Table D7-1

2017 – 2070 Forecast Model Hydrology Sequence[1]

Tulare Lake Subbasin Hydrologic Model
Kings County, California

Stress Period	Forecast Year	Hydrology Conditions	Normal Kings River Flow (AF)	CNRA Change Factor	Kings River Flow CNRA (AF)
1	2017	2011	1,037,113	1.004167	1,041,434
2	2018	2010	706,083	1.016667	717,851
3	2019	1999	763,007	0.998333	761,735
4	2020	2000	777,871	1.010833	786,298
5	2021	2001	456,607	1.013333	462,695
6	2022	2002	582,769	1.015000	591,510
7	2023	2003	603,080	1.014167	611,624
8	2024	2004	515,426	1.038333	535,184
9	2025	2005	901,509	1.001667	903,011
10	2026	2000	777,871	1.010833	786,298
11	2027	2007	526,947	1.008333	531,338
12	2028	2008	379,491	1.001667	380,123
13	2029	2009	387,005	1.015000	392,810
14	2030	2010	706,083	1.016667	717,851
15	2031	1997	757,901	0.983333	745,269
16	2032	1998	704,676	0.989167	697,042
17	2033	1999	763,007	0.996667	760,463
18	2034	2000	777,871	1.021667	794,725
19	2035	2001	456,607	1.016667	464,217
20	2036	2002	582,769	0.974167	567,714
21	2037	2003	603,080	0.974167	587,500
22	2038	2004	515,426	1.002500	516,714
23	2039	2005	901,509	0.993333	895,499
24	2040	2000	777,871	1.021667	794,725
25	2041	2007	526,947	1.000833	527,386
26	2042	2008	379,491	1.002500	380,440
27	2043	2009	387,005	0.991667	383,780
28	2044	2010	706,083	1.012500	714,909
29	2045	1997	757,901	0.983333	745,269
30	2046	1998	704,676	0.989167	697,042
31	2047	1999	763,007	0.996667	760,463
32	2048	2000	777,871	1.021667	794,725
33	2049	2001	456,607	1.016667	464,217
34	2050	2002	582,769	0.974167	567,714
35	2051	2003	603,080	0.974167	587,500
36	2052	2004	515,426	1.002500	516,714

Table D7-1

2017 – 2070 Forecast Model Hydrology Sequence[1]

Stress Period	Forecast Year	Hydrology Conditions	Normal Kings River Flow (AF)	CNRA Change Factor	Kings River Flow CNRA (AF)
37	2053	2005	901,509	0.993333	895,499
38	2054	2000	777,871	1.021667	794,725
39	2055	2007	526,947	1.000833	527,386
40	2056	2008	379,491	1.002500	380,440
41	2057	2009	387,005	0.991667	383,780
42	2058	2010	706,083	1.012500	714,909
43	2059	1997	757,901	0.983333	745,269
44	2060	1998	704,676	0.989167	697,042
45	2061	1999	763,007	0.996667	760,463
46	2062	2000	777,871	1.021667	794,725
47	2063	2001	456,607	1.016667	464,217
48	2064	2002	582,769	0.974167	567,714
49	2065	2003	603,080	0.974167	587,500
50	2066	2004	515,426	1.002500	516,714
51	2067	2005	901,509	0.993333	895,499
52	2068	2000	777,871	1.021667	794,725
53	2069	2007	526,947	1.000833	527,386
54	2070	2008	379,491	1.002500	380,440

1. AF = acre-feet and CNRA = California Natural Resources Agency.

Table D7-2

2017 – 2070 Projects Forecast Model Project Development and Yields[1]

Tulare Lake Subbasin Hydrologic Model
Kings County, California

Year	Kings River Hydrology		Project Descriptions	Mid-Kings GSA Proposed Recharge (AF)	El Rico GSA		South Fork Kings GSA Proposed 10,000 AC SW Pond (AF)	TCWA GSA Proposed 13,340 AC SW Pond (AF)	New Project Total SW Supply (AF)
					Existing Ponds (AF)	Proposed 6,400 AC SW Pond (AF)			
	% Normal Flows	Flood Years							
2017	180%			0	0	0	0	0	0
2018	121%			0	0	0	0	0	0
2019	74%			0	0	0	0	0	0
2020	90%		Construct 340 acres of Perc Basins	0	0	0	0	0	0
2021	59%			0	0	0	0	0	0
2022	67%			0	0	0	0	0	0
2023	83%			0	0	0	0	0	0
2024	61%			0	0	0	0	0	0
2025	148%	Flood		50,000	71,000	0	0	0	0
2026	90%		Construct 340 acres of Perc Basins	0	0	0	0	0	0
2027	40%			0	0	0	0	0	0
2028	72%		Construct 6,400, 10,000, and 13,400	0	0	0	0	0	0
2029	79%		acres of SW Ponds	0	0	0	0	0	0
2030	121%		Construct 340 acres of Perc Basins	0	0	0	0	0	0
2031	155%	Flood		150,000	71,000	40,000	60,000	80,000	180,000
2032	181%	Flood		150,000	71,000	40,000	60,000	80,000	180,000
2033	74%			0	0	0	0	0	0
2034	90%			0	0	0	0	0	0
2035	59%		Construct 340 acres of Perc Basins	0	0	0	0	0	0
2036	67%			0	0	0	0	0	0
2037	83%			0	0	0	0	0	0
2038	61%			0	0	0	0	0	0
2039	148%	Flood		200,000	71,000	40,000	60,000	80,000	180,000
2040	90%			0	0	0	0	0	0
2041	40%			0	0	0	0	0	0
2042	72%			0	0	0	0	0	0
2043	79%			0	0	0	0	0	0
2044	121%			0	0	0	0	0	0
2045	155%	Flood		200,000	71,000	40,000	60,000	80,000	180,000
2046	181%	Flood		200,000	71,000	40,000	60,000	80,000	180,000
2047	74%			0	0	0	0	0	0
2048	90%			0	0	0	0	0	0
2049	59%			0	0	0	0	0	0
2050	67%			0	0	0	0	0	0
2051	83%			0	0	0	0	0	0
2052	61%			0	0	0	0	0	0
2053	148%	Flood		200,000	71,000	40,000	60,000	80,000	180,000
2054	90%			0	0	0	0	0	0
2055	40%			0	0	0	0	0	0
2056	72%			0	0	0	0	0	0
2057	79%			0	0	0	0	0	0
2058	121%			0	0	0	0	0	0
2059	155%	Flood		200,000	71,000	40,000	60,000	80,000	180,000
2060	181%	Flood		200,000	71,000	40,000	60,000	80,000	180,000
2061	74%			0	0	0	0	0	0
2062	90%			0	0	0	0	0	0
2063	59%			0	0	0	0	0	0
2064	67%			0	0	0	0	0	0
2065	83%			0	0	0	0	0	0
2066	61%			0	0	0	0	0	0
2067	148%	Flood		200,000	71,000	40,000	60,000	80,000	180,000
2068	90%			0	0	0	0	0	0
2069	40%			0	0	0	0	0	0
2070	72%			0	0	0	0	0	0
			Project Annual Average	**38,043**	**15,435**	**8,780**	**13,171**	**17,561**	**40,500**
			2040-2048 Average	**44,444**	**15,778**	**8,889**	**13,333**	**17,778**	**40,000**

1. GSA = Groundwater Sustainability Agency, TCWA = Tri-County Water Authority, AC = acre, SW = southwest, SF = surface water, and AF = acre-feet.

Table D7-3

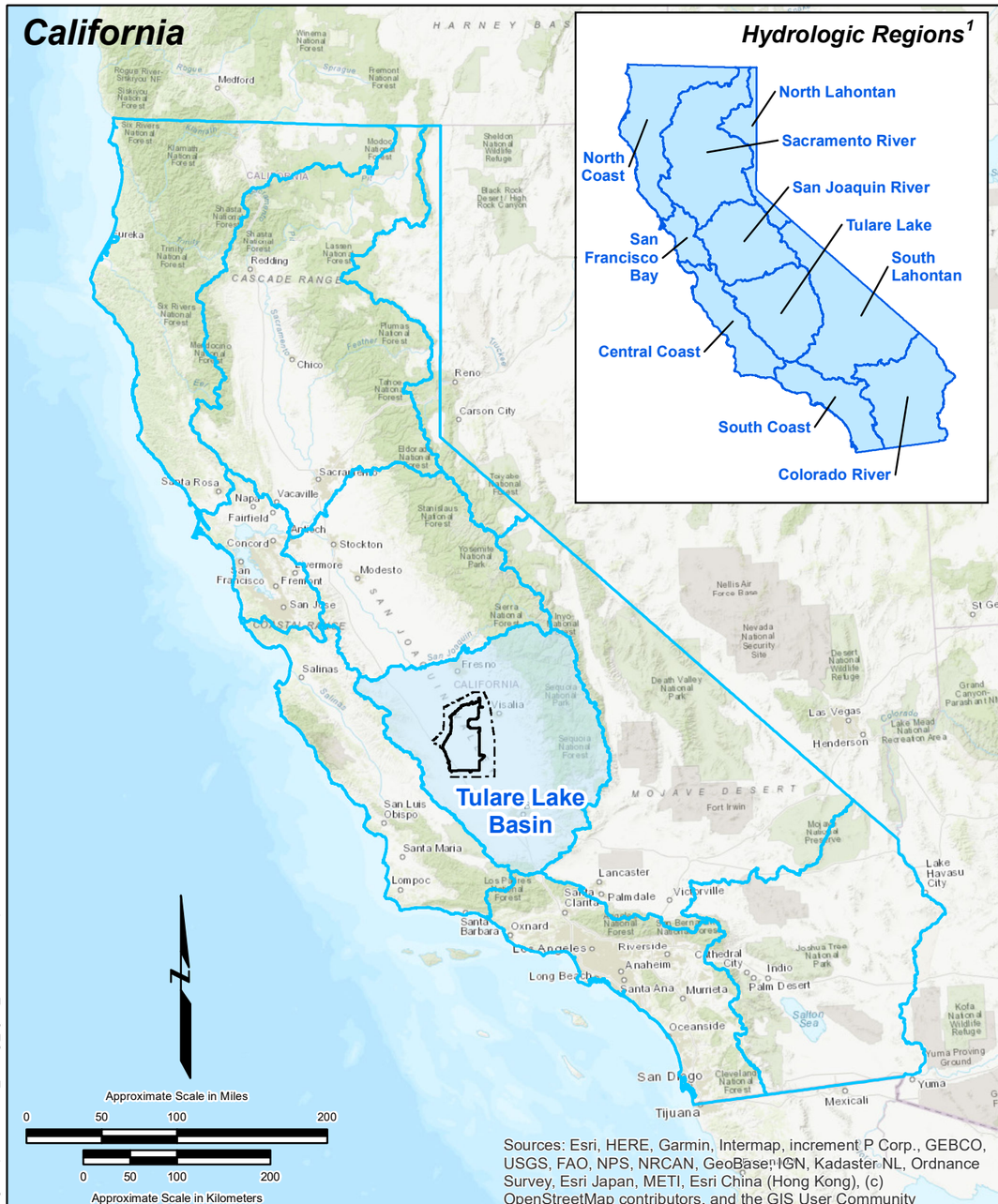
Historical and Forecasts Groundwater Balance Comparison[1]

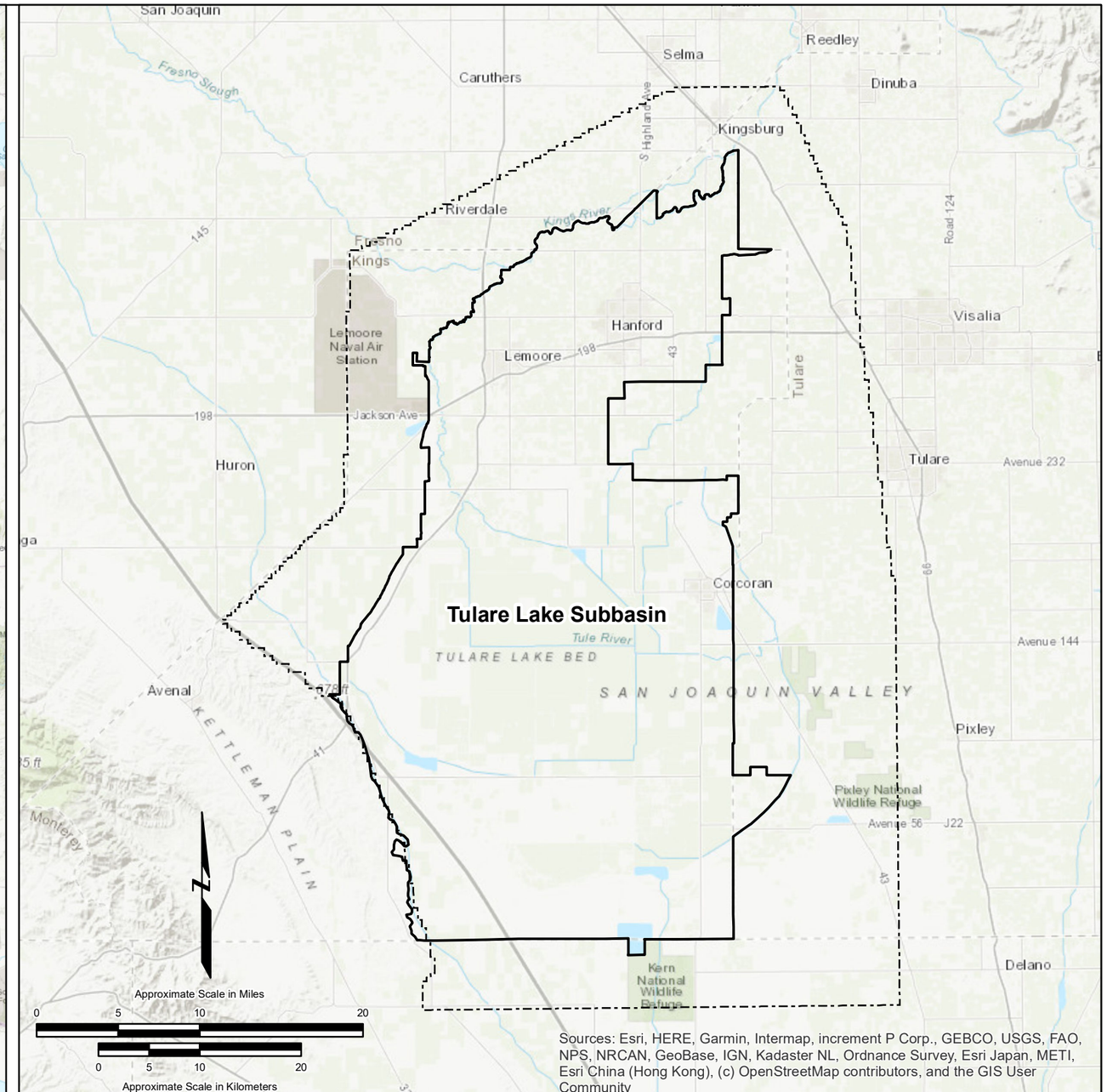
Tulare Lake Subbasin Hydrologic Model
Kings County, California

Simulation	Total Simulation Period	Tulare Lake Drain Net (AF/Y)	Tulare Lake Well Net (AF/Y)	Tulare Lake River Net (AF/Y)	Tulare Lake Recharge Net (AF/Y)	Tulare Lake Storage Net (AF/Y)	Tulare Lake Net Interbasin Flow (AF/Y)	Tulare Lake - Westside Net (AF/Y)	Tulare Lake - Kings Net (AF/Y)	Tulare Lake - Kaweah Net (AF/Y)	Tulare Lake - Tule Net (AF/Y)	Tulare Lake - Kern Net (AF/Y)
Above Corcoran Clay												
Calibration	1990-2016 Average	-5,724	-246,814	141,361	173,756	-142,214	-5,565	5,230	-5,566	-64	-6,678	1,514
Baseline Forecast	2017-2070 Average	-2,915	-233,018	148,209	172,329	-91,547	-30,438	1,288	-8,263	-8,955	-13,336	-1,172
Projects Forecast	2017-2070 Average	-3,919	-196,130	109,294	200,120	-29,931	-16,363	1,707	-4,390	-6,625	-6,988	-67
Below Corcoran Clay												
Calibration	1990-2016 Average	0	-134,595	0	0	56,519	-12,648	-1,269	-8,259	-19,363	-11,700	27,943
Baseline Forecast	2017-2070 Average	0	-90,714	0	0	-51,440	-108,636	-24,350	-25,894	-44,226	-35,198	21,032
Projects Forecast	2017-2070 Average	0	-89,353	0	0	-6,269	-42,250	-11,794	-4,500	-27,202	-6,599	7,845
Total Aquifer												
Calibration	1990-2016 Average	-5,724	-381,410	141,361	173,756	-85,694	-18,213	3,961	-13,826	-19,427	-18,379	29,457
Baseline Forecast	2017-2070 Average	-2,915	-323,732	148,209	172,329	-142,987	-139,074	-23,062	-34,157	-53,181	-48,534	19,860
Projects Forecast	2017-2070 Average	-3,919	-285,483	109,294	200,120	-36,200	-58,613	-10,086	-8,890	-33,827	-13,587	7,778

Simulation	Normal Hydrology Period	Tulare Lake Drain Net (AF/Y)	Tulare Lake Well Net (AF/Y)	Tulare Lake River Net (AF/Y)	Tulare Lake Recharge Net (AF/Y)	Tulare Lake Storage Net (AF/Y)	Tulare Lake Net Interbasin Flow (AF/Y)	Tulare Lake - Westside Net (AF/Y)	Tulare Lake - Kings Net (AF/Y)	Tulare Lake - Kaweah Net (AF/Y)	Tulare Lake - Tule Net (AF/Y)	Tulare Lake - Kern Net (AF/Y)
Above Corcoran Clay												
Calibration	1998-2010 Average	-9,985	-235,813	140,827	176,936	-103,177	-6,741	4,658	-5,640	-244	-7,131	1,616
Baseline Forecast	2040-2048 Average	-1,986	-231,248	141,765	170,054	-104,055	-34,749	965	-10,192	-9,468	-13,930	-2,124
Projects Forecast	2040-2048 Average	-3,288	-182,304	89,564	210,859	-25,079	-19,005	1,572	-6,346	-7,148	-6,743	-341
Below Corcoran Clay												
Calibration	1998-2010 Average	0	-129,537	0	0	29,412	-17,552	1,173	-10,299	-20,331	-14,158	26,063
Baseline Forecast	2040-2048 Average	0	-72,702	0	0	-45,379	-121,729	-29,706	-29,475	-46,470	-36,501	20,423
Projects Forecast	2040-2048 Average	0	-62,943	0	0	5,687	-53,972	-15,058	-8,292	-31,963	-6,195	7,536
Total Aquifer												
Calibration	1998-2010 Average	-9,985	-365,350	140,827	176,936	-73,765	-24,294	5,830	-15,939	-20,575	-21,289	27,680
Baseline Forecast	2040-2048 Average	-1,986	-303,950	141,765	170,054	-149,434	-156,477	-28,740	-39,667	-55,938	-50,431	18,299
Projects Forecast	2040-2048 Average	-3,288	-245,247	89,564	210,859	-19,392	-72,977	-13,485	-14,638	-39,111	-12,938	7,195

1. AF/Y = acre-feet per year.





Explanation

- Hydrologic region
- Subbasin boundary
- Model Domain

Note:
1) Hydrologic region dataset obtained from California Department of Water Resources (CA DWR), September 12, 2018. https://data.ca.gov/dataset/hydrologic-regions

Site Location Map
Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: EMC	Date: 12/12/2019	Project No.: FR18161220
		Figure **D1-1**

Date: 12/12/2019 Printed by: shaina.price
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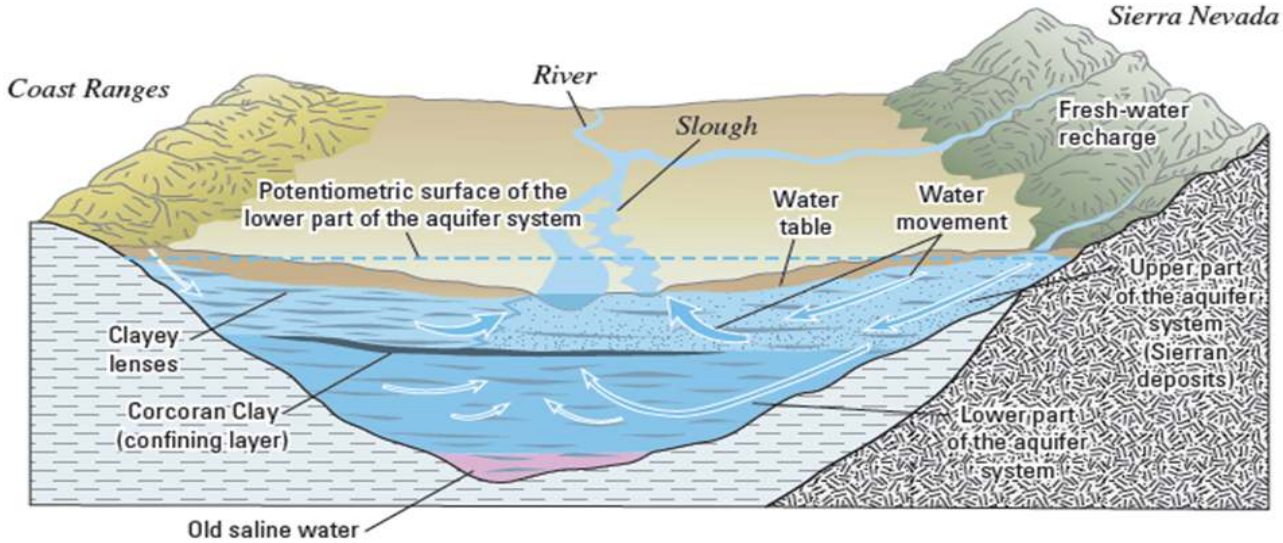
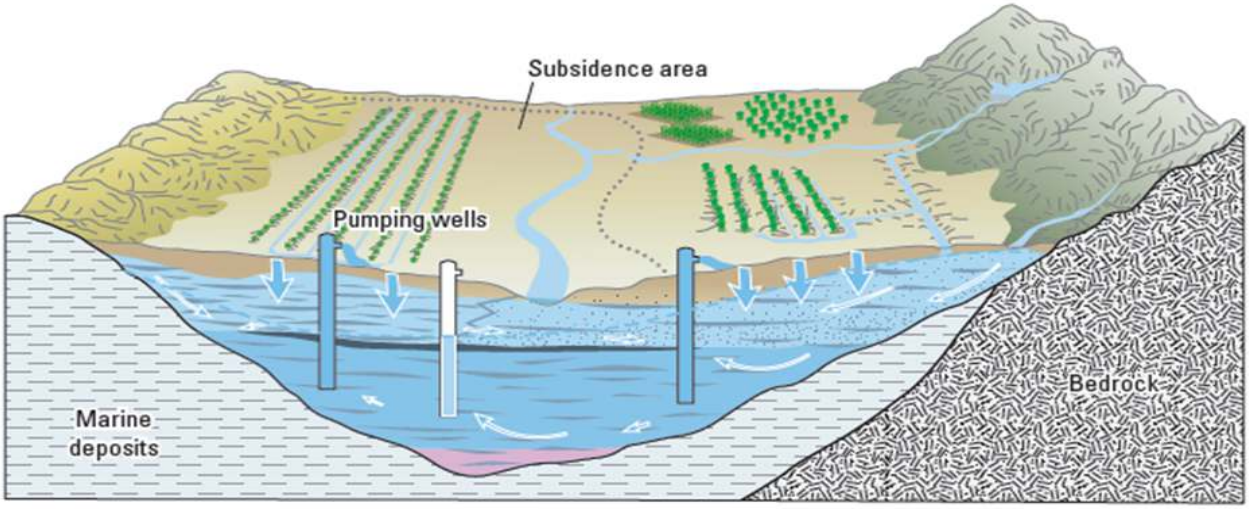
Pre-Development





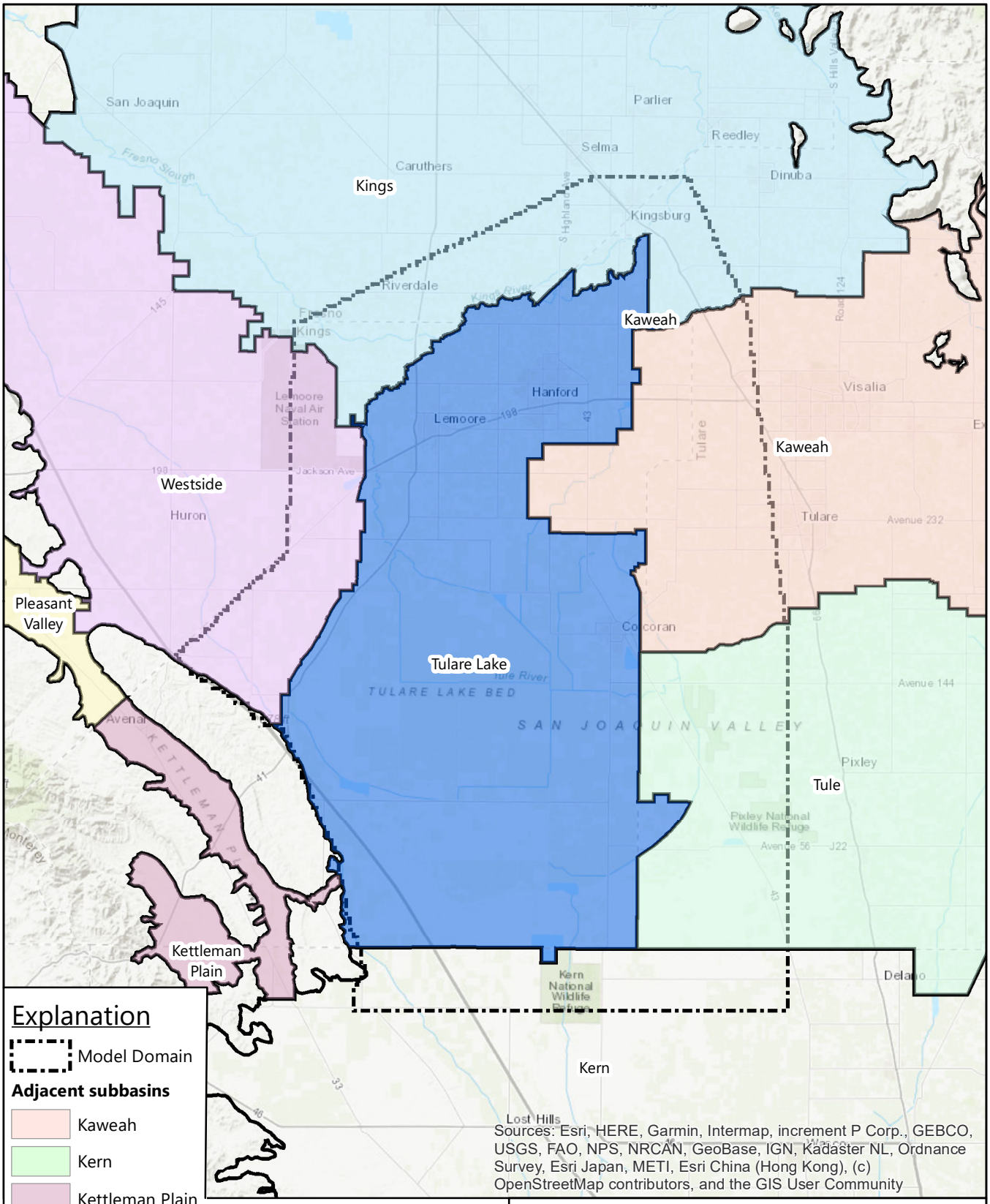
Post-Development

Pre-Development and Post-Development Hydrogeologic Conceptual Model for the San Joaquin Valley

Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: EMC	Date: 08/26/2019	Project No.: FR18161220
		Figure **D2-1**

adapted from Fig. A9, USGS Prof. Paper 1766



Explanation

Model Domain

Adjacent subbasins

- Kaweah
- Kern
- Kettleman Plain
- Kings
- Pleasant Valley
- Tulare Lake
- Tule
- Westside

Miles: 0 2.25 4.5 9

Kilometers: 0 2.5 5 10

Subbasins Bounding The Tulare Lake Subbasin

Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: EMC	Date: 1/7/2020	Project No.: FR18161220
		Figure **D2-2**

Date: 1/7/2020 Printed by: elizabeth.chapman
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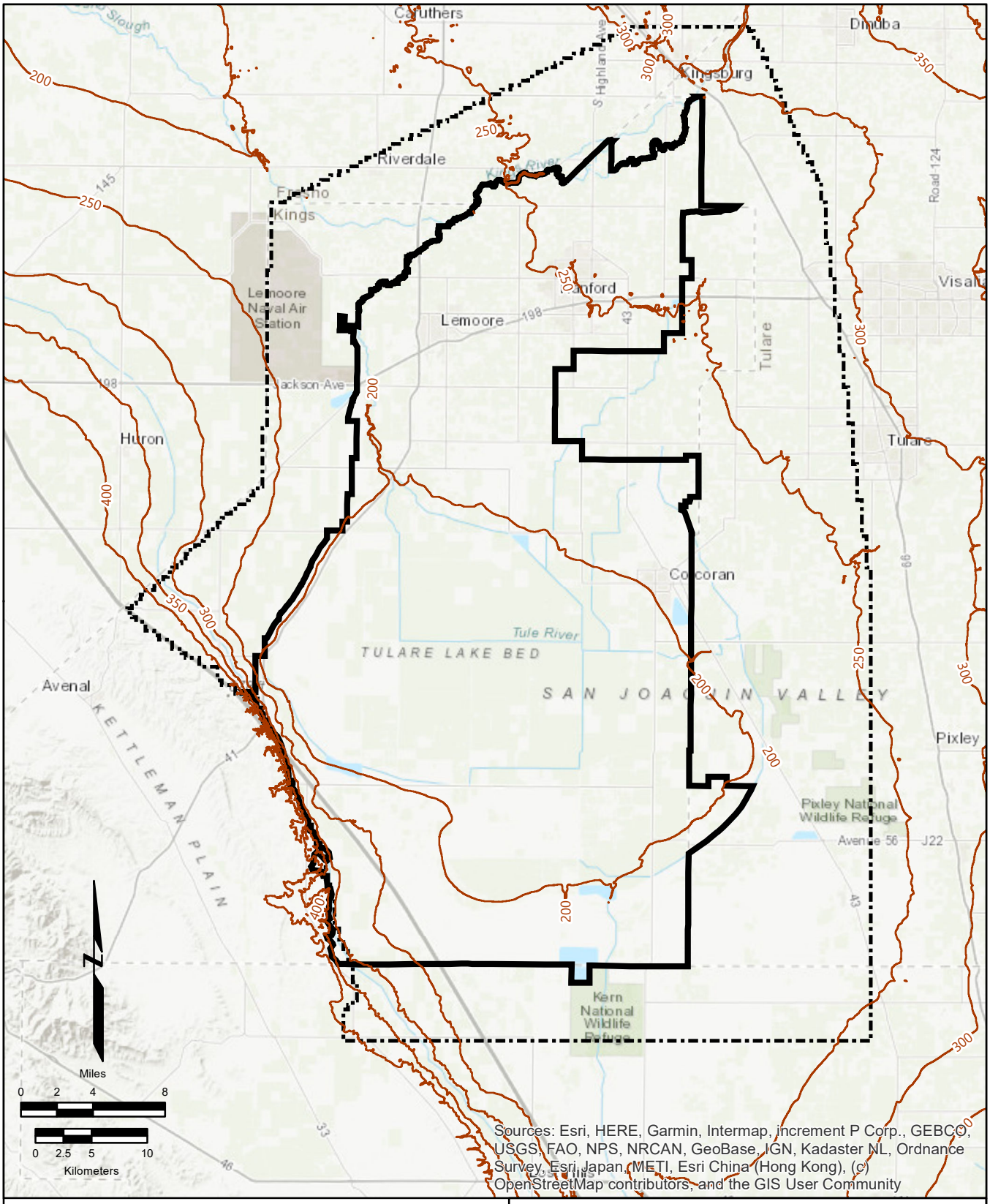

Explanation

- 50ft elevation contour
- Subbasin boundary
- Model domain

Surface Topography

Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: EMC	Date: 12/12/2019	Project No.: FR18161220
		Figure **D2-3**

Date: 12/12/2019 Printed by: shaina.price
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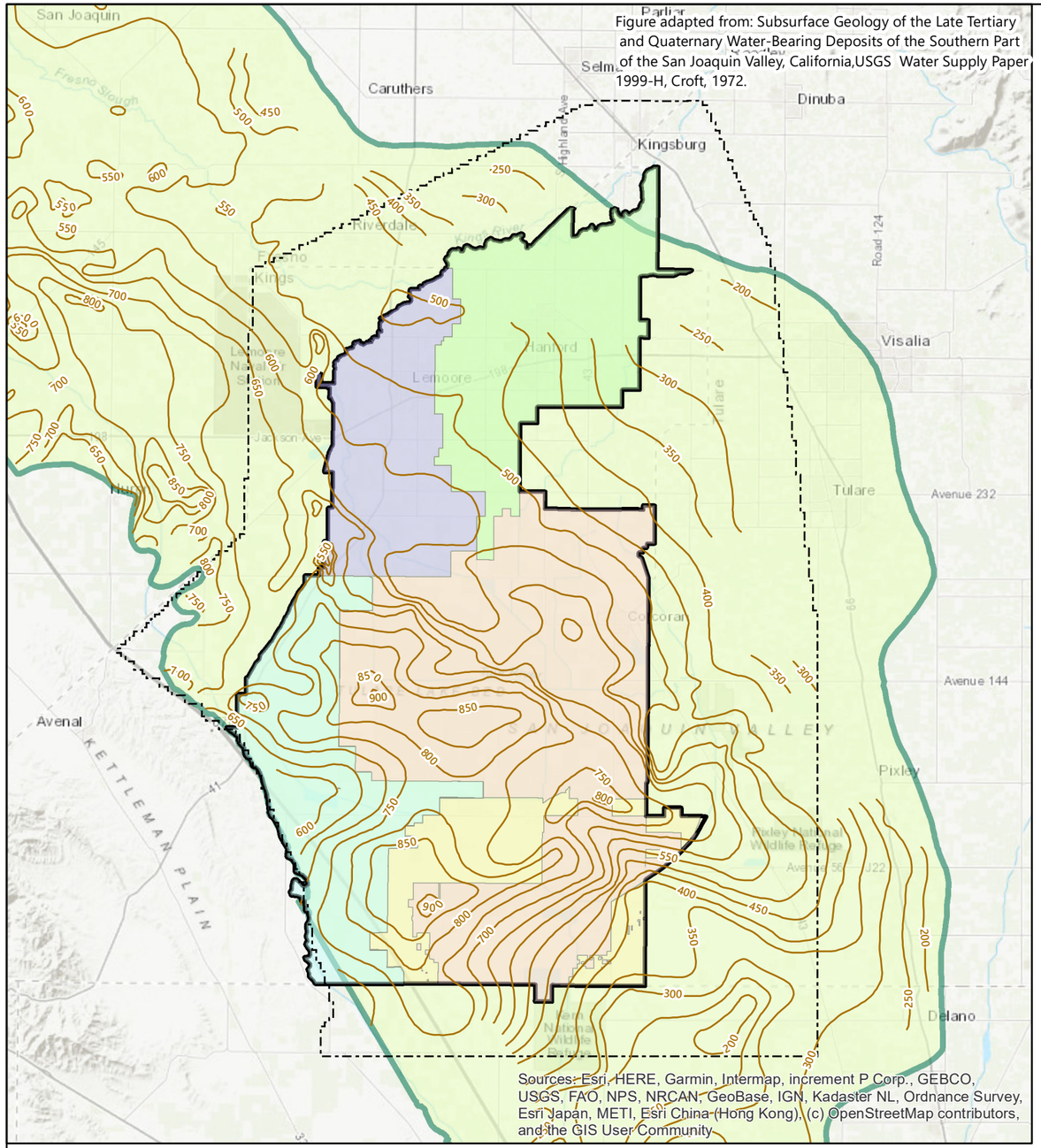
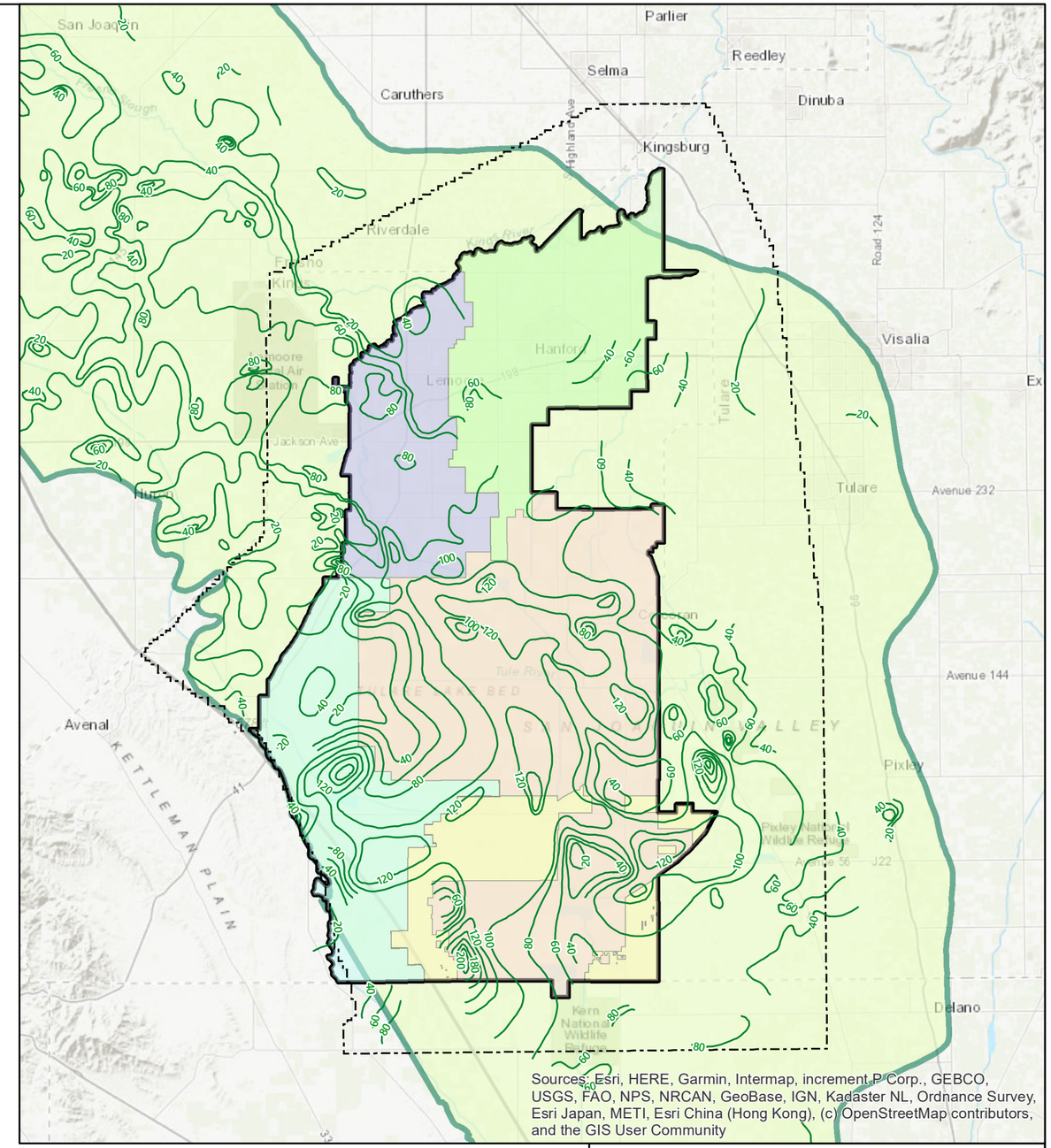
Figure adapted from: Subsurface Geology of the Late Tertiary and Quaternary Water-Bearing Deposits of the Southern Part of the San Joaquin Valley, California,USGS Water Supply Paper 1999-H, Croft, 1972.





Explanation

- Depth to top of E-Clay in feet
- Thickness of E-Clay in feet
- Model domain
- Subbasin boundary
- Extent of E-Clay

Groundwater Sustainability Areas (GSAs)

- El Rico Groundwater Sustainability Agency
- Mid-Kings River Groundwater Sustainability Agency
- South Fork Kings Groundwater Sustainability Agency
- Southwest Kings Groundwater Sustainability Agency
- Tri-County Water Authority

Approximate Scale in Miles: 0 4 8 16

Approximate Scale in Kilometers: 0 4 8 16

N

Lateral Extent Elevation and Thickness of E-Clay

Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: EMC	Date: 1/7/2020	Project No.: FR16181220
		Figure **D2-4**

Date: 1/7/2020 Printed by: elizabeth.chapman
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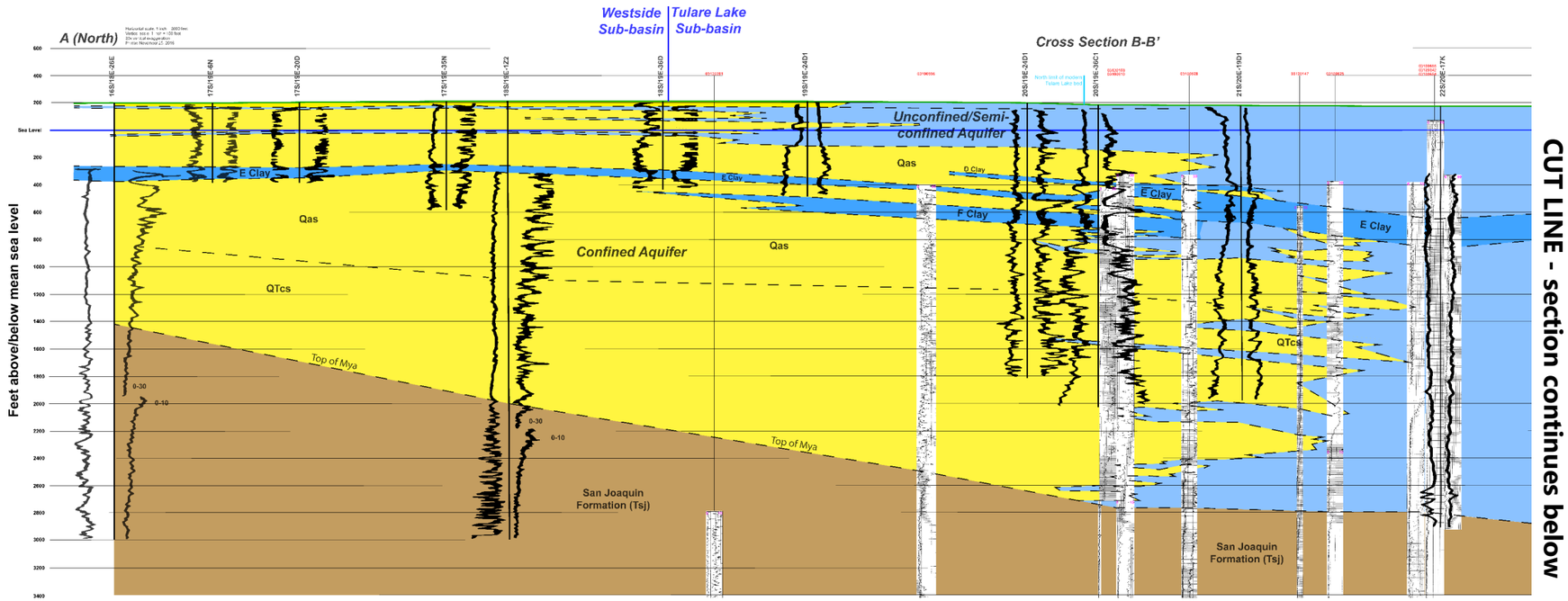

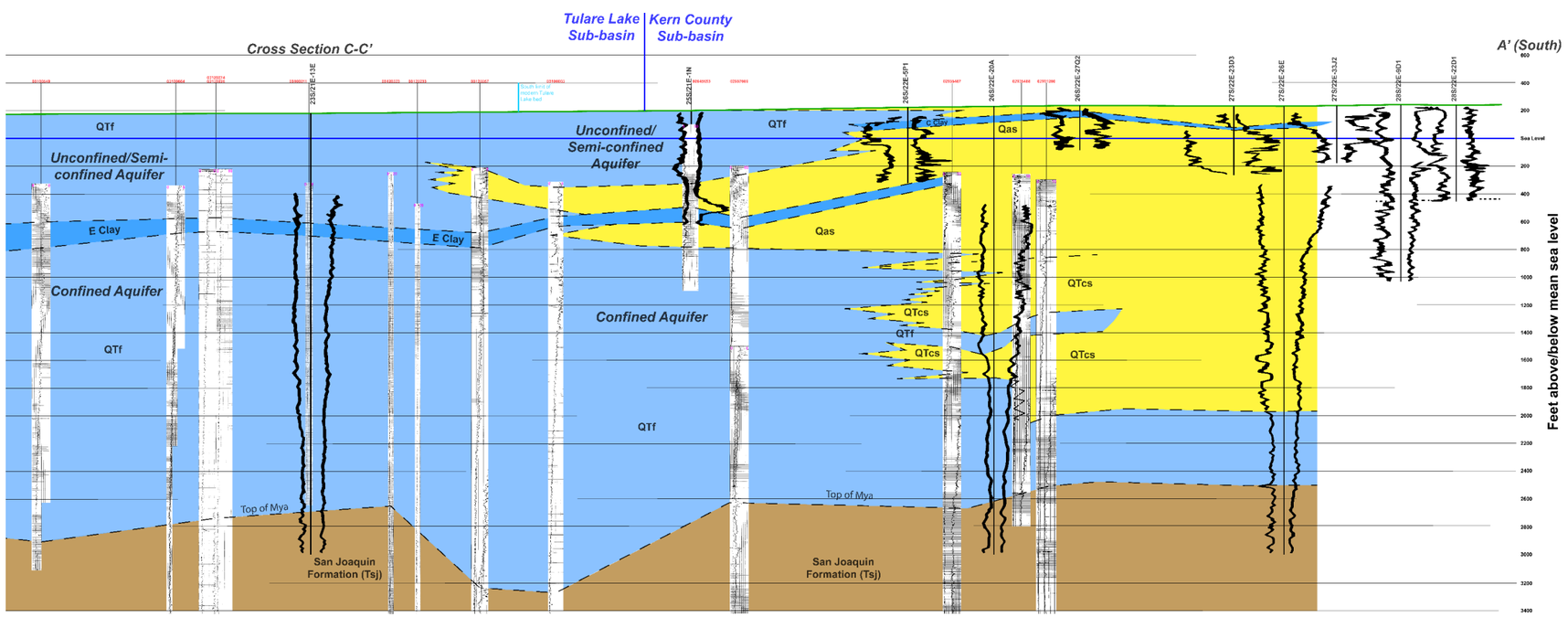

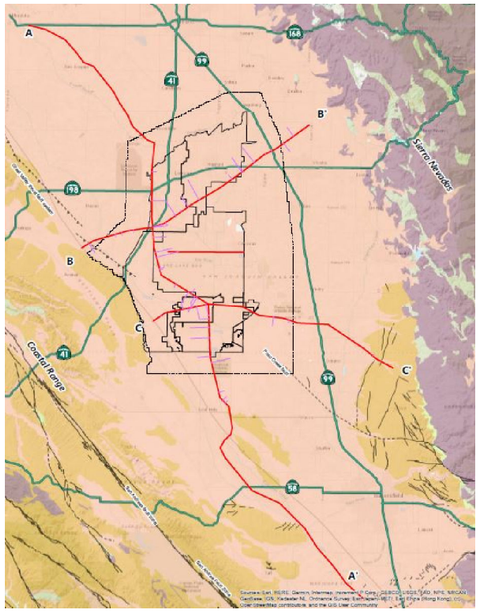

Explanation

	Coarse-grained alluvium / Tulare Formation
	San Joaquin Formation
	Alluvium / Tulare Formation lacustrine sediments
	Regional clay marker beds as defined by Croft (1972)
25S/21E-1N	CA DWR well name
03120281	CA DOGGR well APN
0 30	Electric log resistivity scale (ohmmeters)

Notes:
1) Contacts dashed where inferred.
2) CA DWR = California Department of Water Resources.
2) CA DOGGR = Division of Oil, Gas, and Geothermal Resources, California Department of Conservation.

North-South Geologic Cross-Section A-A'
Tulare Lake Subbasin Groundwater Sustainability Plan
Kings county, California

By: EMC	Date: 12/13/2019	Project No.: FR18161220
		Figure **D2-5a**

Date: 12/13/2019 Printed by: shaina.price
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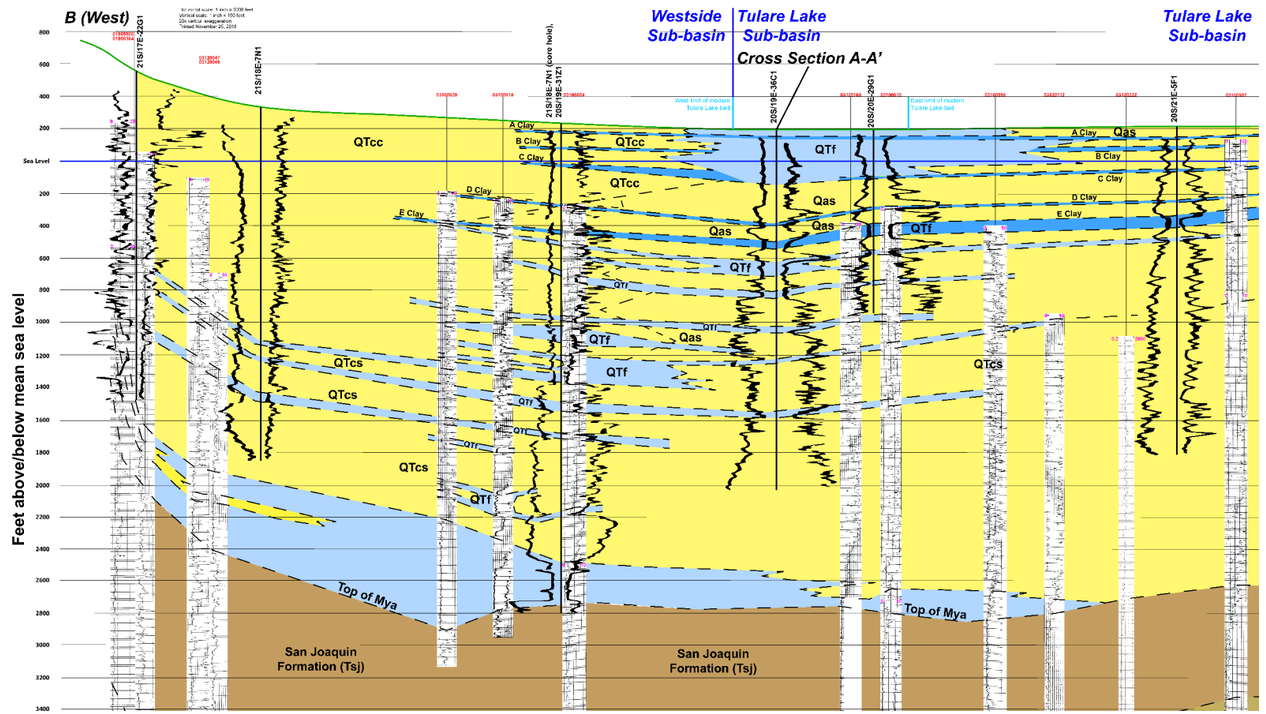

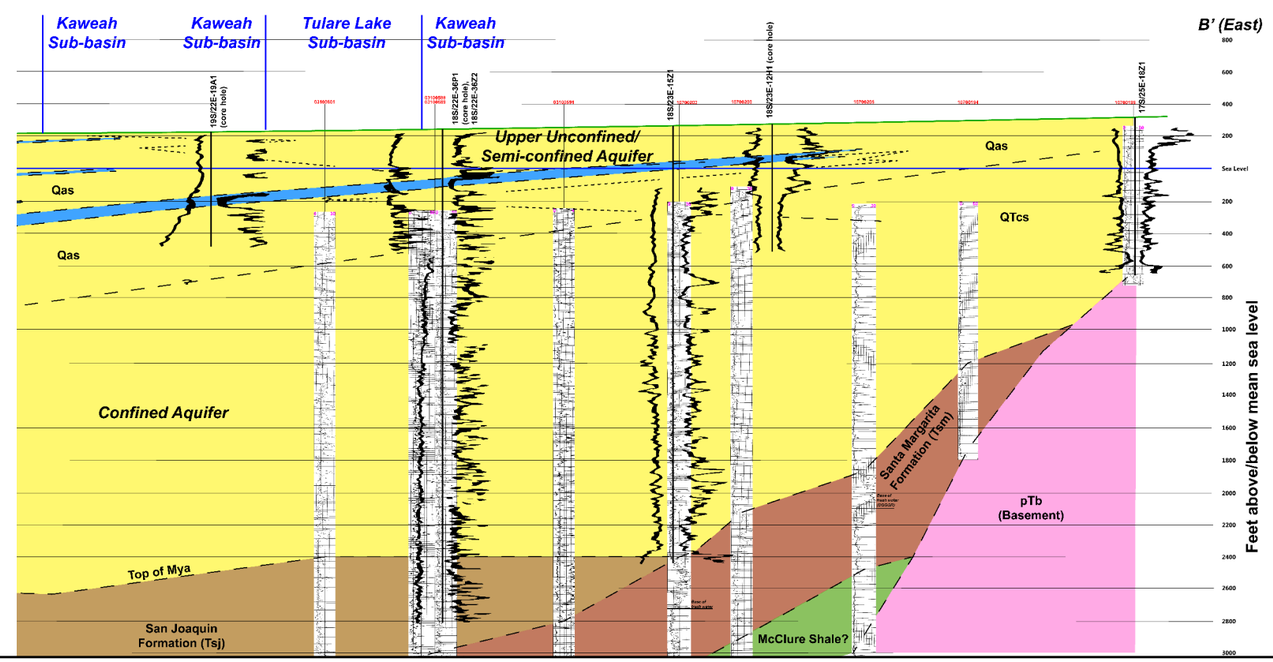

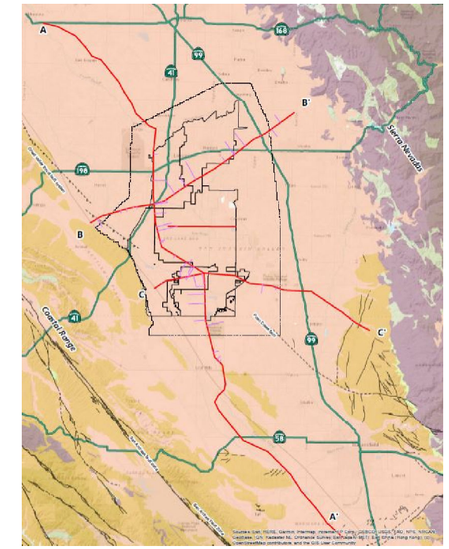

Explanation

- Coarse-grained alluvium / Tulare Formation
- San Joaquin Formation
- Etchegoin Formation
- Santa Margarita Formation
- Alluvium / Tulare Formation lacustrine sediments
- Regional clay marker beds as defined by Croft (1972)
- Crystalline basement

25S/21E-1N CA DWR well name

03120281 CA DOGGR well APN

0 30 Electric log resistivity scale (ohmmeters)

Notes:
1) Contacts dashed where inferred.
2) CA DWR = California Department of Water Resources.
2) CA DOGGR = Division of Oil, Gas, and Geothermal Resources, California Department of Conservation.

