

Columbia-Snake River Irrigators Association Information Memorandum

DATE: September 7, 2006

TO: Mr. Derek Sandison, Yakima River Basin-Plan Formulation Team, WADOE,
And Columbia River Water Management Team
Mr. Gerry O'Keefe, Columbia River Water Management Coordinator, WADOE

FROM: Darryll Olsen, Ph.D., Regional Planner/Resource Economist
CSRIA Board Representative

SUBJECT: Recommendation for Feasibility Report/Environmental Impact Statement
(FR/EIS) Alternative, For the Yakima River Basin Plan Formulation Phase

As the WADOE and USBR proceed with the Plan Formulation Phase of the Yakima River Basin Storage Study, the CSRIA would like to recommend an alternative for review within the 2007-2008 FR/EIS, as described below. This recommended alternative would be included with the Black Rock Reservoir alternative, and/or other alternatives, within the FR/EIS analyses.

FR/EIS Technical Background/Objectives:

The following is noted within existing USBR technical analyses:

- For the recent 23-year hydrologic modeling period, low water and pro-rated water right years occurred about 26% of the time.
- An (one) objective of the new storage projects would be to provide for 70% of a pro-rated water supply under low water-year conditions.
- Under a low water-year condition, an additional 375,000 acre-ft. is needed for meeting the 70% pro-rated water supply objective.
- Under low flow conditions, a target flow of 700 cfs is established at the Sunnyside and Prosser Diversion Dams, April-October, representing an additional 170,000 acre-ft.
- New municipal/domestic water demand is projected to require 82,000 acre-ft. by 2050 (connectivity between groundwater and surface water needs).

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- The total additional supply objective is approximately 627,000 acre-ft. (including flow targets).

Recommended Alternative for Review within the FR/EIS:

The following projects/actions would be operated jointly within the Yakima Basin:

- Include development of the Wymer Dam and Reservoir, with a total available storage capacity of about 175,000 acre-ft., and about 142,000 acre-ft. available under a single, low water-year condition (2001 water-year event). Water supply from the Wymer Project would be limited to a single, low water-year event, as refill would not be possible in year two of extended low water years. Use water from the Wymer Project for consumptive demands and to aid in meeting target flows at the Sunnyside Dam, during a single, low water-year event.

Estimated capital cost: \$400-500 million.

- Assume that all future water demand for municipal/domestic needs is met through conversions (or transfers) of existing irrigation water supplies, about 82,000 acre-ft. or representing about 25,000-27,000 acres of production agriculture (or irrigated lands or some type) during the next 45 years. Take into consideration municipal return flows and a recalibrated water use per acre for lands converted from agricultural irrigation to general municipal uses.

Estimated capital cost: administrative costs only to state or USBR.

- Assume that within five years an additional 100,000 to 125,000 acre-ft. of water can be shifted to instream flows (during the April-September period) from new conservation and water management measures; or that about 5-7% water efficiencies/management can be obtained from the existing base water use conditions.

Estimated capital costs: \$10 to 50 million (measures and costs still in review); and annual operational measures are available at about \$30-100/acre.

Use funds from the Columbia River Basin Water Supply Development Account and the Ecology-CSRIA Voluntary Regional Agreement (VRA) mitigation fees to fund this conservation/water management work; and allow for Yakima River Basin water supply "savings" (or water shifting to instream flows within the Yakima River) to be made available for existing/new mainstem water rights within the McNary, John Day, and The Dalles pools.

- Revise the Yakima Basin's 20-year irrigation demand forecast (2007-2026) to include probable trends for: 1) non-programmatic efficiency gains in water use (based on technology change cycles and increased water system costs); and 2) changing crop rotations and perceivable market trends affecting Basin production.

Estimated capital cost: none.

- Issue the new Kennewick Irrigation District (KID) water permit, allowing for an exchange of water withdrawals between the Lower Yakima River and the Columbia River (KID's "Alternative 5" approach); the net increase in flows at Prosser Diversion Dam (Prosser to Chander Reach) would be about 400 cfs, raising the flows in a low water-year period to 700 cfs. No additional water (volume acre-ft.) from the system would be required to meet the Prosser Dam flow target.

Under the KID water right, the Red Mt. and West Richland area also would be allowed access to new water supplies; and the KID Old Lands and New Lands would exchange water from the Yakima River to the Columbia River.

Estimated capital costs for exchanged water: \$40 million.

Capital funding for the directly exchanged portion (pump system) of the water right would come from the Columbia River Basin Water Supply Development Account, from the USBR, and from the KID via the VRA mitigation fee.

Given the above projects/actions, re-estimate: 1) the probability of water shortages relative to changing demands; 2) the probability of meeting flow targets at Sunnyside Dam and Prosser Dam; and 3) the percent of pro-rated supply availability in single, and multiple, low water years under the alternative conditions.

Also, consider joining the above projects/actions with other incremental water supply measures within the Basin.

cc: Mr. Gerald Kelso, Area Manager, USBR
Interested Parties

Filename: CSRIA-Yakima River Basin-Plan Formulation Study-1
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