

PIT Tag Steering Committee 2024 Annual Meeting

Friday, February 2, 2024 – Skamania Lodge, Stevenson WA

Attendees: Brady Allen, Will Simpson, Gordon Axel, Pat Keniry, Brandon Chockley, Jeff Fryer, Charles Morrill, Scott Putnam, Sebastian Dudek, John Tenney, Nicole Tancreto

Action Items

- Will to update 'Marking Procedures Manual' with guidance for marking lamprey and provide to the PTSC for review
- Scott and Charlie to update existing PTSC charter as more of a guidance document (will become Guidelines instead of Charter) and potentially expand membership
- Scott, Brandon and Brady to review other options for O&M support at RPJ interrogation site after 2025
- John to enhance tag mask validation codes to include detail of performance evaluation conducted for new tag technology and contact information
- PTAGIS will coordinate with researchers to correct timestamp offset issue and communicate these changes via newsletter article and site event logs

Review Action Items from 2023

- Brady updated Committee on tag RFO process, which is currently underway. BPA would like to know if tag purchase needs will change significantly for FWP 2026-2028
- PTAGIS/PTSC completed coordination for PIT Tag Workshop and retrospective video (thanks to Scott Putnam for many hours on the video with assistance from John, Nicole and Earl)
- PTAGIS still plans to enhance the data file browser feature of the PTAGIS website to improve downloading many files at once
- SbyC page was updated with information about needing additional coordination with USACE for any projects at McNary or John Day

PTAGIS Portland Update

- Attempted lift-and- shift to the cloud – Microsoft Azure. Replicated PTAGIS database, website, reporting and data file processing in cloud and determined it was too expensive to get the same performance in the cloud as is available on current on-premises servers.
- Web enhancements
 - Users can request new interrogation sites
 - Site stewards can update interrogation site metadata
 - Pages for workshop including abstract submission, info page, online agenda usable on a phone
 - Updates to SbyC and clip file downloads
- Working on P5, basically P4 with upgraded technology and some additional features and enhancements. Will be 64-bit only, so 32-bit devices will need to be updated. Planning to release beta to focus group in February
 - Request from Gordy to test USB-A to USB-C adapters

PTAGIS Kennewick Update

2023 Accomplishments

- **O&M of Remote Detection Sites.** Detection efficiency and SbyC diversion rates remain high at all juvenile and adult detection sites.
- **Kennewick Electronics Lab.** Tag QA operated without issues. All tags passed QA in 2023. Transceiver repairs proceeded when needed with all transceivers successfully returned to service.
- **Bonneville WA Shore BO4 Remodel Project.** PTAGIS worked with the USACE Portland District design team to finalize the design of 12 new antennas for Bonneville Dam's WA Shore ladder.
- **PIT Tag Electronics Rooms Software and OS Upgrades.** Completed the final stage of upgrading 31 remote PIT tag electronics rooms by upgrading the data collection software to the latest M5. The final stage of upgrades concluded in November with OS updates.
- **Bonneville P1 I&T Design Sent to the USACE.** A full design for this first-of-its-kind antenna system was developed, prototyped and tested in 2022. After an extensive USACE review in early 2023, it was agreed that a revised design should be submitted. With input from the USACE, a mutually accepted design was reached with final drawings and specs to be provided by the USACE.
- **Electronic Diversion Gates R&D.** A R&D effort was completed for the first separation-by-code system at the Lower Monumental Juvenile Fish Facility that uses all-new electronic diversion gate actuators. This system was developed by the Kennewick staff and is now a template for Lower Granite and Little Goose.
- **Easton Dam Project.** PTAGIS was invited to partner with the USBR and Yakama Nation to design and install antennas on the Easton Dam adult ladder and juvenile bypass. The first stage of this project was successfully completed in 2023 including a new electronics room and antennas on the juvenile bypass.
- **Cle Elum Dam Project.** PTAGIS worked in partnership with the USBR and Yakama Nation to design and install antennas on the Cle Elum Dam ladder and juvenile bypass. This project is in the late stages of designing the PIT tag system.
- **Clear Creek Dam Project.** PTAGIS was invited to partner with the USBR and Yakama Nation to design and install antennas on the Clear Creek Dam ladder and juvenile bypass. This project is in the first stages of designing the PIT tag system. PTAGIS is attending design meetings with the agencies. Design meetings continued in 2023.
- **Klickitat Hatchery Project.** The design of a complete PIT tag system for the Yakama Nation Klickitat Hatchery Remodel Project was completed. This includes antennas at the adult channel, juvenile outfall and a new PT room. Construction will start in 2024.
- **Antenna R&D.** The R&D of a new-technology thin-body antenna using water resistant cable was completed. This antenna design will be used in most of the new facilities that PTAGIS designs. The design is simpler than older antennas, are almost completely resistant to water intrusion and are lower in cost to build. This antenna design is now in use at Bonneville's Cascades Island ladder and the Easton Dam juvenile bypass.
- **In-House Antenna Construction.** Due to extreme price increases by our main antenna suppliers and the lack of other viable companies that work in polypropylene plastic construction, the Kennewick office has moved to construct antennas in the Kennewick shop.

