



# FISH PASSAGE CENTER

847 NE 19<sup>th</sup> Avenue, #250, Portland, OR 97232

Phone: (503) 833-3900 Fax: (503) 232-1259

[www.fpc.org](http://www.fpc.org)

e-mail us at [fpcstaff@fpc.org](mailto:fpcstaff@fpc.org)

## MEMORANDUM

TO: Fish Passage Center Oversight Board  
Randy Fisher, PSMFC

FROM: Michele DeHart

DATE: July 31, 2015

RE: Quarterly Fish Passage Center Report for April – June 2015

Following is the Quarterly Report for the Fish Passage Center (FPC) for the second quarter of 2015. This report follows the format and content agreed upon by the Fish Passage Center Oversight Board.

### PISCES System Work Elements

#### **Produce Environmental Compliance Documentation**

In the second quarter of 2015, the FPC staff closely monitored sampling and marking in the Comparative Survival Study (CSS) and Smolt Monitoring Program (SMP) projects to assure that implementation of these projects remained consistent with conditions established by NOAA Fisheries ESA handling and sampling permits. This required particular attention due to the actions taken by the Walla Walla District Corps of Engineers to contract some project monitoring to a private consulting firm, which did not have ESA permits for sampling. The agreement reached was that the staff of the private consulting firm would work under the supervision of the SMP project leader at the site. In addition the FPC staff monitored sampling at the Grand Ronde trap, Lewiston trap and Whitebird trap to evaluate the success of modified schedules and sampling procedures to reduce fish handling at these sites.

#### **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 technical support to facilitate FPAC discussions as requested by the FPAC members, and provided technical assistance to FPAC for planning for the 2015 in-season management of juvenile salmonid migration. In

addition FPC provided technical support to the USACE Fish Passage Operation and Maintenance Committee, attending meetings through the quarter. FPC staff provided technical support to the fishery agencies and tribes' representatives on the SRWG by providing technical review of proposals and reports as requested.

### **Analyze/Interpret Data**

During the second quarter of 2015, the FPC staff completed the Draft Fish Passage Center Annual Report for 2014 and posted it on the FPC web site for a 45 day public review period, which closed on June 15. In addition data summaries for the CSS Annual Report were prepared by FPC staff and distributed to the CSS Oversight Committee for analyses and preparation of individual report chapters. The CSS Draft Annual Report for 2014 will be distributed for regional review on August 31.

During the second quarter of 2015, the FPC responded to 32 requests for data compilations and summaries and 6 of those requests required analyses. These were completed in memorandum form and posted on the FPC web site. Those responses are listed below:

1. Grant County performance testing in 2015 - June 22, 2015
2. Comments on *Systematic review of JSATS passage and survival data at Bonneville and The Dalles Dams during alternative turbine and spillbay operations from 2008–2012* - June 8, 2015 (revised 6/11/15)
3. Comparison of 1977 and 2015 Operations and Flow in the Snake River - June 4, 2015
4. Estimated spill at FCRPS projects based on May 18, 2015, STP and 2015 Fish Operations Plan - May 26, 2015
5. Updated Scenarios of Release of Non-Treaty Storage in 2015 - May 19, 2015
6. Opportunities to use increased spill to reduce impact of anticipated low flows in 2015 - April 13, 2015

### **Develop RME Methods and Designs**

In the second quarter of 2015, FPC staff assembled and presented SMP objectives, management applications and handling data to agencies and tribes' management staff. The purpose of these reviews is to review and modify the SMP for future years to develop an efficient SMP that meets management needs and reduces fish handling to the degree possible. The FPC was assigned the task of developing a draft SMP for 2016 for agencies management-level review by the end of August. In addition the FPC staff invested considerable effort in developing PIT-tag data on returning adult salmon and steelhead including: adult success rate, travel time, and passage timing distribution for the U.S. v. Oregon small work group addressing adult upstream migration success. In addition the FPC reviewed the methodology for establishing adult passage performance standards.

## **Data Management**

### **Website, Daily Reports, Database and Data Updates**

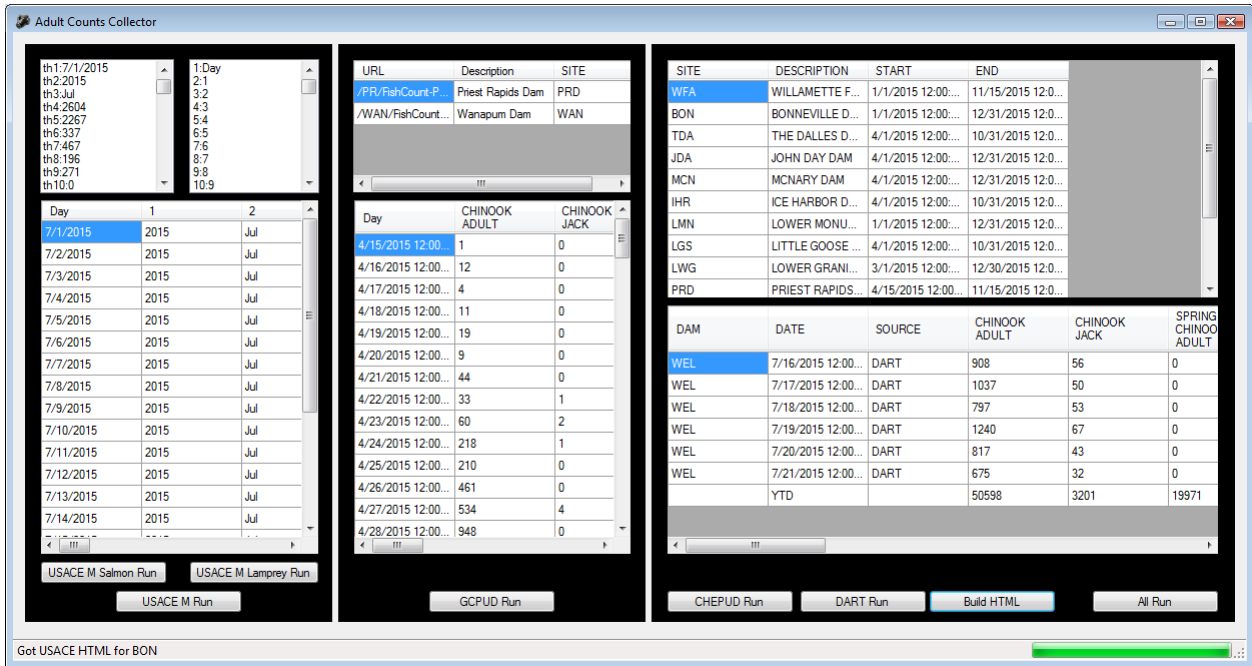
- Regular website maintenance and updates
- Developed a new query and map for SMP annual reach juvenile survival estimates for Snake River Basin PIT-tagged Chinook and steelhead (trap release sites to LMN)
- Moved FPC major databases from SQL Server 2008 to SQL Server 2012 platform
- Pointed web servers' queries, maps and stored procedures to SQL 2012 databases
- Resolved differences between 2008 SQL Server and 2012 SQL Server including:
  - Replication on 2012 servers adds a new field tables which caused some of the queries/views to stop working.
  - Nulls were handled differently by the system
- Views/queries/stored procedures and software were edited to account for these changes.
- Began development of a draft monitoring map for steelhead
  - Copied software (from working chinook map prototype) into each of the folders and configured map server so that it could render the new mapping projects
  - Determined that summer and winter steelhead populations/MPGs needed to be in one spatial dataset for a combined steelhead monitoring map
    - Spatially unioned the summer and winter MPGs and populations
    - Edited the attribute data where two populations occurred
- Began adding data to the draft steelhead monitoring map including: ESUs, MPGs, populations, spawning areas, HUCs and steelhead streams.
- Edited the map scripting colors and text for above data.
- Began scripting to insert hatcheries into the database and union them with the steelhead MPGs/ESUs.

