

Hydrogeologic framework, Treasure Valley, Idaho: update



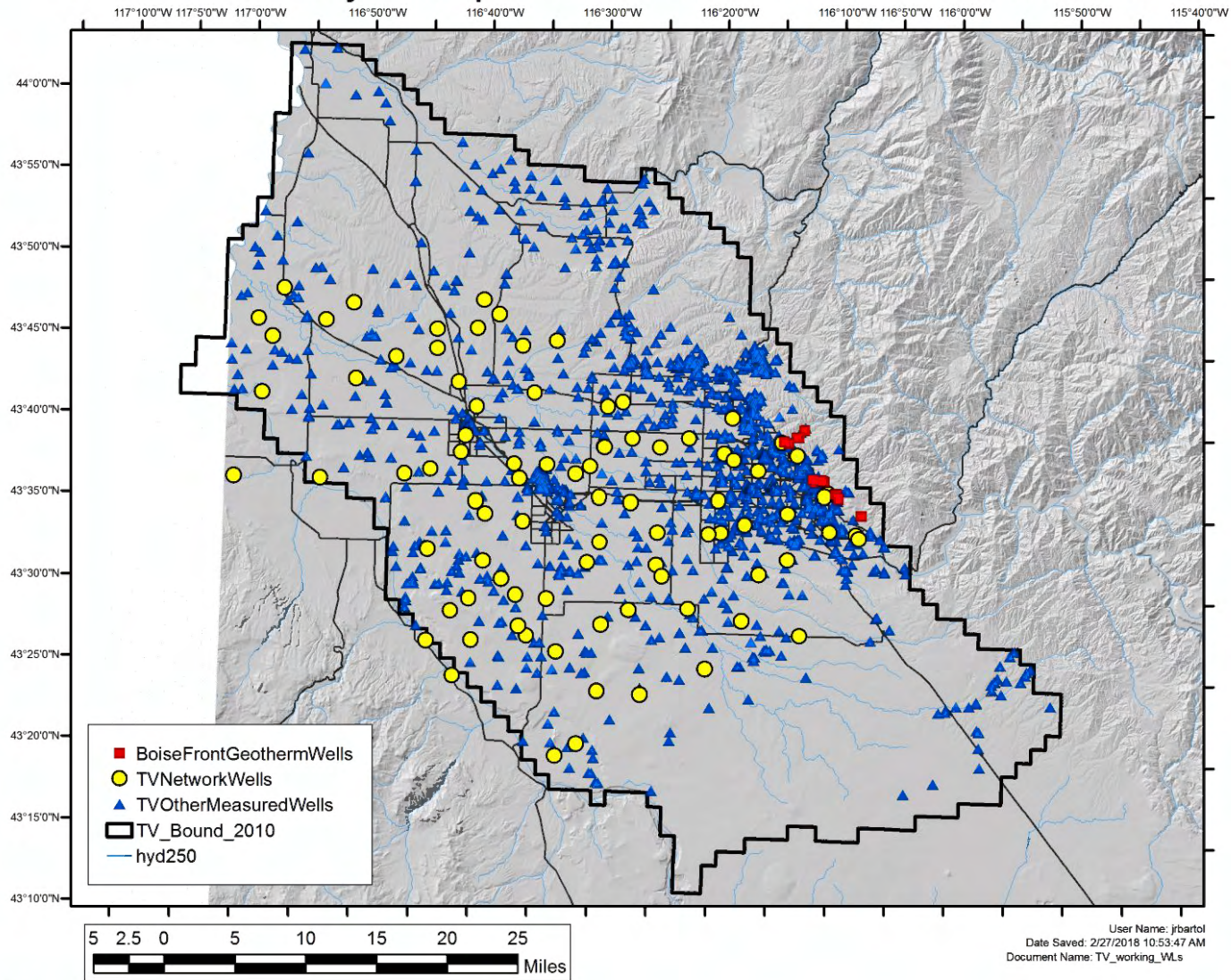
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U.S. Geological Survey
Idaho Water Science Center
March 1, 2018

10-mi Creek Rd
02Sep17

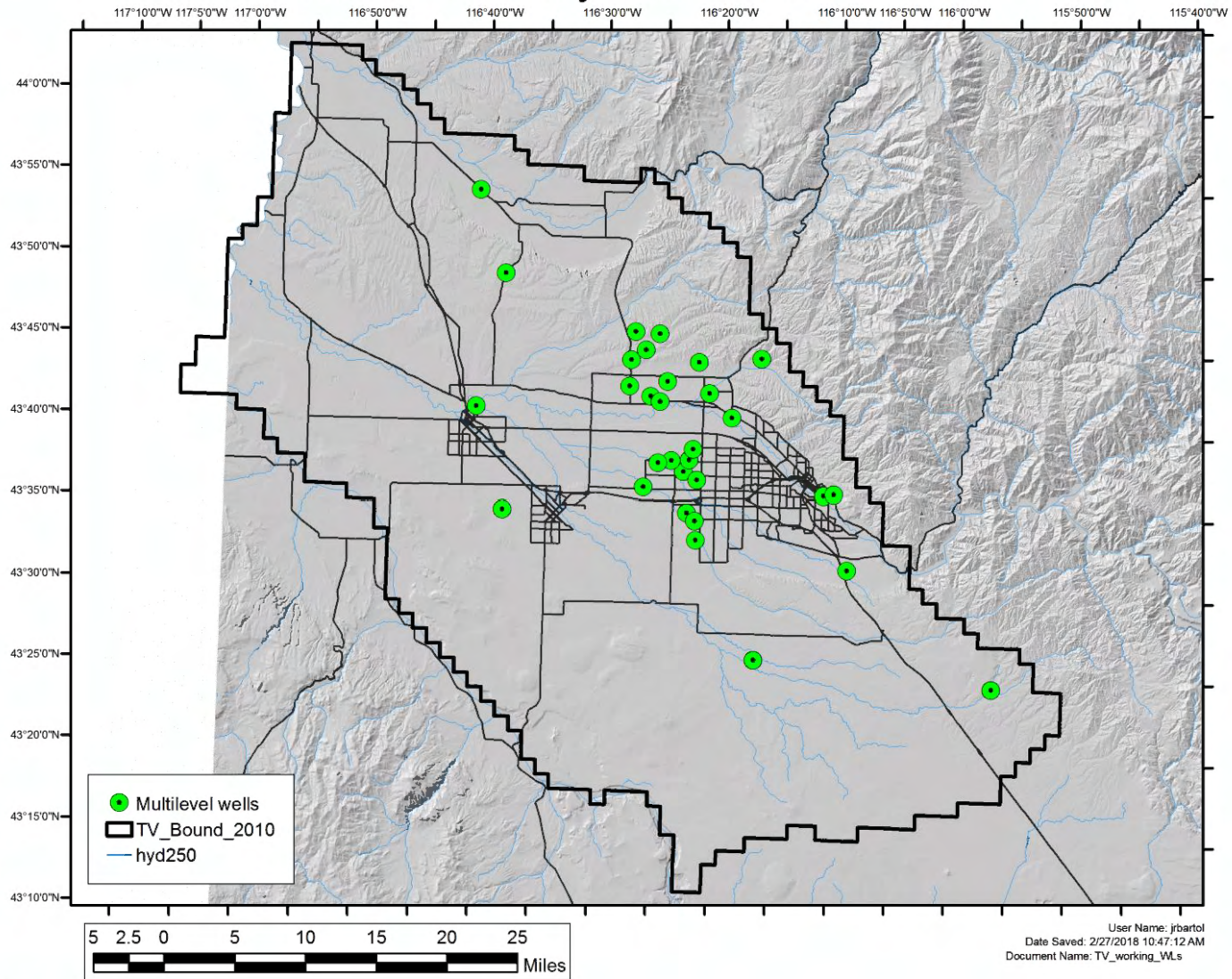
Water-level measurements

- ❖ 30 multi-level wells
- ❖ 101 TV network wells
- ❖ 17 City of Meridian monitoring wells
- ❖ About 1400 wells with 1 or more WL msmts 1986-2015
- ❖ About 44,000 wells in IDWR database, about 26,000 1986-2015

