

Chambers-Clover (WRIA 12) Watershed Restoration and Enhancement Committee *Meeting Agenda*

1. Welcome!
2. Introductions
3. Overview and Task at Hand
4. Group Activity
5. Next Steps
6. Public Comment



Next Steps

- Next meeting early/mid December (date, location TBD)
 - Operating Principles and Charter.
 - Engagement with other collaborations/committees/Boards?
- Trainings.
- NEB Comments Nov. 8
 - <http://ws.ecology.commentinput.com/?id=sWT53>
- Communications:
 - Committee Webpage
 - Meeting notes.



Photo from Kitsap Sun

RCW 90.94 STREAMFLOW RESTORATION



Watershed Restoration and Enhancement Committee Kickoff Meeting

Chambers- Clover Watershed (WRIA 12)

November 1, 2018

Overview

- Background and the Hirst Supreme Court Decision
- Key elements of RCW 90.94
 - Planning
 - Project Funding
 - Net Ecological Benefit
- Committee formation and role
- Timeline



Background



- 29 of our 62 basins have adopted instream flow rules.
 - New water rights are largely unavailable without “water-for-water” mitigation.
 - Changes to existing rights must result in no impairment to instream flows.

Key State Supreme Court Decisions

- *Postema v. Pollution Control Hearings Board* (2000)
- *Swinomish v. Ecology* (2013)
- *Foster v. Ecology* (2015)

Result

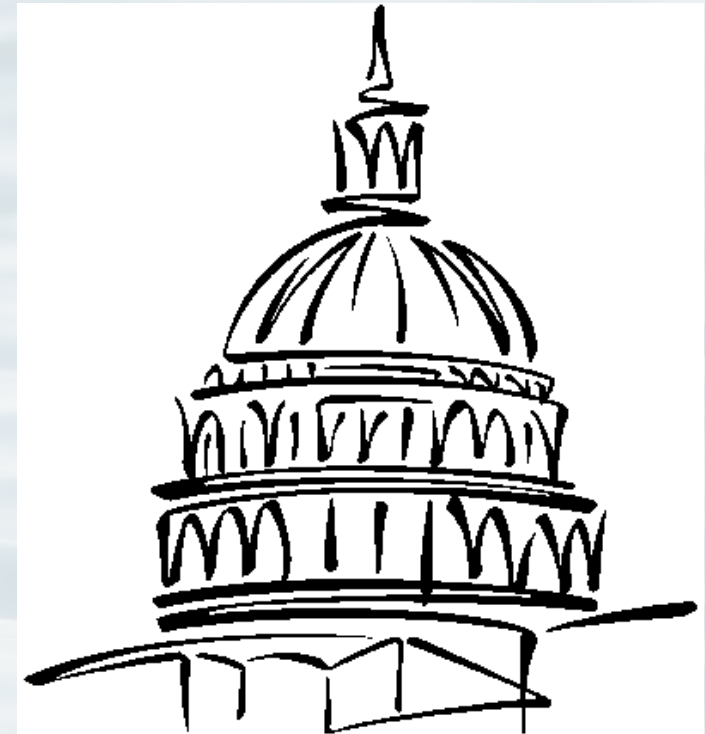
- No impairment to instream flows
- “Perfect mitigation” required for new water users
 - In-kind, in-time, in-place

Hirst, Futurewise, et al v. Whatcom County (2016)

- Appeal of Whatcom County's Comprehensive Plan.
- Failure to sufficiently protect water resources under the Growth Management Act.
- Counties have an independent responsibility to ensure that new permit-exempt uses do not impair senior uses, including instream flows.
- Counties cannot allow even *de minimus* impairment to instream flows.

Legislative Response

- **2017 session:** No agreement, even after longest session in state's history.
- **2017/2018 interim:** Significant discussion continued; progress towards agreement.
- **2018 session:** Agreement reached very early in session.



Negotiated Solution: ESSB 6091 - now RCW 90.94

ENGROSSED SUBSTITUTE SENATE BILL 6091

Passed Legislature - 2018 Regular Session

State of Washington

65th Legislature

2018 Regular Session

By Senate Agriculture, Water, Natural Resources & Parks (originally sponsored by Senators Van De Wege, Rolfes, and Frockt)

READ FIRST TIME 01/12/18.

1 AN ACT Relating to ensuring that water is available to support
2 development; amending RCW 19.27.097, 58.17.110, 90.03.247, and
3 90.03.290; adding a new section to chapter 36.70A RCW; adding a new
4 section to chapter 36.70 RCW; adding a new chapter to Title 90 RCW;
5 creating a new section; providing an expiration date; and declaring
6 an emergency.

Key Elements of RCW 90.94: *Homebuilding*

In basins impacted by the bill:

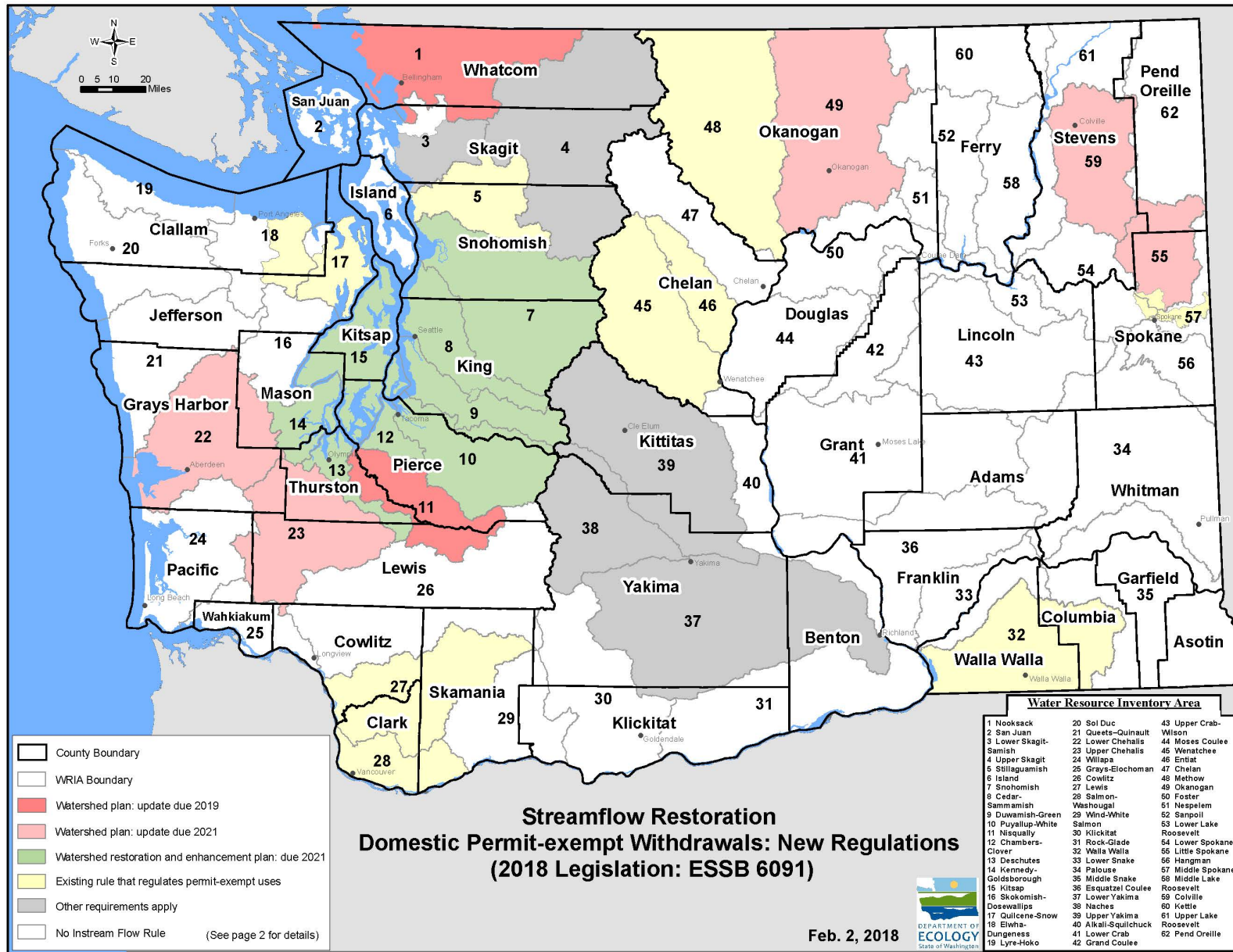
- Homebuilding allowed.
- \$500 fee.
- Water use restrictions.

Did not affect:

- Basins with instream flow rules with specific requirements for permit-exempt uses, the Skagit, and the Yakima.
- Wells drilled before the bill passed.
- Commercial, industrial buildings, or buildings not needing a building permit.



Key Elements of RCW 90.94: *Basin Planning*



Planning groups:

- Existing Watershed Planning Units (Section 202)
- New Watershed Restoration and Enhancement Committees (Section 203)

Planning elements:

- Actions to offset the consumptive use from new permit-exempt wells.
 - Prioritize "in-time and in-place".
- "Net ecological benefit" standard.

Planning requirements:

- Timeframes for completion – 1 or 3 years.

Key Elements of 90.94: *Funding*

- **Projects and Funding:** \$300 million over 15 years for streamflow restoration projects statewide.
 - Priority watersheds
 - Priority projects
- Current round closes Oct 31
- Rule Making



Photo from Kitsap Sun

Key Elements of 90.94: *Other Provisions*

- **Growth Management Act:** Counties can rely on Ecology rules for GMA compliance related to groundwater protection.
- **Metering:** Pilot program for metering new domestic uses in the Dungeness and Kittitas.
- **Foster:** Legislative task force to study the WA Supreme Court's *Foster* decision. 5 *Foster* pilot projects authorized.
- **Reporting:** Reports to the Legislature in 2020 and 2027.

Planning Requirements

Section 020

- Updates to watershed plans prepared under RCW 90.82, the Watershed Planning Act

Section 030

- Watershed restoration and enhancement plans



Net Ecological Benefit



Considerations for Net Ecological Benefit

- Offset projected 20-year consumptive use from new permit-exempt domestic withdrawals
- Non-water projects are in addition to the required water offset



Water and Non-Water Project Examples

Water Offset Projects

- Water right acquisition
- Off-channel storage
- Shallow aquifer recharge (SAR)
- Floodplain restoration/levee removal
- Streambed elevation restoration/alluvium aggradation
- Streamflow augmentation

Non-Water Offset Projects

- Strategic land acquisition
- Streambank stabilization/riparian restoration
- Water quality improvements
- Channel habitat improvements



Picture of Indian Creek in the Teanaway Community Forest, near Cle Elum, WA. Headwaters to the Yakima River and spawning area for Steelhead and other salmonids in the Columbia River Basin. | Photo: Jonathon Loos

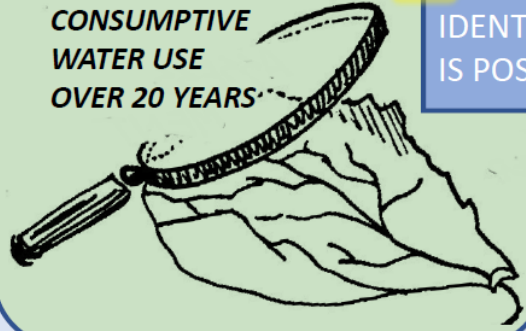
Watershed Restoration and Enhancement Committee Formation

- Ecology as chair
- Ecology invited entities identified in legislation
 - Tribes (reservation, U&A)
 - Counties
 - Cities
 - Largest Irrigation District
 - Largest Non-Municipal Water Purveyor
 - Department of Fish and Wildlife
- Nomination and survey process
 - Environmental interest
 - Agricultural interest
 - Residential Construction interest



1

QUANTIFY EXPECTED
CONSUMPTIVE
WATER USE
OVER 20 YEARS



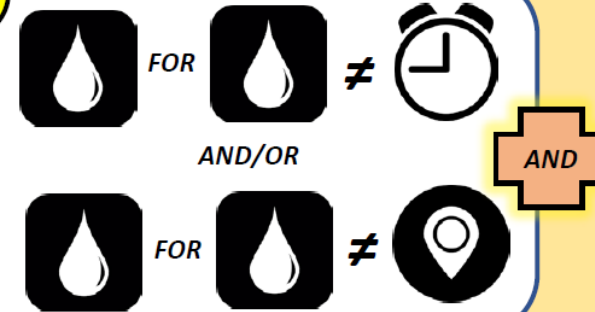
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IDENTIFY WHERE IT
IS POSSIBLE TO OFFSET

