

Demand for Water-Related Ecosystem Services in the Columbia Basin

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Structure

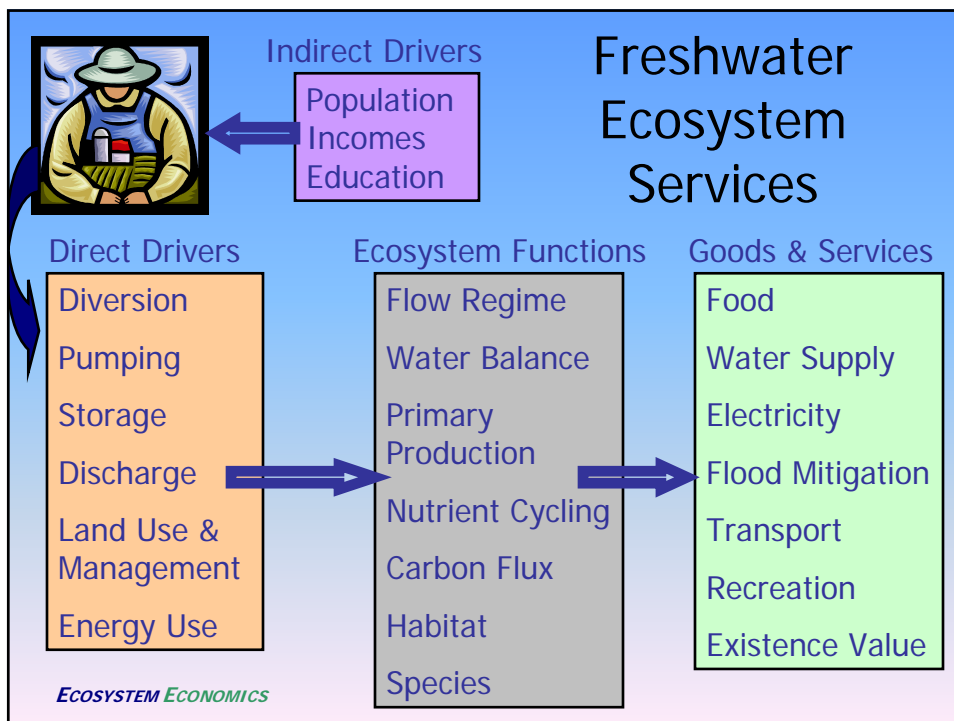
- Water and Ecosystem Service Markets
- Water Quantity Markets
 - Columbia
 - Oregon
 - Deschutes
- Final Thoughts



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Water, Ecosystems & Governance



The Challenge

Managing land and water for many and competing uses in a changing context



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and needed to use the picture.

Demand Drivers and Buyers in the Columbia Basin

- Fish, Wildlife & ESA - BPA, NOAA, BOR
 - BPA: \$150 m/yr
 - NOAA-PCSRF: \$85 m/yr (incl. AK)
 - Reclamation: \$21 m/yr
- FERC and dam licensing
 - PGE: \$120 m in the Deschutes
- Water Quality:
 - USDA & CRP: \$264 m/yr (in PNW)
 - Clean Water Services: \$6m for 20yrs
- General Ecological Restoration,
 - State Funds - e.g. OWEB: \$20m/year

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Comments on Demand

- Most of it is public money
- Includes infrastructure, staffing, studies, projects, etc
- Very little in the way of ecosystem “markets” or trading of rights/credits
- From the seller’s perspective its alphabet soup and all government money
- Is this an efficient way to convey demand for ecosystem services?

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Markets for Water-Related Ecosystem Services

- Mature
 - Purchase of water rights for flow restoration
- Pilots
 - Purchase of instream offsets for new groundwater uses
 - Purchase of shade to offset temperature discharge
- In Design
 - Stormwater credit trading

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What is being Purchased?

- Property Rights and Agreements that reward water rightholders for:
 - Improving water use efficiency & management
 - Reducing consumptive use of water



Oregon: Enabling Statute

- 1987 Oregon Instream Water Rights Act
- Recognized instream use as beneficial
- Allows the transfer/lease of water rights and conserved water to instream use
- No loss of priority
- 1993 Oregon Water Trust started up

Results in Oregon

Stream flow restored '94 to date:

- Conserved water - 66 cfs permanent
- Transfers - 280 cfs permanent
- Leases - 600 cfs/yr (3,200 cfs cumulative)
- An investment to date of ~\$50 million

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Deschutes Basin & Central Oregon

- Rapid population growth
- Demographic change
- Growth of 'lifestyle' farming
- Shift to a recreational economy
- Persistent low stream flow & poor water quality
- Reintroduction of salmon to the upper basin

Cap & Trade for Water: Restoration in the Deschutes

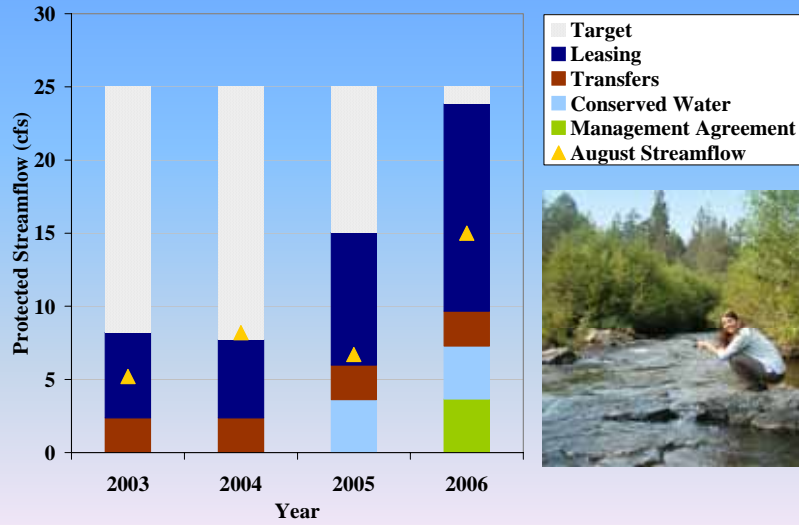
- 'First in time, first in right' - cap on water
 - Surface water trading
 - Add instream uses
 - Allow transfers
 - Link in water conservation
 - Link in groundwater
 - Mitigate new groundwater rights with surface water transfers
- Deals: Acquire senior water rights and transfer to instream use



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Whychus Creek



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Whychus Creek

2000

2007



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A Few Lessons Learned

- Don't assume supply will materialize: tackle liquidity/price discovery/etc head-on
- Don't assume that providing services is a profit-making venture (non-profit role)
- Don't assume transaction costs are negligible, but do work to lower them
- Don't assume sellers (or buyers) will understand what you are talking about!

THANK YOU!

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PDF (Acrobat) Reader™ are required to see this picture.

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