



FEBRUARY 13, 2007

SALT LAKE COUNTY



**SALT LAKE
COUNTY**

Water Quality Stewardship Plan Wastewater Element

Workshop No. 3

Wastewater Needs Assessment

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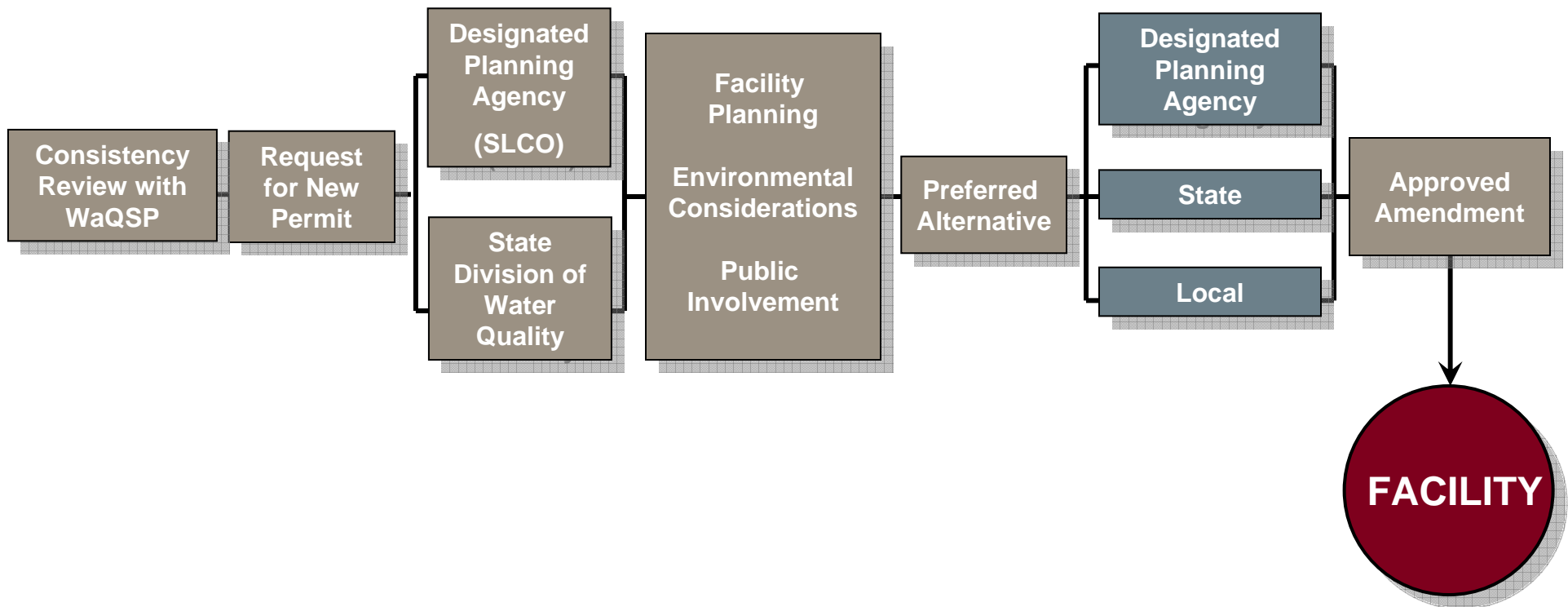


Workshop 2 Recap

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Proposed Permitting Process





Wastewater Needs Assessment

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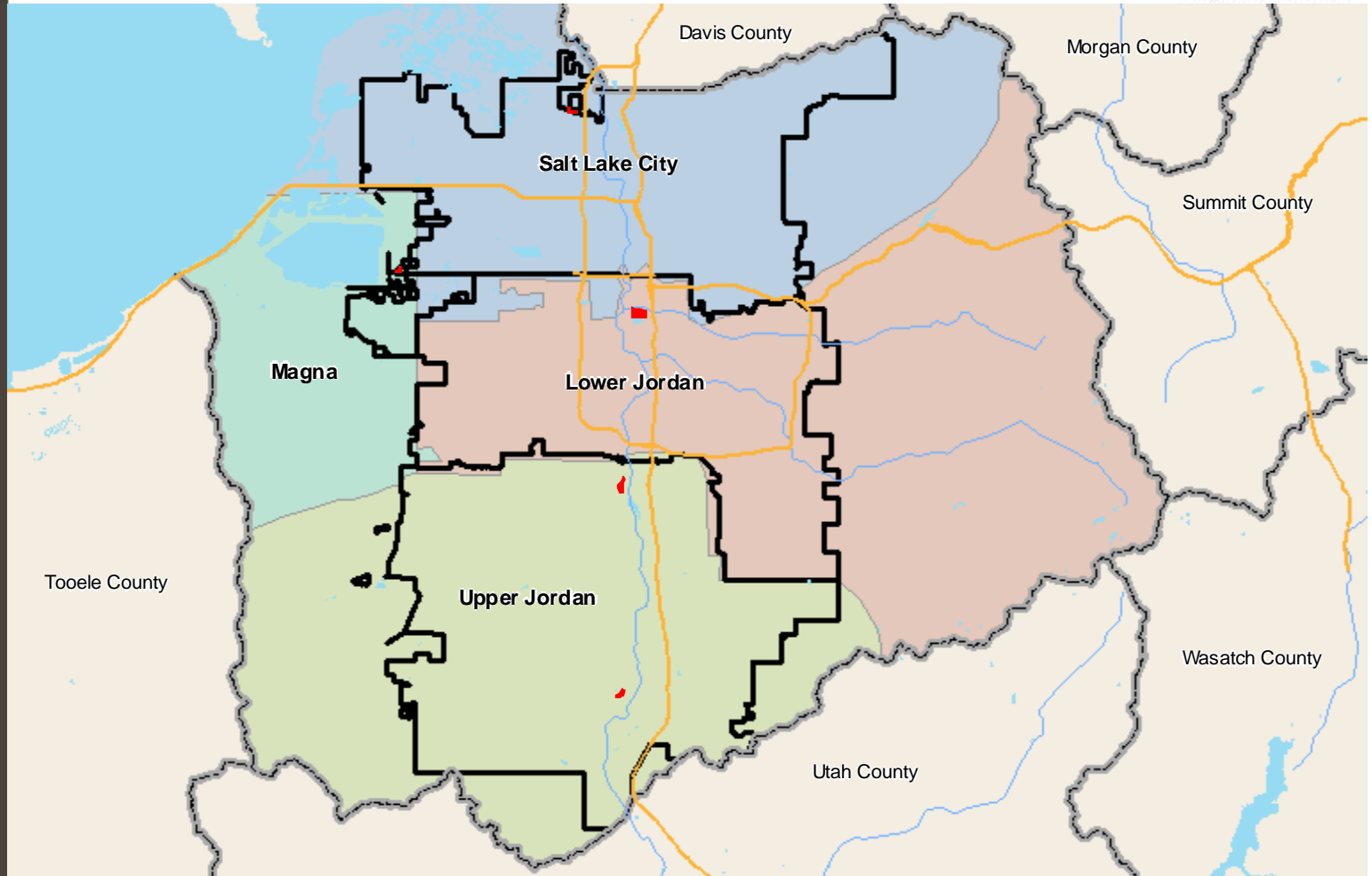
208 Plan Background

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“Facilities Planning Areas”

