

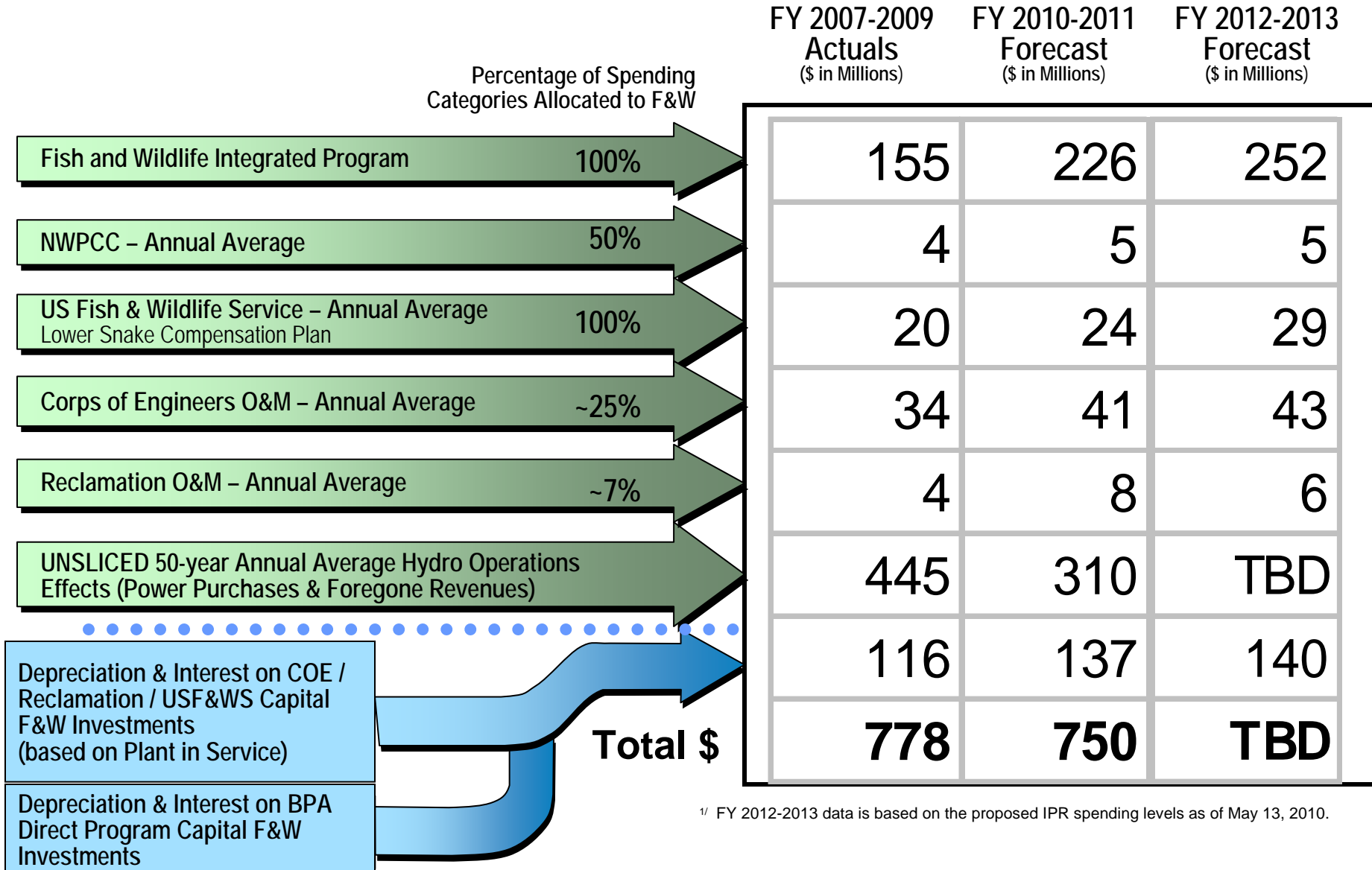


# Integrated Program Review (IPR)

# Fish and Wildlife Program Costs

May 20, 2010

# Total Annual Average Cost of BPA Fish & Wildlife Actions <sup>1/</sup>



<sup>1/</sup> FY 2012-2013 data is based on the proposed IPR spending levels as of May 13, 2010.

## Financial Components of BPA's F&W Investments

- **Integrated program** –The Fish and Wildlife Program (aka Direct Program or Integrated Program) funds several hundred mitigation projects to meet BPA's Power Act and ESA offsite mitigation obligations.
- **Debt service** – The projected amortization, depreciation and interest payments for investments directly funded through BPA borrowing, as well as capital investments by the Corps and Reclamation funded by the U.S. Treasury and reimbursed by BPA.
- **Fish-related O&M** (“reimbursable expenses”) – The hydroelectric share of O&M and other non-capital expenditures for fish and wildlife activities by the Corps and Reclamation (i.e. O&M of fish facilities at the mainstem dams and Corps/Reclamation mitigation hatcheries), and U.S. Fish & Wildlife Service (for hatcheries under the Lower Snake River Compensation Plan – 11 hatcheries and 15 satellite facilities).
- **River operations** – The power production effects of river operations required by NOAA Fisheries and USFWS Biological Opinions.

## Environment, F&W, LSRCP - Expense

| Environment, Fish & Wildlife,<br>Lower Snake | 2009<br>Actuals    | 2010 SOY           | 2011 WP-10<br>Rate Case | 2011 IPR           | 2012 IPR           | 2013 IPR           |
|--|--------------------|--------------------|-------------------------|--------------------|--------------------|--------------------|
| ENVIRONMENTAL REQUIREMENTS                   | 1,230              | 300,000            | 300,000                 | 300,000            | 302,400            | 305,424            |
| FISH & WILDLIFE                              | 177,859,443        | 215,000,002        | 236,000,000             | 236,000,000        | 250,394,000        | 254,384,000        |
| LOWER SNAKE HATCHERIES                       | 20,773,850         | 23,600,000         | 24,480,000              | 24,480,000         | 28,800,000         | 29,900,000         |
| <b>Total</b>                                 | <b>198,634,523</b> | <b>238,900,002</b> | <b>260,780,000</b>      | <b>260,780,000</b> | <b>279,496,400</b> | <b>284,589,424</b> |

