Deschutes Watershed Restoration and Enhancement Plan

City of Olympia Land Use & Environment Committee
February 18, 2021
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DEPARTMENT OF ECOLOGY
State of Washington

Presentation Outline

Streamflow Restoration law

The Watershed Restoration and Enhancement (WRE) Committee

Wells, consumptive use and impacts to streamflows

The Deschutes Watershed Plan

Steps to complete the Plan

Streamflow Restoration law
RCW 90.94 – January 2018

- To help support healthy and sustainable salmon populations while ensuring rural communities have access to water

- Directs the Dept of Ecology to chair local planning Committees to develop Watershed Restoration & Enhancement Plans

- Plans identify projects to offset impacts of new permit-exempt domestic groundwater withdrawals on streamflows over the next 20 years (2018-2038)

- Plans provide for a net ecological benefit to the whole watershed

- Ecology grants for projects: $300M over 15 years

Watershed Restoration and Enhancement Committee

- Ecology chairs the Deschutes Watershed Committee
  - Squaxin Island Tribe
  - Lewis and Thurston Counties
  - Cities of Olympia, Lacey and Tumwater
  - WA Departments of Ecology, and Fish and Wildlife
  - Thurston County Public Utility District No. 1
  - Thurston Conservation District
  - Olympia Master Builders & Business Industry Assn of WA
  - Deschutes Estuary Restoration Team
  - And 5 Ex-officio entities
- The Committee has met since October 2018

What are the Committee's and Ecology's roles?

Committee

- Develops the Watershed Plan
- Approves Plan

Ecology

- Determines Plan meets the law
- Adopts Plan

The Purpose of the Deschutes Watershed Plan

- To provide improved habitat for the recovery of threatened/endangered salmonids
- To identify projects and actions to offset the impacts of new permit-exempt domestic wells on streamflows
- To provide a net ecological benefit to the watershed

Next few slides cover:

- Permit-exempt wells
- Consumptive use
- Groundwater-streamflow connection
- Effects of pumping wells on streams & lakes
- Offset projects and regulatory actions
- Net ecological benefit

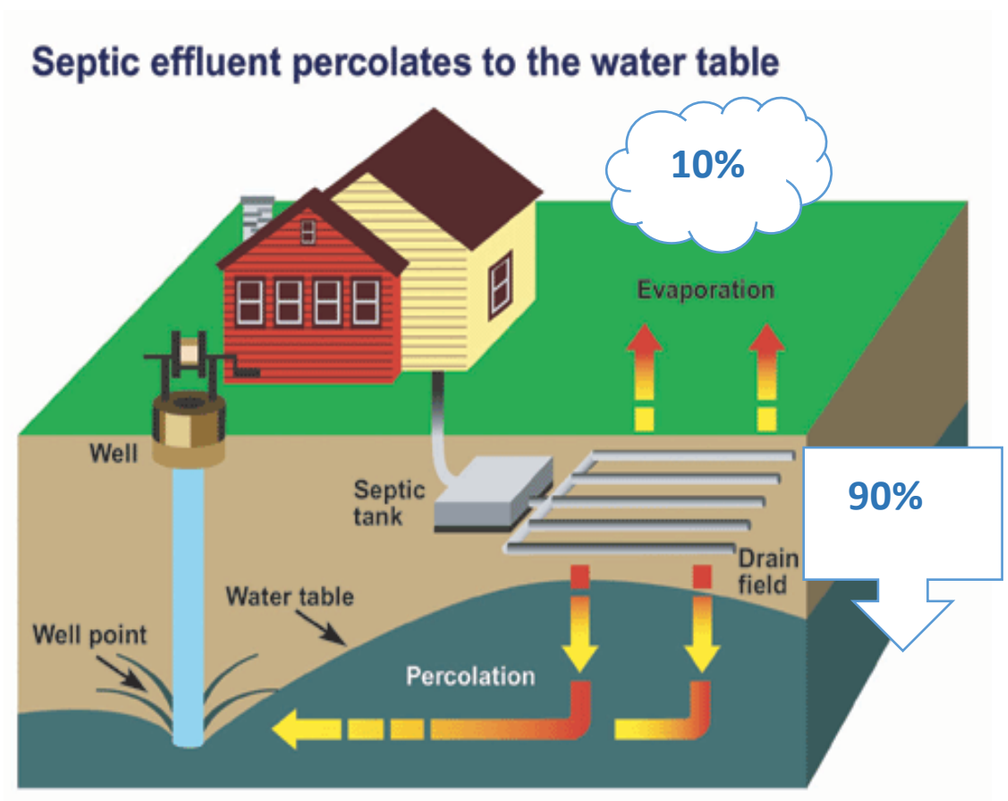
Permit-Exempt Wells

- Domestic groundwater well that serves single homes, small developments; irrigates small lawns and gardens
- Are exempt from the state water-right permitting process and are usually approved and regulated by counties
- State law establishes withdrawal limits for new PE well connections in the Deschutes watershed – 950 gallons per day per connection (RCW 90.94)
- Thurston County currently has almost 22,000 PE wells
  Olympia has ~650 PE wells + ~30 small water systems (1900-2018)
- Olympia water connection requirement: PE well not allowed if parcel is within 200 feet of a water main (OMC 13.04.335)

