



**Umatilla Sub-Basin Replacement Water
(SB 1069) Workshop
28 October 2008**

IRZ Consulting LLC

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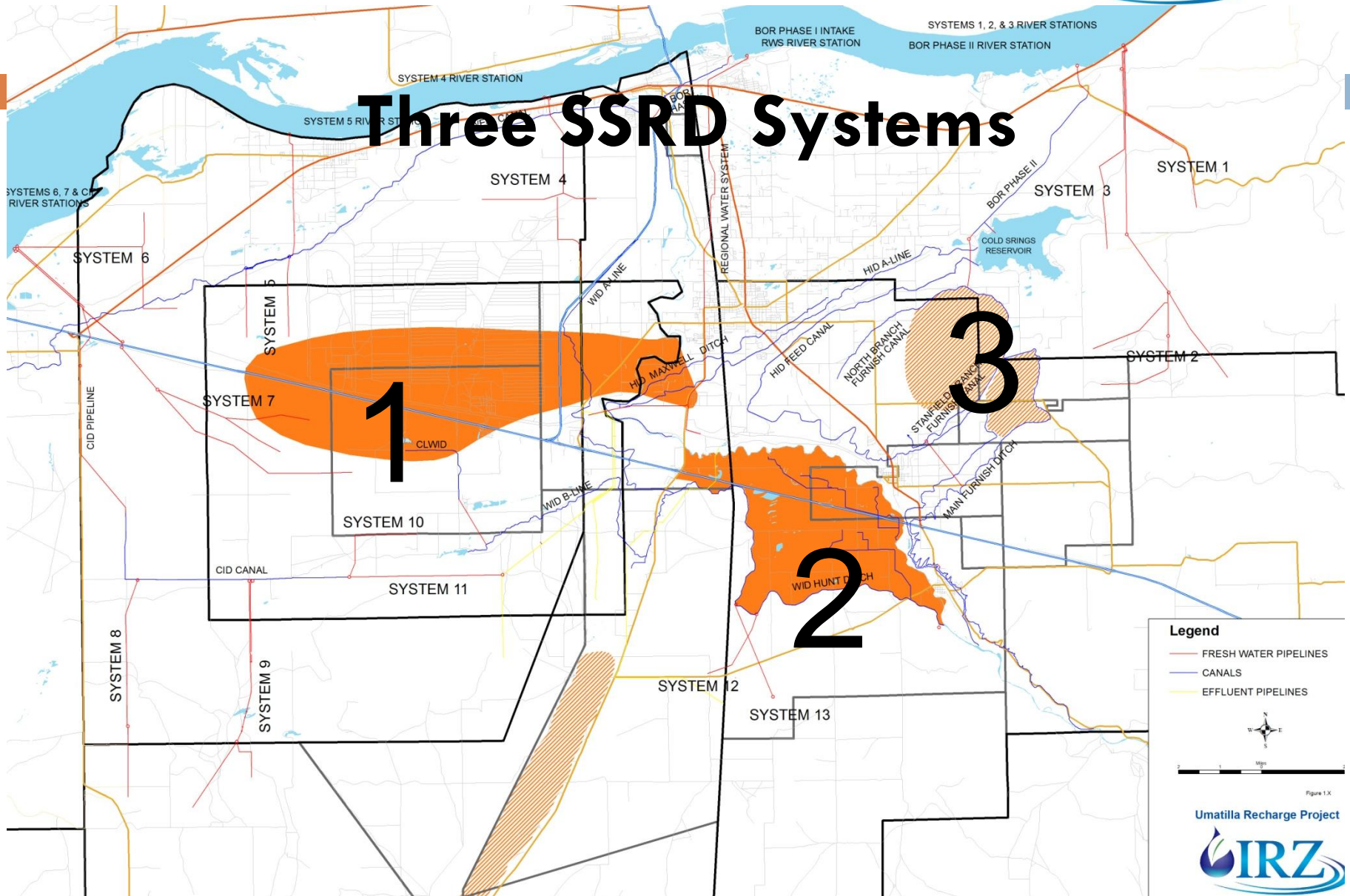
Agenda

