

ODA Ag Water Quality and Strategic Implementation

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Agricultural Water Quality Program
Soil and Water Conservation District Program
OWEB BOD July 29, 2015

120 seconds on the ODA Weed Program

WHY?

Invasive weeds have direct connection to water quality

ODA Ag Water Quality Program & ODA Weed Program = Partnership

Weed control = Early Detection, Rapid Response or "*before it's too late*"

Weed Awareness means continued funding for local weed programs and grants.



Orange
Hawkweed



Spotted
Knapweed



Waterprimrose,
Ludwigia

The Importance of Early Detection

English ivy

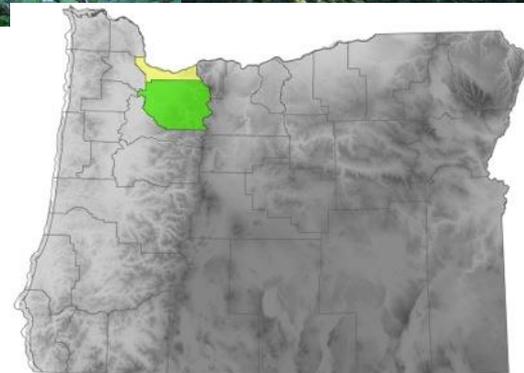
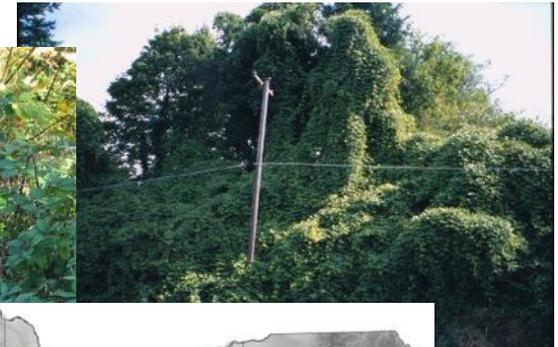
- ✓ Introduced with European settlers and the nursery trade; state listed in 2001.
- ✓ Widespread in Western Oregon today.



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Kudzu

- ✓ State listed in 1995; discovered growing in Clackamas Co. in 2000 and Multnomah Co. in 2001.
- ✓ Eradicated in Clackamas Co; close to eradication in Multnomah.

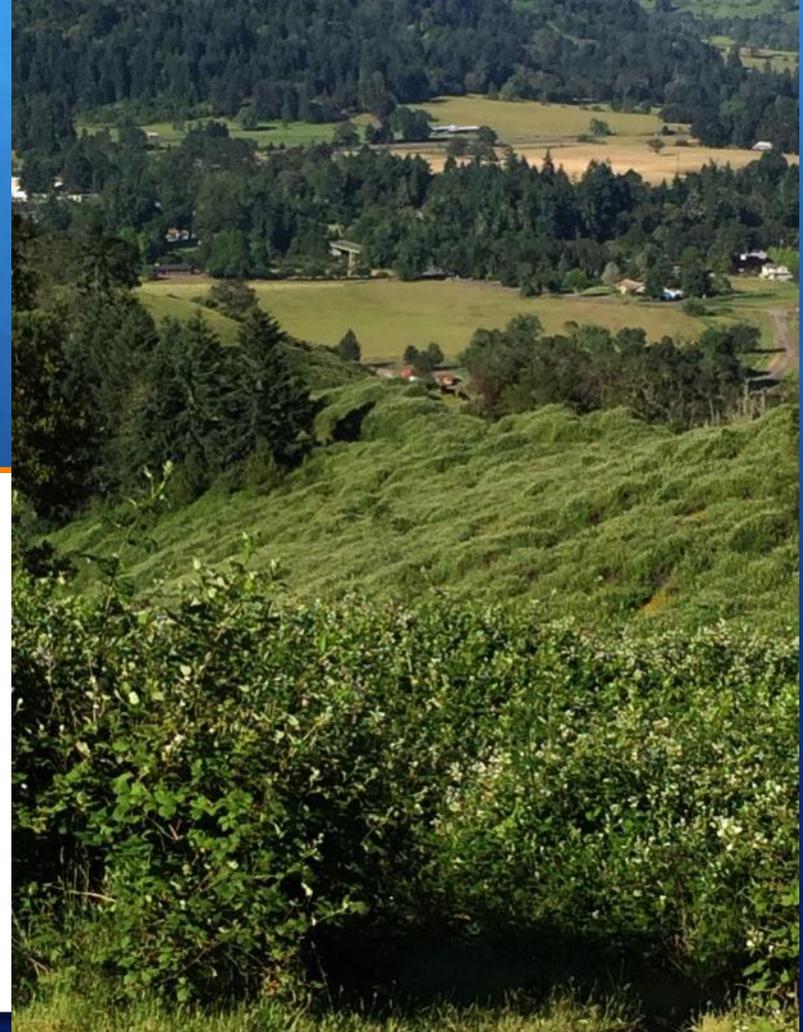


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Noxious Weeds and Water Quality

ORS 569.180 Noxious weeds as public nuisance; policy.

In recognition of the imminent and continuous threat to natural resources, watershed health, livestock, wildlife, land and agricultural products of this state....noxious weeds are declared to be a public nuisance and ***shall be detected, controlled and, where feasible, eradicated on all lands in this state...***



Armenian (Himalayan) blackberry in SW Oregon

What's the Problem?

