

Walla Walla River Bi-State Flow Study 2020-2021

Columbia River Alternatives

Columbia River PAG Meeting

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Introduction

- WW Bi-State Flow Study

- Steering Committee

- Walla Walla Watershed Management Partnership (co-lead)
- Walla Walla Basin Watershed Council (co-lead)
- Confederated Tribes of the Umatilla Indian Reservation
- Local, State and Federal Agencies
 - WW Co, Umatilla Co, Columbia Co, Ecology, WDA, WDFW, ODA, ODEQ, ODFW, OWRD, BPA, BLM, NOAA-NMFS, USACE, USBR, USDA-NRCS, USDA-USFS, USFWS
- Agricultural Irrigation Districts
- Municipalities
- Environmental Organizations

- Primary Funders

- Washington Department of Ecology – OCR
- United States Bureau of Reclamation

Introduction

- WW Bi-State Flow Study

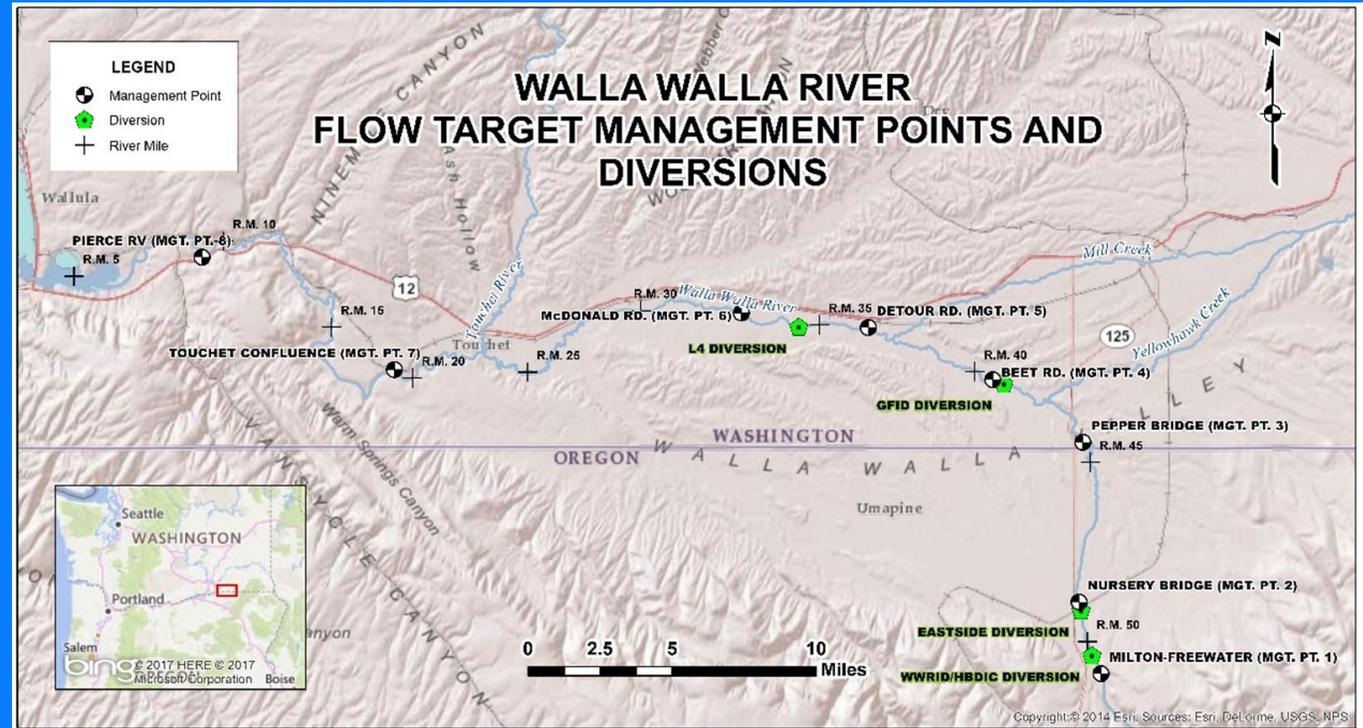
- Voting Members

- Confederated Tribes of the Umatilla Indian Reservation
- Walla Walla River Irrigation District
- Hudson Bay District Improvement Company
- Gardena Farms District No. 13
- Lowden Consolidated Ditches
- Fruitvale Water Users Association
- City of Walla Walla
- City of Milton-Freewater
- Washington Department of Fish and Wildlife
- Oregon Department of Fish and Wildlife
- Kooskooskie Commons
- Tri-State Steelheaders