**Supply, Storage, Recovery,
& Distribution (SSRD) Systems**

Umatilla Recharge Project



Three SSRD Systems



Legend

- FRESH WATER PIPELINES
- CANALS
- EFFLUENT PIPELINES



SSRD1

Supply, Store in alluvial aquifer - 90 days

Recover, Distribute to basalt aquifer –
365 days

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SSRD1 – High Supply Need

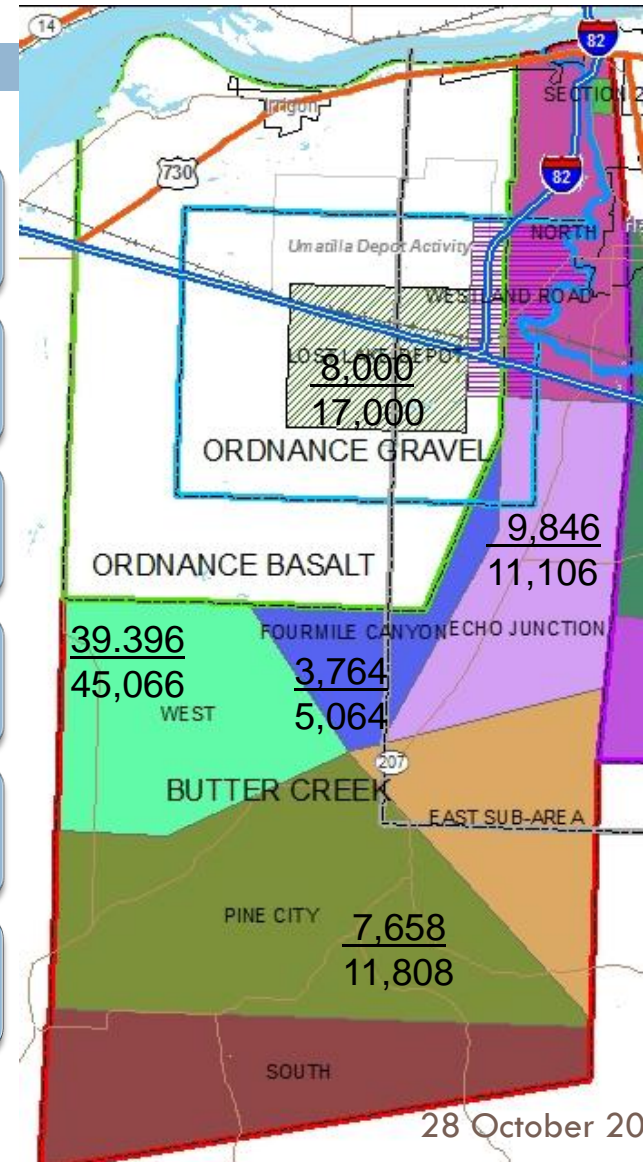
IR Need = 68,664 AFY

10% Bas Aq = 6,166 AFY

Exempt wells = 1,000 AFY

Flow Aug = 24,000 AFY

Total Target = 99,830 AFY



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SSRD1 – Low Supply Need

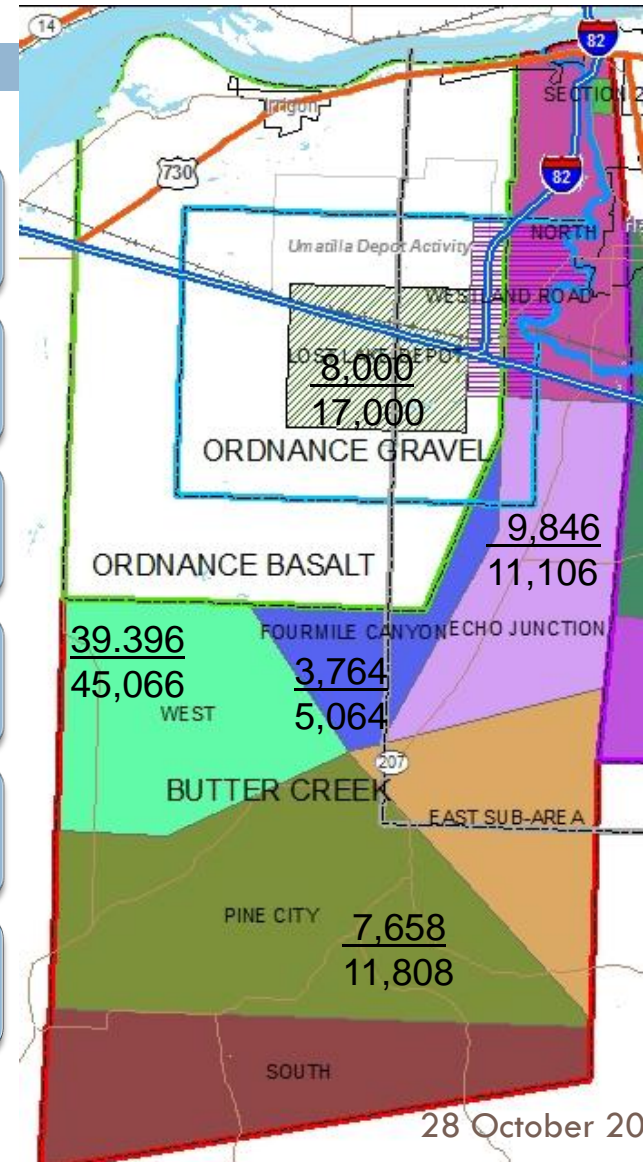
IR Need = 19,610 AFY

10% Bas Aq = 1,461 AFY

Exempt wells = 1,000 AFY

Flow Aug = 3,092 AFY