West-East Geologic Cross-Section B-B'

Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: EMC	Date: 12/13/2019	Project No.: FR18161220
		Figure **D2-5b**

Date: 12/13/2019 Printed by: shaina.price
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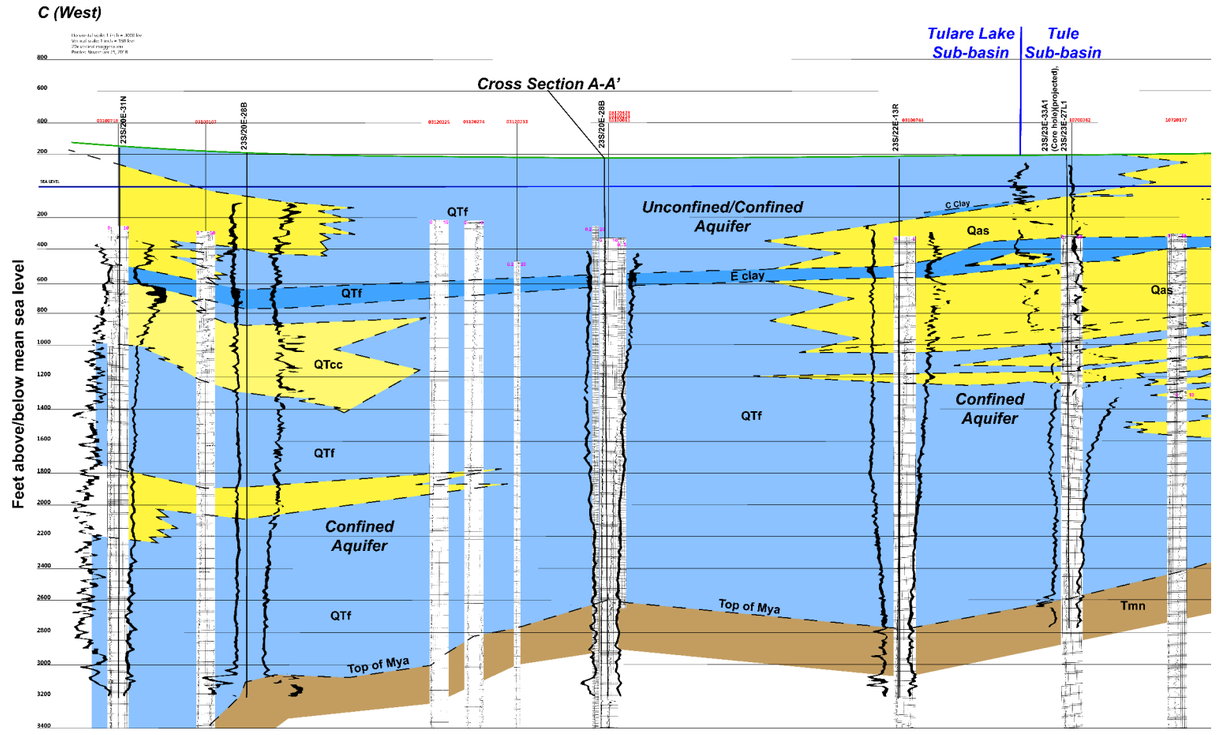
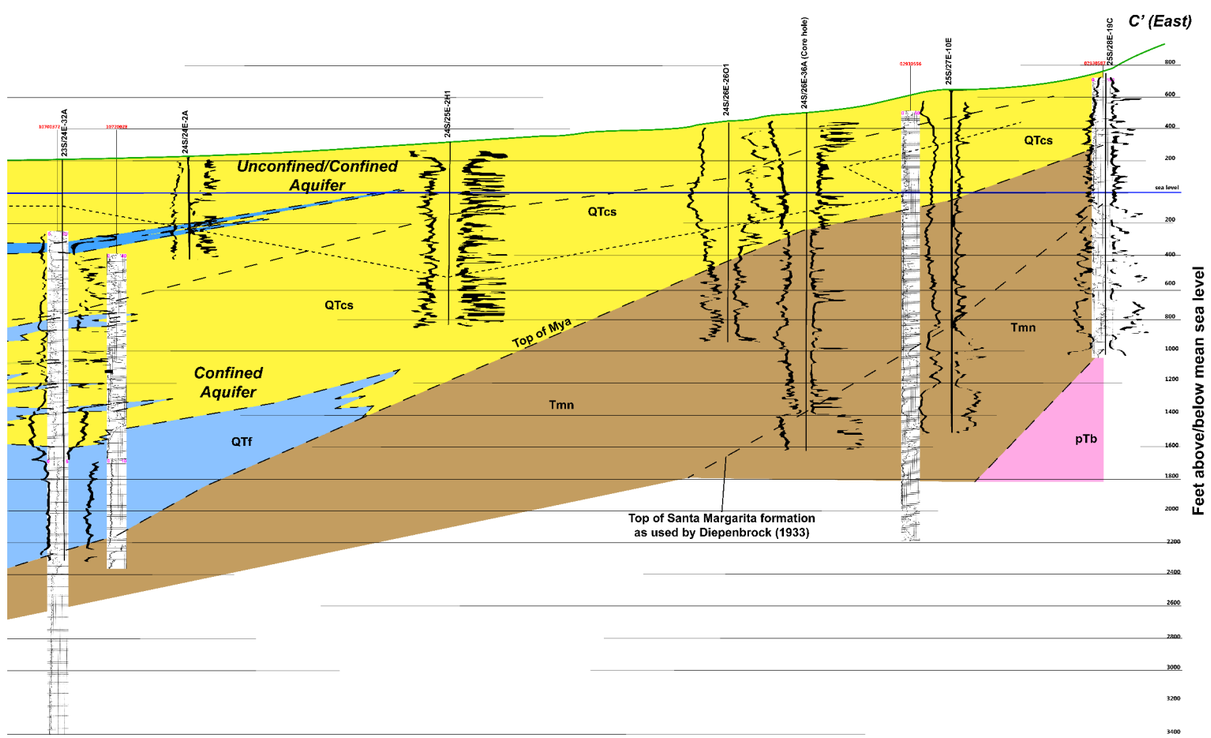
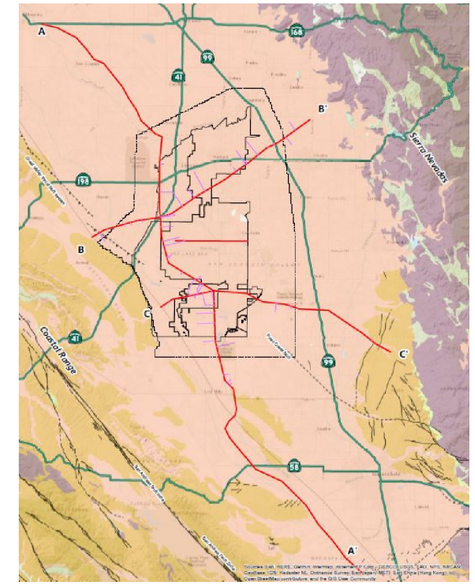






Explanation

- Coarse-grained alluvium / Tulare Formation
- San Joaquin Formation
- Alluvium / Tulare Formation lacustrine sediments
- Regional clay marker beds as defined by Croft (1972)
- Crystalline basement
- 25S/21E-1N — CA DWR well name
- 03120281 — CA DOGGR well APN
- 0 30 — Electric log resistivity scale (ohmmeters)

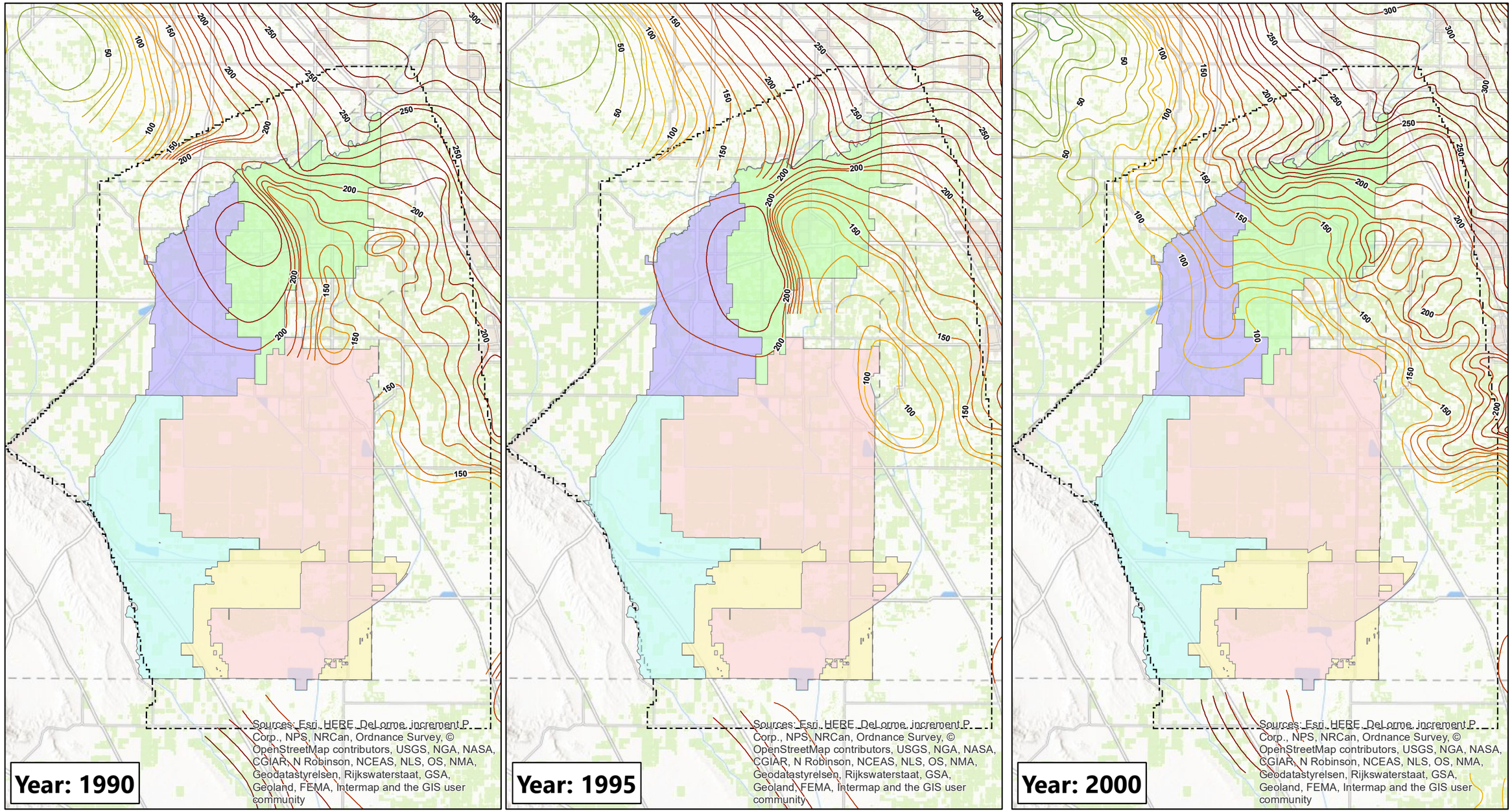
Notes:
1) Contacts dashed where inferred.
2) CA DWR = California Department of Water Resources.
2) CA DOGGR = Division of Oil, Gas, and Geothermal Resources, California Department of Conservation.

North - South Geologic Cross-Section Through the Tulare Lake Bed

Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: EMC	Date: 12/13/2019	Project No.: FR18161220
		Figure **D2-5c**

Date: 12/13/2019 Printed by: shaina.price
Path: N:_FR_projects\FR18s\FR18161220\gis\maps\2019\AppendixD_figD2-5c_West-East Geologic Cross-Section C-C'.mxd



Explanation

- Model domain
- El Rico Groundwater Sustainability Agency
- Mid-Kings River Groundwater Sustainability Agency
- South Fork Kings Groundwater Sustainability Agency
- Southwest Kings Groundwater Sustainability Agency
- Tri-County Water Authority

Groundwater elevation (FMSL)
700
-350

APPROXIMATE SCALE IN MILES
0 5 10 20
0 5 10 20
APPROXIMATE SCALE IN KILOMETERS

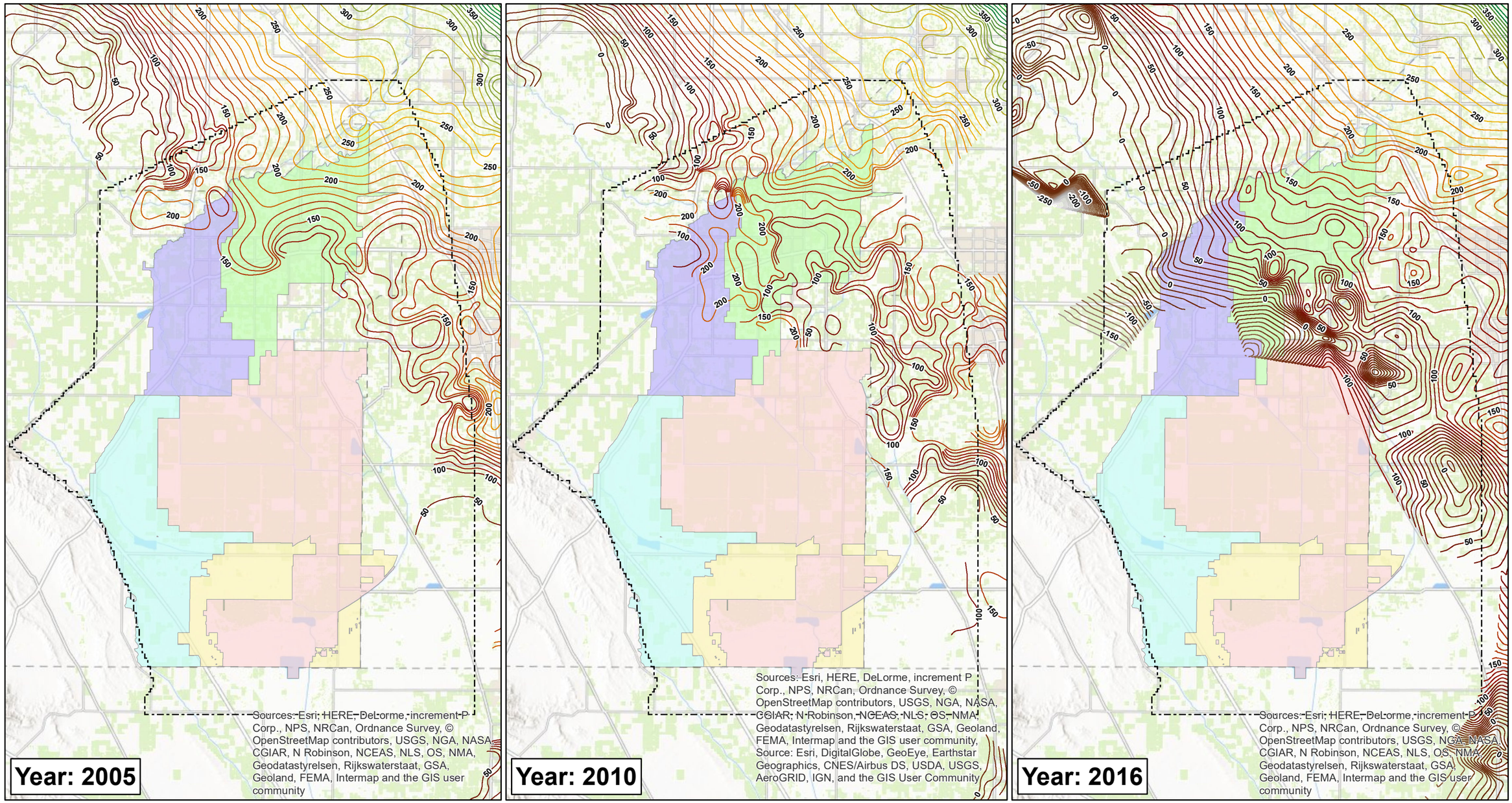
N

Historical DWR Groundwater Elevation Maps Unconfined Aquifer

Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: EMC	Date: 1/8/2020	Project No.: FR18161220
		Figure **D2-6a**

Date: 1/8/2020 Printed by: elizabeth.chapman
Path: N:_FR_projects\FR18s\FR18161220\gis\maps\2019\AppendixD_figD2-6a_RecentGroundwaterConditions_1990_1995_2000.mxd



Explanation

- Model domain
- El Rico Groundwater Sustainability Agency
- Mid-Kings River Groundwater Sustainability Agency
- South Fork Kings Groundwater Sustainability Agency
- Southwest Kings Groundwater Sustainability Agency
- Tri-County Water Authority

Groundwater elevation (FMSL)

-700

-350

APPROXIMATE SCALE IN MILES

0 5 10 20

0 5 10 20

APPROXIMATE SCALE IN KILOMETERS

N

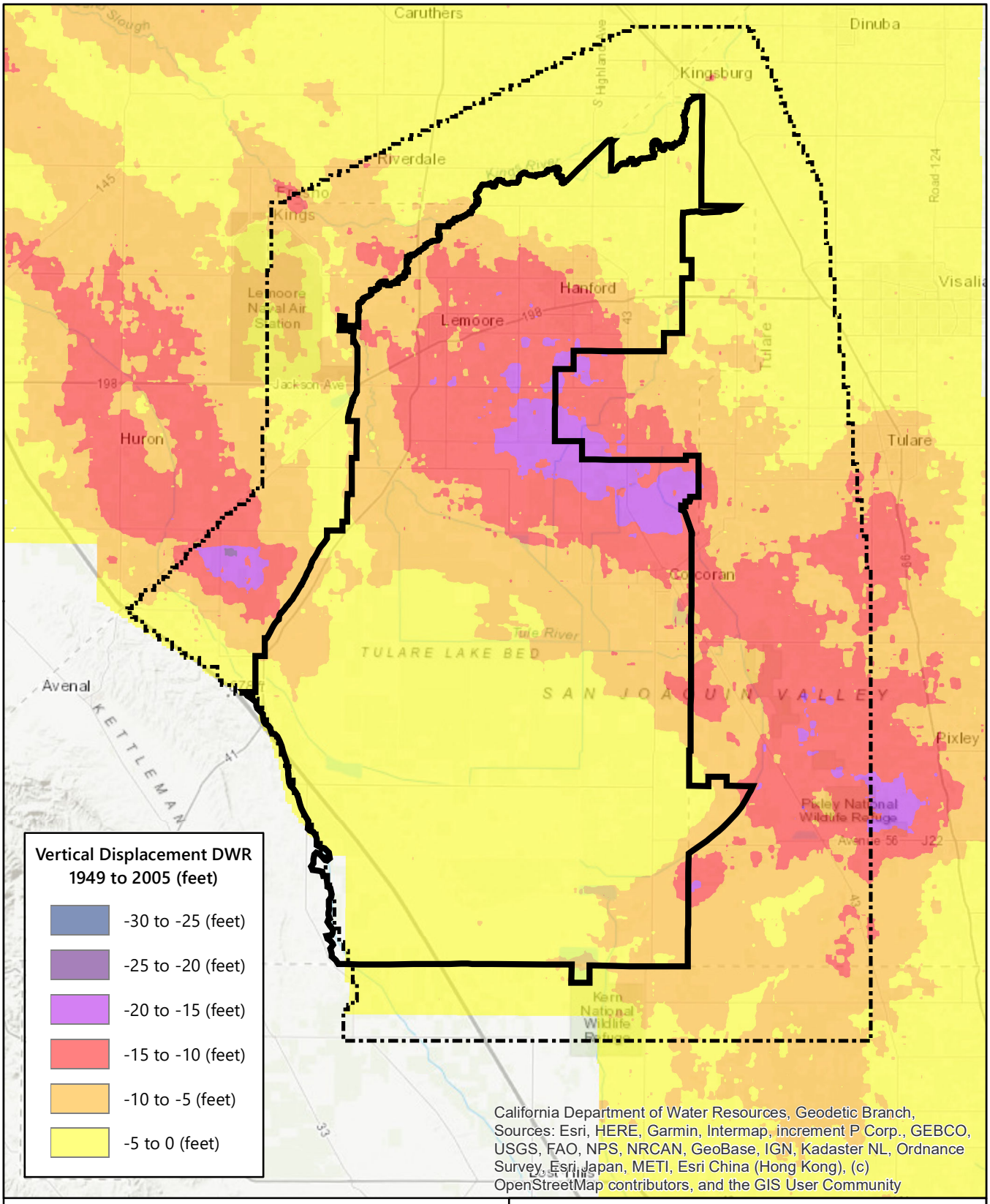
NOTE:
1) Groundwater elevation data obtained from California Department of Water Resources (CA DWR), June 2018: https://databasin.org/datasets/b05820cda86b4921a515065fa1deffcc
2) FMSL = Feet above mean sea level.

Historical DWR Groundwater Elevation Maps, Unconfined Aquifer

Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: EMC	Date: 12/13/2019	Project No.: FR18161220
		Figure **D2-6b**

Date: 12/13/2019 Printed by: shaina.price
Path: N:_FR_projects\FR18s\FR18161220\gis\maps\2019\AppendixD_figD2-6b_RecentGroundwaterConditions_2005_2010_2016.mxd



Explanation

Model domain

Subbasin boundary

Miles: 0 2 4 8

Kilometers: 0 2.5 5 10

Notes:

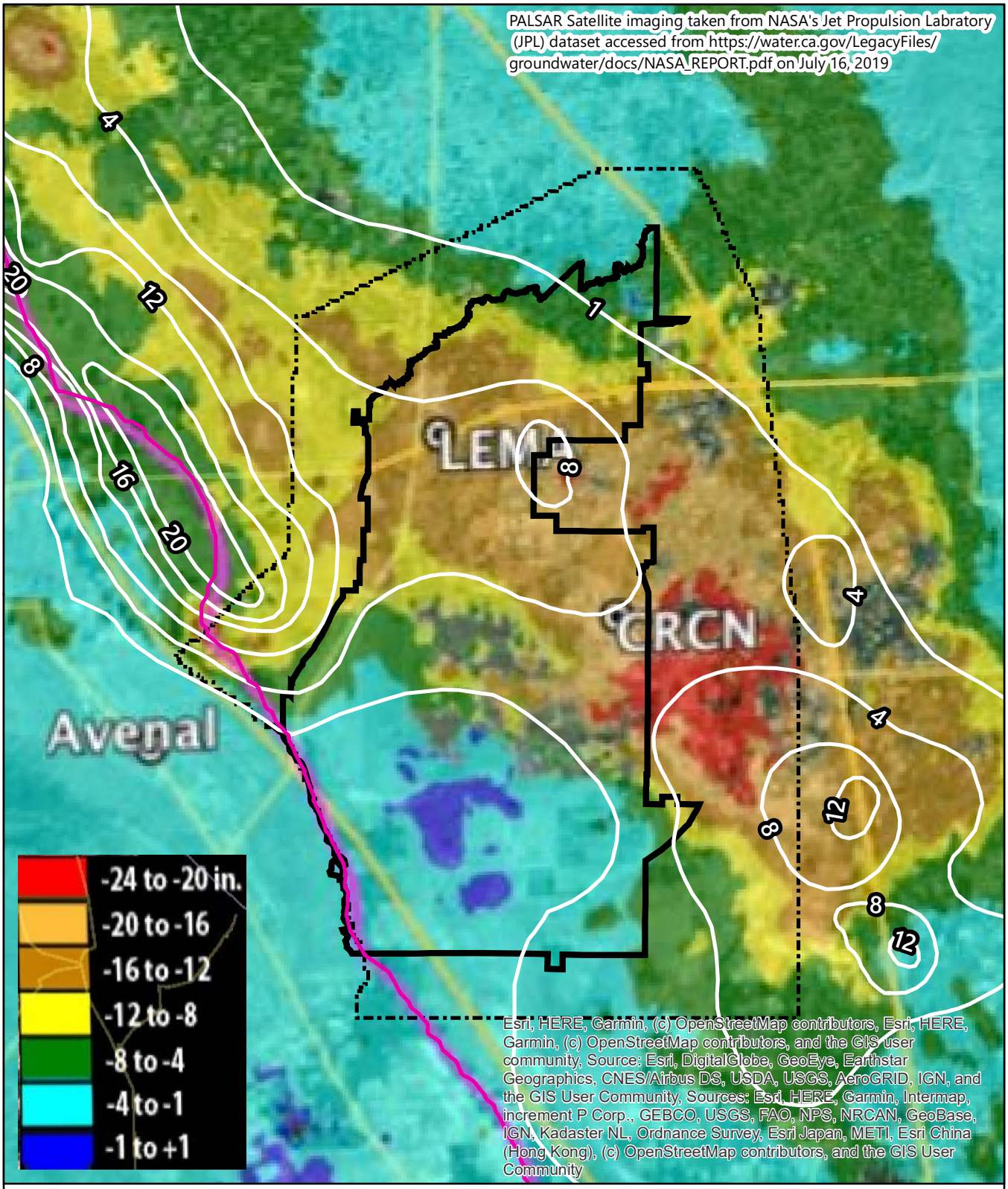
1. Vertical Displacement dataset taken from California Department of Water Resources (DWR) https://sgma.water.ca.gov/webgis. Accessed July 9, 2019.

Historical Subsidence of the Tulare Lake Subbasin

Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: EMC	Date: 12/13/2019	Project No.: FR18161220
		Figure **D2-7**

Date: 12/13/2019 Printed by: shaina.price
Path: N:_FR_projects\FR18s\FR18161220\gis\maps\2019\AppendixD_figD2-7_Historical Subsidence TLSB8x11.mxd



Explanation

Subbasin boundary

Model domain

Edmund G. Brown California Aqueduct

White line shows historical subsidence data from 1926-1970 (ft.)

Miles: 0 2 4 8

Kilometers: 0 2.5 5 10

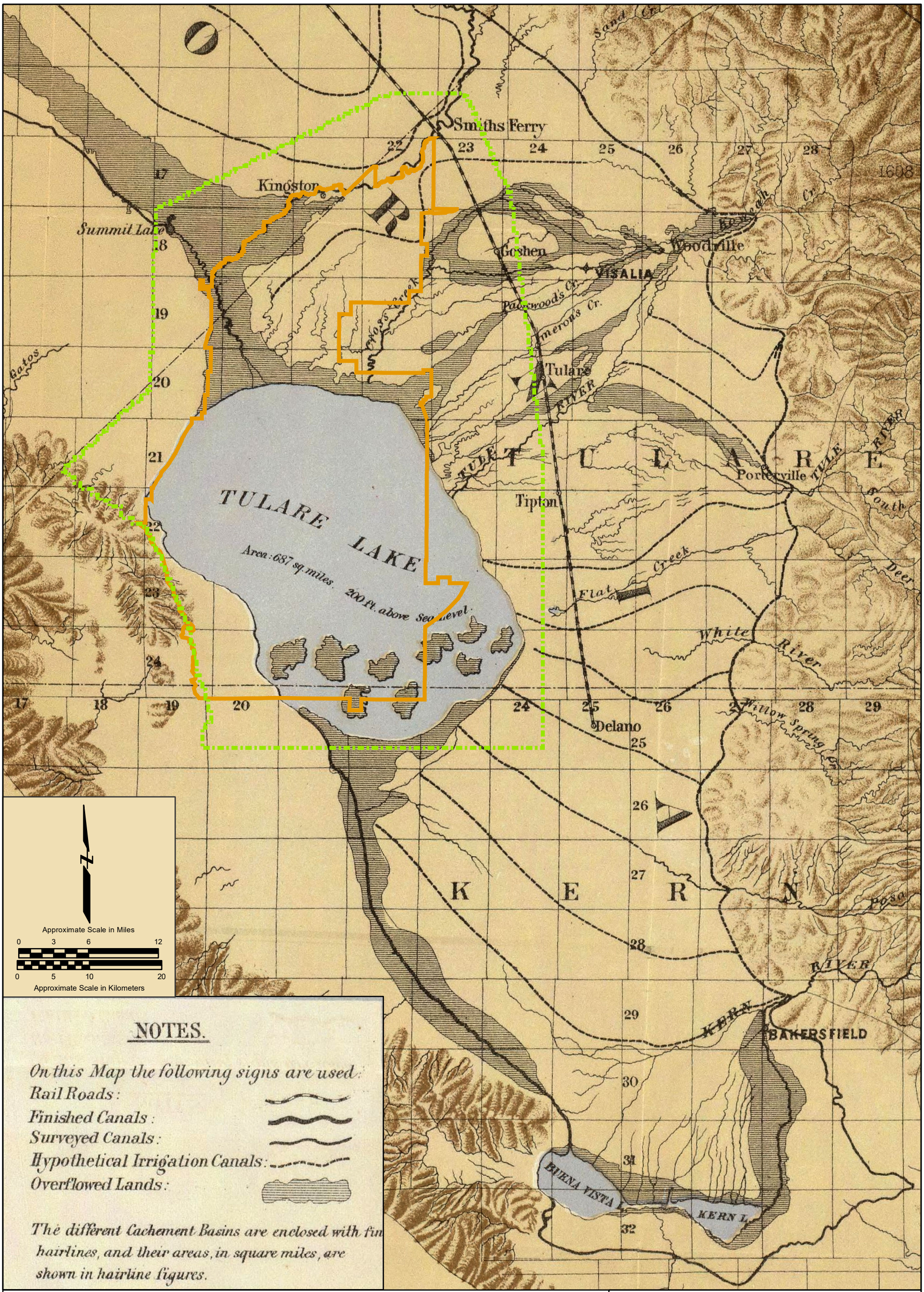
Subsidence in the Tulare Lake Subbasin 2007 to 2010

Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: EMC	Date: 12/13/2019	Project No.: FR18161220
		Figure **D2-8**

Date: 12/13/2019 Printed by: shaina.price
Path: N:_FR_projects\FR18s\FR18161220\gis\maps\2019\AppendixD_figD2-8_Historical Subsidence TLSB8x11.mxd

Date: 12/12/2019 Printed by: elizabeth.chapman
Path: N:_FR_projects\FR18s\FR18161220\gis\maps\2019\AppendixD_figD2-9a_Historic Surface Water Systems San Joaquin Valley.mxd



Explanation

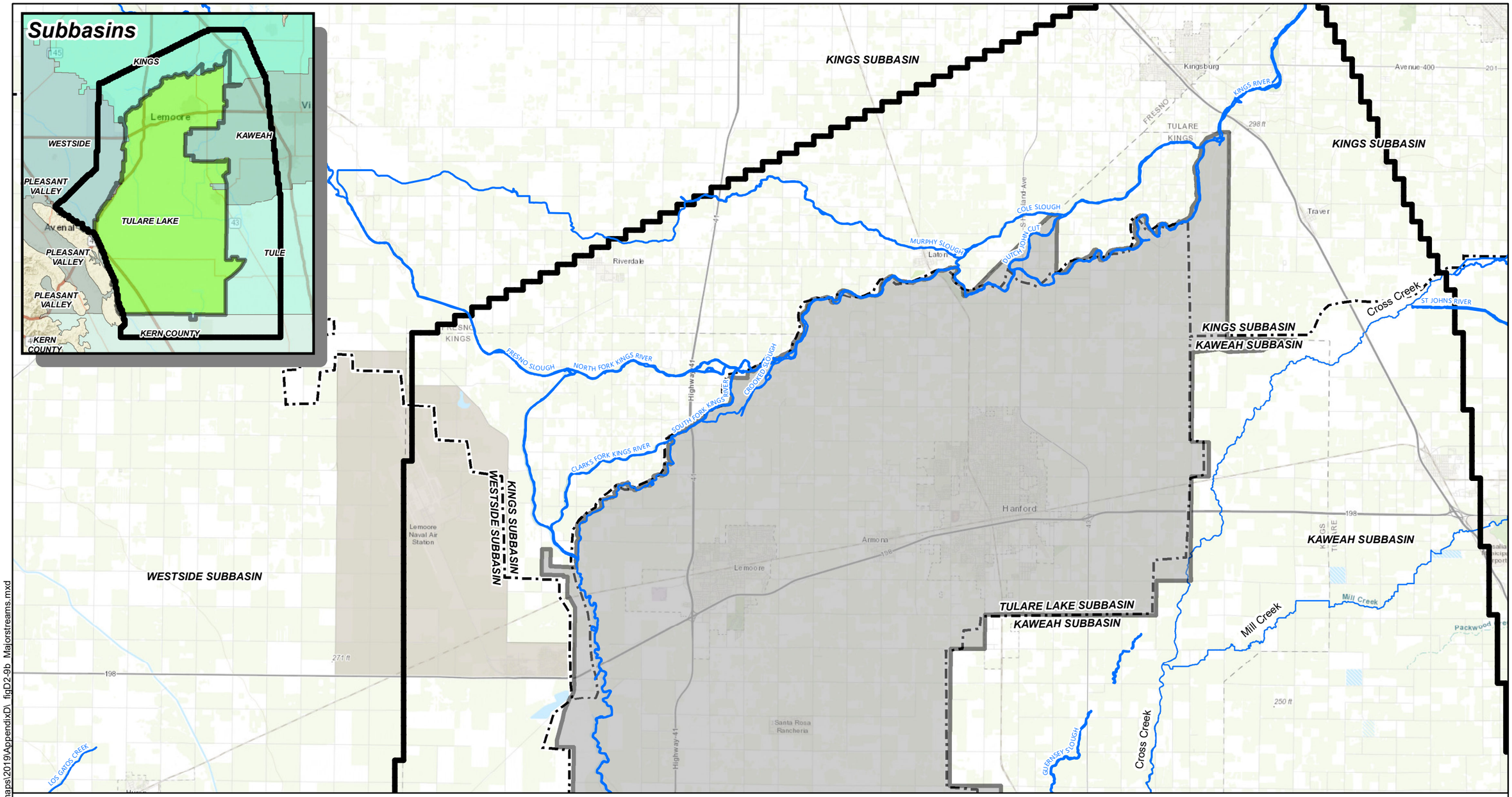
Model domain

Subbasin boundary

Note:
Adapted from "Map of the San Joaquin, Sacramento and Tulare Valleys, State of California, Prepared Under The Direction of the Board of Commissioners on Irrigation, 1873"

Historic Drainage System
Tulare Lake Basin
Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: GLK	Date: 12/12/2019	Project No.: FR16181220
		Figure **D2-9a**



Explanation

- River/Lake [1]
- Model Domain
- Tulare Lake subbasin boundary
- Boundaries of adjacent subbasins

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

APPROXIMATE SCALE IN MILES
0 1 2 4
0 1 2 4
APPROXIMATE SCALE IN KILOMETERS

N

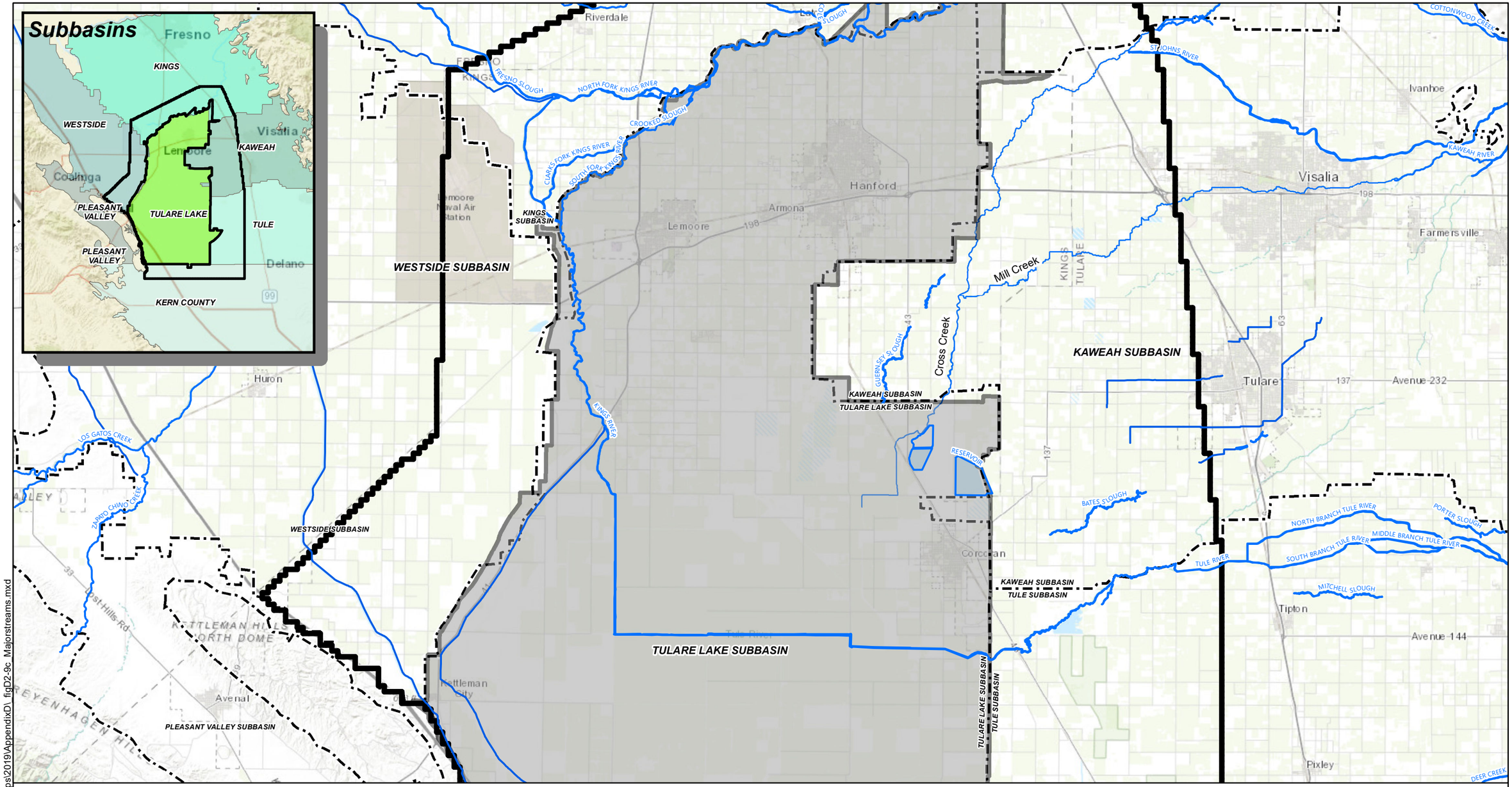
Notes:
1. Data accessed from the National Hydrography Dataset (2018)

Simulated Major Streams and Distribution Channels

Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: EMC	Date: 12/13/2019	Project No.: FR18161220
		Figure **D2-9b**

N:_FR_projects\FR18s\FR18161220\gis\maps\2019\AppendixD_fig\D2-9b_Majorstreams.mxd



Explanation

- River/Lake [1]
- Model Domain
- Tulare Lake subbasin boundary
- Boundaries of adjacent subbasins

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

APPROXIMATE SCALE IN MILES
0 1 2 4
0 1 2 4
APPROXIMATE SCALE IN KILOMETERS

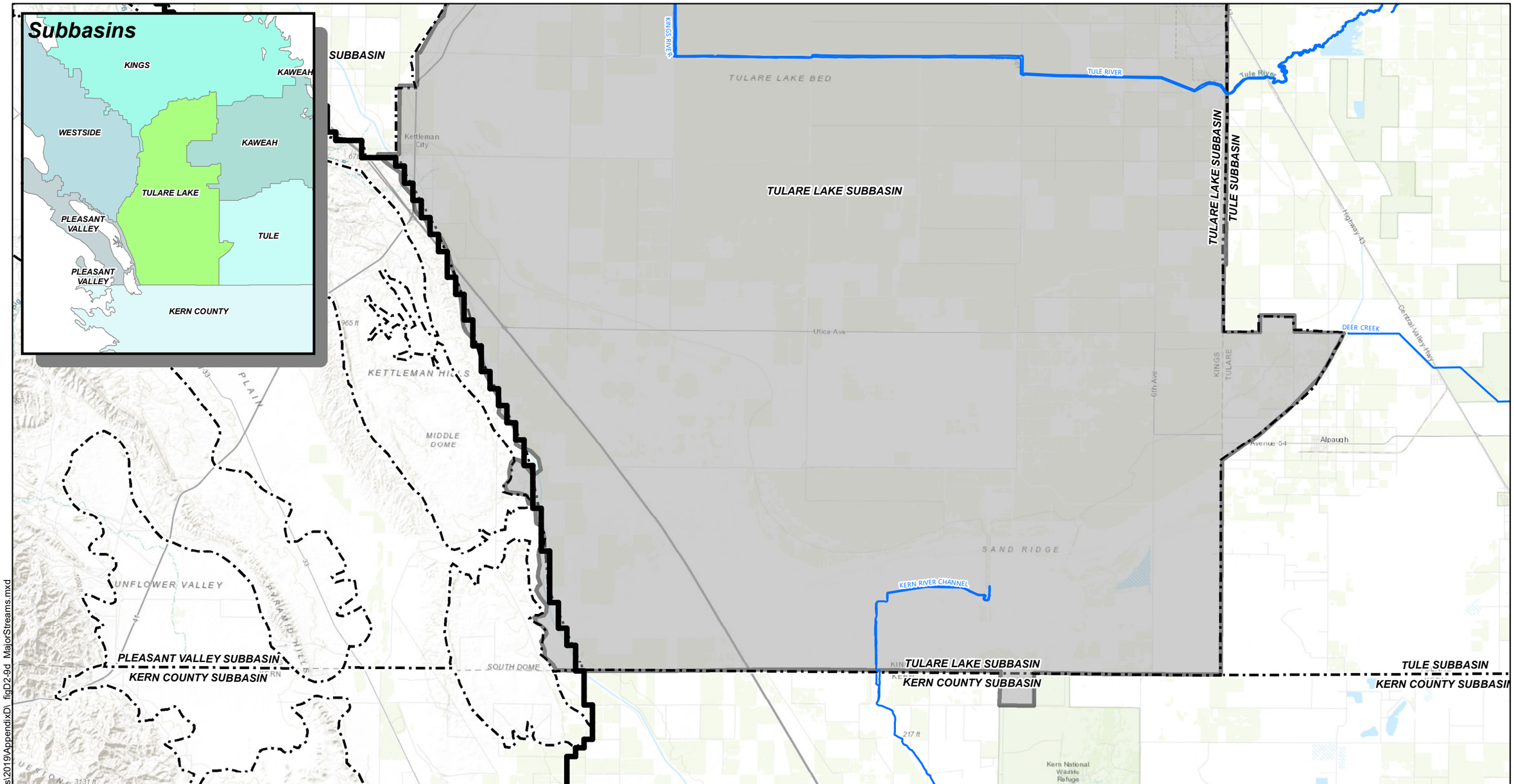
N

Notes:
1. Data accessed from the National Hydrography Dataset (2018)

Major Streams and Distribution Channels
Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: EMC	Date: 1/2/2020	Project No.: FR18161220
		Figure **D2-9c**

N:_FR_projects\FR18s\FR18161220\gis\maps\2019\Appendix D_figD2-9c_Majorstreams.mxd



Explanation

- River/Lake [1]
- Model domain
- Subbasin boundary
- Boundaries of adjacent subbasins

Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

APPROXIMATE SCALE IN MILES
0 1 2 4
0 1 2 4
APPROXIMATE SCALE IN KILOMETERS

N

Notes:
1. Data accessed from the National Hydrography Dataset (2018)

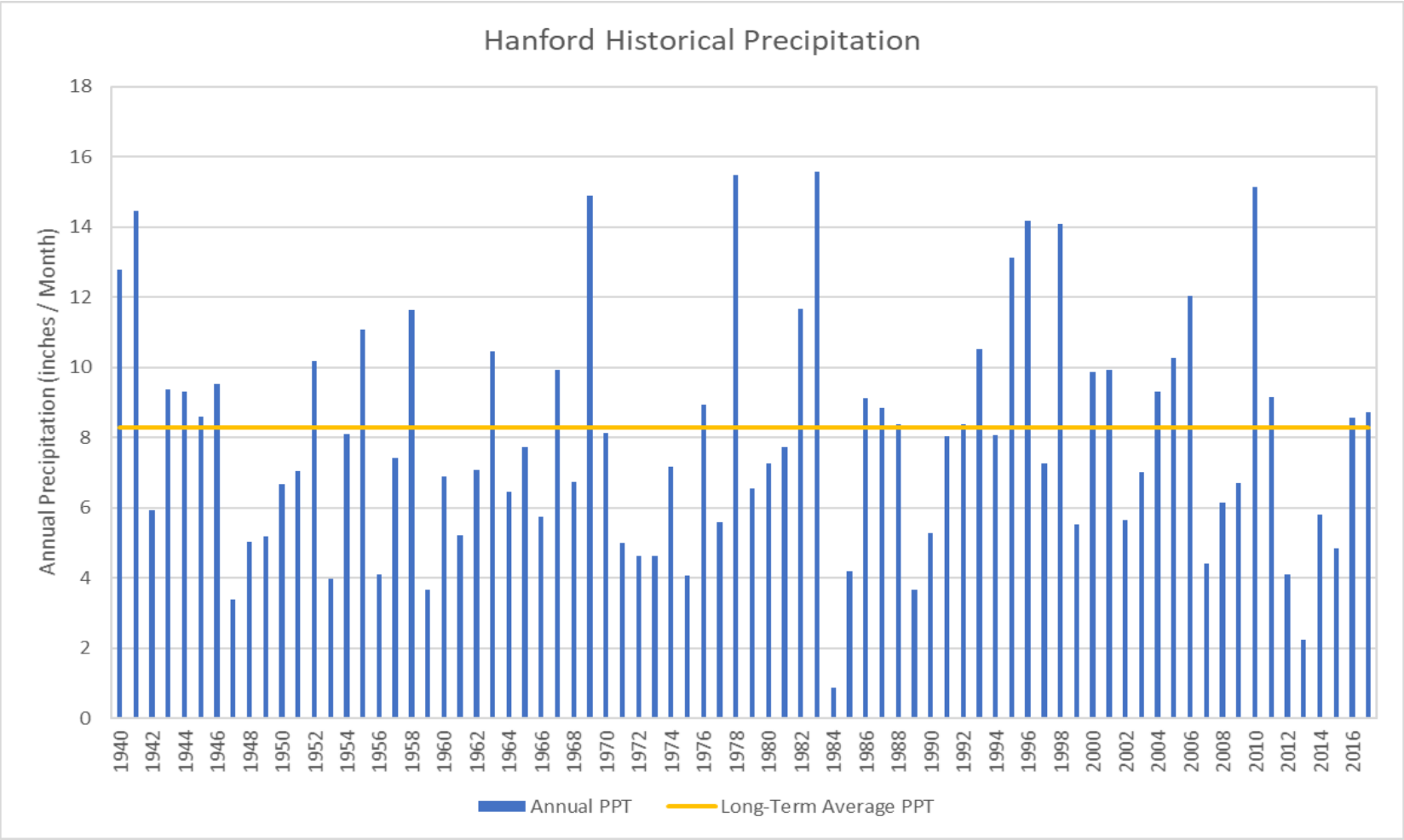
Major Streams and Distribution Channels

Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: EMC	Date: 12/13/2019	Project No.: FR18161220
		Figure **D2-9d**

N:_FR_projects\FR18s\FR18161220\gis\maps\2019\AppendixD_figD2-9d_MajorStreams.mxd

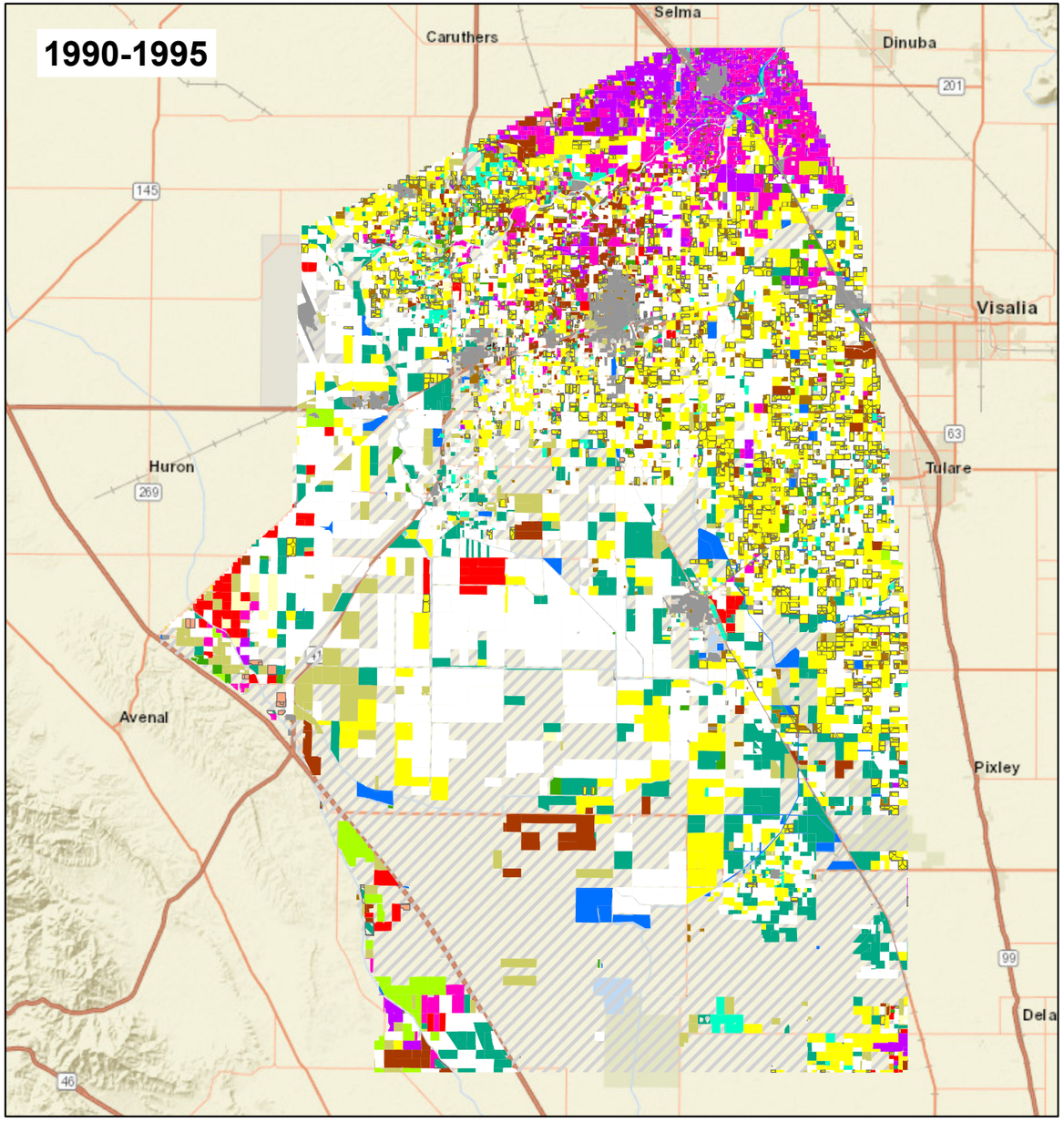
I:\FR18s\FR18161220 Tulare Lake GSP\Figures\3-BasinSe□ing\Figures\DAV□S FOLD□R\DRAFT_TLSB_SGMA_GWModel_Figures_v3Fig D2-10 □an□ord PPT 12□13□2019

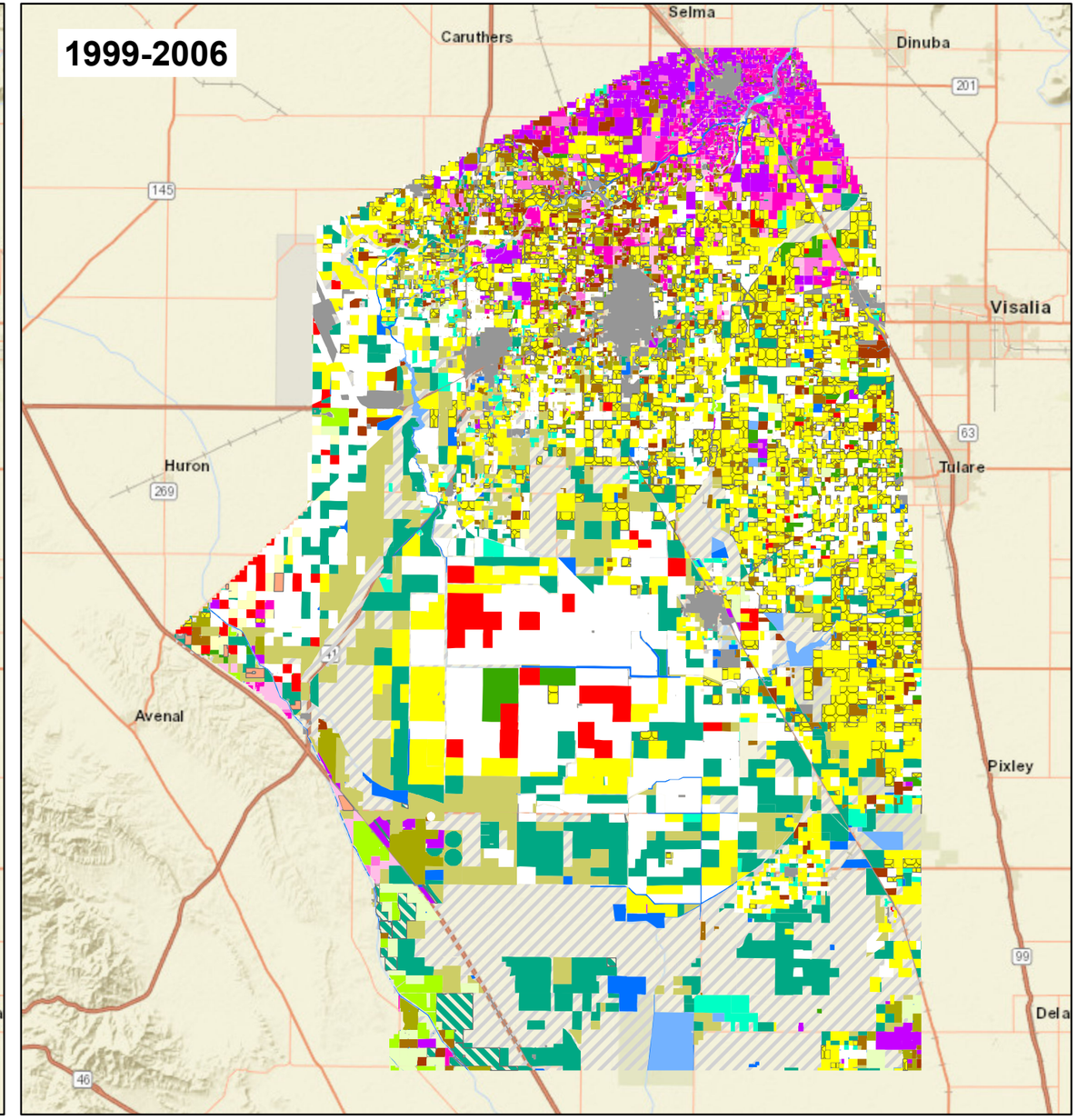


Historical Annual Precipitation
Hanford, California

Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: dmb	Date: 07/30/19	Project No.: FR18161220
		Figure D□□□□





Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community

Explanation

- Alfalfa Hay and Clover
- Almonds (Young)
- Almonds (Adolescent)
- Almonds (Mature)
- Berries
- Carrot Single Crop
- Citrus (no ground cover)
- Corn and Grain Sorghum
- Cotton
- Dairy Single Crop
- Fallow Land
- Forest
- Grain and Grain Hay
- Melons
- Misc. field crops
- Onions and Garlic
- Open Water
- Pasture and Misc. Grasses
- Pistachio (Young)
- Pistachio (Adolescent)
- Pistachio (Mature)
- Pomegranates (Young)
- Pomegranates (Adolescent)
- Potatoes, Sugar beets, Turnip etc..
- Riparian
- Small Vegetables
- Stone Fruit (Young)
- Stone Fruit (Adolescent)
- Stone Fruit (Mature)
- Tomatoes and Peppers
- Urban, Commercial
- Urban, Industrial
- Wine Grapes with 80% canopy
- Winter Wheat

N

0 20,000 40,000

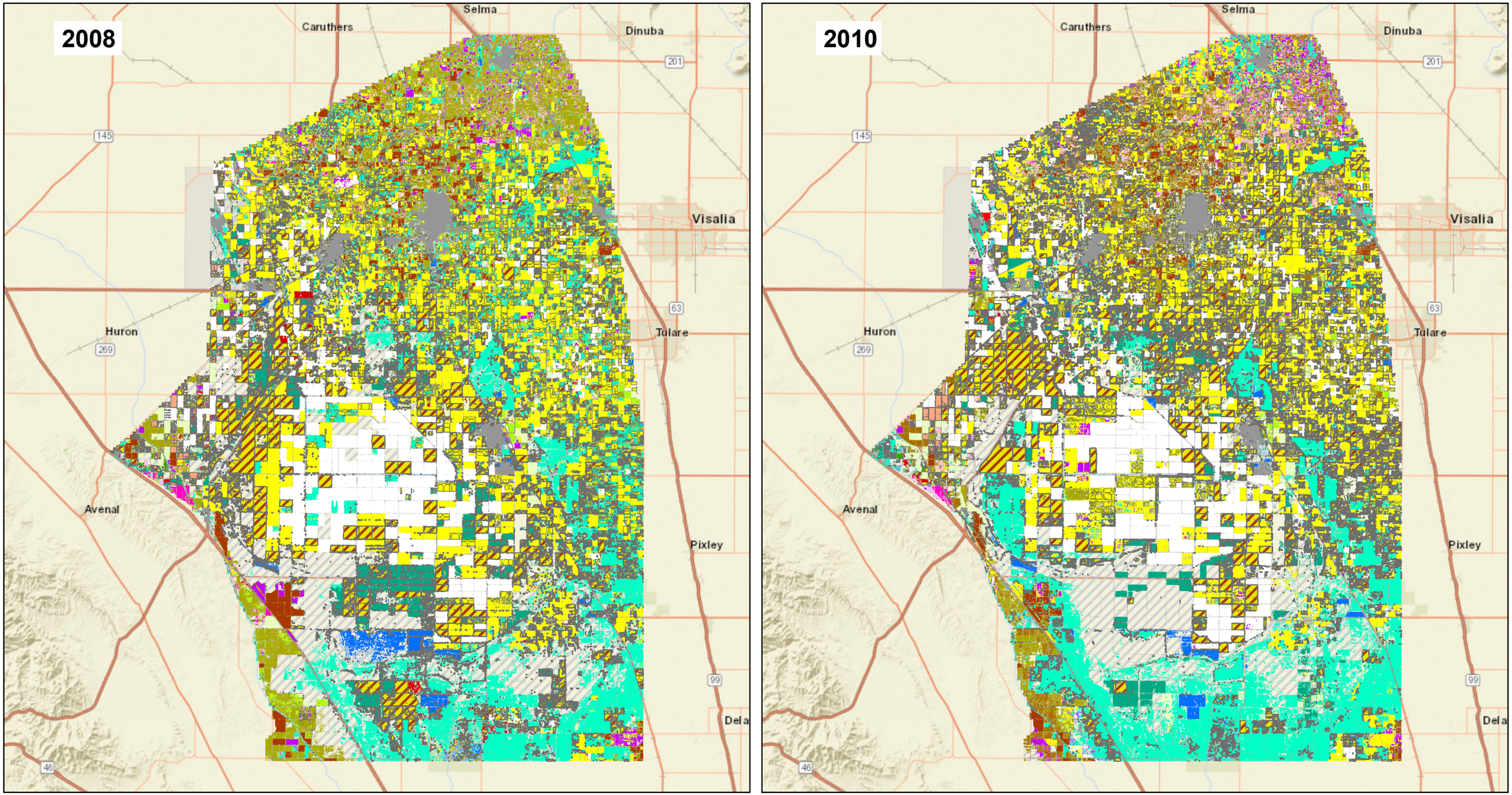
APPROXIMATE SCALE IN FEET

Crop Distributions

Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: jmp	Date: 3/26/2019	Project No.: FR18161220
		Figure **D2-11a**

\\fsn-fs1\Graphics\ FR_projects\FR18s\FR18161220\gis\maps\2018\Hydrogeologic Conceptual Model\Arcmap 10.4\ fig3-8a CropDistributions rev.mxd



Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community

Explanation

- Alfalfa Hay and Clover
- Almonds (Young)
- Almonds (Adolescent)
- Almonds (Mature)
- Berries
- Carrot Single Crop
- Citrus (no ground cover)
- Corn and Grain Sorghum
- Cotton
- Dairy Single Crop
- Fallow Land
- Forest
- Grain and Grain Hay
- Melons
- Misc. field crops
- Onions and Garlic
- Open Water
- Pasture and Misc. Grasses
- Pistachio (Young)
- Pistachio (Adolescent)
- Pistachio (Mature)
- Pomegranates (Young)
- Pomegranates (Adolescent)
- Potatoes, Sugar beets, Turnip etc..
- Riparian
- Small Vegetables
- Stone Fruit (Young)
- Stone Fruit (Adolescent)
- Stone Fruit (Mature)
- Tomatoes and Peppers
- Urban, Commercial
- Urban, Industrial
- Wine Grapes with 80% canopy
- Winter Wheat

N

0 20,000 40,000

APPROXIMATE SCALE IN FEET

Crop Distributions

Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: jmp	Date: 3/26/2019	Project No.: FR18161220
		Figure **D2-11b**