Introduction

- WW Bi-State Flow Study

- Purpose
 - Improve streamflow in the Walla Walla River
 - Milton-Freewater to Confluence with Columbia River



Introduction

- WW Bi-State Flow Study

- Primary Objective
 - Support harvestable populations of native fish species
 - Maintain long-term viability of out-of-stream water uses

Table 1. Walla Walla River Streamflow Targets

Time Period	Flow Study Target Streamflow
April 1—June 15	150 cfs
June 16—June 30	100 cfs
July 1—November 30	65 cfs

Seasonal low flow is historically 0-20 cfs

Introduction

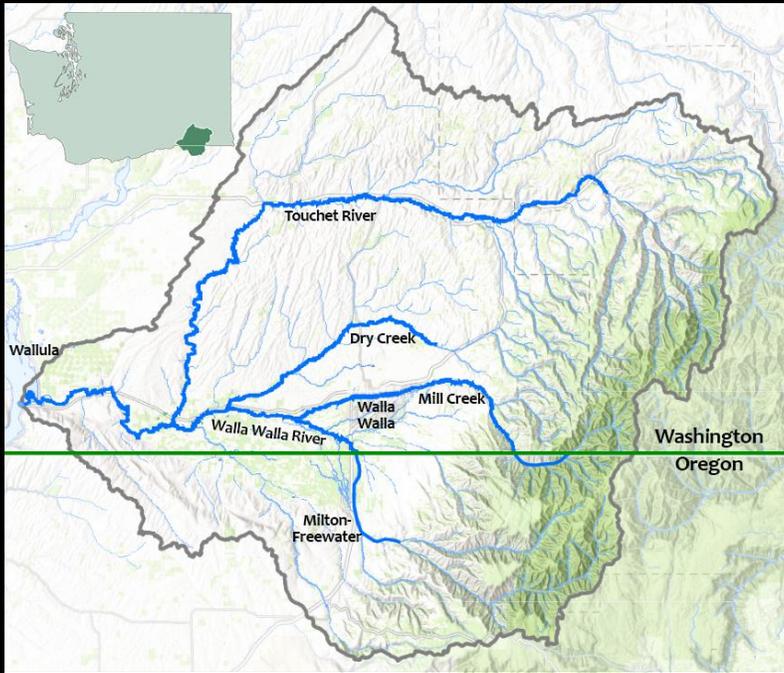
- WW Bi-State Flow Study

- Secondary Objectives

- Replenish and sustain depleted groundwater reserves
 - Sedimentary/alluvial aquifer system
 - Basalt aquifer system
- Improve streamflow in tributary streams
 - Little Walla Walla River
- Supplement supply for out-of-stream water uses
 - Agricultural irrigation districts and water users
 - City of Walla Walla, City of Milton-Freewater
 - Walla Walla, Umatilla and Columbia Counties

Introduction

- WW Bi-State Flow Study



- Walla Walla Water 2050 Strategic Plan
 - Focused on Walla Walla Basin as a whole
 - Initiated by Ecology OCR in 2020
 - Two-year strategic planning effort
 - Programmatic EIS planned
 - Guide water resource decisions for next 30 years
 - Walla Walla Bi-State Flow Study is one primary project