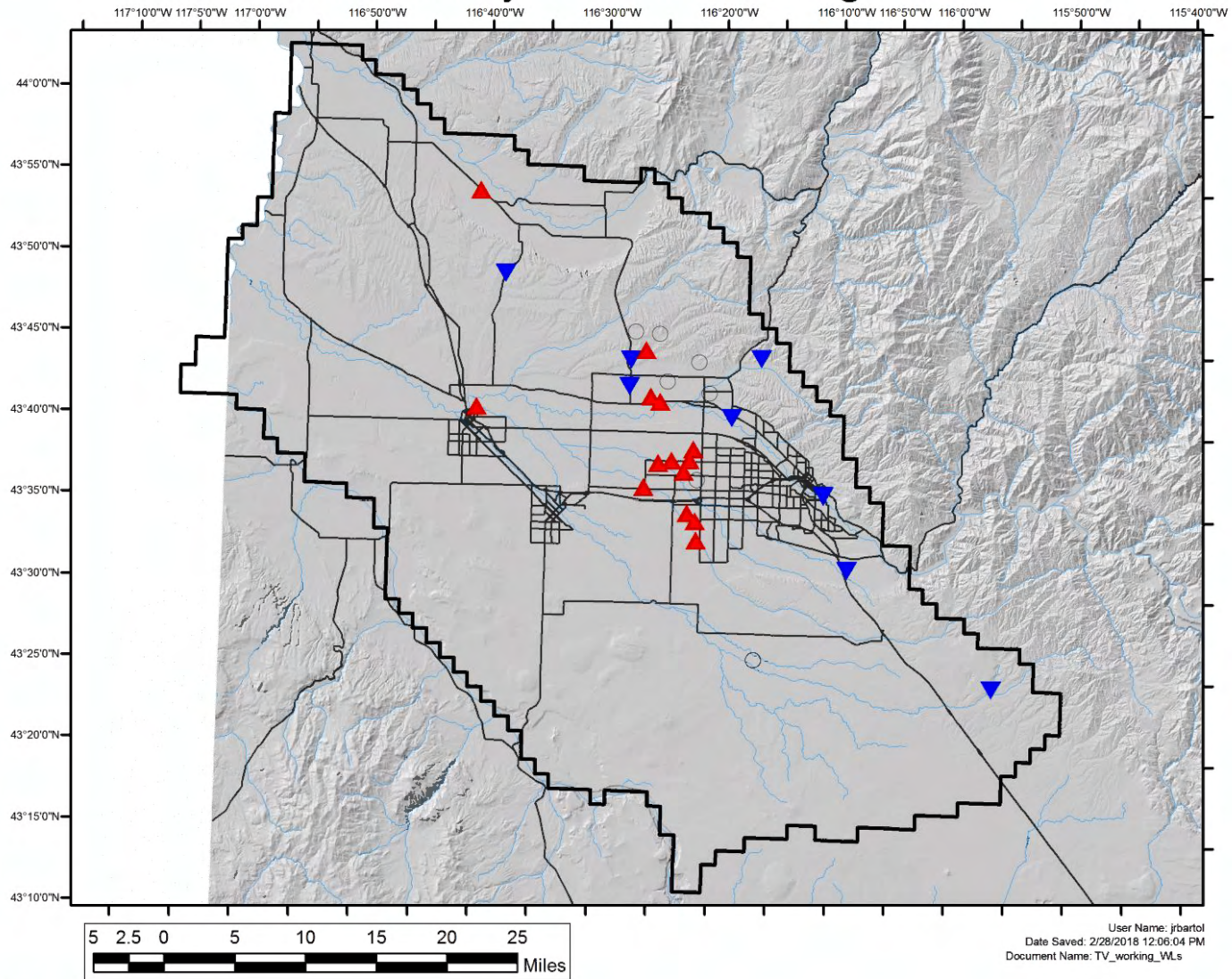
Treasure Valley multiple water-level measurement wells



