The Fish Passage Center
Annual Report of Accomplishments
2010

Submitted To
The Fish Passage Center Oversight Board
January 12, 2011
Profile

The Fish Passage Center (Center) was first established in 1984 by agreement of the Columbia River Intertribal Fish Commission and the National Marine Fisheries Service on behalf of the Basins tribes and the Columbia Basin Fish and Wildlife Council. The Center originally housed two Water Budget managers and provided them with administrative support. The two Water Budget managers were a component of the Water Budget measures included in the Northwest Power Planning Council’s first Fish and Wildlife Program adopted in 1982. One Water Budget Manager represented the basin’s tribes and the other represented the state and federal fish and wildlife managers.

Since 1982, the Fish and Wildlife Program has directed that BPA provide funding for the functions carried out by the Fish Passage Center. The Center serves a large number of significant data gathering and analytical functions including the design and oversight of the implementation of the Smolt Monitoring Program, the Gas Bubble Trauma Monitoring Program, and the Comparative Survival Study. The Center provides a non-federal pool of expertise in assessing the effects of dam operations of Columbia Basin salmon, including analysis of juvenile salmon survival related to flow, spill, gas super saturation and passage routes. Tribal and states’ fishery managers rely heavily on this expertise and have managed their own staffs accordingly. The Center provides a wide range of data and information through its website, including daily fish passage data, historical data and an archive of relevant documents.

In 2009 the Northwest Power Conservation Council completed an amendment process and adopted a new the Fish and Wildlife Program. These amendments reaffirmed the primary purpose of the Center as the provision of technical assistance and information to the fish and wildlife agencies and tribes in particular and the public in

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1 At the time the four Columbia River Treaty tribes were not members of the Columbia Basin Fish and Wildlife Council. Subsequently the Columbia Basin Fish and Wildlife Council was dissolved and the Columbia Basin Fish and Wildlife Authority was established which included expanded membership including the Basin tribes.
general on matters related to juvenile and adult salmon and steelhead passage through the main stem hydro system. The 2009 Program amendments describe the duties of the Center including the responsibility to:

• Assemble, organize, make publicly available, and maintain the primary archive of the smolt monitoring program data

• Participate in the development of the annual smolt monitoring program implementation plan, and assist in the implementation of the program

• Assemble, organize and make publicly accessible, data from other primary sources, and conduct analyses as requested, to meet the information needs of the fish and wildlife agencies, tribes, and public with respect to water management, spill, and fish passage

• Provide technical information necessary to assist the agencies and tribes in formulating in-season flow and spill requests that implement the measures in the Council’s Program, while also assisting the agencies and tribes in making sure that operating criteria for storage reservoirs are satisfied

• Provide the technical assistance necessary to coordinate recommendations for storage reservoir and river operations that, to the extent possible, avoid potential conflicts between anadromous and resident fish, and

• Archive and make publicly accessible the data used in developing all analytical results, associating the specific data with the respective analyses

In 2010 the Fish Passage Center Oversight Board established a process and guidelines for implementation of the 2009 Fish and Wildlife Program measures regarding Independent Scientific Advisory Board review of FPC products. The Oversight Board agreed that the first priority is the review of the FPC Annual Report and the Comparative Survival Study Annual Report. The Oversight Board agreed to implement a process and guidelines for review of FPC products in 2011 (appendix). The Oversight Board agreed that the guidelines would be reviewed after implementation in 2011, to determine if they required modification. The FPC was directed to keep a record of staff time spent responding to ISAB reviews.

On May 2, 2008 the Fish Accords Memorandum of Agreements were completed between the Confederated Tribes and Bands of the Yakama Indian Nation, the Confederated Tribes and Bands of the Umatilla Reservation and the Confederated Tribes of the Warm Springs Reservation of Oregon and the Bonneville Power Administration. The Memorandum of Agreement included the Fish Passage Center project specifying the same services, products and tasks that have been carried out by the Fish Passage Center historically. In 2009 the FPC operated under the terms and auspices of the Fish Accords Memorandum of Agreement in addition to the Northwest Power Conservation Council Fish and Wildlife Program. The Fish Accords establish annual out year budget levels as
part of the agreement. The 2010 FPC budget was developed according to Tribal Accord Agreement guidelines.

The Year in Review

Funding for the FPC project in 2010 was established by the terms of the Fish Accords Memorandum parties. The terms of the Agreement also establish future funding levels. The implementation of the agreements among the Accord parties simplified and streamlined the budgeting and contracting process for the FPC. This allowed the FPC staff to concentrate efforts on improvements to the mainstem passage monitoring program and public data access through the FPC website and improved data display. In addition the CSS Annual Review meeting further improved public access to data and analyses.

The Smolt Monitoring Program

The Smolt Monitoring Program (SMP) was successfully implemented according to the plan agreed upon by the state, federal and tribal fishery agencies to provide a consistent, long term database for short term in-season fish passage management and for long term mitigation decisions. The FPC staff provides daily oversight and technical support for the eleven remote sites implementing the SMP. Final data and analyses of the SMP data are reported in the Fish Passage Center Annual Report. Data validation and verification and data analysis occur throughout the fall and winter and are presented in the FPC Annual Report the following year. SMP data collection continues from March through October 31 at most in river trap and main stem sites. The quality control data verification report was completed and distributed to the remote sites on November 19, 2010, completing the data review process.

