

# FACING THE FUTURE: HOW DO WE EXPAND OUR OPTIONS?

## A REVIEW OF SPOKANE COUNTY, WASHINGTON

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# SPOKANE COUNTY REGIONAL WATER SUPPLIES

- Hydrogeological setting
- Drinking water supplies
  - Physical limitations
  - Legal restrictions
- Non-traditional water supplies
  - Reclaimed water
  - Water banking

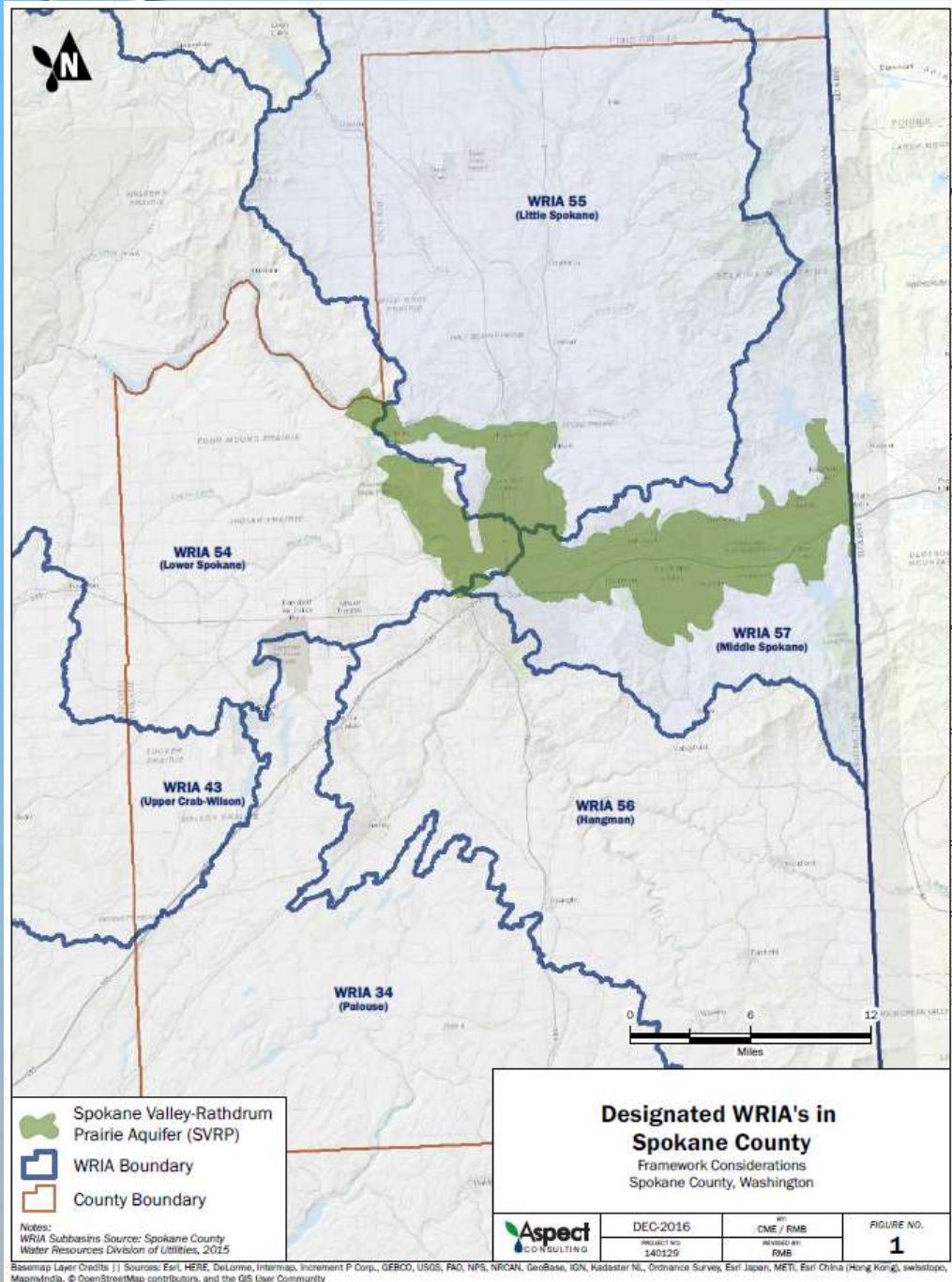


# WATERSHEDS IN SPOKANE COUNTY

## Urban and Rural Settings

- The Spokane Valley Rathdrum Prairie Aquifer (WRIA 57)
- The Little Spokane River Basin (WRIA 55)
- The Columbia River Basalt Group (WRIAs 34, 54, 56 and 43)

The Spokane Dichotomy – Areas of great abundance directly adjacent to areas of scarcity...both legal and physical.



