

# **Park Observer Protocol: Loons Monitoring**

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## Introduction

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**DRAFT 2022-02-11**

## Introduction

This document describes Arctic Inventory and Monitoring Program's field data collection methods using the National Park Service, Alaska Region's Park Observer 2.0 ipad.

For information on the ARCN loons monitoring program please see xxxx

For information about Park Observer 2.0 please see xxxxx

To download the latest loons monitoring protocol file (.obsprot): <https://github.com/NPS-ARC�/YBLO-Observation-Protocol-ObsProt>

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## Installing Park Observer 2.0

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### Installing Park Observer 2.0

Obtain PO2 at <https://akrgis.nps.gov/apps/observer/downloads2/> and follow the installation instructions

General information about PO2 can be found at <http://akrgis.nps.gov/Observer/>

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## Installing a new obsprot

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### Installing a new obsprot (Park Observer 2.0 field data collection protocol) on an ipad

A Park Observer Protocol, hereafter referred to as an obsprot, defines a field data collection model. See <https://akrgis.nps.gov/apps/observer/index.html> for detailed information.

### Obtain the obsprot

The authoritative version of the loons monitoring obsprot will always be at <https://github.com/NPS-ARC�/YBLO-Observation-Protocol-ObsProt>. Ignore any loon obsprot in the Park Observer website.

### *Load the obsprot into Park Observer*

Open ipad and connect to its partner computer using a Lightning/USB cable.

Start itunes.

Connect to the ipad.

In itunes click File Sharing.

Select Park Observer 2.0.

On the computer open a file browser and navigate to your obprot.

Drag the obsprot onto the Park Observer Documents panel.

Start PO2.

Tap the main menu button.

Tap the Protocols menu

Tap the loon protocol. You should see **Created new survey <obsprot name>** in green letters.

Tap back to the main menu.  
Tap Your Surveys.  
Tap <obsprot name>.  
Close the main menu.  
On the map interface tap Tracklog.  
Enter mission information and be sure to tap Save.

## ***Test the new obsprot***

Open Park Observer 2.0 (PO2) Tap the circle thingie in the upper left corner. The new obsprot should appear under Protocols: Create a new survey.

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## **Background map**

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## **Background map**

See  
<http://akrgis.nps.gov/Observer/help2/#new-map>

Alaska Albers did not seem to work but Web Mercator did.

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## **Surveying**

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## **Surveying**

Hit the Tracklog button (?) to start a survey  
to be fleshed out...

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## **Example survey session**

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## **Example survey session**

Example of a loons survey in western alaska.

## **Pre-survey**

Go through the following list to prepare for the survey:

### **Load the obsprot (Observer Protocol) onto the ipad**

- Prepare background map tile package (tpk; see PO2 website for help on this).
- Prepare backup materials such as paper maps, gps, etc. (to supplement the app or for redundant use if

an ipad or the app fails).

- Ensure ipad has PO2 installed and tested functional (use the Sample.obsprot available on the PO2 website to test)
- Load background map into ipad
- Load loon survey obsprot into ipad (github address here)
- Open itunes.
- Connect the survey ipad.
- Click the ipad icon.
- Open File Sharing.
- Select Park Observer 2.0 under Apps.
- Delete any old protocols that could be confused with the newest version.
- Drag the newest version of the obsprot onto the Park Observer Documents panel.

## Test the obsprot

- On the ipad open PO2.
- Tap the circle with the three sliders on it. This is the main controller for the app.
- Tap Protocols
- Tap the loon survey obsprot. The app should respond with 'Created new survey <obsprot name>' in green letters.
- Tap back to the main menu.
- Tap Your Surveys.
- Under Select a Survey tap <obsprot name>.
- Tap on the map to close the menus.
- Tap Tracklog
- Under Survey Info (mission properties) enter as much information as possible.
- Tap Save (the Save button may be hidden requiring you to scroll down).
- On the map will be
  - a button with a square on it - tapping this will close the currently running data collection session
  - a button with a rain cloud and a sun - tapping this will allow you to modify the Survey Info properties. Use infrequently - you might want to do this to make note of rapidly changing conditions during a plot survey)
- a +L (Loon) button - collect data about loon sightings.
- a +P (Pond [lake]) - collect data about extreme pond changes such as drainage, merging, etc.
- a +I (Incidental wildlife observation).

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## obsprot development/editing

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### obsprot development/editing

The main PO2 website has a little information on developing a new obsprot. Unfortunately, the information is scant and trial and error and studying the sample obsprotos is really the only way to learn.

See [https://akrgis.nps.gov/apps/observer/specs/Protocol\\_Specification\\_V2.html](https://akrgis.nps.gov/apps/observer/specs/Protocol_Specification_V2.html).