### **Software Development**

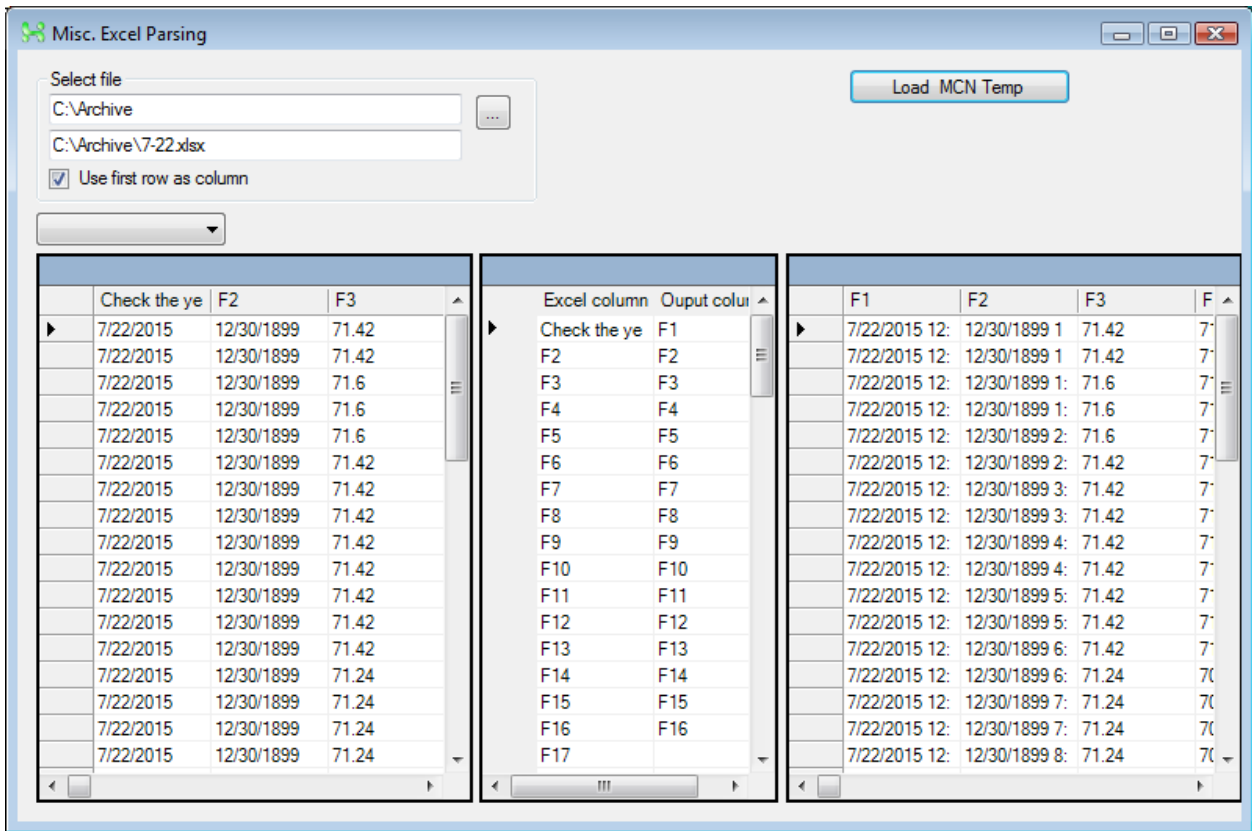
- New C# version of Adult count collecting from multiple sources application has been developed using Visual studio 2010 development tool.
- Developed new application to collect MCN water temperature from e-mail attachment using Visual studio 2010 development tool.

### **Hardware Upgrades**

- Built a new e-mail server with 2012 Windows server and 2012 Exchange server installed
- Built two new SQL servers with 2012 Windows server and SQL Server 2012 installed
- Built one new workstations with Windows 7 installed



### # Visual Studio 2010 Multiple Source Adult Count Collection Software



### # Visual Studio 2010 MCN Water Temperature E-mail Collection and Parser Software

### FPC SMP Annual Reach Survival Estimates Snake River Basin PIT-tagged Chinook and Steelhead Trap Release Sites to Lower Monumental Dam Tailrace

This query allows users to review and download annual reach survival estimates of Snake River basin PIT-tagged yearling chinook and steelhead from trap release sites to Lower Monumental Dam tailrace for years 2004 to 2013. These data were reported in the 2013 FPC Annual Report, smolt monitoring chapter, section H, entitled "Travel Time and Survival Analyses for Hatchery and Trap Releases". Click [here](#) for a brief metadata listing of the fields included in this query, or click [here](#) for a detailed discussion of this data found in the FPC Annual Report.