- + Noxious weeds are generally poor at preventing erosion and providing organic matter to soil.



Russian knapweed root system



Native perennial grass root system

What's the Problem?

- + Noxious weeds form solid stands that greatly reduce the complexity of riparian habitat structure.



Giant knotweed along a NW Oregon coastal river

What's the Problem?

- + Aquatic noxious weeds directly impact water quality by adversely affecting dissolved oxygen, pH, and other water chemistry.



Yellow floating heart in SW Oregon

Available Resources

- + ODA Noxious Weed Control Program Staff
- + Oregon State Weed Board Grants
- + Local Cooperative Weed Management Areas
- + Local County Programs
- + Local Soil and Water Conservation Districts



"We're here to help!"

www.oregon.gov/ODA/programs/Weeds

503-986-4621

SWCD Program Overview

- + ODA manages OWEB pass-through grant funds

 - + \$50,000/year for water quality work

 - + \$20,000/year for business operations

- + 45 SWCDs statewide

 - ◆ 18 w/ 1 to 3 staff

 - ◆ 19 w/ 4 to 6 staff

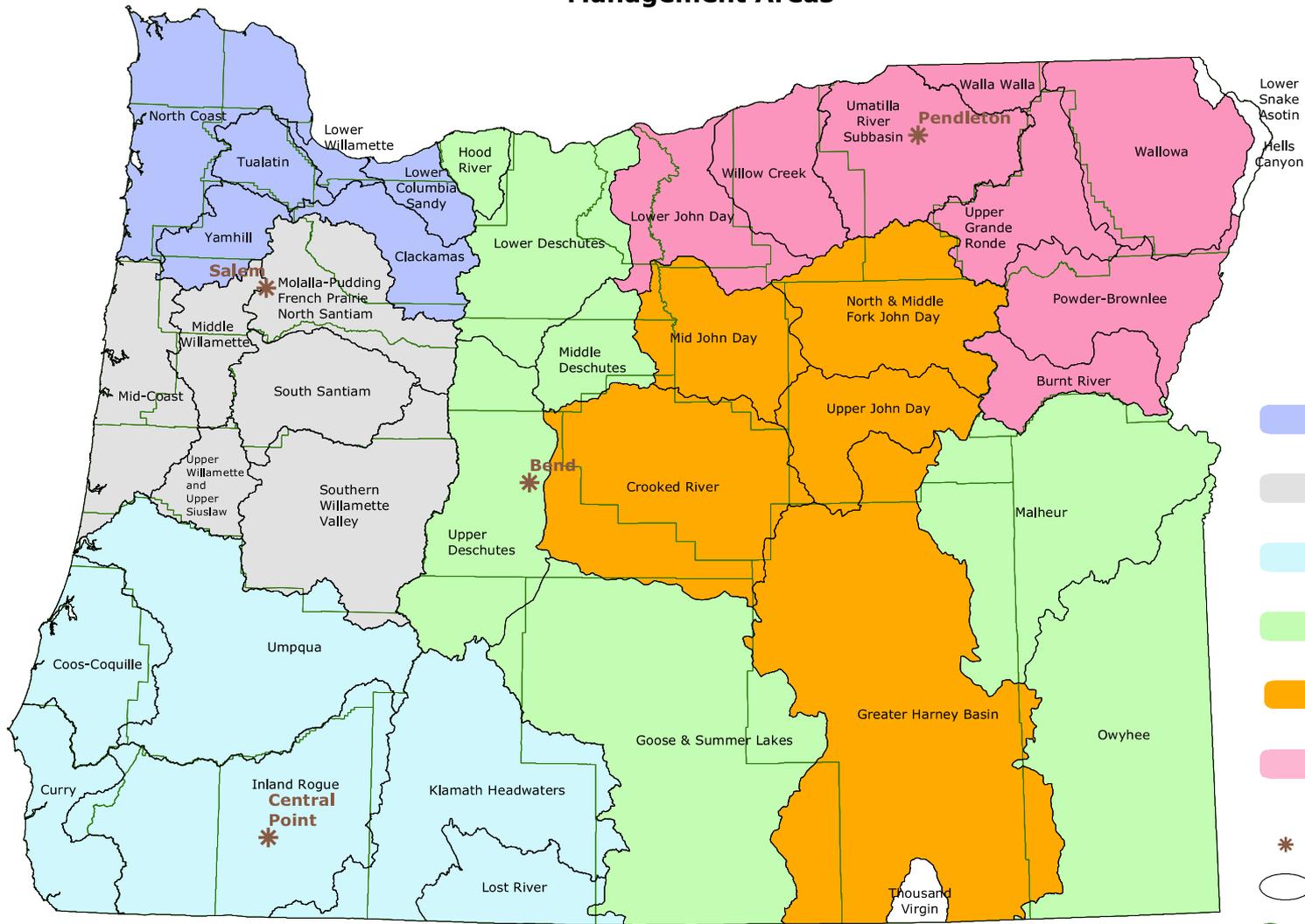
 - ◆ 4 w/ 7 to 9 staff

 - ◆ 4 w/ 10 or more

 - ◆ 13 w/ 5 directors

 - ◆ 32 with 7 directors

Oregon Department of Agriculture Agricultural Water Quality Management Program Management Areas

