Water and Resource Conservation Paul Gosselin, Director

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Butte County
Groundwater Pumpers Advisory Committee

Meeting Agenda

Meeting Date: November 30, 2017

Time: 8:30AM

Place: Chico State University Farm, 311 Nicholas C. Shouten Lane, Room A009 & 0010, Chico, CA

Agenda Items

1. Welcome – Chair Heringer

2. Roll Call – Chair Heringer

3. *Review and approval of the September 18, 2017 GPAC minutes

4. Overview and discussion of the agenda (Paul Gosselin, Water and Resource Conservation)

5. *Discussion and possible recommendation on a private well outreach strategy (Paul Gosselin, Water and Resource Conservation and Susan Strachan, GPAC)

6. *Presentation on fall groundwater conditions (Christina Buck, Water and Resource Conservation)

7. Update on GSA Formation Process and GSP Grant Status (Paul Gosselin, Water and Resource Conservation)

8. Update of other SGMA issues – Staff & GPAC

9. GPAC members wishing to address items not listed on the agenda. (The GPAC is prohibited by state law from taking action on any item presented if it is not listed on the agenda).

10. Public members wishing to address the Commission on items not listed on the agenda. (The GPAC is prohibited by State law from taking action on any item presented if it is not listed on the agenda. Comments will be limited to five minutes per person)

11. Next meeting – January 15, 2018, 8:30AM, CSU Chico Farm.

12. Adjournment

*Materials attached

Agenda Item #3

Water and Resource Conservation Paul Gosselin, Director

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Butte County
Groundwater Pumpers Advisory Committee

Meeting Minutes

September 18, 2017

Time: 8:30AM

Place: Chico State University Farm, 311 Nicholas C. Shouten Lane, Room A009 & 0010, Chico, CA

Agenda Items

1. Welcome – Chair Heringer

2. Roll Call
   Members Present: Heringer, Daly, Cole, Edgar, Sohnrey, Strachan, Schooling

3. Review and approval of the July 17, 2017 GPAC minutes
   Motion by Sohnrey and seconded by Daly. Passed 8-0.

4. Overview and discussion of the agenda.
   Paul Gosselin gave an overview of the agenda.

5. Report and possible recommendation to the Board of Supervisors in support of the "Agricultural Groundwater Users of Butte County"
   Rich McGowan gave an overview of the Agricultural Groundwater Users of Butte County. Paul Gosselin described their interaction with the County.

   Motion by Rice and seconded by Daly to recommend that the Board of Supervisors adopt a resolution to, 1. recognize the value of input from the Agricultural Groundwater Users of Butte County; 2. advocate for representation of agricultural groundwater user representation in each

subbasin governance structure, 3. work constructively, cooperatively and collaboratively with landowners on the formation process towards forming a special district of a new eligible local agency if requested in the future, and; 4. support subbasin governance that recognizes and allows for new eligible local agencies to become members of the governance structure. Motion passed 8-0.

6. Presentation on Stream Aquifer Interaction in the Butte Basin
   Christina Buck gave a presentation on stream aquifer interaction in the Butte Basin. Her presentation was previously given at a GRA conference in August 2017.

7. Update on GSA Formation Process and GSP Grant Status
   Vickie Newlin gave an update on the GSA formation and GSP grant status.

8. Update of other SGMA issues
   Staff reported that there will be an Eligible Local Agency meeting at 9AM on September 28th.

9. GPAC members wishing to address items not listed on the agenda. (The GPAC is prohibited by state law from taking action on any item presented if it is not listed on the agenda).

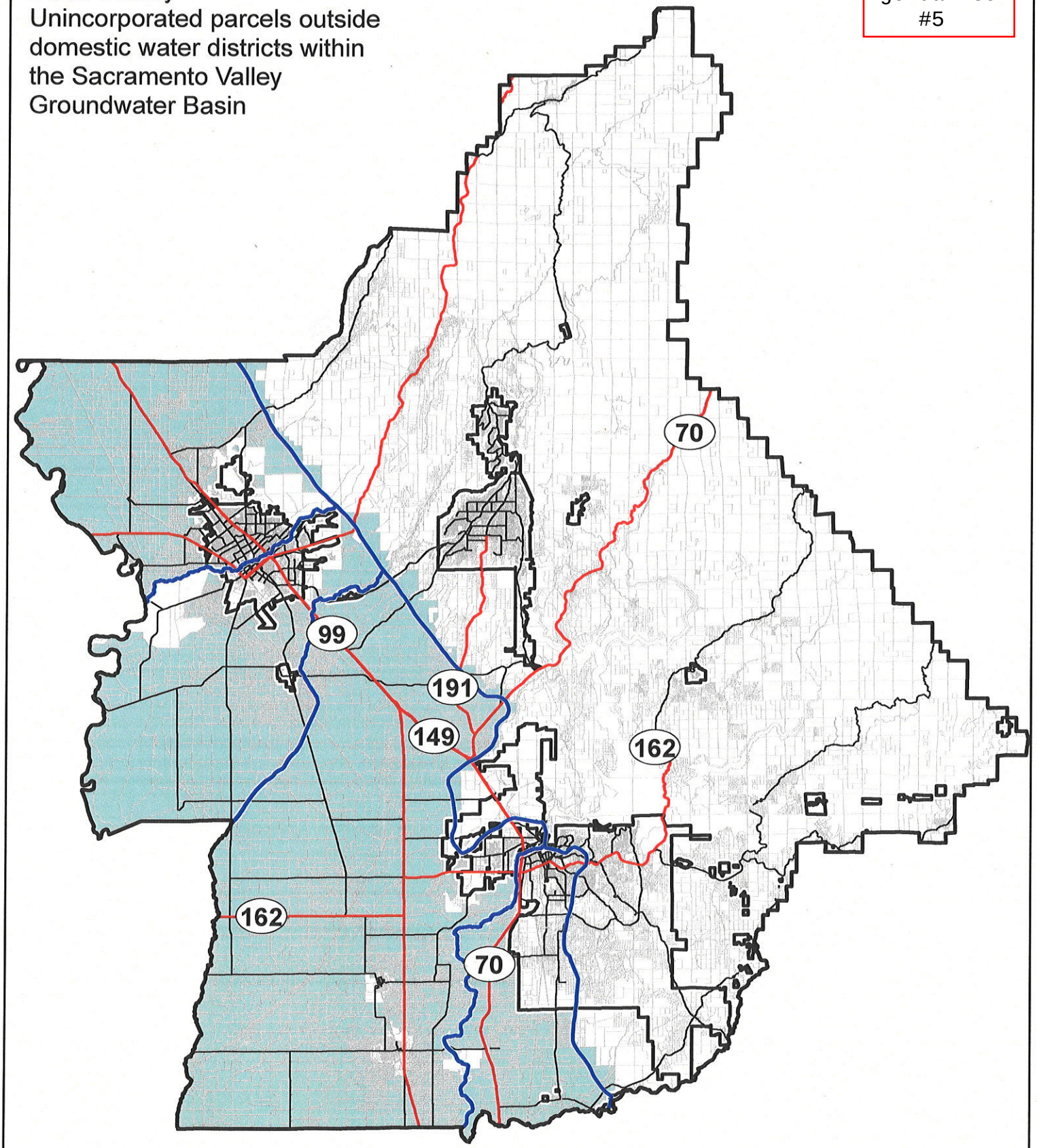
10. Public members wishing to address the Commission on items not listed on the agenda. (The GPAC is prohibited by State law from taking action on any item presented if it is not listed on the agenda. Comments will be limited to five minutes per person)

