

Water Management Options

WRIA 17 Instream Flow Rule



What is an Instream Flow Rule?

Ecology is authorized under state law to establish state water-management rules that protect and preserve:



Aesthetics



Livestock Watering



Recreation



Navigation



Water Quality



Wildlife



Fish

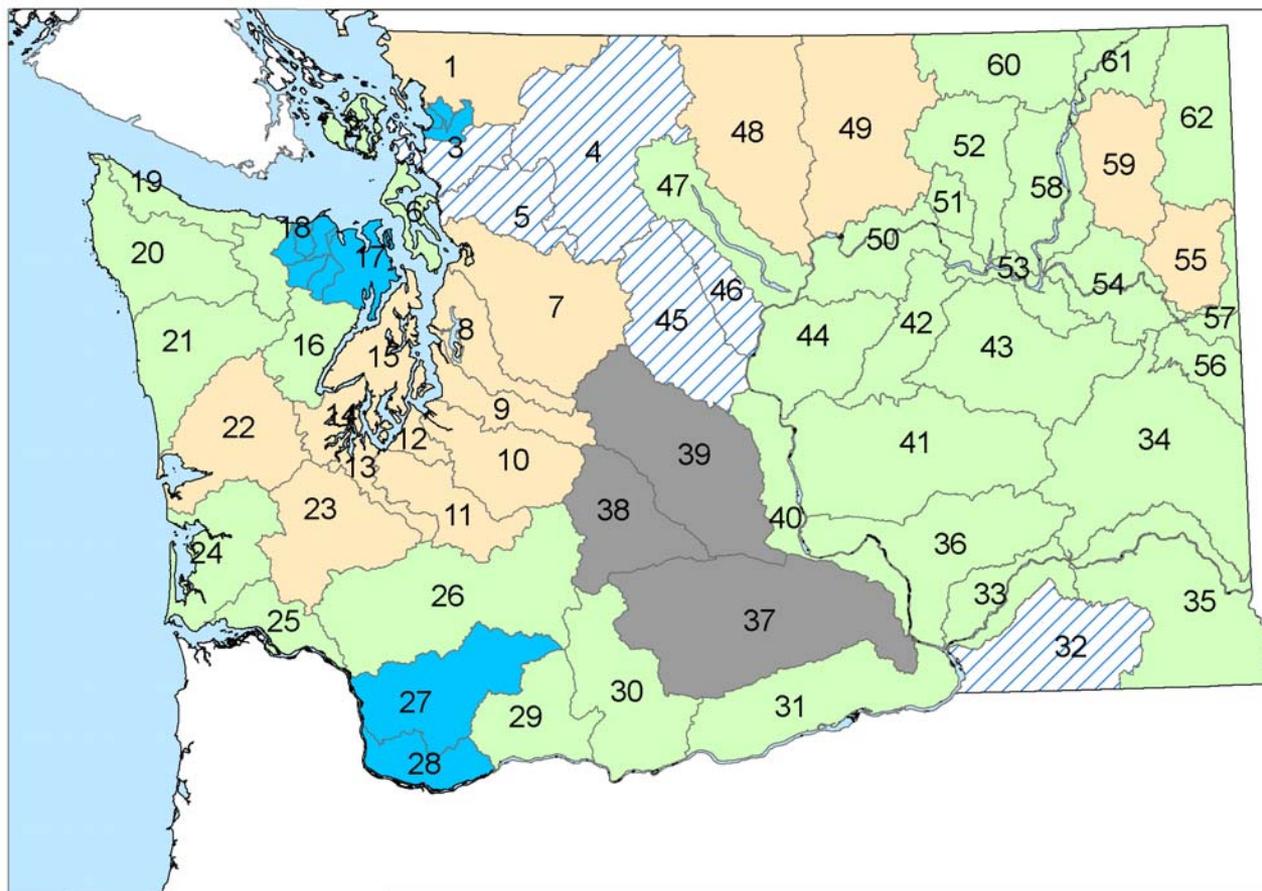
Purpose of an Instream Flow Rule

- Protect Existing Water Rights
- Protect Instream Resources
- Prioritize Uses of Water



Applies to new uses of water

Established Instream Flows and Schedule for New Rules



Instream Flows Set

- Established Instream Flow Rules
- Rules Adopted 2005 -07

Yakima Adjudication

- De facto Federal Flow

Instream Flow Rules Scheduled

- Current Rulemaking
- Future Rulemaking

Rule Development Process

	2005	2006	2007	2008
Planning Units Adopt Flow numbers	X			
Early Public Meetings on Flow Rule	X			
Ecology re-evaluation of rule proposal		X		
Community Forum #1			May 15 and 16, 2007	
Community Forum #2			July 31, 2007	
Community Forum #3				February 6, 2008 You are Here
Community Forum #4 - Preliminary Draft of rule				X
File Formal Draft Rule - start of formal comment period				X
Public Hearings				X
Ecology Responds to Public Comment				X
Adopt Rule				X

The Watershed Planning Act

- Provides an opportunity for local citizens to develop water resources goals with Ecology
- Provide Ecology with specific guidance for water resource management