FIRST
PRIORITY



SECOND
PRIORITY

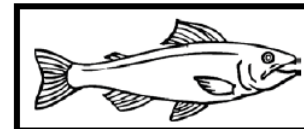


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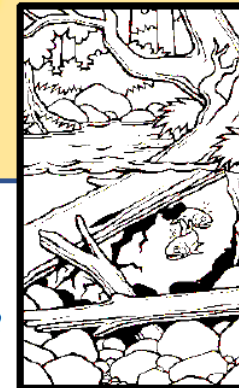


ECOLOGY MUST EVALUATE:
DOES THIS PLAN HAVE A
NET ECOLOGICAL BENEFIT?

PROJECTS THAT ENHANCE



AND/OR



Committee Plan Approval

- If the Committee **approves** a plan, by consensus...
- If the Committee **cannot** reach consensus...
- Rule making triggers...

Anticipated timeline

- **2018-2019**

- Operating Principles and Charter
- Trainings
- Growth Projections
- Consumptive Use Estimates

- **2019-2020**

- Project Identification
- Draft Plan

- **2020-2021**

- Local Plan Review and Approval
- Net Ecological Benefit Determination
- Final Approval June 2021

- **What happens after June 2021?**

- Rulemaking Likely
- Plan Implementation
- Grant Program Management (ongoing)



16

8

15

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12

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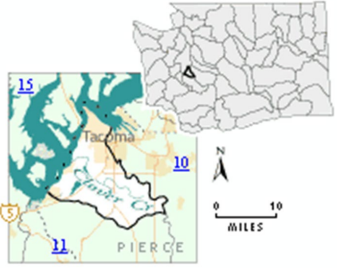
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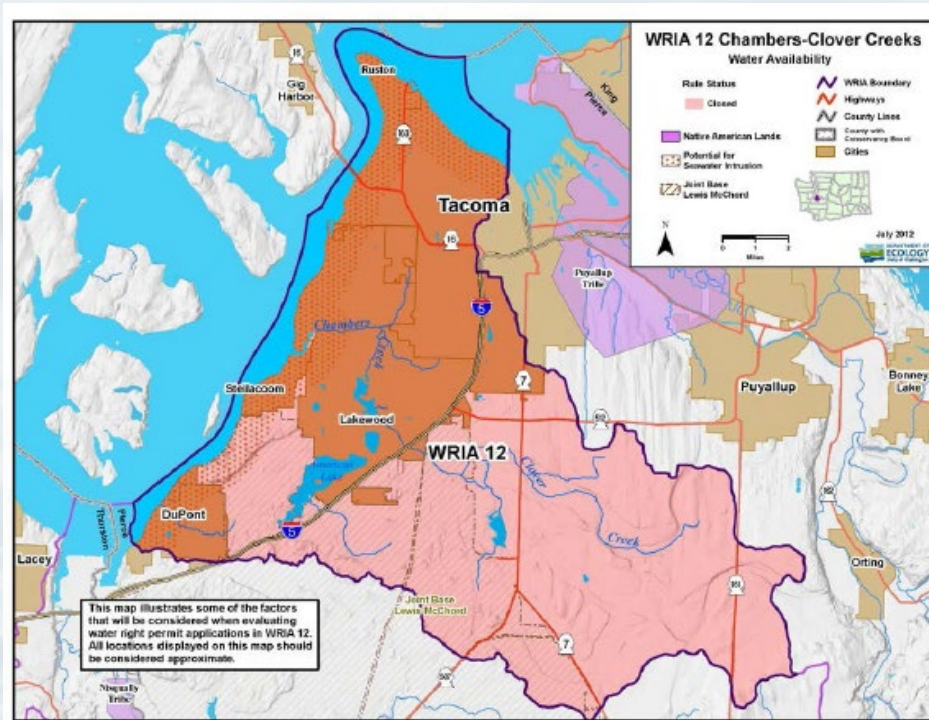
WRIA 12 Highlights

The Chambers-Clover Watershed

- Is one of the most intensely populated basins in western Washington.
- WRIA 12 consists of 1 major stream – Chambers Creek – Clover Creek and a other smaller independent streams.
- Annual streamflow is largely driven by annual rainfall.
- Annual precipitation in the Chambers-Clover Watershed ranges from 40 to 60 inches per year.
 - 'Most of this precipitation arrives during the winter months when overall water demands are the lowest.
 - During the summer, there is little rain, and naturally low stream flows are dependent on groundwater inflow.
 - At the same time the demand for water for human uses, including irrigation are at the yearly maximum.
- ***Groundwater and surface water are least available when water demands are the highest.***