Introduction

- WW Bi-State Flow Study
 - Flow Study Timeline
 - 2019 Flow Study Update

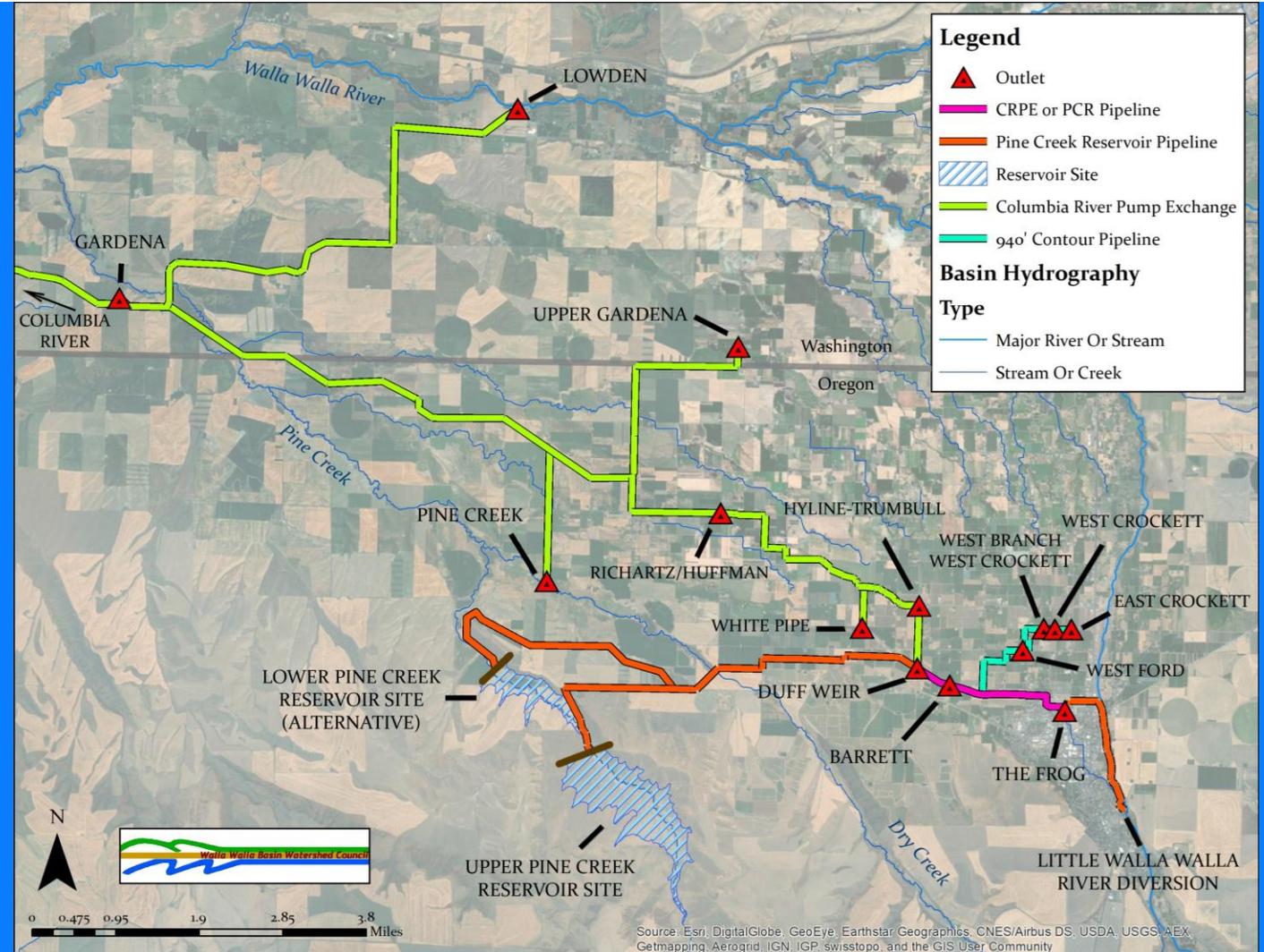
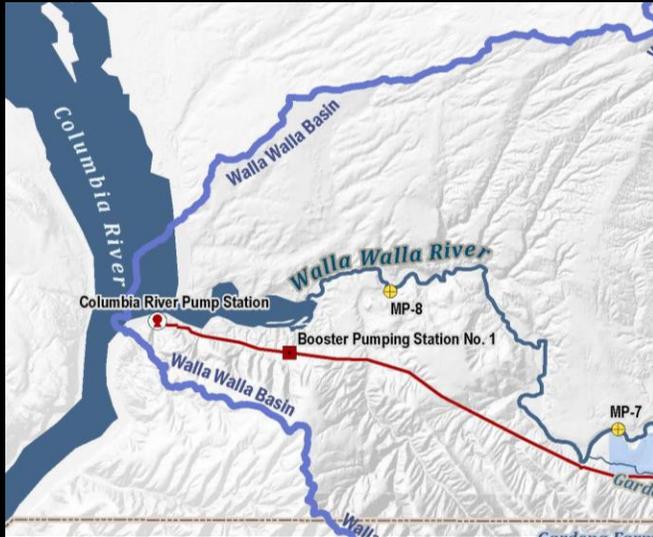
Table 2. Projected Flow Study Timeline

