Streamflow Restoration Planning

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WRIA 14 Watershed Restoration and Enhancement Plan

26 February 2021

DEPARTMENT OF ECOLOGY
State of Washington

Streamflow Restoration law
RCW 90.94

- Clarifies how local governments can issue building permits for homes intending to use a permit-exempt well for their domestic water supply **and offsets those impacts through a local watershed planning effort**.

- Ecology chaired the WRIA 14 Committee, composed of tribes, counties, cities, WDFW, municipal water purveyor, and interest groups. The committee met over the last two years to develop the Watershed Restoration and Enhancement Plan.

Watershed Restoration and Enhancement Plan Components

Planning Horizon

2018 - 2038

WRIA Subbasin Delineation

8 subbasins

Projected New Permit-Exempt Wells

4,294 Projected New Permit-Exempt Wells

Estimated Consumptive Use

759 acre-feet per year (1.04 cfs) – most likely estimate
1,034 acre-feet per year (1.43 cfs) – goal to achieve through adaptive management

Projects and Actions

to offset estimated consumptive use and meet Net Ecological Benefit (NEB)

Presentation Outline

1. Background
2. Streamflow Restoration Law
3. Role of the Committee
4. Elements of the Watershed Plan
5. Steps to complete Plan

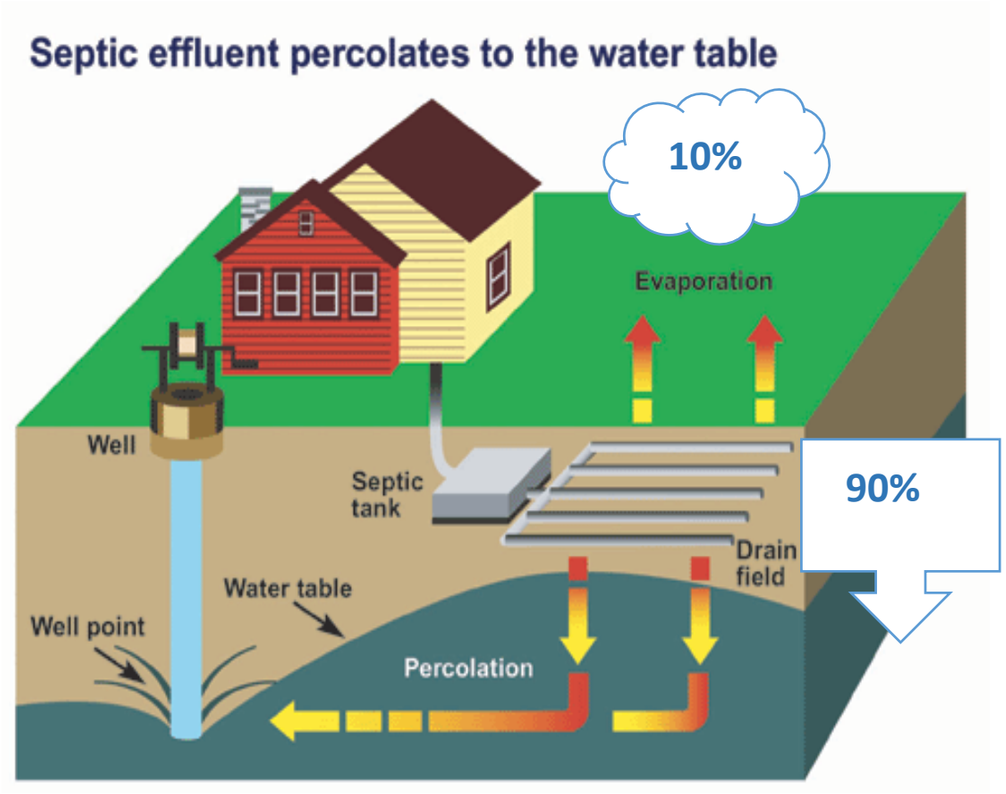
What is a permit-exempt domestic well?

- Serve single homes, small developments, irrigation of small lawns and gardens
- Chapter 90.94 RCW establishes withdrawal limits for permit-exempt domestic well connections in this watershed

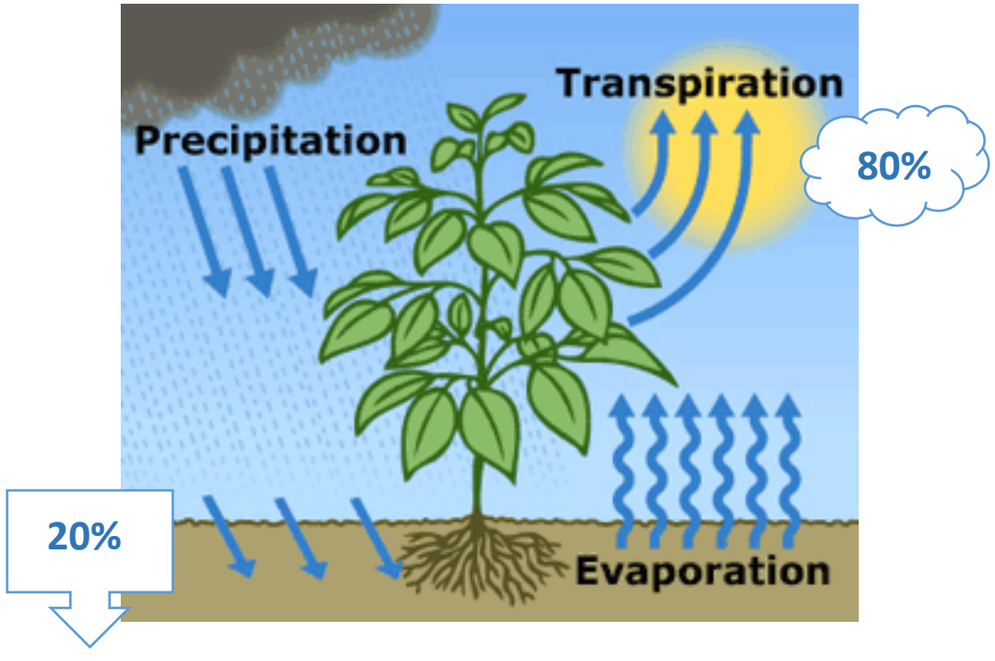
What is consumptive water use?

Water that is evaporated, transpired, consumed by humans, or otherwise removed from an immediate water environment due to the use of new permit-exempt domestic wells.

