

# RESERVOIR STUDIES IN SOUTH WASHINGTON

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**NATURAL RESOURCES**  
WASHINGTON GEOLOGICAL SURVEY



# Where to Explore?



Olympic Peninsula: Nat'l Park, tribes, trap complexity, low success rate in  $SCO_2T$



South-central Columbia Basin: high capacity, large plume radius, permanent mineralization



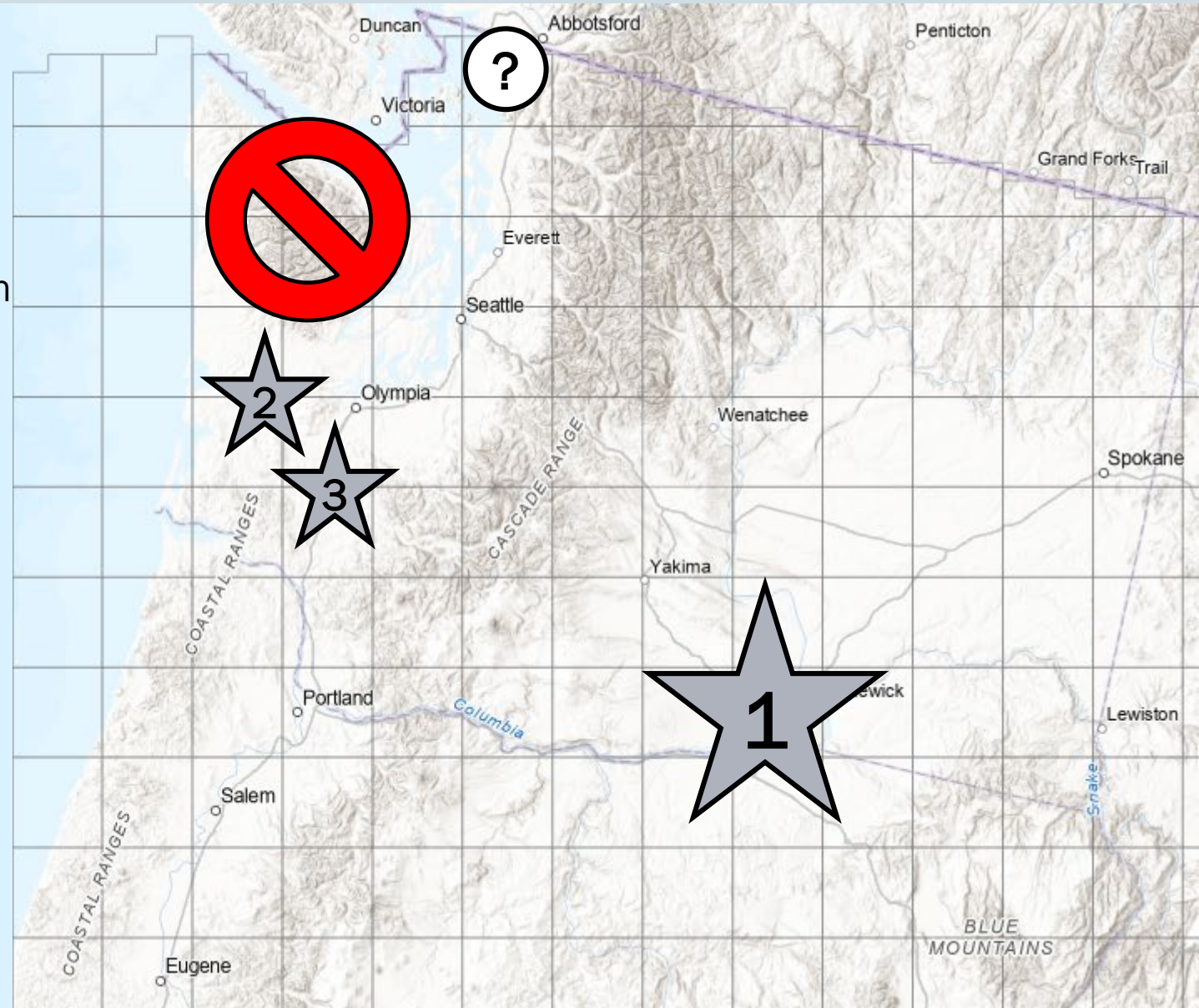
Grays Harbor / Willapa Hills: moderate capacity, moderate cost



