

# 2011 Budget and Anticipated Projects

Policy Advisory Group Meeting  
August 18, 2010

Presented by:

**Derek Sandison**

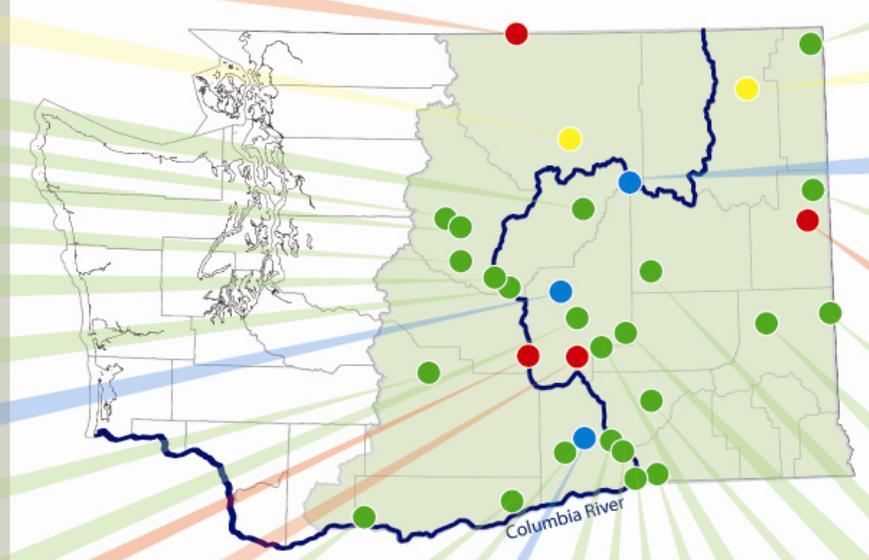
**Dan Haller**

**Office of Columbia River**

**Washington State Department of Ecology**

# Current Projects

## OCR Funded Projects



**Goose Lake & 9 Mile Flat Water Storage (Colville Tribe)**  
 Ac-Ft of Water = 4,750,000  
 Cost = \$600,000 (Pre-Appraisal)

**Similkameen Storage Project (Shanker's Bend)**  
 Ac-Ft of Water = 50,000 - 1.7M  
 Cost = \$325,000 (Study)

**SRB & Tribal Fisheries Project**  
 Ac-Ft of Water = TBD (Regional)  
 Cost = \$ 1,000,000

**Sullivan Lake Reoperation**  
 Ac-Ft of Water = 14,000  
 Cost = \$14,000,000

**Peshastin Irrigation District Piping**  
 Ac-Ft of Water = 360  
 Cost = \$245,000

**Surface Storage (Foster CD) Study**  
 Ac-Ft of Water = 60,000  
 Cost = \$93,750 (Pre-Appraisal)  
 Cost = \$200,000 (Appraisal)

**Mill Creek Storage Study**  
 Ac-Ft of Water = 2,000-11,000  
 Cost = \$125,000 (Study)

**Campbell Creek Reservoir Study**  
 Ac-Ft of Water = 500  
 Cost = \$232,500 (Study)

**Pioneer Piping /Trout Unlimited**  
 Ac-Ft of Water = 1493  
 Cost = \$1,100,000

**Lake Roosevelt Incremental Storage Releases**  
 Ac-Ft of Water = 132,500  
 Cost = \$4,861,000  
 Jobs = 61  
 Econ. Value = \$9,460,000

**Chelan PUD Pump Storage Appraisal**  
 Ac-Ft of Water = TBD  
 Cost = \$180,000 (Pre-Appraisal 8 sites)  
 Cost = \$400,000 (Appraisal 2 sites)

**Rocky Reach Modifications (Chelan PUD)**  
 Ac-Ft of Water = 28,000  
 Cost = \$50,000 (Study)  
 Cost = \$500,000 (EIS)

**Spokane-Rathdrum Prairie ASR Study**  
 Ac-Ft of Water = TBD  
 Cost = \$250,000 (Study)

**Columbia Basin Irrigation District Piping**  
 Ac-Ft of Water = 2,521  
 Cost = \$30,000 (Study)  
 Cost = \$ 1,000,000 (2009)  
 Cost = \$TBD (2010)  
 Jobs = 13  
 Econ. Value = \$2,000,000