Biennium	Description
2017 - 2019	<i>Targeted feasibility studies and data gaps, environmental scoping, expanded outreach, NEPA/SEPA integration strategy, Bi-State Caucus formation, and pilot strategy to protect Bi-State flows</i>
2019 - 2021	Environmental Scoping, Expanded Outreach, NEPA/SEPA Integration Strategy, Interim Resolution to Protect Bi-State Flows, Targeted Feasibility Studies to Address Data Gaps, Monitoring Plan, Selection and Design of Preferred Alternative
2021 - 2023	Advance Design of Preferred Alternative, Final Resolution of Legal Issue to Protect Bi-State Flows, Implementation of Early Action Items
2023 - 2025	Construction of Preferred Alternative, Monitoring of Successes of Early Action Items
2025 - 2027	Construction of Preferred Alternative, Monitoring of Successes of Early Action Items

Note: This proposed timeline may be affected by various factors, including the degree of community support and time required to pursue and secure implementation funding. It is subject to update following completion of the current phase of the project.

Flow Study Alternatives

- Two Primary Projects
 - Columbia River Pump Exchange
 - Pine Creek Reservoir



Two Scenarios

■ Scenario 1

- ~Water Budget Neutral
 - 29,000 AFY
- Minimal Impact to Columbia River

■ Scenario 2

- Water Budget Neutral Plus
 - 87,000 AFY
- Additional volume diverted when water is available in Columbia River

■ Scenario 1

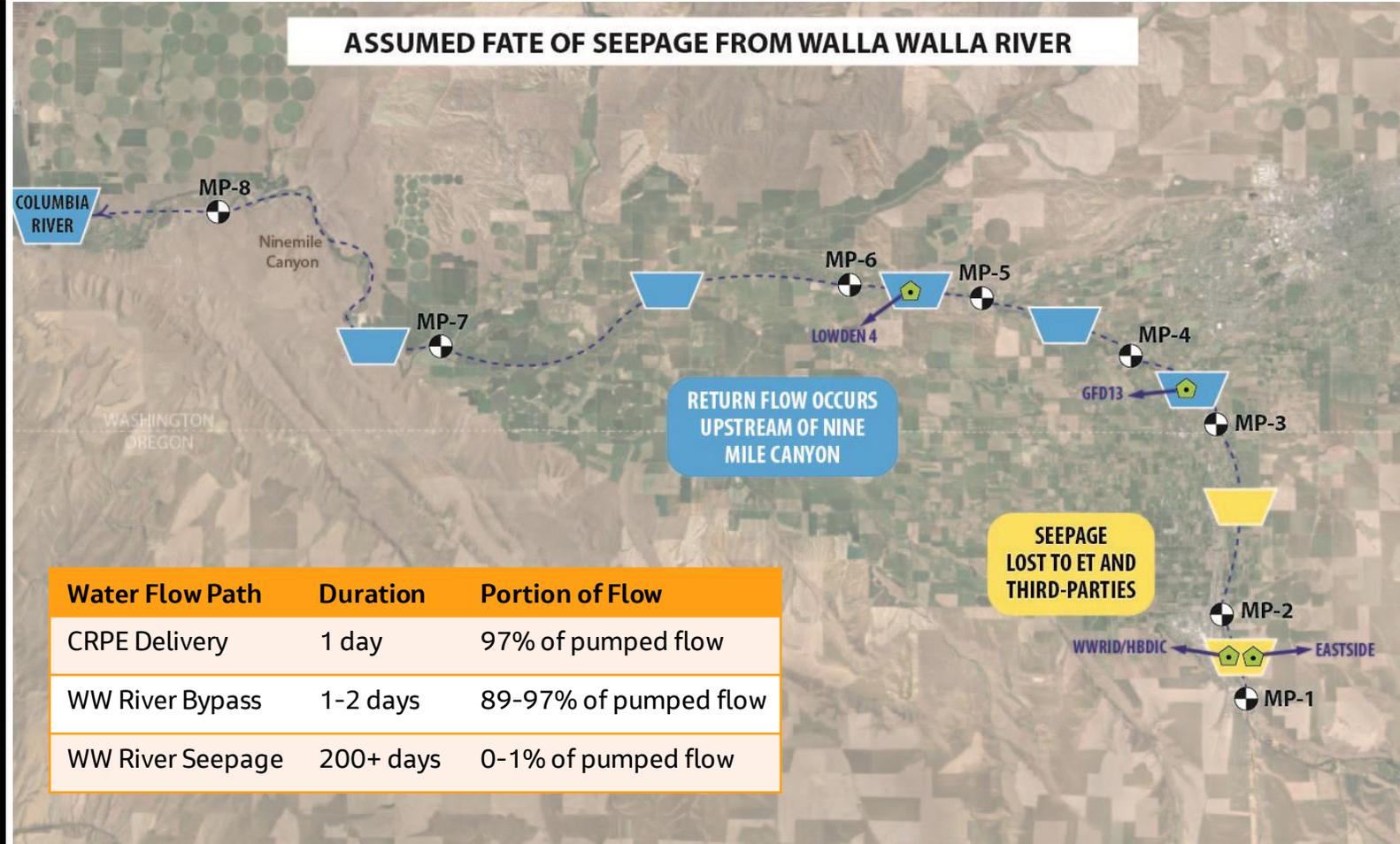
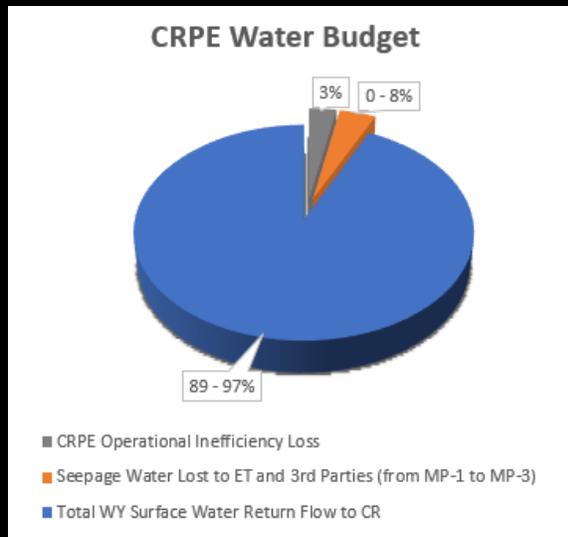
- Bypass streamflow at Walla Walla River diversions
- Bypassed streamflow protected to Columbia River
- Divert equivalent streamflow from Columbia River
- Pump Columbia River water up into Walla Walla Basin
- Distribute Columbia River water to offset bypassed flow

