



CASGEM UPDATE

October 22, 2018

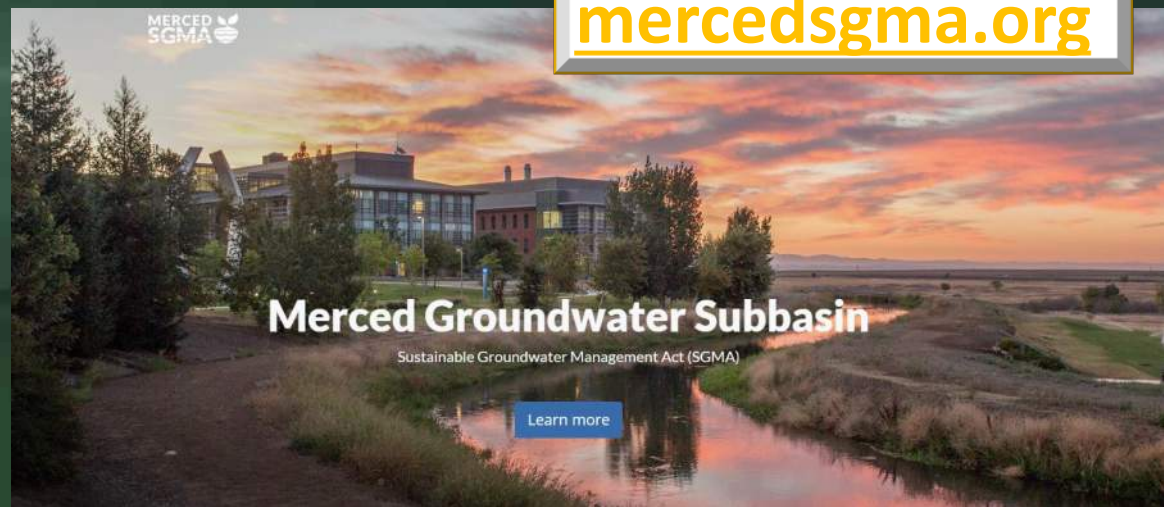
Matt Beaman
mbeaman@mercedid.org

MAGPI - Merced Area Groundwater Pool Interests

- Formed in 1997 – 15 Member Agencies
- Health of Merced GW basin
- Technical data and management strategies

magpi-gw.org

mercedsgma.org



What is CASGEM?

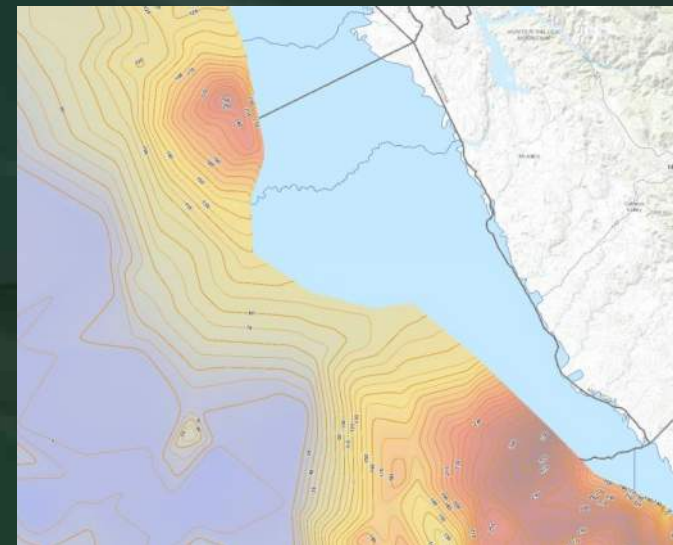
CASGEM is short for California Statewide Groundwater Elevation Monitoring. The Legislature established the program in November 2009 to collect groundwater elevations, facilitate collaboration between local monitoring entities and the Department of Water Resources, and report this information to the public.



<https://water.ca.gov/Programs/Groundwater-Management/Groundwater-Elevation-Monitoring--CASGEM>

CASGEM Objectives

- To define the seasonal and long-term trends in groundwater elevations in California's groundwater basins.
- To provide sufficient data to draw representative contour maps of the elevations.