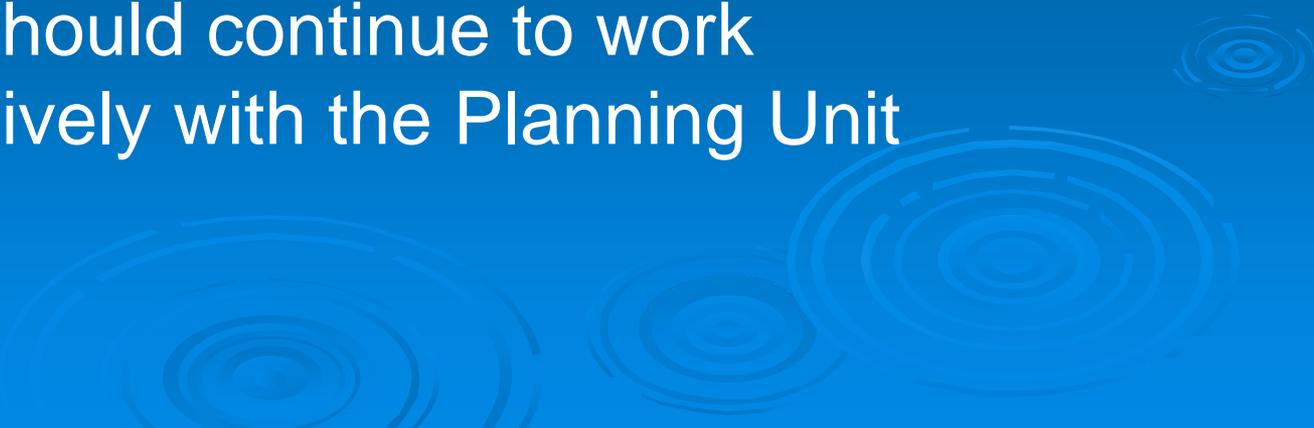
Members of the Planning Unit

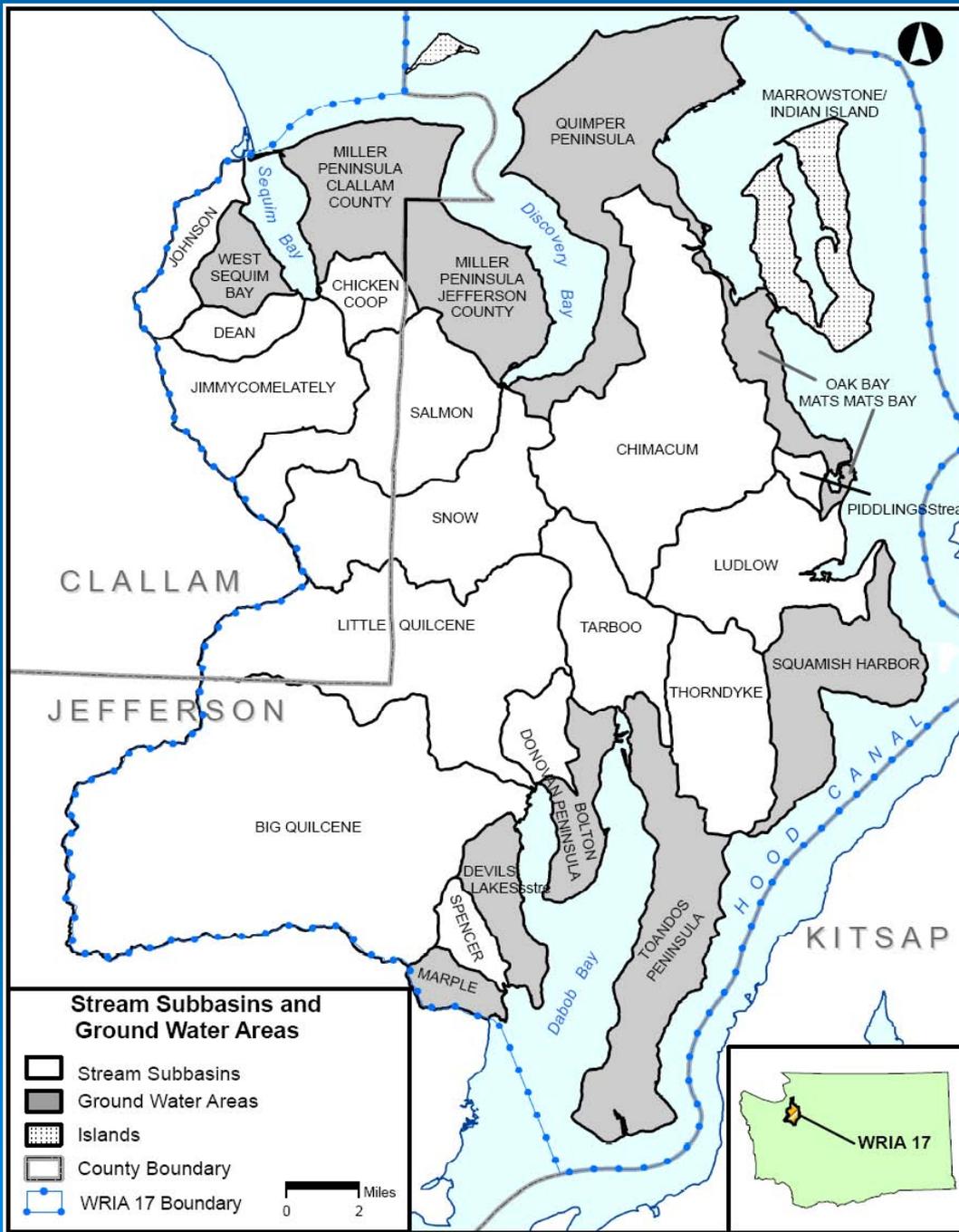
- Jefferson County, Lead agency
- City of Port Townsend
- Port of Port Townsend
- Port Gamble S'Klallam Tribe
- Skokomish Tribe
- Jefferson County Public Utility District No. 1
- Water Utility Coordinating Committee
- Marrowstone Island Groundwater Committee
- Port Townsend Paper Mill
- Jefferson County Conservation District
- Chimacum Grange
- Olympic Environmental Council
- Wild Olympic Salmon
- Home Builders Association
- Trout Unlimited
- Sustainable Agriculture
- WSU Cooperative Extension
- Department of Ecology
- Dept of Fish and Wildlife provided technical expertise

Planning Unit Considering Long Term Water Supply Options

- Aquifer Storage and Recovery (Ecology funded)
 - Groundwater model (Ecology funded)
 - Water banking (Ecology funded)
 - Reclaimed water (Ecology funded)
 - Storage options
 - Desalination (reverse osmosis)
 - Petersen Lake
 - Mitigation
 - Efficiencies at the Mill
 - Conservation programs
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Key Watershed Plan Recommendations

- Recommendation 36: **Adopt Instream Flows**
 - The Planning Unit should continue its efforts to gather information and reach a consensus recommendation on Instream Flows
 - Ecology should continue to work collaboratively with the Planning Unit
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Planning Unit Approval of Flows

January 25, 2005

1. Big Quilcene
2. Little Quilcene
3. Tarboo
4. Thorndyke
5. Snow
6. Salmon
7. Chimacum

WRIA 18 Watershed Plan Approved Flows – May 2005

1. Chicken coop
2. Dean
3. Jimmycomelately
4. Johnson

Ecology and WDFW Recommend Flows (2005)

1. Leland
2. Howe
3. Ludlow
4. Donovan
5. Piddling
6. Spencer
7. Marple

Once Flows are Established

- Existing water rights, including private wells, are not affected unless there is a change or transfer
- All future water rights are subject to the rule



Ecology Must Consider

- Is water available once flows are set?
 - Could existing water rights be impaired?
 - Is it necessary to close the subbasin to future allocations?
 - Possible exceptions to closures
- 



Key Issues in Quilcene Snow Watershed

- Watershed planning group is evaluating long term water supply solutions
- Quilcene Snow watershed has small streams with limited reserves for future use
- Considering conservation standards for household use
- Considering rainwater catchments authorized through subbasin general permits
- Receiving mixed messages on what future agriculture should look like in the County