1. Salt Lake City
2. Magna
3. Lower Jordan
4. Upper Jordan





208 Projected Average Daily Flows

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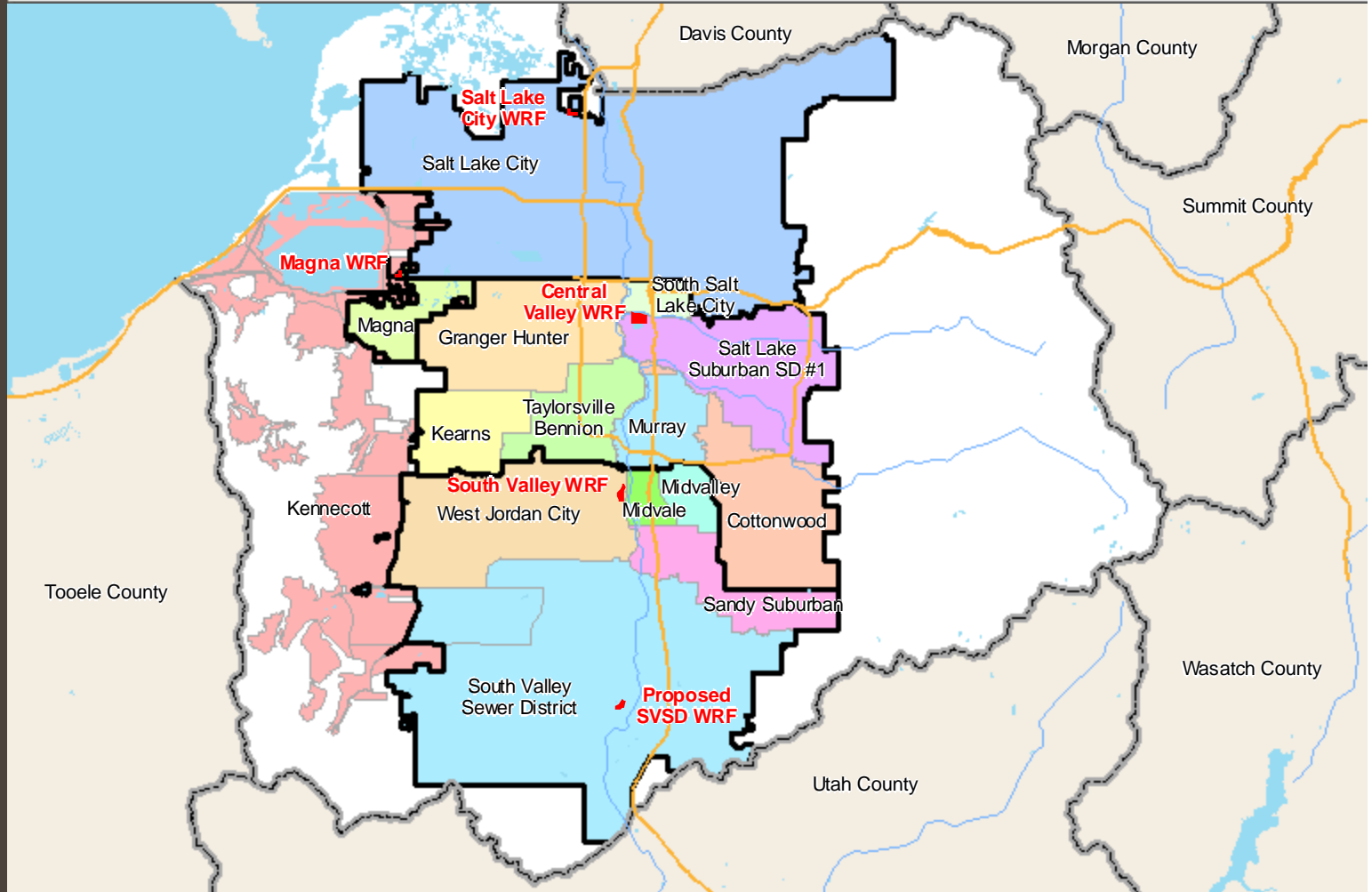
PLANNING AREA	FLOW	YEAR			
		1980	1990	2000	2005 (recorded)
Salt Lake City (SLCWRF)	Flow (mgd)	36.0	36.6	37.1	34
	BOD ₅ (lb/day)	37,000	37,800	39,500	73,853
Magna (Magna WRF)	Flow	1.2	1.5	1.7	2.4
	BOD ₅	1,700	2,200	2,500	5,261
Lower Jordan (CVWRF)	Flow	40.0	45.0	51.0	53.4
	BOD ₅	55,700	63,000	71,300	115,736
Upper Jordan (SVWRF)	Flow	16.0	24.0	32.0	29.5
	BOD ₅	23,500	35,300	47,000	63,947



Current Sewer Districts

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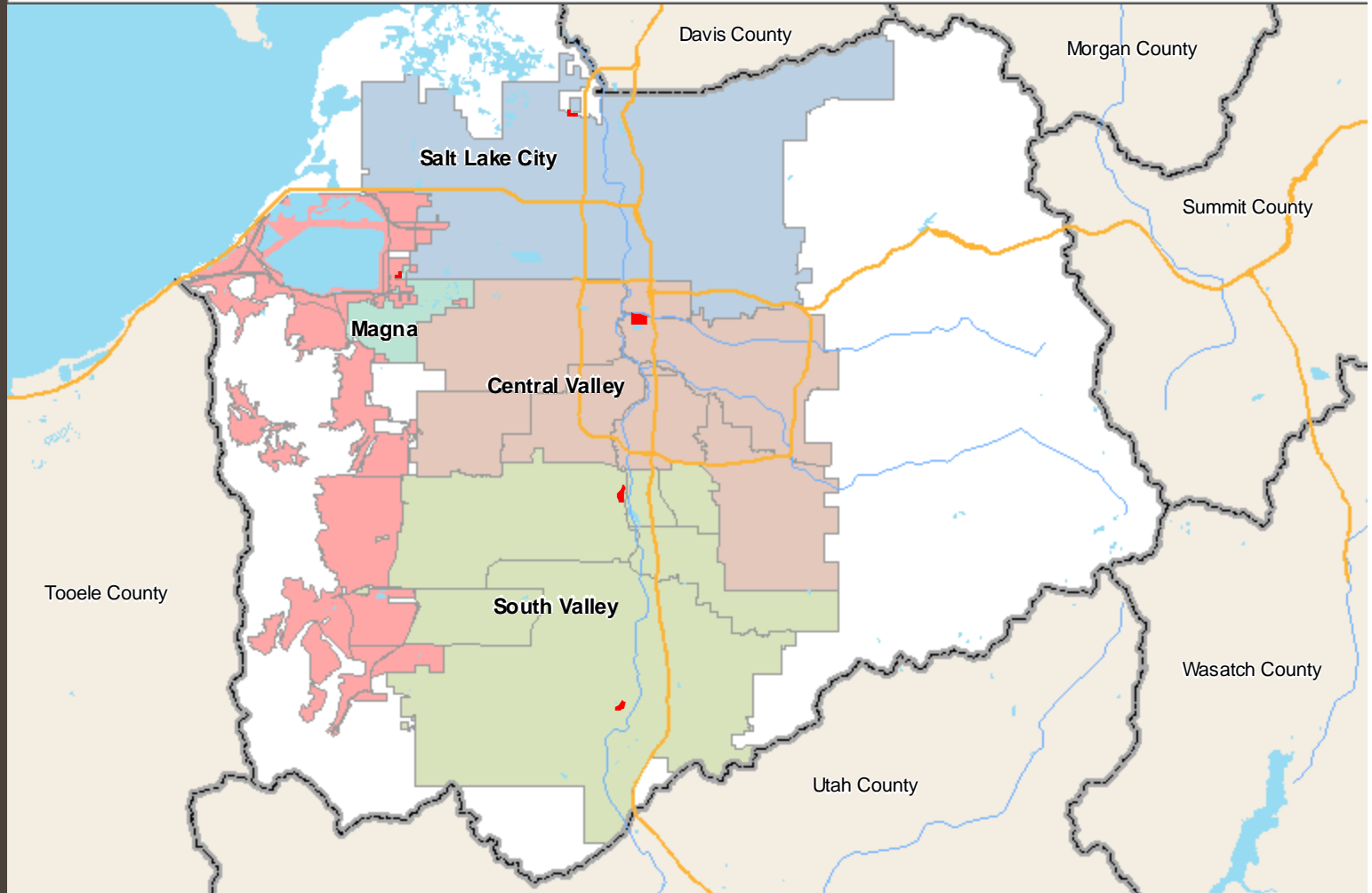