11. Next meeting – The GPAC decided to hold its meetings every two months. The next meeting will be in November at 8:30AM, CSU Chico Farm. Chair Heringer requested that the department present outreach to private well owners.

12. Adjournment

Butte County
Unincorporated parcels outside domestic water districts within the Sacramento Valley Groundwater Basin

Agenda Item #5



Unincorporated, No Domestic WD, Sac Valley Subbasin

Sacramento Valley SubBasin

Domestic Water District

Parcel

BUTTE COUNTY GIS : : EXPORT DATE: September 26, 2017
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Agenda Item #6

Groundwater Elevation Change October 2016 to October 2017

Well Count		Change (ft.)	SIU
109	**Average GWL Change**	**3**	
	Median GWL Change	3	
89	**Average Increase**	**4**	
	Median Increase	4	
	Max Increase	12	*Vina*
20	**Average Decrease**	**-2**	
	Median Decrease	-1	
	Max Decrease	-11	*Butte Sink*

****Questionable Measurements not included**

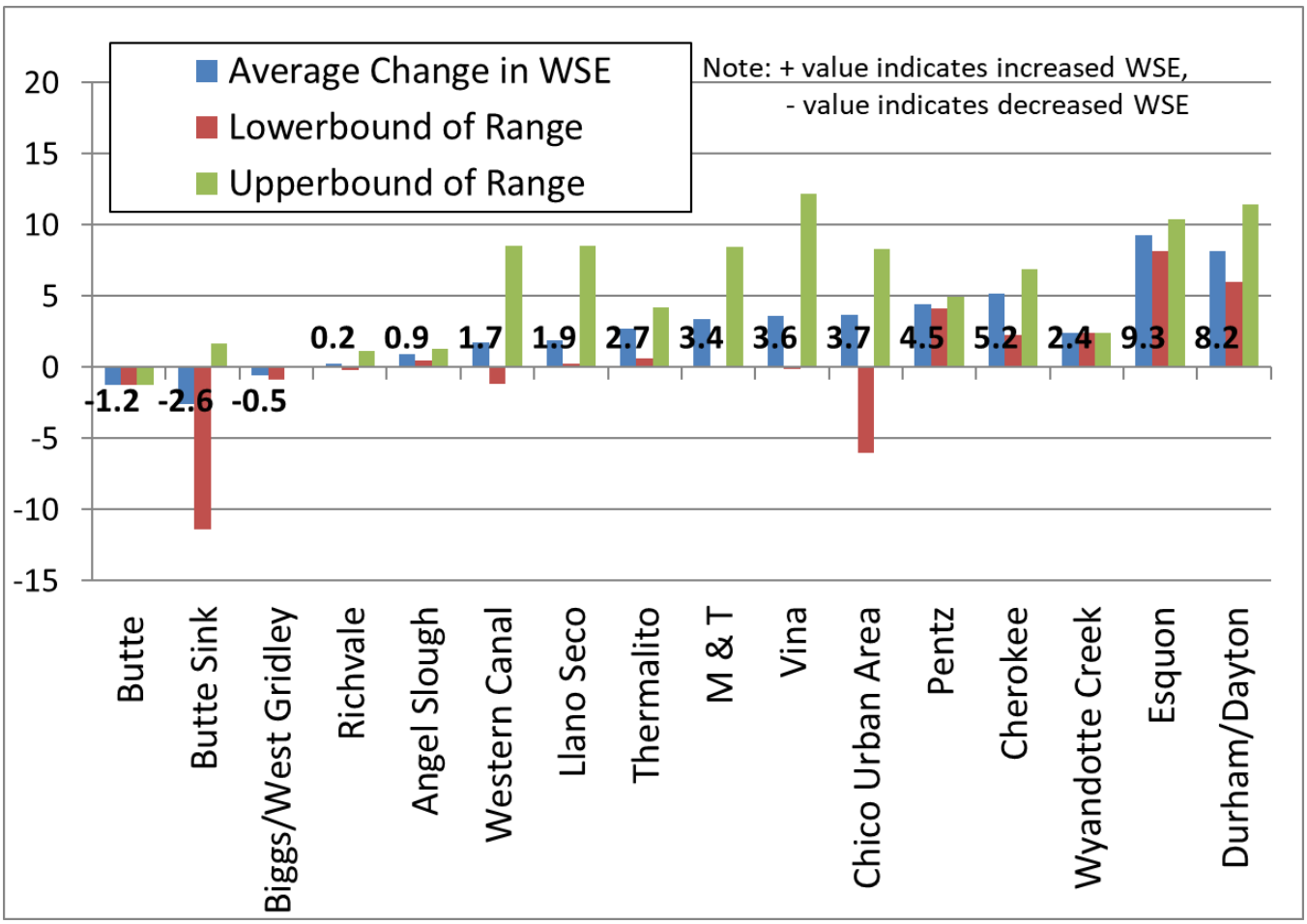


Figure 1. Minimum, average, and maximum Fall 2016 to Fall 2017 change in Water Surface Elevation (WSE) in each sub-region with average change labeled.