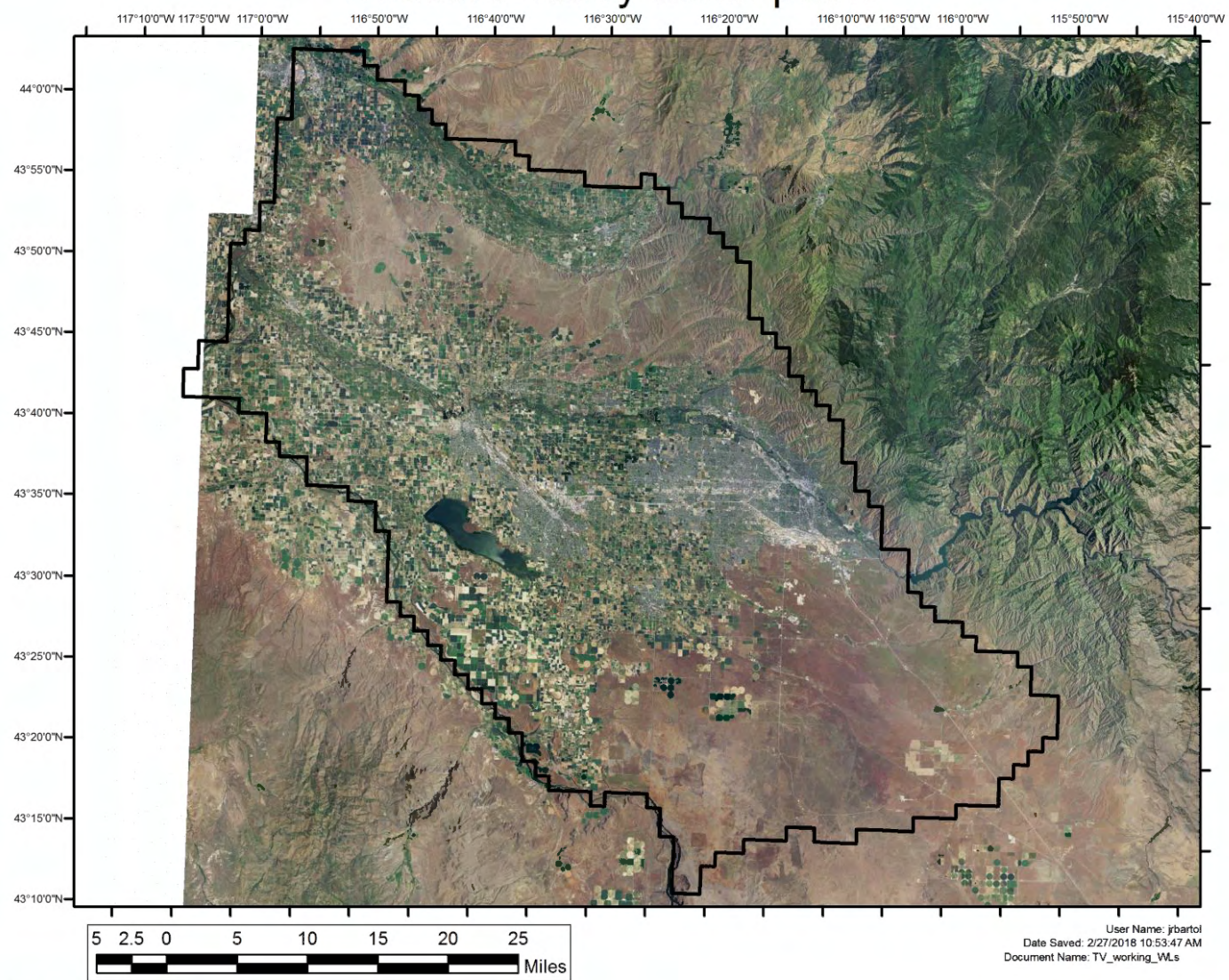
Treasure Valley multi-level wells



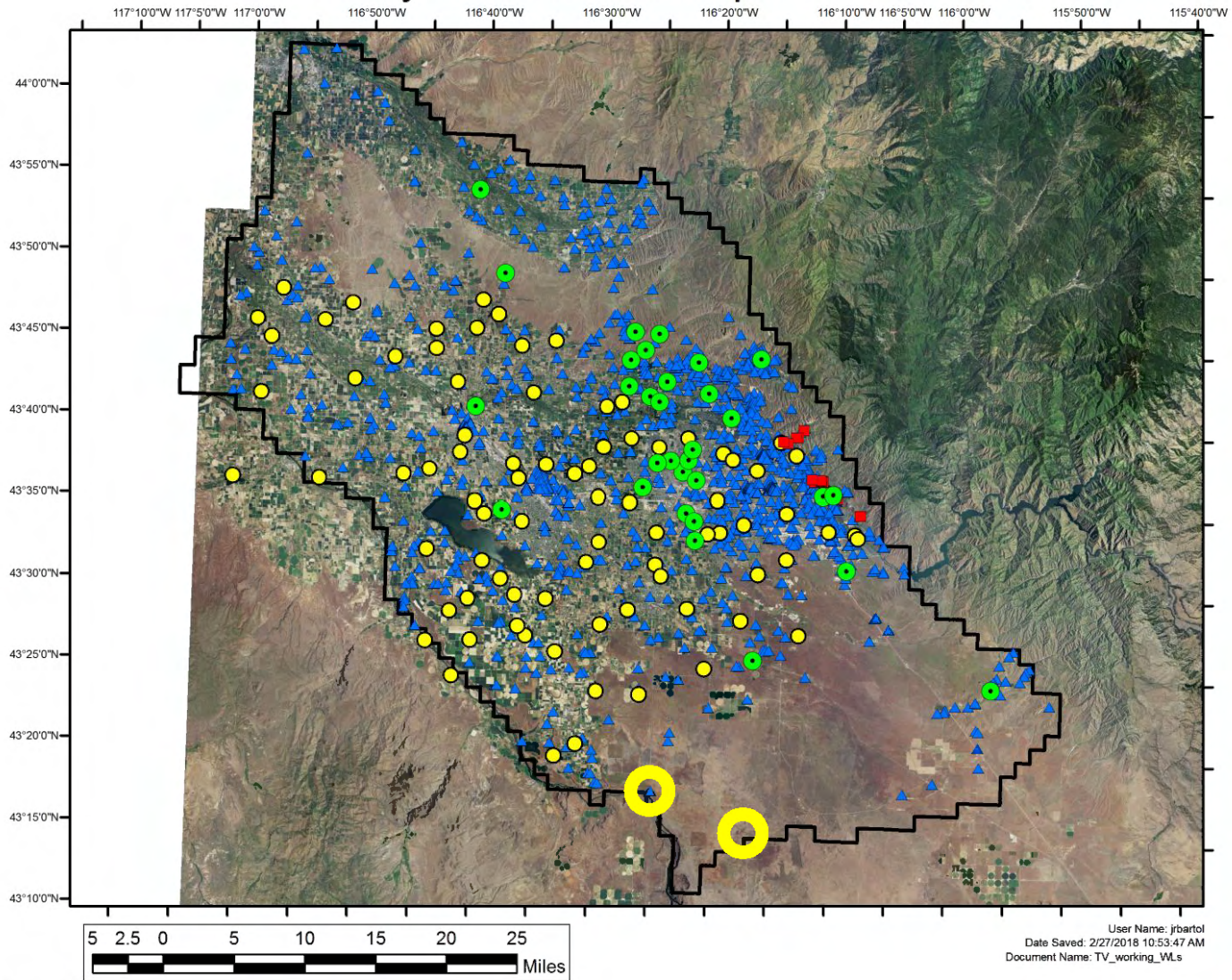
Treasure Valley multi-level well gradient



