

## 2023 PTSC Annual Meeting

Friday, February 3, 2023, 9am – 4pm PST, Online

Attendees: Brandon Chockley, Charles Morrill, Scott Putnam, Jeff Fryer, Tiffani Marsh, Jesse Rivera, Will Simpson, Brady Allen, Pat Keniry, Tim Ludington, Gordon Axel, John Tenney, Don Warf, Craig White, Daniel Wilson, Sebastian Dudek, Nicole Tancreto, Brian Maschhoff, Russell Scranton, Luke Whitman

### Action Items

- Tim will send draft RFI documents to Don and Gordy
- PTAGIS/PTSC will coordinate 2024 PIT Tag Workshop
- John will contact Earl and Sandy about participating in retrospective video
- PTAGIS will update data file browser to better handle downloading many files at once
- PTAGIS will add language to website landing page for SbyC requests indicating any projects at MCJ and JDJ will require additional coordination with USACE to ensure operation of dormant diversion gate equipment

### Portland PTAGIS Update (John Tenney)

#### Presentation

- Reviewed action items from last year's meeting
  - VFD noise at Ice Harbor is still unresolved. Losing about 1% of detections per year. Shuts down detection in the north ladder whenever gates open. Charlie and Don will continue to work on it.
- PTAGIS Records Data summary
  - Getting fewer detections which is affecting precision of survival estimates. Need more detections at McNary, Bonneville and below.
- Overview of survey results
- Tagging software updates
  - Started upgrade to P5, will target 64-bit computers only, upgrade technology, make easier to install, enhance features
  - Cannot support P4 on Windows 7 any longer due to security issues with data submissions. Software continues to work, except data submissions
- Interrogation software updates
  - M5 running at 34 sites (all PTAGIS sites, except for SbyC sites, plus a few small-scale sites managed by other agencies).
    - SbyC successfully evaluated in 2022 at LMJ
  - M5 File Manager allows correction and resubmission of data files
  - I5 used to manually submit data from 92 sites in 2022
- Website, reporting system, API updates
  - Added interrogation site metadata management tools
  - Added some programmatic access to data through API
  - Demo of interrogation site metadata management tools
  - Tiffani had a question about being able to download more than 100 files at a time after FTP goes away.

- Migration to Cloud
  - Identified technology and cost estimates
  - Synchronized database, content, some data files to cloud
  - Hosting reporting system in cloud
  - Working on syncing 8 million data files, hosting website and other services
- DevOps and Best Practices for Software Development

## Kennewick PTAGIS Update (Don Warf)

### Presentation

- JFF Antenna detection efficiencies and SbyC diversion gate efficiencies remain high
- Adult ladder detection efficiencies remain above 98%
  - ICH dropped a little due to VFD noise shutting down detection in the north ladder whenever gates open
  - Tiffani mentioned that a recent report indicates that 5-10% of adults use the north ladder at ICH, so might not be losing that many detections
- Repaired 3 out of 681 transceivers in 2022
- Continued 3% sample rate of PIT tags shipped for BPA
- GRS ran flawlessly in 2022, but had less tags detected than 2021 (~195k unique detections in 2022 vs 250k in 2021).
  - Likely due to higher flows so less percentage of total spill through the RSW.
  - Installing remote control of power supply February 2023, has the potential to increase detections
- BO2 Cascades Island relocation completed
- Bonneville Powerhouse 1 Ice and Trash Sluiceway Automated Gate Antenna Design
  - Submitted 90% design in December 2022
  - Recent concern with changes in flow with this design
  - Will now work on a flush-set design that requires alterations to surrounding structure, but the original design may also work at McNary's TSWs
- Participating in BON Washington Shore serpentine section remodel
  - Will be the first PTAGIS-operated adult weir walls with instrumented lamprey slots
  - Construction planned for winter 2024-2025
- Easton Dam (BOR) will be operational spring 2023
  - PTAGIS will be on-site during installation and will install electronics and take over O&M when completed
- Klickitat Hatchery remodel design completed, work to start in 2023
- Thin body antenna developed
  - Uses NOAA-developed cable
  - Does not require ferrite tile
  - Water entering antenna body does not affect it
  - Lower cost
- Worked on experimental antenna design for monitoring river at Castile Falls

- Plan to replace pneumatic gates at Lower Granite with electric gates, work to start winter 2023-2024
  - USACE purchased the actuators and drives, PTAGIS will upgrade PLCs and HMIs
- Working with BOR at Cle Elum Dam, working to complete design in 2023
- Clear Creek Dam project is in early design, PTAGIS will join the design team to incorporate PIT tag infrastructure in 2023
- Preparing for potential BPA PIT Tag RFO to test new tags
- Working with NOAA on improving juvenile detections at McNary

