

# PTAGIS

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### ISO Transition Project Update

The new ISO-based PIT tag interrogation systems were installed on time for the year 2000 out-migration. Performance of the new system is better than performance of the old system, basin-wide.

Beginning March 25, 2000, the Corps of Engineers initiated water-up procedures at the Juvenile Fish Bypass Systems on the Snake and Lower Columbia Rivers.

With water available in the fish-ways, final testing of the new ISO system began. Final tests were conducted in two phases. First, each monitor in the system was tested using 'calibrated' wooden sticks. Second, after the stick tests, each passage route to the river was tested with live hatchery steelhead. Over 2,700 steelhead were released, and only one went undetected.

("ISO Update" continued on page 4)

### Adult Interrogation Update

*Status Report on the Development of PIT Tag Interrogation Systems for Adult Salmon Transiting Fish Ladders.* This article was submitted by Dr. Sandra Downing (NMFS), David R. Askren (BPA), Blaine D. Ebberts (COE), and Dave F. Hurson (COE).

#### Introduction

Due to the importance to the entire fisheries community of the development of ISO-based PIT tag interrogation systems for adult salmon for deployment in adult fish passage facilities at mainstem hydropower projects of the Federal Columbia River Power System (FCRPS), we have been providing updates for each *PTAGIS Newsletter*. This is the third update in this series and covers work performed between mid-January and June 2000.

Regional coordination and participation in critical planning and decisions are essential to the success of this project. The Adult PIT Tag Oversight Committee (APTOC), which addresses technical issues and provides collective insight on policy and implementation matters, had its first formal meeting in March. It had a second meeting in May. Minutes of these meetings are on public record through the BPA-sponsored website (described at the end of this article), but the major points are summarized in this article.

("Adult Update" continued on page 5)

The PTAGIS newsletter is published periodically by the PIT Tag Operations Center (PTOC). We welcome input from the PTAGIS 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@pittag.org), Dave Marvin (dave\_marvin@pittag.org), John Tenney (john\_tenney@pittag.org), and Liza Bauman (liza\_bauman@psmf.org).

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## MiniMon Production Release

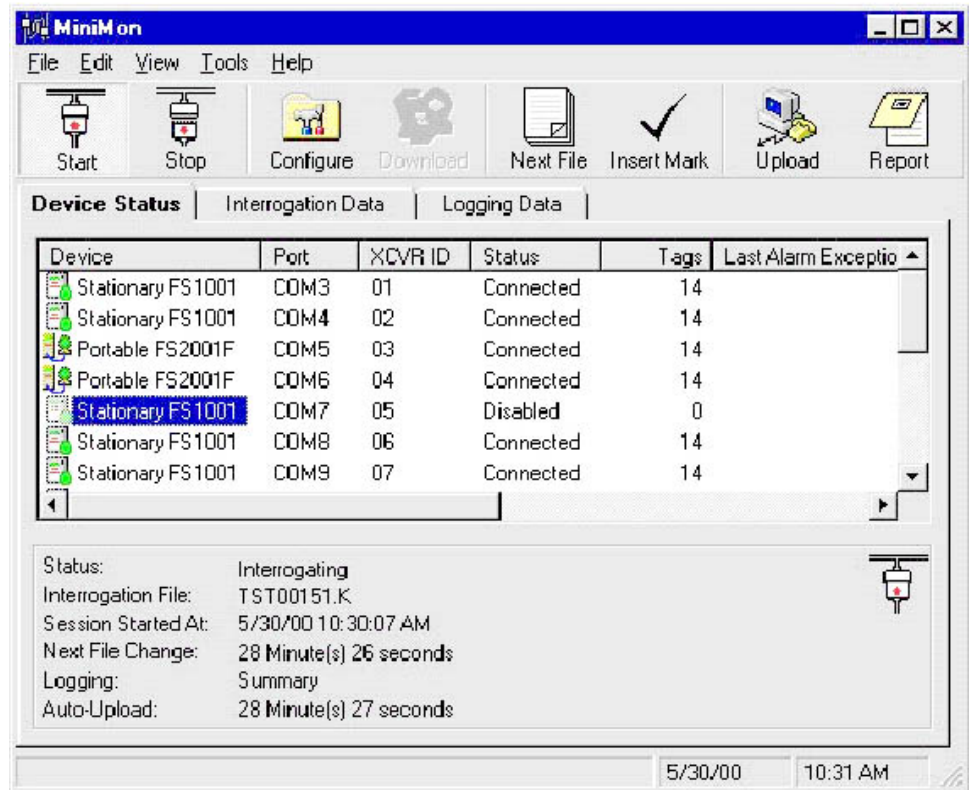
A production release of the MiniMon.Exe interrogation software for Windows is now available. MiniMon is a replacement for the old DOS-based MONITOR.EXE program.