**Step 1. Select Species:** Hatchery Chinook

**Step 2. Select Trap Release Sites to Lower Monumental Dam Tailrace:** GRNTRP - Grande Ronde River Trap

**Step 3. Select Beginning Year:** 2004

**Step 4. Select Ending Year:** 2013

**Step 5. Submit Form:**  or

Tag Site Code	Tag Site Description	Species	Rear code	Year	In river smolt survival estimate from Trap to LMN	95% lower non-parametric confidence interval
GRNTRP	Grande Ronde River trap	CH	H	2004	0.533	0.625
GRNTRP	Grande Ronde River trap	CH	H	2005	0.59	0.516
GRNTRP	Grande Ronde River trap	CH	H	2006	0.643	0.566
GRNTRP	Grande Ronde River trap	CH	H	2007	0.877	0.72
GRNTRP	Grande Ronde River trap	CH	H	2008	0.648	0.559
GRNTRP	Grande Ronde River trap	CH	H	2009	0.781	0.64
GRNTRP	Grande Ronde River trap	CH	H	2010	0.788	0.208
GRNTRP	Grande Ronde River trap	CH	H	2011	0.811	0.639
GRNTRP	Grande Ronde River trap	CH	H	2012	0.719	0.603
GRNTRP	Grande Ronde River trap	CH	H	2013	0.662	0.5

**Graph:**

## SMP annual reach juvenile survival estimates for Snake River Basin PIT-tagged Chinook and steelhead (trap release sites to LMN) Query

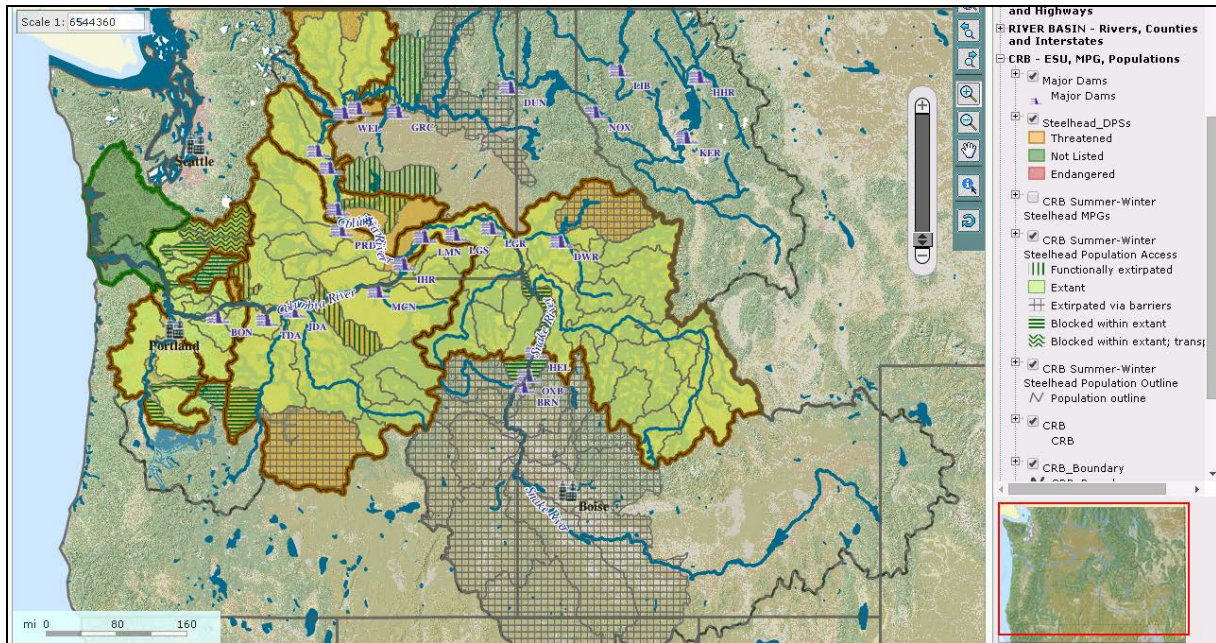
**Table: hatcheries\_currentyear\_pop\_mussteel**

Field	Value
OID	255027
Owner	poplogns
Tablespace	pop_default
ACL	
Primary key	qid
Rows (estimated)	102
File factor	
Rows (counted)	100
Inherits tables	No
Inherited tables count	0
Uniqsize	No
Has Index?	No
System table?	No
Comment	

```

-- Table: hatcheries_currentyear_pop_mussteel
-- DROP TABLE hatcheries_currentyear_pop_mussteel;
CREATE TABLE hatcheries_currentyear_pop_mussteel (
  qid geometry(Point,900013),
  hatcherycode character varying(154),
  description character varying(254),
  subbasinname character varying(154),
  river_km numeric(10,0),
  provincename character varying(154),
  subbasinname character varying(154),
  pitspa_location character varying(154),
  pitspa_pside character varying(154),
  river_id character varying(10),
  total_sla character varying(10),
  outfundingagency character varying(154),
  hsp_required character varying(154),
  chsithatcherycode character varying(154),
  operatingagency character varying(154),
  probasinname character varying(154),
  latitude numeric,
  longitude numeric,
  address character varying(254),
  city character varying(254),
  state character varying(254)
);
  
