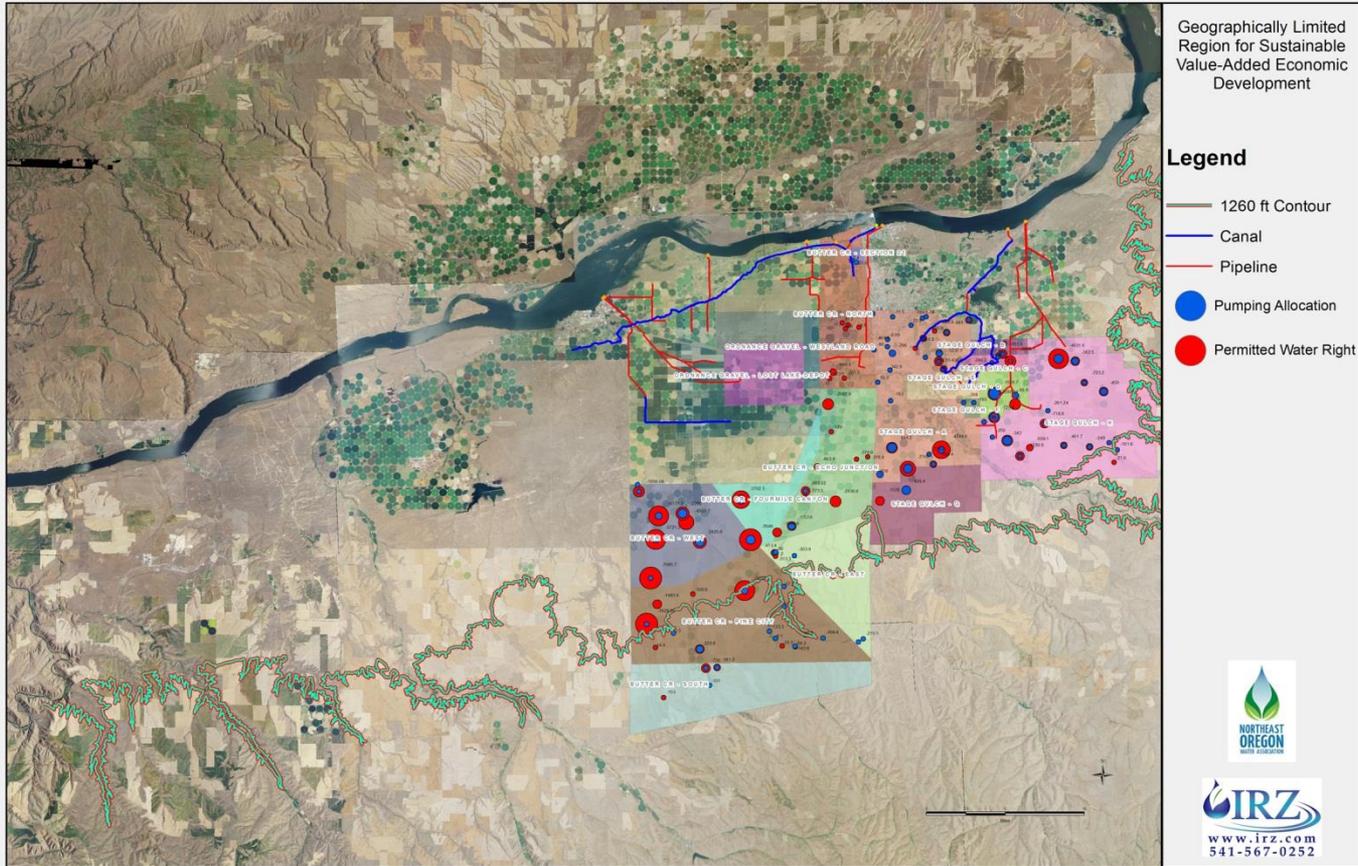




**NORTHEAST
OREGON
WATER ASSOCIATION**

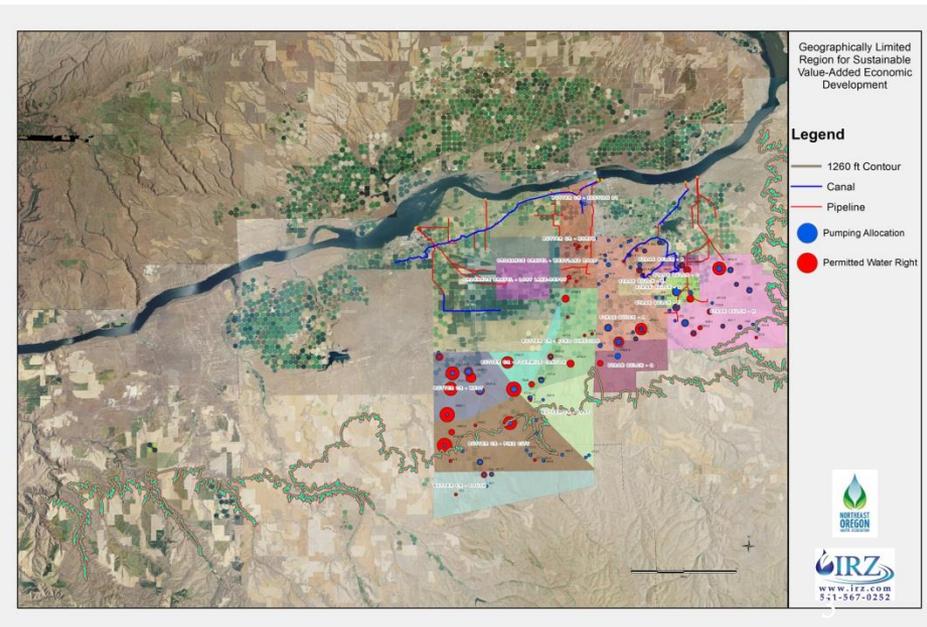
LIFE DEPENDS ON WATER, WE DEPEND ON YOU.