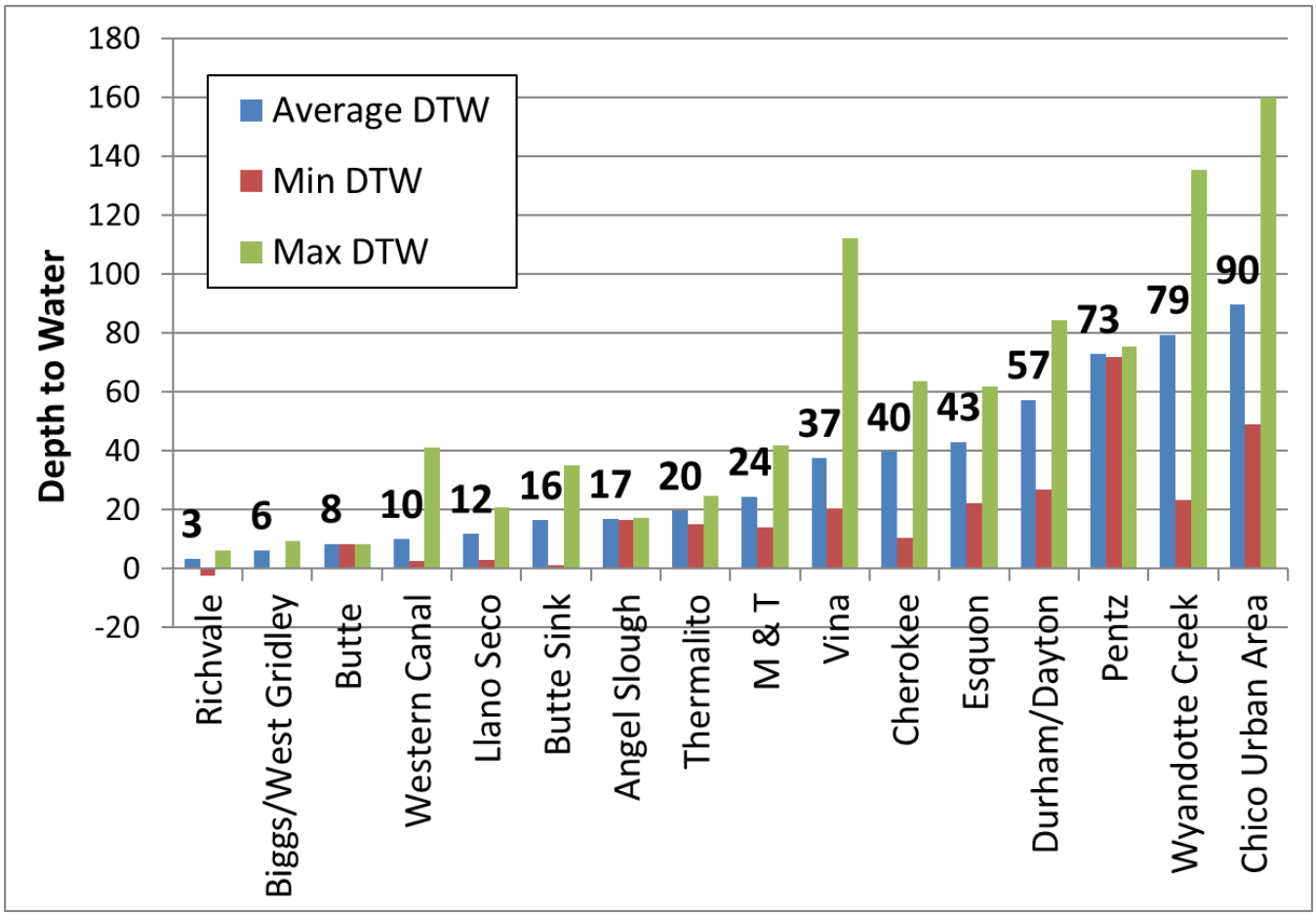


Figure 2. Fall 2017 Average, Minimum, and Maximum Depth to Water (DTW) in each sub-region with average DTW labeled.