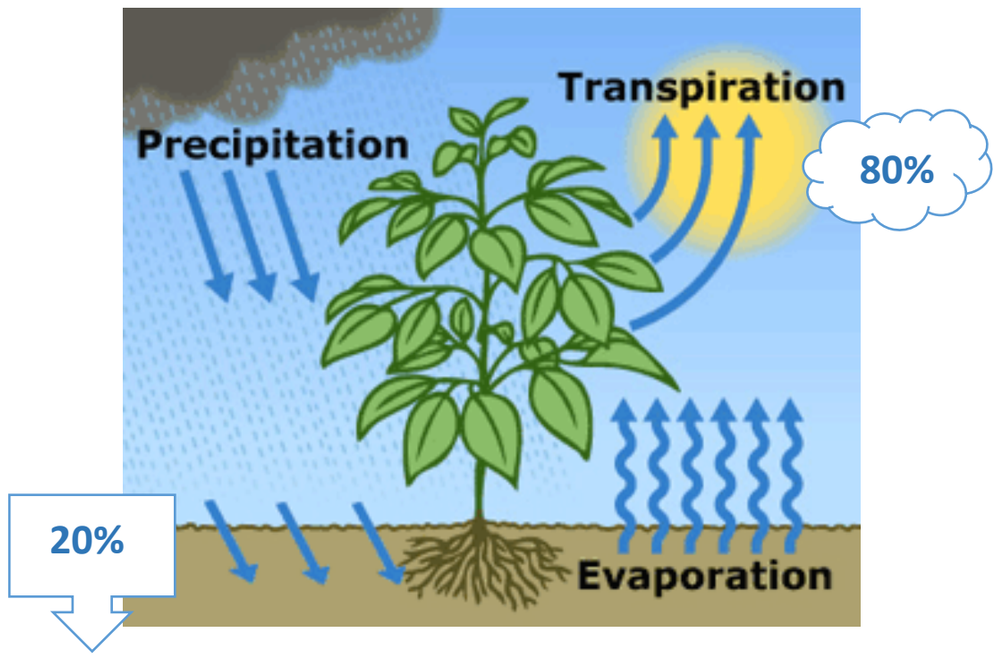
Consumptive Water Use

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.

