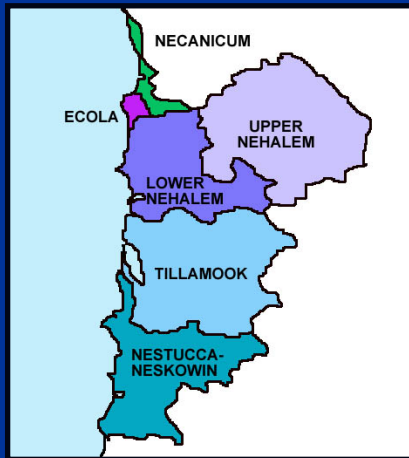


# Coastal Coho Project



North Coast Basin Watershed Groups  
Monday, November 14  
Rockaway Beach, OR

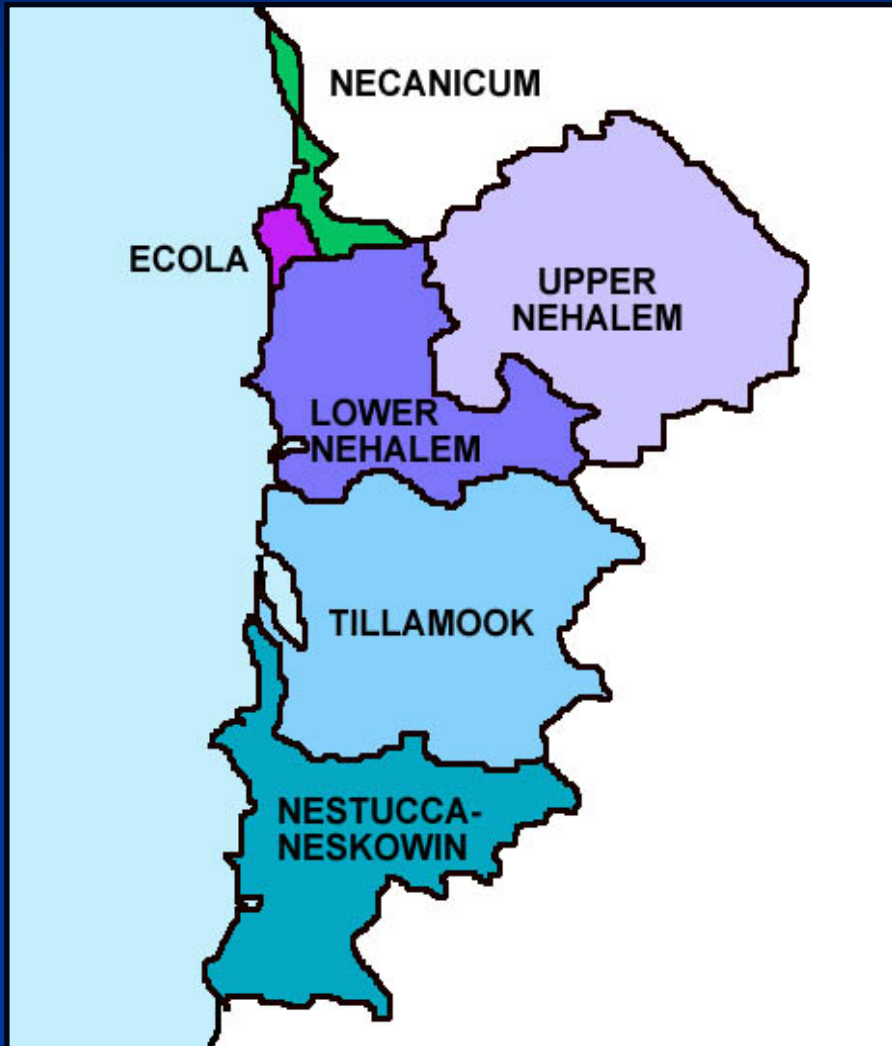
# Today's Discussion

- The North Coast Basin and its Watershed Groups
- Limiting Factors – Assessment and Local Decision-making
- Examples of Actions Taken
- Challenges and Future Risks (panel)
- Take Home Messages

# Oregon's North Coast Basin



# North Coast Basin Watersheds



- Largest city:
  - Seaside – 6,200
  - Tillamook – 4,000
- ~ 2,000 square miles
- Pop (2003) – 40,000
  
- 84% forestland
- 4% urban
- 7% agriculture
- 4% estuary
- 1% residential

# North Coast Council Profiles

System	Formed	Members	Administration	Consensus +	Staff
Necanicum	1997	10-15	501(c)(3) pndg	Consensus	0.1
Ecola	1996	5-10	CREST	Majority	0.2
Upper Nehalem	1996	15-20	501(c)(3)	75%	0.5
Lower Nehalem	1997	20-25	501(c)(3)	75%	0.4
Tillamook	1998	20-25	501(c)(3) pndg	66%	0.7
Nestucca/ Neskowin	1996	5-10	501(c)(3)	Consensus	.5
Tillamook Estuaries Partnership	1994	40	501(c)(3)	Majority Vote	6

# Ecola Creek

Formed	Members	Administration	Decisions	Staff
1996	5-10	CREST	Consensus	0.2 FTE

- Acres  
24,273
- 21 Stream Miles
- Land Use: acres
  - 97% Private Forestry
  - <1% State Forest & Parks
  - 3% Developed
- High priority for streamflow restoration: 7,414 acres



# Necanicum

Formed	Members	Administration	Decisions	Staff
1997	15-20	501(c)(3) pndg	Consensus	0.1 FTE

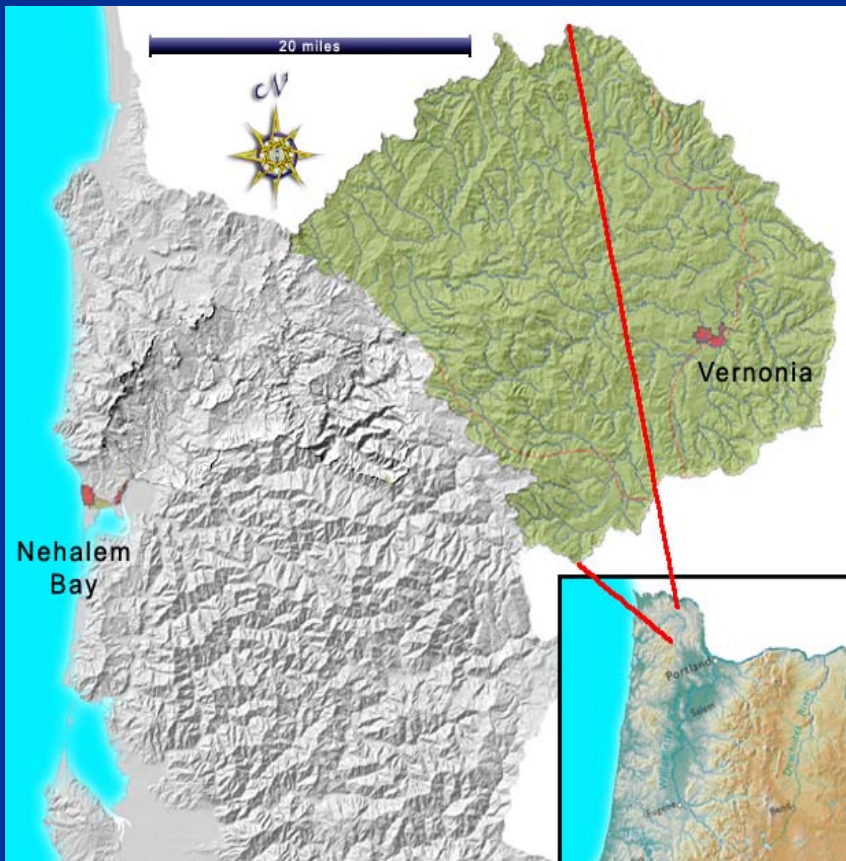
- 53,817 Acres
  - Main & South Fork
  - Neawanna & Neacoxie sub-watersheds
  - 4,100 Acre Estuary
- 163 Stream Miles
- Land Use:
  - 74% Forestry
  - 8% Non-industrial Forest
  - 4% State Forest & Parks
  - 4% Developed
  - 3% Rural Residential
  - 7% Wetlands





# Upper Nehalem

Formed	Members	Administration	Decisions	Staff
1996	15-20	501(c)(3)	Consensus	0.5 FTE

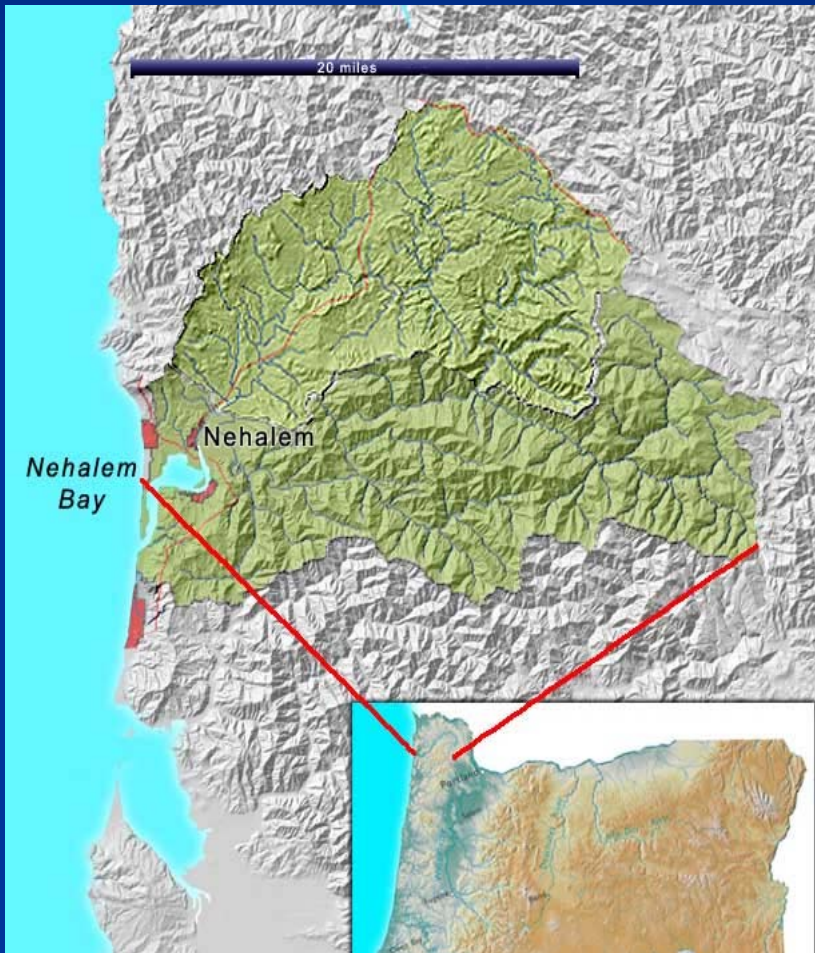


- 346,270 Acres
  - Mainstem above OR 26
  - Fishhawk Lake
  - Rock Creek
  - ODF Critical Habitat Areas
  - 43% of area is High Priority for stream flow restoration
- 846 Stream Miles
- 68% Private Land
- Land Use:
  - 85% Forestry
  - 14% Non-industrial Forest & Agriculture
  - <1% Urban Residential



# Lower Nehalem

Formed	Members	Administration	Decisions	Staff
1997	25-30	501(c)(3)	Consensus	0.4 FTE