POTW Service Areas

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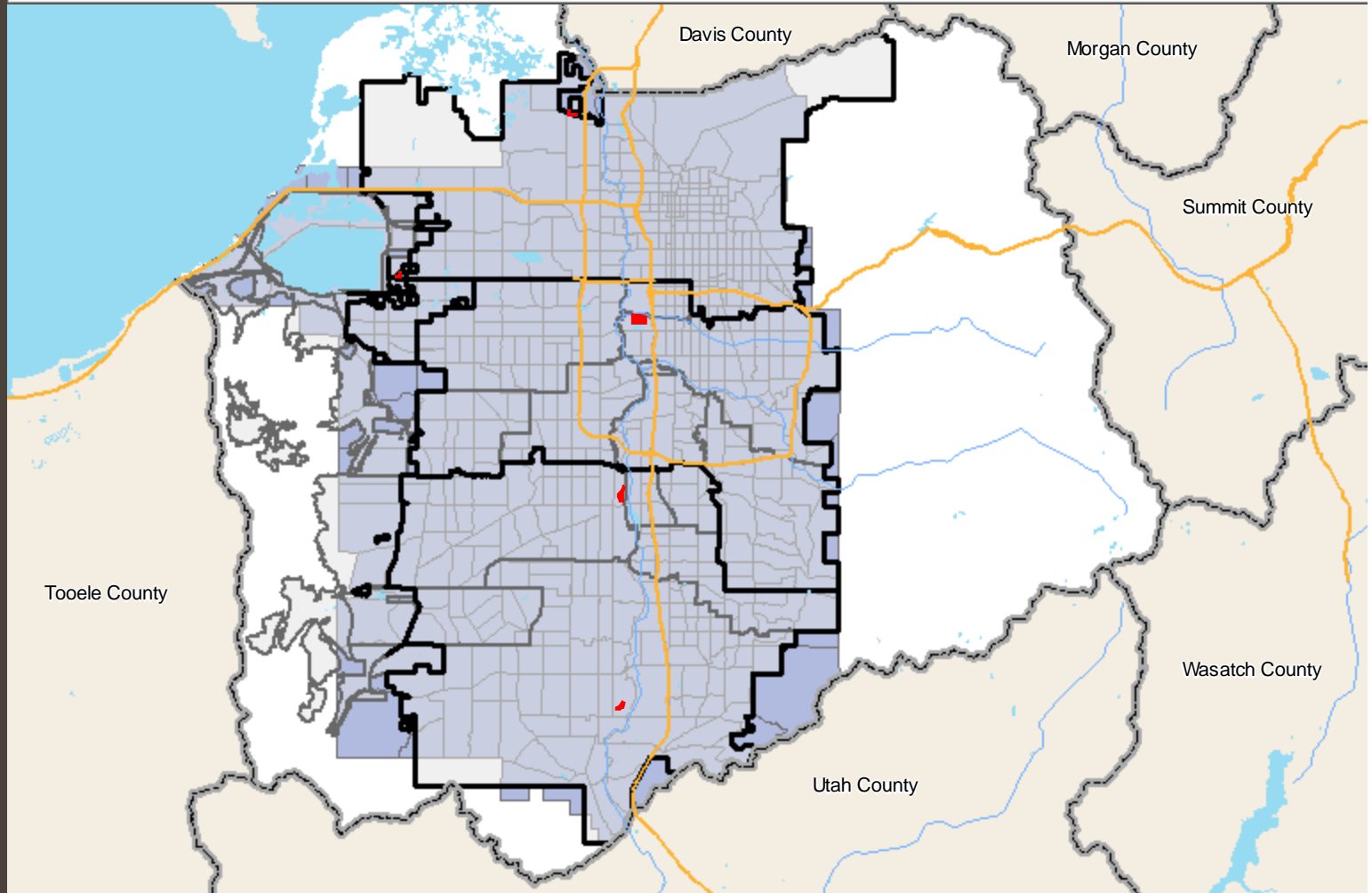
Wasatch Front Regional Council (WFRC) Traffic Analysis Zone (TAZ)

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WFRC TAZ Data

- 2005, 2030
- Population housing units employment
- Boundaries





Alternative Analysis

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Alternative Analysis

- Compares 2030 flow projections for each service area to current and ultimate Water Reclamation Facility (WRF) treatment capacity (expressed in ADF)
- Identifies shortfalls between planned WRF capacity and required capacity to meet 2030 flow projections
 - Does not consider flows or capacity required for build-out conditions (i.e. 2050 and beyond)
- Evaluation includes peak hour flows and loadings (not shown)
- Six alternatives were developed based on potential flows and routing from West-side Bench property owners



Alt 1 – Baseline (Current WRF Capacity)

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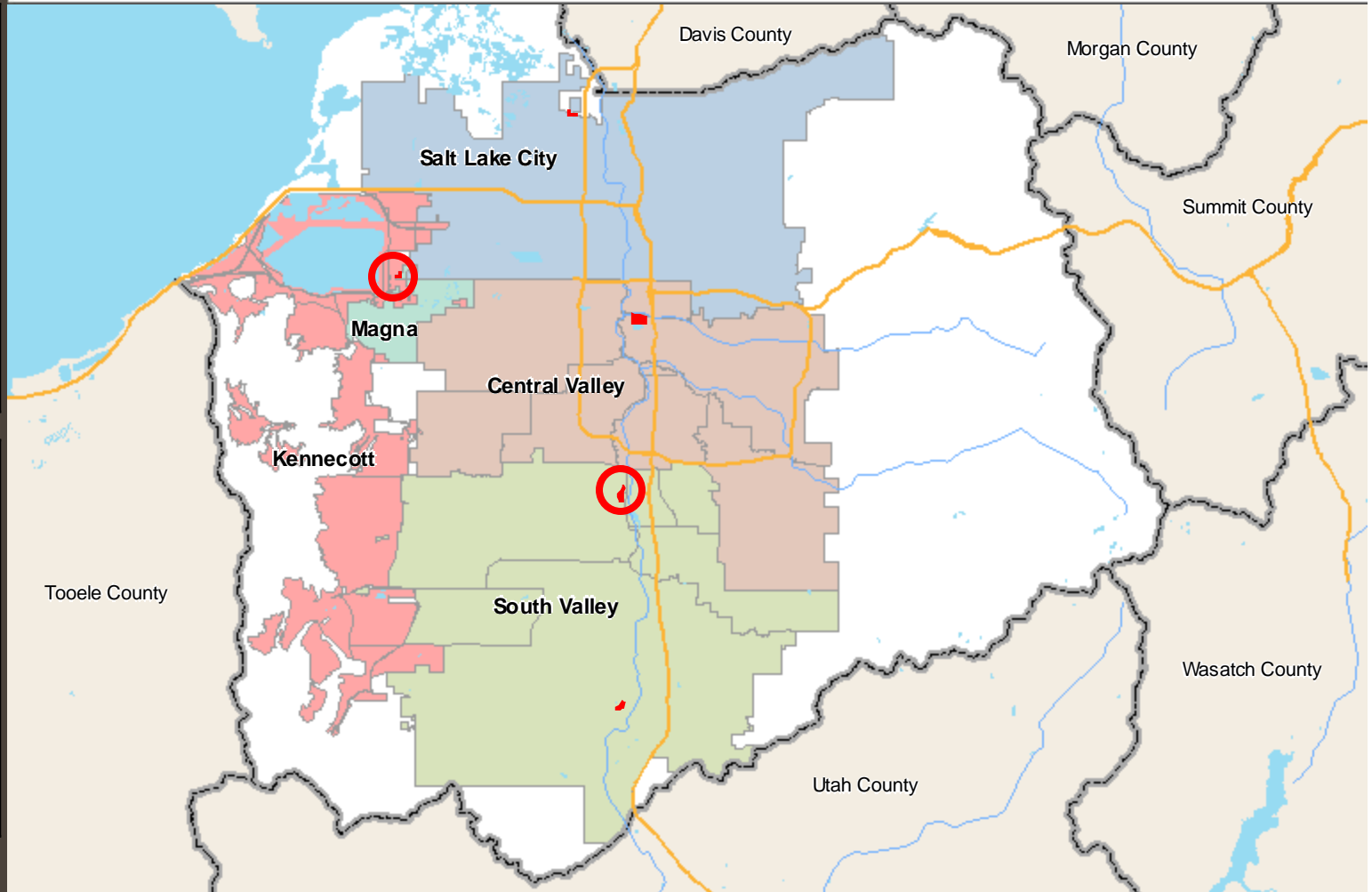
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Alt 1 – 2030

	2030 Flows	Current Cap
SLCWRF	38	56
Magna WRF	4	3.3
CVWRF	68	75
SVWRF	57	50

Alt 1 – Surplus Capacity

	ADF (mgd)
SLCWRF	18.4
Magna WRF	- 0.7
CVWRF	7.5
SVWRF	- 6.7





Alt 1 – Baseline (Ultimate WRF Capacity)