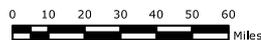


Agriculture Water Quality Specialists

Ag WQ Program Manager
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- * Location of WQ Specialists
- Agricultural Water Quality Management Areas
- County Lines

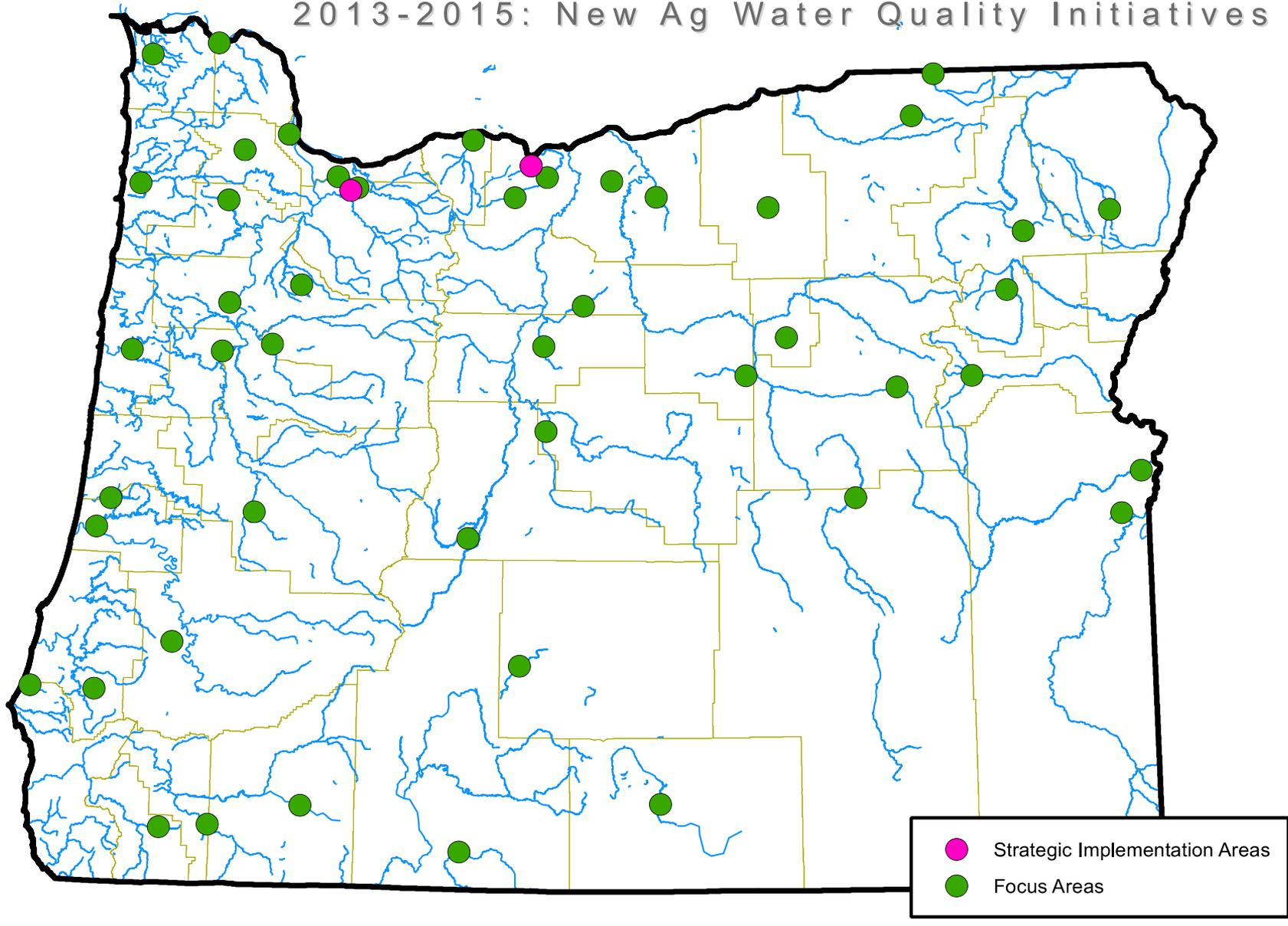
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Prepared By: RM/aboughan
Date Saved: 2/18/2014
Date Printed: 2/18/2014
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Projection: NAD 1983 Oregon Statewide Lambert Equal Area
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2013-2015: New Ag Water Quality Initiatives



