2008 PTSC Meeting

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2008 PIT Tag Steering Committee Meeting

The PTSC Annual Meeting was held at the PTAGIS Field Operations Office in Kennewick, Washington on January 15-16, 2008.

2008 PTSC Meeting Agenda

Time	***Item***	***Person***	***Description***
10:00 Tuesday	Welcome and Introductions		
10:05 - 10:45	Automated PIT Tag Test System Demo	Alan Brower	APTTS
10:45 - 10:55	Tag Forecast & Distribution Process	Carter Stein & Jenn Nighbor	TDI Upgrade
11:00 - 12:00	M4 Project Status and PTAGIS Client Software Plans	John Tenney	M4 Delivery
12:00 - 12:30	Lunch		
12:30 - 13:00	PTAGIS O&M Status	Don Warf	PTAGIS Field Operations
13:00 - 14:00	NOAA Fisheries Status	Sandy Downing	(Spillway, RSW, New Transceiver, 8.5mm Tag Tests, Acoustic/PIT Marking Requirements)
14:00 - 14:15	B2CC Transceiver Upgrade Project	Roger Anderson	BCC
15:00 - 15:15	Biomark Updates	Dean Park	(Projects of interest)
15:15 - 15:30	Break		
15:30 - 15:45	FCRPS PIT Tag Transceiver Issues	Carter Stein / Don Warf	FS1001
15:45 - 16:00	Klickitat Project	Carter / Sandy	Klickitat Background Memo
16:00 - 16:15	Sullivan Project	Carter / Pat	WFF Background
8:00 - 10:30 Wednesday	2008 PIT Tag Specification Document Walkthrough	Carter	2008 Draft
10:30	Select New Chairpersons	Pat	

O&M letter From PTSC to FPAC discussed at the January 2008 annual meeting

Dear FPAC

Pat Keniry said that he would draft a letter for FPAC that would identify infrastructure upgrades required for Rapid River, which has been part of the basic for the past nine years. In addition, the letter to FPAC would identify Willamette Falls Fishway as a project that is a candidate for inclusion in the PTAGIS O&M infrastructure, but money is necessary to bring the facility up to PTAGIS operational standards. FPAC will be asked to provide direction for upgrades to RPJ and incorporating WFF into the basic PTAGIS O&M infrastructure.

Sincerely,

Pat

2008 PIT Tag Steering Committee Meeting

January 15, 2008, Kennewick, WA

Automated PIT Tag Test System

1. Alan Brower provided a demonstration of the Automated PIT Tag Test System. He demonstrated both single tag analysis and batch mode analysis. The APTTS was developed to provide a tool for the PTSC's 'Tag Qualification Process', and to improve the speed and quality of PIT Tag performance measurements. (See APTTS on the PTAGIS Wiki).
2. Don Warf provided a tour of the PTAGIS Kennewick Field Office. He showed the group the PLC development lab that is used to build separation gate sensors, water level sensors, and other controls used at PIT tag interrogation sites. He also showed the Radio Frequency Shield room that is used to test large antennas while screening out unwanted electromagnetic noise. In addition, Don showed the group the monitor test belt that emulates a four antenna group that is used in separation by code scenarios.

M4 and PTAGIS Client Update

1. John Tenney provided a status update for the "M4" project. M4 is windows based software that is being developed to not only replace the DOS based "MULTIMON.EXE" system used for Separation by Code project, but also the MINIMON.EXE program that is used by other non-FCRPS interrogation sites. (See M4 Delivery on the PTAGIS Wiki).
2. John reported that the "MobileMon" and MobileSyncManager tools are no longer being supported. These tools will be replaced by M4 running on embedded XP system hardware (Gasvoda reference).
3. Carter reported that PNNL has inquired about the prospect of PTAGIS tagging software (P3) incorporating an acoustic tag reading device (JSAT tags). PNNL would like to have a solution by April, if it is possible. The acoustic code could be embedded into a comment field. Doug suggested that the Acoustic Tags should be placed into the Additional Positional Comment field. Additional Positional Comments do not get stored in the central PTAGIS database. John suggested that PTAGIS could construct a 'one-off' version of P3 that could be distributed only to AT / PIT project coordinators. The committee agreed that

