2021 Annual PIT Tag Steering Committee

January 21, 2021 – Online

Attendees: Tom Pansky, Charles Morrill, Brandon Chockley, Tiffani Marsh, Scott Putnam, Pat Keniry, Will Simpson, Jeff Fryer, Gabriel Brooks, Gordon Axel, Brady Allen, Christine Petersen, Ben Truscott, Don Warf, John Tenney, Daniel Wilson, Sebastian Dudek, Craig White, Nicole Tancreto

Action Items:

- Review and update Length field definition to include guidance about precision (holdover from 2020)
- PTAGIS will ensure easy access to rejected data files in new data file repository
- Charlie and Don will work together to communicate with USACE regarding fixing the antenna conduit issues at GRS
- Charlie and Don will work together to communicate with USACE regarding the infrastructure installation needed to complete the Bonneville BO2 rebuild
- PTSC agreed to provide beta testing of new PTAGIS website
- PTSC agreed to postpone workshop to 2023. PTAGIS will gather feedback from community on usefulness of holding a smaller webinar in 2022
- PTAGIS will update how RKM values are stored for interrogation sites to show historical values with historical observations

Portland 2020 Update and 2021 Plans

John Tenney presented a review of the Portland office accomplishments for 2020 and plans for 2021. See presentation.

Regarding the drop in SbyC use

Tiffani Marsh noted that access to the Walla Walla district dams was restricted in 2020 due to COVID. It appears that SMP and SbyC activities will be normal in 2021, with extra protocols for preventing COVID

Brandon Chockley noted that SMP continued in 2020 at the Walla Walla sites.

Regarding I5 Software

Scott Putnam volunteered to join the focus group for testing.

Charlie Morrill requested that PTSC and IPTDS subcommittee work on request to Biomark to add total tag count when downloading from transceiver buffers. This would help I5 to check that all data are received when downloading from a transceiver.

Gabriel Brooks added this this could potentially fall under NOAA R&D project, would need a scope of work and get a quote from Biomark on what it would cost.

PTAGIS will present this idea to IPTDS Subcommittee for their feedback

Regarding Data File access

John presented on new data file repository, audit and retrieval features which will supersede FTP access.

Tiffani noted that it is important to make it easy to download many files at once and to be able to easily find and download rejected files. Both features will be included in the new system.

PTAGIS Kennewick 2020 Update and 2021 Plans

Don Warf presented a review of the Kennewick office accomplishments for 2020 and plans for 2021. See presentation.

Regarding Updating SbyC Slide Gates to Electronic Models

Don requested feedback on the necessity of updating the separator SbyC slide gates from pneumatic to electronic models given the lower fish traffic through JFFs.

Tiffani noted that lower traffic through JFFs is likely from the high spill, but also that NOAA did not tag at Lower Granite last year due to COVID. However, collection for transportation was also way down to just over 1.5 million vs over 5 million in other years at Lower Granite. She also noted that collection would be affect by flows, with higher flows resulting in higher collection due to the 125% TDG cap.

Gabriel added that if a fish used a spill route, they often used spill route at dams downstream. It is something they might be able to explore more with the addition of GRS.

Charlie recommended that the PTSC continues to support the electronic enhancements of separator gates.

Regarding First Year of GRS Operation and Continuing Needs

Gordon Axel noted that the USACE has yet to purchase materials for the GRS barge access system necessary for maintenance. Once materials are purchased, NOAA can move forward with construction. He also noted that the Corps are planning to spill every other day in March for kelt passage, so the offseason for maintenance work is compressed in 2021.

Charlie offered to work with Corps to fix the antenna conduit issues (leaking and vibration). Don mentioned that getting a new MOU in place could also help with these types of issues.

Don pointed out that the lower row of antennas can detect fish in the tailrace if they come up close enough to the surface and is working on a solution. Part of that would be to automate putting transceivers in standby when no water is running through the spillway. Gabriel suggested trying an audible sensor.

Charlie doesn't see detections from tailrace when spillway is closed as a concern, and thinks they provide extra information to researchers investigating adult fallbacks or overshoots. Tiffani does see them as a potential issue from data miners who don't know the system and assume that a detection on GRS means the fish traveled over the spillway.

Don and Gabriel pointed out that shutting down transceivers or putting them in standby may be beneficial to the electronics by extending the life expectancy.

Kennewick will continue to investigate a sensor, but will wait for more feedback from the committee before proceeding.

Gabriel noted that the synchronization scheme and remote-control system for transceiver power supplies requested by Kennewick have been figured out by Biomark, and NOAA is working on the details to get those accomplished in 2021.

Regarding installation of BO2 replacement

Existing PIT tag room at BO2 is continuing to sink. Kennewick has new antennas to install further up the ladder, but USACE has not yet committed to completing the electronic infrastructure necessary to turn them on.

