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MEMORANDUM

TO: John Tenney, PSMFC
             Nicole Tancreto, PSMFC

FROM: Michele DeHart, FPC

DATE: June 19, 2012

RE: FPC data access request and PTAGIS beta website

As part of the focus group evaluating the PTAGIS beta website, the Fish Passage Center has reviewed the beta website and compiled these remarks. Our first priority at the FPC is reasonably fast access to the database in a format that is amenable to our needs. **We feel that the best resolution to our needs is either remote data access to the PTAGIS database or daily reports of PTAGIS data updates and changes.**

The primary access to the PITAGIS database that sends data in a format used by FPC is through the telnet system and the "Registered Tag Id Summary" report. The beta version of the web site does not replace the telnet "Registered Tag Id Summary" report. Neither the old version of the website nor the new beta version of the website meets FPC data needs. Neither web version will satisfy FPC needs to update large region wide PIT tag data bases for analyses.
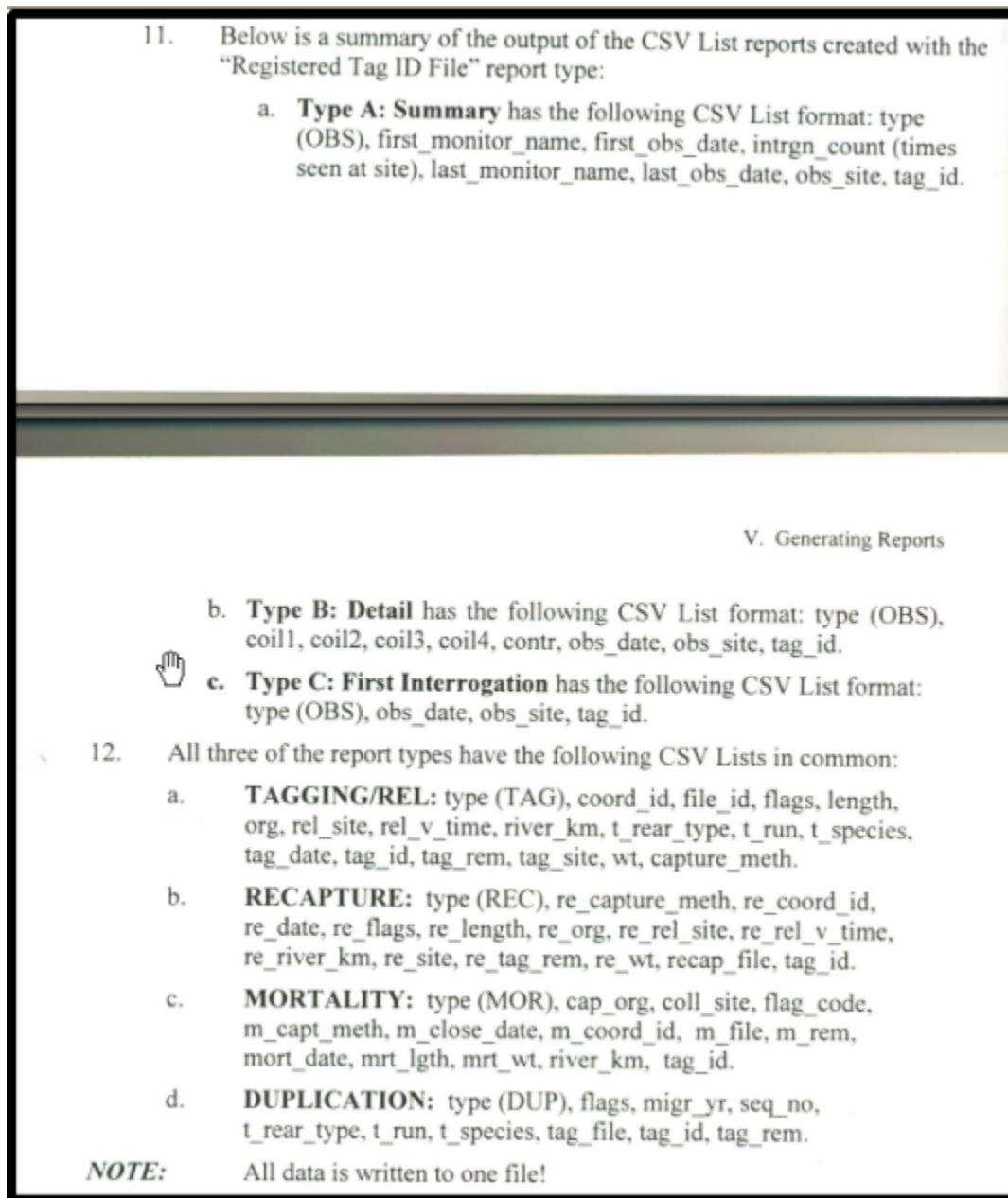
The FPC has developed two options for your consideration that would meet the FPC PIT Tag database needs: (i) **remote data access to the PITAGIS database** or; (ii) **daily reports of PTAGIS data updates**. The first option is designed to take advantage of the fact that both the FPC database and the PTAGIS database are on the SQL platform. Both options would eliminate the inefficiencies of the telnet system. In addition we understand that PSMFC would prefer not to maintain the telnet system. Vast improvements in timeliness and user efficiency could be implemented with either option. The two new data transfer options we are suggesting are below. We look forward to the opportunity to discuss these with you.

