MEMORANDUM

TO: Fish Passage Center Oversight Board
   Jann Eckman, CBFWA
   Randy Fisher, PSMFC

FROM: Michele DeHart

DATE: May 14, 2012

RE: Quarterly Fish Passage Center Report for January - March 2012

Following is the Quarterly Report for the Fish Passage Center for the first quarter of 2012. 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
During this quarter Comparative Survival Study (CSS) and Smolt Monitoring Program (SMP) reporting requirements and application requirements for 2012, were completed. NOAA approval of SMP and CSS activities and sampling for 2012 were completed. NOAA established conditions in their letter of determination for these projects for 2012.

Provide Technical Review
FPC staff facilitated FPAC conference calls once a week throughout the quarter and attended monthly meetings of FPAC through the quarter. FPC provided weekly updates to FPAC, regarding status of fish passage and river and migration conditions. FPC staff provides technical support to facilitate FPAC discussions as requested by the FPAC members.
FPC staff completed the historic operations summary for FCRPS projects and distributed it to the fishery agencies and tribes and the public. The document consolidates historic operations and is intended to provide a historical reference.

**Analyze/Interpret data**
The FPC staff began developing data summaries, and graphics to support analyses for the SMP Annual Report for the 2011 outmigration year during this quarter. The draft SMP/FPC Annual report for 2011 will posted on the FPC website on June 1, for regional and ISAB review. During this quarter, several data requests required extensive analyses of PIT tag data for adult returns. During the first quarter of 2012, the FPC responded to 17 requests for data analyses and interpretation and 13 requests for data summaries, documents or graphic data representations.

- Review comments on the NOAA paper entitled, “Changing rates of upstream survival in Snake River Spring-Summer Chinook Salmon during the migration season as indicated by short interval PIT tag estimates of survival” - April 26, 2012
- Overview of Bonneville Dam powerhouse operations and Spring Creek subyearling Chinook passage and mortality - April 24, 2012
- 2011 Gas Bubble Trauma Biological Monitoring - Wells Hydroelectric Project - April 20, 2012
- Survival and migration timing for two release sites of Hanford Reach fall Chinook PIT-tagged and released in 2011 - April 18, 2012
- Conditions affecting the 2011 and 2012 Fall Chinook Adult Returns to Spring Creek National Fish Hatchery. - March 27, 2012
- Comments on BON and TDA Performance Standards Testing in 2010 - March 23, 2012
- Comparison of juvenile spring Chinook and steelhead survival estimates, Faulkner et al. (2010) and the Comparative Survival Study (CSS) (2011) - March 20, 2012
- FCRPS Juvenile Performance Standard and Metrics - March 16, 2012
- Comparison of fish mortality via spillways and turbines - March 9, 2012
- Draft 2012 Fish Operation Plan - February 24, 2012
- Summer migration, Columbia River - February 10, 2012
- Comparison of GBT incidence at Rock Island Dam versus Rocky Reach Dam in 2011 - January 30, 2012
Develop RME methods and designs

During this quarter, FPC staff organized and conducted Gas Bubble Trauma monitoring training sessions for Smolt Monitoring Program remote site sampling personnel. In addition the FPC staff held a pre-season meeting with SMP remote site personnel to review the SMP design and data reporting requirements for the 2012 SMP. FPC staff met with members of the lamprey technical group to discuss the lamprey components of the Smolt Monitoring Program. FPC staff continued discussions with the Lamprey Technical Group to pursue recommendations from the group for the 2012 SMP. The recommendations of the Lamprey Group were included in the SMP design for 2012.

During this quarter the FPC staff began testing a new bootstrap program developed by FPC staff for the Comparative Survival Study analyses, to accomplish faster processing of data sets for analyses by the CSS Oversight Committee. In addition the FPC staff prepared data sets for the Oversight Committee, to begin analyses for the 2012 CSS Annual Report. In addition the FPC staff finalized the organizational and logistic requirements for the CSS Annual Review meeting which is held in April of each year.

Data Management

**Disseminate raw data and analytical result**

Hardware / OS Software Upgrades

- Built a three new webservers for webfarm
- Setup a web farm using windows load balancing to distribute the traffic among three webservers. Each of the webservers is identical copies of the others. A fourth server handles the load balancing software and traffic distribution.
- Built and setup a new employee workstation
- Built five new servers to run the CSS bootstrapping programs
- Built a new backup database server to serve as a mirror for SQL-Main4
- Performed regular maintenance on SMP site lab touchscreens PC and office PCs running the FPC32.net software.