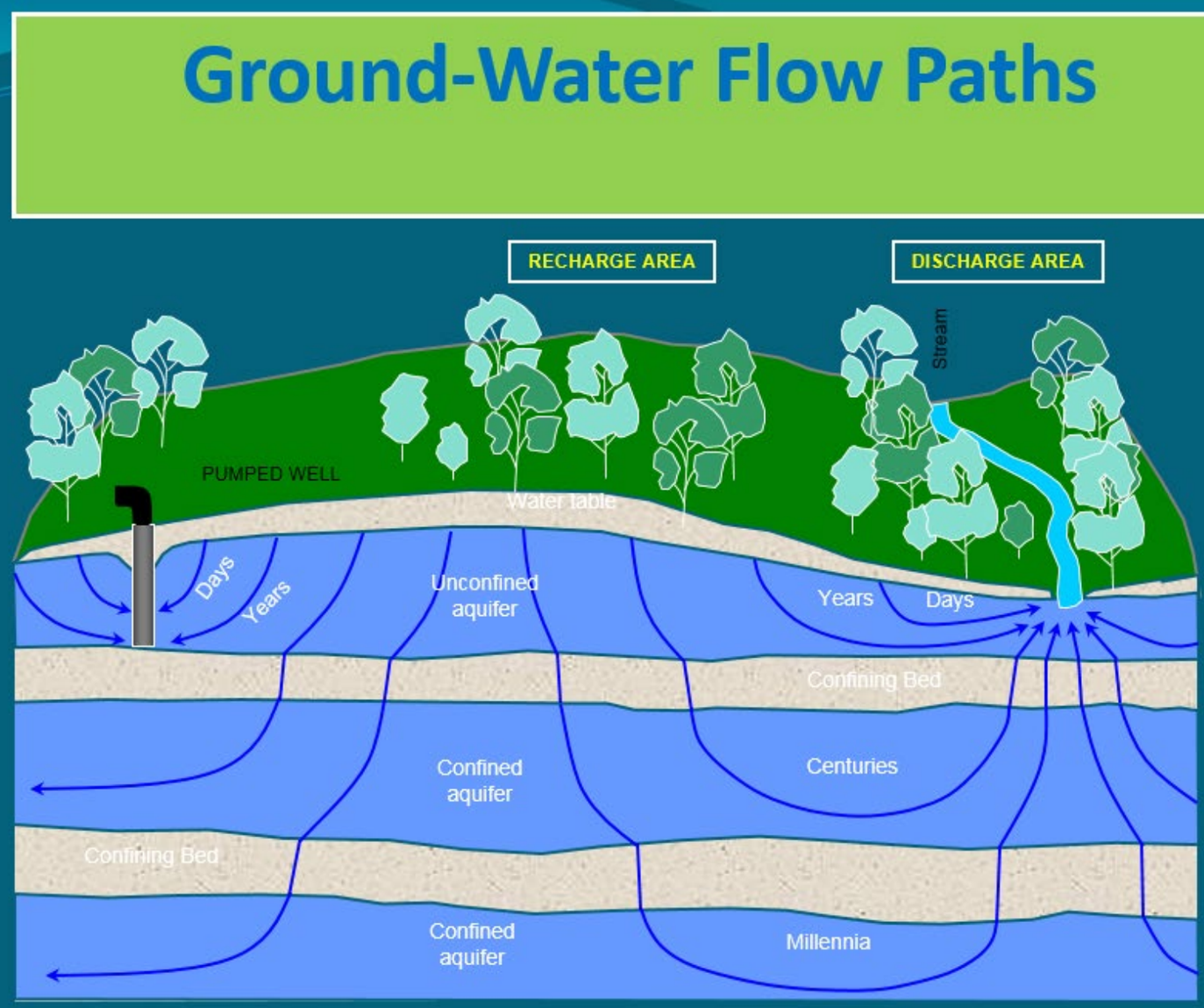
Indoor Consumptive Use



Outdoor Consumptive Use

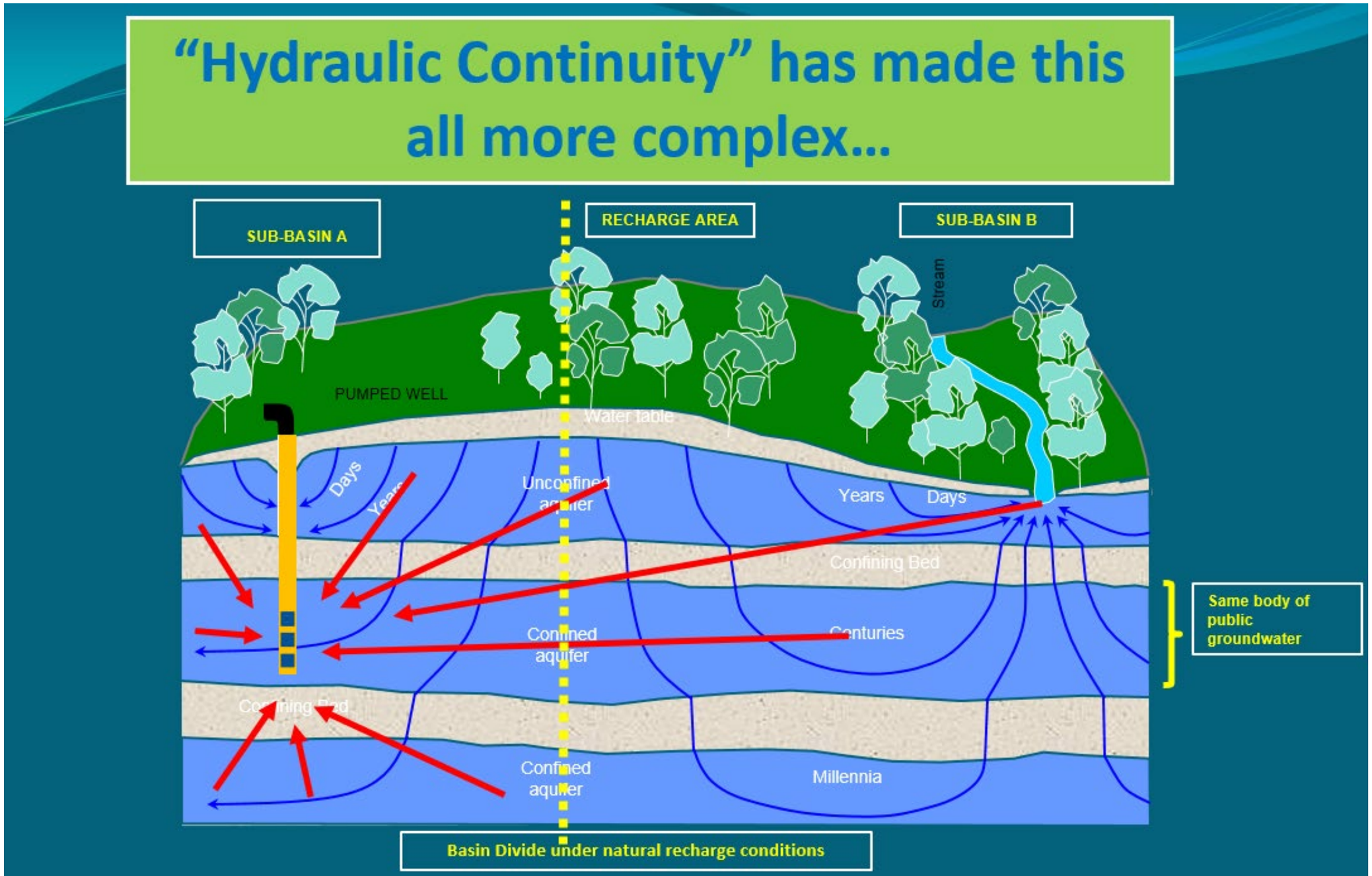


How are groundwater and streamflows connected?



Ground-water flow paths vary greatly in length, depth, and travel time from points of recharge to points of discharge in the ground-water system

How do wells affect streamflows?

