2015 Annual PTSC Meeting

January 30, 2015

Attendees: Nicole Tancreto, John Tenney, Tiffani Marsh, Charles Morrill, Steve Pastor, Daniel Wilson, Craig White, Jeff Fryer, Don Warf, Scott Putnam, Pat Keniry, Brandon Chockley, Sharon Grant, Scott Bettin

Action Items

- Tiffani will draft an article for the newsletter about the PTSC decision to allow lamprey to be tagged with FDX technology and ask for feedback from the community about potential impacts to salmonid detections. PTAGIS will create a forum for this purpose.
- Scott Bettin will contact lamprey researchers to start gathering information. Researchers known to use PIT tags in lamprey: Mary Moser, Chris Caudill, Aaron Jackson. Scott is invited to submit an article for the next PTAGIS newsletter, as well.
- Nicole will incorporate agreed upon changes to the PIT Tag Selection Guidance Document and circulate to the committee for final review and approval.
- Nicole will circulate the draft tag mask request form to the committee for review and approval
- John and Craig will update the MRR data model with changes and additions agreed upon in this meeting
- Craig and Nicole will recast the tags used in the 2014 live fish test at BCC from Test to Known
- Nicole will add new species codes for Brook lamprey and Unknown lamprey
- Nicole will update the Spec Doc with information linking to validation codes on the web and update the PTSC contact page.

Review of Action Items from 2014

- Dual-mode HDX/FDX testing was completed and it does affect performance negatively
- Lamprey marking with FDX tags – Steve talked with USFWS folks about this issue and those folks are not very interested in using FDX. Mary Moser has done some video work that shows lamprey don't hang around the orifices very long. Don has low concern about lamprey being tagged with FDX.
- Don provided a draft newsletter article that summarizes the history of antenna redundancy at mainstem interrogation sites well. Jeff suggests that having 3 antennas in ladders would help with determining directionality and fallbacks. Don would love to have 3 antennas, but the Corps paid for all of the new systems and didn't want 3 antennas. We will incorporate Tiffani's edits and have it go around the committee for one more review.
- John contacted Jody White about completing the Instream metadata recommendations, but nothing has been finalized. Following the open forum at the workshop, Steve had the impression that the group made the commitment that they would follow through on this. PTAGIS will send basecamp info to John Arterburn, Chris Jordan and company and cc PTSC.
- All other 2014 action items were completed

PTAGIS 2014 Program Review and 2015 Plans

Portland Program Review

- Developed new transceiver monitoring system (TASS) for Kennewick O&M
- Implemented tag mask validation for MRR data
- Traveled to select locations in the Basin for Information Sessions
- Enhanced data loading processes and notifications
- Enhanced attributes and metrics available to reporting system
- Started MRR data model evolution
- Developed PIT Tag Forecaster

Portland Program 2015 Plans

- Big priority for 2015 is P4, Daniel Wilson was hired as part of that push.
- Tag distribution integrated into reporting
- New MRR data model, file format, and loading process
- Web services to accept data submissions
- Validation codes request form on website
- New SbyC request form
- Website design update
- QA/QC anomalies
- New PIT tag selection guidance document

Kennewick Program Review

- Near 100% detection efficiencies with exception of BCC
- SbyC diversion efficiency 98-99%
- 89 FS2020s installed – these reduce maintenance costs because of auto-tuning feature and have better read range; will be installed at Ice Harbor in 2015
- Developed and built timer tags to replace old failing ones
- Continue to repair all transceivers in house
- UPSs installed at all mainstem juvenile full flow, adult ladders, LGR separator antennas
- Increased tag testing sample rate from 1% to 3%, no batch failures
- FS3001 transceiver is in use at BCC and is much improved over original BCC transceiver
- New antennas installed at Little Goose and Lower Monumental
- Still waiting on fiber connectivity to Lower Monumental adult ladder PIT tag room
- Developed prototype antenna for John Day ladders to bolt on top of the overflow weir

Kennewick Program 2015 Plans

- Complete Lower Monumental adult ladder PIT tag room when fiber is installed
- Install thin-body antennas at ice harbor adult trap
- Replace all non-SbyC data collection computers
- Ogee project
- John day ladder system

Review Recommendations for Tagging Lamprey with HDX vs. FDX

Scott Bettin, BPA, joined the PTSC meeting via teleconference to request that the committee revisit the decision to recommend tagging lamprey only with HDX tags. When the decision was first made, the primary driver was the concern that lamprey would attach to structures within the read range of antennas for extended time periods and block all other detections on that antenna while it was there, but this no longer considered an issue. Tiffani brought up Mary Moser's video work that shows lamprey don't hang out around weir orifices, but travel through them quickly (on average, three minutes). Don indicated that they have not observed any of the 14k lamprey currently tagged with FDX technology attaching to antennas, and that the HDX systems in the LPS actually cause a lot of interference and problems with the ladder detection systems.