# SPOKANE VALLEY RATHDRUM PRAIRIE AQUIFER

WRIA 57

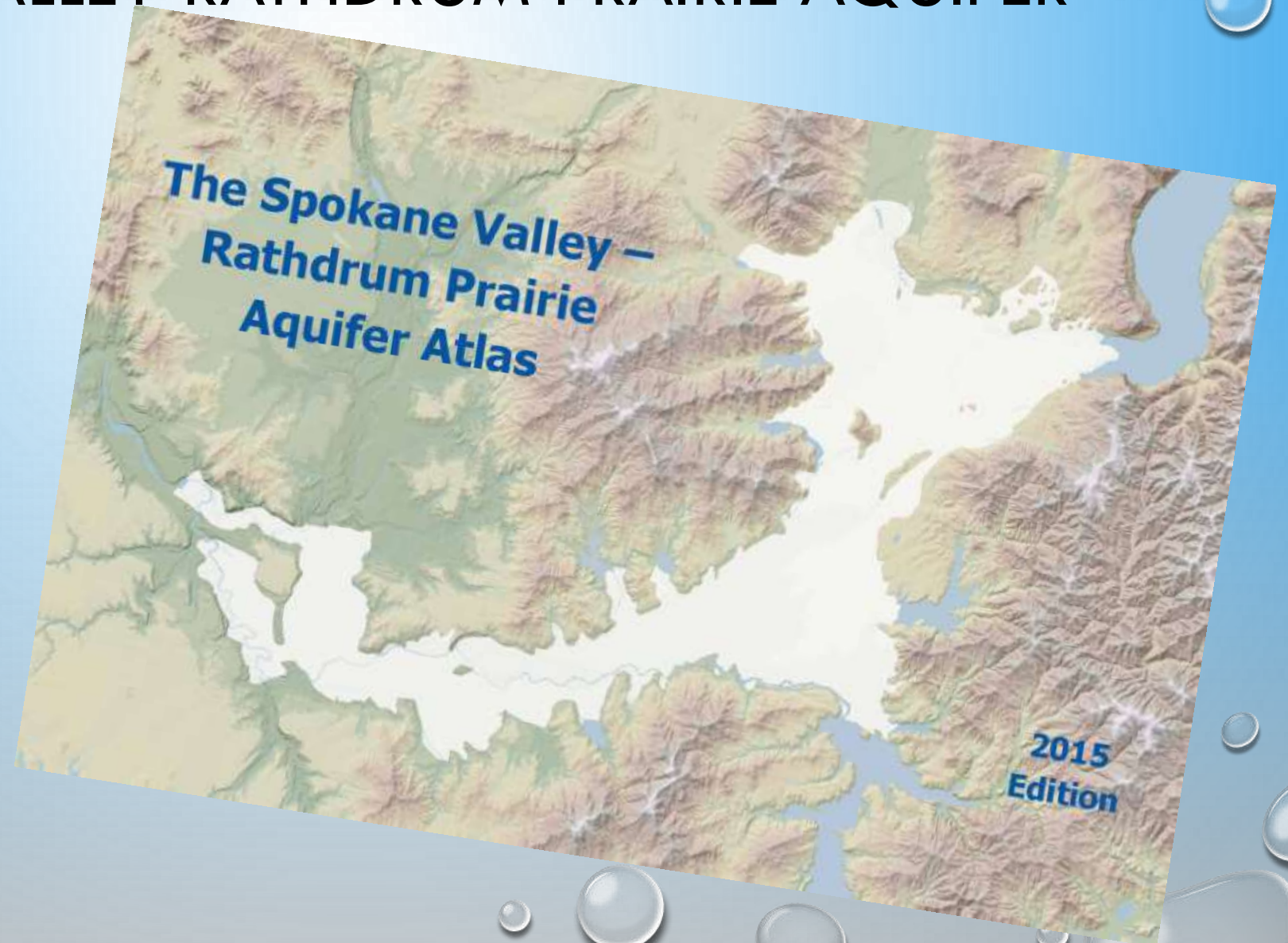
Shallow Unconfined Aquifer