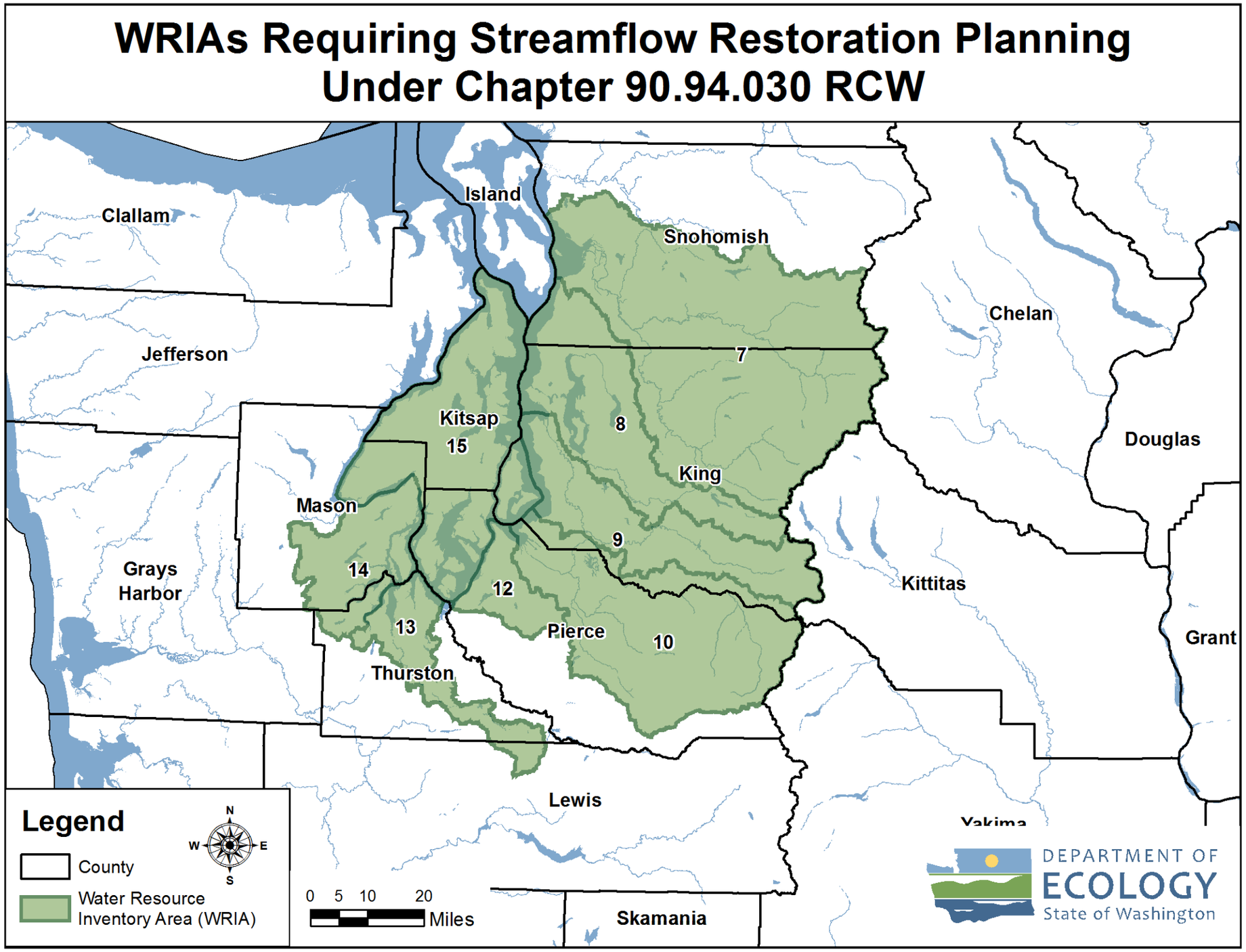


Hydraulically connected ground water and surface water cannot be considered as independent resources - a **withdrawal from one will have <u>some</u> effect on the other.**

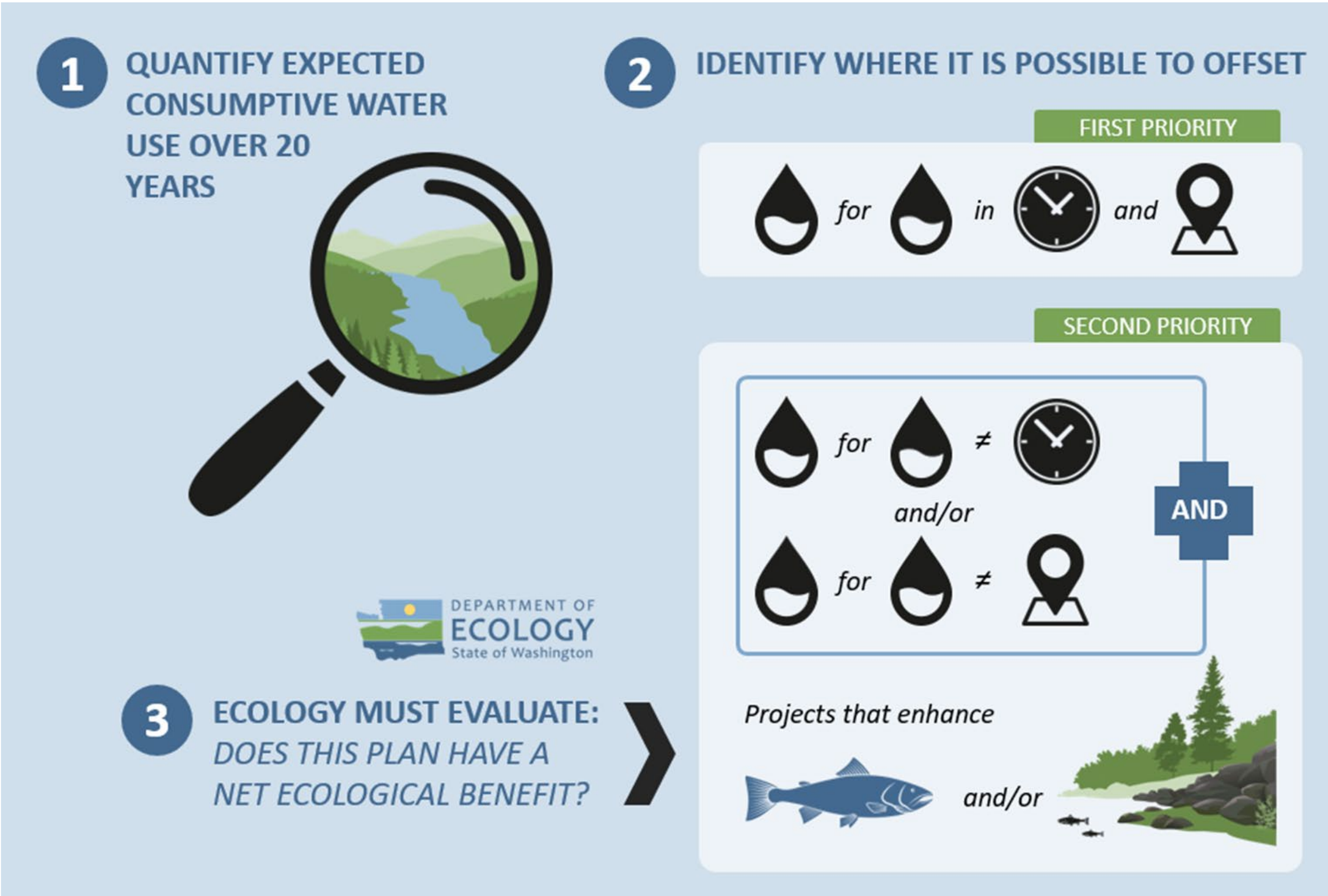
Streamflow Restoration Law RCW 90.94

Clarifies how local governments can issue building permits for homes intending to use a permit-exempt well for their domestic water supply **and offsets those impacts through a local watershed planning effort.**