PTAGIS should try to support these new requirements from PNNL since they would benefit other projects.
4. Sandy also mentioned that in-stream marking users would like to be able to have P3 keep track of marking locations (e.g., to allow multiple marking / release locations per tagging file). John suggested that changes like this would be better incorporated into a new program that was specifically designed for these types or new marking requirements. John said that PTAGIS would conduct a survey of P3 users and features during 2008 to better learn user requirements.
5. Dave Marvin suggested that University of Idaho and others that double mark radio tags with radio tags could benefit from adding additional mark devices. Carter suggested that adding these additional marks to the PIT tag data set could turn out to be just as 'successful' as incorporating Coded Wire Tag batch codes in the PIT tag data set. Charles suggested that we should be receptive to adapting to incorporating this type of data in order to better assist the fisheries management decision process.

NOAA Update

1. Roger reported that ADSX and Digital Angel have reorganized into a new entity, DIGA. In addition, DIGA has acquired Geissler Technologies, and Randy Geissler will be back to help to strengthen the fisheries market shares. The fisheries community would be supported by the Destron / Fearing (DF) brand of DIGA.
2. Roger discussed status of the B2CC transceiver upgrade project. He reported that Scott Livingston (PTAGIS) was in Minnesota last week and worked with Alex (DA). The four units are now hardware compatible. One of the units will remain with DF for further development and testing. The other three will be in the field. One will be in production, and two will be available as spares.
DF has engaged a company called STR to assume maintenance of the firmware for the B2CC transceiver. Roger showed the delivery schedule for the nine software tasks of the project. Task six is related to the identification of spurious tags – these are tags that can be 'false-positives'. Brad Peterson said that a spurious tag was a tag that was only seen once.
Roger described that two units would be at the B2CC at season begin (in March, 2008). A third unit would be at STR in Canada, and the fourth unit would be at DF in Minnesota.
Don Warf asked how the units performance could be qualified. John suggested that the units could be load tested in a laboratory environment. Charles asked why a fish test wasn't included in the project. Sandy and Carter suggested that the main reason was the cost of a live fish test.
Don recalled that last year the transceiver was swapped out about five times last year. Sandy said that NOAA had DF perform a site visit last year just prior to her fish tests. She said that Alex would tweak the reader, and then would perform a live fish test. Don said that it is difficult to know whether or not the readers performance was optimized without a live fish test. Don also described an automated test that could be driven by moving a tag into and out of the field (using a servo motor and linear drive controlled by a PLC connected to a special version of MinMon that was originally modified to operate the flat-plate pit tag

detector at DSM1 at Bonneville Dam) to determine how the reader was performing.

3. Roger discussed a PIT tags matrix that showed TX1400SSt, TX1429SST (20mm) and TXP1485B (8.5mm) tags with parameters of Length, Diameter, Weight and Date Available. Roger described that the 8.5mm tag has the readability of the former, 12mm "BE" tag. The new 8.5mm model (TX1485B (note no "P" in model number)) should have a readability similar to the former "ST" tag. Delivery lead times is about 12 weeks from the time of an order for tags not in inventory.

Dean Park asked whether Sandy was going to perform tests on the new 8.5mm tags. She said that we would prefer to perform the tests at the B01 fish ladder with the new 8.5mm tags by the beginning of February 2008.

Dean asked what the difference on the size of the tolerance of tag size based on the glass used. Roger said the new tag would have better tolerance.

Roger described that a new die is smaller 0.85 x 0.85microns (older was 1.2 x 1.9microns). The new die could enhance the power to modulation ratio which could increase read range 15-20% of the SST PIT tags in 2009. Sandy suggested that using better tags year over year would make it difficult to perform analysis which compared by year.