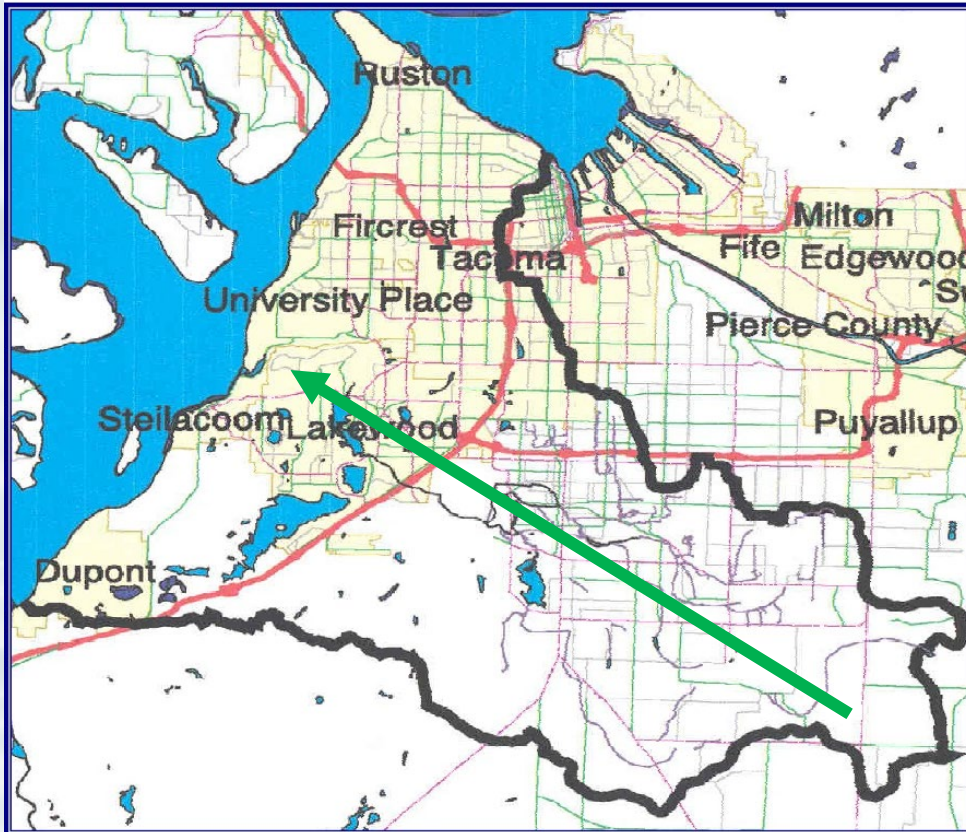
WRIA 12 Highlights

The Chambers-Clover Watershed



- WRIA 12 includes parts of Tacoma, all of University Place, Lakewood and DuPont, and parts of JBLM, Parkland, Spanaway and Graham
- WAC 173-512 is the instream resources protection program rule for the Chambers/Clover watershed.
- This rule, adopted in 1979, closes the watershed to new appropriations that would harm stream flows.
- There is no water set aside in reserves for future uses in this watershed.
- Applicants seeking new water appropriations will need mitigation for the impacts of their water use on surface water bodies.

General Hydrogeology



- WRIA 12 is the smallest of Washington's 62 WRIAs in area – about 149 square miles in area.
- It is the **ONLY** WRIA in the state without a surficial bedrock outcrop – entire surface footprint is glacially deposited materials in the last 15,000 years.
- Only WRIA in state whose "mainstem" stream flows under a major airport runway – Clover Creek at JBLM (McChord AFB)
- At least 3 distinct aquifer zones
 - Recessional outwash – Shallow Aquifer
 - Advance Outwash – Intermediate Aquifer
 - Earlier glaciation – deep aquifer
- These aquifers also extend into the Puyallup (WRIA 10) and Nisqually (WRIA 11) watersheds.
- Groundwater generally flows from SE to NW in the Chambers-Clover mainstem drainage area(s) – discharging to Puget Sound.

Existing Water Rights in the Chambers-Clover Watershed (WRIA 12)



	WRIA 10
New Applications	9
Change Applications	4
Existing Water Right Certificates	470
Existing Water Right Permits	8
Existing Water Right Claims	2,130



Prepared in cooperation with the Pierce Conservation District and the Washington State Department of Ecology

Hydrogeologic Framework, Groundwater Movement, and Water Budget in the Chambers-Clover Creek Watershed and Vicinity, Pierce County, Washington



Scientific Investigations Report 2010–5055

U.S. Department of the Interior
U.S. Geological Survey

USGS Water Resources Scientific Investigations Report – Hydrogeologic Framework, Groundwater Movement, and Water Budget in the Chambers-Clover Creek Watershed and Vicinity. Pierce County, WA - 2010



USGS Delineated Hydrogeologic Units of regional groundwater aquifers in Chambers-Clover Watershed, Pierce County

