



CASCADE ORCHARDS SOURCE SWITCH PROJECT UPDATE

Greg McLaughlin, Washington Water Trust
Icicle Work Group, June 2, 2016

2015 ALTERNATIVES ANALYSIS

This alternatives analysis identified opportunities and constraints that exist for alternatives that have been identified for improving the COIC delivery system and present them to COIC shareholders. Goals of the alternatives analysis include the following:

- Evaluate alternatives for improving the efficiency of the COIC delivery system.
- Provide a basis for comparing the costs, benefits, opportunities, and constraints of the identified alternatives.
- Summarize the analysis in enough detail to enable COIC and other stakeholders to weigh the alternatives, plan for future improvements, and pursue funding for an improvement project.

SHAREHOLDER ENGAGEMENT

Shareholder Meetings

- March 1– Overview and Public Comment
- March 10– Water Rights and Alternatives Analysis Presentation – additional public comment
- March 22–Engineering Presentation and Q/A

Shareholder Advisory Committee

- Three meetings to finalize a detailed alternative with COIC board and consultant support
- Will provide a proposed alternative to shareholders before 5/4

Annual Shareholder Meeting – May 4, 2016

- Presented ballot proposal to shareholders and mailed
- COIC board certified vote on June 1, 2016 – 138 for, 36 against.

Description of Potential Improvement Alternatives

Alt.	Description	Water Supply	Water Delivery System
1	Replace existing system with a pressurized, on-demand, system supplied by a river pump station. Discontinue operation of COIC diversion. Put water into trust.	Replace existing gravity diversion facilities with a pump station on the Wenatchee River near the Icicle Road Bridge or on Icicle Creek near Shore Street.	Install pressurized delivery pipeline in alignment of existing ditch and replace existing laterals with new pipelines.
2	Replace existing system with a pressurized, on-demand, system supplied by a river pump station. Discontinue operation of COIC diversion. Put water into trust. Add capacity for other needs, such as fire protection, or supply for LNFH.	Replace existing gravity diversion facilities with a pump station on the Wenatchee River near the Icicle Road Bridge or on Icicle Creek near Shore Street.	Install pressurized delivery pipeline in alignment of existing ditch and replace existing laterals with new pipelines.
3	Improve existing infrastructure by piping or lining to improve efficiency.	Maintain operation of existing diversion.	Replace existing open ditch with gravity pipelines or line existing ditch. Existing laterals to remain.
4	Evaluate consumptive use and identify opportunities to provide additional water savings via water user conservation.	Would be combined with Alternative 1, 2, or 3.	Would be combined with Alternative 1, 2, or 3.

SHAREHOLDER ENGAGEMENT

Ballot Proposal Provided to Stakeholders

- Move diversion/intake to a yet-undetermined point downstream of the Leavenworth National Fish Hatchery
- Build pressurized system to replace existing ditch and all lateral water lines
- Accommodate 8 of the 11.9 cfs owned by COIC

Contingencies (summary)

- All turnout water quantities and pressures will be retained
- COIC will retain all current uses of water rights
- Construction costs covered by outside funding (\$2.1 - \$3.1 million)
- Future infrastructure replacement costs and annual operating cost increases covered by endowed fund (estimated at \$1.5 million)
- Design will include allocation for wildfire suppression and address potential impacts to neighboring landowners or groundwater
- Final siting of pump station subject to COIC shareholder vote

