

# PTSC Conference Call – Instream Site Support

May 9, 2018, 13:00 PDT

Attendees: Charles Morrill, Courtney Newlon, Jeff Fryer, Pat Keniry, Scott Putnam, Andrew Murdoch, Gabriel Brooks, Don Warf, Darren Chase, Scott Livingston, John Tenney, Nicole Tancreto

## Action Items

1. PTAGIS/John will organize a scoping meeting in June to discuss technical details of direct acquisition of data from remote sites via cell/sat modems.
2. PTSC/Charlie will contact BPA to let them know that PTSC/PTAGIS are working on data management issues for instream sites.

## PTAGIS Background

1. First Instream Sites in 2001
  - a. USFWS AB1, AB2 sites (see [November 2001 Newsletter](#))
  - b. USGS RCX site
2. Substantial increase in number of instream sites from 2006 onwards
  - a. Currently 281 instream (small-scale) sites submitting data to PTAGIS
  - b. Various field data collection platforms, communication and devices
  - c. Agencies responsible for O&M
  - d. New sites require PTSC approval for data submissions into PTAGIS (started in 2011)
3. Concerns expressed about instream vs mainstem sites:
  - a. Lacking regional coordination and standard protocols:
    - i. Section 7.4.2 of [The Status & Needs of the Columbia Basin PIT Tag Information System as Related to FCRPS BiOp RME Requirements](#)
    - ii. [FPC comments about plan](#)
  - b. Observation record fidelity
    - i. Varied detection efficiencies
    - ii. System uptime
    - iii. Stale or lack of metadata

## PTAGIS/PTSC Support Efforts

1. Field/utility software:
  - a. [MiniMon](#)
  - b. [PIFF](#)
2. Website features:
  - a. [Interrogation Site Metadata](#) page
  - b. [GIS](#) page and related [Interrogation Site Map](#) page

- c. [Small-Scale Interrogation Site Detections](#) quick report
  - d. [Event Log](#) submissions and viewing
3. Database and reporting features:
- a. Interrogation file submission via email and FTP
    - i. Observations only
    - ii. Diagnostics and environmental metadata not included
  - b. Metadata updated manually by PTAGIS staff
    - i. Site location, configuration etc.
    - ii. Dates of operation
    - iii. Occasional event logs
  - c. Interrogation Site Type (report filter):
    - i. Adult Fishway
    - ii. Combined Dam Location; separate detections of upstream and downstream migrants.
    - iii. Hatchery Returns
    - iv. Instream Juvenile Fish Trap
    - v. Instream Remote Detection System
    - vi. Juvenile Fish Bypass Facility
    - vii. Monitored Fish Release
    - viii. Trawl Net
  - d. 'Active non-PTAGIS Interrogation Sites' report
  - e. QA/QC Reports:
    - i. Interrogation File Load Status
    - ii. Interrogation Files Loaded
    - iii. Failed Interrogation Files
    - iv. Timer Tag Report
    - v. Interrogation Site Record Summary
4. Coordination:
- a. [Interrogation Site Request Form](#)
    - i. Emailed to PTSC rep for approval
  - b. [PIT Tag Workshops](#)
    - i. [Open Forum on Tributary Detection Infrastructure](#)
  - c. Instream Interrogation Metadata Steering Committee
    - i. Composed of various site stewards in 2011
    - ii. Goal: review and refine PTAGIS metadata and related features
    - iii. Metadata specifications never presented to PTSC (upon multiple requests)
  - d. Instream Focus Group
    - i. Composed of various site stewards recommended by PTSC in 2017
    - ii. Goal: review and refine PTAGIS metadata and related features
    - iii. Limited feedback on existing metadata specifications

- e. WDFW request support for direct data acquisition
  - i. PTAGIS scoped effort by assembling various equipment in lab
  - ii. [2018 Annual PTSC Meeting: Enhanced Instream Site Support](#)
    - 1. *Getting data directly from the sites is not a trivial task, should PTAGIS shuffle priorities (M5) to work on supporting that?*
    - 2. *PTSC supports getting all data into PTAGIS, but not comfortable with pushing M5 back to support direct data acquisition*