**Lands Council (Beavers Study)**  
 Ac-Ft of Water = TBD  
 Cost = \$30,000 (Study)

**Yakima River Water Enhancement**  
 Ac-Ft of Water = 350,000  
 Cost = \$3,350,000 (Study)

**Potholes Supplemental Feed Route**  
 Conveyance  
 Cost = \$10,831,500

**WA State University Supply & Demand Report**  
 Demand Forecasted = TBD  
 Cost = \$750,000 (Study)

**Wanapum Pool Raise**  
 Ac-Ft of Water = TBD  
 Cost = \$500,000 (Wanapum EIS)  
 Cost = \$225,000 (Roick Island Study)

**Crab Creek Storage Project**  
 Ac-Ft of Water = 1-3 Million  
 Cost = \$4,112,139

**White Salmon ASR**  
 Ac-Ft of Water = 145  
 Cost = \$956,950

**Weber Siphon**  
 Conveyance  
 Cost = \$800,000

**Rock Lake Storage Study**  
 Ac-Ft of Water = 110,000  
 Cost = \$126,000 (Study)

**Klickitat County (Horse Heaven Hills) Study**  
 Ac-Ft of Water = 105,000  
 Cost = \$170,000 (Pre-Appraisal)  
 Cost = \$300,000 (Appraisal)

**Kennewick ASR**  
 Ac-Ft of Water = 318  
 Cost = \$1,050,000

**Passive Rehydration (Lincoln County CD) Feasibility Study**  
 Ac-Ft of Water = 300,000  
 Cost = \$925,000 (Study)

**Walla Walla Pump Exchange**  
 Ac-Ft of Water = 30,000  
 Cost = \$600,000 (EIS)  
 Cost = \$40M TBD (Construction)

**Odessa Subarea**  
 Ac-Ft of Water = 140,000  
 Cost = \$7,619,785 (Study)

**Red Mountain AVA Pump Project**  
 Ac-Ft of Water = 20,423  
 Cost = \$95,000 (Study)  
 Cost = \$10,000,000 (Construction)  
 Cost = \$500,000 (Mitigation)

**Barker Ranch Canal Piping**  
 Ac-Ft of Water = 6,436  
 Cost = \$5,600,000  
 Jobs = 71  
 Econ. Value = \$10,890,000

**Franklin CD IWM Study**  
 Ac-Ft of Water = TBD  
 Cost = \$78,000 (Study)

**Boise Cascade ASR**  
 Ac-Ft of Water = 1,657  
 Cost = \$4,500,000

**Conservation Commission Retiming Pilot**  
 Ac-Ft of Water = TBD  
 Cost = \$1,000,000

- **Completed, Constructed Projects**
- **Active, Priority Development Projects**
- **Pending: Technical, Legal or Funding Issues**
- **On Hold**

updated 7/20/2010

## 2010-11 Projects: Goose Lake and Nine Mile Flat Storage



- **FUNDING: \$1.2 million**
- **EST. ACTIVE STORAGE: 4,750,000**
- **COUNTIES: Okanogan**

The grant funds a pre-appraisal study to assess possible storage sites at Goose Lake and Nine Mile Flat in Okanogan County.

# 2010-11 Projects: Columbia Basin Irrigation Districts Piping



- **FUNDING:** \$4M
- **EST. NWS:** Dependant on what specific projects are developed.
- **EST. COST PER AF:** Dependant on what specific projects are developed.
- **COUNTIES:** Adams, Franklin, Grant, and Lincoln
- **LOCATION:** Odessa Subarea

Funding provided to improve the efficiency of the Columbia Basin irrigation districts' water delivery systems. Saved water will be used to move Odessa irrigation from groundwater to surface water sources.

# 2010-11 Projects: Peshastin Irrigation District Pipeline



- **FUNDING:** \$245,000
- **EST. NWS:** 360 AF
- **EST. COST PER AF:** \$2,500
- **COUNTY:** Chelan
- **STREAM REACH:** Cashmere, WRIA 45 and within the boundaries of the Peshastin Irrigation District

Approximately 9,900 feet of the Peshastin Irrigation District canal will be converted from an open canal to a closed pipeline, using an 8-inch diameter to 36-inch diameter pipe. The upstream end of the proposed pipeline will tie into a pipeline constructed in 2005 by the PID.