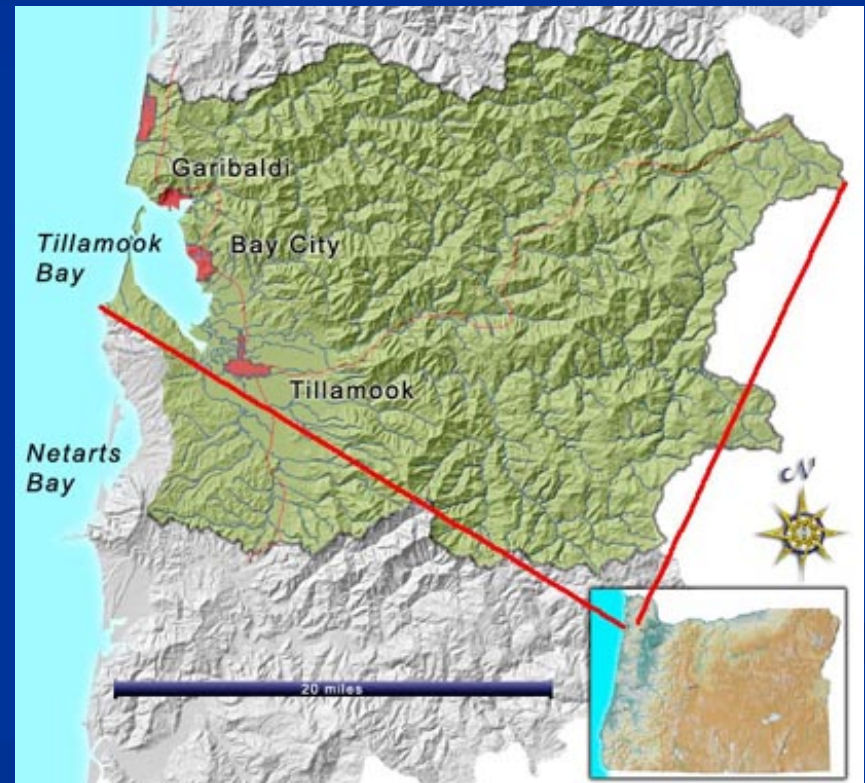


- 200,172 Acres
  - Main stem below OR 26
  - Salmonberry
  - N. Fork
  - 2,749 Acre Estuary
- 274 Stream Miles
- Land Use:
  - 85% Forestry
  - 14% Non-industrial Forest & Agriculture
  - <1% Urban Residential

# Tillamook Bay

Formed	Members	Non-Profit	Decisions	Staff
1998	20-25	501(c)(3) pndng	Consensus	0.7 FTE

- 359,336 acres
  - Tillamook, Trask, Wilson, Kilchis, & Miami Rivers
  - Tillamook Bay Estuary
- 665 stream miles
- 89% public land
- 11% private land
- High priority for streamflow restoration: 95,243 acres



# Nestucca-Neskowin

Formed	Members	Non-Profit	Decisions	Staff
1996	5-10	501(c)(3)	consensus	.5

- 537 stream miles
- 550 acres of estuary
- Agriculture – 14%
- Forest – 82%
- 11% private land
- Urban/residential – 4%



Limiting Factors –  
Assessment and Local Findings

# Limiting Factors – Assessment and Local Findings

Population	Primary Bottleneck	Secondary Bottleneck	Viability Status
Necanicum	Stream Complexity	--	Pass
Nehalem	Stream Complexity	Water Quality	<b>Fail</b>
Tillamook	Stream Complexity	Water Quality	<b>Fail</b>
Nestucca	Stream Complexity	--	Pass



# Limiting Factors – Assessment and Local Findings

Population	Primary Bottleneck	Secondary Bottleneck	Viability Status
Necanicum	Stream Complexity	--	Pass
Nehalem	Stream Complexity	Water Quality	<b>Fail</b>
Tillamook	Stream Complexity	Water Quality	<b>Fail</b>
Nestucca	Stream Complexity	--	Pass

- “What about !!!!!!!!!!!”



# Limiting Factors – Assessment and Local Findings

Population	Primary Bottleneck	Secondary Bottleneck	Viability Status
Necanicum	Stream Complexity	--	Pass
Nehalem	Stream Complexity	Water Quality	<b>Fail</b>
Tillamook	Stream Complexity	Water Quality	<b>Fail</b>
Nestucca	Stream Complexity	--	Pass

Oregon therefore concludes that it will often be more reasonable to simultaneously pursue remediation of both primary and secondary population bottlenecks, using local data to prioritize restoration funding at local spatial scales, rather than to adopt a narrow view of only attempting to remediate the primary risk factor bottleneck.

# Limiting Factors

- Do the Watershed Groups Agree with the Assessment's findings
  
- “Yes.....but concerns with.....”
  1. Single species approach vs. decision-making based on watershed health (water quality and TEP)
  
  2. Use of Intrinsic Potential Model in decision-making (Boxler Creek)
  
  3. Importance of site specific issues (Water quantity in the Necanicum)

*How do we decide what work to do and how does this correspond to Assessment?*

1) TEP Decision Making

# The National Estuary Program

- Section 320 of the Clean Water Act –  
“convene Management Conferences in  
*Estuaries of National Significance*”
- EPA-administered
- Purpose: To characterize priority problems,  
create and implement CCMP
- Locally nominated and managed



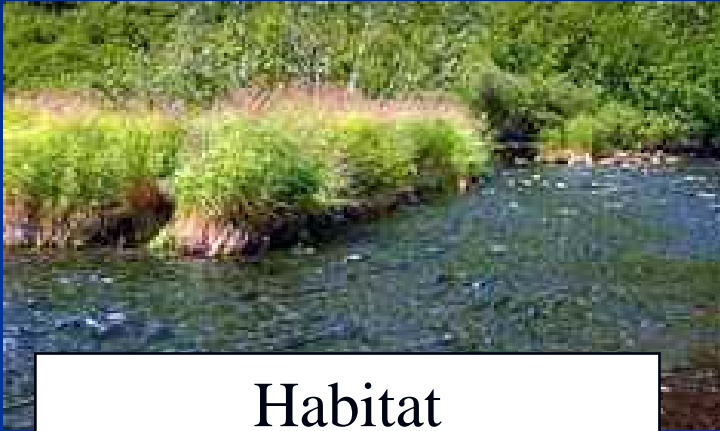
# The National Estuary Program

Restore and protect the integrity of the whole system -- its chemical, physical, and biological properties, as well as its economic, recreational, and aesthetic values.

- Purpose: Create and Implement CCMP



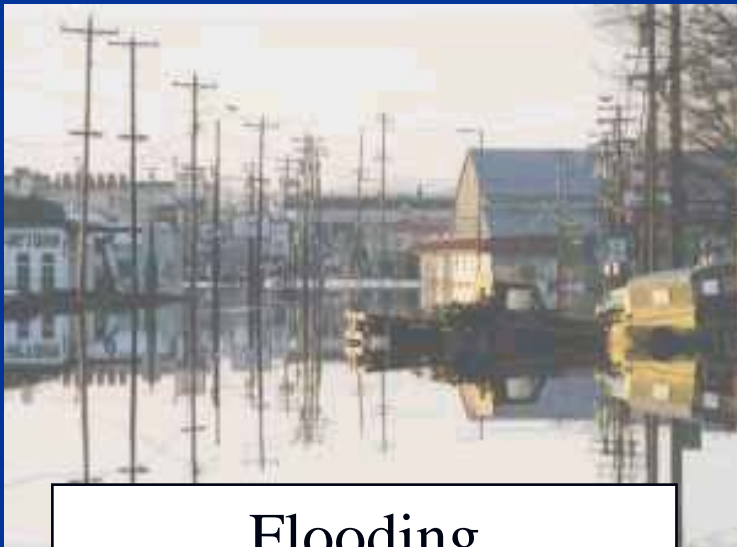
# CCMP - Priority Problems



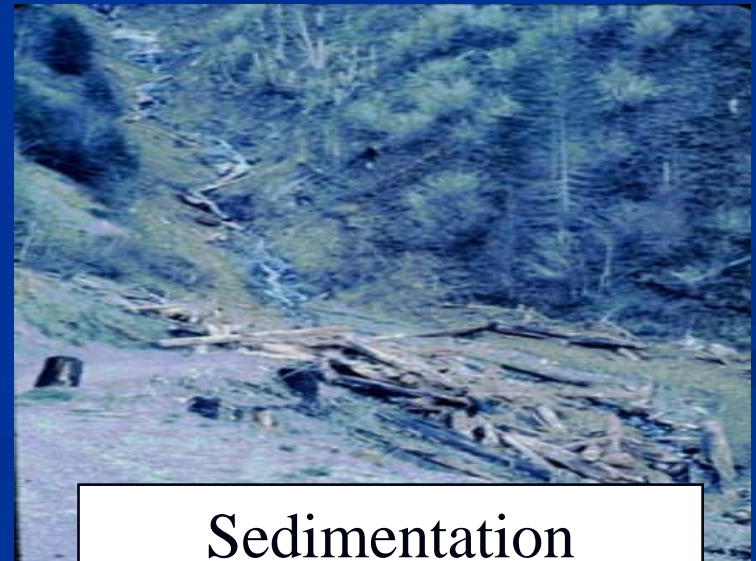
Habitat



Water Quality



Flooding



Sedimentation

# Other Species

In addition to this little guy TEP  
& North Coast Watershed  
Groups also focus on:



- Chinook, Fall and Spring
- Winter Steelhead
- Cutthroat Trout
- Chum Salmon
- Lamprey and other non-game

# CCMP and Coho

- Does not set target population. Adopts ODFW production and escapement goals.
- Establishes 10 year Habitat Restoration Objectives:
  - 100 miles of upland instream habitat
  - Upgrade 50% of all tidegates
  - Enhance 750 acres of tidal wetland
  - Enhance 500 miles of riparian habitat (!!!!)

# CCMP & Water Quality

- Water quality primary driver for establishment of NEP
- TMDLs in place
  - Nestucca Bay watershed: Bacteria, Temperature, and Sedimentation
  - Tillamook Bay: Temperature and Sedimentation
  - North Coast (Nehalem, Neccanicum, Young's, Clatskanie): Temperature and Bacteria
  - Recognized limitations in many other parameters, especially DO (currently inadequate data to list)

# TEP Decision-making

■ CCMP → Workplan Development → On-the Ground

## ■ CCMP Development

- Research and Watershed Assessments
- Merge agency resources re: priorities
- Public Input

## ■ Workplan Development

- Staff Recommendations: Prioritizations and Opportunity
- Board Input and Approval

## ■ On the Ground Decisions

- Contractors
- Agency Partners (ODFW, DEQ, BLM, others)

# CCMP: Key Watersheds

- Data from Forest Ecosystem Management Team and American Fisheries Society
- Provides broad look at priority watersheds

STREAM	KY T1	KY T2	AFS ADA	AFS CR	SRCE	CO	CHF	CHS	CHM	STW	STS	CTS	Comments
Bewley Cr. (Tillamook)					X				X				
Clear Cr. (Kilchis)	X				X				X				
Coal Cr.			X		X				X				
Elkhorn Cr.	X				X	X							
Kilchis R. Mainstem					X		X						
L. N. Fk. Wilson R.	X		X		X	X			X				
L. S. Fk. Kilchis R.					X	X				X			
Miami R.			X										
Miami R. Lower Mainstem			X		X				X				Source for chum below Mimick Cr.
Miami R. Upper Mainstem			X		X		X			X			Above Prouty Cr.
N. Fk. of N Fk. Trask			X		X					X			
N. Fk. Trask R.				X	X			X		X			
S. Fk. Kilchis R.					X					X			
Simmons Cr.					X	X							
Tillamook R. Lower Mainstem					X		X						
Tillamook R. Upper Mainstem					X					X			
Trask R. Mainstem					X		X						
Wilson R. Mainstem					X		X						

**KEY:**

KY T1 – Forest Ecosystem Management Team (FEMAT) Tier 1 Key Watershed  
 KY T2 – FEMAT Tier 2 Key Watershed  
 AFS ADA – Oregon Chapter American Fisheries Society Aquatic Diversity Area  
 AFS CR – Oregon Chapter American Fisheries Society Critical Corridor  
 SRCE – Source  
 CO – Coho

CHF – Fall Chinook  
 CHS – Spring Chinook  
 CHM – Chum  
 STW – Winter Steelhead  
 STS – Summer Steelhead  
 CTS – Sea Run Cutthroat



# CCMP: Core Areas

- Purpose: Prioritize Enhancement Sites throughout Watershed
- Based on ODFW Habitat Inventories\* and AFS Aquatic Diversity Areas