The FPC Annual Report for the 2009 passage season was completed after providing a draft for regional review. It was distributed and posted on the FPC website, on July 31, 2010, according to contract deliverable dates, along with previous year’s reports. In accordance with the Fish and Wildlife Program measures, the Independent Scientific Advisory Board reviewed the FPC Annual Report, and provided comments. The FPC staff responded to the comments, addressed them in the completion of the final draft and posted the comments and the responses on the FPC web site. The comments and the response to comments were also appended to the annual report. Modifications to the SMP
remote data entry program began with a request from the Fish Passage Advisory Committee (FPAC) in 2008. Throughout 2009 new software was developed and tested. Coordination and regional discussions with the Corps of Engineers and the fishery managers took place. Many modifications to the remote data entry software, developed by FPC, took place throughout 2009, with many versions of the new software provided to the remote sites. 2010 was the first year of full implementation of the final product. Development, testing and implementation of the 2010 update of the FPC32.net remote data entry program were carried out during the first quarter of 2010. Staff met with SMP personnel twice prior to deployment of the new program; once at the annual PSMFC meeting and once at an SMP staff meeting in February at the FPC office. Program updates were discussed at these meetings. Additionally, FPC staff traveled to SMP sites for the start-up of sampling for the 2010 season to provide technical support on the updated program and tools. FPC data staff has met with FPAC to discuss proposed changes to the SMP and FPC32.net data entry program for the 2011 season in order to incorporate juvenile lamprey as target species. FPC data staff has begun updating the FPC32.net data entry program to incorporate these changes. The new FPC32.net data entry program was successfully implemented in 2010. Problems requiring additional programming or program revisions did not occur in 2010. However, the FPC anticipates additional changes in FPC32.net for 2011, to accommodate the inclusion of juvenile lamprey as requested by the agencies and tribes and recommended by the Independent Scientific Advisory Board.
Annual GBT Monitoring and Reporting

Oversight requirement of the gas bubble trauma monitoring is a requirement of the Oregon Department of Environmental Quality waiver issued for implementation of the NOAA Biological Opinion spill for fish passage measures. The FPC provides a separate report; an annual summary of GBT data to the US Army Corps of Engineers and to NOAA Fisheries to fulfill states’ issued dissolved gas waiver permits. This annual report summary was completed and provided to the agencies for incorporation into their 2010 passage season report requirements.

Planning for 2011

In 2010, the FPC participated in the Northwest Power Planning and Conservation Council, (NPCC) Independent Scientific Advisory Board, and Independent Scientific Review Panel review of regional Research, Monitoring and Evaluation projects for the Fish and Wildlife Program, Data and information required for the Comparative Survival Study, the Fish Passage Center Project and the Smolt Monitoring Program project were entered into the Taurus data system to facilitate the regional review. The FPC developed responses to questions and comments by the NPCC scientific review panels as well as the Federal technical review panel.

The development of the plan for implementation, the work statements and the budgets for the Smolt Monitoring Program for 2011, the Comparative Survival Study and the Fish Passage Center projects were discussed with the states, tribal and federal fishery managers, the Bonneville Power Administration and the Pacific States Marine Fisheries Commission. The budgets and work statements for these projects were developed within the Accord Memorandum terms and the Pisces work statements. The budgets, work statements, tagging coordination and logistics for implementation of the
Comparative survival study and the Fish Passage Center project were completed in November 2010.

Discussion and finalizing the Smolt Monitoring Program works statement and budgets will continue through December, because the Smolt Monitoring Program has a March 1 through February 28 contracted period.

**Endangered Species Act Section 10 Permit and State Endangered Species Act Permit Requirements**

The FPC is responsible for application, accounting and reporting for federal and state ESA sampling and monitoring permits for the Smolt Monitoring Program and the Comparative Survival Study. Estimated numbers of endangered and or threatened species to be handled are submitted to the permitting authority. Permit applications and reporting were completed. Application, accounting and reporting for state ESA permits was also accomplished. All ESA permit requirements were met in 2010. In addition in 2010, state permits from both Washington and Oregon were obtained for sampling under state mandated requirements, for the Smolt Monitoring Program.

Lower Monumental Dam separator

**Comparative Survival Study**

The Comparative Survival Study (CSS) is a jointly developed and sponsored program of the state, tribal and federal fishery management agencies. A CSS Oversight Committee comprised of state, federal and tribal fishery management agencies has been established to provide technical direction for data collection, analysis and preparation of annual status reports. In addition, Independent Scientific Review Panel and NOAA review comments on the CSS Ten-Year Retrospective report in 2007 contributed to determining specific tasks that were addressed in 2010.
The CSS has had a history of collaboration and is currently cooperating with several other agencies including: the Lower Snake River Compensation Plan, Idaho Fish and Game, Oregon Department of Fish and Wildlife, Washington Department of Fish and Wildlife, Idaho Power Company (IPC), and Smolt Monitoring Project (SMP). This project incorporates the long-term PIT tag marking and recovery of groups of wild and hatchery Chinook juveniles and steelhead. We continued our coordination towards the marking of hatchery Chinook groups from Imnaha, Catherine Creek, McCall, Rapid River, Dworshak, Clearwater, Pahsimaroi and Sawtooth facilities, hatchery steelhead groups from Dworshak, Clearwater, Magic Valley, Hagerman, Niagara Springs, and Irrigon hatcheries, and wild Chinook and steelhead from tributary tagging programs in the and Snake River basin. These PIT tag groups will also be an important component of the regional Smolt Monitoring Program.