Streamflow Restoration Planning Map

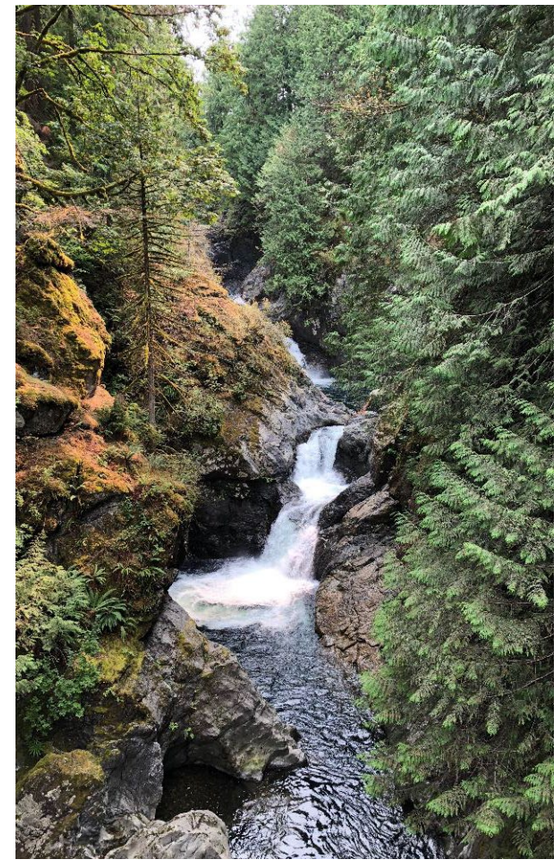


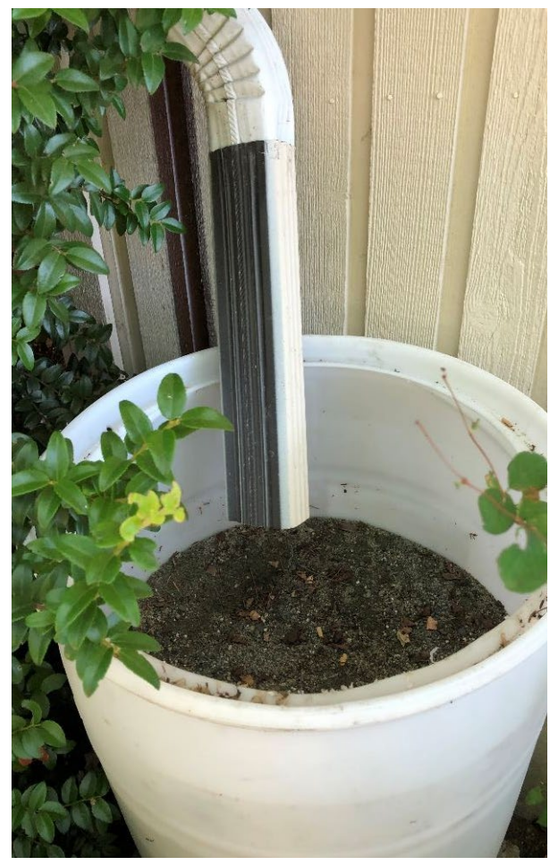
Overview of the Watershed Plan

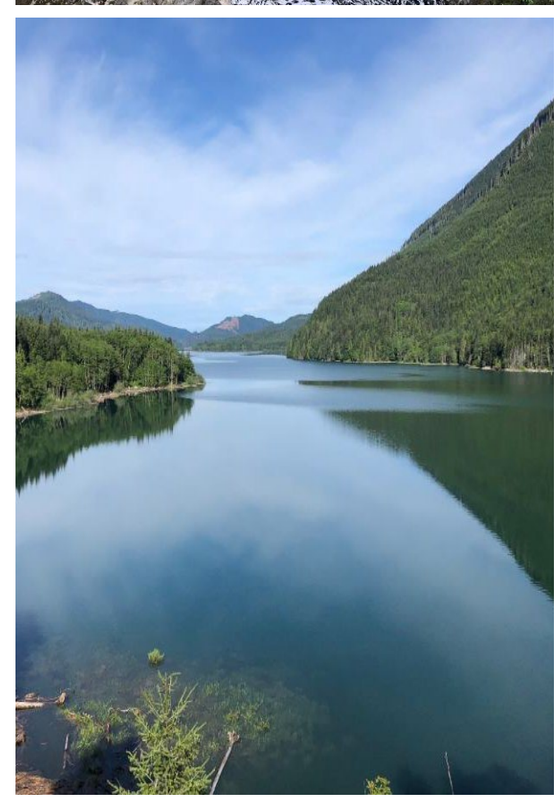


What is offset?

The anticipated ability of a project or action to counterbalance some amount of
the new consumptive water use over the next 20 years (2018-2038).







What is Net Ecological Benefit (NEB)?

From Ecology's Final NEB Guidance

"…local planning groups are best situated, and will therefore determine the appropriate amount of benefits beyond the offsetting of projected impacts …"

Watershed Restoration and Enhancement Committee

Entity Name	Representing
Skokomish Tribe	Tribal government
Squaxin Island Tribe	Tribal government
Mason County	County government
Thurston County	County government
City of Shelton	City government
Mason County Public Utility District 1	Water purveyor
Washington Department of Fish and Wildlife	State agency
Washington Department of Ecology	State agency
Building Industry Association of Washington	Residential construction industry
Washington State Chapter of the Sierra Club	Environmental interests
Mason-Kitsap Farm Bureau	Agricultural interests
Mason Conservation District	Ex-officio
Washington State Department of Health	Ex-officio
Green Diamond	Ex-officio

What is the Committee's role?

Committee

- Develops Watershed Plan
- Approves Plan

Ecology

- Determines NEB
- Adopts Plan

Watershed Restoration and Enhancement Plan Components

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2018 - 2038

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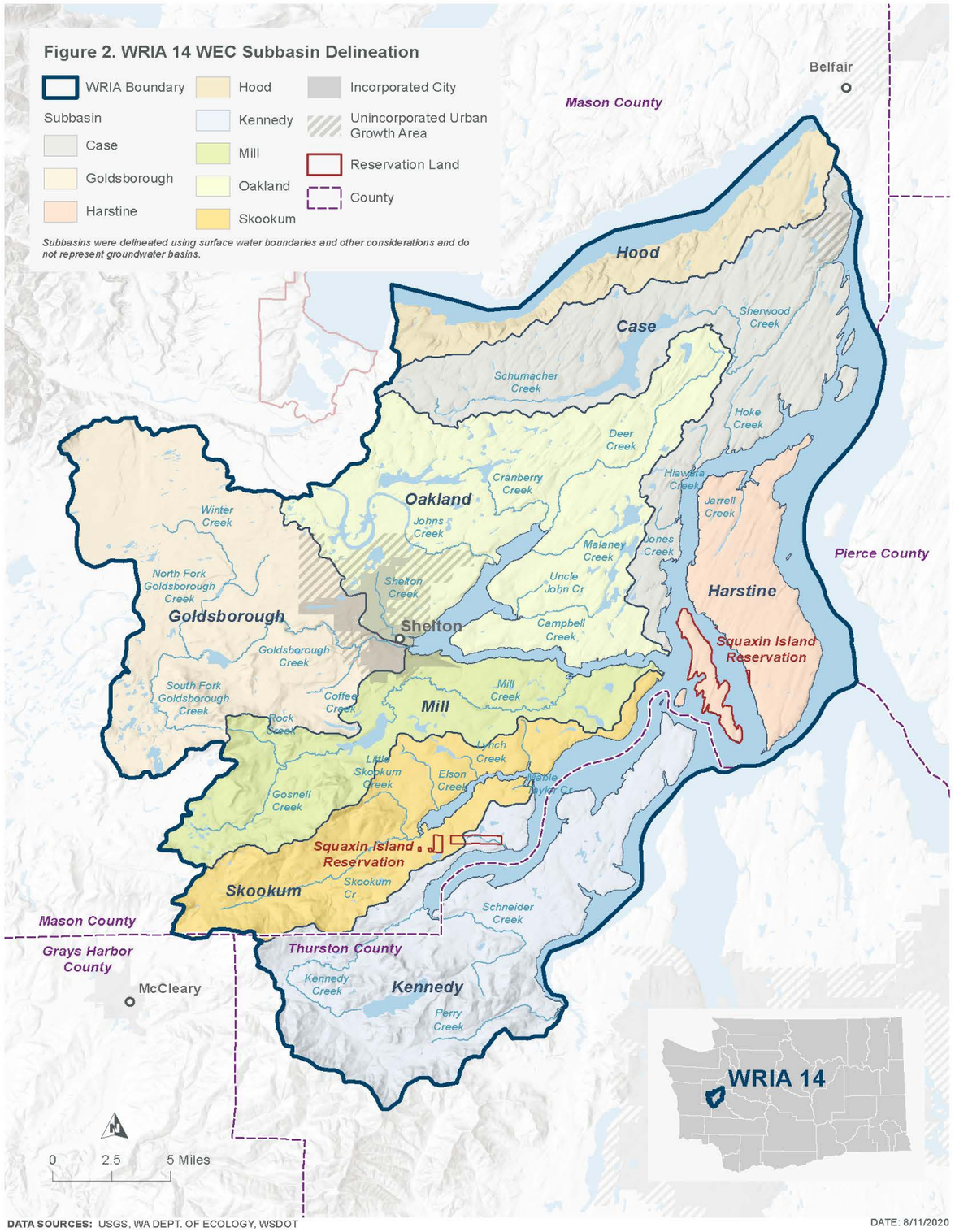
Policy and Adaptive Management

recommendations that contribute to the goal of streamflow restoration

Delineate Subbasins

- The WRIA 14 Committee divided WRIA 14 into 8 subbasins for the purposes of assessing consumptive use and project offsets.