# 2010-11 Projects: Peshastin Pump Exchange Study



- **FUNDING:** \$150,000 - \$200,000
- **EST. NWS:** TBD
- **EST. COST PER AC/FT:** TBD
- **COUNTY:** Chelan
- **STREAM REACH:** Peshastin Creek

**Appraisal study for a pump exchange project on Peshastin Creek. Funding will be transferred from Campbell Creek Project—proponents of that project were unable to secure access to proposed site.**

## 2010-11 Projects: Lower Wenatchee In-Stream Flow Enhancement Project



- **FUNDING: \$1,100,000**
- **EST. NWS: 1493 AF**
- **EST. COST PER AF: \$670**
- **COUNTY: Chelan**
- **STREAM REACH: WRIA 45**

**The project will pipe 5.5 miles of existing Pioneer Water Users Association open canal, installing a new efficient pump-back water withdrawal system, and changing the point of diversion from the lower Wenatchee River to groundwater wells adjacent to the Columbia River.**

# 2010-11 Projects: Walla Walla Pump Exchange



- **FUNDING:** \$2M for 2011-2012 (\$40M Total)
- **EST. NWS:** TBD
- **EST. COST PER AF:** TBD
- **COUNTY:** Walla Walla
- **STREAM REACH:** WRIA 32

Water will be pumped from the mouth of the Walla Walla River to irrigation districts upstream to increase stream flows in the upper portion of the river.

# 2010-11 Projects: Sullivan Lake Water Reoperation



- **FUNDING: \$14M**
- **EST. ACTIVE STORAGE: 14,000 AF**
- **EST. COST PER AF: \$1000**
- **COUNTY: Pend Oreille**
- **STREAM REACH: WRIA 62**

**Fourteen thousand acre feet of water that was previously released in winter will be released in summer when it is needed most. The Office of Columbia River will make a one-time payment of \$14 million to facilitate the annual releases.**

**This project is one of the few water supply development opportunities available in northeast Washington.**

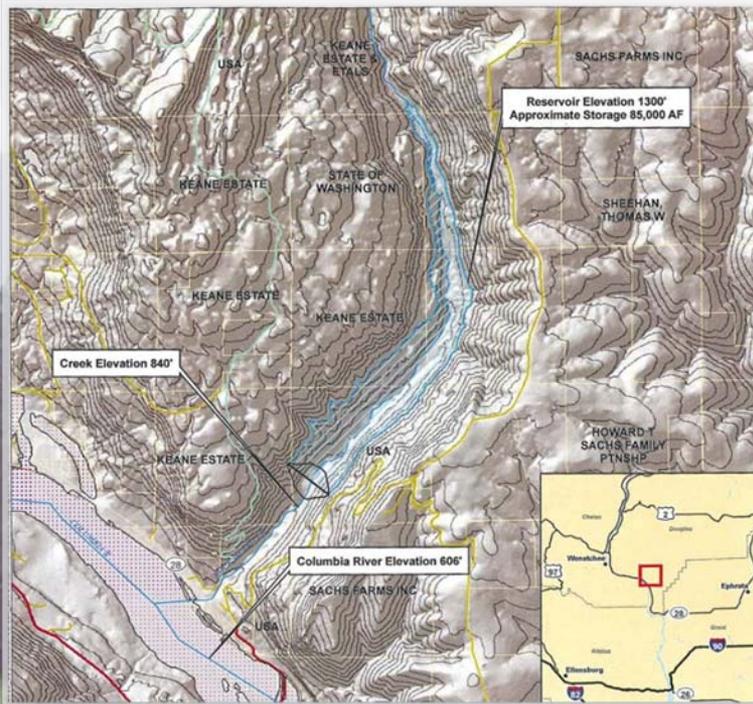
## 2010-11 Projects: Chelan PUD: Rocky Reach Pool Raise and Pump Storage Appraisal



- **FUNDING:** \$500,000 (EIS)  
\$50,000 (Pool raise study)  
\$400,000 (Pump storage study)
- **EST. NWS:** TBD

The grant funds studies for the Rocky Reach pool raise and pump storage projects.

# 2010-11 Projects: Rock Island Storage



- **FUNDING: \$125,000 (appraisal study)**
- **EST. ACTIVE STORAGE: 151,200 ac-ft**
- **EST. COST PER AF: \$TBD**

**An appraisal study will evaluate the viability of a potential storage site at Lower Rock Island Creek**

**Lower Rock Island**  
**\$864M**  
**85,300 ac-ft**  
**\$10,130/ac-ft**

## 2010-11 Projects: Foster CD: Moses Coulee Shallow Aquifer Recharge



- **FUNDING: \$167,500**
- **EST. NWS: TBD**
- **EST. COST PER AF: \$TBD**
- **COUNTY: Douglas**

**The grant funds a study to assess the feasibility of storing\retiming winter and spring flows by implementing a shallow aquifer recharge (SAR) program within Moses Coulee**