Sole Source Designation in late 1970s

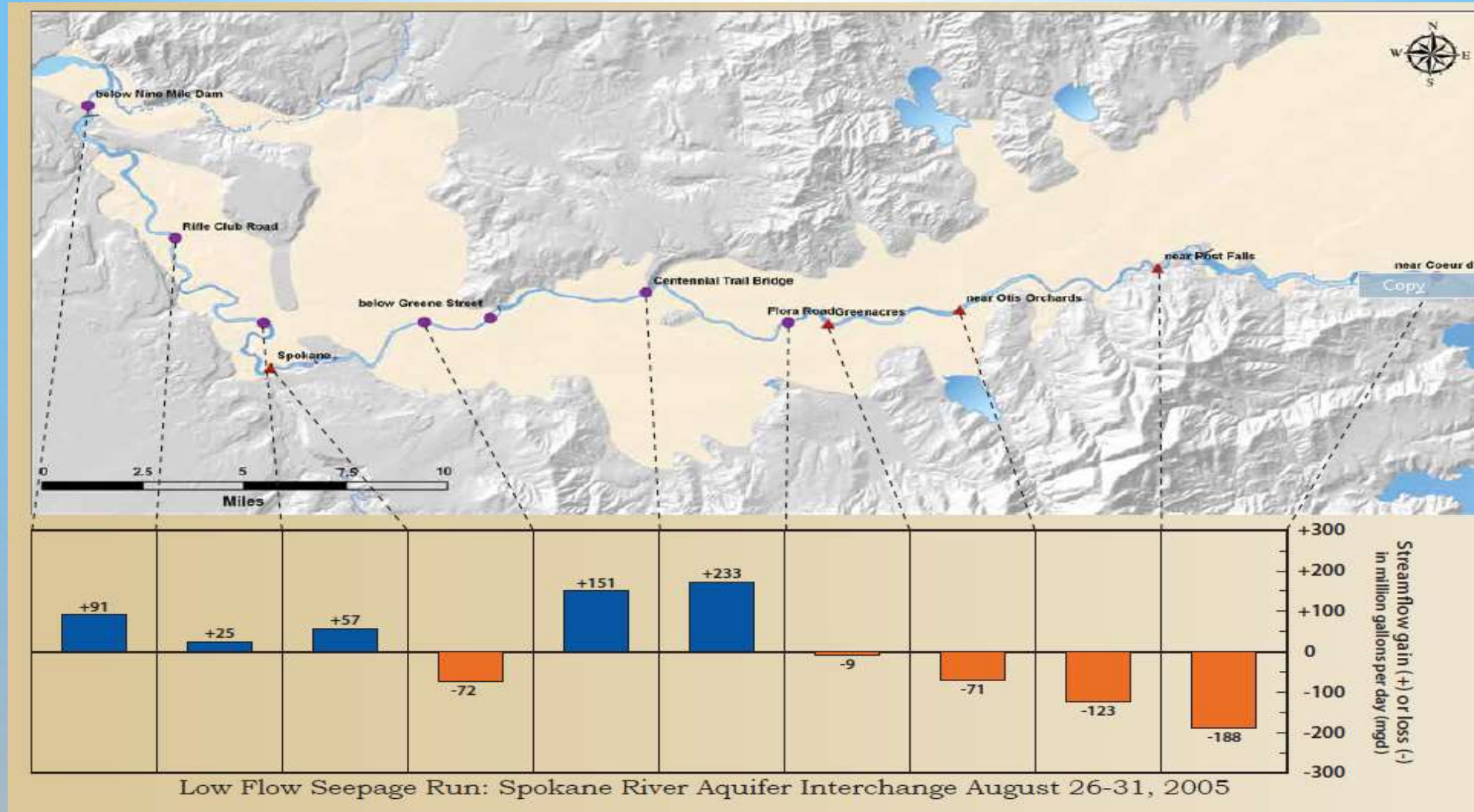
Spokane River Instream Flow Rule passed in 2015