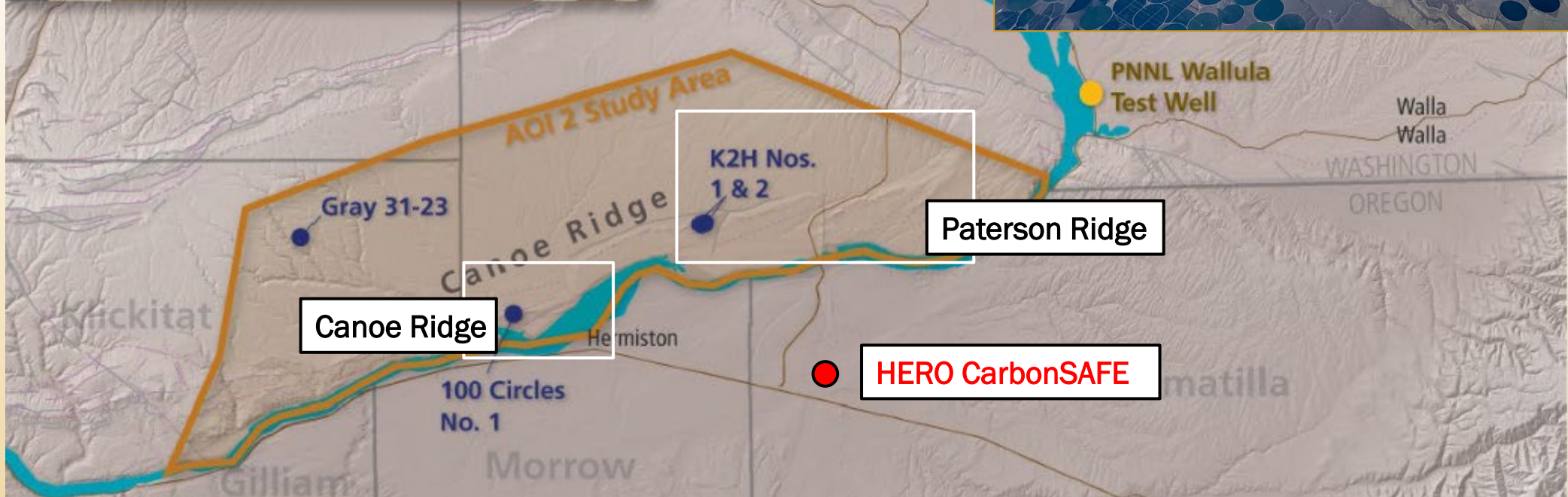
Chehalis Basin: moderate capacity, moderate cost



