

PTAGIS

n e w s l e t t e r

ISO Transition Project Update

Work is continuing on the transition of our 400kHz PIT tag interrogation system to the new system based upon the International Standards Organization (ISO) specifications, ISO-11784 and ISO-11785. The Gantt chart (shown on page 4) illustrates key activities and milestones.

The U.S. Army Corps of Engineers has completed the development of detailed plans and specifications for modification of the electrical and communications infrastructure required to support the new system. They are scheduled to begin the contracting phase soon, with installation of the new electrical and communications systems scheduled after the 400kHz PIT systems are powered off for the final time in the Fall of 1999.

In addition, the Corps has been developing plans and specifications for the catwalks and support platforms at McNary, Lower Monumental and Little Goose. All of the construction work on the platforms should be completed by April 1999.

'ISO Transition' continued on Page 3...

Update on Adult PIT Tag Interrogation Systems Development

The Bonneville Power Administration has been funding National Marine Fisheries Service (NMFS) to design and fabricate an adult PIT-tag interrogation system for use in weir orifices of adult fish ladders.

As part of this effort, NMFS biologists, engineers, and electronics personnel have developed three basic antenna designs. These designs have been presented to the fisheries managers and U. S. Army Corps of Engineers (COE) for review. Installation of these antennas in Bonneville Dam's Cascades Island adult fish ladder occurred during the week of 11 January 1998. Also during that week, the COE installed video equipment for monitoring fish behavior in relation to the antenna system deployed. In late February, antennas will also be installed in the exit ladder of Bonneville Dam's adult monitoring facility. Unlike the Cascades Island antennas, which cannot be removed until next winter's dewatering, those in the exit ladder can be accessed during the migration season.

In addition to video monitoring fish behavior in the Cascades Island fish ladder, antennas will be evaluated for both the material durability and tag detection effectiveness. Periodically, tagged, neutrally-buoyant objects will be passed through the antennas to test antenna reading efficiency. The antennas will be removed when the ladder is dewatered next winter and the material will be examined for wear. The exit ladder antennas will be evaluated using tagged, neutrally-buoyant objects and tagged adult salmon. Video recording will also occur at the exit ladder to examine fish behavior relative to the antennas.

This article was provided by Doug Marsh and Earl Prentice, both of NMFS.

| | |
|--|---|
| In this issue... | |
| ISO Transition Project Update..... | 1 |
| Update on Adult Interrogation Development..... | 1 |
| Call For SBC Proposals..... | 2 |
| Attention SBC Users!..... | 2 |
| ZIPping Your Data Downloads..... | 2 |
| Passwords..... | 2 |
| Proposed Changes at Lower River Sites..... | 2 |
| Monitoring Data Uploads to PTAGIS..... | 3 |
| NMFS Evaluates Adult Detectors..... | 5 |
| 1998 Operations Dates for Facilities..... | 5 |
| Announcements..... | 6 |

Call for SBC Proposals

If you anticipate using Separation-by-Code (SBC) capabilities for PIT-tagged fish at any interrogation sites in 1999, please contact Dr. Sandy Downing, NMFS, at 206.553.4219 or Sandy.Downing.@noaa.gov, or Dave Marvin, PSMFC, at 503.650.5400 or Dave.Marvin@psmfc.org by February 1, 1999, if you have not yet done so.

We currently anticipate a pre-season coordination meeting for all Program Leaders requiring SBC services, to be held the first week of February 1999. This will allow NMFS and PSMFC personnel adequate time to plan and implement the necessary software and firmware to accommodate these requests. A separate session will be scheduled to train personnel directly involved in SBC activities at the interrogation sites.