Reserves are Calculated as 1% of Stream Flow

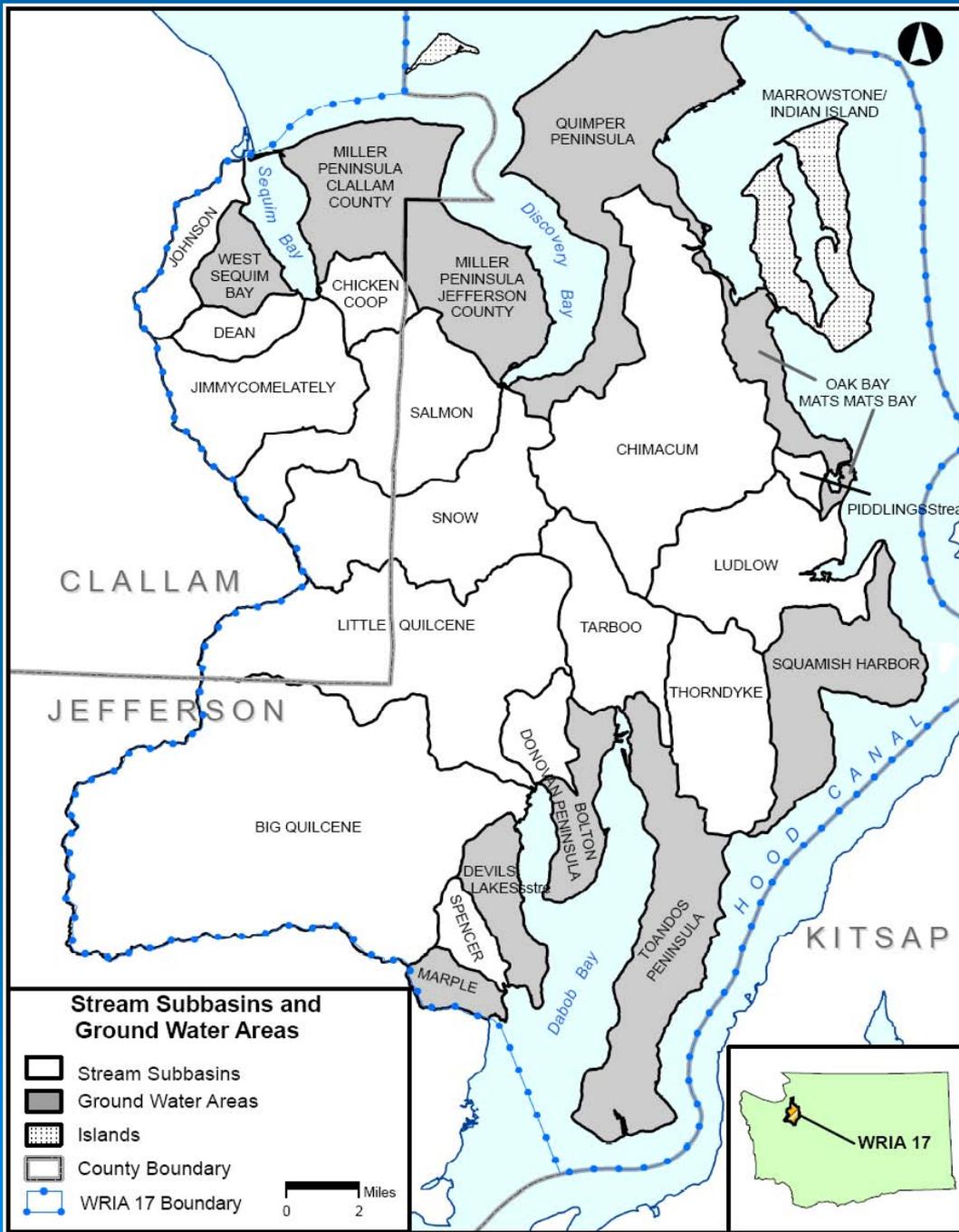
- Calculated for low flow period
- Streams are small in Eastern Jefferson County so reserves are small
- Some subbasins have undeveloped municipal water rights that will use up the reserves: Chimacum, Ludlow, Snow, Thorndyke, Johnson - Dean

WRIA 17 Reserve Subbasins

- Considering Closures and Reserved Water Because of Low Flows
 - Big Quilcene (seasonal opening)
 - Chicken Coop
 - Donovan
 - Jimmycomelately
 - Little Quilcene – Leland – Howe
 - Piddling
 - Salmon
 - Spencer
 - Tarboo

Three Types of Subareas

- **Ground water Areas:** Quimper, Miller, Oak Bay, Squamish Harbor, Toandas Penninsula, Devils Lake, Marple
- **Subbasins with reserves:** Big Quilcene, Chicken Coop, Donovan, Jimmycomelateley, Little Quilcene-Leland-Howe, Piddling, Salmon, Spencer, Tarboo
- **Subbasins with reserves accounted for:** Chimacum, Ludlow, Snow, Thorndyke, Johnson-Dean



Management Options for Reserved Water

- Homes with small yards
 - Debit 175 gpd from reservation
 - Maximum daily limit 350 gpd
 - Limit to 60 X 60 area or measure water use
- Homes with ½ acre gardens
 - Debit 1525 gpd
 - Maximum daily limit 1750 gpd
 - Limit to ½ acre
- Farms using up to 5,000 gpd
 - 1 to 2 acres

Possible Reservation Uses

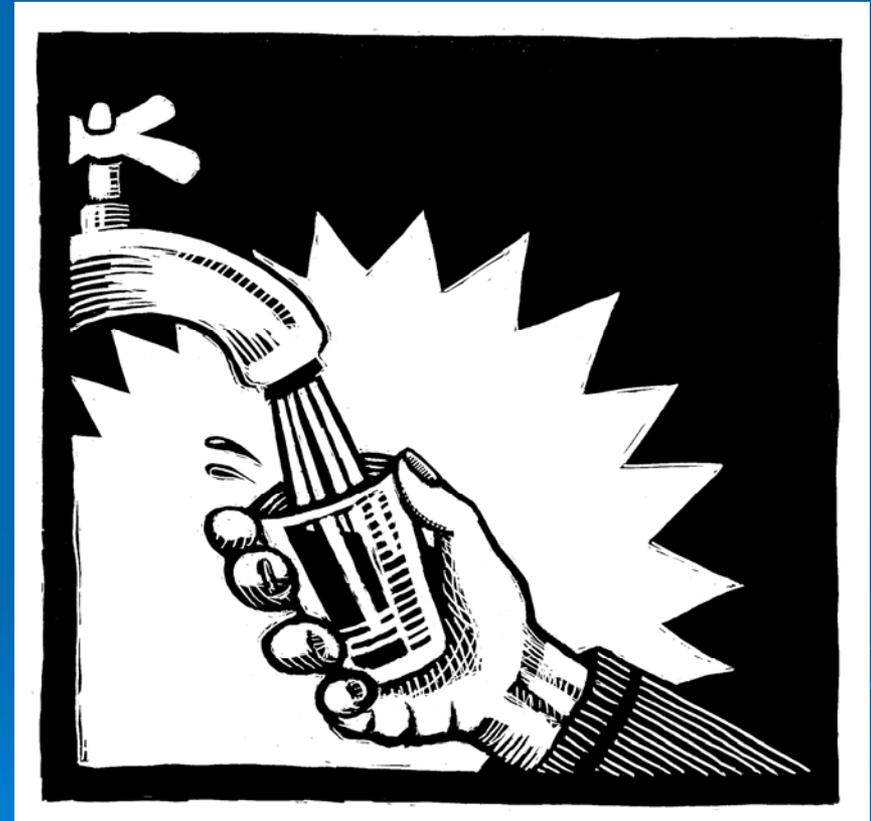
Reservation Management Area Water source (including tributaries)	# homes Small yards	# homes ½ acre garden	# Farms 5,000 gpd	Reservation Quantity
Big Quilcene	1145	127	40	200,400 gpd
Chicken Coop	73	8	2	12,900 gpd
Donovan	5	<1	<1	970 gpd
Jimmycomelately	100	11	3	17,500 gpd
Little Quilcene (includes Leland and Howe Creeks)	210	23	7	36,800 gpd
Piddling	10	1	<1	1900 gpd
Salmon	58	6	2	10,300 gpd
Spencer	27	3	1	4,800 gpd
Tarboo	70	8	2	12,300 gpd