```

## Steelhead Monitoring Map MPGs, Populations, and Hatcheries data and overlay scripts



```

weave\links.txt | hatchery\app.map | pmapper_demo.map | config_default.xml | salmonmap_chrispsu.map | salmonmap_steelhead.map | config_default.xml | intersect_example.txt | steelheadstreams.txt
2849
2850
2851 LAYER
2852 NAME 'SUWI_Steelhead_POPs_access1'
2853 TYPE POLYGON
2854 CONNECTIONTYPE postgis
2855 CONNECTION "dbname='dataandgeo' host=localhost port=5432 user='postgres' password='mermaid37?' sslmode=prefer"
2856 DATA "geom from (select geom, gid, mpg, access_pop, pop_name, esu_dps from crb_all_steel_pop) AS new_tab3 USING UNIQUE gid"
2857 PROJECTION
2858 "init=epsg:900913"
2859 END
2860 METADATA
2861 "DESCRIPTION" "CRB Summer-Winter Steelhead Population Access"
2862 END
2863 STATUS ON
2864 OPACITY 100
2865 classitem 'access_pop'
2866 CLASS
2867     name 'Functionally extirpated'
2868     EXPRESSION "Functionally extirpated"
2869     STYLE
2870     SYMBOL 'hatch-test'
2871     COLOR 0 100 0
2872     OUTLINECOLOR 0 100 0
2873     ANGLE 90
2874     SIZE 4
2875     WIDTH 1
2876     END
2877 END
2878 CLASS
2879     name 'Extant'
2880     EXPRESSION "Extant"
2881     STYLE
2882     WIDTH 1
2883     COLOR 202 255 112
2884     OUTLINECOLOR 0 100 0
2885     OPACITY 50
2886     END
2887 END
2888 CLASS
2889     EXPRESSION "extant"
2890     STYLE

```

**Draft Steelhead Monitoring Map and Map File with MPG and Population Access Data Added**

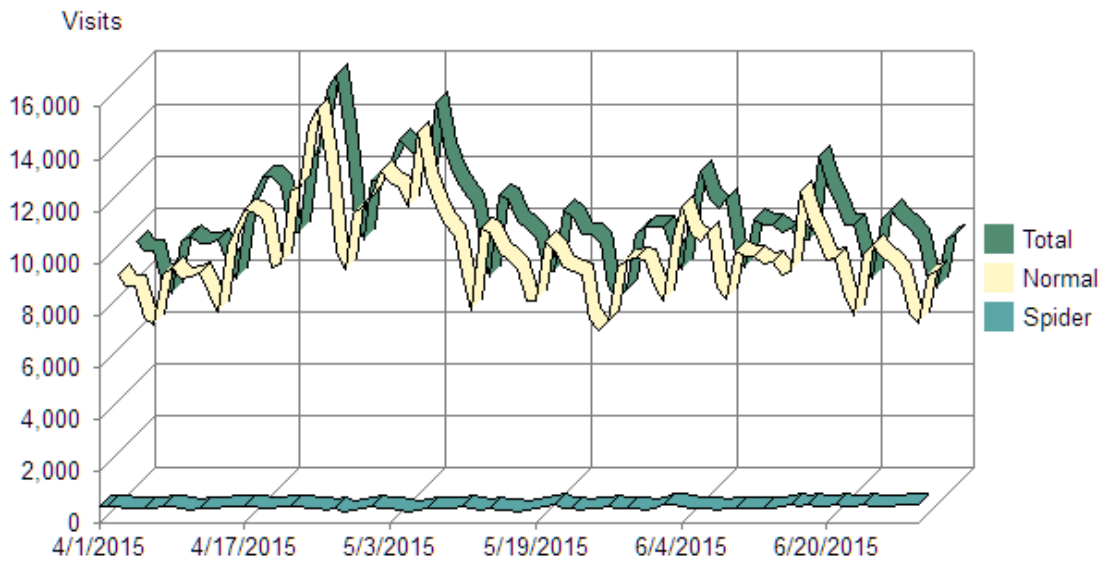
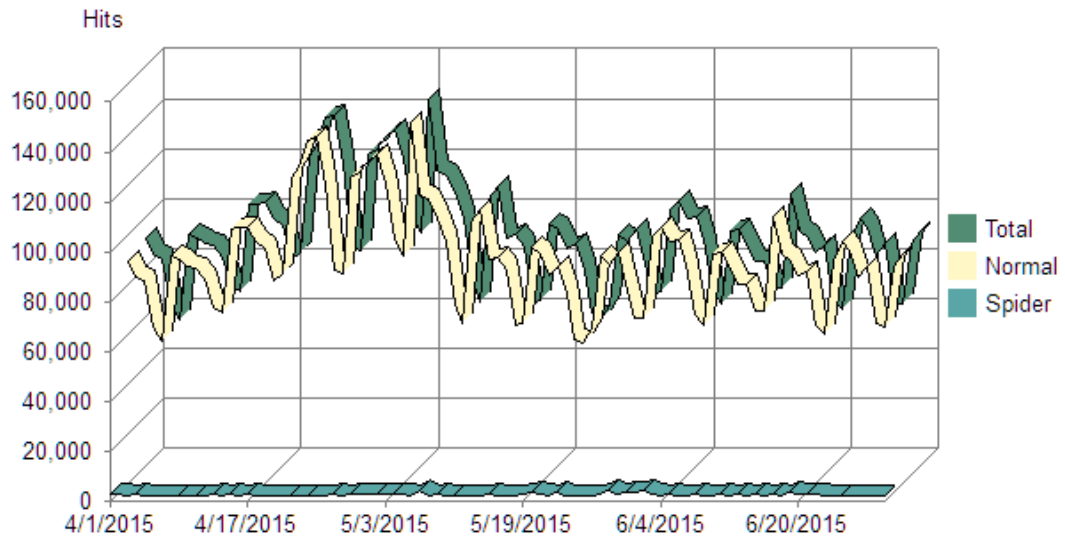
## **FPC.ORG WEBSITE STATISTICS**