Irreplaceable Region

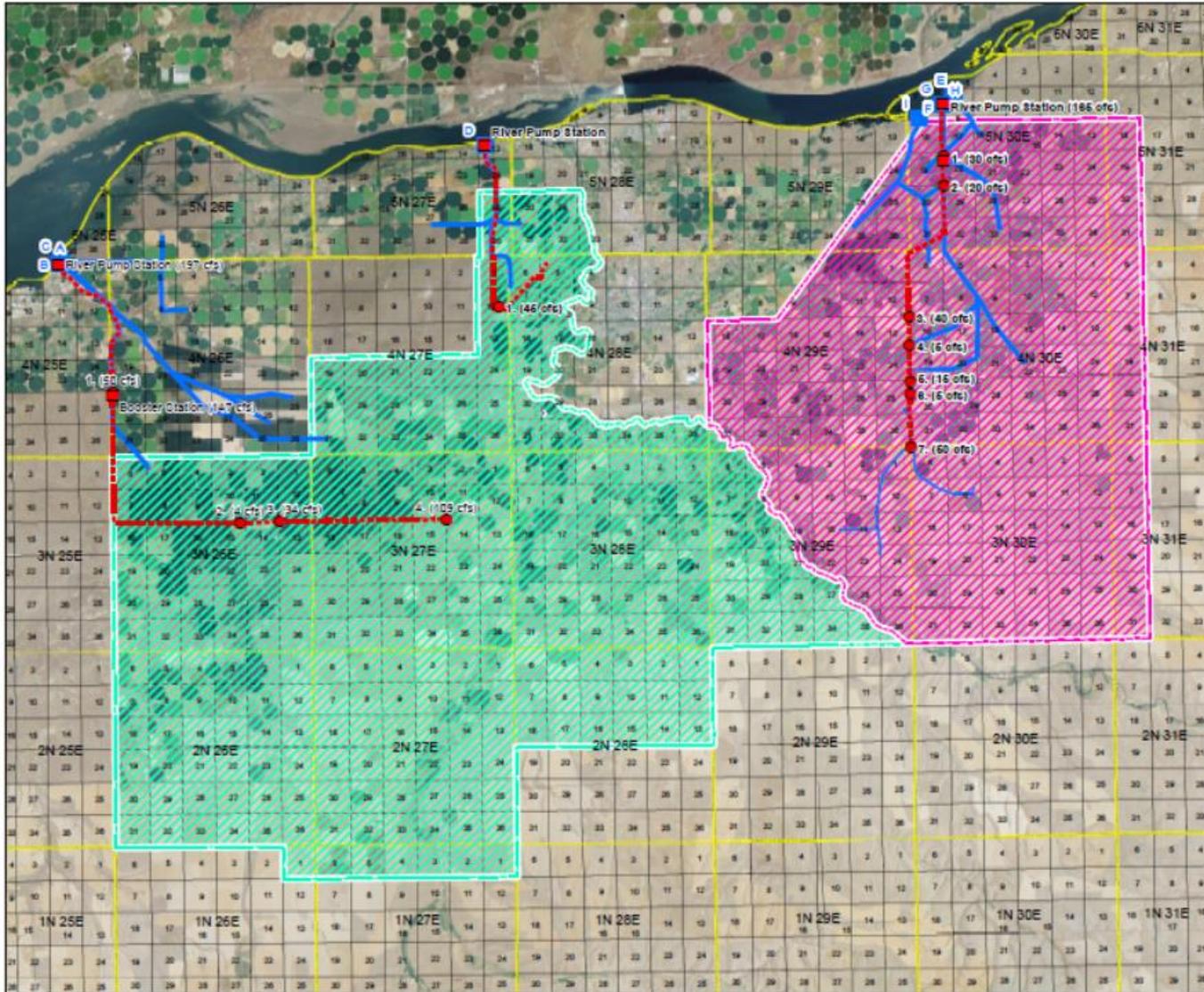


Local Definition of Success:

- USE OF:
 - 150,000 (500 cfs) – Acre-Feet (500 CFS = .0025% of average daily flow, or .004% at low flow) of Columbia River water.
 - Negotiated down to 180 cfs for first phase due to mitigation water right totals
- AND:
 - Infrastructure penetrating our four critical groundwater areas
 - The designs are done!
- WHICH WILL:
 - Give large and small acreage owners a chance to make a difference
 - Encourage innovation and entrepreneurship
 - Generate billions in economic activity and thousands of local and regional jobs (all sectors)
 - Take pressures off of over-appropriated groundwater and Columbia River tributaries
 - Guarantee commitment to and access to future long-term main-stem projects
 - Build a customer base for regional partnerships in NE Oregon



The Vision



East & West Permit Place of Use

NOWA



- Legend**
- Proposed Delivery Point
 - Proposed Pump Station
 - Proposed Pipeline Route
 - ▨ Proposed Place of Use - East
 - ▨ Proposed Place of Use - West
 - Existing Pump Stations
 - Existing Delivery Systems

1 inch = 3 miles

This map was prepared for the purpose of identifying the location of a water right only and it is not intended to provide legal dimension or locations of property ownership lines.



Projection: UTM Zone 11
 Datum: NAD 1983
 Date: 3/24/2015
 Data Sources:



PROJECT STEPS

1st Biennium (2015-2017): Water rights and infrastructure

- Facilitates economic benefit
- Facilitates environmental benefit
- Facilitates social benefit if protections are established to prevent speculation and splinter efforts

2nd Biennium: Permanent Mitigation Program and Basalt Relief/Bank (May need a work group)

- This is the true social benefit

3rd Biennium: A storage project (Juniper Dam study, etc.)