MiniMon provides unattended, around the clock monitoring for fish marked with an ISO PIT Tag. MiniMon can collect data from 16 or more ISO transceivers simultaneously (see Figure 1 at right). The collected data is formatted as per the existing specification for interrogation files (refer to the *1999 PIT Tag Specification Document*, Section III. C. Interrogation Files). MiniMon also provides visual diagnostic information about the current interrogation process in addition to robust logging features.

The following are key features of MiniMon:

- 32 bit application – runs on Win 9X, WinNT and Win2000.
- Creates interrogation files per 1999 Specification Document.
- Supports Destron-Fearing FS-1001 stationary and FS-2001 portable transceivers.
- Capable of collecting data from 16 or more transceivers simultaneously.
- Provides real-time, visual diagnostic information and robust logging features
- Automated data upload to PTAGIS.
- Remote interrogation capabilities.
- Tag report for data analysis.
- On-line HTML help file.
- Can access serial devices through a USB interface.

Figure 1. MiniMon screen shot indicating status of transceiver devices.



Refer to the PTAGIS website to download a copy of the software or view the help file. ☒

## Another (Duplicate) Diatribe From Dave

Faithful readers of this Newsletter are aware of my ongoing crusade to eliminate, or at least control, the duplicate tag records in the PTAGIS3 database.

For those new or few existing readers who remain blissfully unaware of this phenomenon, tag duplication occurs when multiple records of new tagging events are submitted to the database for a unique tag code. In such a situation, the PTAGIS data loading process inserts the first tag code record received into our "Tag\_Data" table, and all subsequent new tagging references to that code are dumped into our "Tag\_Dupe" table.

Tag duplication generally occurs for one of three reasons:

1. Duplication occurs if a tag is inserted into a previously-tagged fish and, when the fish is scanned, the original tag is recorded. (The inverse of this is if the new tag is detected, but the original tag is missed, a recapture event is not reported.) In the case of double-tagged fish, it's a crapshoot as to which, if either, tag will be detected at any downstream interrogation sites.
2. Tag duplication occurs when a tagged fish is recaptured, but reported in a Tag File without an "RE" recapture flag in the conditional comments field.
3. Duplication occurs when researchers use tags retrieved from dead fish without removing the reference to the original tagging event (by "dotting out" the tag code in the original Tag File).

The preferred method for dealing with duplicate tag codes is PREVENTION!

Techniques for preventing the occurrence of duplicate tag codes include:

- Pre-scanning all fish in situations where it's possible to encounter previously-tagged fish;
- Manually or mechanically diverting previously-tagged fish away from marking stations;
- Using the Clip File Verification function in the *PITTag2* program to alert users to the presence of unexpected tag codes; and
- Project management techniques that synchronize the re-use of tags with the excision of the prior tagging data from Tagging Sessions and Tag Files.

In the situations where users can't or won't use these techniques to avoid tag code duplication, our fallback option is to provide those users with feedback to alert them to the presence of duplicates. Two years ago I started generating and publishing static lists of duplicate records. Now, users can access our web site (at [http://www.pittag.org/Data\\_and\\_Reports](http://www.pittag.org/Data_and_Reports)) and directly query the PTAGIS database for any and all "Tag\_Dupe" records.

Seven months ago we instituted our new Field Data Validation and Loading (FDVL) process. One of the products of the FDVL process is a complete audit of all data records submitted to PTAGIS, including duplicate tags. Users can query those audit records, from the "Tagging File Contents Summary" link located on the PTAGIS web page referenced above.

We also include that audit information in the body of each File Load confirmation we e-mail to our data contributors. Two months ago, when it became obvious that data contributors didn't realize their data files contained duplicates because they weren't reading the contents of those messages, we changed the e-mail message subject line to "Dups Rejected" when the Tag File contained one or more duplicate records.

The number of duplicate tags processed this year is not disproportionate to those from previous years. They *are* more obvious this year, due to the changes we've made in the FDVL auditing and feedback mechanisms.

I remain hopeful that this feedback allows users to correct outstanding tag duplication issues and, more importantly, alerts them to existing situations where duplication occurs. I remain optimistic that, with this information, project personnel can avoid recording duplicate tagging information for unique PIT tags. Please don't dash my dreams. ☒

### Old 400kHz Gear?

Let your PIT Tag Steering Committee representative know if you or your project has any left over 400kHz PIT tags or PIT tag readers. The PTSC will help to find new homes within public agencies where you can donate this obsolete equipment. ☒

## Tagging Data Summary Reports

PTAGIS users interested in maintaining a comprehensive list of current and historic PIT tag releases should obtain our annual Tagging Summary Reports, located on our public FTP site, and available through the PTAGIS web site. These reports are generated daily, and provide a complete summary of fish marking activity for each calendar year, dating back to 1987.