(1) **OPTION 1 (remote data access):** Since FPC uses Microsoft SQL to house most of our data and PTAGIS currently exists on the Microsoft SQL platform it seems most efficient for FPC

to gain a more direct connection to the data. We would like to be able to connect to an instance of your PTAGIS database using management studio or through Open Database Connectivity (ODBC). Is there any way to get a connection through the internet to the PSMFC SLQ Server housing the PTAGIS database?

(2) **OPTION 2 (daily reports of changes)** both of these would be automated**:**

    1. REPORT 1**:** An automated query is in place at PTAGIS that routes data, following the telnet format of the "Registered Tag Id Summary" report. This format is outlined in FPC 2009 and 1998 PTAGIS User Manual (Figure 1 below). This query would deliver the "Registered Tag Id Summary" report whenever PTAGIS receives updates or new data. This query would include any tags with changes that occurred in: TAG, OBS, REC, MOR, or DUP or whenever a new tag is loaded. Perhaps on a semi-daily basis the data could be transferred to FPC via an FTP port, HTTP port, email, or any other method amenable to PTAGIS protocols.

    2. REPORT 2**:** A list of tag_id codes that were dotted out in tag files that is delivered similarly to REPORT 1.

11. Below is a summary of the output of the CSV List reports created with the "Registered Tag ID File" report type:

    a. **Type A: Summary** has the following CSV List format: type (OBS), first_monitor_name, first_obs_date, intrgn_count (times seen at site), last_monitor_name, last_obs_date, obs_site, tag_id.

V. Generating Reports

    b. **Type B: Detail** has the following CSV List format: type (OBS), coil1, coil2, coil3, coil4, contr, obs_date, obs_site, tag_id.

    c. **Type C: First Interrogation** has the following CSV List format: type (OBS), obs_date, obs_site, tag_id.

12. All three of the report types have the following CSV Lists in common:

    a. **TAGGING/REL:** type (TAG), coord_id, file_id, flags, length, org, rel_site, rel_v_time, river_km, t_rear_type, t_run, t_species, tag_date, tag_id, tag_rem, tag_site, wt, capture_meth.

    b. **RECAPTURE:** type (REC), re_capture_meth, re_coord_id, re_date, re_flags, re_length, re_org, re_rel_site, re_rel_v_time, re_river_km, re_site, re_tag_rem, re_wt, recap_file, tag_id.

    c. **MORTALITY:** type (MOR), cap_org, coll_site, flag_code, m_capt_meth, m_close_date, m_coord_id, m_file, m_rem, mort_date, mrt_lgth, mrt_wt, river_km, tag_id.

    d. **DUPLICATION:** type (DUP), flags, migr_yr, seq_no, t_rear_type, t_run, t_species, tag_file, tag_id, tag_rem.