BMO Data Summary

Fall 2008-2017 Groundwater Elevations - CASGEM

Sub Basin	Sub-Inventory Unit	Monitoring Wells	Well Type	Well Depth	First Record	Groundwater Elevations												Analysis		
						Fall 2008 Water Surface Elevation (WSE) (Elev. ft)	Fall 2009 Water Surface Elevation (WSE) (Elev. ft)	Fall 2010 Water Surface Elevation (WSE) (Elev. ft)	Fall 2011 Water Surface Elevation (WSE) (Elev. ft)	Fall 2012 Water Surface Elevation** (WSE) (Elev. ft)	Fall 2013 Water Surface Elevation (WSE) (Elev. Ft)	Fall 2014 Water Surface Elevation (WSE) (Elev. Ft)	Fall 2015 Water Surface Elevation (WSE) (Elev. Ft)	Fall 2016 Water Surface Elevation (WSE) (Elev. Ft)	Fall 2017 Water Surface Elevation (WSE) (Elev. Ft)	Fall BMO Stage 1 Alert Level (Elev. ft)	Fall BMO Stage 2 Alert Level (Elev. ft)	Elevation Above (+) or Below (-) Alert Stage 1 (ft)	Change Fall 2016 to Fall 2017 (ft)	Fall 2017 Depth to Water (ft)
EAST BUTTE	Biggs/West Gridley*	17N01E10A001M	D	S	1953	52.9	55.3	55.2	57.0	NM	56.1	57.5	52.8	57.2	56.3	34.0	28.1	22.3	-0.9	9.0
		18N01E35L001M	M	D	2005	69.2	67.2	68.0	71.8	69.0	69.7	67.8	60.0	69.9	69.9	a			0.04	0.1
		18N02E16F001M	I	S	1947	75.9	75.9	75.7	76.5	77.8	76.3	76.6	75.4	76.7	75.9	74.8	74.2	1.1	-0.8	6.4
		18N02E25M001M	I	S	1959	80.7	81.7	80.8	82.1	80.9	81.1	80.1	78.9	80.5	80.0	67.9	64.0	12.1	-0.5	9.3
		18N02E32H001M	D	S	2001	NM	NM	NM	73.7	71.8	71.6	71.6	71.6	71.9	71.9	70.1	68.0	1.8		
	Butte*	17N02E14A001M	I	S	1947	78.1	80.6	77.8	78.4	77.9	76.9	77.5	75.3	77.6	76.4	72.9	70.3	3.5	-1.2	8.4
		17N02E14H001M	D	S	2000	75.3	75.8	75.4	76.9	74.9	NM	74.5	65.9	74.0	67.1	66.0	54.3	1.1		
		17N03E16N001M	D	S	1953	74.8	74.1	74.5	75.7	74.4	73.7	72.5	NM	NM	NM	74.0	73.2			NM
	Butte Sink	17N01E17F001M	M	S	1992	51.9	52.3	50.8	51.3	51.6	50.1	47.0	43.5	48.3	49.1	50.9	47.5	-1.8	0.8	9.9
		17N01E17F002M	M	I	1992	50.6	51.0	48.9	49.8	51.7	47.2	44.2	38.2	44.9	46.1	51.1	47.4	-5.0	1.3	13.3
		17N01E17F003M	M	I	1992	50.0	50.0	47.6	48.8	51.3	46.6	42.7	35.3	44.0	45.7	51.0	47.0	-5.3	1.7	13.7
		17N01E24A003M	M	D	2007	70.7	67.4	68.6	72.5	71.1	68.3	66.7	62.9	70.1	71.6	b			1.5	1.3
		17N01E24A004M	M	I	2007	28.2	22.9	27.2	51.7	41.7	30.0	23.3	21.0	49.1	37.7				-11.4	35.1
		17N01E24A005M	M	I	2007	28.5	23.1	27.4	51.7	41.8	29.9	23.3	20.9	49.1	37.7				-11.4	35.1
		17N01E24A006M	M	S	2007	68.4	68.3	67.3	67.1	69.1	68.6	67.7	66.4	67.2	66.7				-0.5	6.2
		17N02E19J001M	I	S/I	2000	NM	NM	66.1	67.2	NM	NM	NM	NM	66.7	NM	62.8	55.7			NM
	Cherokee	20N02E24C001M	M	S	1999	112.2	111.5	110.7	114.9	109.8	105.0	99.3	95.8	98.1	105.1	113.6	108.8	-8.6	6.9	52.7
		20N02E24C002M	M	I	1999	112.1	111.6	112.1	115.0	109.9	105.1	99.4	96.0	98.3	105.0	113.4	107.8	-8.4	6.7	52.7
		20N02E24C003M	M	I	1999	112.1	111.5	110.9	114.9	109.9	105.2	99.4	96.1	98.8	105.0	113.5	107.9	-8.6	6.2	52.8
		20N03E31M001M	M	S	2001	109.2	108.1	105.7	105.6	106.0	104.2	103.9	99.3	103.8	108.9	111.4	106.5	-2.5	5.1	24.1
		20N03E33L001M	I	S	1999	116.8	115.4	115.2	114.8	112.6	109.6	110.1	108.3	108.9	111.9	116.7	113.3	-4.8	3.0	39.4
		21N03E22C001M	D	S	2001	361.5	366.0	367.1	363.2	354.3	366.9	358.8	360.0	366.0	371.9	357.9	347.9	14.0	5.9	10.5
		21N03E29J003M	D	S/I	2007	NM	216.5	212.2	NM	NM	205.1	NM	217.6	NM	210.7	c				63.6
		21N03E32B001M	I	S	1999	218.8	218.1	218.3	222.1	218.3	224.1	216.1	215.8	215.6	217.9	218.6	215.3	-0.7	2.3	20.5
	Esquon	20N02E08H003M	D	S	2008	116.4	116.5	117.7	117.9	100.4	NM	109.9	NM	NM	110.0	d				22.3
		20N02E09G001M	M	S	2001	105.7	NM	108.8	113.6	100.6	103.8	98.3	90.6	95.7	103.9	108.9	97.5	-5.0	8.2	44.9
		20N02E09L001M	I	I	1953	109.7	108.6	110.9	112.5	109.7	106.4	105.1	97.2	104.4	109.9	112.1	106.8	-2.2		
		21N02E20P001M	I	S/I	1995	111.9	111.6	106.4	114.1	106.4	99.0	98.2	94.1	95.9	106.3	108.7	87.7	-2.4	10.4	61.8
	Pentz	21N02E26E003M	M	D	2007	107.9	109.4	107.0	119.1	105.5	111.3	108.3	103.4	106.4	110.5	e			4.1	71.7
		21N02E26E004M	M	I	2007	94.4	106.9	104.7	118.3	103.6	111.2	108.9	102.4	106.1	110.5				4.4	71.7
		21N02E26E005M	M	I	2007	98.8	104.2	101.7	117.0	100.7	110.3	108.1	100.9	105.0	110.0				4.9	72.3
		21N02E26E006M	M	S	2007	108.9	108.0	107.6	113.5	107.1	105.5	104.6	102.7	102.6	107.0				4.4	75.3
	Richvale*	18N01E13A002M	I	S/I	2001	75.6	75.2	74.3	74.7	74.3	74.6	75.7	72.1	74.8	74.6	No Fall BMO**			-0.2	4.7
		18N01E15D002M	D	S	1976	68.7	62.9	40.5	41.2	52.8	68.1	61.2	35.3	70.0	70.2				0.2	2.2
		19N01E27Q001M	M	I	1978	83.1	82.6	82.2	83.1	81.2	82.7	83.0	76.8	82.1	82.2				0.1	5.2
		19N01E35B001M	M	S	2002	83.6	83.4	81.7	82.2	81.5	82.0	83.6	80.1	81.8	82.0				0.2	4.5
		19N01E35B002M	M	D	2005	88.8	88.3	88.6	89.9	88.3	88.3	87.1	81.9	87.8	88.9				1.1	-2.4
		19N01E35B003M	M	I	2005	83.8	82.7	83.1	84.2	82.9	83.5	82.9	76.0	82.6	83.0				0.4	3.5
		19N02E15N002M	I	U	2000	101.2	100.9	101.1	102.9	101.0	101.3	100.9	100.1	101.5	101.4				-0.1	6.0

Well Type
D-Domestic, I-Irrigation
M-Monitoring, M/I-Municipal and Industrial
Well Depth
S-Shallow, I-Intermediate
D-Deep