### Program Description

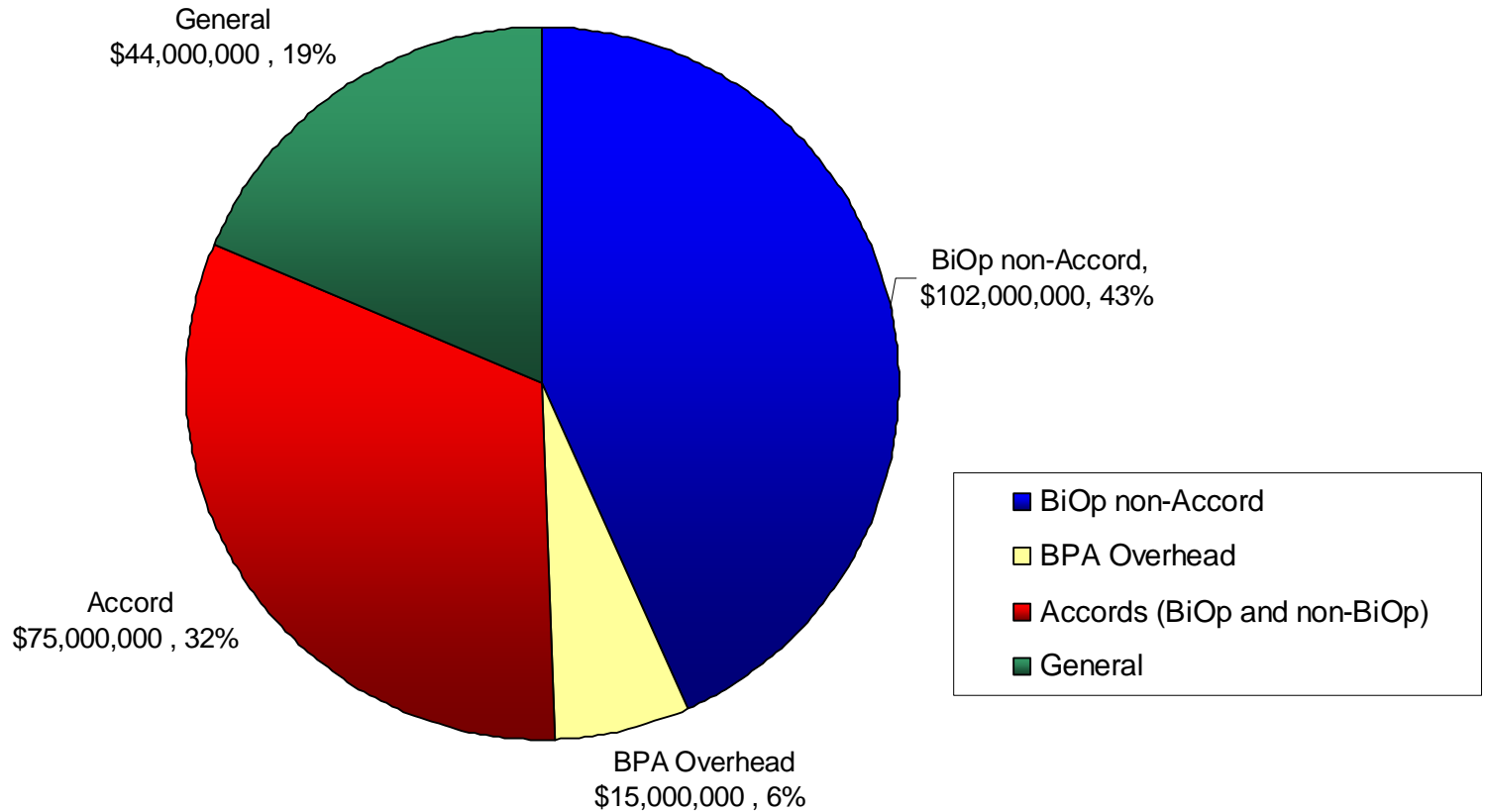
- BPA's Integrated Fish and Wildlife Program (Integrated Program) implements projects that meet BPA's fish and wildlife mitigation objectives under the Northwest Power Act, consistent with the Program adopted by the Northwest Power and Conservation Council. The projects also meet BPA's Endangered Species Act (ESA) offsite fish and wildlife requirements under biological opinions from the U.S. Fish and Wildlife Service and National Oceanic and Atmospheric Administration (NOAA Fisheries), and the commitments encompassed within the Columbia Basin Fish Accords.

### Key Products and Outputs

- BPA meets its Power Act and ESA objectives in the Fish and Wildlife Program primarily through the negotiation and award of mitigation contracts to state, federal, and tribal entities. These contracts implement projects that meet BPA's objectives in the following categories: tributary and estuary habitat improvement, hatcheries, harvest, research, monitoring and evaluation, and predator control. Project outcomes are credited and accounted for as contributions toward the recovery and mitigation obligations of BPA.
- The Fish and Wildlife Program is carried out in partnership with the Power Council, with the Council developing and updating the Program and making funding recommendations to BPA for projects to implement in support of the program.
- The Fish and Wildlife Program expense budget also ensures the agency's environmental and cultural resource compliance for Program activities, through analysis and documentation consistent with the requirements of the National Environmental Policy Act (NEPA) and the National (and state) Historic Preservation Act (NHPA).

# Fish & Wildlife Program – FY 2011 Expense

FY 2011 Forecasted Fund Distributions



## Fish and Wildlife Program Proposed Expense Budget

| F&W Program Expense Budget                         | IPR                |                    |
|--|--------------------|--------------------|
|  | FY 2012            | FY 2013            |
| Base *   | 239,634,000        | 243,324,000        |
| Kalispel Tribe MOA                                 | 960,000            | 960,000            |
| Kootenai River White Sturgeon BiOp Habitat Project | 6,000,000          | 6,000,000          |
| AMIP RM&E  | 1,300,000          | 1,300,000          |
| Washington Estuary MOA                             | 500,000            | 500,000            |
| Shoshone- Bannock Tribe MOA                        | 1,700,000          | 1,700,000          |
| <b>Total Program</b>                               | <b>250,394,000</b> | <b>254,384,000</b> |

\* Base budget developed by starting with FY 2011 budget and applying 2.5% inflation rate to Accord funds (consistent with Accord provisions), 0.9% inflation rate applied to BiOp Non-Accord funds and General funds (consistent with the treatment of inflation in the rest of the IPR).

# Fish & Wildlife Program Budget Details

## IPR Drivers for 2012-13:

- New habitat restoration actions are needed to fulfill RPAs within the 2006 Libby BiOp, in support of the Kootenai River White Sturgeon. These actions may include such things as dredging, restoration of channel complexity, and bank stabilization at an estimated cost of \$6M per year.
- New RM&E requirements in the AMIP are estimated to have an annual additional cost of \$1.3M. Potential additional costs for rapid response contingency actions in the AMIP (such as safety net hatchery production) are not reflected in the estimated budget, as these contingency costs will be addressed as part of BPA's broader approach for addressing risks and uncertainties in the BPA rate design process
- New costs resulting from the Shoshone-Bannock Fish Accord and the Washington Estuary MOA, of \$1.7M/yr and \$500k/yr, respectively, are reflected in the budget estimates for FY12-13 (prior to FY12, these costs are being absorbed into existing budgets, using budget flexibility resulting from under-runs in the Program ramp-up rate).
- Completing a previously negotiated Accord with the Kalispel Tribe would likely increase the Program budget by approximately \$960,000 a year.

## Risk Factors:

- Accounting provisions for implementing the Accords allow for unspent dollars to be moved into future years with the limit that each entity's annual spending level not exceed 120% of it's annual base budget in any given year. Consequently, at some point in the future, Accord spending levels in excess of base budgets are a potential scenario. This situation could begin to develop in FY12-13.
- BPA direct funds (though not through the Integrated Fish and Wildlife Program) the operation and maintenance costs for: 1) Corp of Engineers operated fish passage facilities and hatcheries associated with FCRPS dams, 2) Bureau of Reclamation Leavenworth, Entiat and Winthrop National Fish Hatcheries ("Complex") to mitigate for Grand Coulee Dam and 3) USFWS-managed Lower Snake River Hatcheries which mitigate for the four Lower Snake River dams. Several of these facilities have deferred maintenance costs which will necessitate significant capital investments, and will also likely require reform to comply with FCRPS BiOp RPA 39 requirements and/or HSRG recommendations.

