

IPTDS Subcommittee Meeting

April 24, 2024

Attendees: Brian Knoth, Derrek Faber, Brian Davis, Ben Winkler, Ryan Kinzer, Gabriel Brooks, Nicholas Porter, Randy Johnson, Jeff Fryer, Zack Mays, Brady Allen, Darren Chase, Daniel Wilson, John Tenney, Scott Livingston, Sebastian Dudek, Nicole Tancreto, Mark Leonard

Member Updates and Round Robin

John Tenney, PTAGIS: New release of M5 coming that is primarily an update to the underlying libraries along with some bug fixes. Another important issue that was discovered recently: even though the RPi hardware is 64-bit, the operating system has been 32-bit until recently. So M5 will have two Linux releases one each for 32-bit and 64-bit operating systems. Also, we received great feedback about the hands-on sessions at the PIT Tag Workshop.

Brian Davis, USFWS: Gearing up for the season, monitoring returning Chinook at hatchery fish ladders, monitoring bull trout and lamprey. Might be putting a new site in Steigerwald National Wildlife Refuge to monitor larval lamprey.

Brian Knoth, IDFG: Most instream arrays being used to monitor steelhead escapement. IDFG and U of I will be working on updating steelhead survival models.

Gabriel Brooks, NOAA: Reinstalled PD6 and PD5, PD7 also still running. Installed a temporary barge that is detecting lots of fish with only two antennas. Operating the flexible antenna, also using the new multiplexor on the trawl. New antenna sprung a leak recently, was fixed by Biomark. Working on a model to try to figure out where the fish are travelling in the estuary to better place pile dike sites in the future. Also working on model at Willamette Falls. Working with USACE on the Bonneville Ice and Trash sluiceway, and adding spillway detection at McNary.

Jeff Fryer, CRITFC: Working with Biomark on improving Zosel Dam detection. Also working with Okanagan Nation on sites and analysis.

Randy Johnson, CCT: Updated a site and documented passage in area that has not seen fish in a while.

Ryan Kinzer, NPT: Ensuring sites are operating well. Completed rerunning models for estimating abundance using the Snake River arrays, adding sites downstream of Lower Granite. Completed draft prioritization of instream arrays in the Snake River basin, may lead to moving sites depending on feedback. Working on summarizing operational data for all the Snake River sites, will be used to qualify the estimates from the model (if they are biased/unbiased). Want to develop a model that would account for habitat upstream and downstream of the sites but with same population.

Ben Winkler, Biomark: Kyle Meier is still available for questions, feature requests, etc. IS1001-Mux released at the PIT Tag Workshop. Working on testing standard IS1001 standard antennas on the new mux. Planning on updating sites that are still running the old mux and other old readers.

Nick Porter, Biomark: Testing using lithium phosphate batteries (Lye Time brand) on a few sites to make use of the full-depth of discharge those batteries have. Similar price to AGM style batteries. Q: don't those have chance of being damaged by freezing weather. A: has heaters that will kick in at 36 degrees F. Also, they shut off if they get too hot or too cold to prevent damage.

Derrek Faber, ODFW: Lots of repairs from ice damage. Installing temporary arrays in 30mile creek and a floating array in Mckay creek. More projects going in on upper Grande Ronde.

Zack Mays, Yakama Nation: Installed a new site to monitor bull trout near Snoqualmie. Worked with Gabriel to design a new antenna in the helix structure in Lake Cle Elum. Hoping to install a PIT barge at the mouth of the Yakima River.

New Business

Proposal to Add Equipment Lists to Site Diagrams

- Derrek suggested that adding an optional equipment list to site diagrams would be useful to folks trying to find information on equipment needed to set up an instream site.
- There is an Equipment History section on the metadata page that has placeholders for equipment types such as Communications and Power Supply
- Gabriel suggests having a list of equipment that has been used along with notes about what works well in which conditions. Also, NOAA uses a disclaimer with language to indicate that NOAA is not endorsing specific equipment, perhaps PTAGIS could have something similar
- John suggested as a first step to create a document within the IPTDS Subcommittee team in MS Teams to allow this group to update vendor equipment and notes about usage. This feature was used before to share other documents for similar activities. This new document would only be visible to Subcommittee members to avoid issues that Gabe mentioned. Members can download the document and send it to others outside the group.
- Ben is working on a mobile app that would be used to record the equipment used at individual sites, very beta at the moment
- **PTAGIS Action: Add equipment types Communication, Power Supply and Tag Technology to the Equipment History of the Manage Site feature in the PTAGIS dashboard**
- **PTAGIS Action: provide an Excel spreadsheet shared via MS Teams to allow Subcommittee members to update information about vendor equipment for internal use only**

Discussion to Change the IPTDS acronym and name for subcommittee

- Several members agreed that the IPTDS acronym is a bit unwieldy and they are in support of looking for a new one for the Subcommittee name
- Derrek sent out a ranked choice poll with some options for a new name/acronym and the winner was *STREAMS* - Stream Tag Research & Environmental Analysis Monitoring Systems

PIT-GPT

Derrek created a chat GPT application using device manuals and documents from PTAGIS to help him find information specific to operating an instream site.

<https://chat.openai.com/g/g-CwAfJw7CI-pit-gpt>

Chairperson Election

Several members nominated Derrek to continue as Chair and he agreed.

Additional Topics

Brian Davis asked if there is a way for users to find sites that are capable of detecting HDX tags

- Could use the Tag Technology equipment type
- Gabriel suggests getting it from the status report, however sites with submissions through Biomark or I5 don't currently include status reports

Nick Porter reported that Biomark worked with Idaho Power to install deep water antennas to detect sturgeon

- Installed the antennas with divers in slow moving water and have so far detected 90% of the fish they were targeting.