Subbasin Delineation Map



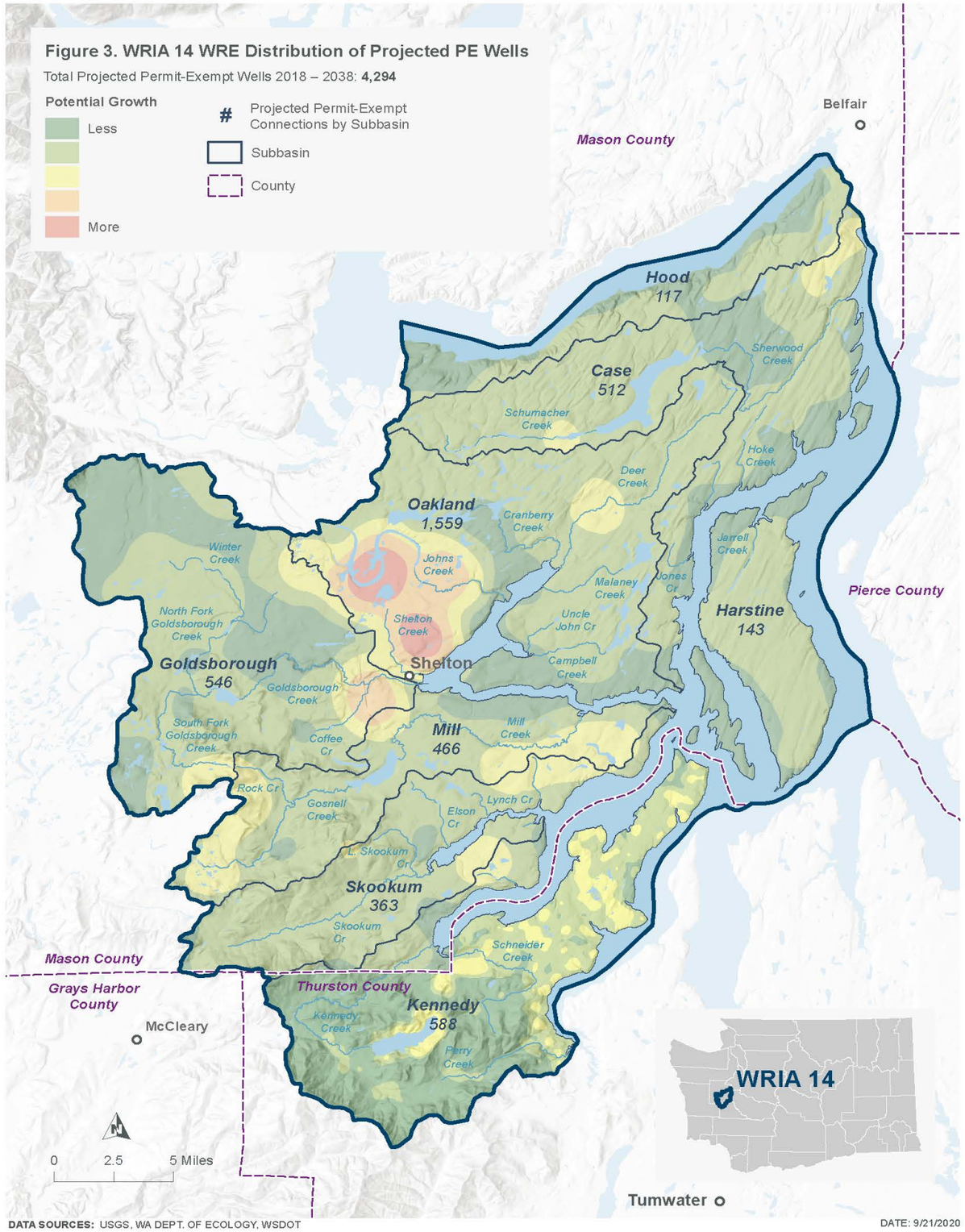
Project New Permit-Exempt Wells

- The WRIA 14 Committee projects 4,294 PE wells over the planning horizon. The largest number of these wells are likely to be installed in the Oakland Bay subbasin.

Projected New Permit-Exempt Wells

Subbasin	Projected PE Wells
Case	512
Goldsborough	546
Harstine	143
Hood	117
Kennedy (Mason County)	59
Kennedy (Thurston County)	529
Mill	466
Oakland	1,559
Skookum	363
Totals	**4,294**