Software Development

- Development, testing and implementation of the 2012 update of the FPC32.net remote data entry program were carried out during the first quarter of 2012. The updates of the FPC32.net program involved adding an additional lamprey species code and some other miscellaneous feature updates (i.e. changing the system settings to allow separate directories for the input files and the output batch files). Adding the additional lamprey code required changes to the touch screen, the catch detail tab and the batch reports. Specifically:
  - FPC32.NET. Lamprey condition sampling at JDA, BON and MCN.
    - Build a second tally box for talling Tank B counts for MCN only
Add new species code to Catch Detail – LU – lamprey Sp (Unid)
Incorporate new Lamprey species code into Daily Summary Report on FPC32.Net and SMP batch posting program
- New adult fish counting schedule at TDA and MCN
- Nez Perce Windows 7 and SQL Server 2005 authentication issues
- Assisted SMP staff with updating their 2012 SMP site-specific tools to incorporate the new lamprey data into the on-site databases.

Documentation and Training

- FPC staff coordinated a pre-season meeting with SMP staff from various sites to demonstrate new version of FPC32.net data entry program, refresh site personnel on SMP protocol, and retrain site personnel on identification of lamprey juveniles.
- The FPC staff updated the following documents, provided copies to each of the SMP sites and posted the documents on the website.
  - SMP Sampling Protocol
  - Condition Sampling Protocol
- Trained backup FPC staff to:
  - Receive and check daily batches from SMP sites
  - Run the daily SMP reports
  - Run the daily Tri-Cities daily report

Website, Daily Reports and Data Updates

- The end of year and beginning of year website maintenance was completed. This included updating web scripts, pages and graphs for 2012.
- Updated Spawning Redd map webpages to include 2011 chum spawning maps
- Preliminary hatchery release data for 2012 releases were gathered from agencies and entered into hatchery release database. FPC staff continues to update these records as releases occur and data become available.
- Daily SMP reports and scripts were updated to include the new lamprey data. The following reports were updated to incorporate lamprey juvenile data:
  - Weekly Fish Condition Report
  - Weekly SMP Mortality Report by Site
- Updated CSS queries and graphs to incorporate data from CSS 2011 Annual report including:
  - CSS Estimated Population of Smolts and Number of Returning per Study Category, CSS Returning Adults Age Composition, CSS SARS by Study Category, CSS SR, TIR and D and CSS Overall Annual SARS for the Snake and Columbia Rivers
- FPC updated online queries and graphs to incorporate new lamprey species (lu) including:
  - 2012 Daily Passage Data for the Smolt Monitoring Project
  - 2012 Daily Passage Graph for the Smolt Monitoring Project
  - Historic Daily Passage Data for the Smolt Monitoring Project
- Historic Daily Passage Graph for the Smolt Monitoring Project
- SMP Site Daily Juvenile Mortalities
- Added all five lamprey species and an all lamprey species option to the fish condition graph and the detailed fish condition graph, since lamprey condition sampling is occurring at BON, JDA and MCN
- FPC staff updated 2011 CSS release and tagging sites location and release data. Maps were developed for a presentation at the CSS Annual Meeting
- Developed a document database to keep track of the documents generated by FPC staff members, replacing the manual system.

2011 WDFW Chum Redds Survey Markers

LEGEND:

NOTE:
- Original points were brought into ArcGis and aligned with the datum WGS84
- Points were represented in the projection used by Google map services - WGS 84 UTM Zone 10N (WGS) coordinate system

2011 Chum Spawning Red Maps

2011 Chum Spawning Red Maps (contd)
FPC SMP Documentation and 2012 FPC32.net Manual

FPC32.net second tally box for talling Tank B counts for MCN only
In FPC32.net added new species code to Catch Detail – LU – lamprey Sp (Unid)

Incorporated new Lamprey species code into Daily Summary Report on FPC32.Net and SMP batch posting program
Updated CSS Queries to incorporate 2011 CSS Annual Report Data

Updated CSS Queries to incorporate 2011 CSS Annual Report Data (contd.)

