

# IPTDS Subcommittee September 2023 Meeting

September 12, 2023

Attendees: Derrek Faber, Carley Simpson, Matthew Stilwater, Brian Davis, Kory Kuhn, Marika Dobos, Gabriel Brooks, Ryan Kinzer, Randy Johnson, Jeff Fryer, Brady Allen, Megan Detloff, John Tenney, Darren Chase, Don Warf, Scott Livingston, Sebastian Dudek, Daniel Wilson, Nicole Tancreto

## Action Items Last Meeting

- M5 SOP still in progress, hope to be finished by workshop

## Updates from members

- Gabriel Brooks – NOAA had four pile dike sites out this year that detected over 15k tags and 11k detections from the trawl and flexible antennas, so there were over 26k fish detected below BON in 2024. Working on a proposal to expand pile dike sites to add more antennas to good sites and try out a few new sites.
  - Working with USACE and PSMFC on additional detection in the Ice and Trash Sluiceway only in one gate (1B) to start with. Not adding antennas to the moveable gates any longer. About 2% of fish pass through the I&T sluiceway and it is year-round passage.

## Workshop Planning Ideas for Survey

- Presentation and hands-on use of data cleaning and analysis tools. Potential follow-up discussion with PNAMP Fish Monitoring Workgroup PIT Tag Array Task
  - Ryan Kinzer, Mike Ackerman, Kevin See, Megan Dethloff, Marika Dobos
  - PNAMP goals are to identify challenges biologists encounter regarding management and use of PIT tag array data. Discuss existing tools strengths and weaknesses and gather level of interest from the community.
- Remote power setups – discussion and hands-on
  - Randy Johnson, Kory Kuhn, Matt Stilwater, Gabriel Brooks, Ryan Gerstenberger
  - Battery setups/types
  - Solar power
  - Wind Power
  - TEG Generators
  - Grid power and noise isolation
  - Innovative tech
- Networking and Communication Setups
  - Derrek Faber, Gabriel Brooks
  - Remote data using cell, satellite
  - Networking and firewalls
- Antenna anchoring systems
  - Anchor types
  - Substrate types and complexities
  - Securing different antenna types

- Antenna fabrication
  - Different fabrication techniques
  - Pros and cons of each antenna type
- Antenna connections and initial setup
  - Daisychain vs 1-1 cabling
  - CANBUS, MODBUS, data-over-power
- M5 Deployment on Raspberry Pi
- High-power systems
  - PTAGIS Kennewick, Gabriel Brooks
  - Vendor area
- Innovations in PIT tag technology
- Instream 101 basic introduction
- Half duplex technology

PTAGIS will send out a survey to the newsletter group to get idea of the level of interest in these topics.

#### [Demo of Gabriel Brooks python script](#)

Runs on a schedule and contacts an MC on cell modem to download all data from the previous day. Parses noise, antenna current and phase and graphs them, counts unique tags on each antenna, calls PTAGIS API to get species and release info, then emails a report to staff at beginning of each day.

Gabe will send to Derrek, Ryan and Marika.

Nicole will send API keys to Derrek and Ryan.