Chimacum Creek

Ecology Working to Ensure Water for Domestic Use

- Considering allowing new homes on septic systems using water “in-house only”
 - Not debit reserves
 - Also for basins without reserves
- Most water is recharged back into ground through septic system



Domestic In-house Use

- Estimate of cumulative impact in Chimacum Basin
 - Approximately 300 new homes outside PUD service area 2005 to 2025 based on subbasin specific growth rates
 - Low flow in Chimacum Creek approximately 3.0 cfs

# homes	Indoor use	% return*	Total water use
300	136 gpd	87%	.008 cfs (5304 gpd)

* Drost, B.W., et al., 1999. Conceptual model and numerical simulation of the ground-water-flow system in the unconsolidated sediments of Thurston County, Washington. U.S. Geological Survey Water-Resources Investigations Report 99-4165, 254 p.

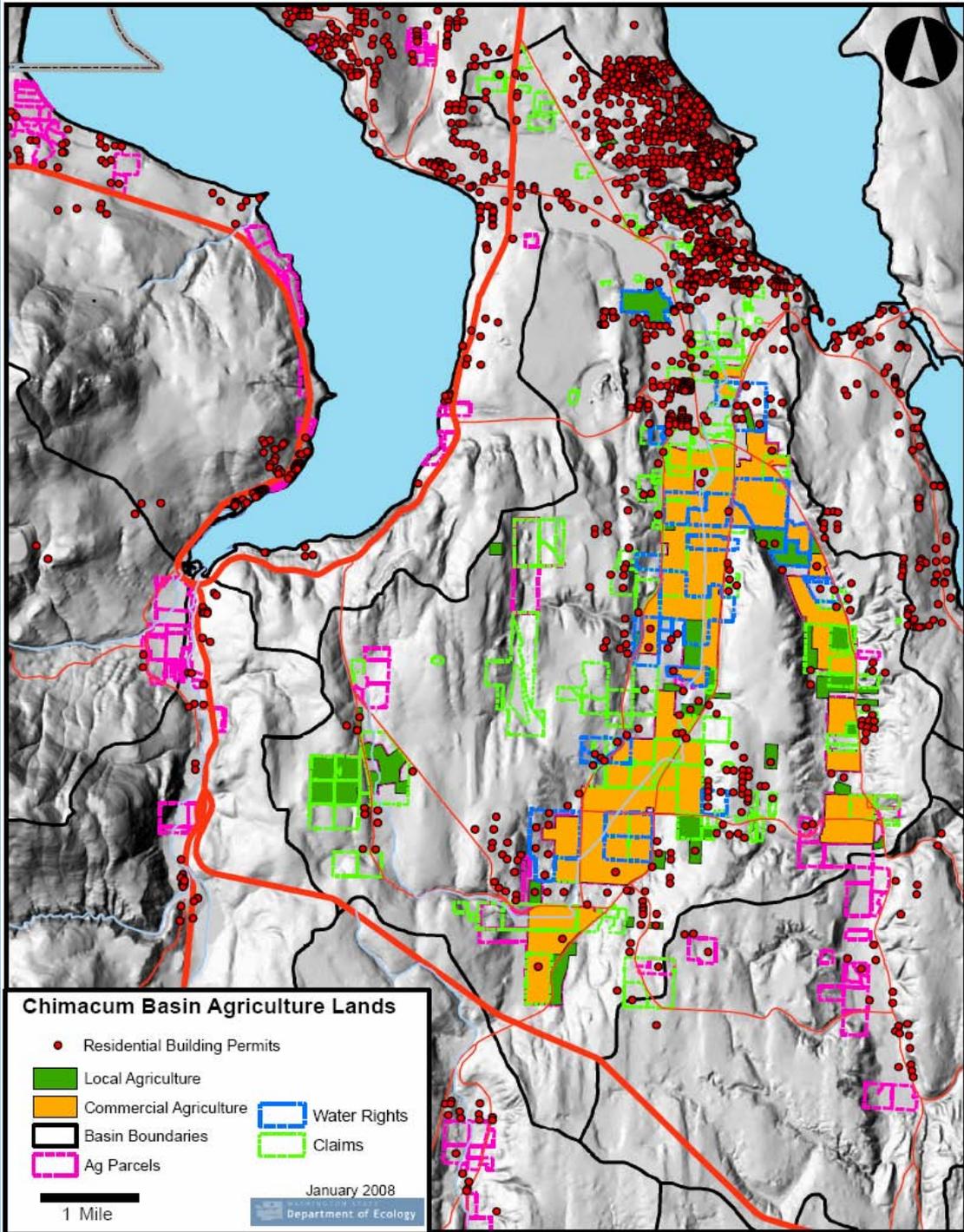


