



**US Army Corps  
of Engineers** ®  
Northwestern Division

# **US Army Corps of Engineers**

## **Operations and Maintenance Budget for the Fish and Wildlife Program**

**Portland, Seattle and Walla Walla Districts**



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# Corps F&W Expense Budget

- Funding for O&M tasks in areas affected by the operation of Corps hydropower producing dams
  - Willamette & Rogue Basins (9/15)
  - Lower Columbia River (4)
  - Snake River Basin(5)
  - Upper Columbia Basin(3)
- We cooperatively rank each task as to its relative importance
  - Priority 1 = Required by law that are needed every year \* (74%)
  - Priority 2 = Required by law that are needed irregularly \* (20%)
  - Priority 3 = Items pending legal requirement (4.5%)
  - Priority 4 = Other Corps Stewardship Program (0.5%)



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# Corps F&W Expense Budget

Lower Granite FY05 O&M Plan			
		1000's	
Routine O&M Baseline Budget:	BiOp Action	FY 05	Priority
Fish Transport	40,43,44	\$471	1
Operations of Fish Passage Fac.	144	\$485	1
Maintenance of Fish Passage Fac.	6, 144, 145	\$492	1
AFEP (Transport, Adult Fish Passage)	Many	\$414	1
<b>Subtotal</b>		<b>\$1,862</b>	
Wildlife/Resident Fish:		FY 05	05
Wildlife Management	None	\$239	1
Wildlife Maintenance	None	\$14	1
Level 2 Wildlife Inventories	None	\$206	4
Level 2 GIS Work	None	\$21	4
Replace Cattle Water Corridors W/ Wel	None	\$147	4
Nisqually John Canyon Grassland Proj	None	\$147	4
Shoreline Stabilization	None	\$147	4
Aerial Deer Surveys	None	\$147	4
Wildlife Mitigation	None	\$147	4
<b>Subtotal</b>		<b>\$1,216</b>	
<b>Total</b>		<b>\$4,075</b>	

Non-Routine Items:			
		FY 05	05
Dev. Preventative Maint. Program	6, 145	\$150	2
AFEP (Steelhead Kelt Study)	109	\$273	2
Debris Handling	146	\$74	2
ESBS Overhaul	6, 144, 145	\$30	2
Repaint Barge Holds	145	\$150	3
<b>Subtotal</b>		<b>\$677</b>	
Water Quality		FY 05	05
Fixed Monitoring Stations	54, 131	\$89	1
Regional Database	198	\$8	2
System TDG Modeling	133	\$2	2
Temperature Modeling Plan (Snake R)	143	\$100	2
Review TDG Monitoring (Forebay)	132	\$60	2
WQ Actions Report	5	\$3	2
Temperature Study (Technical Phase)	Appendix B	\$50	3
TDG Monitors (Data Qual./Redund.)	131	\$8	3
<b>Subtotal</b>		<b>\$320</b>	

Priority 1 Items =	\$2,204
Priority 2 Items =	\$700
Priority 3 Items =	\$208
Priority 4 Items =	\$963



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# 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 BiOp, 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 (10%)

- baseline wildlife management, habitat mitigation, mitigation hatchery maintenance, and invasive species coordination, project management