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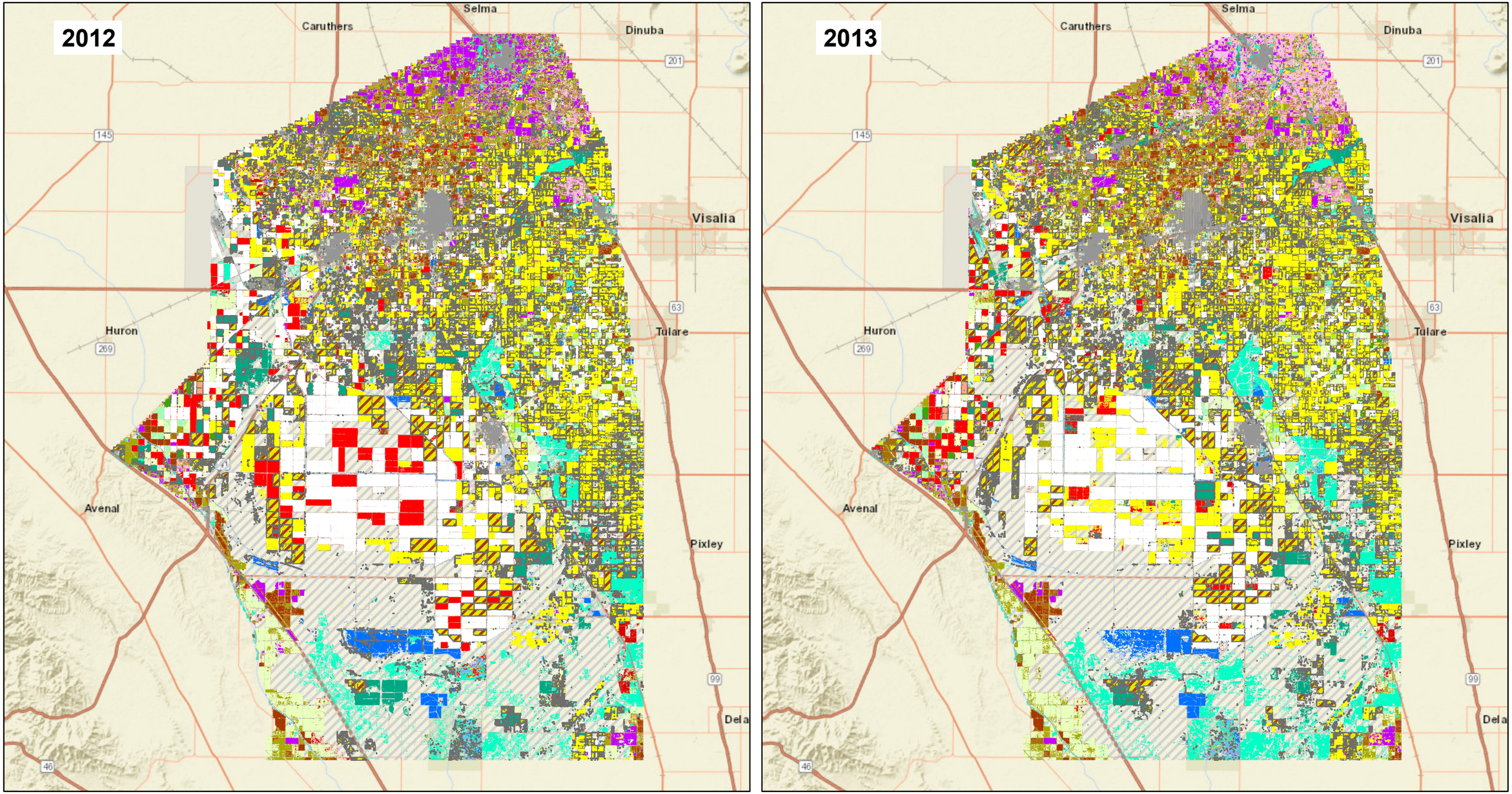


Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community

Explanation

- Alfalfa Hay and Clover
- Almonds (Young)
- Almonds (Adolescent)
- Almonds (Mature)
- Berries
- Carrot Single Crop
- Citrus (no ground cover)
- Corn and Grain Sorghum
- Cotton
- Dairy Single Crop
- Fallow Land
- Forest
- Grain and Grain Hay
- Melons
- Misc. field crops
- Onions and Garlic
- Open Water
- Pasture and Misc. Grasses
- Pistachio (Young)
- Pistachio (Adolescent)
- Pistachio (Mature)
- Pomegranates (Young)
- Pomegranates (Adolescent)
- Potatoes, Sugar beets, Turnip etc..
- Riparian
- Small Vegetables
- Stone Fruit (Young)
- Stone Fruit (Adolescent)
- Stone Fruit (Mature)
- Tomatoes and Peppers
- Urban, Commercial
- Urban, Industrial
- Wine Grapes with 80% canopy
- Winter Wheat

N

0 20,000 40,000

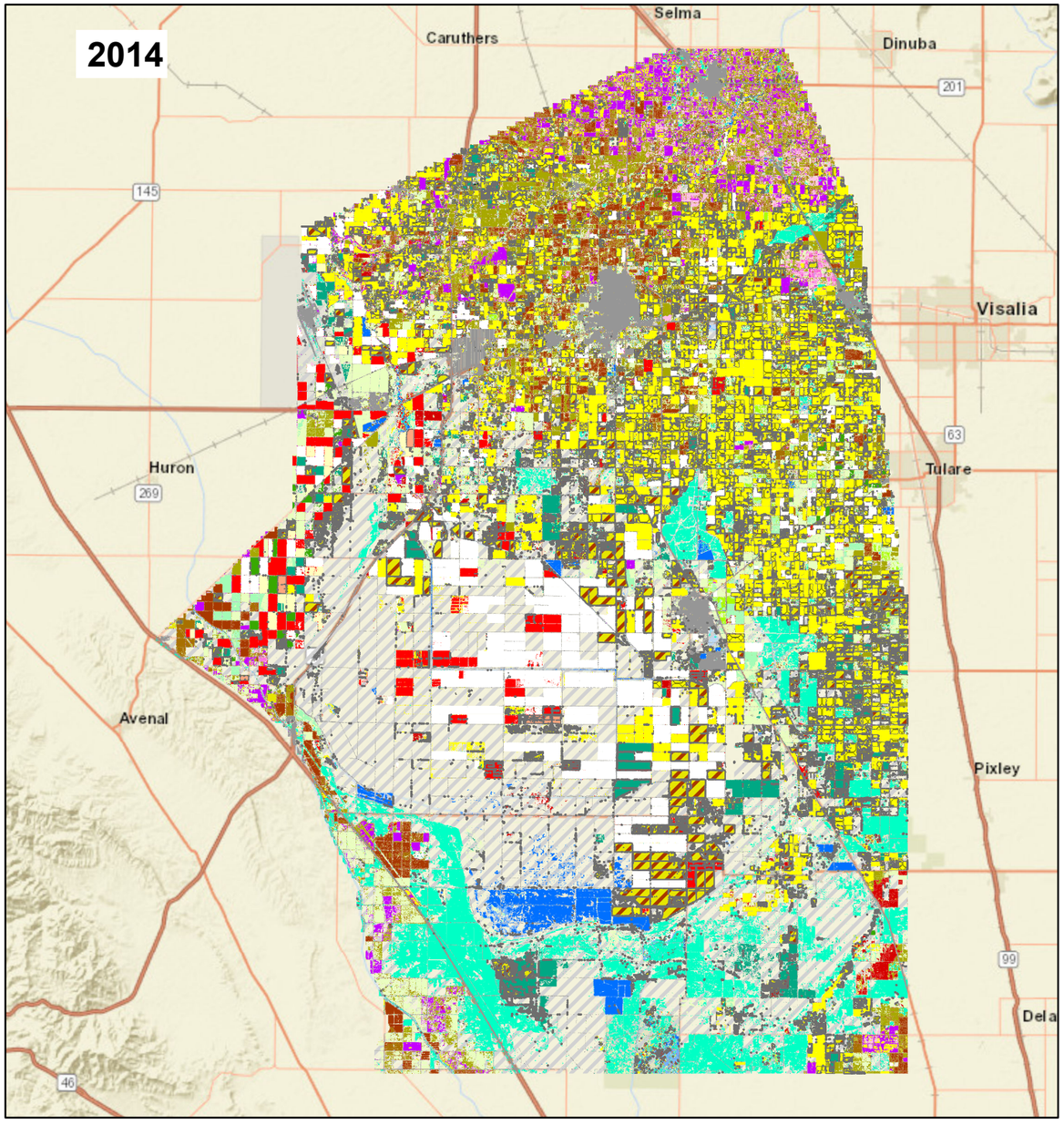
APPROXIMATE SCALE IN FEET

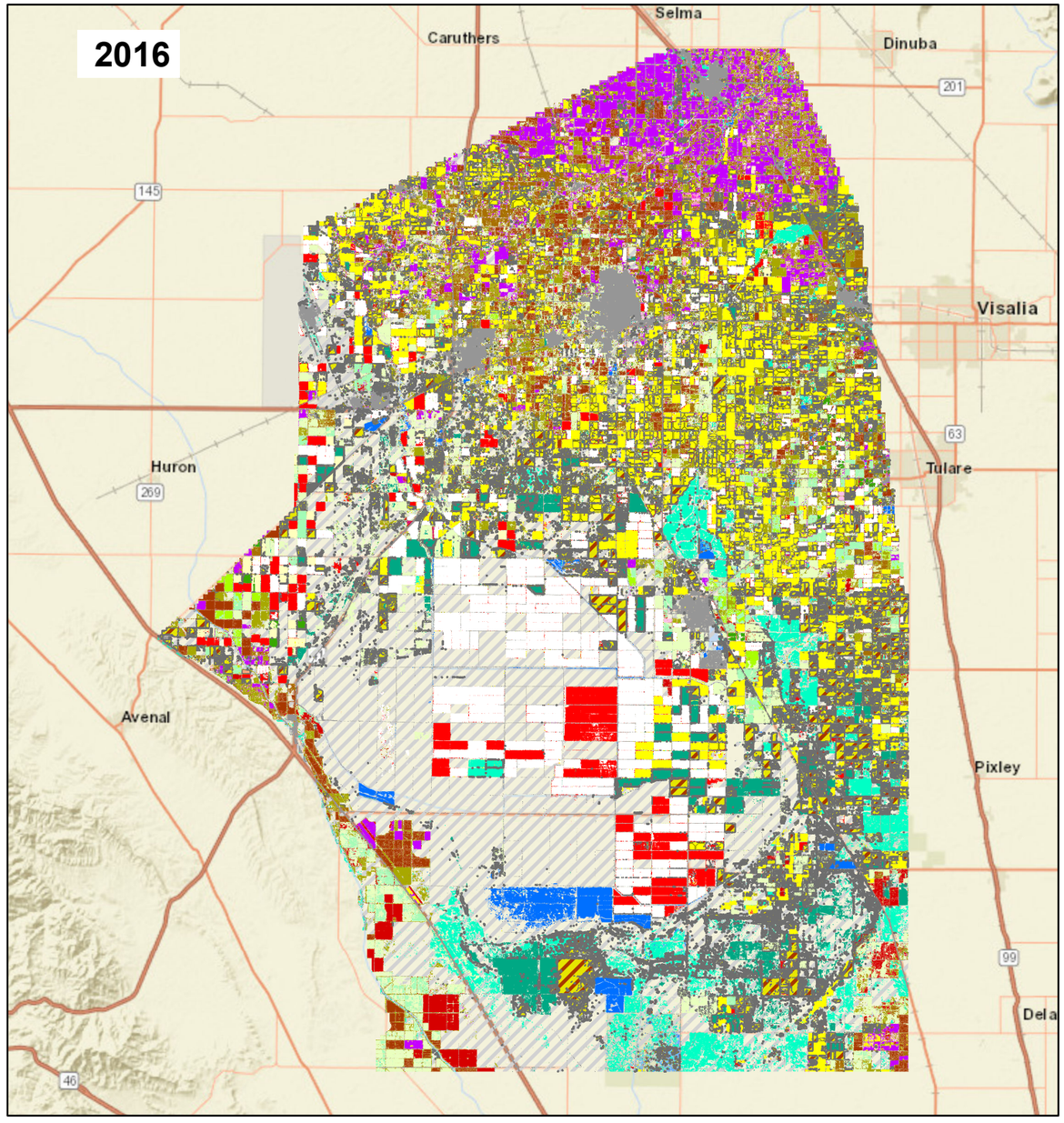
Crop Distributions

Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: jmp	Date: 3/26/2019	Project No.: FR18161220
		Figure **D2-11c**

\\fsn-fs1\Graphics_FR_projects\FR18s\FR18161220\gis\maps\2018\Hydrogeologic_Conceptual_Model\Arcmap 10.4_fig3-8c_CropDistributions_rev.mxd





Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community

Explanation

- Alfalfa Hay and Clover
- Almonds (Young)
- Almonds (Adolescent)
- Almonds (Mature)
- Berries
- Carrot Single Crop
- Citrus (no ground cover)
- Corn and Grain Sorghum
- Cotton
- Dairy Single Crop
- Fallow Land
- Forest
- Grain and Grain Hay
- Melons
- Misc. field crops
- Onions and Garlic
- Open Water
- Pasture and Misc. Grasses
- Pistachio (Young)
- Pistachio (Adolescent)
- Pistachio (Mature)
- Pomegranates (Young)
- Pomegranates (Adolescent)
- Potatoes, Sugar beets, Turnip etc..
- Riparian
- Small Vegetables
- Stone Fruit (Young)
- Stone Fruit (Adolescent)
- Stone Fruit (Mature)
- Tomatoes and Peppers
- Urban, Commercial
- Urban, Industrial
- Wine Grapes with 80% canopy
- Winter Wheat

N

0 20,000 40,000

APPROXIMATE SCALE IN FEET

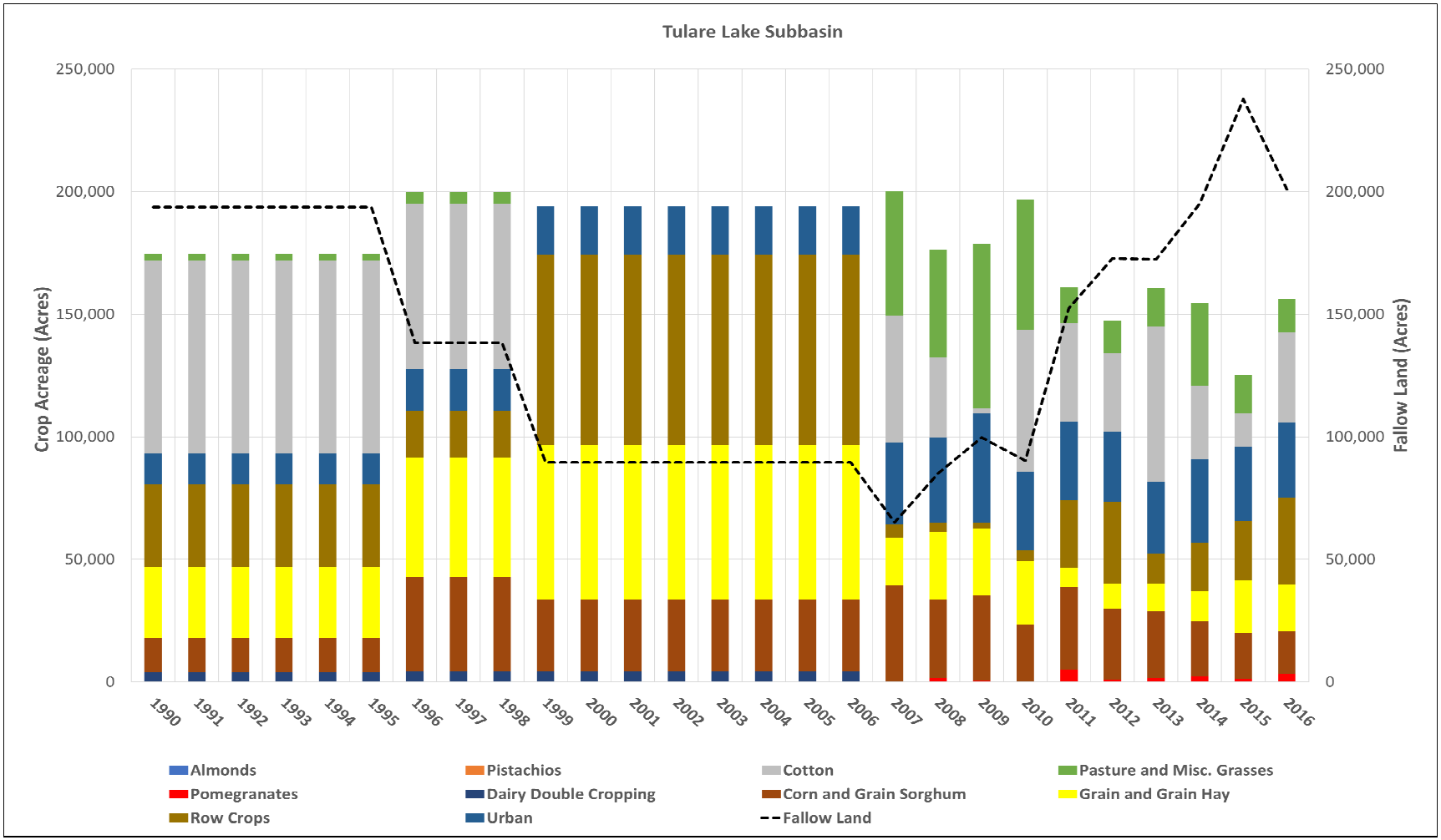
Crop Distributions

Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: jmp	Date: 3/26/2019	Project No.: FR18161220
		Figure **D2-11d**

\\fsn-fs1\Graphics\ FR projects\FR18s\FR18161220\gis\maps\2018\Hydrogeologic Conceptual Model\Arcmap 10.4\ fig3-8d CropDistributions rev.mxd

N:_FR_projects\FR18s\FR18161220\temp\DBean_Hydro_\Wood Figure TemplatesFig 2-12 HstoricalCrop Acreage 9/7/2019



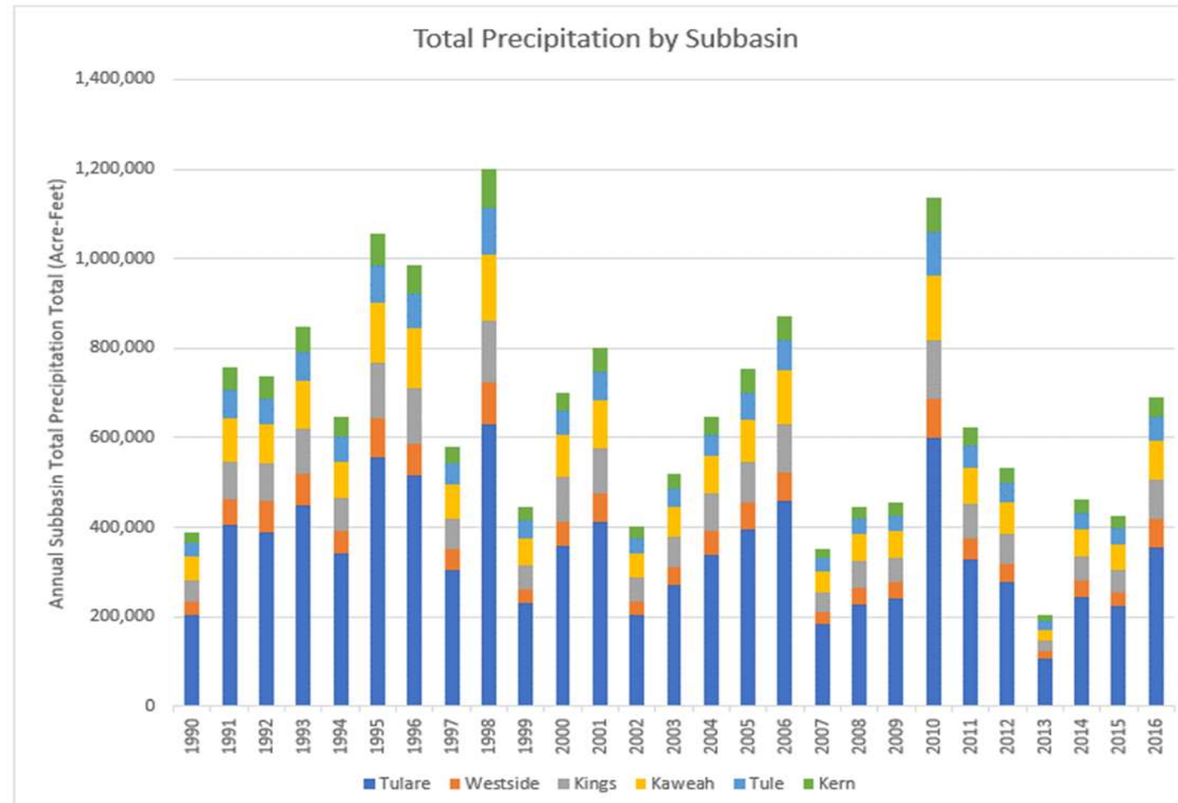
Historical Crop Acreage in Model Domain

Tulare Lake Subbasin Groundwater Sustainabilty Plan
Kings County, California

By: dmb	Date: 07/30/19	Project No.: FR18161220
		Figure **D2-12**

ANNUAL TOTAL PRECIPITATION (ACRE-FEET)

SP	Tulare	Westside	Kings	Kaweah	Tule	Kern	Total
1990	205,446	28,212	48,930	51,309	30,947	24,023	388,867
1991	405,080	57,267	83,913	96,137	63,627	50,916	756,939
1992	390,074	67,498	84,716	87,700	57,619	48,389	735,997
1993	447,720	71,443	101,727	105,426	65,907	54,792	847,015
1994	340,437	50,626	75,966	80,699	54,192	45,398	647,318
1995	556,440	85,801	126,208	134,572	83,809	68,943	1,055,774
1996	517,621	70,468	123,183	132,981	78,164	62,576	984,993
1997	304,204	46,045	70,190	75,198	46,704	38,101	580,442
1998	628,620	94,415	137,547	149,223	102,104	88,545	1,200,453
1999	231,988	30,280	53,202	60,123	39,033	32,569	447,196
2000	358,410	53,273	99,777	96,159	51,600	40,115	699,334
2001	411,922	63,322	101,366	106,449	63,662	52,859	799,578
2002	205,011	30,798	53,013	53,586	32,171	26,641	401,219
2003	270,548	40,570	66,233	68,593	40,425	33,269	519,638
2004	339,269	53,188	82,590	83,239	49,381	40,603	648,271
2005	394,033	61,121	90,935	93,355	60,700	53,816	753,960
2006	457,938	64,091	108,085	119,504	69,821	52,995	872,434
2007	184,578	26,460	44,432	46,579	29,322	21,777	353,148
2008	228,631	37,419	58,349	59,869	35,246	27,247	446,762
2009	240,260	36,916	55,236	59,739	34,814	29,497	456,461
2010	598,897	88,582	130,029	144,182	96,270	80,046	1,138,006
2011	328,748	46,550	76,276	80,288	51,437	40,143	623,442
2012	277,729	39,653	66,630	72,324	43,489	33,195	533,019
2013	108,142	15,048	22,376	25,747	19,794	14,606	205,713
2014	243,088	37,368	54,143	61,105	38,200	29,654	463,558
2015	223,458	29,592	51,681	58,217	35,773	25,262	423,982
2016	356,639	60,978	87,691	88,184	53,105	44,307	690,904
min	108,142	15,048	22,376	25,747	19,794	14,606	205,713
max	628,620	94,415	137,547	149,223	102,104	88,545	1,200,453
mean	342,775	51,370	79,793	84,833	52,864	42,973	654,608

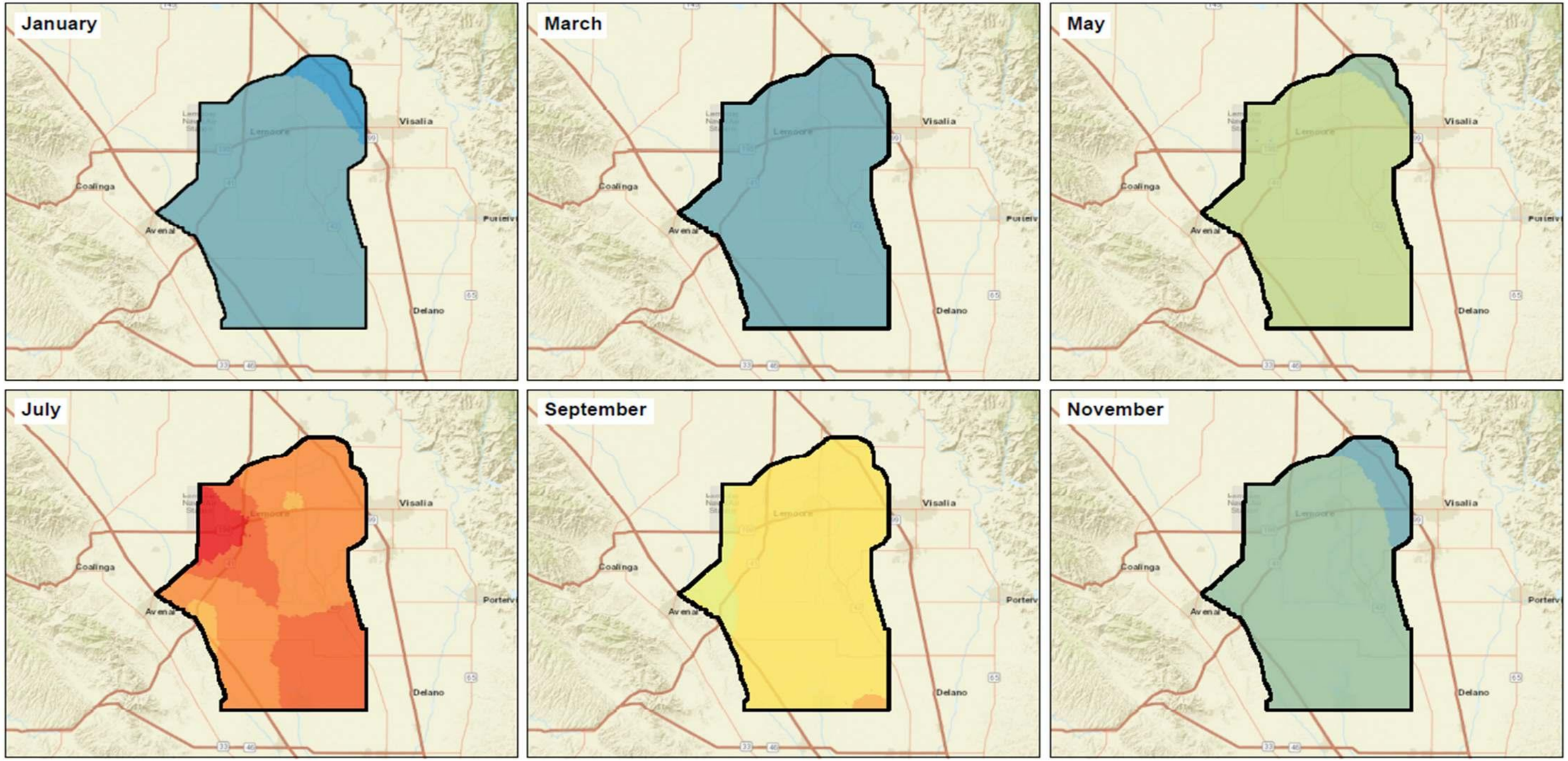


Note:
Annual precipitation totals are based on 4-kilometer grids of precipitation from the Oregon State University PRISM database. Monthly totals taken from January 1990 to December 2016

Estimated Annual Total Precipitation by Subbasin
Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: dmb	Date: 07/30/19	Project No.: FR18161220
		Figure **D2-13a**

N:_FR_projects\FR18s\FR18161220\temp\DBean_Hydro_\Wood Figure TemplatesFig 2-13b Month Avg PPT 9/7/2019



Explanation

Model Domain

Precipitation (feet per day)

5.1e-003 - 1.0e-002	1.1e-004 - 2.0e-004
2.1e-003 - 5.0e-003	5.1e-005 - 1.0e-004
1.1e-003 - 2.0e-003	2.1e-005 - 5.0e-005
5.1e-004 - 1.0e-003	1.1e-005 - 2.0e-005
2.1e-004 - 5.0e-004	7.0e-006 - 1.0e-005

Service Layer Credits: Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

N

0 50,000 100,000

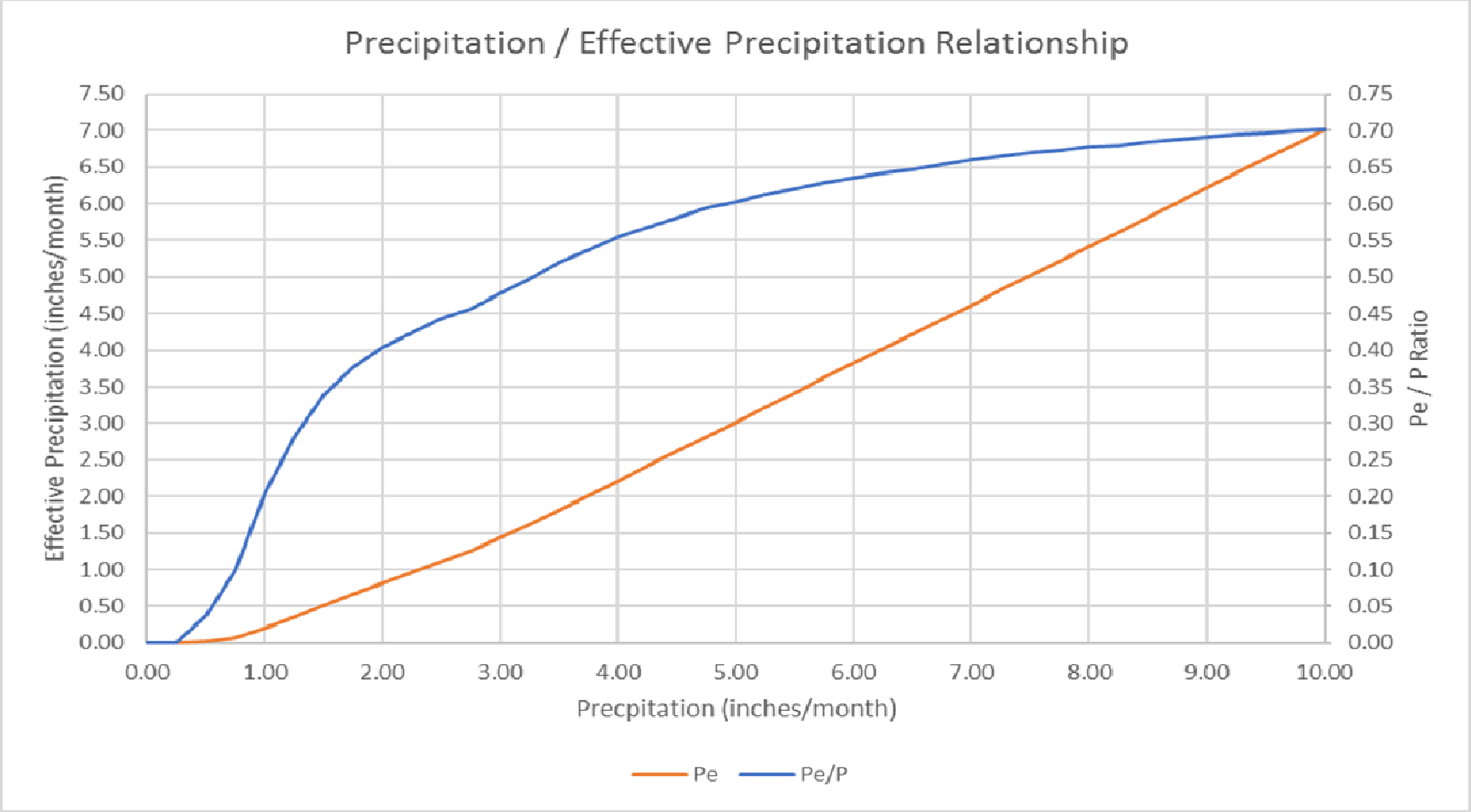
APPROXIMATE SCALE IN FEET

Average Monthly Precipitation Across Model Domain 1990-2016

Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: EMC	Date: 09/07/19	Project No.: FR18161220
		Figure **D2-13b**

C:\AModel\Kings\Report\Figures_fig_2_8_PrecipitationAcrossDomain.mxd



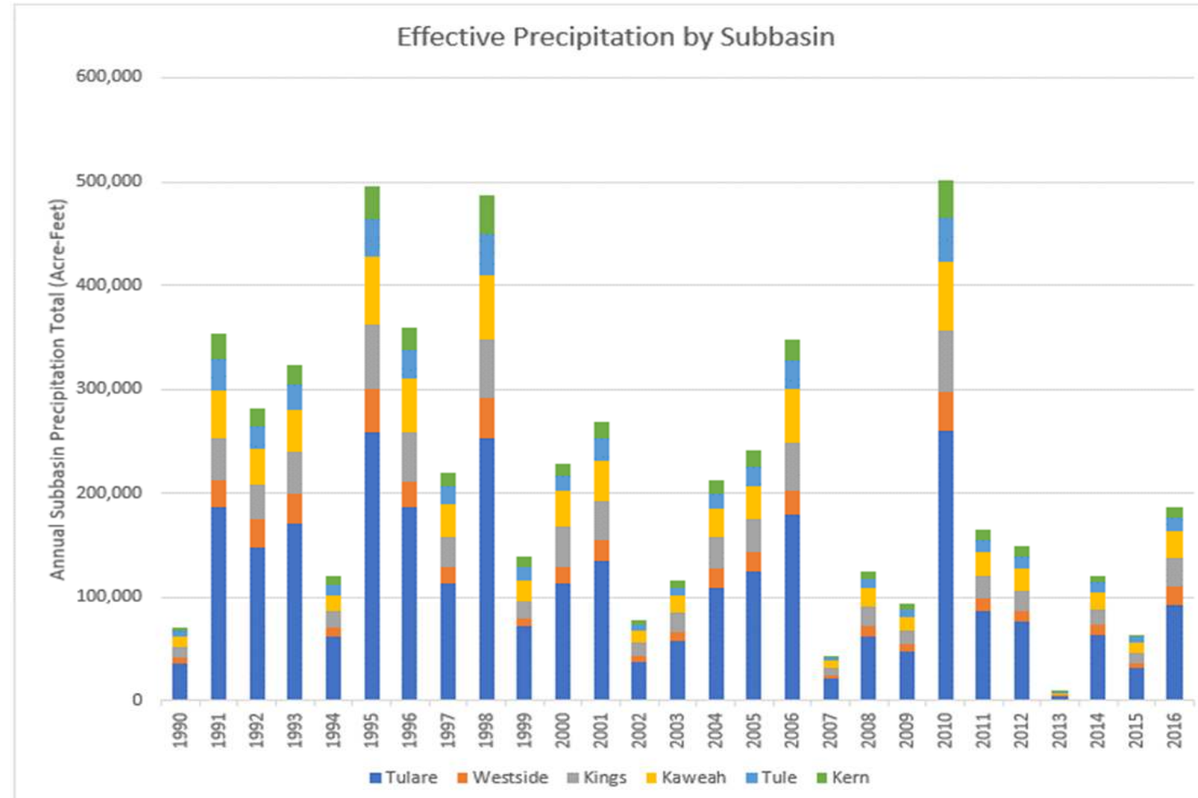
Modified from:
United Nations Food and Agricultre Organization (FAO)
FAO 56, Chapter 3 Table 6
Precipitation (P) and Effective Precipitation (Pe) in mm/month

Precipitation Versus
Effective Precipitation
Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: dmb	Date: 07/30/19	Project No.: FR18161220
		Figure **D2-14**

ANNUAL EFFECTIVE PRECIPITATION (ACRE-FEET)

Date	Tulare	Westside	Kings	Kaweah	Tule	Kern	Total
1990	35,788	5,208	10,921	10,176	4,812	3,714	70,619
1991	187,134	25,313	40,273	46,723	29,809	23,715	352,967
1992	148,073	27,645	33,148	33,386	21,388	17,350	280,990
1993	170,267	29,369	40,873	40,049	23,350	19,250	323,158
1994	61,232	8,593	15,645	16,141	10,127	8,240	119,978
1995	259,175	41,208	62,347	64,874	37,212	30,391	495,207
1996	186,149	24,278	48,754	51,487	27,483	21,442	359,593
1997	113,642	15,748	28,680	30,918	17,369	13,352	219,710
1998	252,323	38,854	56,898	60,724	41,542	36,341	486,681
1999	71,917	7,632	16,648	20,114	13,016	10,619	139,945
2000	113,113	16,314	38,555	34,058	15,532	11,155	228,726
2001	134,333	20,616	37,779	38,654	20,766	17,000	269,148
2002	37,068	5,535	12,943	11,666	5,956	4,445	77,613
2003	57,809	8,545	17,995	17,097	8,207	6,806	116,460
2004	109,787	18,411	29,462	28,012	14,496	12,064	212,232
2005	124,268	19,089	31,607	31,363	18,469	16,100	240,896
2006	179,592	23,246	45,635	51,807	27,290	19,450	347,021
2007	20,953	2,745	7,604	7,072	3,259	1,764	43,397
2008	61,111	11,105	18,873	18,211	9,119	6,389	124,809
2009	47,768	7,417	12,492	13,028	6,456	5,711	92,872
2010	260,214	37,095	58,830	65,701	43,440	35,754	501,035
2011	86,495	12,603	22,107	21,802	12,693	9,244	164,943
2012	75,839	10,048	19,758	21,768	12,555	8,764	148,732
2013	4,721	561	939	1,214	1,153	735	9,322
2014	63,051	9,701	14,375	17,224	9,896	6,761	121,008
2015	30,969	4,190	10,169	11,275	5,114	1,900	63,617
2016	92,375	18,143	27,302	25,956	12,925	10,086	186,788
min	4,721	561	939	1,214	1,153	735	9,322
max	260,214	41,208	62,347	65,701	43,440	36,341	501,035
mean	110,562	16,638	28,171	29,278	16,794	13,279	214,721



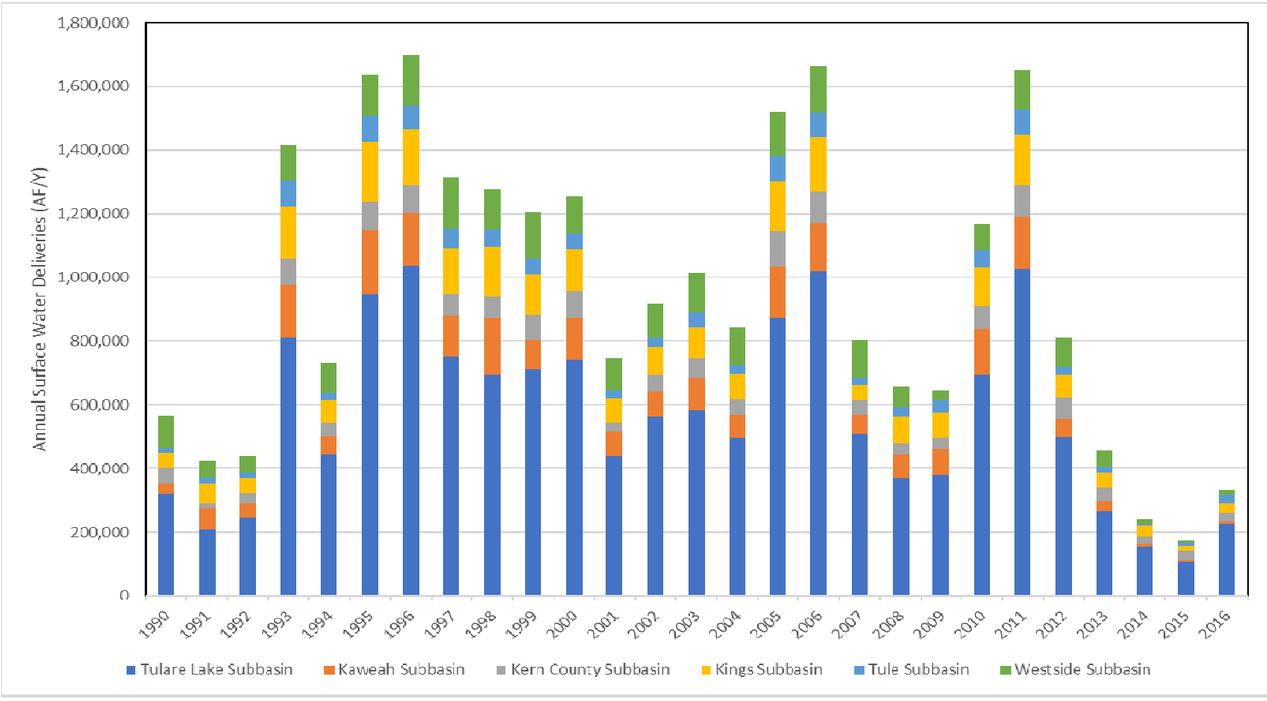
Note:
Annual effective precipitation totals are based on 2 kilometer grids of precipitation from the Oregon State University PRISM database and Effective Precipitation Chart

Estimated Annual Effective Precipitation by Subbasin
Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: dmb	Date: 07/30/19	Project No.: FR18161220
		Figure **D2-15**

Annual Surface Water Deliveries (Acre-Feet / Year)

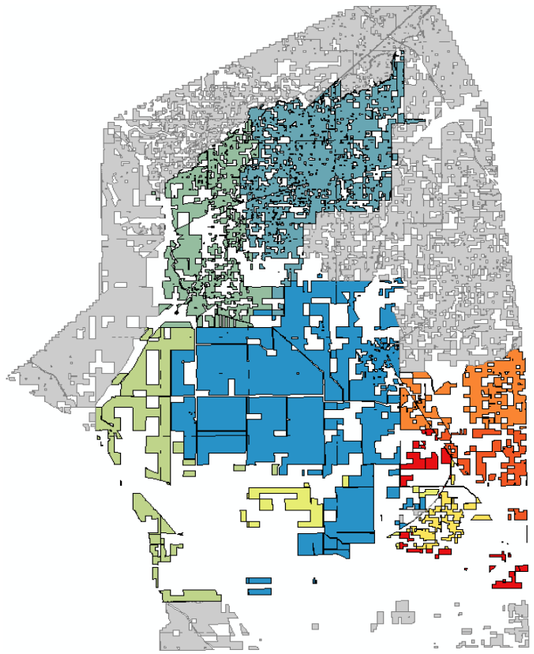
Date	Tulare Lake Subbasin	Kaweah Subbasin	Kern County Subbasin	Kings Subbasin	Tule Subbasin	Westside Subbasin	Total Model Domain
1990	319,638	34,691	46,977	47,706	14,494	101,753	565,259
1991	209,115	66,976	16,670	60,707	20,365	50,314	424,147
1992	244,988	48,175	29,248	47,266	18,257	51,537	439,472
1993	810,344	165,910	83,835	160,515	85,065	109,771	1,415,439
1994	443,205	56,606	44,535	69,284	22,852	94,931	731,414
1995	947,855	199,690	91,209	186,720	82,330	127,670	1,635,474
1996	1,036,790	163,574	87,848	177,280	75,768	155,283	1,696,544
1997	748,244	131,645	68,613	142,094	63,303	162,313	1,316,212
1998	693,058	179,630	69,486	153,596	54,029	127,191	1,276,990
1999	712,379	90,346	82,217	123,948	49,408	147,138	1,205,436
2000	740,630	131,085	85,279	129,655	53,811	114,126	1,254,586
2001	437,390	75,793	31,430	73,740	27,230	100,268	745,851
2002	563,492	79,353	51,035	87,765	28,672	107,362	917,680
2003	582,626	100,822	63,030	96,972	46,562	125,166	1,015,176
2004	495,419	71,381	49,475	80,158	28,180	120,407	845,020
2005	872,486	161,327	109,892	158,076	78,061	139,083	1,518,926
2006	1,019,418	150,216	100,573	170,799	74,941	147,368	1,663,316
2007	508,584	60,204	44,265	51,185	21,408	118,138	803,785
2008	370,440	74,103	34,343	83,836	29,913	64,483	657,118
2009	378,849	81,144	34,414	79,124	39,295	33,190	646,016
2010	693,453	145,197	71,837	120,646	54,005	81,772	1,166,909
2011	1,025,466	165,643	97,315	159,548	78,345	125,949	1,652,265
2012	498,360	56,953	65,646	72,022	26,220	90,518	809,719
2013	264,069	33,712	41,542	46,333	17,950	51,684	455,291
2014	154,035	8,482	24,232	31,689	7,799	15,092	241,330
2015	107,068	7,140	24,818	18,233	7,799	9,836	174,894
2016	227,433	8,482	24,232	31,689	24,908	15,092	331,837
1990-2016 Average	**559,438**	**94,381**	**58,296**	**98,540**	**41,888**	**95,831**	**948,374**
1998-2010 Average	**620,633**	**107,739**	**63,637**	**108,423**	**45,039**	**109,669**	**1,055,139**



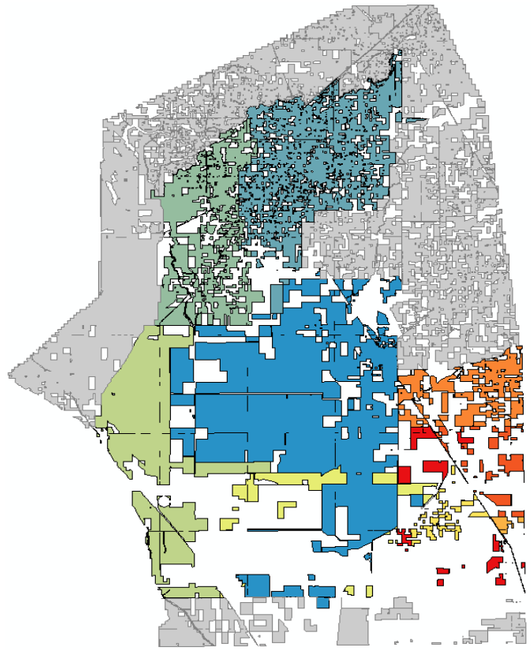
Estimated Annual Surface Water Diversions by Subbasin

Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

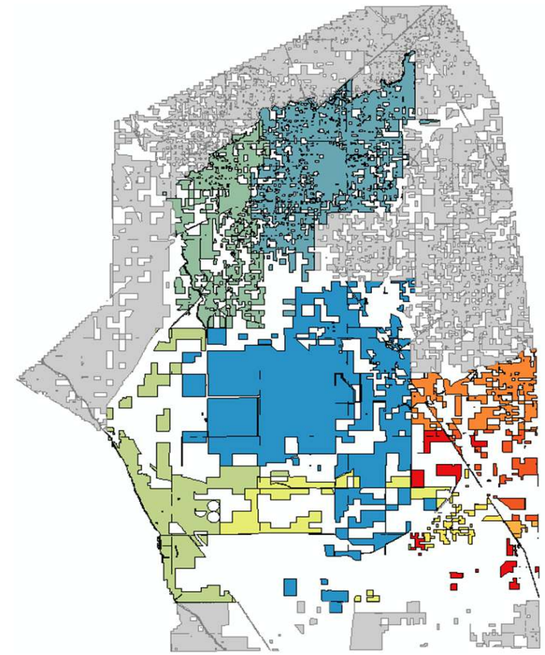
By: dmb	Date: 07/30/19	Project No.: FR18161220
		Figure **D2-16**



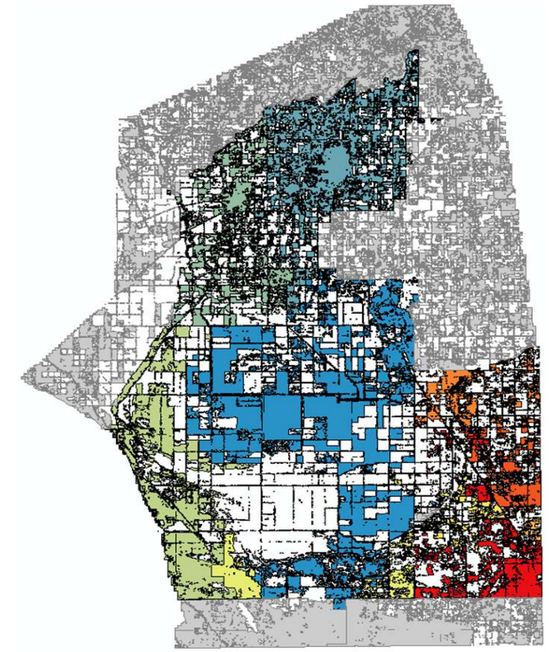
1990 - 1995



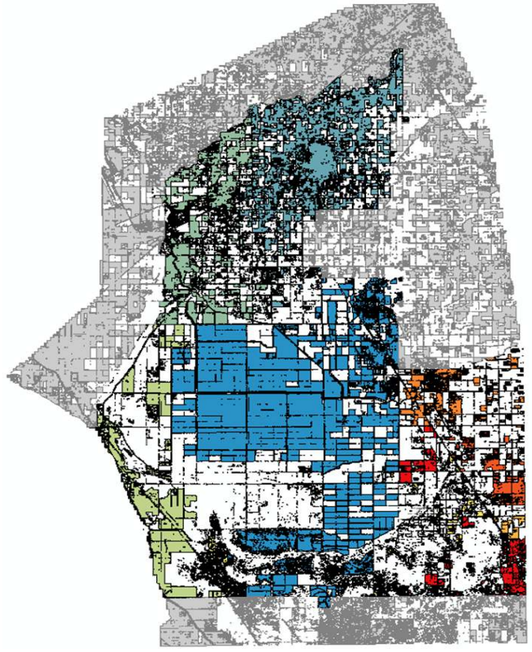
1996 - 1998



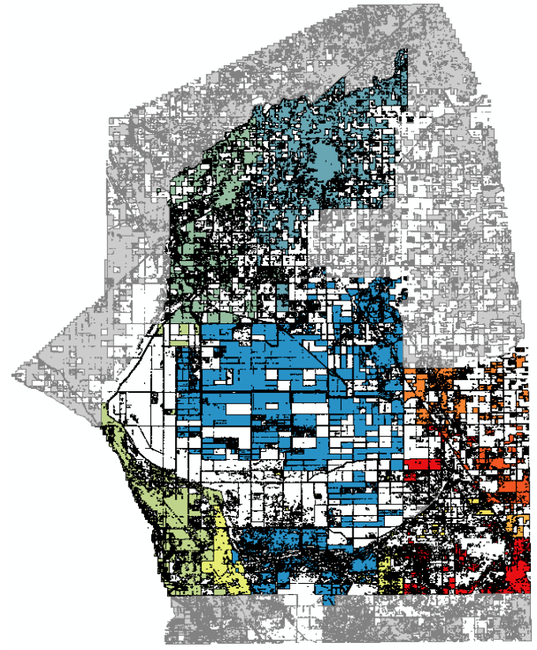
1999 - 2006



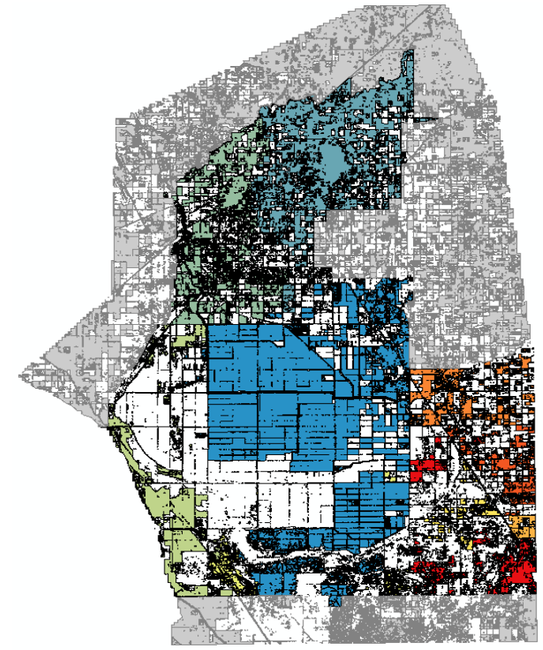
2009



2012



2014



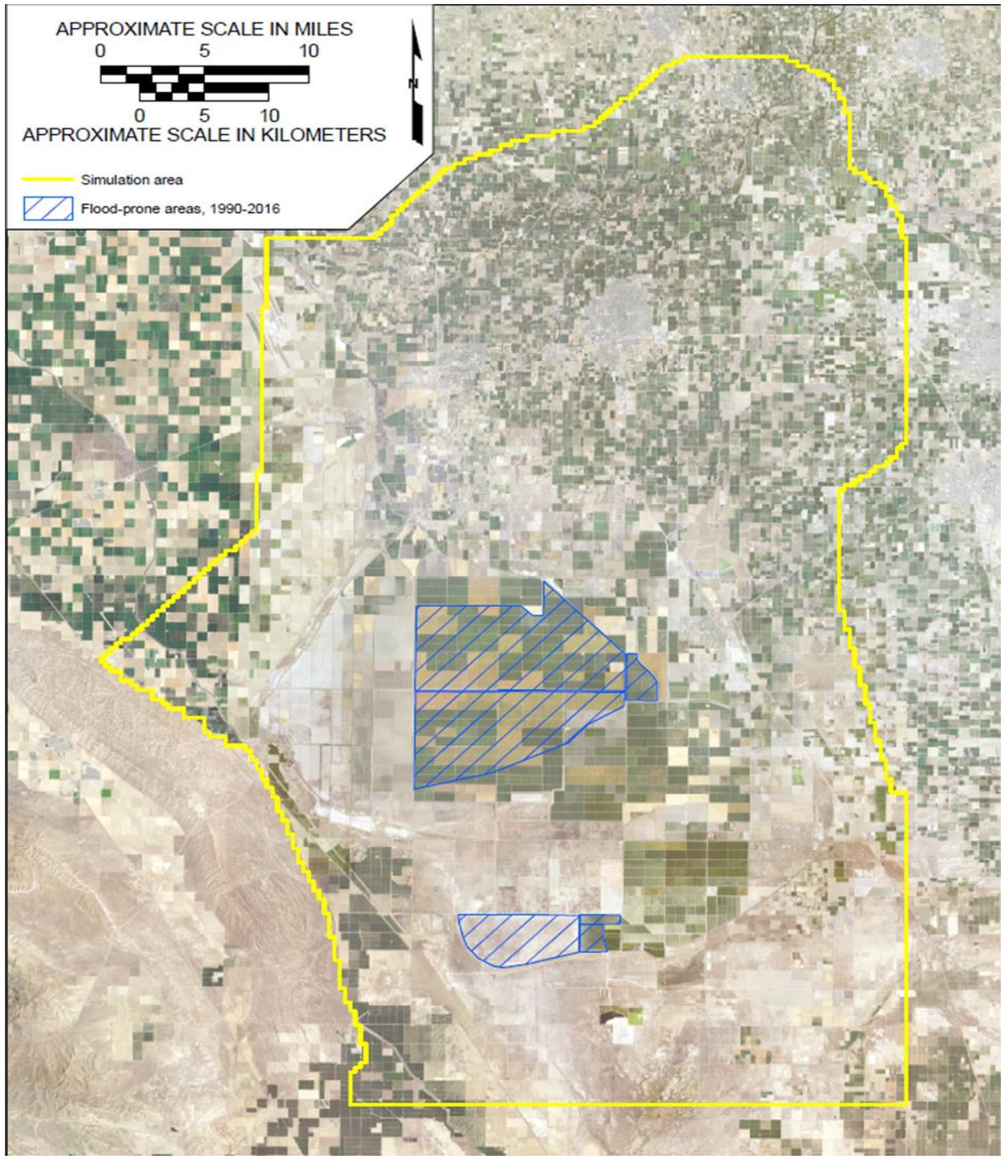
2016

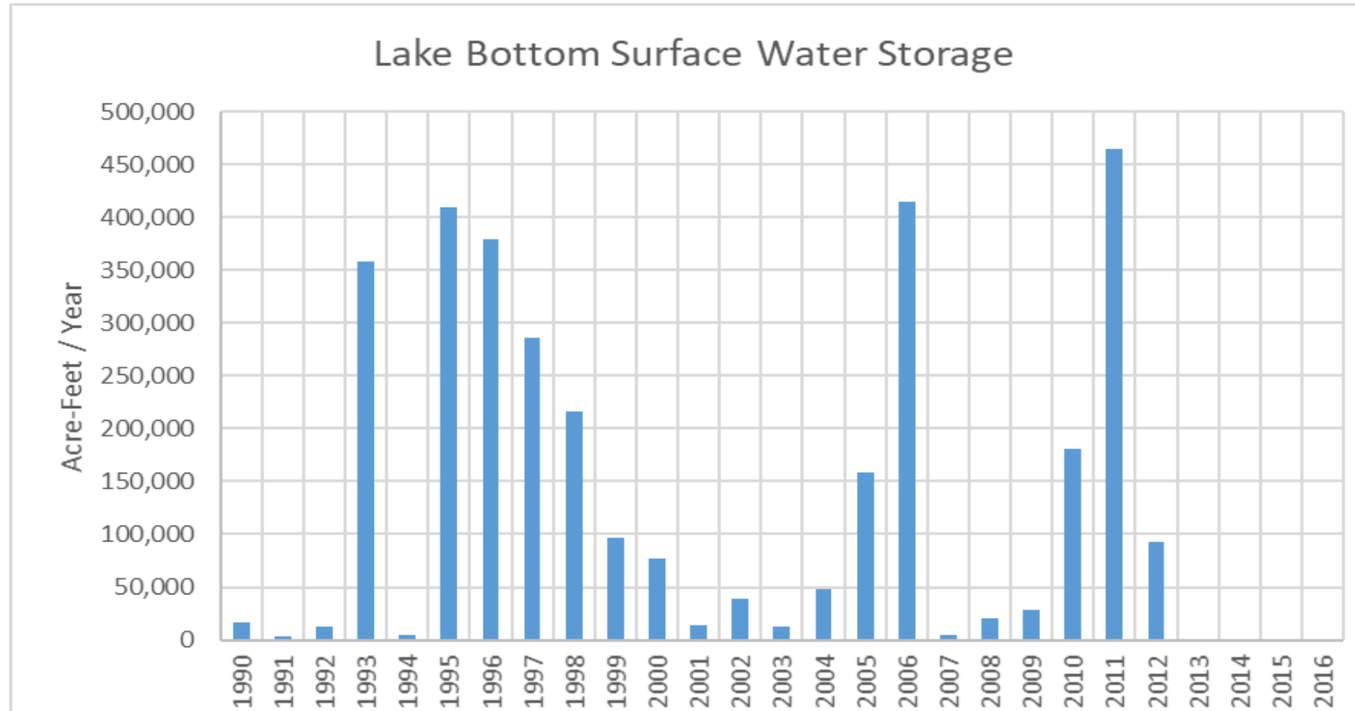
- Kaweah Subbasin, Greater Kaweah GSA
- Kaweah Subbasin, Mid-Kaweah GSA
- Kern County Subbasin, Kern Groundwater Authority GSA
- Kern County Subbasin, Semitropic
- Kings Subbasin, Central Kings GSA
- Kings Subbasin, Kings River East GSA
- Kings Subbasin, North Fork Kings GSA
- Kings Subbasin, South Kings GSA
- Tulare Lake Subbasin, Alpaugh GSA
- Tulare Lake Subbasin, El Rico GSA
- Tulare Lake Subbasin, Mid-Kings River GSA
- Tulare Lake Subbasin, South Fork Kings GSA
- Tulare Lake Subbasin, Southwest Kings GSA
- Tulare Lake Subbasin, Tri-County Water Authority GSA
- Tule Subbasin, Alpaugh GSA
- Tule Subbasin, Delano-Earlmart Irrigation District GSA
- Tule Subbasin, Lower Tule River ID GSA
- Tule Subbasin, Pixley ID GSA
- Tule Subbasin, Tri-County Water Authority GSA
- Westside Subbasin, Westlands Water District