In addition to the historic analyses included in the CSS, additional analyses were added in 2010. In 2010 the CSS Oversight Committee conducted several new analyses including; the examination of delayed mortality associated with juvenile Chinook and steelhead passage through powerhouse bypass systems, the calculation of a straying rate for adults that return to Bonneville dam, smolt to adult return (SAR) calculations for Chinook that include jacks and the addition of several new study groups. Adult and juvenile metrics for new study groups include: Deschutes River natural spawner steelhead (2006-2008), John Day River natural spawner steelhead (2004-2008). Juvenile metrics for three Snake River hatchery Chinook groups include: Pahsimeroi summer Chinook, Sawtooth spring Chinook, Clearwater spring Chinook. Juvenile passage metrics and survival were added for six Snake River hatchery steelhead groups: Hells Canyon (A-run), Clearwater River (B-run), Imnaha River (A-run), Grande Ronde River (A-run), Salmon River (A-run), Salmon River (B-run). Juvenile passage and survival metrics were added to the CSS report for two Snake River hatchery sockeye groups: Sawtooth and Oxbow.

In 2010, FPC staff worked with BPA representatives and the state and federal fishery agencies to PIT-tag 72,800 hatchery steelhead, 192,600 hatchery steelhead, and 69,800 wild Chinook and steelhead. These tags were provided by the CSS, and work statements and budgets were developed for the 2010 outmigration year to enable these on-going tagging efforts on wild Chinook and steelhead and hatchery Chinook. In all, Chinook and steelhead hatchery releases above Lower Granite Dam from twelve different hatcheries were included. Additionally, wild Chinook and steelhead were marked at various locations in Idaho, Oregon, and Washington states. This information was submitted to BPA via their Pisces database entry program. In most cases, this tagging work was part of a joint effort of the CSS and federal, state and tribal agencies to affect cost savings, avoid redundancy, improve precision of CSS estimates and meet the needs of cooperators. Also as part of this joint effort, pre-assignments of randomly selected PIT tags were submitted to PSMFC in order to meet CSS study design requirements and the needs of cooperating agencies. This information was submitted to BPA via their Pisces database entry program.
In 2010 the CSS Oversight Committee and the FPC organized and conducted the first annual Comparative Survival Study Annual Review. The objective of the public review meeting is the presentation of the annual CSS analyses by the agencies and tribes representatives to the CSS Oversight Committee, and the FPC. The Annual Review meeting was held at the Water Resources facility in Vancouver Washington and was well attended by the fishery management agencies. The CSS Annual Review received many positive responses from the fishery management agencies. Based upon the response from the fishery managers and tribes, the CSS Oversight Committee has decided to hold the Review every year.

Adult fall back Lower Monumental Dam
Adult Facilities Inspection Program

The state and federal fishery management agencies provide funding for the FPC Adult Fish Passage Facilities Inspection Program. FPC staff manages the agencies adult facilities inspection program and writes the annual report of the inspection program. The FPC staff trains and coordinates fish facilities inspections at federal and Public Utility main stem Columbia and Snake rivers dams. Inspections are conducted monthly and are often accompanied by FPC staff. Monthly reports are provided to the FPC. Monthly reports are posted on the FPC web site for regional access. Facility issues that arise as the result of inspections are raised to the project operators by the FPC for discussion and resolution and are reported to the Fish Passage Advisory Committee of Columbia Basin Fish and Wildlife Authority (CBFWA). In 2010 inspections were conducted at all 13 dams. A total of 90 adult facility inspections were conducted in 2010.

Bonneville Dam downstream from the Oregon counting station

In addition emergency passage facility events are coordinated by the hydro project operators and regulators through the FPC facilities inspection program staff who assures communication with the Fish Passage Advisory Committee. FPC produces an Annual Adult Facilities Inspection report. All inspections and reports were successfully implemented in 2010. The Annual Adult Facilities Inspection Report for 2009 was completed in 2010 and is posted on the FPC website with previous years’ reports. The
draft 2010 report will be completed by April 15 and posted on the FPC web site for a 45 day public review period. The final report will be completed by June 1, 2011 and posted on the FPC web site.

Data Acquisition, Storage, Analysis and Distribution

The NPCC Program Amendment specifically requires the FPC to “Gather, organize, analyze, house, and make widely available monitoring and research information related to juvenile and adult passage and to the implementation of water management and passage measures that are a part of the Council’s program”. The FPC Data System is comprised of several databases that are maintained and updated hourly, daily, weekly, monthly and annually. These databases are utilized by the state, tribal, and federal fisheries agencies for in-season management deliberations and decisions so they must be accurate with the most recent information available. The data bases are the foundation of FPC analysis and technical support for the fishery managers. Smolt passage data, flow, spill, and adult counts are updated daily. The hatchery release database is continually updated through daily discussions between FPC staff and hatchery managers and hatchery staff to assure that hatchery release data are up to date and reflect any last minute changes in hatchery release data. All of the FPC databases were successfully maintained and updated without lapse in 2010. In 2010, several upgrades, improvements, and modifications were made to the FPC data system. Analytical tools were developed to deliver data for our users, improve database stability, and improve data presentation to facilitate meeting the needs of the agencies, tribes, and the public at large. Website improvements were made to enhance user navigation, ease of use, and data access.