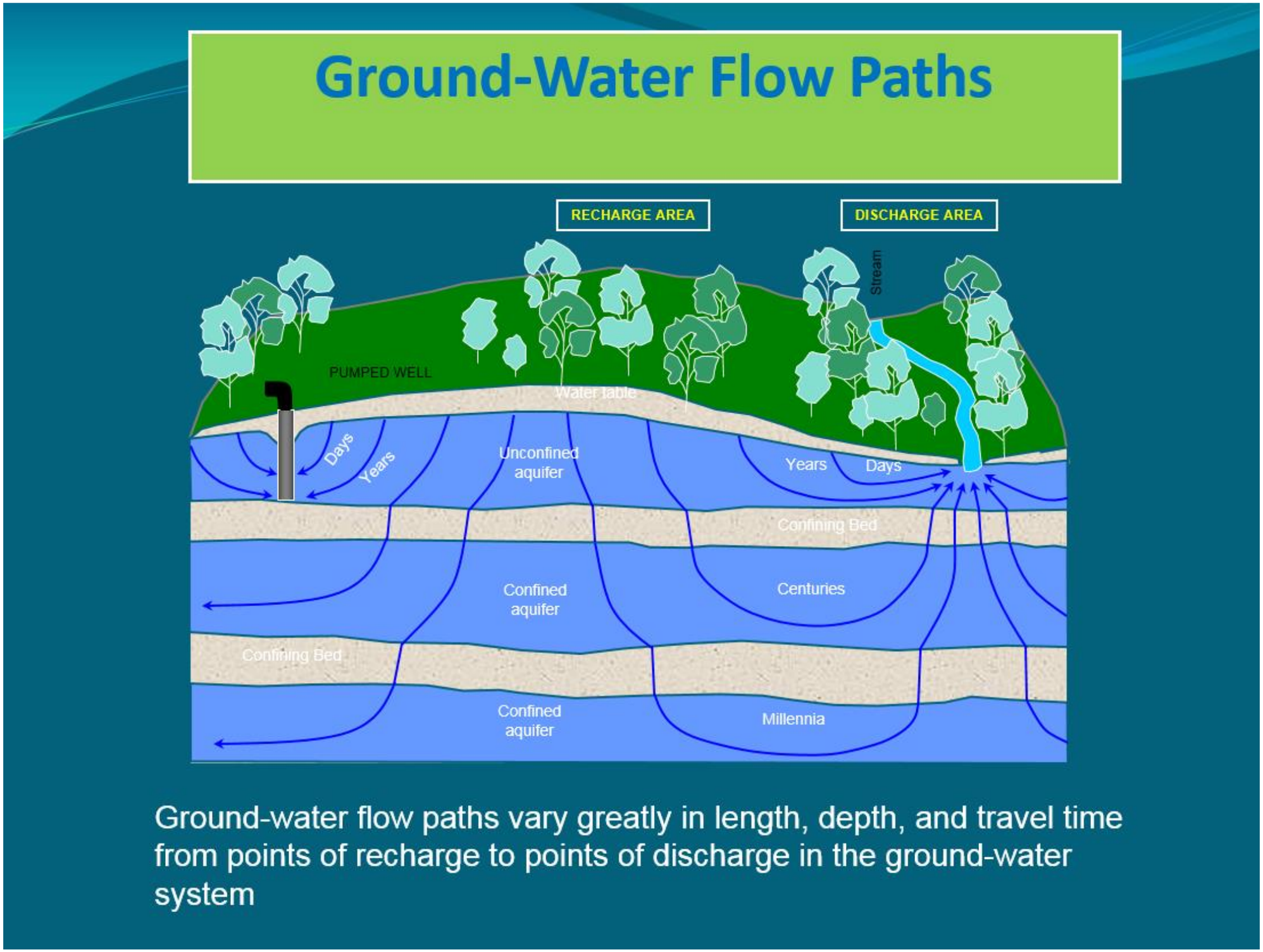
<u>Indoor Consumptive Use</u>



<u>Outdoor Consumptive Use</u>

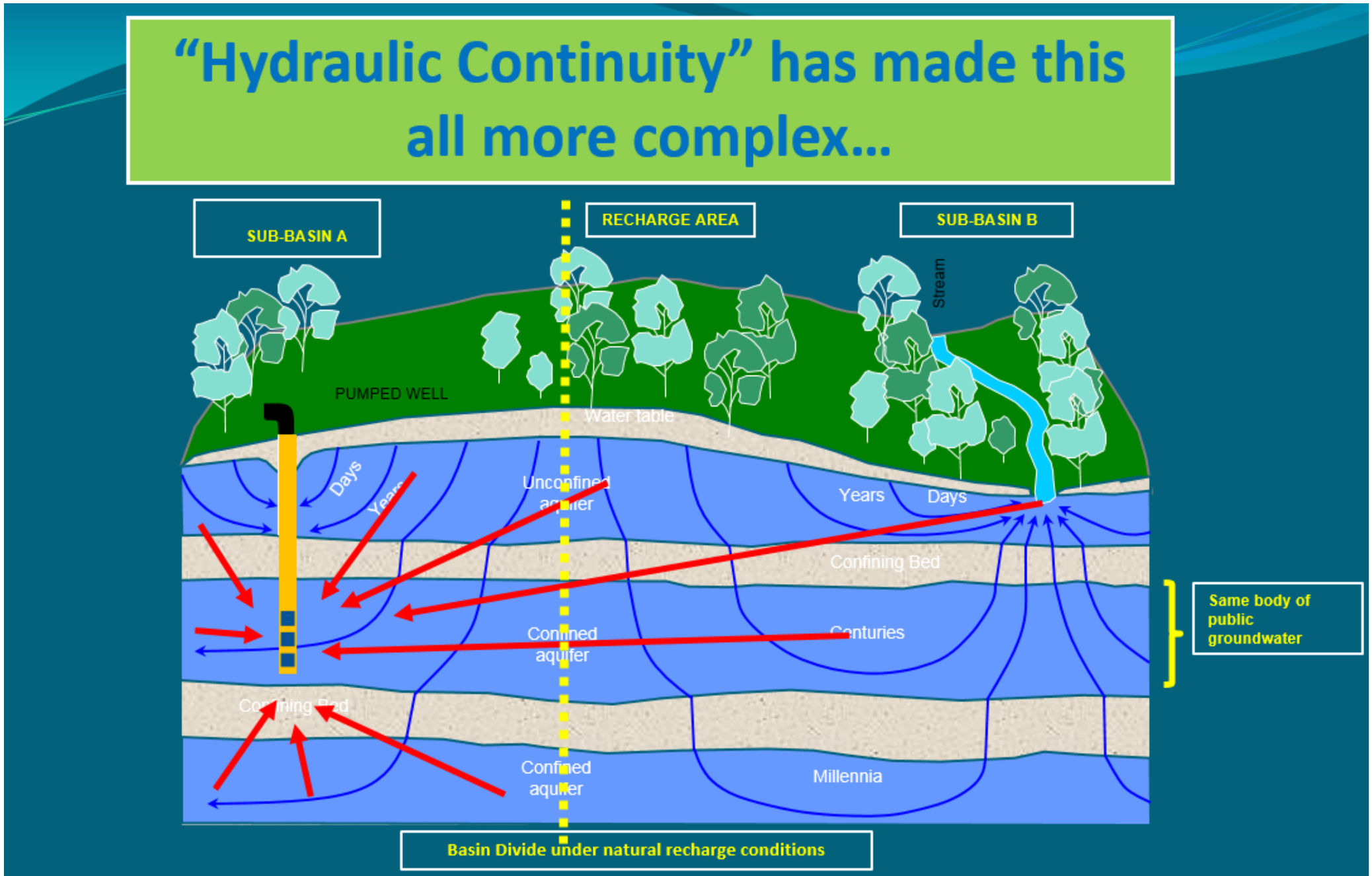


Groundwater-Streamflow Connection



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

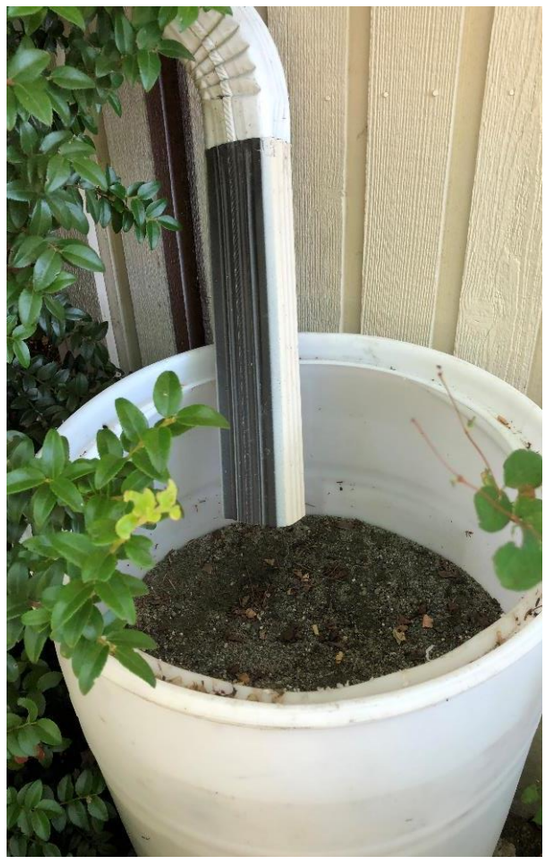
Wells Affect Streamflows

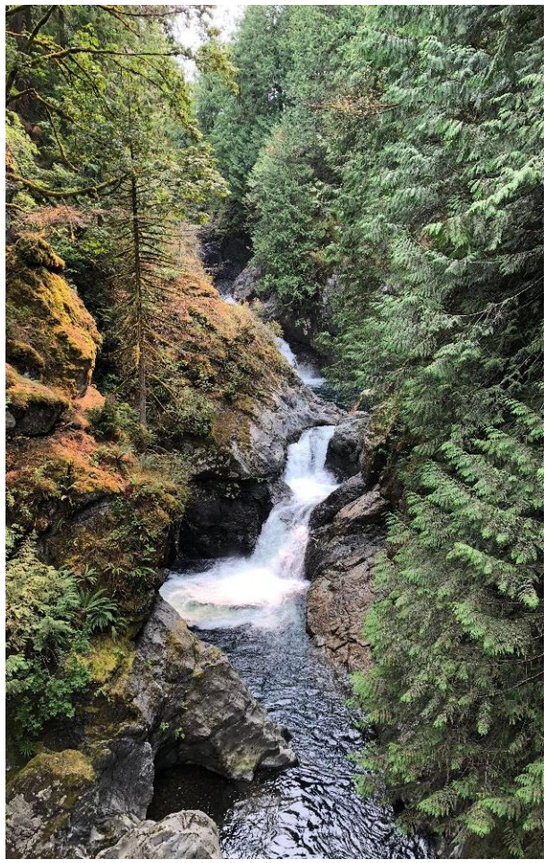


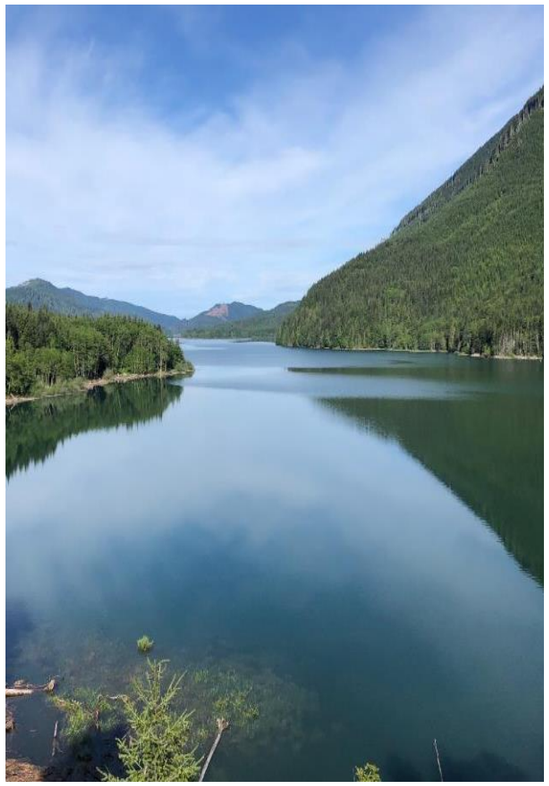