Draft Basin Priority - Merced

DRAFT

Hydrologic Region: San Joaquin River
 South Central Region Office (SCRO)
 Basin Area: 491255 acres (767.6 miles)
 2010 Population: 173731

Basin: SAN JOAQUIN VALLEY

Sub_Basin: MERCED

Basin Number: 5-22.04

Date: 12/30/2013

DATA COMPONENT RANKING VALUE TABLE

Data Component	Ranking Range	Units	Ranking Value	Confidence Adjustment	Average of Components	Adjusted Ranking Values
1. Population	7 - 250	persons/sq-mi	1			1
2. Population Growth	25.1 - 40	percent	4			4
3. Public Supply Wells	0.11 - 0.25	wells/sq-mi	2			2
4. Total Wells	10.1 - 20	wells/sq-mi	4	3		3
5. Irrigated Acreage	251 - 350	acres/sq-mi	4	3		3
6. GW Reliance	GW Use	0.61 - 0.8	4		3.125	3.125
	% of Total Supply	41 - 60	3	2.25		
7. Impacts*	--	--	4			4
8. Other Information**	--	--	0			0
Overall Basin Ranking Score	> 19.7	--				20.1

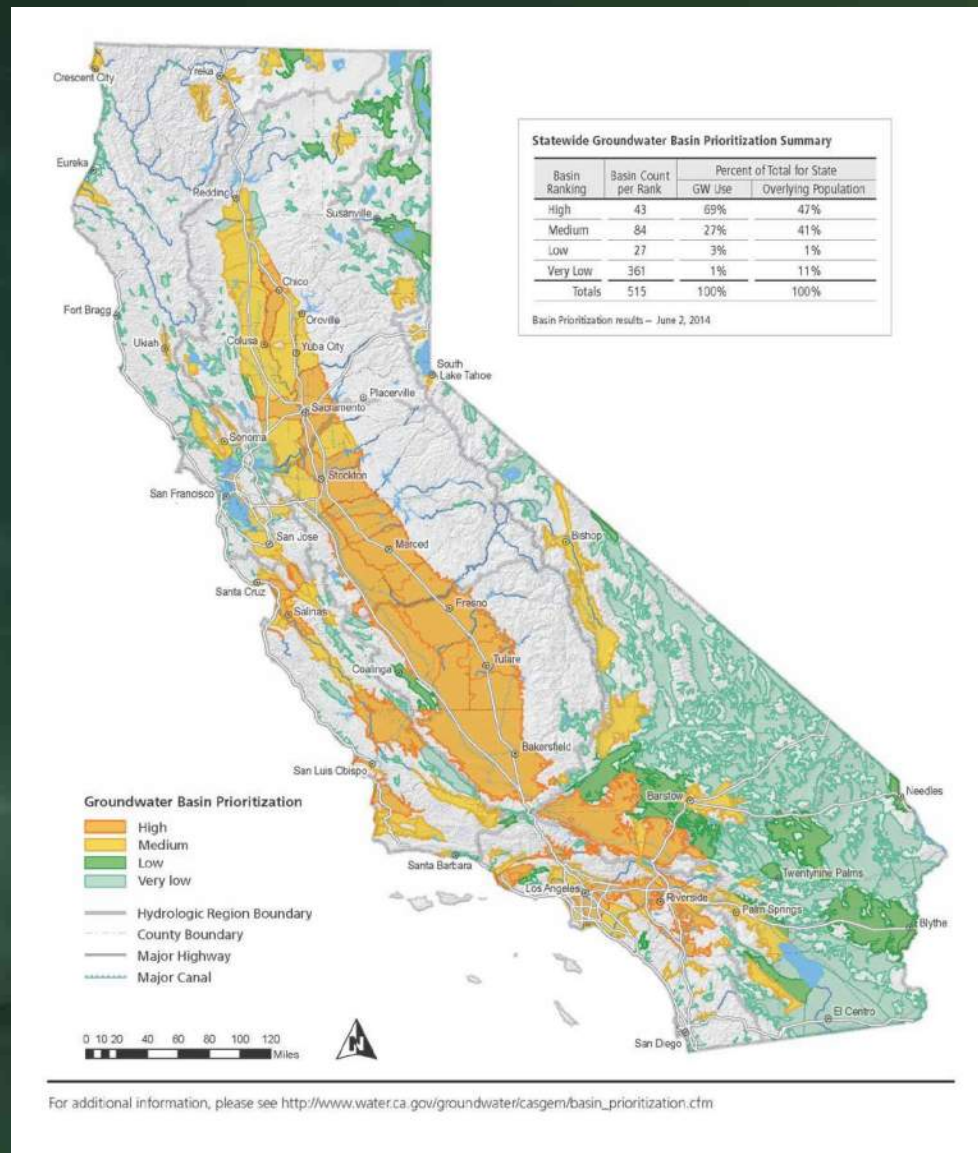
Overall Basin Priority: High

Very Low Ranking Range	Low Ranking Range	Medium Ranking Range	High Ranking Range
0 - 5.4	5.4 - 12.5	12.6 - 19.7	> 19.7