Updated 2011 CSS Tag and Release Site Maps
Created FPC document database

Added Lamprey to Fish Condition Graph and Query
FPC.ORG WEBSITE STATISTICS
2012 - FIRST QUARTER January through March

The FPC website is the primary vehicle for data distribution. During the first quarter of 2012, FPC.org had 3,213,140 hits. There were a total of 457,078 pages viewed and 223,708 visits to the website. The current year FPC.org first quarter hits were 1.16 times greater than the 2011 hits; the current year 1st quarter page views were 1.46 times greater than the 2011 pages views and the 2012 first quarter visits were 1.20 times greater than the 2011 first quarter visits.

The average hits per day in 2012 were 34,791 and the average pages viewed per day were 5,021. The numbers of unique page views were 337,993. The average visits per day during the first quarter of 2012 to the website were 2,457, staying an average of 4:36 minutes. About 94.4% of the visits were from the United States. Of the U.S. visits, 29% were from Washington, 25% were from Oregon, 9% were from California, 5% were from Idaho, 2% from Montana and 30% were from other states. About 60.2% of the visits from the U.S. were from commercial and network domains, about 21.7% were from governments and military domains, 16.5% were from organizations and 1.6% were from educational domains.

The average number of visits during weekdays was 2,615, while the average number of visits during the weekend was 2,062. The most active day of the week is Wednesday, while the least active day of the week is Sunday. March was the busiest month with 50% of the visits, followed by February with 27.9% of the visits and lastly January with 22.1% of the total visits from the first quarter of 2012. The top platform (operating system) used to hit the site during the first quarter of 2012 was Windows 7 with about 33% of the hits, followed by Windows XP (32.3%), Windows Vista (10.8%), Mac OS (5.3%), Google Android (3.4%), iOS (1.4), Unix/Linux (1.5%), Mobile Android (1.2%), and other platforms (11.1%). The top browser used to hit the site was Internet Explorer (58.7%) followed by Safari (12.6%), Firefox (10.5%), Chrome (7.9%), and other various other browsers (10.3%). A total of 5.4% of the hits during the first quarter were from mobile devices, while 8% of the visits were from mobile devices. Of the 5.4% mobile hits, 52.9% were from iPhones, 25.6% were from iPads, 14.9% were from various Android devices, 6.6% were from iPods.
The top requested page was the Daily Adult Salmon Dam Count Report. Of the top 50 requested page groups, about 84% were about adult salmon, 4.6% were about FPC and the website (includes FPC homepage, contact, site map, FAQ, FPAC links, etc…), 7% were about river queries (flow / spill report, temperature graphs, spill update, etc…), 2.1% were about smolt data, and the remaining 2.3% were included hatchery data, FPC documents, CSS data and spawning data. With log analyzer, we can track the number of page views on the dynamic web queries which are a measure of the data requests via the website (i.e. .asp, .aspx, .php, etc). During the first quarter of 2012, there were 138,281 total data requests. During the first quarter of 2011, there were 64,863 data requests. The first quarter 2012 data request increased about 2.1 times when compared with 2011.
Note: The geographic locations included in these maps are based on where the domain name of the visitor is registered. In some cases, the domain name is not registered in the same location as the visitor. For example, the domain name for the USFWS is in Colorado. Therefore, if a USFWS employee in Montana, Washington, Oregon or Idaho accesses the FPC web site, that visit will be logged as coming from Colorado.
Manage and Administer projects
During the first quarter of 2012 FPC staff worked with BPA, state and federal subcontractors and PSMFC to finalize the SMP budgets and work statements for the 2012 Smolt Monitoring Program. The SMP contract for 2011 ended on February 28 and the 2012 SMP starts on March 1. The FPC staff managed the budget, organization, logistics and implementation of the 2012 CSS Annual Review meeting.
Produce status reports
All Pisces status report requirements were met for the SMP, CSS and FPC projects for this quarter. All Pisces status report requirements were met for the SMP, CSS and FPC projects for this quarter. Files and reports were uploaded into the Pisces system to Bonneville where required.

Produce annual progress reports.
All Pisces progress reports were completed successfully for the Comparative Survival Study, the Smolt Monitoring Program and the Fish Passage Center projects.

Regional Coordination, Fishway Inspections/FPAC
During January through March of 2012, the FPC staff concentrated on the development of the Adult Fish Facilities Annual Report for 2011. The draft report, and consolidated facilities inspection reports for 2011 and recommendations were developed into a draft report. The draft report was distributed to the region and posted on the FPC web site on March 14, 2012. The comment due date is 45 days later on April 16, 2012. Following the 45 day public review period, the FPC will incorporate comments and finalize the report.