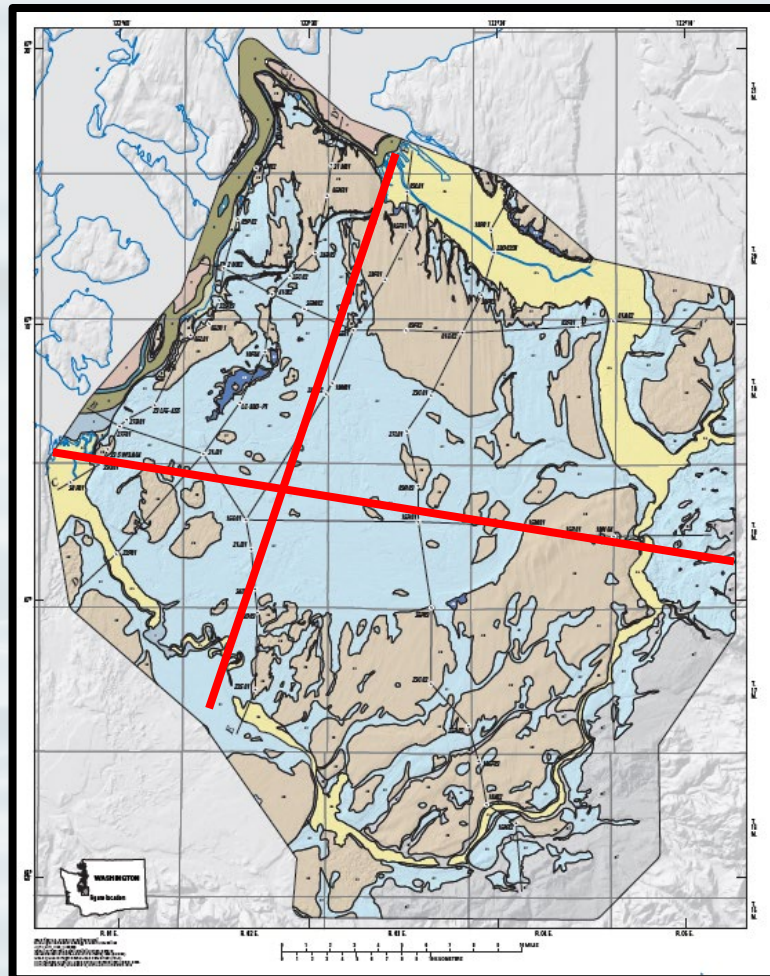
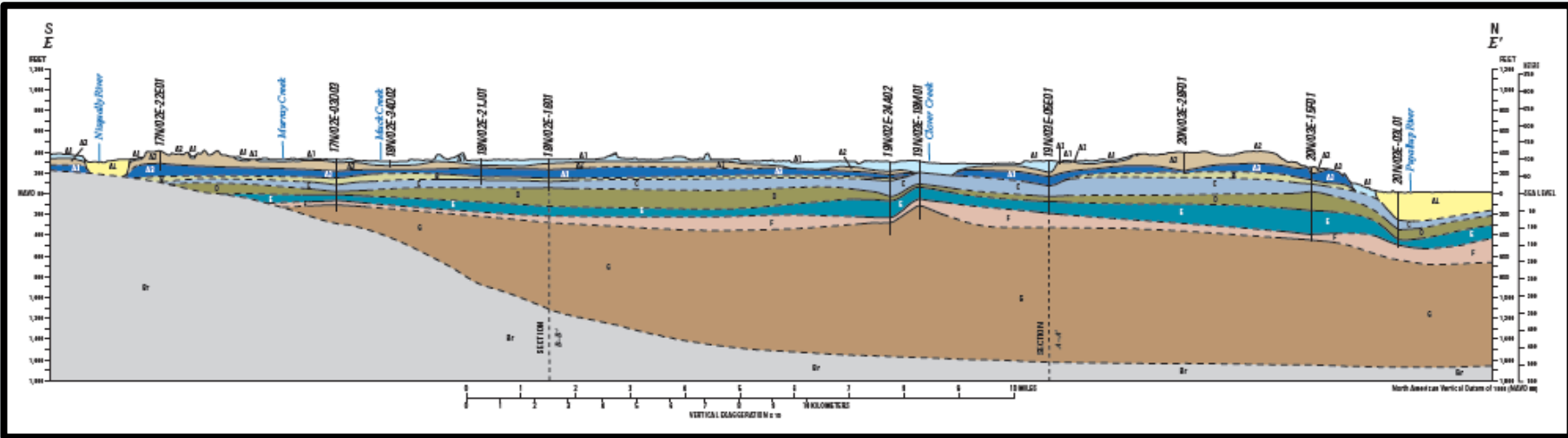
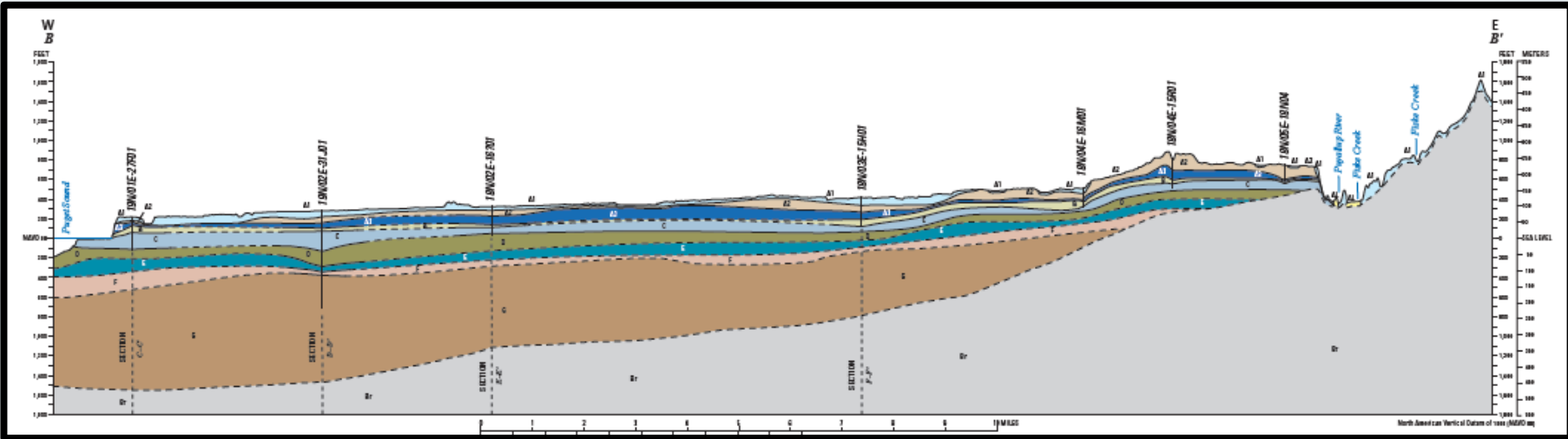


Table 1. Hydrogeologic units defined in this study and correlation with geologic and hydrostratigraphic units from previous investigations.

Period	Epoch	Hydrogeologic units defined in this study	Geologic units in Troost (in press) and Troost and Booth (in press)	Geologic units in Schasse (1987) and Walsh (1987)	Hydrostratigraphic units in Robinson & Noble, Inc., and others (2003)	Stratigraphic units
Quaternary	Holocene, Pleistocene	A1 alluvial valley aquifer	Qal, af, Qp	Qa, Qvi(e)	Aquifer A: includes Steilacoom gravel, Vashon Till, Vashon Advance Outwash, Espinasse Sand	Recent alluvium, mudflows/ lahars and marine deposits
		A1 aquifer	Qal, Qv, Qvt, Qvy, Qvs, Qw	Qa, Qgd, Qgo, Qgog, Qgos, Qp, Qvi(lc), Qvi(o)		Vashon Drift (Steilacoom gravel, recessional outwash)
		A2 confining unit	Qvi, Qvt, Qvrl	Qgm, Qgt, Qgl		Vashon Drift (Vashon Till), ice-contact and moraine deposits
		A3 aquifer	Qva, Qpfc	Qga		Vashon Drift (advance outwash)
		B confining unit	m, af, Qal, Qb, Qf, Qls, Qns, Qob, Qpdc, Qpf, Qpoc, Qpon, Qrf, Qvic, Qwbc	Qc(k)	Layer B	Olympia Beds (Kinsap Formation), Lawton Clay
		C aquifer	Qpog, Qpogc	Qgp	Aquifer C	Salmon Springs Drift, Penultimate Drift, Hayden Creek Drift, Wingate Hill Drift
		D confining unit			Layer D	Puyallup Formation
		E aquifer			Aquifer E	Stack Drift
		F confining unit			Layer F	Alderton Formation
		G Undifferentiated deposits			Aquifer G	Oting Drift
Tertiary	Miocene to Eocene	Bedrock Unit		Qap, Qap(h), Qapt(h), Qap(wh), Qapt(wh), and all pre-Quaternary deposits		Basement confining unit and some alpine glacial deposits

