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Revelstoke

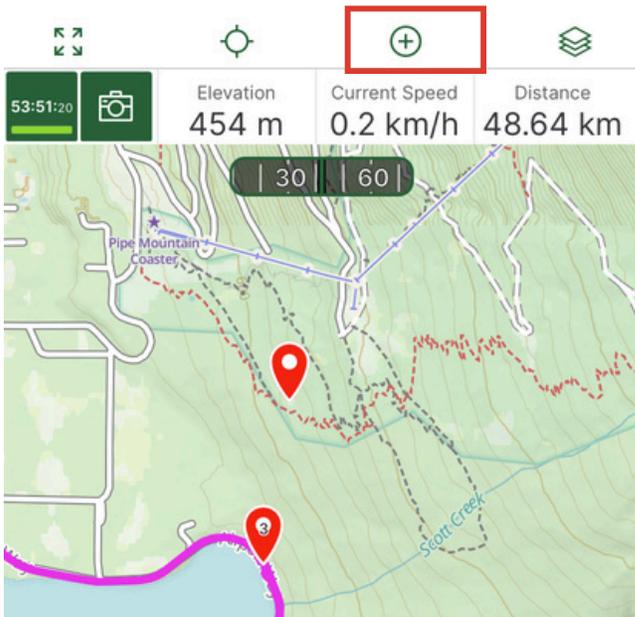
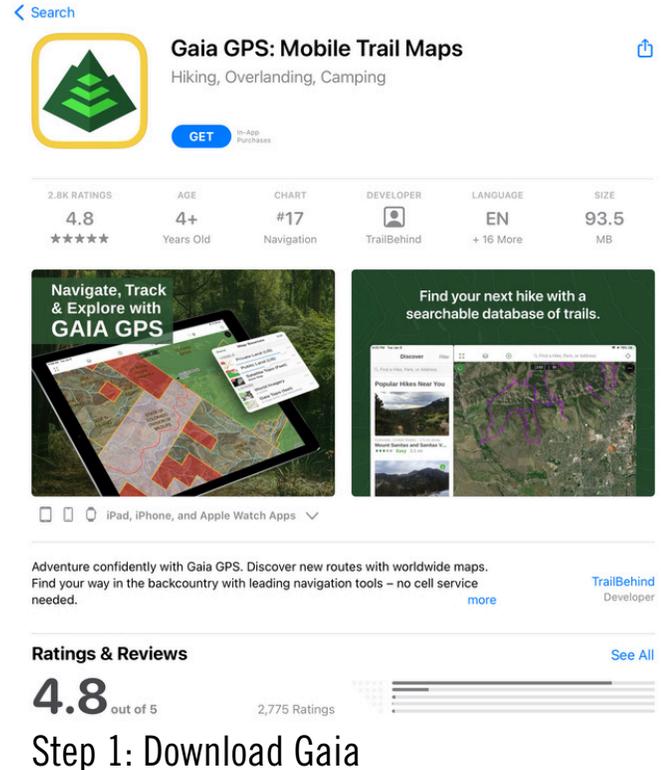
# Toad Watch Tutorial:

# How to Record Data Using Gaia GPS

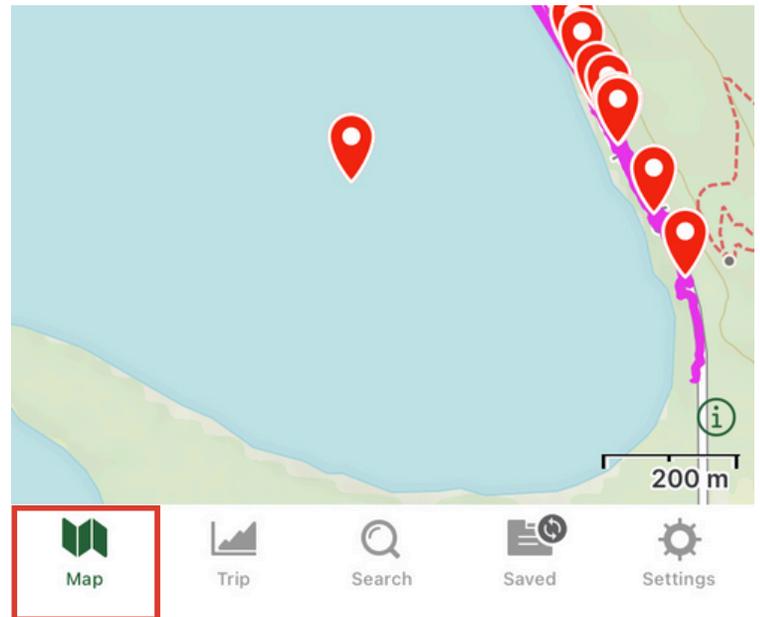
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## Part 1: Get Started on Gaia