CASGEM – Basin Prioritization

2015 CASGEM Status Report
(Publish Date: July 12, 2016)

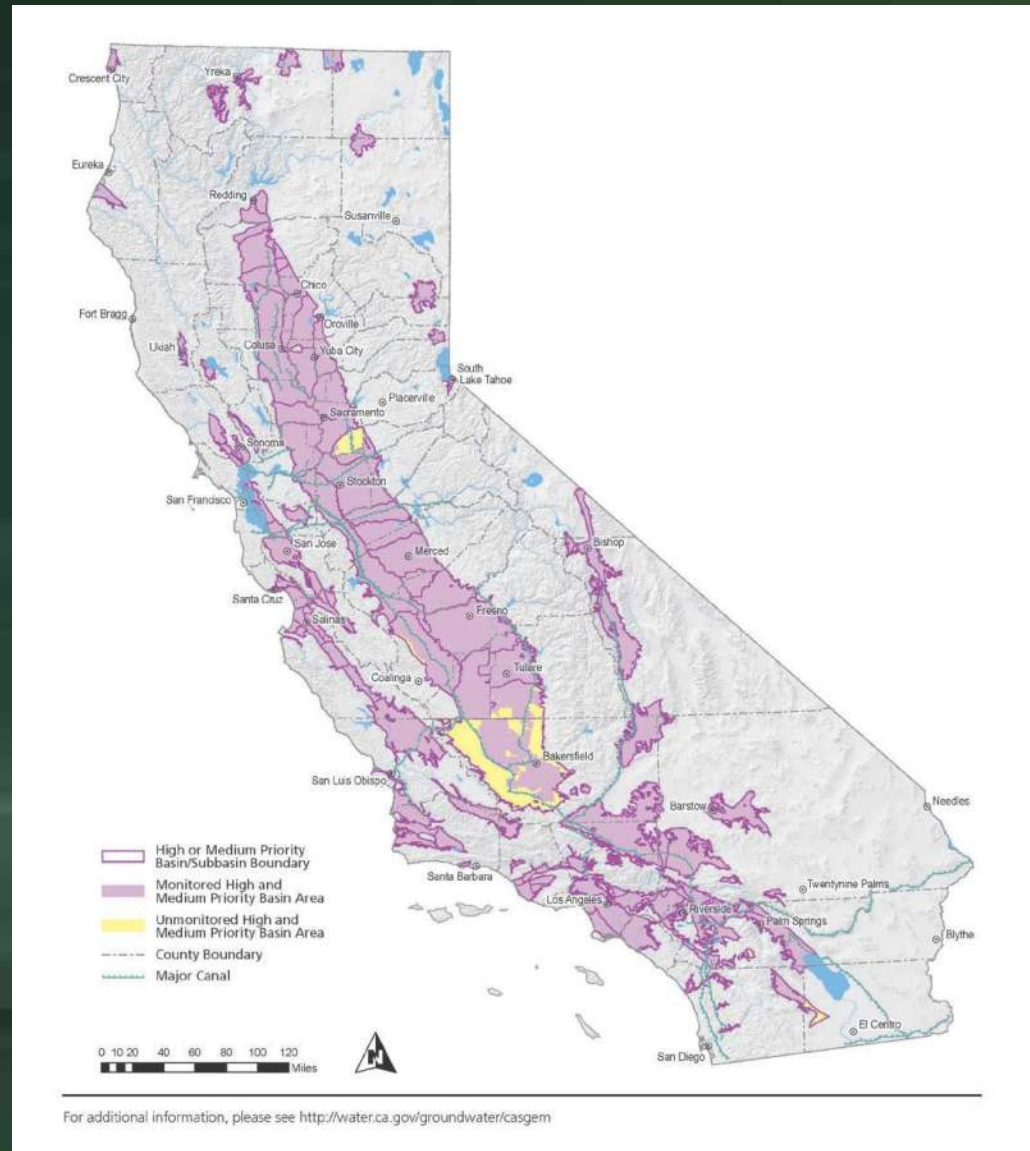
<https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/CASGEM/Files/2015-CASGEM-Status-Report.pdf>