# F&W Integrated Program Historical Spending

| <b>F&amp;W Expense<br/>(millions)</b> | <b>FY07</b> | <b>FY08</b> | <b>FY09</b> | <b>FY10</b> | <b>FY11</b> | <b>FY12</b> | <b>FY13</b> |
|---------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>FY07-09 Rate Case</b>              | \$143M      | \$143M      | \$143M      | -.          | -           | -           | -           |
| <b>FY10-11 IPR1</b>                   | -           | -           | \$200M      | \$230M      | \$236M      | -           | -           |
| <b>FY10-11 IPR2</b>                   | -           | -           | \$185M      | \$215M      | \$236M      | -           | -           |
| <b>FY12-13 IPR</b>                    | -           | -           | -           | -           | \$236M      | \$250M      | \$254M      |
| <b>ACTUAL</b>                         | \$139.5M    | \$148.9M    | \$177.9M    | \$200M*     | -           | -           | -           |

\* Estimated value

| <b>LSRCP<br/>(millions)</b> | <b>FY07</b> | <b>FY08</b> | <b>FY09</b> | <b>FY10</b> | <b>FY11</b> | <b>FY12</b> | <b>FY13</b> |
|-----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>FY07-09 Rate Case</b>    | \$19.5M     | \$19.5M     | \$20.4M     | -.          | -           | -           | -           |
| <b>FY10-11 IPR1</b>         | -           | -           | \$20.4M     | \$23.6M     | \$24.5M     | -           | -           |
| <b>FY10-11 IPR2</b>         | -           | -           | \$20.4M     | \$23.6M     | \$24.5M     | -           | -           |
| <b>FY12-13 IPR</b>          | -           | -           | -           | -           | \$24.5M     | \$28.8M     | \$29.9M     |
| <b>ACTUAL</b>               | \$19.3M     | \$19.4M     | \$20.8M     | \$23.6M*    | -           | -           | -           |

\* Estimated value



## Fish & Wildlife - Capital

| Capital - Fish & Wildlife | 2009 Actuals      | 2010 SOY          | 2011 WP-10 Rate Case | 2011 IPR          | 2012 IPR          | 2013 IPR          |
|---------------------------|-------------------|-------------------|----------------------|-------------------|-------------------|-------------------|
| F&W CAPITAL IT PROJECTS   | 1,450,876         | -                 | -                    | -                 | -                 | -                 |
| F&W CAPITAL-HATCHERY      | 4,883,255         | 43,603,506        | 33,496,716           | 21,424,930        | 15,832,175        | 15,715,359        |
| F&W CAPITAL-LAND          | 14,574,830        | 21,050,115        | 21,051,690           | 21,051,690        | 21,220,479        | 21,433,018        |
| F&W CAPITAL-PASSAGE/OTHER | 7,954,278         | 5,346,379         | 5,451,594            | 17,523,380        | 12,947,346        | 12,851,623        |
| <b>Total</b>              | <b>28,863,239</b> | <b>70,000,000</b> | <b>60,000,000</b>    | <b>60,000,000</b> | <b>50,000,000</b> | <b>50,000,000</b> |

### FY 2012-13 Program Spending Drivers

- The program focuses on three primary capital components: major construction (such as hatcheries), passage improvement, and land acquisitions.
- The major driver behind the proposed FY12-13 capital budgets is the base program of land acquisitions and tributary fish passage improvements as well as major construction activities for several large capital projects, such as the Chief Joseph Hatchery, that have shifted out of FY09-10 timeframe and into the FY12-13 rate period, due to permitting, reviews and final decisions taking longer than anticipated in the IPR process leading up to the FY10-11 rate case.

| Capital - Fish & Wildlife | 2013 IPR          | 2014 IPR          | 2015 IPR          | 2016 IPR          | 2017 IPR          |
|---------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| F&W CAPITAL IT PROJECTS   | -                 | -                 | -                 | -                 | -                 |
| F&W CAPITAL-HATCHERY      | 15,715,359        | 15,609,145        | 15,501,974        | 15,405,818        | 15,284,727        |
| F&W CAPITAL-LAND          | 21,433,018        | 21,626,283        | 21,821,294        | 21,996,278        | 22,216,606        |
| F&W CAPITAL-PASSAGE/OTHER | 12,851,623        | 12,764,572        | 12,676,732        | 12,597,904        | 12,498,667        |
| <b>Total</b>              | <b>50,000,000</b> | <b>50,000,000</b> | <b>50,000,000</b> | <b>50,000,000</b> | <b>50,000,000</b> |

### FY 2014-17 Program Spending Drivers

- The major drivers behind the proposed FY14-17 capital budgets continue to be the base program of land acquisitions, tributary fish passage improvements and major construction activities associated with hatcheries.

## Lower Snake Compensation Hatcheries

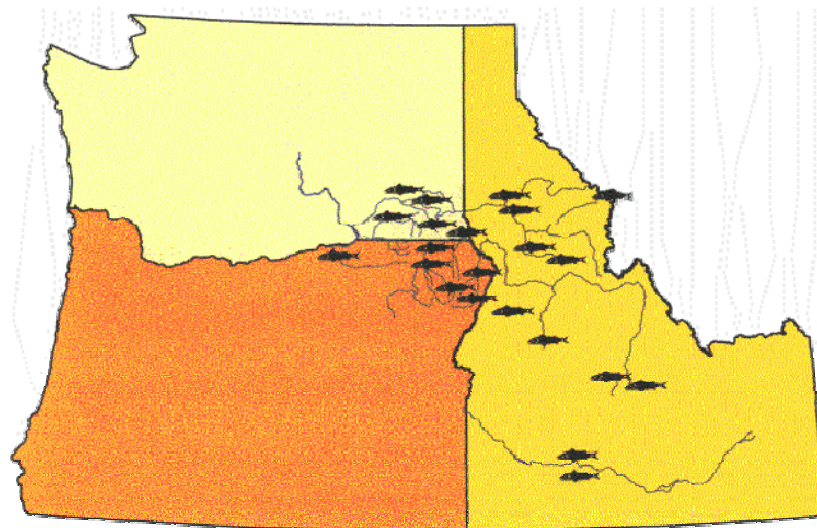
- Oregon
  - Lookingglass (Imnaha)
  - Wallowa (LSC, BC)
  - Irrigon
- Washington
  - Lyons Ferry (Cotton & DP)
  - Tucannon (Curl Lk)
  - Snake River Lab
- Idaho
  - Clearwater (CR, Red, Powell)
  - Magic Valley
  - Hagerman NFH
  - McCall (S. Fork)
  - Sawtooth (E. Fork)
  - Capt J., Pitt. & Big Canyon (with BPA)
  - Dworshak (joint with COE)
  - IDFG Fish Health Lab

28 Facilities located in three states

Present value of assets (less land) is \$322 million

65% built in the 1980's now 25 + years old

Present value of equipment is \$12.9 million



# Lower Snake Compensation Hatcheries

## What's Included

- **Operations** are those costs to collect broodstock, rear and release healthy fish while meeting local, state and federal standards.
- **Evaluations** are those costs to monitor success in meeting mandated goals and provide data needed to secure ESA permits.
- **Non-recurring maintenance** fixes broken assets, ensures assets comply with regulations, replaces equipment, preventative maintenance and mission requirements

# Lower Snake Compensation Hatcheries

## Comprehensive Asset Management Plan

- **Structured approach to assessing needs, including:**
  - Onsite condition assessment inspections, bridge and seismic surveys .
  - ESA, NPDES, & environmental compliance audits
  - ADA, & human safety audits.
  - Mission , scientific & programmatic requirements.
- **Program components: Deferred, preventative, corrective, programmatic, routine maintenance, equipment.**
- **All projects ranked through a formal rating process:**
  - Importance, substitutability, mission, energy efficiency
  - Human safety, ADA compliance, fish security
  - Environmental compliance, Scientific defensibility
  - Risk of future deterioration, visitor services.
- **General application is to ensure human safety, fish security and legal obligations are met first.**
- **The budget represents less than 1% of net asset value – long term costs will likely approach industry standard of 2-4%.**

