

State of Washington

Columbia River Water Supply Development Program

**Western Governors' Association/Western States Water Council
Arizona Department of Water Resources**

November 14, 2012



Presented by
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Office of Columbia River
Washington State Department of Ecology



Columbia River Basin Water Management (Development) Act - 2006

Ecology directed to aggressively pursue development of new water supplies for both instream and out-of-stream uses

- Significant investment in new storage and conservation
 - Capital: authorization for bonds of up to \$200 million
 - Operating: \$2.1 million and 15 FTEs
- 2/3 of funds for study & construction of new storage & pump exchanges
 - 1/3 of new storage for improving streamflows to benefit fish
 - 2/3 of new storage for new out-of-stream uses
- 1/3 of funds for all other water supply projects
- Legislative reporting on water supply and demand forecasts

Water Supply Development Account Uses

2/3 of development account:

- Assess, plan, and develop new storage

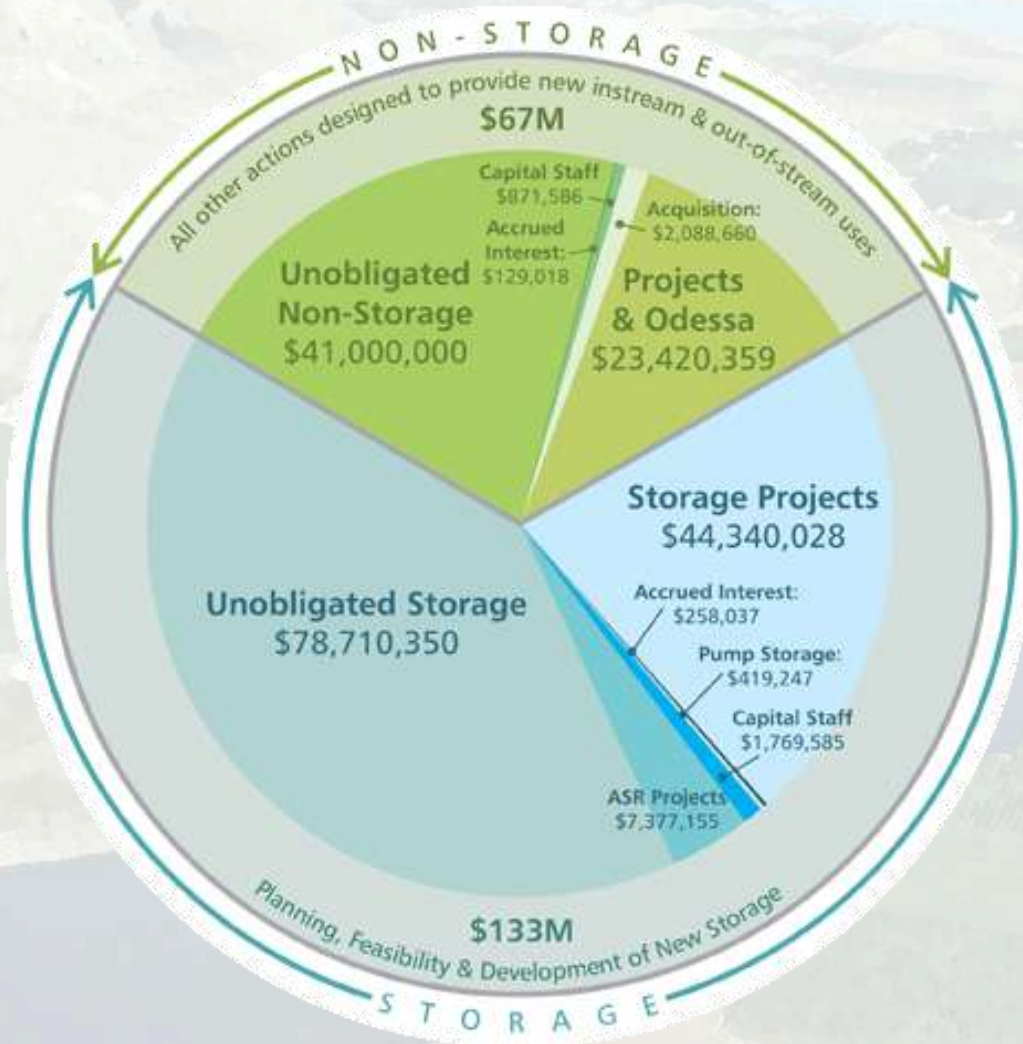


1/3 of development account:

- Improve or alter existing storage facilities
- Implement conservation projects
- Any other actions to provide access to new water supplies (e.g., acquisitions, leases, marketing)

Status of the Columbia River Basin Water Supply Account

The pie chart shows the current appropriation of funds from the Columbia River basin Water supply Development Account. Under RCW 90.90.010(2)(b), two-thirds of the account must be spent on storage and one third for other purposes. The arrows surrounding the circle reflect this split. The pie slices that make up the circle reflect the allocated and remaining funds within each category.