Location of Surface Water Delivery Areas by Subbasin

Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: dmb	Date: 07/30/19	Project No.: FR18161220
		Figure **D2-17**





Explanation

Model Area

Surface Water Ponds

Location of Surface Water Storage Areas and Estimated Annual Lake Bottom Storage

Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: dmb	Date: 07/30/19	Project No.: FR18161220
		Figure **D2-18**

Date	Pond 1 (AF/Y)	Pond 2 (AF/Y)	Pond 3 (AF/Y)	Pond 4 (AF/Y)	Pond 5 (AF/Y)	Pond 6 (AF/Y)	Pond 7 (AF/Y)	Pond 8 (AF/Y)	Pond 9 (AF/Y)	Total (AF/Y)
1990	0	0	0	0	0	0	0	0	0	0
1991	0	0	0	0	0	0	0	0	0	0
1992	0	0	0	0	0	0	0	0	0	0
1993	0	0	0	0	0	0	0	0	0	0
1994	10,700	12,840	0	0	0	0	0	0	0	23,540
1995	10,700	12,840	0	0	0	0	0	0	0	23,540
1996	10,700	12,840	0	0	0	0	0	0	0	23,540
1997	10,700	12,840	0	0	0	0	0	0	0	23,540
1998	10,700	12,840	0	0	0	0	0	0	0	23,540
1999	0	0	0	0	0	0	0	0	0	0
2000	10,700	12,840	0	0	0	0	0	0	0	23,540
2001	0	0	0	0	0	0	0	0	0	0
2002	0	0	0	0	0	0	0	0	0	0
2003	10,700	12,840	0	0	0	0	0	0	0	23,540
2004	10,700	0	0	0	0	0	0	0	0	10,700
2005	10,700	12,840	14,980	14,980	0	0	0	0	0	53,500
2006	10,700	12,840	14,980	14,980	21,400	25,680	12,840	23,540	10,700	147,660
2007	0	0	0	0	0	0	0	0	0	0
2008	0	0	0	0	0	0	0	0	0	0
2009	10,700	0	0	0	0	0	0	0	0	10,700
2010	10,700	12,840	0	0	0	0	0	0	0	23,540
2011	10,700	12,840	14,980	14,980	21,400	25,680	12,840	23,540	10,700	147,660
2012	10,700	0	0	0	0	0	0	0	0	10,700
2013	0	0	0	0	0	0	0	0	0	0
2014	10,600	12,720	0	0	0	0	0	0	0	23,320
2015	10,700	12,840	0	0	0	0	0	0	0	23,540
2016	0	0	0	0	0	0	0	0	0	0
Total	171,100	166,800	44,940	44,940	42,800	51,360	25,680	47,080	21,400	616,100

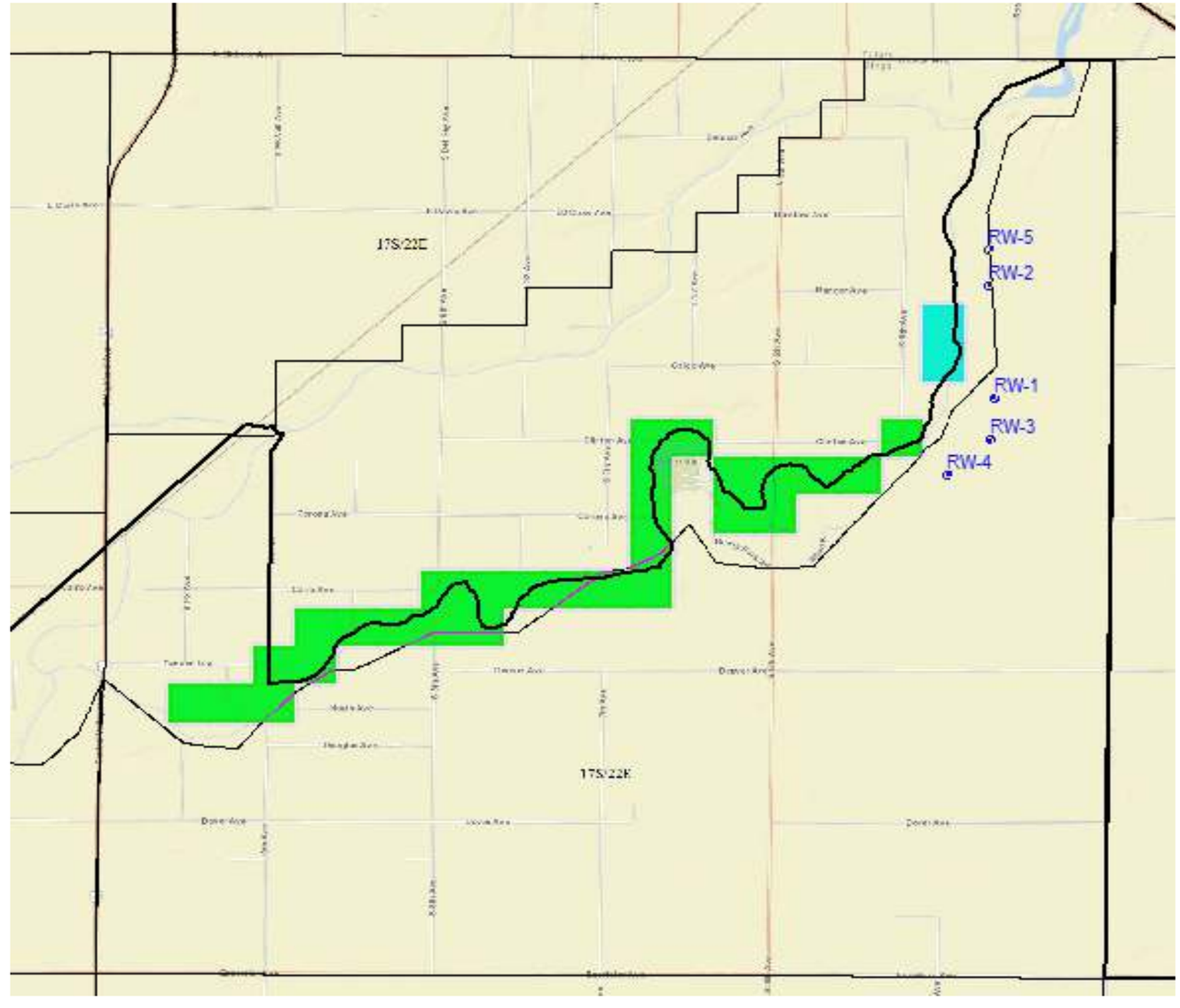
Estimated Annual Intentional Recharge - Corcorian Irrigation District

Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: dmb | Date: 07/30/19 | Project No.: FR18161220

Figure **D2-19**

Date	Cond 8 Recharge (AF/Y)	APEX Recharge (AF/Y)	APEX Recovery (AF/Y)	APEX Storage (AF/Y)
1990	1,021	--	--	--
1991	0	--	--	--
1992	0	--	--	--
1993	61	--	--	--
1994	0	--	--	--
1995	36,806	--	--	--
1996	8,541	--	--	--
1997	19,259	--	--	--
1998	37,879	--	--	--
1999	0	--	--	--
2000	0	--	--	--
2001	0	--	--	--
2002	0	225	0	225
2003	0	3,742	526	3,216
2004	0	0	912	-912
2005	5,442	10,994	0	10,994
2006	22,611	12,152	6,939	5,213
2007	0	3,630	6,319	-2,689
2008	0	2,792	5,435	-2,643
2009	0	9,514	7,677	1,837
2010	0	9,154	6,345	2,809
2011	32,441	10,292	0	10,292
2012	0	3,692	9,044	-5,352
2013	0	6,962	4,970	1,992
2014	0	441	298	143
2015	0	0	0	0
2016	42,672	0	0	0
Total	206,732	73,590	48,465	25,125

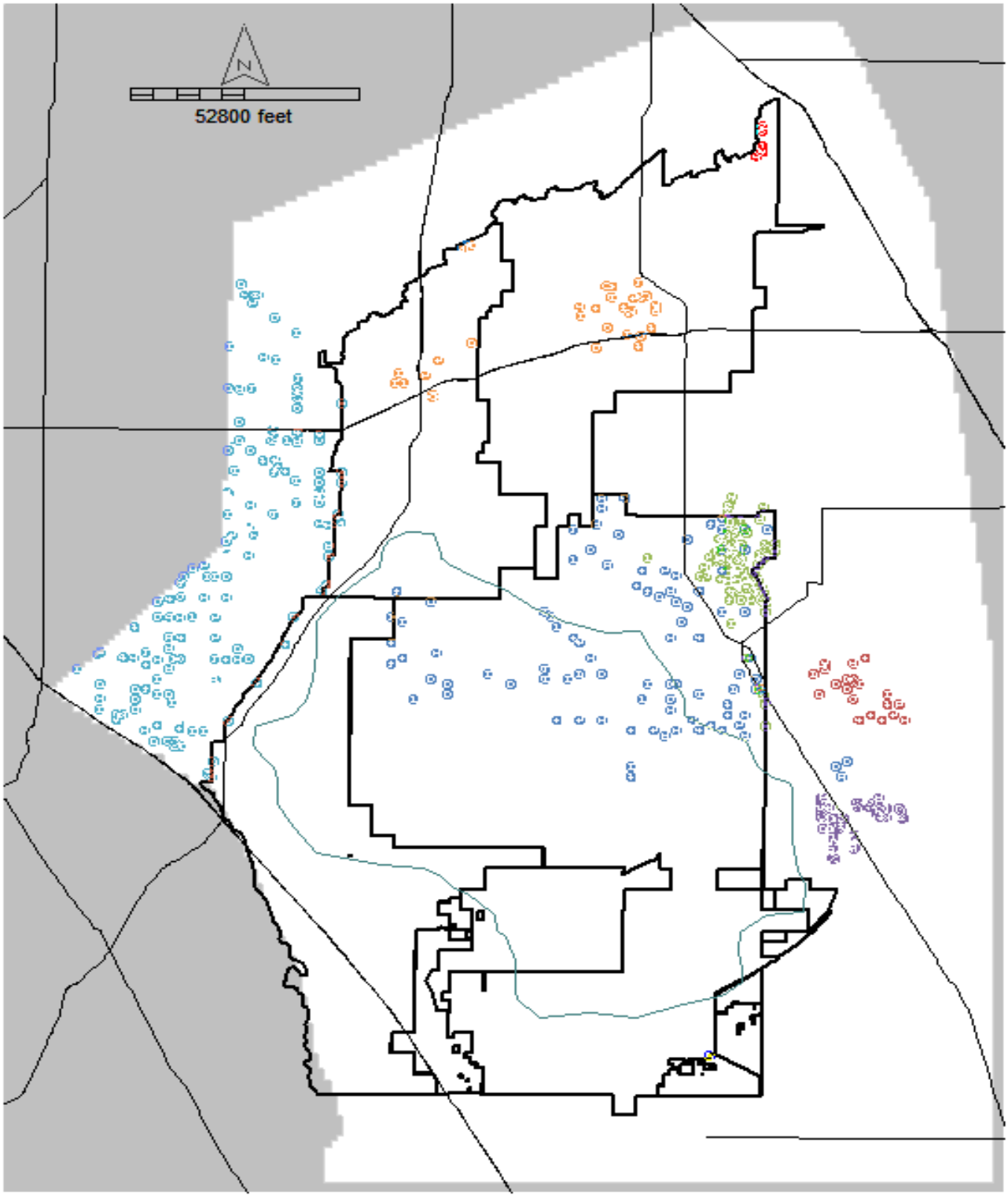


Condition 8 Recharge Area
APEX Ranch Water Bank Recharge Pond
APEX Ranch Recover Well

Estimated Annual Intentional Recharge - Condition 8 and APEX Ranch
Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: dmb | Date: 07/30/19 | Project No.: FR18161220

Figure **D2-20**



- Municipal
- Westlands Water District
- Corcoran Irrigation District
- El Rico GSA
- Creighton Ranch
- Angiola Well Field
- Apex Ranch

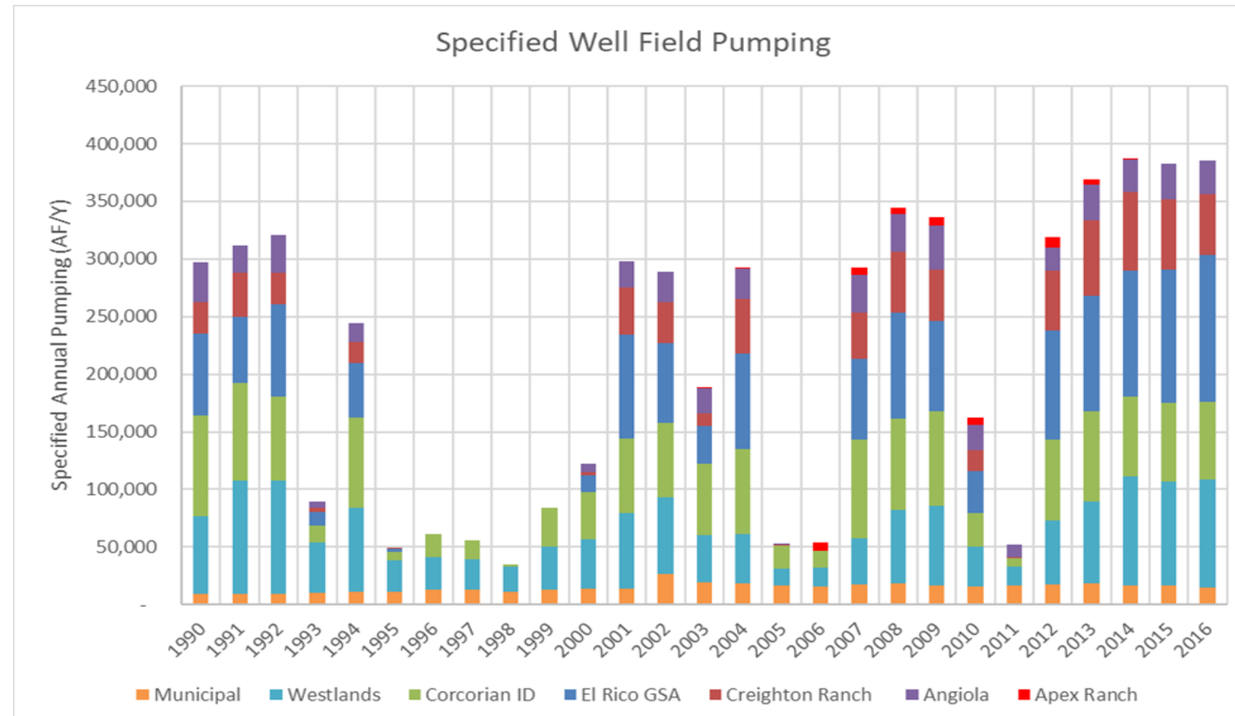
Location of Wells with Specified Pumping and Known Construction

Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: dmb	Date: 07/30/19	Project No.: FR18161220
		Figure **D2-21**

I:\FR18s\FR18161220 Tulare Lake GSP\Figures\8-Appendices\Figures\PendingReview\AppendixD\December2019\DRAFT_TLSB_SGMA_GWModel_Figures_v3.xlsxFig D2-21 Specified Well Map 12/19/2019

Date	El Rico GSA Well Field (AF/Y)	Creighton Ranch Well Field (AF/Y)	Corcorian ID Well Field (AF/Y)	Angiola Well Field (AF/Y)	Westlands Well Field (AF/Y)	Municipal Well Fields (AF/Y)	Apex Ranch Well Field (AF/Y)
1990	70,716	27,222	87,977	34,500	67,131	9,370	--
1991	57,509	38,484	84,438	23,396	98,656	9,109	--
1992	80,012	27,255	72,348	33,494	98,344	9,666	--
1993	11,395	4,035	14,248	5,956	44,056	10,208	--
1994	48,043	17,986	78,297	16,389	72,674	10,928	--
1995	2,897	905	7,145	-	27,589	10,775	--
1996	-	-	20,261	-	28,516	12,719	--
1997	-	-	15,586	-	27,000	12,775	--
1998	-	-	2,484	-	20,988	11,555	--
1999	-	-	33,406	-	37,185	13,087	--
2000	14,910	2,849	40,672	6,784	43,392	13,421	--
2001	89,799	41,120	64,353	23,244	65,947	13,895	--
2002	68,933	35,843	64,736	26,537	66,530	26,701	-
2003	32,420	10,856	62,246	22,429	40,841	19,349	526
2004	82,875	47,511	74,007	26,805	42,115	18,777	912
2005	-	468	20,138	662	14,744	16,536	-
2006	-	72	14,034	141	16,526	15,822	6,939
2007	69,863	40,266	85,434	32,894	40,373	17,221	6,319
2008	92,269	52,980	79,362	32,502	63,519	18,432	5,435
2009	78,097	45,292	81,493	37,798	69,904	16,354	7,677
2010	36,129	17,740	29,669	22,568	34,895	15,271	6,345
2011	606	314	7,328	11,336	15,509	17,042	-
2012	95,154	52,325	70,008	19,388	55,298	17,467	9,044
2013	100,275	66,005	78,175	30,528	70,940	18,411	4,970
2014	108,976	68,726	69,880	27,695	94,077	16,930	298
2015	116,254	61,050	67,982	30,220	90,723	16,146	-
2016	126,886	53,113	67,982	29,047	93,853	14,555	-



Notes:
1. El Rico Groundwater Sustainability Agency (GSA), Corcoran Irrigation District, and Creighton Ranch pumping provided by the El Rico GSA
2. Angiola Well Field pumping data provided by Angiola Water District
3. Westlands pumping provided by Westlands Water District
4. Municipal pumping and Apex pumping provided by various municipalities and Kings River Water District

Annual Specified Pumping by Well Field
Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: dmb	Date: 07/30/19	Project No.: FR18161220
		Figure **D2-22**

Annual Crop Demand (AF/Y)

Date	TLSB	Westside	Kings	Kaweah	Tule	Kern	Total
1990	901,131	291,990	328,863	424,556	197,637	87,217	2,231,393
1991	901,119	288,262	328,849	424,556	197,637	87,217	2,227,639
1992	902,016	284,489	329,148	424,998	197,921	87,318	2,225,890
1993	901,095	283,147	328,833	424,556	197,637	87,217	2,222,484
1994	900,719	263,495	328,833	424,556	197,637	87,217	2,202,456
1995	900,633	243,070	328,775	424,556	197,637	87,217	2,181,887
1996	982,820	257,687	292,187	406,852	254,257	107,481	2,301,283
1997	985,893	268,823	300,664	408,439	253,933	108,406	2,326,158
1998	989,781	243,239	309,316	410,462	254,000	109,483	2,316,281
1999	1,062,749	263,950	316,538	415,430	253,992	63,054	2,375,713
2000	1,079,872	258,530	324,230	418,470	254,108	66,574	2,401,785
2001	1,089,515	283,910	325,407	419,045	253,769	69,132	2,440,778
2002	1,100,326	277,743	326,810	420,081	253,820	71,790	2,450,569
2003	1,111,248	299,919	328,199	421,117	253,870	74,447	2,488,801
2004	1,113,509	289,665	328,509	422,104	254,310	75,582	2,483,679
2005	1,113,269	268,262	328,310	422,163	253,971	76,507	2,462,481
2006	1,114,369	261,146	328,236	422,685	254,021	77,537	2,457,995
2007	1,074,260	280,336	257,665	387,633	290,933	205,928	2,496,756
2008	1,004,624	273,945	256,884	421,390	296,194	186,808	2,439,846
2009	1,012,322	305,821	256,214	336,797	250,674	237,356	2,399,183
2010	995,249	278,025	281,457	346,870	301,120	247,643	2,450,365
2011	764,558	257,795	219,117	346,680	152,303	67,393	1,807,847
2012	738,639	292,444	227,094	361,650	182,653	73,426	1,875,904
2013	743,729	318,593	202,452	346,907	166,566	96,210	1,874,457
2014	701,059	365,392	239,018	343,552	193,931	120,344	1,963,297
2015	566,898	370,658	223,336	318,118	170,463	83,566	1,733,039
2016	646,034	371,623	241,082	317,784	152,776	80,645	1,809,944
Min	566,898	243,070	202,452	317,784	152,303	63,054	1,733,039
Max	1,114,369	371,623	329,148	424,998	301,120	247,643	2,496,756
1990-2016 Average	940,646	286,739	292,075	394,889	227,325	104,545	2,246,219
1998-2010 Average	1,066,238	275,730	305,213	404,942	263,445	120,142	2,435,710

Annual Effective Precipitation Utilized by Crops (AF/Y)

Date	TLSB	Westside	Kings	Kaweah	Tule	Kern	Total
1990	19,958	4,318	9,898	10,134	4,021	1,244	49,574
1991	78,722	16,428	27,444	38,793	21,719	7,694	190,800
1992	64,818	24,269	24,144	28,899	15,747	5,740	163,617
1993	67,191	20,008	25,068	30,973	16,254	6,004	165,498
1994	34,514	6,123	14,367	15,929	7,877	2,828	81,637
1995	95,479	21,157	36,745	48,040	24,113	8,897	234,430
1996	100,745	20,047	33,683	44,875	24,361	9,632	233,344
1997	58,885	12,805	17,579	24,815	14,337	6,118	134,539
1998	116,167	25,963	38,123	50,183	32,155	14,137	276,727
1999	34,039	6,590	10,459	14,066	7,218	1,858	74,231
2000	70,413	13,814	26,881	29,672	15,472	3,995	160,246
2001	94,963	18,024	32,490	38,749	21,039	5,954	211,219
2002	26,034	4,299	12,099	11,948	5,990	1,685	62,054
2003	40,108	7,125	16,388	17,922	7,930	2,591	92,063
2004	74,858	15,360	24,636	28,506	14,362	4,272	161,995
2005	80,390	16,208	27,519	30,024	16,637	5,669	176,448
2006	104,703	19,345	34,578	43,910	25,059	7,201	234,795
2007	14,800	1,940	6,669	7,093	3,456	1,379	35,337
2008	35,836	9,454	12,655	18,355	10,733	4,599	91,630
2009	32,367	5,698	10,965	12,592	6,666	4,957	73,244
2010	88,203	22,750	27,939	32,256	23,244	16,507	210,899
2011	52,937	10,835	19,879	21,821	10,643	3,971	120,086
2012	45,317	8,817	17,930	23,369	12,074	5,282	112,788
2013	2,800	326	525	1,175	893	527	6,246
2014	30,586	10,563	12,275	15,813	7,632	3,413	80,282
2015	15,085	3,280	7,920	10,283	4,837	1,131	42,536
2016	41,890	13,881	19,341	21,746	9,312	4,102	110,272
Min	2,800	326	525	1,175	893	527	6,246
Max	116,167	25,963	38,123	50,183	32,155	16,507	276,727
1990-2016 Average	56,363	12,571	20,304	24,887	13,473	5,237	132,835
1998-2010 Average	62,529	12,813	21,646	25,790	14,612	5,754	143,145

Annual Farm Demand (AF/Y)

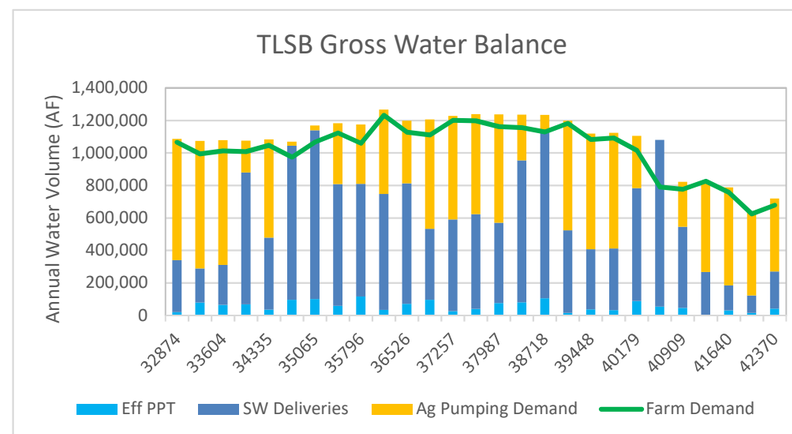
Date	TLSB	Westside	Kings	Kaweah	Tule	Kern	Total
1990	1,065,856	379,829	425,121	552,538	256,615	114,629	2,794,588
1991	994,832	358,828	401,725	514,334	233,176	106,035	2,608,931
1992	1,012,909	343,450	406,535	528,115	241,481	108,779	2,641,268
1993	1,008,709	347,335	404,875	524,762	240,425	108,288	2,634,395
1994	1,047,937	339,746	419,143	544,830	251,521	112,514	2,715,691
1995	973,503	292,869	389,226	502,007	229,979	104,424	2,492,007
1996	1,067,962	313,585	344,546	482,623	304,804	130,465	2,643,985
1997	1,123,726	337,872	377,306	511,503	317,630	136,383	2,804,420
1998	1,059,009	286,711	361,492	480,381	294,124	127,132	2,608,849
1999	1,232,448	339,665	407,814	535,160	327,150	81,596	2,923,833
2000	1,127,412	284,814	349,602	457,426	279,949	73,623	2,572,827
2001	1,111,506	309,426	344,390	447,420	273,032	74,325	2,560,098
2002	1,201,455	318,210	370,000	480,162	290,750	82,471	2,743,049
2003	1,198,411	341,139	366,586	474,349	288,517	84,529	2,753,532
2004	1,162,011	319,587	357,269	463,075	281,525	83,897	2,667,364
2005	1,155,548	293,659	353,639	461,355	278,436	83,344	2,625,980
2006	1,129,741	281,543	345,256	445,626	268,596	82,751	2,553,513
2007	1,183,096	324,200	294,958	447,694	338,016	240,627	2,828,591
2008	1,083,093	307,929	286,930	474,164	335,571	214,361	2,702,048
2009	1,091,697	349,701	288,327	381,416	286,941	273,394	2,671,475
2010	1,016,725	297,419	297,831	370,133	326,713	271,898	2,580,720
2011	791,090	287,744	234,224	382,183	166,368	74,617	1,936,226
2012	776,133	330,525	245,767	397,981	200,454	80,173	2,031,033
2013	826,405	371,025	237,221	406,748	194,551	112,569	2,148,518
2014	757,265	413,917	266,385	385,588	218,818	137,564	2,179,536
2015	624,647	428,797	253,146	362,160	194,523	96,982	1,960,255
2016	677,936	417,581	260,622	348,283	168,493	90,048	1,962,964
Min	624,647	281,543	234,224	348,283	166,368	73,623	1,936,226
Max	1,232,448	428,797	425,121	552,538	338,016	273,394	2,923,833
1990-2016 Average	1,018,558	333,967	336,664	457,853	262,524	121,756	2,531,322
1998-2010 Average	1,134,781	311,846	340,315	455,259	297,640	136,457	2,676,298

Annual SW Deliveries (AF/Y)

Date	TLSB	Westside	Kings	Kaweah	Tule	Kern	Total
1990	319,870	101,619	47,539	34,733	14,511	46,975	565,248
1991	209,568	50,258	60,256	67,030	20,368	16,662	424,142
1992	245,345	51,466	46,973	48,204	18,265	29,256	439,510
1993	811,312	109,501	159,335	166,035	85,071	83,829	1,415,083
1994	443,731	94,821	68,919	56,681	22,866	44,530	731,548
1995	948,773	127,445	185,554	199,827	82,318	91,195	1,635,112
1996	1,038,046	155,077	176,089	163,768	75,817	87,846	1,696,643
1997	749,117	162,214	141,157	131,813	63,410	68,603	1,316,314
1998	693,908	127,058	152,543	179,774	54,049	69,486	1,276,818
1999	713,206	147,012	123,314	90,454	49,410	82,217	1,205,613
2000	741,494	114,048	128,808	131,211	53,836	85,257	1,254,654
2001	437,871	100,121	73,383	75,856	27,236	31,432	745,899
2002	564,134	107,249	87,249	79,437	28,684	51,013	917,765
2003	583,124	124,958	96,413	100,930	46,590	63,012	1,015,028
2004	495,764	120,232	79,759	71,463	28,189	49,469	844,876
2005	873,425	138,809	157,030	161,487	78,104	109,872	1,518,728
2006	1,020,922	147,160	169,818	150,345	74,983	100,583	1,663,811
2007	508,886	117,825	51,225	60,221	21,430	44,262	803,848
2008	371,231	64,289	83,113	74,197	29,911	34,341	657,082
2009	379,590	33,075	78,392	81,233	39,292	34,417	645,999
2010	694,592	81,618	119,468	145,326	54,007	71,839	1,166,851
2011	1,026,568	125,783	158,177	165,812	78,345	97,317	1,652,002
2012	498,937	90,342	71,505	57,021	26,222	65,649	809,676
2013	264,515	51,613	45,947	33,756	17,953	41,540	455,323
2014	154,346	15,048	31,361	8,517	7,799	24,232	241,303
2015	107,212	9,806	18,103	7,154	7,800	24,819	174,894
2016	227,755	15,061	31,385	8,505	24,909	24,233	331,849
Min	107,212	9,806	18,103	7,154	7,799	16,662	174,894
Max	1,038,046	162,214	185,554	199,827	85,071	109,872	1,696,643
1990-2016 Average	560,120	95,685	97,882	94,474	41,903	58,292	948,356
1998-2010 Average	621,396	109,497	107,732	107,841	45,055	63,631	1,055,152

Annual Agricultural Pumping Demand (AF/Y)

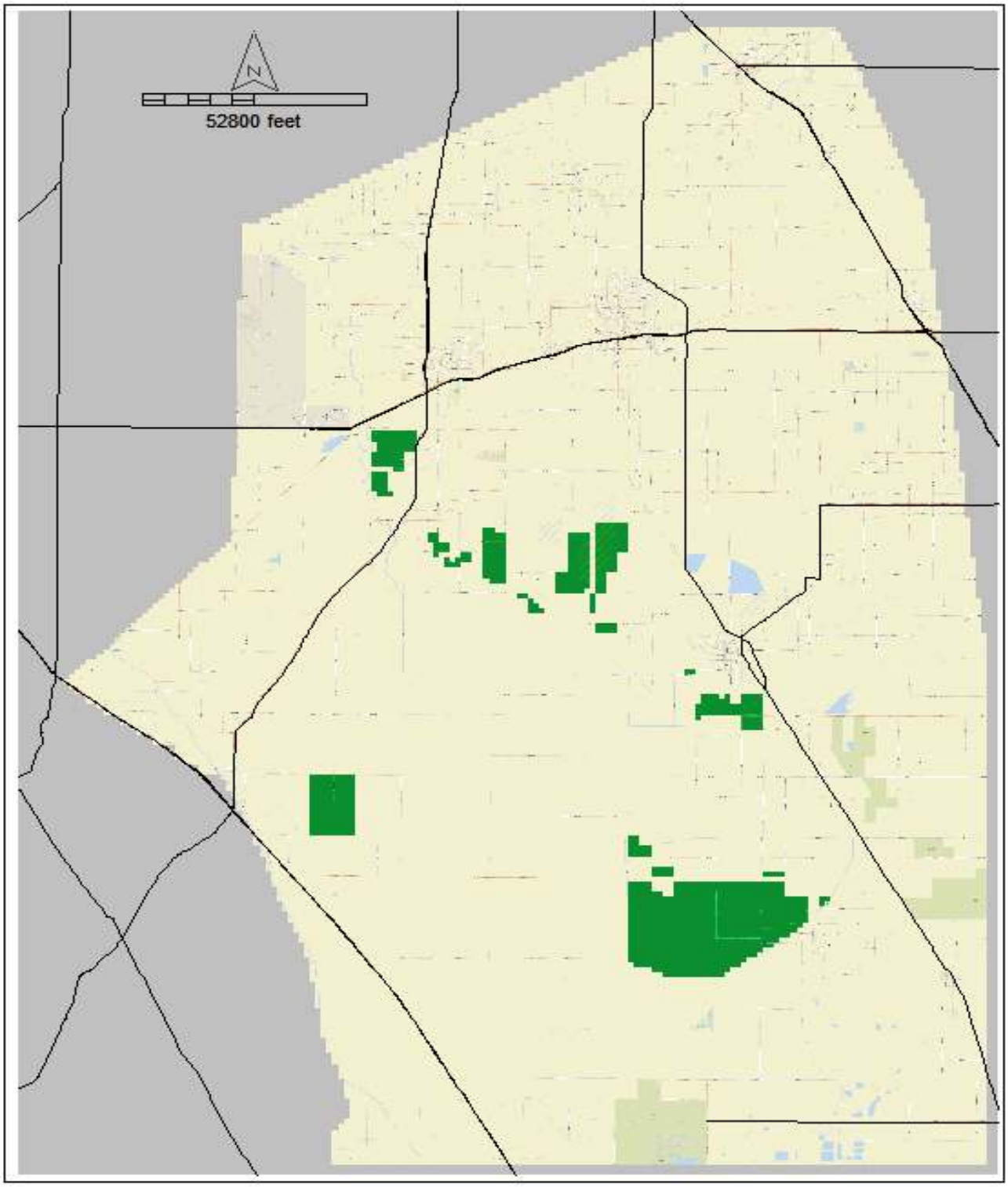
Date	TLSB	Westside	Kings	Kaweah	Tule	Kern	Total
1990	-745,986	-278,210	-377,582	-517,805	-242,104	-67,654	-2,229,341
1991	-785,264	-308,570	-341,469	-447,304	-212,809	-89,372	-2,184,789
1992	-767,564	-291,984	-359,561	-479,910	-223,216	-79,523	-2,201,759
1993	-197,397	-237,834	-245,540	-358,728	-155,354	-24,459	-1,219,312
1994	-604,206	-244,926	-350,224	-488,149	-228,655	-67,983	-1,984,143
1995	-24,730	-165,424	-203,672	-302,179	-147,661	-13,229	-856,896
1996	-29,915	-158,508	-168,457	-318,855	-228,987	-42,619	-947,342
1997	-374,608	-175,659	-236,149	-379,690	-254,220	-67,780	-1,488,105
1998	-365,102	-159,653	-208,949	-300,607	-240,074	-57,645	-1,332,031
1999	-519,242	-192,653	-284,500	-444,706	-277,739	621	-1,718,220
2000	-385,918	-170,767	-220,794	-326,215	-226,113	11,634	-1,318,173
2001	-673,635	-209,305	-271,007	-371,563	-245,796	-42,893	-1,814,199
2002	-637,322	-210,961	-282,751	-400,725	-262,067	-31,459	-1,825,285
2003	-615,287	-216,181	-270,173	-373,419	-241,927	-21,516	-1,738,504
2004	-666,247	-199,354	-277,510	-391,613	-253,336	-34,428	-1,822,488
2005	-282,123	-154,850	-196,609	-299,869	-200,331	26,529	-1,107,252
2006	-108,819	-134,383	-175,438	-295,282	-193,614	17,832	-889,703
2007	-674,210	-206,375	-243,733	-387,473	-316,586	-196,365	-2,024,743
2008	-711,862	-243,641	-203,818	-399,968	-305,659	-180,020	-2,044,967
2009	-712,107	-316,626	-209,935	-300,183	-247,649	-238,977	-2,025,477
2010	-322,133	-215,801	-178,363	-224,807	-272,706	-200,059	-1,413,869
2011	0	-161,961	-76,046	-216,371	-88,024	22,700	-519,702
2012	-277,196	-240,183	-174,262	-340,959	-174,232	-14,524	-1,221,356
2013	-561,890	-319,412	-191,274	-372,992	-176,598	-71,029	-1,693,195
2014	-602,919	-398,869	-235,024	-377,071	-211,018	-113,332	-1,938,233
2015	-517,434	-418,991	-235,043	-355,006	-186,723	-72,163	-1,785,361
2016	-450,181	-402,520	-229,237	-339,778	-143,584	-65,815	-1,631,116
Min	-785,264	-418,991	-377,582	-517,805	-316,586	-238,977	-2,229,341
Max	0	-134,383	-76,046	-216,371	-88,024	26,529	-519,702
1990-2016 Average	-467,159	-238,282	-238,782	-363,379	-220,622	-63,464	-1,591,687
1998-2010 Average	-513,385	-202,350	-232,583	-347,418	-252,584	-72,827	-1,621,147



Gross Annual Water Balance

Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: dmb	Date: 07/30/19	Project No.: FR18161220
		Figure **D2-23**



Legend

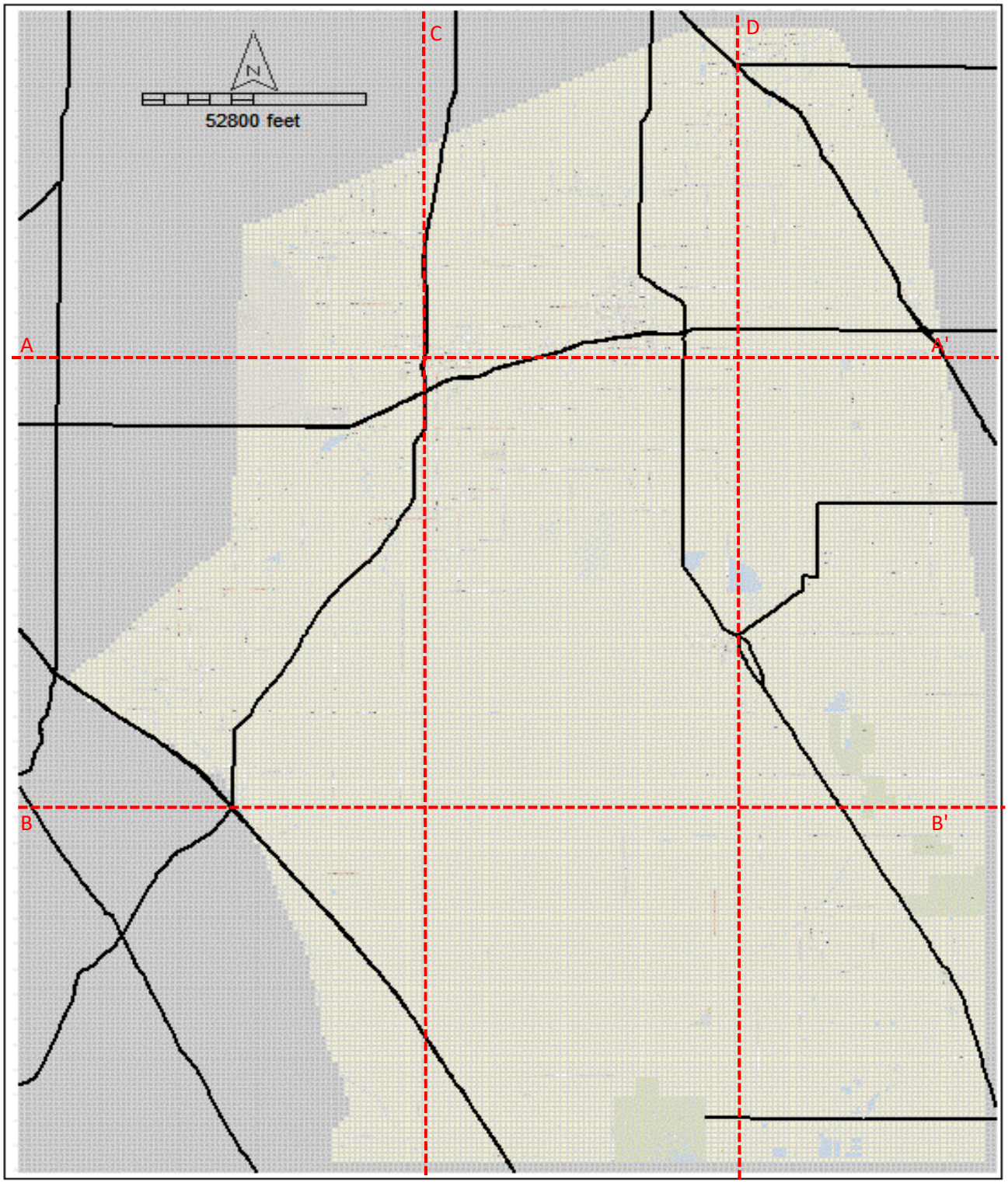
Model Area

Sub-Surface Drains

Approximate Location of Sub-Surface Drainage Systems

Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: dmb	Date: 07/30/19	Project No.: FR18161220
		Figure **D2-24**



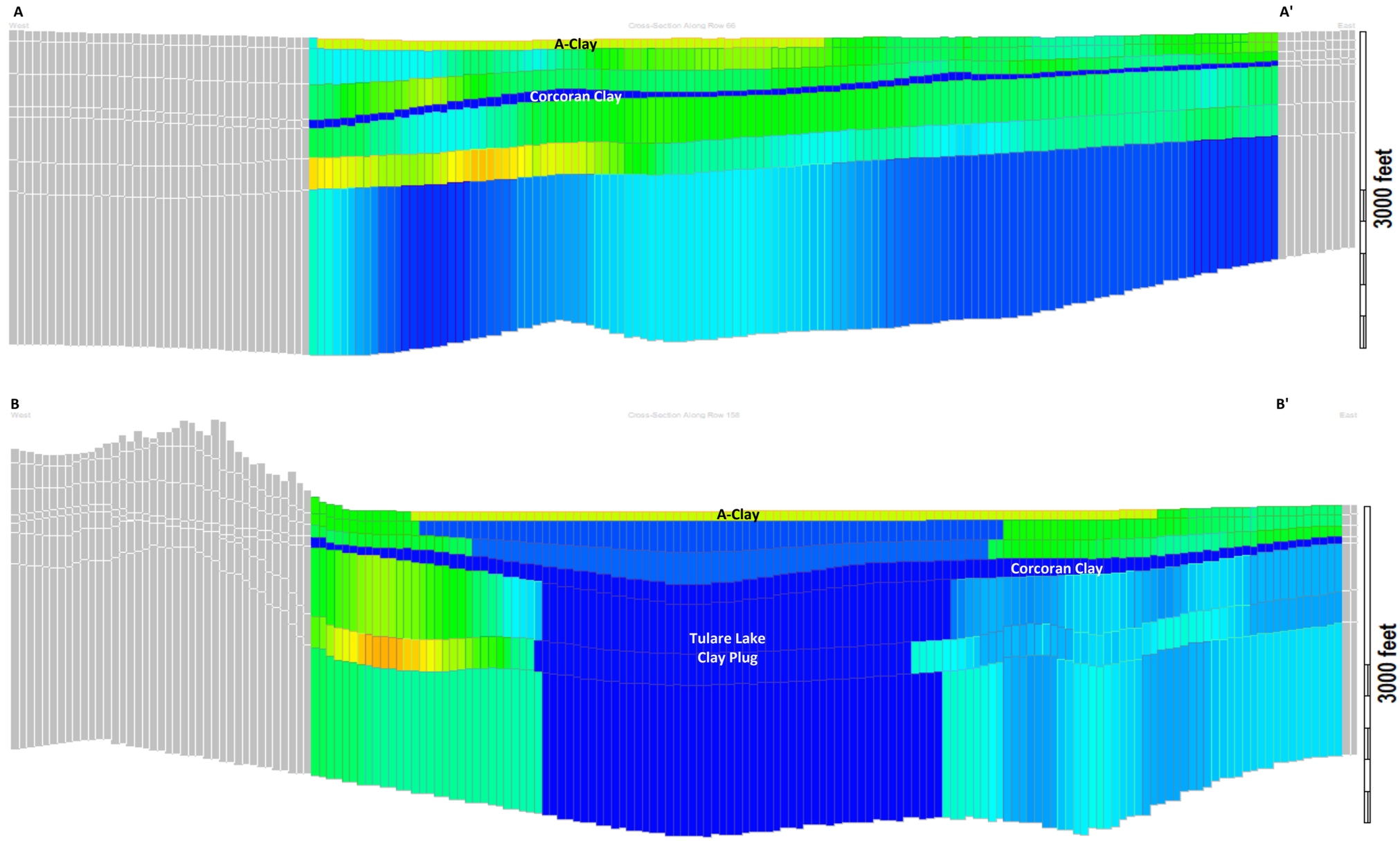
Explanation

- Cross Section
- Major Roads
- No Flow

Tulare Lake Subbasin Hydrologic Model Domain and Grid

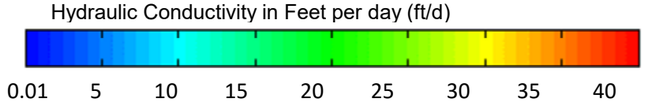
Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: dmb	Date: 07/30/19	Project No.: FR18161220
		Figure **D4-1**



Vertical Exaggeration 20 X

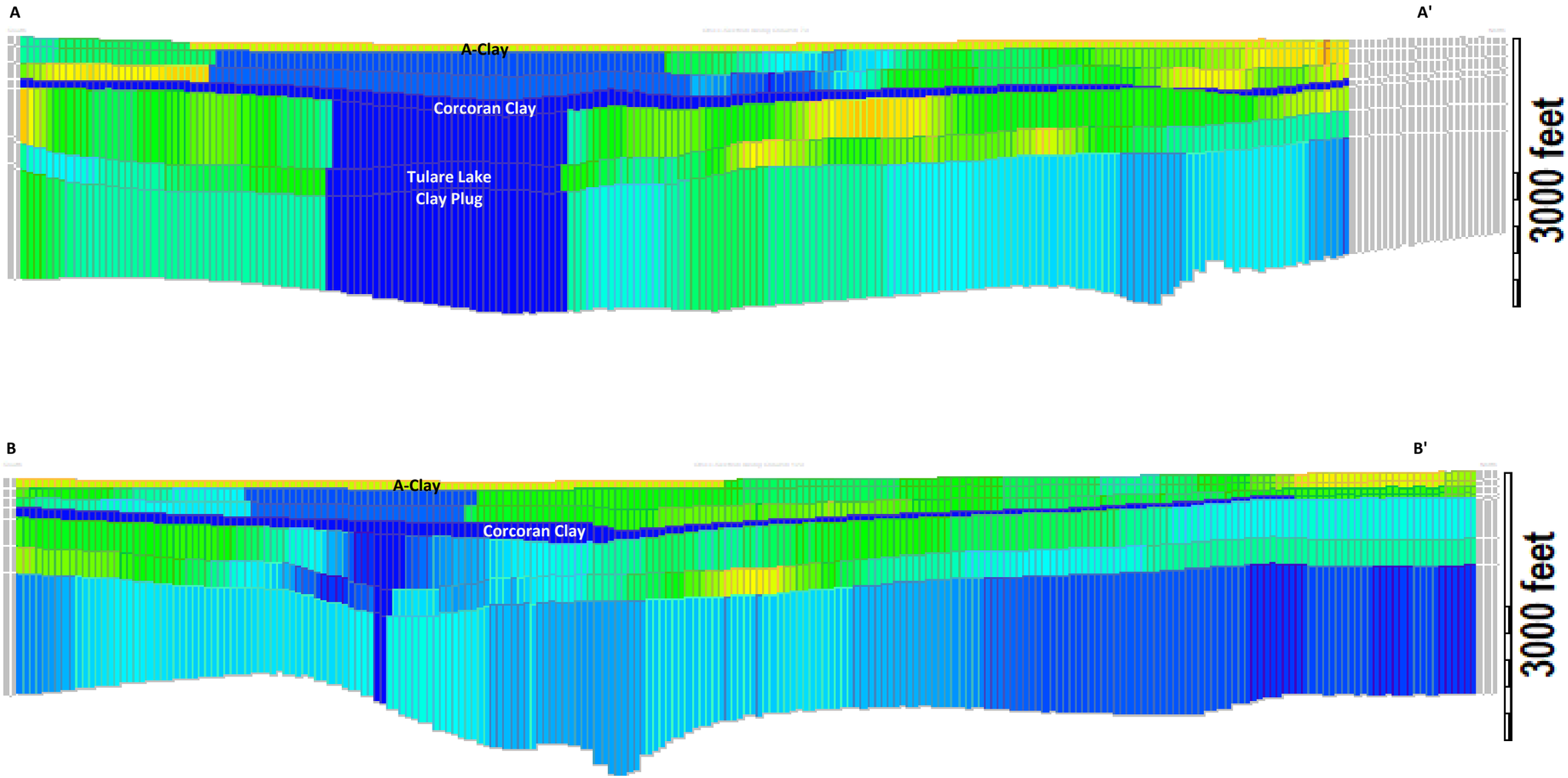
Hydraulic Conductivity in Feet per day (ft/d)



Model Layers and East-West Cross-Sections A-A' and B-B'

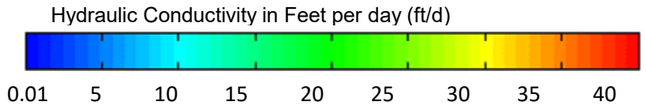
Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: dmb	Date: 07/30/19	Project No.: FR18161220
		Figure **D4-2**



Vertical Exaggeration 20 X

Hydraulic Conductivity in Feet per day (ft/d)

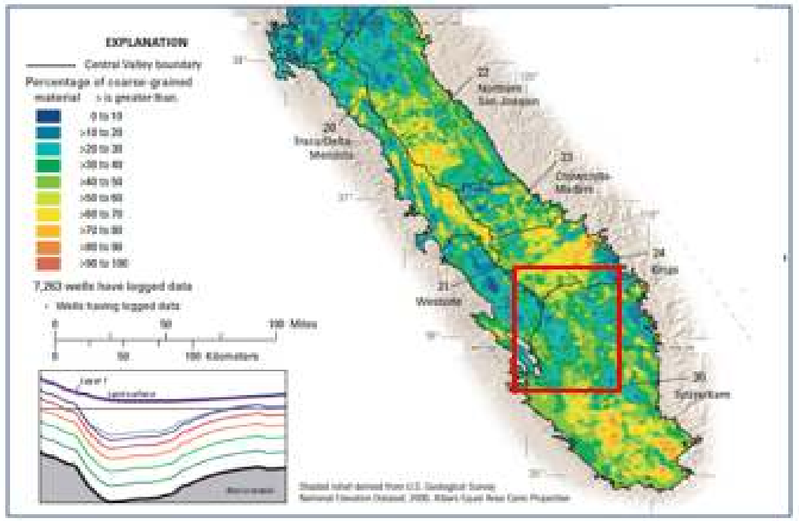


Model Layers and North-South Cross-Sections C-C' and D-D'

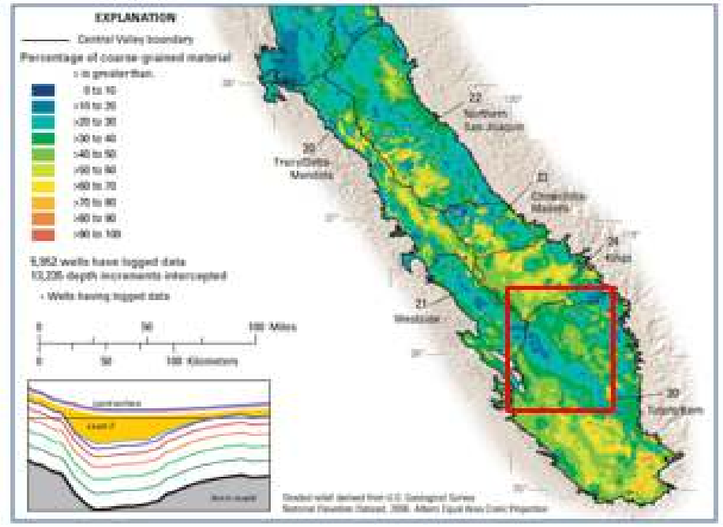
Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: dmb	Date: 07/30/19	Project No.: FR18161220
		Figure **D4-3**

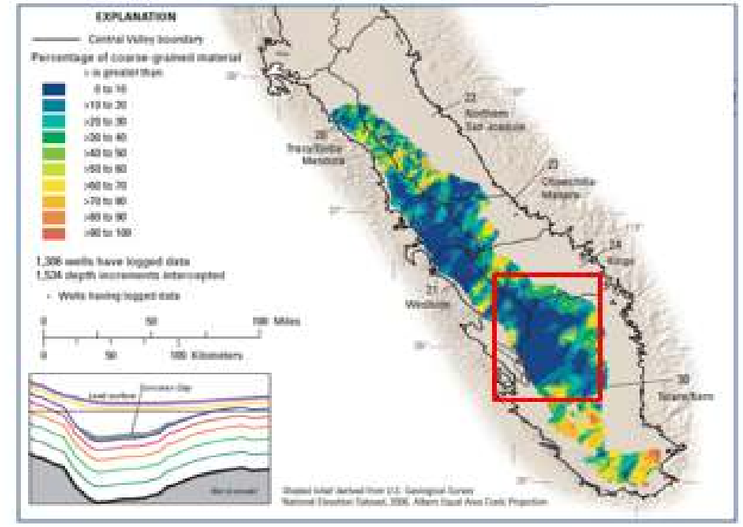
a. 0 - 50 foot depth interval



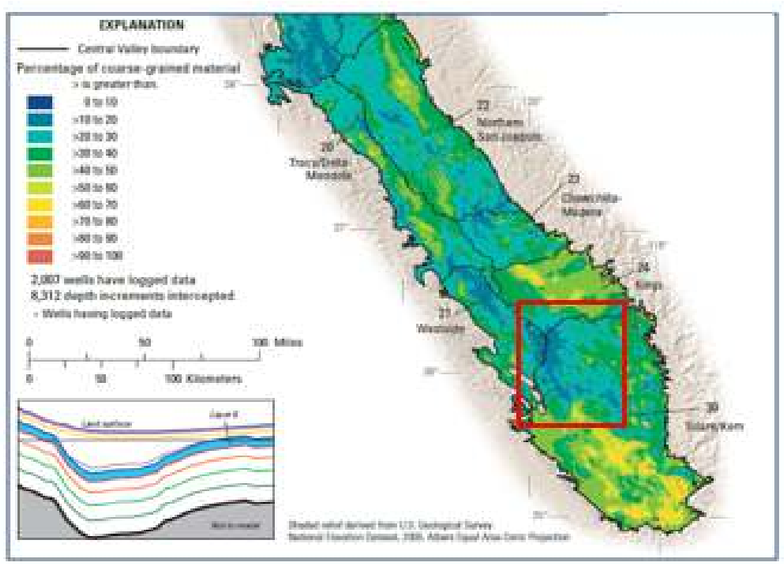
b. 50 - 200 foot depth interval



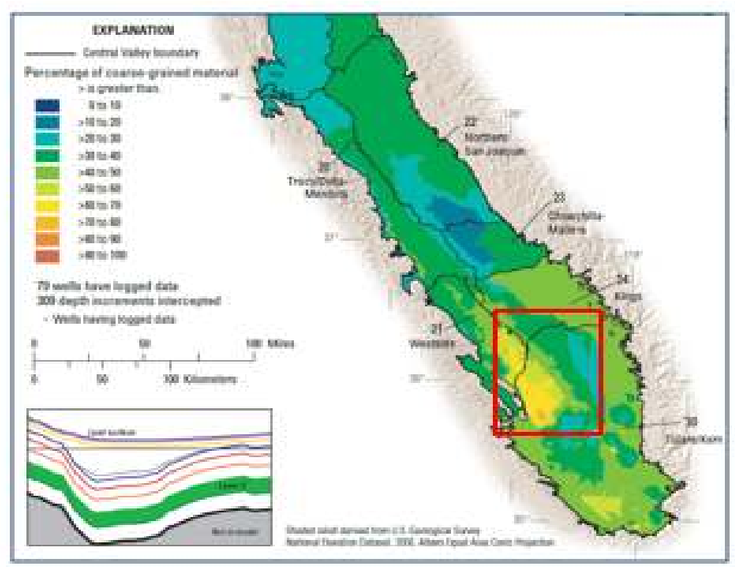
c. Corcoran Clay Depth interval



d. 100 foot depth interval immediately below Corcoran Clay



e. 200 foot depth interval from 400 to 700 feet bgs



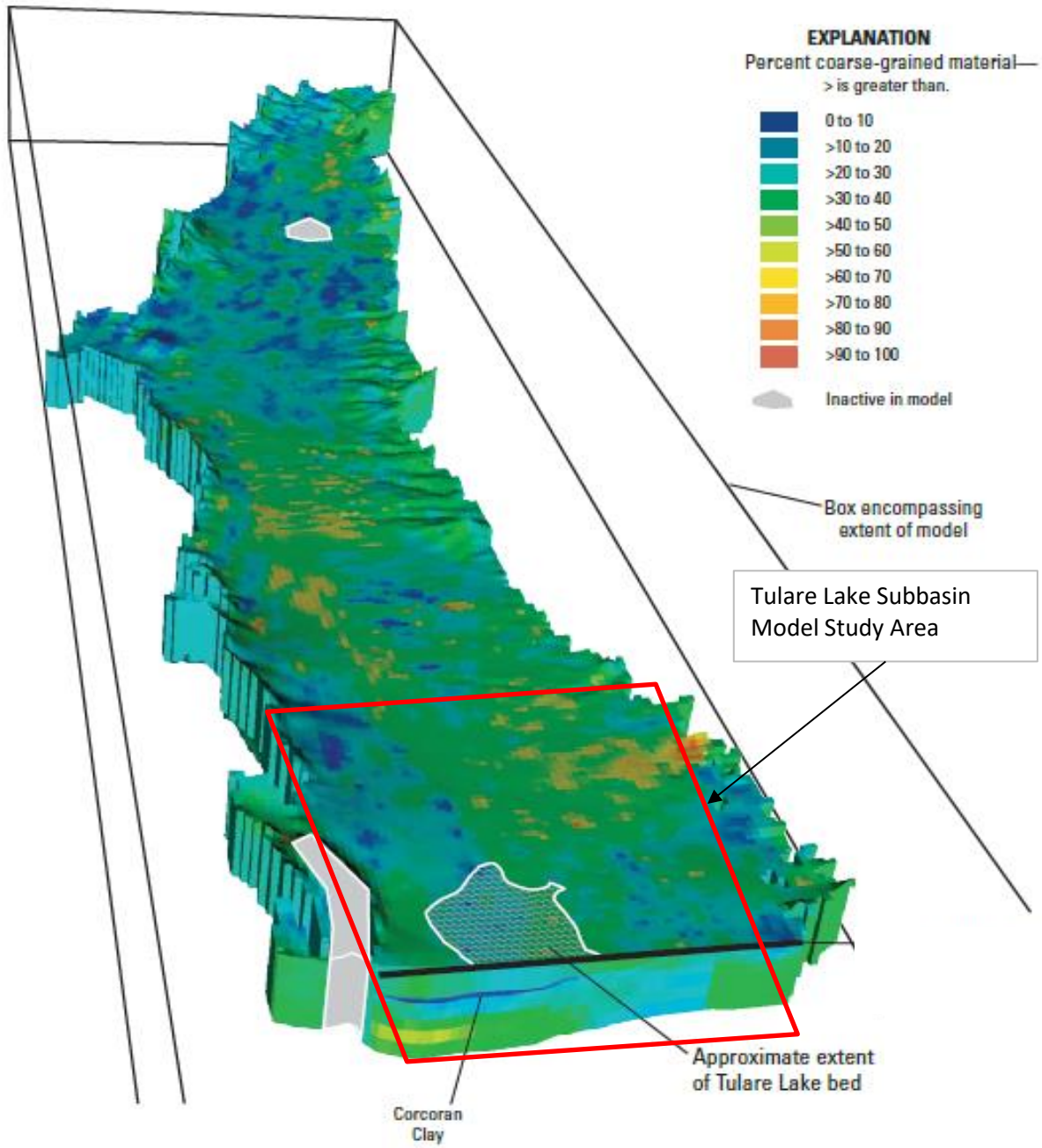
Tulare Lake Subbasin Hydrologic Model study area