 Major Streams  SWCD Boundary

0 30 60 120 Miles



Strategic Focus of Resources

Focus Areas

SWCD-Led

Tool: Streamside
Vegetation Assessment

Measure percentage of
lands meeting goals
of Area Plans



Strategic Implementation Areas

ODA-Led

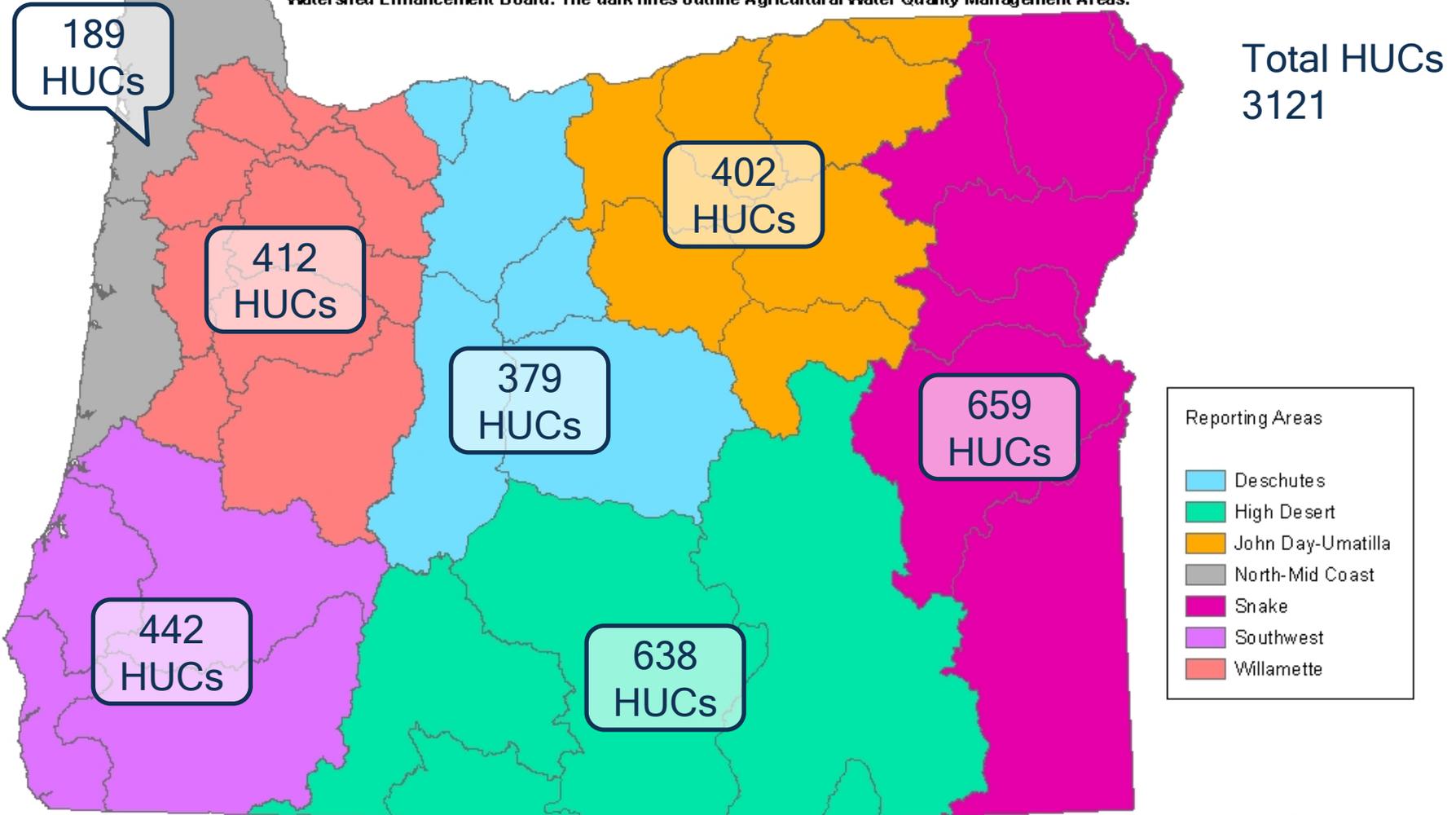
Tool: Compliance
Evaluation

Measure percentage of
lands achieving compliance
with Area Rules

Need both to "tell the story" of ag and water quality

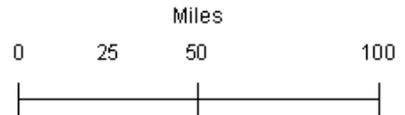
Agricultural Water Quality Reporting Areas

The Oregon Department of Agriculture uses these regions for reporting information such as monitoring data, implementation actions, and compliance activities. These regions are modified from those used by the Natural Resources Conservation Service, Oregon Association of Conservation Districts, and the Oregon Watershed Enhancement Board. The dark lines outline Agricultural Water Quality Management Areas.



Reporting Areas

- Deschutes
- High Desert
- John Day-Umatilla
- North-Mid Coast
- Snake
- Southwest
- Willamette



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Prepared by: Elise Johnson
 Date: 04/20/2011
 Date Printed: 04/20/2011
 Scale: 1:500,000
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FUTURE SIA SITE IDENTIFICATION AND PRIORITIZATION