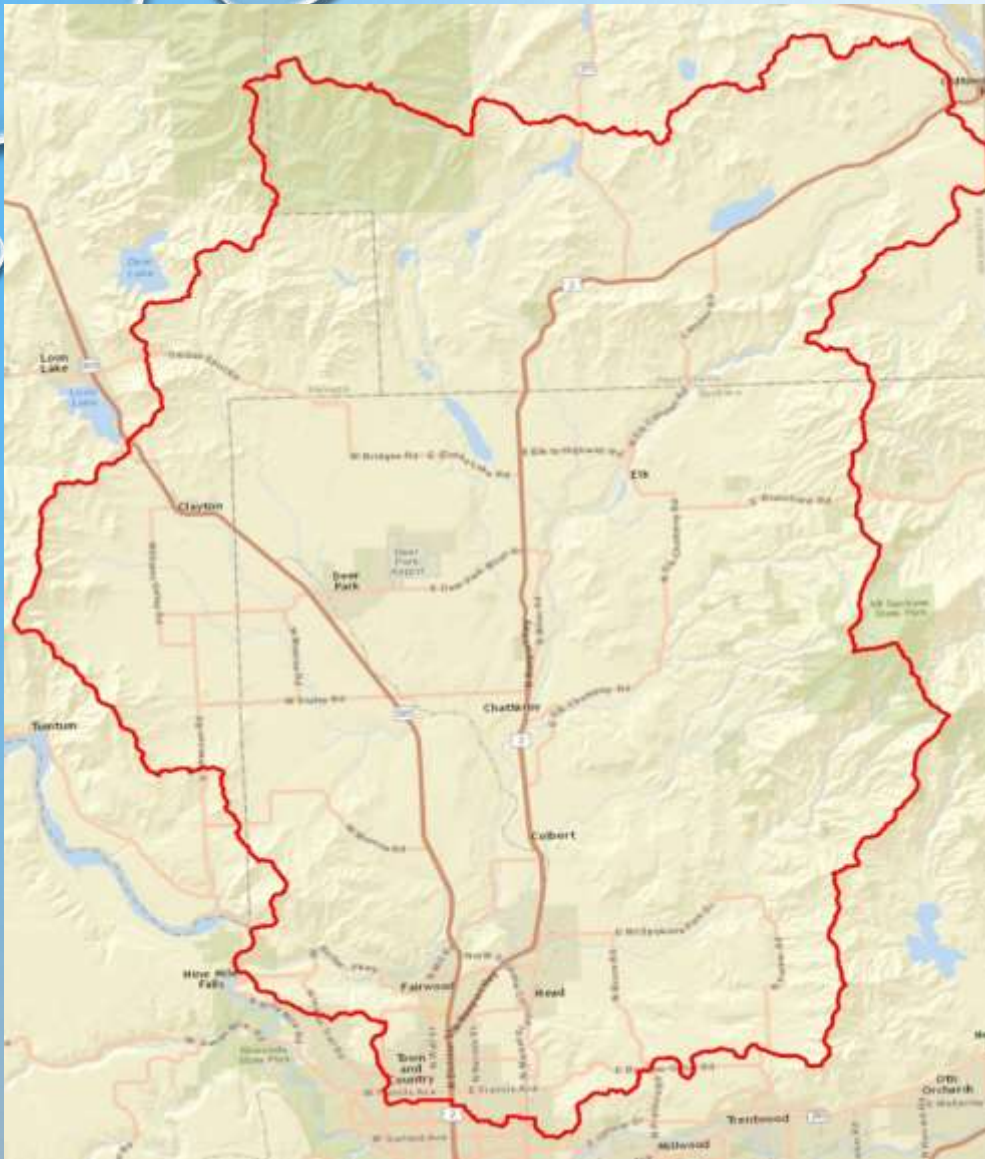
Abundant Municipal Supply

Inexpensive



# SVRP Aquifer/Spokane River Connection





## WRIA 55 – LITTLE SPOKANE RIVER WATERSHED

Varied geologic terrain - granitic, basalt flows, alluvial deposits.

Drinking water limitations include both quantity and quality.

The Little Spokane River instream flow rule (WAC 173-555) established on January 6, 1976.

As of 2009 in 27 out of 41 years the Little Spokane fell below the minimum flow

New water uses (municipal and rural) in the Little Spokane River Basin will impair the senior instream flow water right.

# THE HIRST DECISION AND RURAL WATER:

## Historically:

- Counties have a duty to establish if a building permit would be served by a legal water source.
- Counties relied on the Department of Ecology to tell them if water was not legally available.
- If Ecology did not provide information to Counties, water was considered legally available.

## The Hirst Decision:

- Affirmed that Counties have the duty to evaluate legal availability of water before issuing a building permit;
- Held that Counties, not Ecology, must make the determination; and
- Counties cannot rely on Ecology's opinion of the legal availability of water for building permits.