Trask River basin									
Stream Segment	Length (m)	Length (ft)	Channel Width	Priority	Habitat Survey	Field Verified	ODF District	From	To
E Fk of S Fk Trask River	1799	5900	4-12m	1		X	TILL	TJ on left at T2S-R7W-26	Boundary of SEC 25 and 26
Edwards Creek	5411	17747	4-12m	1	YES		TILL	Mouth	End of old road
South Fork Trask River	4635	15202	4-12m	1	YES	X	TILL	Bill Creek	Headwaters at T2S-R8W-35W
Summit Creek	104	342	4-12m	1		X		South Fork Trask River	Upstream 100m
Bill Creek	1084	3556	4-12m	2	YES	X	TILL	Mouth	Upper ODF Boundary
Bill Creek	264	867	4-12m	2	YES	X	TILL		
Bill Creek	1378	4520	4-12m	2	YES	X		Upstream ODF Boundary	Upstream 1300m at T2S-R8W-26N
Boundary Creek	936	3070	4-12m	2	YES	X	TILL	Mouth	Headquarters Camp Cr.
Clear Creek	4547	14913	4-12m	2	YES	X	TILL	Mouth	Barrier at T1S-R6W-7
Cruiser Creek	1094	3588	4-12m	2	YES			Mouth	ODF Boundary
Cruiser Creek	1525	5002	4-12m	2	YES		TILL	ODF Boundary	400m past TJ Right
Cruiser Creek Trib 1	797	2614	4-12m	2			TILL	Mouth	
Elkhorn Creek	4399	14430	4-12m	2	YES		TILL	Cruiser Creek	TJ at T2S-R6W-75W
Elkhorn Creek Trib 1	1553	5094	4-12m	2	YES		TILL	TJ at T2S-R6W-75W	T2S-R7W-13C
Green Creek	1888	5537	4-12m	2		X		Mouth	1700m
Headquarters Camp Creek	590	1935	4-12m	2	YES	X	TILL	Boundary Creek	Stretch Creek
Joyce Creek	672	2204	4-12m	2	YES	X	TILL	Mouth	1st TJ on right
Michael Creek	984	3228	4-12m	2		X	TILL	Mouth	TJ on left at T1S-R7W-23
Mill Creek Trib 1	1744	5721	4-12m	2				Mill Creek	1800m
Mill Creek Trib 2	982	3221	4-12m	2				Mill Creek	Road X-ing at T2S-R9W-10SW
Rock Creek	1024	3358	4-12m	2	YES	X	TILL	Mouth	1000m (Bend to left)
Steampot Creek	1207	3959	4-12m	2	YES	X	TILL	Mouth	TJ on right at T2S-R7W-21SE
Trask River Trib 1	1443	4732	4-12m	2				Mouth	1400m
Bark Shanty Creek	1747	5732	12-20m	2	YES	X	TILL	Mouth	Barrier at T1S-R7W-32S
South Fork Trask River	5203	17066	12-20m	2		X	TILL	Mouth	Bill Creek
Hembre Creek	448	1471	4-12m	3		X	TILL	Mouth	Road Crossing
N Fk of N Fk Trask River	3701	12140	4-12m	3			FG	Large TJ on left at T1S-R6W-9	Forks at T1N-R6W-34
Gold Creek	249	816	4-12m	4	YES			Mouth	Hatchery Dam
E Fk of S Fk Trask River	9627	31578	12-20m	4		X	TILL	Scotch Creek	TJ on left at T2S-R7W-26
Elkhorn Creek	3758	12327	12-20m	4	YES		TILL	Mouth	Cruiser Creek
M Fk of N Fk Trask River	3979	13051	12-20m	4	YES		FG	Elkhorn Creek	Barrier at T1S-R6W-27
N Fk of N Fk Trask River	5428	17803	12-20m	4		X	FG	Mouth	Large TJ on left at T1S-R6W-9

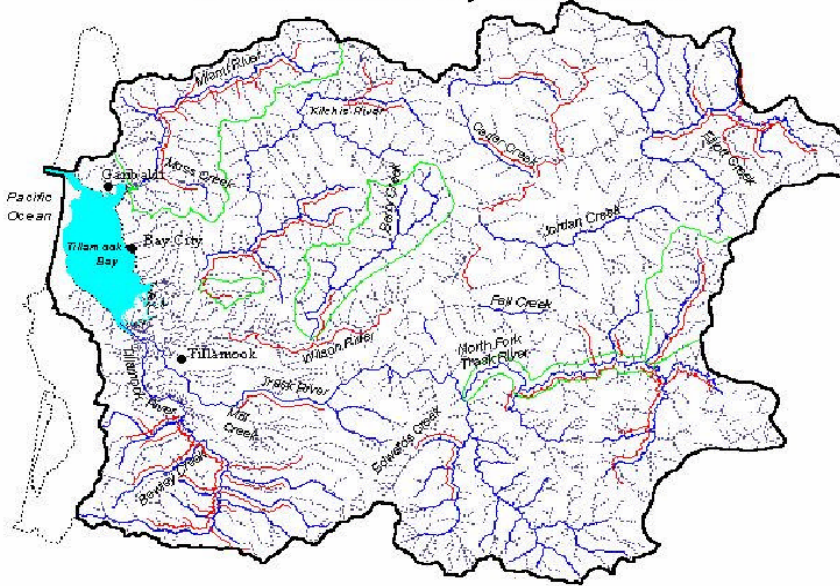
Priority: 1 = High, 2 = Moderate, 3 = Low, 4 = Very Low, 5 = Federal Land (No priority); ODF District: AST = Astoria, FG = Forest Grove, TILL = Tillamook.

Example from Trask River basin

\*North Coast Stream Project Guide...to Restoration Sites and Site Selection (Barry Thom and Kelly Moore)

# CCMP: Core Areas

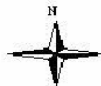
Oregon Plan Core Areas and American Fishery Society Aquatic Diversity Area in Tillamook Bay Watershed



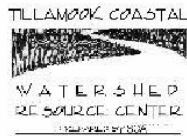
- Watershed Boundary
- Oregon Plan Core Areas
- American Fisheries Society Aquatic Diversity Areas
- Streams Surveyed
- Unsurveyed Streams

No warranty, express or implied, is made regarding the accuracy or utility of the data on any other system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data and aggregate use with other data. It is also strongly recommended that careful attention be paid to the contents of the metadata file associated with these data. The Tillamook Coastal Watershed Resource Center shall not be held liable for improper or incorrect use of the data described in this metadata file.

\* Oregon Plan Core Areas (from ODFW) as designated in the Original Draft Oregon Plan dated August 8, 1986. Core Areas were delineated by species using procedures described in the "Original Draft Plan" dated August 19, 1996. This document is available at <http://www.oregon-plan.org/reports.html>. The specific delineation procedures are discussed in SECTION VIIH.

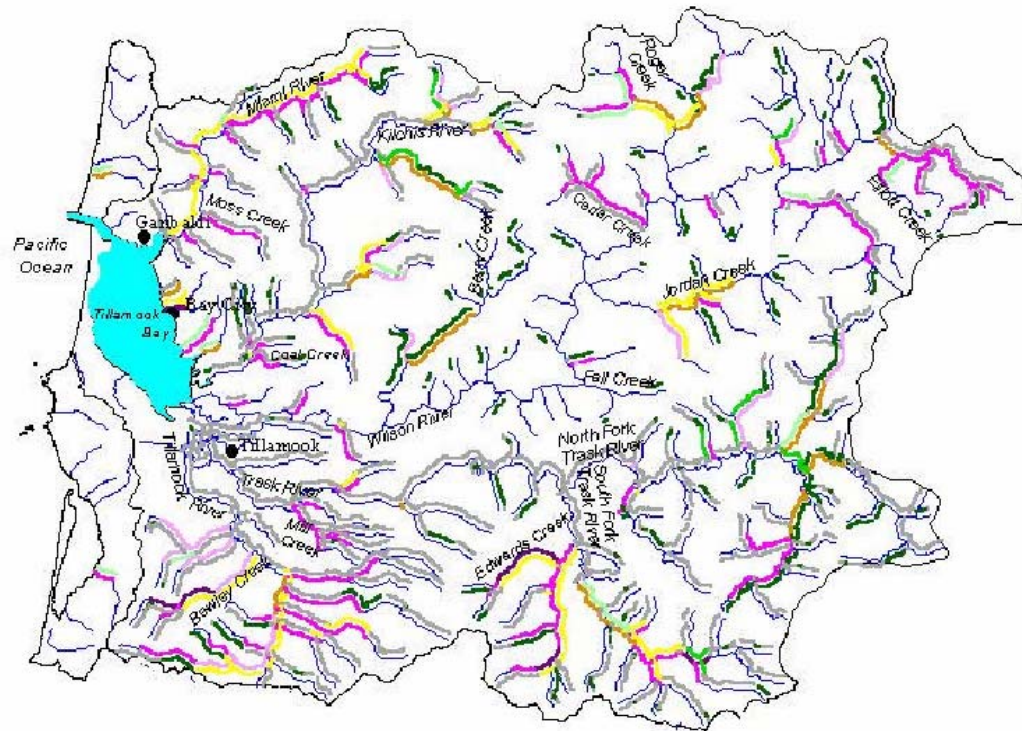


0 1 2 3 4 5 Miles



- ODFW Habitat Inventory
- Prioritized site selection for restoration providing ranking: 1 (high) – 4 (very low)
- 1 & 2s Yielded CCMP Target: “Enhance 100 miles of upland instream habitat”

