MEMORANDUM

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

FROM: Michele DeHart

DATE: July 9, 2009

RE: Quarterly Fish Passage Center Report for April – June 2009

Following is the Quarterly Report for the Fish Passage Center for the first quarter of 2009. This report follows the format and content agreed upon by the Fish Passage Center Oversight Board (Oversight Board).

**Pisces System Work Elements**

**Produce environmental compliance documentation**
Sample collections and mortalities were reviewed weekly to assure permit requirements and conditions were met.

**Provide Technical Review**
In response to a request from the Fish passage Advisory Committee the FPC staff reviewed and provided comments on, "Statistical Design for the Lower Columbia River Acoustic-Tag Investigations of Dam Passage Survival and Associated Metrics".

...
Analyze/Interpret data

The FPC completed data summaries, analysis and discussion of results for the FPC annual report summarizing the results of the Smolt Monitoring Program, passage conditions and river operations for 2008. The report was posted on the website for 45 day regional review ending on July 16. In addition, during this quarter the FPC staff has focused considerable effort in data analyses and interpretation in development of the draft CSS Annual Status Report for 2008, which will be posted on the website for regional review on August 31.

The FPC responded to 13 requests for data and analysis, which are listed below

1. Review of; "Statistical Design for the Lower Columbia River Acoustic-Tag Investigations of Dam Passage Survival and Associated Metrics" - June 24, 2009 - FPAC

2. Mainstem monitoring: Comparative Survival Study; Coordination and integration of marking for estimation of smolt to adult returns (SAR) juvenile migration survivals and mainstem passage characteristics, The Smolt Monitoring Program; juvenile migration passage characteristics including survival. - June 22, 2009 - Members Advisory Group, CBFWA

3. 2009 Update of Proportion of hatchery Snake River sub-yearling Chinook (released above Lower Granite Dam) that are released unclipped and/or unmarked. - June 16, 2009 - FPAC

4. Proportion of fall Chinook and steelhead adults passing LGR during evening non-counting hours - June 11, 2009 - Jay Hesse, NPT


6. Spring Chinook adult passage in Snake River in May 2009 - June 1, 2009 - FPAC

7. Survival and detectability for 2007 Hanford Reach juvenile fall Chinook - May 22, 2009 Henry Franzoni, CRITFC

8. Ice Harbor bypass effects on Snake River hatchery Chinook returns - May 21, 2009 Russ Keifer, IDFG

9. Survival and detectability for 2008 Hanford Reach juvenile fall Chinook - April 28, 2009 Henry Franzoni, CRITFC

10. Audit of PTAGIS server system by Darin Jackson and Andrew Wilcox - April 15, 2009 - FPAC


12. Quarterly Fish Passage Center Report for January - March, 2009 - April 14, 2009 – FPC Oversight Board

13. Factors affecting adult passage of spring Chinook - April 8, 2009- Rob Lothrop, CRITFC
Develop RME methods and designs
FPC staff participated with the CSS Oversight Committee, and CBFWA initiatives in developing a basinwide RME program to meet Biological Opinion requirements and the requirements of the NPCC Fish and Wildlife Program. The FPC staff provided technical support to the agencies and tribes specifically addressing the issues of coordination of monitoring programs in tributaries, hatcheries and sub basins with on going mainstem monitoring to achieve maximum efficiency and cost effectiveness. FPC staff participated with PSMFC and agencies and tribes representatives in discussions and reviews of enhancements to the PITAGIS data management and storage system. The implementation of the new fish mainstem condition sampling and data recording protocols has been monitored through the spring migration.

Disseminate raw summary and data results
The FPC website is the primary vehicle for data distribution. The FPC site had 7,684,492 successful hits on our website during the 2nd quarter of 2009 with 643,984 page views and 468,378 user sessions. Approximately 83% of the user sessions were from the United States. Approximately 1% of the user sessions were international with about 16% of unknown origin. During the 2nd quarter, we averaged 84,444 hits per day and 7,076 page views per day. The average user session length was about 4:17 minutes. The number of unique visitors was 105,416. Of these unique visitors, 55.5% visited once and 44.5% visited more than once. We log all data requests via the web. The number of requests between 4/1/2009 and 6/30/2009 was 80,410. The following figures illustrate our website use for the 2nd quarter of 2009.