## 2010-11 Projects: Conservation Commission: Irrigation Efficiencies



- **FUNDING:**
  - \$1 Million for Retiming Project (Franklin Conservation District).
  - \$2 Million for Conservation Projects
- **EST. NWS: TBD**

**Create operating Agreement on how OCR and The Washington State Conservation Commission blend conservation efforts.**

# 2010-11 Projects: Red Mountain AVA/Pump Exchange



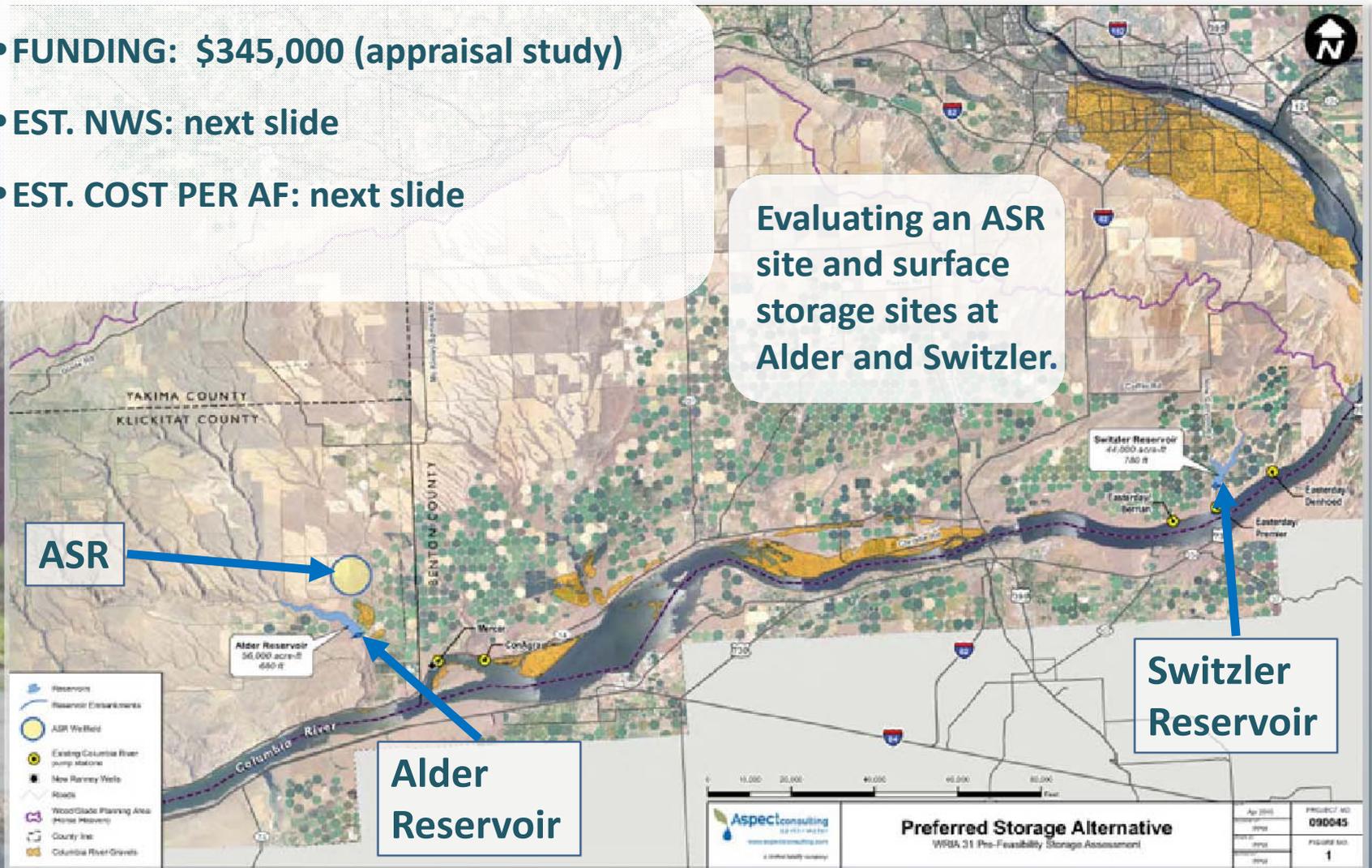
- **FUNDING:** \$95,000 (study)  
\$10,000,000 (construction)  
\$500,000 (mitigation)
- **EST. NWS:** Approx. 7000 ac-ft (perm)  
Approx 13,000 ac-ft (temp)
- **STREAM REACH:** Lower Yakima River

The project will move the Kennewick Irrigation District (KID) diversion point on the Yakima River from Prosser to Kiona, and water savings from efficiency improvements and past land use changes to provide water for additional wine grape acreage and Yakima River stream flows.