2024 Plans

- **Bonneville WA Shore BO4 Remodel Project.** Construction will start in December with 12 new antennas to be installed in early 2025. PTAGIS will provide construction QA for the project and install all electronics.
- **I&T Sluiceway Project.** PTAGIS is currently waiting for a completed USACE design for the antenna system. Upon receiving the design, PTAGIS will construct the antenna shield then install the system on a spare gate to be delivered to NOAA Pasco by the USACE. Once completed, with final inspections from the USACE, the antenna / gate assembly will be delivered to Bonneville for installation.
- **Electronic Diversion Gates R&D.** With funds from the BOG process, these systems will be installed at Lower Granite and Little Goose during the winter water-down of 2024.
- **Easton Dam Project.** If USBR funds are in place, PTAGIS will work with the USBR to install a five-antenna system on the adult ladder.
- **Cle Elum Dam Project.** PTAGIS will continue to work in partnership with the USBR and Yakama Nation to design and install antennas on the Cle Elum Dam ladder and juvenile bypass. This project is in the final stages of design with construction starting this spring.
- **Clear Creek Dam Project.** This project is in the middle stages of design. PTAGIS will continue as advisors to the USBR and YN for the antenna system.
- **Klickitat Hatchery Project.** This project is slated to start construction this summer. It will include 2 antennas on the adult intake channel and 3 antennas on the juvenile exit. PTAGIS will install all electronics and a new PIT Tag electronics room.
- **New PIT Tag RFO.** As with past RFOs, PTAGIS will test all submitted tags with the same array of tests performed in 2017. The results of the tests will be sent to NOAA for evaluation and submittal to BPA.
- **Pend Oreille Region.** Albeni Falls Dam wants to work with Kennewick to design PIT tag detection for the new passage structure current in planning.

Inclusion of Pend Oreille Region in PTAGIS

- Working on bull trout and adding passage at Albeni Falls Dam
- Would like Kennewick expertise on including PIT tag detection equipment in the new passage facility
- Biologists would like to include PIT tag data in PTAGIS
- It is in Columbia Basin with several BPA funded projects
- BPA has no objections, PTSC has no objections

NOAA R&D Project Update

- Ice and trash sluiceway detector antennas could be used elsewhere
- Investigating how best to increase detections at McNary
- Enhance pile dike sites in estuary to include more antennas which could gain several thousand more detections
- Gabriel Brooks provides support for instream site managers from many agencies
- Supporting Kennewick staff with antenna design, installation and other R&D activities
- GRS maintenance platform is almost ready to use. It is very heavy. When needed, it will be lowered into place with a crane with help from a barge below for positioning. Staff will access the platform via the barge. Platform can be set in two positions to access all of the antennas.

Workshop Debrief

- Scott heard kudos across the board about the workshop, one suggestion received to hold the IPTDS workshops before the conference instead of at the end
- Food is a little pricey at Skamania
- Workshops on Thursday afternoon were well attended
- It was a lot of work for PTAGIS staff because there are not as many PSMFC staff dedicated to event planning as there were in the past. In future PTAGIS would like to see more support from PSMFC or may consider sub-contracting it out.
- Charlie commented that the acoustics were difficult for some attendees and those with hearing issues in particular, but did like that the presenter view screen was in front of the speaker so they did not need to turn and look at the slide behind them. Also thought the quality of the presentations was high.
- The workshop page will turn into an archive for the presentations and include some pictures along with the retrospective video, which includes closed captions.
- Brandon offered support with future workshops
- IPTDS Subcommittee did a good job with organizing Thursday
- Jeff commented that it could have been more promoted on the PTAGIS website
 - If more presenters are desired, consider pushing the deadline for abstract submissions later. Even a week would likely have helped as September 9 was very close to summer vacations.
 - Also consider recruiting speakers that may have a lot to contribute
 - As a presenter, Jeff missed having a mouse to point to items on slides
 - Likes the workshops at the end
 - Expand vendors to other technologies and pricing seems on the low end of PTAGIS could charge. More recruiting here could also help.
- Gordy would like to see more out-of-basin presentations and/or talks not centered on fish
- PTSC could help with presenter recruitment next time
- John heard comments that the vendors were lacking, would like to get more next time
- USFWS Vancouver office was able to send more people because it was so close to them and because it is a workshop and offers training
- Brady thinks having the training at the end was helpful in getting more folks to attend

Update Marking Procedures Manual

- Will Simpson provided an update on writing a section for tagging lamprey, he has reached out to the lamprey working group. Planning for a draft for this spring and get feedback before sharing with PTSC
- Would be worth repeating the food safety and HDX/FDX concerns
- Tiffani worked on section related to tagging small fish or with small tags that also needs to be incorporated into the next revision

