



CAPITOL LAKE — DESCHUTES ESTUARY

Long-Term Management Project Environmental Impact Statement

ECONOMIC FOUNDATIONS FOR FUNDING AND GOVERNANCE

Adam Domanski, Ph.D.
ECONorthwest

Challenge

✦ Develop a funding and governance agreement that finances the Capitol Lake EIS preferred alternative that is

- Efficient,
- Equitable, and
- Sustainable



CAPITOL LAKE – DESCHUTES ESTUARY

Long-Term Management Project Environmental Impact Statement

Guiding Principles

1. Dedicated and secure funding sources.
2. Those who contribute to the problem should participate in funding or paying for the solution.
3. Those who benefit from the solution should participate in funding or paying for the solution.
4. Shared distribution of costs.
5. State participation.
6. Watershed-wide in scale.
7. Manageable governance structure.
8. Commitment to a long-term collaborative process.
9. Adequately resourced administration.
10. Support the goals and objectives of both the CL/LDW management plan, as well as goals for the future of the overall watershed.



Guiding Principles

1. Dedicated and secure funding sources.
2. Those who **contribute** to the problem should participate in funding or paying for the solution.
3. Those who **benefit** from the solution should participate in funding or paying for the solution.
4. Shared **distribution** of costs.
5. State **participation**.
6. Watershed-wide in **scale**.
7. Manageable governance structure.
8. Commitment to a long-term collaborative process.
9. Adequately resourced administration.
10. Support the goals and objectives of both the CL/LDW management plan, as well as goals for the future of the overall watershed.



Application of Economic Theory

How do we define value?

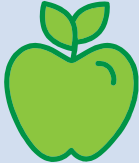
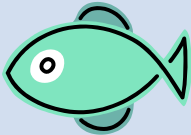
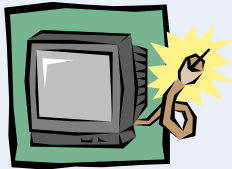

How do we define efficiency?

What conditions help lead to agreement?

How does equity affect agreement?



Economic Theory – How do we define value?

	Excludable	Non-Excludable
Rival	Private 	Common 
Non-Rival	Club 	Public 



Economic Theory – How do we define value?

Implications for Funding Mechanisms

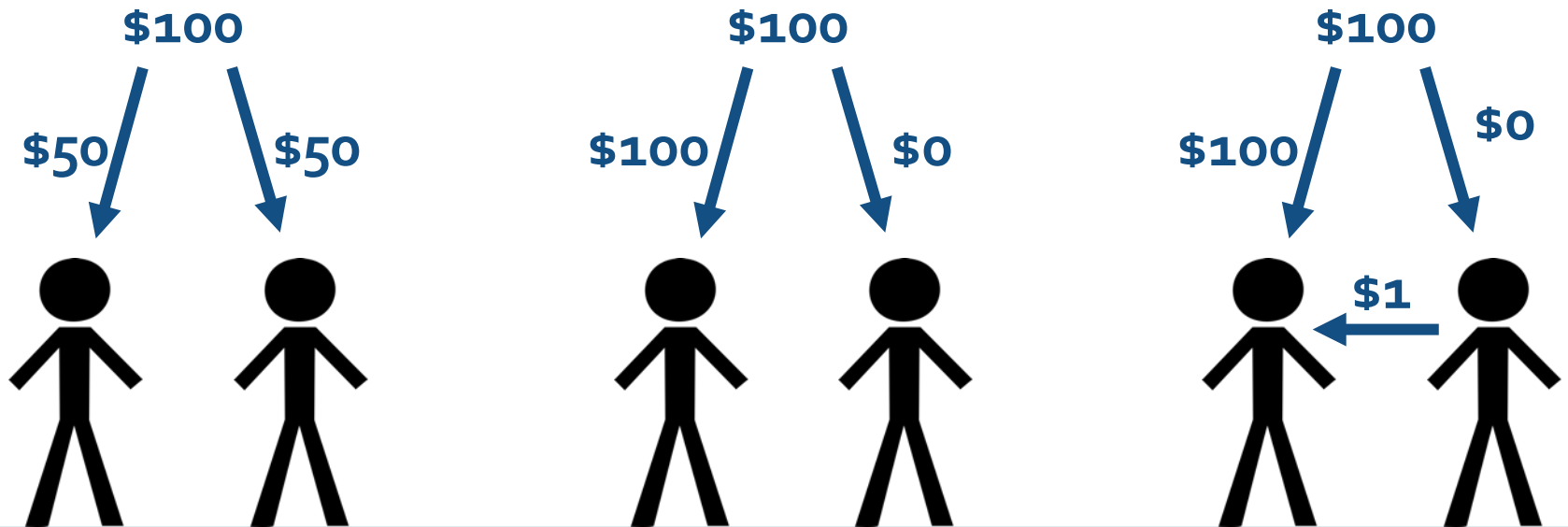
Potential Change in Value	Type of Value	Potential Funding Mechanism
Local Property Values	Private	Local Property Tax Levy
Downtown Business Revenue	Private	Sales Tax
Budd Inlet Dredging Costs	Private/Club	Direct transfer to/from marina and Port
Fishery Catch rates	Common	License/Permit Fee
Non-use Ecosystem Services	Public	Direct funding from/to DNR, Ecology
Recreational Use Value	Public	Direct funding from/to City of Olympia