USGS Conceptual Cross-Sections (looking west) of regional groundwater aquifers in Pierce County



Groundwater Flow Direction(s)

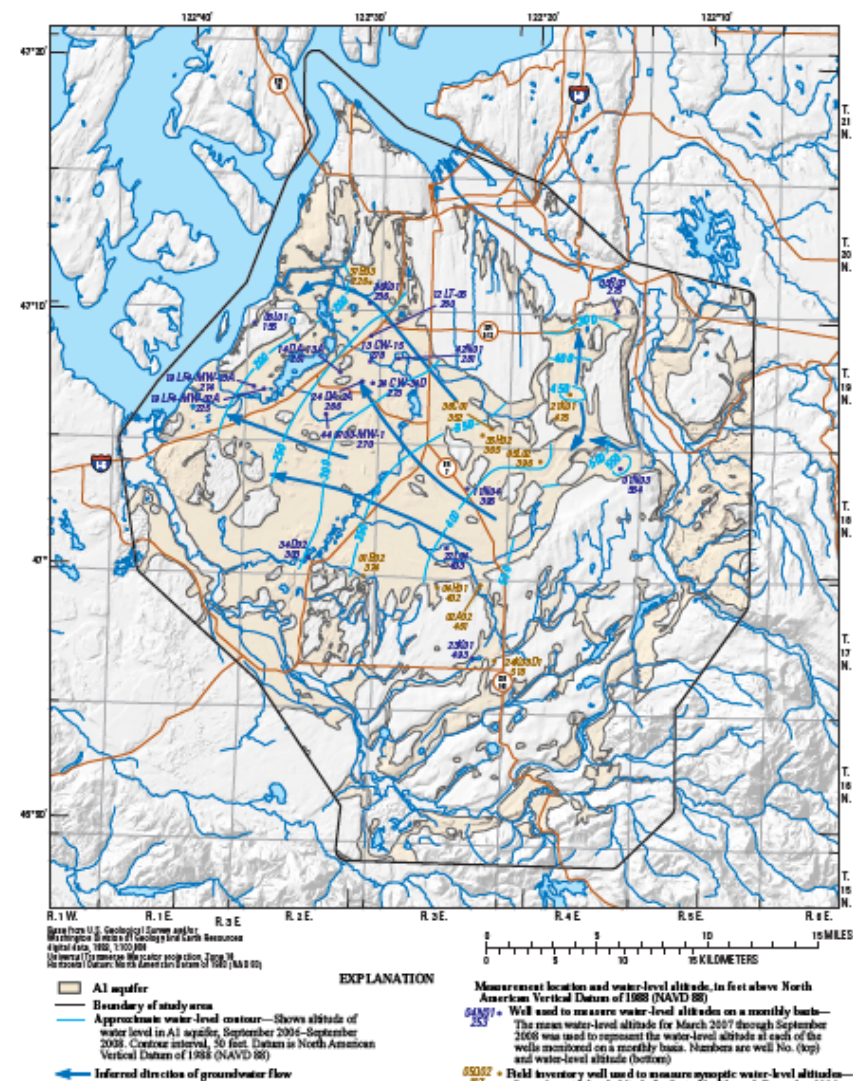


Figure 17. Water-level altitudes and direction of groundwater flow in A1 aquifer, Chambers-Clover Creek Watershed and vicinity, Washington, September 2006–September 2008.

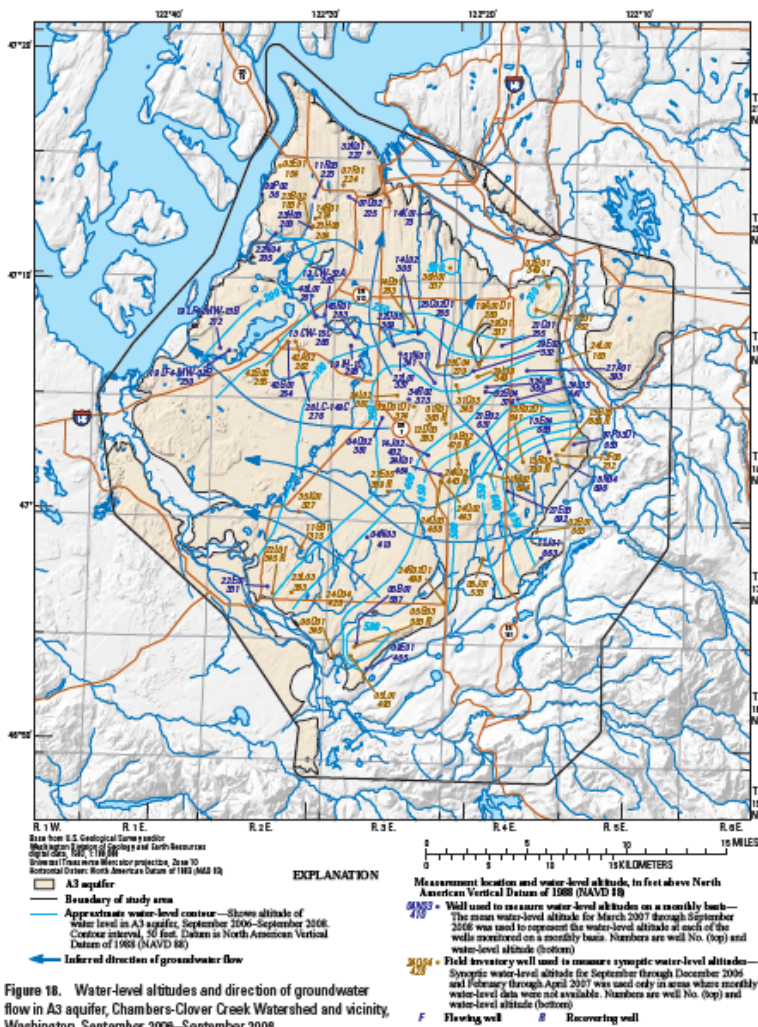


Figure 18. Water-level altitudes and direction of groundwater flow in A3 aquifer, Chambers-Clover Creek Watershed and vicinity, Washington, September 2006–September 2008.