Projects funded by other sources such as State Building Construction Account and Operating Budget include:

Programmatic Environmental Impact Statement Mainstem, Storage Alternatives Study, Walla Walla Pump Exchange, Metering, Odessa Subarea, Supplemental Feed Route, Lake Roosevelt Supplemental Environmental Impact Statement (SEIS), Crab Creek SEIS, Frenchman Hills Construction, Yakima Storage Study, Fish & Wildlife Project Support, Conservation Commission staff, Legislative Report Forecasting, and Yakima Basin Water Supply projects.

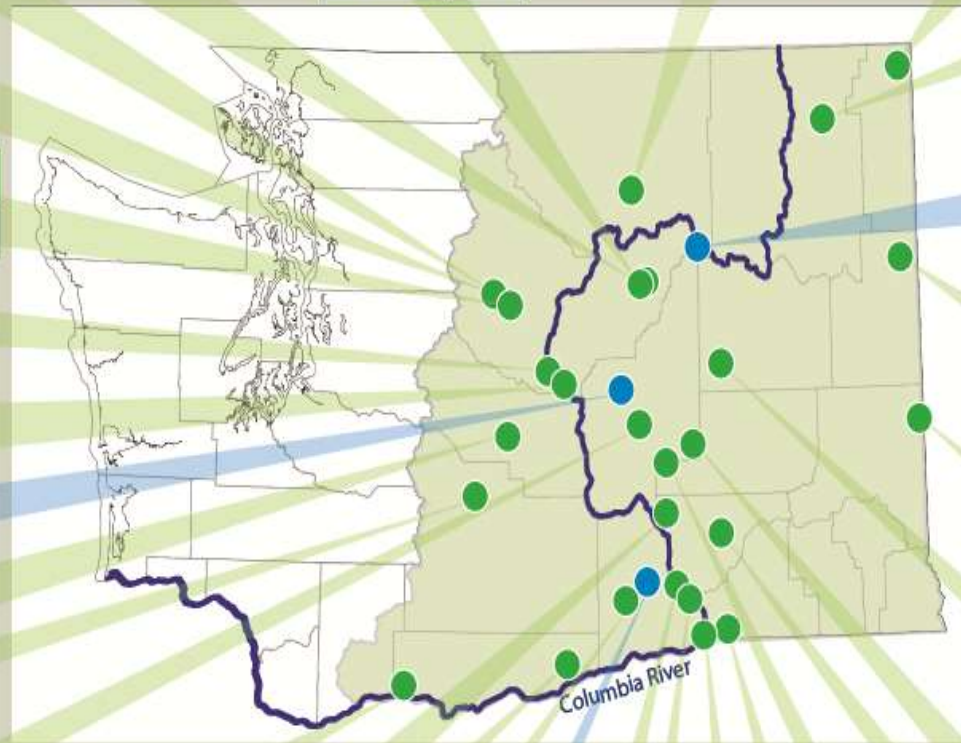
RCW 90.90 - Statutory Focus

- Find alternatives to groundwater for agricultural users in the Odessa groundwater subarea
- Develop sources of water supply for pending water right applications
- Create new uninterruptible supply of water for interruptible water right holders
- Meet new municipal, domestic, industrial and irrigation water needs of the basin
- Develop water for instream purposes

Columbia River Basin Long Term Water Supply and Demand Forecast

Demand Type	Estimated Volume (ac-ft)	Source
2030 Irrigation Demand (new irrigation, Odessa replacement, Yakima Basin supply, and Columbia River interruptibles)	800,000 – 1.1 Million	WSU Integrated Model, Odessa EIS, Yakima EIS, and Ecology 2001 Drought Database
2030 New Municipal Demand (including municipally-supplied commercial and self-supplied domestic)	108,500	WSU Integrated Model
Unmet Tributary Instream Flows	500,000	Ecology Data, tributaries with adopted instream flows, 2001 drought year
2030 New Hydropower Demand	0	WSU Surveys and Planning Forecast Review