CASGEM – Monitoring Status

2015 CASGEM Status Report
(Publish Date: July 12, 2016)

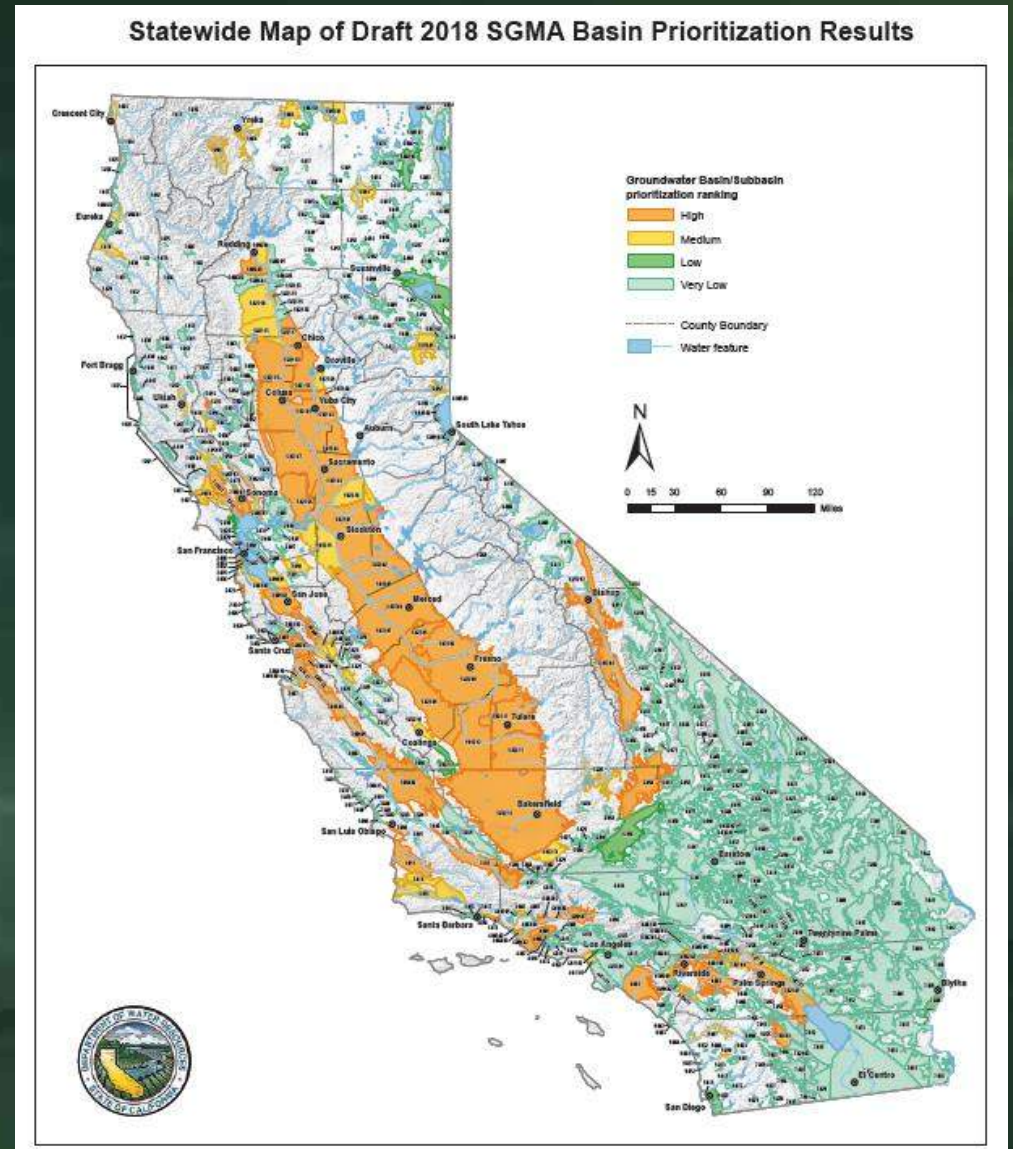
<https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/CASGEM/Files/2015-CASGEM-Status-Report.pdf>



SGMA – Basin Prioritization

2018 SGMA Basin
Prioritization Process and
Draft Results
(May 2018)

<https://water.ca.gov/Programs/Groundwater-Management/Basin-Prioritization#collapse-Is-the-CASGEM-legislation-still-in-effect224bb167-4277-4942-8b75-21e0f861345b>