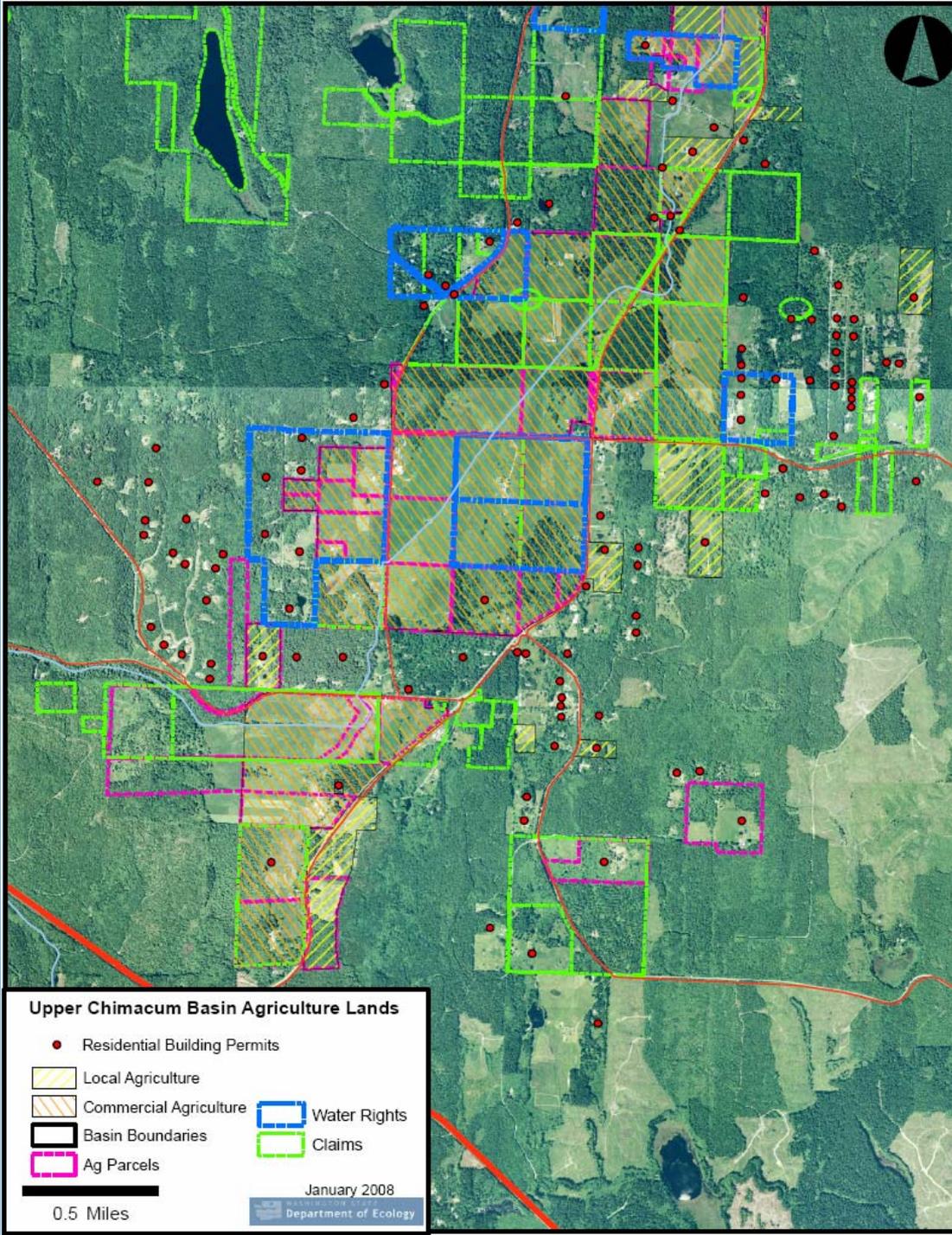
Chimacum Creek

Local Agriculture Concerns

- Agriculture is important to local community
- Protecting existing water rights is key to maintaining agriculture in Jefferson County
- Priority areas for future agriculture:
 - Chimacum
 - Salmon/Snow
 - Miller
 - Quimper
 - Tarboo
 - Big and Little Quilcene – lower reaches







Upper Chimacum Basin Agriculture Lands

- Residential Building Permits
- Local Agriculture
- Commercial Agriculture
- Basin Boundaries
- Ag Parcels
- Water Rights
- Claims

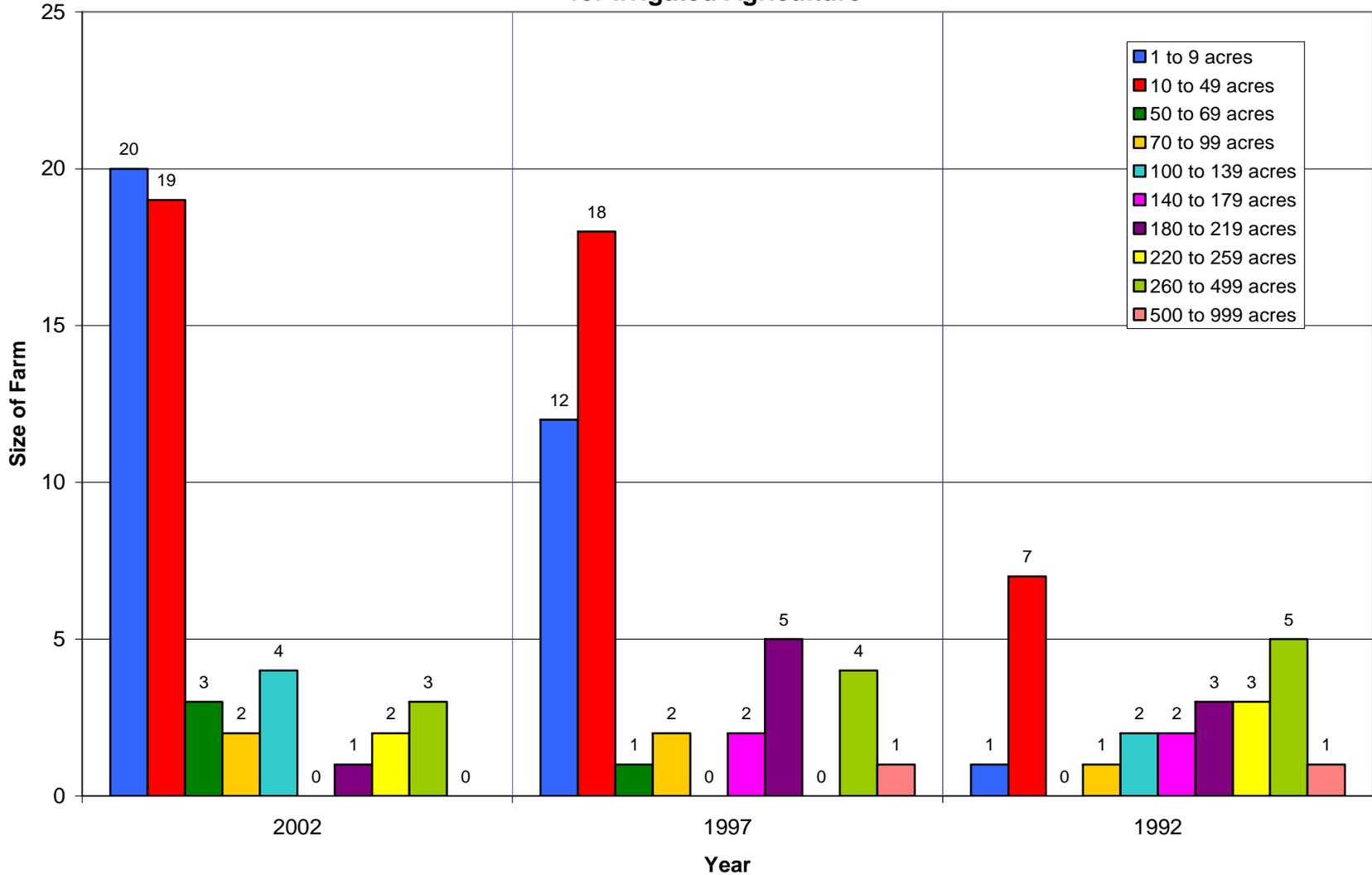
0.5 Miles

January 2008
Department of Ecology

Agriculture Trends

- Trend is towards larger number of smaller farms
- Acreage under irrigation down from 1992 to 2002
- Differing opinions about expanded exempt well agricultural use versus focusing on larger farms in existing agricultural areas.