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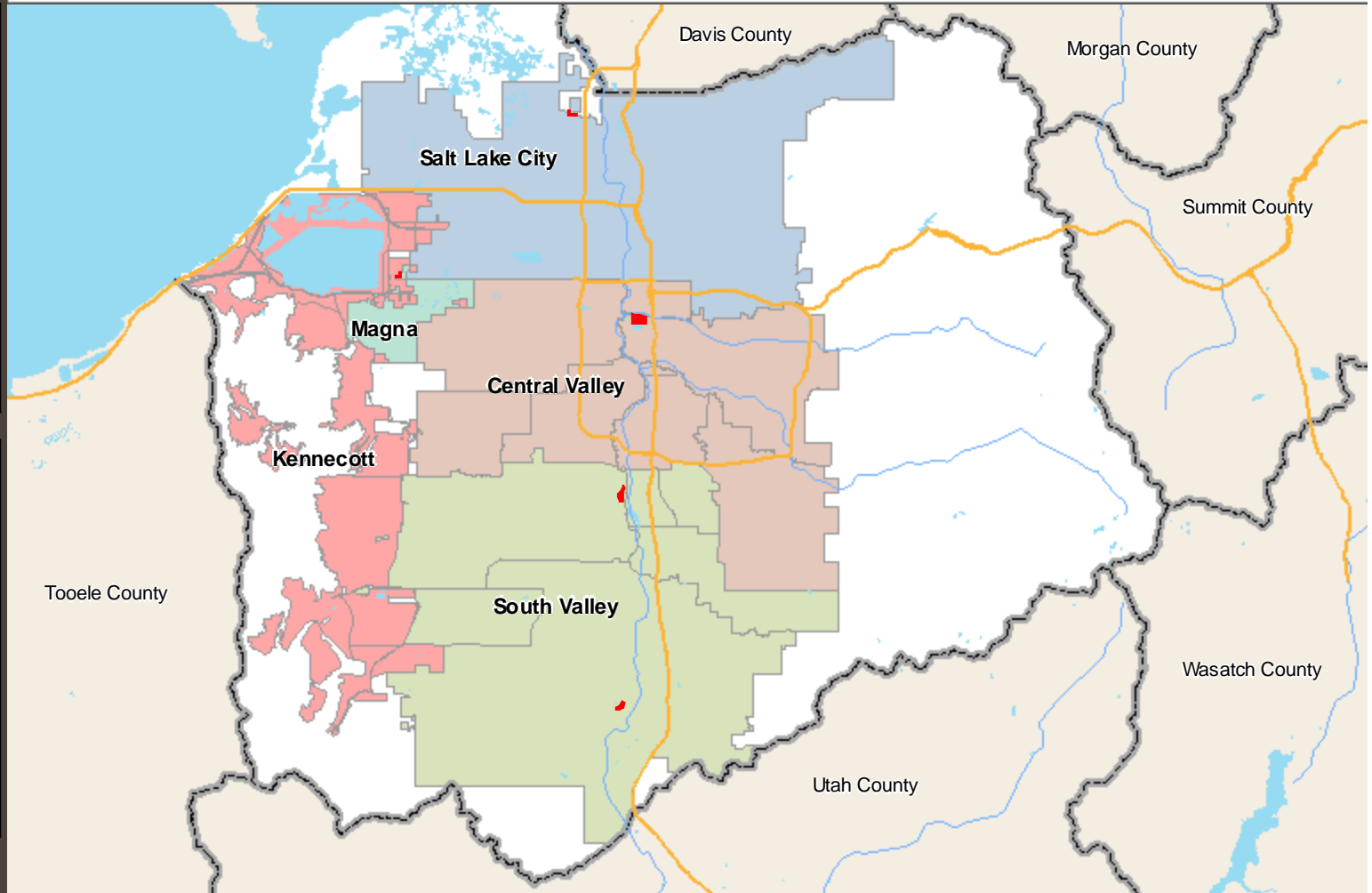
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Alt 1 – 2030

	2030 Flows	Ultimate Cap
SLCWRF	38	56
Magna WRF	4	6
CVWRF	68	100
SVWRF	57	80

Alt 1 – Surplus Capacity

	ADF (mgd)
SLCWRF	18.4
Magna WRF	2.0
CVWRF	32.5
SVWRF	23.3





Alt 2 – All West-side Bench Flows to Central Valley (Current WRF Capacity)

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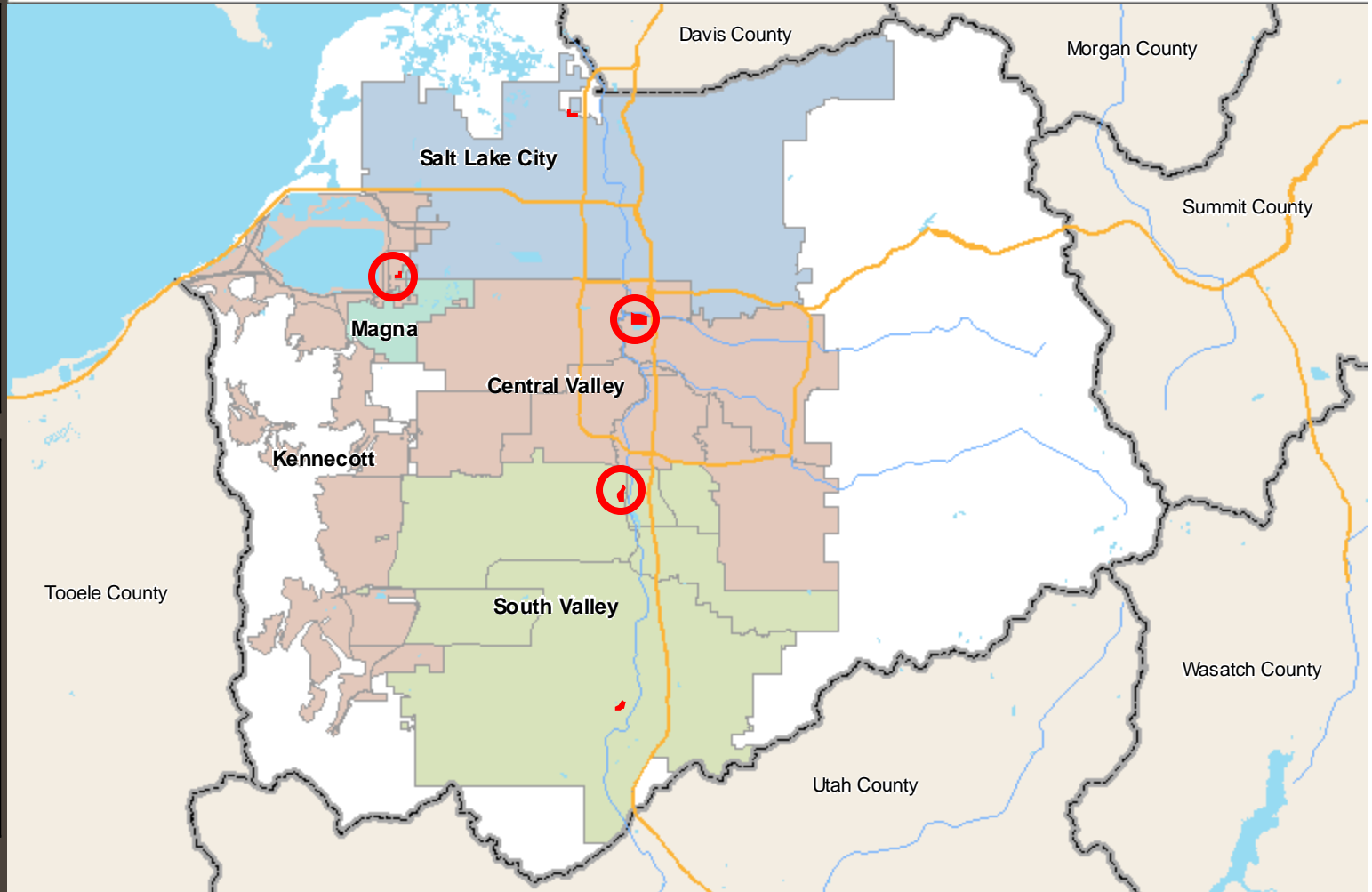
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Alt 2 – 2030

	2030 Flows	Current Cap
SLCWRF	38	56
Magna WRF	4	3.3
CVWRF	78	75
SVWRF	57	50

Alt 2 – Surplus Capacity

	ADF (mgd)
SLCWRF	18.4
Magna WRF	- 0.7
CVWRF	- 3.2
SVWRF	- 6.7





Alt 2 – All West-side Bench Flow to Central Valley (Ultimate WRF Capacity)