Total Target = 25,163 AFY

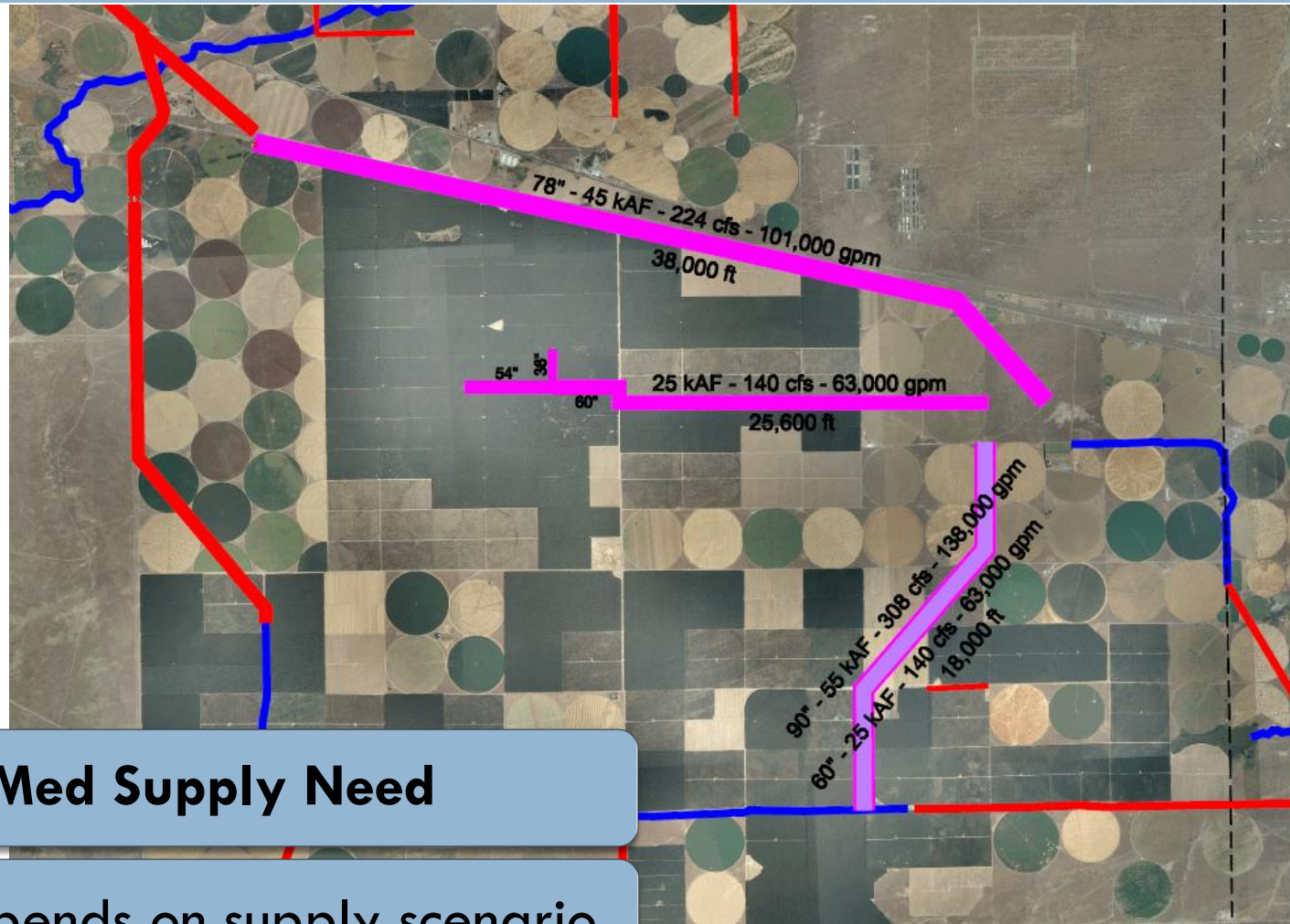


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SSRD1 – Med Supply Need

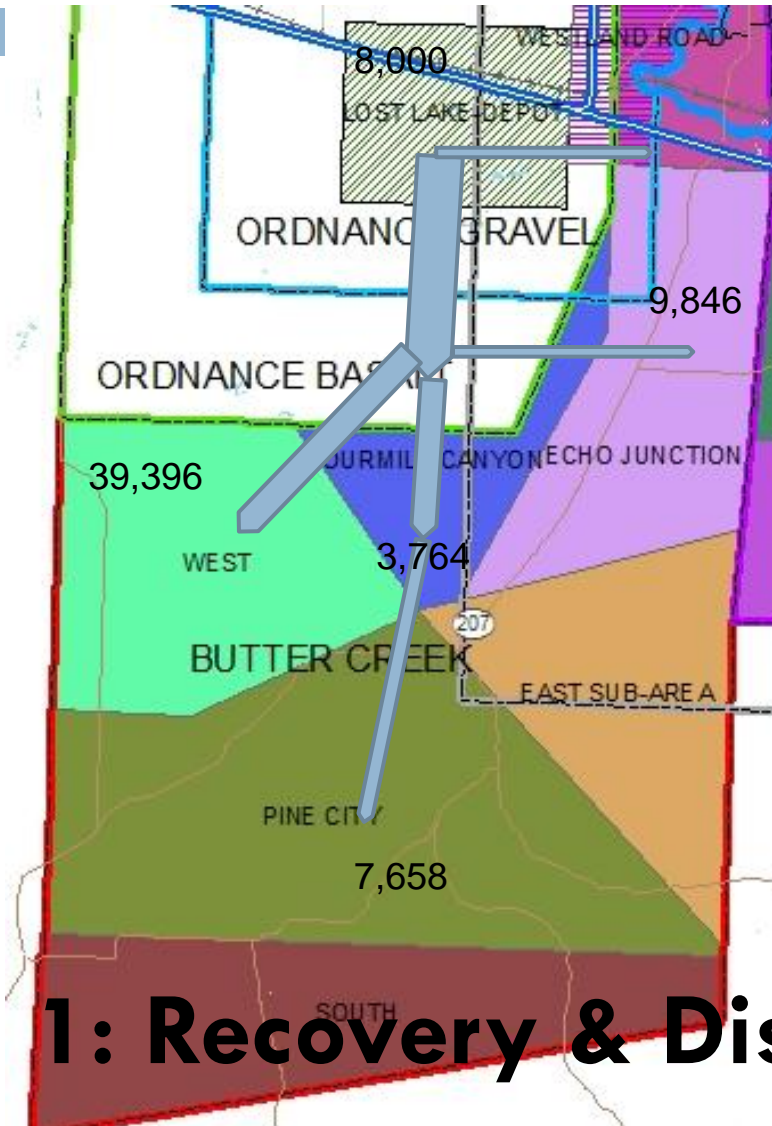
55 or 45kAFY depends on supply scenario

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SSRD System 1: Recovery & Distribution

27 August 2008



SSRD2

Supply, Store in basalt - 90 days?