Estimated Water Budget

- The water-budget area received about 1,428,000 acre-feet or about 52 inches of precipitation per year (January 1, 2011, to December 31, 2012).
- About 41 percent of precipitation enters the groundwater system as recharge.
- Seven percent of this recharge is withdrawn from wells and the remainder leaves the groundwater system as discharge to rivers, discharge to springs, or submarine discharge to Puget Sound, or exits the study area through subsurface flow in the Green River valley.

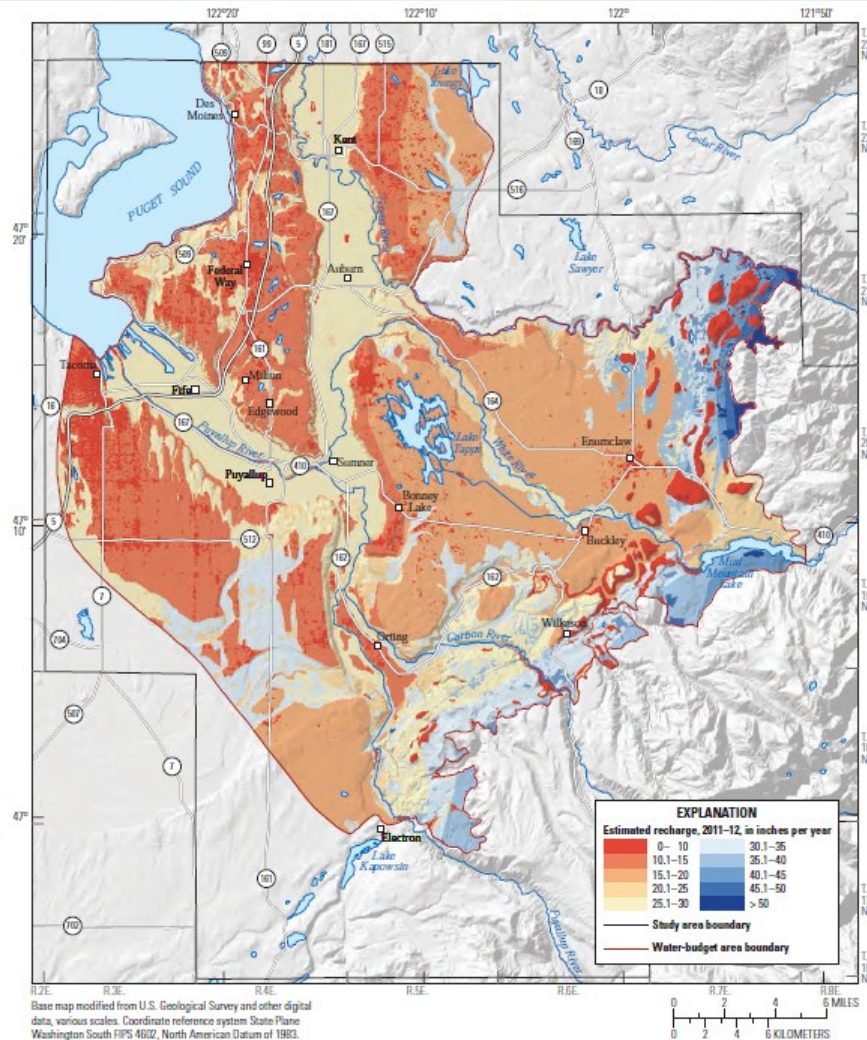


Figure 17. Distribution of average annual groundwater recharge from precipitation in Puyallup River Watershed and vicinity, Washington, January 2011–December 2012.

Distribution of average annual groundwater recharge from precipitation in the Chambers-Clover Creek watershed and vicinity