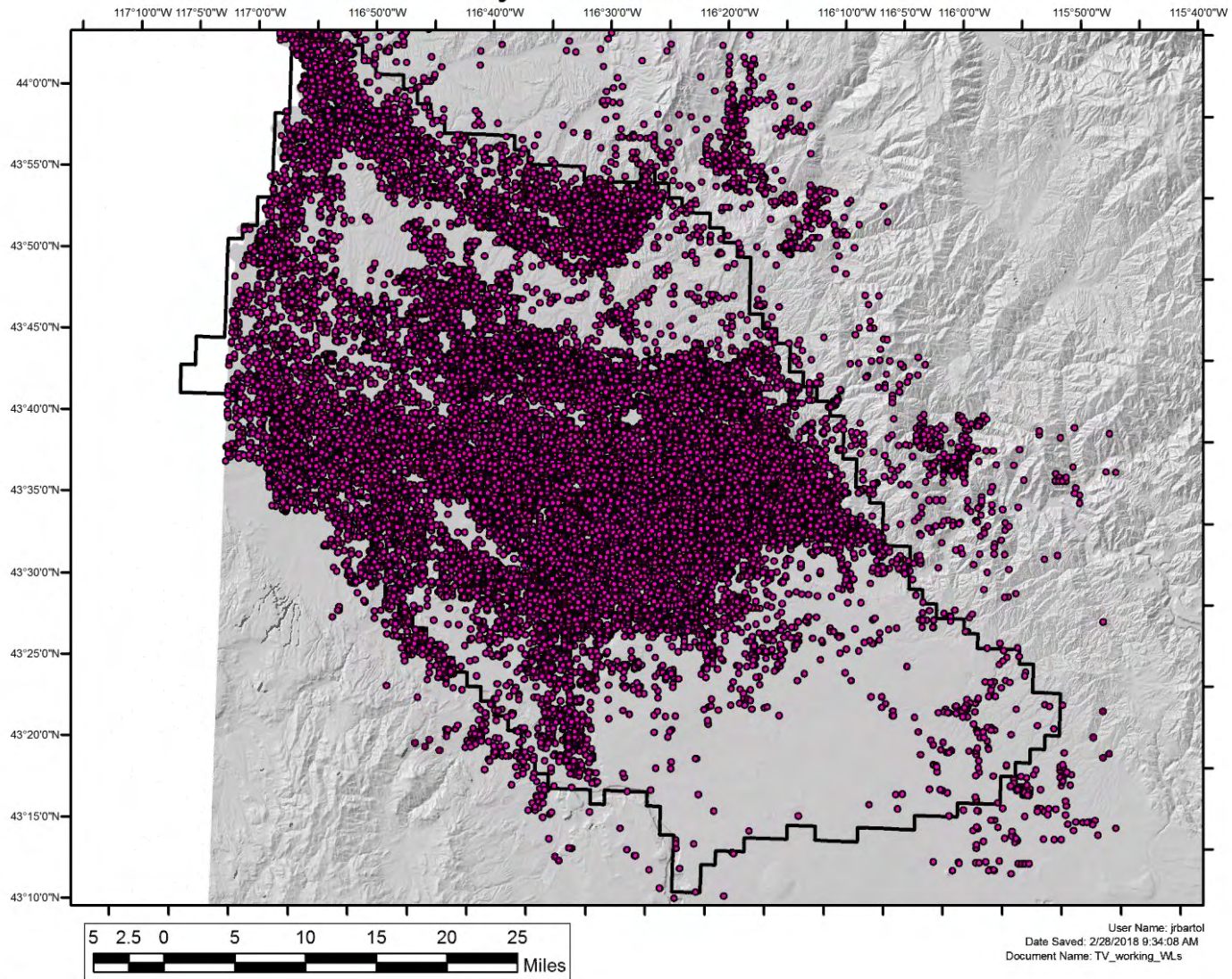
Treasure Valley aerial photo



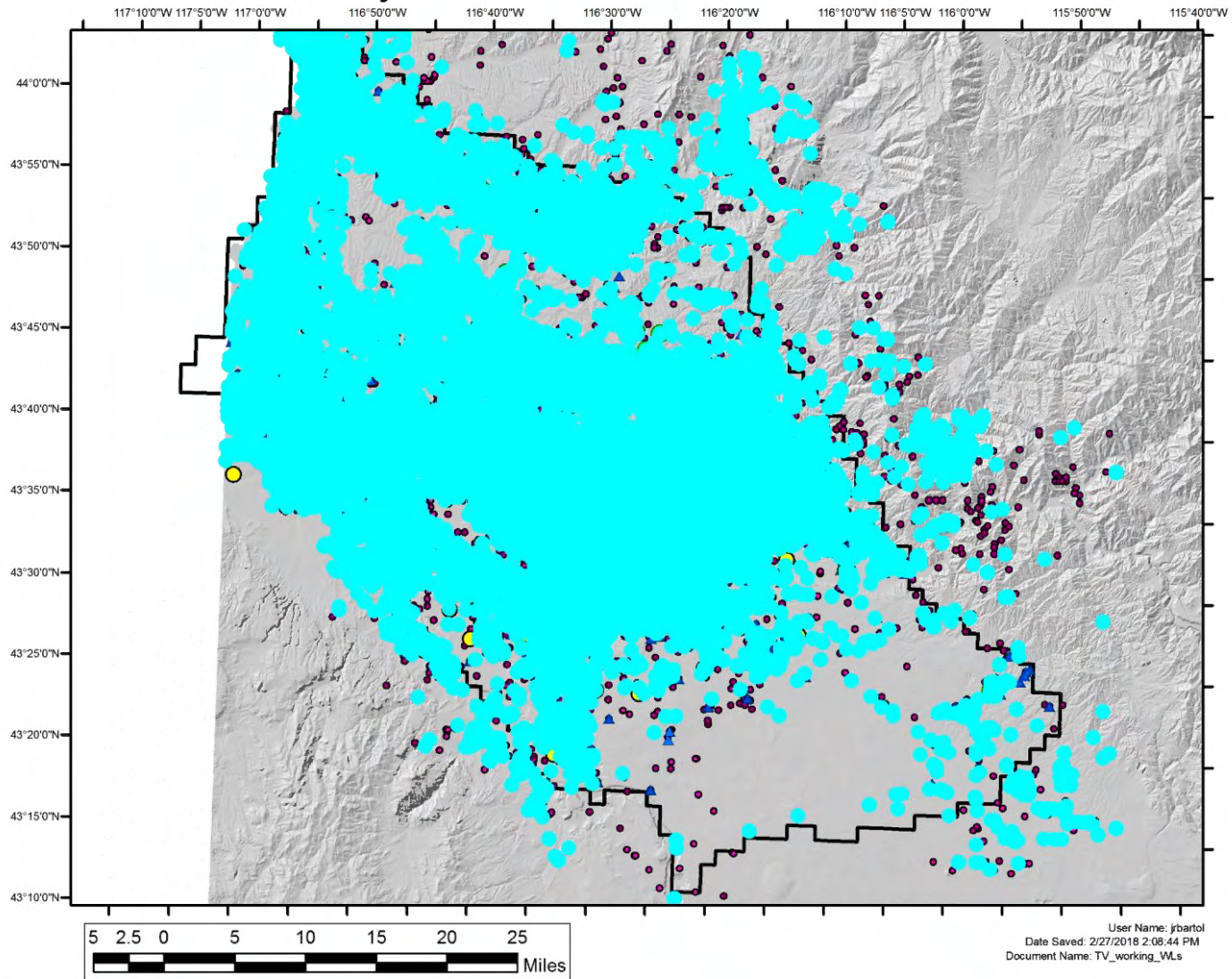
Treasure Valley wells with multiple measurements