Jefferson County Farm Size for Irrigated Agriculture



More on Agriculture

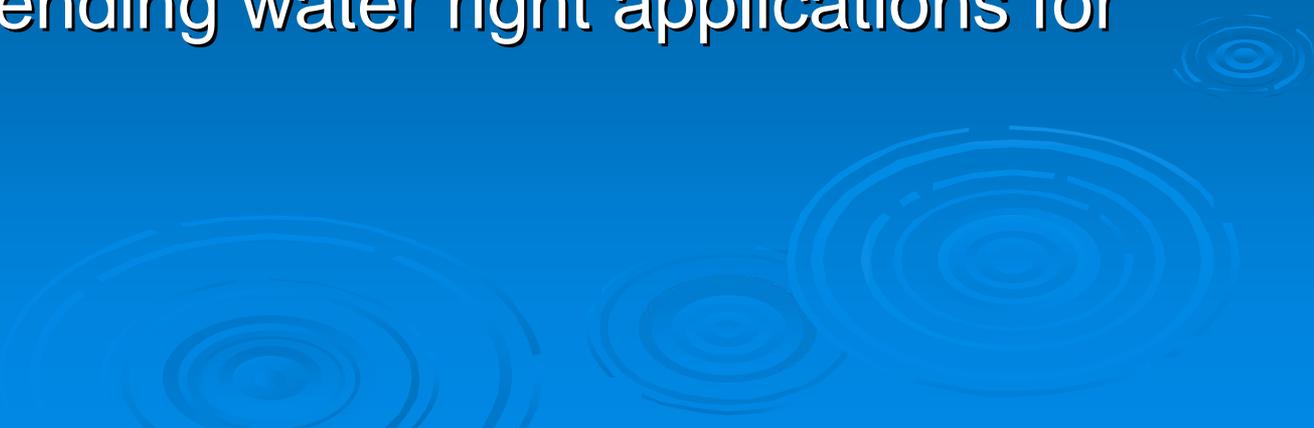
- New large-scale agriculture usually requires a water right permit (exceeds the 5,000 gpd limit for an exempt well)
- In most areas, new water right permits will be difficult to get
- Buying property with existing water rights is an option