## LSRCP FY 12 - 13 Expenses

| Category  | FY 12                | FY 13                |
|---|----------------------|----------------------|
| <b>Operations</b>                               | <b>\$ 17,640,000</b> | <b>\$ 18,390,000</b> |
| <b>Evaluation</b>                               | <b>\$ 4,830,000</b>  | <b>\$ 5,030,000</b>  |
| <b>Nonrecurring maintenance &amp; equipment</b> | <b>\$ 2,890,000</b>  | <b>\$ 3,020,000</b>  |
| <b>HRT/HSRG/HGMP</b>                            | <b>\$ 3,440,000</b>  | <b>\$ 3,440,000</b>  |
| <b>Total</b>                                    | <b>\$ 28,800,000</b> | <b>\$ 29,880,000</b> |



# Reduction Scenarios

## Environment, F&W, LSRCP – Reduction Scenario

| Environment, Fish & Wildlife,<br>Lower Snake | 2012 IPR           | 2012 IPR<br>Reduction<br>Scenario | Delta             | 2013 IPR           | 2013 IPR<br>Reduction<br>Scenario | Delta             |
|--|--------------------|-----------------------------------|-------------------|--------------------|-----------------------------------|-------------------|
| ENVIRONMENTAL REQUIREMENTS                   | 302,400            | 302,400                           | -                 | 305,424            | 305,424                           | -                 |
| FISH & WILDLIFE                              | 250,394,000        | 237,384,175                       | 13,009,824        | 254,384,000        | 241,164,523                       | 13,219,477        |
| LOWER SNAKE HATCHERIES                       | 28,800,000         | 27,360,000                        | 1,440,000         | 29,900,000         | 28,405,000                        | 1,495,000         |
| <b>Total</b>                                 | <b>279,496,400</b> | <b>265,046,575</b>                | <b>14,449,824</b> | <b>284,589,424</b> | <b>269,874,947</b>                | <b>14,714,477</b> |

### FY 2012-13 Impacts to F&W Resulting from Reduction Scenario:

- FY 2012 – The total reduction for F&W would be \$13 million.
- FY 2013 – The total reduction for F&W would be \$13.2 million.

### Fish and Wildlife Program

- The proposed FY 2012-13 Fish and Wildlife Program reflects the estimated costs of meeting BPA's commitments in various BiOps as well as the Fish Accords, while sustaining the current program level for the non-BiOp/non-Accord portion of the Program.
- The 5% reduction scenario for the FY 2012-13 Fish and Wildlife Program reflects an assumption that the ramp-up of the Program to meet BPA's new BiOp and Accord obligations will continue with expenditures increasing at a slower rate than originally expected, as was the case in FY 2009, and may be continuing into FY 2010.
- Notwithstanding this scenario, approximately 80% of the proposed program level reflects the estimated cost of meeting BiOp/Accord commitments, and so for rate-setting purposes, even if this scenario was selected as the appropriate program level, BPA would still be obligated to manage the Program to meet its full commitments.

# Environment, F&W, LSRCP – Reduction Scenario

## Fish and Wildlife Program (continued)

- The risk of the 5% reduction scenario is that if the Program spending rate accelerates to a level commensurate with BPA's expectations prior to FY 2012, then by FY 2012, total actual spending would likely exceed the proposed program level in this scenario (i.e. actual spending to meet obligations would exceed the proposed rate case amount). While a continuation of slower than expected Program spending is plausible, FY 2012 is three years after the initiation of the Accords and the 2008 FCRPS BiOp, and it is therefore far less likely that the slower spending rate (relative to the original projection) will persist beyond the initial years of these new commitments.
- Compounding this risk is that the accounting provisions for implementing the Accords allow for unspent dollars to be moved into future years, with the limitation that each signing entity's annual spending level shall not exceed 120% of their annual base budget in any given year. Consequently, at some point in the future, Accord spending levels in excess of base program levels are a potential scenario. It is not altogether unrealistic that this situation could begin to develop in FY 2012-13.



# Environment, F&W, LSRCPC – Reduction Scenario

## FY 2012-2013 Impacts to Lower Snake Hatcheries Resulting from Reduction Scenario:

- FY 2012 reduction to Lower Snake Hatcheries spending would be \$1.44 million, achieved by reducing the Non-Recurring Maintenance program.
- FY 2013 reduction to Lower Snake Hatcheries would be \$1.49 million, by reducing the Non-Recurring Maintenance program.

## Lower Snake Hatcheries

- The 5% reduction scenario for the Lower Snake Hatcheries reduces the \$2.2 million/year program level for non-recurring maintenance by an average of about \$1.47 million/year. This reduction would add to the existing backlog of non-recurring maintenance.
- The risk associated with a reduction of this magnitude - for a backlog that already has an estimated cost moderately in excess of the non-recurring maintenance line-item in the proposed program level - is that further facility deterioration will occur, and the cost of the future backlog will be higher than the money saved with this reduction.
- There is some experience with having postponed this type of maintenance at the Dworshak Hatchery, Leavenworth Complex and several Mitchell Act hatcheries; in all cases, maintenance deferrals led to much bigger and more costly problems down the road.
- These hatchery facilities and equipment assets (less property) are valued at \$334.7 million; most were built or purchased in the mid 1980s and are now 25+ years old.
- Beginning in FY 2007, BPA and the Fish and Wildlife Service developed a long-term Asset Management Plan to ensure functionality and to prevent having to incur large capital costs in the future. The proposed program level already defers \$5.9 million in facility needs (under the Asset Plans) and \$2.7 million in equipment needs.
- As such, the proposed program level already strikes a balance between deferring purchasing and implementing the long-term Asset Management Plan. Additional deferrals would not eliminate the need, and would most likely result in higher future costs.

# Environment, F&W, LSRCP – Reduction Scenario

| Program Line Item             | Description of Reduction   | \$ Amount of Reduction  | Impact of Reduction  | Risk          |
|-------------------------------|--|-------------------------|--|---------------|
| <b>F&amp;W Program</b>        | Assumes the ramp-up of the Program to meet BPA's new BiOp and Accord obligations will continue with expenditures increasing at a slower rate than originally expected.   | \$13.1 million per year | If the Program spending rate accelerates to a level commensurate with BPA's expectations prior to FY 2012, then by FY 2012, total actual spending would likely exceed the proposed program level in this scenario (i.e. actual spending to meet obligations would exceed the proposed rate case amount).   | <b>Medium</b> |
| <b>Lower Snake Hatcheries</b> | The 5% reduction scenario for the Lower Snake Hatcheries reduces the \$2.2 million/year program level for non-recurring maintenance by an average of about \$1.45 million/year. This reduction would add to the existing backlog of non-recurring maintenance. | \$1.45 million per year | The risk associated with a reduction of this magnitude - for a backlog that already has an estimated cost moderately in excess of the non-recurring maintenance line-item in the proposed program level - is that further facility deterioration will occur, and the cost of the future backlog will be higher than the money saved with this reduction. | <b>High</b>   |



# **Bureau of Reclamation: Operation and Maintenance Budget Leavenworth Fisheries Complex**



## Reclamation Expense Budget Leavenworth Fisheries Complex

- Reclamation had responsibility to mitigate, to acceptable levels of abundance, the salmon resources jeopardized by the construction of Grand Coulee Dam.
- The Leavenworth National Fish Hatchery Complex was authorized by the Grand Coulee Fish Maintenance Project April 3, 1937, and reauthorized by the Mitchell Act (52 Stat. 345) May 11, 1938.
- Construction of the Entiat, Leavenworth and Winthrop National Fish Hatcheries occurred from 1938-1940.
- Complex is composed of Mid-Columbia Fisheries Resource Office (MCFRO) and Leavenworth, Entiat and Winthrop National Fish Hatcheries.