New Permit-Exempt Wells Map



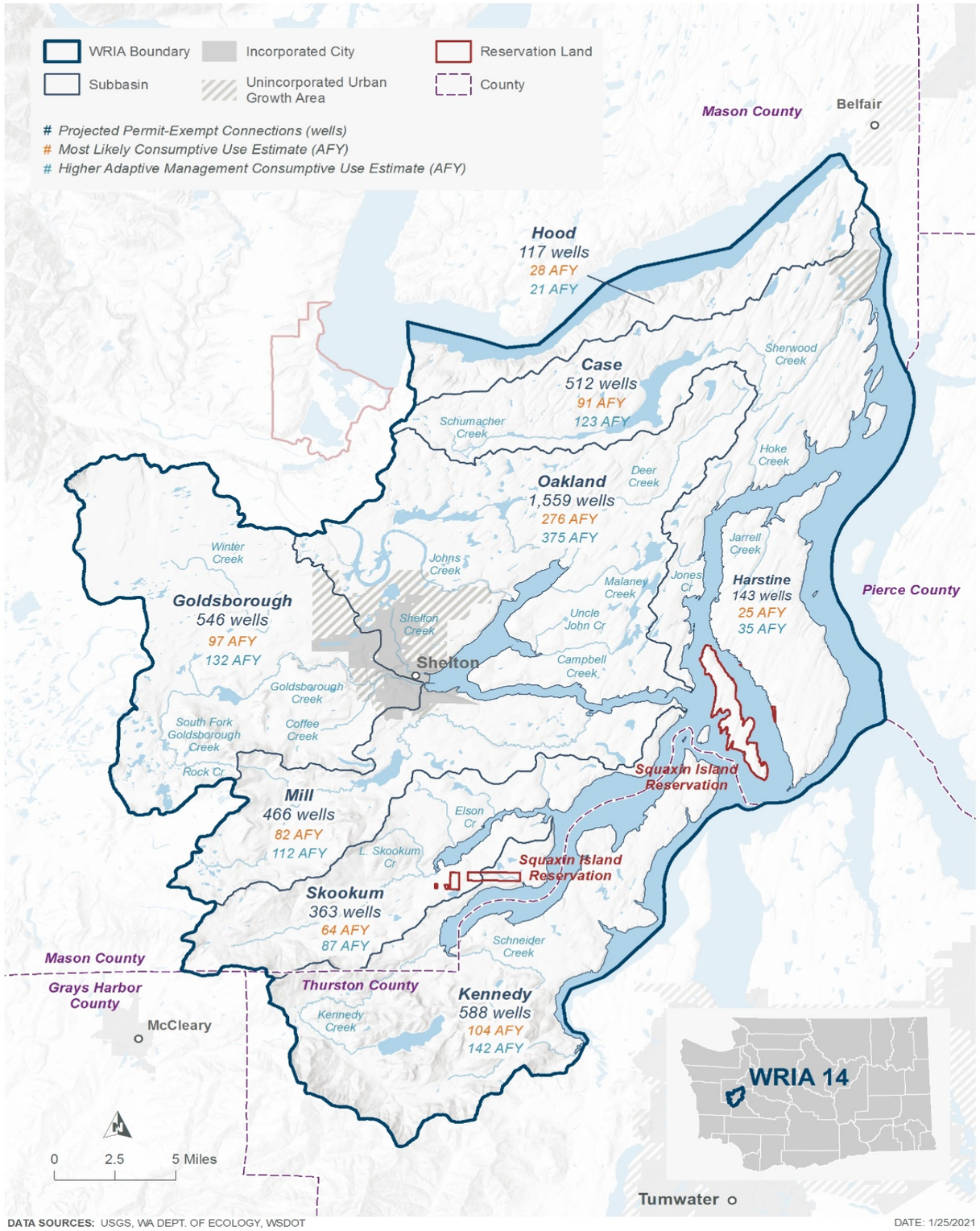
Estimate New Consumptive Water Use

- The WRIA 14 Committee used a 20-year projection for WRIA 14 of new PE wells to estimate the consumptive water use that this watershed plan must address and offset. The WRIA 14 Committee estimates 759 AF per year (1.04 cfs) of new consumptive water use in WRIA 14 as the “most likely” estimate.
- The Committee also included a higher estimate to achieve through adaptive management of 1,034 AF per year (1.43 cfs)

Estimated New Consumptive Water Use

			Assumed Irrigated Acreage of 0.10 Acre (Most Likely Estimate)		Assumed Irrigated Acreage of 0.14 Acre (Higher Adaptive Management Goal)	
Subbasin	Projected PE wells	Indoor CU (AF/year)	Outdoor CU (AF/year)	Total CU/year (AF/year) in 2038	Outdoor CU (AF/year)	Total CU/year (AF/year) in 2038
Case	512	8.6	81.9	90.5	114.7	123.3
Goldsborough	546	9.2	87.4	96.5	122.3	131.5
Harstine	143	2.4	22.9	25.3	32.1	34.5
Hood	117	2.0	18.7	20.7	26.2	28.2
Kennedy	588	9.9	94.0	103.9	131.6	141.5
Mill	466	7.8	74.6	82.4	104.4	112.2
Oakland	1,559	26.2	249.4	275.6	349.2	375.4
Skookum	363	6.1	58.1	64.2	81.3	87.4
TOTAL	**4,294**	**72**	**687**	**759.2**	**962**	**1,034.0**

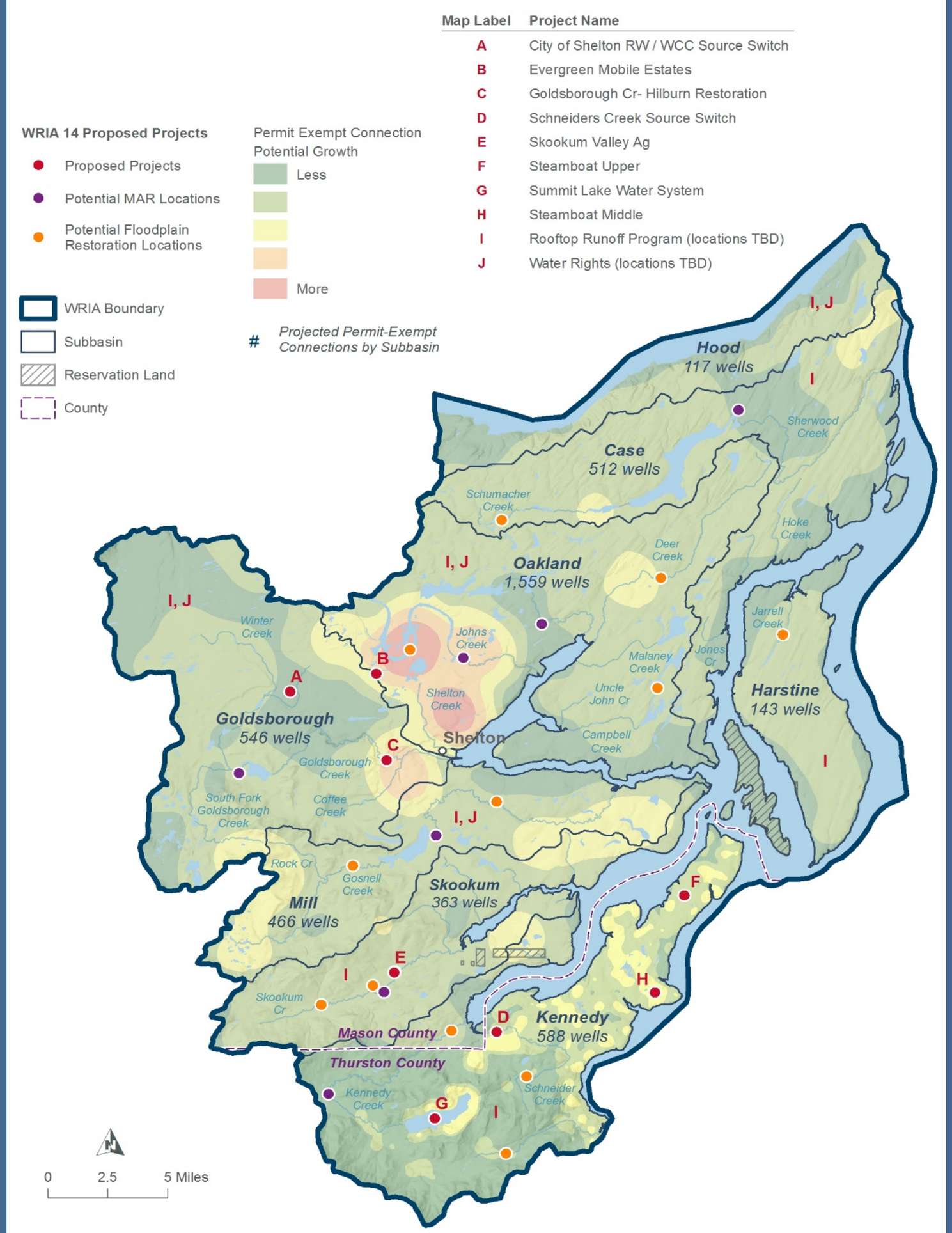
New Consumptive Water Use Map



Types of Projects & Actions

- Water Right Acquisition Offset Projects
- Non-Acquisition Water Offset Projects
- Habitat and Other Related Projects
- Regulatory Action Recommendations

Projects Overview Map



WRIA 14 Water Offset Projects
(Category I)

- City of Shelton Reclaimed Water/ WCC Source Switch
  - Redirect North Shelton wastewater to WRP and infiltrate Class A reclaimed water at existing spray field near the WCC
  - Subbasin: Goldsborough
- Evergreen Mobile Estates
  - Water system consolidation and water right acquisition
  - Subbasin: Oakland
- Steamboat Middle
  - Expanded water storage in an existing wetland
  - Subbasin: Kennedy
- Managed Aquifer Recharge
  - Categorical project that will include potential site locations in priority subbasins
  - Subbasins: Case, Mill, Kennedy, Goldsborough, Oakland, Skookum
- Water Right Acquisition Opportunities
  - Categorical project that includes potential opportunities for water right acquisitions in priority subbasins
  - Subbasins: Goldsborough, Hood, Mill, Oakland

WRIA 14 Habitat/Non-offset Projects

- Skookum Valley Ag
  - Channel re-alignment to increase channel length and sinuosity
  - Subbasin: Skookum
- Skookum Valley Railroad Culvert Crossings
  - Restore fish passage at several existing barriers
  - Subbasin: Skookum
- Goldsborough Creek-Hilburn Restoration
  - Priority project from Salmon Recovery 4YWP. Remove bank protection and channel fill, increase density of LWD.
  - Subbasin: Goldsborough
- Steamboat Upper
  - Increase ponded storage on north end of the Steamboat Peninsula
  - Subbasin: Kennedy