Rock Island Dam
Hardware Improvements in 2010

- FPC staff installed an extra T1 line during the first quarter of 2010 due to the increased website traffic that has occurred over the past few years. A new router was also added to our network hardware.
- Five new PCs were built for the Data Center. One of the upgraded computers is one of our main data collection engines. A printer was directly attached to this computer, since it is the computer that receives the daily SMP batch files, processes them, prints the reports, and posts the data to our database.
- The FPC staff researched and reviewed options for a new off-site backup service. Off-site backup was completed by backing up our servers by tape backups and then a staff member would transport the tapes to the off-site office storage facility. Two options were considered for the new service: off-site backup services and server colocation service. Several service providers were contacted for quotes for both services. A server colocation service was chosen through Easystreet. Easystreet provided us with an economical 3 year agreement. The package the FPC purchased includes a dedicated rack condo 6” 3(RU) 30” deep with internet connection and firewall protection, using green power. Redundant power, redundant internet access and redundant firewall service are also provided. The bandwidth with this package is <50 GB/month. Three members of the FPC staff have 24 hour access to the Easystreet facility and FPC backup server rack. In addition, there are Easystreet employees at the facility 24 hours a day.
- FPC staff built a new backup server with several hard drives, providing several terabytes of storage. FPC staff setup backup software on the new server. Staff members backed up all of the servers and databases to the new FPC backup server. When completed the server was moved to the Easystreet facility. A nightly remote backup of FPC servers is performed.

Analytical tools developed / upgraded in 2010

- Development, testing and implementation of the 2010 update of the FPC32.net remote data entry program was carried out during the first quarter of 2010. Staff met with SMP personnel twice prior to deployment of the new program; once at the annual PSMFC meeting and once at an SMP staff meeting in February at the FPC office. Program updates were discussed at these meetings. Additionally, FPC staff traveled to SMP sites for the start-up of sampling for the 2010 season for support on the updated program and tools. FPC data staff has met with FPAC to discuss proposed changes to the SMP and FPC32.net data entry program for the 2011 season in order to incorporate juvenile lamprey as target species. FPC data staff has begun updating the FPC32.net data entry program to incorporate these changes.
• FPC data staff has begun developing a new data entry program for the Gas Bubble Trauma monitoring program. This new program will likely replace the older data entry program in 2011.

• FPC Staff developed a new application (FPCExport) to create an XML batch file for Nez Perce Tribe Data collection system from the Imnaha Trap. This allows the FPC Data Center to use standard FPC32.net posting program for the Nez Perce data rather than the older posting program.

• FPC staff filled a data request by the Nez Perce development team to assist in the development of an FPC32.net data collection prototype program.

• FPC staff assisted with Nez Perce SQL server maintenance.

• FPC staff upgraded the ConsoleImportCOE12highavg application. Developing 12 – Hr Average TDG parsing procedure for a new COE source format.

• FPC staff developed a new version of Nez Perce data entry program (FishClient 2.2).

• FPC staff modified the TDG data collection and report generation program, “ConsoleImportTDG” to accommodate a new URL for Grant County PUD. Additionally, the FPC staff developed a new application entitled, Descale/Mortality Batch Mailer. This application alerts particular FPC staff to abnormal or high levels of descaling or mortality incidents at SMP sites. This allows for quicker dissemination of this information to the Fish Passage Advisory Committee.

• FPC staff updated the site-specific SMP tools.

Website improvements:

• The FPC staff updated the following three documents, provided printed copies to each of the sites and posted the documents on the website.
  1. SMP Sampling Protocol
  2. Condition Sampling Protocol
  3. FPC32.net Data Entry Program Manual

• SMP Daily Fish Condition Descale Percentage Graph was added to the website.

• Under the Adults section, a table containing summarized (estimated) actual steelhead and salmon return data to the mouth of the Columbia for the past 11 years. Included in this table are return data for spring Chinook, summer Chinook, fall Chinook, Coho, Sockeye and upriver steelhead.

• FPC staff upgraded the Daily Adult PIT Tag Detection graph and the Cumulative Adult PIT tag Detection graph.