* adapted from Fig. A12, USGS Prof. Paper 1766

Kriged Distribution of Coarse Fraction For San Joaquin Valley Basin-Fill Sediments at Five Depth Intervals

Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: dmb	Date: 07/30/19	Project No.: FR18161220
		Figure **D4-4**



Modified from USGS Prof. Paper 1766

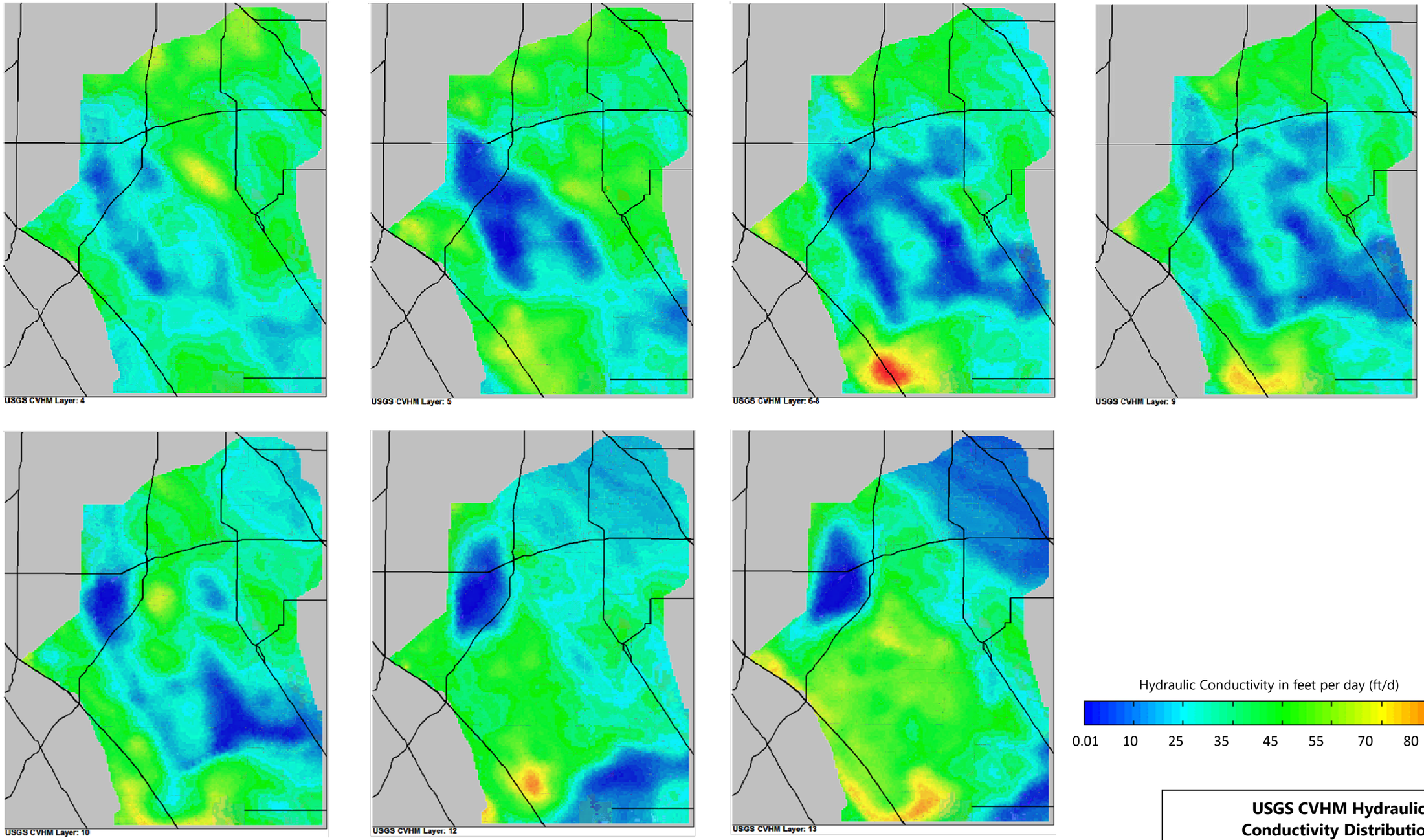
3D Oblique Image of San Joaquin Valley Coarse Fraction Percentage Estimated by USGS Sediment Texture Study

Tulare Lake Subbasin Groundwater Sustainability Plan

Kings County, California

By: dmb	Date: 07/30/19	Project No.: FR18161220
		Figure **D4-5**

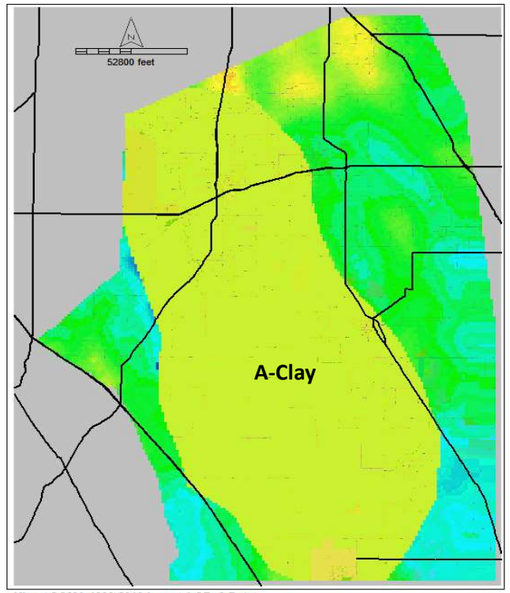
I:\FR18s\FR18161220 Tulare Lake GSP\Figures\3-BasinSetting\Figures\DAVIS FOLDER\DRAFT_TLSB_SGMA_GWModel_Figures_v3.xlsxFig 4-5 Oblique Texture Model 1/17/2020



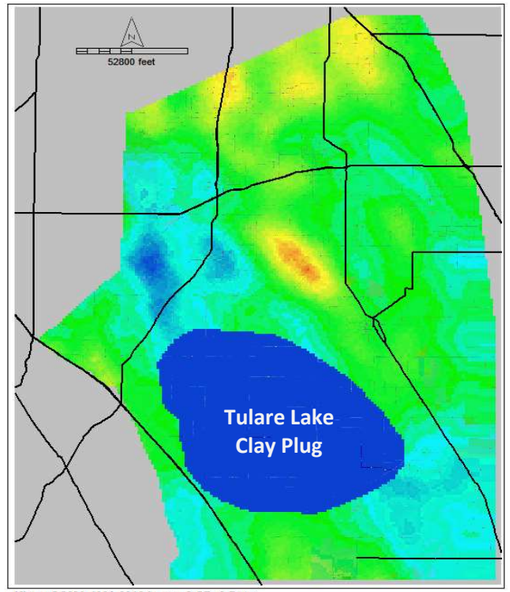
USGS CVHM Hydraulic Conductivity Distribution

Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

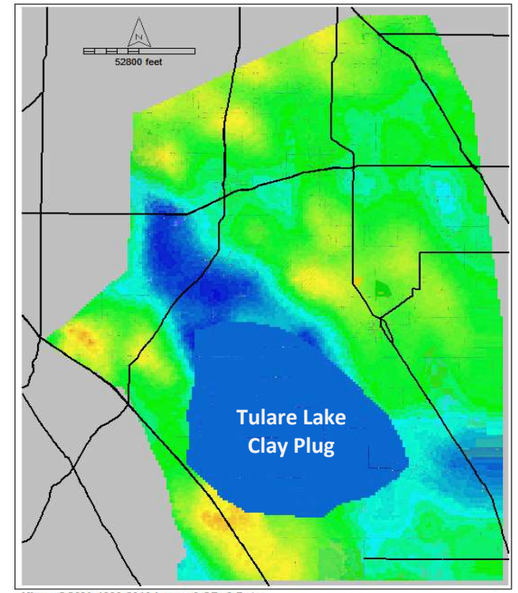
By: dmb	Date: 07/30/19	Project No.: FR18161220
		Figure **D4-6**



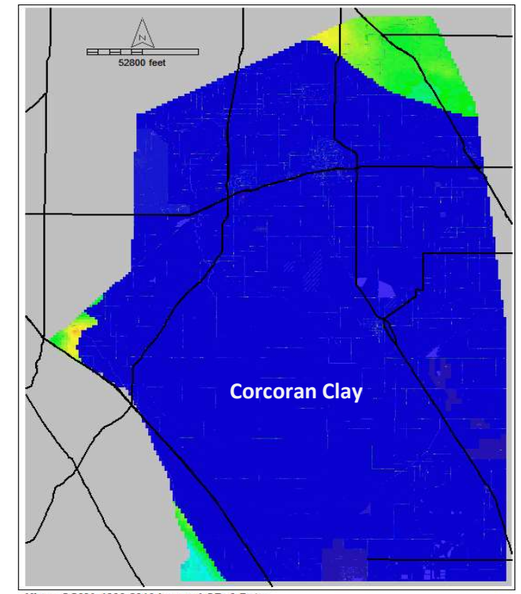
Kings SGMA 1990-2016 Layer: 1 SP: 0 Date:



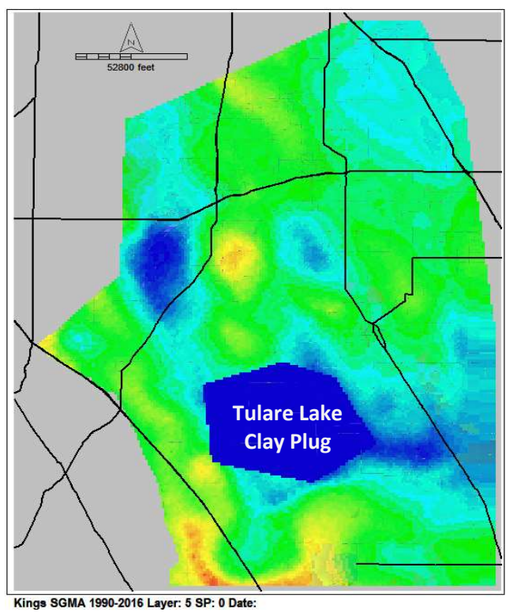
Kings SGMA 1990-2016 Layer: 2 SP: 0 Date:



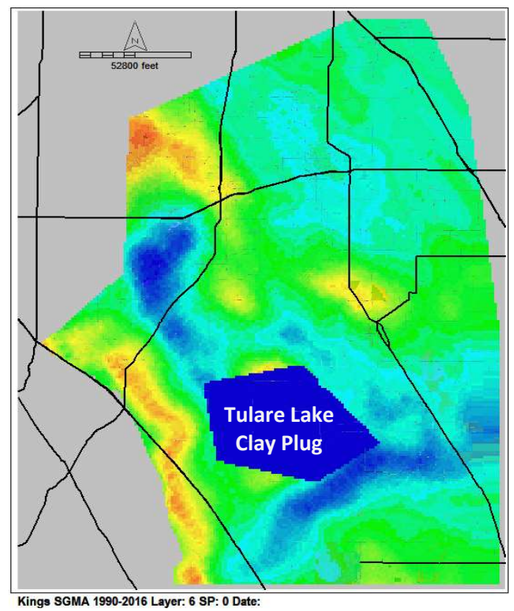
Kings SGMA 1990-2016 Layer: 3 SP: 0 Date:



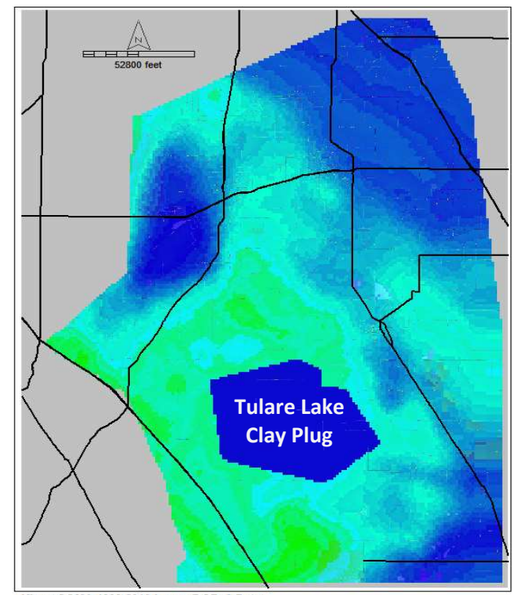
Kings SGMA 1990-2016 Layer: 4 SP: 0 Date:



Kings SGMA 1990-2016 Layer: 5 SP: 0 Date:

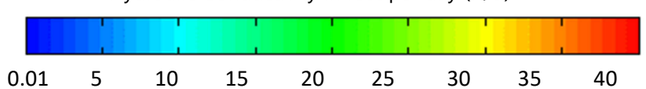


Kings SGMA 1990-2016 Layer: 6 SP: 0 Date:



Kings SGMA 1990-2016 Layer: 7 SP: 0 Date:

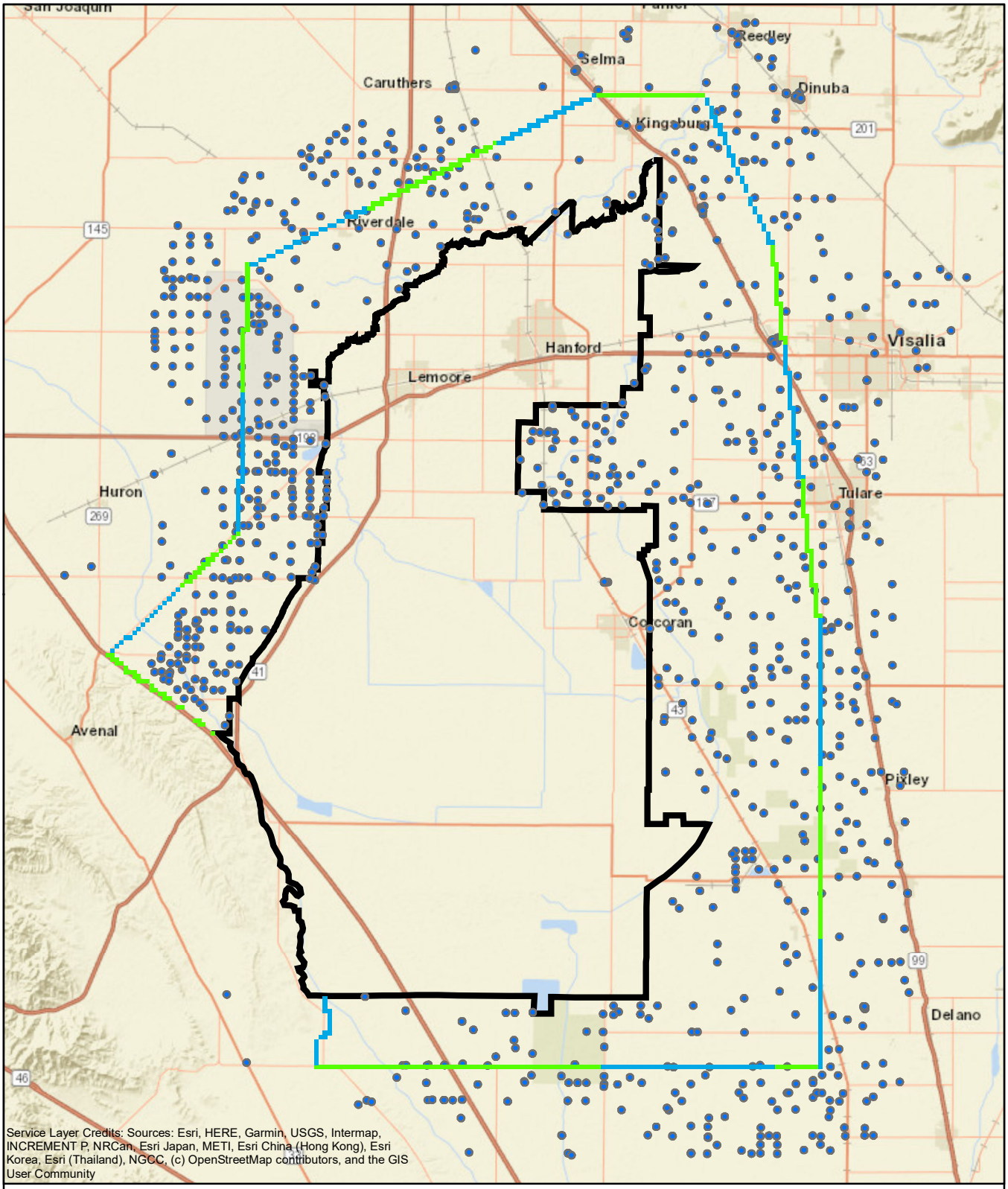
Hydraulic Conductivity in feet per day (ft/d)



Calibrated Model Layer Hydraulic Conductivity Distribution

Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: dmb	Date: 07/30/19	Project No.: FR18161220
		Figure **D4-7**



Explanation

- Evaluated wells
- General head boundaries

Miles
0 2 4 8
0 2.5 5 10
Kilometers

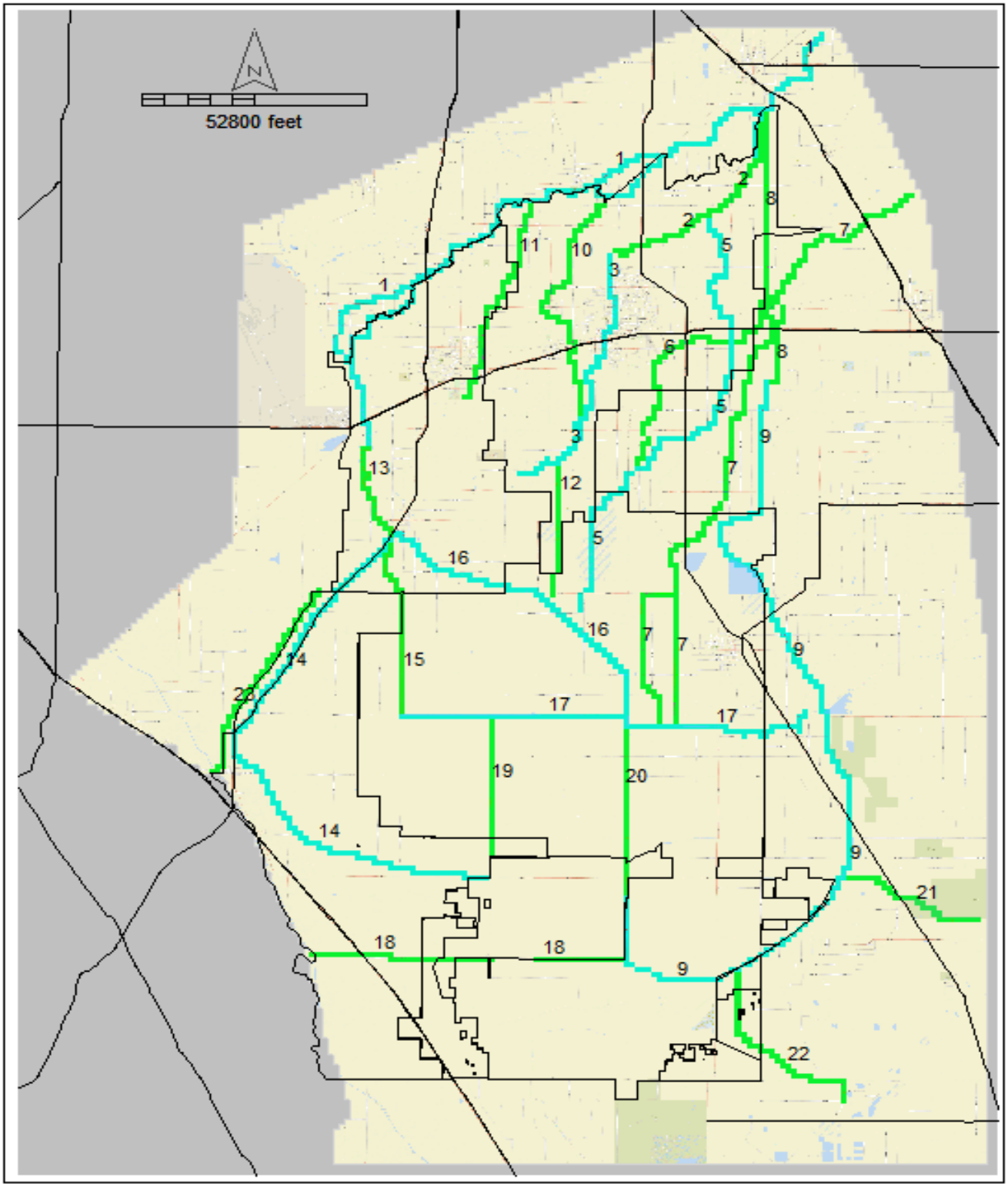
N

Location of Wells Evaluated for General Head Boundaries

Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: EMC	Date: 1/7/2020	Project No.: FR18161220
		Figure **D4-8**

Date: 1/7/2020 Printed by: elizabeth.chapman
Path: N:_FR_projects\FR18s\FR18161220\gis\maps\2019\AppendixD_figD4-8_wellsandGHBs.mxd

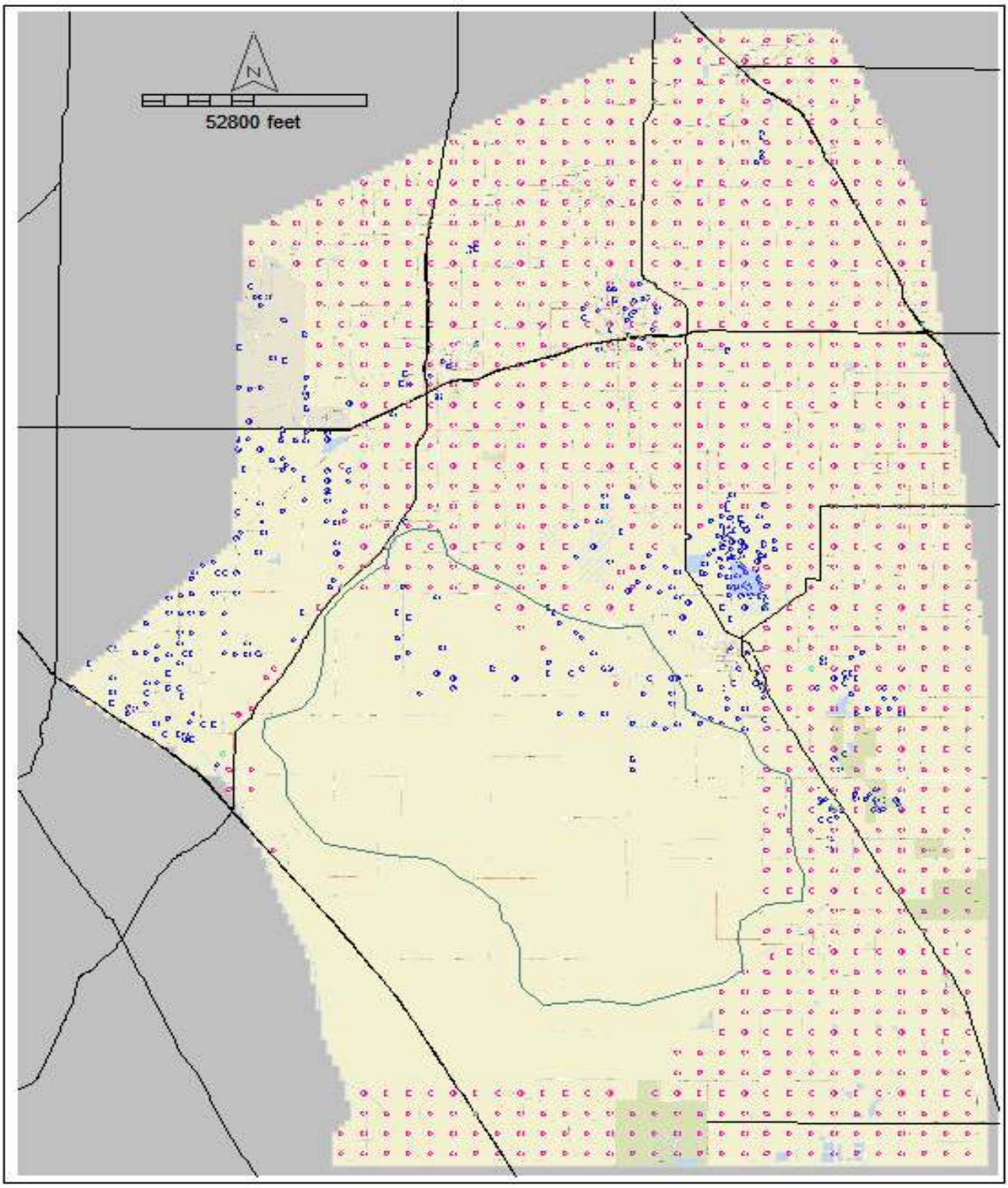


Notes:
1) Numbers shown are River Reaches
2) Colors delinate different reaches

Location of Rivers, Streams, and Canals for River Boundaries

Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

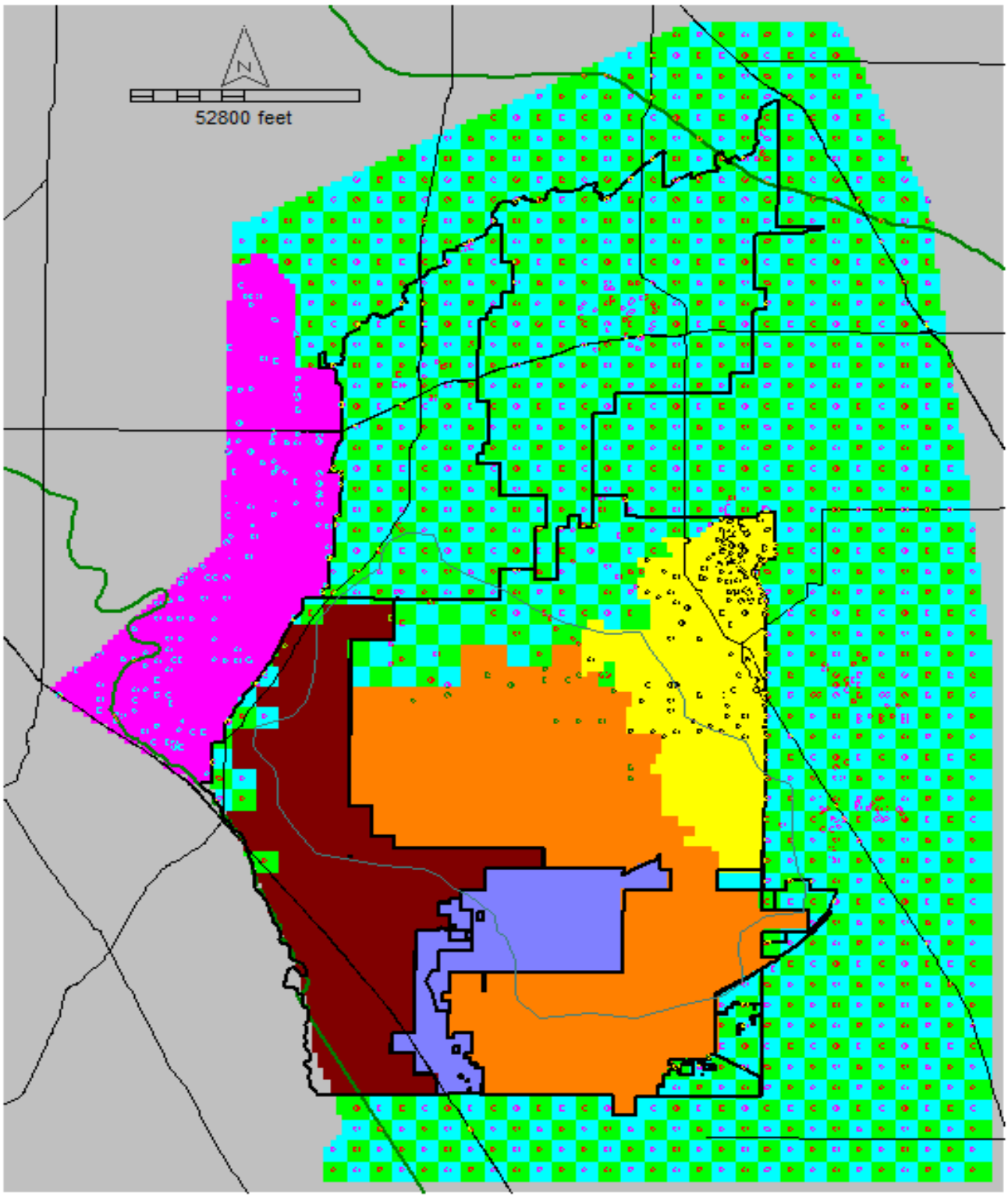
By: dmb	Date: 07/30/19	Project No.: FR18161220
		Figure **D4-9**



Location of Existing and Hypothetical Pumping Well within Model Domain

Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: dmb	Date: 07/30/19	Project No.: FR18161220
		Figure **D4-10**

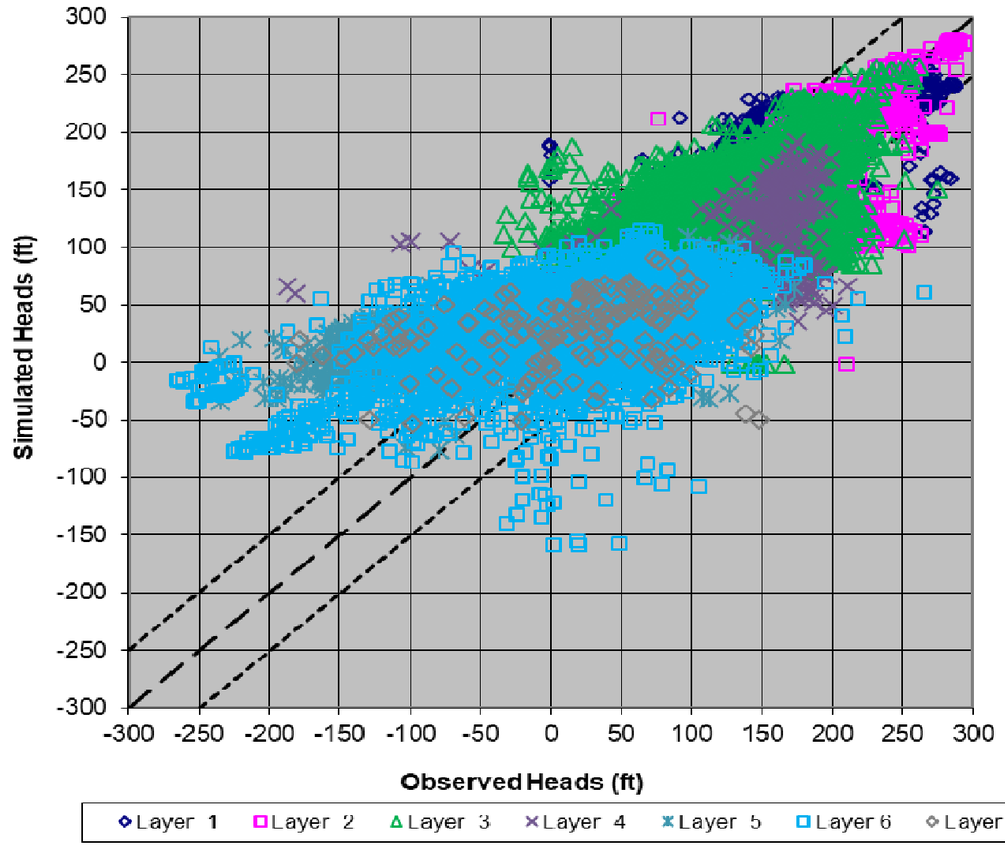


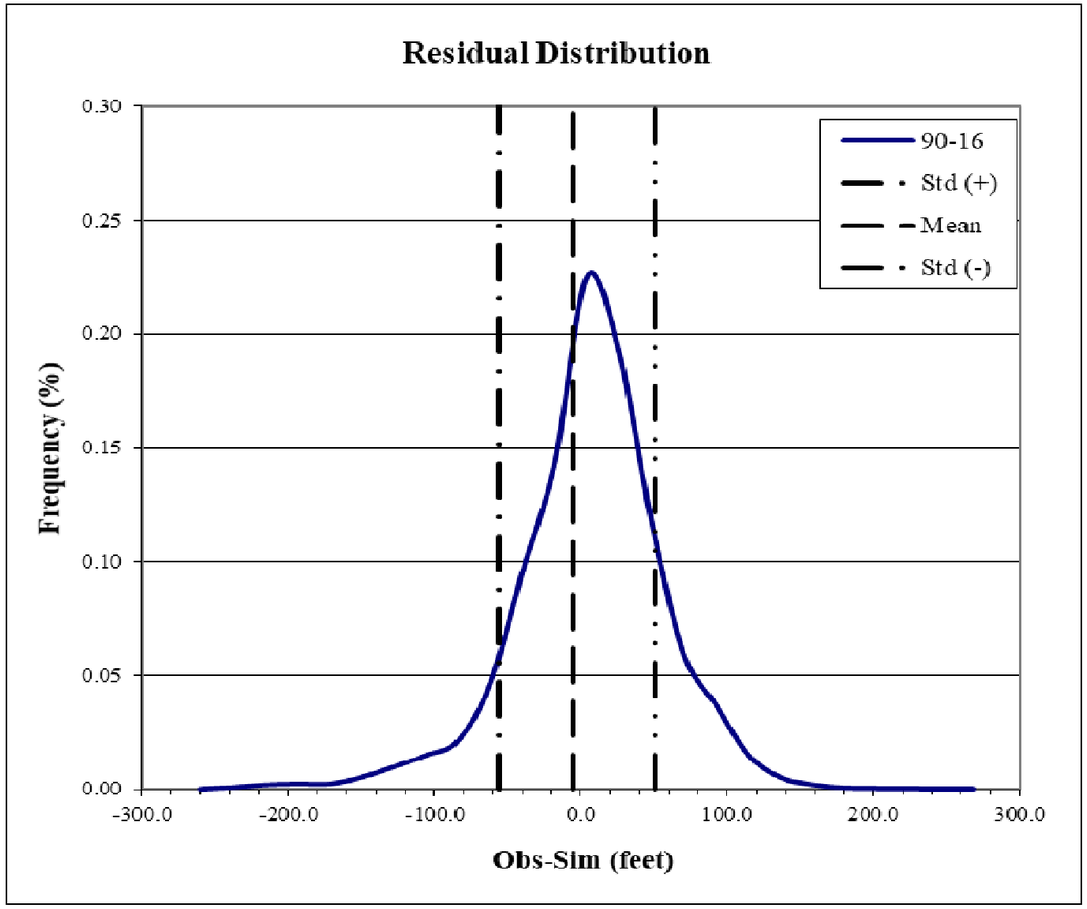
- Hypothetical Agricultural Well Service Area
- Hypothetical Agricultural Well Service Area
- Corcorain ID Service Area
- El Rico GSA Service Area
- Westlands Water District Service Area
- SouthWest Kings GSA Service Area
- Tri County Water Authority Service Area

Location of Hypothetical Irrigation Well Service Areas within Model Domain

Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: dmb	Date: 07/30/19	Project No.: FR18161220
		Figure **D4-11**





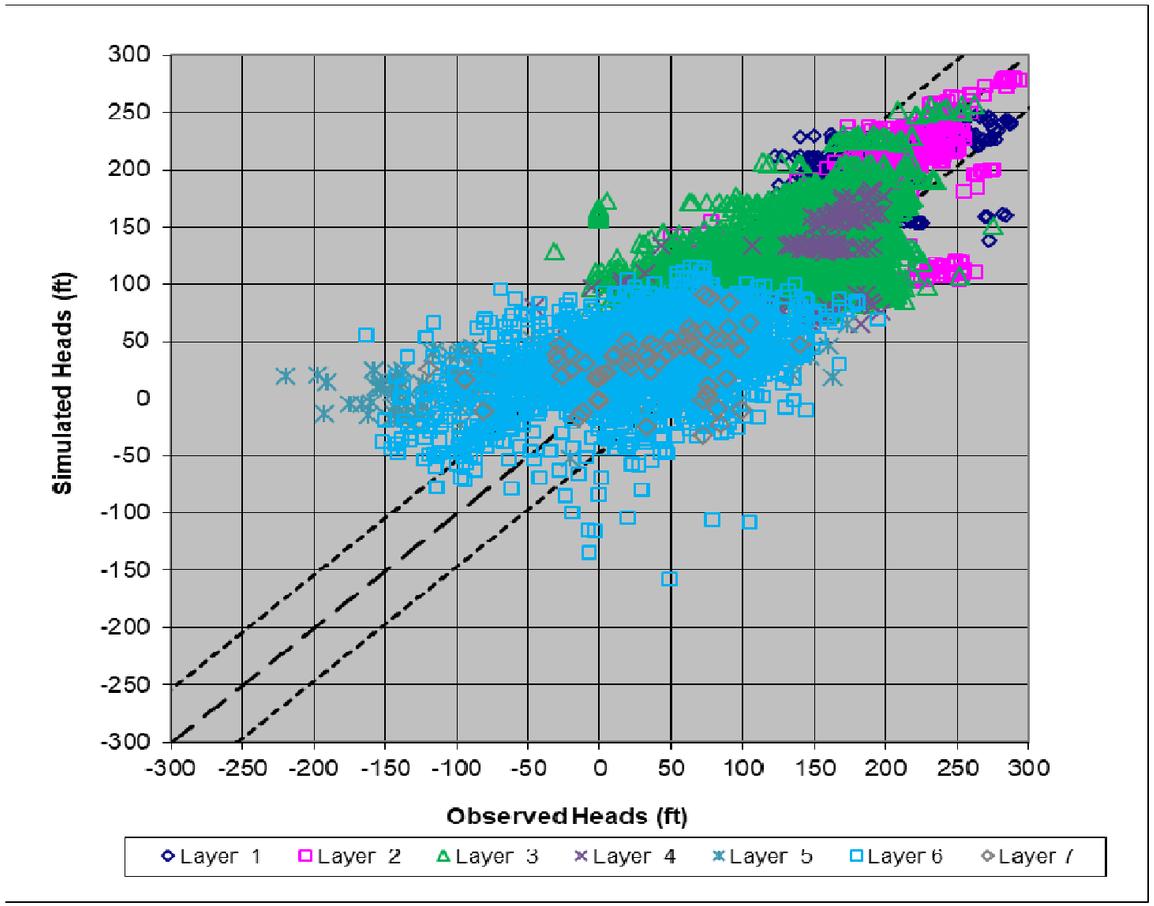
Statistics	Layer 1 - 7		Layer 1	Layer 2	Layer 3	Layer 4	Layer 5	Layer 6	Layer 7
Residual Mean	-4.98	ft	-9.30	185.26	-1.18	25.67	-35.43	-11.66	-11.45
Absolute Residual Mean	37.03	ft	26.33	38.80	30.55	36.38	64.09	49.81	45.61
Residual Std. Deviation	50.61	ft	34.84	44.84	39.78	53.49	75.82	63.58	63.42
Sum of Squares	42586112	ft^2	1733398	45812399	12887543	1291708	5743049	18228849	780823
RMS Error	50.85	ft	34.84	44.84	39.78	53.49	75.82	63.58	63.42
Min. Residual	-255.01	ft	-179.50	-1.00	-180.93	-252.97	-240.51	-255.01	-197.45
Max. Residual	213.28	ft	152.58	280.01	143.90	151.42	154.06	213.28	197.53
Number of Observations	16468		1333	1261	8136	367	820	4363	188
Range in Observations	575.33	ft	332.09	281.01	324.83	404.39	394.58	468.29	394.98
Scaled Residual Std. Deviation	8.80%		10.49%	15.96%	12.25%	13.23%	19.22%	13.58%	16.06%
Scaled Absolute Residual Mean	6.44%		7.93%	13.81%	9.40%	9.00%	16.24%	10.64%	11.55%
Scaled RMS Error	8.84%		10.49%	15.96%	12.25%	13.23%	19.22%	13.58%	16.06%
Scaled Residual Mean	-0.87%		-2.80%	65.92%	-0.36%	6.35%	-8.98%	-2.49%	-2.90%
Correlation Coefficient	82%		66%	64%	74%	76%	92%	82%	82%

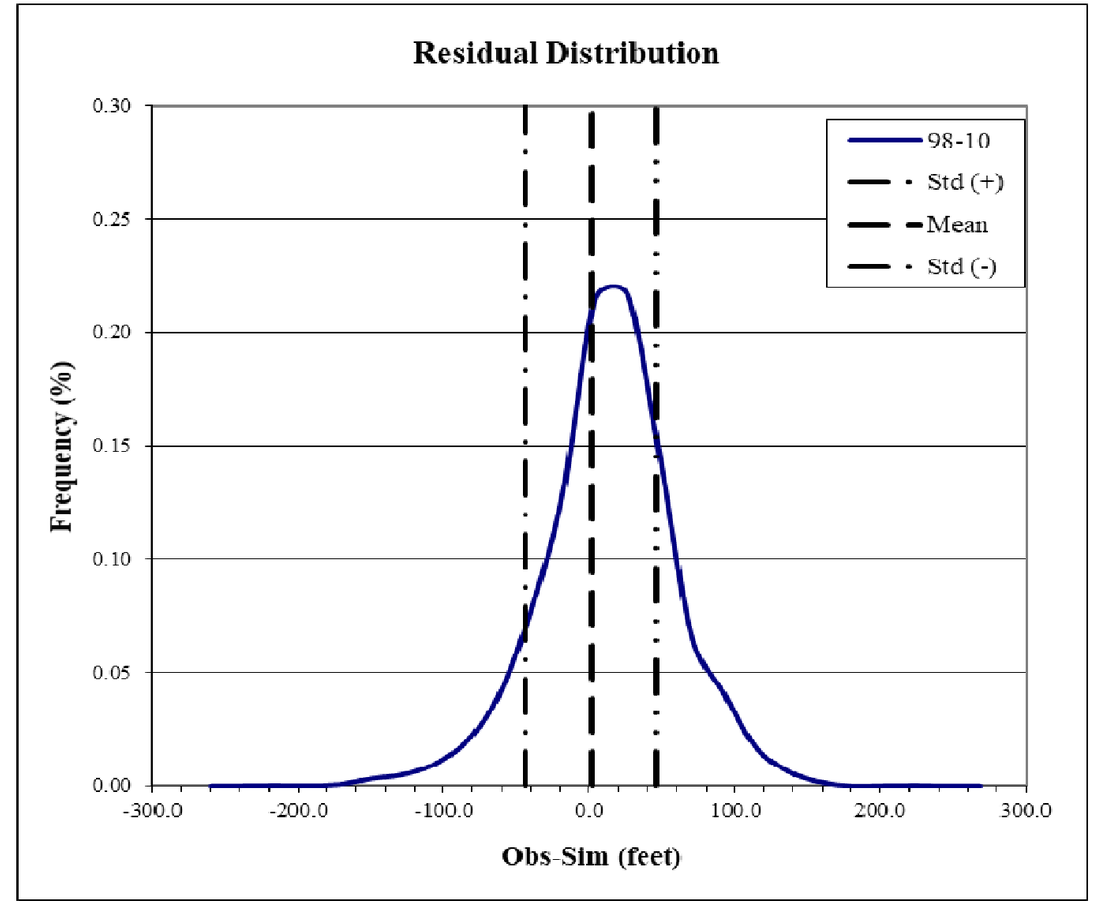
1990 - 2016 Calibration Statistics and Scattergram

Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: dmb | Date: 11/20/19 | Project No.: FR18161220

Figure **D5-1a**





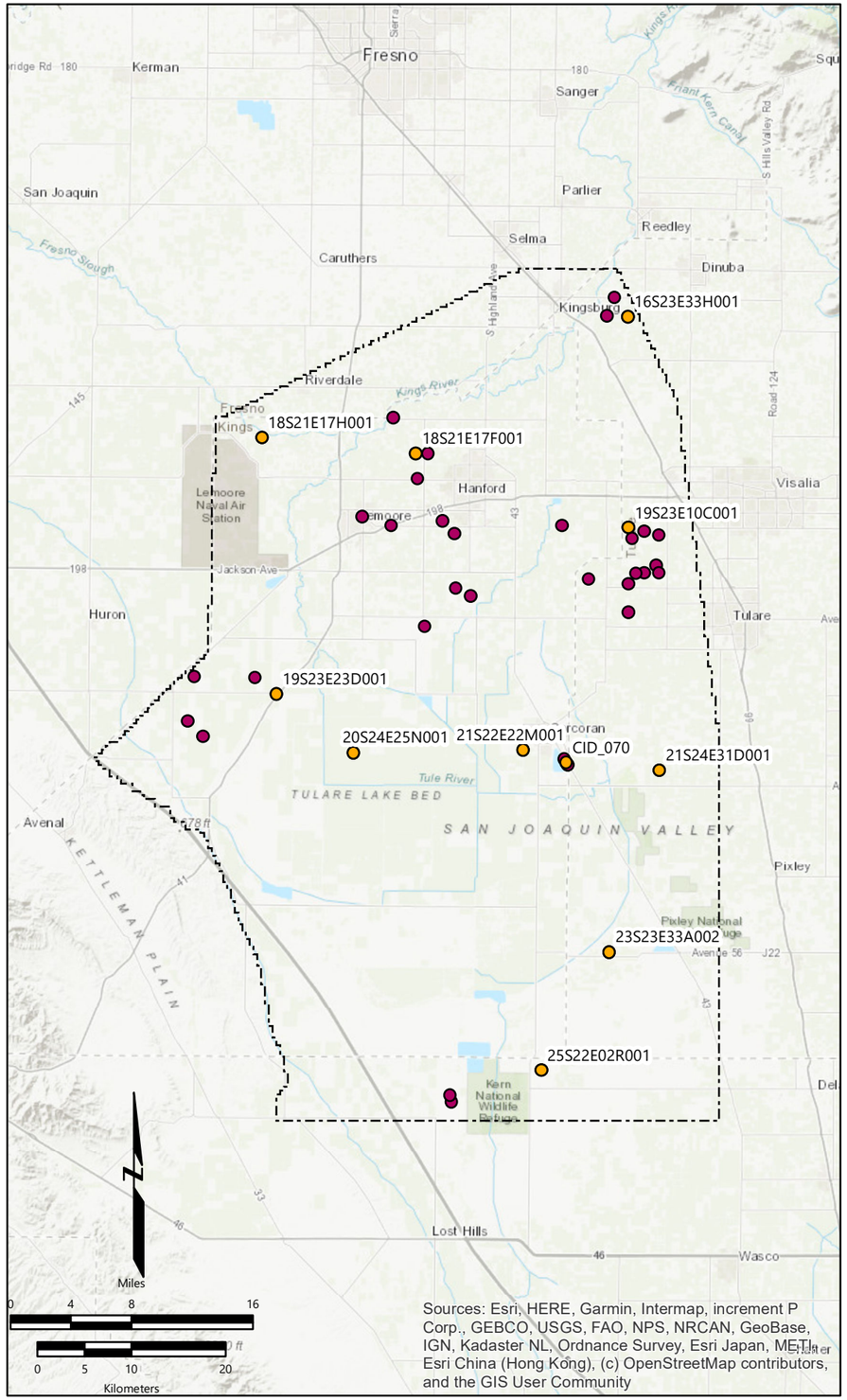
Statistics	Layer 1 - 7		Layer 1	Layer 2	Layer 3	Layer 4	Layer 5	Layer 6	Layer 7
Residual Mean	2.26	ft	-3.24	185.61	5.32	20.05	-26.55	-1.71	4.83
Absolute Residual Mean	34.78	ft	23.78	40.69	29.78	28.23	61.79	44.63	35.33
Residual Std. Deviation	46.26	ft	32.01	47.25	38.69	40.99	73.64	55.32	48.41
Sum of Squares	15075869	ft^2	561933	19148686	5416707	316496	2009708	5707709	160941
RMS Error	46.32	ft	32.01	47.25	38.69	40.99	73.64	55.32	48.41
Min. Residual	-240.16	ft	-89.83	-1.00	-167.94	-125.53	-240.16	-219.41	-145.72
Max. Residual	213.28	ft	133.86	280.01	143.40	121.24	144.32	213.28	108.57
Number of Observations	7028		543.00	522.00	3552.00	152.00	328.00	1863.00	68.00
Range in Observations	545.16	ft	223.69	281.01	311.34	246.77	384.47	432.70	254.29
Scaled Residual Std. Deviation	8.49%		14.31%	16.81%	12.43%	16.61%	19.15%	12.79%	19.04%
Scaled Absolute Residual Mean	6.38%		10.63%	14.48%	9.57%	11.44%	16.07%	10.31%	13.89%
Scaled RMS Error	8.50%		14.31%	16.81%	12.43%	16.61%	19.15%	12.79%	19.04%
Scaled Residual Mean	0.41%		-1.45%	66.05%	1.71%	8.12%	-6.91%	-0.39%	1.90%
Correlation Coefficient	82%		58%	62%	77%	66%	91%	79%	78%

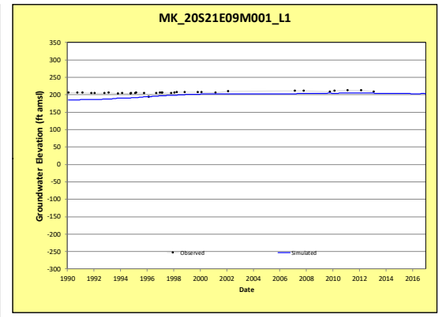
1998 - 2010 Calibration Statistics and Scattergram

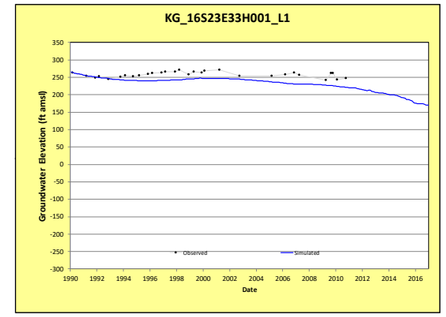
Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

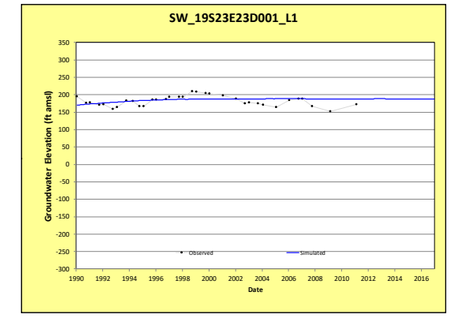
By: dmb | Date: 07/30/19 | Project No.: FR18161220

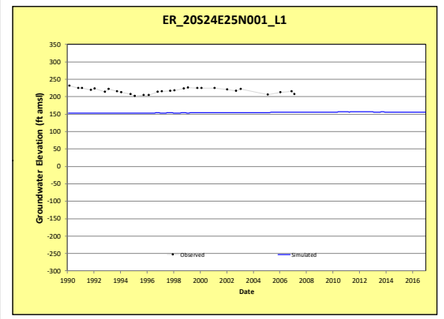
Figure **D5-1b**

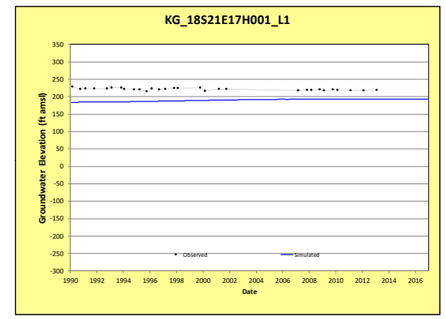


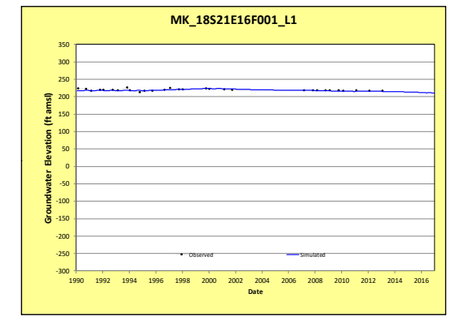


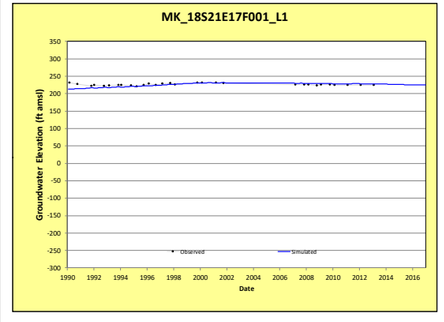


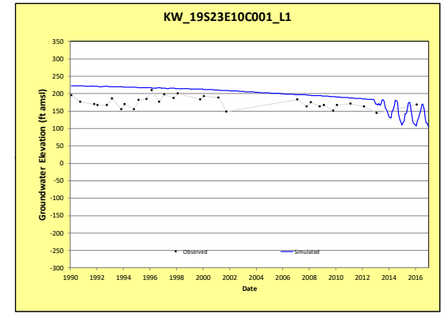


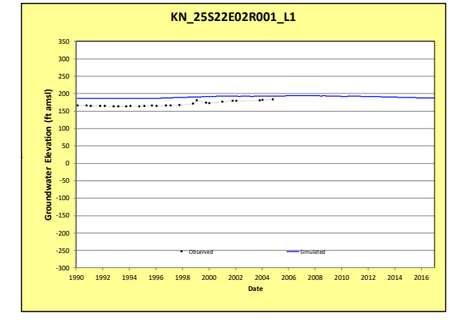


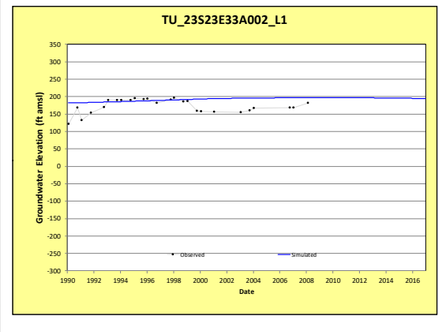


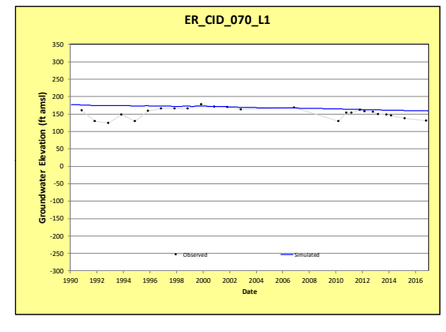












Explanation

- Target well with hydrograph shown
- Target well
- Model domain

Well ID — Layer

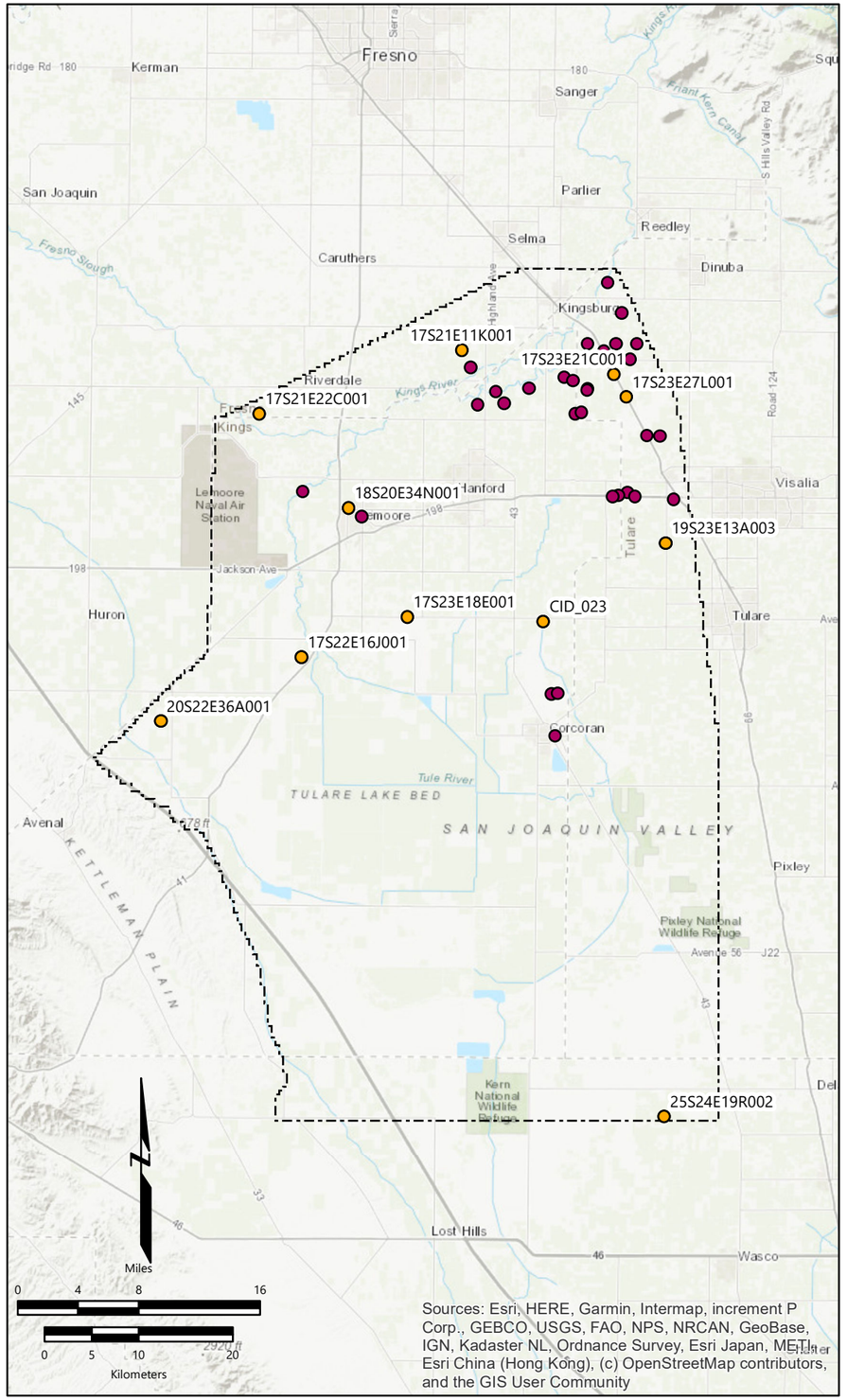
KW_19S23E10C001_L1

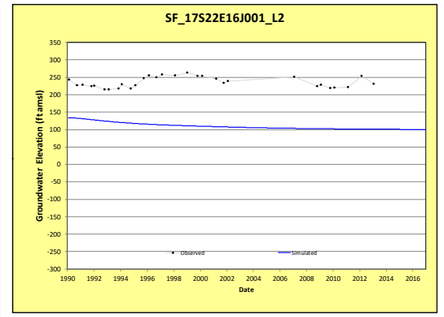
Layer 1 Observed and Simulated Hydrographs