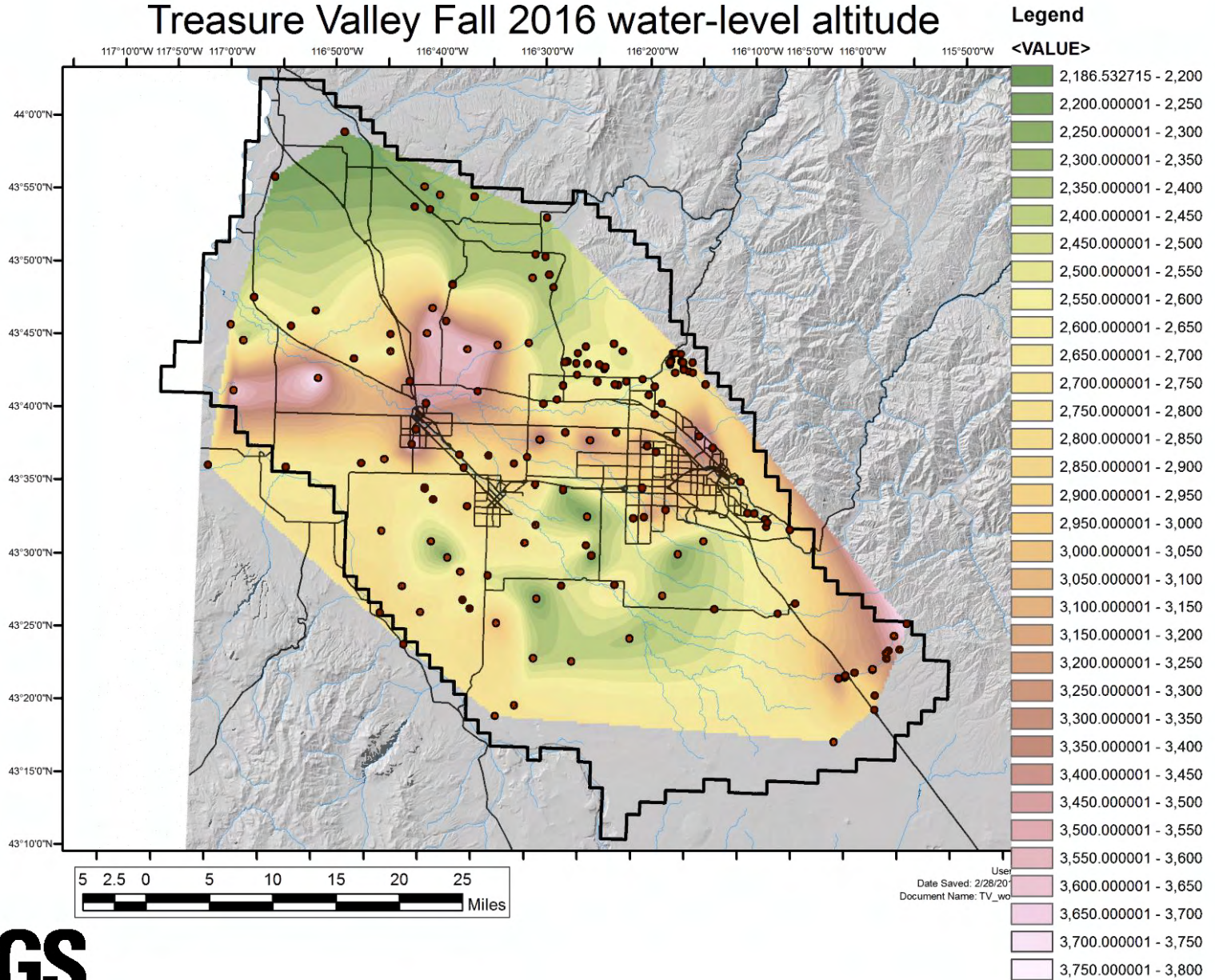
Treasure Valley wells in IDWR database



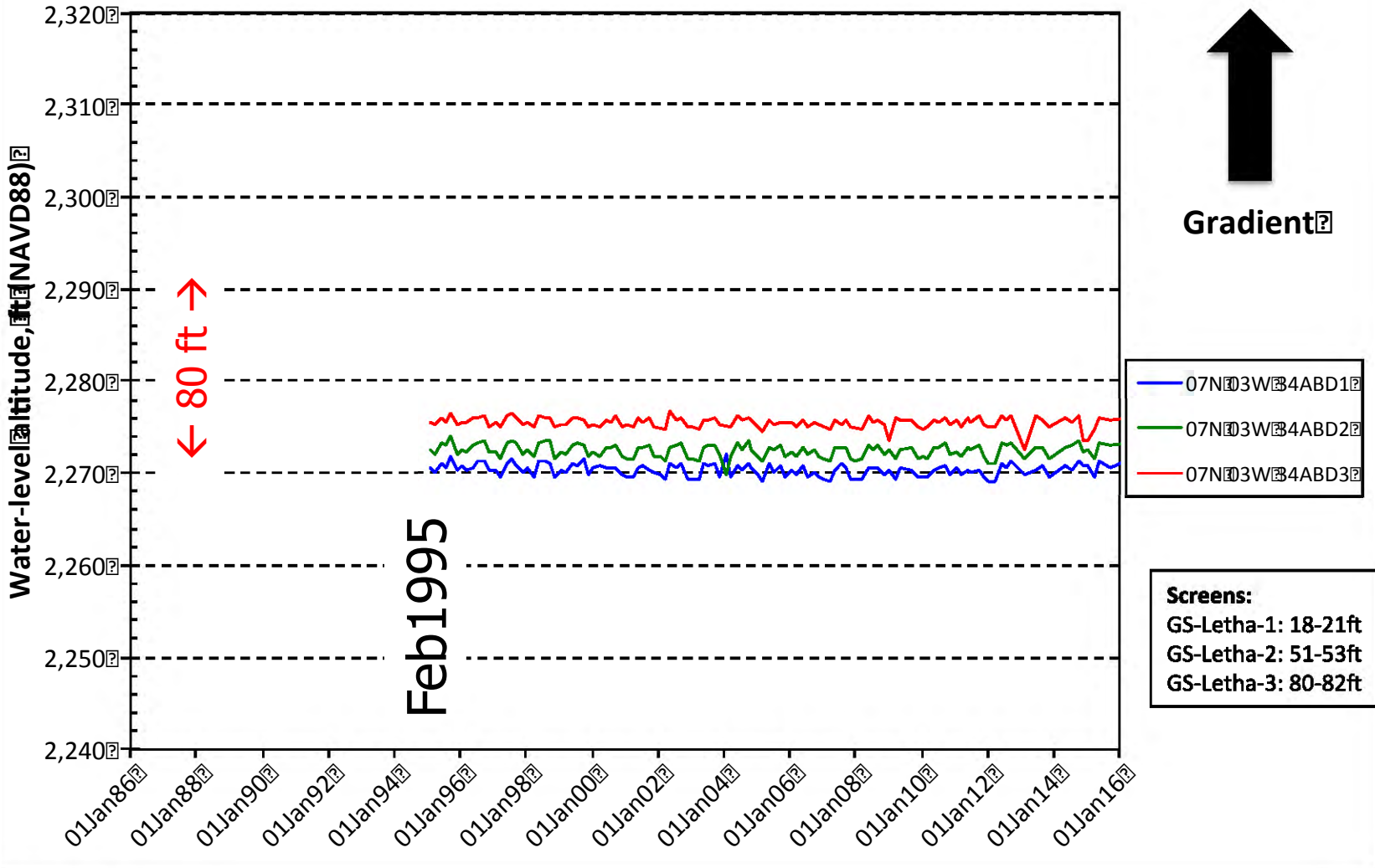
Treasure Valley wells in IDWR database, 1986-2015



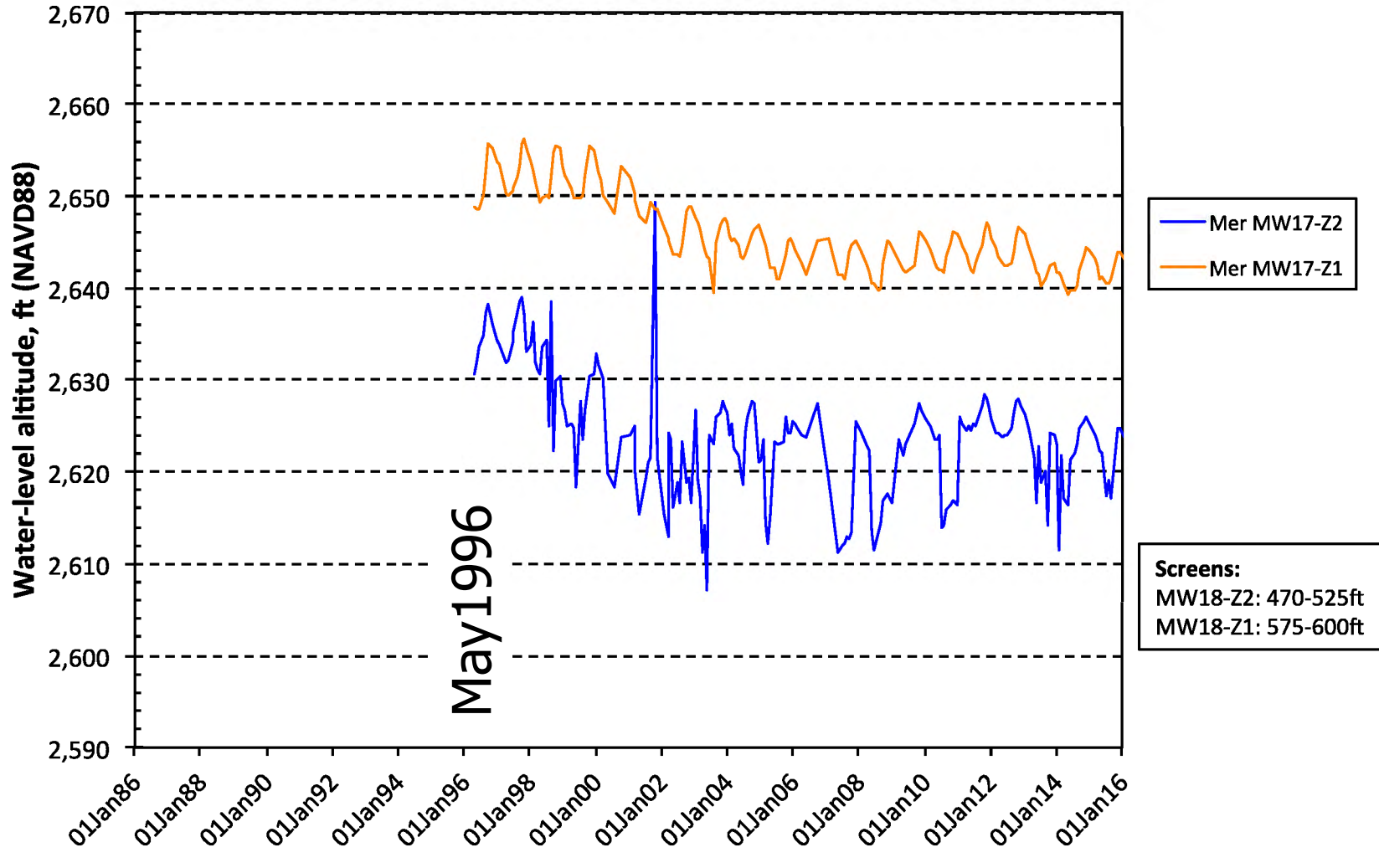
Treasure Valley Fall 2016 water-level altitude