• The FPC staff has started to map the CSS release sites / hatcheries for future applications. CSS Maps were developed for a presentation given using some of these preliminary data.
• FPC staff developed a new mortality data query and stacked bar graph and added the percent sample mortality data to the query
• Using the summarized mortality, descaling and fish condition data, FPC staff developed three new reports that are available through the website. 1) the Weekly Fish Condition Report, 2) the Weekly Mortality Report, and 3) the Weekly Descaling Report
• FPC staff developed a draft prototype web data query for daily fish travel time data
• Using the FPC hatchery database, the mapped hatcheries and mapped release sites, the FPC staff developed hatchery release proportional symbol maps for 2009 release totals, summarized by species and river zone. These maps were added to the hatchery section of the 2009 annual report.
• An updated SMP fork length query was developed. This query allows the user to obtain fork lengths that are collected as part of the fish condition monitoring conducted by SMP sites. The fields included in the output are: Site, Batch, Sample End Date, Species, Clipped/Unclipped, Coded Wire Tag, Fork length, Number of condition fish sampled, Special species code, and Elastomer tag. Special species codes are provided because the code of EF (eroded fin) can help users identify hatchery steelhead that are otherwise unmarked and the code FR (fry) can be used to identify Chinook fry, particularly in the early season. Elastomer tag information is also provided to help users identify hatchery origin salmonids that are otherwise unclipped.
• FPC received a request from CRITFC for sharing the FPC adult count. The FPC staff developed a new application, using SQL Server Integration Services (SSIS) to create a .csv flat file of historical adult data and a file of the current year’s daily adult count data. This file is posted on the ftp server and overwritten every two hours in a scheduled job on the FPC SQL Server.
• FPC staff continued development on a Hatchery and release site data web application. After review of the prototype application, FPC staff made several edits to the prototype application including: organizing the spatial base map layers by three scales (regional, river zone, and local scales); including hatcheries, release sites, release site codes and HUCs as the initial base map layers; refining the colors, symbols and labels of the spatial data layers; and defining, the implementation of the specific spatial queries to be included in the application.
• The Hatchery and release site data web mapping applications’ geographic data for this application is housed in a spatial database, while the hatchery release data are housed in our main MS SQL server database. The FPC staff upgraded tools to connect these two data sources together. A Visual Studio C# application that automates posting hatchery data into a Postgres SQL spatial database has been upgraded, tested and implemented. The data are automatically updated twice a
day, in the morning and early afternoon. This will provide up to date data for the user, when the application is made available over the web-site.

- The current draft version of the Hatchery Release Data Map Query and draft documentation has been attached to the website, on the front page. FPAC are evaluating this application.
- CSS databases and queries are being updated to include the data from the Final 2010 CSS Annual Report.
- The “Current Water Temperature Graph” was added to the website to allow website users to graph water temperature beyond the spill season.
- FPC staff loaded historic PIT-tag data (MY 1986-2004) into a new PITFINAL database. PITFINAL database is void of dot-outs. We also have a current year PIT-tag database call PITWORKING. The staff loads PITFINAL at the end of each migration year, while PITWORKING is loaded during the year for “real-time” analyses.

Rock Island smolt monitoring and PIT tagging
Portion of updated FPC32.net Data Entry Program Manual

Updated FPC32.net 2010

SMP Daily Fish Condition Descale Percentage Graph

Summarized steelhead and salmon return data to the mouth of the Columbia

Updated Daily Adult PIT tag Detections
CSS Release Sites

Nez Perce Fish Client Target Catch Panel

[Image of the Nez Perce Fish Client Target Catch Panel]
Nez Perce Batch Info Panel

Descale/Mortality Batch Mailer
FPC Daily Salmon Mortalities by Site and Species on FPC Website

FPC Weekly Fish Condition Report on FPC website

DRAFT - FPC Daily Fish Travel Time Prototype Web Application
2009 Hatchery Releases by Species and River Zone, maps used in 2009 Annual Report

Updated Fork Length Query

Draft Hatchery Release Data Map Query and draft documentation
Visual Studio C# application posting hatchery data to spatial database
Current Water Temperature Graph and Report

Updated CSS queries and graphs
Updated CSS queries and graphs (cont.)

SSIS service creates .csv current year’s daily adult dam count data on FPC ftp site
Technical Assistance and Information to Fish and Wildlife Agencies and Tribes and the Public in General

The primary purpose of the Fish Passage Center is to provide technical assistance and information to fish and wildlife agencies and tribes in particular and the public in general. The FPC participated in all Fish Passage Advisory Committee meetings and provided technical information as requested. In-season analyses and recommendations relative to the implementation of the 2010 Operations Agreement were assessed weekly and SORs were developed and submitted as needed. The FPC also participated in weekly Technical Management Team meetings.

The FPC participated and provided technical input to the Action Agency Columbia River Forecasting Group through bi-monthly meetings. The FPC staff continued to provide technical support in the Fall Chinook transportation evaluation committee addressing study design issues for juvenile fall Chinook transportation evaluations. FPC staff attended the COE sponsored “Bypass Effects Workshop”. The FPC staff provided programming technical support for the Nez Perce tribe monitoring, data acquisition, storage and management for their SQL data system.

In implementing the NPCC Program language the Fish Passage Center responds to requests for data, analysis and technical support. The vast majority of data provided to the region by the FPC is accomplished through the FPC web site. Users throughout the region and the world are able to access FPC data through the web site. Data can be downloaded into spreadsheet format and documents, analysis and reports can be accessed through the web site. The data and analysis provided to the region through the web site is accomplished without direct involvement of FPC staff. FPC staff is available to assist individuals when they are having difficulty locating or downloading the data they need.

Specific requests for data summaries or analysis are also submitted to the FPC through telephone conversations or email. If possible these requests are directed to the web site and assistance is provided to the requester in navigating the site to retrieve the data requested. These requests are logged onto a data request form reviewed by the FPC manager and assigned to one or more FPC staff members according to expertise and workload to fill the request. All data requests are logged and filed upon completion. Those that include analysis are posted on the web site upon completion. The schematic below shows the process for response to data requests followed by a data request form.
Data Requests

Regional, National
International, Public
and Private entities

- Email, written, verbal,
telephone requests
- Data Request Forms
- Review and assign

FPC Web site

Redirect to website?