## Reclamation Expense Budget Leavenworth Fisheries Complex

- In 1949, responsibility for operation and maintenance responsibilities was transferred to the U.S. Fish and Wild Service (USFWS).
- USFWS operates the facilities to mitigate for depleted pacific salmon stocks and is funded through a reimbursable agreement with the Bureau of Reclamation.
- Construction, operation and maintenance, and replacement expenses to be repaid to the government by power users.
- The budget covers the operations of the three hatcheries as well as a portion of the USFWS MCFRO and Olympia Fish Health Center. The MCFRO provides monitoring and evaluation of hatchery stocks, marking programs, and permitting compliance for all station programs and activities. The OFHC provides fish diagnostic services in support of healthy salmon stocks.



## Reclamation Expense Budget Leavenworth Fisheries Complex

- Current Complex hatchery operations are authorized by the following treaties, judicial decisions and legislation:
  - Treaty with the Yakama, 06/09/1855
  - Treaty with the Nez Perce, and Tribes of Middle Oregon, 06/25/1855
  - Treaty with the Bands of Colvilles, 04/08/1872
  - U.S. v. Oregon (“Belloni Decision”, Case 899), 07/08/1969
  - Endangered Species Act of 1973
  - Pacific Salmon Treaty Act of 1985
  - Salmon and Steelhead Conservation and Enhancement Act, 1980
  - Treaty with the Walla Walla, Cayuse, Umatilla Tribes, 06/09/1855



## Reclamation Expense Budget Leavenworth Fisheries Complex

- The Leavenworth Complex Fish production programs support mitigation efforts in the Columbia River Basin. Production goals are set by the Columbia River Fisheries Management Plan under the U.S. v Oregon decision of 1969.
- The Leavenworth NFH currently rears 1.2 million spring Chinook salmon smolts annually and provides a tribal and sport fishery on Icicle Creek.
- The Entiat NFH rears up to 400,000 summer Chinook and Coho salmon smolts annually for release into the Entiat River.
- The Winthrop NFH rears 600,000 spring Chinook salmon and 100,000 summer steelhead for release in the Methow River.



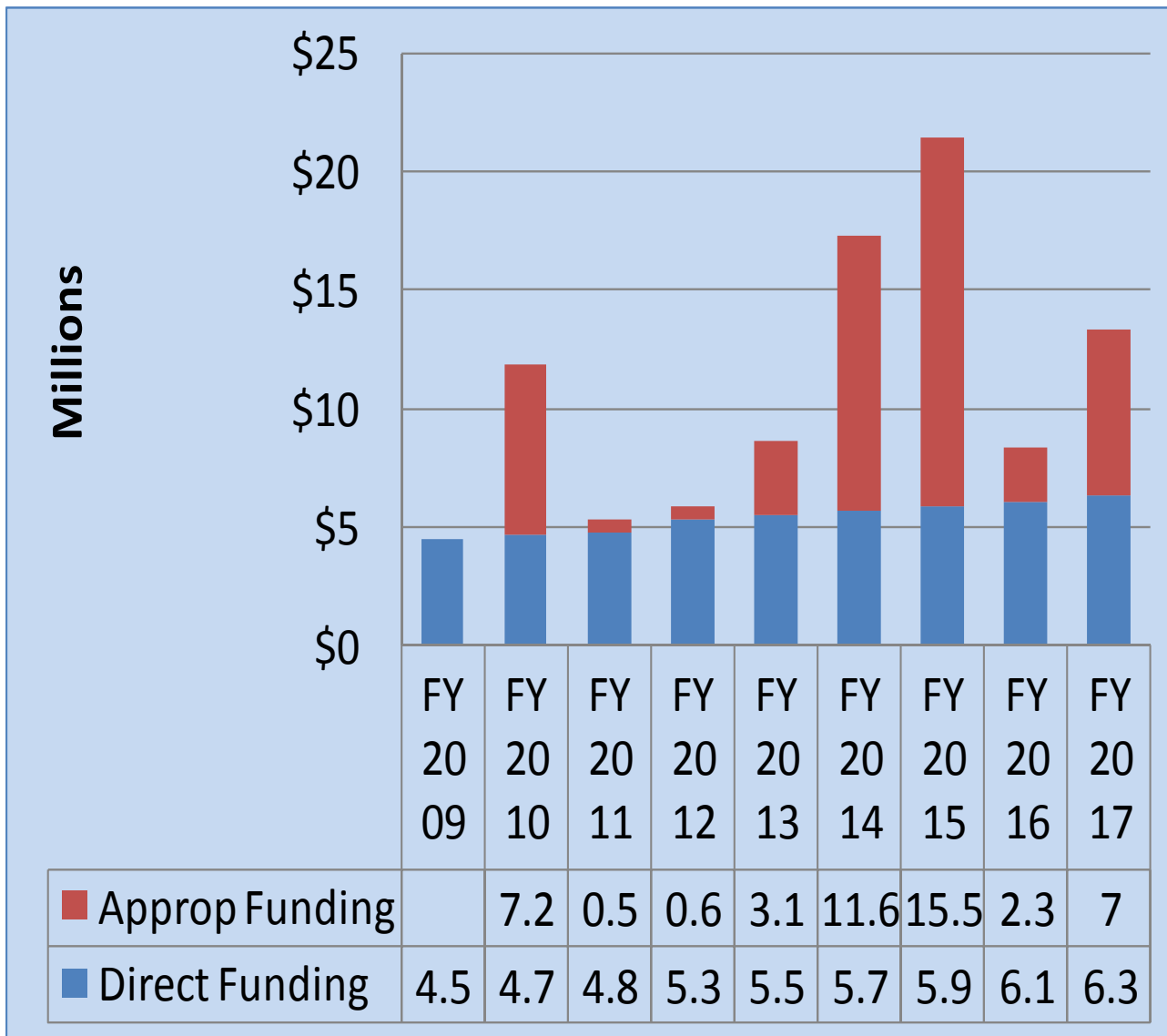
## Reclamation Expense Budget Leavenworth Fisheries Complex

- The fish production programs of the Leavenworth Fishers Complex hatcheries were recently reviewed by the USFWS's Hatchery Review Team (HRT) and the Hatchery Science Review Group (HSRG)
- USFWS personnel are working through the implementation of the recommendations from the HRT and HSRG as well as incorporating new actions from the
  - FCRPS BiOp—RPA No. 39
  - FCRPS Columbia River Accords
  - U.S. v. Or. Fish Management Plan
- All recommendations and actions are expected to contribute to more sustainable fisheries programs that reduce risks to listed species and increase recovery efforts in the Columbia Basin





# Leavenworth Program Levels





## FY 2010 - 2017 Program Drivers

- FCRPS BiOp: New requirements
- Aging Infrastructure:
  - Original construction in 1939
  - Indicates significant rehabilitation of hatcheries required
- World Market:
  - Significant material cost increases



# Reclamation Expense Budget

## Leavenworth Fisheries Complex

- Budget Allocation:
  - Facilities Operations for Leavenworth, Entiat, and Winthrop Complex: ~ 58%
  - MCFRO Support: ~ 23%
    - Monitoring and evaluation program, tagging, marking programs, permit compliance, Biological Assessments, Hatchery and Genetic Management Plans, ESA compliance, supplies and materials.
  - Olympia Fish Health Center Support: ~7%
    - Diagnostic fish health services at Leavenworth, Entiat and Winthrop NFH's  
Monthly fish health inspection throughout the entire rearing cycle of the salmon (egg to adult), diagnostic work, supplies, and materials.
  - Facilities Maintenance: ~ 12%