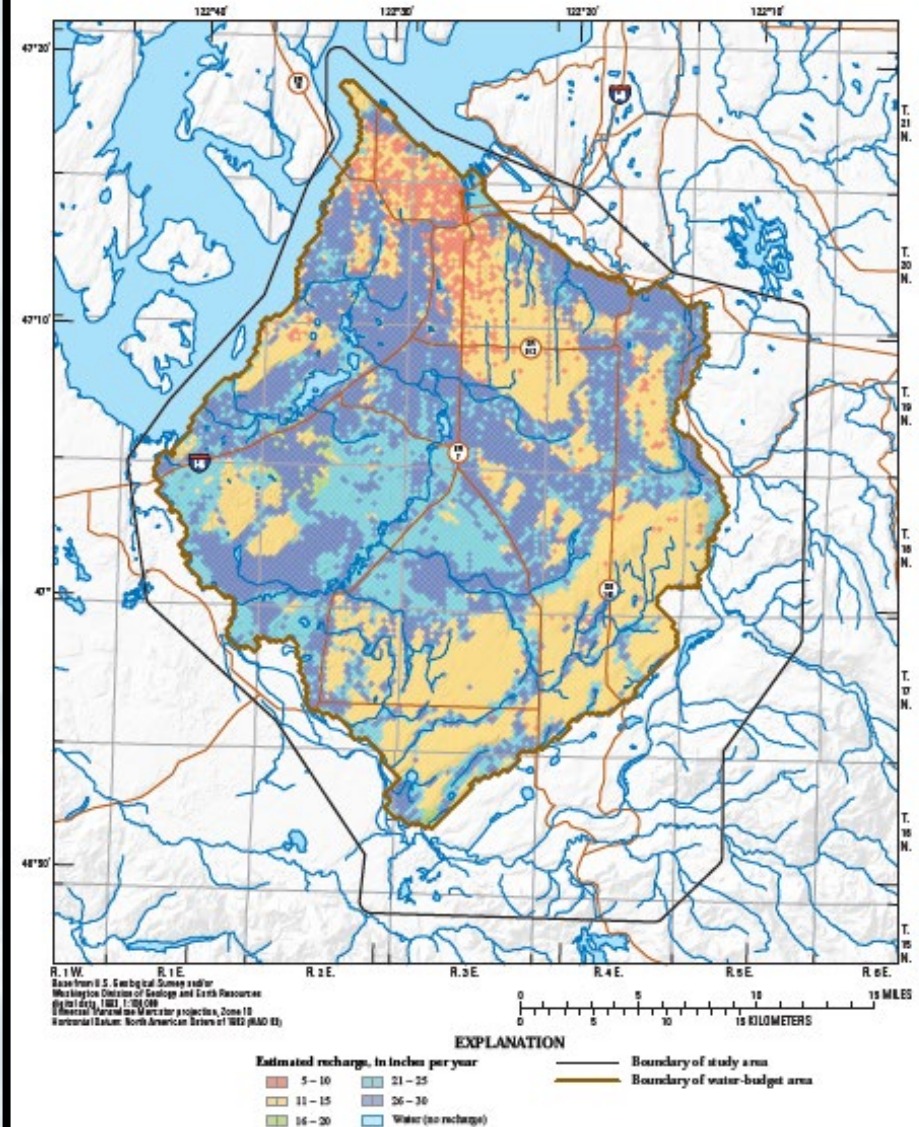
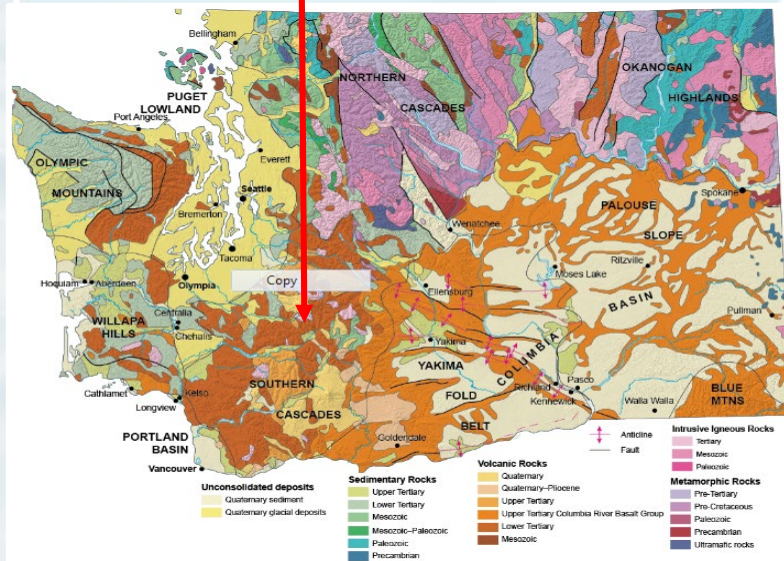
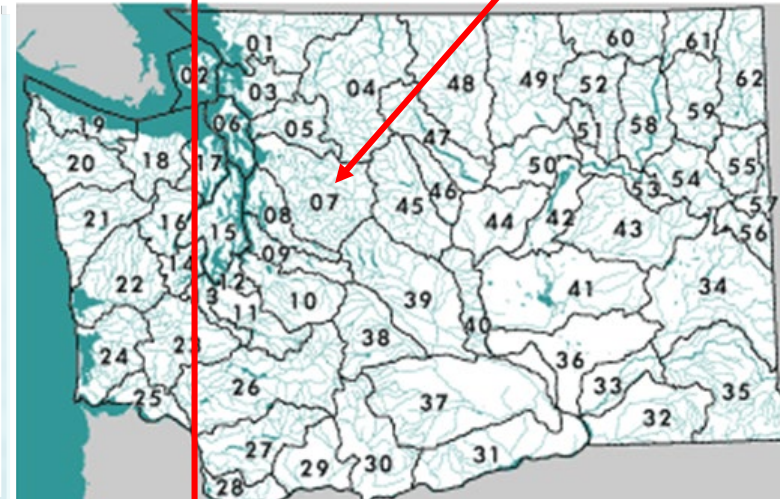
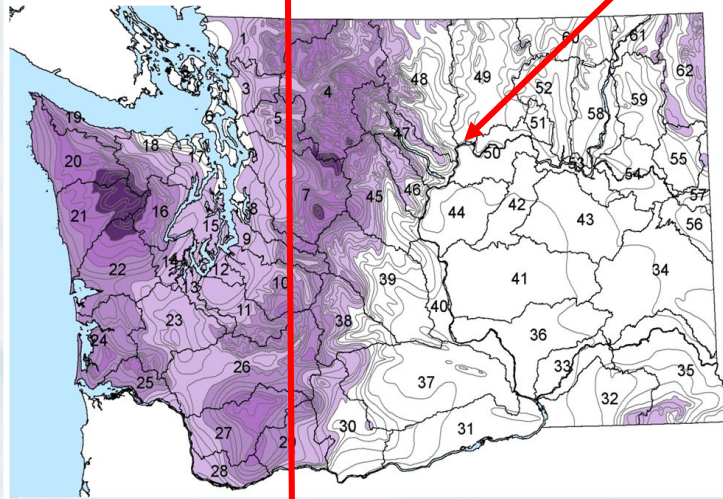


Figure 15. Distribution of average annual groundwater recharge from precipitation in Chambers-Clover Creek Watershed and vicinity, Washington, September 2008–August 2008.

Conclusions

- New law allows rural growth to continue ahead of the water for water solutions
- New law primarily impacts future permit exempt wells and building permits in the 15 “pre-2000 rule” watersheds:
 - WRIAs 1, 7, 8, 9, and 15 in NW Region,
 - WRIAs 10, 11, 12, 13, 14, 15 and 22/23 in SW Region
 - WRIA 49 in Central Region
 - WRIAs 55 and 59 in Eastern Region
- It lays out these interim standards that will apply until local committees develop plans to be adopted into rule:
 - Allows a maximum of 950 or 3,000 gallons per day for domestic water use, depending on the watershed.
 - Establishes a one-time \$500 fee for landowners building a home using a permit-exempt well in the affected areas.
- It retains the current maximum of 5,000 gallons per day limit for permit-exempt domestic water use in watersheds that do not have existing instream flow rules.
- It invests \$300 million over the next 15 years in projects that will help streamflows and fish.

Big Challenge: Fitting the wide variation in precipitation/recharge, surficial water supply and complex hydrogeological conditions with legal and Court directed statutes/decisions...



Questions?

Thank you

Mike Gallagher
Department of Ecology
Water Resources Program

(360) 407-6058
Mike.Gallagher@ecy.wa.gov



DEPARTMENT OF
ECOLOGY
State of Washington

Next Steps

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 - Operating Principles and Charter.
 - Engagement with other collaborations/committees/Boards?
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