

# Water Weather Station

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# What we'll cover

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Emma Geary

02 How it works

:

03 Buoy

:

04 App

Garrett King

05 Website

Kaitlyn Rice

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# 01

# Intro

# What is the Water Weather Station?



The WWXS will offer a unique way of keeping students engaged beyond the end of their camp. The buoy will allow for physical interaction with a device that creates useful data. With a higher level of user interaction Users will be more likely to retain the skills they have learned at the Sea Discovery Camp.

tldr; A method of collecting, storing, and displaying water quality data from extended intervals of time.

# License

# MIT

# 02

# How it Works

# This is you!

- Work as an instructor at the Sea Discovery Center
- Manage a group of Middle School aged students
- Love water and computers (especially in tandem)

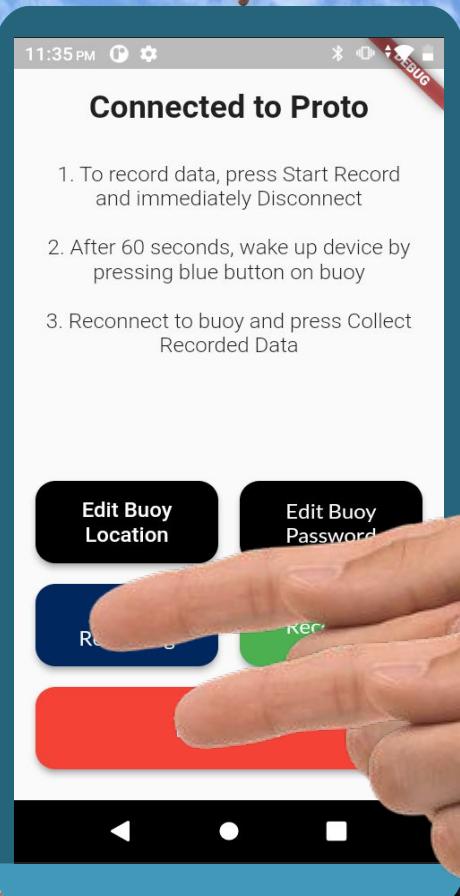
**So, what is going on?**





















# 03

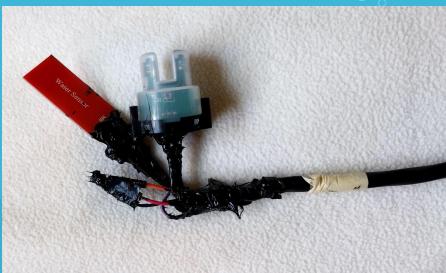
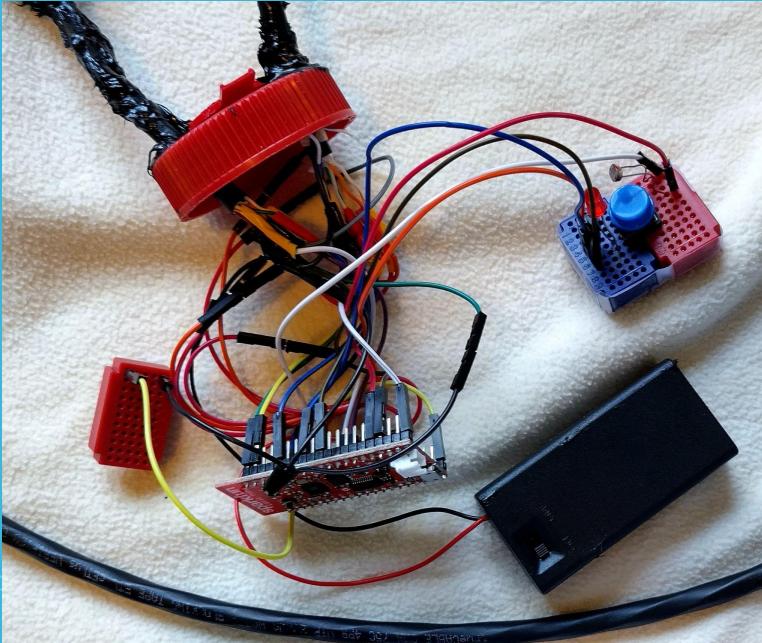
# Buoy

# What Does It Do?

1. Collect water data
  - a. Turbidity, Salinity, Temperature, Insolation
2. Store data (up to 30 days)
3. Send data upon request from the app



# Where were we last time?



Working, but...