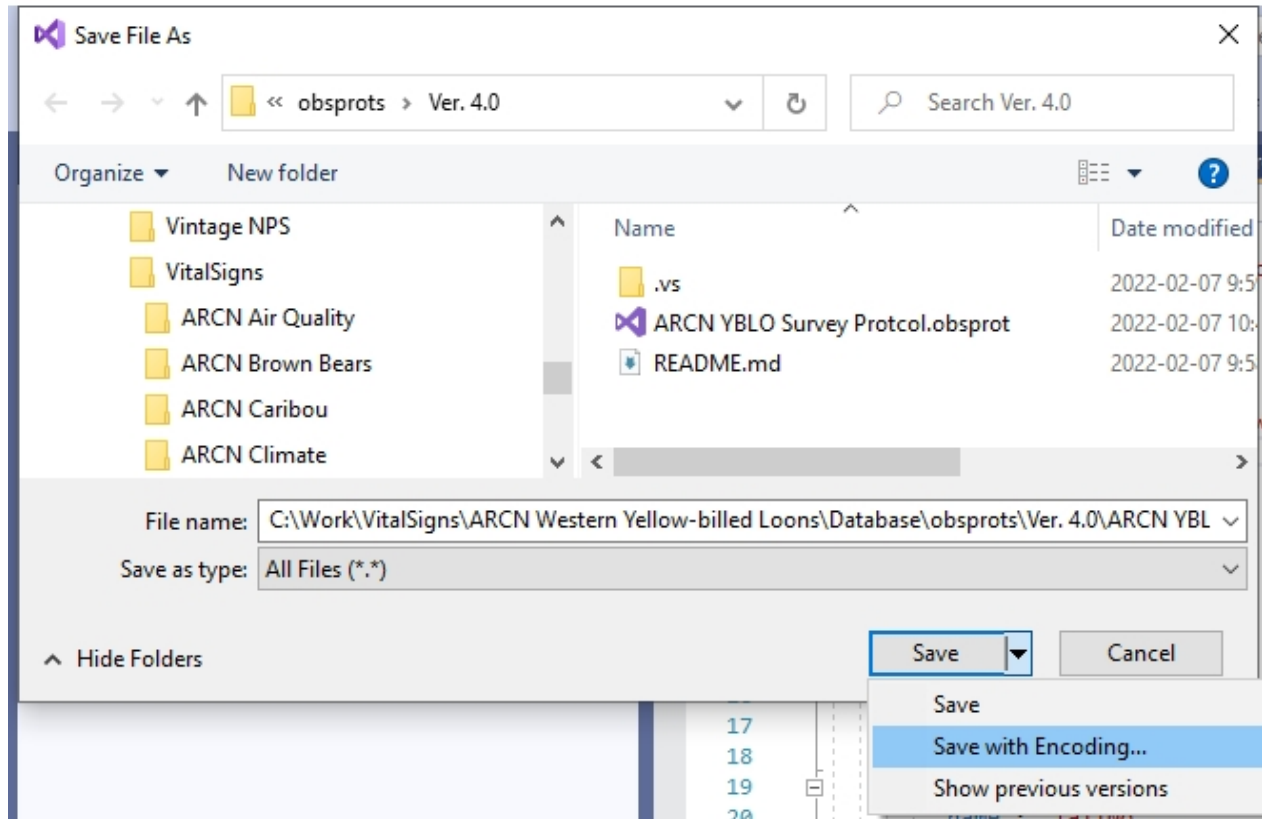
## Tips

- **Code:** The code must be perfect. Error messages are usually arcane and unhelpful.
- **JSON must be valid:** Validate the JSON before testing.

- **Colors:** Colors appear to be standard RGB but the fourth digit represents alpha, or transparency. Some documentation says a value between 0 and 1 defines alpha, but I found it did not work. Complete opacity seems to be 255. Example: "color" : [ 90, 151, 206, 255 ] represents an opaque blue color.

## Encoding as UTF-8

The PO2 protocol development documentation states that obsprots should be encoded as UTF-8. Here is how I encoded it using Visual Studio. I did a Save as... and in the lower right corner next to the Save button there is an up arrow that allows you to change the encoding. Select UTF-8 With Signature (I actually don't know what the signature part is but this is what I read on the internet).



## Hard close Park Observer between protocol tests

PO2 seems to 'remember' old protocols, so if there was a previous error that you have fixed, you may still see the same error message unless you hard close PO2 (double tap home button and slide PO2 icon up).

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obsprot development notes

## obsprot development notes

### General procedure

Get the obsprot at <https://github.com/NPS-ARCN-CAKN/YBLO-Observation-Protocol-ObsProt>

Check out a copy

I found JSONEdit to be a fabulous tool for editing and maintaining valid JSON. Need to get on categorized software list.

Edit JSON

Connect to the ipad using iTunes

ipad - delete any existing surveys and protocols so it's all blank

ipad - hard close PO2 (it seems to 'remember' old protocols, so if there was an error you will still get error messages, even if you've loaded a new valid obsprot).  
 drag a new obsprot onto the ipad  
 re-open PO2  
 create a new survey by tapping on the protocol  
 tap on the new survey and test  
 if it works then commit the change with documentation  
 edit - test - commit until done

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## Gotchas

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## Gotchas

Park Observer has some frustrating features to watch out for:

Gotcha	Description/consequence	Needs more investigation
There are no required fields.	You could for instance record a count but no species, or vice versa. You could record a count of 1 and a Pair? = True. You are the only source of data validation.	
The Save button is usually hidden down low where you can't see it.	If you don't save then your record is abandoned.	
[Possible gotcha] Tapping the +L button does not seem to place a loon.	Tapping a loon onto the screen works but tapping the +L button does not seem to place a loon. Possibly due to lack of GPS during testing?	Y

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