# Core Areas and Access



## Access

-  Easy
-  Moderate
-  Low
-  None
-  Unknown

## Priority Instream Habitat Enhancement Sites

-  High



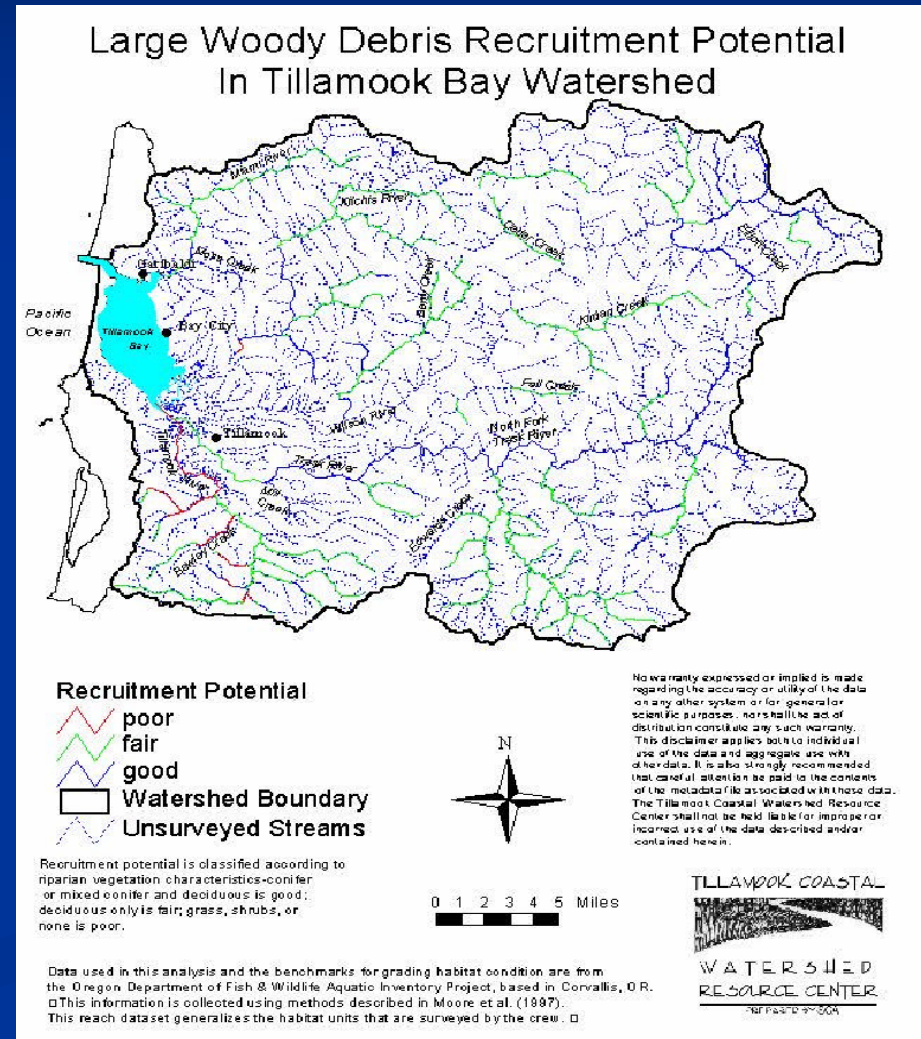
0 1 2 3 4 5 Miles

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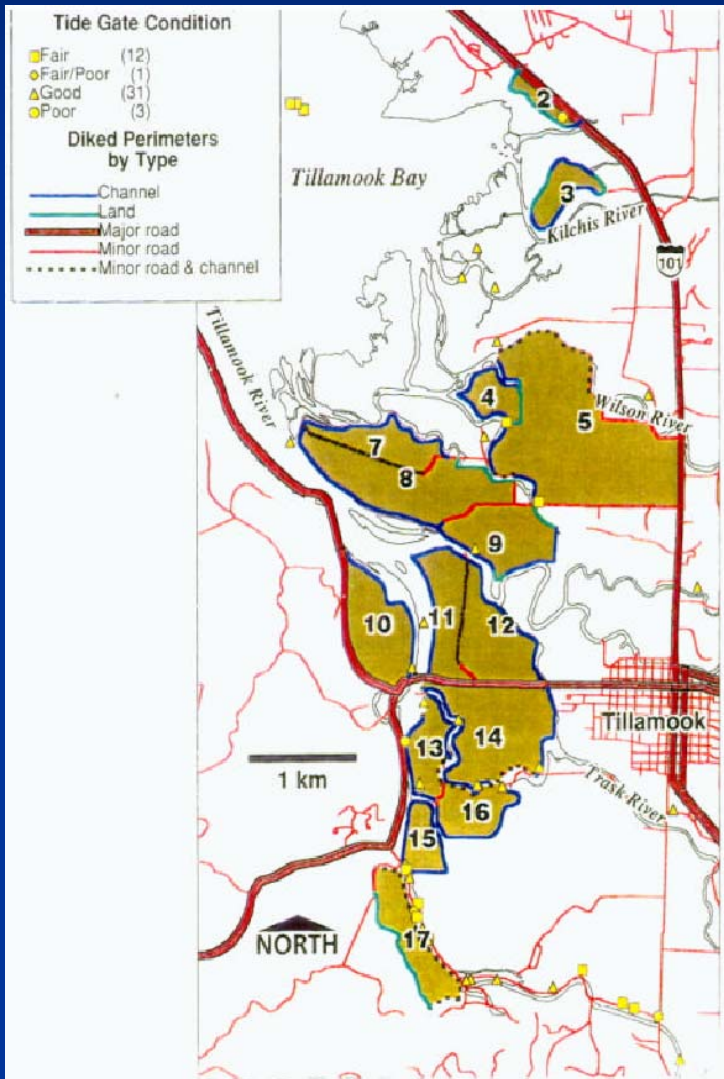


# LWD Recruitment

- Purpose: Identify areas of highest recruitment potential and target for protection & restoration
- Used ODFW Aquatic Inventory Project Data and Protocols



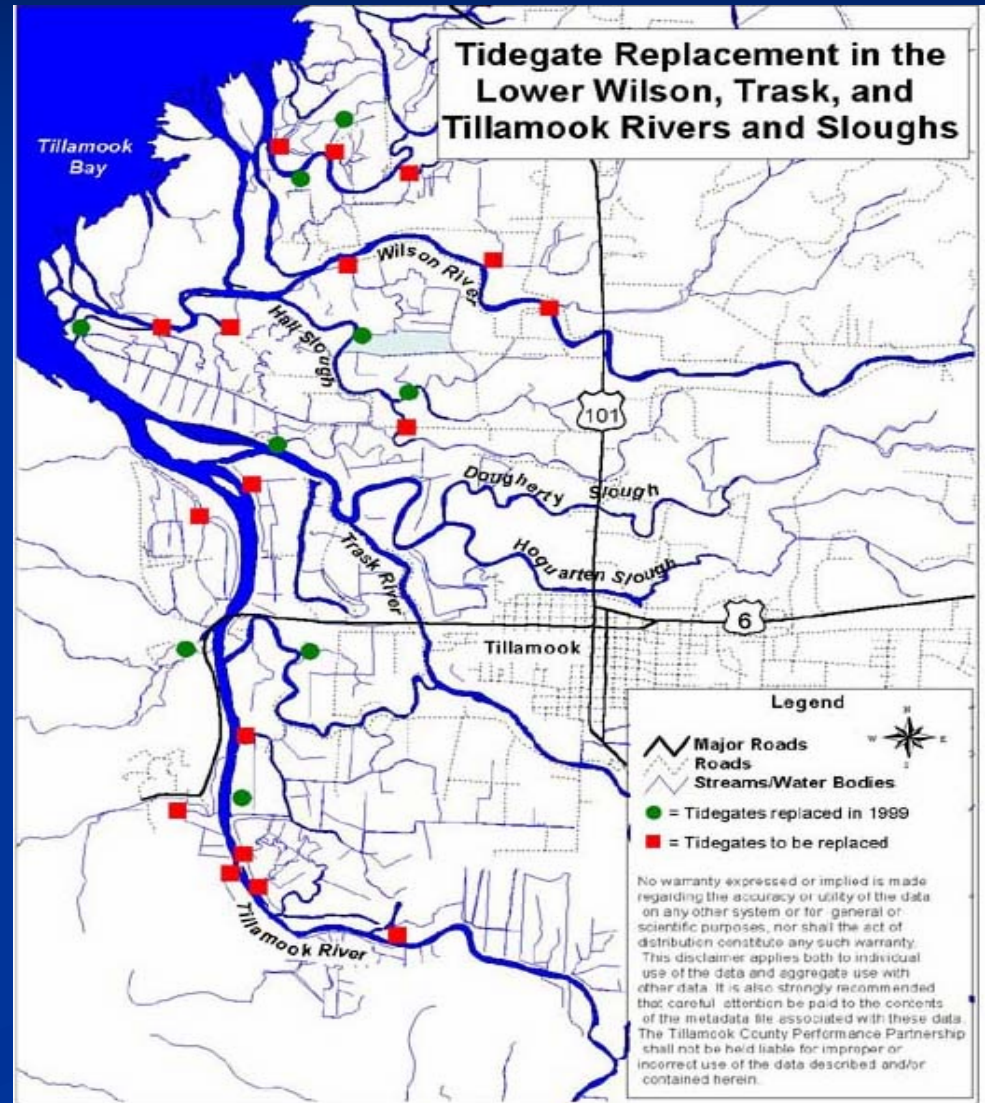
# CCMP: Wetlands Prioritization



- Report: Assessment of Potential Dike Breach Restoration (Simenstad)
- 17 dikes wetlands
- Set priorities for future acquisition and restoration projects

# CCMP: Tidegate Prioritization

- Size
- Function
- Habitat Potential





# Wetlands and Tidegate Prioritization - Result

375 Acre Wilson – Trask  
Acquisition

(discuss later)

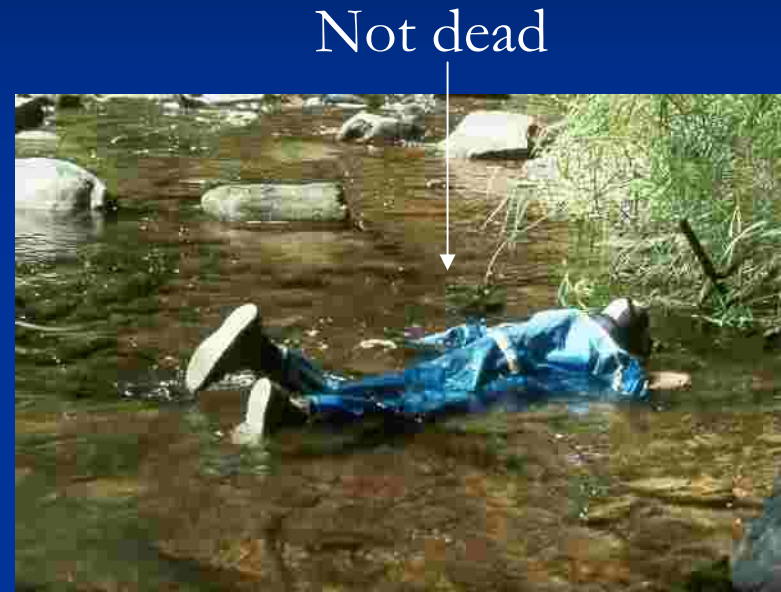


# Current data needs

- Population and distribution data (RBA)
- Prioritized fish Passage Barriers
- DO as a Limiting Factor

# Current Activities – Rapid Bioassessment

- Completed in Nestucca, Neskowin, Sand Lake watersheds (NNWC)
- Year One completed in Tillamook Bay (TEP)
- Purpose:
  - Develop baseline data for three successive cohorts
  - Measure effectiveness of restoration
  - Prioritize restoration activities



# Current Activities – Culvert Prioritization

- Hired by BLM to develop approach to prioritize culverts in Nestucca and Neskowin watersheds
- Gathered all existing data
- Developed prioritization model
- Worked with TAT to “ground truth” model results
- Beginning project implementation



# Current Activities – DO as a Limiting Factor

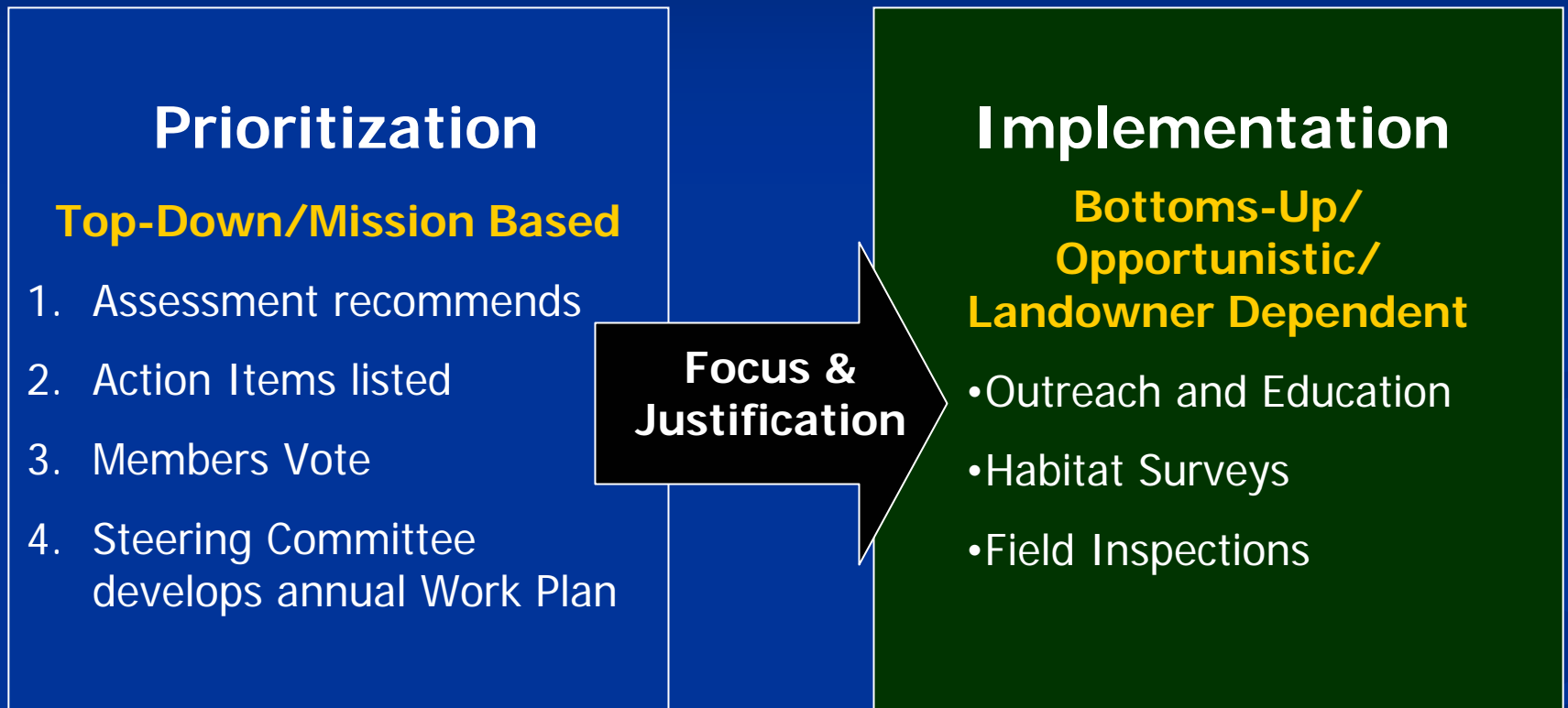
- Co-hired a position with DEQ
- One function: design monitoring program in sloughs and work with ODFW on evaluating impact on salmonids