Response, hard copy,
email, excel, ascii
DATA REQUEST FORM

Request Taken By: ______________________________  Date: __________________

Data Requested By:
Name: ________________________________  Phone: __________
Address: ________________________________  Fax: __________
_________________________________  Email: __________

Data Requested:

_________________________________
_________________________________
_________________________________

Data Format:    Hardcopy ☐    Text ☐    Excel ☐

Delivery:       Mail ☐       Email ☐       Fax ☐       Phone ☐

Comments:

_________________________________
_________________________________

Data Compiled:
By ________________________________  Date: __________

Request # ______________
Response to Specific Data Requests

The FPC website is the primary source for public data access. In addition to data access through the website, several data requests are received through telephone or written contacts. In 2010 contract year the FPC responded to 76 requests for data analyses and summaries from the agencies and tribes and others, in addition to the regular weekly reports, and annual reports. These are recorded through data request written forms. Responses are developed by FPC staff and distributed according to the request. Data request forms and responses are maintained in a data request log. In 2010 the FPC staff received and responded to 76 data requests from agencies, tribes and the public. Of the 76 requests received in 2010, 32 responses were developed in memorandum form and are posted on the FPC website. These requests were completed and presented to the agencies and tribes to facilitate their activities in a wide range of forums related to fish passage and hydro system management. These 32 requests related to data summaries and analysis relative to historic passage data, hydro system operations and fish passage characteristics. The requests that included analysis were posted on the FPC web site in accordance with established FPC operating procedures.

Weekly summary reports of storage reservoir elevations and operations were provided to the Fish Passage Advisory Committee and reflected in weekly reports which are posted on the FPC website. FPC staff participated in the Adaptive Management Team and provided analysis and technical support to the agencies and tribes regarding dissolved gas waiver limits and monitoring.

In response to requests from the fishery agencies and tribes, the FPC staff provided historic data summaries, research results, analytical results to the agencies and tribes and review comments on various proposed hydro system operations as they potentially affect fish passage and survival. The FPC staff, continued participation and technical support in the regional Adaptive Management Team. FPC staff continued to participate in a technical support role in the fall Chinook Passage Studies Planning Team. In response to a request from the Fall Chinook Planning Team, the FPC added a Fall Chinook Planning Team page to the FPC website. Regular updates were provided in season on the migration characteristics of juvenile and adult salmonids during the spring season and particularly during the implementation of the court ordered spill. These were developed to web reports. The FPC staff provided review comments on research proposals and research reports as requested by the agencies and tribes. These were proposed or conducted through the BPA Fish and Wildlife Program process and the US Army Corps of Engineers Anadromous Fish Passage Evaluation Program. Specifically, the FPC staff provided technical assistance to the agencies and tribes in the development and review of research proposals. As well as provide assistance in reviewing results of research used to make management decisions regarding modifications to dam’s structure or operations.
Specific Data Requests 2010

1) **2011 Operations** - November 30, 2010
2) Breakdown of ocean-age of returning PIT-tagged adult Fall Chinook at Lower Granite Dam in 2010 - November 19, 2010
3) Comparative Survival Study (CSS) Fall 2010 PIT-tagging Operations - November 19, 2010
4) Delayed/latent mortality and dam passage, fish passage operations implications - October 6, 2010
5) Delayed/latent mortality and dam passage - October 5, 2010
6) Adult fall Chinook counts at Priest Rapids Dam in relation to those at McNary and Ice Harbor dams - September 27, 2010
7) Carson Hatchery Report 1997-2010 - September 1, 2010
8) Rapid River Hatchery Report 1997-2010 - September 1, 2010
9) Priest Rapids Hatchery Report 1997-2010 - September 1, 2010
10) McCall Hatchery Report 1997-2010 - September 1, 2010
11) Lookingglass Hatchery Report 1997-2010 - September 1, 2010
12) Leavenworth Hatchery Report 1997-2010 - September 1, 2010
13) Dworshak Hatchery Report 1997-2010 - September 1, 2010
14) Wells Hatchery Report 1997-2010 - September 1, 2010
16) Comments on fall Chinook workshop and Methods for Analysis Report Draft - July 9, 2010
17) Preliminary Reach survival estimates and transport probabilities for Spring migrant juvenile salmon from the Snake River Basin in 2010 - July 8, 2010
18) Data request looking at SARs by passage route at Bonneville Dam for subyearling Chinook - June 2, 2010
19) Passage timing data at Rock Island Dam - May 24, 2010
20) Estimated spill volume, survivals, and spill passage at Ice Harbor under FOP Operations versus IDFG Proposed 50%/50% spill operation - May 12, 2010
21) Response to Comments: Scoping for the Independent Scientific Advisory Board Review of Fish Passage Center Products - May 7, 2010
22) Scoping for the Independent Scientific Advisory Board Review of Fish Passage Center Products - March 4, 2010
23) Initiation of Transportation in 2010 - April 18, 2010
24) 2010 Water Supply and Snowpack - April 14, 2010
25) NOAA proposed juvenile fish passage operation for 2010 in the Snake River - March 2, 2010
26) COE proposal regarding increase smolt transportation at McNary Dam - February 17, 2010
27) Review of the NOAA Transportation analyses and potential effects of reducing spill for fish passage in May and beginning the transportation program earlier in the spring and supporting analyses - February 9, 2010
28) Lower Monumental bypass effects on Snake River Chinook and steelhead - February 3, 2010
29) Update of Sockeye Memos – Inclusion of 2009 data - January 26, 2010
30) Review of RSW and TSW studies - January 15, 2010
31) Tucannon River Steelhead Straying Behavior - January 8, 2010
32) Juvenile Fall Chinook timing in the Columbia River - January 5, 2010