Sub Basin	Sub-Inventory Unit	Monitoring Wells	Well Type	Well Depth	First Record	Groundwater Elevations												Analysis		
						Fall 2008 Water Surface Elevation (WSE) (Elev. ft)	Fall 2009 Water Surface Elevation (WSE) (Elev. ft)	Fall 2010 Water Surface Elevation (WSE) (Elev. ft)	Fall 2011 Water Surface Elevation (WSE) (Elev. ft)	Fall 2012 Water Surface Elevation** (WSE) (Elev. ft)	Fall 2013 Water Surface Elevation (WSE) (Elev. Ft)	Fall 2014 Water Surface Elevation (WSE) (Elev. Ft)	Fall 2015 Water Surface Elevation (WSE) (Elev. Ft)	Fall 2016 Water Surface Elevation (WSE) (Elev. Ft)	Fall 2017 Water Surface Elevation (WSE) (Elev. Ft)	Fall BMO Stage 1 Alert Level (Elev. ft)	Fall BMO Stage 2 Alert Level (Elev. ft)	Elevation Above (+) or Below (-) Alert Stage 1 (ft)	Change Fall 2016 to Fall 2017 (ft)	Fall 2017 Depth to Water (ft)
EAST BUTTE	Thermalito	18N03E08B003M	I	S/I	2001	95.2	NM	89.6	99.0	97.3	96.4	94.6	94.8	96.8	97.4	91.7	83.8	5.7	0.6	14.9
		18N03E21G001M	I	S	1953	82.2	83.9	85.1	87.0	85.3	83.6	82.7	82.3	83.0	87.2	83.5	81.2	3.7	4.2	19.1
		19N03E05N002M	D	S	1967	119.7	117.0	115.1	119.8	117.9	114.7	113.6	113.7	114.2	117.6	109.2	92.4	8.4	3.4	24.7
		19N03E16Q001M	D	S	2000	137.4	138.0	138.4	139.3	138.8	137.6	139.3	139.4	140.0	NM	136.3	133.0			NM
	Western Canal*	19N01E09Q001M	I	S	1991	88.5	89.1	85.7	86.8	86.5	87.0	NM	NM	NM	87.0	No Fall BMO**				5.4
		19N02E07K002M	M	I	2006	98.7	99.6	99.8	101.5	99.8	99.5	98.2	91.8	99.2	100.0				0.8	2.7
		19N02E07K003M	M	I	2006	96.3	98.4	98.4	99.4	98.2	97.7	98.1	96.1	99.4	98.2				-1.2	4.5
		19N02E07K004M	M	S	2006	95.7	98.4	98.5	99.5	98.3	98.2	99.3	95.4	99.2	98.3				-0.9	4.4
		19N02E13Q001M	M	S	2002	112.0	112.8	113.3	115.6	114.0	114.1	114.4	111.9	115.0	114.9				-0.1	5.0
		19N02E13Q002M	M	I	2006	113.2	113.3	114.1	115.9	114.5	114.3	114.7	112.3	115.4	115.3				0.0	4.6
		19N02E13Q003M	M	D	2006	113.8	113.7	114.5	116.2	114.8	114.6	114.8	112.7	115.7	115.6				-0.1	4.3
		20N01E18L001M	M	D	2000	99.4	99.3	100.7	101.0	97.1	95.5	95.0	90.7	96.0	104.5				8.6	2.8
		20N01E18L002M	M	I	2001	99.0	99.5	99.8	100.3	97.9	97.3	97.5	94.9	97.7	98.7				1.1	8.7
		20N01E18L003M	M	S	2001	101.3	102.0	102.4	102.9	100.7	100.4	100.2	99.3	101.0	101.2				0.2	6.1
		20N01E35C001M	D	S	1947	99.3	99.7	98.1	99.0	97.8	NM	NM	NM	NM	NM					NM
		20N02E15H001M	M	S	1995	110.4	106.9	111.4	112.7	108.8	NM	100.4	96.6	96.8	102.8				6.0	41.3
		20N02E15H002M	M	S	1995	129.6	128.1	131.0	144.1	129.1	NM	116.8	115.3	116.3	121.1				4.8	23.1
		20N02E16P001M	I	U	1990	108.2	107.5	NM	109.2	112.7	111.6	109.0	105.0	107.3	110.9				3.6	20.9
		20N02E28N001M	D	S/I	1947	114.4	115.2	117.9	118.5	117.5	117.2	116.8	117.5	117.5	117.3				-0.2	6.1
WYANDOTTE CREEK	Wyandotte Creek	CWS-01	M&I	U	1978	101.0	132.0	131.0	131.0	124.0	130.0	120.0	134.0	139.0		82.0	31.0			
		CWS-02	M&I	U	1978	146.0	143.0	146.0	148.0	146.0	144.0	148.0	140.0	138.0		98.0	43.0			
		CWS-03	M&I	U	1978	163.0	165.0	164.0	164.0	161.0	163.0	149.0	165.0	165.0		123.0	78.0			
		17N03E03D001M	I	S	1947	71.5	70.5	72.3	73.2	72.6	71.4	69.6	70.3	71.5	73.9	68.4	66.9	5.5	2.4	23.4
		17N04E09N002M	I	S/I	2001	69.9	66.0	64.4	72.5	NM	66.7	53.6	52.4	53.7	65.2	69.1	60.3	-3.9		