# 2010-11 Projects: Horse Heaven Hills Storage

- **FUNDING:** \$345,000 (appraisal study)
- **EST. NWS:** next slide
- **EST. COST PER AF:** next slide

Evaluating an ASR site and surface storage sites at Alder and Switzler.

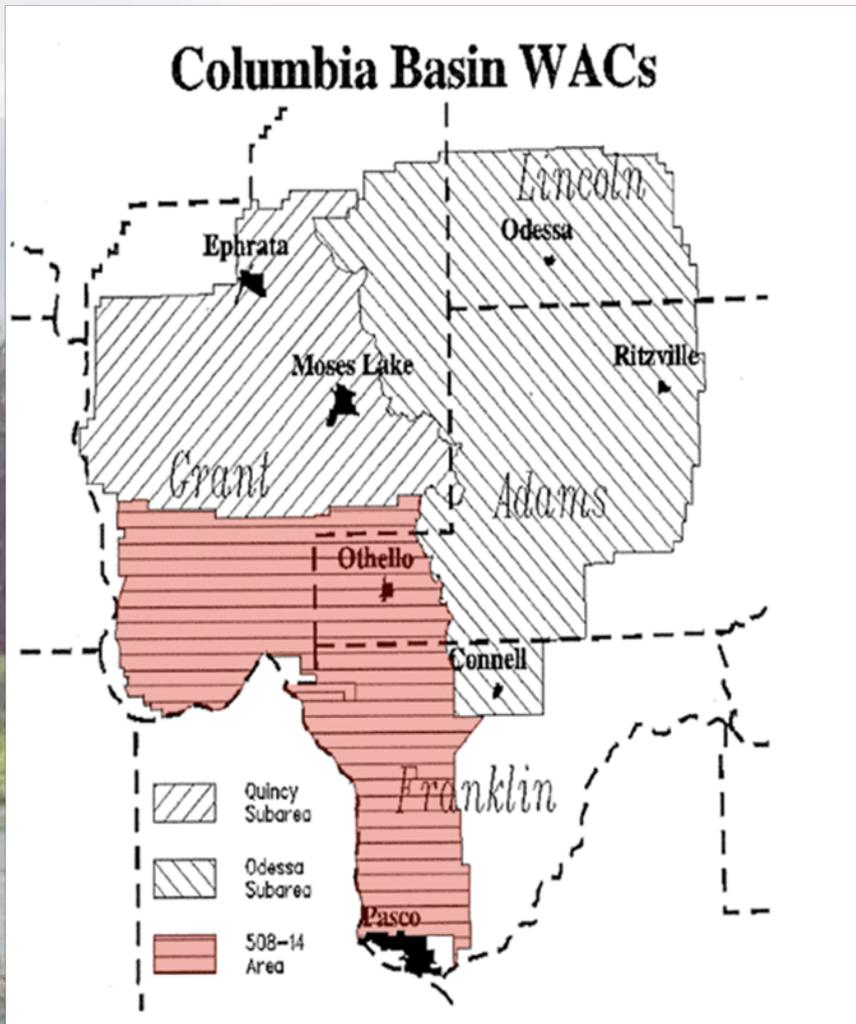


# 2010-11 Projects: Horse Heaven Hills Storage

	With Existing Conveyance				With New Conveyance			
	Alder	ASR	Switzler	All	Alder	ASR	Switzler	All
Ac-ft	55.8K	5K	44.4K	105.2K	55.8K	5K	44.4K	105.2K
Cost	\$167.3M	\$23.2M	\$187.7M	\$378.2M	\$256.9M	\$30M	\$273M	\$560M
\$/ac-ft	\$2,999	\$4,636	\$4,228	\$3,595	\$4,604	\$6,006	\$6,150	\$5,323
ALTC*	\$12.9M	\$2.7M	\$14M	\$29.6M	\$18.8M	\$3.2M	\$19.7M	\$41.7M
ALTC/ac-ft	\$232	\$538	\$316	\$282	\$632	\$443	\$396	\$396