All FPC staff participates in the development of weekly reports from March through October. These weekly reports summarize river and reservoir operations, as well as fish passage information. The reports document any unplanned or planned excursions from the implementation of Biological Opinion measures. The report is distributed via email and paper copy, as well as being posted on the FPC website. The estimated circulation is about 750 readers.

All FPC staff participates in the development of the Annual Fish Passage Center Report. This report serves as historic information relative to the annual operation and management of the hydro system. The report summarizes hydrologic conditions, reservoir operations throughout the water year and focuses on the resulting flows during the migration period. The report also summarizes annual spill operations as provided under the Biological Opinion spill measures or court ordered spill measures. Annual fish passage metrics; passage indices, passage timing, smolt travel time and survival are presented and discussed along with past years’ information collected under varying environmental parameters. The Annual Report also presents annual and historic adult passage information and yearly hatchery information.

Web Statistics

The FPC Website is the primary vehicle for data distribution. The FPC site had 19,698,791 successful hits on our website during 2010 with 1,882,885 page views and 1,505,043 user sessions. The 2010 website hits increased about 1.01 times compared to the 2009 website hits, with a total of 232,782 more hits in 2010. The 2010 page views increased 1.15 times and the 2010 user sessions increased 1.18 times when compared with the 2009 website usage. Approximately 86.2% of the 2010 user sessions were from the United States. Of the remaining 2010 users, 2.8% were international users and about 11% were of unknown origin. During 2010, we averaged 52,312 hits per day and 4,573 user sessions per day. The average user session length was 5 ½ minutes. The number of unique users was 393,187. Of these unique users, 60.3% visited once and 39.7% visited more than once. We log all data requests made via the web. The number of requests between 1/1/2010 and 11/30/2010 was 329,997. The 2010 web data requests increased 1.02 times compared to the 2009 data requests, with a total of 7,155 more web data requests in 2010.
2010 Website User Sessions Per Month

2010 User sessions are 1.18 times greater than the 2009 user sessions.

- January: 4% (2009), 15% (2010)
- February: 7% (2009), 13% (2010)
- March: 13% (2009), 15% (2010)
- April: 11% (2009), 15% (2010)
- May: 10% (2009), 15% (2010)
- June: 12% (2009), 15% (2010)
- July: 15% (2009), 15% (2010)
- August: 8% (2009), 15% (2010)
- September: 3% (2009), 2% (2010)
- October: 3% (2009), 2% (2010)
- November: 3% (2009), 2% (2010)
- December: 2% (2009), 2% (2010)

Legend:
- Green: 2009 User sessions
- Blue: 2010 User sessions
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.
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.
Documents completed by FPC in the 2010 contract year

The culmination of all aspects of the FPC project staff work is presented in several annual, weekly and periodic documents prepared in response to requests. The documents completed in 2010 are listed below and are all available on the FPC website at www.fpc.org.

- Fish Passage Center Annual Report
- Comparative Survival Study Annual Report (CSS).
- Annual Adult Facilities Inspection Report
- Weekly Reports
- Gas Bubble Trauma Monitoring Annual Report
- Fish Passage Center Accomplishments Annual Report
- Response to ISAB comments on the CSS project
- Response to ISAB comments on the SMP project and the FPC Annual Report

Financial Summary

The Fish Passage Center project in the past has been flat funded for several years. This year’s funding was set at $1,388,801 a small increase that was used to finally update needed system upgrades to computers. This increase also assisted with purchasing training for FPC staff, something that flat fund in the past did not account for. This increase also assisted in purchasing offsite storage at EasyStreet for FPC backup of information and data in case of emergency.

BPA PISCES System

The FPC project met all of the Pisces system requirements for maintaining Pisces project data for the Fish Passage Center, Smolt Monitoring Program and Comparative Survival Study projects, including, input of data, budgets, milestone reports, annual and quarterly reports. Edits were made to the statement of work as necessary for all projects. Project inventory was also maintained and updated by the FPC for all projects. FPC continues to take the responsibility of updating all needed PISCES requirements for CSS USFWS and updated budget information.

CBfish.org/Taurus

The FPC staff submitted all the necessary information in the CBfish.org/Taurus data system, for the Fish Passage Center project, the Smolt Monitoring Program project and the Comparative Survival study project. The FPC responded to ISAB, ISRP and the Federal RME team comments on the proposals for the next three years.
Appendix

Final FPC Oversight Board
Guidelines for Independent Scientific Advisory Board
Review of FPC products
Review Guidelines for the Independent Scientific Advisory Board
Review of Fish Passage Center Products

January 5, 2011

Background

The Northwest Power and Conservation Council’s 2009 amendments to the Columbia River Basin Fish and Wildlife Program call for the continuation of the fish passage related functions currently conducted by the Fish Passage Center. The primary functions are to provide technical assistance and information to fish and wildlife agencies in particular, and to the public in general, on matters related to water management, spill, and other passage measures. The Program also calls for the Fish Passage Center’s Oversight Board to ensure that the functions are implemented consistent with the Program. To do this, the Program specifies that the Oversight Board will work with the Center and the Independent Scientific Advisory Board (ISAB) to organize a regular system of independent and timely science reviews of the Center’s analytical products. The Oversight Board determines the requirements for peer review of analytical products.