Each CSV (comma-separated value) record in these summaries tallies the total number of records in the PTAGIS “Tag\_Data” table for each distinct combination of species, run/race, rearing type, and release time values in a tagging file. For some tagging files, all of this information can be reduced to single records in the summary report. Data from in-river marking involving multiple fish stocks may result in a dozen or more records, per tagging file, in the Tagging Summary Reports. (Obviously, each tagging file, by definition,

has a single “Migration Year,” “Coordinator ID,” “Release Site”, and “Release River Kilometer” value per file, regardless of the number of records in the summary report.) This level of specificity in the reports is probably more than that required by any individual analysis. Users can and should use their own spreadsheet or database tools to isolate and aggregate their records of interest from these reports.

As I mentioned above, each year’s tagging summary report is generated daily (at around midnight, PDT) as required. This means that only those years’ reports containing new or modified data records are created. By inspecting the file creation date, users can determine when the contents of each summary file last changed. The file date is also included in the header of the report. For your analytical pleasure, each summary record (for tagging files modified since 1/1/2000) is also date-stamped, with

the most current additions or modifications at the top of each summary file. This allows users to easily identify and select only those data that have changed since the user’s last system query.

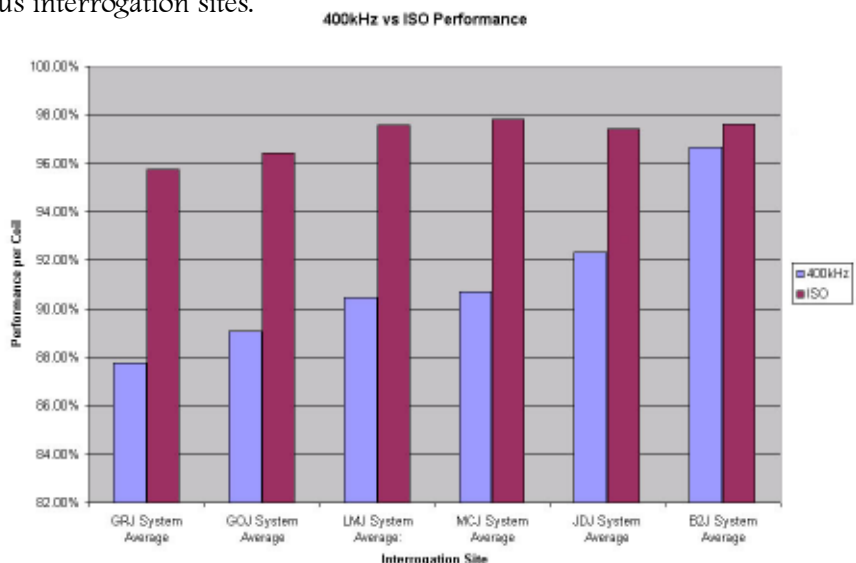
Each annual Tagging Summary Report file contains a single header row identifying the report’s field (column) names. The names, number, and position of these report fields do not change. Date fields are formatted as “M/D/YY hh:mm”, and fields containing multi-word text strings are double quoted. All fields are separated by commas, and can be automatically and reliably parsed by most spreadsheet and database programs. The records within each Summary Report are sorted in descending order by modification date, and then by tagging file name, in ascending alphabetical order. The Tag Summary Report files are available in both native (CSV) and compressed (ZIP) formats from [ftp://ftp.pittag.org/pub/pittag/reports/data\\_summary](ftp://ftp.pittag.org/pub/pittag/reports/data_summary). ☒

## ISO Update (cont.)

For details on the final system testing and data regarding the operational comparison of the new and old systems, refer to Figure 2 at right, and visit the PTAGIS web site at: [www.pittag.org/ISO\\_Transition/FinalTests](http://www.pittag.org/ISO_Transition/FinalTests).

The next step in the Transition process is to install a ‘dual-system’ at the Bonneville Adult Research Lab and the Lower Granite Adult trap during the in-water work windows this winter. The dual systems will be capable of detecting both the 400kHz tags and the new ISO tags.

Figure 2. Graph comparing performance between new and old systems at various interrogation sites.



## Adult Update (cont.)

At the March meeting, BPA presented a draft Management Plan for regional review. APTOC members supported the goal of having all of the ladders at Bonneville Dam covered for the year 2002 when fish tagged with ISO tags start returning in statistically significant numbers. Subsequent installation of interrogation systems at additional dams will be prioritized by APTOC.

Toward reaching that goal, the following technical teams were established:

- 1) Information Gathering on Fish Passage,
- 2) Evaluation of Prototype Transceivers and Antenna Systems,
- 3) Dam Installation and Infrastructure, and
- 4) Application-based Performance Requirements Evaluation.

If you have an interest in participating on any of these teams, please contact any of the authors (contact information is provided at the end of this article).