Bellingham / Chuckanut: located under refineries



# South Washington Study Area

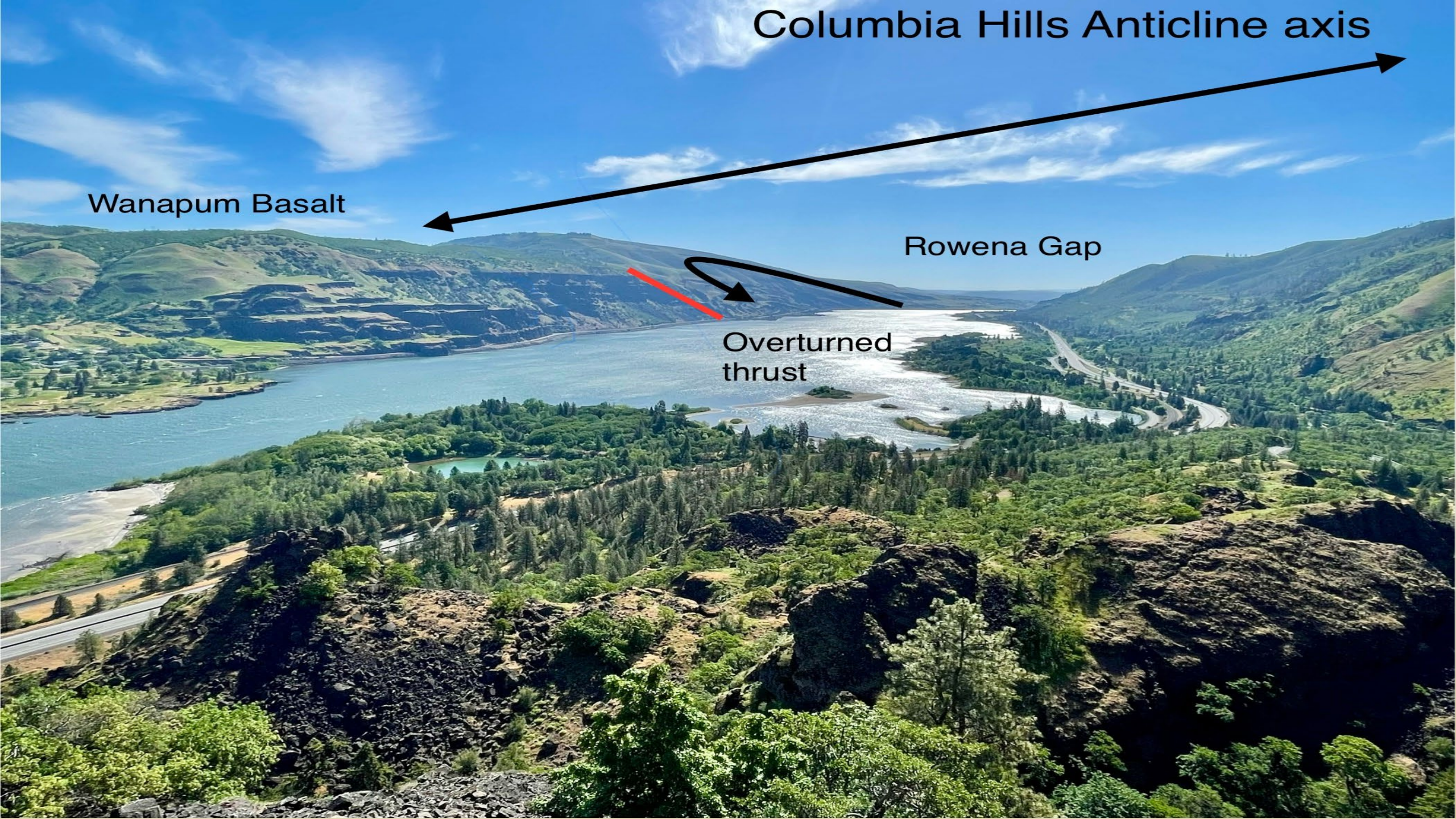


Columbia Hills Anticline axis