## – Water Quality (5%)

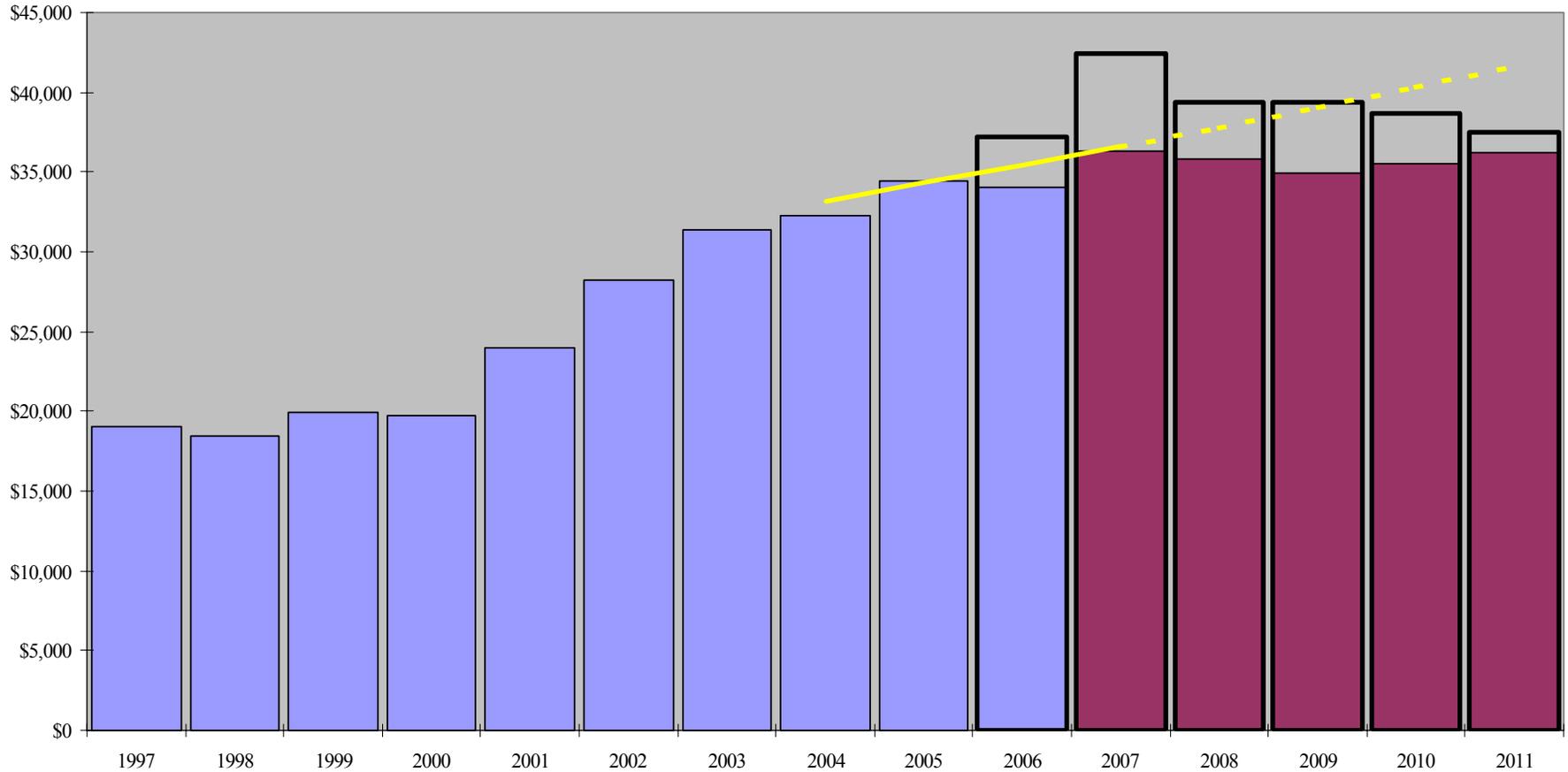
- Total Dissolved Gas and Temperature monitoring/modeling, and TMDL coordination, project management



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# Corps F&W Expense Budget

## US Army Corps of Engineers Expense Fish and Wildlife Budget



Yellow Line indicates a 3% escalation for cost inflation



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# Corps F&W Expense Budget

- What has changed the budget in the past
  - Biological Opinions for Endangered Species
- What will change the budget in the future
  - Efficiencies and applying new technologies
  - Biological Opinions for Endangered Species
  - Unanticipated events
    - Aquatic nuisance species, etc...



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# Corps F&W Expense Budget

- Cost Effectiveness and Biological Effectiveness
  - Occurs on a Case-by Case basis
  - Alternative breakdown of line items
    - Project Management (5%)
    - Research (15%)
    - Fish Passage (37%)
    - Hatcheries (19%)
    - Transportation (11%)
    - Wildlife & Res. Fish (6%)
    - Water Quality (5%)



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# Corps F&W Expense Budget

- Role of Project/Program Management (5%)
  - Contracting procedures
    - Open Competitive Bids
  - Planning
    - Budgets
    - Execution
    - Future years



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# Corps F&W Expense Budget

- Role of Research (15%)
  - O&M research – looks at present operations
  - How to better operate for fish and/or cost
  - Often called for in Biological Opinions
  - Hatchery Disease Work, Transportation Effectiveness, etc...



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# Corps F&W Expense Budget

- Cost Effectiveness/ Biological Effectiveness
  - Fish Passage (37%)
    - Juvenile Screen Work
      - Inspection techniques decrease unit outages
      - Bar screens are lower maintenance than traveling screens
    - Adult Ladder
      - Closed Floating Orifice Entrances to reduce water requirement
      - Manual systems changed to automatic
    - Sluiceway at The Dalles
      - Change in seasonal operations
      - Modification to orifices



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# Corps F&W Expense Budget

- Cost Effectiveness/ Biological Effectiveness
  - Transportation (11%)
    - Reduction of transportation season
    - Trucking in late season
  - Hatcheries (19%)
    - Study to evaluate water filtration systems



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# Corps F&W Expense Budget

- Role of the Regional Forum
  - Fish Passage Operations and Maintenance Team
  - Fish Facility Design Review Work Group
  - Studies Review Work Groups
  
- Planning Documents
  - Fish Passage Plan
  - Water Management Plan



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## Corps F&W Expense Budget

- We've described the process for determining fish O&M priorities to you.
  - Are there other methods or criteria the region should be considering to help us in this process?
  - Are there alternative approaches that should be considered to promote cost effective O&M activities?