Update PTSC Charter

- Action: Charlie and Scott working on draft for review this year
- Basic idea is to replace “charter” with “guidelines”
- Scott has received a request from Nez Perce Tribe to expand membership to tribes

- All agreed the guidelines should include updated language that expands potential PTSC membership
- All thought a newsletter article would be good way to disseminate the information and ask for additional members
- Charlie also suggests that FPAC could be another venue for letting folks know
- Brady and others suggested that including USACE on PTSC would benefit coordination
- Brandon commented that FPAC specifically does not include USACE or BPA, Since PTSC is a subcommittee of FPAC, there may be a conflict of interest if it were to have representation from the action agencies. Charlie noted that the PTSC is an advisory committee only, so this may not be an issue.

RPJ O&M Support

- PTAGIS Kennewick has been subcontracting to Biomark to maintain the equipment to monitor volitional release from Rapid River Hatchery
- It is owned by Idaho Power and the question was asked why PTAGIS is spending money on it
- Scott Putnam operates the Salmon River smolt trap, which is a CSS trap, and uses RPJ to figure out when the large volitional release is going to hit Salmon River trap, so it can be avoided. Otherwise the trap might reach its take limit too early in the season.
- John Cassinelli (IDFG Anadromous Fisheries Program Manager) says the run timing on those tags is useful to other groups as well
- Stuart Rosenberger might not have a problem paying for internet if they are already doing so (personal contact with Scott at the workshop)
- PTAGIS is going to fund O&M for at least the next 2 years. If decision is made to end that support, will leave antennas and transceivers, but take computer equipment. Perhaps IDFG instream folks could assist with O&M, if needed. Scott will look into it.
- Brandon noted FPC uses RPJ detections to calculate travel time for hatchery reports. He also noted that the CSS tags are the only tags they use at Rapid River.
- Brady commented that since BPA funds CSS tagging there, it makes sense to fund detections there as well
- Brandon asked if needed in the future, could O&M of RPJ could be put under the CSS contract since the Salmon River trap is a CSS site. Brady will look into it

Review Tag Mask Evaluation and Approval Process

- John proposes that the person who requests to add a tag mask will be associated with that tag mask with contact information to answer any questions about application or performance of those tags
- PTAGIS will create a page that displays all the tag masks and it would contain the information submitted by the researcher who requested the tag mask, including how they evaluated the tag
- Brandon – consider adding language that an approved tag mask has not necessarily been fully evaluated for performance in the PTAGIS system
- John – tags that go through the RFO and meet system specs will be automatically approved and listed as just that, tags that do not meet performance standards will not be shown
- PTAGIS will only test tags as requested by BPA
- John will work on mock-up of the enhanced web features for PTSC review

Timestamp Correction for Substantial Number of Observation Records

- Significant number of observation records have timestamps that are 1 hour off
 - ~140 sites
 - ~180 thousand data files
 - ~10 million data rows
- This is too many files to reprocess, but data can be fixed in database. Should PTAGIS do that and what kind of documentation should be created?
- Brandon noted that one hour probably doesn't make much of a difference in travel time calcs
- PTAGIS policy has always been that the data in the database matches the files.
- PTSC agreed that PTAGIS should take the following actions:
 - request that data contributor correct the original data files
 - PTAGIS to spot check data files to make sure they have been corrected
 - update the data in the database rather than reprocess the files
 - notify data extract users before the database update
 - Event logs for each site with timeframe of data edited and when it was changed
 - Document the correction in a newsletter article

Request to Have PTAGIS Store Data Used for Research Papers

- Both Russel Scranton and Dalton Hance asked about the possibility of PTAGIS storing data sets used for papers
- Gordy noted that he cites PTAGIS as the database used, then in methods describes step-by-step how the data was queried
- The PTAGIS reporting system and web API could be used to fulfill this, if the researcher exports the results set to the API, then a simple URL can be used to download the data
- John and Nicole will write up a newsletter article and FAQ on how to do this

Request to PIT Tag Rocks

- Ian Jezorek asked if PTAGIS would accept PIT-tagged rocks, will be used to monitor movement
- PTSC had minor concern with rocks getting stuck on instream site antennas and shutting them down for extended periods
- No issues with using the Other (00U) species code for rocks

Request from WDFW to incorporate Puget Sound data into PTAGIS

- Charlie brought to the group that WDFW is willing to provide funding to host Puget Sound data
- Charlie sees the value in having a central location for all WA PIT tag data, as long as it does not impact PTAGIS
- John suggests that PTAGIS could work with other data management systems to find intersecting tags, such as avian predation records from different basins, similar to what is occurring in the Klamath Basin.

Chair and Co-chair

- Charlie and Scott will be co-chairs