Tiffani asked if the idea behind this would be to change the Lamprey Passage Structure (LPS) interrogation systems from HDX to FDX and how the costs for that would be handled. Scott indicated that is the preference and that the costs would need to be analyzed. Don said that PTAGIS could donate the FS1001A transceivers that are being replaced by FS2020s to the LPS systems.

Jeff said that if all the lamprey antennas in the ladders were switched to FDX, this would also benefit salmonid detections. If this occurred, would PTAGIS be involved in maintaining them?

John indicated that if they were on the mainstem, PTAGIS would maintain them under the current contract and added that another benefit would be the loading of lamprey detections in PTAGIS automatically. Don would recommend replacing current lamprey antennas with thin-walled antennas for improved performance and maintenance. He also recommends that the folks primarily involved with tagging and detecting lamprey get together in a room to discuss the benefits and impacts of this type of switch.

Based on available evidence indicating little to no potential for impacting salmonid detection, Tiffani proposed the committee approve FDX tags for use in lamprey. The motion was seconded by Pat and Scott and approved by the committee. The committee wants feedback from the Columbia Basin PIT tag community about the use of FDX tags in lamprey and will work with PTAGIS to provide a mechanism for this feedback. This is not a mandatory switch from HDX to FDX, and if lamprey researchers want to explore making the change they will need to coordinate with each other and funding agencies.

Actions:

- Tiffani will draft an article for the newsletter about the PTSC decision and ask for feedback from the community about potential impacts to salmonid detections.
- PTAGIS will create a forum for this purpose.
- Scott Bettin will contact lamprey researchers to start gathering information. Researchers known to use PIT tags in lamprey: Mary Moser, Chris Caudill, Aaron Jackson.
- Scott is invited to submit an article for the next PTAGIS newsletter, as well.

PIT tag selection guidance

John reviewed the history of tag validation in PTAGIS software and the database (as reported in article #7 of the June 2014 newsletter).

This agenda item is covering two separate, but related topics:

1. Draft document that provides guidance to researchers who want to purchase PIT tags

The committee reviewed the guidance document and spent some time editing. Once finalized, it will be published on the website and announced in the next PTAGIS newsletter.

2. Process for requesting and approving new tag mask validation codes

There will be a web form for researchers to request that a new tag mask be added to the validation codes. This will ensure that MRR and interrogation data submitted to PTAGIS referencing these PIT tag codes will be available through the reporting system. Nicole will circulate the draft form that is currently in development for comment from the committee.

Actions:

- Nicole will incorporate agreed upon changes to the guidance document and circulate to the committee for final review and approval.
- Nicole will circulate the draft tag mask request form to the committee for review.

MRR Data Model Review – existing fields

Craig led a discussion about changes to existing fields in the MRR data model. The following changes were approved by the committee.

File Name: TDP-YYYY-DOY-EXT.xml
Where **TDP** = Tag data project ID; **YYYY** = year of the first event date in the file; **DOY** = the day of year of the first event date in the file; **EXT** = user-entered alphanumeric string analogous to the extension in the current tag file name

Tag Date: name will be changed to Event Date and it will be recorded in date/time offset format which PTAGIS will convert to PST for loading into database

Session Message: Expanded from 76 characters to 200 characters

Raceway/Transect/Tank: make it clear this field can be used for any holding apparatus (e.g. buckets, etc.) and isn't just for use at hatcheries, expanded to 10 or 20 characters

Release River KM: don't add underscore to the beginning of RKM field; expand field length to fit all necessary triplets; use it as an address not a measure. PTAGIS will explore adding new field for RKM measure.

