

LOWER BOISE RIVER INTERIM FEASIBILITY STUDY

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Treasure Valley CAMP Advisory Group



US Army Corps of Engineers
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Corps Study Authority

- Water Resources Development Act (WRDA) 1999, Section 414
 - ▶ Flood control

- WRDA 2007, Section 4038
 - ▶ Ecosystem restoration & water supply



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General Investigation Steps

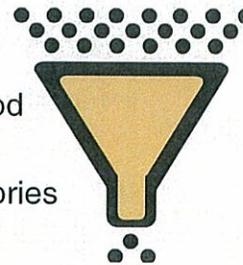
- Reconnaissance Study – 2001
- Feasibility Study – 2 Phases
 - ▶ Interim Feasibility (June 2009 – April 2013)
 - Existing conditions inventory
 - Assess flood risks
 - Conduct surface water storage assessment
 - Plan next study phase
 - ▶ Complete Feasibility Phase (TBD)
- Congress authorizes construction
- Preconstruction engineering & design
- Construction



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Water Storage Screening Analysis

- Twelve sites from 2006 USBR Storage Assessment Study
- Two step screening analysis
 - Step 1: Ranked for water supply and flood risk reduction capabilities
 - Step 2: Top 6 scored for 6 criteria categories
 - Future water demand
 - Flood risk reduction
 - Hydropower potential
 - Cost index
 - Social effects
 - Environmental effects
- Top three selected for further study



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First-Level Screening Analysis

SITES	Basin Ave. Annual Inflow Volume		Relative Residual Volume			Reduction of System Ave. Runoff Volume		Modeled Annual Refill Volume		COMPOSITE SCORE
	kAF	Score	Max Storage Potential	kAF	Score	kAF	Score	kAF	Score	
Arrowrock – Max	1733	12	317	0	14	317	14	60	11	12.8
Lucky Peak – Max	2047	14	96	0	14	96	11	60	11	12.5
Twin Springs	846	10	304	0	14	304	13	50	7	11.0
Alexander Flats	376	8	68	0	14	68	10	50	7	9.8
Dunnigan Creek	179	6	227	58	5	179	12	225	14	9.3
Lucky Peak - Min	2047	14	12	0	14	12	6	12	3	9.3
Barber Flats	324	7	58	0	14	58	9	50	7	9.3
Anderson	721	9	30	0	14	30	8	10	2	8.3
Arrowrock – Min	1733	12	9	0	14	9	5	9	1	8.0
Krall	18	5	121	103	3	18	7	60	11	6.5
Grimes	7	3	1500	1493	1	7	3	225	14	5.3
Firebird	5	1	67	62	4	5	1	67	12	4.5
Indian-Mayfield	5	1	52	47	6	5	2	52	8	4.3
Rabbit	8	4	152	144	2	8	4	50	7	4.3

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Water Storage Screening Results

Site	Ht. (ft)	Additional Storage ¹ (kAF)	Criteria Categories and Weighted Scores ^{2,3}						Weighted Composite Score ⁴
			Future Water Demand	Flood Risk	Hydro Potential	Cost Index	Social Effects	Environ Effects	
Arrowrock–New Dam	368	317	6.3	7	1.8	4.4	3.2	3.3	25.9
Alexander Flats	271	68	3.0	3	1.2	4.4	5.4	4.1	21.1
Twin Springs	371	304	4.5	6	1.7	3.2	3.4	1.6	20.3
Barber Flats	181	58	2.5	2	0.7	5.6	4.8	4.3	19.9
Lucky Peak–Max Raise	290	96	4.8	4	1.4	1.6	2.6	5.0	19.3
Dunnigan Creek	351	227	6.0	5	0.6	2.4	2.0	3.2	19.2
Lucky Peak–Min Raise	264	12	1.0	1	1.0	0.8	6.6	6.6	17.0