Economic Theory – How do we define efficiency?

✦ Pareto Efficient outcomes occur when:

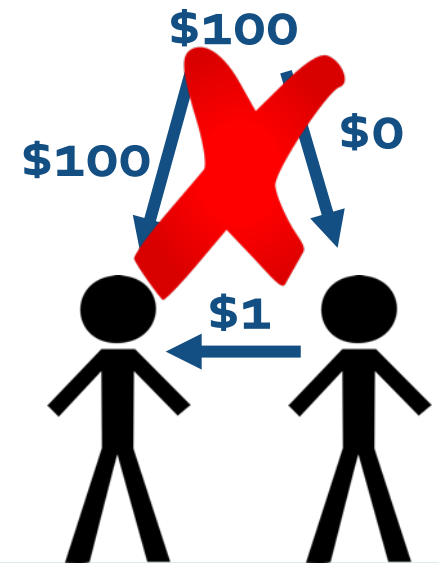
- At least one party is made better off, and
- No parties are made worse off.



Economic Theory – How do we define efficiency?

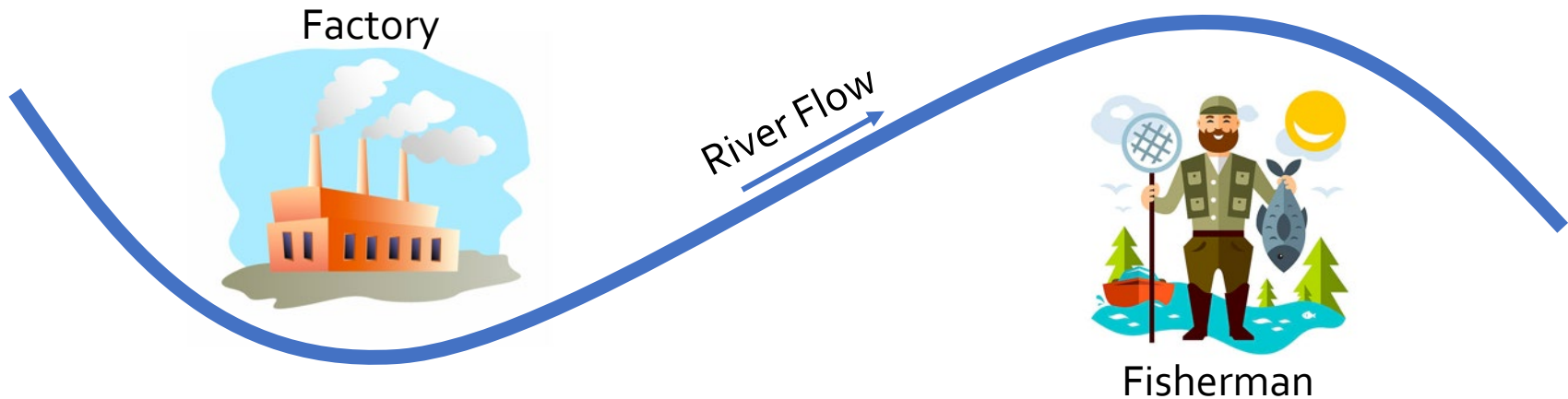
★ Pareto Efficient outcomes occur when:

- At least one party is made better off, and
- No parties are made worse off.



Economic Theory – What conditions help lead to agreement?

Introduction to Coasian Bargaining



- ✦ Factory generates pollution that negatively affects downstream Fisherman.
- ✦ Factory can spend money to 1) reduce pollution, 2) compensate Fisherman.
- ✦ Fisherman can pay Factory to reduce pollution.



Economic Theory – What conditions help lead to agreement?

Introduction to Coasian Bargaining

✦ Coase Theorem (Part I):

- When there are **well-defined property rights** and **costless bargaining**, then negotiations between the party creating the externality and the party affected by the externality can bring about the socially optimal market quantity.

✦ Coase Theorem (Part II):

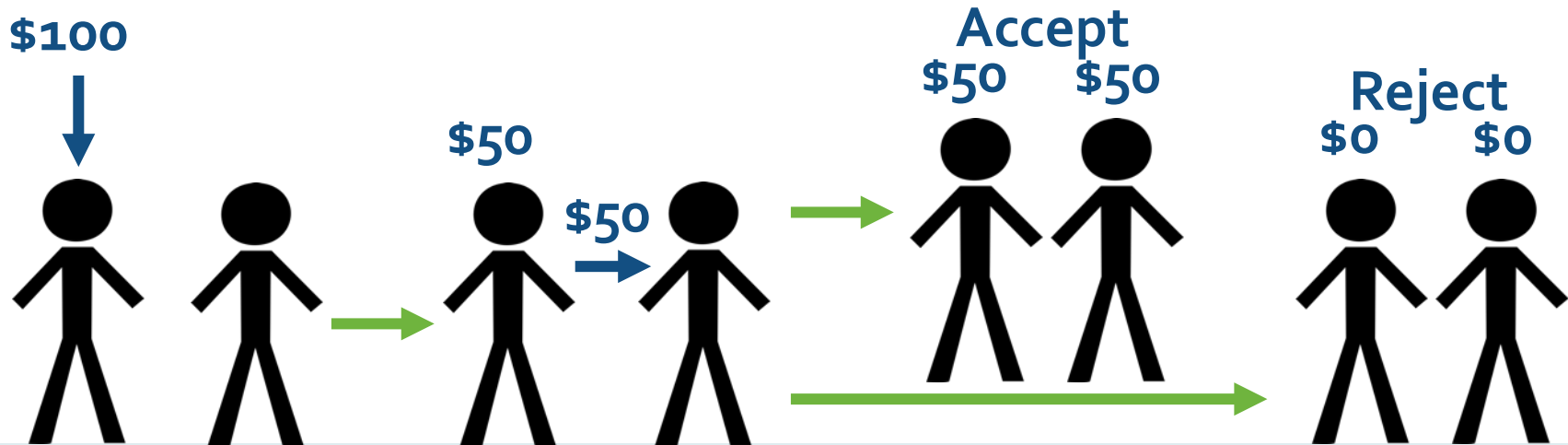
- The efficient quantity for a good producing an externality **does not depend on which party is assigned the property rights**, as long as someone is assigned those rights.



Economic Theory – How does equity affect agreement?

The Ultimatum Game

- ✦ **Step 1:** Individual 1 is given some amount of money.
- ✦ **Step 2:** Individual 1 chooses to share some of that money with individual 2.
- ✦ **Step 3:** Individual 2 chooses to accept the allocation, or reject it (and neither individual gets anything).