1. Before heading out for surveys, download the FREE version of Gaia GPS app onto your phone.
2. Create a Gaia GPS account using your email address.
3. Login to Gaia GPS.
4. Look for Western Toads along Airport Way between designated areas. When making observations, determine the vitality status and sex of the toad(s) - view **page 10** for tips. Are they alive or dead, female, male or unknown?
5. Open the Gaia app once a toad has been spotted and select "Map" on the bottom, left side of the screen.
6. Record toad locations by adding Waypoints. To add Waypoints, press the small plus sign at the top of the screen.



Step 6: Record the Observation Location



Step 5: Select "Map"



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### Part 2: Record Waypoints

7. Select "Add Waypoint (My Location)".
8. Edit Waypoint title. In the title section write down the quantity of toads, sex, their vital status and direction of travel in an abbreviated fashion. Please note, if there are too many toads on the road and time is rushed, do not worry about direction of travel.

#### Abbreviations:

- i. Sex: Is the toad female, male or unknown?  
Female = F, Male = M, Unknown = U
- ii. Vitality status: Is the toad alive or dead?  
Alive = A, Dead = D
- iii. Direction of travel: Are the toads travelling East or West?  
East = towards forested upland habitat like Cartier  
West = towards water in Cartier Bay and the reservoir. If they are in the middle of the road and it's difficult to determine the direction of travel, leave this blank.

#### Example Waypoint Titles:

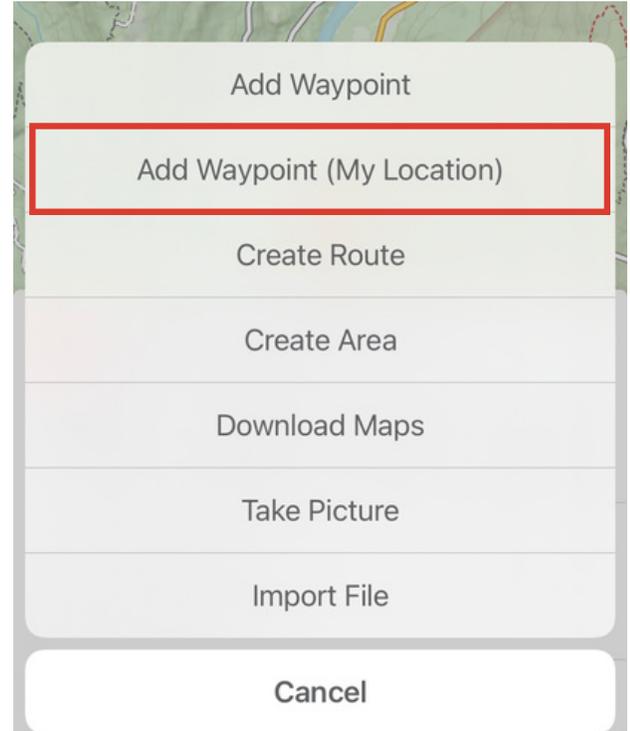
##### Observation A:

1 live female moving towards the water:  
1F-A-W.