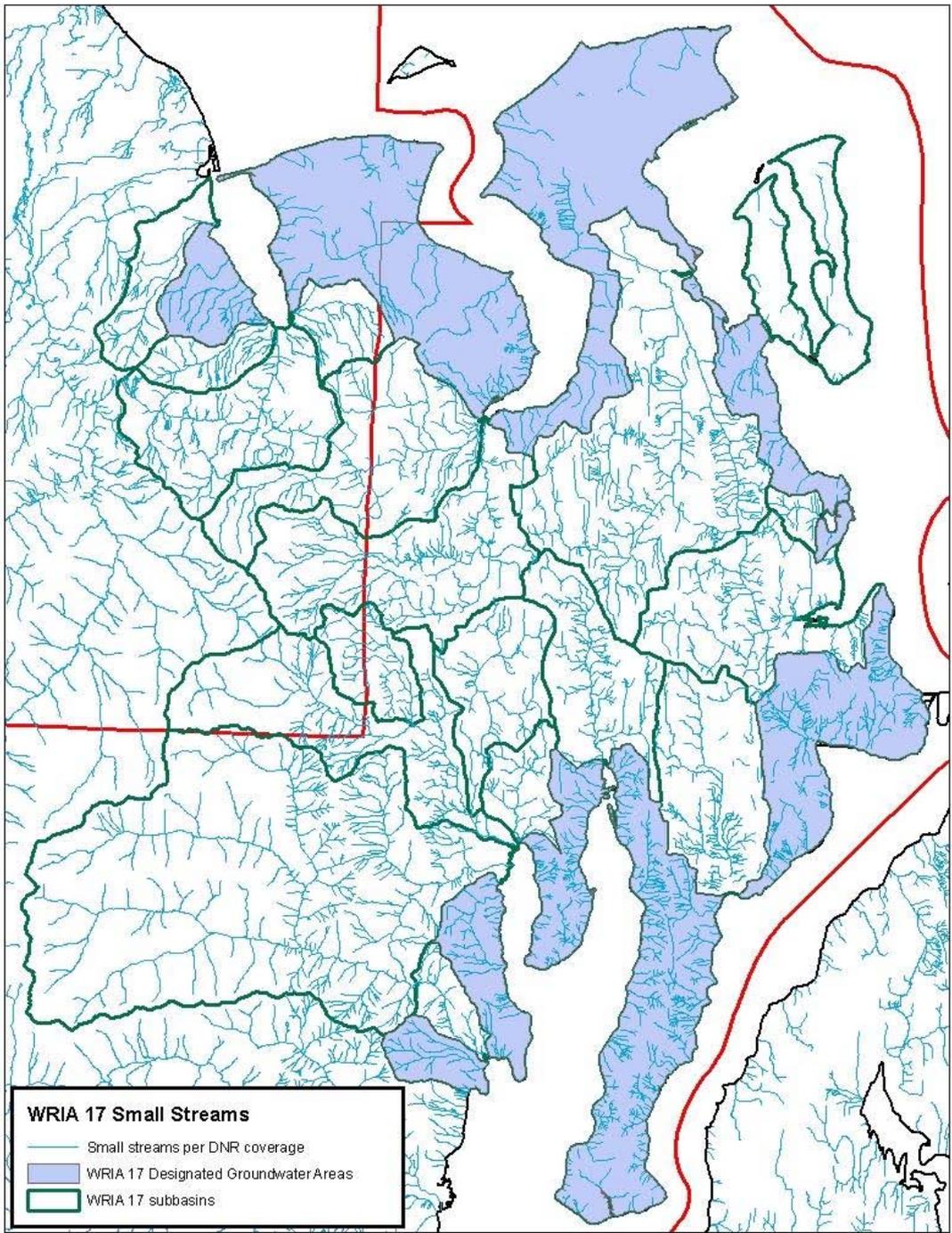


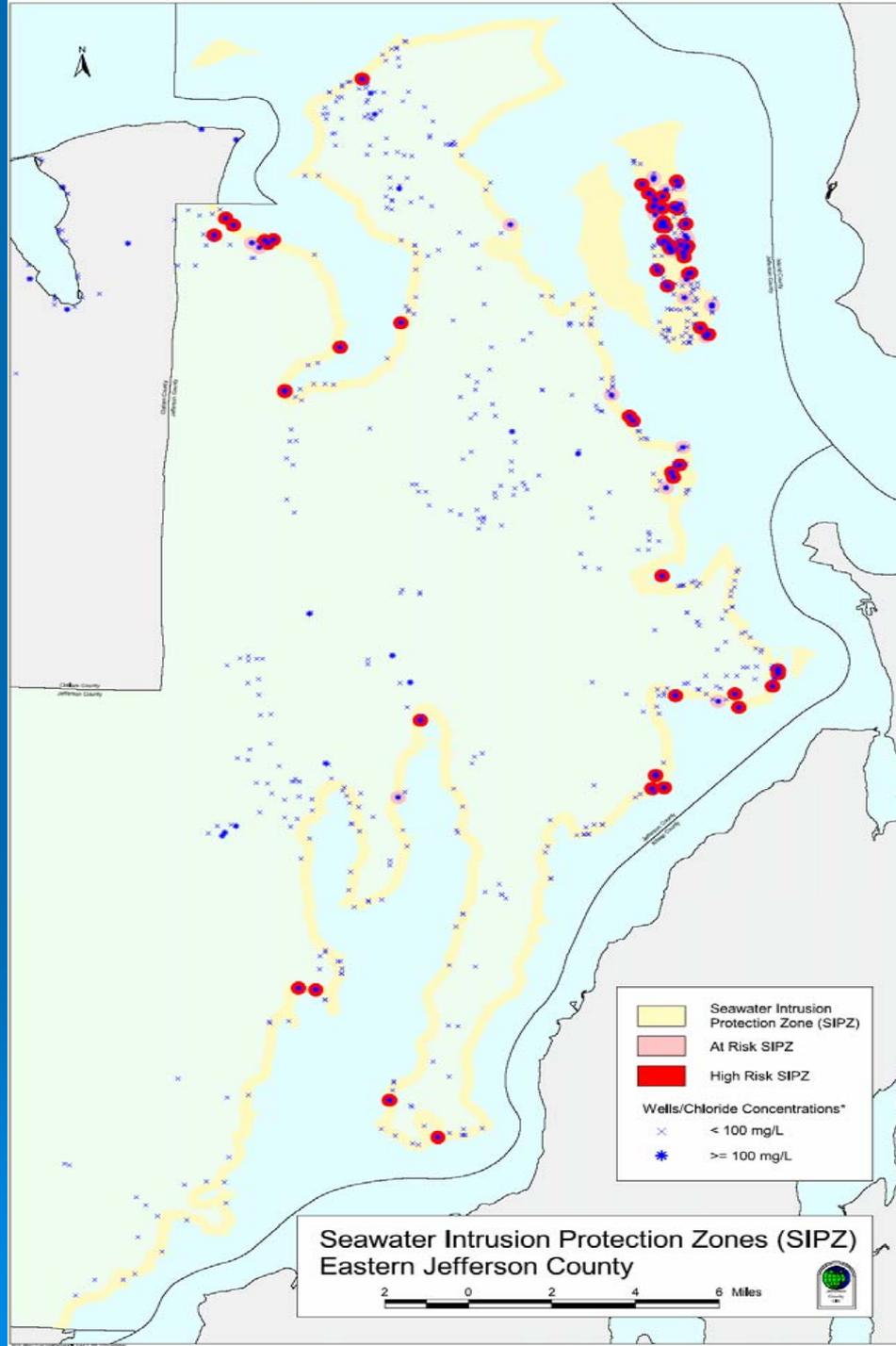
Ground Water Areas

- Miller Peninsula
- Quimper Peninsula
- Oak Bay
- Squamish Harbor
- Toandos Peninsula
- Bolton Peninsula
- Devil's Lake
- Marple

Ground Water Areas

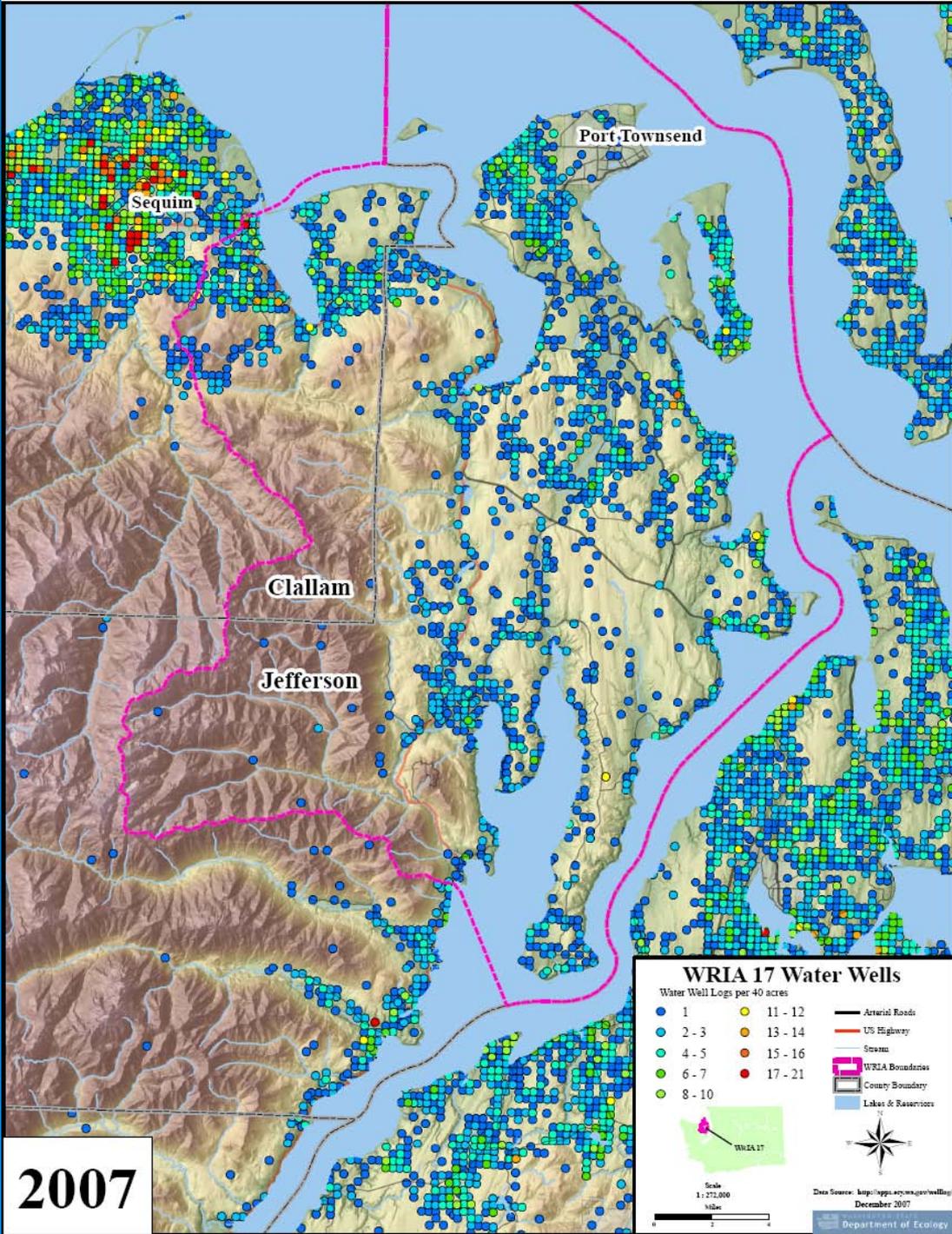
- Concerns expressed about protecting small fish-bearing streams
 - Concerns expressed about saltwater intrusion
 - Evaluating Quimper and Miller for expanded agriculture use in these areas
 - Several pending water right applications for irrigation
 - Islands
- 