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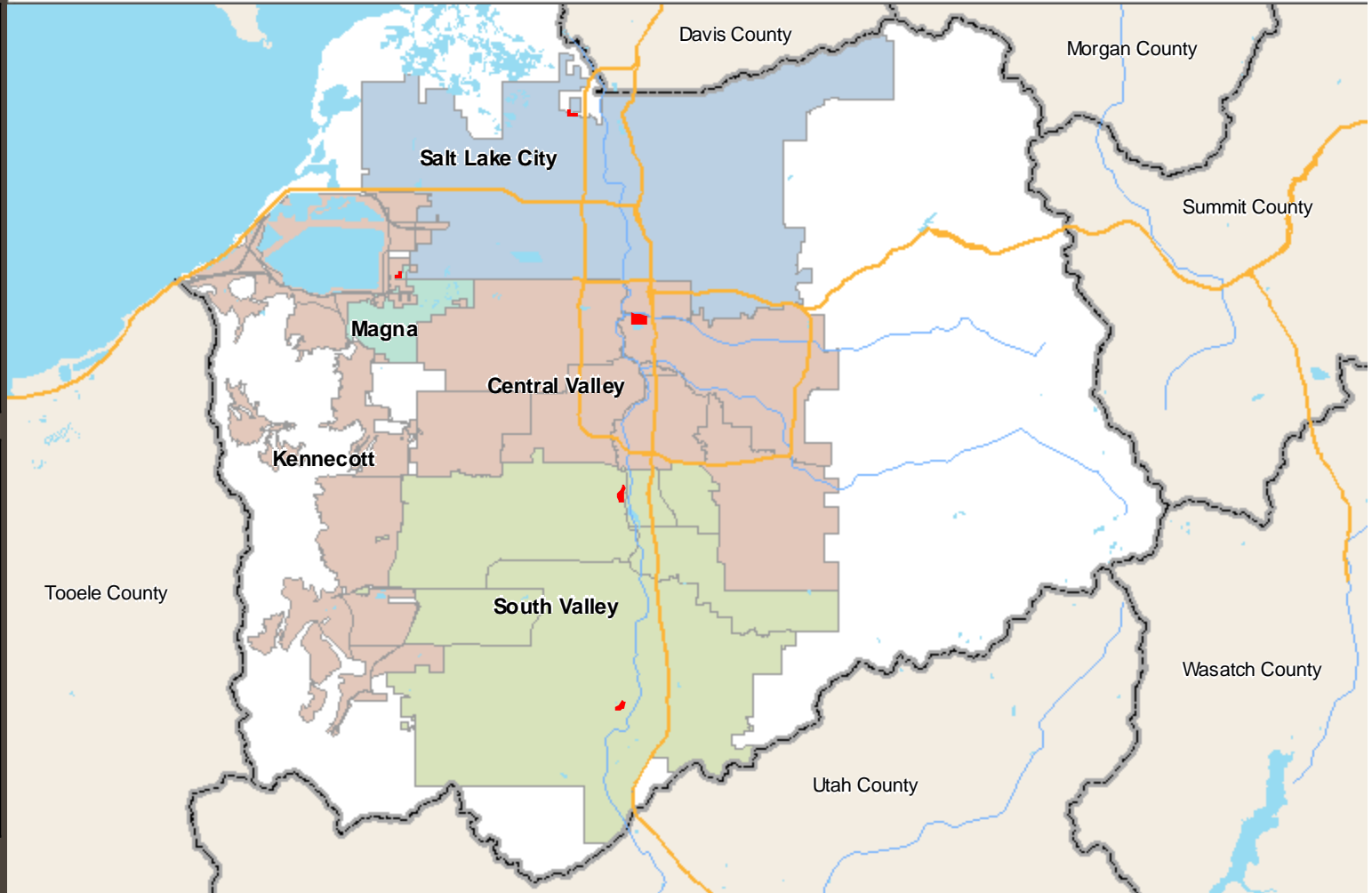
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Alt 2 – 2030

	2030 Flows	Ultimate Cap
SLCWRF	38	56
Magna WRF	4	6
CVWRF	78	100
SVWRF	57	80

Alt 2 – Surplus Capacity

	ADF (mgd)
SLCWRF	18.4
Magna WRF	2.0
CVWRF	21.8
SVWRF	23.3





Alt 3 – 1/3 West-side Bench to Magna, Rest to Central Valley (Current WRF Capacity)

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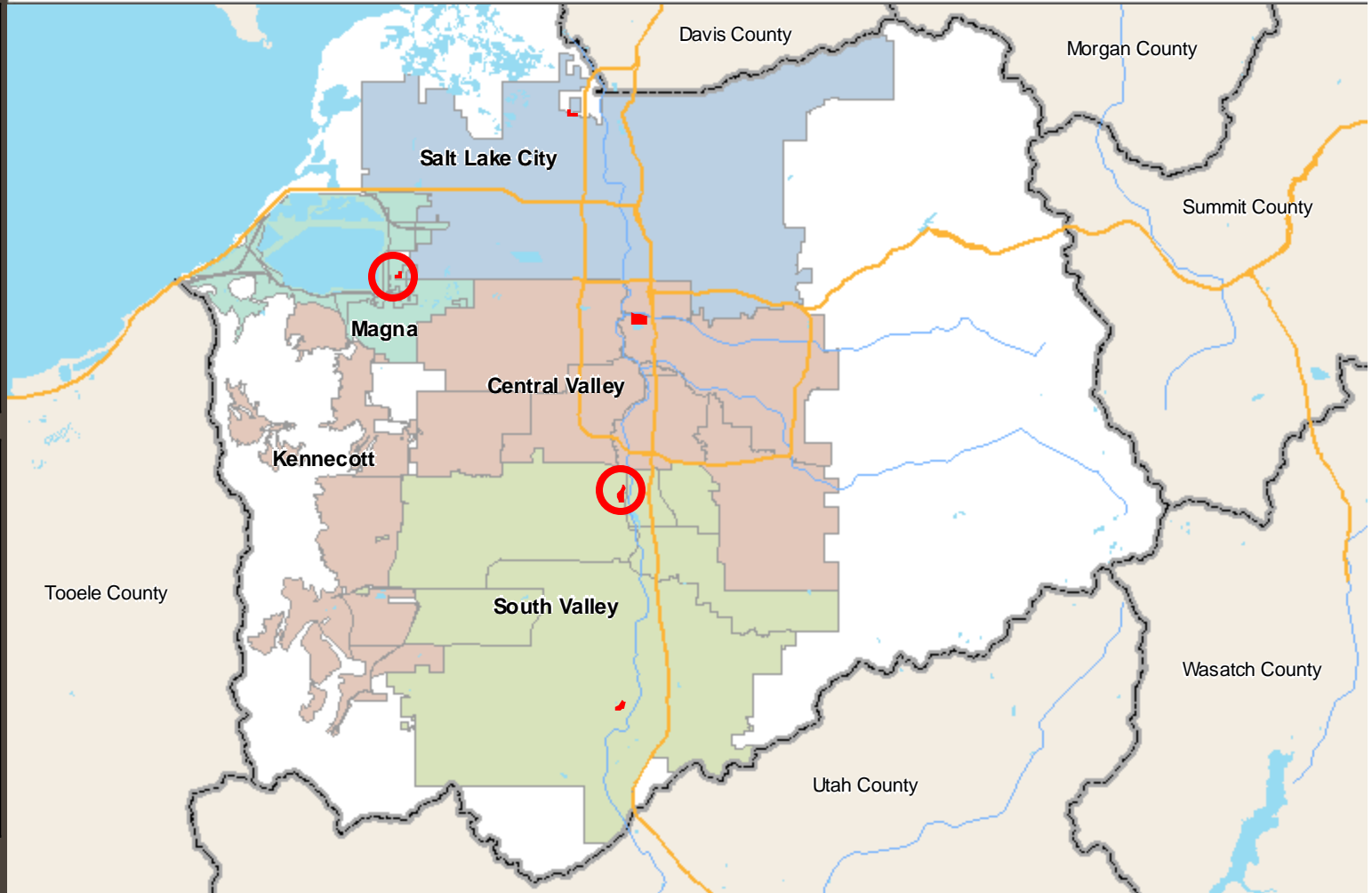
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Alt 3 – 2030

	2030 Flows	Current Cap
SLCWRF	38	56
Magna WRF	12	3.3
CVWRF	70	75
SVWRF	57	50

Alt 3 – Surplus Capacity

	ADF (mgd)
SLCWRF	18.4
Magna WRF	- 8.4
CVWRF	4.9
SVWRF	- 6.7





Alt 3 – 1/3 West-side Bench to Magna, Rest to Central Valley (Ultimate WRF Capacity)