CASGEM Guidelines & Procedures

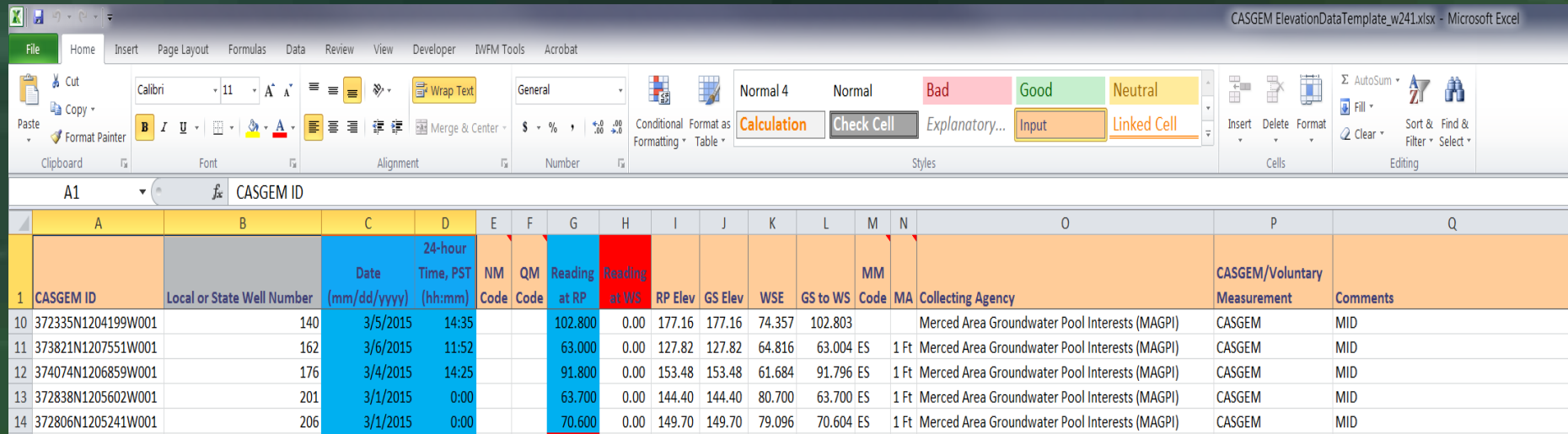
- <https://water.ca.gov/Programs/Groundwater-Management/Groundwater-Elevation-Monitoring--CASGEM>

Monitoring Schedule

- The goal is to collect groundwater level measurements in the middle of March and the middle of October
- Upload of data through the CASGEM Online System by the middle of the following month (April and November)

Well Depth Submittal Format

GW Elev Data



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	CASGEM ID	Local or State Well Number	Date (mm/dd/yyyy)	24-hour Time, PST (hh:mm)	NM Code	QM Code	Reading at RP	Reading at WS	RP Elev	GS Elev	WSE	GS to WS	Code	MA	Collecting Agency	CASGEM/Voluntary Measurement	Comments
10	372335N1204199W001	140	3/5/2015	14:35			102.800	0.00	177.16	177.16	74.357	102.803			Merced Area Groundwater Pool Interests (MAGPI)	CASGEM	MID
11	373821N1207551W001	162	3/6/2015	11:52			63.000	0.00	127.82	127.82	64.816	63.004	ES	1 Ft	Merced Area Groundwater Pool Interests (MAGPI)	CASGEM	MID
12	374074N1206859W001	176	3/4/2015	14:25			91.800	0.00	153.48	153.48	61.684	91.796	ES	1 Ft	Merced Area Groundwater Pool Interests (MAGPI)	CASGEM	MID
13	372838N1205602W001	201	3/1/2015	0:00			63.700	0.00	144.40	144.40	80.700	63.700	ES	1 Ft	Merced Area Groundwater Pool Interests (MAGPI)	CASGEM	MID
14	372806N1205241W001	206	3/1/2015	0:00			70.600	0.00	149.70	149.70	79.096	70.604	ES	1 Ft	Merced Area Groundwater Pool Interests (MAGPI)	CASGEM	MID

Read Me

Field Name	Field Description	Mandatory
CASGEM ID	The unique identifier assigned and used by the CASGEM system.	Yes
Local or State Well Number	The name or number identifier given to the well by the Monitoring Entity.	No
Date (mm/dd/yyyy)	Enter the data in this format: mm/dd/yyyy. An error message will display if a future date is entered.	Yes

MAGPI CASGEM



CASGEM Monitoring Plan Merced Area Groundwater Pool Interests (MAGPI)