Hydraulically connected ground water and surface water cannot be considered as independent resources - a **withdrawal from one will have <u>some</u> effect on the other.**

“Offset”

The anticipated ability of a project or action to counterbalance the impact of consumptive water use on streamflows resulting from domestic groundwater withdrawals







Offset Projects – Quantity and Location

1 **QUANTIFY EXPECTED CONSUMPTIVE WATER USE OVER 20 YEARS**

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

2 **IDENTIFY WHERE IT IS POSSIBLE TO OFFSET**

FIRST PRIORITY

for *in* *and*

SECOND PRIORITY

for ≠

and/or

for ≠

AND

Projects that enhance

and/or

Deschutes Watershed Plan Components

Planning Horizon
2018-2038

Deschutes Subbasin Delineations
9 subbasins

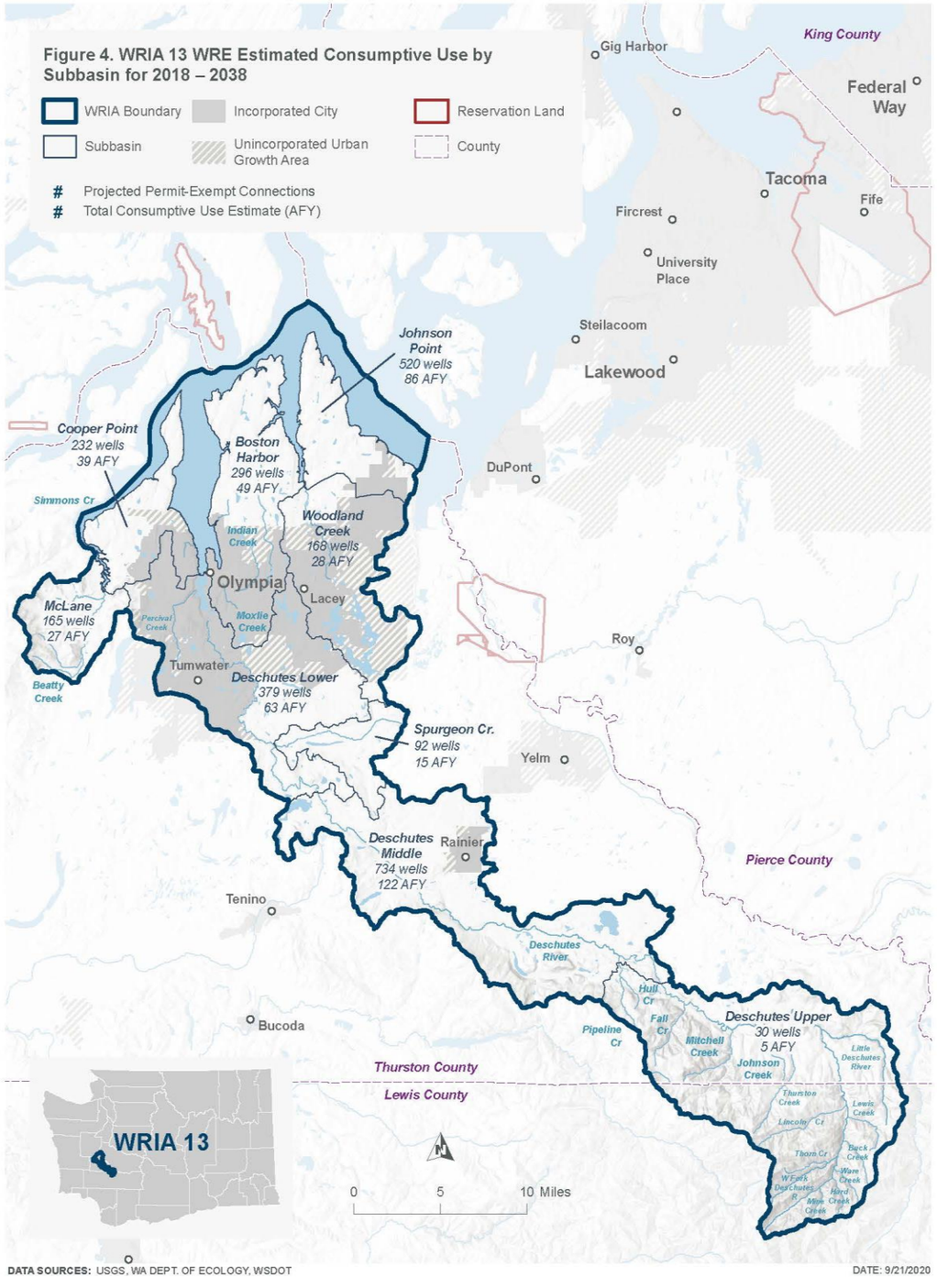
Projected new PE Wells
2,616 Watershed-wide
~ 25-50 in Olympia/UGA