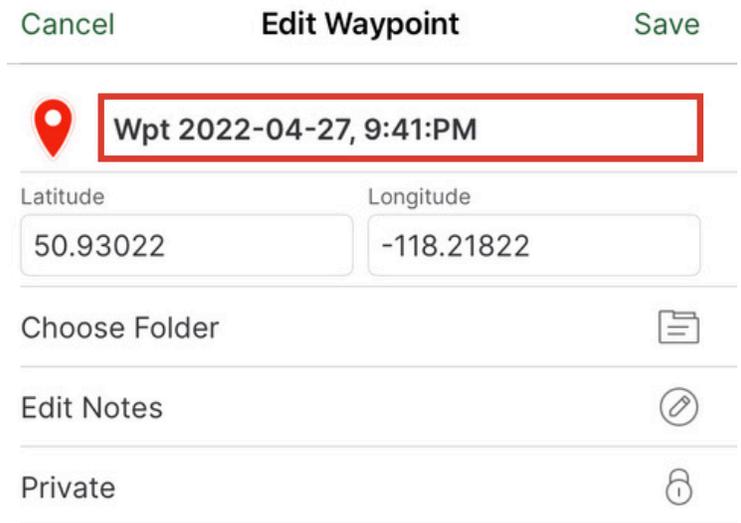
##### Observation B:

3 live females moving towards Cartier Bay:  
3F-A-W.

For more examples of how to record Waypoint titles, see pages 7 and 8.



Step 7: Add Waypoint (My location)



Tip: Read Gaia's [Privacy Settings](#) and select Private or Public based on your personal preferences.

Step 8: Edit Waypoint Title



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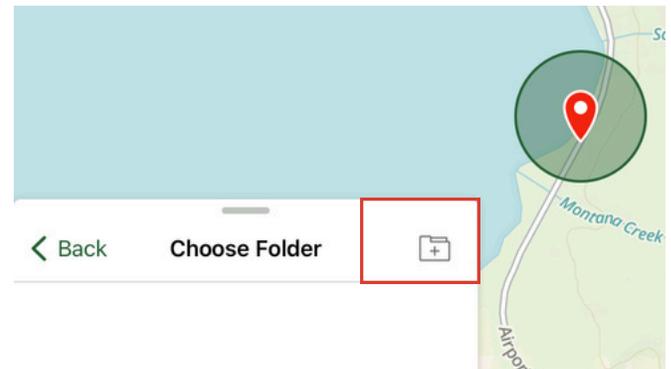
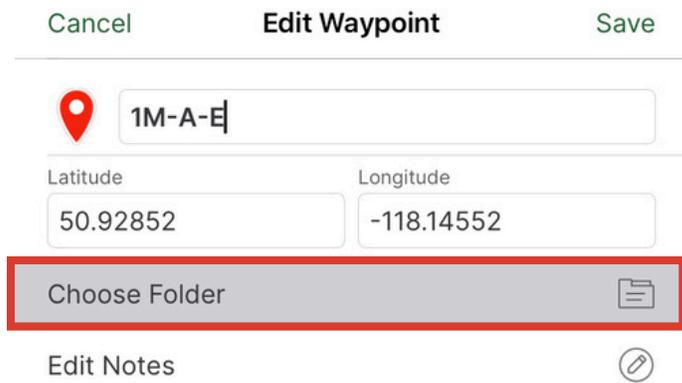
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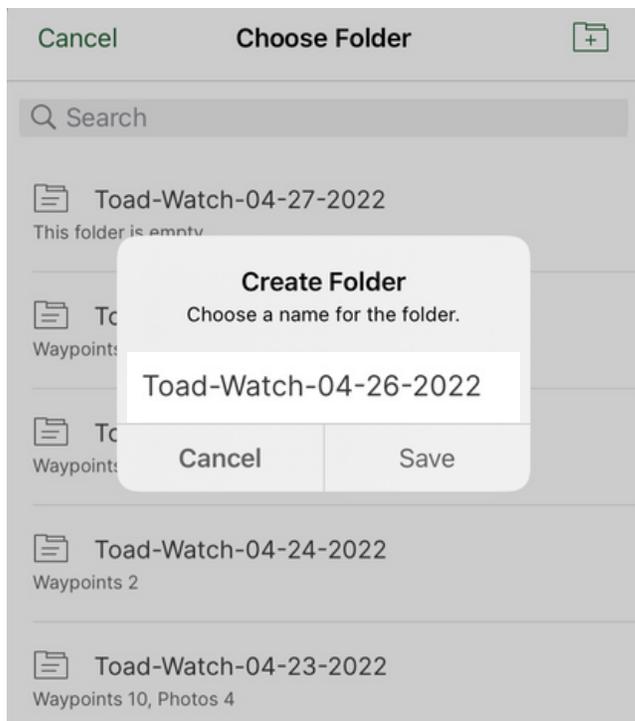
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### Part 3: Organize & Export Waypoints