Recovery, Distribution by Irrigators

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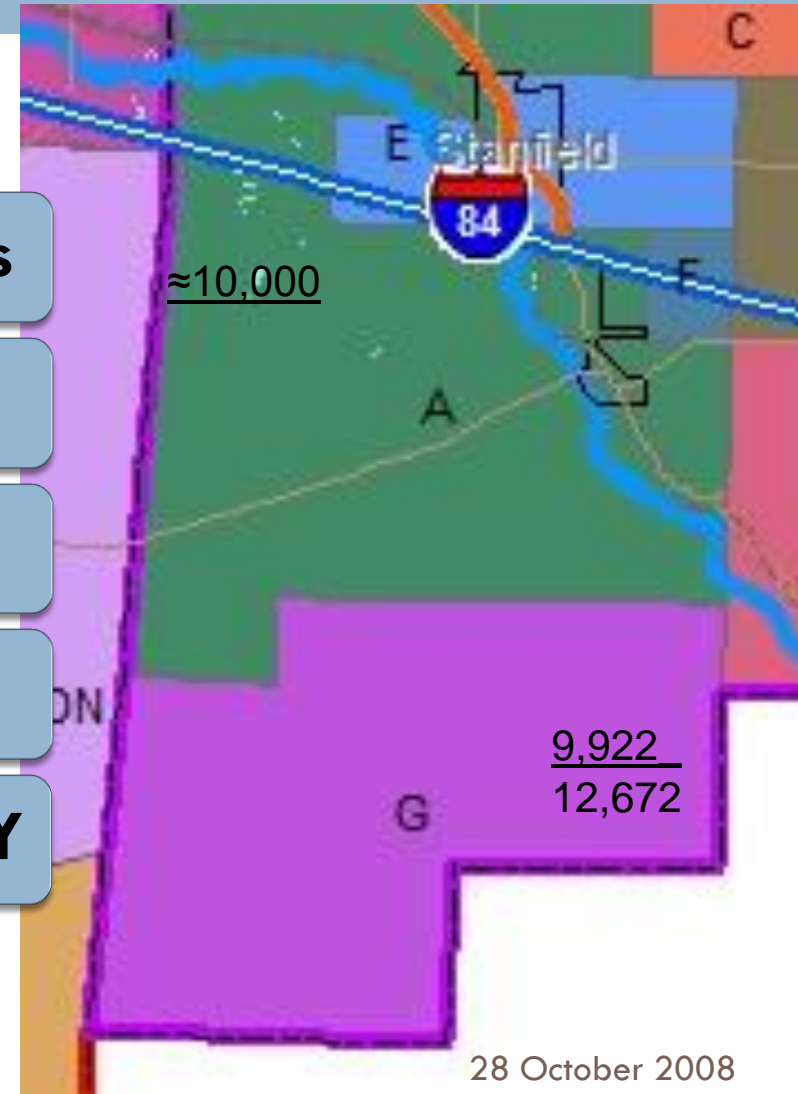
SSRD System 2 – Supply Needs