		17N04E22B001M	D	S	1976	88.4	85.4	95.1	100.4	98.2	95.7	84.3	93.2	94.8	NM	81.3	76.3			NM
		19N04E31F001M	D	S	2001	122.1	123.2	122.5	123.9	120.3	108.0	121.1	120.8	121.6	124.0	120.0	114.6	4.0	2.4	135.3
WEST BUTTE	Angel Slough	21N01W23J001M	I	S	1941	107.6	107.2	107.2	108.1	106.0	103.9	103.7	103.0	103.7	105.0	108.5	105.4	-3.5	1.3	16.4
		21N01W35K002M	I	S/I	1994	97.5	97.7	97.8	98.8	96.7	95.4	96.4	96.0	96.7	97.2	97.5	95.5	-0.3	0.5	17.2
	Chico Urban Area	CWSCH01	M&I	U	1988	117.0	117.0	120.0	119.0	114.0	114.0	112.0	112.0	NM	NM	119.0	101.0			NM
		CWSCH01b	M&I	U	1988	139.0	140.0	145.0	144.0	140.0	140.0	138.0	138.0		149.0					83.0
		CWSCH02	M&I	U	1988	117.0	123.0	130.0	132.0	86.0	113.0	112.0	111.0	112.0	111.0	103.0	63.0	8.0	-1.0	72.0
		CWSCH03	M&I	U	1988	121.0	120.0	116.0	120.0	117.0	114.0	110.0	113.0	113.0	115.0	116.0	100.0	-1.0	2.0	143.0
		CWSCH04	M&I	U	1988	107.0	91.0	NM	110.0	108.0	107.0	107.0	117.0	124.0	118.0	103.0	66.0	15.0	-6.0	94.0
		CWSCH05	M&I	U	1988	111.0	115.0	113.0	118.0	110.0	108.0	100.0	102.0	107.0	111.0	98.0	61.0	13.0	4.0	104.0
		CWSCH06	M&I	U	1988	116.0	113.0	109.0	113.0	101.0	101.0	97.0	108.0	109.0	116.0	115.0	61.0	1.0	7.0	65.0
		CWSCH07	M&I	U	1991	111.0	106.0	110.0	114.0	105.0	103.0	101.0	105.0	105.0	110.0	103.0	80.0	7.0	5.0	160.0
		22N01E28J001M	M	I	1958	122.6	123.8	125.5	130.4	121.4	119.6	114.7	114.7	117.8	125.0	126.7	120.8	-1.7	7.3	53.9
		22N01E28J003M	M	I	1958	126.5	128.0	129.7	135.0	126.7	124.7	119.8	118.2	121.0	129.4	129.1	123.7	0.3	8.3	48.9
		22N01E28J005M	M	D	1958	120.5	121.5	122.2	127.4	116.4	117.5	113.8	113.1	114.0	122.1	122.3	117.3	-0.2	8.1	56.8
		22N01E35E001M	I	S/I	2005	116.3	116.0	116.0	122.4	112.5	110.8	107.5	107.5	NM	116.0	f				66.3
		22N02E30C002M	M	S	2002	116.3	115.5	114.8	119.2	112.3	111.4	109.5	NM	113.4	116.0				2.6	127.7
	Durham/Dayton	20N01E02H003M	M	S	2001	95.1	95.6	95.9	101.7	93.1	90.3	86.9	83.9	88.3	95.2				6.9	37.1
		20N01E10C002M	I	S	1947	100.5	101.1	100.9	NM	96.0	94.4	94.4	90.1	94.7	100.7	101.5	97.6	-0.8	6.0	26.7
		20N02E06Q001M	I	S/I	1947	109.5	108.3	108.1	113.9	106.8	103.9	102.1	95.9	100.4	108.0	106.2	101.2	1.8	7.6	29.6
		21N01E10B003M	I	I	1995	110.6	111.8	112.4	119.1	107.1	104.2	100.7	96.3	102.2	109.9	114.7	93.2	-4.8	7.7	60.4
		21N01E13L002M	M	D	2012					102.2	98.7	95.7	90.6	96.1	105.0	g			8.9	74.8
		21N01E13L003M	M	I	2012					102.1	98.9	95.8	90.9	96.0	105.3				9.3	74.6
		21N01E13L004M	M	I	2012					102.4	99.1	95.8	91.4	96.2	105.5				9.2	74.4
		21N01E25K001M	D	S	1993	98.5	96.9	98.8	103.9	NM	90.4	87.5	85.6	87.9	95.9	99.6	74.5	-3.7	8.0	58.4
		21N01E26K001M	I	I	1993	92.9	85.6	98.2	92.9	88.1	86.8	78.5	84.5	79.1	88.3	95.9	72.3	-7.6	9.2	64.5
		21N01E27D001M	D	S	1946	94.9	94.3	94.9	100.0	91.4	86.6	83.8	83.2	NM	94.5	97.1	90.9	-2.6		48.8
		21N02E07C001M	I	I	1967	114.2	133.1	134.8	133.7	128.0	NM	NM	NM	NM	NM	109.0	100.4			NM
		21N02E18C001M	M	D	2010				115.7	103.2	100.5	97.5	90.9	97.3	104.8	h			7.5	84.3
		21N02E18C002M	M	I	2010				115.8	102.7	101.1	97.5	92.4	97.9	105.4				7.5	83.7
		21N02E18C003M	M	S	2010				154.0	144.6	143.5	139.7	140.2	149.6	161.0				11.5	28.1
		21N02E30L001M	D	S/I	1995	106.9	105.6	106.3	112.6	101.8	98.8	95.6	93.3	95.9	103.2	110.5	95.1	-7.4	7.3	56.2