Percentage Hits by Organization Type, 2nd Quarter 2009

- Network / Individual: 63.5%
- Company: 24.4%
- Organization: 4.6%
- Government: 5.1%
- Military: 1.4%
- Education: 1.0%
Create/manage/maintain database, maintain long term database, maintain SMP/CSS site data

Website Updates

Regular website maintenance and updates were completed during the quarter. This included updating the web scripts, pages and graphics when necessary. Additionally, work continued on updating the website and adding additional data queries. FPAC requested a *Detailed Fish Condition Injury Data Query*. This was added to the FPAC Links page. A link was also placed on the fish condition query page. Under the survival sub-site, the *CSS Returning Adult Age Composition Query* was added. Metadata was created for both of these queries. Additionally the website navigation was updated, adding access to two newly developed TDG reports that are posted daily on the web (see the Software Development section below).
CSS RETURNING ADULT AGE COMPOSITION QUERY

Instructions: Choose an option for querying the CSS age composition of returning adults by clicking on one of the buttons and completing the form.

1. Single-year table: Allows you to choose a species, source, season, and year. Returning is indicated that can be downloaded as a .pdf.
2. Single-year table 4-year span: Allows you to choose a species, source, season, and year. Returning is indicated that can be downloaded as a .pdf.
3. Multiple-year table: Allows you to choose a species, source, season, and multiple years. Returning is indicated that can be downloaded as a .pdf.
4. Multiple-year table & graph: Allows you to choose a species, source, season, and multiple years. Returning is indicated that can be downloaded as a .pdf into a .pdf graph.

CSS Returning Adult Age Composition Graphs
Hatchery Chinook, 2005

Percentage adults by age category

Number of returning adults by age category

CSS Number of Returning Jacks and Adults by Age for Wild Chinook

Percentage of Returning Adults by Age for Wild Chinook

Note: Graphs are reproduced for the figures worth of prints.
DAILY DETAILED FISH CONDITION INJURY DATA GRAPH QUERY

Daily Detailed Fish Condition Injury Data Graph

1. Choose one of the following Smolt Monitoring Project sites: [Lower Granite Dam]
2. Select Start Date [5/24/2009] and End Date [6/20/2009] in mm/dd/yyyy format. The table below lists the dams and years that have fish condition data available to currently query.
3. Choose one of the following anadromous salmonid species: [Chum] [King] [Pink] [Sockeye] [Chinook] [Chum][King][Pink][Sockeye][Chinook]
4. Submit [Submit] or Reset [Reset]

Click here for metadata about the detailed fish condition data table and graph.
Click here for smolt monitoring program metadata.
Click here to download a draft copy of the FPC SMP Condition Sampling Protocol Version 1.0 (2009).
Click here to download a draft copy of the FPC/SMP Remote Site Data Entry Program Manual 2009 Season (this is the document includes documentation for the touch screen program used to collect the fish condition data).

DATA TABLE:

Fish Condition - Detailed Injury Data:

<table>
<thead>
<tr>
<th>Site</th>
<th>Date</th>
<th>Batch</th>
<th>Species</th>
<th>Eye Injuries</th>
<th>Operculum Injuries</th>
<th>Body Injuries</th>
<th>Fin Injuries</th>
<th>Head Injuries</th>
<th>Number of Fish with Physical Injuries</th>
<th>Number of Fish Sampled</th>
</tr>
</thead>
<tbody>
<tr>
<td>LGR</td>
<td>6/24/2009</td>
<td>09176</td>
<td>CHI</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>87</td>
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<tr>
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<td>09176</td>
<td>CHI</td>
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<td>0</td>
<td>0</td>
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<td>0</td>
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</tr>
<tr>
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<td>09177</td>
<td>CHI</td>
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<td>0</td>
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<td>70</td>
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<tr>
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<td>09176</td>
<td>CHI</td>
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<td>0</td>
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<td>70</td>
</tr>
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<td>CHI</td>
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<td>98</td>
</tr>
<tr>
<td>LGR</td>
<td>6/30/2009</td>
<td>09181</td>
<td>CHI</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>107</td>
</tr>
<tr>
<td>LGR</td>
<td>7/1/2009</td>
<td>NA</td>
<td>CHI</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Daily Fish Injuries at Lower Granite Dam