This document provides general guidance and establishes protocols for regular and timely ISAB reviews of the Center’s analytical products. These products take several forms, and the ISAB’s review guidelines are tailored to reflect reviews of the scientific content of these various products. Scientific review by the ISAB is recommended only for selected FPC products. Review for administrative, oversight, or an editorial purpose is not appropriate.

The ISAB serves the Northwest Power and Conservation Council, NOAA Fisheries, and the Columbia River Indian Tribes (ISAB partners). The ISAB’s workload is reviewed and approved by the ISAB’s Administrative Oversight Panel consisting of the Council Chair, the Director of the Northwest Science Center (in consultation with the regional administrator), and a representative from the Columbia River Indian Tribes (currently CRITFC’s executive director).

Guidelines for ISAB Review

1. **Regular Review of FPC and CSS Annual Reports:** A subgroup of the ISAB will initiate an examination of the FPC and CSS draft annual reports when these reports are released for public comment. As part of the examination, the subgroup will look at the annual reports to identify work products, methodologies, and analyses which they think appropriate for potential ISAB science review, and will notify the ISAB Liaison to the FPC and the FPC Oversight Board accordingly.

2. **Review of Technical Analyses and Memorandum:**

   *Review requests:* Any interested party may suggest potential review of Fish Passage Center analytical products to the ISAB Liaison to the FPC. Parties include but are not limited to the Council, the fish and wildlife managers, the FPC Director, the FPC Oversight Board, the ISAB, and the ISAB Administrative Oversight Panel. The FPC Oversight Board will be
notified by the ISAB Liaison to the FPC of any requests not originating from the FPC Oversight Board (Figure 1).

Criteria: FPC products for ISAB review will be selected from those suggested based on the following criteria:
- new or novel analyses are introduced;
- new conditions or data bring old analyses into question; and/or
- consensus cannot be reached in the region on the science involved in the product.

Memoranda in response to special assignments, inquiries and technical matters are often appropriate for consideration of ISAB review.

Assignments:
The ISAB Executive Committee will consider requested reviews presented to or by the ISAB Liaison and identify those reviews which are consistent with these guidelines. The ISAB Liaison will notify the FPC Oversight Board and Chair of the ISAB Executive Committee’s decision to review FPC work products. In the event the ISAB Executive Committee declines a review request originating from, or supported by, the FPC Oversight Board, the reasons for the decision will be communicated in writing to the FPC Oversight Board. The Board may then communicate further with the ISAB Executive Committee about whether and how to conduct the review.

3. ISAB Liaison to the FPC and FPC Oversight Board: ISAB reviews will be facilitated by a Council staff liaison to the FPC and FPC Oversight Board to ensure timely reviews are conducted as needed throughout the year. Unless otherwise agreed to by the ISAB, the liaison will be the Council’s Ex Officio representative on the ISAB. The liaison will notify the FPC Oversight Board of each ISAB review assignment and provide an opportunity for the FPC Oversight Board to assess the effects of an assignment on the FPC’s work load (Figure 1). If a potential conflict is identified, the liaison will work with the ISAB Executive Committee and FPC Oversight Board to resolve it.

4. ISAB Administrative Oversight Panel General Assignment Approval: The Panel approves the ISAB to conduct regular reviews of FPC products and will not need to formally review and approve each specific assignment. The ISAB’s Liaison to the FPC and the ISAB coordinator will inform the ISAB Administrative Panel of each assignment and provide the opportunity for comments from the Panel. After a year or two, the ISAB Administrative Oversight Panel should examine the ISAB’s role in reviewing FPC products as a part of a regular overall examination of ISAB activities to ensure continued effectiveness and efficiency of the reviews.

5. ISAB Review Subcommittees: For each review, the ISAB will select a review subcommittee from the full ISAB membership, including possible ad hoc members consistent with the ISAB terms of reference, based on areas of expertise and availability. A separate review group will not be established by the ISAB beyond the ISAB. The ISAB will follow its standard review protocols in completing reviews of FPC products in a timely manner.
6. **Report Distribution:** ISAB reviews will be posted on the ISAB website and be made available to FPC staff for posting on the FPC website. The FPC Oversight Board will be notified at the time of posting. ISAB review comments should be linked directly to the corresponding FPC work product on the FPC web site and the ISAB web site, as well as any subsequent FPC response or revision.
Figure 1. Schematic of science review of FPC analytical work products, as called for in the Council’s 2009 Columbia River Basin Fish and Wildlife Program and the FPC Oversight Board’s Review Guidelines for the Independent Scientific Advisory Board Review of Fish Passage Center Products.

Potential science reviews can be suggested by the FPCOB, NOAA Fisheries, Tribes, state/federal fish agencies, Council, FPC Director, ISAB and others.