NOTE: All data is written to one file!

Figure 1. Screenshot of 1998 PTAGIS User Manual (Baumen et al., 1998, pg 26-27). This screenshot shows the explanation of the format for the text file resulting from the "Registered Tag ID Summary" report query. This is the primary query used on the telnet application by the Fish Passage Center.

Review of new beta website

The issues that FPC has had with the web access have been addressed before (FPC 2009) and some key points are that:

- PTAGIS is a critical component of the FPC, Smolt Monitoring and Comparative Survival study projects. The FPC completely depends on the PTAGIS data system to meet the FPC contract deliverables, day-to-day data requests, the FPC Annual Report and the CSS Annual Report.

- These various region-wide deliverables are time sensitive and we depend on a reasonably fast acquisition of large sets of data.

- FPC continues to use the telnet application to access PTAGIS primarily for two reasons:

  (1) The current PTAGIS web interface program does not produce an output format that is useable by the FPC to update our databases.

  (2) The current PTAGIS web interface is much slower than data acquisition via the telnet.

The new beta application seems robust and capable of replacing the current website eventually for most users. However, under its current format the beta web application does not produce the data needed by FPC and is not a viable replacement for the telnet "Registered Tag Id Summary" report or the old web application.

On occasion, the FPC does use the old web application for purposes other than database updates. After reviewing the beta website, we feel that is would be sufficient for these purposes, perhaps with some improvements. There are scenarios where the beta version is more restrictive than the old version of the web site or requires other improvements.

(1) The FPC finds that the new Beta website could be used for basic queries of the PTAGIS database to obtain the most up to date information on tagging programs. For example, getting up to date info on CSS wild marking programs in regards to species, date, tagging site, coordinator ID, etc. However, the FPC staff tried several queries including the observation report April 2011. When this query was requested (using the export button), timeouts occurred. In addition, the staff had difficulties trying to use the export functions.

(2) The new Beta website may also be sufficient for downloading observation data at the 'coil' level for certain requested analyses that are often for a specific list of tags or though a query. However, the beta application did not appear to have the ability to upload a list of tags, to register, and query the database and this feature should be added.

(3) The old web application was useful to identify lists of tags that need to be downloaded through the telnet "Registered Tag Id Summary" report. In this regard the beta website is more restrictive that the old website and this would need to be remedied in the beta application.

1. **RECAPS/MORTS**

    a. With the current web application we query all recaps and all morts to keep our database up to date. This is necessary since recaps and morts can get uploaded retrospectively *at any time*. This allows for a complete update of our MS SQL database and since there are currently only ~0.95 million recaps and ~1.2 million morts, the tags to update/add can be identified with two queries on the old web application. The beta system does not allow for this.

2. **OBS**

    a. With the current application we query all detected obs within a calendar year without any other restrictions. This allows for identification of tags to update/add with a single web query. This is restricted on the current web application by tag and release date requirements. Since these two dates can: (i) not exist on PTAGIS due to late upload of tagging file, (ii) contain a mis-entered rel_date that is nonsensical, (iii) or contain nonsensical tag_date due to ORPHAN tags and ultimately a late upload of the tag file, having these restrictions in the query limits our ability to update our MS SQL database.

(4) The Beta website it too restrictive for some of our needs. Given the nature of the requests we receive, a limit of 1,000,000 records too few.

(5) It would be nice if there was a way to catalog ALL queries that are executed by a user. There have been times when the FPC ran a query on the old web version but the data that were returned were not what was expected. However, we are not always able to retrieve the old query language to investigate why certain data were missing.

References

Bauman, L., J. Mead, and C. Stein. 1998. PIT Tag Information System User Manual. Version 4. Pacific States Marine Fisheries Commission, Portland, Oregon.

FPC 2009. Fish Passage Center, Memo to Randy Fisher, FPC use of PTAGIS (01/09/09). www.fpc.org/documents/memos/03-09.pdf