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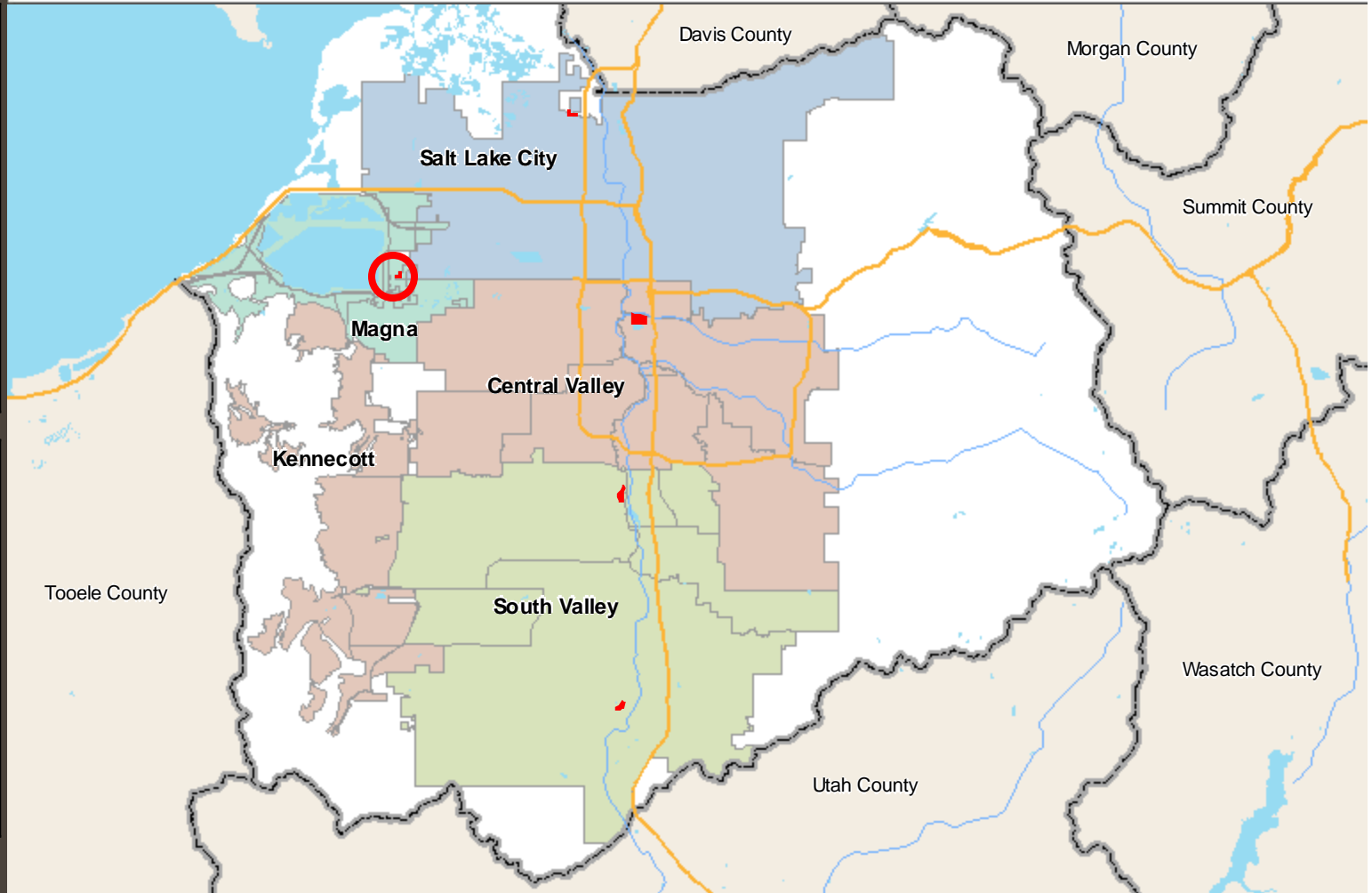
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Alt 3 – 2030

	2030 Flows	Ultimate Cap
SLCWRF	38	56
Magna WRF	12	6
CVWRF	70	100
SVWRF	57	80

Alt 3 – Surplus Capacity

	ADF (mgd)
SLCWRF	18.4
Magna WRF	- 5.7
CVWRF	29.9
SVWRF	23.3





Alt 4 – 1/3 West-side Bench Flow Magna, Central Valley, South Valley (Current WRF Capacity)

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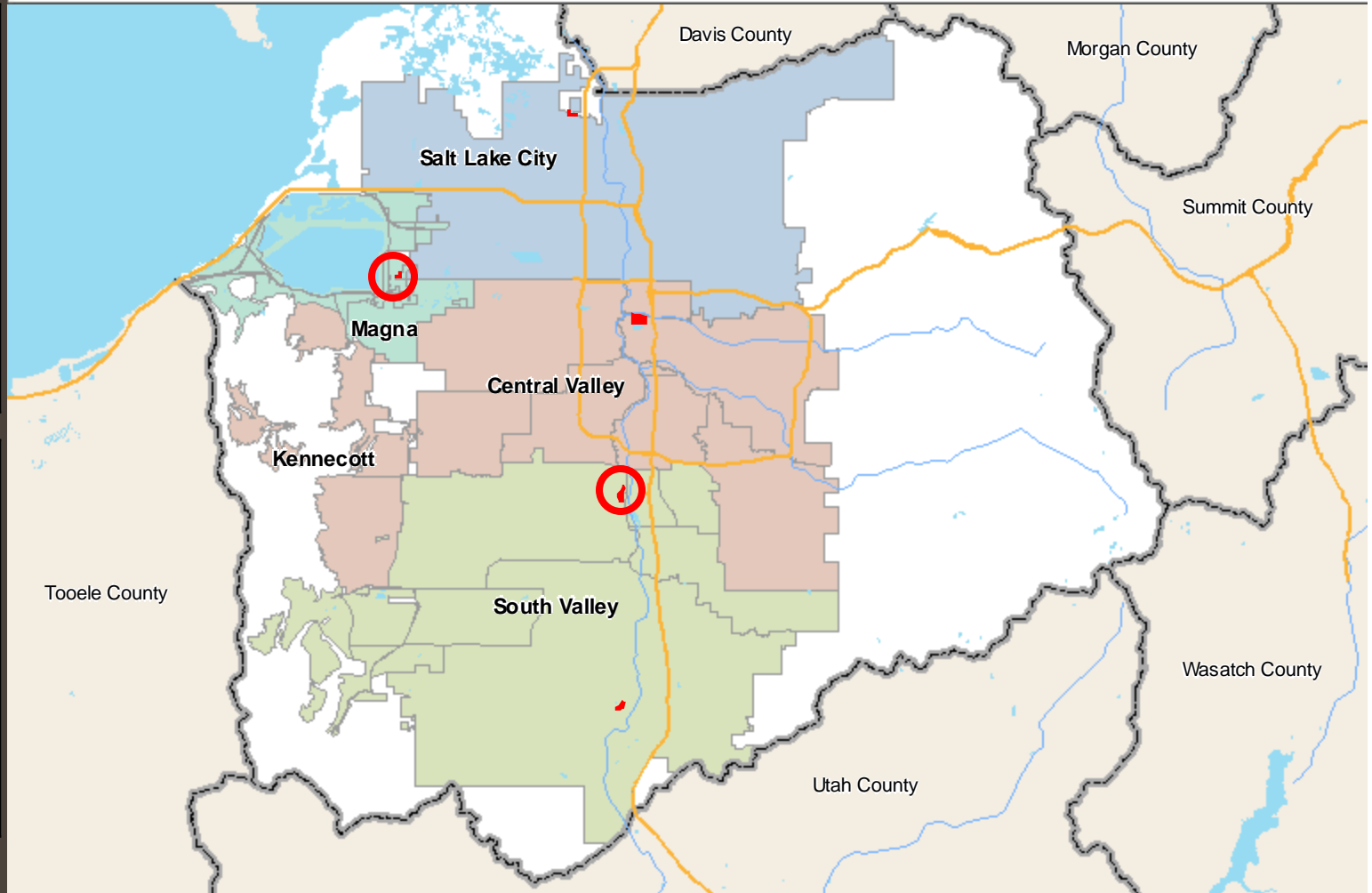
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Alt 4 – 2030

	2030 Flows	Current Cap
SLCWRF	38	56
Magna WRF	12	3.3
CVWRF	69	75
SVWRF	57	50

Alt 4 – Surplus Capacity

	ADF (mgd)
SLCWRF	18.4
Magna WRF	- 8.4
CVWRF	5.7
SVWRF	- 7.4





Alt 4 – 1/3 West-side Bench Flow Magna, Central Valley, South Valley (Ultimate WRF Capacity)