What we mean by Geographically Limited and Irreplaceable

LITERALLY: THE BEST HIGH-VALUE AG IN THE WORLD

• WATER LIFT

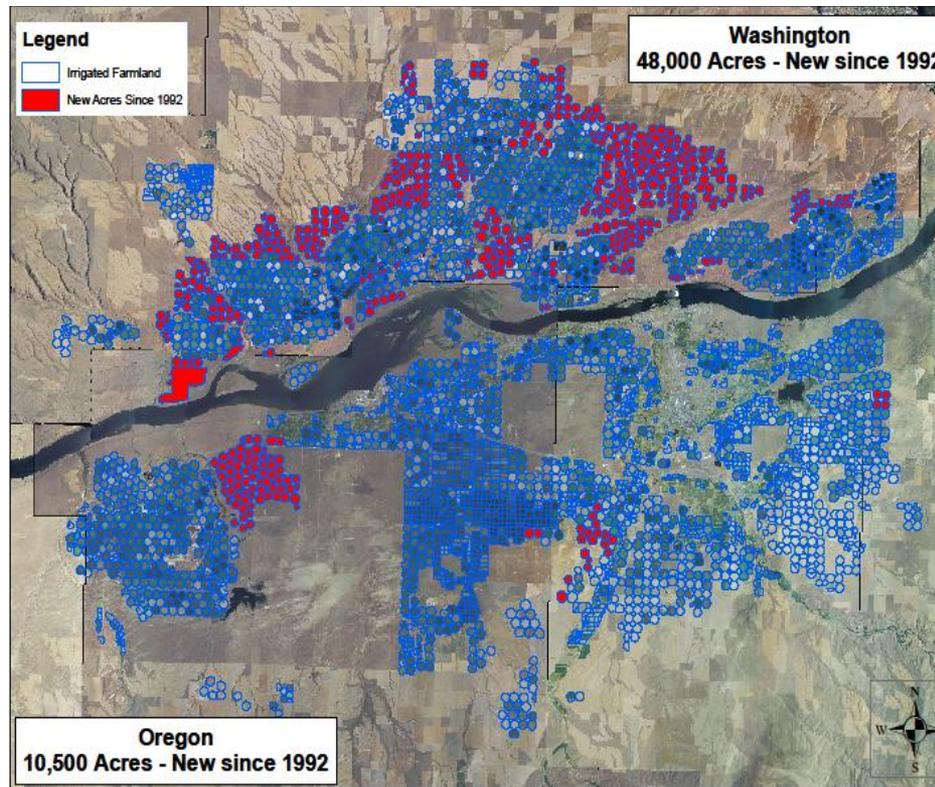
• WEATHER

• EXISTING SYSTEMS

• TERRAIN

• PROCESSING

• ALTERNATIVE FUEL NEEDS



VALUE OF WATER “From Dry to Fry”

Dryland wheat - \$100

- 40 bushel fallow wheat

1st Acre Foot - \$500

- 100 bushel irrigated wheat

2nd Acre Foot - \$1,500

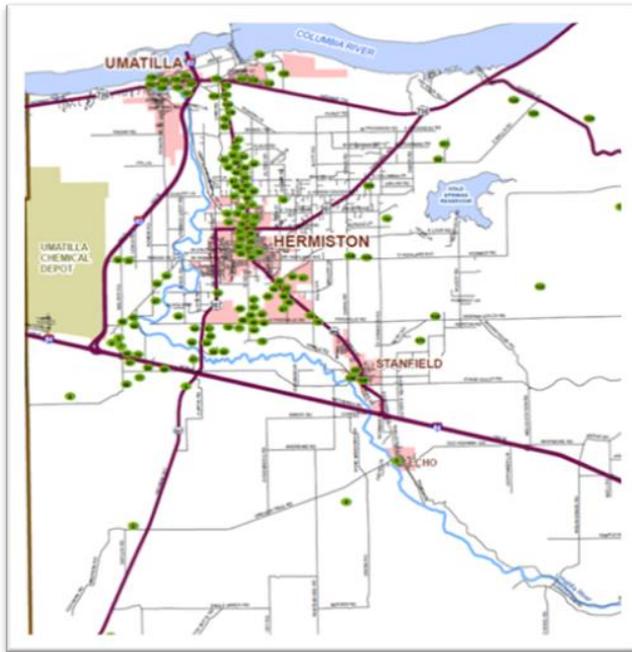
- Hay, Some vegetables, grass seeds, etc.