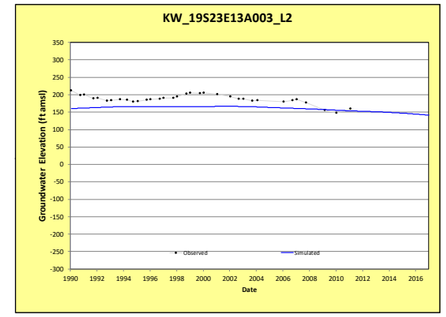
Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

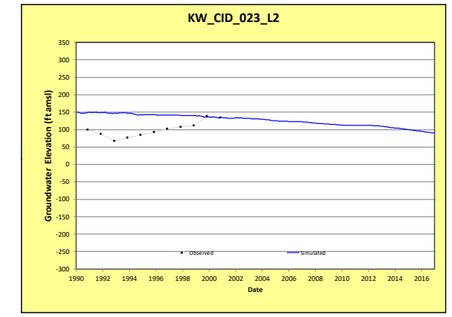
By: EMC	Date: 1/8/2020	Project No.: FR18161220
		Figure **D5-2a**

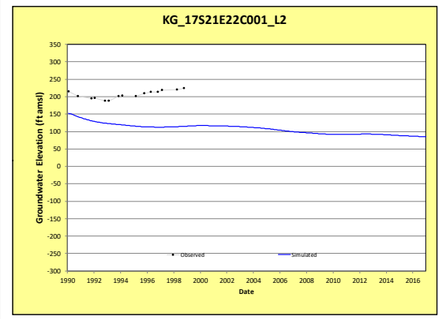
Date: 1/8/2020 Printed by: elizabeth.chapman
Path: N:_FR_projects\FR18s\FR18161220\temp\DBean_Hydro__fig01_layeredHydrographs_20191218.mxd

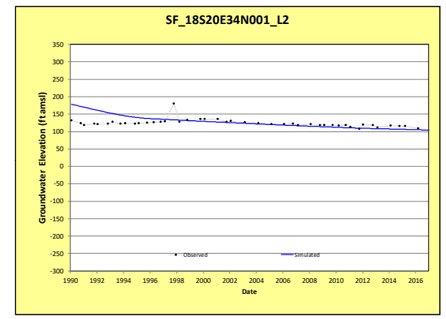


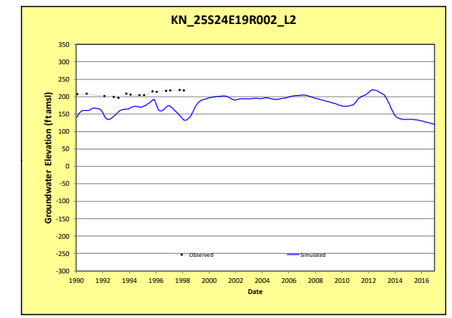


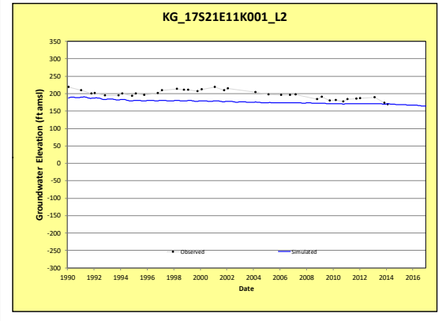


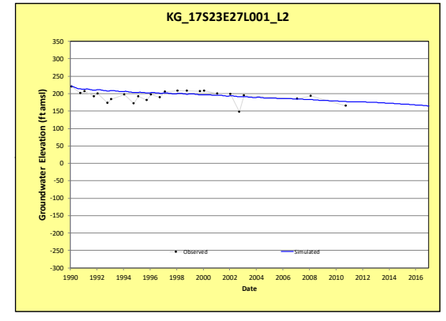


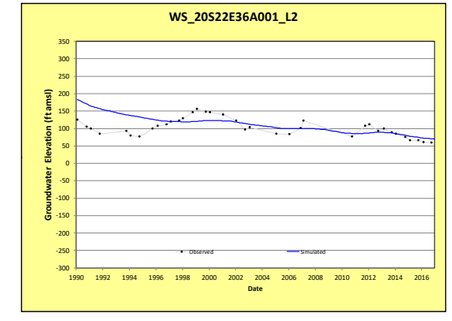


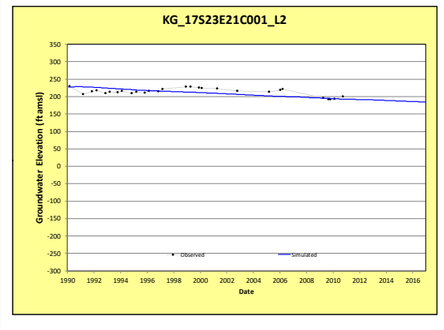


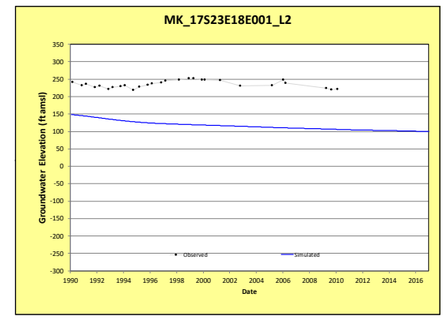












Explanation

- Target wells with hydrograph shown
- Target well
- Model domain

Well ID — Layer

MK_17S23E18E001_L2

Layer 2 Observed and Simulated Hydrographs

Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: EMC	Date: 1/8/2020	Project No.: FR18161220
		Figure **D5-2b**

Date: 1/8/2020 Printed by: elizabeth.chapman
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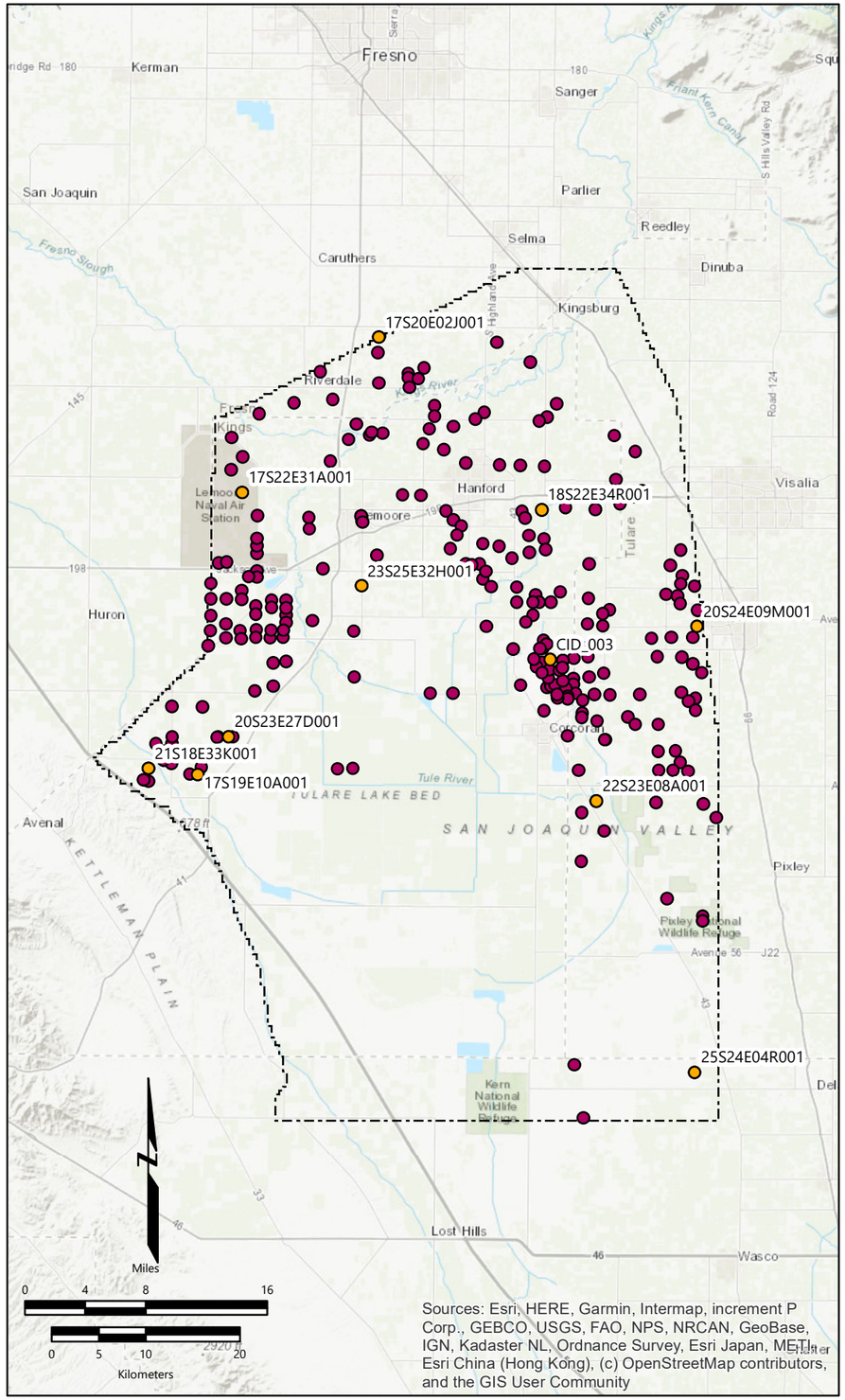
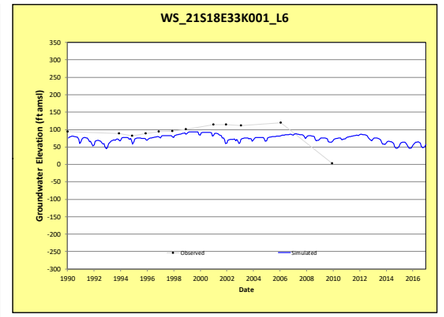
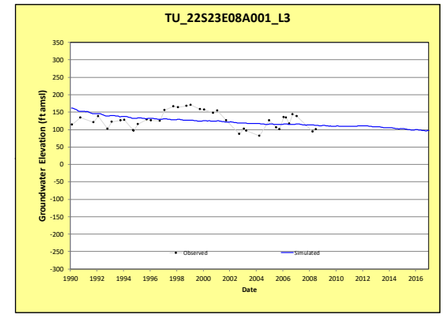
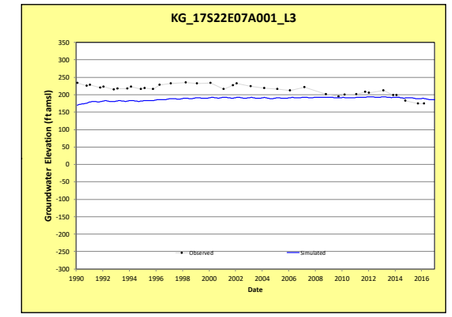
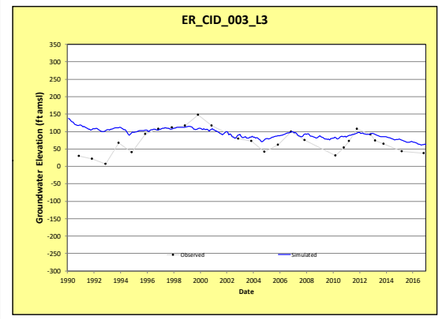
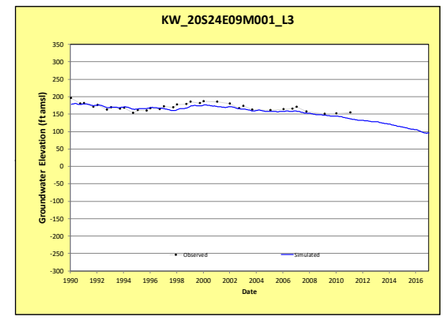


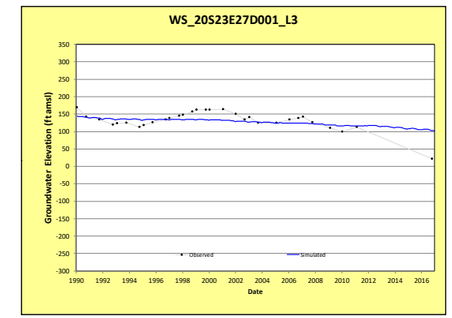


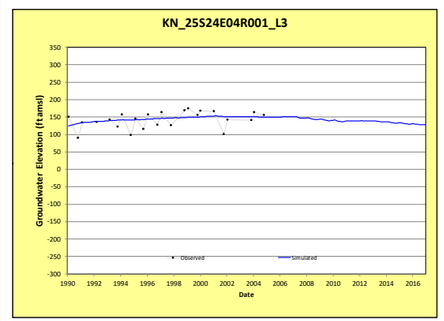


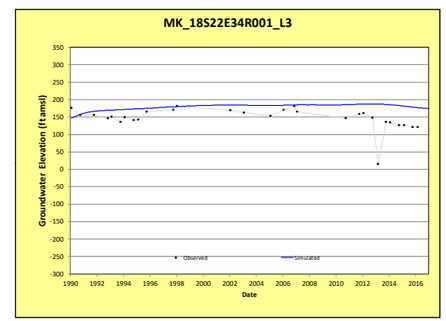


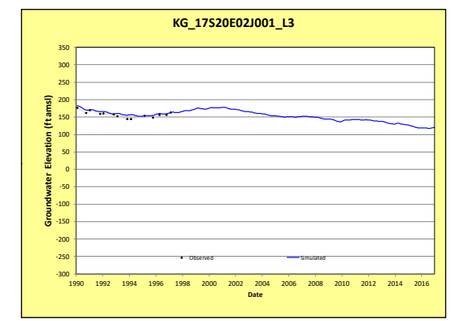


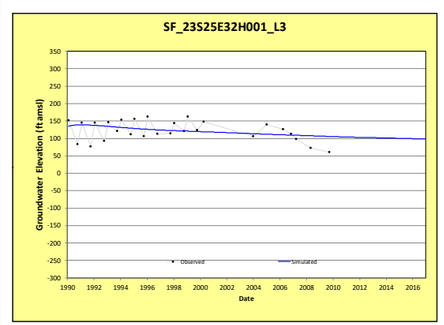


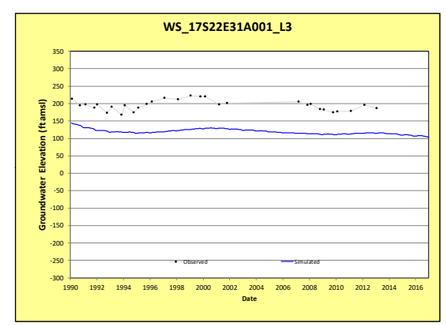












Explanation

- Target wells with hydrograph shown
- Target well
- Model domain

Well ID — Layer

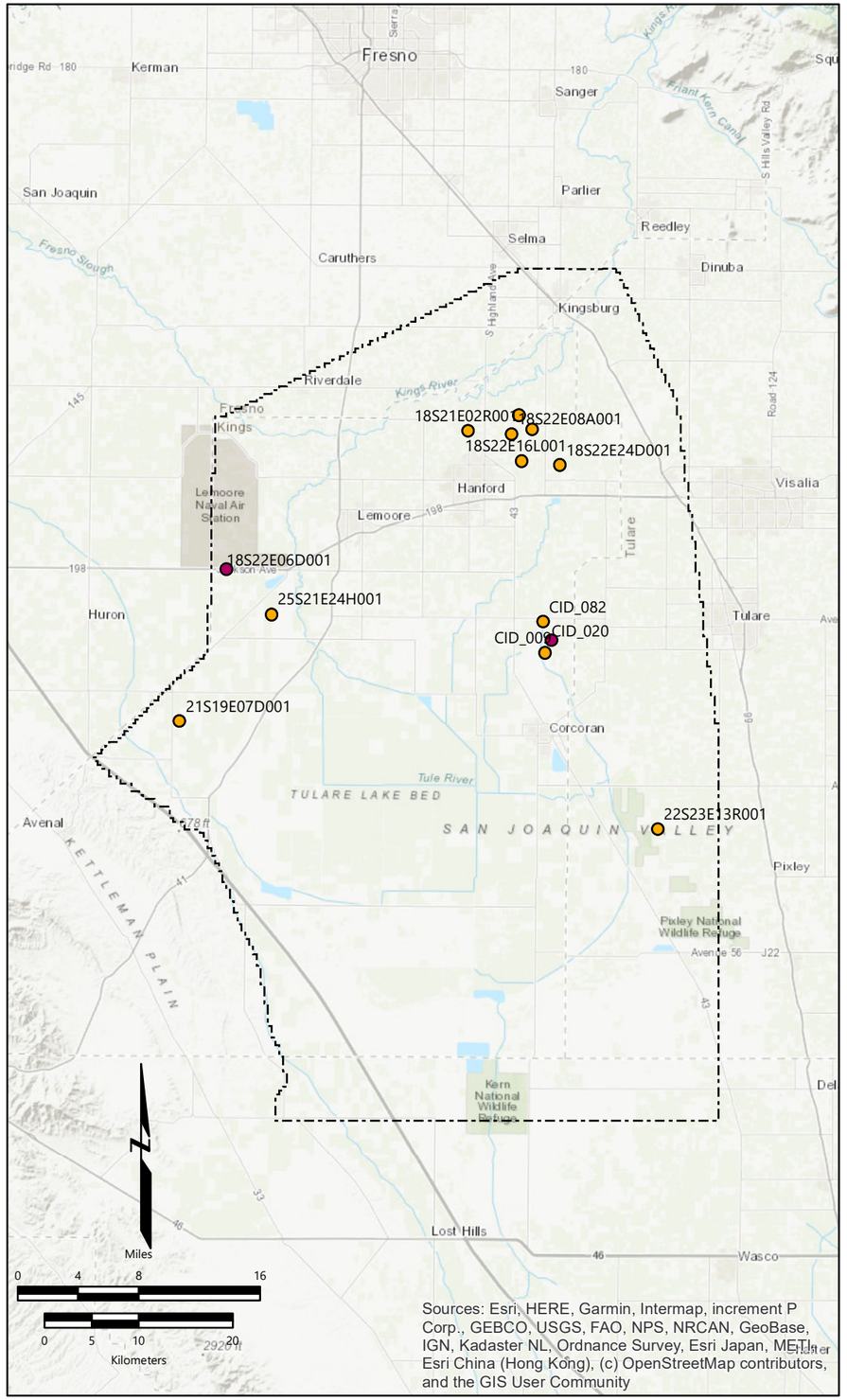
SF_23S25E32H001_L3

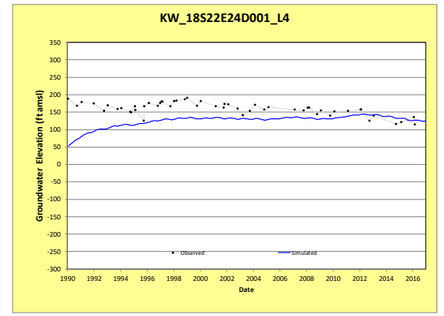
Layer 3 Observed and Simulated Hydrographs

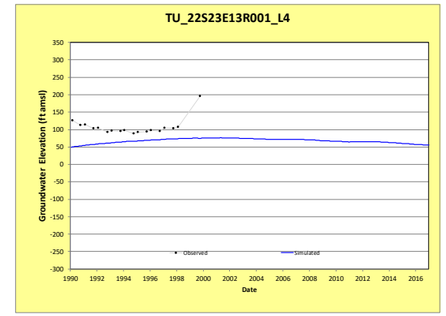
Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

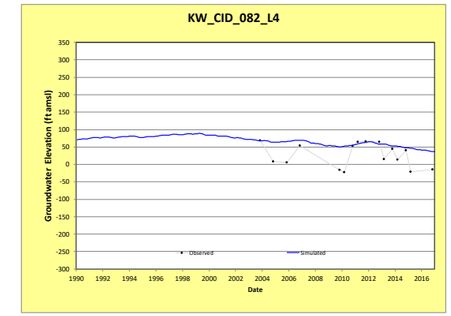
By: EMC	Date: 1/8/2020	Project No.: FR18161220
		Figure **D5-2c**

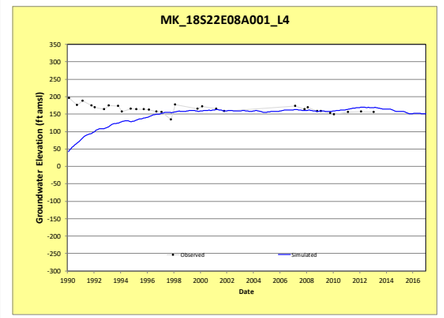
Date: 1/8/2020 Printed by: elizabeth.chapman
Path: N:_FR_projects\FR18s\FR18161220\temp\DBean_Hydro__fig03_layeredHydrographs_20191218.mxd

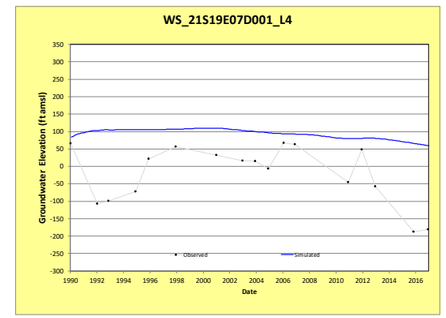


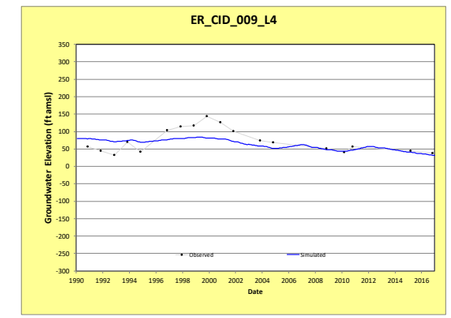


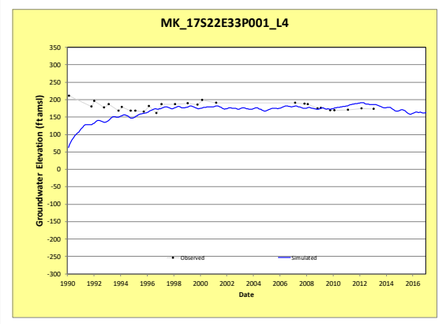


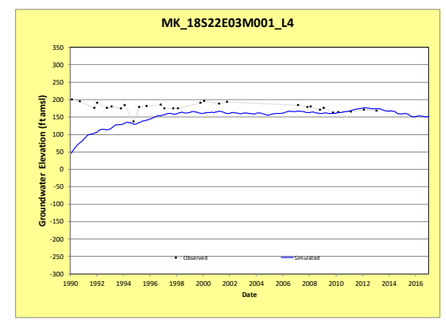


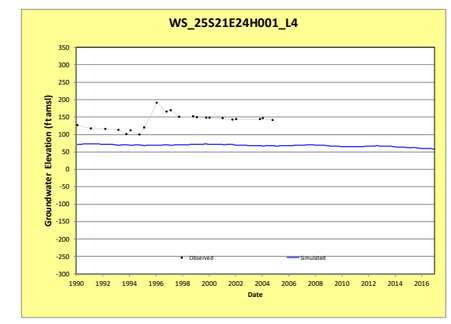


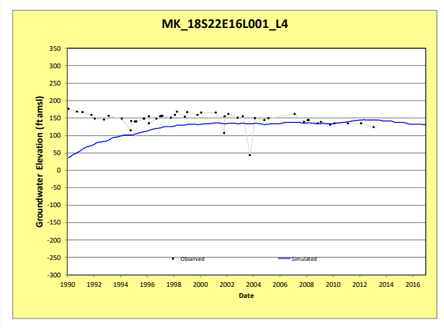


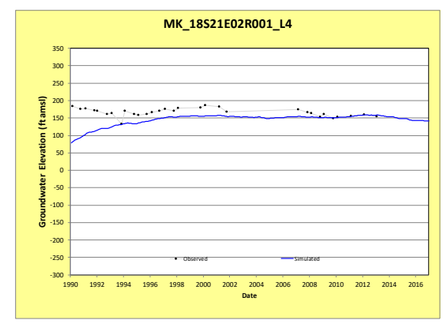












Explanation

- Target well with hydrograph shown
- Target well
- Model domain

Well ID — Layer

MK_18S22E16L001_L4

Layer 4 Observed and Simulated Hydrographs

Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: EMC	Date: 1/8/2020	Project No.: FR18161220
		Figure **D5-2d**

Date: 1/8/2020 Printed by: elizabeth.chapman
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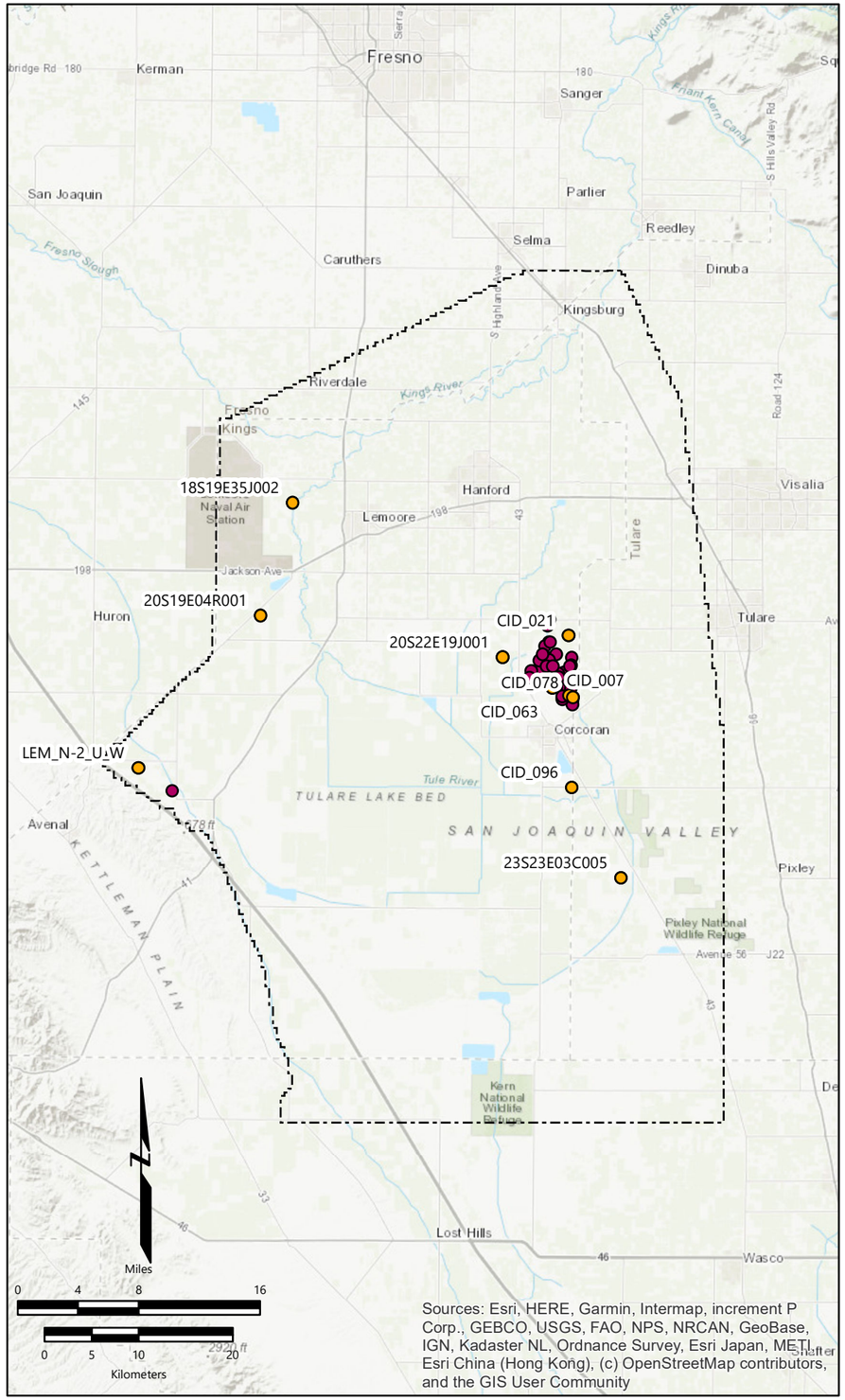

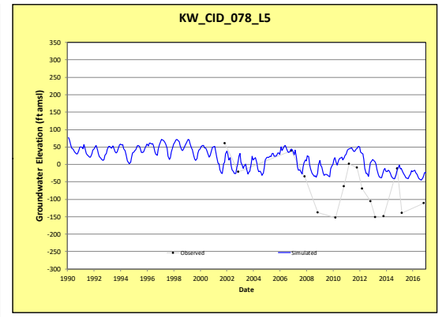

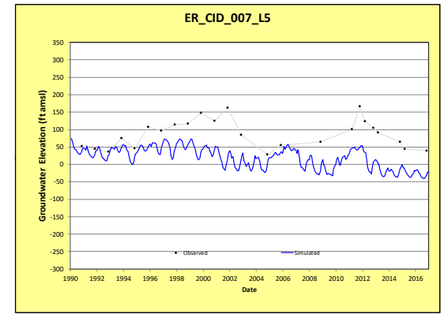

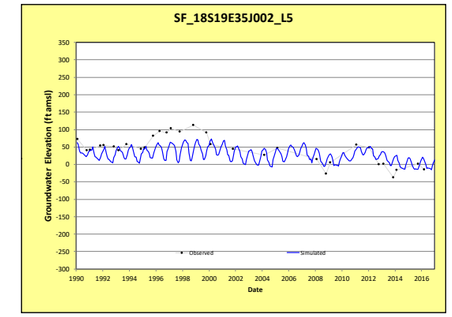

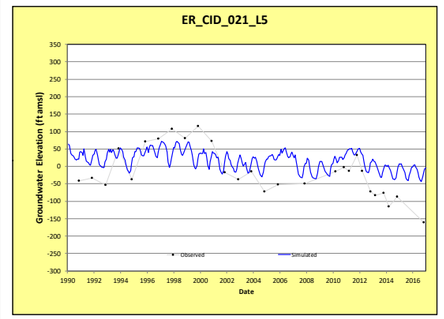

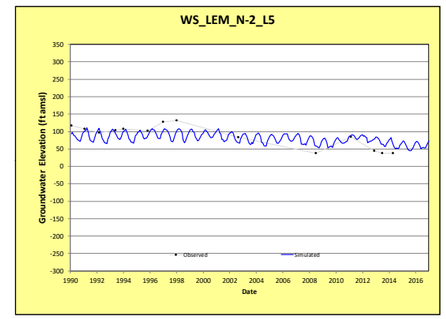

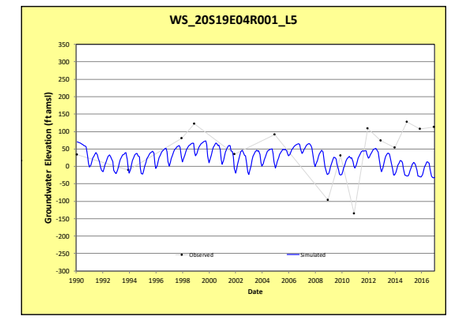

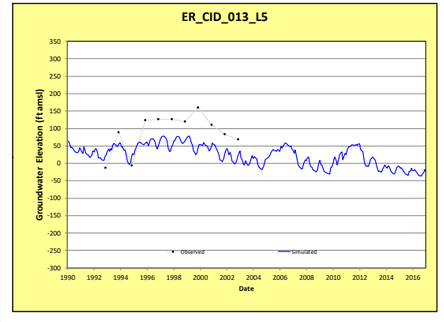

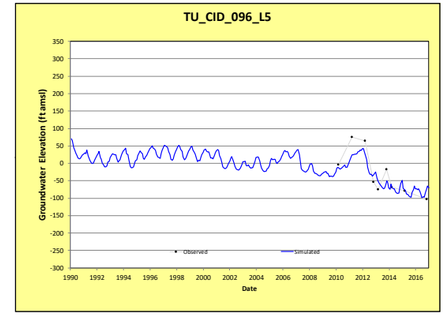

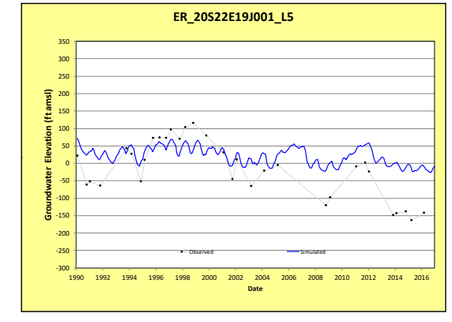

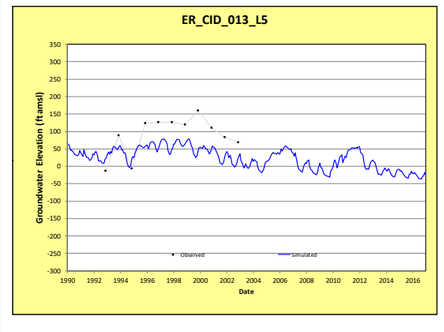

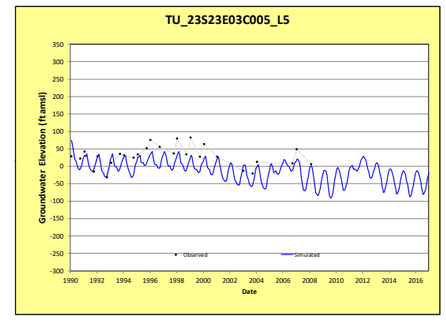

Explanation

- Target well with hydrograph shown
- Target well
- Model domain

Well ID — Layer

ER_CID_013_L5

Layer 5 Observed and Simulated Hydrographs

Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: EMC	Date: 1/8/2020	Project No.: FR18161220
		Figure **D5-2e**

Date: 1/8/2020 Printed by: elizabeth.chapman
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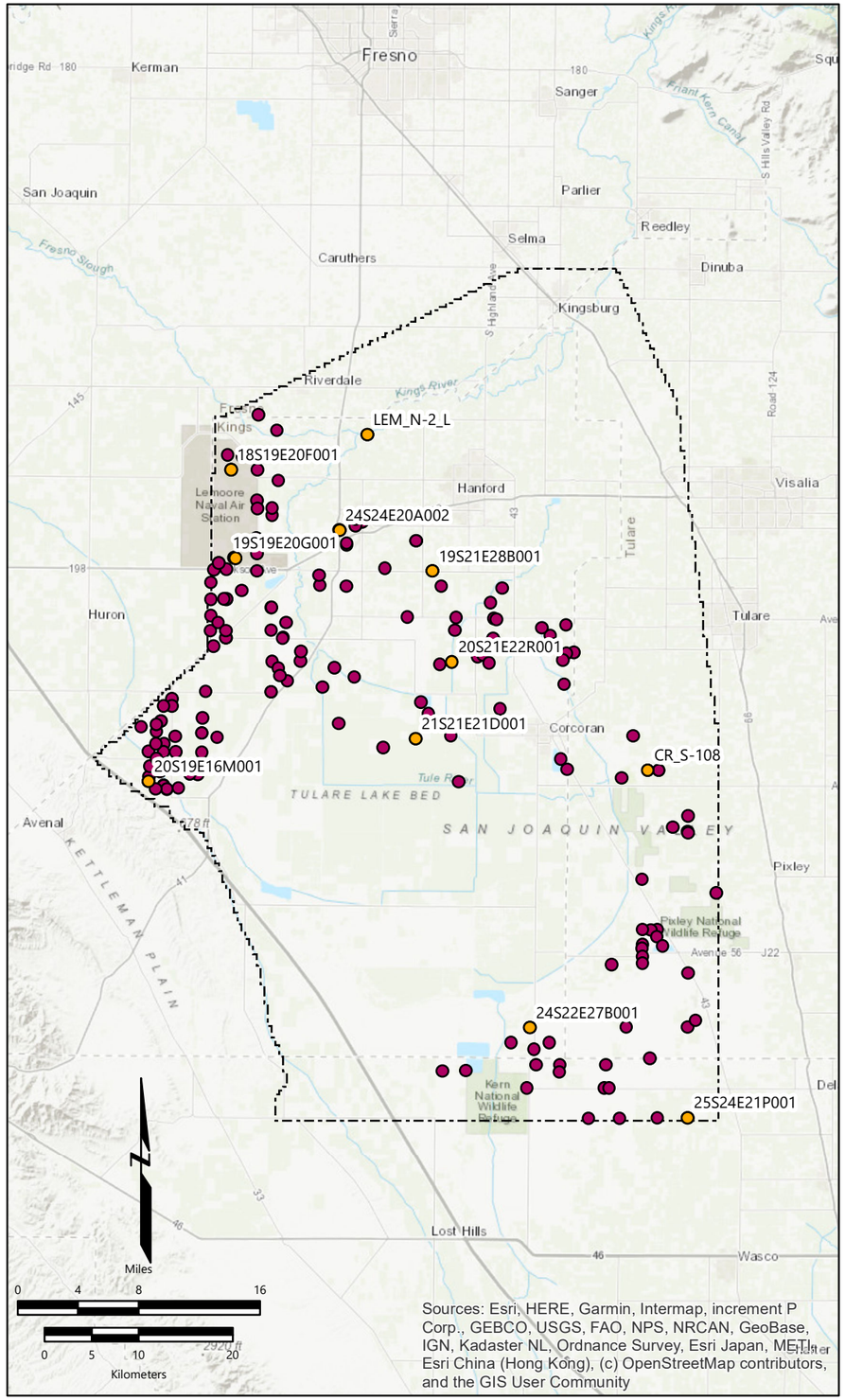
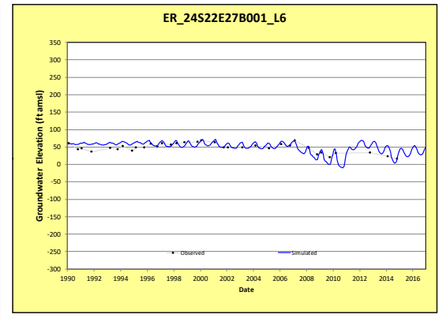
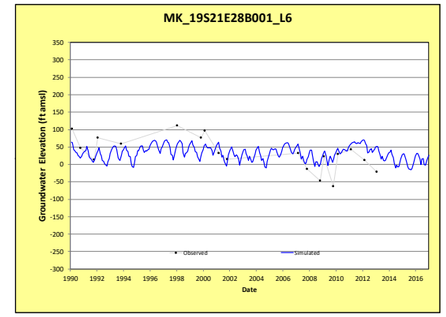
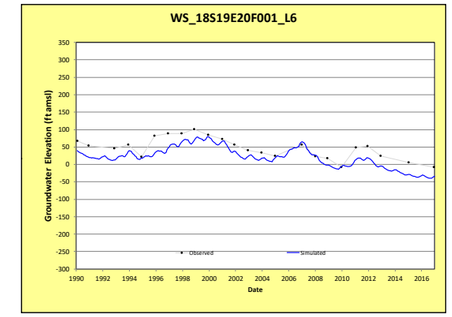
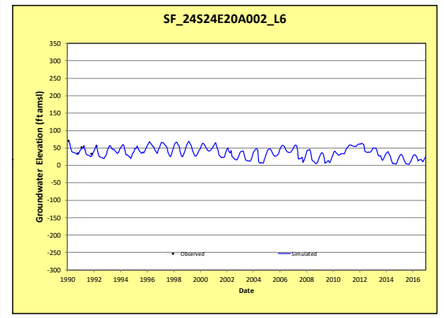


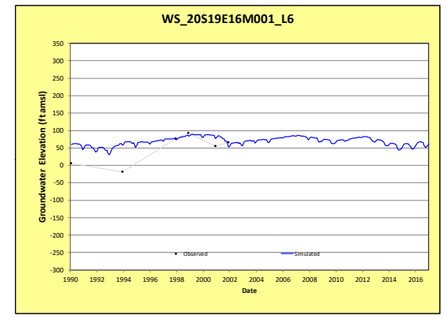
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

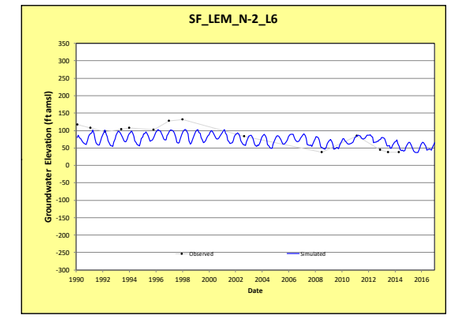


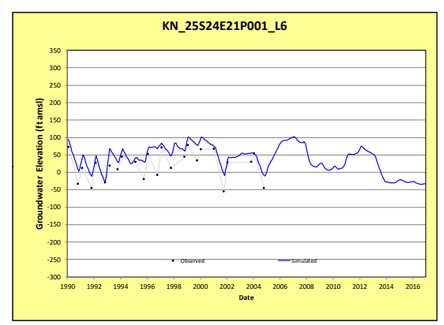


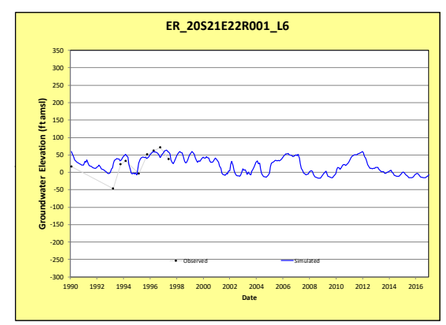


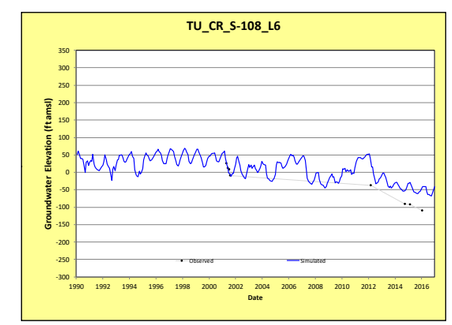


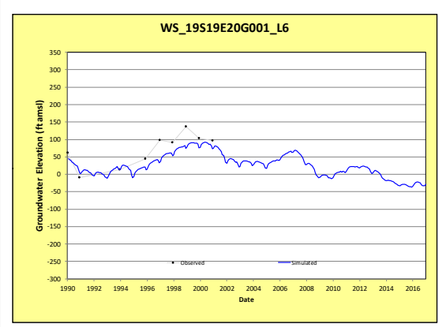


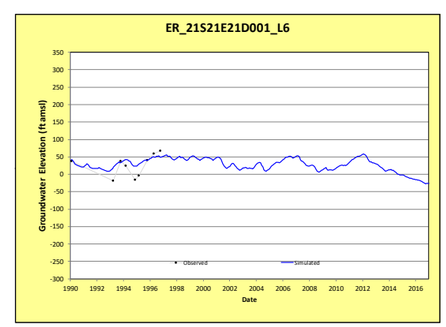












Explanation

- Target wells with hydrograph shown
- Target well
- Model domain

Well ID — Layer

ER_21S21ED001_L6

Layer 6 Observed and Simulated Hydrographs

Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: EMC	Date: 1/8/2020	Project No.: FR18161220
		Figure **D5-2f**

Date: 1/8/2020 Printed by: elizabeth.chapman
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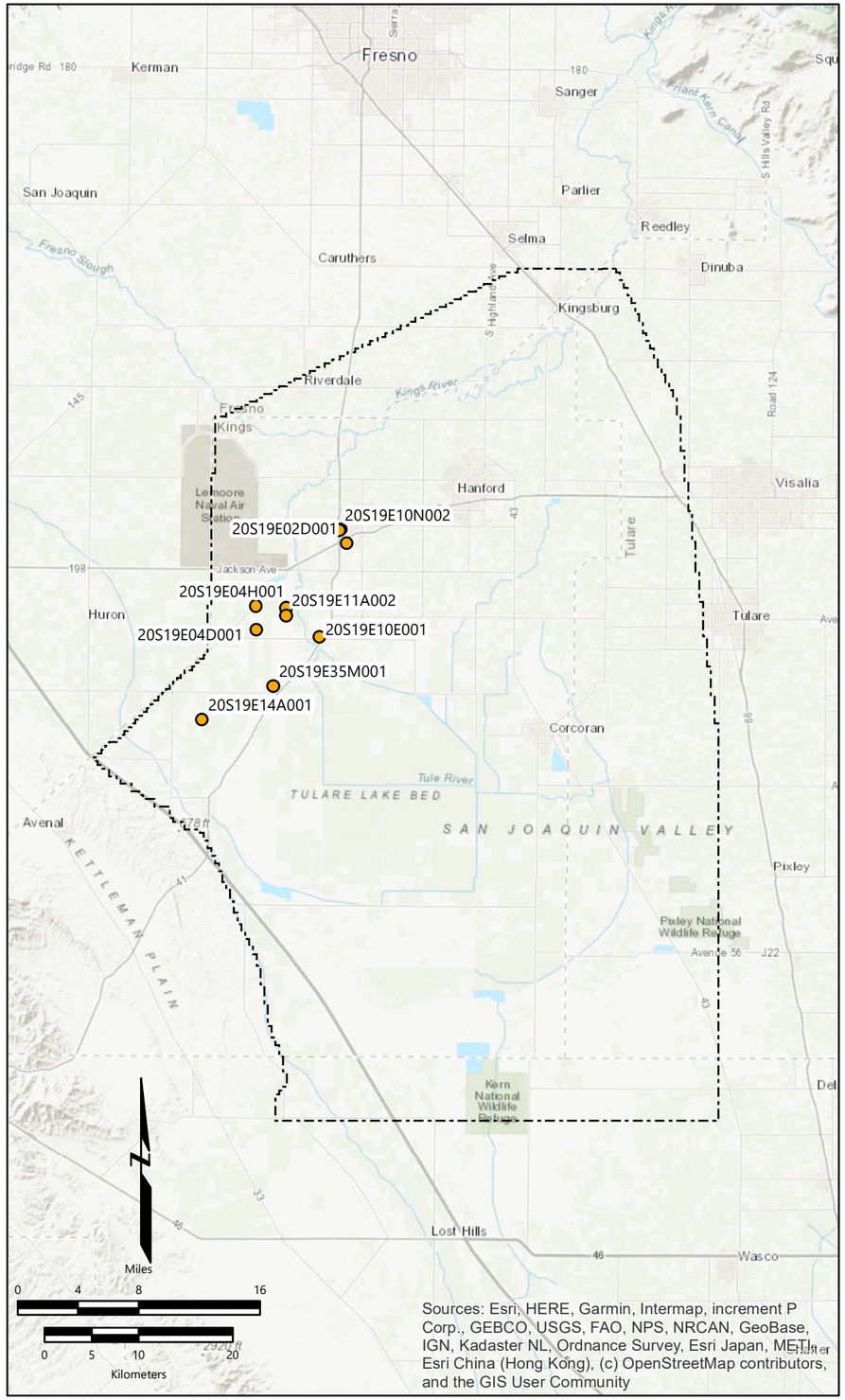

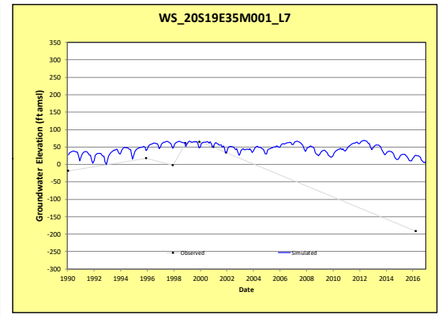

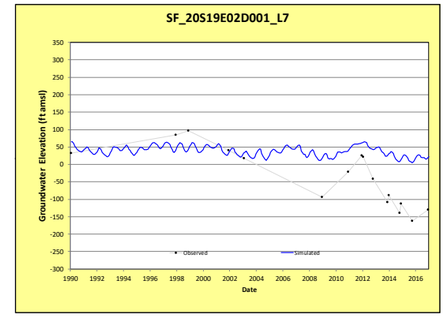

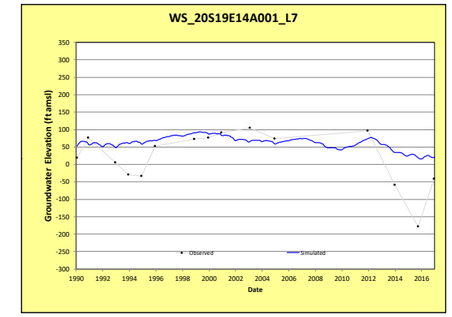

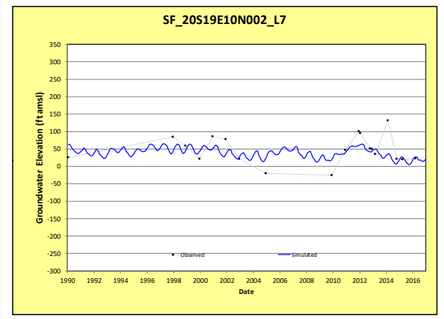

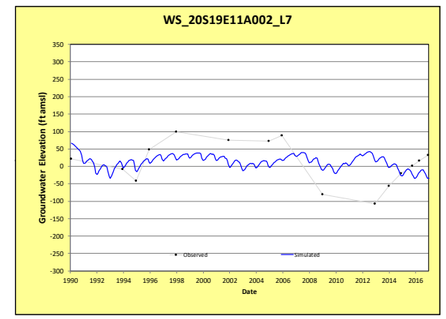

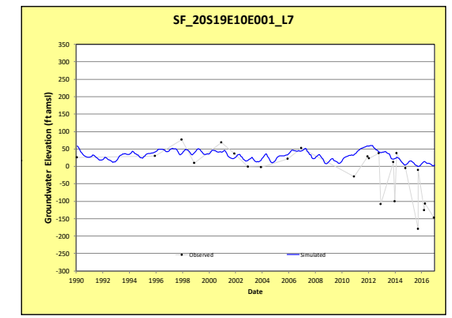

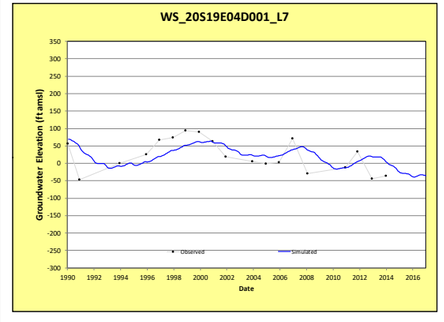

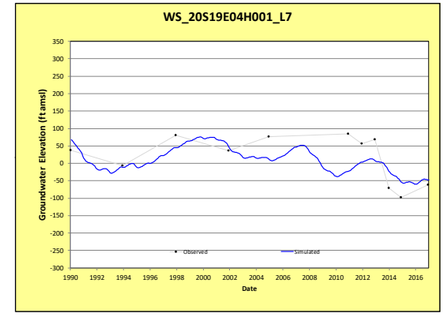

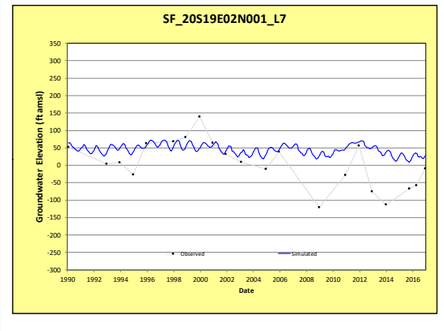

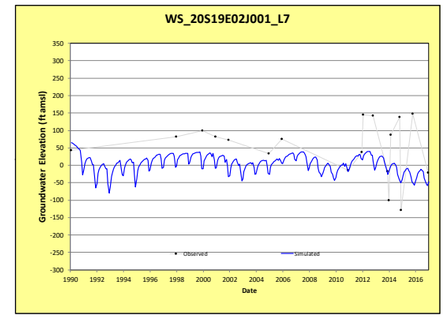

Explanation

- Target well with hydrograph shown
- Target well
- Model domain

Well ID — Layer

WS_20S19E02J001_L7

Layer 7 Observed and Simulated Hydrographs

Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: EMC	Date: 1/8/2020	Project No.: FR18161220
		Figure **D5-2g**

Date: 1/8/2020 Printed by: elizabeth.chapman
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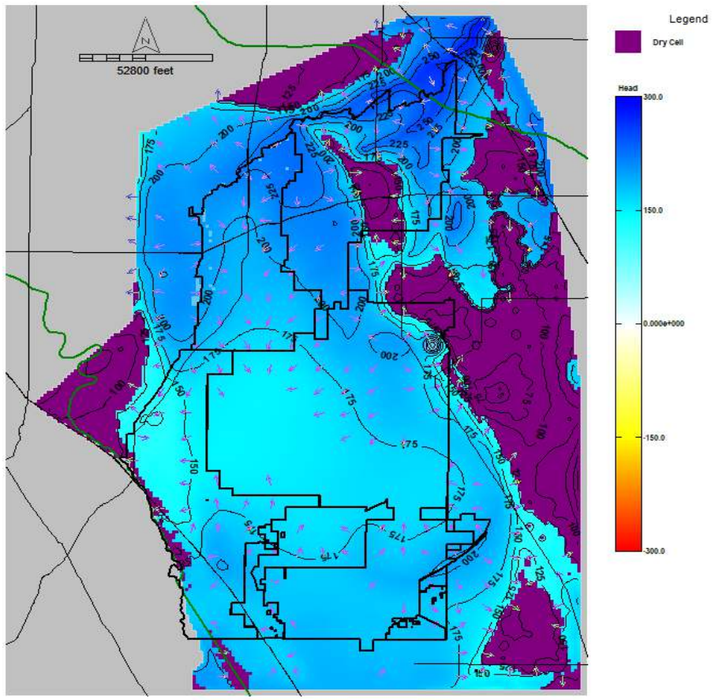
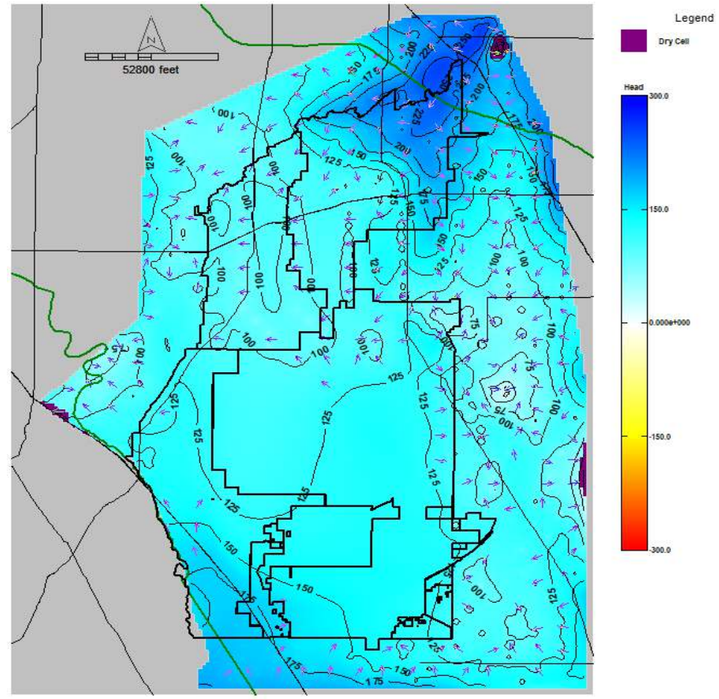


Kings SGMA 1990-2016 Layer: 1 SP: 312 Date: 2016.0



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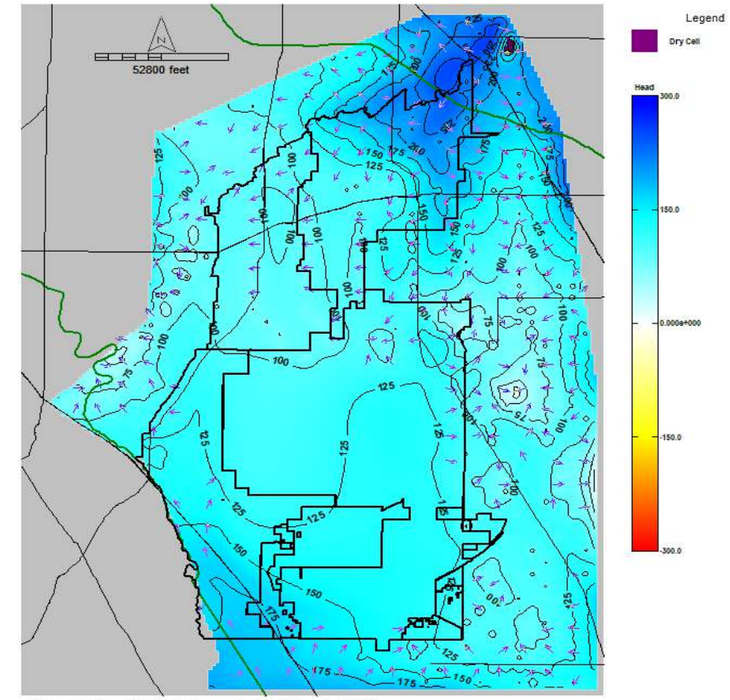

