LIFE DEPENDS ON WATER, WE DEPEND ON YOU.
Irreplaceable Region

![Map of Geographically Limited Region for Sustainable Value-Added Economic Development]

Legend:
- 1260 ft Contour
- Canal
- Pipeline
- Pumping Allocation
- Permitted Water Right
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
PROJECT STEPS

1<sup>st</sup> 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

2<sup>nd</sup> Biennium: Permanent Mitigation Program and Basalt Relief/Bank (May need a work group)
- This is the true social benefit

3<sup>rd</sup> 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)

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

[Map showing the geographic distribution of irrigation areas]
RAW PRODUCT AND A 20 MINUTE DRIVE
EXAMPLE 1: SWEET CORN - AN OREGON STAPLE

125 ACRES = $120,000 = $3.2 MILLION

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

PER ACRE

TOTAL
### RAW PRODUCT - CARROTS

**EXAMPLE 2: OREGON’S OTHER ORANGE POWERHOUSE**

125 ACRES = $475,000 = $8.6 MILLION

#### CARROTS

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

**PER ACRE:**

- **TOTAL:**
  - **TONS:**
  - **POUNDS:**
  - **OUNCES:**
  - **$**
### POTATOES

<table>
<thead>
<tr>
<th>#</th>
<th>SUPPLY CHAIN</th>
<th>PRICE UNIT</th>
<th>PRICE UNIT</th>
<th>$/UNIT</th>
<th>%</th>
<th>TONS</th>
<th>POUNDS</th>
<th>OUNCES</th>
<th>$</th>
<th>TONS</th>
<th>POUNDS</th>
<th>OUNCES</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Farm</td>
<td>Harvested Potatoes</td>
<td>Ton</td>
<td>$150.00</td>
<td></td>
<td>40.00</td>
<td>80,000</td>
<td>1,280,000</td>
<td>5,000.00</td>
<td>10,000,000</td>
<td>160,000,000</td>
<td>750,000</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Farm</td>
<td>Usable Potatoes</td>
<td>Ton</td>
<td>$176.47</td>
<td>85%</td>
<td>34.00</td>
<td>68,000</td>
<td>1,088,000</td>
<td>4,250.00</td>
<td>8,500,000</td>
<td>136,000,000</td>
<td>750,000</td>
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<tr>
<td>3</td>
<td>Processor</td>
<td>Finished Product</td>
<td>Pound</td>
<td>$0.35</td>
<td>60%</td>
<td>20.40</td>
<td>40,800</td>
<td>652,800</td>
<td>2,550.00</td>
<td>5,100,000</td>
<td>81,600,000</td>
<td>1,785,000</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Retail</td>
<td>Store Sales</td>
<td>Ounce</td>
<td>$0.30</td>
<td>100%</td>
<td>20.40</td>
<td>40,800</td>
<td>652,800</td>
<td>2,550.00</td>
<td>5,100,000</td>
<td>81,600,000</td>
<td>24,480,000</td>
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</tr>
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</table>

**PER ACRE TOTAL**

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

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Direct</td>
<td>Total</td>
<td>Direct</td>
</tr>
<tr>
<td>SSRD 1 – Options 2&amp;3</td>
<td>$80,635,422</td>
<td>$116,265,246</td>
<td>$12,573,426</td>
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<tr>
<td>SSRD 1 – Option 1</td>
<td>$144,770,763</td>
<td>$208,720,310</td>
<td>$22,656,434</td>
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<tr>
<td>Full Project</td>
<td>$239,020,310</td>
<td>$344,264,806</td>
<td>$37,346,288</td>
</tr>
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</table>

* 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

<table>
<thead>
<tr>
<th></th>
<th>$500</th>
<th>$550</th>
<th>$600</th>
<th>$650</th>
<th>$700</th>
<th>$750</th>
<th>$800</th>
</tr>
</thead>
</table>

#### Return on Land - 3%

<table>
<thead>
<tr>
<th></th>
<th>(250)</th>
<th>(250)</th>
<th>(250)</th>
<th>(250)</th>
<th>(250)</th>
<th>(250)</th>
<th>(250)</th>
</tr>
</thead>
</table>

#### Taxes & Operations

|------------|-------|-------|-------|-------|-------|-------|-------|

#### $ Available for Water

<table>
<thead>
<tr>
<th></th>
<th>225</th>
<th>275</th>
<th>325</th>
<th>375</th>
<th>425</th>
<th>475</th>
<th>525</th>
</tr>
</thead>
</table>

#### Acre Feet

<table>
<thead>
<tr>
<th></th>
<th>3.0</th>
<th>3.0</th>
<th>3.0</th>
<th>3.0</th>
<th>3.0</th>
<th>3.0</th>
<th>3.0</th>
</tr>
</thead>
</table>

#### $/Acre Foot

<table>
<thead>
<tr>
<th></th>
<th>75</th>
<th>92</th>
<th>108</th>
<th>125</th>
<th>142</th>
<th>158</th>
<th>175</th>
</tr>
</thead>
</table>

### +/- $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”

- Baseline Conditions
- Primary direct Economic benefit
- Ecological and Fish Benefit
- Any Secondary direct economic benefits
- Project Cost(s)

Funding Gap to be filled for project to commence
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
Contact Information

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