- Messy
- Difficult/tedious assembly
- Not enough battery
- No room for expansion
- Constantly falling apart



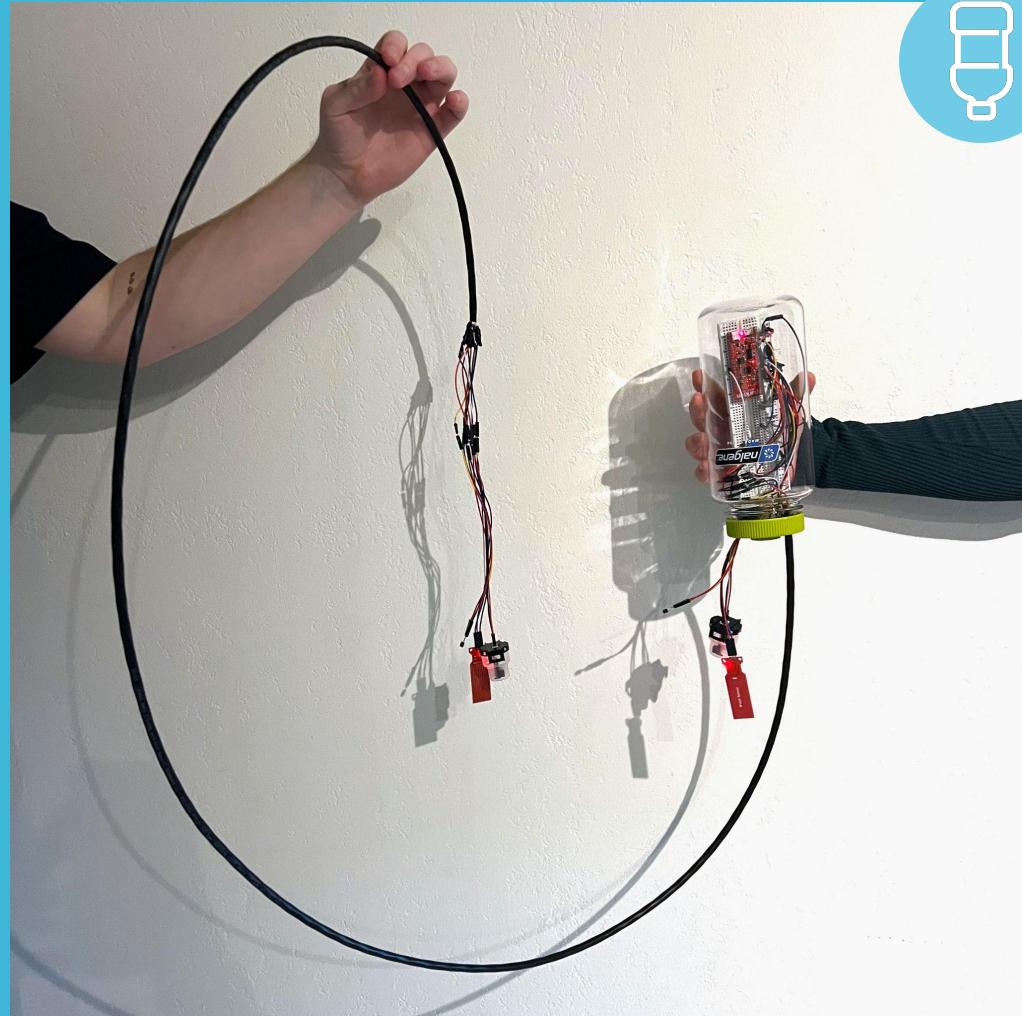
# In Memoriam

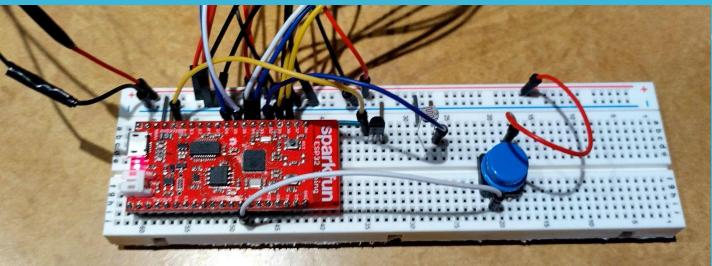
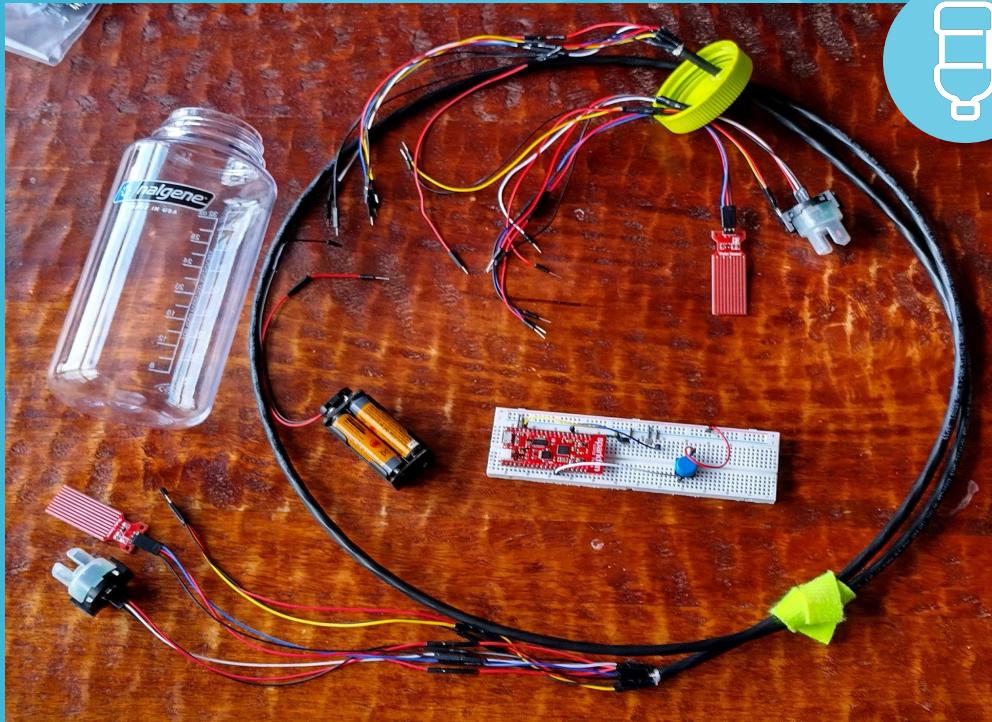