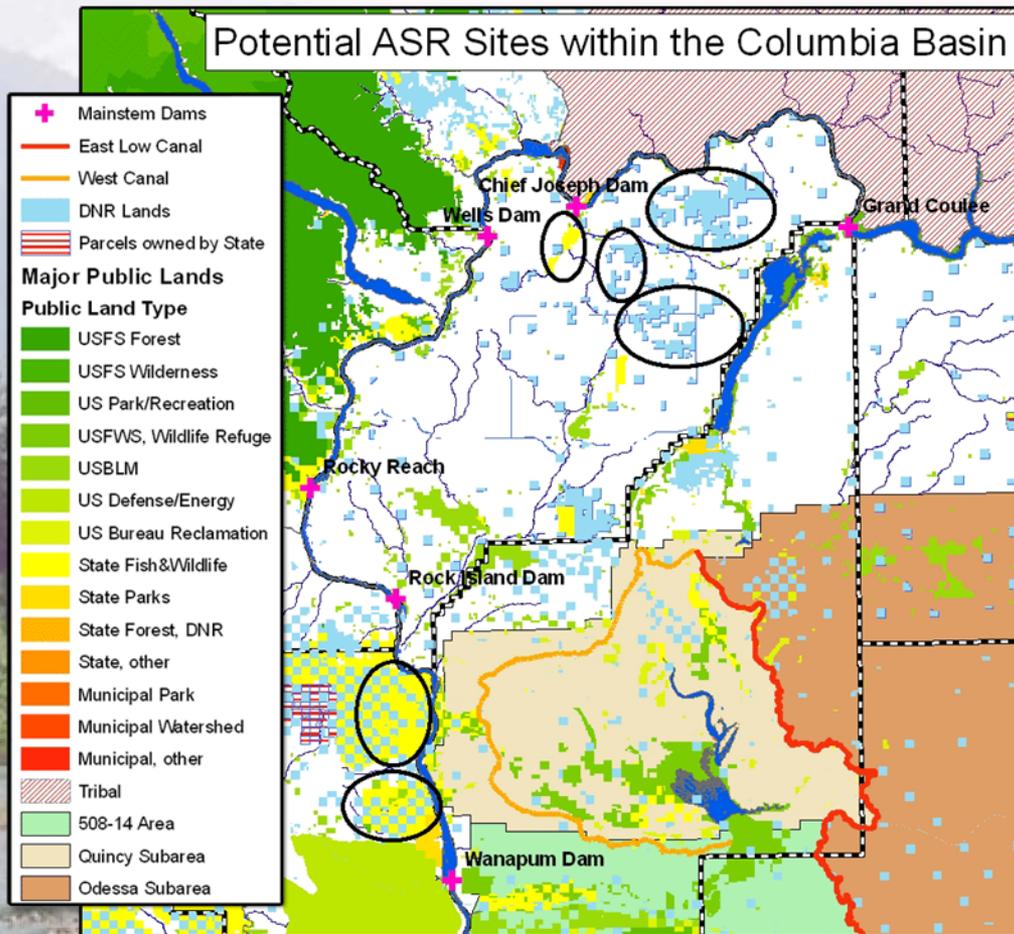
\*Annual Long Term Costs = O&M + pumping power costs + amortized annual cost

# 2010-11 Projects: 508.14 Rule Amendment



- WAC 508.14 was initially adopted in 1969, then amended in 1988.
- It covers parts of the Columbia Basin project for artificially stored groundwater outside of Odessa and Quincy groundwater management areas (covered under separate rules).
- The rule conditions approval of permits upon findings that a Reclamation license may be required for artificially stored groundwater.
- Potentially several million ac-ft may be available.
- OCR is coordinating with Reclamation on a program to license some of that water for new uses.

# 2010-11 Projects: Aquifer Storage and Recovery Exploration



**Objective:** Drill and test state-owned sites for potential construction of Aquifer Storage and Recovery.

**Candidate sites will:**

- Have a high potential of becoming a facility.
- Require minimum capital costs.
- Require minimum cost to local private landholders.
- Not impair existing water rights.
- Have minimal EIS concerns.

**Estimated cost:** \$1.75 Million

# Project Decision: Mill Creek Storage



- **FUNDING:** \$300,000
- **EST. NWS:** 2,000-11,000 AF
- **COUNTY:** Stevens
- **STREAM REACH:** Mill Creek, approximately 30 RM from Lake Roosevelt

- **Potential storage project in northeastern Washington. Appraisal study determined cost per acre-foot to be very high. Few other water supply development opportunities in this part of the state.**
- **PUD will discuss it later today.**