■ Scenario 2

- Same as Scenario 1, plus...
- Utilize surplus capacity of Columbia River delivery system
- Divert additional flow from Columbia River when available
- Deliver additional water for secondary objectives

Scenario 1. Water Budget Neutral

- Columbia River Impact – Preliminary Findings



Walla Walla River Seepage Estimates (GSA), 2019.

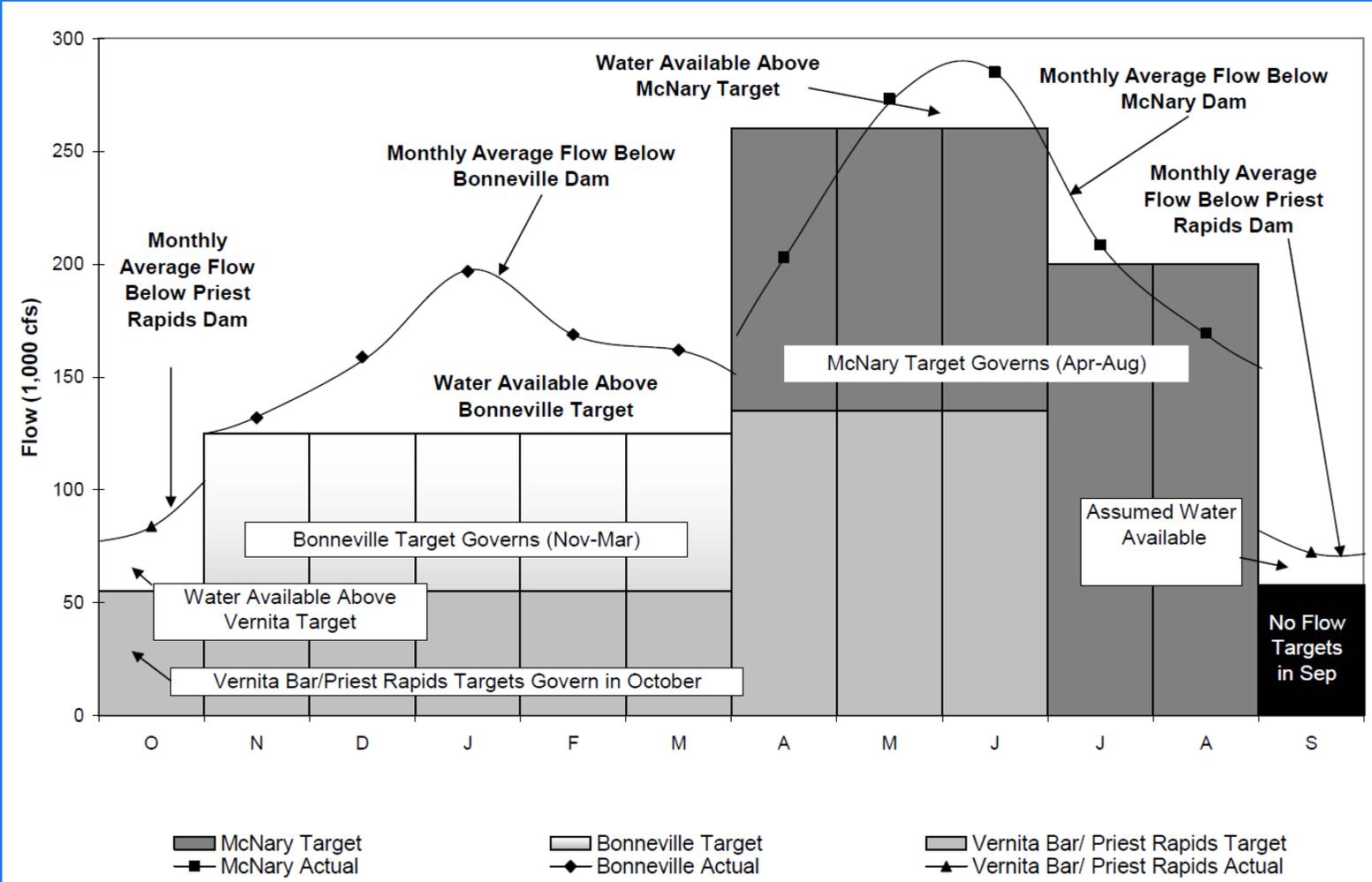
Scenario 2. Water Budget Neutral Plus

- Columbia River Water Availability
 - Study Methodology

- Coordinated with USBR regarding prior studies
- Reviewed related studies from USBR:
 - 2004 Black Rock Preliminary Appraisal
 - 2008 Black Rock EIS
 - 2012 Odessa Subarea Special Study FEIS
- Reviewed Potential Constraints:
 - WAC 173-563-040
 - NMFS BiOps (2004, 2008, 2014, 2020)
- 'Historical Streamflow Data' database coordinated between BPA, US Army Corps of Engineers, and USBR provides 90 years of historic data.

Scenario 2. Water Budget Neutral Plus

- Columbia River Water Availability
 - Columbia River Target Flows and Water Availability
 - Example: USBR 2004 Black Rock Preliminary Appraisal



Scenario 2. Water Budget Neutral Plus

- Columbia River Water Availability
 - Competing Interests for Water Available in the Columbia River