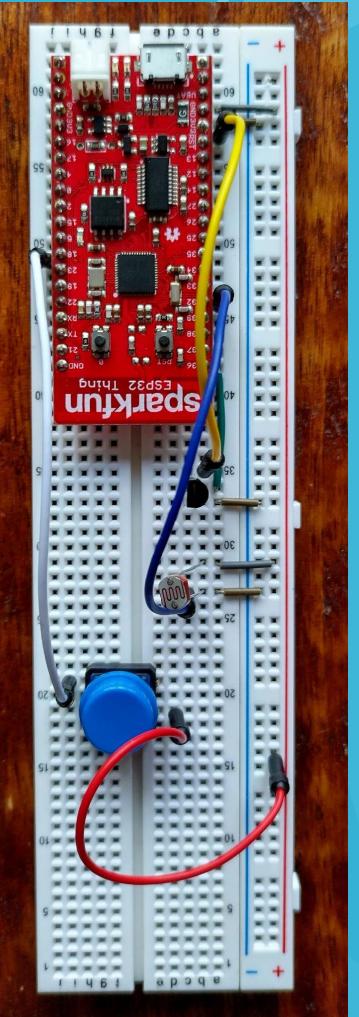
You will be missed :(

# Upgrades, people! Upgrades!



1. Added sensors.
2. Fixed code to be sending the correct amount of data.
3. Rebuilt, reorganized, color-coded!
4. 30+ pages of in-depth documentation recorded!