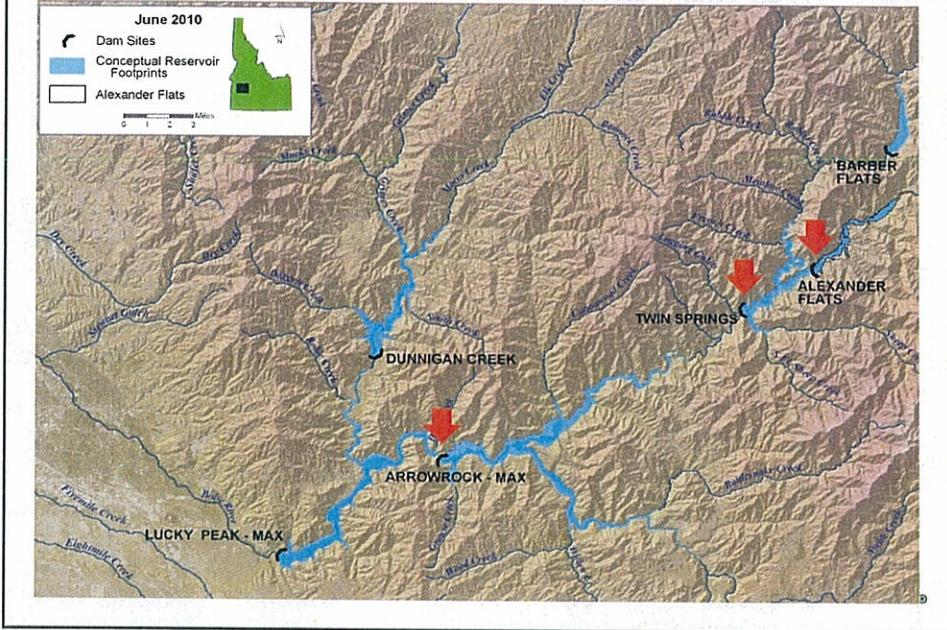
¹ Current system capacity is 983 kAF which includes Arrowrock, Anderson Ranch, and Lucky Peak reservoirs.

² The higher the number, the better the site's performance for a criterion.

³ Weighted scores calculated using the following weighting factors – (Future Water Demand – 1.0, Flood Risk Reduction – 1.0, Hydropower Potential – 0.3, Cost Index – 0.8, Social Effects – 1.0, and Environmental Effects – 1.0).

⁴ Weighted composite score = sum of weighted scores for each criterion category. All values were rounded to the nearest tenth.

Reservoir Footprint Concepts



Public Comment - Excerpt

- **Water Resources Problems**
 - ▶ Future water demand/supply needs
 - ▶ Water quality
 - ▶ Flood risk
 - ▶ Impacted ecosystems
 - ▶ Climate change
- **Suggested Measures (water demand/supply)**
 - ▶ Water conservation & water management
 - ▶ Interbasin transfers
 - ▶ Surface water storage
 - ▶ Improved land use planning
 - ▶ By-pass channel with aquifer storage and recovery
 - ▶ Pricing/markets
 - ▶ Wastewater reuse

 Nevada Department of Water Resources
Lower Basin River Internals Feasibility Study, 2014

Public Information Meetings
and Public Comment Summary



August 2016



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Interim Feasibility Study - Next Steps

- Select water storage sites for further analysis.
 - Engineering design, hydraulic & hydrologic analysis, and cost estimates for selected storage sites
- Complete flood damage/economic analysis.
- Complete 'Future Without Project' description.
- Prepare a Project Management Plan to complete feasibility study.
- Prepare Interim Feasibility Report.
- Conduct public review of Interim Report.



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Interim Feasibility Study Time Line

- Flood Damages Analysis May 2012*
- Water Storage Assessment July 2012*
- Draft Interim Feasibility Rpt Dec 2012*
- Final Interim Feasibility Rpt Apr 2013*

* Assumes no Congressional appropriations until FY 2012.



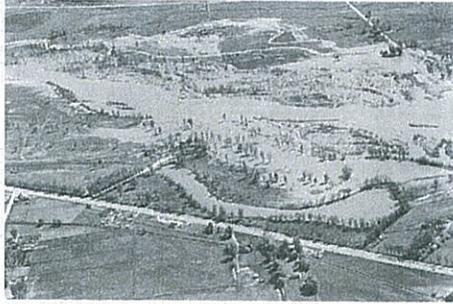
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Study Information

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