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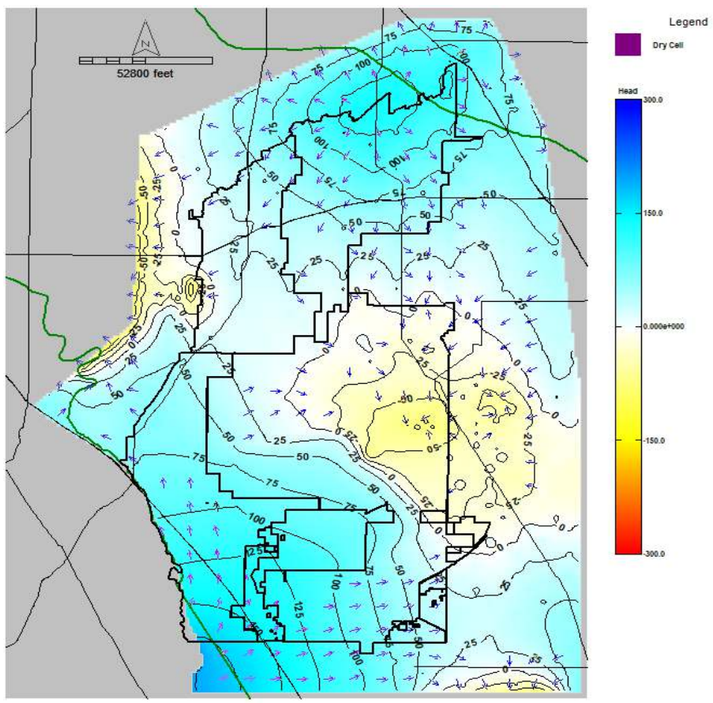

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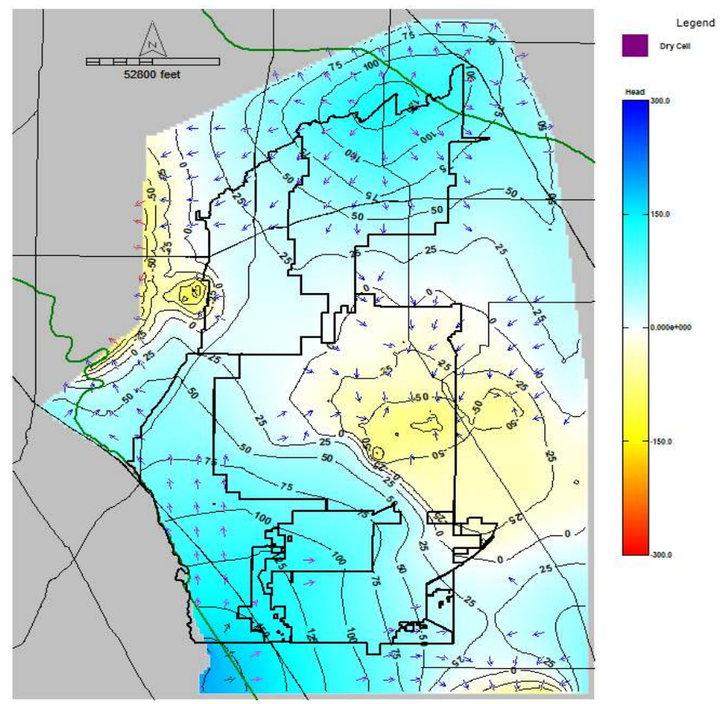

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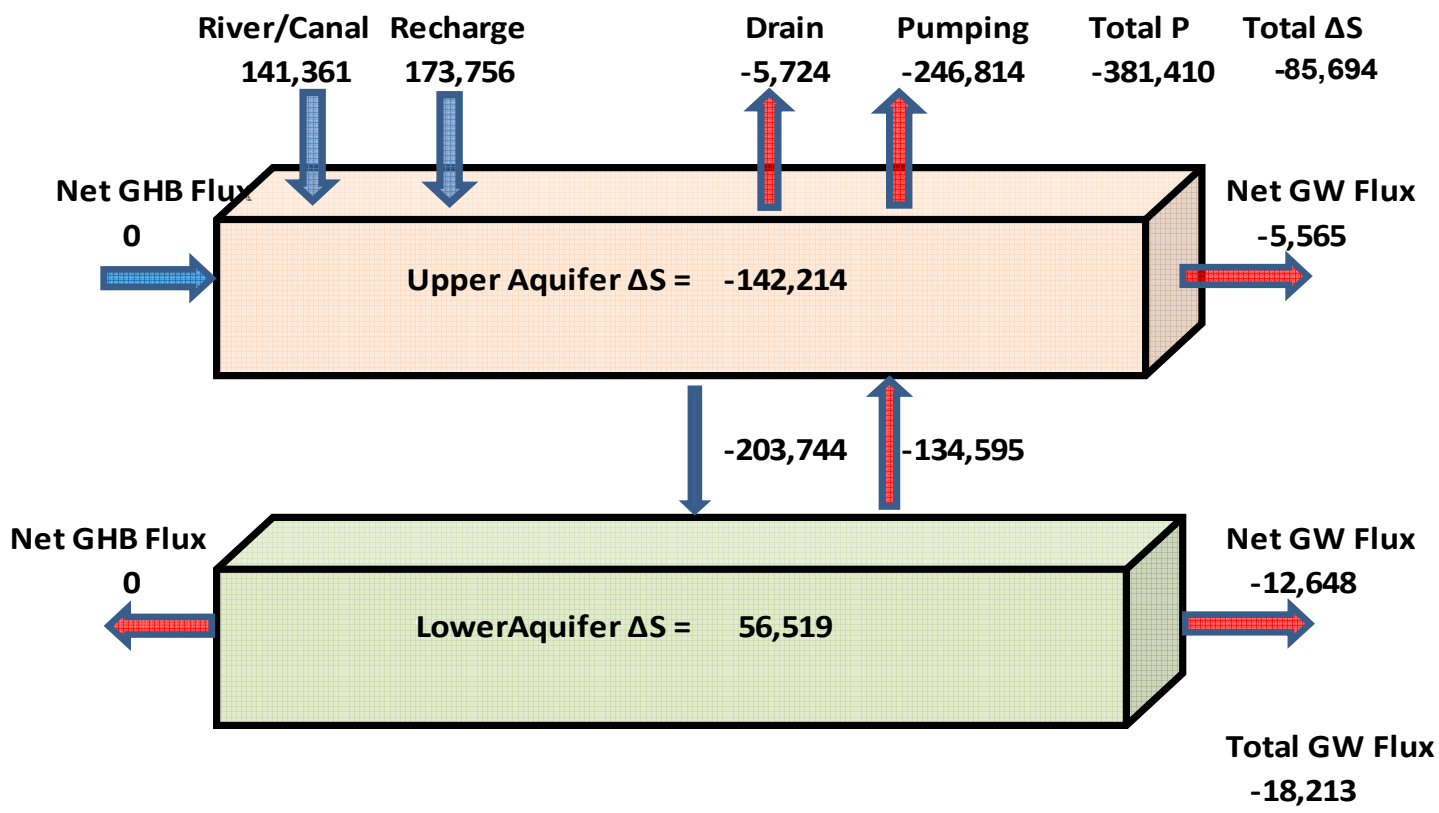
Simulated December 2015 Groundwater Elevations and Groundwater Flow Vectors

Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

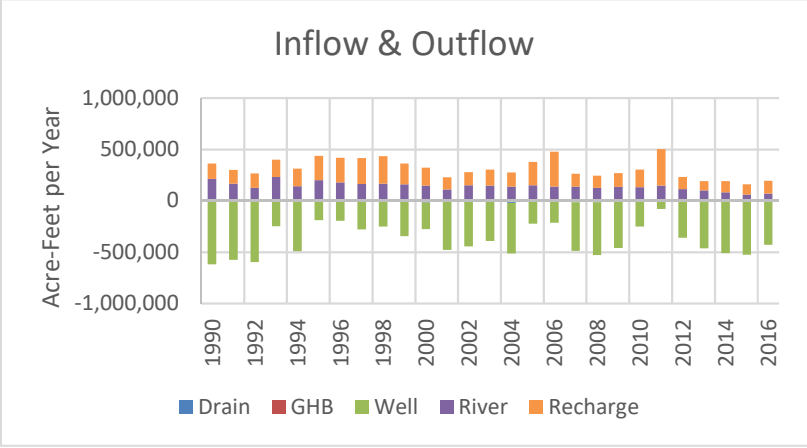
By: dmb	Date: 07/30/19	Project No.: FR18161220
		Figure **D5-3**

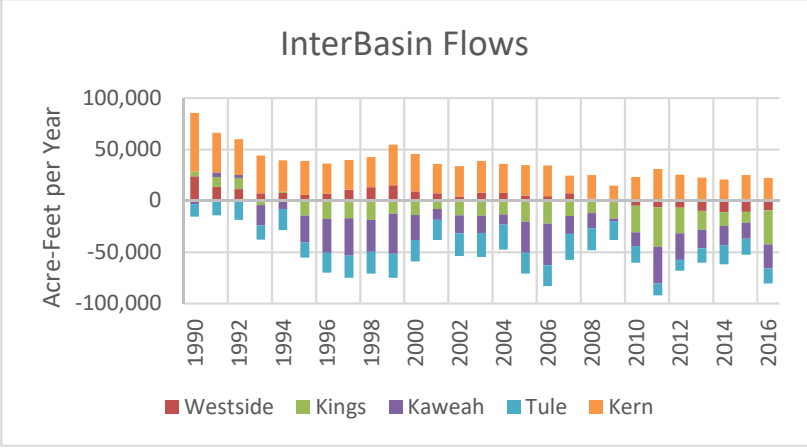
1990-2016
Average Groundwater Balance
Tulare Lake SB

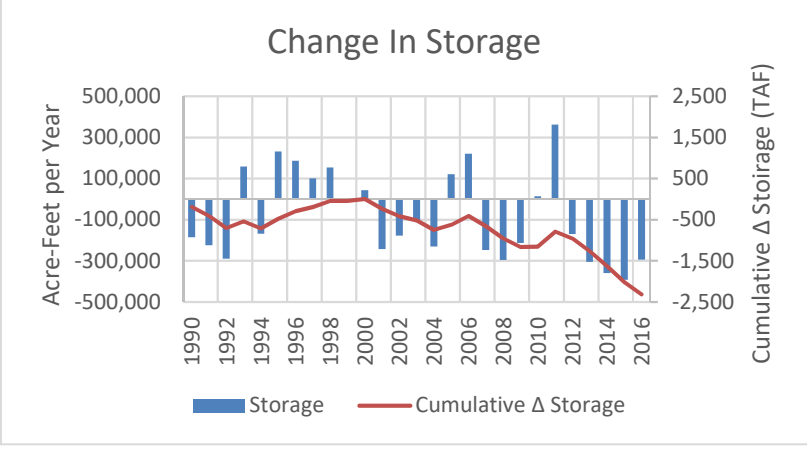


1990 - 2016
Tulare Lake Subbasin

TulareLake Date	Net Drain	Net GHB	Net Well	Net River	Net Recharge	Net Storage	TulareLake Interbasin	Westside Interbasin	Kings Interbasin	Kaweah Interbasin	Tule Interbasin	Kern Interbasin
1990	0	0	-618,843	212,023	150,920	-185,926	69,929	23,632	4,815	-3,467	-12,024	56,971
1991	0	0	-577,240	164,892	135,941	-224,464	51,899	13,271	9,747	4,376	-14,187	38,693
1992	0	0	-596,994	125,681	139,491	-290,389	41,344	11,225	10,812	2,987	-18,583	34,904
1993	0	0	-248,824	231,839	167,981	157,279	6,232	7,344	-4,219	-20,133	-13,496	36,736
1994	-26	0	-491,956	139,080	173,457	-168,707	10,497	7,647	1,210	-8,114	-20,670	30,426
1995	-82	0	-188,622	200,925	235,917	231,421	-16,719	5,564	-14,724	-26,071	-14,705	33,217
1996	-251	0	-195,586	177,508	238,753	186,481	-33,990	6,788	-17,826	-32,867	-19,334	29,250
1997	-1,392	0	-278,726	162,833	252,651	100,786	-35,395	10,524	-17,146	-36,466	-21,396	29,090
1998	-1,870	0	-249,086	165,955	266,380	153,536	-28,386	13,146	-18,649	-31,067	-21,177	29,362
1999	-7,376	0	-338,241	159,660	201,878	522	-20,428	15,099	-12,823	-38,853	-23,234	39,384
2000	-17,343	0	-260,727	147,624	172,534	43,638	-13,661	9,202	-14,008	-24,256	-20,878	36,279
2001	-13,351	0	-467,326	108,934	119,202	-243,059	-2,375	7,046	-8,208	-10,602	-19,402	28,791
2002	-10,253	0	-435,270	150,502	128,082	-178,393	-20,389	4,116	-14,310	-17,484	-22,160	29,448
2003	-8,170	0	-385,602	145,737	157,010	-101,083	-16,217	7,968	-14,505	-16,849	-23,580	30,749
2004	-20,849	0	-494,263	137,236	138,732	-231,122	-11,678	7,475	-13,320	-9,952	-24,296	28,416
2005	-5,413	0	-217,488	150,074	227,638	121,017	-36,335	4,993	-20,418	-30,344	-20,294	29,728
2006	-9,651	0	-205,429	138,230	339,860	220,649	-48,705	4,446	-22,451	-40,403	-20,192	29,895
2007	-14,999	0	-474,153	137,542	123,827	-248,490	-33,353	7,330	-14,948	-17,451	-25,274	16,990
2008	-13,795	0	-515,546	126,421	117,419	-296,277	-23,147	1,856	-12,181	-14,428	-21,584	23,191
2009	-4,295	0	-456,641	133,032	135,636	-213,010	-23,837	-1,793	-15,575	-2,407	-18,590	14,527
2010	-2,440	0	-249,776	129,805	171,969	13,129	-37,307	-5,091	-25,818	-13,379	-16,097	23,078
2011	-4,486	0	-77,680	147,432	355,590	361,228	-61,401	-6,641	-38,331	-35,573	-11,696	30,840
2012	-3,226	0	-357,301	111,314	120,601	-169,947	-42,994	-6,733	-25,065	-25,720	-10,775	25,299
2013	-8,381	0	-455,726	99,564	90,038	-305,607	-38,136	-9,909	-18,283	-18,315	-13,933	22,304
2014	-3,579	0	-508,253	82,742	107,427	-360,352	-41,461	-11,151	-13,313	-18,684	-18,842	20,529
2015	-829	0	-524,338	60,439	99,444	-392,279	-27,490	-10,951	-10,641	-15,502	-15,383	24,986
2016	-2,497	0	-428,423	69,718	123,037	-294,325	-58,248	-9,455	-33,115	-23,497	-14,438	22,257
1990-2016 Average	**-5,724**	**0**	**-381,410**	**141,361**	**173,756**	**-85,694**	**-18,213**	**3,961**	**-13,826**	**-19,427**	**-18,379**	**29,457**
1998-2010 Average	**-9,985**	**0**	**-365,350**	**140,827**	**176,936**	**-73,765**	**-24,294**	**5,830**	**-15,939**	**-20,575**	**-21,289**	**27,680**



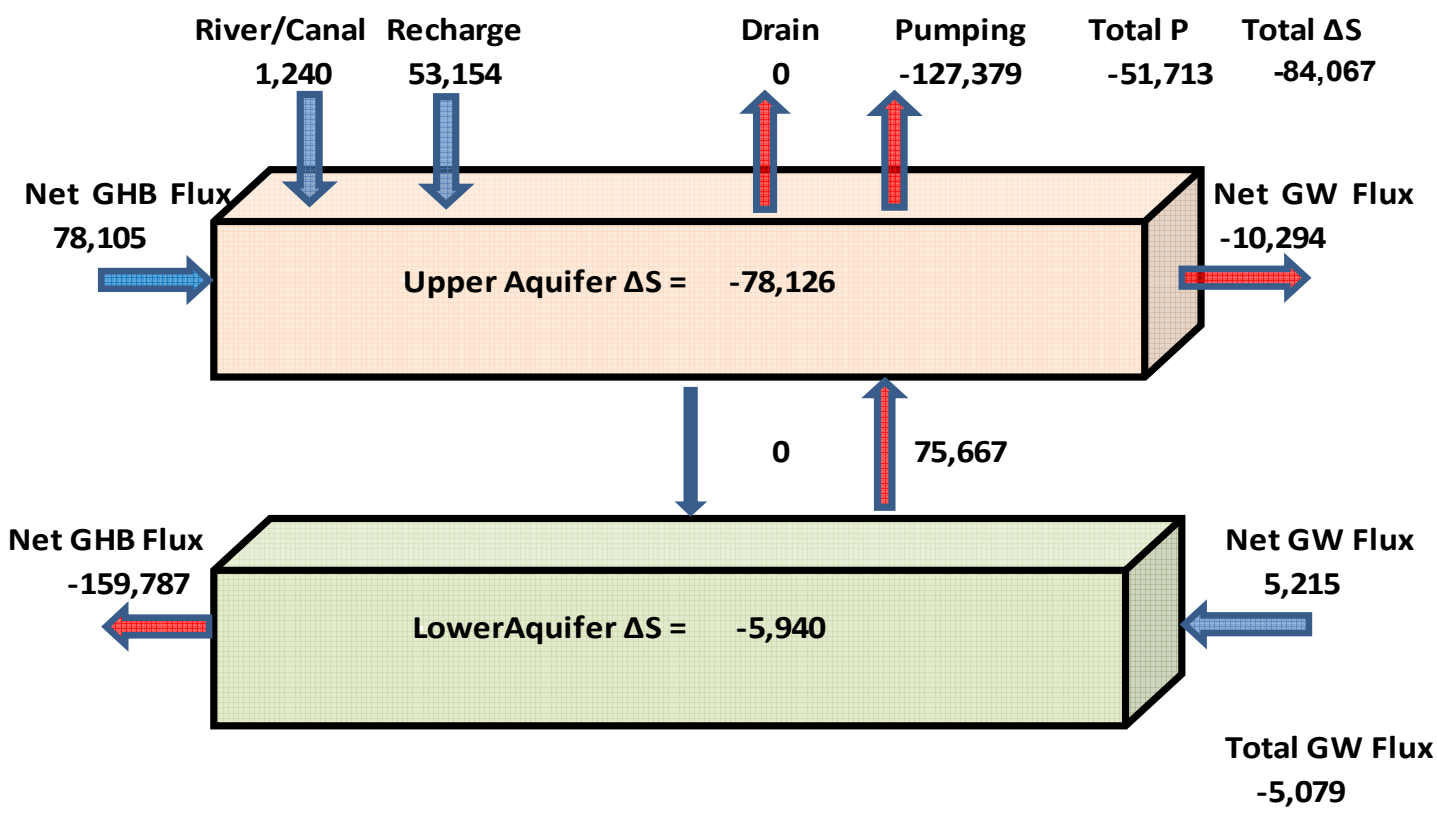




Groundwater Mass Balance
Tulare Lake Subbasin
Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

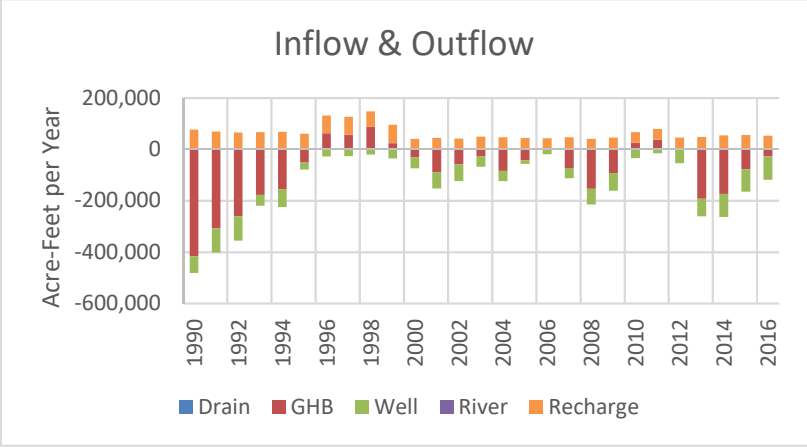
By: dmb	Date: 12/15/19	Project No.: FR18161220
		Figure **D5-4**

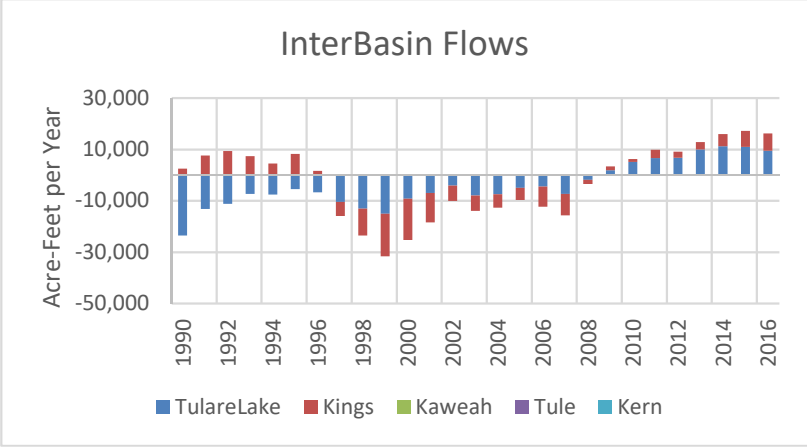
1990-2016
Average Groundwater Balance
Westside SB

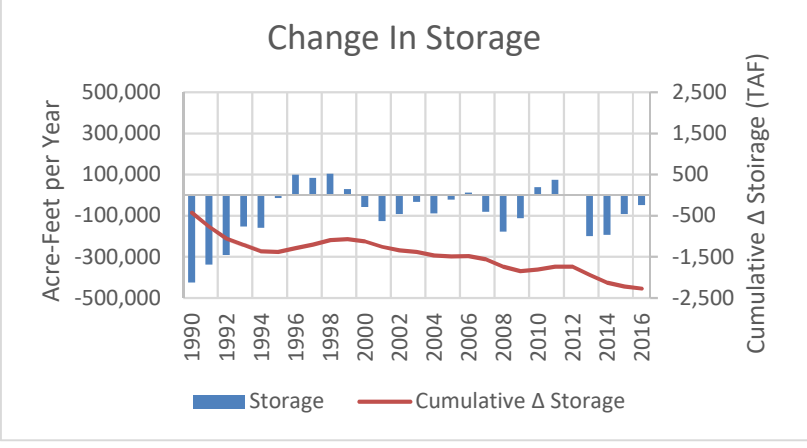


1990 - 2016
Westside Subbasin

TulareLake Date	Net Drain	Net GHB	Net Well	Net River	Net Recharge	Net Storage	Interbasin TulareLake	Interbasin Westside	Interbasin Kings	Interbasin Kaweah	Interbasin Tule	Interbasin Kern
1990	0	-416,613	-64,299	1,305	75,411	-425,294	-23,632	0	2,518	0	0	0
1991	0	-306,833	-94,899	1,315	67,929	-338,123	-13,271	0	7,580	0	0	0
1992	0	-260,820	-94,233	1,297	64,558	-291,005	-11,225	0	9,334	0	0	0
1993	0	-177,022	-42,742	1,275	65,909	-152,615	-7,344	0	7,293	0	0	0
1994	0	-154,444	-69,800	1,262	67,284	-158,845	-7,647	0	4,416	0	0	0
1995	0	-51,451	-26,944	1,258	59,364	-15,122	-5,564	0	8,215	0	0	0
1996	0	61,385	-27,841	1,253	69,011	98,671	-6,788	0	1,651	0	0	0
1997	0	55,068	-26,074	1,249	69,862	84,080	-10,524	0	-5,501	0	0	0
1998	0	86,377	-20,708	1,252	60,275	103,573	-13,146	0	-10,476	0	0	0
1999	0	22,760	-35,621	1,250	71,595	28,355	-15,099	0	-16,531	0	0	0
2000	0	-31,098	-42,612	1,262	38,891	-58,827	-9,202	0	-16,069	0	0	0
2001	0	-88,368	-64,117	1,269	42,859	-126,795	-7,046	0	-11,392	0	0	0
2002	0	-59,530	-64,657	1,278	40,823	-92,170	-4,116	0	-5,977	0	0	0
2003	0	-28,132	-39,554	1,283	47,458	-32,937	-7,968	0	-6,025	0	0	0
2004	0	-83,841	-40,547	1,290	46,023	-89,837	-7,475	0	-5,288	0	0	0
2005	0	-42,330	-14,695	1,291	43,362	-22,114	-4,993	0	-4,750	0	0	0
2006	0	-2,135	-16,480	1,294	41,476	11,768	-4,446	0	-7,942	0	0	0
2007	0	-73,077	-39,686	1,296	45,543	-81,676	-7,330	0	-8,423	0	0	0
2008	0	-153,303	-61,382	1,307	39,326	-177,598	-1,856	0	-1,697	0	0	0
2009	0	-92,631	-68,431	1,308	44,595	-111,863	1,793	0	1,497	0	0	0
2010	0	24,802	-34,671	1,310	40,459	38,085	5,091	0	1,094	0	0	0
2011	0	37,267	-15,329	1,312	40,675	73,785	6,641	0	3,219	0	0	0
2012	0	-449	-54,215	1,318	44,354	99	6,733	0	2,358	0	0	0
2013	0	-191,800	-68,720	1,316	47,308	-199,093	9,909	0	2,894	0	0	0
2014	0	-173,365	-90,404	1,313	52,774	-193,733	11,151	0	4,762	0	0	0
2015	0	-77,549	-87,385	1,313	54,676	-91,693	10,951	0	6,279	0	0	0
2016	0	-28,273	-90,193	0	53,365	-48,877	9,455	0	6,768	0	0	0
1990-2016 Average	**0**	**-81,682**	**-51,713**	**1,240**	**53,154**	**-84,067**	**-3,961**	**0**	**-1,118**	**0**	**0**	**0**
1998-2010 Average	**0**	**-40,039**	**-41,782**	**1,284**	**46,360**	**-47,080**	**-5,830**	**0**	**-7,075**	**0**	**0**	**0**



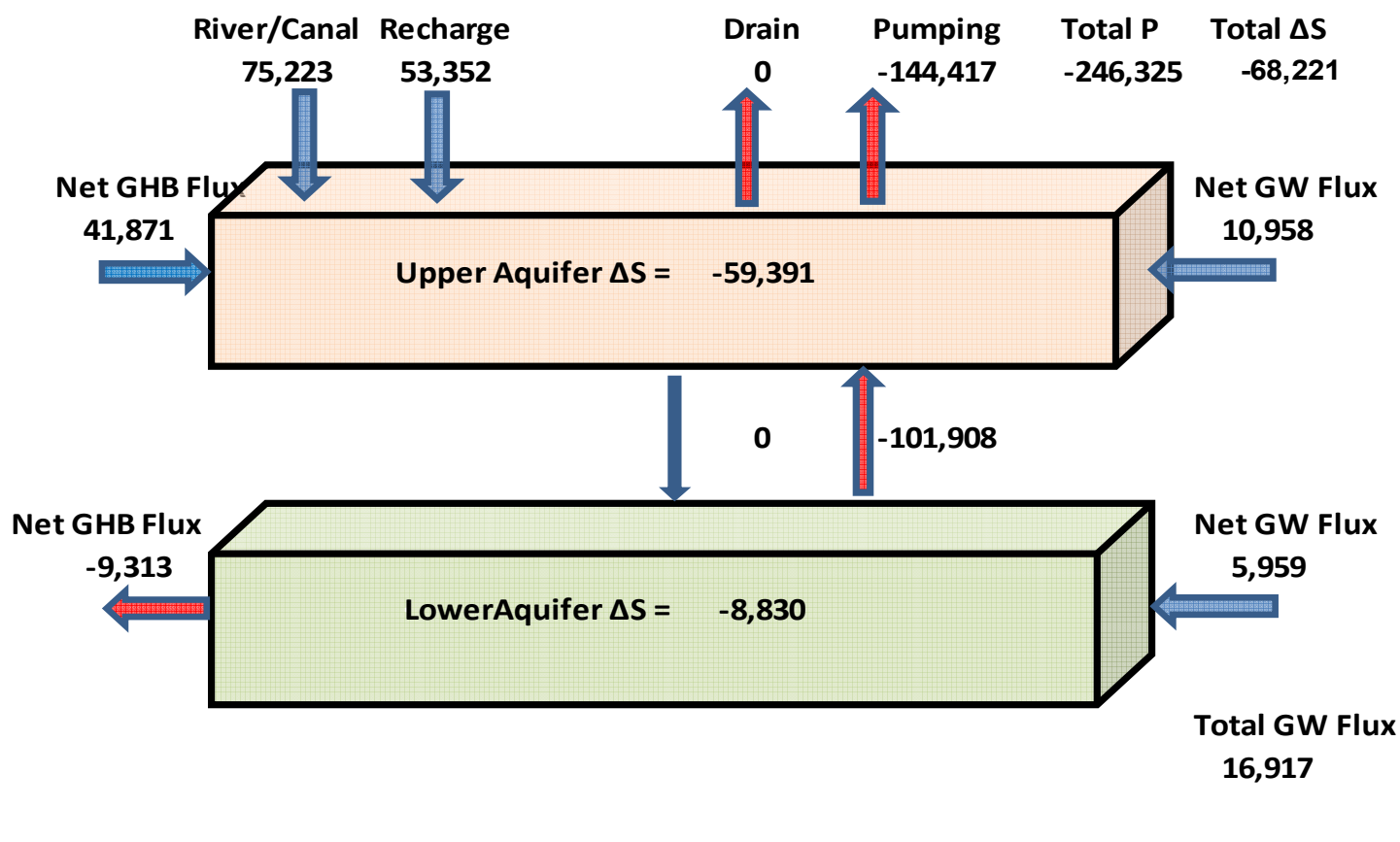




Groundwater Mass Balance
Westside Subbasin
Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

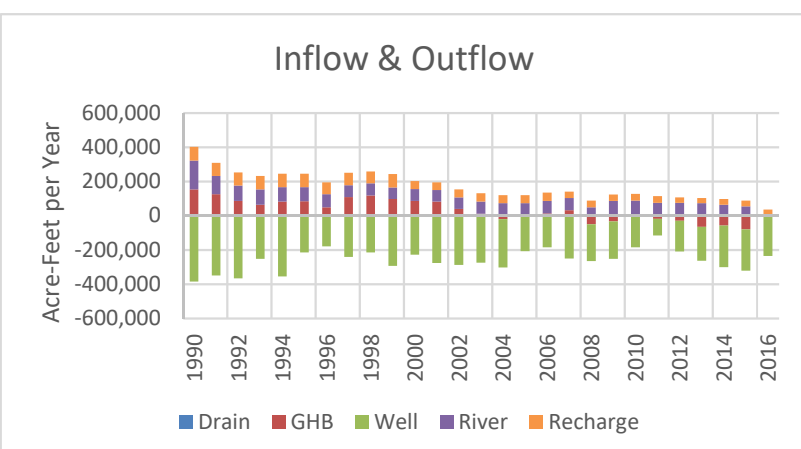
By: dmb	Date: 12/15/19	Project No.: FR18161220
		Figure **D5-5**

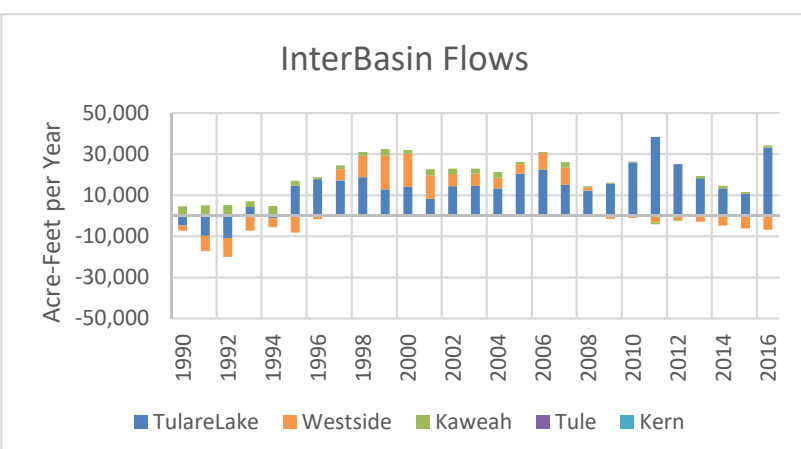
1990-2016
Average Groundwater Balance
Kings SB

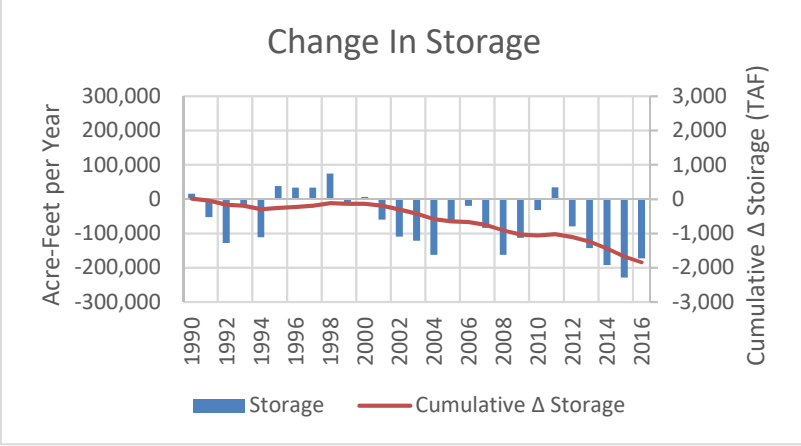


1990 - 2016
Kings Subbasin

TulareLake Date	Net Drain	Net GHB	Net Well	Net River	Net Recharge	Net Storage	Interbasin TulareLake	Interbasin Westside	Interbasin Kings	Interbasin Kaweah	Interbasin Tule	Interbasin Kern
1990	0	153,507	-384,337	169,046	79,741	15,208	-4,815	-2,518	0	4,504	0	0
1991	0	124,539	-348,796	107,577	75,776	-53,100	-9,747	-7,580	0	5,048	0	0
1992	0	85,636	-366,658	91,057	76,643	-128,172	-10,812	-9,334	0	5,220	0	0
1993	0	63,444	-251,847	90,672	77,740	-20,149	4,219	-7,293	0	2,874	0	0
1994	0	82,944	-355,512	83,133	78,922	-111,410	-1,210	-4,416	0	4,642	0	0
1995	0	84,637	-215,315	82,151	77,734	38,072	14,724	-8,215	0	2,339	0	0
1996	0	48,223	-178,362	77,072	68,853	32,844	17,826	-1,651	0	873	0	0
1997	0	107,723	-241,638	70,229	72,279	33,073	17,146	5,501	0	1,803	0	0
1998	0	118,175	-214,567	69,924	69,494	74,029	18,649	10,476	0	1,860	0	0
1999	0	96,736	-292,444	67,565	78,859	-16,762	12,823	16,531	0	3,100	0	0
2000	0	85,919	-227,760	68,455	47,204	5,842	14,008	16,069	0	1,936	0	0
2001	0	82,301	-277,276	67,448	45,197	-59,687	8,208	11,392	0	2,987	0	0
2002	0	38,507	-286,933	68,043	47,651	-109,739	14,310	5,977	0	2,634	0	0
2003	0	10,551	-275,240	72,558	47,606	-121,577	14,505	6,025	0	2,345	0	0
2004	0	-19,464	-283,587	72,500	46,386	-162,951	13,320	5,288	0	2,545	0	0
2005	0	-4,898	-203,108	72,979	47,504	-61,361	20,418	4,750	0	976	0	0
2006	0	13,674	-184,500	72,546	47,592	-19,644	22,451	7,942	0	614	0	0
2007	0	32,310	-250,493	70,241	37,723	-84,139	14,948	8,423	0	2,632	0	0
2008	0	-50,566	-214,765	49,586	38,416	-162,941	12,181	1,697	0	463	0	0
2009	0	-33,972	-217,422	85,755	37,471	-113,549	15,575	-1,497	0	479	0	0
2010	0	9,787	-185,133	78,260	39,636	-32,243	25,818	-1,094	0	459	0	0
2011	0	-17,920	-97,073	75,380	39,597	34,158	38,331	-3,219	0	-966	0	0
2012	0	-29,573	-179,351	74,885	31,796	-79,785	25,065	-2,358	0	-281	0	0
2013	0	-64,621	-198,165	72,788	30,437	-143,078	18,283	-2,894	0	1,051	0	0
2014	0	-57,537	-243,399	63,777	34,247	-193,050	13,313	-4,762	0	1,243	0	0
2015	0	-79,762	-242,398	55,138	32,307	-229,309	10,641	-6,279	0	958	0	0
2016	0	-1,216	-234,685	2,254	33,689	-172,561	33,115	-6,768	0	944	0	0
1990-2016 Average	**0**	**32,559**	**-246,325**	**75,223**	**53,352**	**-68,221**	**13,826**	**1,118**	**0**	**1,973**	**0**	**0**
1998-2010 Average	**0**	**29,159**	**-239,479**	**70,451**	**48,518**	**-66,517**	**15,939**	**7,075**	**0**	**1,771**	**0**	**0**



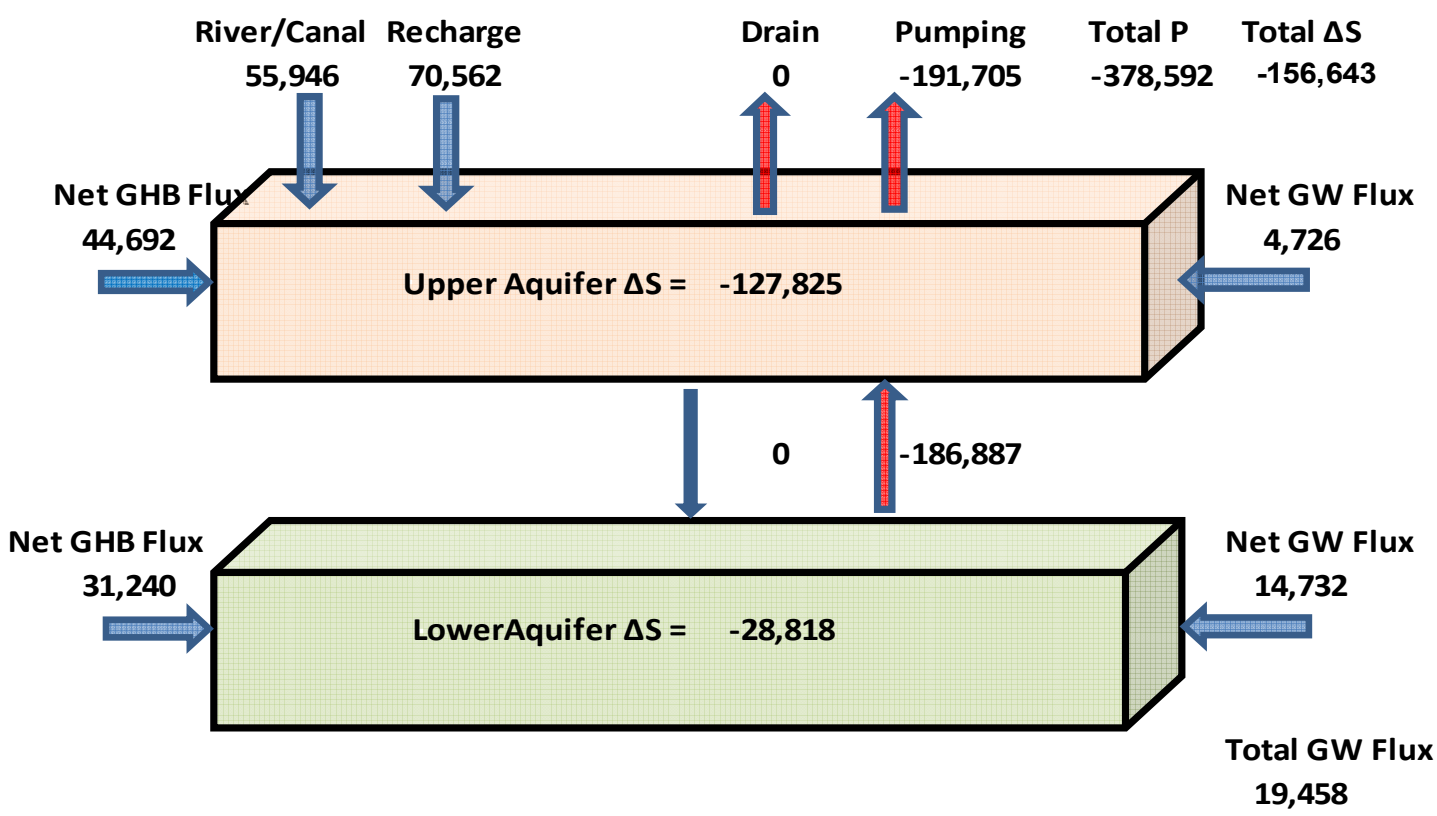




Groundwater Mass Balance
Kings Subbasin
Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

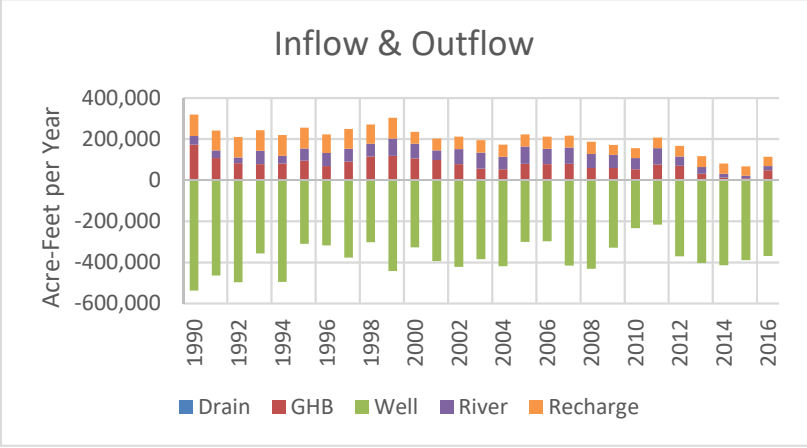
By: dmb	Date: 12/15/19	Project No.: FR18161220
		Figure **D5-6**

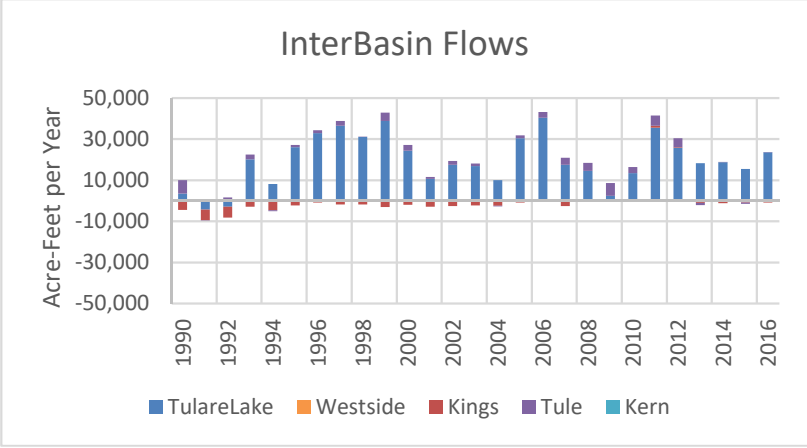
1990-2016
Average Groundwater Balance
Kaweah SB

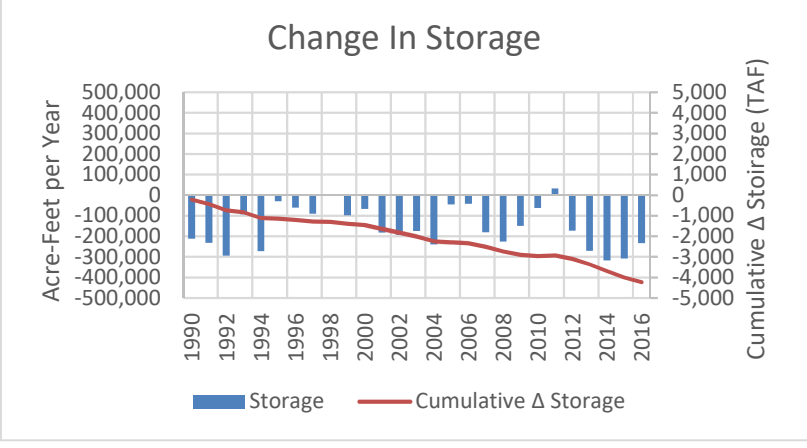


1990 - 2016
Kaweah Subbasin

TulareLake Date	Net Drain	Net GHB	Net Well	Net River	Net Recharge	Net Storage	Interbasin TulareLake	Interbasin Westside	Interbasin Kings	Interbasin Kaweah	Interbasin Tule	Interbasin Kern
1990	0	172,831	-537,159	42,496	103,609	-212,649	3,467	0	-4,504	0	6,568	0
1991	0	107,583	-463,728	36,764	96,709	-232,084	-4,376	0	-5,048	0	-11	0
1992	0	81,651	-497,528	29,290	99,060	-294,105	-2,987	0	-5,220	0	1,542	0
1993	0	77,286	-356,606	66,092	99,049	-94,514	20,133	0	-2,874	0	2,383	0
1994	0	80,902	-495,185	37,053	102,172	-272,016	8,114	0	-4,642	0	-549	0
1995	0	94,932	-309,662	59,838	100,083	-30,023	26,071	0	-2,339	0	1,054	0
1996	0	68,503	-317,375	63,686	91,031	-60,703	32,867	0	-873	0	1,443	0
1997	0	89,438	-377,453	63,327	96,295	-91,317	36,466	0	-1,803	0	2,354	0
1998	0	114,652	-301,969	63,291	92,691	-2,106	31,067	0	-1,860	0	22	0
1999	0	118,216	-442,308	84,491	100,527	-99,162	38,853	0	-3,100	0	4,070	0
2000	0	106,502	-327,865	70,296	58,536	-67,290	24,256	0	-1,936	0	2,897	0
2001	0	97,263	-394,189	48,197	57,101	-182,971	10,602	0	-2,987	0	972	0
2002	0	78,197	-422,360	72,804	61,265	-193,353	17,484	0	-2,634	0	1,815	0
2003	0	56,243	-384,827	77,120	60,606	-175,029	16,849	0	-2,345	0	1,236	0
2004	0	53,353	-419,713	60,149	59,185	-239,862	9,952	0	-2,545	0	-308	0
2005	0	78,649	-300,204	85,039	59,441	-46,176	30,344	0	-976	0	1,502	0
2006	0	77,866	-298,321	74,806	59,613	-43,395	40,403	0	-614	0	2,795	0
2007	0	79,789	-415,842	79,484	57,284	-180,937	17,451	0	-2,632	0	3,492	0
2008	0	58,458	-431,763	68,344	60,460	-226,521	14,428	0	-463	0	4,003	0
2009	0	58,932	-329,201	63,510	48,642	-150,022	2,407	0	-479	0	6,147	0
2010	0	52,112	-234,294	55,673	48,421	-62,200	13,379	0	-459	0	2,962	0
2011	0	76,346	-216,915	79,408	50,989	31,298	35,573	0	966	0	4,929	0
2012	0	70,075	-370,148	45,029	50,752	-173,616	25,720	0	281	0	4,380	0
2013	0	31,050	-403,265	33,241	51,860	-270,970	18,315	0	-1,051	0	-1,157	0
2014	0	12,193	-415,074	18,863	49,171	-317,311	18,684	0	-1,243	0	26	0
2015	0	9,525	-390,330	11,544	46,175	-309,136	15,502	0	-958	0	-619	0
2016	0	47,596	-368,704	20,716	44,451	-233,187	23,497	0	-944	0	174	0
1990-2016 Average	**0**	**75,931**	**-378,592**	**55,946**	**70,562**	**-156,643**	**19,427**	**0**	**-1,973**	**0**	**2,005**	**0**
1998-2010 Average	**0**	**79,249**	**-361,758**	**69,477**	**63,367**	**-128,386**	**20,575**	**0**	**-1,771**	**0**	**2,431**	**0**



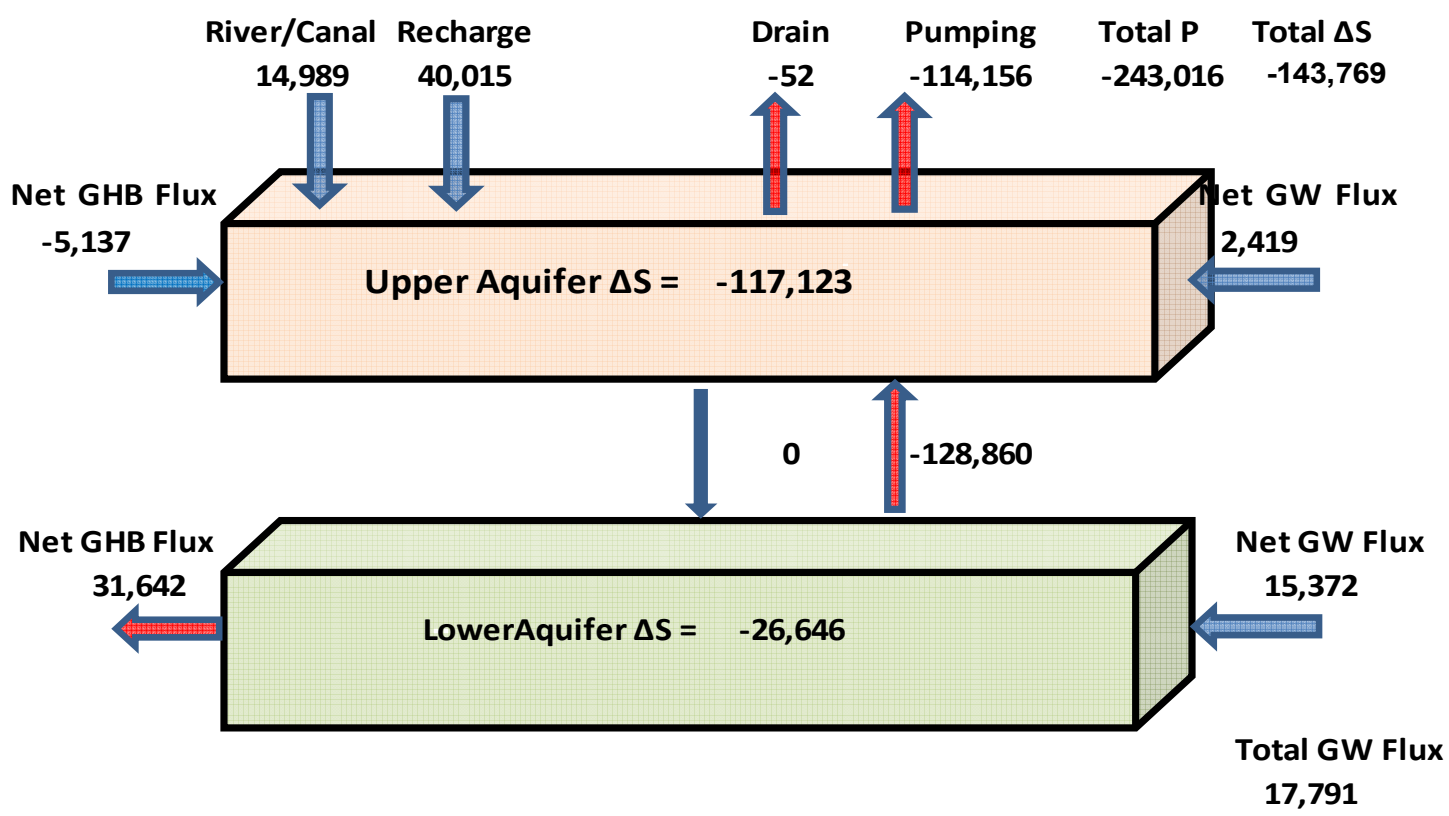




Groundwater Mass Balance
Kaweah Subbasin
Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

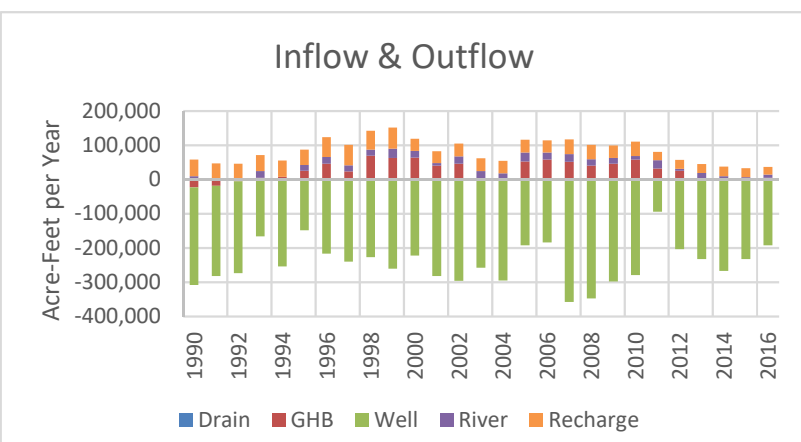
By: dmb	Date: 12/15/19	Project No.: FR18161220
		Figure **D5-7**

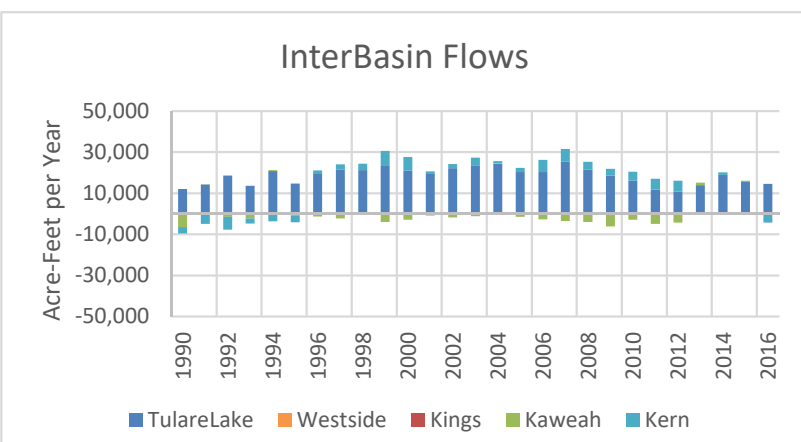
1990-2016
Average Groundwater Balance
Tule SB

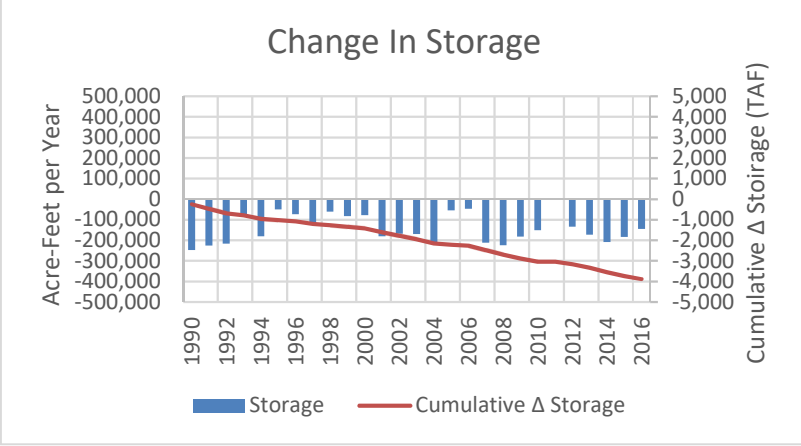


1990 - 2016
Tule Subbasin

TulareLake Date	Net Drain	Net GHB	Net Well	Net River	Net Recharge	Net Storage	Interbasin TulareLake	Interbasin Westside	Interbasin Kings	Interbasin Kaweah	Interbasin Tule	Interbasin Kern
1990	0	-23,566	-284,555	9,618	48,228	-247,845	12,024	0	0	-6,568	0	-3,025
1991	0	-18,667	-263,398	3,449	43,409	-225,953	14,187	0	0	11	0	-4,946
1992	0	-5,300	-268,690	684	45,275	-217,174	18,583	0	0	-1,542	0	-6,183
1993	0	4,326	-165,862	20,019	46,394	-86,494	13,496	0	0	-2,383	0	-2,484
1994	0	7,958	-253,837	0	46,982	-181,434	20,670	0	0	549	0	-3,757
1995	0	25,307	-148,402	16,882	44,943	-50,717	14,705	0	0	-1,054	0	-3,098
1996	0	45,820	-216,603	19,552	57,888	-73,711	19,334	0	0	-1,443	0	1,739
1997	0	23,106	-239,747	18,382	59,597	-116,961	21,396	0	0	-2,354	0	2,659
1998	0	68,956	-227,472	17,741	54,979	-61,553	21,177	0	0	-22	0	3,087
1999	-94	62,510	-260,854	27,404	61,127	-83,406	23,234	0	0	-4,070	0	7,338
2000	-82	63,667	-221,821	19,580	35,921	-78,068	20,878	0	0	-2,897	0	6,685
2001	-43	40,136	-282,286	7,462	34,734	-180,420	19,402	0	0	-972	0	1,148
2002	-77	45,471	-295,718	21,943	36,975	-169,024	22,160	0	0	-1,815	0	2,037
2003	-143	785	-257,704	23,994	36,852	-170,227	23,580	0	0	-1,236	0	3,644
2004	-88	3,599	-294,831	14,519	35,955	-215,230	24,296	0	0	308	0	1,012
2005	-174	52,654	-191,897	26,378	36,973	-55,320	20,294	0	0	-1,502	0	1,954
2006	-151	57,771	-184,092	20,669	35,792	-46,574	20,192	0	0	-2,795	0	6,040
2007	-209	51,182	-357,542	22,998	43,001	-212,594	25,274	0	0	-3,492	0	6,196
2008	-143	40,599	-347,405	18,133	42,686	-224,920	21,584	0	0	-4,003	0	3,628
2009	-103	46,193	-297,514	16,553	36,625	-182,508	18,590	0	0	-6,147	0	3,296
2010	-36	58,280	-279,500	10,122	41,904	-151,840	16,097	0	0	-2,962	0	4,255
2011	-58	32,131	-94,078	23,936	24,249	-1,823	11,696	0	0	-4,929	0	5,231
2012	-13	25,701	-203,630	4,825	26,348	-135,064	10,775	0	0	-4,380	0	5,310
2013	0	3,110	-232,680	16,090	25,641	-173,089	13,933	0	0	1,157	0	-340
2014	0	505	-266,921	8,515	28,447	-209,336	18,842	0	0	-26	0	1,301
2015	0	-1,136	-231,535	6,160	26,210	-184,562	15,383	0	0	619	0	-262
2016	0	4,541	-192,869	9,100	23,267	-145,904	14,438	0	0	-174	0	-4,209
1990-2016 Average	**-52**	**26,505**	**-243,016**	**14,989**	**40,015**	**-143,769**	**18,379**	**0**	**0**	**-2,005**	**0**	**1,417**
1998-2010 Average	**-103**	**45,523**	**-269,126**	**19,038**	**41,040**	**-140,899**	**21,289**	**0**	**0**	**-2,431**	**0**	**3,871**