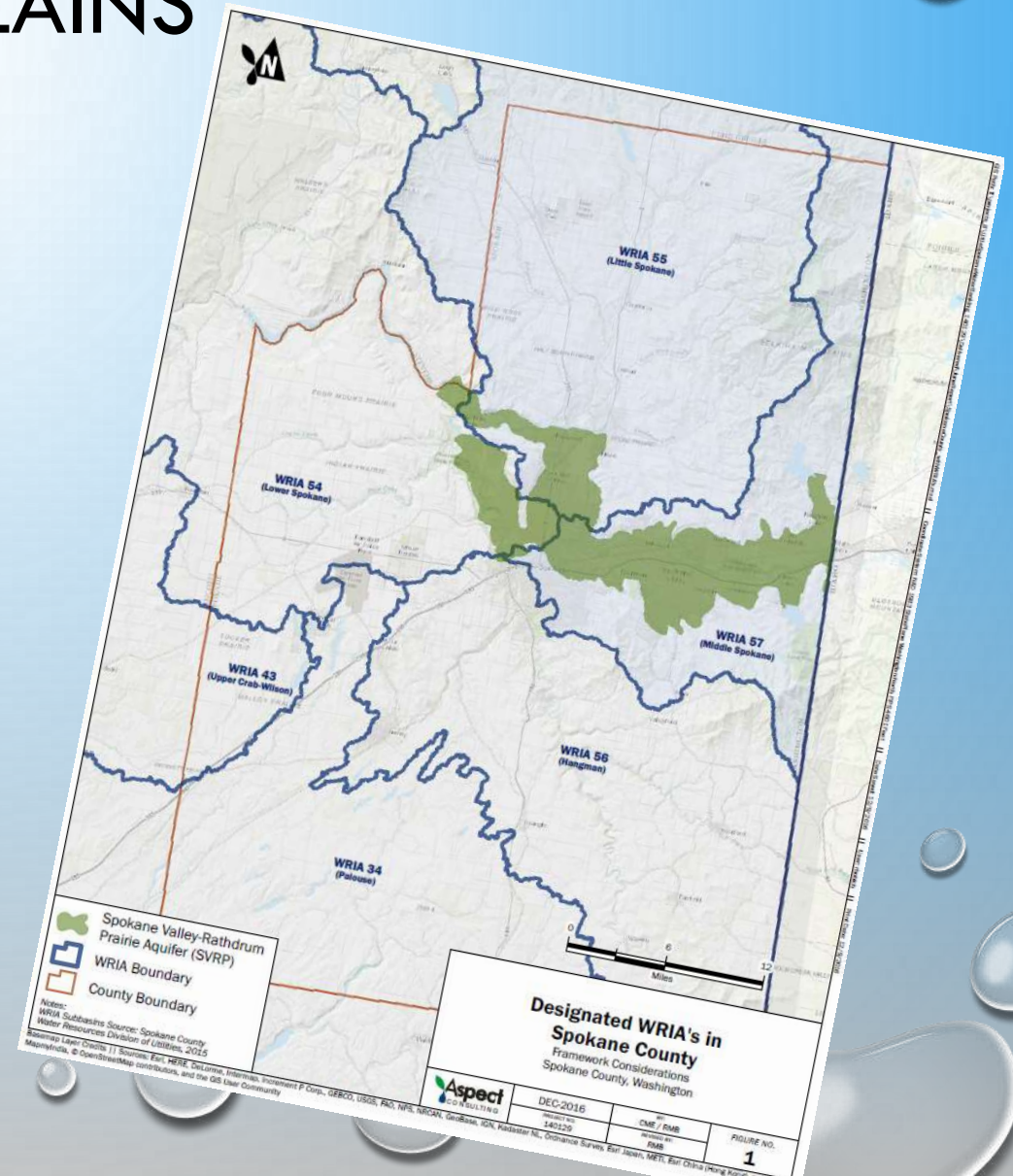
## The Legislative "Fix":

- Watershed Planning V.2 – Deadline for Plan is February 2021



# WRIAS 54 AND 34 – HANGMAN / PALOUSE THE WEST PLAINS

- Columbia River Basalt Group
  - Aquifers of varying depths and connectivity – natural and man made
    - Areas of localized scarcity
    - Regional environmental contamination
    - Limited recharge