## PTAGIS/PTSC Support Plans

See article *Enhancements to Interrogation Site Metadata and Software* in [April 2018 Newsletter](#)

1. Enhance updating of slowly changing metadata with new web portal
  - a. Reduce stale metadata
  - b. Update site contact information
  - c. View/manage file submission features and alerting
  - d. Web portal planned in 2014 –schedule pushed
    - i. Development of PIT Tag Forecaster web tool
    - ii. Program budget cuts
    - iii. P4 development
  
2. Accept automated metadata from field sites (in addition to observations)
  - a. Environmental data from probes (water temp, depth)
  - b. Diagnostics from transceiver and filed equipment
    - i. Timer tags
    - ii. Noise/Signal levels from status reports
  - c. Requires new file format and submission features
  - d. Develop reports on automated metadata for data users and site stewards
  - e. Greater transparency: determines if site was operating/functioning properly during period of time
  
3. Develop M5 interrogation field software
  - a. Replacement for MiniMon and M4
  - b. Support for instream sites by running on low-power/cost platforms
  - c. Support environmental data collection from probes and PLC

## Discussion

**Charlie:** we discussed this at the most recent PTSC meeting, but my discussions with Andrew raised some new information and I thought it was worth the group revisiting this topic.

**Andrew:** through discussions with BPA about funding, am concerned that long-term decisions might be made without taking PTAGIS into consideration. We and BPA are looking for the highest data quality that we can afford. Would like to set some standards for equipment and have a centralized management of all data, including diagnostics and environmental, in PTAGIS. Am looking for a path forward to for PTAGIS to start acquiring data directly from these sites and providing access to

environmental and diagnostic data through the established reporting system. This would provide cost savings to BPA and make sure all data is in one place.

**Scott:** Agree with all your points and how important the data. Would like to know what is reasonable for PTAGIS to do to help with these issues?

**John:** PTAGIS is currently working on new file format which is first step to accepting environmental and diagnostic metadata. Biomark and others could start using that to submit those data along with observations later this year or early next year. Also on a parallel path is development of web portal to manage slowly changing metadata.

**Charlie:** suggests that PTSC send recommendation to BPA for more support to PTAGIS to develop this system

**Gabriel:** recommends that PTAGIS focus on a system that can talk directly to MTS/Mux and CR1000, rather than develop M5 for use at these sites

**John:** we need to develop M5 for PTAGIS, and are planning to build it so that it can run on low-power systems anyway. Not intending it to be the only solution for this issue, but is a part of the process, and there are still some folks using Minimon for small scale sites. It could also provide a solution to folks with outdated equipment, as there appears to be an issue with the older QuBEs

**Gabriel:** issue QuBE is hardware related, when board fails, it continues to report the last good number, and system needs hard reset to determine if board has failed.

**Andrew:** we have not experienced that issue, but Biomark told us that correcting the data once it is pulled in is a major problem and why they don't want to support the QuBE anymore. Wasn't a problem with the QST data management system, but is a problem with BioLogic.

**John:** some concerns with direct data acquisition:

- How to handle data anomalies
- Variety of transceivers and data loggers
- Variety of communication devices and providers
- Perception of duplicating effort of Biomark

**Jeff and Pat** would like to see more information on how much it would cost and what wouldn't get done while this system is being built

**Charlie:** suggests getting a small group together to talk about these concerns and technical details and report back to the PTSC: Gabriel, Andrew, John, Don, others

**Andrew:** I don't have technical expertise for this, but suggest that the group formulate a plan and communicate that plan to BPA. PTAGIS needs to have a voice with BPA in how the data from these sites will be managed.

**John:** we'll schedule a scoping meeting for June and will report back to PTSC afterwards. Suggest that Charlie contact BPA and let them know we are working on this issue.

**Charlie:** agreed, will contact BPA