Cascade Orchards Irrigation District: Project Overview

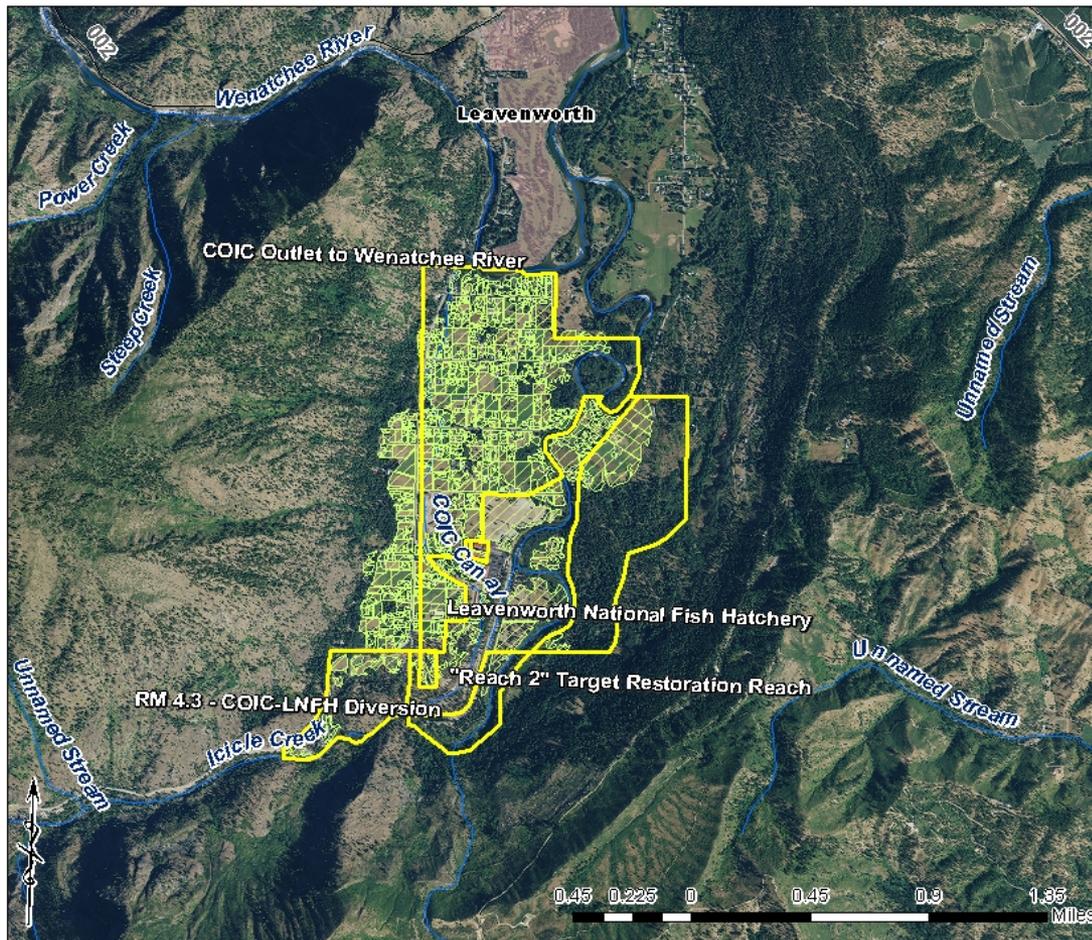
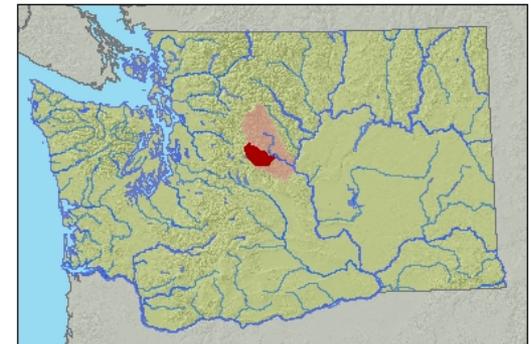
Legend

-  Cascade_Orchards_Delineated_Irrigation
-  Cascade_Orchard_POU

Prepared by



September 23, 2015



ALTERNATIVE 1

Construction Cost Estimate--Dave Rice, Anchor QEA

Item	4-cfs	6-cfs	8-cfs
Site and Preparation Work	\$109,000	\$104,000	\$104,000
Pressurized Delivery Pipelines	\$697,000	\$774,000	\$878,000
River Pump Station	\$431,000	\$569,000	\$673,000
Subtotal – Construction Cost	\$1,237,000	\$1,447,000	\$1,655,000
Mobilization/Demobilization (10%)	\$123,700	\$144,700	\$165,500
Sales Tax (8.2%)	\$101,434	\$118,654	\$135,710
Total Construction Cost ²	\$1,681,000 – \$1,901,000	\$1,967,000 – \$2,223,000	\$2,249,000 – \$2,543,000
Total Non-construction Costs ^{2, 3}	\$386,000 – \$430,000	\$443,000 – \$495,000	\$505,000 – \$564,000
Total Project Implementation Cost ²	\$2,067,000 – \$2,331,000	\$2,410,000 – \$2,718,000	\$2,754,000 – \$3,107,000

Notes:

- 1 Costs are in 2015 dollars.
- 2 The high end of the range of Total Construction/Non-Construction with 30% construction contingency.
- 3 The low end of the range includes a 15% construction contingency.
- 4 Non-construction costs include an allowance for engineering, permitting, and administration

ALTERNATIVE 1

COIC Estimate of Long-term Operating Costs

Impact to COIC Annual Operating Budget				
Operating Expenses:	2014	2015	Current	New
Staff Salaries				
Field Workers	\$17,128	\$16,955	\$17,000	\$3,000
Officers	\$3,921	\$3,678	\$4,000	\$4,000
New System O&M Manager				\$12,000
Office and management expenses	\$2,901	\$2,881	\$3,000	\$3,000
	\$2,560	\$3,906	\$4,000	\$4,000
	\$1,911	\$1,405	\$1,500	\$1,500
	\$2,296	\$8,043	\$5,000	\$5,000
	\$153	\$399	\$500	\$500
	\$174	\$619	\$500	\$500
Maintenance, Small Repairs, Supplies	\$3,819	\$1,725	\$5,000	\$1,000
Power costs				\$10,600
Total Operating Budget	\$34,862	\$39,611	\$40,500	\$45,100

ALTERNATIVE 1

COIC Estimate of Long-term Operating Costs

Beginning Fund Principal	\$1,500,000
Inflation	3%
Investment Return	5%
Net Return	2%
Pipe & Infrastructure Life	50yrs
Pumps & Electrical	25yrs
Pipe & Infrastructure Cost	\$461,620
Pumps & Electrical Cost	\$721,519

Objectives:

The model estimates beginning fund amount necessary to cover all future replacement costs.

The model runs for 50 years and the validation test is to show the fund balance at the end of 50 years is equal to the beginning fund balance, adjusted for inflation.

Cost assumptions are the same as the Anchor report, but the funding approach differs in that this funding approach assumes a large upfront amount to fund future

Replacement costs, while the Anchor report assumes the COIC invests funds each year to fund future replacement, starting with a zero balance.

QUESTIONS?

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