- 9a. Select “Choose Folder” to store your entry in a folder with the corresponding date.  
9b. If no folders exist yet in Gaia or there is not yet one for the correct date, click the folder icon with a little plus sign to “Create a Folder”.



#### Step 9a: Choose Folder



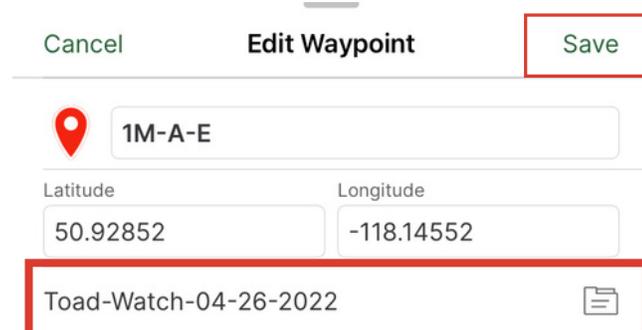
#### Step 9b. Create Folders

Name the folder according to the date to ensure all Waypoints are organized by date. Each toad watch session should have its own folder labelled with the corresponding date.

#### Example: Toad-Watch-05-01-2022.

Ensure all the Waypoints created during the data collection are entered into folders. This will allow you to export your data more efficiently.

10. Select “Save” to save the waypoint into your newly created folder.





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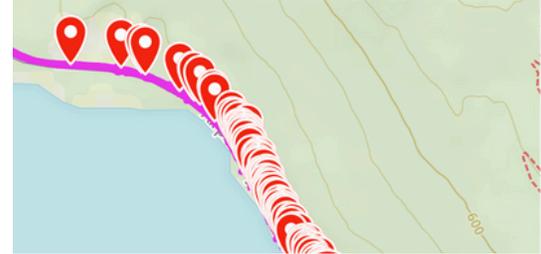
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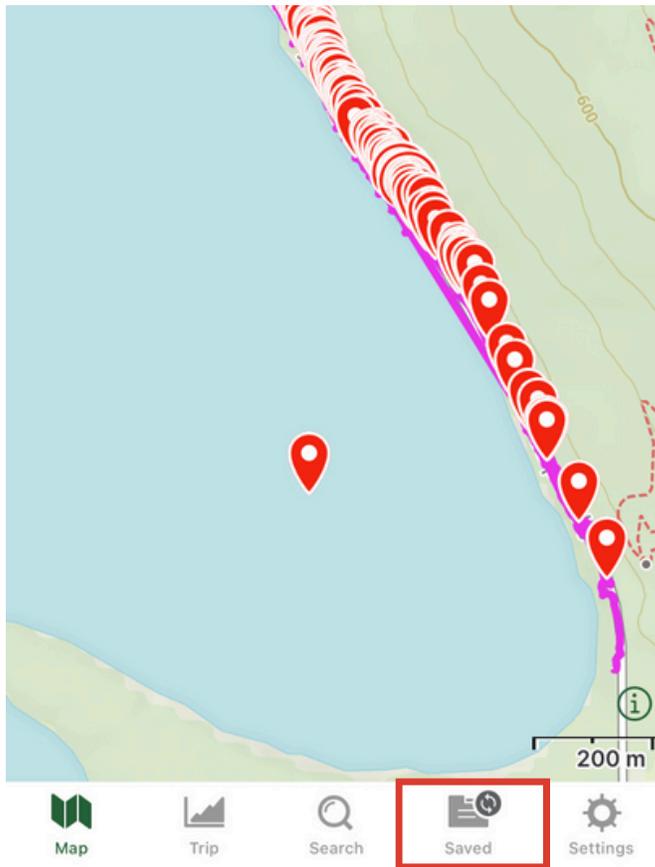
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### Part 5: Save Waypoints