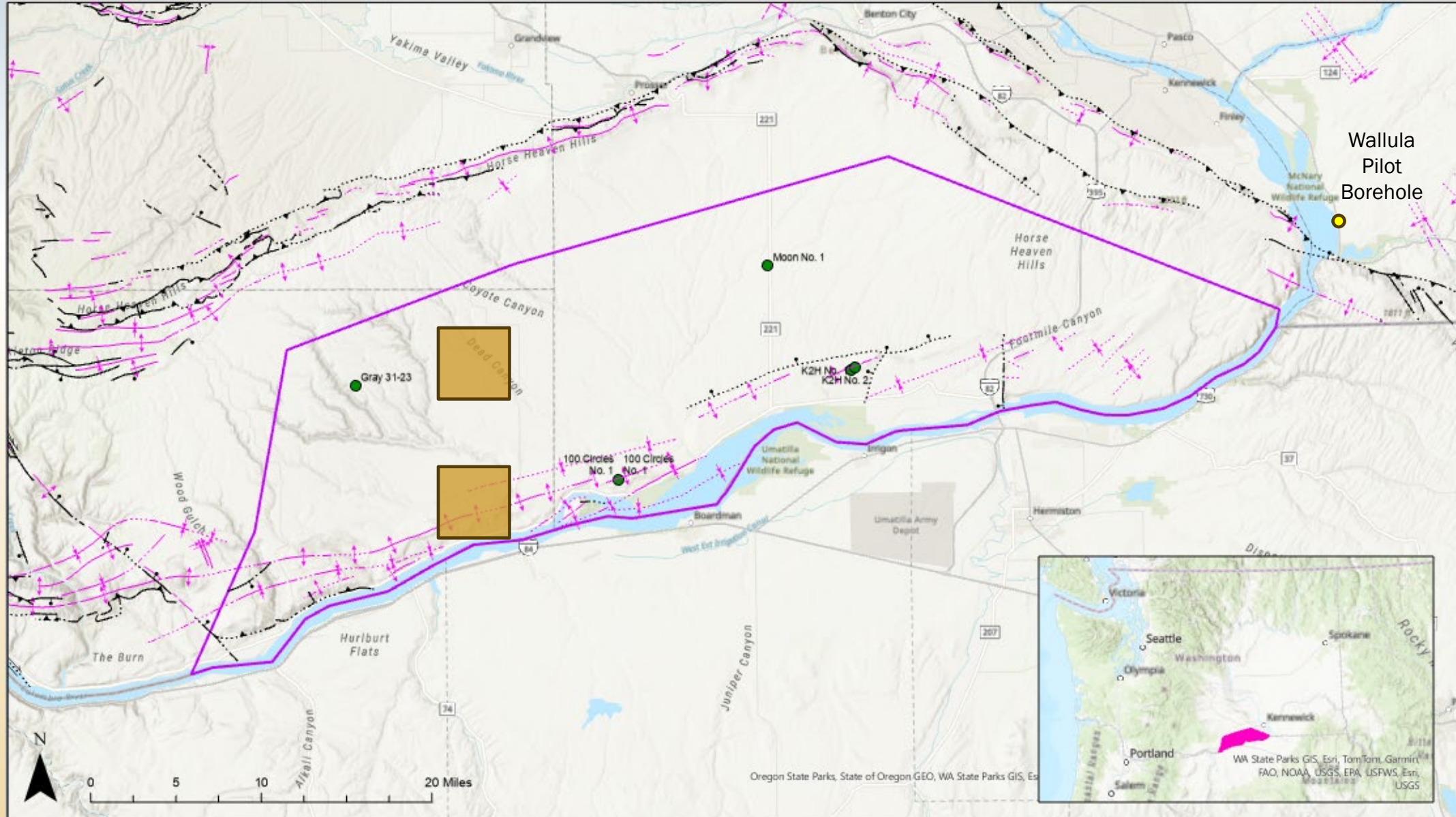
Wanapum Basalt

Rowena Gap

Overtured thrust



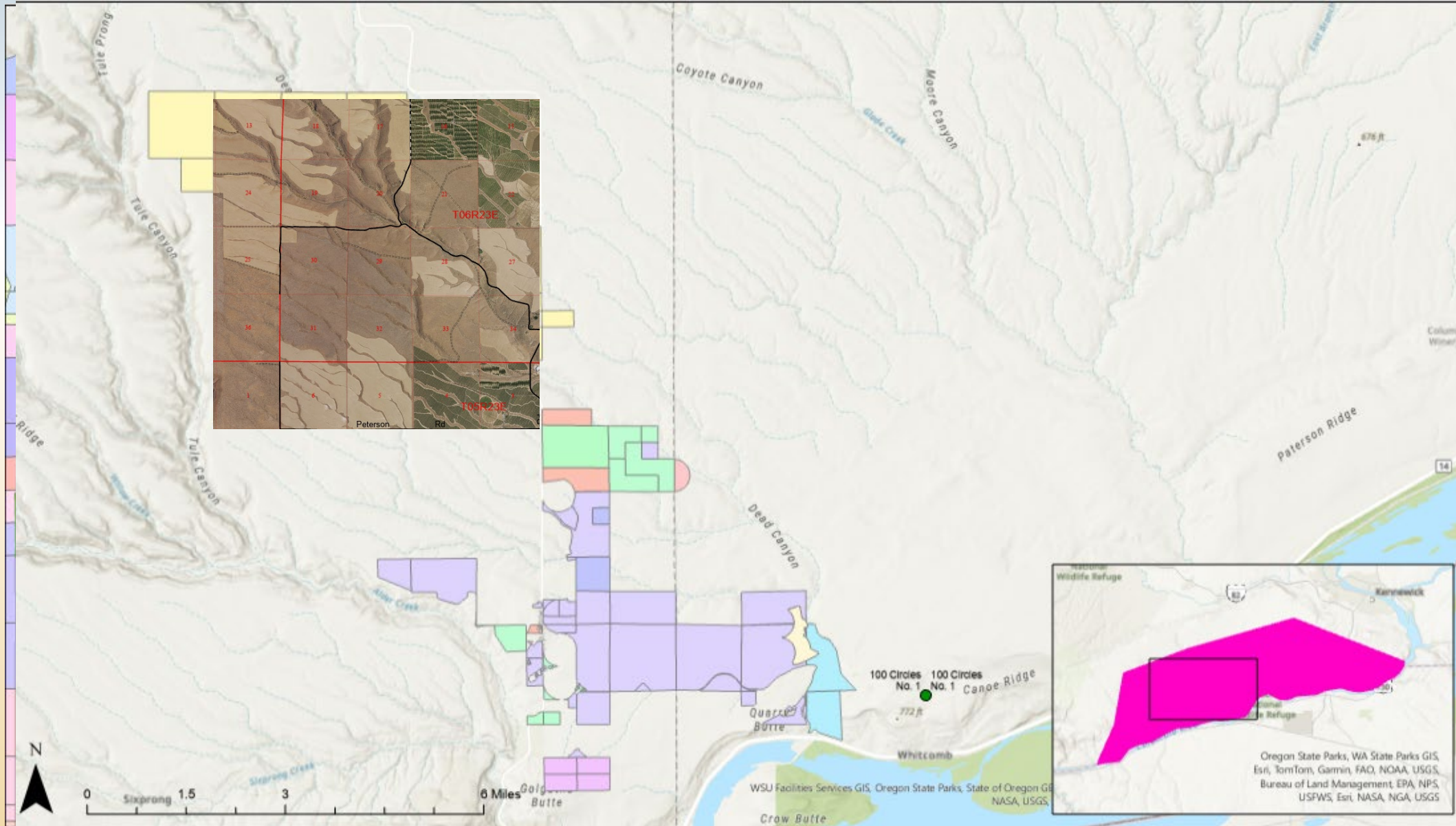