*How do we decide what work to do and how does this correspond to Assessment?*

2) Watershed Council Decision-making and Limitations of Intrinsic Potential Model (Boxler Creek Example)



# Prioritization and Implementation - Upper Nehalem example



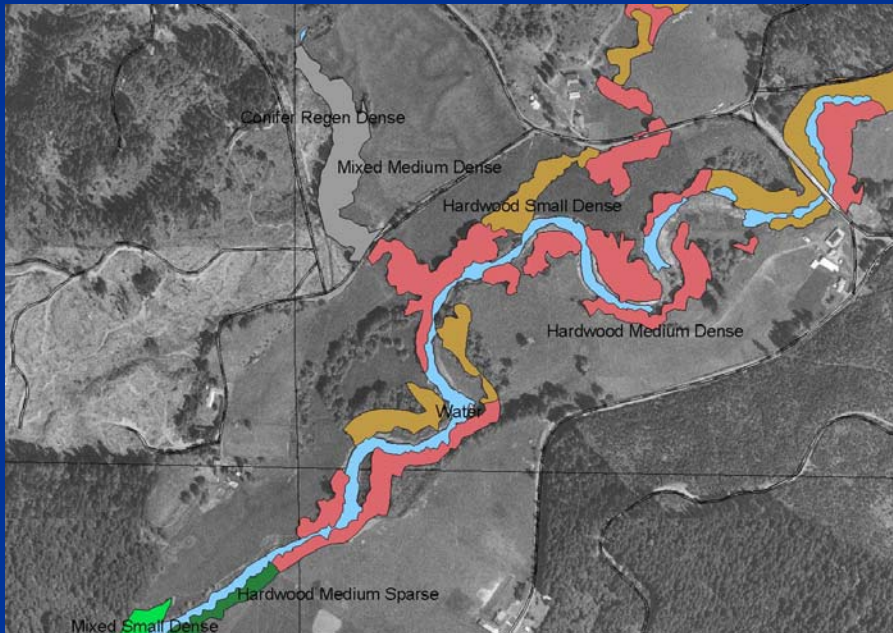
Note: Watershed Assessments have been completed for all north coast basins

# Prioritization and Implementation - Upper Nehalem example



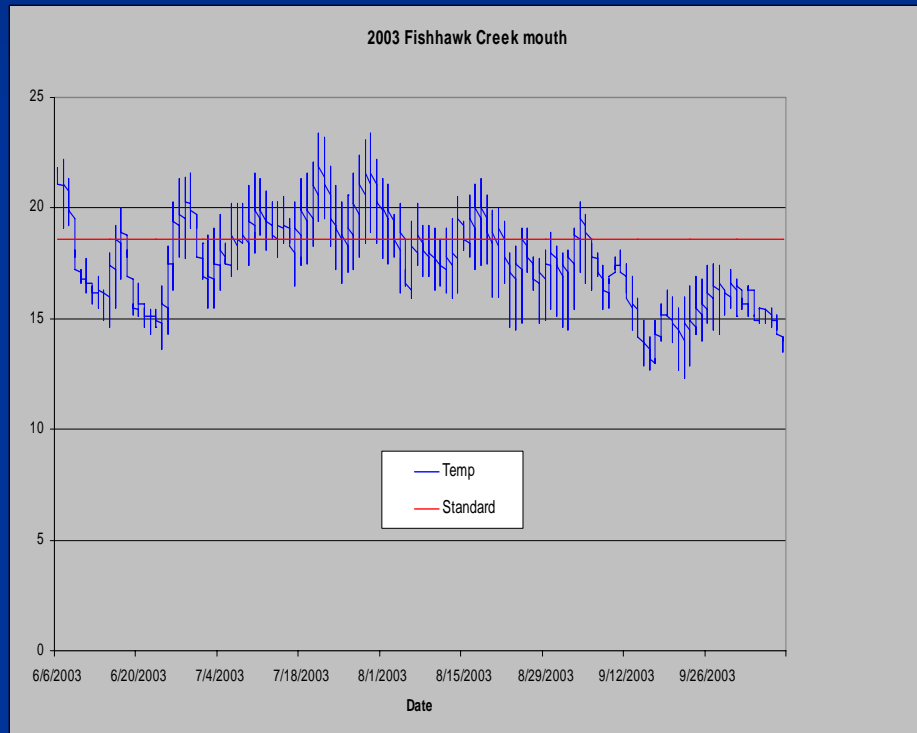
- Action Plan
- Requests for Help
- Riparian Conditions Analysis

# Prioritization and Implementation - Upper Nehalem example



- Action Plan
- Requests for Help
- Riparian Conditions Analysis
- Temperature Data 1993-2005 (170 sites)

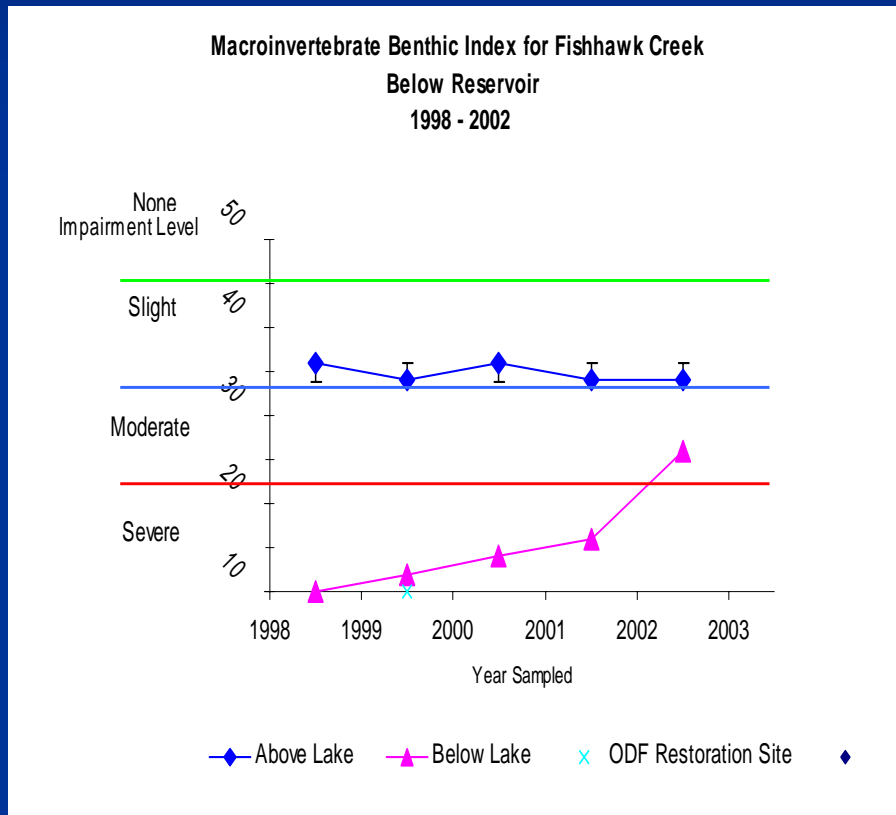
# Prioritization and Implementation - Upper Nehalem example



- Action Plan
- Requests for Help
- Riparian Conditions Analysis
- Temperature Data 1993-2005 (170 sites)
- Bug populations and diversity (B-IBI)

# Prioritization and Implementation - Upper Nehalem example

- Action Plan
- Requests for Help
- Riparian Conditions Analysis
- Temperature Data 1993-2005 (170 sites)
- Bug populations and diversity (B-IBI)
- Landowner education



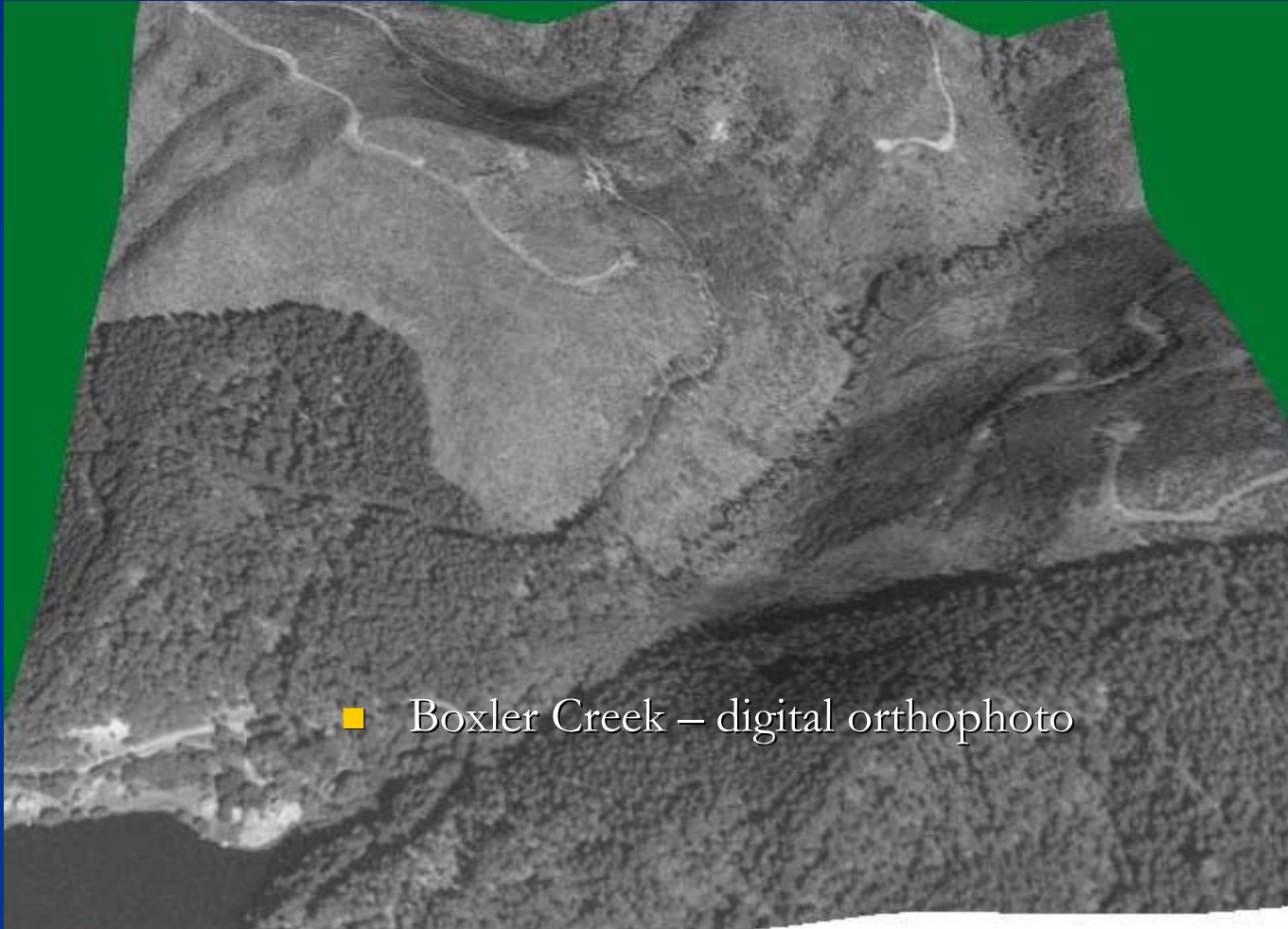
# Prioritization and Implementation - Upper Nehalem example