(see notes on PTAGIS Wiki)

Dave Marvin described that the 8.5mm tags that were used in fish released in 2007 were not detected at all in the B2CC flume, whereas fish that were marked with 12mm ST tags from associated groups were detected. Dean Park thought that fish marked with the 8.5mm tags were as small as 45mm in length.

Roger specifically wants to know what the fisheries community needs in the future. The Committee said that these tags need to be detected in the B2CC flume and in the adult ladders. Single use injector. Transceiver maintenance contract renewed. $0.25 tags …

4. Roger described contract #AB133F-07-CN-0200, Development of a Multiplexing FDX-B PIT-Tag Transceiver System. Sandy said that the FS1001M filled the need formerly. In July 2006 a user group met at PSMFC offices in Portland, and Sandy drafted a new "In-stream" hardware specification for the multiplexing reader. (See notes on PTAGIS Wiki).

Sandy said that she will be receiving two antenna receiver controller nodes (standalone units) soon. She said that NOAA is open to anyone else to learn about.

Dean suggested that Biomark could host a demonstration in Boise. A demonstration wouldn't really be feasible until the end of March, 2008.

Depending on the success of the antenna receiver controller nodes, an optional task for development of a master controller which would control the antenna nodes could be initiated and scheduled to be completed in five months. Final design completion would take an additional six months.

5. Roger reported that over 100 FS1001M CPU boards were modified. A new release of 1.9xx software will be released within the next two month, with a user manual update.

6. Roger briefly mentioned new organizational controls that will improve product quality at Destron Fearing.

7. Sandy described the Spillway PIT-Tag detection system. Phase 1 – Feasibility study was completed in June 2007. (See notes on PTAGIS Wiki). Federal agencies would not allow non-federal entities review the solicitation for this procurement, the proposals submitted by other vendors or the feasibility study. Sandy distributed the study to federal entities (USACE and BPA) during Summer 2007, but none had responded until Fall, 2007. She reported that 12mm tags were readable in the large (50ft @ 2 feet) antenna at speed up to 60 feet per second.
8. Sandy described McNary Temporary Spllway Weir Surface Bypass test structure. Don Warf asked Sandy to keep PTAGIS in the information loop, and to invite PTAGIS to related meetings. Roger said that the depth is an issue, but the flow rate was something like 20 feet per second rather than 60 fps for spillways.
9. Roger suggested replacements for FS1001 and FS101A transceivers, drop-in replacements with auto-tuning. He suggests a 2-3 year time frame. Pricing should be lower than existing product.
In addition, he suggests replacing the FS2001F-ISO with a new unit which would have 'more graphics, weigh less and be less expensive than the FS2001. A new pocket reader would also be released later in 2009.
Carter said that the PTAGIS staff understands that our current system is degrading and that we need to put together a strategy to update it soon. Roger suggested a meeting to describe next steps that are necessary to move forward with and upgrade.
10. Charles Morrill moved, and Ed Buettner seconded, the proposal that PTSC direct PTAGIS to initiate a project to upgrade the existing reader FS1001 and FS1001A readers with new readers. The Committee agreed unanimously with the motion.
11. Sandy described the John Day river site near McDonald Ferry (twenty miles upstream from the Columbia River) that has an in-stream PIT tag detection system designed to detect stray adult PIT tagged fish. She reported that the system had detected more fish than she had expected. The state of Oregon has performed spawning surveys downstream of this site. Research is attempting to determine where these fish are straying from.
Dean Park reported that Biomark installed the antennas with the intent that they not be washed out. HDR did a substrate analysis to help determine how the antenna would hold up on the river bottom. Dean described excavating and using fiberglass trays that were wedge anchor bolted into the substrate and then installing antenna coils parallel to the river bottom, and covering.
12. Doug Marsh described NMFS marking in 2008. He described about 578,000 PIT tagged fish, both production and surrogate that would be marked and released from each US –v- Oregon "Priority Site". Fish would be assigned arbitrarily to in-river or transport and he described many other technical complications.

