Measuring Effectiveness of ODA’s Agricultural Water Quality Program

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Topics

- Background of WQ Program
- SWCD Scope of Work
- Monitoring Program
- Focusing Efforts
- Q&A
Background

- Agricultural Water Quality Mgmt Act (aka SB 1010) adopted in 1993
- ODA responsible for and jurisdiction over ag practices and water pollution associated with farming activities
- 38 Mgmt Areas identified throughout OR
- 38 Area Plans/Rules
## What’s the difference?

<table>
<thead>
<tr>
<th>Area Plans</th>
<th>Area Rules</th>
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| • Describe a program to achieve the **water quality goals and standards** necessary to protect designated beneficial uses related to water quality, as required by state and federal law. | • **Enforceable** aspect of an Area Plan.  
• Must be sufficient to assure that landowners in compliance with the Area Rules will prevent and control water pollution from agricultural activities and soil erosion. |
The Basics

- Biennial reviews of Area Plans and Rules with Local Advisory Committees (LAC)
  - Assess progress

- Consult DEQ during bi-review process

- Work with Local Management Agencies (LMAs) to implement Area Plans
  - SWCD Scope of Work (SOW) tasks
Local Management Agencies (LMAs)

It is the intention of the Legislative Assembly that water quality plans:

- involve SWCDs as LMAs
- with the timely and effective implementation of these plans

ORS 568.909
Area Plan Implementation

Local Area Plan

Landowners

SOW Tasks
Typical Task Categories

Outreach & Education
Conservation Planning
Technical Assistance
Project Development and Imp
Grant Writing
Monitoring
Training
Partnerships
ODA-SWCD Monitoring

- Many SWCDs have monitoring tasks
  - Map conditions
  - Develop monitoring plans
  - Conduct water quality monitoring

- ODA monitoring staff and specialists
  - Work with SWCDs
  - Review area maps
  - Provide technical support to SWCDs
Key Question

- Are the efforts of ODA and our partners effective in leading to agricultural land conditions that protect water quality?
Monitoring Water Quality

- Statewide ambient sampling
  - ODA received funding in 2011 Legislative session
  - 19 new sites complement existing DEQ network
  - Currently we have funding for 2011-2013

- Local projects with SWCDs and WCs
  - Validate land condition-water quality relationship
  - Track WQ improvements from mgmt changes
  - Assessments determine where to focus efforts
Monitoring Land Conditions

- Tracking changes in streamside areas through aerial photography
  - Photograph randomly selected stream segments along agricultural lands
  - Assign code to streamside vegetation
  - Assign a score to streamside vegetation condition
  - Can track changes in the score over time

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<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Clear Creek</td>
<td>63.38</td>
<td>62.00</td>
<td>-1.38</td>
</tr>
<tr>
<td>Coffee Lake Creek</td>
<td>44.81</td>
<td>43.23</td>
<td>-1.58</td>
</tr>
<tr>
<td>Currin Creek</td>
<td>58.05</td>
<td>55.59</td>
<td>-2.46</td>
</tr>
<tr>
<td>NF Deep Creek</td>
<td>52.58</td>
<td>49.59</td>
<td>-2.99</td>
</tr>
<tr>
<td>Parrot Creek</td>
<td>66.57</td>
<td>65.41</td>
<td>-1.16</td>
</tr>
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Differences of less than 1.5 are not considered significant.
Land Condition Focus

• Program is focused on monitoring land conditions:
  • Landowners have more control
  • We can provide clearer expectations to landowners
  • A variety of factors affect WQ
  • WQ (especially stream temp) can take a very long time to respond to certain land condition changes – we want to be able to report progress before then
Why Focus Efforts?

- Is the AgWQ Program effective?
- Measure progress
- Best use of limited resources
How do we get there?

- Identify WQ issues in a small watershed
- Identify measures to meet WQ goals
- Identify milestones & timelines
Measuring Progress

- Differentiate between “implementation” and “progress”
  - Implementation = work being done on the ground
  - Progress = % improvement
    - Landscape condition
    - Water quality
- How do we show overall effectiveness?
  - Implementation + Progress
Landscape Condition
(riparian vegetation example)

- Pre-Assessment – Document
- Landowners contacted – site visits
- Technical assistance and project implementation
- Post-Assessment - Document
- Report progress
## Assessment Example

<table>
<thead>
<tr>
<th>Landowners</th>
<th>Ft of stream</th>
<th>% of priority area</th>
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</thead>
<tbody>
<tr>
<td>Red (Level 1)</td>
<td>14,256</td>
<td>28%</td>
</tr>
<tr>
<td>Yellow (Level 2)</td>
<td>7,920</td>
<td>16%</td>
</tr>
<tr>
<td>Green Priority (Level 3)</td>
<td>27,984</td>
<td>56%</td>
</tr>
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**Goal:**
All areas progressing toward site capable vegetation in riparian areas adjacent to ag land by June 2014
Examples

- Currently WQ Program has 9 pilot projects for priority areas throughout the state

- Temperature
- Bacteria/Nutrients
- Sediment/Erosion

*Riparian vegetation as a surrogate addresses multiple parameters of concern
Pilot Projects

Clackamas
Curry
Inland Rogue

Lower John Day
Middle Willamette
Molalla-Pudding

Owyhee
Southern Willamette
Umpqua
Statewide timeline goals

2011 – 9 areas identified pre- and post-assessment completed by 2013

2012 – 10 more areas identified, pre- and post-assessment by 2014

2013 – Remaining 19 areas identified, pre-and post-assessment by 2015
Questions?