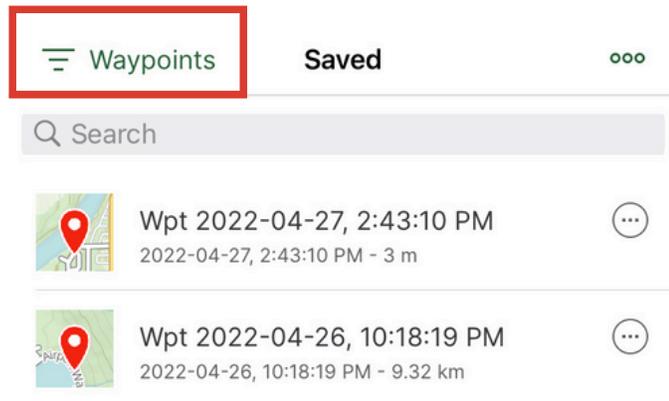
11. The Waypoint will now appear on your map as a red point.
12. Repeat steps 5-11 for all toad observations.
13. At the end of volunteer shift, share the folders containing Waypoints with Wildsight by adding us as a collaborator.
14. Select the "Saved" icon on the bottom-right.
15. Navigate to "Folders" using the the filter option in the top-left corner.



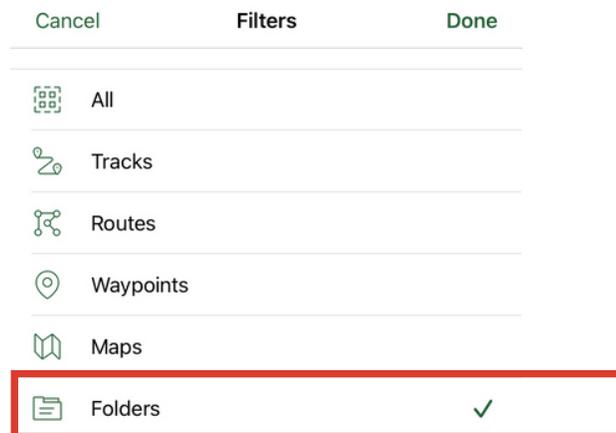
Step 11. Waypoint appears on map



Step 14. Select "Saved" Icon



Step 15. Use filter to navigate to "Folders"