### **2015 – SECOND QUARTER April through June**

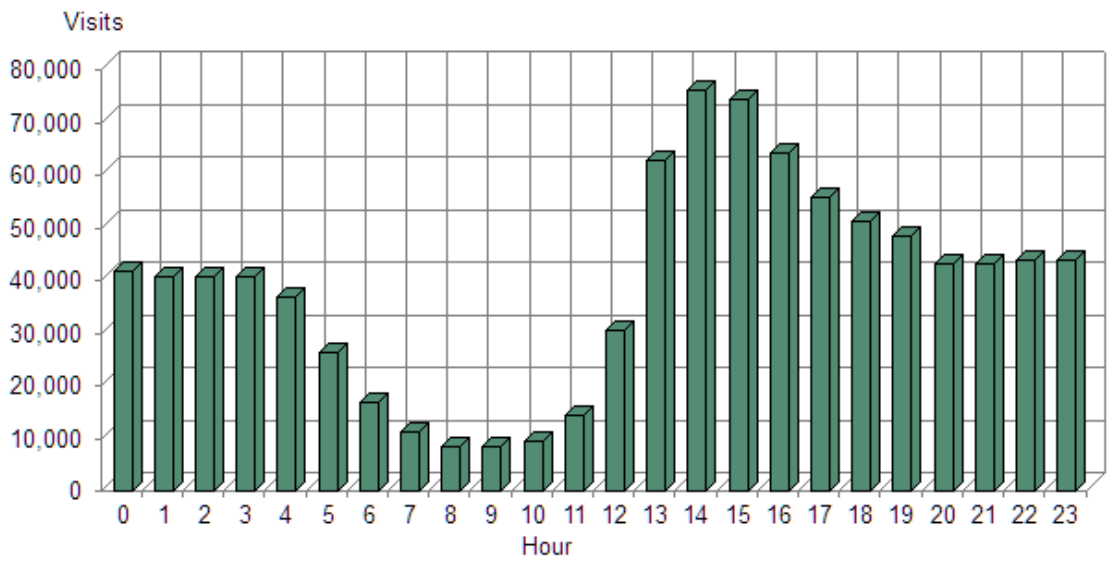
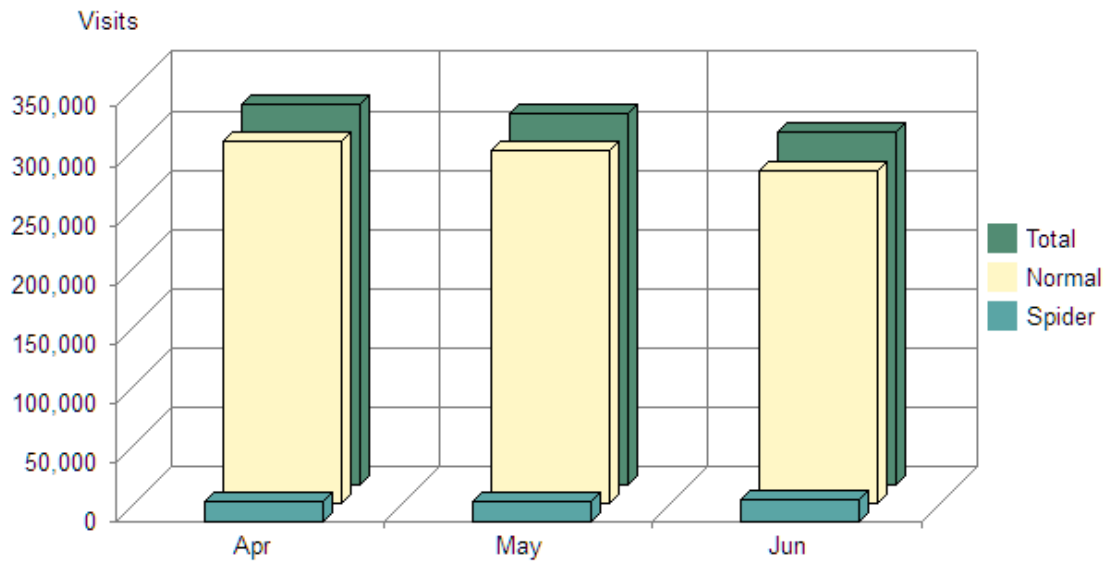
The FPC Web site is the primary vehicle for data distribution. During the second quarter of 2015, FPC.org had 8,349,605 hits. There were a total of 1,522,486 pages viewed and 928,981 visits to the website. The average hits per day in the second quarter were 91,488. The average number of page views was 16,730 with an average staying time of 4½ minutes. About 96.1% of the visits were from the United States. Of the U.S. visits, 28.3% were from Washington, 20.5% were from Oregon, 6.8% were from California, 6.7% were from Idaho, and 37.7% were from other states. About 48.8% of the visits were from commercial/organizations, 41.2% were from network/individuals, 5.8% were from government and education, and 4.2% were from other miscellaneous domains.

The most active day of the week was Tuesday, while the least active day of the week was Sunday. The busiest hour of the day was around 3:00 PM. April was the busiest month with 34.5% of the visits, followed by May with 33.6%, and June with 31.9%. The top platform (operating system) used to hit the site during the second quarter of 2015 was Windows 7 with about 36.3% of the hits, followed by Android (14%), Windows NT (8%), Mac OS (5%), Windows XP (3%), Windows Vista (2.8%), Linux (1%) and other operating systems (29.9%). The top browser used to hit the site was Safari (30.1%) followed by Internet Explorer (29.7%), Chrome (24%), Firefox (6.4%) and other various browsers (9.8%). A total of 22.3% of the hits during the second quarter were from mobile devices. Of the 22.3% mobile hits, 75.6% were from iPhones, 24.1% were from iPads, 0.1% were from various Android devices, and 0.3% were from iPods.

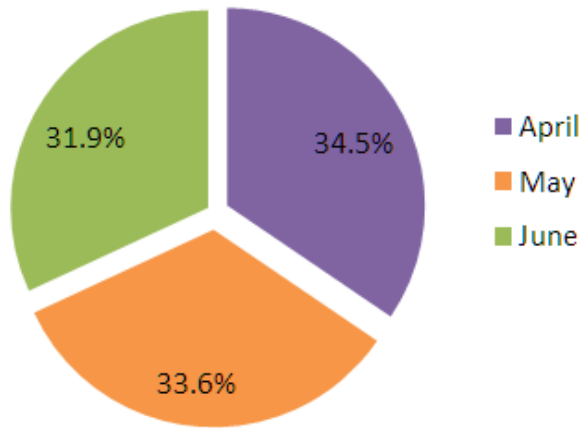
The top requested page was the Daily Adult Salmon Dam Count report. Of the top 50 requested pages and queries, 83.6% were about adult salmon; 7.6% were about the FPC website and FPC documents (includes FPC homepage, contact, site map, FAQ, FPAC links, etc.); 8.2% were about river queries (flow/spill report, temperature graphs, spill update, etc.) and 0.6% were about smolt data. We 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 second quarter of 2015, there were 1,278,979 total data requests.