Well Type
D-Domestic, I-Irrigation
M-Monitoring, M/I-Municipal and Industrial
Well Depth
S-Shallow, I-Intermediate
D-Deep

Sub Basin	Sub-Inventory Unit	Monitoring Wells	Well Type	Well Depth	First Record	Groundwater Elevations												Analysis		
						Fall 2008 Water Surface Elevation (WSE) (Elev. ft)	Fall 2009 Water Surface Elevation (WSE) (Elev. ft)	Fall 2010 Water Surface Elevation (WSE) (Elev. ft)	Fall 2011 Water Surface Elevation (WSE) (Elev. ft)	Fall 2012 Water Surface Elevation** (WSE) (Elev. ft)	Fall 2013 Water Surface Elevation (WSE) (Elev. Ft)	Fall 2014 Water Surface Elevation (WSE) (Elev. Ft)	Fall 2015 Water Surface Elevation (WSE) (Elev. Ft)	Fall 2016 Water Surface Elevation (WSE) (Elev. Ft)	Fall 2017 Water Surface Elevation (WSE) (Elev. Ft)	Fall BMO Stage 1 Alert Level (Elev. ft)	Fall BMO Stage 2 Alert Level (Elev. ft)	Elevation Above (+) or Below (-) Alert Stage 1 (ft)	Change Fall 2016 to Fall 2017 (ft)	Fall 2017 Depth to Water (ft)
WEST BUTTE	Llano Seco	20N01E18L001M	M	D	2000	99.4	99.3	100.7	101.0	97.1	95.5	95.0	90.7	96.0	104.5	99.4	94.1	5.1	8.6	2.8
		20N01E18L002M	M	I	2001	99.0	99.5	99.8	100.3	97.9	97.3	97.5	94.9	97.7	98.7	99.3	96.3	-0.6	1.1	8.7
		20N01E18L003M	M	S	2001	101.3	102.0	102.4	102.9	100.7	100.4	100.2	99.3	101.0	101.2	101.2	98.5	0.0	0.2	6.1
		20N01W04J001M	I	S	2008	81.18	80.98	81.28	81.58	80.98	80.98	80.58	81.0	81.1	81.6	i			0.5	20.8
		20N01W11N002M	I	S	2008	93.17	92.97	92.47	93.77	93.27	92.17	93.27	91.7	92.2	92.7				0.5	14.7
		21N01W35K002M	I	S/I	1994	97.5	97.7	97.8	98.8	96.7	95.4	96.4	96.0	96.7	97.2	97.5	95.5	-0.3	0.5	17.2
	M & T	21N01W11A001M	M	D	2010				112.4	110.0	105.8	105.6	104.0	106.6	111.1	j			4.5	18.2
		21N01W11A002M	M	S	2010				114.8	113.4	113.2	112.8	113.3	113.4	113.4				0.0	15.9
		21N01W11A003M	M	S	2010				114.4	113.8	113.7	113.4	114.1	114.1	115.3				1.2	14.0
		21N01W13J001M	M	D	2012					105.9	103.1	102.0	98.6	101.3	103.9				2.6	23.8
		21N01W13J002M	M	I	2012					107.0	104.7	102.3	100.0	102.5	103.4				1.0	24.3
		21N01W13J003M	M	I	2012					107.7	105.7	103.4	101.1	103.2	103.8				0.6	23.9
		21N01W24B001M	M	D	1995	106.1	105.7	107.2	106.9	103.7	100.7	99.0	97.1	99.5	103.3	109.1	100.3	-5.8	3.9	23.8
		22N01E29R001M	I	I	1947	118.1	119.3	123.0	127.4	118.3	115.9	90.2	110.1	113.4	121.9	118.6	109.4	3.3	8.5	41.8
		22N01E32E004M	D	S	1992	113.4	114.5	118.0	121.5	113.6	110.5	104.6	106.6	108.8	117.0	111.5	90.1	5.5	8.2	33.9
VINA	Vina	22N01E09B001M	D	S	2001	131.7	131.0	132.0	136.1	129.5	128.0	125.6	125.5	126.5	132.0	143.5	136.3	-11.5	5.5	46.3
		22N01E20K001M	D	S	1961	121.5	121.0	124.6	129.1	120.7	118.3	NM	114.1	114.3	126.5	124.9	120.0	1.6	12.2	41.3
		23N01E18A001M	D	S	1976	NM	164.3	168.6	168.0	NM	NM	NM	NM	NM	NM	165.3	148.1			NM
		23N01E29P002M	D	S/I	1990	143.8	138.5	141.9	144.2	140.6	NM	136.5	134.9	133.9	140.4	129.8	100.8	10.6	6.5	64.9
		23N01E33A001M	I	S/I	2001	146.7	145.4	145.3	147.5	143.5	140.5	NM	136.3	136.9	140.2	149.3	136.3	-9.1	3.4	112.1
		23N01W10E001M	I	I	2001	149.3	156.3	157.2	159.9	NM	NM	142.7	141.9	145.1	NM	152.6	144.2			NM
		23N01W10M001M	M	S	2001	153.6	155.6	157.1	159.9	NM	148.6	147.5	144.5	149.6	154.0	154.3	145.5	-0.3	4.4	33.4
		23N01W27L001M	D	S	1976	132.6	133.4	135.3	137.4	130.7	NM	126.4	126.4	129.4	133.4	131.6	116.0	1.8	4.0	29.0
		23N01W36P001M	D	S	1959	122.8	124.7	125.9	129.8	120.7	118.7	117.5	116.8	119.6	125.2	128.9	124.1	-3.7	5.6	37.6
		23N02W25C001M	I	S/I	1967	132.1	133.9	134.4	135.8	130.6	130.5	131.0	130.9	133.9	135.4	128.8	123.7	6.6	1.5	22.0
		23N01W25G001M	I	I	2007	140.3	139.8	134.5	129.1	134.4	131.5	131.4	130.5	139.1	NM	k				NM
		23N01W03H002M	M	I	2012					172.6	169.8	168.0	167.0	167.7	170.2				2.5	46.6
		23N01W03H003M	M	I	2012					173.2	170.3	168.4	167.1	168.1	171.2				3.1	45.7
		23N01W03H004M	M	S	2012					175.8	173.9	171.3	170.4	171.1	174.8				3.7	42.1
		23N01W28M002M	M	D	2009		136.9	134.4	138.3	136.6	127.5	131.3	129.9	133.0	136.2				3.2	22.8
		23N01W28M003M	M	D	2009		136.8	135.4	138.8	137.1	129.0	130.6	129.8	132.8	135.7				2.9	23.3
		23N01W28M004M	M	S	2009		133.9	139.3	137.1	131.7	130.6	128.0	128.0	130.6	133.9				3.3	25.1
		23N01W28M005M	M	S	2009		133.4	141.4	136.6	131.4	130.2	127.7	127.8	130.1	133.7				3.7	25.3
		23N01W31M001M	M	D	2008	131.1	126.8	134.0	126.0	129.7	110.9	121.6	119.9	125.3	128.2				2.8	26.6
		23N01W31M002M	M	I	2008	132.5	131.6	133.0	132.2	129.4	125.8	126.0	124.5	129.5	129.4				-0.1	25.4
		23N01W31M003M	M	S	2008	133.1	135.1	133.8	137.1	132.0	129.5	128.9	126.2	132.2	132.1				-0.1	22.6
		23N01W31M004M	M	S	2008	134.0	134.1	134.5	135.7	133.5	133.2	132.2	132.3	133.4	134.5				1.1	20.3