WRIA 14 Prospective Projects

- Other Water Right Opportunities and Efficiency Projects
  - Investigate opportunities throughout WRIA 14 for water right acquisition or efficiency projects.
- Forest Stand Age
  - The committee is interested in voluntary projects throughout WRIA 14 that involve forest conservation, forest land acquisition, carbon sequestration that can be demonstrated to have a streamflow benefit.
- Floodplain Restoration
  - The committee is interested in restoring stream floodplain function, where appropriate throughout WRIA 14.
- Summit Lake Alternative Water Supply
  - This project in the Kennedy subbasin conceptually project involves determining alternative solutions for safe water supply to the Summit Lake community. There is a potential for water offset but the project is currently too conceptual.
- Schneider Creek Source Switch
  - This project in the Kennedy subbasin would involve a source switch from surface water to groundwater. There is potential for water offset but the project currently conflicts with the Foster Supreme Court Decision and would only be implemented pending legislative changes to allow for such projects to move forward.
- Mason County Rooftop Runoff Program
  - This project would implement a new county requirement WRIA-wide for new rural residential building to install LID BMPs that infiltrate over 95% of rooftop runoff. There is potential for water offset but Mason County is not moving forward with the project at this time due to regulatory constraints.

Water Offset Projects

Project Type	Project Name	Project Description	Subbasin	Estimated Water Offset (AFY)	Offset Claimed by WRIA 14 Committee (AFY)
Category I	City of Shelton RW/ WCC Source Switch	Re-direct North Shelton wastewater to WRP and infiltrate Class A reclaimed water at existing spray field near the WCC	Goldsborough	486	486
Category I	Evergreen Mobile Estates	Water system consolidation and water right acquisition	Oakland Bay	7	7
Category I	MAR	Install managed aquifer recharge facilities	Multiple	910	273
Category I	Water Right Opportunities	A focused WRIA-wide analysis on potential WR efficiencies and acquisition for future studies and implementation	Goldsborough, Hood, Mill, Oakland	1,112	111
Category I	Steamboat Middle	Surface water retention and infiltration	Kennedy	14	14
Prospective	Schneider Creek Source Switch	Source switch from surface water ground water	Kennedy	64	0
Prospective	Summit Lake Water System	Future potential source switch for local domestic water supply	Kennedy	24-133	0
Prospective	Mason Co Rooftop Runoff	New county requirement for new rural residential building to install LID BMPs that infiltrate over 95% of rooftop runoff.	All	249	0
	WRIA 14 Total Water Offset for WRIA 14 Projects			**2,866-2,975**	**891**
	WRIA 14 Consumptive Use Estimate			**759**	
	WRIA 14 Higher Adaptive Management Consumptive Use Goal			**1,034**	

Policy and Adaptive Management Recommendations

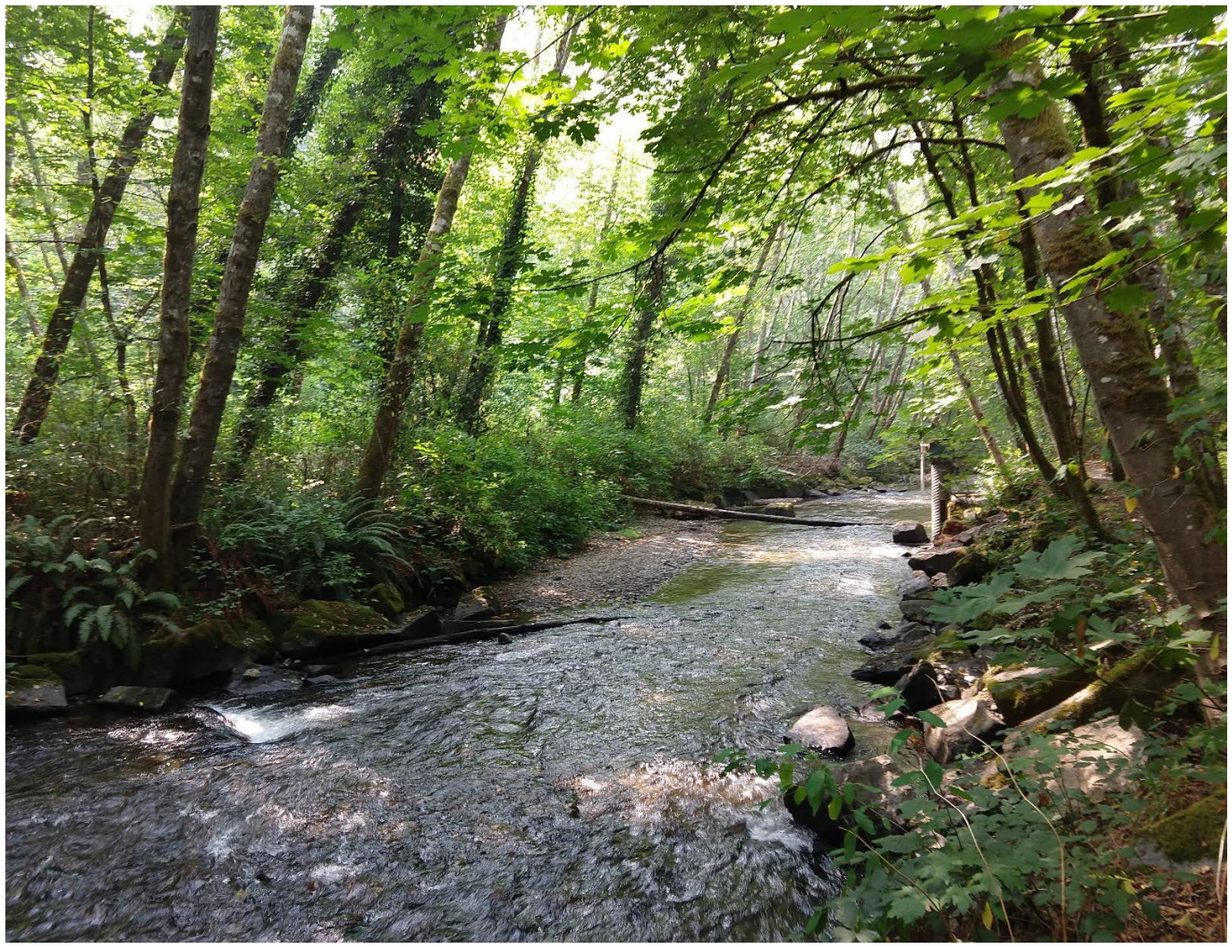
- As recommended by the NEB Guidance, the Committee prepared the watershed plan with implementation in mind. However, as articulated in the Streamflow Restoration Policy and Interpretive Statement (POL-2094), “RCW 90.94.020 and 90.94.030 do not create an obligation on any party to ensure that plans, or projects and actions in those plans or associated with rulemaking, are implemented."

WRIA 14 Policy and Regulatory Recommendations

- Track the number and location of permit-exempt wells
- Monitoring and Research
- Revolving Loan and Grant Fund for Community Water Systems
- Mason County-Wide Conservation Outreach Program
- Water Supply Data for Comprehensive Water Planning
- Sports Field Irrigation Conservation
- Group A Water System Conservation through Infrastructure Improvements
- Funding for Plan Implementation
- Waterwise Landscaping

Plan Implementation and Adaptive Management

- The WRIA 14 Committee supports an adaptive management process for implementation of the WRIA 14 Watershed Plan. Adaptive management will help address uncertainty and provide more reasonable assurance for plan implementation.



Plan Implementation and Adaptive Management Recommendations

- Project, Policy and Permit-Exempt Well Tracking
- Reporting and Adaptation
- Funding

Steps to Complete the Plan

- Committee members meet (virtually) for the final vote on the plan in mid-April.