OCR Funded Projects



Peshastin Pump Exchange Study
Ac-Ft of Water = TBD
Cost = \$200,000

Chelan PUD: Rock Island Off Channel Storage
Ac-Ft of Water = 85,300
Cost = \$125,000 (Pre-Appraisal)

Foster CD: Moses Coulee Shallow Aquifer Recharge
Ac-Ft of Water = TBD
Cost = \$93,750 (Pre-Appraisal)
Cost = \$200,000 (Appraisal)

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

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

Mill Creek Storage Study
Ac-Ft of Water = 2,000-11,000
Cost = \$125,000 (Pre-Appraisal)
Cost = \$425,000 (Appraisal)

Aquifer Storage & Recovery Exploration
Ac-Ft of Water = TBD (Regional)
Cost = \$1,750,000

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

Lower Wenatchee In-Stream Flow Enhancement Project
Ac-Ft of Water = 1493
Cost = \$1,100,000

Lake Roosevelt Incremental Storage Releases
Ac-Ft of Water = 132,500
Cost = \$4,861,000 (+ \$5.6M, annually)
Econ. Value = \$3B (Muni/Industrial)
Jobs = 35,000 (Muni/Industrial)
Econ. Protected = \$1.1B/yr (Odessa)
Jobs Protected = 784 (Odessa)
Econ. Protected = \$9.5M/yr (Drought)
Jobs Protected = 140 (Drought)

Chelan PUD Pump Storage Appraisal
Ac-Ft of Water = 50,000
Cost = \$165,000 (Pre-Appraisal & sites)
Cost = \$400,000 (Appraisal 2 sites)

Rocky Reach Pool Raise
Ac-Ft of Water = 28,000
Cost = \$500,000 (ES)
Cost = \$50,000 (Pre-appraisal)

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

Columbia Basin Irrigation District Piping
Cost = \$30,000 (Study)
Ac-Ft of Water = 2,521 (2009)
Cost = \$1M (2009)
Jobs = 13 (2009)
Econ. Value = \$2M (2009)
Ac-Ft of Water = 2,929 (2010)
Cost = \$2M (2010)

Manashtash Piping
Ac-Ft of Water = 454
Cost = \$376,000

WSU/WDFW Supply & Demand Report
Demand Forecasted = TBD
Cost = \$1,000,000 (Study)

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

Potholes Supplemental Feed Route
Conveyance
Cost = \$15,147,748

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

508.14 Rule Change
Ac-Ft of Water = TBD
Cost = TBD

Weber Siphon
Conveyance
Cost = \$800,000

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

Conservation Commission Irrigation Efficiencies
Ac-Ft of Water = TBD (Regional)
Cost = \$2,000,000

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

*All projects funded from the Columbia River Water Supply Development Account unless otherwise noted.

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 = \$2,250,000

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

Odessa Subarea
Ac-Ft = 176,343 - 347,137
Cost = \$8,223,469 (Study)
Cost = \$841.6M - \$3.314B (Construction)

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

Red Mountain AVA Pump Project
Ac-Ft of Water = 11,005
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)

Bolsa Cascade ASR
Ac-Ft of Water = 1,657
Cost = \$6,000,000

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

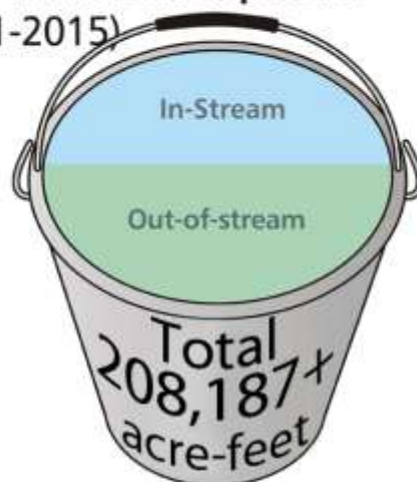
Water Development Progress - 2012

Developed



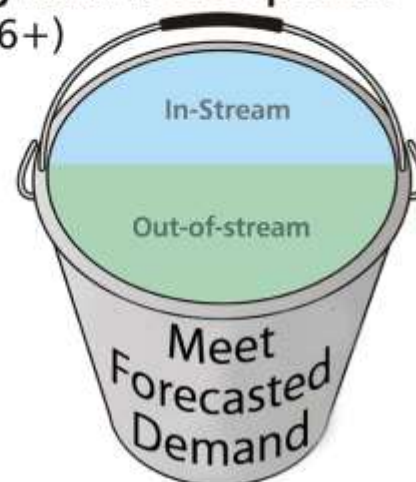
- > Barker Ranch: 6,436 ac-ft
- > Columbia Basin Irrigation District Piping: 5,450 ac-ft
- > Donations: 6,066 ac-ft
- > Lake Roosevelt: 132,500 ac-ft
- > Potholes Supplemental Feed Route (conveyance)
- > Pine Creek Acquisition: 900 ac-ft
- > Weber Siphon (conveyance)