3rd Acre Foot - \$5,000+

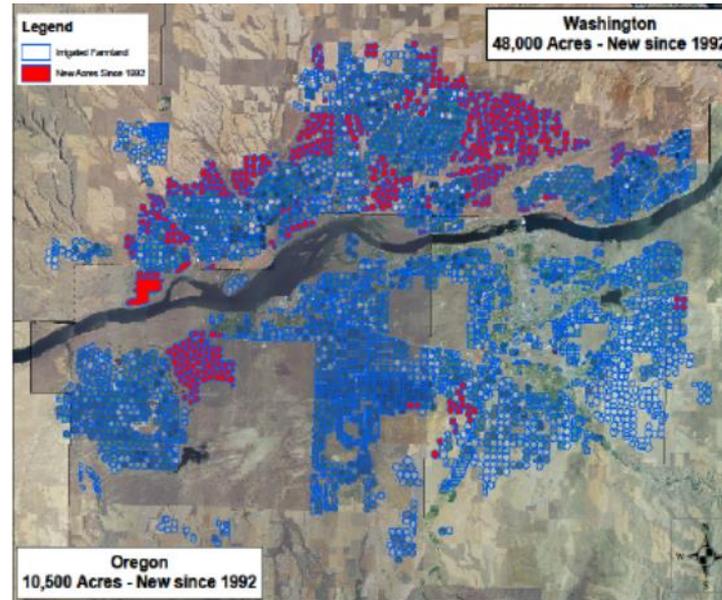
- High value root crops
- Full Rotation

OBC and State Leadership Recognize the Value of High-Value Irrigated Agriculture

THE CASE: The "Ag-Base" that Supports Job Creation and Innovation



Geographically limited: Existing acreage and "in-fill" growth



The POTENTIAL: Jobs, Funds, Future (Source: Bruce Sorte, OSU)

<i>Type of Effect</i>	<i>Employment Full & Part- Time</i>	<i>Labor Income (\$)</i>	<i>Total Value Added (\$)</i>	<i>Output (\$)</i>
Direct (Manufacturer)	5,989	158,052,082	225,015,545	1,063,288,422
Indirect (Suppliers)	3,054	99,471,765	173,184,004	357,002,946
Induced (Household Spending)	1,209	37,182,718	75,567,449	124,808,178
Total Effect	10,252	294,706,566	473,766,999	1,545,099,547

RAW PRODUCT AND A 20 MINUTE DRIVE

EXAMPLE 1: SWEET CORN - AN OREGON STAPLE

125 ACRES = \$120,000 = \$3.2 MILLION

SWEET CORN													
#	SUPPLY CHAIN	PRICE UNIT	PRICE UNIT	\$/UNIT	%	PER ACRE				TOTAL			
						TONS	POUNDS	OUNCES	\$	TONS	POUNDS	OUNCES	\$
1	Farm	Harvested Corn	Ton	\$ 95.00		10.00	20,000	320,000		1,250.00	2,500,000	40,000,000	
2	Farm	Usable Corn	Ton	\$105.56	90%	9.00	18,000	288,000	\$ 950	1,125.00	2,250,000	36,000,000	\$ 118,750
3	Processor	Bulk Finished	Pound	\$ 0.30	60%	5.40	10,800	172,800	\$ 3,240	675.00	1,350,000	21,600,000	\$ 405,000
4	Repackage Facility	Packaged Finished	Pound	\$ 0.10	100%	5.40	10,800	172,800	\$ 1,080	675.00	1,350,000	21,600,000	\$ 135,000
5	Retail	Store Sales	Ounce	\$ 0.15	100%	5.40	10,800	172,800	\$ 25,920	675.00	1,350,000	21,600,000	\$ 3,240,000



RAW PRODUCT - CARROTS

EXAMPLE 2: OREGON'S OTHER ORANGE POWERHOUSE

125 ACRES = \$475,000 = \$8.6 MILLION

CARROTS													
#	SUPPLY CHAIN	PRICE UNIT	PRICE UNIT	\$/UNIT	%	PER ACRE				TOTAL			
						TONS	POUNDS	OUNCES	\$	TONS	POUNDS	OUNCES	\$
1	Farm	Harvested Carrots	Ton	\$ 95.00		40.00	80,000	1,280,000		5,000.00	10,000,000	160,000,000	
2	Farm	Usable Carrots	Ton	\$ 105.56	90%	36.00	72,000	1,152,000	\$ 3,800	4,500.00	9,000,000	144,000,000	\$ 475,000
3	Processor	Finished Product	Pound	\$ 0.35	60%	21.60	43,200	691,200	\$ 15,120	2,700.00	5,400,000	86,400,000	\$ 1,890,000
4	Repackage Facility	Packaged Finished	Pound	\$ 0.10	100%	21.60	43,200	691,200	\$ 4,320	2,700.00	5,400,000	86,400,000	\$ 540,000
5	Retail	Store Sales	Ounce	\$ 0.10	100%	21.60	43,200	691,200	\$ 69,120	2,700.00	5,400,000	86,400,000	\$ 8,640,000