ZIPping Your Data Downloads

You folks getting your PTAGIS reports forwarded to you by e-mail may have noticed that we've changed our protocol when your ZIP-compressed files exceed 1Mb (one megabyte). Previously, we told you it was too big to email, and then deleted the REPORT.ZIP file. You could still download the original, uncompressed, file through a Kermit or Zmodem connection or by using FTP. We've decided that displaying and then deleting the ZIPped file was cruel and unusual punishment, so we modified our routine. Now, if your ZIP file exceeds 1Mb, we move the compressed version of the file to your user directory, along with the uncompressed file. You still won't receive the ZIP file via e-mail, but you **can** download the file from your user area using your FTP client.

Another change, even in ZIPped reports under 1Mb in size, is that the filename of the original report is preserved in the ZIPped version; you can now queue and run multiple reports in a single session without having the ZIP versions overwrite each other.

You folks that **don't** currently have your files forwarded by e-mail might want to do so, to take advantage of the file compression. Please remember to delete your large ZIP files from our server after you've transferred them. The easiest way to do this is through your FTP utility. You can also use your FTP utility to delete the uncompressed, original, reports but it's "cleaner" for us if you use the PTAGIS application to remove those files.

Passwords

On June 1, 1998, PSMFC implemented a more rigorous password protection scheme for all access into Commission computers and projects, including the PTAGIS database. PTAGIS users must now change passwords at least every six months, and passwords must meet these three criteria:

- 1) The password must be at least six characters long, and I recommend no more than eight characters;
- 2) At least two of the first eight characters must be non-alpha characters, such as numbers, spaces, periods, or commas; and
- 3) The new password must have at least two differences from the previous password (so if your existing password is "i-am2cute", you can't replace that with "u-am2cute", but you could replace it with "i-is2cute", but that's just too cute, so don't).

Proposed Changes at Lower River Interrogation Sites

Rick Martinson (NMFS) wants to alert PIT tag researchers and users that, in 1999, condition data will not be collected from PIT tagged fish that end up in the general Smolt Monitoring samples at John Day and Bonneville dams, as they were in 1998 and previous years. Please contact Rick (rickdm@gorge.net or 541.296.8989) if this action negatively impacts your research or you want more explanation.

NMFS is currently responsible for the collection of PIT tag interrogation data at Bonneville Dam, including the new facility at the Bonneville Second (Washington shore) Powerhouse. When completed in 2000, the new facility will replace the now-defunct B2J interrogation site, with additional coil redundancy and sampling capabilities. This facility is scheduled to operate in a limited capacity in 1999, solely to facility PIT tag interrogations, and primarily for detection of fish marked for a joint NMFS/COE study. NMFS is currently planning to discontinue 1999 PIT tag detection activities at B2J around July 31, anticipating that their marked groups will have passed the project by that time, and that their project funding will be exhausted. Again, if you believe your PIT tag marking project will be negatively impacted by this reduction in interrogation effort at Bonneville Dam, please contact Rick Martinson (see above) and/or Carter Stein, PTAGIS Program Manager (carters@psmfc.org, 503.650.5400).

Monitoring Data Uploads to PTAGIS

Many, if not most, of you Tag Coordinators are now e-mailing your data files to PSMFC, rather than using the PTAGIS application with a TelNet or dial-up connection. When you do so, you should be getting an e-mail reply indicating that the files were either "ACCEPTED" for loading or "REJECTED". (If you're not getting that reply, you should initiate or update the e-mail forwarding process from the "Util" menu in the PTAGIS application.) However, it's apparent that many of you are NOT monitoring those uploads and confirming that those data are being incorporated into the database.

When you upload your data file to PSMFC, we run a cursory validation routine that essentially duplicates the functionality of your PITVAL program. If the validation process detects an error in file format or content, it kicks the file out of the queue and we issue you a message saying "FILE REJECTED", and indicating the first error detected in the file; if the file passes muster, we queue the file for loading, and issue you a "FILE ACCEPTED" message. If you've elected to have messages forwarded to your e-mail address, that's the last message you'll see. However, the PTAGIS database maintains a log of this same activity, and also reports when (or if!) the file was ultimately loaded to PTAGIS, and when (or if!) the data are incorporated into the database.