Charlie offered to work with Don to best communicate the benefits of completing the infrastructure as soon as possible.

Regarding the Addition of Detection Points at Bonneville Dam

Charlie noted that adding detection to the first powerhouse ice and trash sluiceway is on hold from Corps side. NOAA would like it to go forward to increase PIT tag detection to boost survival estimates.

Regarding Barge Load Line Antennas

Antennas on barge loading flumes will be in place for the 2021 season, not sure what kind of efficiency will be possible, but left room to add more antennas if necessary.

Tiffani noted that when they release tagged transport fish at GRJ the efficiency will likely take a hit as there will be a lot of tagged fish close together. She also suggests her transport tagging could be used to estimate efficiency, with the caveat that some fish escape from the transport holding every year.

NOAA R&D Update

Gabriel Brooks and Gordy Axel presented the current NOAA R&D proposal for 2021, which still needs approval. See presentation.

GRS direct fish release evaluation planned for mid-March, with plans to evaluate efficiency at 2 depths and 3 locations, using both 12mm and 9mm tags. Funded by USACE.

Bonneville Ice and Trash Sluice PIT detection is on the back burner

Development of new multiplexor using the IS1001 reader to help reduce system cost, will be very similar to the old Mux (FS1001M), but read FDX, HDX and half telegram tags. Completion planned for summer 2022.

Updates on flexible antenna used for the trawl, the goal is to replace the original trawl antennas eventually. To do that, we need to improve spread in the water, reduce drag and vibration with cable fairing, net reel for easier deployment, updated transceiver enclosures, synchronization over fiber for additional master controllers and antennas.

Enhance pile dike interrogation system below Bonneville (PD7). Trying to increase juvenile detection by installing antennas on upstream side.

Add another pile dike system to increase juvenile detection and use as a test bed for power systems.

Charlie asked how the flexible antenna system compares to the barges.

Gabriel indicated that based on one year of testing, 9 barges would be needed to get the same amount of detections the trawl gets.

Charlie asked if a barge could be used instead of RSW system like at Lower Granite. Tiffani suggested putting a barge in forebay in front of a spillway. Gordy had suggested that, but the Corps prefer detection below Bonneville to ensure the fish detected have actually passed the dam.

IPTDS Subcommittee Update

Gabriel Brooks presented an update of the first year of the Instream PIT Tag Detection System (IPTDS) Subcommittee. See presentation.

- It's been a good forum for people across the region to share information.
- The subcommittee provided input to PTAGIS on instream related features
- Started working on establishing standards for site diagrams
- Worked on agenda for PIT Tag workshop before it was postponed

PIT Tag Workshop Considerations

PTAGIS has been planning to reschedule the workshop for January 2022, but is wondering if it will be possible, both in terms of COVID-19 and of agency operations. Some options to consider:

- In-person workshop in 2022
- In-person workshop in 2023
- Virtual workshop in 2022

Tiffani noted that a lot of the value of the workshop takes place outside the scheduled talks, and thinks that a virtual workshop would not be as useful, but January 2022 is seeming less possible.

Charlie suggested holding one or a several small webinars in 2022 and an in-person workshop in 2023

Brandon suggested holding it in fall 2022, but several members noted that fall is a busy time and may not get full attendance.

The group agreed that winter is best time to hold it and that in-person 2022 does not seem like a good possibility. PTAGIS will gather feedback from the community on holding small webinar in 2022 and plan for full workshop in 2023.

PTAGIS Website Testing and Rollout

PTAGIS requests that the PTSC (and IPTDS Subcommittee) work as a focus group and review website information and test advanced features. Plan is to have a beta ready for the group to test in the next month or two and release into production sometime in summer. PTAGIS will prepare documentation on what to test and ask certain members to test those features they use most often.

Brandon suggested that members interested in testing specific features contact Nicole with that information.

River Kilometers for Interrogation Sites Which Have Moved

A small number of interrogation sites have moved from their original location far enough up or downstream to require the site RKM to change. PTAGIS currently displays the most current RKM on the metadata page and with observation records in the reporting system, regardless of when the

observation occurred. PTAGIS also records the RKM at the time the observation was recorded, so that when an observation record is viewed it could show the RKM of the site at the time it was recorded. This is how data extract files can get RKM, though they can also use the most current RKM.

Should PTAGIS show the historical RKM value with historical records of a site? PTSC agrees that it should.

Wrap Up

Tiffani is interested in getting the new M5 file format when it has solidified. John suggested PTAGIS might be able to provide that information another way since we also use it to compute SbyC gate efficiencies.

Charlie and Tiffani will remain co-chairs.