

# PTAGIS

newsletter

## What is PTAGIS?

In order to provide a context and background for the PIT Tag Operations Center (PTOC) and the PTAGIS project, we offer the following as the first of a two-part article.

### *Project Background*

In 1984, Bonneville Power Administration (BPA) contracted the National Marine Fisheries Service (NMFS) to research and develop a passive integrated transponder (PIT) tag for use in the Columbia River Fish and Wildlife Program. With the PIT tag system, large amounts of data are produced with relatively few tags, in comparison to traditional tagging and marking systems. For NMFS to meet its contractual and oral agreements with BPA, it contracted the Pacific States Marine Fisheries Service (PSMFC) to develop and operate a prototype database system.

In 1989, NMFS announced its intention to phase out of the operation, maintenance and management of the PIT tag systems in the Columbia River Basin. Subsequently, BPA contracted with PSMFC because it is the only agency

with experience in data management, has no vested interest in the interpretation of data generated from PIT tags, and is independent of water or fish and wildlife management responsibilities. The PIT Tag Operations Center (PTOC) was established at the PSMFC office to house PTAGIS and to utilize PSMFC's data facilities.

The actions that PSMFC was charged to implement under the PTAGIS contract were:

1. Management of a long term Columbia River Basin-wide database system accessible to all entities;
2. Maintenance and documentation of fish tagging and interrogation systems;
3. Operation and maintenance of equipment at the remote sites;
4. Provision of technical support for the software and hardware;
5. Provision of training to users; and
6. Purchases of PIT tags and associated equipment.

### *Project Goals*

The goal of the PIT Tag Information System (PTAGIS) is to operate and maintain the Columbia River Basin-wide database for PIT tagged fish and to operate and maintain the established interrogation systems. The data collected by this system is to be accessible to all entities.

The measurable goal for the system is to collect 100% valid data and provide that data in "near-real" time with down-time of any system component of not more than

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one percent as measured during the period of peak out-migration.

#### *Performance Objectives and Requirements*

1. Operate, maintain and enhance the PTAGIS database system and data collection software.
2. Install, operate and maintain interrogation systems in field locations.
3. Administration, Management and Coordination.

4. Additional Support Actions, which include; assisting BPA in the planning, coordination, evaluation and management of the New Tag Frequency Transition Project; installing a 24-coil PIT tag interrogation systems at dams.

#### *Next Time:*

In our next issue of the PTAGIS Newsletter, we will address how PTAGIS coordinates with various agencies in order to make the project successful.

## **PTOC Operations Status**

The US Army Corps of Engineers initiated juvenile fish facility water-up procedures at Lower Granite on March 26, and at Little Goose and Lower Monumental Dams on April 1 for the 1997 out-migration. McNary Dam began operation on April 4.

The following is a site by site summary of PIT Tag related information related to these season start-up activities. These are the production sites supported by the PIT Tag Operations Center. The three-letter acronym following the site name in the list below is the SITE\_CODE identifies used in the PTAGIS database.

#### ***Database Operations:***

Processing of Tagging files, Mortality files and Corrections occurs at 22:00 PDT or upon request. Processing of release information files happens on the fly.

Interrogation data is collected and processed four times per day, at 00:00, 06:00, 12:00 and 18:00 Pacific Standard Time, from production sites that are operating the new interrogation platform. Data collection for production sites that are operating the traditional interrogation occurs only during the 00:00 interrogation load process. Interrogation data collected at experimental sites is loaded during the next load scheduled after the data is sent to PTAGIS.

Generation of the Technical Management Team (TMT) daily data sets occurs after the 00:00 load. Generation of the Technical Management Team year to date data set occurs every Thursday night at 19:00 PDT.

Generation of Smolt Monitoring Program (SMP) Disposition by Day reports occurs after the 06:00 load.

Both the TMT and SMP data sets are available from the PTAGIS ftp server and from the World Wide Web.

#### ***Field Operations:***

##### *Lower Granite Adult Trap (GRA)*

The PIT tag interrogation system was started and has been in continuous operation since the facility watered up for the season on March 5. On Thursday, April 23, the traditional PIT tag interrogation computer system will be replaced with the new interrogation platform in order to support Separation by Code (SBC). University of Idaho and National Marine Fisheries Service will be collecting PIT tagged adults at the trap utilizing, in part, the SBC system.

##### *Lower Granite Juvenile Bypass (GRJ)*

The Lower Granite system began operation beginning March 26. This facility is configured with the new interrogation platform that supports SBC. Using the SBC system, one of five juvenile smolt that have been marked for this study are returned to the river; four of five are diverted to the transport raceways. Juvenile PIT tagged fish that are not part of this study are returned to the river.