Economic Theory – How does equity affect agreement?

The Ultimatum Game

✦ Results:

- Average offers are around 40-50%
- About half of the responders reject offers below 30%
- Allocation of the offer matters more than the absolute amount



Applying Theory to Practice

- ✦ **Identify beneficiaries and types of value**
 - *Downtown businesses, Port, local residents, the State, others?*
- ✦ **Are property rights clearly understood?**
 - *Revenue, dredging costs, property values, ecosystem services, others?*
- ✦ **Is bargaining costless?**
 - *Are the right people at the table?*
- ✦ **What does an efficient outcome look like?**
 - *Are any parties going to be made worse off?*
- ✦ **Is an outcome equitable?**
 - *Would a party accept an allocation if they weren't at the table?*



Application to Funding and Governance Options



Photo Credit: Al Toney 2016 (Wikimedia commons: https://commons.wikimedia.org/wiki/File:Washington_State_Capitol_Historic_District.jpg)



CAPITOL LAKE — DESCHUTES ESTUARY

Long-Term Management Project Environmental Impact Statement

Applying Theory to Practice

✦ Identify beneficiaries and types of value

- *Downtown businesses, Port, local residents, the State, others?*

✦ Are property rights clearly understood?

- *Revenue, dredging costs, property values, ecosystem services, others?*

✦ Is bargaining costless?

- *Are the right people at the table?*

✦ What does an efficient outcome look like?

- *Are any parties going to be made worse off?*

✦ Is an outcome equitable?

- *Would a party accept an allocation if they weren't at the table?*



Benefit Flows and Funding Mechanisms

Potential Change in Value	Beneficiary	Type of Value	Potential Funding Mechanism
Lake-Based Recreation - Boating, fishing	Locals Visitors	Public	- Use fees - Parking fees - Property tax - Direct funding
Trail-Based Recreation - Walking, Biking, Running			
Park-Based Recreation - Community Events - Individual Use - Private Events	Locals Visitors Organizations	Public	- Use fees - Parking fees
		Private	- Rental fees
Downstream Recreation - Channel navigation	Marinas Marina Users	Public Club	- Direct funding - Use fees



Benefit Flows and Funding Mechanisms

Potential Change in Value	Beneficiary	Type of Value	Potential Funding Mechanism
Local Property Values - Changes in views, amenities	Local Property Owners	Private	- Property tax
Traded-Sector Activity - Channel navigation	Port Businesses	Private	- Direct funding
Downtown Business Activity - Tourism, Local visitors	Downtown Businesses	Private	- Sales taxes - Property tax - LID
Water Quality - TMDL pollution reduction allocations	LOTT Public/State	Public	- Direct funding - Utility fee/rate



Benefit Flows and Funding Mechanisms

Potential Change in Value	Beneficiaries	Type of Value	Potential Funding Mechanism
Cultural/Spiritual Importance - Heritage, Traditional use	Public Tribes	Public	- Direct Funding - Contributions - Grants
Science and Education	Public	Public	- Direct Funding - Contributions - Grants
Fish and Wildlife Habitat - Regulatory compliance - Use and non-use value	WDFW, DNR Tribes Public	Public Common	- Direct Funding - License fee
Flood Protection/ SLR Mitigation	Public and Private Property Owners	Public Private	- Property tax - Direct funding - LID



Funding Mechanisms

Fees	Taxes/Rates	Direct Funding	Contributions
Use Fees	Property Tax	Direct Transfers	Donation
Parking Fees	LID	State Funds	Grant
Rental Fees	Sales Tax		
License Fees	Utility Fee/ Rate		



Phase 1 Recap: Comparison Table of F&G Models

Washington State Department of Enterprise Services
 Funding and Governance Committee Related to the Capitol Lake/Lower Deschutes Watershed Long-Term Management Planning
 Comparison of Various District and Other Models