- Action Plan
- Requests for Help
- Riparian Conditions Analysis
- Temperature Data 1993-2005 (170 sites)
- Bug populations and diversity (B-IBI) 50 sites
- Landowner education
- Monitoring



# Boxler Creek



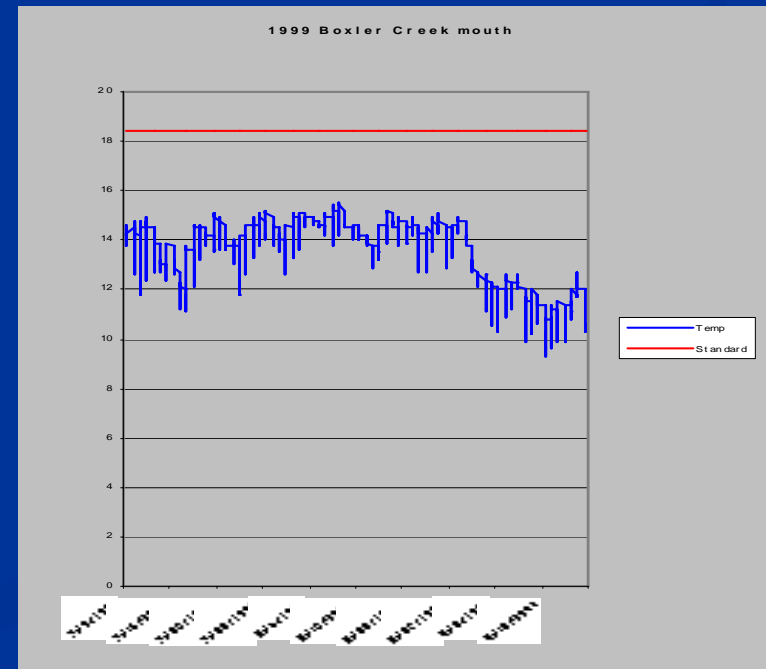
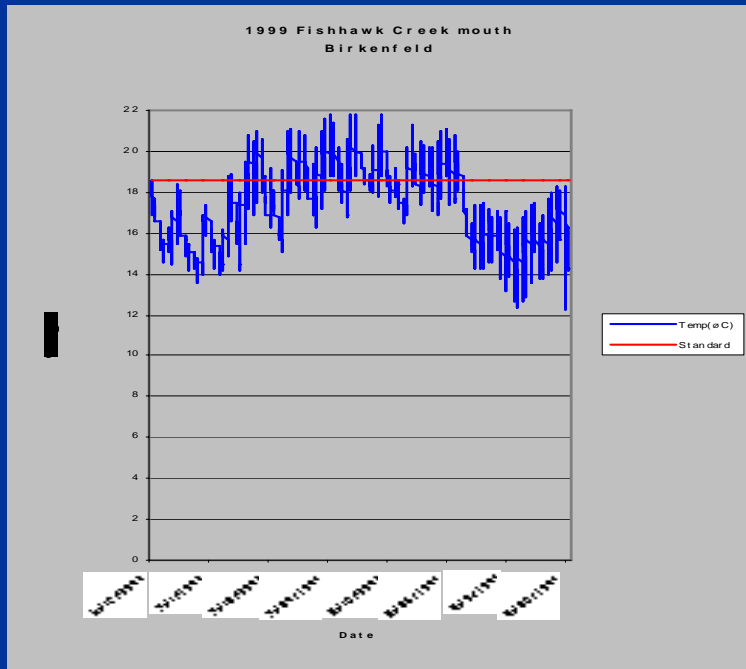
- Boxler Creek – digital orthophoto

# Boxler Creek – Coho Passage



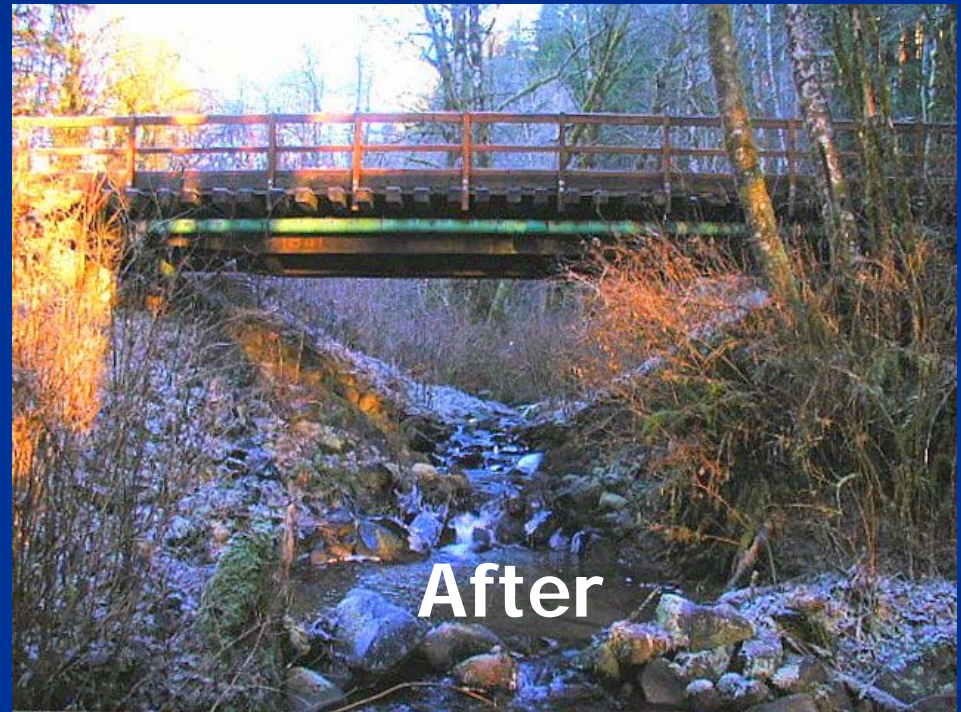
# Boxler Creek WQ Monitoring

1999 monitoring showed summer temperatures in Fishhawk Creek were stressful to fry and smolts. Boxler Creek was a temperature refuge area, with a B-IBI score of 42, indicating a plentiful mix of invertebrates. This implied that coho would use the creek once the fish passage barrier was removed.





# Boxler Creek – Coho Passage







Brood stock  
recovery  
achieved...

Coho have returned to  
Boxler Creek to spawn  
every year since 1999...

*How do we decide what work to do and how does this correspond to Assessment?*

3) Site specific factors: Necanicum  
water quantity



# Necanicum Limiting Factors



S. Fork Necanicum River below City of Seaside Impoundment 9-15-2005

- **Water Quantity**
  - City of Seaside withdrawals
- Stream Complexity
- Habitat Disconnects
  - Road Crossings
  - Fill and Grade
- Water Quality
  - Neacoxie
  - Neawanna

# Implementation on the North Coast

- Wilson – Trask Wetlands
- East Humbug
- God's Valley
- Vaughn Creek

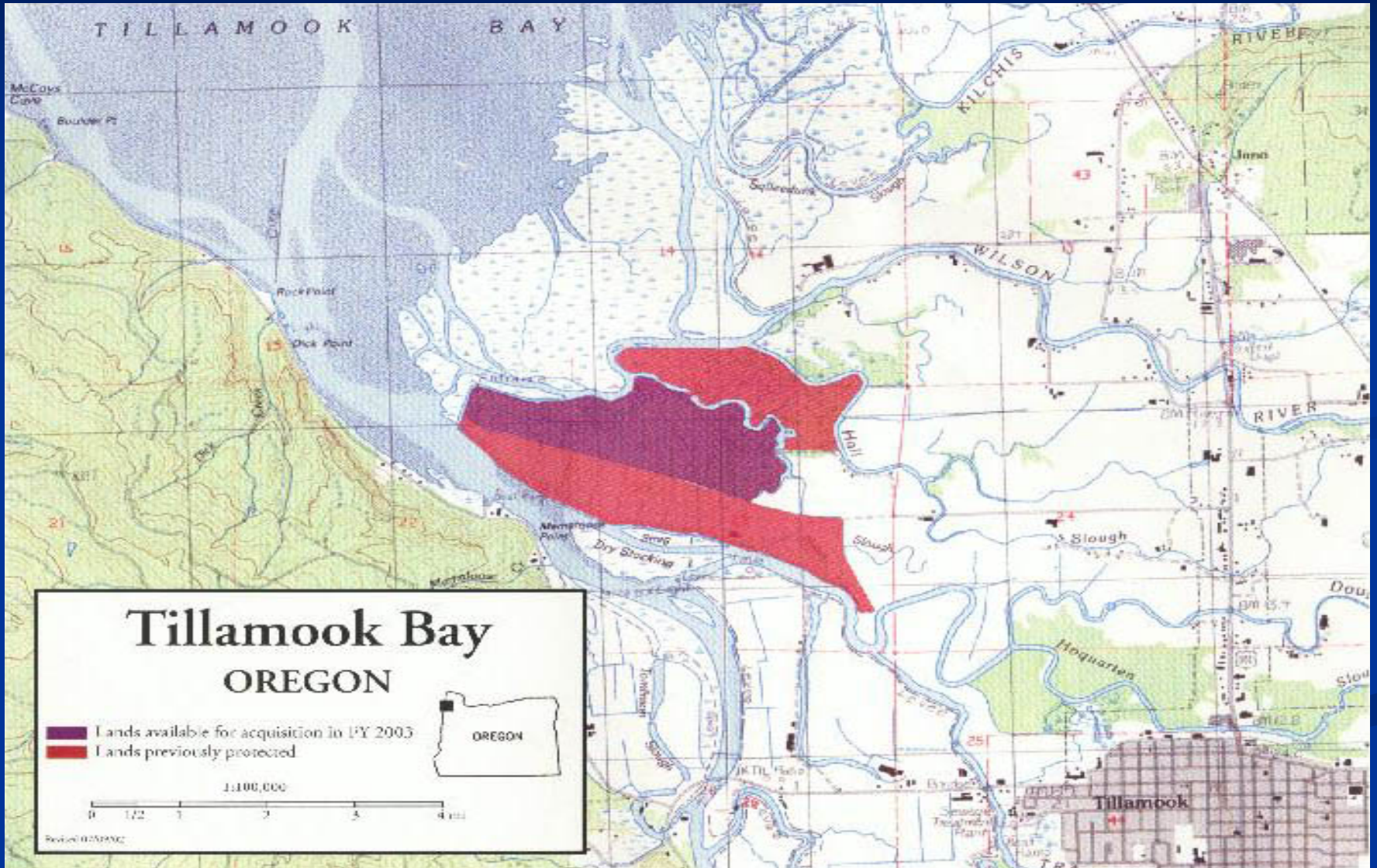
# TEP Restoration Projects

- “Best Bang for the Buck” - Preserve the best, Restore areas with highest intrinsic potential
- Partnerships – Community (Hoquarton) and Agencies (Cruiser)
  - Fish Passage – High priority identified by ODF assessments, ODFW, and BLM/TEP prioritization
  - Wetland acquisition – High priority based on CCMP. Opportunistic.
  - Riparian Enhancement – High priority based on water quality monitoring data

# Wilson – Trask Wetlands



# Wilson-Trask Wetlands









# Property Acquisition & Restoration

- \$1.2 million for acquisition
- Management Plan and IGA
- Corps Feasibility Study
- Finding the money





