Incentive-Based Environmental Restoration and Planning – Shifting the Paradigm

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Restoration

• Improvement
  – Common in a regulatory context

• Creation
  – Compensating or mitigating for an action

• Acquisition
  – Common where restoration options are limited
Incentive-Based Restoration

- Prospective Restoration
- Restoration Up Front (RUF)
- Restoration Banking

- Mechanism for increasing the conservation of valuable ecological resources, services and habitats
Incentive-Based Restoration

- Entity undertakes restoration
- Receives ‘credit’ (e.g., DSAYs)
- Credits can be applied, sold or traded
- Credits remain durable so long as service flows remain in same condition as when assigned
Incentive-Based Restoration

• Example:
  – Company ABC required to restore 20 acres of salt marsh to offset a quantified liability
  – Most viable project is 50 acres in size
  – ABC restores 50 acres, applies 20 acres to original liability, and has 30 acres of ‘credit’
Incentive-Based Restoration

• Why?
  – Restoration today, instead of tomorrow
  – Expands restoration options for urbanized watersheds
  – Focuses financial resources on ecological resources
## Typical Assessment Costs vs. Representative Restoration Costs

<table>
<thead>
<tr>
<th></th>
<th>Artificial Reef Construction ($200k/acre)</th>
<th>Marsh Creation ($75k-126k/acre)</th>
<th>Oyster Reef Creation ($154k/acre)</th>
<th>Migratory Waterfowl Habitat Acq. in Midwest US ($320/acre)</th>
<th>Cattle Exclusion from Salmon Habitat for 75 years ($200k/mile)</th>
<th>Boat Ramp Construction ($100k each)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sediment Contamination Survey ($1.1 M)</td>
<td>5.5 acres</td>
<td>8.7-14.7 acres</td>
<td>7.1 acres</td>
<td>3,478 acres</td>
<td>5.5 miles</td>
<td>11 ramps</td>
</tr>
<tr>
<td>Sediment Toxicity Testing ($750k)</td>
<td>3.8 acres</td>
<td>6-10 acres</td>
<td>4.9 acres</td>
<td>2,344 acres</td>
<td>3.8 miles</td>
<td>7.5 ramps</td>
</tr>
<tr>
<td>Fish Reproduction Testing ($2.0 M)</td>
<td>10 acres</td>
<td>15.9-26.7 acres</td>
<td>13 acres</td>
<td>6,250 acres</td>
<td>10 miles</td>
<td>20 ramps</td>
</tr>
<tr>
<td>Fish Health Survey ($600k)</td>
<td>3 acres</td>
<td>4.8-8 acres</td>
<td>3.9 acres</td>
<td>1,875 acres</td>
<td>3 miles</td>
<td>6 ramps</td>
</tr>
<tr>
<td>Bird Egg Gradient Study ($460k)</td>
<td>2.3 acres</td>
<td>3.7-6.1 acres</td>
<td>3 acres</td>
<td>1,438 acres</td>
<td>2.3 miles</td>
<td>4.6 ramps</td>
</tr>
</tbody>
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Paradigm Shift

• Corporate Social Responsibility (CSR)
  – Identification and incorporation of societal needs and values within the strategic and operational processes of a for-profit organization
  – Shareholder (Friedman) vs. Stakeholder (Freeman)
Paradigm Shift

• New Governance
  – Contemporary approach encouraging dialogue about regulatory principles among stakeholders
  – Social and public good may be achieved through private-public associations and networks
  – Rather than oppositional, an appreciative, positive stance is emphasized
  – Mechanisms are flexible and animated by goals for outcomes – not processes
New Governance

- Government
- Public
- NGOs
- Industry

Companies: Matrix New World, Dupont, Versar
References


Thank you for your attention!