The goal of the development project is to develop an ISO-based interrogation system that can be installed into any fish ladder. PIT tag interrogation systems consist of antennas (coils of wires), antenna housings, and transceiver systems that decode the return signals and transmit tag codes to the computer. All three of these components must be developed to produce interrogation systems that will work in fish ladders.

We anticipate that developing these components will go through three phases: a Development Phase, an

Evaluation Phase, and an Implementation Phase. The work that was completed between January and June, and some that is planned, is described below.

### Development Phase

The development efforts continued to focus on the interrogation of fish passing through weir orifices since the majority (anecdotal evidence suggests around 90%) of salmonids use them; however, some development work was completed on antenna housings for the weir overflows.

*Antenna systems*—The two-section design for the insert-only antenna housing permitted us to easily exchange the different antenna sections during the spring development tests. Thus, we were able to test two sizes of orifices (18" and 26") in the Adult Fish Facility (AFF) exit ladder at Bonneville Dam. The 26" orifice is the largest sized orifice located at a FCRPS project (McNary Dam). By testing the largest size, we can be confident that any transceiver that passes the evaluation tests scheduled for this September will very likely work in all of the FCRPS fish ladders.

After the 26"-orifice inserts were installed at the AFF, NMFS-Portland and COE hydraulic engineers and biologists observed the effects of the inserts on ladder hydraulics. They approved use of the inserts, indicating that they did not think the 26" orifices would impede fish passage through the ladder. Video documentation during the spring tests confirmed this conclusion.

Development work during February and March on the different prototype transceiver systems was successful in determining an acceptable common

antenna configuration. Thus, the transceiver systems could be tested using any of the weirs during the spring development tests.

The COE tested several weir overflow antenna-housing designs with its hydraulic model. The upstream extension design produced the least change from existing hydraulics, shifting the water surface profile upstream. This resulted in a slight reduction in the minimum water depth over the weir. This design would permit an 18" wide flat-plate PIT tag detector to be installed at the top of a weir, which theoretically would allow most of the tagged fish using a weir overflow to be detected. No field confirmation tests of the model results are planned at this time.

*Transceiver systems*—To meet the 2002 goal of installing PIT tag interrogation systems for adult salmon in all fish ladders at Bonneville Dam, the NMFS-R&D team and BPA have taken a "spread the risk" approach and supported several development efforts simultaneously. The result was that at the end of 1999, we had two promising transceiver systems: 1) the Destron Fearing Adult system (DF-Adult) and 2) the open-architecture system that combined the analog signal analysis module from Pattern Engineering (PE) with the module responsible for processing codes and interfacing with data processing systems developed by NMFS. Since the preliminary tests to determine the feasibility of combining the strengths of both systems were favorable, NMFS and the two contractors worked on the technical and legal hurdles that had to be overcome for this "marriage" system

("Adult Update" continued on page 6)

## Adult Update (cont.)

to be developed. DF has the lead position in manufacturing the marriage or hybrid system.

In order to ensure that any transceiver system that is developed will meet the needs of the fisheries community, the NMFS-R&D team wrote a draft requirements document for orifice transceivers. APTOC released this document for input from the community in February. A revised draft was sent out for final review in June.

### Evaluation Phase

*Transceiver/Antenna Systems Testing*—The results from the evaluation tests run during the summer of 1999 suggested that both of the PE/NMFS and DF-Adult systems should be able to read PIT tagged fish in the orifices found in the fish ladders of the FCRPS.

To confirm this conclusion and to start gathering more information on how well these systems will perform in fish ladders, some development tests were conducted this spring as scheduled using PIT tagged spring chinook salmon. These field evaluation tests also help determine such things as the behavioral responses of fish to antenna systems, effects of field environmental conditions (e.g., radio-frequency [RF] noise), and reading efficiencies with fish.

Tests were conducted in the AFF exit ladder using antennas for 18” and 26” orifices between 19 April and 16 May. Fish were tagged on two days each week for the first three weeks (we wish to thank CRITFC, U of Idaho, and ODFW personnel for helping us). Unfortunately, no provisions had been made to syn-

chronize the transceiver systems together and they interfered with each other; therefore, the systems had to be run on alternate days. We also determined that ambient RF noise was significantly impacting the performance of the installed interrogation systems. For instance, the motors for the sweepers that clean the DSM screens in Powerhouse II essentially eliminated reading tags when they were active for 10 minutes every three hours. There were also other unidentified sources of RF noise that caused problems—we had to stop testing on May 3<sup>rd</sup> because the noise levels were so high. Despite two weeks of investigation in May, we have still not identified the intermittent source(s) of noise. The levels are different in the four weirs, but all of the weirs have been affected. It was thought to be weather dependent, but that correlation has been eliminated. We have been constantly monitoring the worst weir since 19 May. Since then, the unexplained noise has only been terrible one day, but many days have short periods of time (10-90 min) when interrogation of tags would be

affected. To investigate how to mitigate the effects of ambient RF noise, NMFS has built a test facility at its Pasco Field Station. This facility will also be used to test antenna cabling and test tags.