# Reclamation Expense Budget

## Projected LFC RAX Items

|          |   | Jan-2010       |       |       |       |        |        |       |       |        |        |       |       |
|----------|---|----------------|-------|-------|-------|--------|--------|-------|-------|--------|--------|-------|-------|
|          |   | Appraisal Cost | 2011  | 2012  | 2013  | 2014   | 2015   | 2016  | 2017  | 2018   | 2019   | 2020  | 2021  |
|          |   | Total \$M      |       |       |       |        |        |       |       |        |        |       |       |
| Location | Item  |                |       |       |       |        |        |       |       |        |        |       |       |
| LNFH     | Replace water intake system                           | \$20.7         | \$0.5 | \$0.5 | \$1.0 | \$8.0  | \$10.0 | \$0.7 |       |        |        |       |       |
| LNFH     | Rehabilitate 8X80 foot raceways                       | \$1.5          |       | \$0.1 | \$1.4 |        |        |       |       |        |        |       |       |
| LNFH     | Construct new covered raceways                        | \$3.4          |       |       | \$0.1 | \$1.5  | \$1.8  |       |       |        |        |       |       |
| LNFH     | Replace Structure 2                                   | \$4.5          |       |       | \$0.5 | \$2.0  | \$2.0  |       |       |        |        |       |       |
| LNFH     | Redrill well #1                                       | \$0.1          |       |       | \$0.1 |        |        |       |       |        |        |       |       |
| ENFH     | Install covers on raceways                            | \$1.3          |       |       |       | \$0.1  | \$1.2  |       |       |        |        |       |       |
| WNFH     | Replace Foster Lucas A, B, & C bank ponds             | \$25.3         |       |       |       |        | \$0.5  | \$1.0 | \$6.0 | \$8.0  | \$9.8  |       |       |
| WNFH     | Install weir at Foghorn Dam for broodstock management | \$12.6         |       |       |       |        |        | \$0.5 | \$0.5 | \$5.5  | \$6.1  |       |       |
| WNFH     | Replace entrance bridge                               | \$0.6          |       |       |       |        |        | \$0.1 | \$0.5 |        |        |       |       |
|          |   |                |       |       |       |        |        |       |       |        |        |       |       |
|          | <b>TOTAL</b>  | \$70.0         | \$0.5 | \$0.6 | \$3.1 | \$11.6 | \$15.5 | \$2.3 | \$7.0 | \$13.5 | \$15.9 | \$0.0 | \$0.0 |



## Reclamation Expense Budget Leavenworth Fisheries Complex

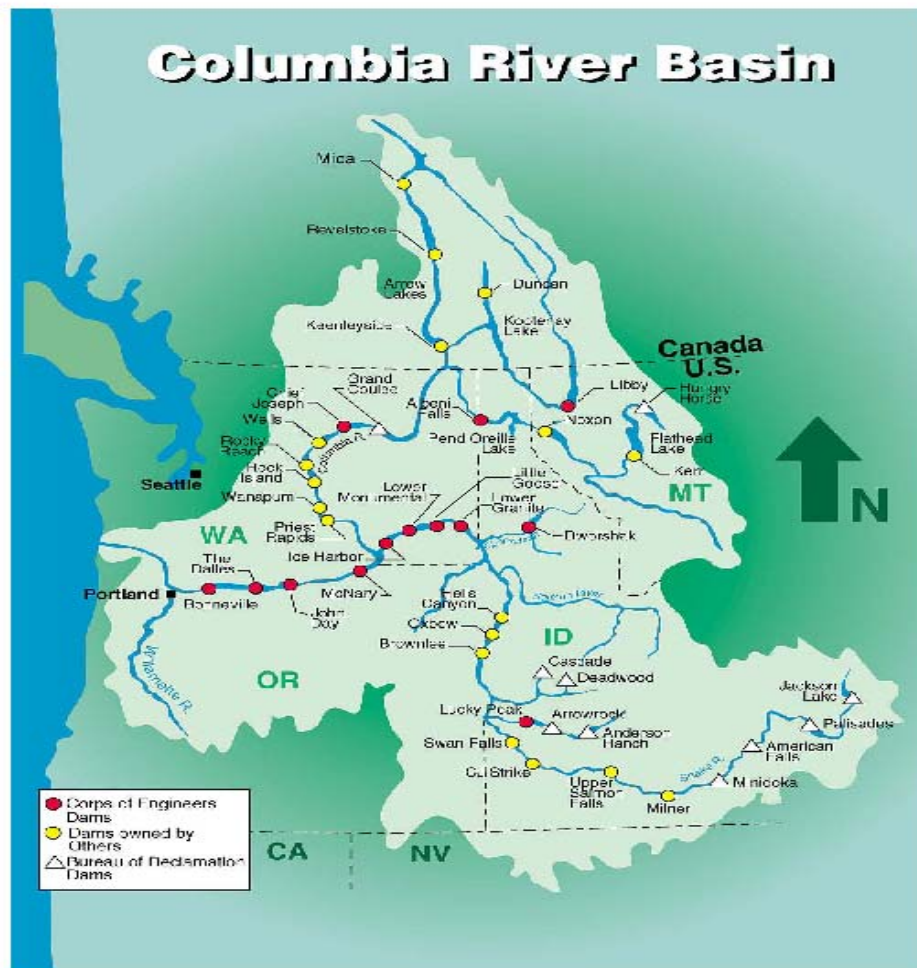
- Leavenworth Fisheries Complex ongoing and growing requirements:
  - Significant rehabilitation of hatcheries required
  - BiOp: New requirements
  - Clean Water Act requirement
  - Hatchery Management Requirements
  - HSRG Requirements



**Integrated Program Review  
(IPR)  
US Army Corps of Engineers  
Direct Funded Fish and Wildlife Program**

## Corps F&W Expense Budget

- **Funding for Fish and Wildlife related O&M tasks in areas affected by the operation of Corps hydropower producing dams**
  - Willamette & Rogue Basins (9)
  - Lower Columbia River (4)
  - Snake River Basin (5)
  - Upper Columbia Basin (3)





## Corps F&W Expense Budget

- **Appropriated Budget from Congress (25%)**
  - Environmental Stewardship Business Line
  - Annual Budget Prepared two years in advance
  - Possible differences in the President's Budget and Appropriations
  
- **Direct Funded Program (75%)**
  - Cost allocation varies by project
  - Use a 5-year plan to develop annual budget

## Corps F&W Expense Budget

- **Anadromous Fish (85%)**
  - Operation & maintenance of fish passage facilities at dams, mitigation hatcheries, smolt transportation, multi-year fish passage research outlined by Biological Opinions and Fish Accords, program management
  - Spare parts for fish passage facilities, painting fish barges, coordinating and conducting fish operations, and conducting irregular fish passage or disease research, project management
  
- **Wildlife and Resident Fish (12%)**
  - Baseline wildlife management, habitat mitigation, mitigation hatchery maintenance, and invasive species coordination, project management
  
- **Water Quality (3%)**
  - Total Dissolved Gas and Temperature monitoring/modeling, and TMDL coordination, project management

## Corps F&W Expense Budget

### Distribution of F&W Budget by Activities

|                                   | Previous<br>Rate Period<br><u>FY08-09</u> | <u>FY10</u> |
|-----------------------------------|---|-------------|
| <b>Project/Program Mgt.</b>       | 4%  | 4%          |
| <b>Research</b>                   | 8%  | 7%          |
| <b>Fish Passage</b>               | 45%                                       | 38%         |
| <b>Hatcheries</b>                 | 17%                                       | 17%         |
| <b>Transportation</b>             | 12%                                       | 19%         |
| <b>Wildlife and Resident Fish</b> | 12%                                       | 12%         |
| <b>Water Quality</b>              | 2%  | 3%          |