Step 16. Select Folders



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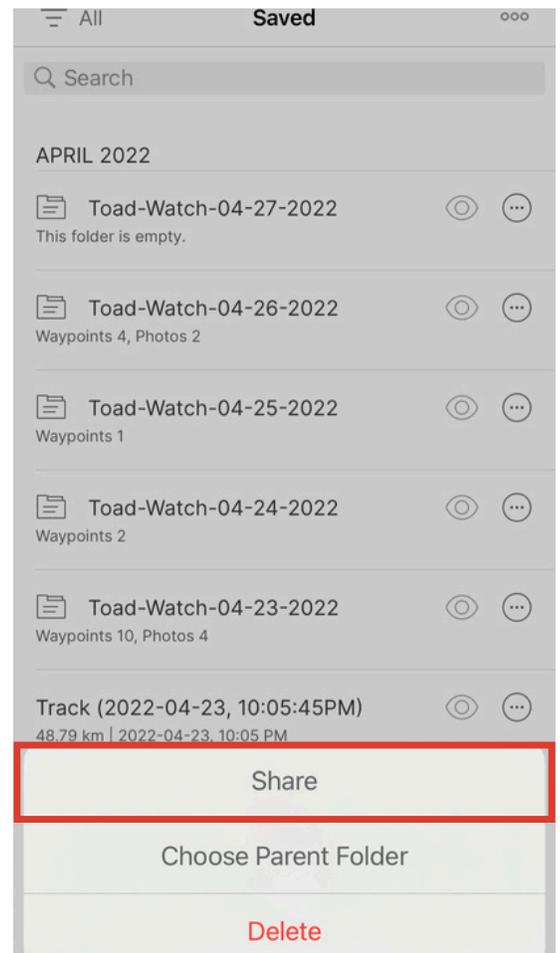
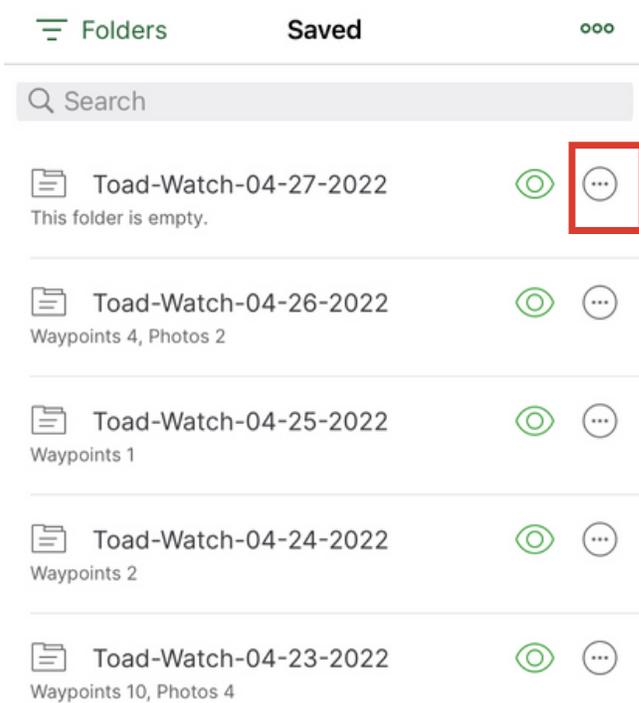
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### Part 6: Export Waypoints

17. Find the Toad-Watch folders and click the three dots on the right.



### Step 17. Share Folders



### Part 6: Export Waypoints

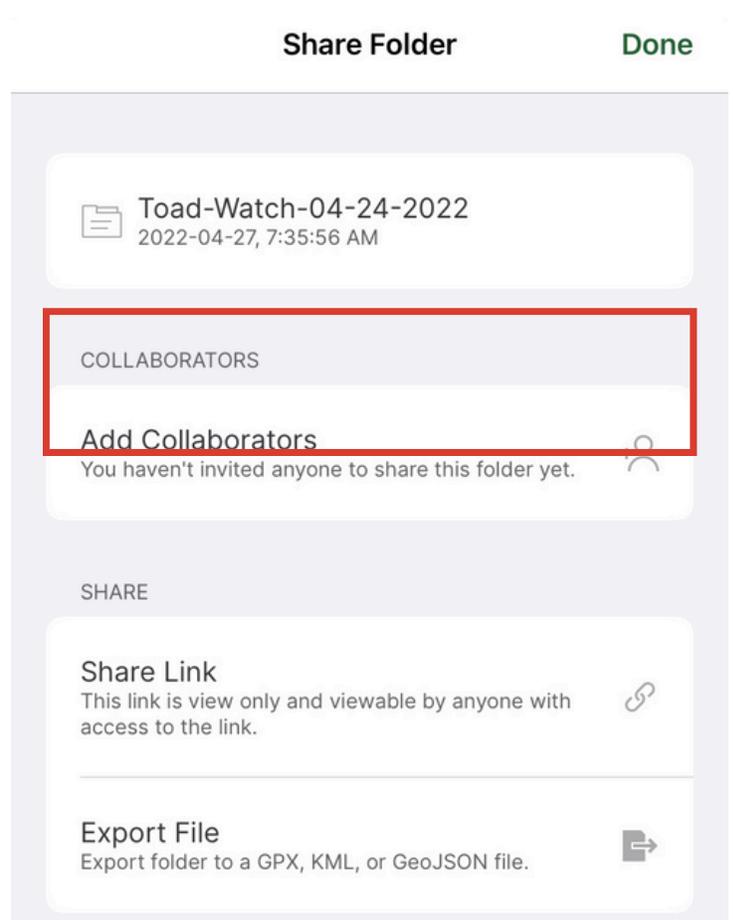
18. Select “Add Collaborators”.