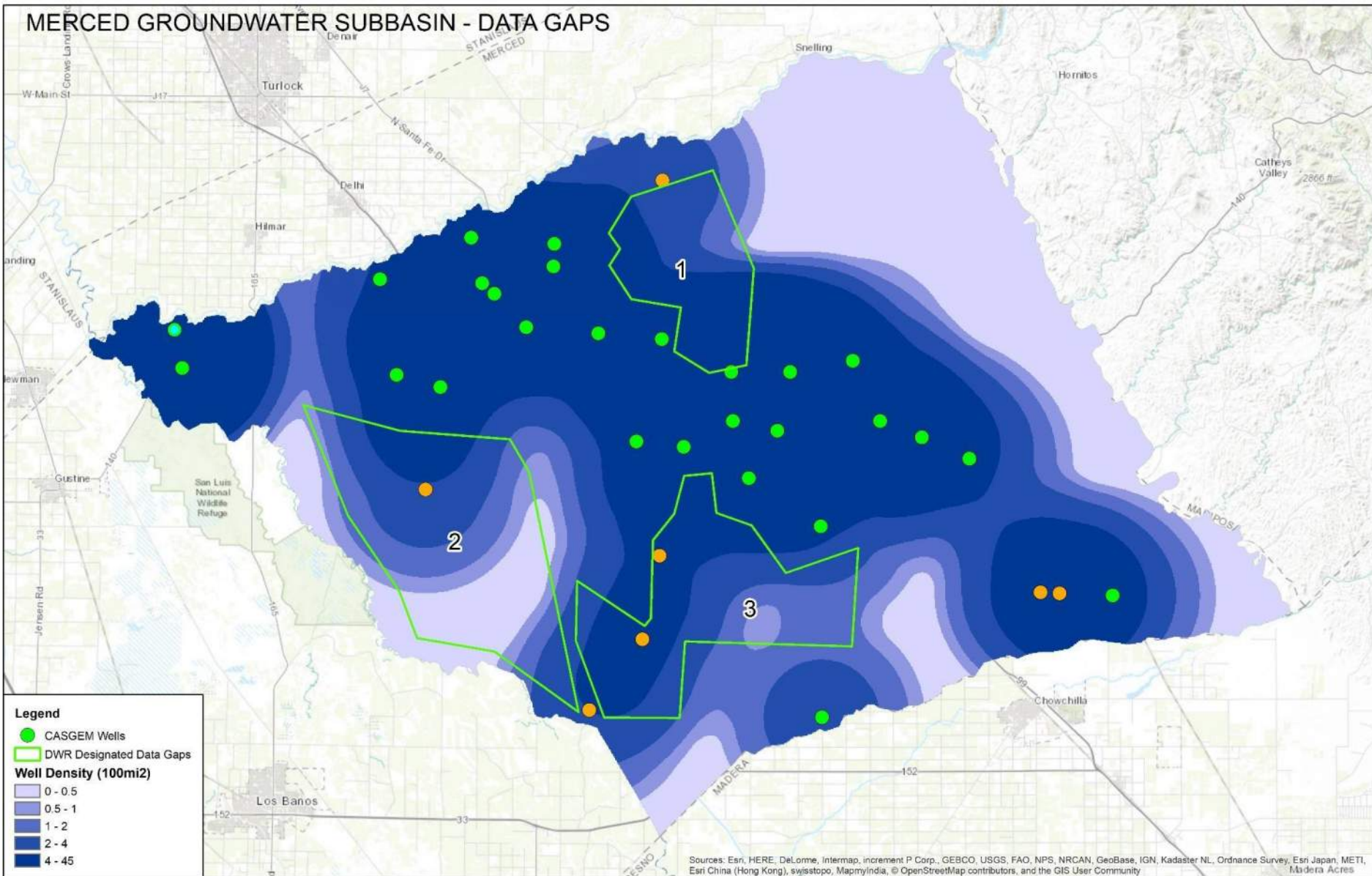
- [http://magpi-gw.org/MAGPI-GW/assets/File/CASGEM Monitoring Plan Update August 22 2014small.pdf](http://magpi-gw.org/MAGPI-GW/assets/File/CASGEM%20Monitoring%20Plan%20Update%20August%2022%202014small.pdf)

Total Wells

MAGPI Entity	Above Corcoran Clay	Below Corcoran Clay	Outside Corcoran Clay (East)	Screened in Both	Total Wells
Merced Irrigation District	5	5	5	1	16
City of Merced	0	4	12	0	16
Stevinson Water District	6	0	0	0	6
Chowchilla Water District	0	1	1	0	2
Lone Tree Mutual Water District	0	2	0	0	2
Winton Water & Sanitary District	0	0	2	0	2
City of Atwater	0	0	1	0	1
Private	2	1	1	0	4
Total:	13	13	22	1	49

CASGEM Data Gaps

MERCED GROUNDWATER SUBBASIN - DATA GAPS



MAGPI CASGEM WELLS - COMPLETION RELATIVE TO CORCORAN CLAY

Explanation

- MAGPI CASGEM wells outside of the Corcoran Clay extent
- MAGPI CASGEM wells above Corcoran Clay
- MAGPI CASGEM wells below Corcoran Clay
- MAGPI CASGEM wells above and below Corcoran Clay