For the days we completed our tests, the reading efficiencies for spring chinook salmon transiting both 18” and 26” orifices in the upstream direction were above what we had expected, ranging from 88.6-100% (Table 1 below). Two fish went through one of the 26” orifices while the sweeper motors were active and if they are eliminated from the calculation, we read above 92% for each of the individual orifices. Only fish transiting upstream were counted because fish going downstream tend to fall back at all angles, which makes it difficult both to record them with the video cameras and to read their tags. Furthermore, only fish that were positively recorded by the video cameras were used in the calculations (the COE Fisheries Field Unit did an excellent job in taking and analyzing

(“Adult Update” continued on page 7)

Table 1. Results from 4 days of fish tests conducted in the AFF exit ladder at Bonneville Dam. Numbers of fish and reading efficiencies (RE) are included for the two transceiver systems and two sizes of orifices.

	Hybrid system		PE/NMFS system	
	18” orifice	26” orifice	18” orifice	26” orifice
# of upstream fish read	72	57	61	39
Total # of upstream fish	76	57	61	44
Reading efficiency (%)	94.7	100.0	100.0	88.6
RE adjusted for active sweeper motors				92.9

## Adult Update (cont.)

all of the videotapes). Some fish were counted multiple times because they fell back through the ladder and then re-entered the orifices. We counted all upstream passes through the orifices separately, so if a fish was not read on any of its passes, then that fish was counted as a miss.

During the spring tests, some problems occurred with components failing, with turbulence (bubbles) making it impossible to use the video cameras in one of the weirs, and with marginal turbidity one day (a Secchi disk reading of "3" seems to be the lower limit for viewing fish in the 26" orifices). However, the video cameras and streamer tags (see Figure 3 below right) helped us realize that interpreting PIT tagged adult fish passage is going to be more complicated than for juvenile salmon passage at the fish facilities. For example, 1) without the video cameras, it is impossible to know the direction the fish are traveling; 2) when fish fall back, they are often at extreme angles that make interrogating them impossible; and 3) fish will also occasionally nudge their noses into an orifice without going through, yet their tags will be read. Fish took a wide range of time to pass through the ladder. Many passed through the four weirs in less than a minute; others stayed in the ladder for longer than a day. We did tape one fish that used the overflows on all four weirs. We had another test fish that left the ladder and then was recorded again a month after we tagged it.

Based on the promising results from the spring development tests and the confidence the fisheries community

has gained while dealing with Destron Fearing with the ISO-based interrogation system developed for the juvenile salmon, we are strongly supporting the development of the hybrid system. The open-architecture system is being developed currently as a backup system, but the thorough evaluation of the two prototype transceiver systems scheduled for September will help finalize which transceiver system will be manufactured for the Washington Shore Fish Ladder tests scheduled for 2001. In the September tests, the transceiver evaluation team will use fall chinook salmon and steelhead for fish tests and will conduct a number of tests in the EMI-shielded room and laboratory at the NMFS Sand Point Electronic Shop in Seattle. These tests will evaluate the transceiver systems for ease of installation, reliability of operation and maintenance issues, electronic performance, diagnostic capabilities, and purchasing costs.

### Website Information

The Columbia Basin Fish and Wildlife Information Portal provides additional technical and administrative information about this project at the following

Internet address:

<http://www.efw.bpa.gov:88/infoportal/system/catview.gtf?pwd=/ColumbiaBasin/FishAndWildlifeProjects/BPA/FWP/198331900&list=catview>

The Portal is a public service provided by the Bonneville Power Administration. The Portal provides services by which registered authors and workgroups can develop information pertaining to the mitigation of impacts of the Columbia River Federal Hydropower System and species recovery. The Portal provides public access to this information as well as services by which the registered public can subscribe for update notification as content changes. The Portal can be accessed at the following Internet address: <http://www.efw.bpa.gov:88/>. ☒

### Contact Information:

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Figure 3. Photograph of a streamer tag that has been attached to a fish.



## Dave Answers His Most Frequently Asked Questions

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### *PITTAG2 Keyboard Shortcuts*

#### QUESTION:

Last year I melted the keyboard on my laptop when I left the laptop sitting on the tailgate of the pickup. I plugged in an external keyboard and the computer works fine, but now I can't use an external mouse, and it's inconvenient to use what's left of the computer's touchpad. Instead, I use the *PITTag2* keyboard shortcut keys, especially the [Alt]-A combination to Accept the current record. Now *PITTag2* won't auto-format my fish weights. Not only does it fail to add ".0" to my integer entries, it won't catch the format error when it validates and exports the Tag File. Why?