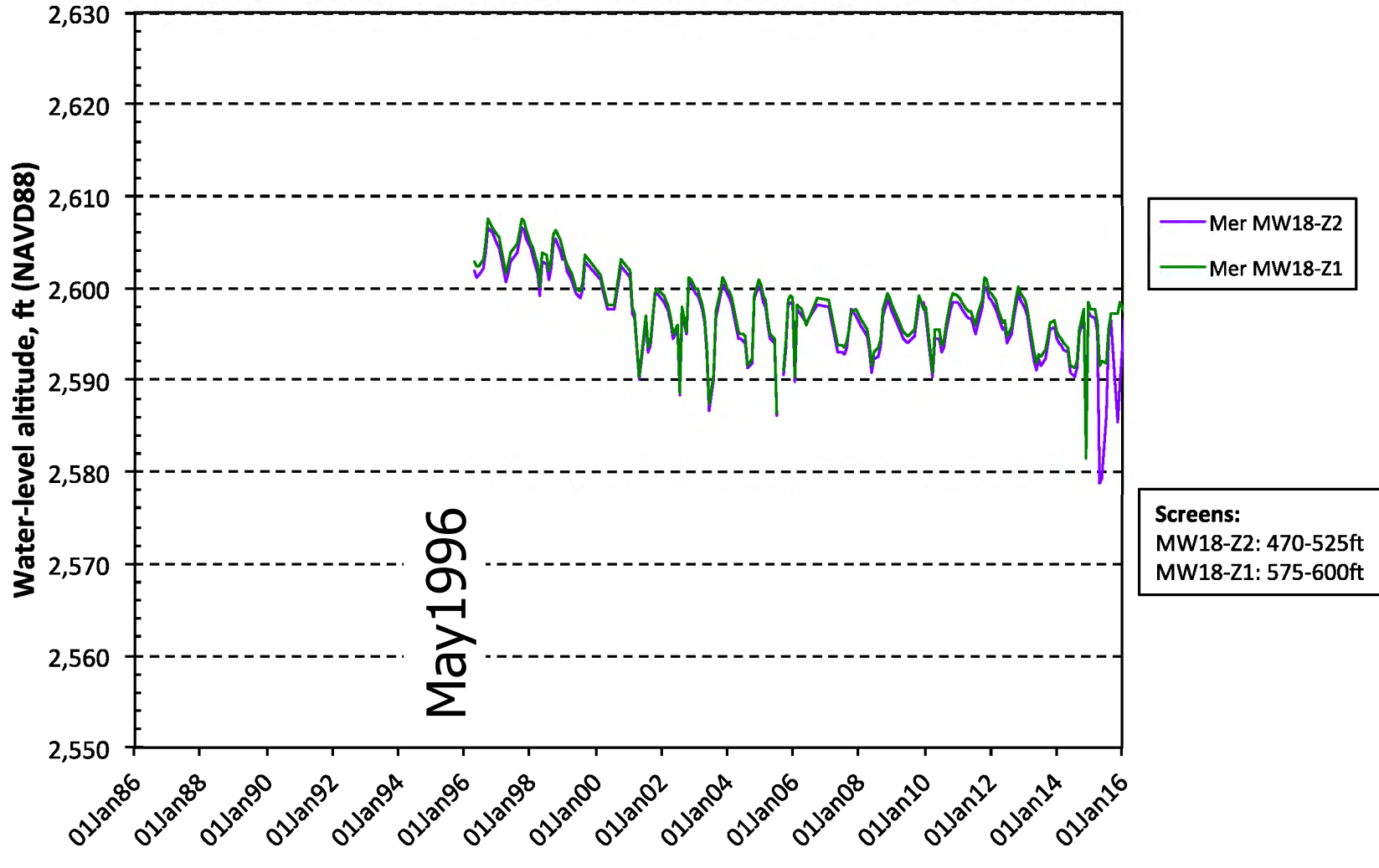
USGS-Letha 1-3 / 07N03W034ABD#



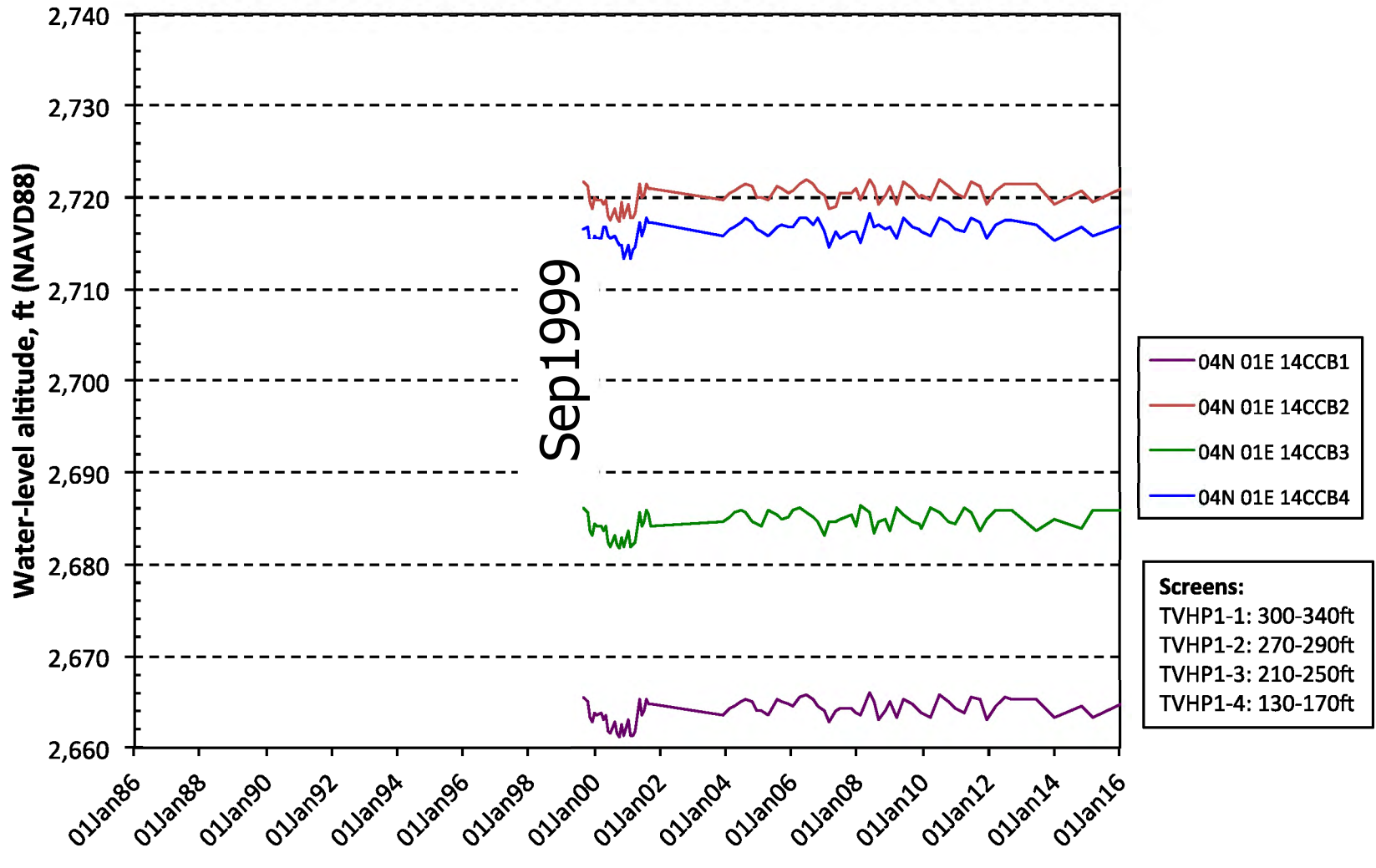
Meridian MW-17, zones 1-2 / 03N 01E 20CB#