## Corps F&W Expense Budget

| Year | Actual Expense | Project Needs | Ceiling*     |
|------|----------------|---------------|--------------|
| 2006 | \$32,503,000   |               | \$35,307,000 |
| 2007 | \$33,037,000   |               | \$36,399,000 |
| 2008 | \$37,450,000   |               | \$37,491,000 |
| 2009 | \$37,694,000   |               | \$38,616,000 |
| 2010 |                | \$41,248,000  | \$39,774,000 |
| 2011 |                | \$45,352,000  | \$40,967,000 |
| 2012 |                | \$45,771.00   | \$42,196,000 |
| 2013 |                | \$47,413.00   | \$43,462,000 |

\*Includes 3% escalation factor

## Corps F&W Expense Budget

### Fish and Wildlife Program ongoing and growing requirements

- Aging Infrastructure
- Biological Opinions
- Clean Water Act Requirements
- Hatchery Management Requirements
- Aquatic Invasive Species



# Columbia River Fish Mitigation Project (CRFM)

# Columbia River Fish Mitigation Project

- **Purpose:** Mitigate impacts of the dams to anadromous fish in the Columbia, Lower Snake and Willamette Rivers to meet Biological Opinion requirements.
  - CRFM (Col/Lower Snake River) initiated in 1991; Implement fish passage improvements that were not part of the original dam constructions for juvenile and adult fish passage.
  - Willamette Basin efforts initiated in 2008
  
- **Authority:** Original Congressional Acts for project construction and operation
  
- **Funding source:** Congressional appropriations. BPA repays U.S. Treasury for “power share” of costs.
  
- **Transfers to “Plant-in-Service”:**
  - Costs are transferred when new facility goes into operation or study completed
  
- **Costs and schedule:**
  - Current estimated project cost: \$2.1B (FCRPS \$1.8B, Willamette \$300M)
  - Current estimated balance to complete: \$670M
  - Current estimated completion: 2018, 2023 (To meet current FCRPS and Willamette River Basin BiOp completion dates, respectively)

# Columbia River Fish Mitigation Project

- **Primary focus:** Facility configuration and operations at the dams that improve fish survival:
  - Evaluate project and system fish passage & survival
  - Identify/develop/construct passage and other survival improvements (juvenile and adults)
  - Seek cost effective alternatives, configurations, and operations
  - Implement Biological Opinions and Fish Accord agreements
  - Regional coordination
    - Biological/technical review & input
    - Establish priorities
      - Critical issues/uncertainties for research
      - Biological outputs for alternative actions
      - Costs
- **Goals:** Implement improvements to the projects increase fish survival while allowing the continued benefits of the multi-purpose projects (hydropower, navigation, recreation, flood damage reduction).
  - Improve and address impacts to fish survival that were not considered when the dams were originally built.
  - Achieve BiOp performance requirements to achieve recovery of endangered species and stability of the hydropower system. 96% spring and 93% summer.



# Columbia River Fish Mitigation Project



# Columbia River Fish Mitigation Project

| <b>Annual Appropriations:</b> |                | <b>Transfers to Plant-in-Service (power share):</b> |                |
|-------------------------------|----------------|---|----------------|
| <b>91-99</b>                  | <b>\$516.6</b> |   |                |
| <b>2000:</b>                  | <b>\$58.1</b>  | <b>2000:</b>  | <b>\$47.0</b>  |
| <b>2001:</b>                  | <b>\$80.5</b>  | <b>2001:</b>  | <b>\$ 6.2</b>  |
| <b>2002:</b>                  | <b>\$71.2</b>  | <b>2002:</b>  | <b>\$ 8.8</b>  |
| <b>2003:</b>                  | <b>\$82.1</b>  | <b>2003:</b>  | <b>\$68.4</b>  |
| <b>2004:</b>                  | <b>\$66.1</b>  | <b>2004:</b>  | <b>\$62.9</b>  |
| <b>2005:</b>                  | <b>\$75.4</b>  | <b>2005:</b>  | <b>\$51.9</b>  |
| <b>2006:</b>                  | <b>\$84.1</b>  | <b>2006:</b>  | <b>\$352.7</b> |
| <b>2007:</b>                  | <b>\$95.0</b>  | <b>2007:</b>  | <b>\$56.7</b>  |
| <b>2008:</b>                  | <b>\$82.2</b>  | <b>2008:</b>  | <b>\$36.5</b>  |
| <b>2009:</b>                  | <b>*\$83.3</b> | <b>2009:</b>  | <b>\$103.2</b> |
| <b>2010:</b>                  | <b>\$80.6</b>  |   |                |

(Dollars are in millions)

\* \$29.9 Additional provided via ARRA funds

# Columbia River Fish Mitigation Project

## Estimated annual transfers to Plant-in Service 2010-2014 (Power share) (Dollars are in millions)

| Year: | FY 2010 | FY 2011 | FY 2012 | FY 2013 | FY 2014 |
|-------|---------|---------|---------|---------|---------|
|       | \$237   | \$111   | \$120   | \$192   | \$103   |

# Columbia River Fish Mitigation Project

## ▪ Major Activities:

- **Bonneville Dam:**
  - Complete 2nd PH Bypass improvements
  - Continue to test B2 forebay guidance structure/ decision on permanent
  - BIOP performance testing
  
- **The Dalles Dam:**
  - Complete spillwall
  - Evaluate and modify, as warranted, adult ladder(s) for reliability and passage efficiency
  - BIOP performance testing
  
- **John Day Dam:**
  - Continue to test spillway surface bypass weirs configuration
  - Decision on permanent surface bypass facilities
  - Evaluate and modify, as warranted, tailrace passage improvements
  - BIOP performance testing
  
- **McNary Dam:**
  - Reconfigure and test of spillway surface bypass weir
  - Investigate additional surface bypass alternatives
  - Initiate design on a powerhouse surface bypass prototype
  - Complete design and construct juvenile bypass outfall relocation

# Columbia River Fish Mitigation Project

- **Lower Monumental:**
  - Complete construction of Removable Spillway Weir boat barrier
  - Complete design and construct juvenile bypass facility outfall relocation
  - Conduct biological performance verification testing
- **Little Goose:**
  - Complete construction of adjustable spillway weir stoplogs and boat barrier
  - Complete hydraulic investigations of tailrace – adult and juvenile passage
  - Conduct biological performance verification testing
- **Lower Granite Dam:**
  - Initiate construction of juvenile bypass facility upgrades
  - Initiate biological performance verification testing
  - Complete hydraulic investigations for tailrace divider wall and spillway deflectors
- **System Actions:**
  - Turbine passage index testing
  - Juvenile fish spillway injury reduction studies
  - IH replacement runner development
  - Lamprey passage research and improvements
  - Estuary tern relocation
  - Estuary post- passage and transport survival studies in the estuary
  - Juvenile fish avian predation reduction studies
- **Willamette Actions:**
  - Upgrade adult collection facilities and release sites to provide upstream passage via trap-and-haul
  - Evaluate downstream fish passage alternatives
  - Evaluate temperature control facilities
  - Perform system-wide research, including determining dam/reservoir survival and flow impacts

# Columbia River Fish Mitigation Project

## Current and Prospective Summary of Spring Chinook Survival Rates for Dams in the Federal Columbia River Power System

| Hydroelectric Dam | Comprehensive Passage Model (COMPASS)<br>Created by NOAA Fisheries along with federal, state, and tribal agencies and the University of Washington. COMPASS is intended to evaluate and predict the effects of hydropower operations on salmon survival rates |             |
|-------------------|---|-------------|
|                   | Current   | Prospective |
| Lower Granite     | 96.4  | 96.9        |
| Little Goose      | 96.0  | 97.2        |
| Lower Monumental  | 93.8  | 96.1        |
| Ice Harbor        | 96.6  | 97.3        |
| McNary            | 94.2  | 96.1        |
| John Day          | 91.8  | 93.2        |
| The Dalles        | 91.4  | 95.5        |
| Bonneville        | 97.1  | 97.5        |

# Columbia River Fish Mitigation Project

## ■ Future – Way Forward

- FCRPS BiOp - Continue progress on passage improvements to meet the BiOP performance targets (93/96%). Performance evaluations initiated in lower Columbia projects in 2010 and scheduled to start in 2011 on several lower Snake projects.
- Willamette BiOp - Initiate early collection facility improvements. Complete basin-wide evaluation and implement additional actions likely provide significant biological benefit and improvements in survival in the basin.