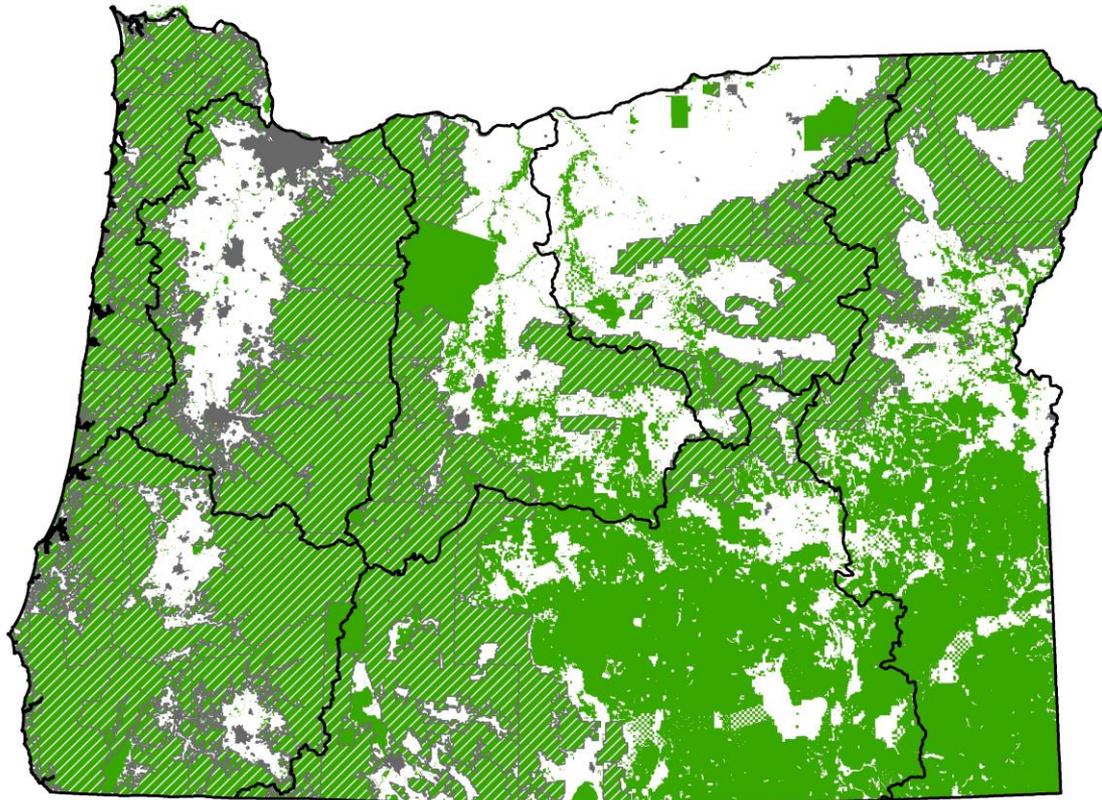
→ Identify and remove non-Ag lands - Ex: Federal lands, Tribal lands, Urban

→ Identify and remove lands without streams

→ Identify six-field HUCs (10,000 – 40,000 acres)
with Ag and Water

→ Prioritize HUCs

SIA Prioritization



UrbanGrowthBoundary Forestry Zones Not Private Land



Ag Land



Urban



Forestry Zone



Not Private Lands

3121 HUCS Statewide minus
HUCS without Ag or water =

HUCs WITH AG & WATER =
2174

HUCS with Ag & Water and.....
CRITERIA! =

HUCs with Ag and Water: (2174 HUCs)

Score is calculated based the stream feet or acres of each category divided by the total stream feet or acres in agricultural use, multiplied by the scoring factor (10 for water quality and 5 for aquatic species of concern).

+ Water Quality; (303(d) listed or TMDL:

Criteria:

| | |
|-------------------|------|
| Temperature | (10) |
| Bacteria | (10) |
| Nutrients | (10) |
| Sediment | (10) |
| <hr/> | |
| Possible WQ score | (40) |

HUCs with Ag, Water, and WQ Criteria = 1018

+ Aquatic Species of Concern

Criteria: Priority 1 and 2 from ODFW Aquatic Species of Concern data layer.

Possible score (5)

Priority 1 and 2 includes salmonid species and other non-salmonid species that are endemic to Oregon.

Water Quality SCORING example

Water Quality Score (303(d) listed or TMDL)

Criteria:

| | |
|------------------|------|
| #1 - Temperature | (10) |
| #2 - Bacteria | (10) |
| #3 - Nutrients | (10) |
| #4 - Sediment | (10) |
| Possible total | (40) |