Near Term Development (2011-2015)



- > Boise Cascade ASR: 1,657 ac-ft
- > Columbia Basin I.D.: 5,337 ac-ft
- > Conservation Commission I.E.: TBD
- > 508.14 Rule Change: TBD
- > Kennewick ASR: 318+ ac-ft
- > Lower Wenatchee: 1,493 ac-ft
- > Manashtash: 454 ac-ft
- > Odessa Subarea: 164,000 ac-ft
- > Peshastin I.D.: Piping: 360 ac-ft
- > Red Mountain: 20,423 ac-ft
- > White Salmon ASR: 145 ac-ft
- > SRB & Tribal Fisheries: TBD
- > Sullivan Lake: 14,000 ac-ft

Long Term Development (2016+)



- > Aquifer Storage & Recovery Exploration: TBD
- > Chelan PUD Pump Storage: 50,000 ac-ft
- > Conservation Commission Retiming: TBD
- > Foster C.D. Moses Coulee S.A.R.: TBD
- > Goose Lake & 9 Mile Flat Storage: 4,750,000 ac-ft
- > Klickitat County Horse Heaven Hills: 105,000 ac-ft
- > Lincoln CD Passive Rehydration: 300,000 ac-ft
- > Mill Creek Storage: between 2000-11,000 ac ft
- > Peshastin Pump Exchange: TBD
- > Spokane-Rathdrum Prairie A.S.R.: TBD
- > Walla Walla Pump Exchange: 30,000 ac-ft
- > Yakima River Water Enhancement: 450,000 ac-ft

Lake Roosevelt Storage Releases

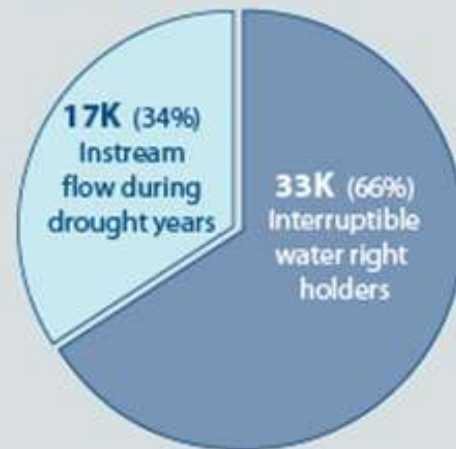
Lake Roosevelt Incremental Storage Releases

Operational change of 1 foot annually and 1.8 feet during drought

The Lake Roosevelt storage release would divert up to 82.5K ac-ft of water for:



In a drought year an additional 50K ac-ft of water for:



Sullivan Lake Reoperation

- OCR agreement with Pend Oreille County PUD to convert former hydropower facility to water supply operation.
- Creates 14,000 ac-ft of additional supply in NE counties.
 - 9,333 ac-ft for out-of-stream uses (at least 50% for municipals)
 - 4,667 ac-ft for instream uses
- Schedule: 2012-2014 releases, with permits starting in 2012



Yakima Basin Integrated Plan

- **Water Supply**
 - Market driven reallocation of water
 - Enhanced conservation
 - Surface storage
 - Aquifer storage (passive and active recovery)
- **System operation modifications**
- **Watershed/fish habitat improvements**
- **Fish passage**



Office of Columbia River POLICY ADVISORY GROUP (PAG) Members

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NW Power & Conservation Council

Rudy Peone

Spokane Tribe

Dave Sauter

Klickitat County Commissioner

Matt Watkins

City of Pasco

Phil Rigdon

Yakama Nation

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WA State Dept of Fish & Wildlife

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WA State Farm Bureau

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Reservation

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The Conf Tribes of the Colville Reservation

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Bonneville Power Administration

Questions?

For more information, visit:

www.ecy.wa.gov/programs/wr/cwp/crwmp.html