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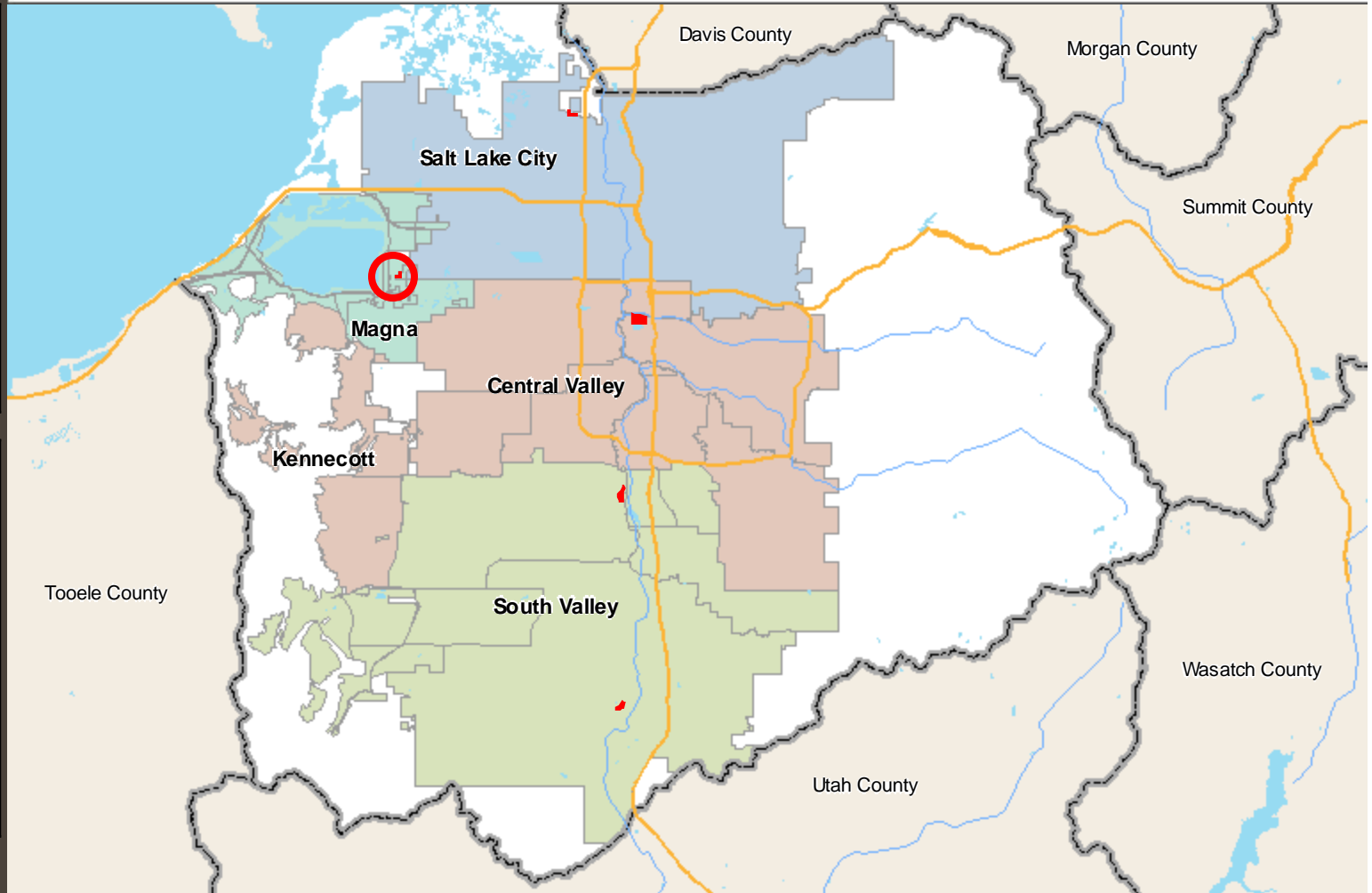
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Alt 4 – 2030

	2030 Flows	Ultimate Cap
SLCWRF	38	56
Magna WRF	12	6
CVWRF	69	100
SVWRF	57	80

Alt 4 – Surplus Capacity

	ADF (mgd)
SLCWRF	18.4
Magna WRF	- 5.7
CVWRF	30.7
SVWRF	22.6





Alt 5 – All West-side Bench Flow to Magna (Current WRF Capacity)

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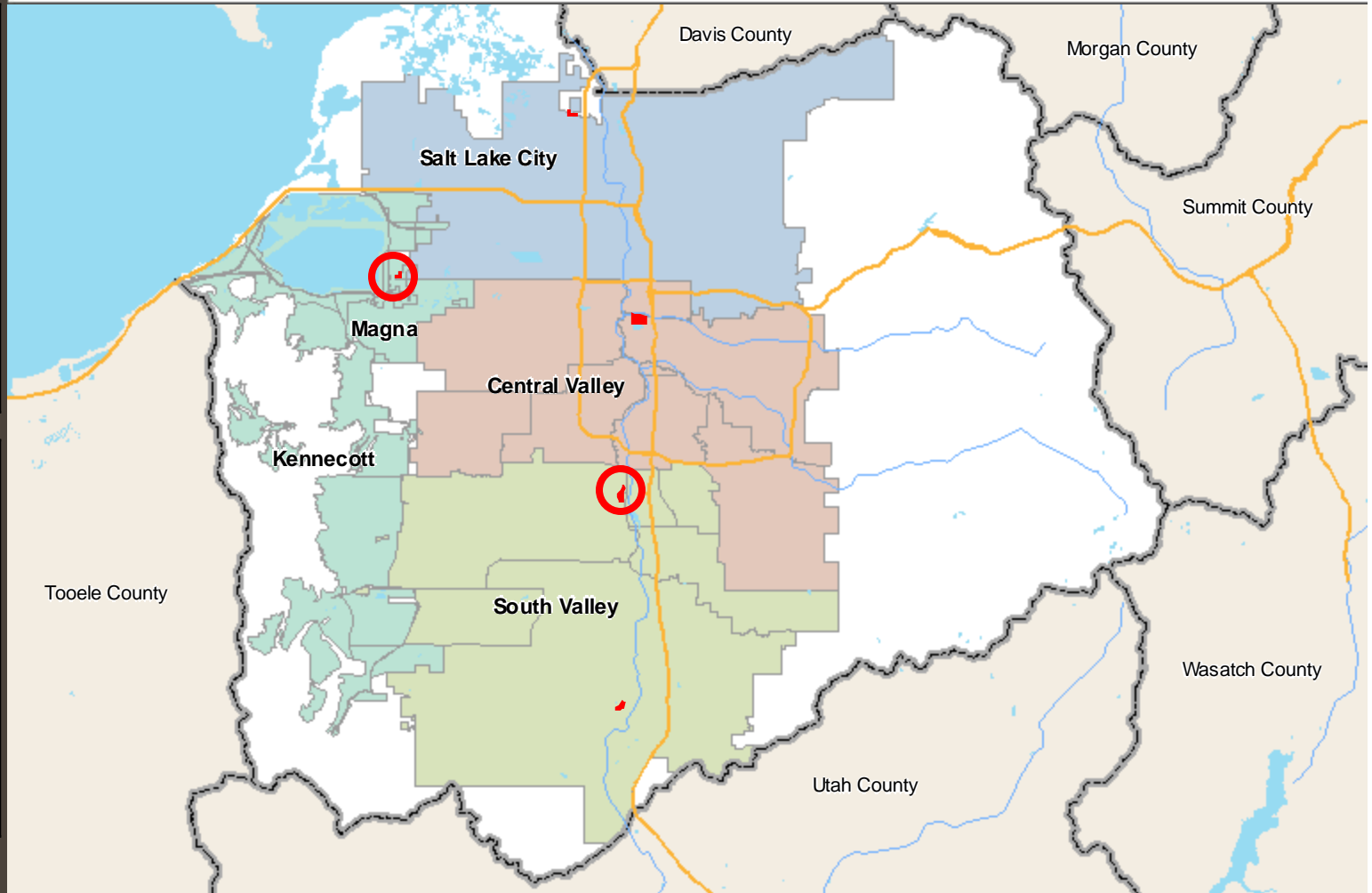
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Alt 5 – 2030

	2030 Flows	Current Cap
SLCWRF	38	56
Magna WRF	14	3.3
CVWRF	68	75
SVWRF	57	50

Alt 5 – Surplus Capacity

	ADF (mgd)
SLCWRF	18.4
Magna WRF	- 10.9
CVWRF	7.5
SVWRF	- 6.7





Alt 5 – All West-side Bench Flow to Magna (Ultimate WRF Capacity)