<table>
<thead>
<tr>
<th>Date</th>
<th>Total Number of Fish Injuries</th>
<th>Number of Fish Injured by Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>5/24/2009</td>
<td>20</td>
<td>Chum</td>
</tr>
<tr>
<td>5/25/2009</td>
<td>20</td>
<td>Chum</td>
</tr>
<tr>
<td>5/26/2009</td>
<td>20</td>
<td>Chum</td>
</tr>
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<td>5/27/2009</td>
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<td>5/30/2009</td>
<td>20</td>
<td>Chum</td>
</tr>
<tr>
<td>6/30/2009</td>
<td>20</td>
<td>Chum</td>
</tr>
</tbody>
</table>

Note: Graphs are only provided for 7 days worth of data.
SOFTWARE DEVELOPMENT
SMP site personnel requested a few updates to their site access tools. These updates were developed and deployed at the sites. A new total dissolved gas program was developed along with two new TDG reports. Two data monitoring programs were developed, including an SMP batch monitoring and posting program and a TDG download data monitoring program. Both of these programs run on the FPC intranet and are deployed as a single dashboard application with a tab for each program. A more detailed description of the TDG program and the monitoring program dashboard follows.

NEW TDG PROGRAM AND REPORTS
In June, FPC staff developed a new program to download and store hourly total dissolved gas (TDG) data from the COE and Grant County PUD websites. This new program processes these data each day and provides an estimate of the 12-hour average TDG levels for each project throughout the basin. The program estimates the 12-hour average TDG levels using both the Oregon and Washington criteria and generates two daily reports with the most recent two weeks of data for each methodology. Both of these reports are posted to the FPC Daily Reports section of the website for viewing and download (http://www.fpc.org/riverandsmp_dailyreports.html).
NEW DATA COLLECTION MONITORING APPLICATIONS:

To assist FPC staff in the monitoring of data acquisitions, FPC staff developed two data monitoring programs. The first of these programs was developed to monitor for the status of SMP batch data uploading. As SMP remote data entry sites send their data to the FPC, this program is updated. This allows FPC staff to quickly see which sites have uploaded the data for that day and which sites are still missing data for that day. The second of these programs was developed to monitor for the successful acquisition of data for the new TDG reports. This allows FPC staff to quickly view whether some TDG data are missing for the daily report or whether some sites have partial data (i.e., less than 24 hours for a single day).

Both of these programs run on the FPC intranet and are deployed as a single dashboard application that can be viewed with an internet browser from the user’s own desktop.
Manage and Administer projects
Proposed future budgets for the FPC, SMP and CSS were reviewed with BPA and CRITFC. The FPC staff reviewed SMP and CSS project budgets obligations and expenditures completed to this point in the contract year.

Produce status reports
All Pisces status report requirements were met for the SMP, CSS and FPC projects for this quarter.

Produce annual progress reports.
All Pisces progress reports were completed successfully. During this quarter, work continued to progress on the draft FPC annual report which is currently posted on the FPC web site for review. In addition the FPC staff continued analysis and development of the draft CSS Annual Status Report for 2008.

Regional Coordination, Fish way Inspections/FPAC
During this quarter, the 2008 annual Fish Facilities Inspection report for 2008 was completed and posted on the FPC web site on June 1. Regional review comments were received and addressed in the final report. FPC staff attended each monthly FPAC meeting and each weekly FPAC conference call.