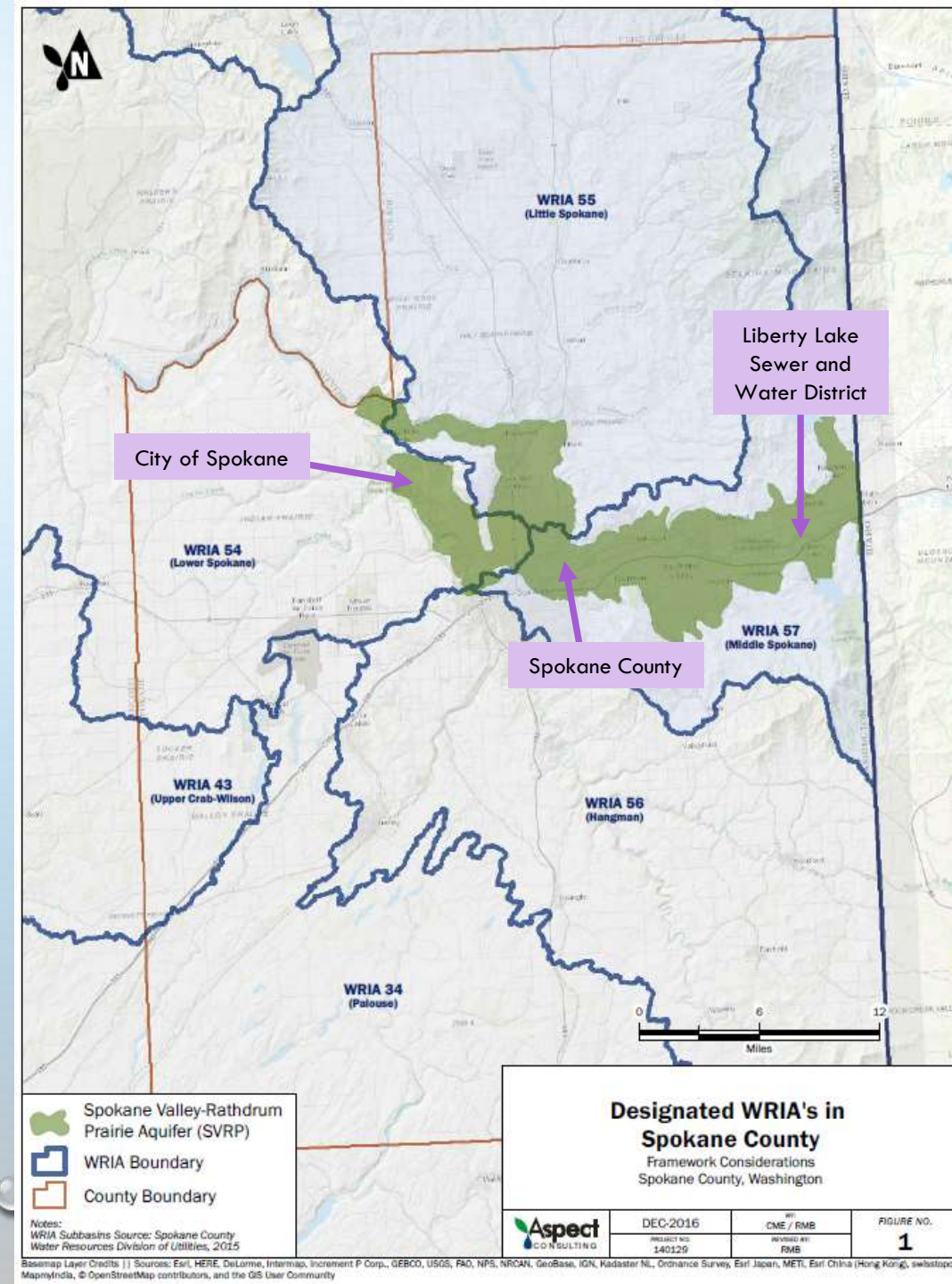


# RECLAIMED WATER

- Chapter 173-219 WAC – effective February 23, 2018
  - *The purpose of this chapter is to encourage the use of reclaimed water to help meet the growing need for clean water across the state by establishing a regulatory framework for the generation, distribution, and use of reclaimed water for the beneficial uses...*
  - Implements Chapter 90.46 RCW Reclaimed Water Use
- In Spokane County – two main drivers
  - Receiving water quality limits
  - Water shortage/small receiving water

# RECEIVING WATER QUALITY LIMITS

- Spokane River Municipal NPDES Permit Limits
  - Low nutrient discharge limits require filtration
    - ~0.050 mg/L total phosphorus
  - Potential future limits may make surface water discharge infeasible/impractical
    - For example 7 pg/L PCBs
  - Required review of out-of-stream reclaimed water uses
- No reclaimed water permits at this time