These processing records are available for your perusal by navigating to the "All Uploads" item under the "Util" menu in the PTAGIS application. From this function, you can view any or all log activity records currently available. In theory, users will query their own data upload logs by selecting the "Upload Log" function from the "Util" menu, reviewing their upload activity, identifying any problems that are indicated in the log, confirming their data were successfully loaded into the database, and then removing the records from the log.

When the user removes their log records, those records then drop out of sight in the global "All Uploads" view. In reality, there are currently 6,417 records of file uploads sitting out there gathering dust; the distressing part (at least to me) is that 166 of these have a status message of "FILE REJECTED". If you're wondering why your data don't show up in queries of the database, or if other users are complaining they can't find your data, then you might consider checking the "Upload Log" and confirming your data were properly and completely processed. While there, how about deleting a completed record or twenty?

If you've been e-mailing data into PSMFC, but haven't felt the need to log into the PTAGIS application for more than, say, six months, then you'll need to read the article about passwords on page 2.

... 'ISO Transition' continued from page 1

ISO tags have been ordered for projects that will mark fish (fish that are expected to out-migrate in the Spring of 2000) this summer. These tags are expected to be available for distribution by March 1999.

The first shipment of ISO portable transceivers is scheduled to arrive by February 1, 1999. Distribution of these readers to project coordinators will be completed by April 1999.

The first shipment of ISO stationary transceivers is expected during April 1999. All ISO stationary transceivers are scheduled to be delivered by August 1, 1999.

Other activities are underway. This includes procurement of miscellaneous cables and connectors, test tags, timer tags and other items.

In addition, work is beginning now to prepare new communication interface panels and hardware and software for the programmable logic controllers (PLC's) used

at Lower Granite and Little Goose to control Separation by Code diversion gates.

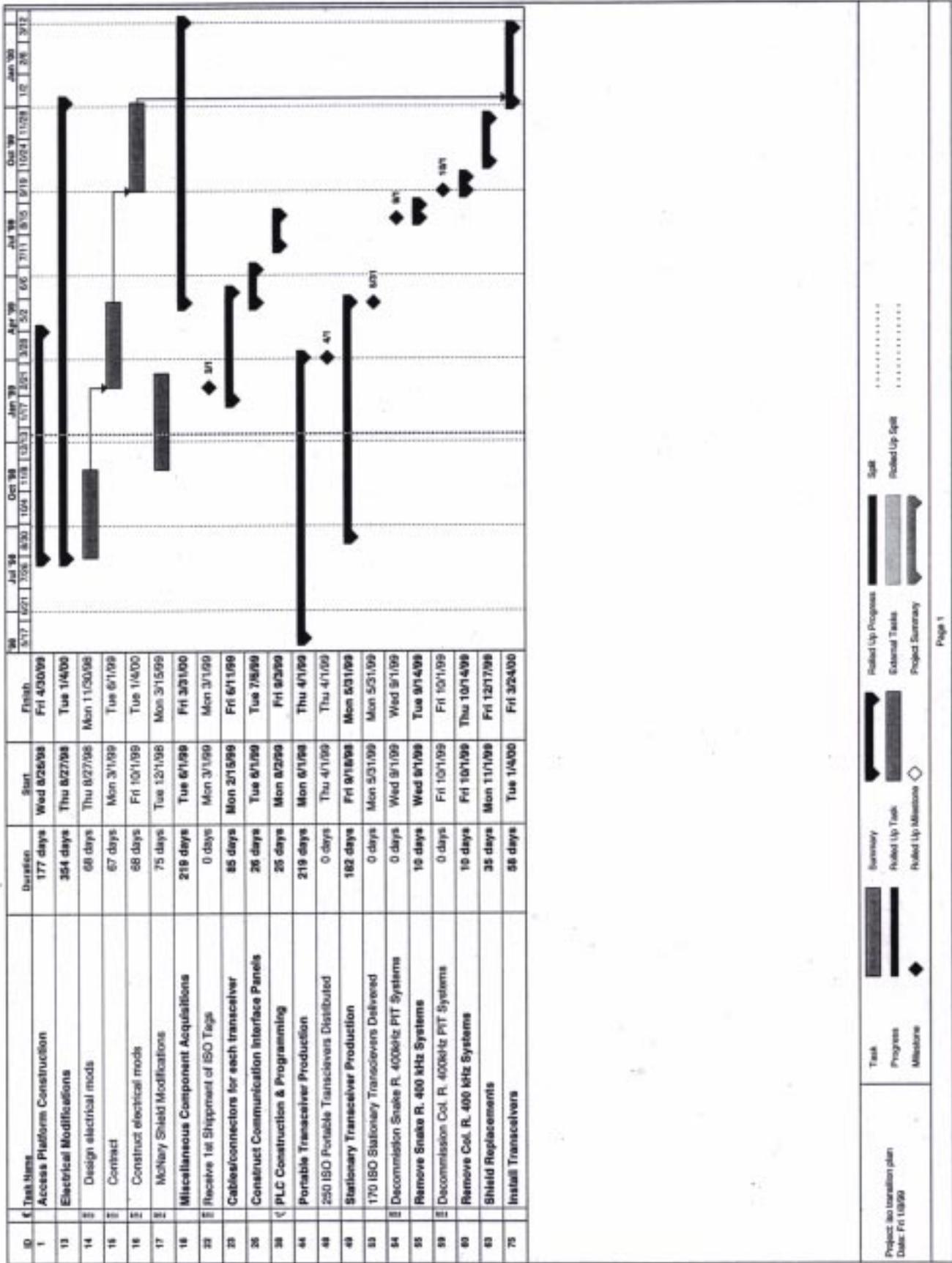
Plans are to power off 400kHz PIT tag interrogation electronics at Snake River dams beginning on September 1, 1999 and October 1, 1999 at McNary and John Day. Subsequent to these events, the construction associated with the electrical modifications can be done.