Estimated Consumptive Use
- 435 acre-feet per year (0.6 cubic feet per second)
- 513 afy (0.7 cfs) – goal to achieve through adaptive management

Projects and Actions
To offset estimated consumptive use and meet net ecological benefit

New PE Well Impact Map

This map shows the projected new PE wells in each subbasin in the 20-year planning horizon and the associated offset needed (acre-feet/year).



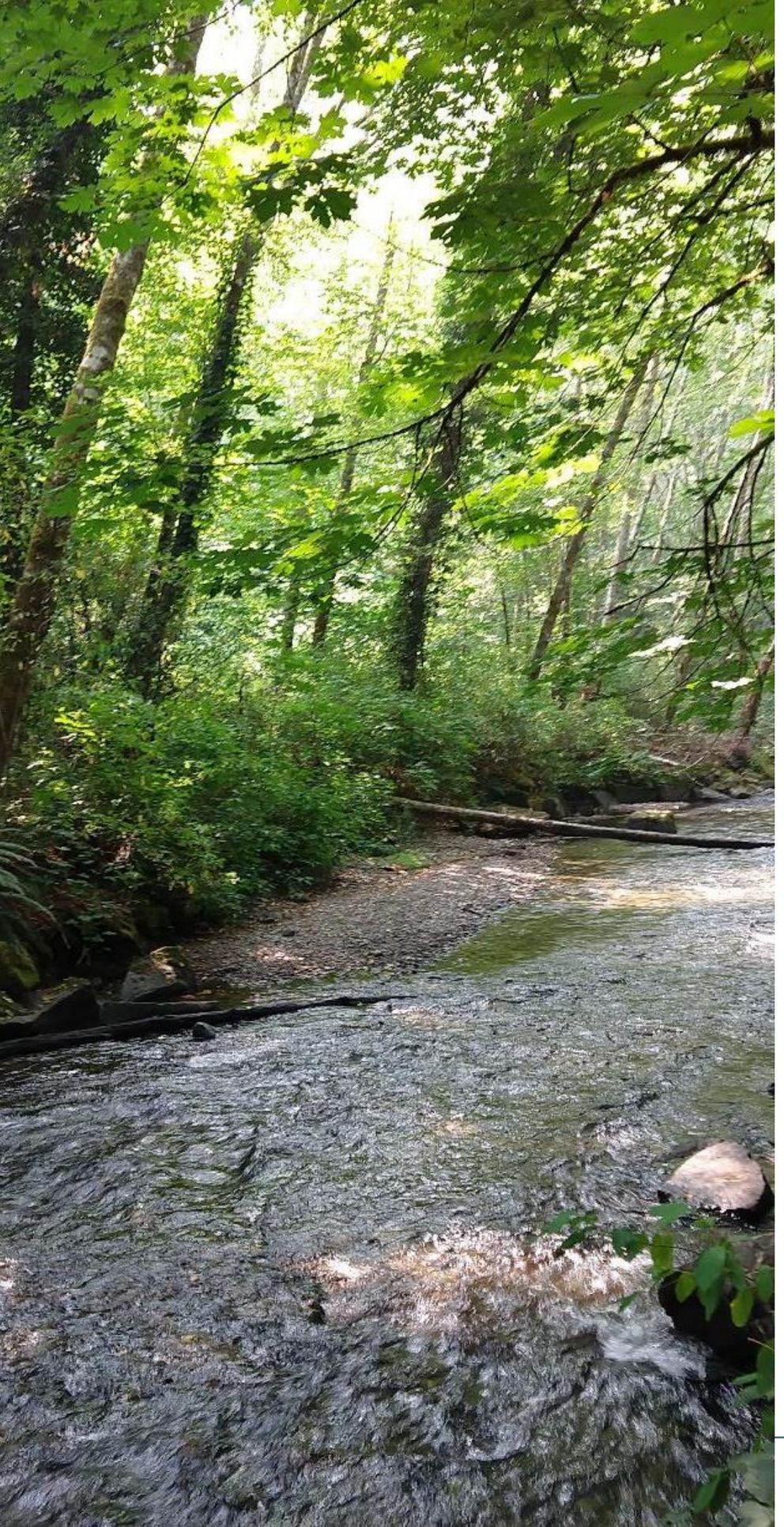
Types of Projects and Actions

- Water Right Acquisition/ Efficiency Projects
- Non-Acquisition Water Offset Projects
- Habitat/Function Projects
- Regulatory/Policy Actions

Water Offset Projects (selected/conceptual)

- Schneider's Prairie Off-Channel Connection (Thurston Co)
  - Deschutes River off-channel reconnection and infiltration