- If all members of the Committee **approve** the plan, the Committee chair will submit the plan to Ecology for review and NEB determination.

- If the Committee **does not approve the plan**, Ecology will prepare the plan. Ecology will send the plan to the Salmon Recovery Funding Board for technical Review. Ecology will then finalize the plan and the Director shall initiate rulemaking.

Post Plan Submission

- SEPA public comment period
- No changes to plan after submission
- Ecology will review plan
- Ecology will determine action by June 30, 2021

Thank you for your time!

Any questions?

Ecology's Policy Interpretation

- More information on the Streamflow Restoration law can be found online

DEPARTMENT OF ECOLOGY State of Washington

POL-2094

DEPARTMENT OF ECOLOGY WATER RESOURCES PROGRAM
POLICY AND INTERPRETIVE STATEMENT

STREAMFLOW RESTORATION POLICY AND INTERPRETIVE STATEMENT

Effective Date:	07/31/2019
Contact:	Program Development and Operations Support
References:	*Statute:* Chapters 18.104, 34.05, 90.03, 90.82, and 90.94 RCW; RCW 19.27.097, 43.83B.405, 89.08.460, and 90.44.050 *Administrative Rule:* Chapters 173-500, 173-531A, 173-563, and 173-566 WAC.
Purpose:	To ensure consistency, conformity with state law, and transparency in the implementation of chapters 19.27 and 90.94 RCW.
Application:	This policy applies to the evaluation of building permit applications under RCW 19.27.097 and the implementation of activities authorized under chapter 90.94 RCW.

This policy supersedes any previous policy statement with which it conflicts.

Ecology's NEB Guidance

- More information on the Final Guidance for Determining Net Ecological Benefit can be found online

WATER RESOURCES PROGRAM GUIDANCE

Final Guidance for
Determining Net Ecological Benefit

GUID-2094 Water Resources Program Guidance

July 31, 2019
Publication 19-11-079

WRIA 14 Committee Brochure

- More information on WRIA 14 Committee can be found [online]

Water Resources Program

DEPARTMENT OF ECOLOGY State of Washington

WRIA 14 Kennedy-Goldsborough Watershed Restoration and Enhancement Committee Overview

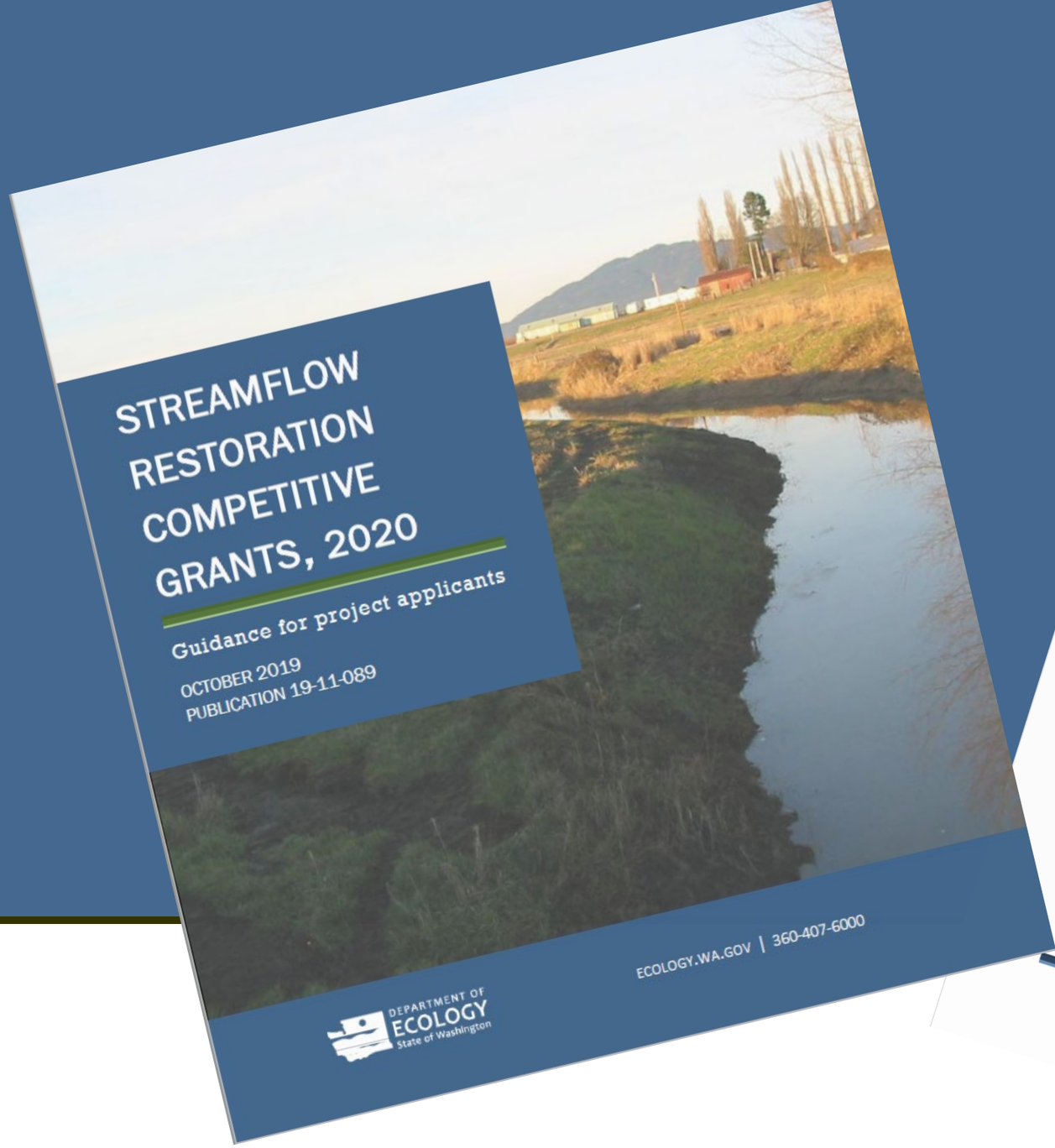
More information
Visit the Streamflow Restoration webpage[1].

Contact information
Angela Johnson
Committee Chair
angela.johnson@ecy.wa.gov
360-407-6668

Background

In January 2018, the Legislature passed the Streamflow Restoration law to help restore streamflow levels. Its purpose is to support robust, healthy, and sustainable salmon populations while providing water for homes in rural Washington.

The law calls for local watershed planning and project implementation that improve streamflows. The Department of Ecology funds implementation through its competitive grant program[2].



Requirements by project type

Water right acquisitions

- Applicant must attend a pre-application meeting.
- Water right purpose of use changed to instream flow.
- Permanently convey the right to Ecology's Trust Water Rights Program.

Altered water management or infrastructure

Conservation and water use efficiency projects must permanently convey saved water to Ecology's Trust Water Rights Program, and create:

- Permanent instream flow improvement; or
- Access to new water supplies when identified in a watershed plan adopted under chapter 90.94 RCW.

Environmental monitoring

If environmental monitoring projects are funded, recipients will need to submit a Quality Assurance Project Plan for the project and meet Ecology standards for submitting environmental monitoring data (see Ecology Publication No. 17-11-013).

Water storage

A managed aquifer recharge project requires a feasibility study.

Watershed function, riparian, and fish habitat improvements

Projects involving the use or acquisition of private property must show landowner awareness by including a Landowner Acknowledgement Form (see Chapter 1) with their application.

Feasibility studies

A feasibility study for a managed aquifer recharge project must follow special requirements (see Appendix D).

Other feasibility studies are eligible with no special requirements.

STREAMFLOW RESTORATION COMPETITIVE GRANTS | PUBLICATION 19-11-089 | OCTOBER 2019

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Grants Guidance Overview

DEPARTMENT OF ECOLOGY
State of Washington