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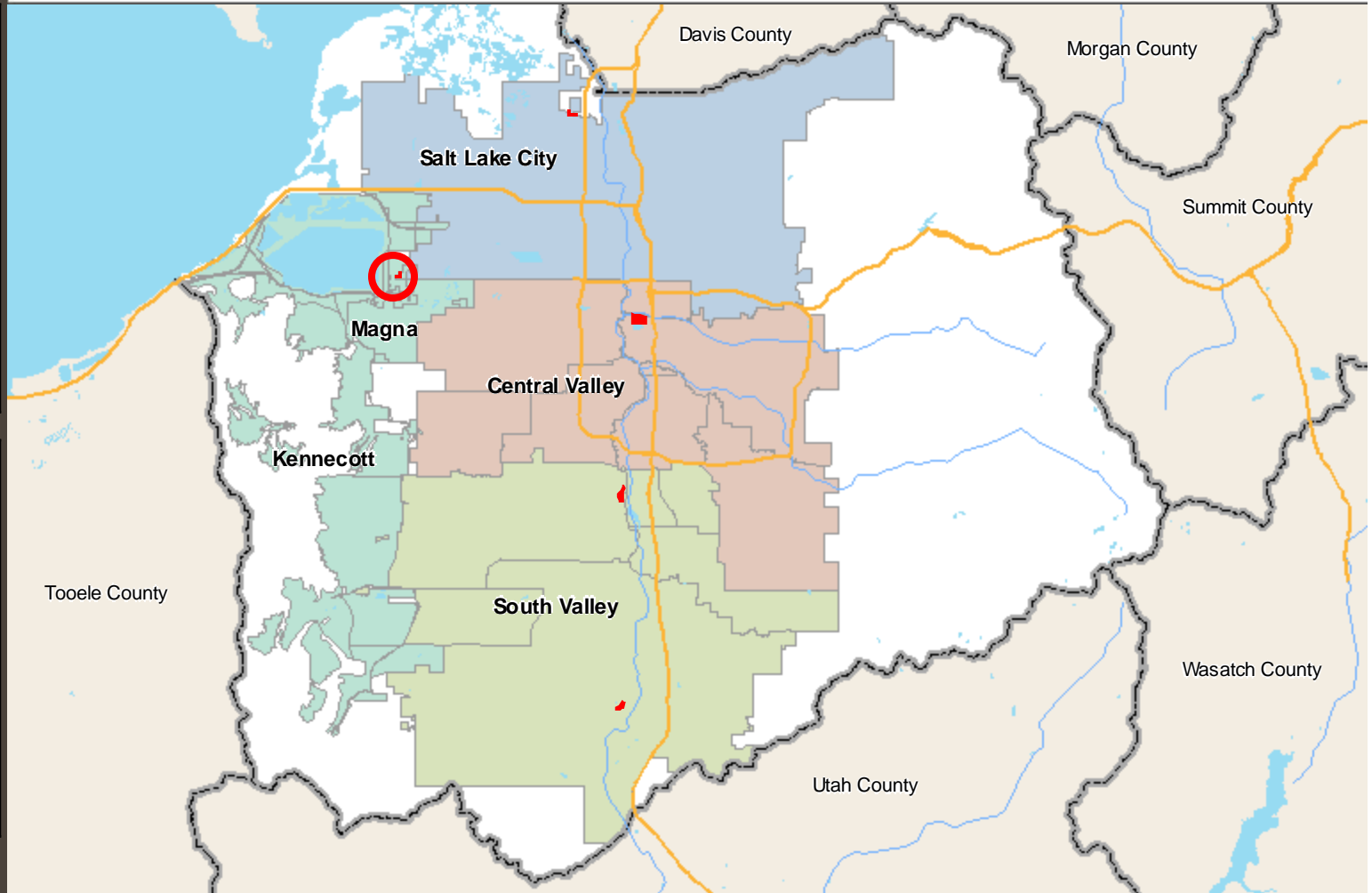
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Alt 5 – 2030

	2030 Flows	Ultimate Cap
SLCWRF	38	56
Magna WRF	14	6
CVWRF	68	100
SVWRF	57	80

Alt 5 – Surplus Capacity

	ADF (mgd)
SLCWRF	18.4
Magna WRF	- 8.2
CVWRF	32.5
SVWRF	23.3





Alt 6 – All West-side Bench Flow to South Valley (Current WRF Capacity)

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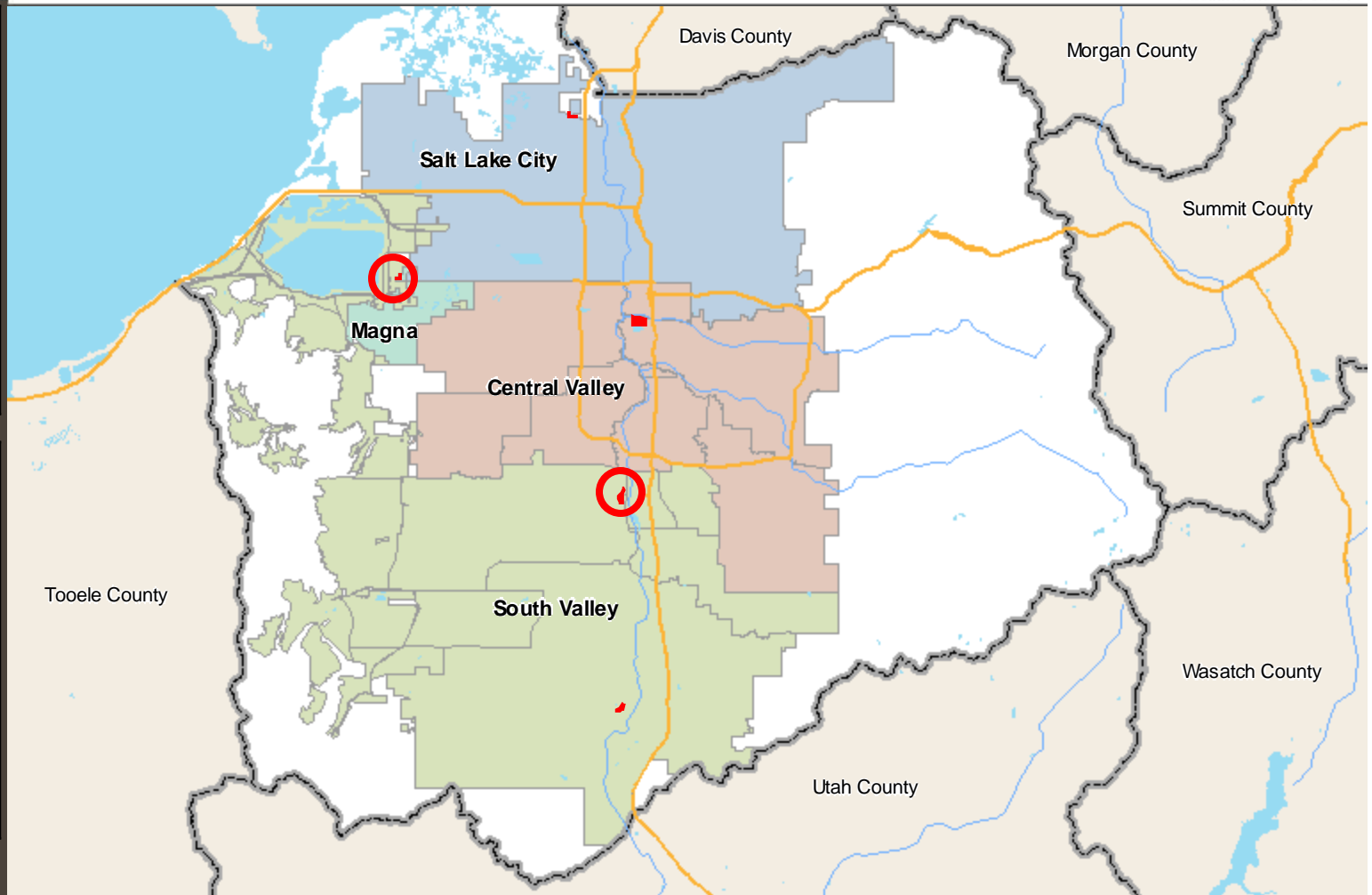
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Alt 6 – 2030

	2030 Flows	Current Cap
SLCWRF	38	56
Magna WRF	4	3.3
CVWRF	68	75
SVWRF	67	50

Alt 6 – Surplus Capacity

	ADF (mgd)
SLCWRF	18.4
Magna WRF	- 0.7
CVWRF	7.5
SVWRF	- 16.6





Alt 6 – All West-side Bench Flow to South Valley (Ultimate WRF Capacity)

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Alt 6 – 2030

	2030 Flows	Ultimate Cap
SLCWRF	38	56
Magna WRF	4	6
CVWRF	68	100
SVWRF	67	80

Alt 6 – Surplus Capacity

	ADF (mgd)
SLCWRF	18.4
Magna WRF	2.0
CVWRF	32.5
SVWRF	13.4