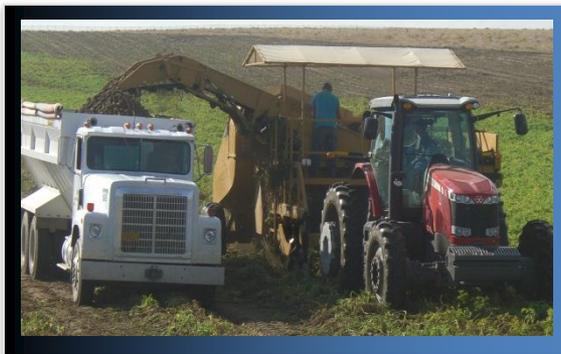
RAW PRODUCT - POTATOES

EXAMPLE 3: PARADISE FOR POTATOES



125 ACRES = \$750,000 = \$24 MILLION

POTATOES													
#	SUPPLY CHAIN	PRICE UNIT	PRICE UNIT	\$/UNIT	%	PER ACRE				TOTAL			
						TONS	POUNDS	OUNCES	\$	TONS	POUNDS	OUNCES	\$
1	Farm	Harvested Potatoes	Ton	\$150.00		40.00	80,000	1,280,000		5,000.00	10,000,000	160,000,000	
2	Farm	Usable Potatoes	Ton	\$176.47	85%	34.00	68,000	1,088,000	\$ 6,000	4,250.00	8,500,000	136,000,000	\$ 750,000
3	Processor	Finished Product	Pound	\$ 0.35	60%	20.40	40,800	652,800	\$ 14,280	2,550.00	5,100,000	81,600,000	\$ 1,785,000
4	Retail	Store Sales	Ounce	\$ 0.30	100%	20.40	40,800	652,800	\$195,840	2,550.00	5,100,000	81,600,000	\$ 24,480,000



THE ROTATION & PROCESSING



THE ROTATION

1. Potatoes
2. Grass/Wheat/Feed
3. Grass/Wheat/Feed
4. Onions/Carrots/Other Root Crop
5. Double Crop/Other Vegetable

VALUE ADDED, PROCESSING, INTEGRATION

- | | |
|--------------------------|---|
| 1. Potato Plant: | \$300 million, 10,000 acres = \$30,000/acre |
| 2. Grass Plant: | \$ 25 million, 10,000 acres = \$2,500/acre |
| 3. Dairies & Milk Proc.: | \$ 50 million, 10,000 acres = \$5,000/acre+ |
| 4. Onion Pack & Proc.: | \$ 50 million, 10,000 acres = \$5,000/acre |
| 5. Vegetable Plant: | \$100 million, 10,000 acres = \$10,000/acre |

The Full Project Return (Using 2006 Figures to be Conservative)

Alternatives	Output (Business Activities) (2006\$)		Labor Income* (2006\$)		Employment (# of jobs)	
	Direct	Total	Direct	Total	Direct	Total
SSRD 1 – Options 2&3	\$80,635,422	\$116,265,246	\$12,573,426	\$24,150,857	330	679
SSRD 1 – Option 1	\$144,770,763	\$208,720,310	\$ 22,656,434	\$ 43,452,201	606	1,233
Full Project	\$239,020,310	\$344,264,806	\$37,346,288	\$71,600,591	1,040	2,074

* Labor income consists of employee compensation plus proprietor's income.