USGS

Ian Jazoric and Kyle Martins from USGS described activities that have been curtailed in Wind River. In trout creek watching a WDFW smolt and parr survey areas. Described areas along Hemlock dam, where new detection systems are being installed. Funding for these projects seems uncertain. Kyle is working with Charlie Snow from WDFW.

Klickitat River

PTSC members were informed about a potential project that would be developed by the

Yakima Indian Nation on the Klickitat River. The understanding is that the YIN is attempting to plan a regional project,that would be funded by BPA. This type of site is in the same category of sites as RPJ and WFF.

Tag Distribution

1. Carter described the new PIT Tag purchase and distribution process. The new process BPA purchases tags directly from Destron Fearing and DF drop ships tags to PTAGIS Kennewick office. BPA Project Sponsors request tags on-line using the PTAGIS Tag Request form. BPA approves tags for shipment. After tags shipments have been approved for a project, PTAGIS will distribute tags to the project.

Carter reported that the tag approval and distribution software is being redesigned for use over the internet, for the new process. Because of the software changes, "Clip Files" for recently distributed tags will not be available from the PTAGIS web site until March, 2008.

PTAGIS Field O&M Status

1. Don Warf reported status of 2007 projects (LMJ Full flow, JDJ Full Flow PIT tag installations, Adult PIT Tag interrogation at Roza Dam, redesign of slide-gate controls, new slide gate to support Doug Marsh's project at Lower Granite dam). See PTAGIS O&M Status on the PTAGIS Wiki.

Don reported that the top five project for 2008/2009 would include installation of a new full flow antenna group at Little Goose, assume responsibility for ODFW Site at Sullivan Dam, replace all site data collection computers that were originally installed in 1999/2000, deploy M4 beta sites and fully upgrading Rapid River.

Dean talked about the Sullivan Dam site. The site is a Portland General Electric operated facility. It includes a juvenile bypass system and an adult ladder system. ODFW operates that Adult ladder system, and PGE operates the juvenile system. ODFW and PGE may have other coordination or maintenance agreements.

Carter said that the question for the PTSC is either PTAGIS should stop supporting these orphan installations, support the orphan installations as well as possible, or seek additional funding to provide better support for these orphan sites since they are important parts of the basin's PIT tag detection infrastructure. The Rapid River fish hatchery is another example of a site (RPJ) that has been operated and maintained by PTAGIS. The interrogation site was originally installed to support the Fish Passage Center's Comparative Survival Study. That study is on-going. In addition, other studies, designed by NOAA and funded by the Corps use the detections from the RPJ site. The site requires a major upgrade because of deterioration of the antennas over the past ten years.

Steve Pastor suggested that PIT tag marking projects identify operations and maintenance funding required to support interrogation of the marked fish at non-FCRPS sites.

Charles suggested that individual project sponsors have the responsibility for assuring that funding for detection.

With regard to RPJ, Biomark will prepare a cost estimate for necessary site upgrades for PTAGIS. Carter suggested that he provide the costs to PTSC members. PTSC members will be responsible for asking their agency managers

whether they require the detection site or not. The agency that requires the detections will be required to pay for the site upgrades or installations.
Pat Keniry said that he would draft a letter for FPAC that would identify infrastructure upgrades required for Rapid River, which has been part of the basic for the past nine years. In addition, the letter to FPAC would identify Willamette Falls Fishway as a project that is a candidate for inclusion in the PTAGIS O&M infrastructure, but money is necessary to bring the facility up to PTAGIS operational standards. FPAC will be asked to provide direction for upgrades to

RPJ and incorporating WFF into the basic PTAGIS O&M infrastructure