About Earth Economics

- Nonpartisan economic research, education, and consulting for government, corporate, and NGO clients
- Currently working throughout the US and Internationally
- Robust 18-year history - Washington-based 501(c)3
Why a new economic view is needed

Previous ‘Empty World’ Situation

Natural Capital was Abundant
• Vast pristine continents
• Countless fish in the rivers & oceans
• Boundless forests

Built Capital was Scarc
• Small cities, roads, and industry
• Few fishing boats
• Few lumber mills

Today’s Full World Situation

Natural Capital is Scarce
• Fewer natural places/species
• Fewer fish
• Disappearing forests
• Less clean water and air

Built Capital is Abundant
• Large cities, roads and industry
• Many fishing boats
• Many lumber mills
• Many power plants
Ecological Economics is Critical

- **Measures primarily built capital**—GDP;
- **Nature’s economic contributions** (e.g. drinking water, waste treatment and storm protection) are frequently valued at zero!

- Multidisciplinary approach, attempts to measure beyond GDP;
- Uses innovative economic methodologies to account for nature;
- Works with the understanding that the economy and society are fully embedded in and dependent upon the natural environment;
- Effective planning requires long-term, systems view that brings together human, social, built, and natural capital.

Results in better investments over time!

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How We Affect the Regions We Serve

**New Economics to Value and Secure Watersheds:**
- Puget Sound
- Mississippi River and Delta
- Colorado River Basin
- San Francisco Bay Area
- Columbia River Basin
- St Louis River Basin
- Long Island Sound
- Mat-Su River Basin

**New Economics to Modernize Federal Policy and Standards:**
- FEMA Disaster Mitigation Program
- President’s Council of Environmental Quality (CEQ)
- Governmental Accounting and Standards Board (GASB)

**New Economics to Shift Investment to True Sustainability:**
- More resilient communities (100RC)
Ecosystem Service Valuation

The Natural Value of Thurston County
A Rapid Ecosystem Service Valuation

2012
ES in Thurston County

- 14 landcover types
- 16 ecosystem services

Why Capture Holistic Benefits and Costs?

- More Benefits
- Better Design
- New Stakeholders
- New Partners
- More Funding
Benefit and Cost Categories

- Lifecycle Costs
- Social
- Economic
- Environmental

Framing Benefit- Cost Analysis

No Action (Baseline) vs. Action

❗❗ ‘No Action’ DOES NOT mean that conditions aren’t changing
- Climate
- Infrastructure
- Population
- …
Holistic BCA Analysis
North Winds Weir

Finding the Costs and Benefits
North Winds Weir
## Finding the Costs and Benefits

**North Winds Weir**

### Sample Benefit Categories

<table>
<thead>
<tr>
<th>Project Costs</th>
<th>Avoided Damages</th>
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<tbody>
<tr>
<td></td>
<td>Economic</td>
</tr>
<tr>
<td>Property Acquisition</td>
<td>Commercial Property</td>
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<tr>
<td>Soil Remediation</td>
<td>Residential Property</td>
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<tr>
<td>Plant Installation and Care</td>
<td>Infrastructure – Bridges and Roads</td>
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<td>Site Improvements (paths, etc.)</td>
<td>Casualties</td>
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- **Economic**
  - Neighboring Property Values
  - Construction Investment Jobs
  - ‘Trickle Down’ to Local Businesses
  - Long-Term Worker Retention

- **Social**
  - Volunteer Engagement
  - Physical Health
  - Mental Health
  - Social Equity
  - Recreation (Fishing, Birding)
  - Cultural Value

- **Environmental**
  - Salmon Habitat
  - Reduced Soil Erosion
  - Carbon Sequestration
  - Bird Habitat
  - Air Quality
  - Tree Cover
  - Invasive Control
Thurston Climate Adaptation Plan

**Action 4**
Restore riparian vegetation along freshwater and marine shorelines to stabilize banks, provide shade and flood storage, and slow and filter polluted runoff.
- Added benefits for riparian vegetation along shorelines
- Benefits of shade provided
- Values for runoff (N & P)
- Values for flood storage

**Action 141**
Elevate, reinforce or relocate important electrical equipment that is within areas at risk of flooding and/or landslides.
- Not many added environmental or social benefits to highlight

Any questions?

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