Seawater Intrusion Protection Zones (SIPZ)
Eastern Jefferson County







Little Quilcene

Rainwater Catchment

- Pending legislation (again)
- Exception to closure in rule
- Ecology process subbasin general permits if requested
- Preference for indoor or outdoor use?



12,000 gallon system



9,000 gallon system



System size
unknown

Water Rights Processing

- PUD Four corners well new nonadditive application
- Port Ludlow cost recovery project
- Quilcene water supply – priority for post rule adoption

Options for measuring water use

- New water right permits must meter
- Should metering be required for new exempt uses
- Should metering be an option if people want to vary the amount they irrigate



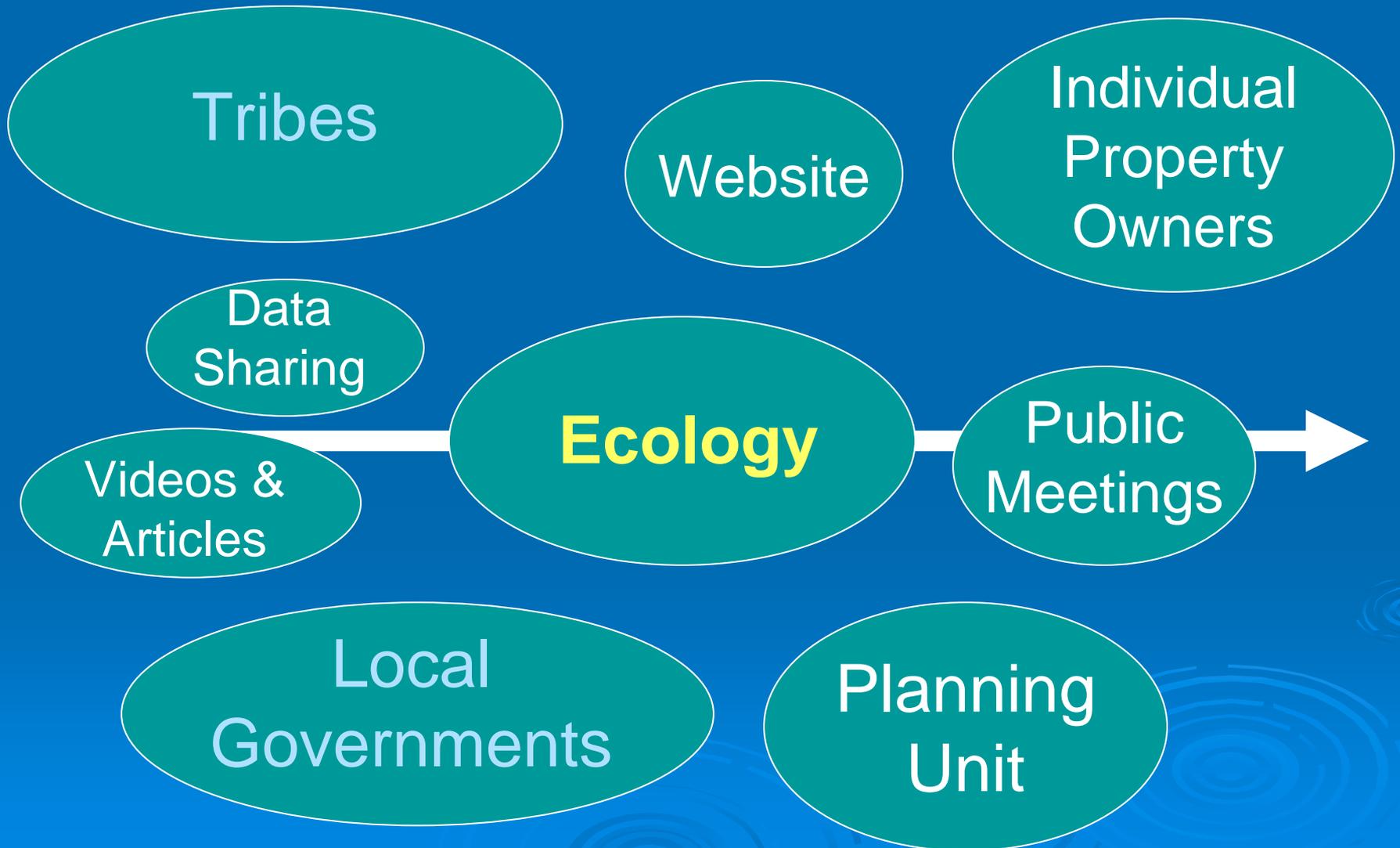
Summary – the hard choices

- Use of Reserves – what uses to debit
 - In-house Use
 - Water for new public water supply
 - Water for new agriculture
 - Is there demand for rainwater catchment?
 - To meter or not to meter
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What is Next?

- Ecology will continue to work with local officials and citizens to write a preliminary draft rule
- Ecology will share the preliminary draft rule with the public at a community forum before “filing” the formal draft rule
- When the rule is filed with the State Code Reviser there is a formal public comment period and 2 public hearings before the rule is adopted

Ongoing Communication





WATER for PEOPLE, FARMS & FISH

<http://water.jefferson.wsu.edu>

<http://www.ecy.wa.gov/programs/wr>