Electro-magnetic field (EMF) shield replacement will be performed immediately after facilities are de-watered on November 1, 1999.

Final installation and testing of the new ISO transceivers will be performed between January 4 and March 15, 2000.

If you have any questions regarding the ISO Transition, please contact your PIT Tag Steering Committee representative or the co-chairs of the Transition Planning Team, Charles Morrill at 360.902.2747, John Rowan at 503.230.4238, or Carter Stein at 503-650-5400.

Gantt Chart Illustrating Key ISO Transition Activities



NMFS Evaluates Adult PIT Tag Detectors in Bonneville Ladder

As part of their R&D program, NMFS researchers are testing the feasibility of *in situ* interrogation of PIT-tagged salmonids in adult passage ladders at Columbia Basin hydroelectric facilities. Throughout 1999, NMFS researchers will be evaluating the performance, durability, and behavioral impacts of ISO-compliant, 134.2kHz PIT tag tunnels placed within the submerged orifices of two ladders at Bonneville Dam. (See article on page 1.)

The Cascades Island ladder is the middle of three adult ladder systems at Bonneville, and is located on the north side of the spillway, between the spillway and the Second Powerhouse. The ladder is comprised of a series of 72" overflow weirs with two 24"x 24" orifices located at the base and sides of each weir. NMFS has retrofitted several of these submerged orifices with three different types of interrogation units.

In February, NMFS will install evaluation detectors in 18" orifices in an offshoot of the ladder on the Washington shore. This offshoot will route fish from the adult lab back to the main ladder, and can be dewatered without impacting passage in the main ladder.

During 1999, the NMFS researchers will monitor the passage of adult migrants in proximity to these test units for indications of avoidance behavior. The researchers are confident that the design of the prototype tunnels meet or exceed all physical and hydraulic criteria for placement in the ladder, and that the presence of the tunnels will not prolong or prevent upstream movement of anadromous migrants. Since the tunnels will be energized for

the duration of the year, this monitoring will also test the potential for fish to avoid the orifice due to electro-magnetic "noise", as well as test the efficiency and durability of the three tunnel designs.