Merced Groundwater Basin
 Corcoran Clay extent
 Corcoran Clay thickness in feet

Public Water Agencies

- Ballico-Cortez W.D.
- Chowchilla W.D.
- Laguna W.D.
- Le Grand-Athlone W.D.
- Merced I.D.
- Merquin County W.D.
- Sierra W.D.
- Stevinson W.D.
- Turner Island W.D.
- Winton_Water_Sanitary_District

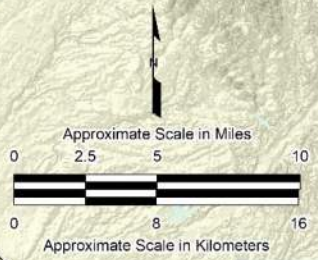
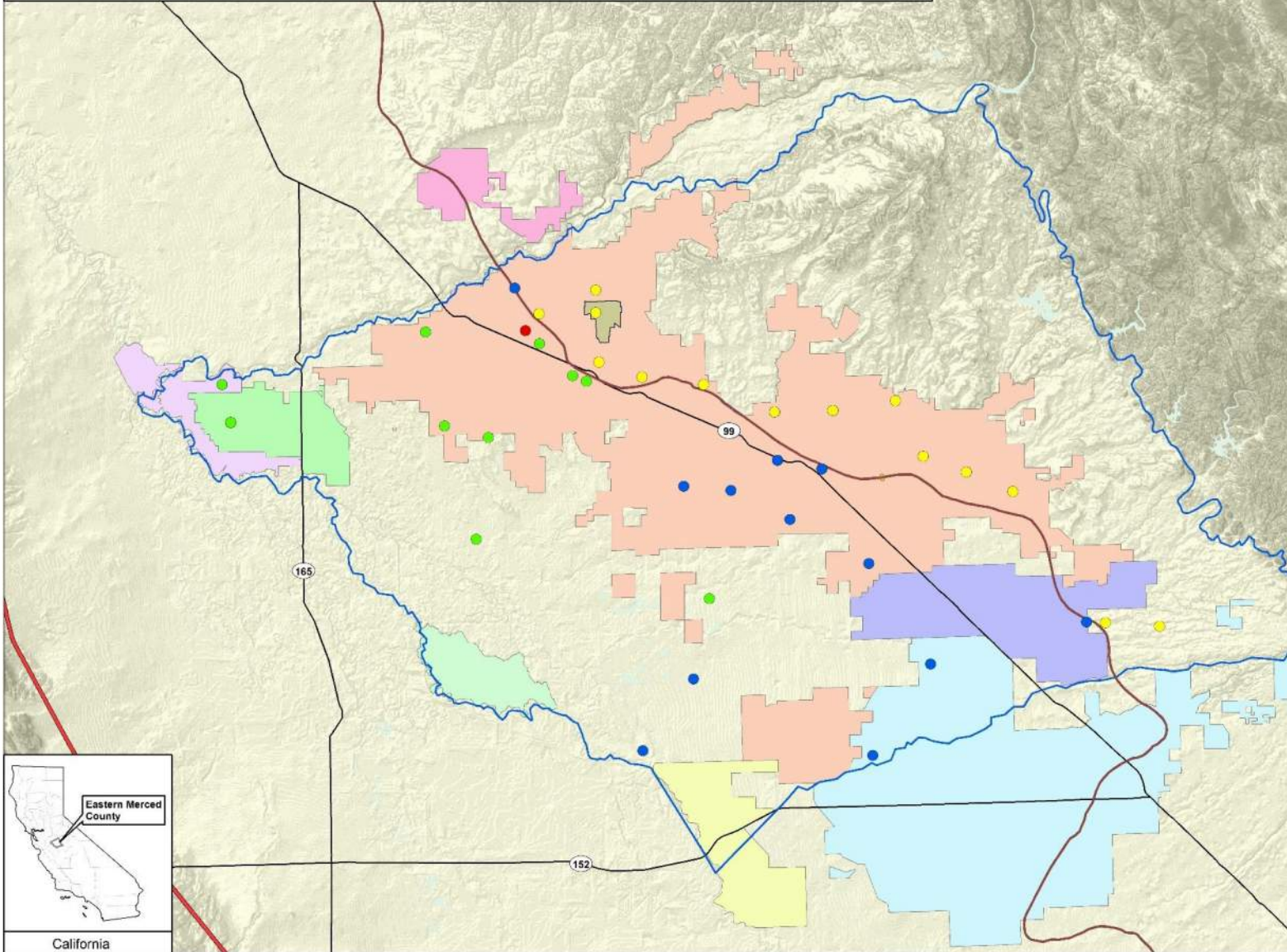