MODEL NAME	AUTHORITY	DESCRIPTION OF MODEL	ESTABLISHMENT	USE	FUNDING AND/OR GOVERNANCE MODEL	GENERATION OF REVENUE	EXAMPLE	NOTES
Flood Control District	Chapter 86.09 RCW	May include all or part of territory of any county and may combine territory in two or more counties.	Established in 1937 through RCW 86.09.001 for purpose of protection of life and property, preservation of public health, and conservation and development of natural resources. Powers of district provide for control of stream system or for protection against tidal bodies of water per RCW 86.09.004 .	District may be organized or maintained for (1) investigation, planning, construction, improvement, replacement, repair or acquisition of dams, dikes, levees, ditches, channels, canals, banks, revetments and other works, appliances, machinery and equipment and property and rights to control floods and lessen danger and damages, and (2) cooperation with any agency or agencies of the U.S. or WA State in investigating and controlling floods. As of April 2016, flood control districts and flood control zone districts exist in 17 counties per Municipal Research and Services Center web site.	Funding model and Governance model. Local legislative authorities involved. District managed by board of directors consisting of three members per RCW 86.09.259 . Directors appointed and elected per Chapter 85.38 RCW . Some jurisdictions set up advisory committees.	District has authority to issue and sell special assessment bonds or notes per RCW 86.09.157 .	WA flood districts and flood control zone districts by county from Municipal Research and Services Center of WA's web site.	State granted school or other state public lands may be included in district per RCW 86.09.013 . In addition to powers of Chapter 86.09 RCW and Chapter 85.38 RCW , districts may engage in activities authorized under RCW 36.61.020 for lake or beach management districts.
Flood Control Zone District	Chapter 86.15 RCW	County legislative authority may initiate creation of zone or additional zones within county for purpose of undertaking, operating, or maintaining flood control projects, storm water control projects, or groups of projects of special benefit to specified areas per RCW 86.15.020 .	Established in 1961.	County legislative authority may establish countywide district incorporating boundaries of any and all watersheds within county per RCW 86.15.025 . District may participate in and expand revenue on cooperative watershed management arrangements and actions for purposes of water supply, water quality, water resource, and habitat protection and management per RCW 86.15.035 .	Funding model and Governance model. County commissioners ex officio supervisors of zones. Option for election of supervisors other than county commissioners in zone with more than 2000 residents per RCW 86.15.050 . County may appoint countywide advisory committee.	Supervisors may authorize (1) annual excess tax levy when authorized by voters, (2) property assessment, including state property, benefitted by flood control or storm water control improvements, (3) annual property tax levy with limitations, and (4) charge for services to those who benefit per RCW 86.15.160 .	WA flood districts and flood control zone districts by county from Municipal Research and Services Center of WA's web site.	Supervisors may authorize issuance of general obligation bonds to finance flood control or storm water control improvement and provide for retirement of bonds with property tax levies per RCW 86.15.170 .



Governance Models

Governance Models	Phase 1 Funding and Governance Models
Special District	Flood Control District
	Flood Control Zone District
	Lake Management District
	Shellfish Protection District
	Special Purpose District
Public Development Authority	Public Development Authority
Legal Agreement	Chesapeake Bay Model
Non-Profit	LOTT



Relationship Between Funding and Governance Models

Governance	Fees				Taxes/Rates				Direct Funding		Contributions	
	User	Parking	Rental	License	Utility	Sales Tax	Property Tax	LID	Direct Transfers	State Funds	Donations	Grants
Special District												
Public Development Authority												
Legal Agreement												
Non-Profit												



Guiding Principles

1. Dedicated and secure funding sources.
2. Those who **contribute** to the problem should participate in funding or paying for the solution.
3. Those who **benefit** from the solution should participate in funding or paying for the solution.
4. Shared **distribution** of costs.
5. State **participation**.
6. Watershed-wide in **scale**.
7. Manageable governance structure.
8. Commitment to a long-term collaborative process.
9. Adequately resourced administration.
10. Support the goals and objectives of both the CL/LDW management plan, as well as goals for the future of the overall watershed.