- At 5% expect a direct income tax stream of no less than \$3.5 million annually
- Local property tax on land value increase alone is no less than \$1.5 million annually

COSTS OF WATER: WHAT WORKS



Land Rent	\$ 500	\$ 550	\$ 600	\$ 650	\$ 700	\$ 750	\$ 800
Return on Land - 3%	\$ (250)	\$ (250)	\$ (250)	\$ (250)	\$ (250)	\$ (250)	\$ (250)
Taxes & Operations	\$ (25)	\$ (25)	\$ (25)	\$ (25)	\$ (25)	\$ (25)	\$ (25)
\$ Available for Water	\$ 225	\$ 275	\$ 325	\$ 375	\$ 425	\$ 475	\$ 525
Acre Feet	3.0	3.0	3.0	3.0	3.0	3.0	3.0
\$/Acre Foot	\$ 75	\$ 92	\$ 108	\$ 125	\$ 142	\$ 158	\$ 175

+/- \$125/AF target:

Three inputs: Cap EX, O&M, Mitigation (New Territory)

THE PROJECT COST

1. Central Project

- Total Phase I Project Cost: \$14 million (\$1,750/af)
 - \$4 million of \$11 million targeted to Central Project
 - Landowners to commit \$10 million in equity and debt service
 - State investment: 28% of Project cost
- Phase II (Aquifer Recharge & Recovery) Cost: \$10 million

2. East Project

- Total Phase I Project Cost: \$46 million (\$1,486/af)
 - \$7 million of \$11 million targeted to East Project
 - Landowners to commit \$39 million in equity and debt service
 - State investment: 15% of Project Cost

3. West Project

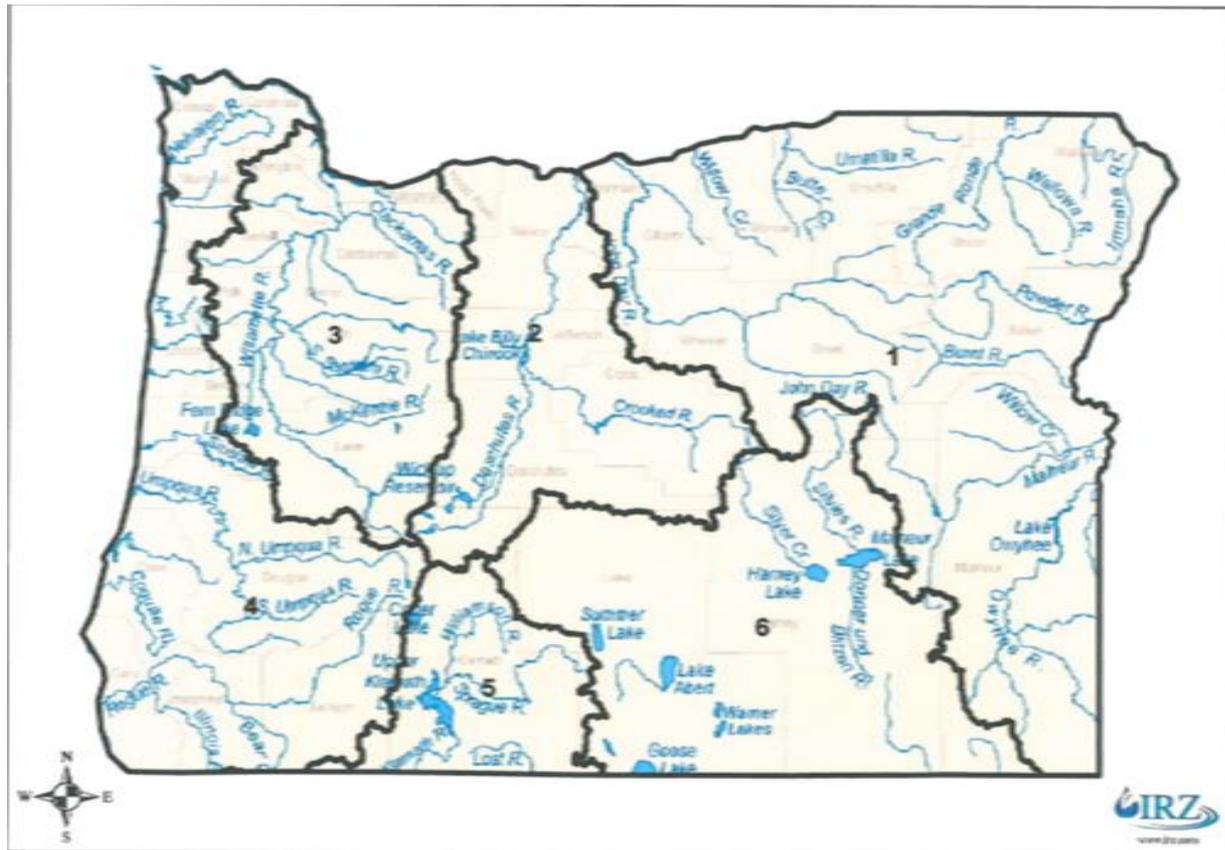
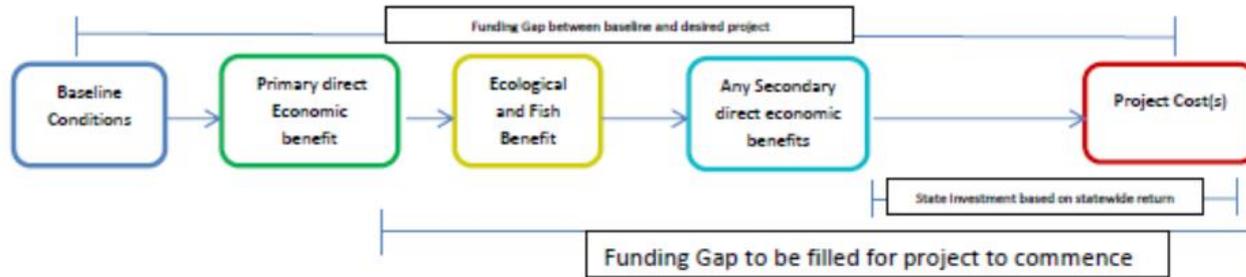
- Total Phase I Project Cost: \$35 million (\$803/af)
 - Not enough earmarked funding for West Project (i.e. \$11 million only helped with 2 of 3)
 - Sought \$10 million from SB 839 grant program (Denied in May)
 - Port of Morrow forced to abandon freshwater component
 - West Project status unknown