- Competing Interests for Available Columbia River Water

Projects currently under consideration throughout the Columbia River system

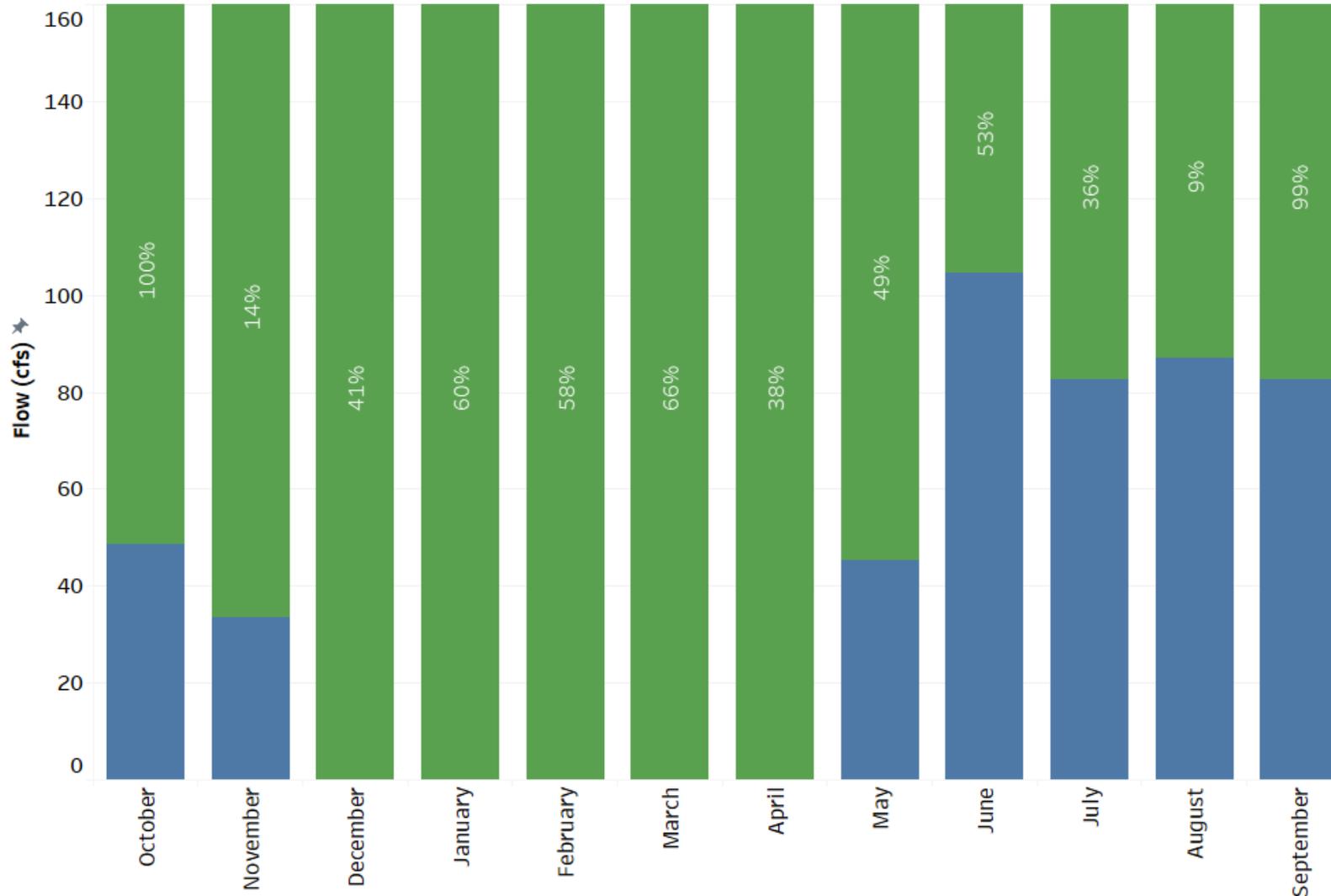
Total Volume: **330K AFY**

Springtime Rate: **1,400 cfs**



Scenario 2. Water Budget Neutral Plus

- Columbia River Water Availability
- Average Year (2014) Est Pump Volume (blue)
Surplus Capacity (green)
Surplus Cap: **87K AFY**
- Columbia River Water Availability % of historic days with available flow
CR Water Avail: **5M AFY**
pre-consultation



Scenario 2. Water Budget Neutral Plus

- Columbia River Water Availability
 - Preliminary Findings
 - Pre-Consultation Summary
- Columbia River Water Availability
 - 5 million AFY (average year)
- Competing Proposed Projects
 - 330,000 AFY (estimate)
- Walla Walla CRPE
 - Design Capacity for Primary Objectives
 - 29,000 AFY (average year)
 - Surplus Capacity for Secondary Objectives
 - 87,000 AFY (average year)

Scenario 2. Water Budget Neutral Plus

- Columbia River Water Availability
 - Potential Capacity for Secondary Objectives
- Potential Uses of Surplus Capacity of CRPE for Secondary Objectives (WW Water 2050)
 - Consumptive Uses (irrigation, municipal, etc...)
 - Little Walla Walla River flow augmentation
 - Declining Groundwater (MAR/ASR)
 - Instream Flows (additional)
- Considerations
 - Priority of uses
 - Location and timing of uses
 - Rates and volumes of uses
 - Impacts on pipeline and booster pump sizing

Feedback

What do you think about the two scenarios for the Columbia River Pump Exchange?



Challenging today.
Reinventing tomorrow.