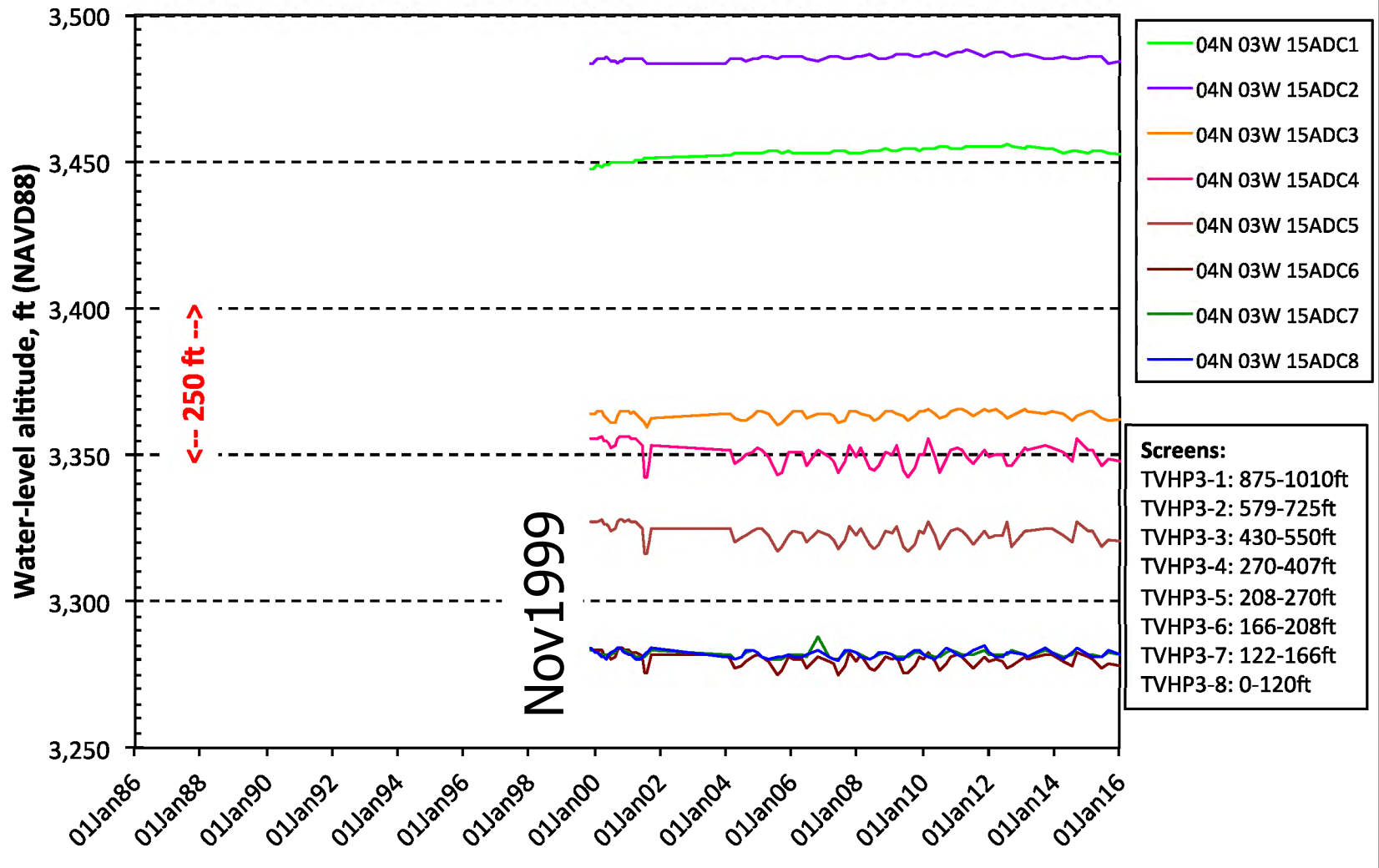
Meridian MW-18, zones 1-2 / 04N 01E 32CC#