19. Fill out the sharing invitation as follows:

- i. INVITE: revelstoke@wildsight.ca.
- ii. MESSAGE: Input your name here.
- iii. THESE PEOPLE CAN: Select “Edit”.
- iv. Hit “Send” in the top right corner!

**Note:** When creating and sharing Waypoints, choose private if you do not want other Gaia users to view your data.

#### Step 18. Add Collaborators



#### Step 19. Invite and Send!





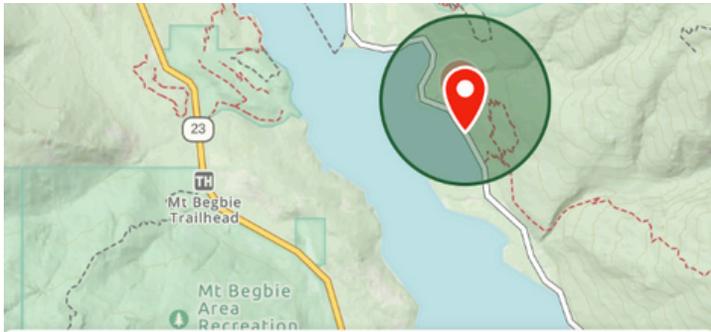
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## Appendix A: Observation Examples



Cancel Edit Waypoint Save

 1F-A-W

Latitude	Longitude
50.93022	-118.14738

Toad-Watch-04-26-2022 

Edit Notes 

### Observation A:

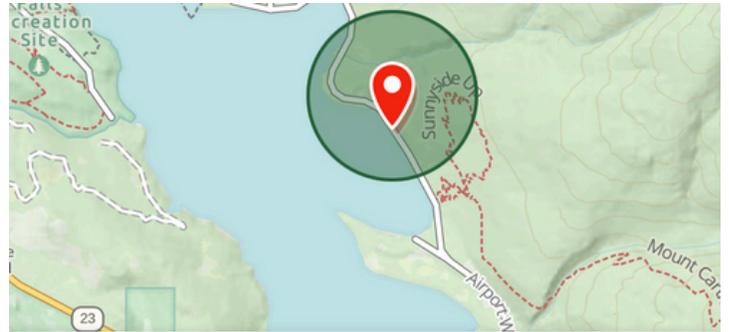
1 live female moving towards the water:  
1F-A-W.

### Recording multiple toads

If there are multiple toads within close proximity to each other, do not create separate waypoints for each toad. As seen above in **Observation B**, create one entry for multiple toads by entering the quantity of toads in front of the sex. At toad hotspots, it may be challenging to record direction of travel due to volume of toads or oncoming vehicles. Please prioritize safety above all else and get yourself and your toad friends off the road. It is fine to leave direction of travel blank.

### Recording both sexes

If there are both males and females in the area, record both sexes in the same waypoint.



Cancel Edit Waypoint Save

 3F-A-W

Latitude	Longitude
50.93200	-118.14922

Toad-Watch-04-24-2022 

Edit Notes 

### Observation B:

3 live females moving towards Cartier Bay:  
3F-A-W.



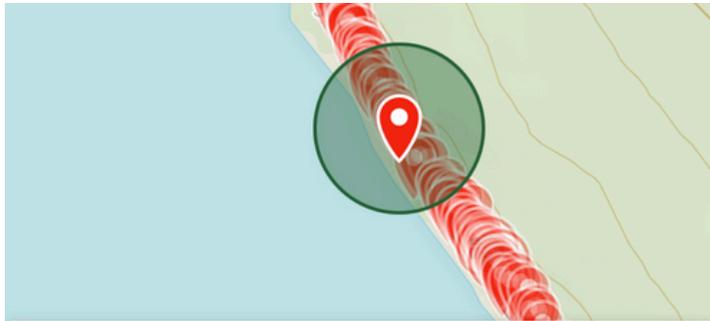
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# Toad Watch Tutorial:

## How to Record Data Using Gaia GPS

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### Appendix B: Observation Examples



Cancel Edit Waypoint Save



2F-2M-A-E

Latitude

50.93156

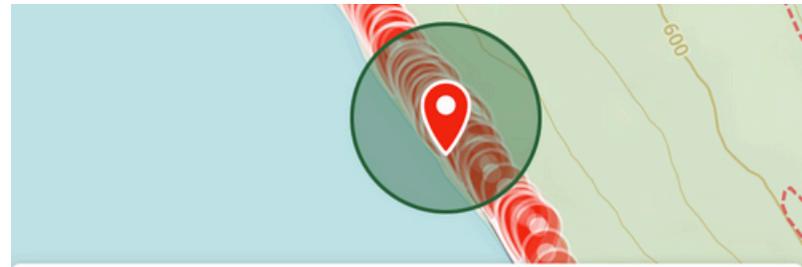
Longitude

-118.14883

Toad-Watch-04-25-2022



Edit Notes



Cancel Edit Waypoint Save



1F-1M-D

Latitude

50.93052

Longitude

-118.14764

Toad-Watch-04-23-2022



Edit Notes



#### Observation C:

2 females and 2 males moving towards Cartier:  
2F-2M-A-E.

#### Observation D:

1 dead female toad and 1 dead male toad:  
1F-1M-D.

#### Recording Toad Mortalities

Please note: When volunteering with Toad Watch, volunteers will witness graphic scenes. In some cases, it is not possible to prevent all the toads from being run over. However, it is equally as important to record observations of dead toads as it is for live toads. A key goal of this project is to identify high-volume mortality spots to help inform the potential installation of a toad underpass in the future. If it is not possible to distinguish the sex of the dead toad, write U (unknown).

#### Observation E:

2 dead toads, sex unknown:  
2U-D.



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### Appendix C: Capturing Other Observations

#### *Get detailed, have fun!*

Feel free to add photos and descriptions to observations in the notes sections of observations. Every bit of information helps create more context for nightly trends.

 1F-A-E  
2022-04-26, 9:15:27 PM



Edit



Add Photos



Share



More



10.90 km, 153°SE from me

50.93010, -118.14724

Elevation: 455 m

Toad-Watch-04-26-2022



Survey start time 8:40 pm. Current temp 7 degrees, 88% humidity. Rained recently, pavement is wet but did not rain during surveys. Finished surveys at just after 10pm. Temperature at end point was 6 degrees. Not many toads were out tonight due to the chilly



#### **Gravid Females**

When a female toad's belly is full of eggs, she is gravid. The extra weight can be quite evident around her stomach. If a gravid female is observed, record "gravid" in the notes section.

#### **Injured Animals**

Sometimes a toad or other animal may be impacted by a vehicle, but their injury is not immediately fatal. In this case, record them as alive but mention their injury in the notes section if it looks non-life threatening.

#### **Weather Observations**

On 04-26-2022, the temperature was cold so fewer toads were observed. However on 04-25-2022, the rain created the perfect storm for a bio blitz! Coeur d'alene salamanders, Common Garter snakes, slugs, earth worms and frogs were all on display on Airport Way.

#### **Car Counts**

Counting the number of vehicles on a nightly basis driving down Airport Way can provide valuable information about the correlation between vehicle traffic and toad mortalities. Observing these relationships can help to inform community engagement and prevent further loss of life by seeking to educate the community about the importance of driving slower to reduce wildlife mortalities.



# Toad Watch Tutorial: How to Identify Males vs Females

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## Sex-Determined Characteristics of Western Toads



### Male Western Toad

- Smaller than females with a more narrow head
- Longer forearms than females
- Dark nuptial pads on their thumbs
- May produce chirping sounds when picked up (females are usually silent)
- Length (snout to vent): 6 - 11 cm on avg.



### Female Western Toad

- Larger than males with a wider head
- Smaller forearms than males
- NO nuptial pads on their thumbs
- Usually silent if picked up
- Length (snout to vent): 12.5 cm on avg.
- In late April and May, many females are gravid, meaning they are carrying eggs and will have larger stomachs.