*Signed,  
LJ*

#### ANSWER:

Congratulations! You've discovered the Achilles Heel of *PITTag2* data entry. The auto-format feature doesn't work in the specific situation where you've entered an integer weight and then immediately press [Alt]-A to process the record. The solution is to [Tab] off of the weight field before pressing [Alt]-A. This is only an issue when you enter integer values for weights, and then only when you process the record with the keyboard shortcut. ☒

### *Tagging File Summary: 1900 Dates*

#### QUESTION:

Occasionally, I encounter PIT tagged fish incidental to my "regular" sampling at a couple of sites on the river. I've got a bunch of dinky *PITTag2* Tag Sessions with one or two fish in each of them. What's the easiest way to submit these recapture data to the PTAGIS database?

*Signed,  
BG*

#### ANSWER:

First, combine your data by tag-reporting location. Create a Tag Session in *PITTag2* for "Site A", and a separate Session for "Site B." Keep everything from a given location in a single Tag Session. For each Tag Session, generate a Tag File (containing your recapture records) and submit it to the PTAGIS3 database. For example, at "Site A" you already have a total of three tags, acquired on three separate days, in two tag sessions. Add the data for the single tag to the session with two tags (you'll have to manually update the Release Time Variables and Declarations).

Next, change the "Tag Date" value in the Tag Session to the first day that fish at "Site A" were scanned for PIT Tags. This will probably also change the Julian date in the File Name field. This is the name of the file you should submit to PTAGIS. (If you collect PIT tag data from "Site C", but have been sampling there for a month, specify your beginning sample date for the Tag Date, rather than the date of your first PIT tag recovery.) If and when more PIT tagged fish are recaptured at "Site A", append those tags directly to this Tag Session, apply and specify the Release Time Variables and Declarations, and regenerate the Tag File, overwriting the previous file version.

Each time you submit the file for "Site A", include the current day's date in the "Release Date" field, as long as fish are being sampled and scanned for tags. At the end of the season, the "Tag Date" and "Release Date" fields will define the sampling effort, while the Variable Release values will indicate the actual dates of tag recoveries. Also, at the end of the year you'll have all the PIT tag recovery data for "Site A" in a single Tag Session and local Tag File (plus the file copies we maintain in our archives; this provides redundancy and security for you).

Remember, the first time you e-mail a recapture data file in to [pitdata@pittag.org](mailto:pitdata@pittag.org), the subject heading must be "TAGGING". Anytime you re-submit a tag file via e-mail, use a subject heading of "TAGGING CORRECTIONS" or your file will be rejected from the database. ☒

("FAQ" continued on page 9)



## FAQ (cont.)

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### *Impact of No Release Data*

#### QUESTION:

What happens if I don't update my tagging data with release information (Site, Date, River Kilometer, etc.)?

*Signed,*  
*KT*

#### ANSWER:

Well, KT, it's mostly what *doesn't* happen. Most of the "canned" PTAGIS reports rely on the Release Date and Release Site descriptors. Some of these reports will automatically (and silently) use the "Tag Date" and "Tag Site" values if the corresponding "Release" values are missing. Other reports will simply, and expectedly, fail to find any data for queries involving missing Release field values.

Many researchers conducting in-river sampling or monitoring activities use the PTAGIS database as their sole source of data for the temporal and spatial distribution of tagged fish above their site (shame, shame), and they generally query the Release-related fields to obtain these distributions. If the Release information is unavailable (or inaccurate) for marked fish within the intended distributions, then the queries may "miss" those fish. This could result in "overmarking", where researchers do not anticipate, and therefore do not pre-scan for, previously-tagged fish. ☒

### *Duplicate Tag Codes*

#### TWO QUESTIONS:

- 1) I accidentally used a PIT tag from a mort in another fish; this accounts for a duplicate tag in my data set. How does PTAGIS resolve the fact that two separate fish have the same code?
- 2) I tagged a fish normally and got both a "TNI" and "DUP" record for that tag on the One-Fish-History Utility [from the PTAGIS web-site's Data and Reports page]. How can you have no record of a tag code and have it still be a duplicate? Where is the duplicate?

*Signed,*  
*MM (again)*

#### ANSWER:

All tag codes in the PTAGIS3 database "Tag\_Data" table are unique. Any tag code submitted to the database as a new tagging event that matches a code already in the "Tag\_Data" table will instead be inserted into the "Tag\_Dupe" table. Therefore, there is no conflict for PTAGIS3 to resolve. Thus, all references to the duplicate tag's original tagging event will point to the mort that you retrieved the tag from, rather than the fish you put the tag into. Please see the article "Another (Duplicate) Diatribe From Dave" on page 3 for instructions on how you should resolve duplicate tag assignments.