### BPA PIT Tag RFO (Tim Ludington)

- Contract with Biomark goes through end of FY 2023 due to one-year extension to the previous contract
- Working on RFI (request for information) to send to potential vendors. Plan to have draft for review next week.
- John and Don stated PSMFC and NOAA would review technical language related to tag acceptance in RFI, RFO and contract
- Timeline:
  - Draft RFI/RFO documents will be sent to Don and Gordy for review soon
  - Anticipate getting requests out to vendors near end of February
  - Need more information on testing needs. Don said they need about 6-8 weeks depending on number of tag models to test and will send report from last RFO with more information.
- Brady asked about the live fish test. Gordy answered that hatchery fish are tagged and released directly into the Bonneville corner collector, all fish have to pass through the antenna. He also mentioned that they tested a few different implantation methods from vendors for the last RFO, would also like that to be possible in this one, too.
- John offered to have Tim come out to Kennewick to see the tag testing set up
- Tim briefed the committee on existing stock and said there are enough tags on hand to cover planned shipments for the rest of this fiscal year, and that he has been working with Jenn to maintain backstock of about 1 year of tags

### 2024 PIT Tag Workshop Planning

- Any issues with agency policy in terms of travelling to in-person event?
  - There does not seem to be policy against travel in member agencies, but budgets are tight
- In-person vs virtual vs hybrid
  - Members expressed a preference for in-person meeting
  - John said that it might be too much to handle a hybrid meeting, but if the in-person meeting needs to be cancelled could pivot to completely virtual.
- Responsibilities
  - PTAGIS will put out call for presentations early summer
  - PTSC reviews abstracts and provides final decision on presentations
- Vendors

- Will contact Biomark about sponsoring a happy hour
- If any one knows of vendors that should be invited, email PTAGIS
- Keynote – Retrospective video
  - PTSC agreed that a retrospective video featuring some of the key PIT tag technology pioneers would be really interesting and useful
  - Scott Putnam offered up video filming and editing expertise
  - Focus on the first steps with implanting PIT tags in fish and detecting those tags
- PTAGIS software/reporting training
- IPTDS Demo/Training
- PTSC Annual Meeting before/after

#### [IPTDS Subcommittee Update \(John Tenney\)](#)

- Added support for the IS1001-Mux in I5 and M5
- Draft SOP for installing M5 on Raspberry Pi
- Implemented VTT report for site stewards via website
- Updated I5 to capture noise from IS1001-MC and working on a report to make that available to stewards
- Reviewed interrogation site metadata management features on PTAGIS website
- Coordination with PNAMP FMWG
- Biomark presented BioProbe
- Derrek Faber will be the chair for this year

#### [NOAA R&D Update \(Gordy Axel\)](#)

- Installed an additional pile dike interrogation site across from Jones Beach that detected a lot more fish than anticipated
- Plan to install more pile dike sites in 2023
- Trawl and flexible antenna array will be operated in 2023 on a schedule similar to pre-COVID
- Worked on the remote power supply control at GRS with Kennewick
- Supporting Kennewick on the Ice and Trash Sluiceway design
- Planning to work on improving McNary detections as soon as possible

#### [PiThy \(PIT-tag Hypertool\) A PTAGIS for the Rest of Us \(Brian Maschhoff\)](#)

##### [Presentation](#)

- Browser based tool for loading, pre-processing, annotating and visualizing PTAGIS query results
- Problems to address
  - Usability for large unwieldy data sets
  - Awkward data structure
  - Repeatability
  - Interpretability
  - Interoperability
- Data Reduction Strategy to maintain the first and last events of a particular group
  - Order events, identify and remove unhelpful intermediate events
- Recommended attributes
  - Tag

- Mark species, run, rear type
- Event release site code
- Event release date
- Event type
- Event site code
- Event date time
- Antenna group
- Antenna
- Event length
- Load local data from PTAGIS exports and match up with associated data from other sources (e.g. DART)
- Export results to JSON, csv and zip and maintain original query metadata from PTAGIS
- Link to the tool: <https://onefishtwofish.net/viz/PITTool.html>

### Discussion Items

- SbyC gates at MCJ at JDJ haven't been used in years, gates may need extra attention if a researcher wants to use SbyC at those locations
  - Tiffani indicated that it seems unlikely transportation will be revived at McNary, but a researcher could still want to use the system to collect fish there. She suggested adding information to the SbyC request system to indicate that using SbyC at those sites may take extra coordination to ensure hardware is operable.
- Tiffani asked about what PTAGIS should do if the region changes to year-round PDT
  - Modern PTAGIS software transmits the time zone offset with all timestamps now, so data collection is not an issue.
  - Would need to decide if PTAGIS should change to displaying all timestamps in PST to PDT if this happens.
- Willamette Falls O&M (Luke Whitman, ODFW) - [Presentation](#)
  - The fish ladder at Willamette Falls has been out of service for about 3 years, but it is an important detection point for the Willamette River
  - All fish going upstream have to swim through the Willamette Falls ladder, and they get good detections when operating.
  - ODFW does not have the expertise to keep the site up to date and operating efficiently
  - Many new studies undergoing and planned using PIT tags, continue to have adult Chinook coming back from previous studies
  - Important decisions being made without much data
  - Luke has requested that PTAGIS take over the site or at least provide some expertise to get it up to standards and help when issues come up
  - Don has visited the site and said new equipment costs should be relatively low as the antennas and transceivers were in good shape. Mostly need new computers, updated communications (cell or satellite modem). Maintenance should also be low cost, as it can be primarily remote once upgrades have been made.
  - Brady said that BPA will likely not be interesting in funding the site, but will check in to see what is possible

## Elect Chair and Wrap up

- Charlie and Tiffani agreed to remain chair and co-chair