IR Need = 20,000 AFY

10% Bas Rep = 2,000 AFY

Flow Aug = 3,000 AFY

Total Target = 25,000 AFY



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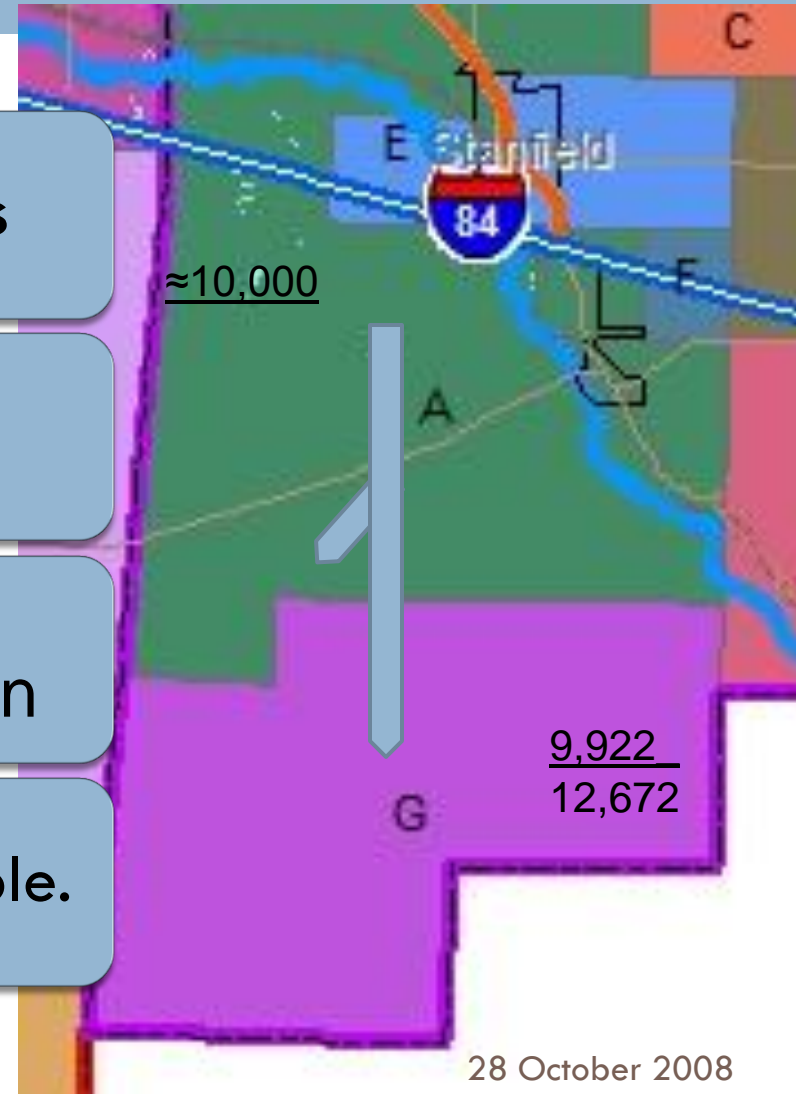
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SSRD System 2 – Supply Factors

Groundwater availability depends on Umatilla River water availability

≈7,500 AFY average may be possible based on CLWID diversion

Add'l river water is highly unpredictable.



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SSRD3

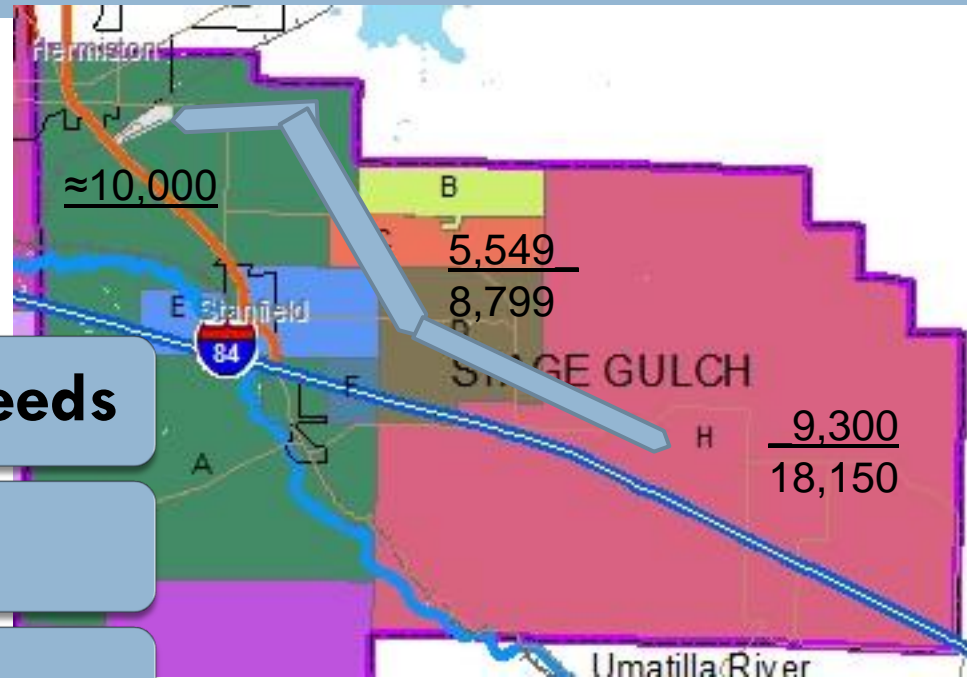
Supply, Store in alluvial aquifer - 90 days

Recover, Distribute to basalt aquifer –
365 days

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SSRD System 3 – Supply Needs

IR Need = 25,000 AFY

10% Bas Aq = 2,500 AFY

Muni/Exempt = 6,000 AFY

Total Target = 33,500 AFY

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Questions?