In response to question #2, it appears that the tag in the "Tag\_Dupe" table was originally bumped there because the same code was in the "Tag\_Data" table. Subsequently, someone has dotted out the original tagging record and resubmitted that tag file. What HAD been a tag record is now a Dot-Out record, but there's still a record in the "Tag\_Dupe" table. We don't automatically shuffle the records out of "Tag\_Dupe" table; we're waiting for you to reload the file that contains that "duplicate" record, at which time it will THEN be instantiated as a new tagging event in the "Tag\_Data" table. ☒

("FAQ" continued on page 10)

**FAQ (cont.)***Changing File Name Extensions**Tag File Content Summary***QUESTION:**

I used the “Tag File Content Summary” utility available on your web site. When I looked at the summary for all files, most of the file load dates were “1-Jan-1900”, and all of the row counts were blank. What’s up?

*Signed,*  
*MM*

**ANSWER:**

First and foremost, thanks for not asking “wassup?!?”. The Tag File Content Summary query allows you to see what data have been loaded to the PTAGIS3 database from your tagging files. For each file submitted, the report shows the number of records loaded as “new tags”, “recaptures”, “mortalities”, “duplicate tags”, and “Dot-Outs”.

The table driving that query contains every tag file submitted to PTAGIS since forever. However, only files submitted since December 1, 1999 have the row counts for records loaded to various PTAGIS3 database tables. We will update the information for files submitted prior to December 1999 (identified with the 1-Jan-1900 date) later this fall or winter. ☒

**QUESTION:**

Last week I sent in about 24 files. Of those, three have the wrong file extensions. I had changed the file extension in Windows Explorer but I did not go back into *PITTag2* and change the header and validate and export. Anyway, I was wondering what the protocol is to correct this. Thank you for your help, o wise one.

*Signed,*  
*RR*

**ANSWER:**

First, I want you to FedEx me your hands so I can wrap the fingers over the edge of my desk and rap them with a steel ruler. Never, ever, ever edit (or rename) your Tag Files outside of the Lovely and Talented *PITTag2* program!!! Apoplexy aside, here’s the standard protocol for “deleting” tag files that have already been loaded into the PTAGIS database.

- 1) Open a new tag session in *PITTag2*, and generate a filename and extension identical to the one you want to delete in PTAGIS. This means replicate the original file’s tag date and extension.
- 2) In the Session Message field, write something like “Empty file. Contents replaced by ABC00xxx.yyy.”, where ABC00xxx.yyy is one of the “real” filenames.
- 3) Complete just enough of the header to make it legal. You can use your original field values if you want.
- 4) Validate and Export the new (empty) version of the original file, overwriting the prior ASCII version that should still exist in your Tag Files directory (probably C:\Program Files\PITTag2\TagFiles).
- 5) Submit this new file version to PTAGIS, via e-mail (to [pitdata@pittag.org](mailto:pitdata@pittag.org)), with a subject line of “TAGGING CORRECTIONS”.
- 6) Once you’ve received e-mail back confirming we’ve got our clutches on your “empty” data file, you can submit the “real” data file. Again, you’ll mail it to [pitdata@pittag.org](mailto:pitdata@pittag.org). Since you haven’t yet loaded the new file to PTAGIS, your subject line is “TAGGING”. If you HAD previously loaded this data file to PTAGIS (and discovered that all your tag codes ended up in the “Tag\_Dupe” table), you’d submit the new version with a subject of “TAGGING CORRECTIONS”.

Following this procedure, the submission of the “empty” file clears all of that file’s existing data records from the detail tables (new tags, recaps, morts, dot-outs, and dupes), giving us a “blank slate”. The submission of the “real” file then instantiates the data records in the proper and expected tables. ☒

(“FAQ” continued on page 11)

## FAQ (cont.)

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### *Registered TagID Utility*

#### QUESTION:

I'm pretty new at this. I'm assuming I will see a recapture show up in one of my tagging files if one of the PIT tagged fish we released is detected downstream. I'm using the "Tag File Contents Summary" utility on your Web Site to look for this stuff. Am I doing it right, or is there a better way to check in once in a while to see when/where the fish we tagged show up?

*Signed,  
JM*

#### ANSWER:

Actually, the only thing that's going to cause your tagging files to change is if YOU modify them. You've got to do a little legwork to retrieve "detections" of your fish from downstream sites. But first—a couple of definitions.

"Recaptures" occur when someone physically handles your tagged fish. If the recapture event is somehow related to a dead fish, either because of intentional sacrifice or from "natural" causes, it's reported as a "mortality"; mortality events are stored and referenced separate from recaptures.

"Interrogations" are the automated detections of PIT tagged fish as they pass through the permanently installed PIT tag antenna coils at various monitoring facilities. At transportation sites, we're generally confident of which fish are transported and which fish are returned to the river. Oh, and to make things just a little more confusing, I should mention that some people (and the PTAGIS3 database) often use the terms "interrogation" and "observation" interchangeably.