Return on Investment: 3,000 jobs and \$600 million in increased business activity (Port of Morrow and 2008 SB 1069 economic study), \$114 million additional assessed property values (Umatilla County)

Water 2.0 (Our Needs)

- Development of Permanent Upper Columbia Mitigation Program
 - Mainstem Mitigation Credit program above John Day Dam
- Umatilla Basin “Basalt Bank”
 - Need a work group to develop basalt banking rules in the CGA’s of the Umatilla Basin
- Targeted Water Supply Infrastructure Funding
 - Note: The upper Columbia/Snake, Willamette, Deschutes and Klamath basins may be too large in scale and return to fit within the 839 program

The New Business of Water Infrastructure
 "Assessing the Multiple Benefits of a Water Molecule and the Value-Multipliers that lead to successful project funding"



Notes from Washington

- WA has Water Resource Inventory Areas for all watersheds (statewide planning and funding for all watersheds)
- WA has a targeted infrastructure investment program for the Columbia and its major tributaries (Looking for reauthorization this year)
 - Seeded with \$200 million in multiple bond sale investments
 - Legislative mandates on targets for the funds
 - Requirement for annual progress reports on legislative directives due to size and scale of projects

Question: Could the same model work in Oregon?

- SB 839 program for all watersheds in the State (efficiency improvements, small storage and recharge projects)
 - Projects that don't generate "sticker shock"
 - Note: Some question duplication of water development programs (IFA, OWEB, SB 839)
- Targeted investment program for large main-stem basins (Deschutes, Willamette, Klamath, Upper Columbia)
 - Legislative directives and funding for the basins (i.e. a chunk of change with clarity on the intended results)
 - Ability to utilize accounts to build up funding for large projects (multi-bienieum investment account)

Take Away:

- Mitigation is doable with partnerships and access
 - Without partnerships mitigation is cost prohibitive
 - Without a regional program there is no access to mitigation credits and, therefore, no deals to be made
- Oregon, as the downstream state, can either be a litigator or a partner
- Broad market based mitigation opens the door to speculation. Oregon will lose in a speculative market



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