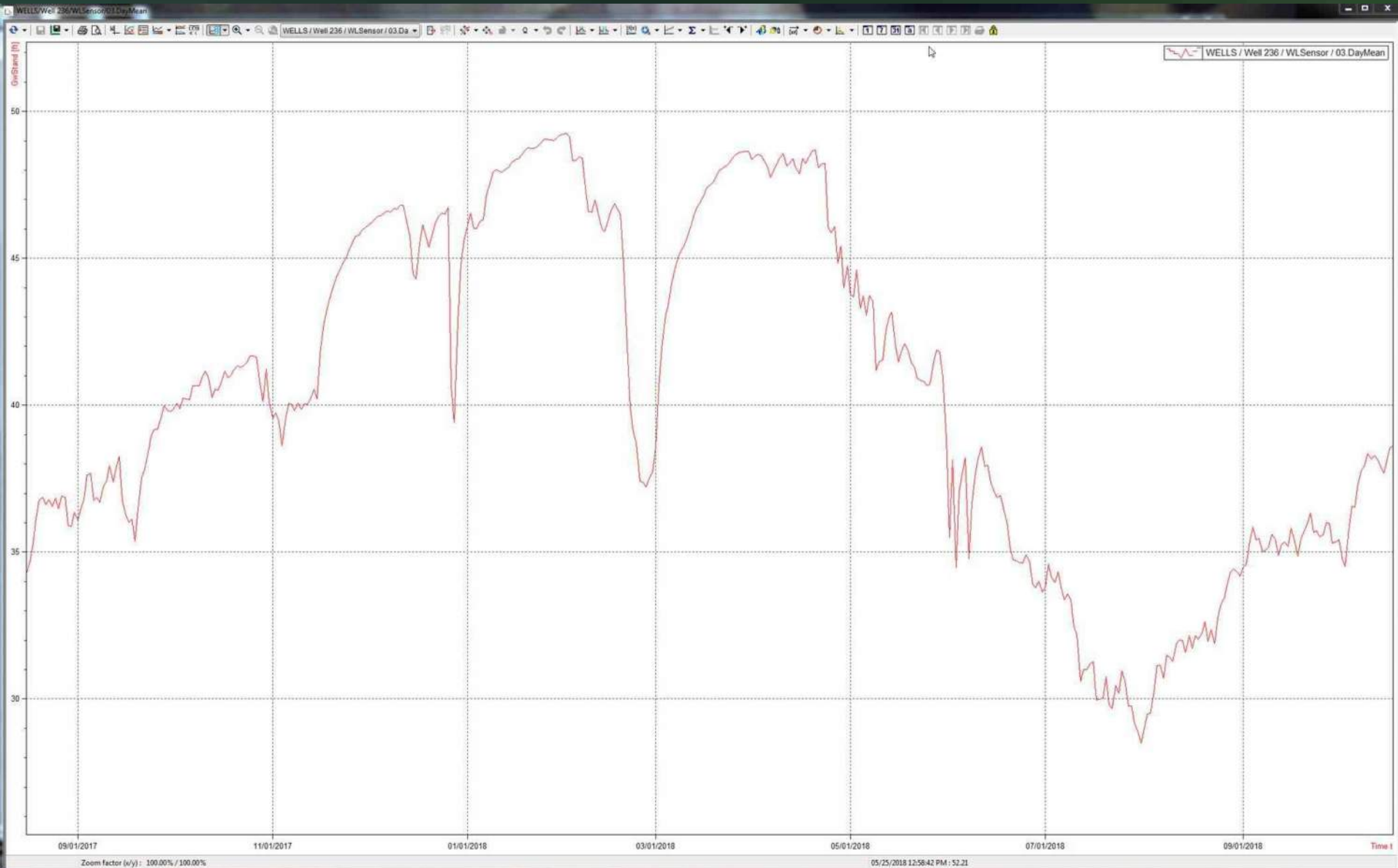
Figure 7

Well Automation

- Installed two weather and groundwater monitoring stations (Well 95 and Well 236)



Well 236



Next Steps



- Continue expanding coverage with additional wells
- Continue compliance by submitting elevation data
- Instrument additional wells for SGMA monitoring
- Finalize the updated Monitoring Plan

Questions?



http://www.sbcity.org/about/history/streets_n_places/artesian_avenue.asp
http://www.sbcity.org/images/History/artesian3_1.jpg