So, now that you know the lingo, let's get back to your original question. How do you obtain downstream detection data for your tagged fish?

I suggest retrieving data from PTAGIS3 through the "Registered Tag ID File" utility. You upload an ASCII text file containing your list of tag codes and register it with us, and then query the database against that file; we'll return a different file to you containing everything in your code list from our tagging, interrogation, recapture and mortality event tables. We also alert you to any of your codes that are NOT in our "Tag\_Data" table via the TNI (Tags Not Instantiated) list. And, if available, we reference the initial receipt and distribution of the tags in the Columbia Basin, via the TDI (Tag Distribution Information) list. The information for all six categories (TAG, OBS, RECAP, MORT, TNI, and TDI) are formatted in CSV records, sorted by tag code, grouped by category, and compiled into a single data file.

These data will satisfy the vast majority of database queries. Simply upload (via Zmodem or FTP) your data file and register it, one time, and you can then generate the correlated data sets once, on demand, or repeatedly throughout the migration season(s). Each time you run the Registered Tag ID report, you'll receive the most current information loaded to the PTAGIS3 database. And once you acquire the data, you can customize, manipulate, and aggregate the data as necessary to suit your needs.

Here are a couple of tips. First, if you FTP your list to PTAGIS, log in with your PTAGIS account name and password; you'll be routed directly to your account area on our server. Make sure you upload your file to the "out" directory in your user area. Second, you should enable the "Forwarding E-Mail" option under the "Util" menu. This not only automates the delivery of your reports (in ZIP format) to your e-mail address, but also preserves the ZIP report in your "out" directory on our server, where you can retrieve it via FTP if it's too large to e-mail. ☒

("FAQ" continued on page 12)

## FAQ (cont.)

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### *Running Reports from the PTAGIS3 Application*

#### QUESTION:

Help! I don't know anything about running reports from the PTAGIS application, but my boss wants me to find all the interrogations of the tagged fish we're dumping into the forebay out here at Dang Dam. What do I do?

*Signed,  
LM*

#### ANSWER:

Dear LM: I know our documentation is incomplete and out-dated. While the following steps are specific to generating interrogation reports, the process is generic, and can be applied to the other data classes.

Before you can access the PTAGIS application, you must have or acquire a user account (by contacting me via email at [dave\\_marvin@pittag.org](mailto:dave_marvin@pittag.org)). Then you'll need a TelNet client (like Window's own "TelNet" or, preferably, a recent version of "HyperTerm") or a dial-up client like ProComm Plus. With the account and communications client, you can log into the PTAGIS application. For reasons you'll understand in step 5, you should provide us with your e-mail address via the "Forward E-Mail" option under the main PTAGIS "Util" menu.

Now, here's how to retrieve your interrogation data for the juvenile PIT tag detection system at Dang Dam (DDJ).

- 1) Under the "Reports" menu, select "Interrog Site Detail". (This is actually mislabeled,

and will give us a summary report, as you'll see later.)

- 2) Create a "New Query". Insert "1/1/00" in the "First Obs Dates Begin" field, then tab to the "End" field and enter "12/31/00". Tab to the "Obs Site" field and enter "DDJ". Press [F2] to save the query, and call it "DDJ-2000" (or another name, if you're prompted that you've already used this query name in this report class).
- 3) Create a "New CSV List". Cursor down to highlight the fields you want, in the order you want, and press [Enter] to select them. You can select whatever tagging information you want; for obs data I'd select "first\_obs\_date", "first\_monitor\_name", "last\_obs\_date", "last\_monitor\_name", and "times\_seen\_at\_site". (We don't care about the "obs\_site" column, because we specified "DDJ" only in query creation step in (2) above.) Press [F2] when you're done, and save this CSV list as "DDJ-2000" (or another name, if you're prompted that you've already used this CSV list name in this report class).

- 4) Run the report. Select your "DDJ-2000" query from the list; then select "DDJ-2000" from your CSV list. (You don't have to name the query and CSV identically, but I find that doing so helps me keep track of what query goes with what format.) You'll be prompted for an output filename (the default is something like "dm12345.csv"); might I suggest "DDJ-2000.CSV"?

- 5) From the "View Report" page you can see when this report is finished; the file size field will change from a null value to a non-zero number, or zero if the report completed without returning any data rows. You can view the report onscreen, but you'll probably want to download it. If you've already enabled your "Forwarding E-Mail" option, the ZIPped report will be e-mailed to you. Otherwise, and if your communication client allows it, you can download the uncompressed file from the "Upload/Download" menu via the Zmodem protocol.

As I said earlier, these steps are specific to generating an interrogation report. However, the process is generic: 1) create or edit a report query, 2) create or edit a report CSV list of desired fields, and 3) run the report using your CSV format. The process of running reports is very similar for the other report data types: tagging, recapture, and mortality. ☒

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Place  
Stamp  
Here

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