# Selection criteria



# Acquisition area

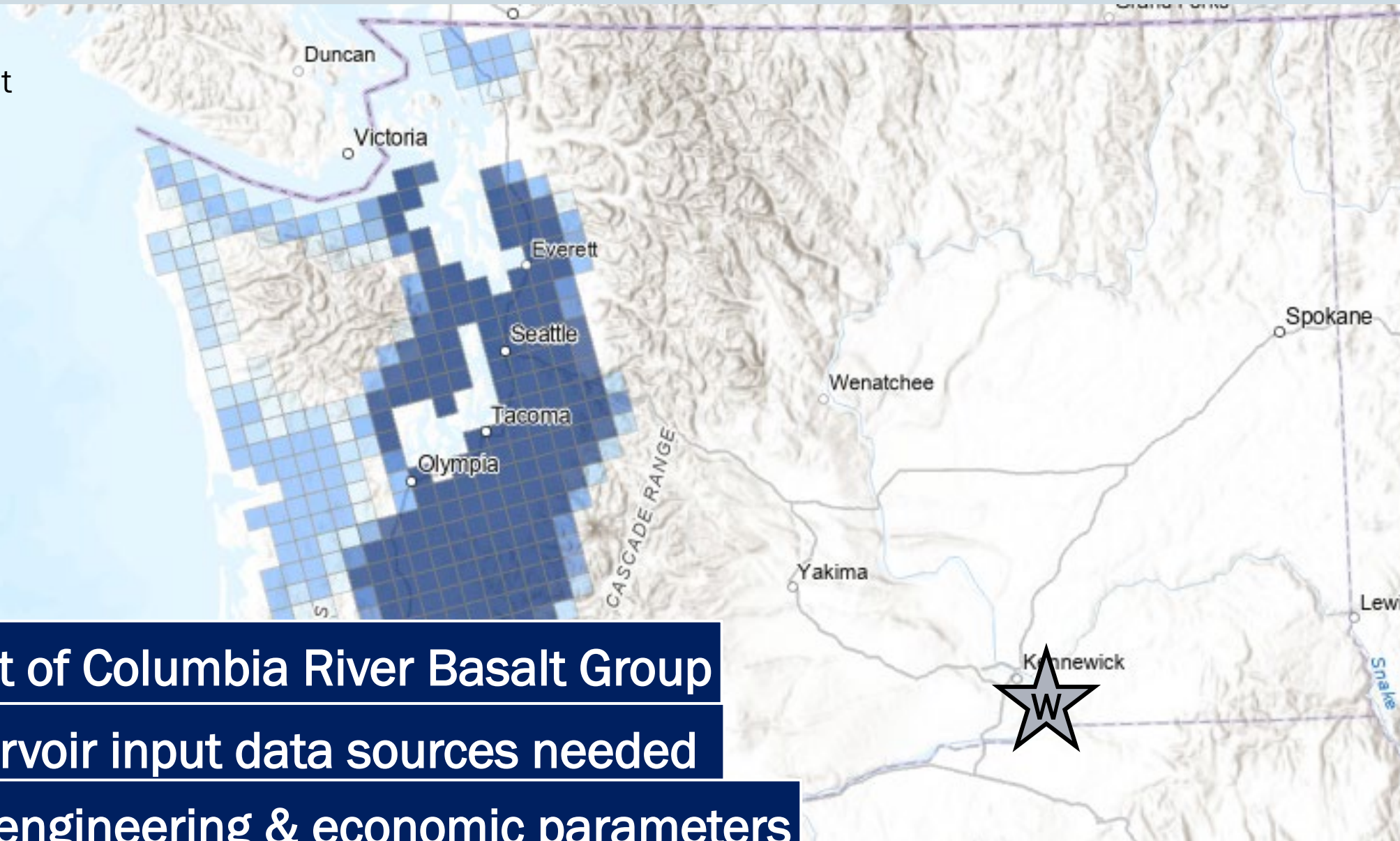
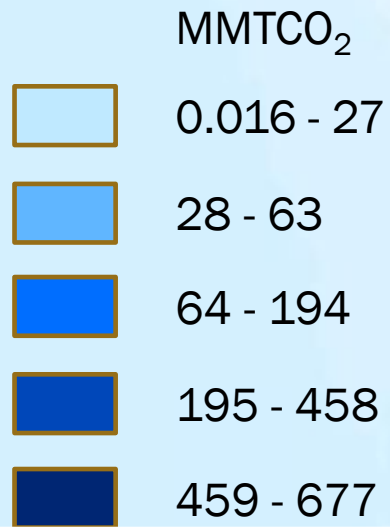
Contact criteria:

- 1) At least 8 square miles of contiguous landownership
- 2) Proximity to 100 Circles well.
- 3) Low aspect ratio to seismic survey (square-shaped)



