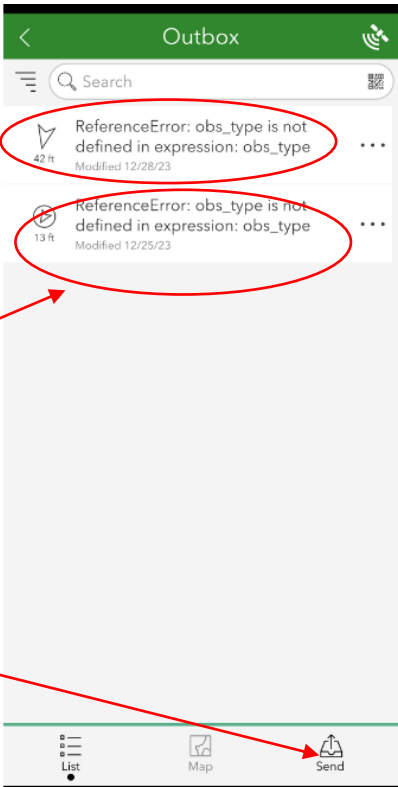
You will then be given the opportunity to send immediately, continue to work on the observation or save to the Outbox for later sending, editing or deleting. Usually, you will choose “Send now”. However, if there is a poor internet connection you may need to “Save in Outbox” for sending later when you have a better connection.



If you choose “save to outbox”, it will show you a list of all the items in the outbox. Do not be concerned about the “ReferenceError:...” naming. Rather, pay attention to the “Modified” date information.

To return to editing the item press an observation item.

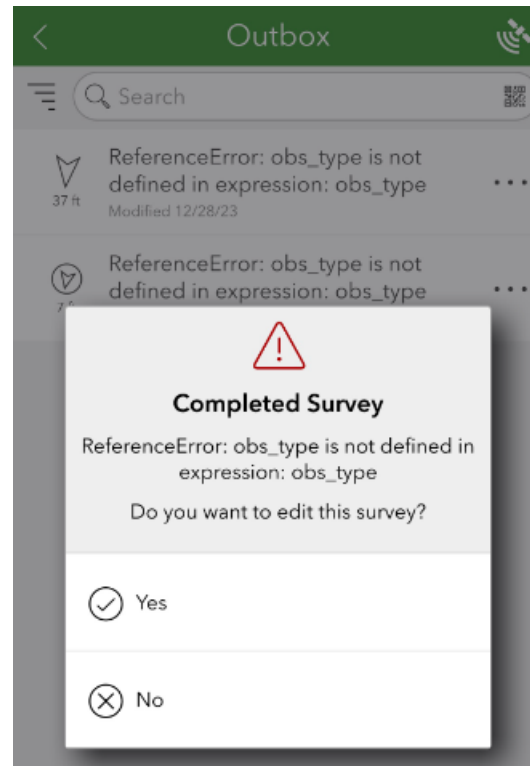
To send everything in the Outbox, click the “send” icon.



When you press on one of the Outbox items you will see a screen like this:

Choosing “Yes” will reload the survey and your work on it.

Choosing “No” leaves the observation entry in the Outbox.



You can review previously sent survey observations by going back to the main screen of the application.