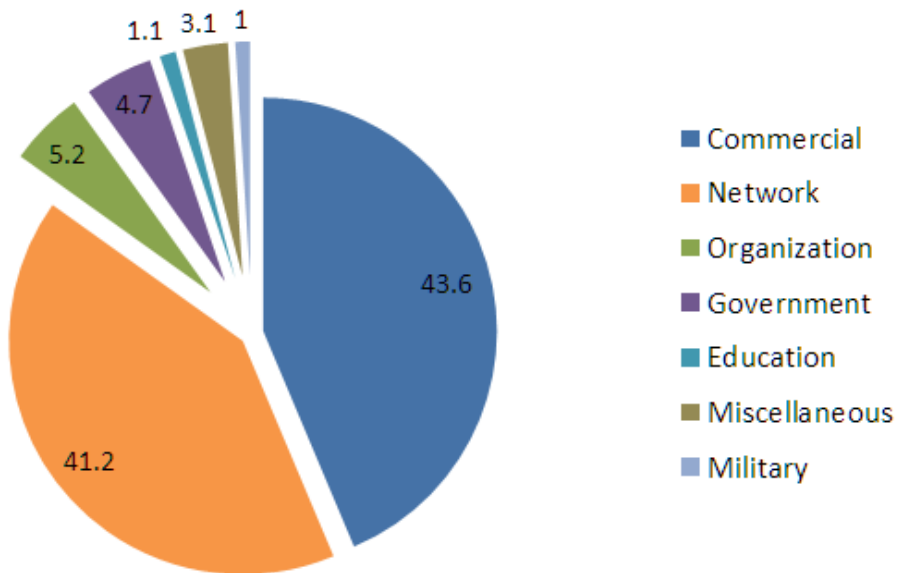




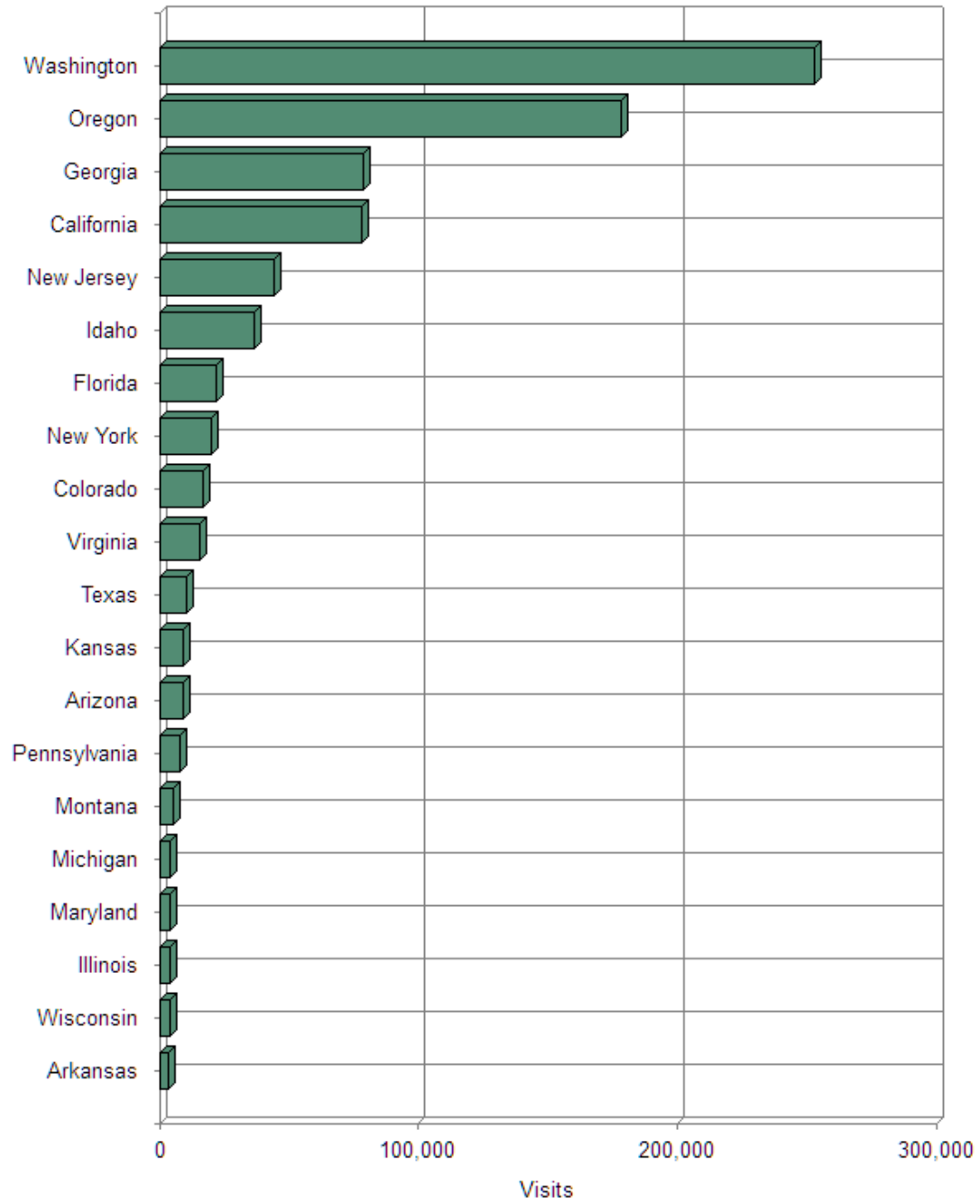
**Percent Visits per Month  
2nd Quarter 2015, FPC.org**