It's important to note that these tests do not provide complete coverage of the passage routes in the test location; and that no adult salmonids marked with ISO-compliant tags are expected to pass Bonneville Dam in 1999. No "production" PIT tag data are expected from this evaluation in 1999.

We'll post additional information, and updates, regarding these tests on our web-site at <http://www.psmfc.org/pittag> as they become available.



PTAGIS Software Engineer John Tenney (l) and NMFS Biologist Earl Prentice (r) discuss the installation of an evaluation PIT tag interrogation tunnel in the adult fish ladder at Bonneville Dam.

1998 Operations Dates for Mainstem Interrogation Facilities

| Site/Code | Start | End | Note |
|--------------------------------|----------|----------|--|
| Lower Granite Juvenile/GRJ | 03/28/98 | 11/01/98 | Sample Override Began on 06/10/98 |
| Lower Granite Experimental/GRX | 03/28/98 | 11/01/98 | |
| Little Goose Juvenile/GOJ | 04/01/98 | 11/01/98 | Sample Override Began on 06/10/98 |
| Lower Monumental Juvenile/LMJ | 04/01/98 | 11/01/98 | Sample Override Began on 06/10/98 |
| McNary Juvenile/MCJ | 03/29/98 | 12/15/98 | Began Transportation Program on 06/01/98 |
| John Day Juvenile/JDJ | 04/08/98 | 10/29/98 | |
| Bonneville PH1 Sample/BVJ | 03/09/98 | 10/31/98 | Subsampled During 8-hr Period 1600-2400 |
| Bonneville PH1 Flat Plate/BVX | 03/09/98 | 03/31/98 | Operated Concurrent with BVJ |
| Bonneville PH1 Flat Plate/BVX | 04/01/98 | 09/19/98 | Operated 24hr/day |
| Bonneville PH1 Flat Plate/BVX | 09/20/98 | 10/31/98 | Operated Concurrent with BVJ |
| Bonneville PH2 Juvenile/B2J | 04/01/98 | 09/19/98 | Operated 24hr/day |
| Bonneville PH2 Juvenile/B2J | 09/20/98 | 10/04/98 | Operated During 8-hr Period 1600-2400 |

Announcements

- On December 14, 1998, Destron/Fearing informed the PIT Tag Operations Center of its intentions regarding support of the 400kHz interrogation systems. The letter said, in part:

Destron-Fearing will discontinue all support of the 400Khz FDXA readers as of Jan 1, 1999. This includes all portable and stationary systems designed specifically for 400 kHz operation. These systems have been out of production at Destron for two years and many components are obsolete.
- The PTAGIS program is happy to announce a new member to the project team. John Tenney joined the Commission staff December 1 as the PTAGIS Software Engineer. John comes to us from Mirror Systems, where he was Senior Developer for "Replica", a legal document management system used by defense attorneys and prosecutors in litigation. John's focus will be on development of the personal computer based tools supported by PTAGIS. Initially, John is preparing the PITTAG2.EXE software for its initial production release. John is a 1991 Computer Science graduate from University of Utah.
- Mark your calendars! The 2000 PIT Tag Workshop will be held from January 12-14, 2000 at Skamania Lodge. If you have a presentation or a specific topic that you would like to see addressed, please contact Carter Stein.

We welcome input from the PIT Tag community, so feel free to call (503.650.5400), fax (503.650.5426), e-mail, or write us with your story ideas. If you have any questions regarding the contents of this publication, or about the PTAGIS program, please contact Carter Stein, PTAGIS Program Manager. Editing and layout by Liza Bauman. Unless otherwise noted, contributors include Carter Stein (carters@psmf.org), Dave Marvin (dave_marvin@psmf.org), John Tenney (john_tenney@psmf.org), and Liza Bauman (liza_bauman@psmf.org).
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