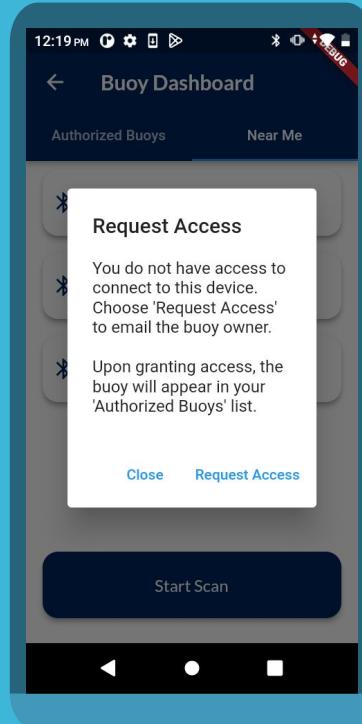
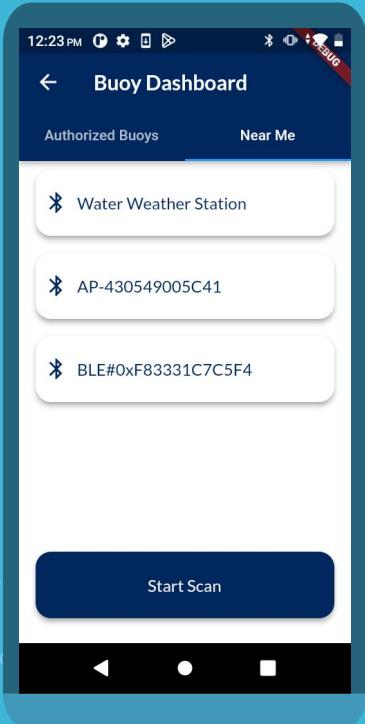
# 04 App



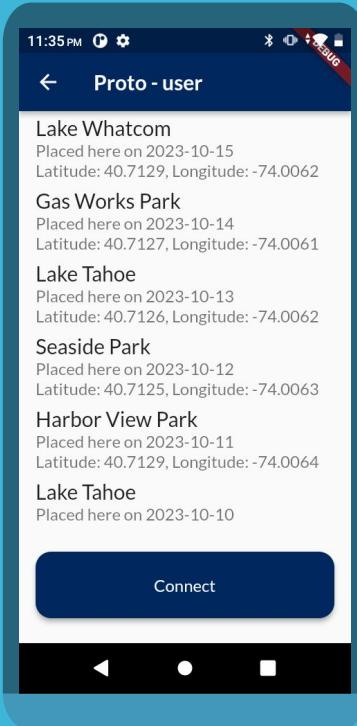
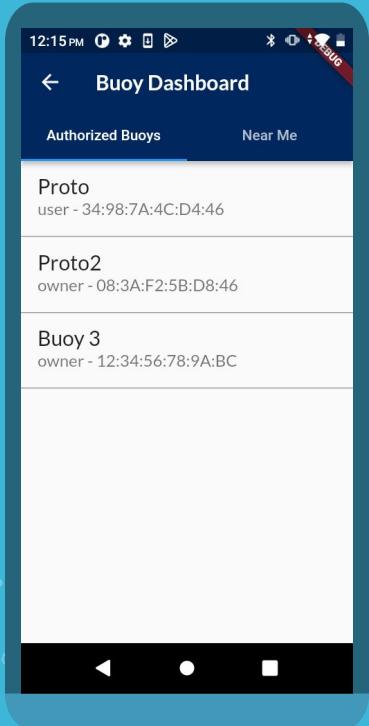
# Goals for the app