# Past Work

NATCARB (2015)  
P50 Storage Assessment



**No assessment of Columbia River Basalt Group**

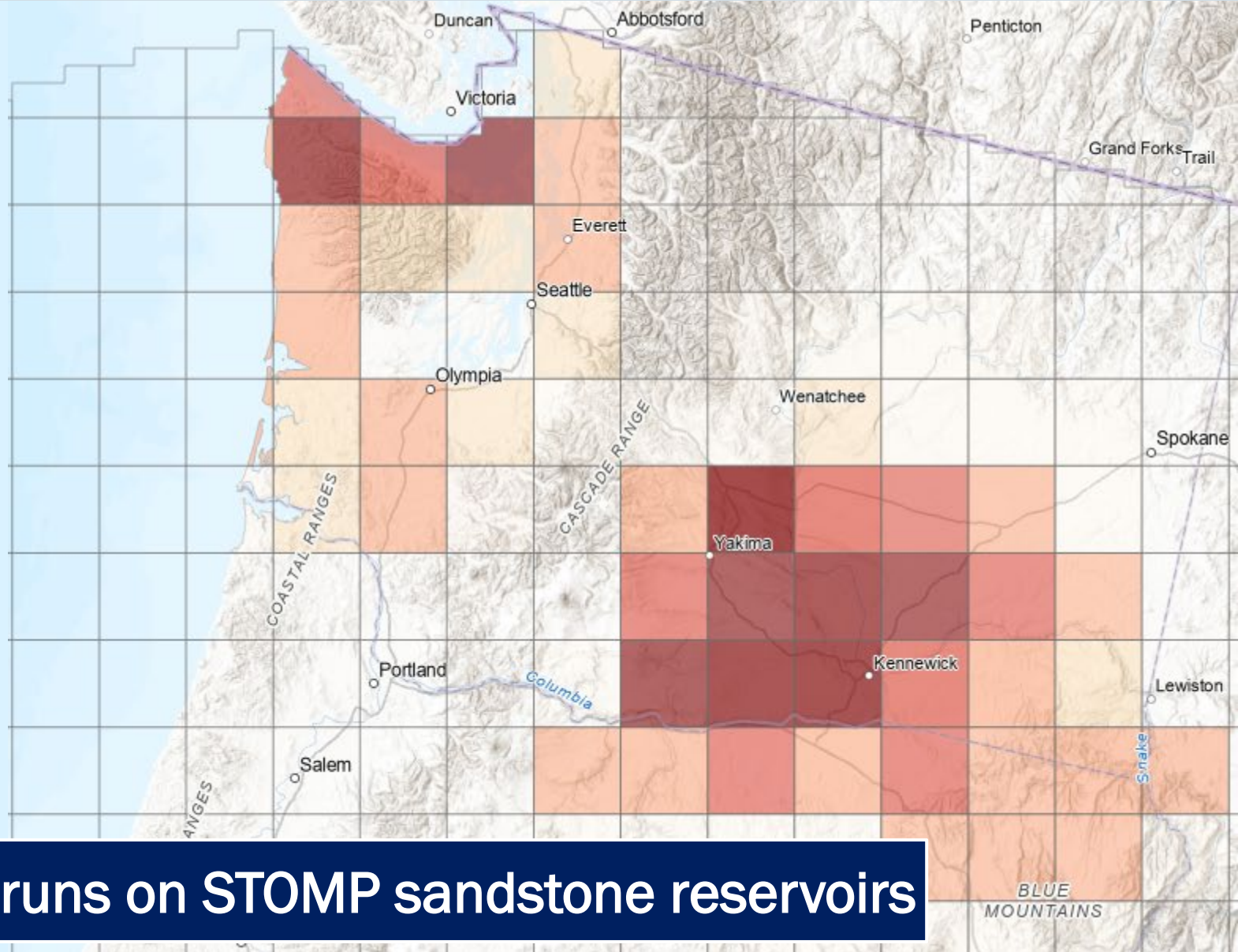
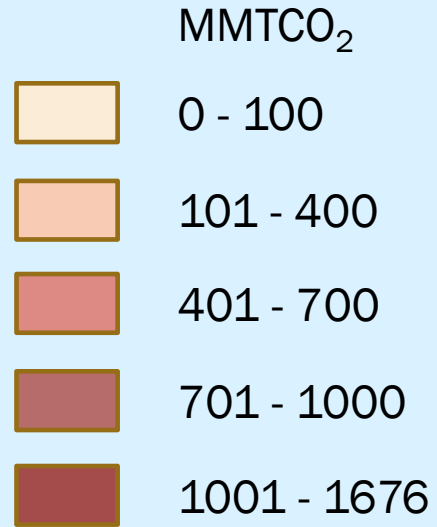
**Additional reservoir input data sources needed**