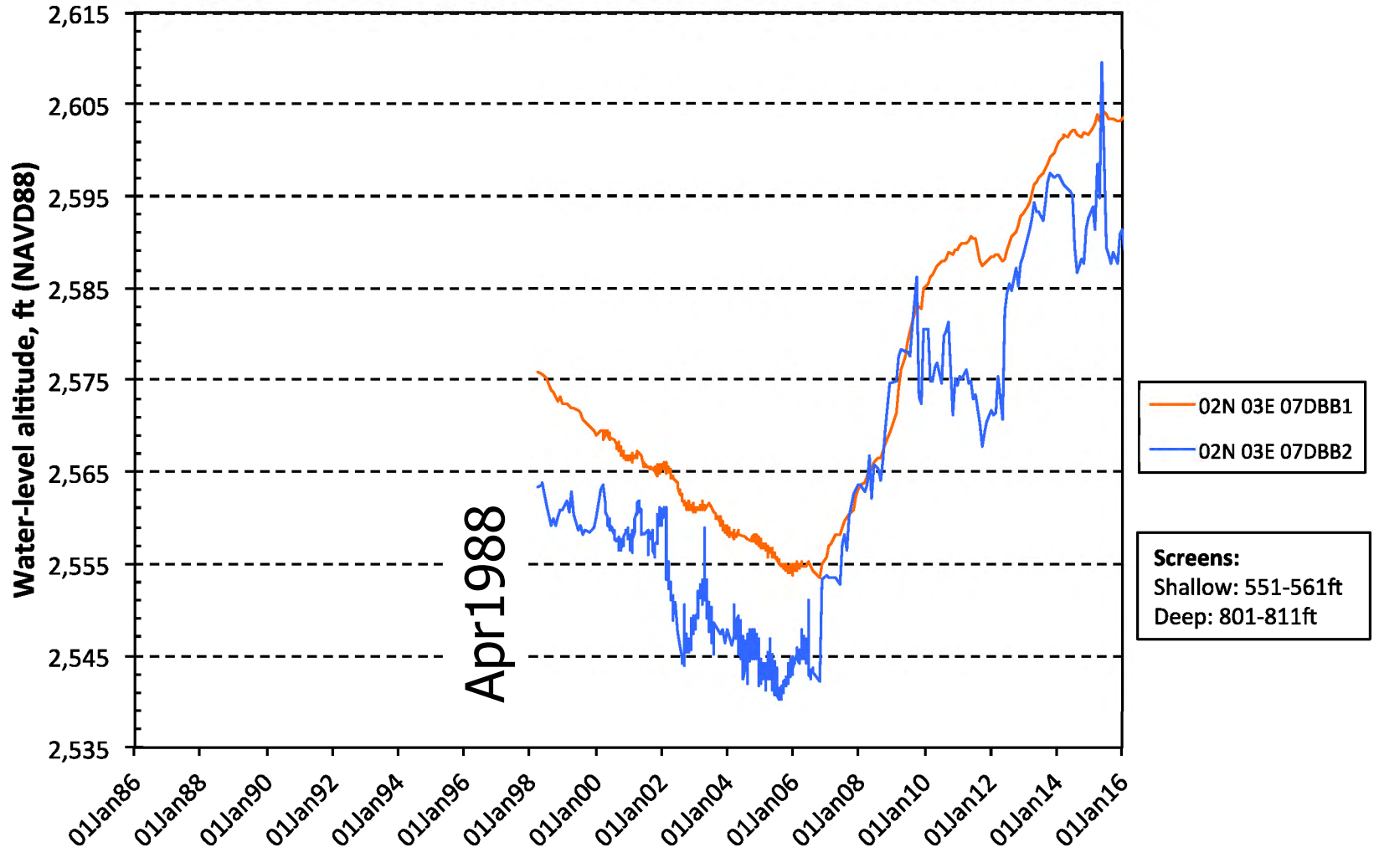
TVHP 1, zones 1-4 / 04N 01E 14CCB#



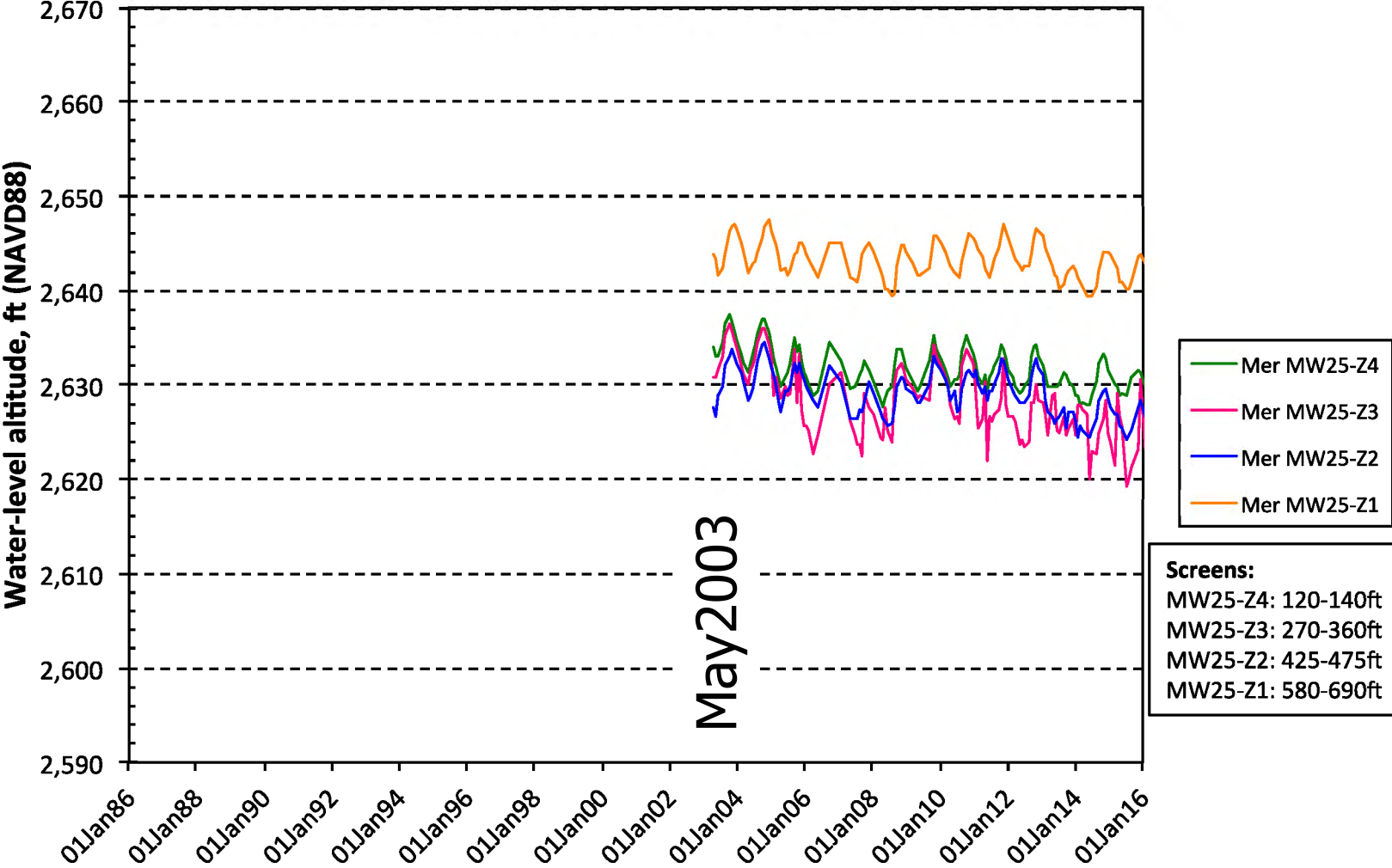
TVHP3, zones 1-8 (Caldwell) / 04N 03W 15ADC#



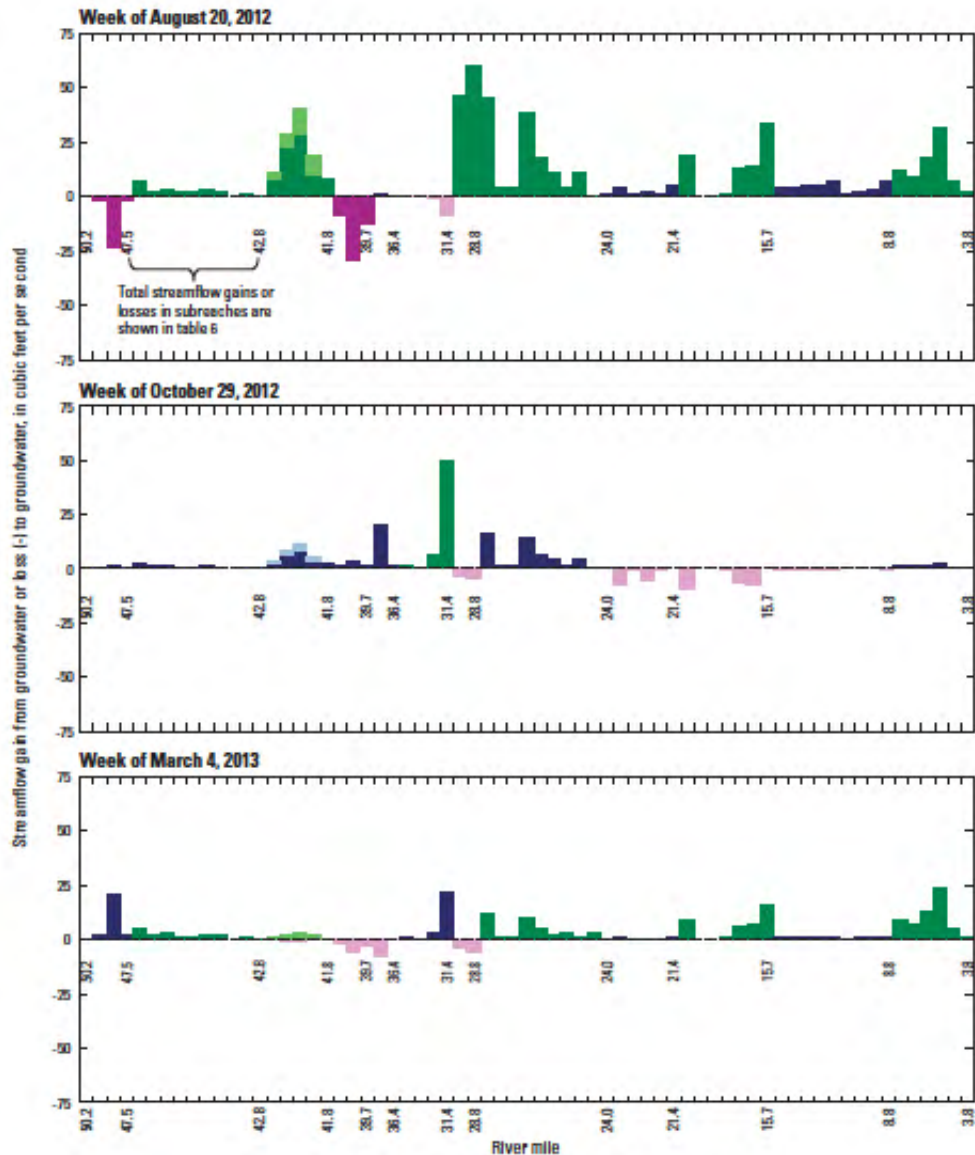
SEB Micron, shallow-deep / 02N 03E 07DBB#



Meridian MW-25, zones 1-4/ 03N 01E 29ABD#



Seepage runs; Etheridge SIR-2013-5220



- EXPLANATION**
- Streamflow gain greater than (>) discharge (Q) uncertainty
 - Streamflow gain less than (<) Q uncertainty
 - North Channel streamflow gain > Q uncertainty
 - North Channel streamflow gain < Q uncertainty
 - Streamflow loss > Q uncertainty
 - Streamflow loss < Q uncertainty



Any data you have helps..

- ❖ Pumpage
- ❖ Water levels
- ❖ Pump/aquifer tests
- ❖ Drain/canal elevations
- ❖ Other data...
- ❖ Thanks (so far):
 - City of Meridian
 - City of Nampa
 - City of Boise
 - SPF
 - Brown and Caldwell

	Mgal/mo									
1996	Well #1	Well #2	Well #3	Well #4-A	Well #5	Well #7	Well #8	Well #10	Well #11	Total
Jan	5.83	2.72	0.00	0.00	13.15	24.02	0.00	0.00	3.30	49.02
Feb	5.46	2.92	0.30	0.00	14.18	24.20	0.00	0.00	2.60	49.67
Mar	5.78	2.51	0.00	0.00	14.63	25.08	0.00	0.00	2.95	50.95
Apr	5.86	1.88	0.00	0.00	9.41	21.84	0.07	0.00	2.83	41.89
May	6.13	1.88	4.90	5.84	10.02	37.89	0.12	0.00	12.35	79.13
Jun	5.57	4.16	14.04	11.31	22.39	27.45	7.32	0.00	68.35	160.58
Jul	5.44	5.89	19.88	9.15	31.93	27.42	23.95	0.00	79.42	203.08
Aug	5.42	5.66	4.69	10.54	30.50	29.02	29.48	0.00	75.99	191.30
Sep	5.29	4.81	0.00	0.00	26.18	14.38	19.99	0.00	65.68	136.33
Oct	5.64	2.78	0.00	0.00	15.00	0.60	6.35	0.00	44.64	75.00
Nov	5.39	1.98	0.00	0.00	10.91	0.01	0.11	0.00	26.75	45.14
Dec	5.86	2.50	0.00	0.00	13.98	0.00	0.00	0.00	32.79	55.12
Total	67.67	39.68	43.81	36.84	212.28	231.91	87.39	0.00	417.63	1137.22