MEMORANDUM

TO: Fish Passage Center Oversight Board
    Brian Lipscomb, CBFWA
    Randy Fisher, PSMFC

FROM: Michele DeHart

DATE: July 29, 2008

RE: Quarterly Fish Passage Center Report for April – June 2008

Following is the Quarterly Report for the Fish Passage Center for the second quarter of 2008. This report incorporates the comments received at the last Fish Passage Center Oversight Board (Oversight Board) meeting regarding format and content. The report follows the Pisces work elements format for the project.

**Pisces System Work Elements**

**Produce environmental compliance documentation**
Daily sampling is continually monitored through the migration period to assure that section 10 ESA permit requirements, conditions and limitations are met.

**Provide Technical Review**
During the second quarter of 2008 the FPC staff was asked to provide review comments regarding the survival estimates for sockeye in the NOAA incidental take statement, and the NOAA proposed passage operations relative to past years operations. These are posted on the FPC web site. FPC staff attended Oregon DEQ and Washington DOE Adaptive Management Meetings to provide technical support, review and analysis as requested by the state management agencies and the regional committee.
Analyze/Interpret data

The staff priority in the second quarter of 2008, was completing and posting the 2007 Fish Passage Center Annual Report on the web site, for regional review. The FPC staff responded to 52 data requests which are listed below. These ranged over a wide range of topics and were received from fish management entities and the public. These are listed below as was requested at the last Oversight Board meeting. The FPC staff received a request from the Fish Passage Advisory Committee to include fish condition data on the FPC web site. During the second quarter, the FPC began reviewing, organizing and developing a structure for inclusion of this data on the FPC web site. The Oregon Department of Environmental Quality and the Washington Department of Ecology requested several data summaries, analysis and reviews to support their Adaptive Management Team deliberations regarding water quality waivers.

1. Adult Graph
   Judy Peterson, Citizen
   April 1, 2008

2. Adult count clip vs. unclip information
   Alicen Magnius, NOAA
   April 7, 2008

3. Link to NOAA
   Dudley Devices
   April 15, 2008

4. Forced spill & gas cap spill
   Jay Hesse, NPT
   April 15, 2008

5. Asked about adult pit tag counts
   Victor Woops, Citizen
   April 16, 2008

6. Asked about adult pit tag counts
   Chad low, Citizen
   April 16, 2008

7. Size difference transported fish
   Russ Kiefer, IDFG
   April 21, 2008

8. Seasonal timing CSS groups
   Russ Kiefer, IDFG
   April 21, 2008

9. Recent attempts to improve mainstream migration condition for in-river migration salmonids.
   Ed Bowles, ODFW
   April 21, 2008

10. Transport related questions
    Ed Bowles, ODFW
    April 21, 2008

11. Average spill proportion variable
    In CSS analysis
    Jay Hesse, NPT
    April 23, 2008

12. Asked about adult pit tag counts
    David Bighouse, Citizen
    April 28, 2008

13. Asked about adult pit tag counts
    Liz Hamilton, NSIA
    April 28, 2008

14. Adult counts at Bonneville
    Rob Carroll, Citizen
    April 28, 2008

15. Average Temp. Bonneville in April 82-95
    Cindy LeFleur, WDFW
    April 28, 2008

16. Requested historical flow data
    Richard Schully, IDFG
    May 1, 2008

17. CSS Oversight Committee review of NOAA document submitted to ISAB re: transportation
    Ed Bowles, ODFW
    May 1, 2008

18. Adult passage/spill
    Robert Bissonette, Teacher
    May 6, 2008

19. Adult travel time data
    Tony Maniglia, Citizen
    May 8, 2008

20. Temp. graph suggestion
    Vince Zeik, Citizen
    May 9, 2008

21. Added Association of Northwest steelheaders to website
    Ted Fountain, NW Steelheaders
    May 12, 2008

22. Requested McNary temp. Data
    Bob Rogers, Citizen
    May 12, 2008

23. Passage Index '06 and '07
    Peter Jensen, Citizen
    May 13, 2008

24. Request help troubleshoot their SQL
    Brian Michelob, NPT
    May 16, 2008

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Develop RME methods and designs
In response to a request from FPAC the FPC staff working with the SMP remote site personnel are developing a standardized method for collecting and reporting standardized fish condition data at all SMP sites. This includes development of sampling criteria and also the development of a standard remote site data entry program so that fish condition data collection is applicable across sites.

FPC staff evaluated a memorandum sent by the COE, describing standardizing fish condition data. A set of data for the standardized fish condition dataset was selected based on biological review and recommendations from the COE memorandum. A new database design for the standardized fish condition data was created. A fish condition data entry program for LGS and LMN was developed; since these sites were not collecting individual fish condition data (see...
The staff went to these sites to install the program and provide user support. For the other SMP sites that currently collect individual fish condition data, access and excel macros were developed to allow their data to be reported in the standardized format. These macros were sent to each site, along with written procedures. End user support was provided over the phone. A new email address was created to allow standardized fish condition data to be reported to the FPC on a daily basis from LGR, LGS, MCN, LMN, JDA, and BON. This email address group includes many staff members. Additionally internal procedures were developed for processing these data.