Blind Slough





4 10 '99

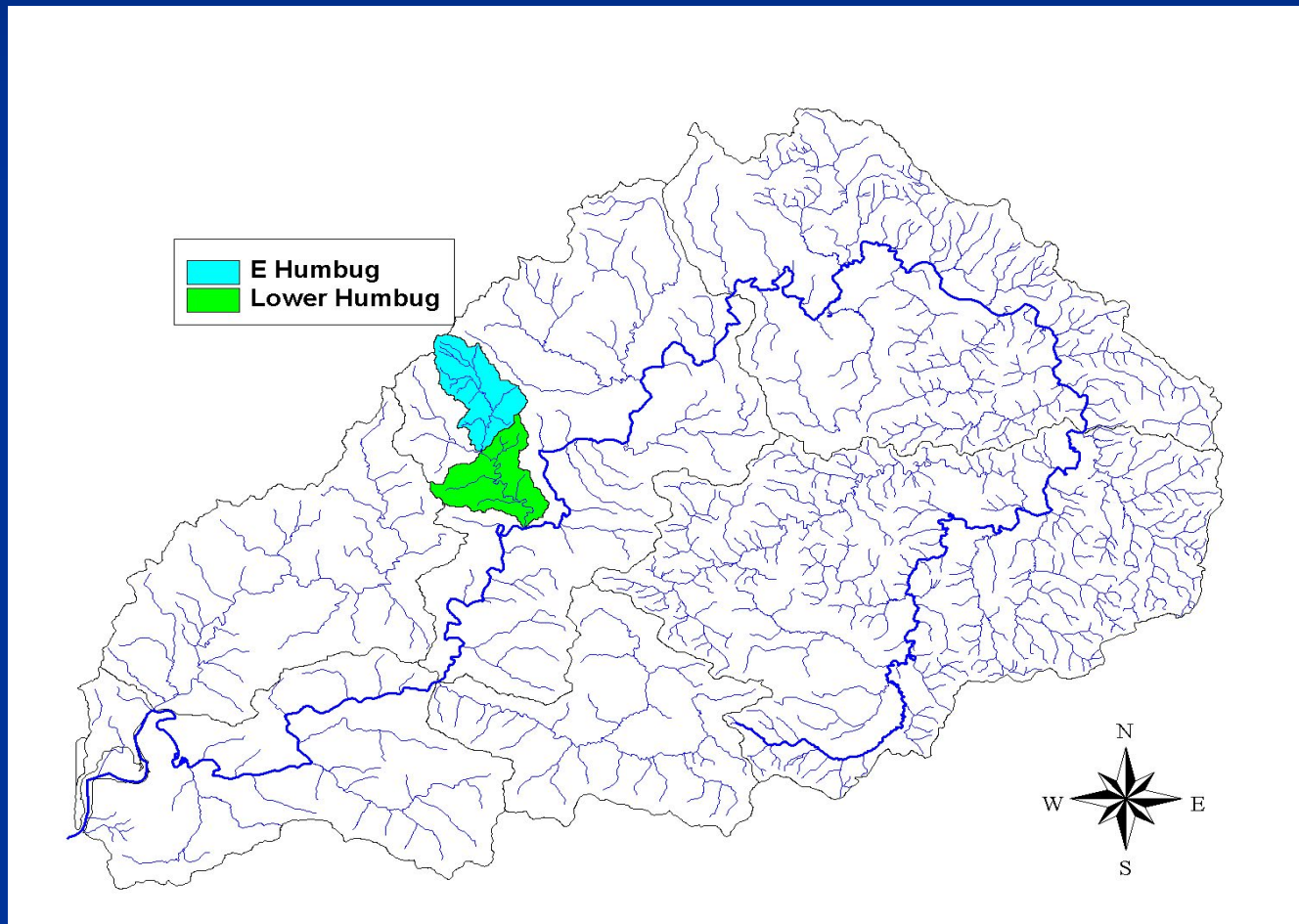




# East Humbug Creek

# Watershed perspective

- East Humbug sub-basin



## East Humbug - Nehalem

Salmon Passage/Habitat Improvement Longview Fibre Co.  
OWEB/UNWC/ODFW/DEQ/BLM

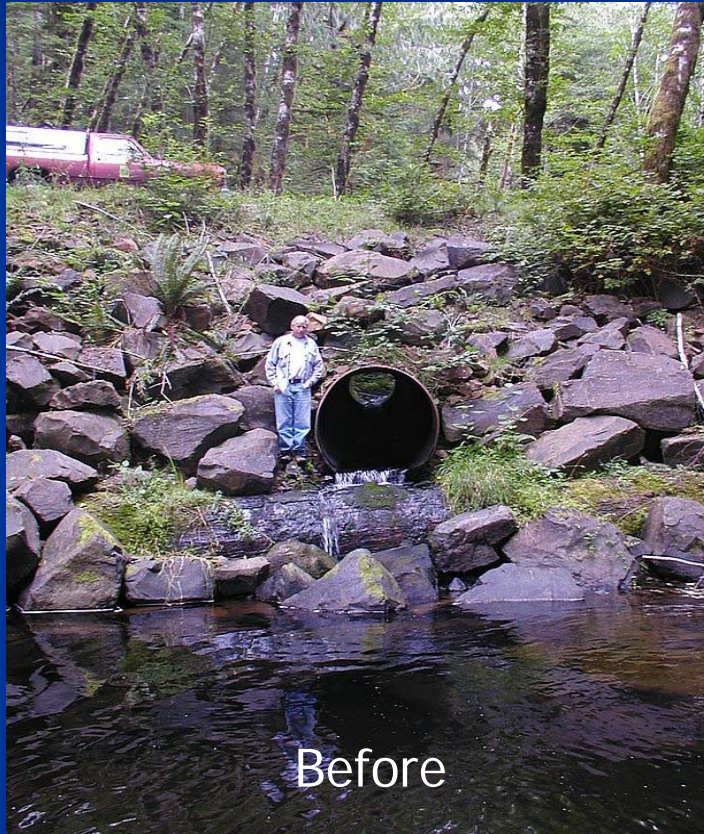
### Addressing multiple limiting factors

- Salmon passage
- Stream complexity
- Riparian condition
- Stream nutrient
- Water quality



# Salmon Passage Improvement Longview Fibre Co/UNWC/OWEB

- **Barrier**



## Removal





# Salmon Habitat Improvement Longview Fibre Co./ODFW/UNWC/OWEB

- **Building Habitat complexity**



Large wood placement –  
according to ODFW priorities/guidelines



# Riparian Condition Improvement UNWC / DEQ / BLM / Longview Fibre Co

- Under planting hardwoods  
with conifers



BLM Coop –  
Native Plant Nursery trees



UNWC planting – Beaver protection

# Stream Nutrient Enrichment

## ODFW / UNWC

### ■ Salmon

### Carcass

### Placement





# Water Quality Improvement Longview Fibre Co / UNWC / BLM

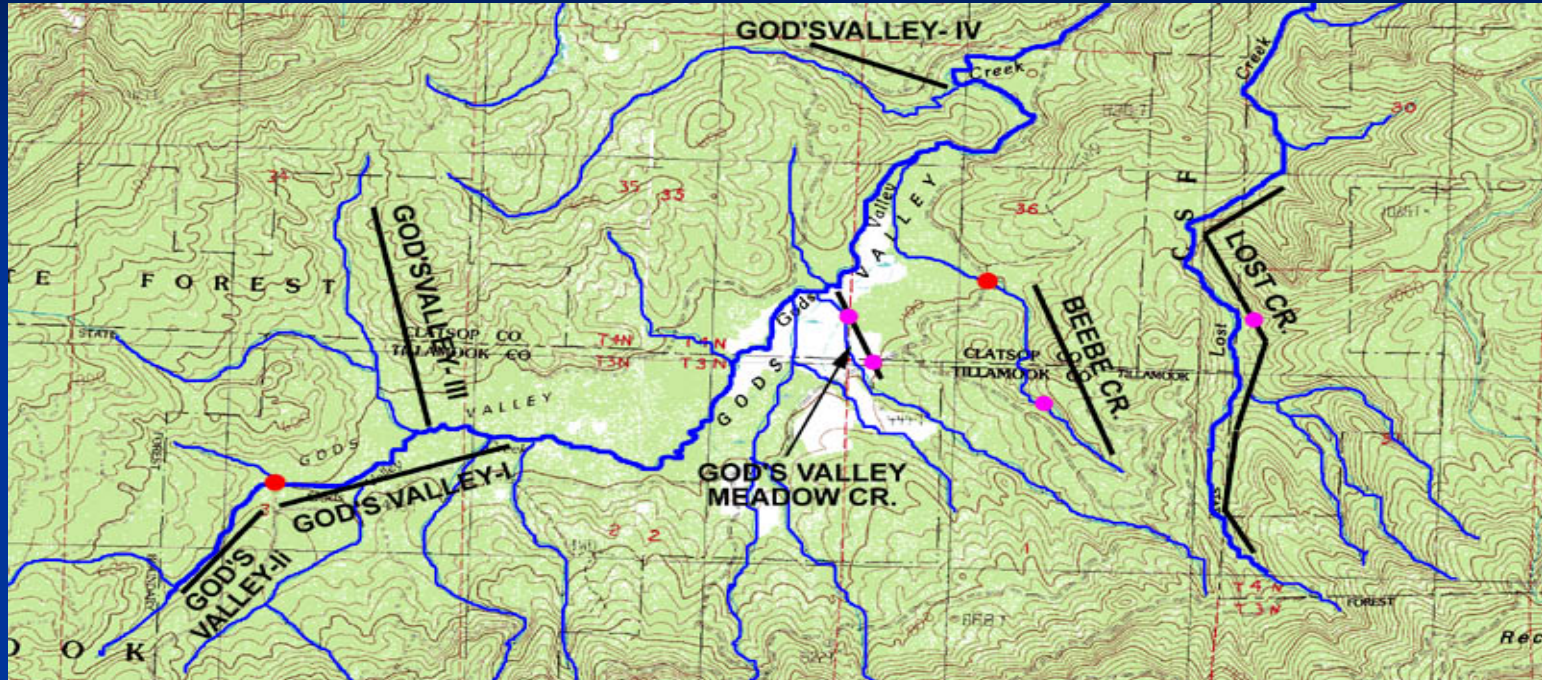
- **Reducing Fine Sediment**





# God's Valley

# God's Valley Core Habitat Projects



## Completed

- God's Valley I LWD-LVF
- God's Valley II LWD-LVF

## In-work

- God's Valley III LWD-LVF

## Pending

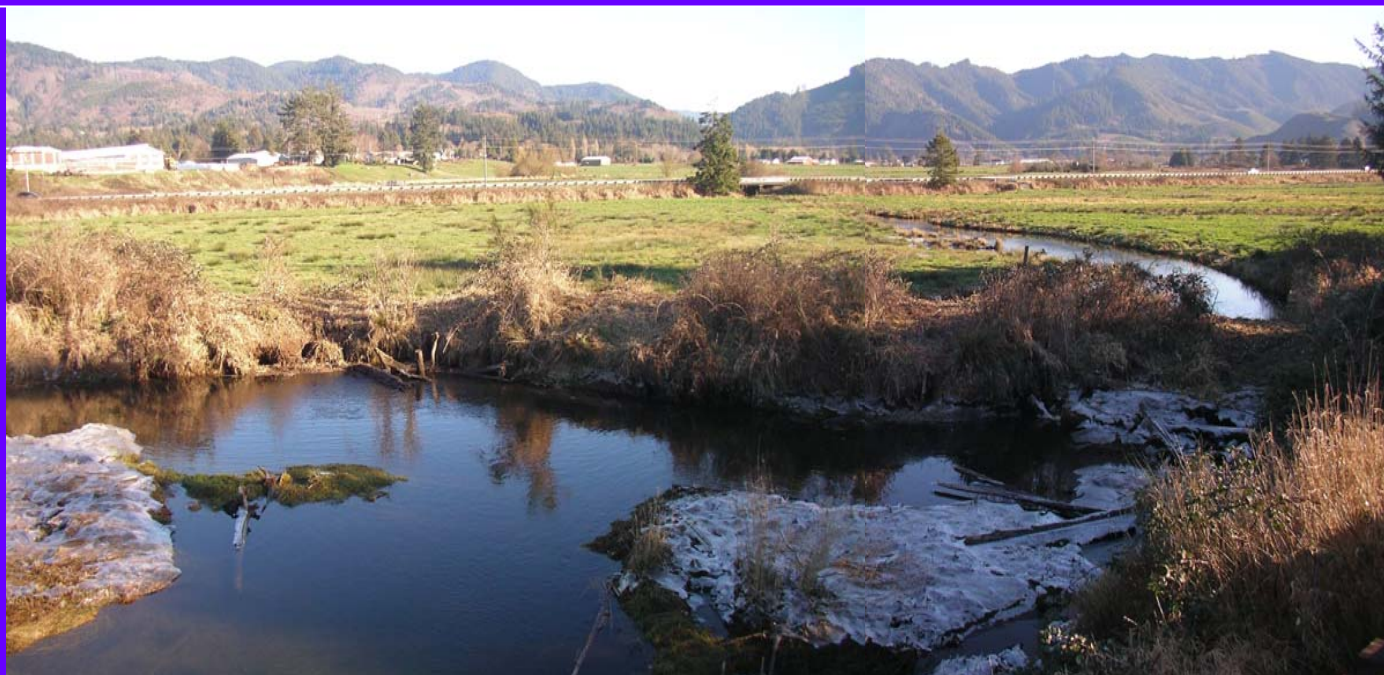
- God's Valley IV LWD-LVF
- God's Valley Meadow Creek Restoration-ODFW