- Full communication with buoy and web server
- Multi-user functionality
- Security

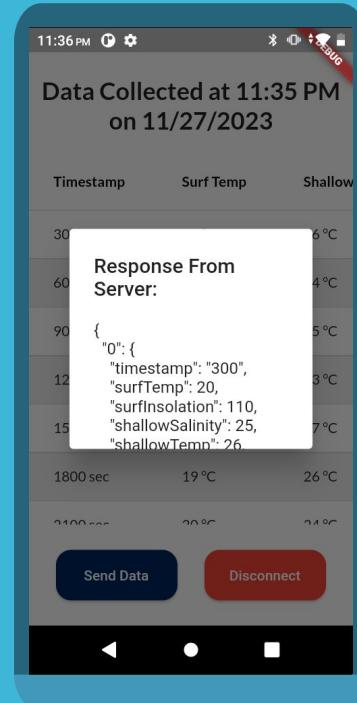
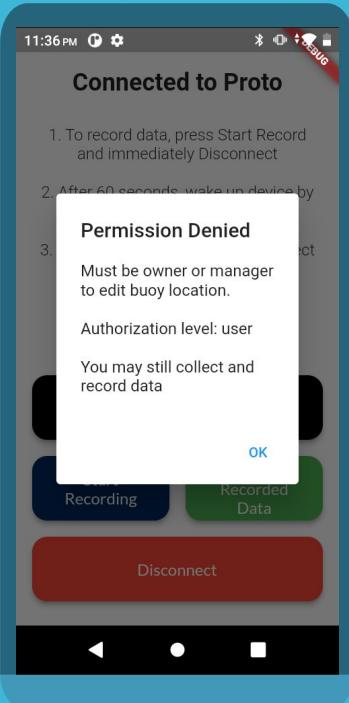
# Request Access



# Authorized Buoys



# Connected Screen





# 05

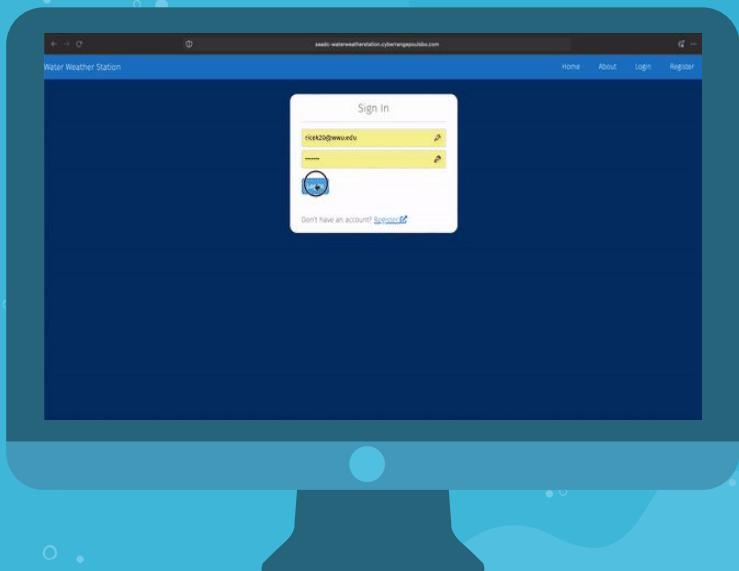
# Website



# Website is live!

[seadc-waterweatherstation.cyberrangepoulsbo.com/](http://seadc-waterweatherstation.cyberrangepoulsbo.com/)

Thank you Paul Haithcock!