  - Lower Deschutes subbasin
- Hicks Lake Stormwater Retrofit (Lacey)
  - Stormwater infiltration in series with existing stormwater treatment
  - Woodland subbasin
- Donnelly Drive Infiltration Ponds (Lacey)
  - Improve stormwater infiltration, avoiding surcharge and runoff to Chambers ditch
  - Lower Deschutes subbasin
- Managed Aquifer Recharge (Watershed-wide)
  - Categorical project that includes potential site locations in priority subbasins

- Project Inventory lists 8 projects in Olympia (Plan Appendix J)
- All plan projects are conceptual; no decisions yet to pursue



Habitat Projects

(selected/conceptual)

Floodplain restoration – Watershed-wide

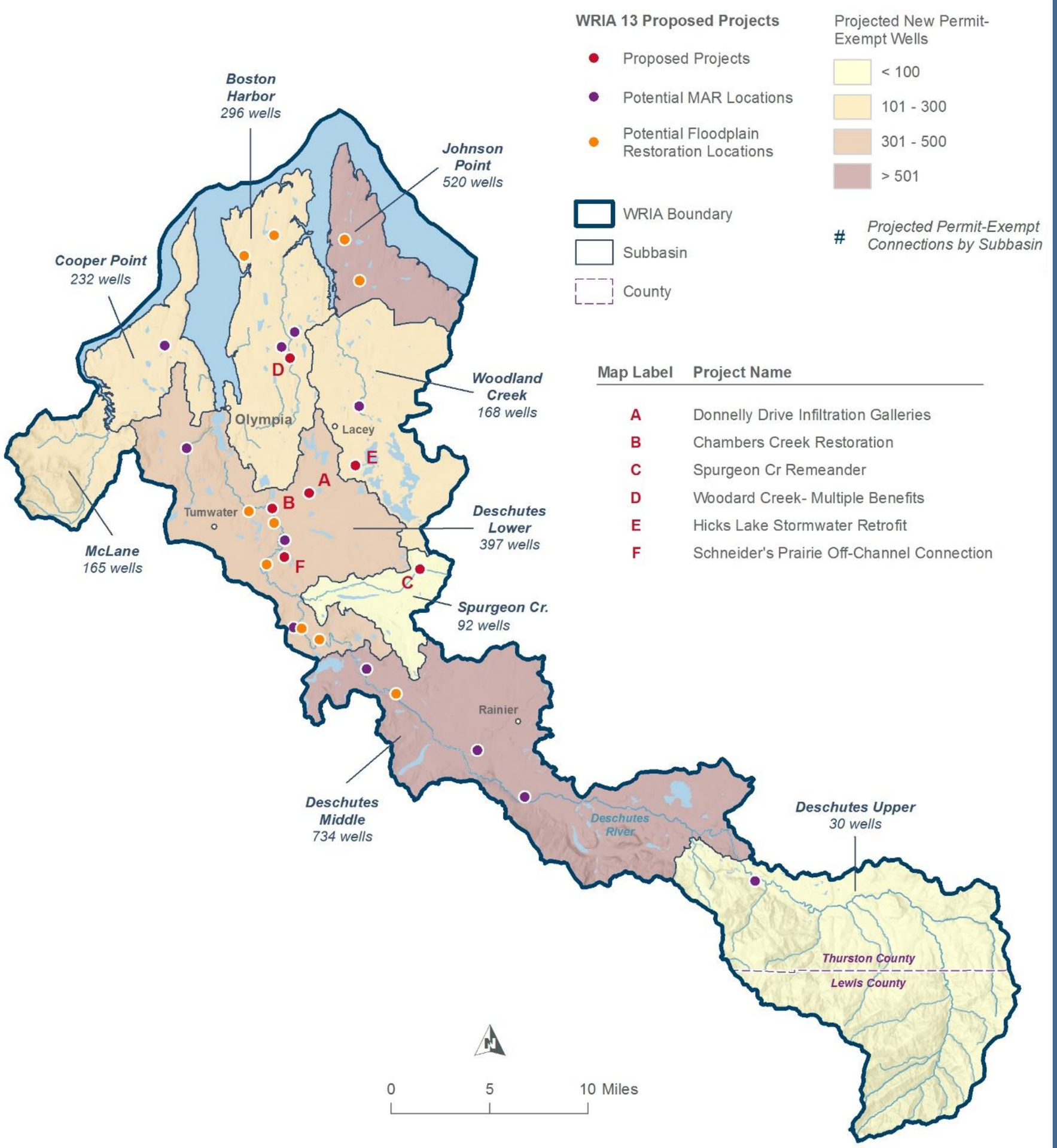
Identifies potential locations for future projects