Fork length: Units will remain millimeters. In P4 would be useful to be able to record length in cm, and have it converted automatically to mm. May need to add something to the field definition to explain the difference in precision. Suggestion to add validation on fork length using Life Stage, probably just a warning because of ambiguity.

Session Note: will be loaded into database from P4

Detail Note: will be loaded into database and tied to the detail record on which it was entered

MRR Data Model Review – new fields

Craig led a discussion about proposed new fields. The following additions were approved.

Release Latitude and Longitude: optional. PTAGIS will either need to specify one format, coordinate system and datum (e.g. decimal degree, geographic coordinate system, WGS84 datum) are a few possibilities and then convert to a standard. Would be good to include some sort of precision indicator – source, or qualitative precision value. Would not replace RKM.

Event Type: Required to specify whether the record is a mark, recapture, or recovery. There is support for adding a new event type of **Passive Recapture**, but the definition needs to be clear.

Life Stage: the domain should be limited to **Adult or juvenile**. Conditional comments can be used to specify more precise values, such as parr/fry, smolt, jack, kelt, carcass, harvest, etc. Would need to add carcass and harvest flags to validation codes.

Spawn Year: Optional, needs good definition

BPA project number: do not add this field in the first version because it could be misleading. A data user could too easily misuse the information and tags can be used for more than one BPA project.

Project specific fields: Details still need to be worked out, but would allow users to define fields outside of the PTAGIS dataset and collect data for them in P4. Fields would not be sent to PTAGIS, but could be exported. Additional Positional would be default fixed field in this category. Some details that still need to be decided: Would they be included in the file? We were not planning on doing that, but it is worth considering. This would give the researcher an easy way to archive that information with the files on the PTAGIS server.

Additional tag code: Optional; one or more tag codes could be entered to be associated with the PIT-tagged fish

Additional tag code type: Required if additional tag code is entered. Would become validation code with initial domain of: CWT, Elastomer, Acoustic, Radio

Collection range – Do not add this, as the project specific fields could be used for this information

Tag type and size: A clear decision was not reached on these fields. This information could easily be loaded in a different process from clip/vendor files or list of tag codes from researcher. They could be combined into one field (e.g. FDX 12mm, HDX 12mm, etc), or separated into 2 different fields: Tag type = HDX/FDX. Tag Size = general size classes e.g. 12mm, 9mm.

Gender/Sex: leave in conditional comments, do not add separate field

Adding data from outside Columbia Basin

Nicole has received requests from the Chehalis Tribe and WA state Olympic Experimental Forest to submit PIT tag data to PTAGIS. The committee agrees that it is acceptable to add data from outside the Columbia Basin, as long as it does not impact primary operations. There could be some benefits for adding data from the Chehalis River in terms of detection of strays.

How to report anomalous events to data users

Add some sort of anomalous event to database so there would be a flag in reporting data. Or can it be a webpage that just lists events. Could be internal mechanism that PTSC decides these tags should have a flag. Newsletter article pointing to the report.

Live fish tests

A live fish test was conducted in 2014 of the new BCC transceiver. The tags used in these fish were categorized as test tags before the test. After the release, some of them were detected on the trawl in the estuary and we received questions about why they were not showing up in the reporting system. The committee agrees that if a tag is in a fish that has a chance of being detected on more than just the system being tested, then it should not be categorized as a test tag. Mark data should be submitted that also records the purpose for the test. The tags from the 2014 test of BCC will be re-categorized from Test to Known.

Adding new lamprey species codes

The original lamprey species code was somewhat generic and was only defined as Lamprey. In 2010, the definition was changed to Pacific lamprey. Mary Moser has requested that Brook lamprey be added as an available species code. However, in some life stages it is difficult to distinguish between pacific and brook lamprey, so it would be beneficial to have a way to record those occasions. The committee decided to add a species code for brook lamprey and one for unknown lamprey.

This discussion brought up that the validation code information in the PIT Tag Specification Document (Spec Doc) is out of date (as well as, the PTSC contact information). PTAGIS has held off on updating the Spec Doc because of the system upgrades that are in progress, but adding notes to the title page or to the validation codes page to link to the website would be beneficial.

Action: Nicole will update the Spec Doc with information linking to validation codes on the web and update the PTSC contact page.

PTSC Committee Chair

Charlie Morrill volunteered to become the PTSC committee chair and Scott Putnam was nominated to become co-chair.