Maine’s Watershed Stewards Program – Who, What, & Why

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and
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Extension Education

Have to be more than one shot wonders
Penobscot Bay Marine Program

- Developed by SPO in mid 1990’s
- 25 hour program on land use impacts to Penobscot Bay ... service component
Watershed Stewards Program

• Developed in 1996
• Master Gardener Program format
• What type of watershed ..
  lakes ... streams?

Maine has over 5800 lakes and ponds; 2700 over one acre.
Maine Lakes Resource

$6.7$ billion annually (Boyle et al., 1997)
Development Pressure
Land Use Impacts on Water Quality
Land Use Impacts on Water Quality
Watershed Stewards Program

- 20 hours of training
- 20 hours of volunteer service
- 16 courses in 6 counties
- Over 300 participants

Transparency as measured by Secchi Disk in Green Lake is over 9 m!
Program Goals

- Protection ... Remediation
- Understand connections:
  - land use and water quality
- Service to the lake
- Change behavior: more lake-friendly land use practices
Partners

- Maine DEP
- County SWCD
- Maine Dept. of Ag.
- Maine VLMP
- County Extension Offices
Course Topics Include

- Lakes 101
- Nonpoint Source Pollution
- Septic System Care and Maintenance
- Camp Road Maintenance
- Vegetated Buffers: what/why
- Shoreland Zoning/NRPA Regulations
- Watershed training day
Edge of road on above hill has caused this large sediment delta which runs into a tributary behind the brush.
Commercial / Residential Sites

Serious Problem
Grant funds to do implementation - CSREES

Buffer Plants

New Trail
Significant impacts:
>$225,000 in 319 funds
Long-term Program Evaluation

• Increase knowledge
• Erosion over time in knowledge
• Higher level of community service
• Were stewards “walking the walk”
  - lake-friendly land-use practices?
Evaluation/Research

• Statistically valid evaluation
• Compared knowledge and activity (real impacts) of program graduates to other lake land owners not trained
• Compare Stewards vs. ‘Non-stewards’
Written Survey

- Developed our test
- Piloted
- Mailed to 161 Stewards
- Mailed to 328 nonstewards, same lakes
- Incentive for nonstewards to return their survey
Response

- Stewards: 
  - 64 responses or 39%
- Nonstewards: 
  - 70 responses or 22%
Strength of Program Knowledge

Test Scores

Score = 48.5 - 0.095 (Year)

Stewards Only

Years Program Presented

0 10 20 30 40 50 60

97 98 99 00 01 02
Program Goals

✓ Increase knowledge from WSP

• Increase community service?
• Change behavior to more lake-friendly land use practices?
  - Telephone survey
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<thead>
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<th>Hours</th>
<th>Non-stewards</th>
<th>Stewards</th>
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<td>&gt; 100</td>
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<tr>
<td>Non-Stewards</td>
<td>Stewards</td>
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<td>Jet skis (2)</td>
<td>NPS pollution (5)</td>
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<td>Bass</td>
<td>Invasive plants (10)</td>
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<td>Ducks and Flooding</td>
<td>Road runoff (4)</td>
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<td>Pollution (5)</td>
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<td>Don’t know (2)</td>
<td>Ignorance (2)</td>
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Results

- www.umaine.edu/waterquality
- JOE (accepted for publication)
Conclusions

* Move more to course-based programming in Extension
* Validity as educators
* More potential for impact
* Opportunities