# Major Updates



## Data Collection

- Processes several data points at once



## Ownership

A buoy has owners, managers, and users

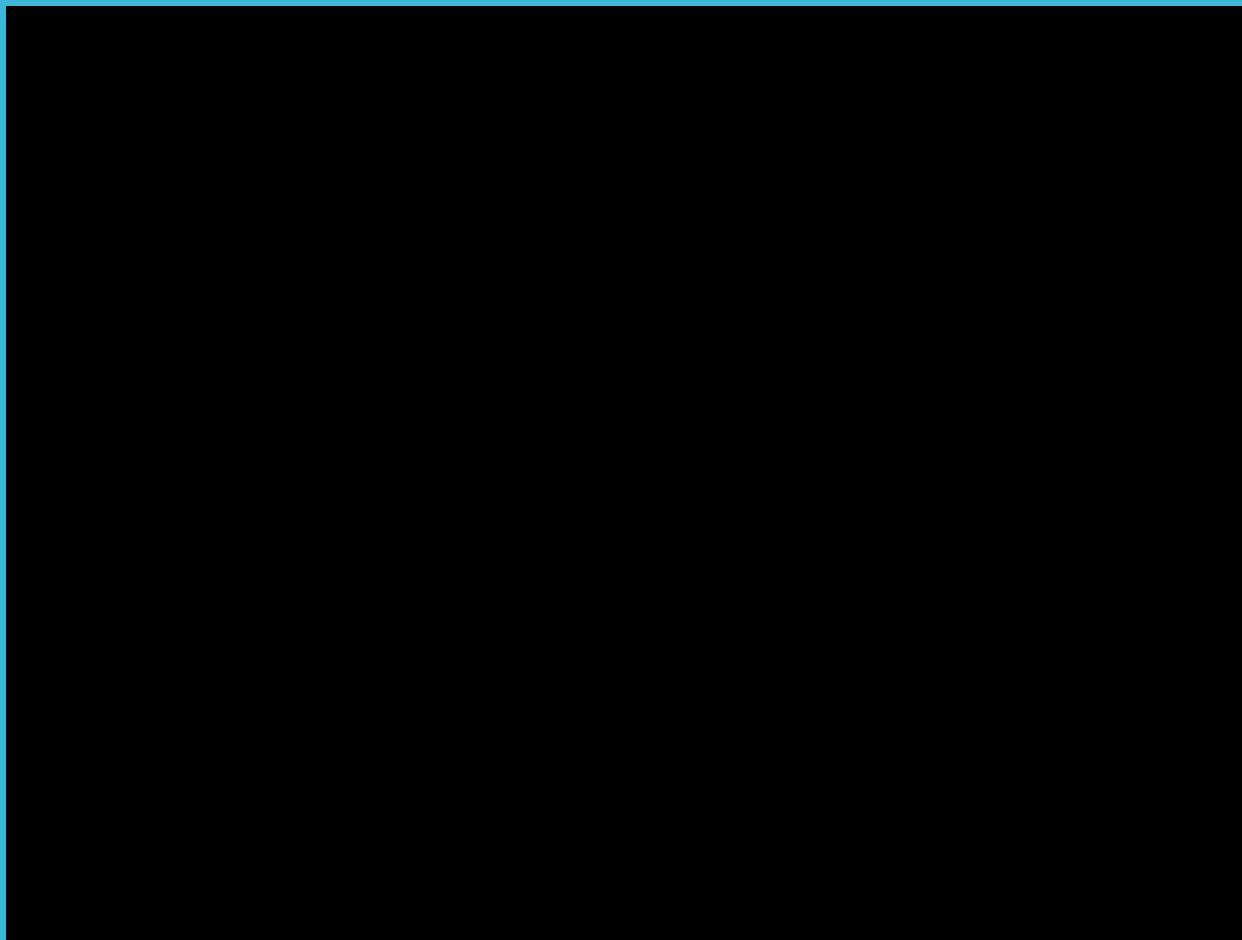


## History

Each buoy stores its location history

# 06

# Demo



# 07

# What's next

# Future of WWXS

## Sponsorship & New Group

Department of Defense, Navy funded



## App



More intuitive recording and collecting of data

## Buoy



Dissolved Oxygen Sensor, Optimization

## Website



Building out the website content and adding further interactions

# Thank you!

Questions?