## In-development

- Lost Creek LWD & Strainer Removal-ODF & LVF
- Beebe Creek LWD & Culvert Removal-God's Valley Land Trust

# Vaughn Creek

# Restoring Coho Populations in the Tillamook Bay Watershed Vaughn Creek





# Restoring Coho Populations in the Tillamook Bay Watershed Vaughn Creek



## Vaughn Creek Reach 1

Watershed Scale Project addressing multiple limiting factors

14 partners, including 4 dairy owners and 4 different state and federal funders



# Restoring Coho Populations in the Tillamook Bay Watershed Vaughn Creek

## Council's Role

Interested landowner (golf course) in reach 2

Council took advantage of opportunity, developed action plan for the three reaches, began implementation in reach 2 in 2001

Brought together partners for watershed scale project in reach 1 in 2004



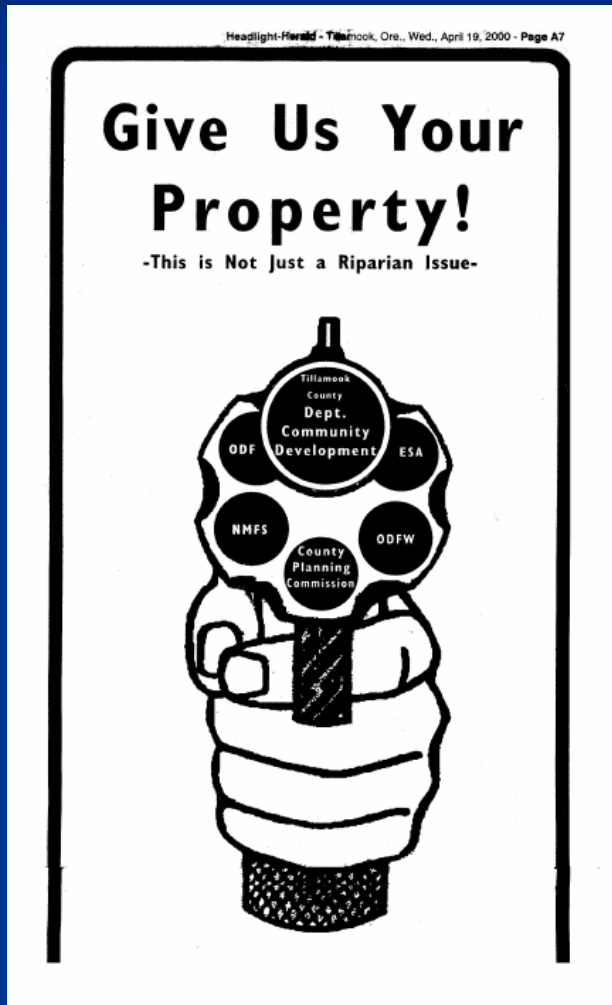
# Challenges

1. Rural Communities and Capacity
2. Rural Communities and Ideology
3. Limited Council Support
4. Future Risks

# Challenge 1: Rural Communities & Limited Capacity

- Where do Councils lack capacity?
- How does this impact the ability to implement projects?
  - Technical Assistance/Engineering
  - Non-federal Cash Match
  - Small pool of volunteers

# Challenge 2: Rural Communities & Ideologies



- Distrust of Government
- Development Controls and Private Property Rights

# Challenge 3: Council Support

## ■ Council Support

- Manage and organize monthly Council meetings
- Organize 3-4 committee meetings/month
- Process all accounting
- Monitor all projects
- Manage grant administration
- Complete all reporting requirements
- Coordinate volunteers



# Challenges: Council Support

- Education and outreach
  - Tillamook Bay Cleanup – Spring of every even year
  - Annual Down by the Riverside event
  - Open Houses, Project Tours
  - Develop, write, edit newsletters (2/year)
  - Develop, write, submit press releases (3/quarter)
  - Coordinate partnerships with local school districts, teachers, and other educational organizations
  - Develop and manage website

# Challenges: Council Support

- Project Development, Funding, & Management
  - Develop plan to reach out to landowners
  - Work with local agencies (ODFW, ODF, BLM), landowners, and council members to develop projects
  - Write grants
  - Once funding is received, manage all aspects of the project, including accounting, reporting, monitoring, education, etc.

# North Coast Council Profiles

System	Formed	Members	Administration	Consensus +	Staff
Necanicum	1997	10-15	501(c)(3) pndg	Consensus	0.1
Ecola	1996	5-10	CREST	Majority	0.2
Upper Nehalem	1996	15-20	501(c)(3)	75%	0.5
Lower Nehalem	1997	20-25	501(c)(3)	75%	0.4
Tillamook	1998	20-25	501(c)(3) pndg	66%	0.7
Nestucca/ Neskowin	1996	5-10	501(c)(3)	Consensus	.5
Tillamook Estuaries Partnership	1994	40	501(c)(3)	Majority Vote	6

# Challenges: Council Support

- Council Support Tasks
  - 501 c 3 Application
  - Fundraising
  - Council Policies
  - Board/Council Development
  - Small Grant Team
  - Network of Oregon Watershed Councils
  - Native Plant Cooperative
  - Water Trail Committee



# Challenge 4: Combating today's problems as others build

System	Environmental	Resource Extraction	Human Activities
Necanicum	Invasive Weeds	Quarries & Non-industrial tree harvest	Municipal Water Removal & Urbanization
Ecola			Urbanization
Upper Nehalem	Water Quality Invasives: Weeds & Marine		
Lower Nehalem	Water Quality Invasives: Weeds & Marine	Non-industrial Timber Operations	Bacteria, Nitrogen Weekend Warriors
Tillamook	Knotweed		
Nestucca/ Neskowin			Residential Development

High

Medium

Low

# Take Home Messages

- Invest!!
  - Institutionalize Support for WCs
  - Provide agency support for WCs
  - Oregon: Provide cash match (Federal: reduce match requirements in rural areas)
  - Demonstrate Economic Value of Salmonids
  - Support controls on land use and resource extraction
  - Make Conservation/Restoration a Priority

**Thank You**

**Questions**

# Lower Nehalem & Necanicum Impediments

1

Decreasing Council Resources



# Lower Nehalem & Necanicum Impediments

1

Decreasing Council Resources

2

Losing Technical Resources

# Lower Nehalem & Necanicum Impediments

1

Decreasing Council Resources

2

Losing Technical Resources

3

Attitudes & Politics

# Lower Nehalem & Necanicum Impediments

1

Decreasing Council Resources

2

Losing Technical Resources

3

Attitudes & Politics

4

Dependency on OWEB

# Prioritization and Implementation - Upper Nehalem

## Prioritization

### Top-Down/Mission Based

#### 1. Member created list

- Mission
- Limiting Factors
- Land Uses
- Documentation

#### 2. Members Vote

#### 3. Steering Committee develops Work Plan

Goals, Focus  
&  
Justification

## Implementation

### Bottoms-Up/ Opportunistic/ Landowner Dependent

- Outreach
- Networking
- Field Inspections



# Prioritizing and Implementing in the Tillamook Bay

## Prioritization

### Best Bang for the Buck

1. Watershed assessments & action plans
2. Information provided by other agencies identifying areas of high priority
3. Landowner interest

**Focus & Justification**

## Implementation

### Developing Strategic Approach

- Outreach
- Technical advice
- Habitat Surveys

# Challenges: Council Support

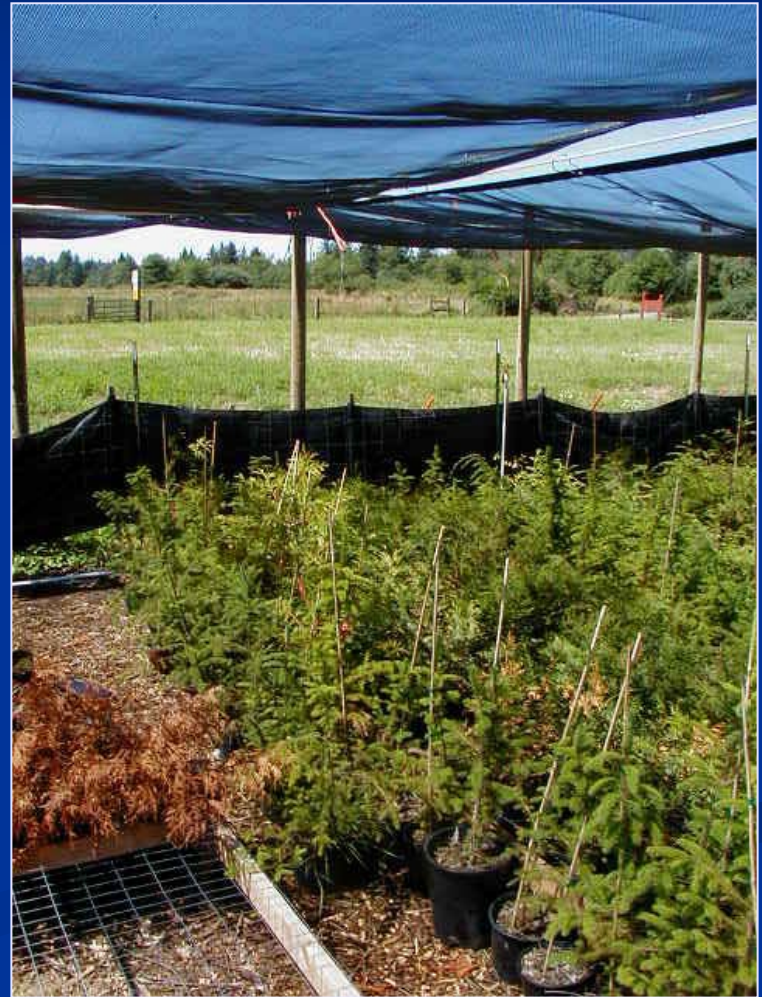
WHAT DO WE NEED?

## INVESTMENT

- Adequate
- Secure
- Consistent

# Lower Nehalem Accomplishments

- 33,790 Linear Feet (widths to 75 ft) of Riparian Plantings
- 57 Large Wood Structures
- 3 Culverts
- Innovations
  - Native Plant Nursery
  - Power Shear
  - Arrow Creek
  - Winter Habitat Assessments
  - Estuary Cleanups



# Lower Nehalem Limiting Factors



- Stream Complexity
  - Known culverts and dams: the easy ones are done, the hard ones remain.
  - **New barriers**
  - Large Wood and riparian conifer restorations
- Water Quality
  - Bacteria & Temp