##### *Little Goose Juvenile Bypass (GOJ)*

The Little Goose system began continuous operation beginning March 26. This facility is configured with the new interrogation platform that supports SBC. NMFS is con-

ducting a study that utilizes SBC at the experimental sub-site at the project named GOX. PIT tagged juveniles that are not part of this study are returned to the river. Since April 10, 1997 at 12:00, all fish that exit this facility through the B-Side (Steelhead side) are also returned to the river.

#### *Lower Monumental Juvenile Bypass (LMJ)*

The Lower Monumental system began continuous operation beginning March 26. This facility is configured with the new interrogation platform that supports SBC. There are no studies that will utilize SBC at this project. All PIT tagged fish that enter this facility are returned to the river. Since April 10, 1997 at 12:00 all fish that exit this facility through the B-Side (Steelhead side) are also returned to the river.

#### *McNary Juvenile Bypass (MCJ)*

The McNary system began continuous operations beginning on April 4. This facility is also configured with the new interrogation platform that supports SBC. There are no studies that will utilize SBC at this project. All fish that enter this facility, PIT tagged or not Pit tagged, are returned to the river.

#### *Chandler Canal at Prosser (PRJ)*

This facility, located near Prosser, WA on the Yakima River, began continuous operations on March 15. This facility is configured with the traditional interrogation system and does not support SBC.

#### *Day Sub-Sample (JDJ)*

Two or three remote interrogation units are in operation at the John Day dam. Fish collected through the gate-well air lift are passed through these monitors. Operations at this facility began on April 7.

#### *Bonneville 1 Sub-Sample (BVJ)*

One remote interrogation unit is in operation at the downstream migrant (DSM1) at Bonneville powerhouse 1. All fish collected in the subsample trap are passed through this interrogation unit. Operations at this facility began on March 17.

#### *Experimental Facilities*

There are a number of experimental facilities that are

collecting PIT tag interrogation data. Most of these facilities are supported by National Marine Fisheries Service. PTOC provides hardware or data system support on these systems on request, as time allows.

#### *Lower Granite Experimental (GRX)*

This facility is located at Lower Granite Dam. It has been used in the past to perform initial testing of the SBC system along with two- and three-way rotational gates that were developed by National Marine Fisheries Service. This facility has proven useful for studies conducted by various organizations including US Fish and Wildlife Service and National Marine Fisheries Service. These organizations will be utilizing this system during 1997. Data from this system is automatically sent from the site to the PTAGIS database.

#### *Little Goose Experimental (GOX)*

This facility is located within the Little Goose juvenile bypass system. This system is designed specifically to operate SBC at the PIT tag diversion hold tank. Data collected by this system are not collected by PTAGIS.

#### *McNary Experimental (MCX)*

This facility was established this year to support field testing of the new ISO stationary transceivers. This site consists of two monitors: one four coil monitor located on the B-side (Steelhead) raceway and one four coil monitor located upstream of the River-1 exit. Data from this system will be used to test modifications to the PTAGIS data collection system required to support the new ISO code formats.

#### *Bonneville Experimental (BVX)*

This is the pass by (flat) interrogation monitor installed at DSM1 at Bonneville Powerhouse 1. All fish that pass through DSM1 and not collected in the sub-sample trap (BVJ) pass by this two-coil monitor. Data from this site is sent to PTAGIS by NMFS.

#### *Bonneville Powerhouse 2 (B2J)*

This site is a four-coil monitor that is being installed by NMFS in Bonneville Powerhouse 2. Data collected at this site will be sent to PTAGIS by NMFS.

# User Account Set-Up

If you wish to set up an account that will enable you to use the PIT Tag Interrogation System, please send a fax with the following information to PSMFC at (503) 650-5426, attention: PTAGIS Database. Once your fax is received, we will telephone you in order to verbally obtain your password.

Name:
Agency:
Address:
Phone #:
Fax #:
E-mail address:

Pacific States Marine Fisheries Commission  
Program Manager, PIT Tag Information System  
45 SE 82nd Drive, Suite 100  
Gladstone, Oregon 97027-2522

Also, please indicate if you would like any of the following documents. Mark any that apply:

- Procedural Manual
- Specification Document
- User Manual
- PTAGIS Newsletter

## New File Validation Process

Currently, PTOC has been testing a new file validation process that lets the user know (while uploading) if their file will be loaded into the PTAGIS database. This new computer program will be in use within the next two weeks. In our next issue of the *PTAGIS Newsletter*, we will highlight the many benefits of the new procedure.