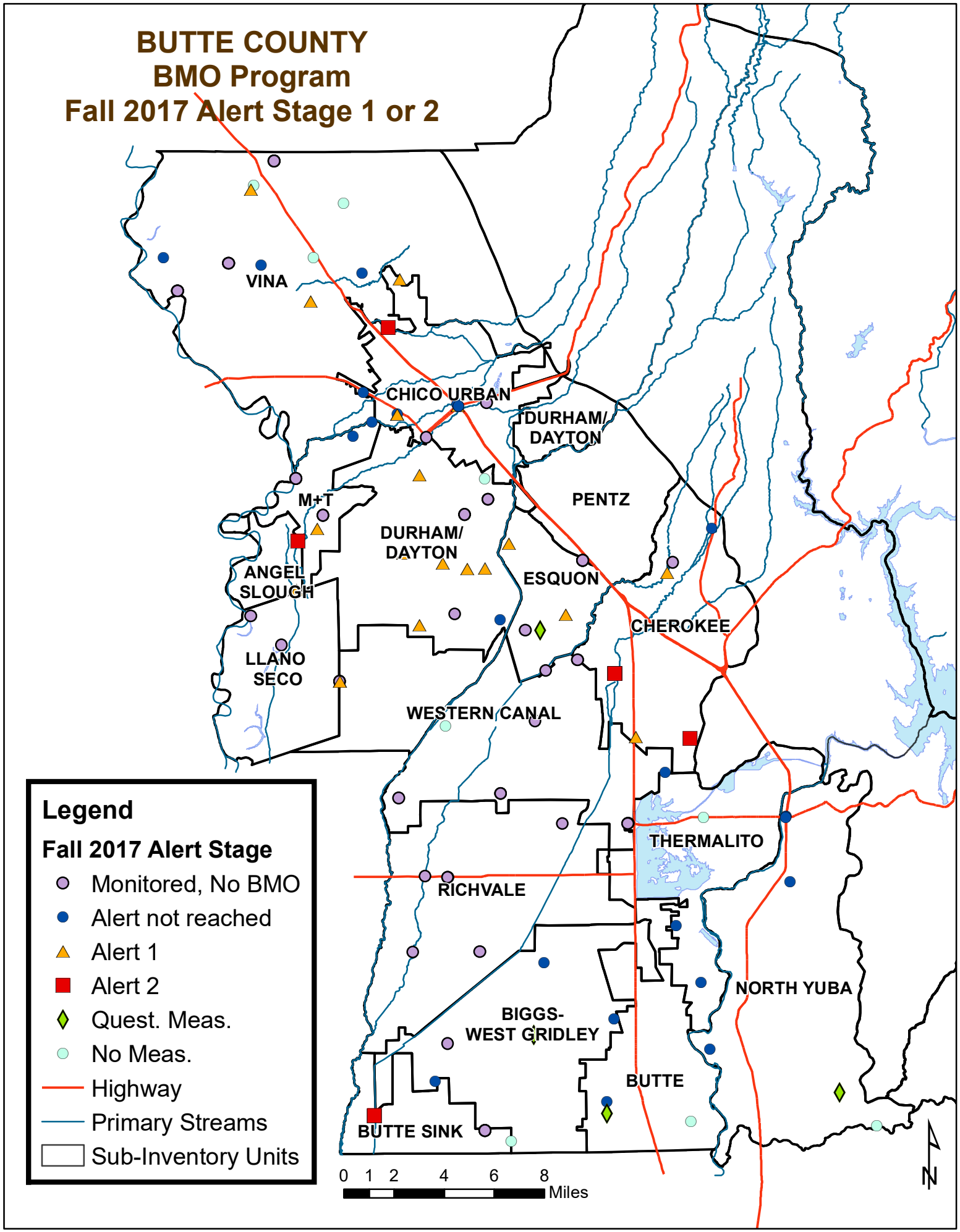
Note: Red font indicates Questionable Measurement (QM), Orange highlight is Alert Stage 1, Red higlight is Alert Stage 2
* Indicates sub-inventory unit corresponding to an Irrigation District primarily served by surface water
****** Richvale and Western Canal use the Specific Depth Method which establishes alert levels for spring only (per Chapter 33A)
a 18N01E35L001M monitoring well installed in 2005. Not yet enough data to establish alert levels
b 17N01E24A03-6 multi-completion well installed in 2007. Not yet enough data to establish alert levels
c 21N03E29J03 added to DWR monitoring network in 2007
d 20N02E08H03 added to DWR monitoring network in 2008
e 21N02E26E03-6 multi-completion monitoring well installed 2007
f 22N01E35E001, 22N02E30C002 and 20N01E02H003M added to the network in 2005, 2002, and 2001, respectively.
g 21N01E13L02-04 installed in 2012 and 21N02E18C01-03 in 2010
h 21N02E18C01-03 installed in 2010
i 20N01W04J001 and 20N01W11N002 first measured in 2008
j 21N01W11A01-03 and 21N01W13J01-03 installed in 2010 and 2012, respectively.
k 23N01W25G01 added to DWR monitoring network in 2007, 23N01W28M02-5 and 23N01W31M01-4 multi-completion monitoring wells installed 2008, and 23N01W03H02-4 installed 2012

Depth Category
S- Shallow: indicates total well depth or screening interval is less than 200 feet below ground surface
I- Intermediate: total well depth or screening interval is 200-600 feet
S/I- Shallow/Intermediate: screened interval spans portions of the shallow and intermediate depth intervals
D- Deep: total well depth or screening interval is greater than 600 feet

Alert Stage Count

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Alert 1	27	29	24	7	26	23	21	16	21	22
Alert 2	2	1	2	2	6	16	19	25	18	8
Total Measured	109	113	114	121	124	121	124	124	121	119

Well Type
D-Domestic, I-Irrigation
M-Monitoring, M/I-Municipal and Industrial
Well Depth
S-Shallow, I-Intermediate
D-Deep


BUTTE COUNTY
BMO Program
Fall 2017 Alert Stage 1 or 2
VINA
CHICO URBAN
DURHAM/
DAYTON
PENTZ
M+T
DURHAM/
DAYTON
ANGEL
SLOUGH
ESQUON
CHEROKEE
LLANO
SECO
WESTERN CANAL
THERMALITO
RICHVALE
NORTH YUBA
BIGGS-
WEST GRIDLEY
BUTTE
BUTTE SINK
Legend
Fall 2017 Alert Stage
Monitored, No BMO
Alert not reached
Alert 1
Alert 2
Quest. Meas.
No Meas.
Highway
Primary Streams
Sub-Inventory Units
0 1 2 4 6 8
Miles
N