Floodplain connectivity, increase instream habitat complexity

- Green Cove Creek – Cooper Point subbasin
- McLane Creek – McLane subbasin
- Spurgeon Creek – Spurgeon subbasin
- Chambers Creek – Chambers subbasin
- Woodard Creek –Woodard subbasin

Project Inventory lists 3 habitat projects in Olympia (Plan Appendix J)

Projects Overview Map



Map Label	Project Name
A	Donnelly Drive Infiltration Galleries
B	Chambers Creek Restoration
C	Spurgeon Cr Remeander
D	Woodard Creek- Multiple Benefits
E	Hicks Lake Stormwater Retrofit
F	Schneider's Prairie Off-Channel Connection

Policy and Regulatory Actions (selected/draft)

May involve Olympia:

- Deschutes Watershed Council – *Partnership to collaboratively address management of regional water resources*
- Instream Flow Rule revisions – *updates and possible new closures*
- County policies to promote connections to water systems
- Water supply data for comprehensive water planning
- County planning study - *streamflow restoration effectiveness*

May benefit Olympia:

- Upgraded well reporting - *Ecology database*
- State-wide water conservation program

Several others pertain only to new PE wells

Plan Implementation and Adaptive Management

- Oversight - *Deschutes Watershed Council*
- Project Tracking - *Salmon Recovery Portal*
- Monitoring and Research
- Funding – *current recommendations*
  - Request sustainable funding from Legislature
  - Increase PE well fees - *currently $500*
  - Grants - *in addition to Ecology's WRE grant program*
  - Deschutes Watershed Council – *revenues from member cost-sharing, fees or services*
  - Other ideas welcomed

Watershed-wide Net Ecological Benefit

- Compare total project offset (1,316 afy) to "most likely" consumptive use impact (435 afy)
- Compare offset to impact by subbasin
- Determine whether the Plan successfully offsets impacts
- State how projects provide additional benefits to instream resources
- State how adaptive management provides additional certainty (to achieve the higher offset goal of 513 afy)
- State whether net ecological benefit has been achieved

Ecology's Plan Completion Process

Draft Plan Currently receiving input from Committee entities

Plan Finalized

March 24: Watershed Committee discusses input (if needed)

April 20: Committee votes whether to submit Final Plan to Ecology

Plan Evaluation

June 30: Ecology determines whether Plan meets law

If so, Ecology may initiate rule-making

If not, Salmon Recovery Funding Board reviews Plan; Ecology may initiate rule-making of the revised Plan

Rule-making - Deschutes Instream Flow Rule may be amended; thus, open to revisions/additions by Ecology and public comment

Role of LUEC to Help Complete the Plan

Tonight – Decide whether to approve the Utility Advisory Committees' recommendation to support staff representation on the Watershed Committee to vote on the Deschutes Plan for submittal to Ecology

By March 19 – Provide me with any input on the draft Plan, for discussion with Watershed Committee and possible incorporation into Final Plan

Plan's Affect on Olympia

- Plan largely involves Thurston County – approves/regulates PE wells
- Olympia – less involvement with proposed projects & policies; likely to engage the most via the Deschutes Watershed Council

Thank you for your time and attention!

Questions? Discussion

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