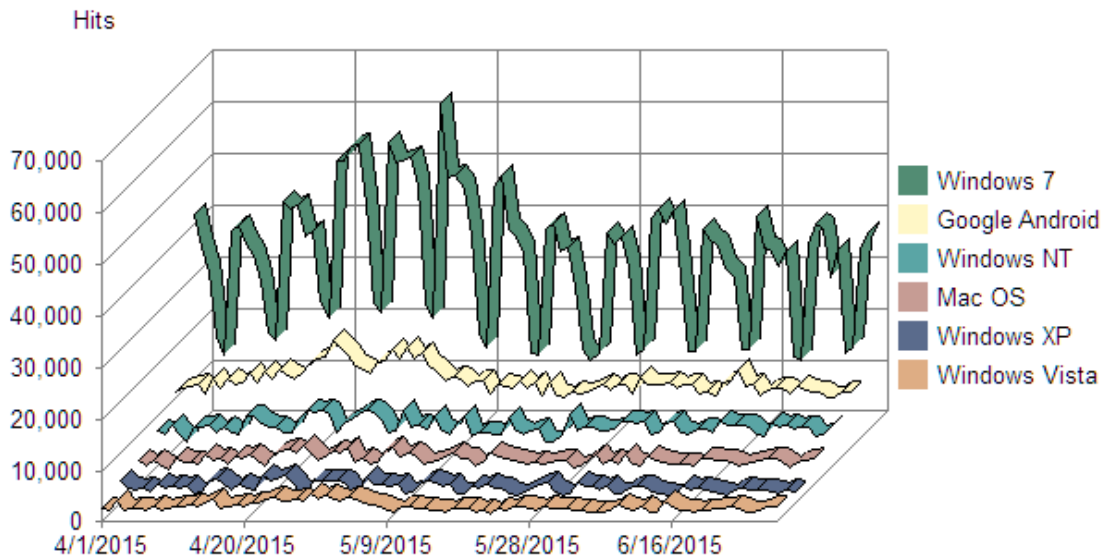
**Percent Visits by Domain  
2nd Quarter 2015, FPC.org**



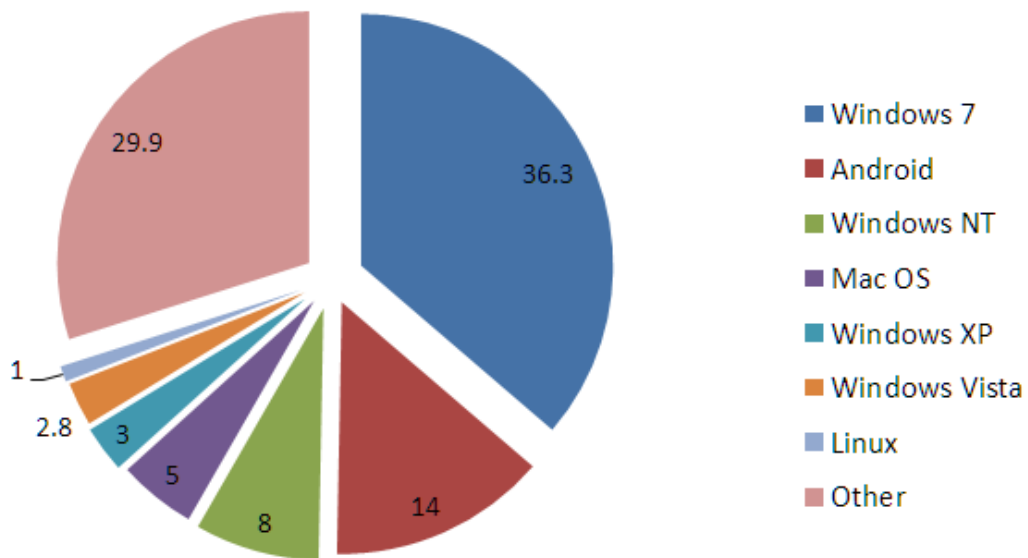
### Most Active US States



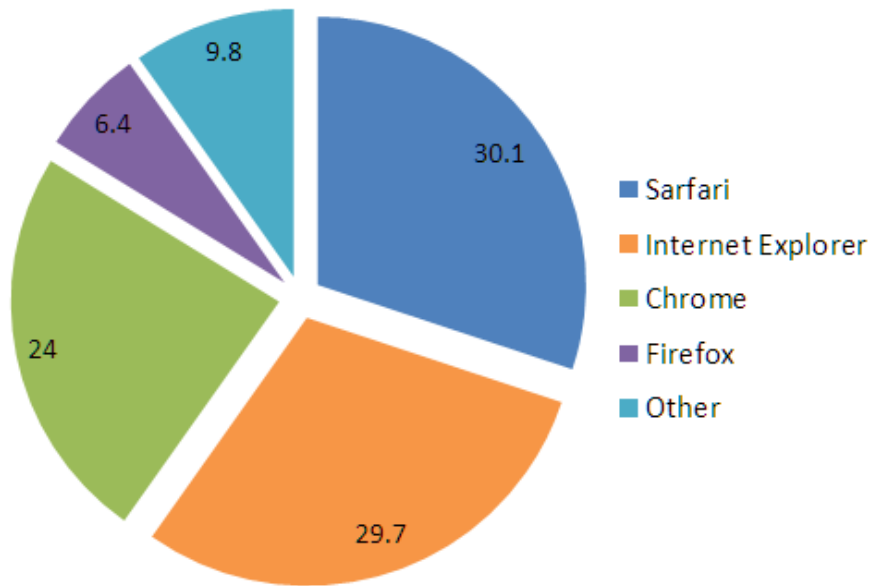
## Daily Platforms



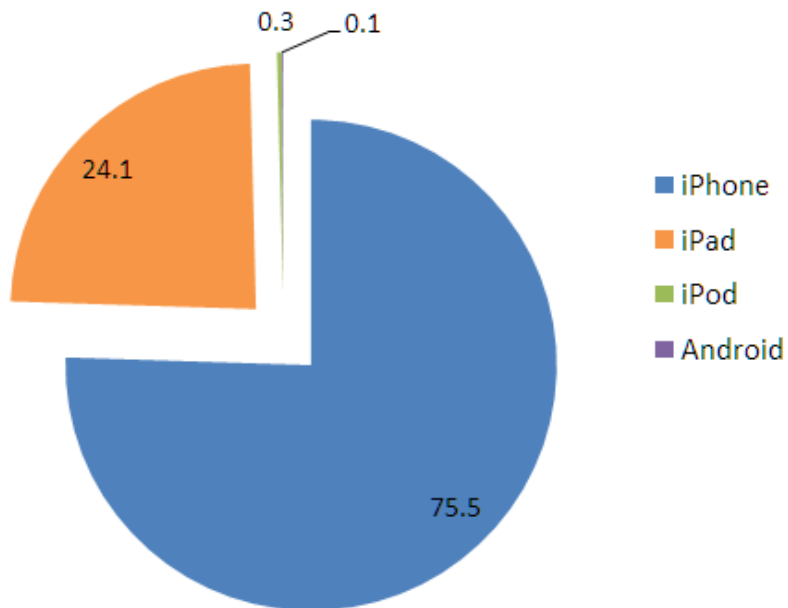
## Percentage Hits by Platform 2nd Quarter 2015, FPC.org