WQ Criteria: 1a

5,000 feet - TMDL for Temperature

5,000 feet / 10,000 feet = .5

.5 x 10 = 5

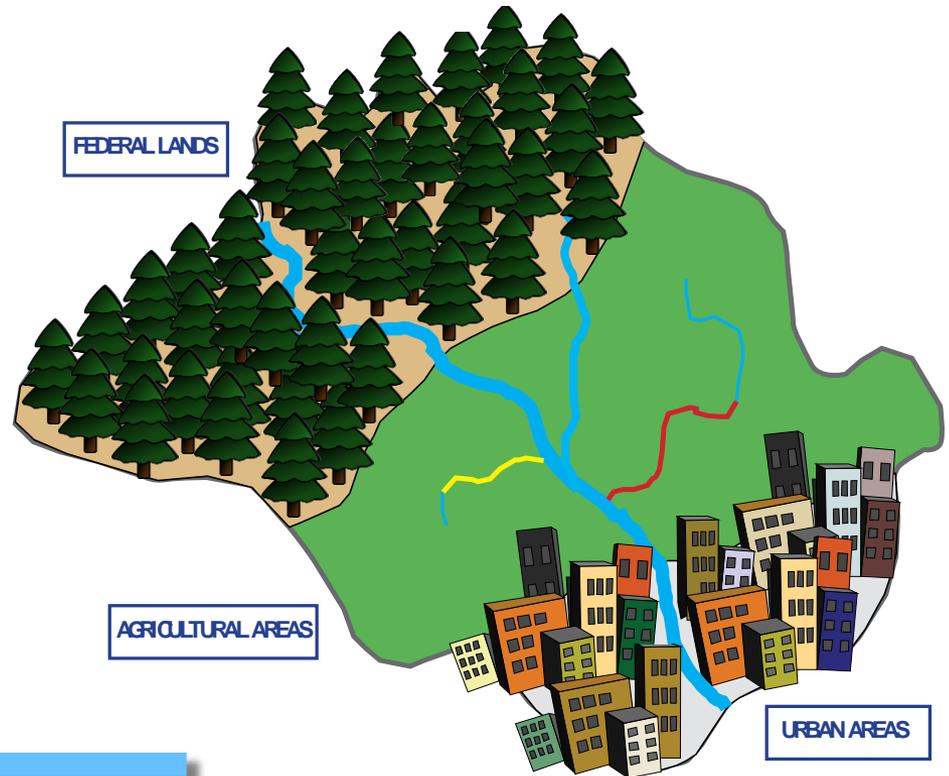
WQ Criteria: 1b

3,000 feet - TMDL for Bacteria

3,000 feet / 10,000 feet = .3

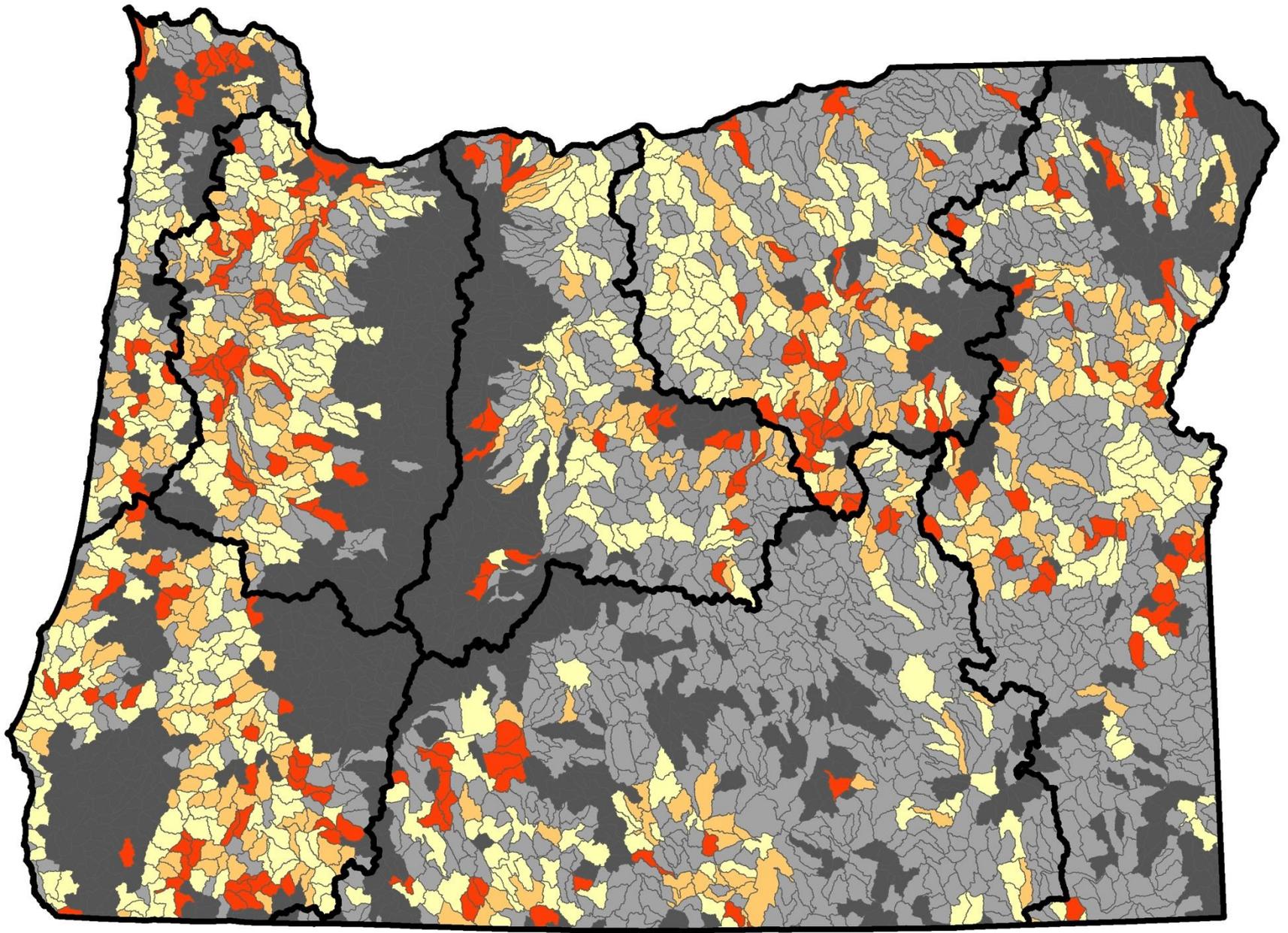
.3 x 10 = 3

Total WQ Score = 8



Prioritization Results:

| Geographic Area | All HUCs | HUCs (with ag and water) | Scored HUCs | | | | | | |
|-------------------|----------|--------------------------|----------------|---------------------|-----|-----|------|------------------|--------------------|
| | | | No WQ Criteria | WQ Criteria present | Low | Med | High | Score Range high | Average Score high |
| Deschutes | 379 | 237 | 133 | 104 | 51 | 32 | 21 | 6.53 to 25.00 | 9.70 |
| High Desert | 638 | 472 | 359 | 113 | 58 | 33 | 22 | 10.00 to 30.05 | 15.11 |
| John Day/Umatilla | 402 | 343 | 177 | 166 | 84 | 49 | 33 | 5.60 to 13.53 | 7.69 |
| North/Mid Coast | 189 | 130 | 47 | 83 | 40 | 25 | 18 | 11.82 to 25.00 | 16.09 |
| Snake | 659 | 503 | 312 | 191 | 96 | 56 | 39 | 7.76 to 15.00 | 10.07 |
| Southwest | 442 | 248 | 52 | 196 | 98 | 59 | 39 | 8.74 to 25.00 | 11.64 |
| Willamette | 412 | 241 | 76 | 165 | 82 | 50 | 33 | 8.06 to 34.52 | 10.75 |
| Total | 3121 | 2174 | 1156 | 1018 | 509 | 304 | 205 | N/A | N/A |

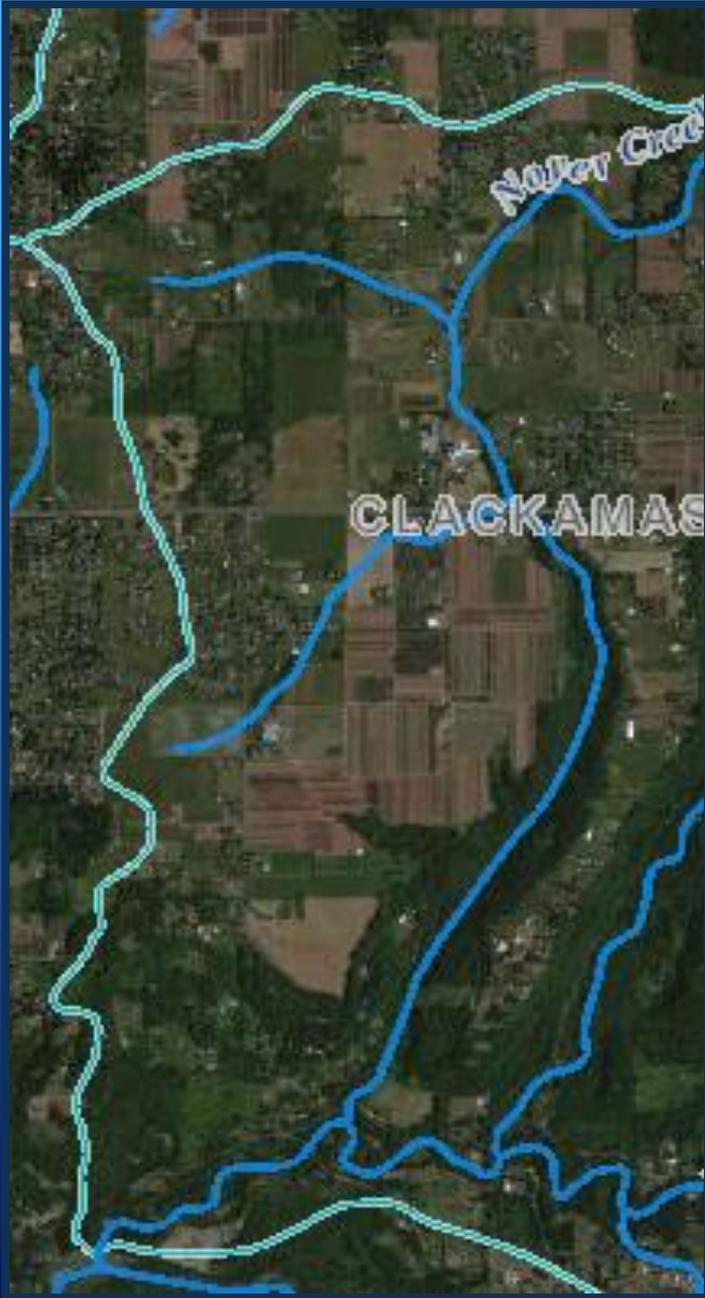


Local Partner Considerations

- + Drinking Water Source Protection Areas
- + Groundwater Management Areas
- + Pesticide Stewardship Partnerships
- + DEQ long-term ambient water quality monitoring locations
- + Prior work—build on or potentially harm
- + Current Focus Area
- + Current partner priorities—to align resources (Natural Resources Conservation Service, Oregon Watershed Enhancement Board, Oregon Department of Environmental Quality, Oregon Association of Conservation District)

Compliance Evaluation and Implementation





Compliance Evaluation:

Evaluation Methods:

Publically Available Information

- *Aerial Photos
- *Topographic maps
- *Stream location maps
- *Property boundary maps
- *Field Survey



Threat Assessment Concern on Agricultural lands

Categories:

Manure Piles

Bare Ground

Riparian Vegetation



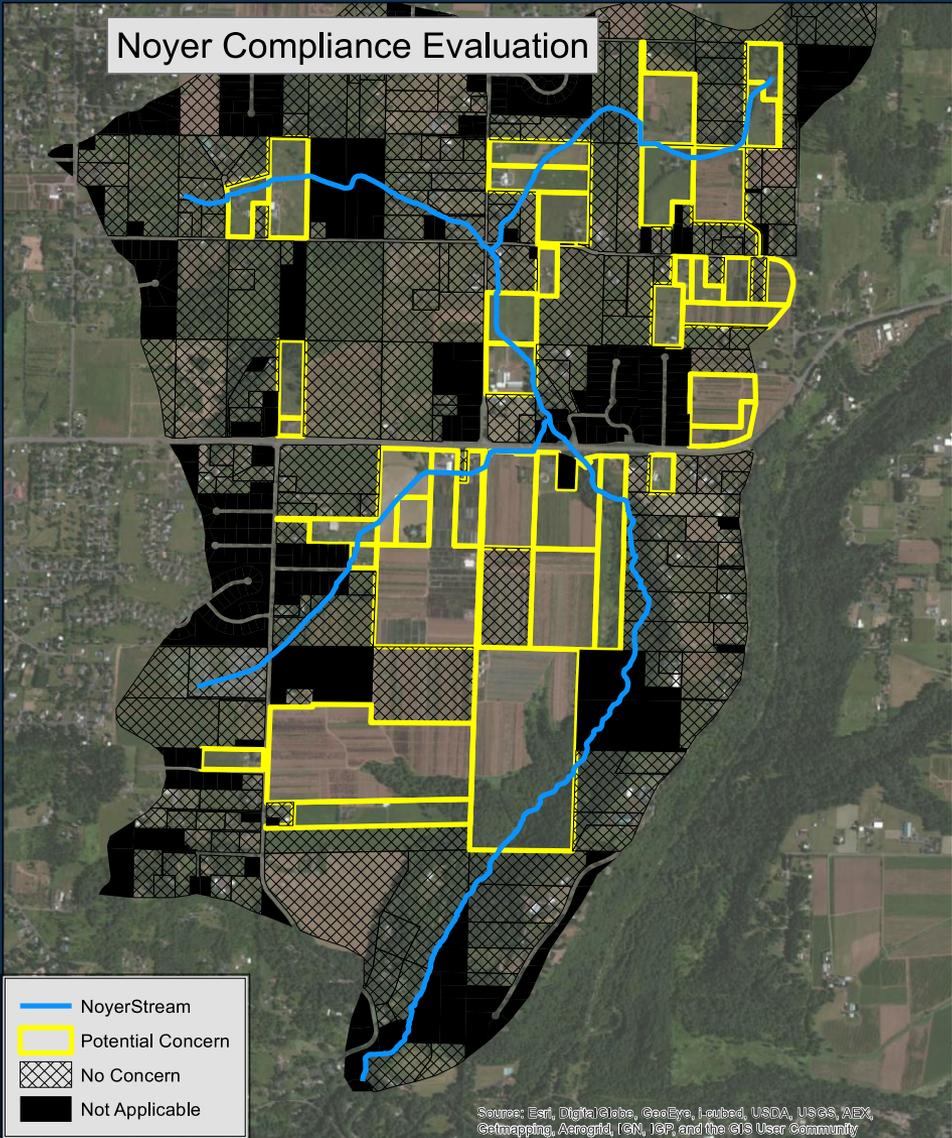
Riparian Vegetation

Low Concern— Unable to determine if Ag activities are preventing vegetation from establishing

Moderate concern—Agricultural activity may be preventing vegetation from establishing.

Significant/Serious Concern—Agricultural activity observed during field evaluation and appears to be preventing vegetation from establishing.

Noyer Compliance Evaluation



— NoyerStream
 Potential Concern
 No Concern
 Not Applicable

Source: Esri, DigitalGlobe, GeoEye, Earthstar, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, JEP, and the GIS User Community



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Noyer Creek – Clackamas Co. Compliance Evaluation

Not Applicable
 No Concern
 Potential Concern

2013-2014 Strategic Implementation Areas

Noyer Creek (Clackamas County)

Total Parcels in Assessment Area = 623

- 368 (N/A) (Fed. Land, Not Ag etc.)

237 "Evaluated"

| Evaluation Categories | Pre-evaluation | Post-evaluation |
|-----------------------|--------------------|------------------|
| No Concern | = 200 Parcels | 209 Parcels |
| Low Concern | = 19 Parcels | 26 Parcels |
| Moderate Concern | = 16 Parcels | 0 Parcels |
| Significant Concern | = 2 Parcels | 2 Parcels |
| Serious Concern | = <u>0 Parcels</u> | <u>0 Parcels</u> |
| Total | = 237 Parcels | 237 Parcels |

SIAs July 2015

Wasco County

Polk County (w/Yamhill)

Yamhill County (stand alone SIA)

Columbia County (3 x 6th Field HUICS)

Jackson County

East Multnomah (w/Clackamas)

Deschutes County

July 2016 – 6-7 more

Questions??

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Oregon
Department
of Agriculture