The FPC staff determined and implemented the major steps needed to accomplish the automation of inputting standardized fish condition data into the FPC database. These steps included: 1. Creating standardized fish condition table in our database; 2. Writing storage procedures to import new daily data into standardized table and update any data that has changed; 3. Writing storage procedures to import historical fish condition data into the new standardized fish condition database; and 4. Writing storage procedures and scheduling jobs to update the tables used for the standardized fish condition graph and query on the website (see Figure 2).
Figure 2 – Updated Standardized Fish Condition Web Graph and Query

<table>
<thead>
<tr>
<th>Site</th>
<th>Date</th>
<th>Species</th>
<th>Number of Fish Sampled</th>
<th>Number of Fish with Physical Injuries</th>
<th>Percentage of Fish with Physical Injuries</th>
<th>Number of Fish with Disease</th>
<th>Percentage of Fish with Disease</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>LGR</td>
<td>6/23/2008</td>
<td>CHO</td>
<td>103</td>
<td>1</td>
<td>0.9709</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LGR</td>
<td>6/24/2008</td>
<td>CHO</td>
<td>120</td>
<td>7</td>
<td>5.6333</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LGR</td>
<td>6/25/2008</td>
<td>CHO</td>
<td>92</td>
<td>3</td>
<td>3.3333</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LGR</td>
<td>6/26/2008</td>
<td>CHO</td>
<td>90</td>
<td>3</td>
<td>3.3333</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Create/manage/maintain database, maintain long term database, maintain SMP/CSS site data

The FPC data staff removed 2 older servers from its network and replaced them with new servers. These servers were the databases used by queries on the FPC website. One of the servers was the primary web database server (SQL-Main1, MS SQL2000) replaced by SQL2 with MS SQL 2005 (see Figure 3). The other server was a duplicate replica of this server, used as a backup server. The servers were built, installed, and setup onto the network. The database software was installed. Data was copied from the old machines onto the new machines and then authentication and replication were setup. Web queries were then pointed to the new database server. Some of the queries needed editing, due to some minor syntax changes in the newer version of TSQL.

Figure 3 – SQL2 FPC Web Database Server (MS SQL 2005)
Additional computer/network updates

Maintenance on computers and network equipment was completed. The laptop screen was repaired and a new workstation was built for additional computing power for the staff. Staff worked with the Nez Perce when their database systems crashed this quarter to assist them to get up and running, since they collect SMP data and report it to the FPC.

FPC32 software development for the SMP program

Phase I development of the FPC32 software involved adding fish condition standardized data and reporting at the sites this year. This was recently completed (see above section). The Phase II development of the FPC32 program involves rewriting the entire FPC32 software package in a newer development environment to take advantage of newer computing capabilities. Phase II development has begun and is continuing. A system design flowchart was created for the FPC32 Phase II development, illustrating the major inputs and outputs for the software (see Figure 4). The main SMP batch input functions have been developed (see Figure 5). Reporting functions are currently being written. The FPC staff are working as a team to develop the most useful format for the reports. In addition, we are considering adding standardized COE reports so that SMP sites do not need to develop these reports individually.

![Figure 4 -- FPC32 Phase II System Design Flowchart](image-url)
1. New computer program CSS Bootstrap BT2 (R – CRT - T) has been developed.
2. New computer program CSS Bootstrap BT3 (CRT- R - T) has been developed.

Regular website maintenance continued this quarter. In addition, shad have been added to the Adult Cumulative table query, as requested by several website users. Work continued on updating the website to the new design and navigation formats. Several smolt web pages and queries have been upgraded. For instance, a SMP daily reports web page was created and linked to the menu. It provides access to all of the daily SMP reports (see Figure 6). A new smolt data web page was created. It groups similar smolt graphs and queries together under three tabbed sections, providing the user with more information in determining where they will find the type of query they are searching for (see Figure 7). Additionally, work continues to update queries and graphs to the new format (see Figure 8). As previously mentioned, the fish condition graph and query were updated to work with the new standardized fish condition data. The fish condition graph was changed to a bar graph that only plots data for the dates when fish are sampled. The staff answered several data requests from the website to the webmaster, such as the suggestion by a user to add shad to the Adult Cumulative table query.
Figure 6 – SMP Daily reports web page

Figure 7 – Smolt Data web page
Figure 8 – Updated Smolt Daily Passage Index Graph web pages
Manage and Administer projects

Produce a plan
In response to request from BPA FPC staff developed plans for the CSS study for 2009 and the FPC and SMP projects for 2009 in order to assist BPA in developing their 2009 start of year budget document. The CSS project plans for 2009 were developed according to the regional agreement reached in 2008. The FPC plan was produced according to the tribal MOA with BPA and the NPCC Fish and Wildlife Program language.

Produce annual progress reports.
The FPC Annual Report for 2007 was completed and posted on the web site for a 45 day regional review period during this quarter consistent with the project deadline due dates established in the Pisces project tracking system. The FPC staff worked with the CSS Oversight Committee to complete a draft 2007 status report, during this quarter. The draft due date does not occur until the third quarter of the year.

Regional Coordination, Fish way Inspections/FPAC
Fish facilities inspections took place according to schedule and were completed for all projects during this quarter. The monthly reports were posted on the FPC web site.

Disseminate raw summary and data results
The FPC website is the primary vehicle for data distribution. The FPC site had 8,780,677 successful hits on our website during the 2nd quarter of 2008 with 544,610 page views and 315,167 visits or user sessions. Approximately 87% of the user sessions were from the United States. About one percent of the remaining user sessions were international with about 12% of unknown origin. During the 2nd quarter, we averaged 96,490 hits per day, 7,089 page views per day, and 5,194 user sessions per day. The average user session length was 4 ½ minutes. The number of unique users was 103,464. Of these unique users, 55.5% visited once and 44.5% visited more than once. We log all data requests made via the web. The number of requests between 4/1/2008 and 6/30/2008 was 75,780. The following graphics illustrate our website use and our audience for the second quarter of 2008.
Weekends

FPC 2nd Quarter, 2008
Visits

Hits by Organization Type, 2nd Quarter 2008

Network / Individual: 56.7%
Company: 22.1%
Organization: 12.5%
Government: 6.0%
Military: 1.7%
Education: 1.0%
Produce status reports
All Pisces status report requirements were met for the SMP, CSS and FPC projects for this quarter.