Jun 6th, 10:50 AM - 11:10 AM

Session A4 - Using a focus area approach to restore watershed-scale stream connectivity

Ben Naumann
USDA-Natural Resources Conservation Service

Follow this and additional works at: http://scholarworks.umass.edu/fishpassage_conference

Naumann, Ben, "Session A4 - Using a focus area approach to restore watershed-scale stream connectivity" (2012). International Conference on Engineering and Ecohydrology for Fish Passage. 7.
http://scholarworks.umass.edu/fishpassage_conference/2012/June6/7

This Event is brought to you for free and open access by the The Fish Passage Community at UMass Amherst at ScholarWorks@UMass Amherst. It has been accepted for inclusion in International Conference on Engineering and Ecohydrology for Fish Passage by an authorized administrator of ScholarWorks@UMass Amherst. For more information, please contact scholarworks@library.umass.edu.
Using a Focus Area Approach to Restore Watershed-Scale Stream Connectivity

Ben Naumann\textsuperscript{1}, Jeffrey Norment\textsuperscript{1}, Norm Dube\textsuperscript{2}, Merry Gallagher\textsuperscript{3}, Jed Wright\textsuperscript{4}

1 USDA-Natural Resources Conservation Service
2 Maine Department of Marine Resources
3 Maine Department of Inland Fisheries and Wildlife
4 U.S. Fish and Wildlife Service
What has the past/present land use given us for barriers?

- Large dams
What has the past/present land use given us for barrers?

- Large dams
- Legacy log drive dams
What has the past/present land use given us for barriers?

- Large dams
- Legacy log drive dams
- Aging road network with culvert barriers
- Reduction to only 218 of 12,400 stream miles to sea-run fish in the Penobscot
Penobscot restoration project

Before and After Habitat Access

Existing Access for Sea-Run Fish

Significantly Improved Access for Sea-Run Fish to Nearly 1,000 Miles

Maps from www.penobscotriver.org/assets/Habitat_Access__before_and_after.pdf
Culverts in the Penobscot

- 1,125 culverts in the lower and middle Penobscot
- 770 (68%) are severe fish barriers
Agency Collaboration

Prioritization (Different Levels) → Coordination → Outreach → Implementation

National Resources Conservation Service

“Helping people help the land”
Focus Area Determination Part I: Fish habitat

Total ATS rearing units rank + ((BKT stream rank + BKT Pond acreage rank)/2)

OR

- Worked with state and federal biologists
- Focus area determination
  - Habitat variables
  - Expert opinion
  - Best of the best (could be better)

Habitat + Habitat = Habitat

National Resources Conservation Service

“Helping people help the land”
Focus Area Determination
Part II: NRCS Client Eligibility

<table>
<thead>
<tr>
<th>Barrier Ownership</th>
<th>Piscataquis</th>
<th>Pleasant</th>
<th>East Branch</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Park (AT)</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Small Land Owners</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Unknown</td>
<td>2</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Worked with NRCS</td>
<td>2</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Non-Profit</td>
<td>0</td>
<td>9</td>
<td>0</td>
</tr>
<tr>
<td>Large Forest Land Owners</td>
<td>9</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>State, Town, County Roads</td>
<td>13</td>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>27</strong></td>
<td><strong>22</strong></td>
<td><strong>22</strong></td>
</tr>
</tbody>
</table>
Culvert Barrier Ownership in the Pleasant River Watershed

- **Non-profit**: 11.0, 15%
- **State**: 8.0, 11%
- **Rail**: 6.0, 8%
- **Private Large**: 26.0, 34%
- **Private Small**: 2.0, 3%
- **Municipality**: 22, 29%

Ownership details for different entities within the Pleasant River Watershed.
Coordination

- Finding partners
- Stakeholders meetings
- Keeping Maine Forests
- Connectivity projects

National Resources Conservation Service

“Helping people help the land”
Stream Connectivity Private Landowner Framework

Goal
To provide landowners tools, training, and other assistance that is currently available through agency programs and projects to improve long-term stream connectivity while being flexible and adaptable to various landowner capabilities and approaches.

Objectives
1. Provide landowners information on the process to acquire certain fish habitat information for their ownerships.
2. Provide landowners with crossing structure prioritization information.
3. Provide landowners with training opportunities.
4. Provide landowners with technical assistance.
5. Provide landowners with financial assistance.
We gave them what they wanted

- Road stream crossing survey trainings
- Road stream crossing workshops
- Site visits
- Prioritization of road stream crossings on their land base
Prioritization land owner maps
Implementation 2011

Blocked Culvert
Implementation 2011

Low Flow Fish Barrier
Implementation 2011

Restored Natural Process
Lessons learned

- Don’t limit yourself to a small geographical area
- Take advantage of opportunities
- Collaborate with partners with different expertise
- Be patient with landowners
- Building relationships take time