# SPOKANE COUNTY RECLAIMED WATER USE STUDY

JUNE 2009

**Water  
Reclamation  
Facility**

**Spokane River**

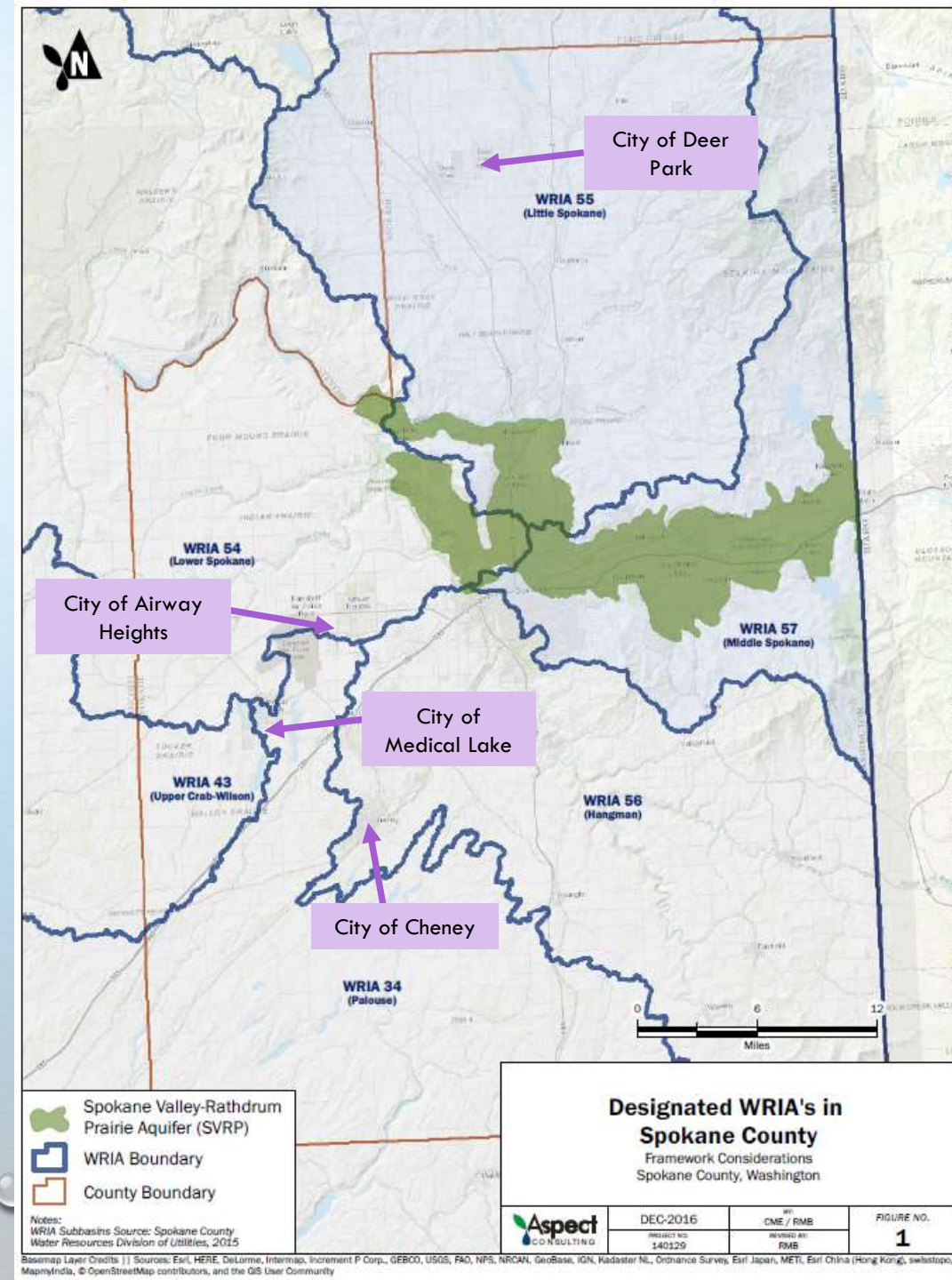


Options

- **Urban Irrigation**
  - Parks, Schools, Fairgrounds
- **Industrial Reuse**
  - Paper Mill, Rock Crushing, Concrete
- **Groundwater Recharge**
  - Surface Percolation
- **Wetlands Restoration**
  - Creation, Restoration, Enhancement
- **Other**
  - Agricultural Land, Poplar Farms

# SMALL RECEIVING WATERS/ SMALL FACILITIES

- Small wastewater facilities in relatively rural areas
- City of Deer Park
  - Land treatment process (irrigation and infiltration)
- City of Airway Heights
  - Reclaimed water permit – groundwater recharge, irrigation, and commercial/industrial
- City of Medical Lake
  - Reclaimed water permit – surface water augmentation and irrigation
- City of Cheney
  - NPDES permit – wetland discharge