**Volume  $\neq$  CCS engineering & economic parameters**

# SCO<sub>2</sub>T Output - Probabilistic

## Capacity (P50)

Success Cases Only



**Future work: currently SCO<sub>2</sub>T runs on STOMP sandstone reservoirs**



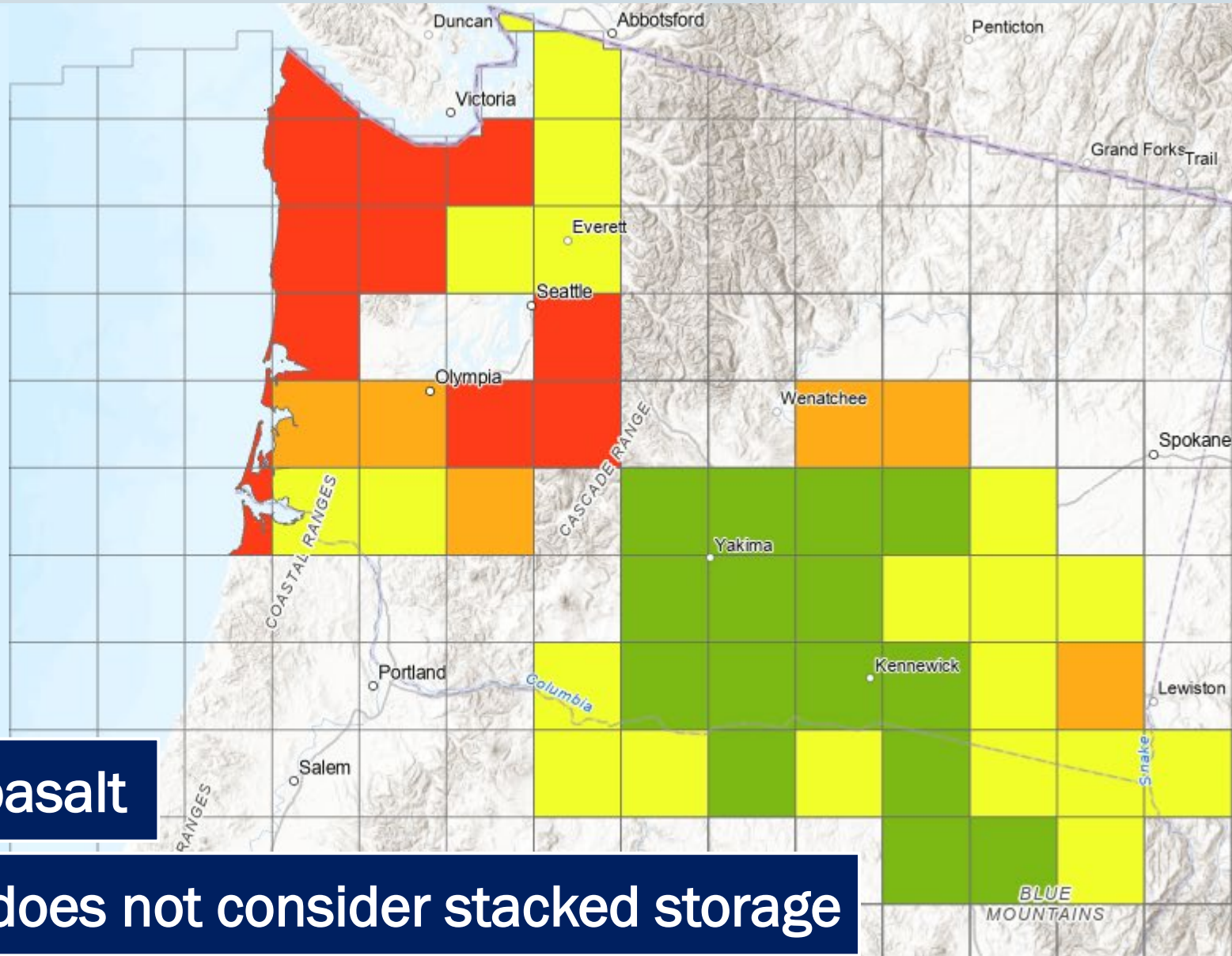
# SCO<sub>2</sub>T Output - Probabilistic

## Cost

Success Cases Only

- Financing
- Drilling
- Injection
- PISC (monitoring)

\$/MTCO<sub>2</sub>



**Future work: drilling costs in basalt**

**Future work: currently SCO<sub>2</sub>T does not consider stacked storage**