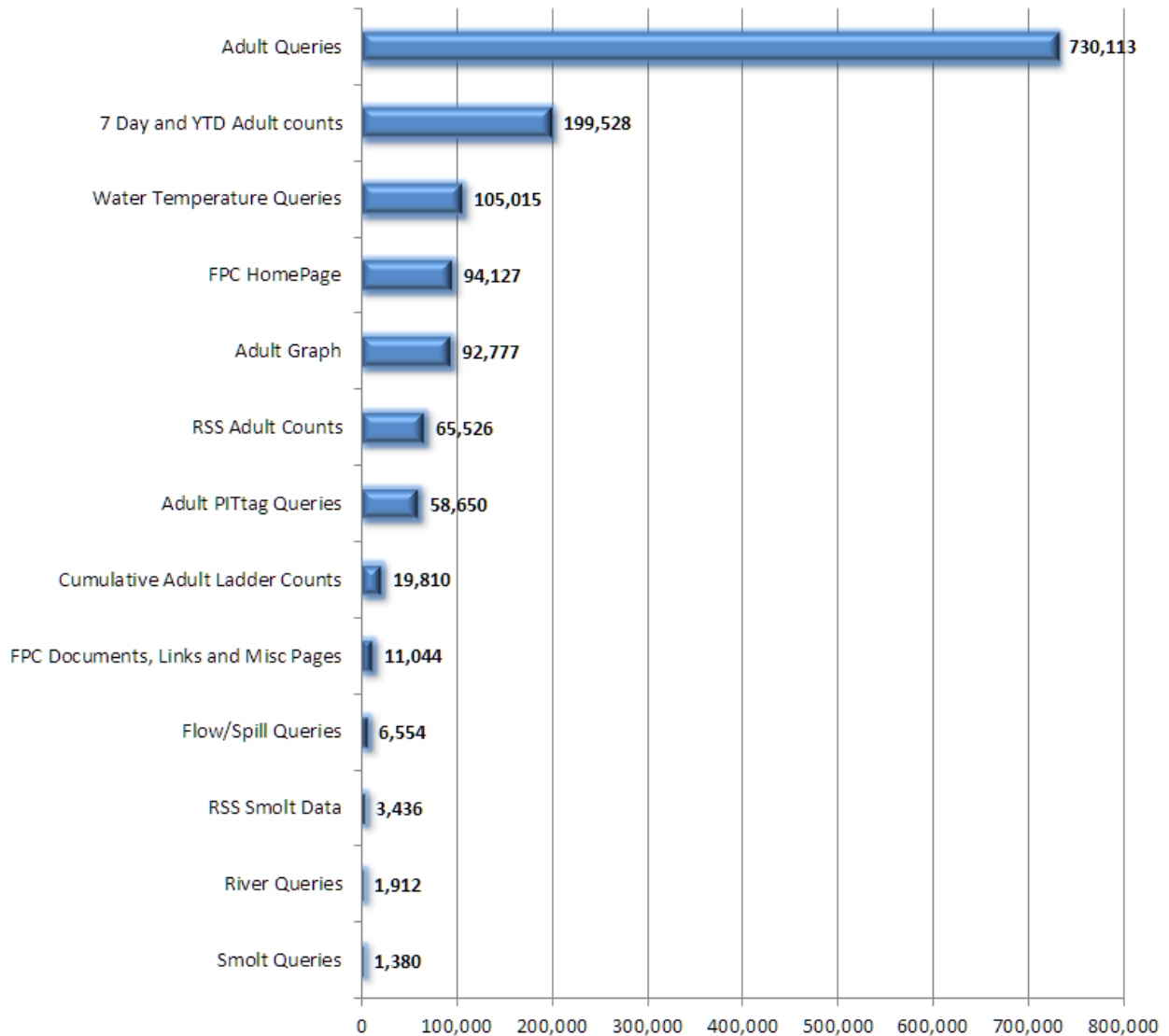
### Percentage Hits by Browser, 2nd Quarter 2015, FPC.org



### Of the 22.3% Mobile Devices, Percentage Hits by Device Type



### Top Requested Page Groups, 2nd Quarter 2015, FPC.org



### Manage and Administer Projects

During the second quarter of 2015 the FPC staff tracked expenditures for CSS, FPC and CSS projects to date relative to planned budgets. In addition coordination began with agencies and tribes for 2016 marking plans for SMP and CSS projects. Statements of work and budgets for the FPC and CSS projects submittals are due to the Bonneville Power Administration on September 1 for the 2016 project year.

### **Produce Status Reports**

All Pisces status report requirements were met for the SMP, CSS and FPC projects for this quarter. Files and reports were uploaded into the BPA's Pisces system where required.

### **Produce Annual Progress Reports**

All Pisces progress reports were completed successfully for the CSS, the SMP, and the FPC projects.

### **Regional Coordination, Fishway Inspections/FPAC**

April through July Fishway Inspections were completed at all thirteen projects that have adult fishways on the mainstem Columbia and Snake rivers. Through July of this year, a total of 54 fishway inspections have taken place on the Columbia and Snake rivers. Water and fish ladder temperatures have been problematic in 2015, especially in the lower Columbia and Snake rivers. At Lower Granite Dam, the USACE has been utilizing emergency and rental pumps to cool ladder temperatures. The FPC has performed all inspections at Grant County projects as well as participated in fishway inspections at other dams.

The 2014 Annual Fishway Inspection Report was finalized and posted on the web on 5/29/2015.