# Northwest Power and Conservation Council



# Northwest Power and Conservation Council

| PLANNING COUNCIL | 2009 Actuals | 2010 SOY  | 2011 WP-10 Rate Case | 2011 IPR  | 2012 IPR   | 2013 IPR   |
|------------------|--------------|-----------|----------------------|-----------|------------|------------|
| Total            | 9,424,498    | 9,683,000 | 9,934,000            | 9,934,000 | 10,356,000 | 10,637,000 |

## Program Description

- The Northwest Power and Conservation Council was authorized by Congress as part of the Power Act of 1980. The principal duties of the Council are: 1) develop a regional power plan, 2) develop a fish and wildlife program, 3) provide for broad public participation in these processes. BPA provides the funding for the Council.

## Strategic Objectives

- S7 – Environment, Fish and Wildlife
- I6 – Collaboration
- S9 – Stakeholder Satisfaction
- I5 – Technology Innovation

## Key Products and Outputs

- The Council develops a regional power plan and makes funding recommendations to BPA for projects to implement in support of the Fish and Wildlife program.

## FY 2012-13 Program Spending Drivers

- The Council will monitor the implementation of the 6th Power Plan including its Action Plan. The Council will also monitor the progress in the implementation of the Fish and Wildlife program designed to protect, mitigate and enhance fish and wildlife affected by the federal hydropower system. Fifty percent of the Council operations program is attributed as a Fish and Wildlife cost with the other 50 percent being attributed as a Power cost.

# Next Steps

## Detailed Workshop Schedule

### 2010 Integrated Program Review (IPR) Workshop Schedule

\*All workshops are subject to change as necessary\*

|   | Workshop Topic  | Date         | Time          |
|---|---|--------------|---------------|
| - | <b>Asset Management Overview</b><br><i>Pre-IPR meeting held at the Quarterly Business Review</i>  | May 3, 2010  | 3:00-4:00 PM  |
| 1 | <b>Executive Welcome and Overview</b><br><i>Executive Welcome, Introductions, Process Overview<br/>Power, Transmission, Corporate overview</i>  | May 10, 2010 | 9:00-1:00 PM  |
| 2 | <b>Federal Hydro Asset Strategy &amp; Capital Discussion</b><br><i>FCRPS Hydro Asset Strategy<br/>Federal Hydro Capital Program for FY 2012-17</i>  | May 13, 2010 | 9:00-12:00 PM |
| 3 | <b>Transmission Asset Strategies &amp; Capital Discussion</b><br><i>Transmission Asset Strategies<br/>Transmission Capital Programs for FY 2012-17</i>  | May 17, 2010 | 9:00-4:00 PM  |
| 4 | <b>Transmission Expense</b><br><i>Transmission Expense Programs for FY 2012-13</i>  | May 18, 2010 | 9:00-12:00 PM |
| 5 | <b>Transmission Overflow</b><br><i>Discuss Remaining Topics, Follow Ups, Etc.</i>   |              | 1:00-4:00 PM  |
| 6 | <b>Power Internal Operating Costs, Acquisition/Ancillary Services &amp; Residential Exchange</b><br><i>Power Internal Operating Cost for FY 2012-13<br/>Power Acquisition and Ancillary Services for FY 2012-13<br/>Residential Exchange Program for FY 2012-13</i> | May 19, 2010 | 9:00-12:00 PM |
| 7 | <b>Columbia Generating Station (CGS)</b><br><i>CGS Expense and Capital Program for FY 2012-17</i>   |              | 1:00-4:00 PM  |



## Detailed Workshop Schedule

### 2010 Integrated Program Review (IPR) Workshop Schedule

\*All workshops are subject to change as necessary\*

|    | Workshop Topic  | Date          | Time           |
|----|---|---------------|----------------|
| 8  | <b>FCRPS Hydro Operation &amp; Maintenance Program and Cultural Resources</b><br><i>FCRPS Hydro O&amp;M Program for FY 2012-13</i><br><i>Cultural Resources Program</i>   | May 20, 2010  | 9:00-12:00 PM  |
| 9  | <b>Fish &amp; Wildlife, Lower Snake River Comp (LSRC) and Northwest Power Planning Council (NWPPC)</b><br><i>F&amp;W Expense &amp; Capital Program for FY 2012-17</i><br><i>LSRC Program for FY 2012-13</i><br><i>NWPPC Expense Program for FY 2012-13</i><br><i>Columbia River Fish Mitigation (CRFM) FY 2012-17</i> |               | 1:00-4:00 PM   |
| 10 | <b>Power Overflow</b><br><i>Discuss Remaining Topics, Follow Ups, Etc.</i>  | May 24, 2010  | 9:00-12:00 PM  |
| 11 | <b>Energy Efficiency &amp; Renewable Resources</b><br><i>Energy Efficiency Expense &amp; Capital Program for FY 2012-17</i><br><i>Renewable Resources for FY 2012-13</i>  |               | 1:00-4:00 PM   |
| 12 | <b>Facilities Asset Strategy</b><br><i>Facilities Asset Strategy</i>  | May 25, 2010  | 9:00-10:30 AM  |
| 13 | <b>Information Technology (IT) Asset Strategy</b><br><i>IT Asset Strategy</i>   |               | 10:30-12:00 PM |
| 14 | <b>Agency Services</b><br><i>Agency Services Expense &amp; Capital Programs for FY 2012-2017</i>  |               | 1:00-4:00 PM   |
| 15 | <b>General Manager Meeting</b>  | June 8, 2010  | 9:00-12:00 PM  |
| 16 | <b>General Manager Meeting</b>  | July 13, 2010 | 9:00-12:00 PM  |



## Ways to Participate

- All forums are open to the public and will be noticed on the Integrated Program Review (IPR) external website at: <http://www.bpa.gov/corporate/Finance/IBR/IPR/>.
- Representatives from the Corps of Engineers, Bureau of Reclamation and Energy Northwest will be participating in the IPR process including presentations.
- All technical and managerial workshops will be held at BPA Headquarters.
- If participating by phone please dial into the bridge at 503-230-5566, then any time during or after the message and the double beep, enter 3981#. Presentation material will be posted on the IPR external website prior to the workshop taking place.
- The IPR process will include a public comment period for proposed program spending levels. The comment period opens May 10, 2010 and will close on July 29, 2010.
- Comments can be submitted at any of the scheduled workshops or submitted in writing to:
  - Bonneville Power Administration, P.O. Box 14428, Portland, OR 97293-4428,
  - Email to [comment@bpa.gov](mailto:comment@bpa.gov),
  - Faxed to (503) 230-3285



## BPA's Financial Disclosure Information

- All FY 2010-2017 information has been made publicly available by BPA on May 18, 2010 and does not contain Agency-approved Financial Information.
- All FY 2007-2009 information has been made publicly available by BPA and contains Agency-approved Financial Information.
- All FY 2011 Rate Case data has been developed for publication in rates proceeding documents and is being provided by BPA.

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