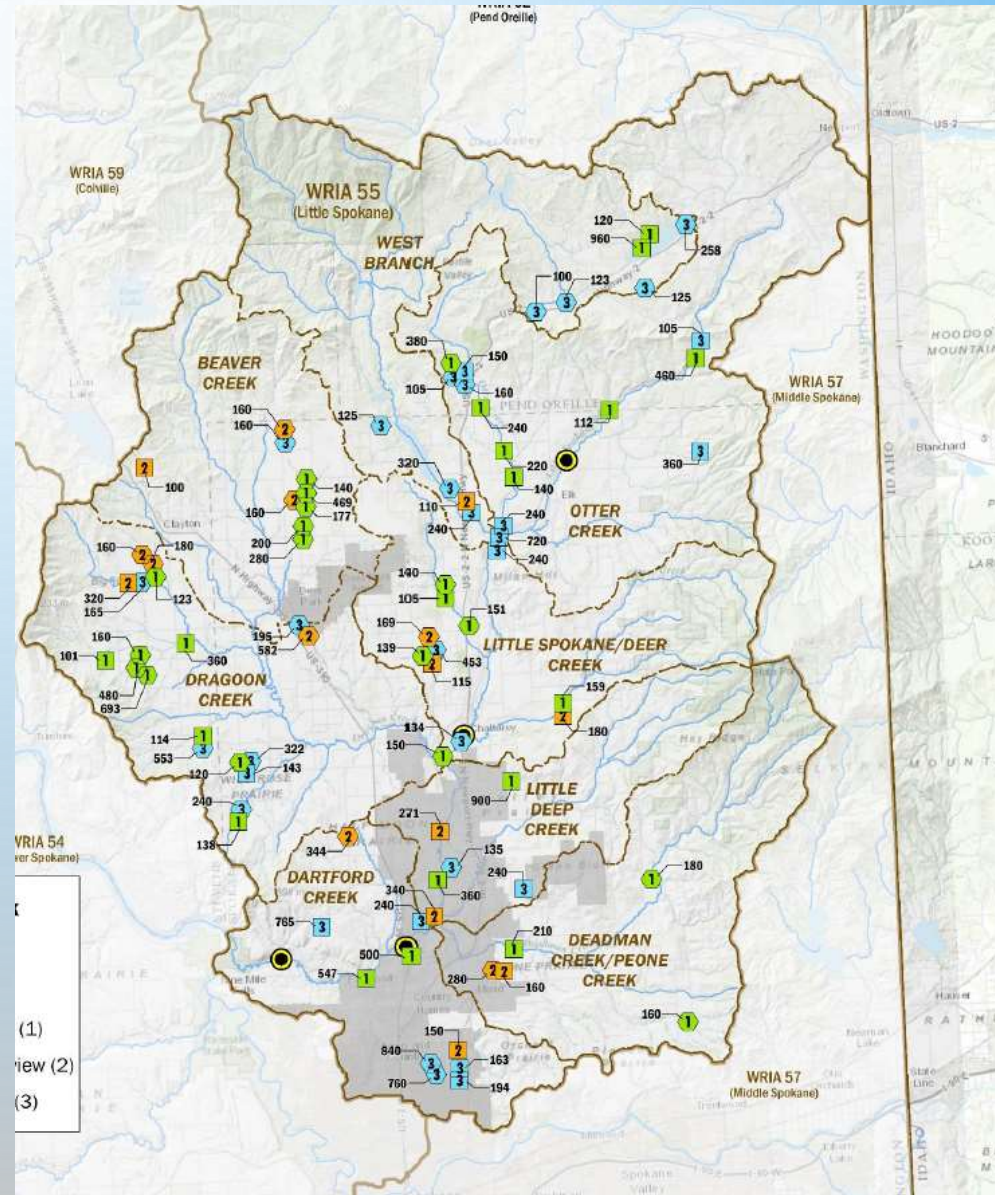
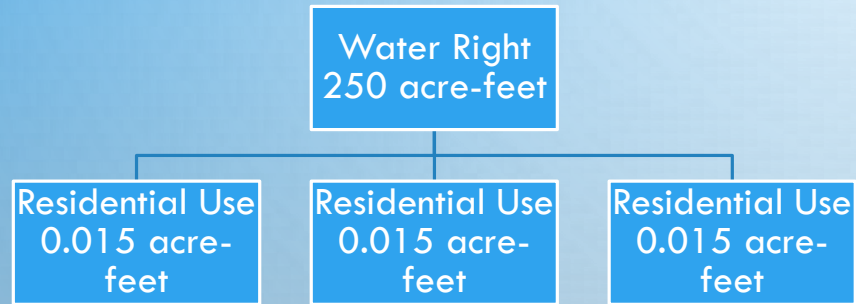
# Little Spokane River – Water Bank

- New uses may not impair instream flows, but uses established before the instream flow (1976) can.
- Water banks redistribute water use senior to instream flow to new uses



# Little Spokane River – Water Bank

- Putting water in the bank
  - Purchase existing water rights that have not been relinquished.
  - Put water in the bank and divide up into smaller pieces



(1)  
view (2)  
(3)

# THANK YOU!!

- CONTACTS

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