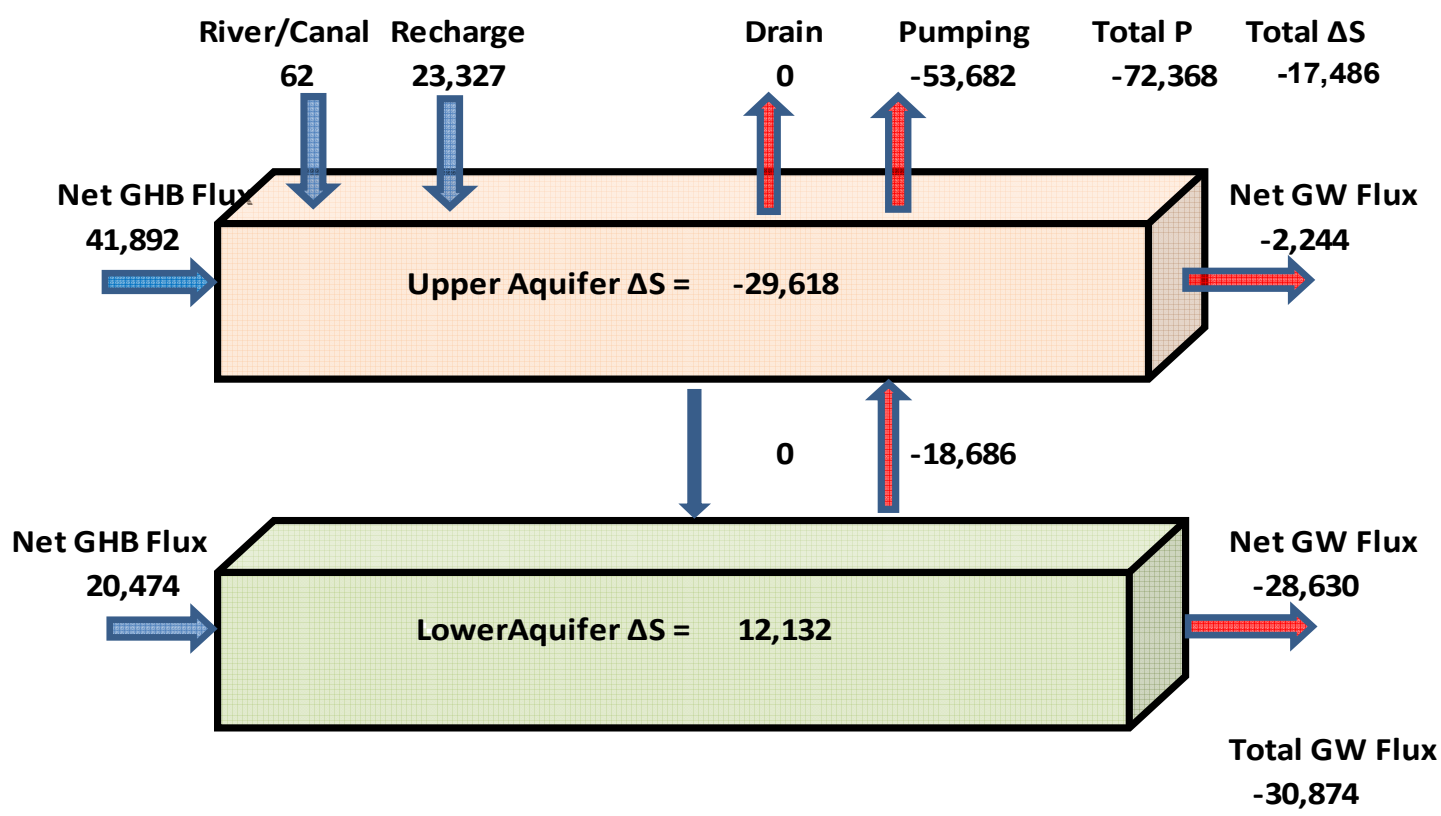




Groundwater Mass Balance
Tule Subbasin
Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

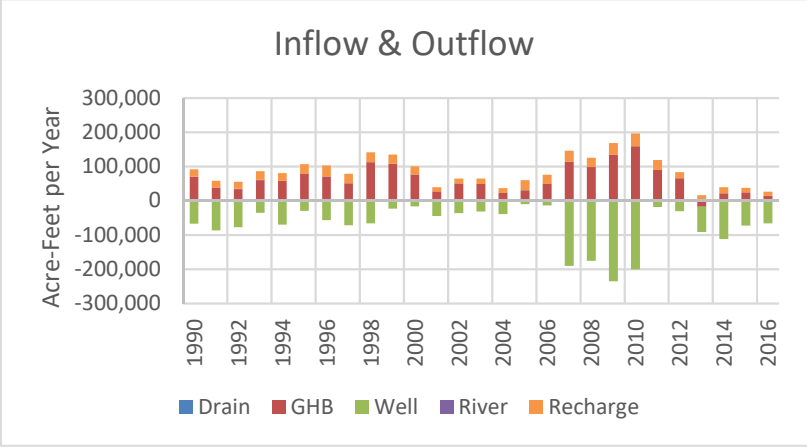
By: dmb	Date: 12/15/19	Project No.: FR18161220
		Figure **D5-8**

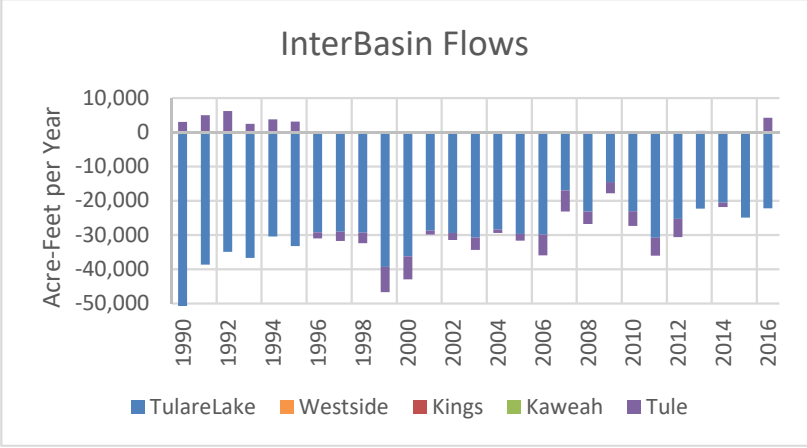
1990-2016
Average Groundwater Balance
Kern SB

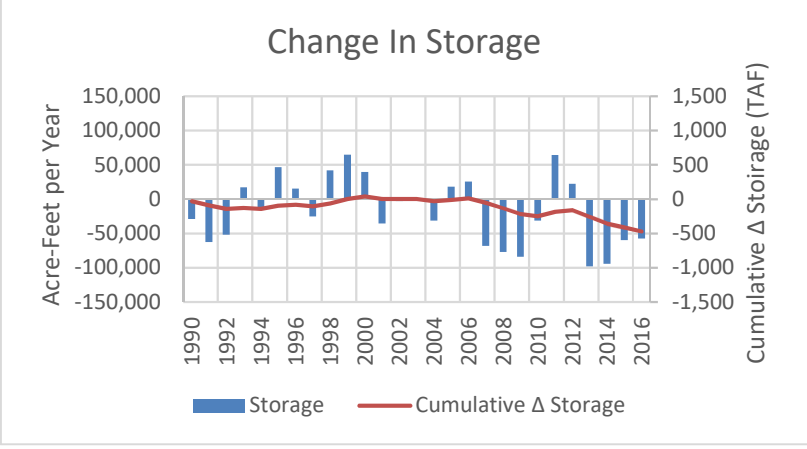


1990 - 2016
Kern Subbasin

TulareLake Date	Net Drain	Net GHB	Net Well	Net River	Net Recharge	Net Storage	Interbasin TulareLake	Interbasin Westside	Interbasin Kings	Interbasin Kaweah	Interbasin Tule	Interbasin Kern
1990	0	69,796	-67,231	0	22,116	-29,265	-56,971	0	0	0	3,025	0
1991	0	38,262	-87,211	0	20,006	-62,690	-38,693	0	0	0	4,946	0
1992	0	34,064	-77,917	187	20,626	-51,761	-34,904	0	0	0	6,183	0
1993	0	60,245	-35,270	185	26,026	16,935	-36,736	0	0	0	2,484	0
1994	0	57,842	-69,714	0	22,828	-15,712	-30,426	0	0	0	3,757	0
1995	0	78,149	-30,062	185	28,292	46,446	-33,217	0	0	0	3,098	0
1996	0	70,592	-56,706	187	31,895	14,979	-29,250	0	0	0	-1,739	0
1997	0	50,141	-72,084	185	28,287	-25,219	-29,090	0	0	0	-2,659	0
1998	0	111,858	-66,609	185	28,908	41,894	-29,362	0	0	0	-3,087	0
1999	0	107,107	-23,290	0	27,767	64,863	-39,384	0	0	0	-7,338	0
2000	0	75,337	-17,088	187	24,123	39,596	-36,279	0	0	0	-6,685	0
2001	0	27,538	-44,901	0	11,757	-35,545	-28,791	0	0	0	-1,148	0
2002	0	50,642	-36,158	0	13,888	-3,114	-29,448	0	0	0	-2,037	0
2003	0	48,468	-31,250	0	16,522	-652	-30,749	0	0	0	-3,644	0
2004	0	22,793	-39,107	0	14,192	-31,550	-28,416	0	0	0	-1,012	0
2005	0	30,314	-10,054	185	29,176	17,940	-29,728	0	0	0	-1,954	0
2006	0	48,548	-13,906	185	26,744	25,637	-29,895	0	0	0	-6,040	0
2007	0	114,520	-190,698	0	31,175	-68,188	-16,990	0	0	0	-6,196	0
2008	0	97,862	-175,605	0	27,362	-77,200	-23,191	0	0	0	-3,628	0
2009	0	133,803	-235,193	0	34,866	-84,347	-14,527	0	0	0	-3,296	0
2010	0	159,358	-200,492	0	36,801	-31,667	-23,078	0	0	0	-4,255	0
2011	0	89,684	-18,947	0	29,513	64,180	-30,840	0	0	0	-5,231	0
2012	0	65,311	-30,394	0	17,679	21,988	-25,299	0	0	0	-5,310	0
2013	0	-18,128	-73,820	0	15,969	-97,943	-22,304	0	0	0	340	0
2014	0	21,647	-111,701	0	17,652	-94,232	-20,529	0	0	0	-1,301	0
2015	0	24,001	-72,531	0	13,114	-60,141	-24,986	0	0	0	262	0
2016	0	14,125	-65,994	0	12,550	-57,368	-22,257	0	0	0	4,209	0
1990-2016 Average	**0**	**62,366**	**-72,368**	**62**	**23,327**	**-17,486**	**-29,457**	**0**	**0**	**0**	**-1,417**	**0**
1998-2010 Average	**0**	**79,088**	**-83,412**	**57**	**24,868**	**-10,949**	**-27,680**	**0**	**0**	**0**	**-3,871**	**0**

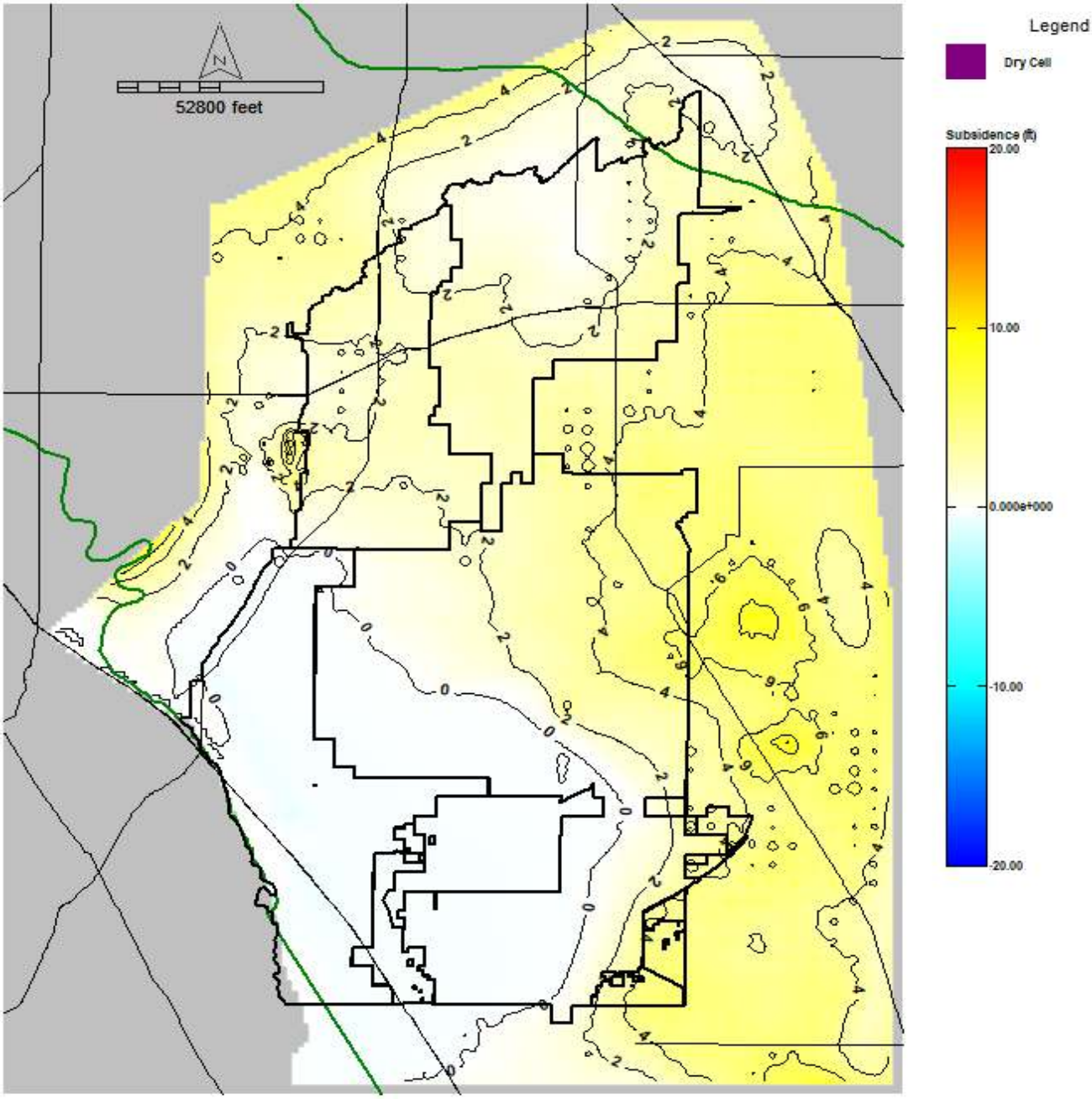






Groundwater Mass Balance
Kern Subbasin
Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: dmb	Date: 12/15/19	Project No.: FR18161220
		Figure **D5-9**

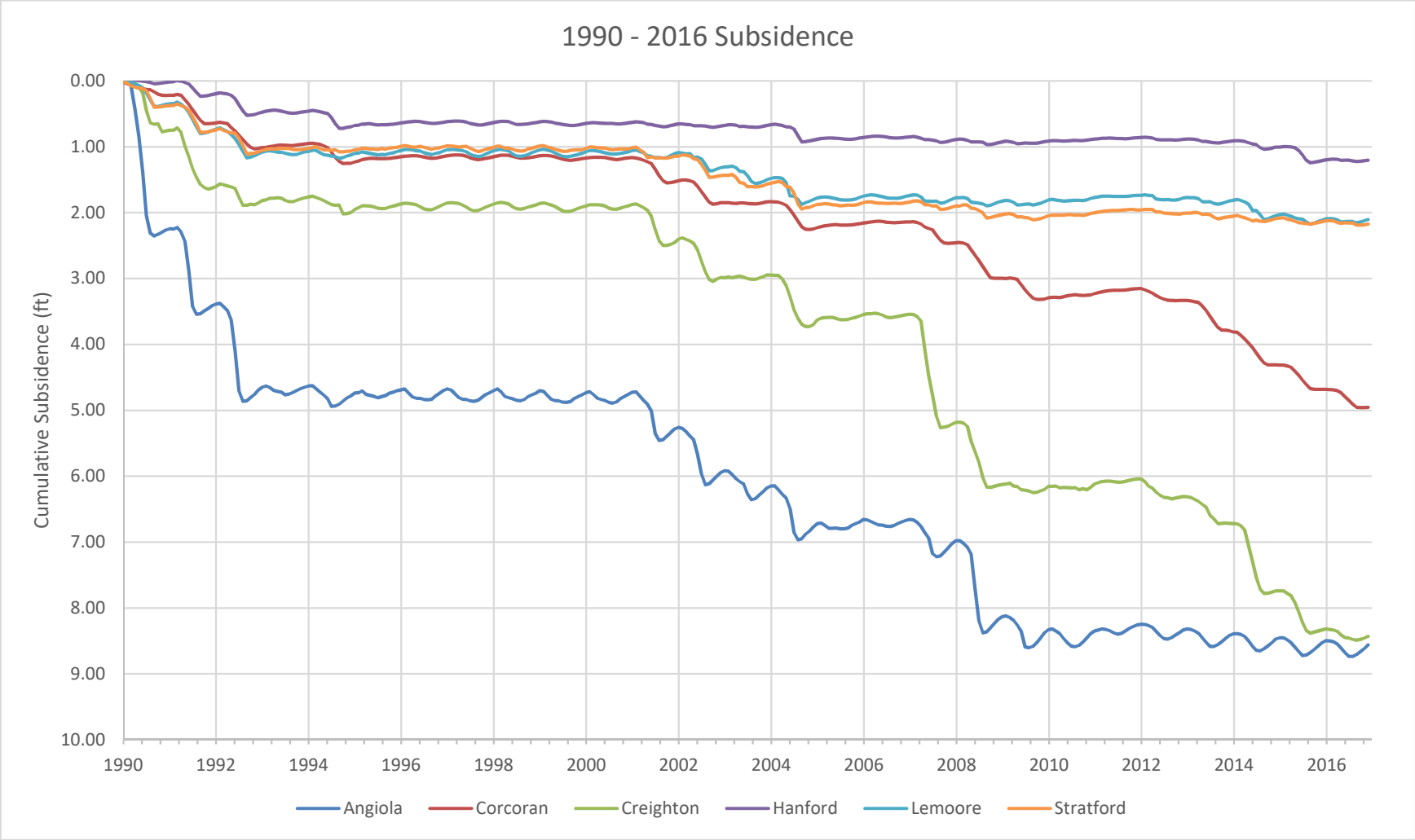


Kings SGMA 1990-2016 Layer: 1 SP: 312 Date: 2016.0

Simulated Subsidence 1990-2015

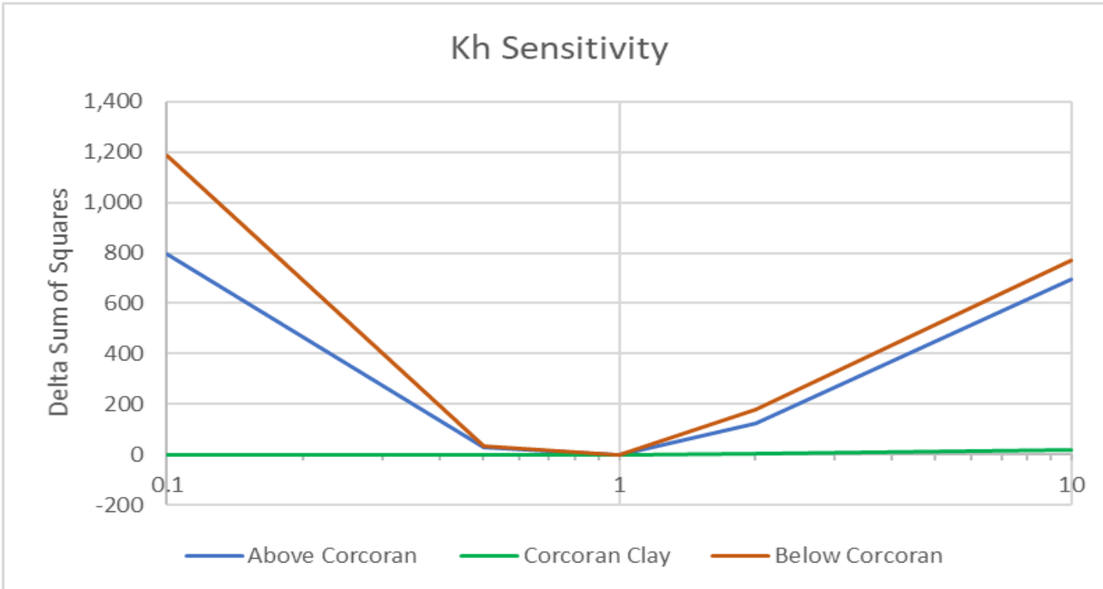
Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

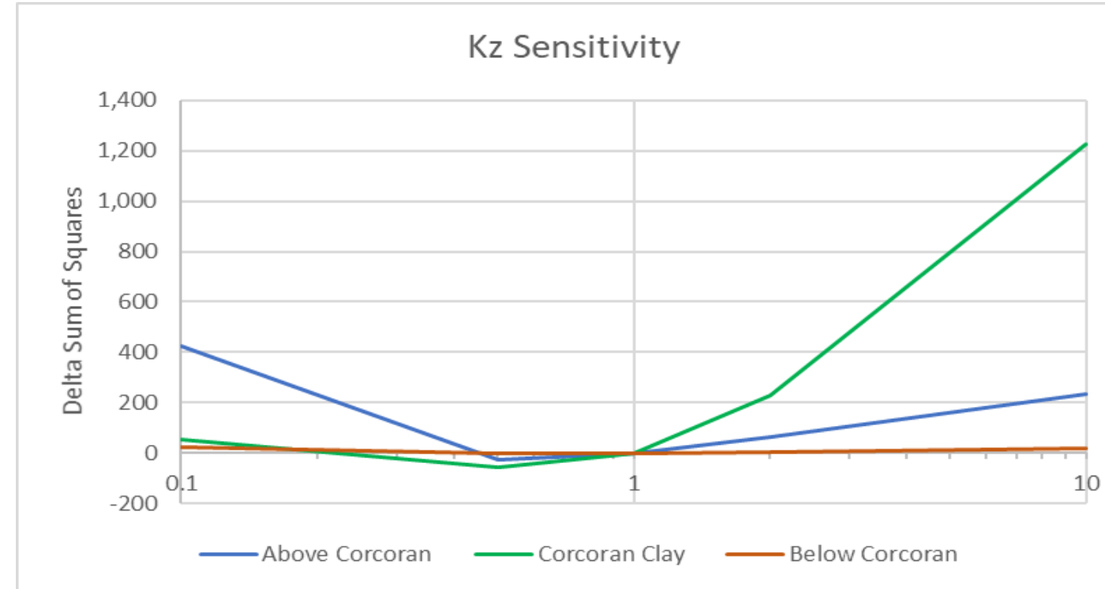
By: dmb	Date: 12/12/19	Project No.: FR18161220
		Figure **D5-10**

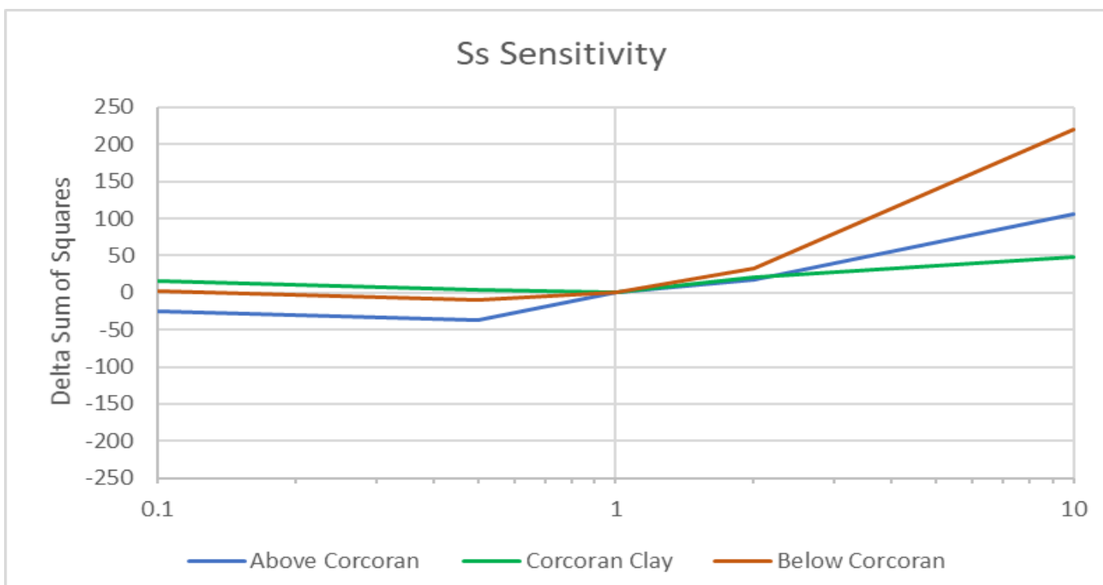


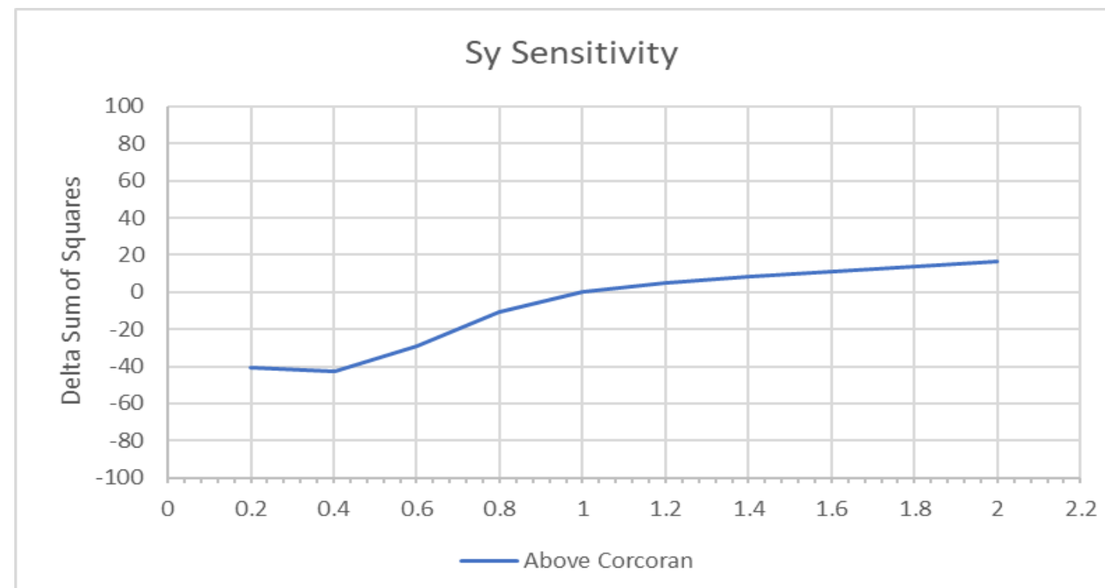
Simulated Cumulative Subsidence
Municipal and Agricultural Well Field
Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: dmb	Date: 12/12/19	Project No.: FR18161220
		Figure **D5-11**







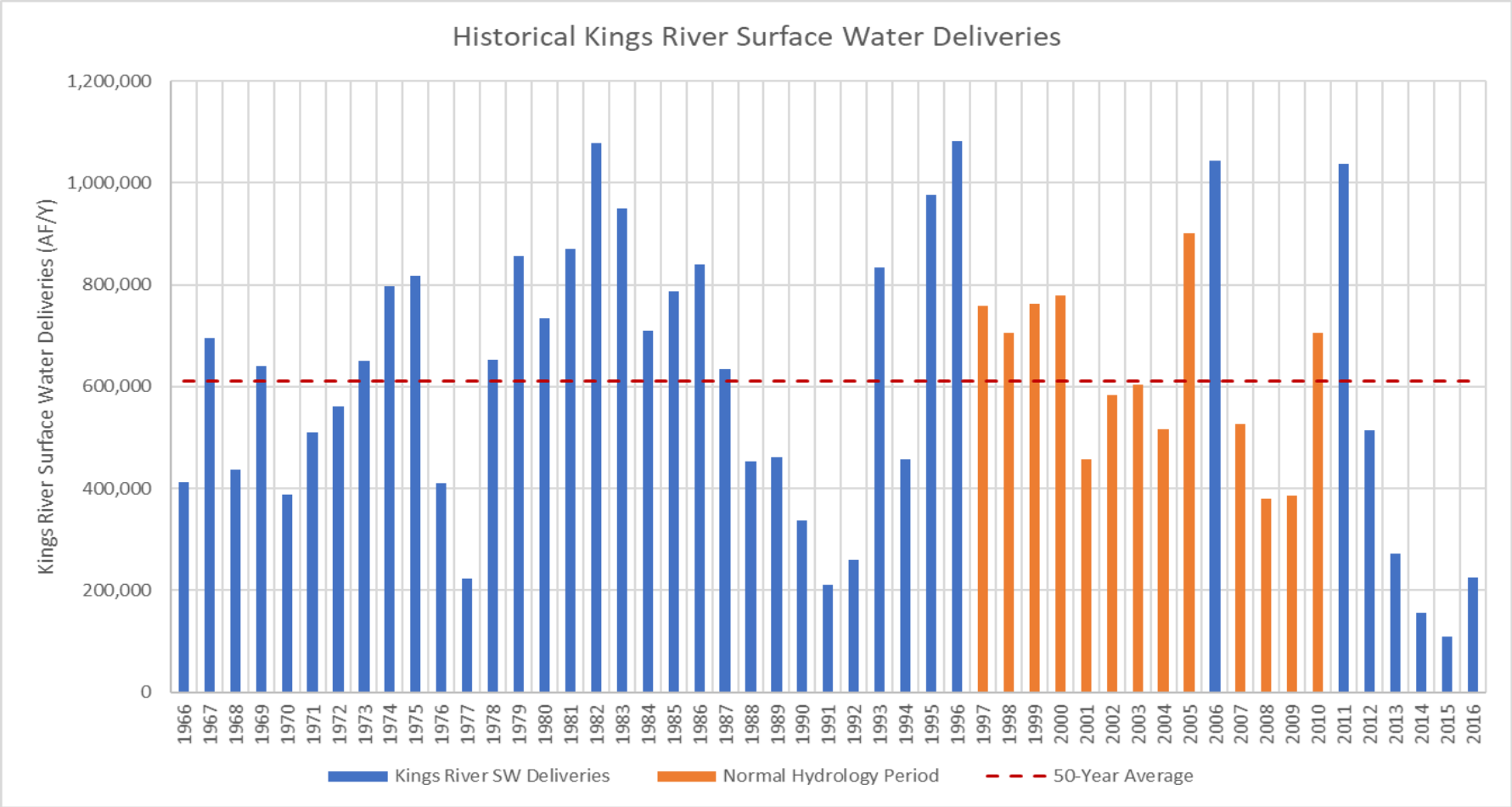


Model Hydraulic Parameter Sensitivity Anlysis

Tulare Lake Subbasin SGMA Model

Kings County, California

By: dmb	Date: 07/30/19	Project No.: FR18161220
		Figure **D6-1**

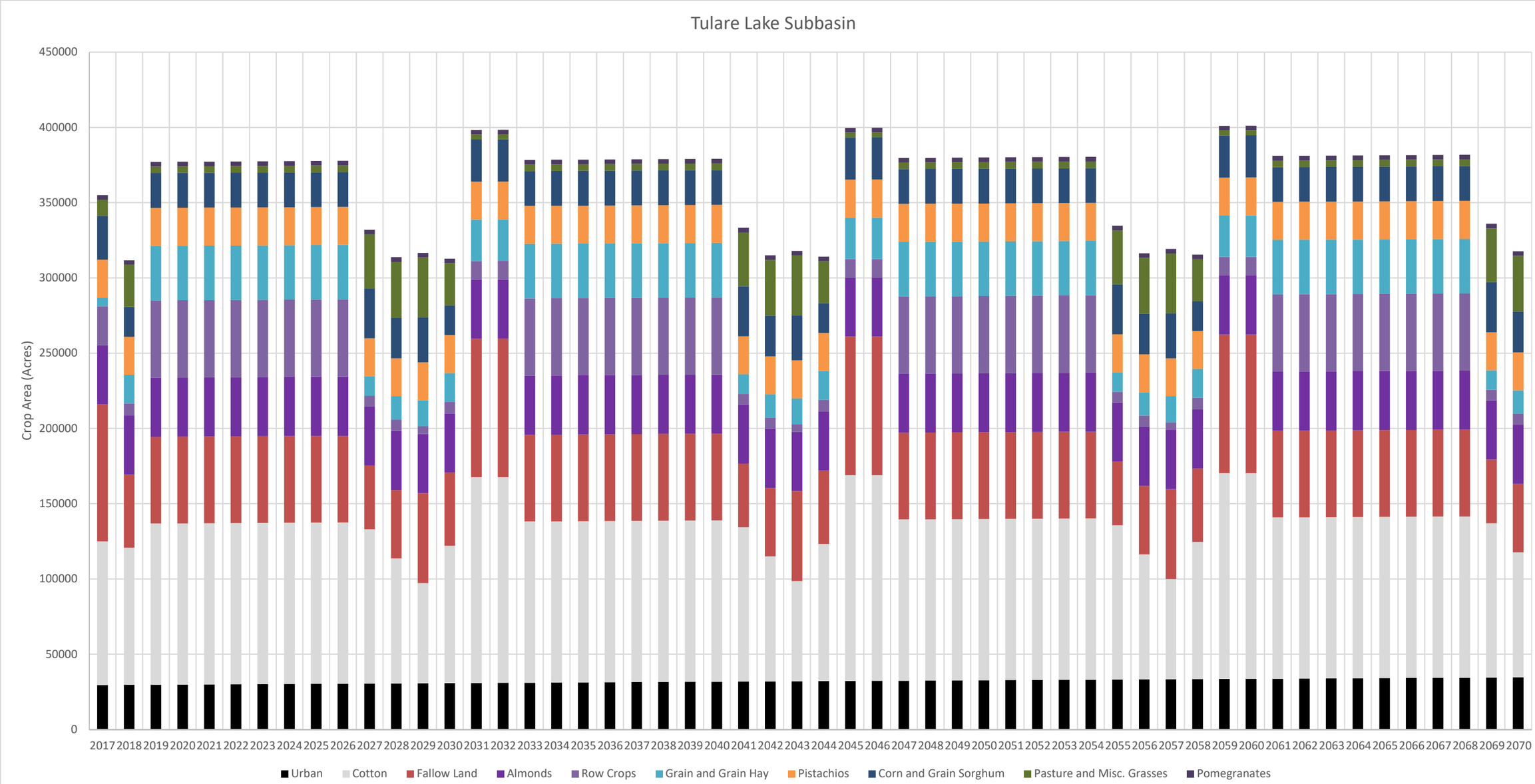


□o□e: □ormal □□drolog□c□cle included 199□ ins□ead o□2006 □o ma□c□ □□e □0-□ear average

Historical Kings River Surface Water Deliveries with Normal Hydrology

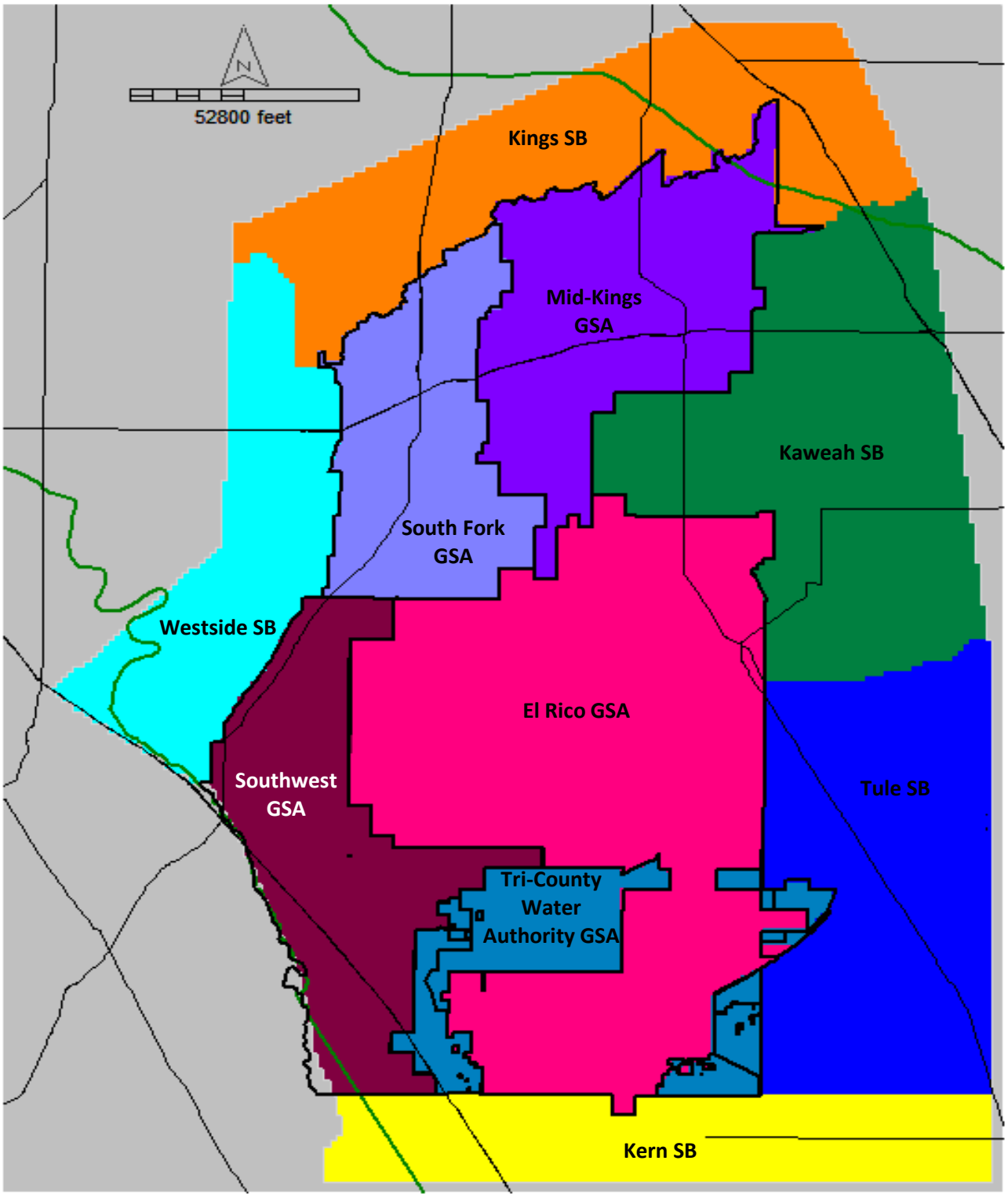
Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: dmb	Date: 07/30/19	Project No.: FR18161220
		Figure D□□□



2017-2070 Baseline Forecast
Crop Acerage
Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

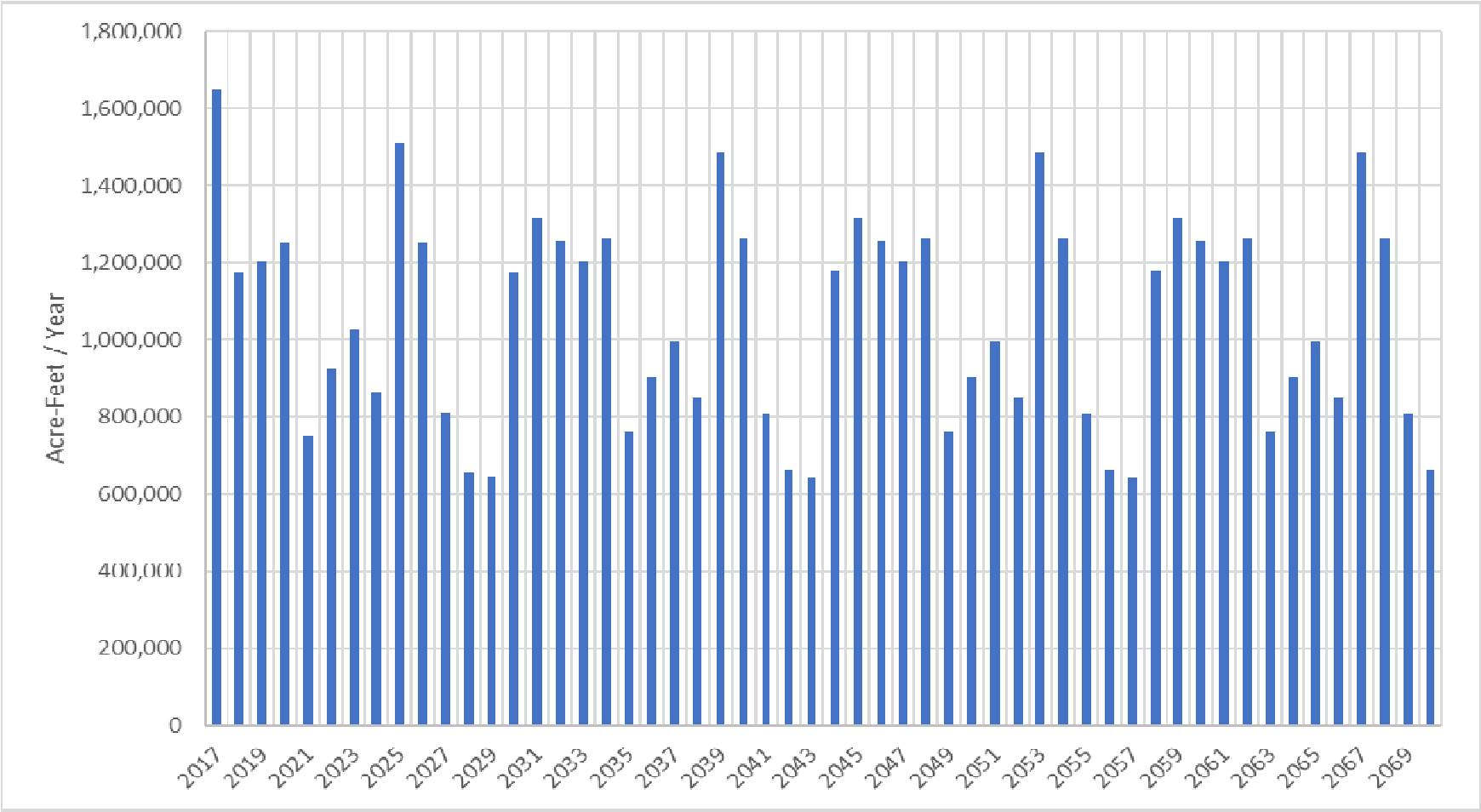
By: dmb	Date: 12/12/2019	Project No.: FR18161220
		Figure **D7-2**



Forecast Model Service Areas

Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

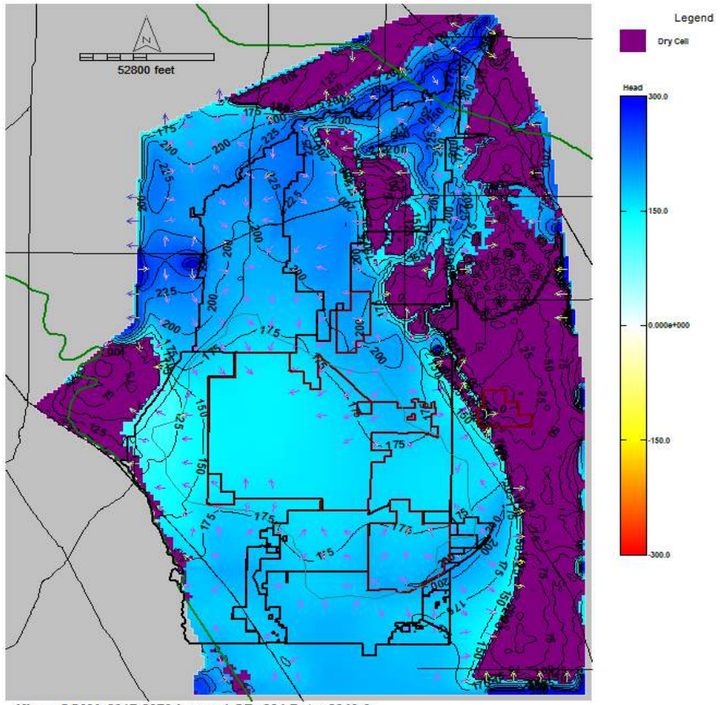
By: dmb	Date: 12/12/19	Project No.: FR18161220
		Figure **D7-3**



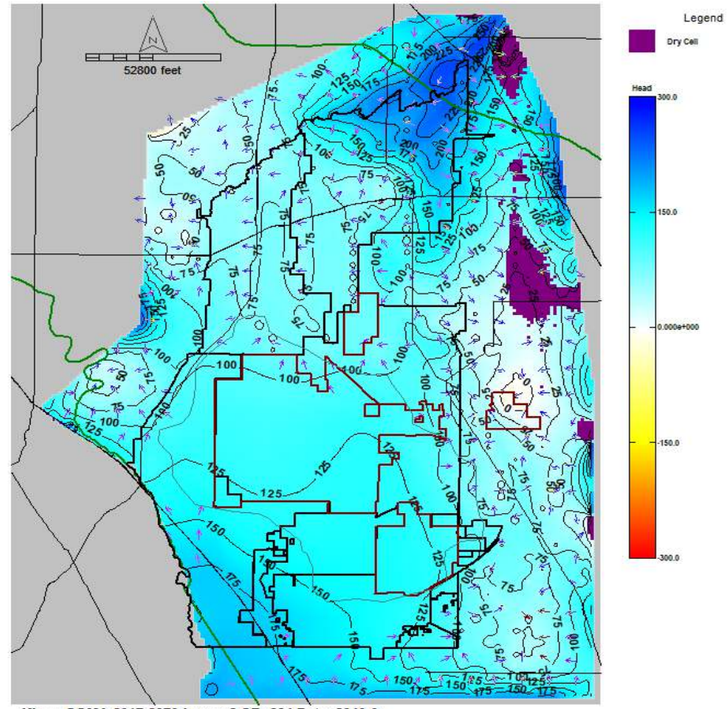
2017-2070 Baseline Forecast of Surface Water Deliveries with CNRA

Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

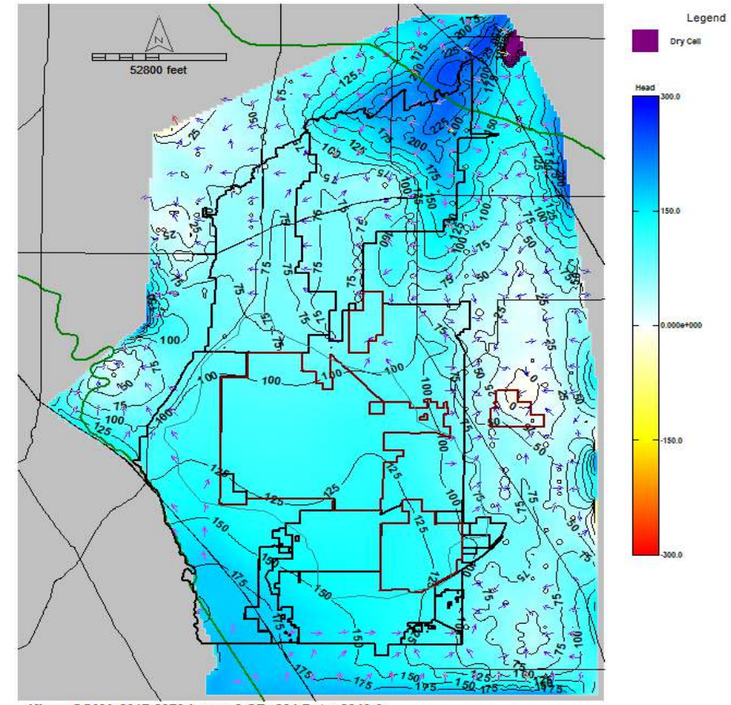
By: dmb	Date: 12/12/2019	Project No.: FR18161220
		Figure **D7-4**



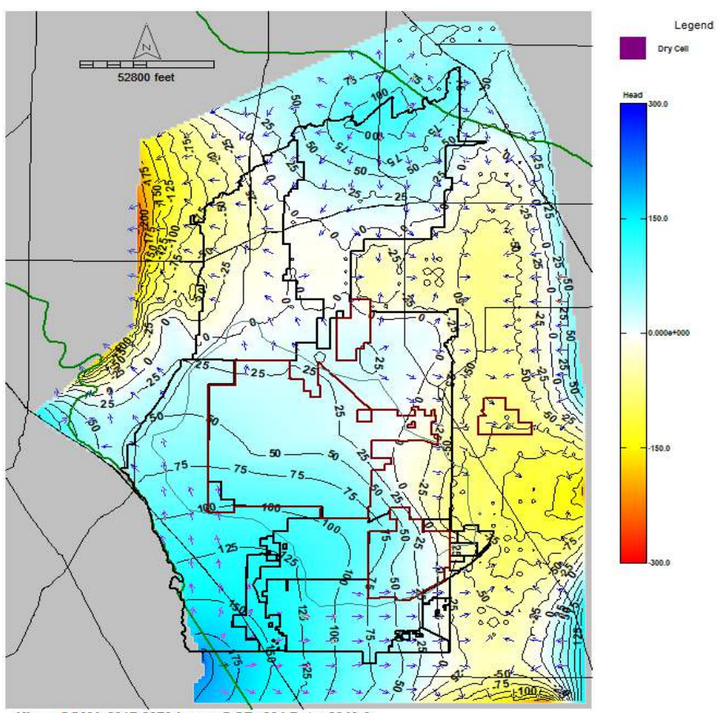
Kings SGMA 2017-2070 Layer: 1 SP: 284 Date: 2040.6



Kings SGMA 2017-2070 Layer: 2 SP: 284 Date: 2040.6



Kings SGMA 2017-2070 Layer: 3 SP: 284 Date: 2040.6



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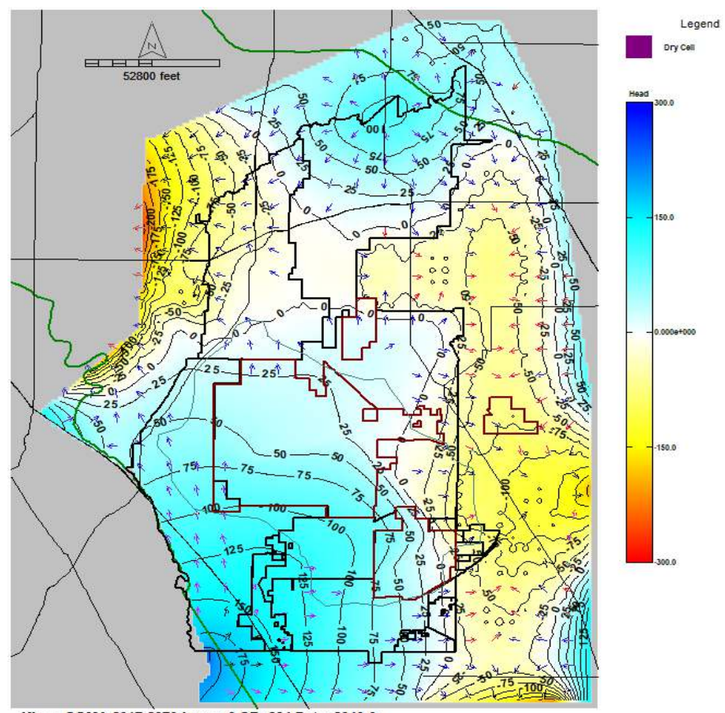
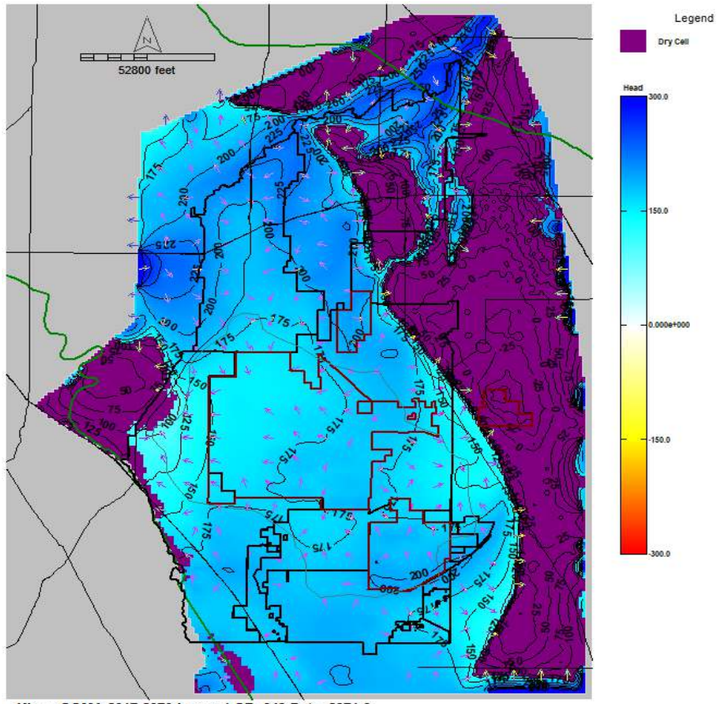


Kings SGMA 2017-2070 Layer: 6 SP: 284 Date: 2040.6

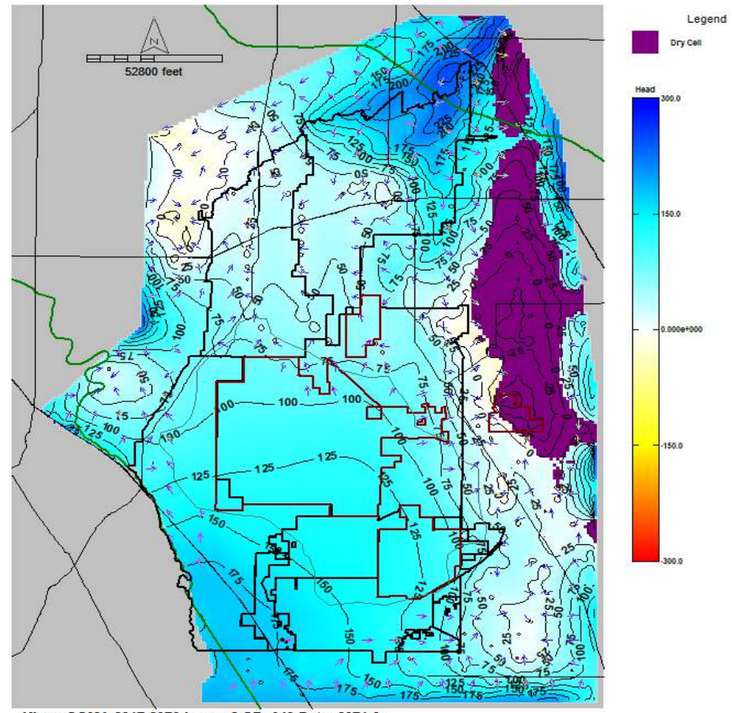
2040 Baseline Forecast Groundwater Elevations and Groundwater Flow Vectors

Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: dmb	Date: 12/12/2019	Project No.: FR18161220
		Figure **D7-5a**



Kings SGMA 2017-2070 Layer: 1 SP: 649 Date: 2071.0



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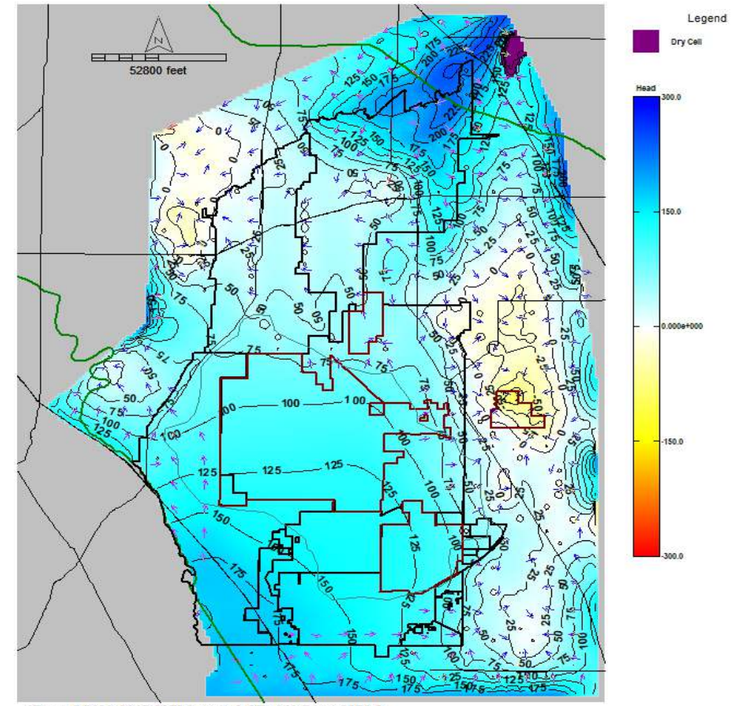
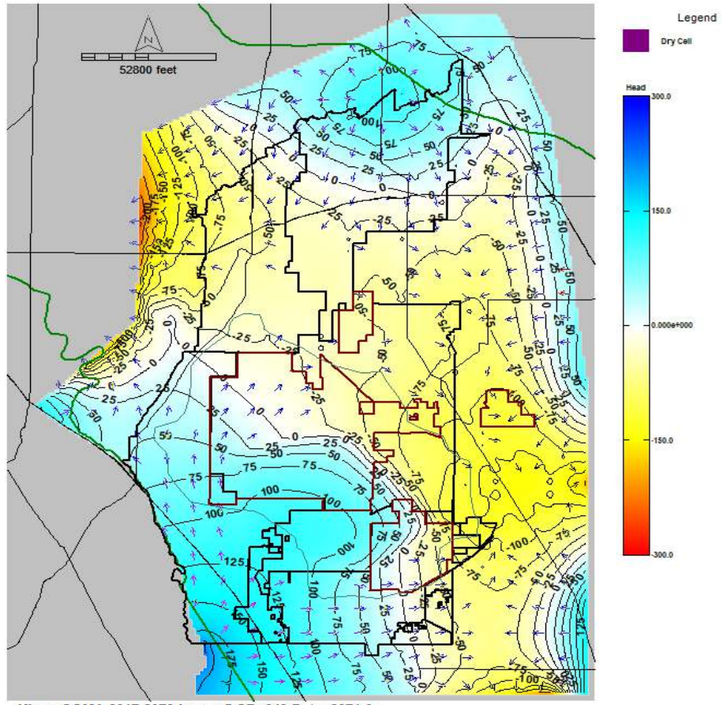


Kings SGMA 2017-2070 Layer: 3 SP: 649 Date: 2071.0



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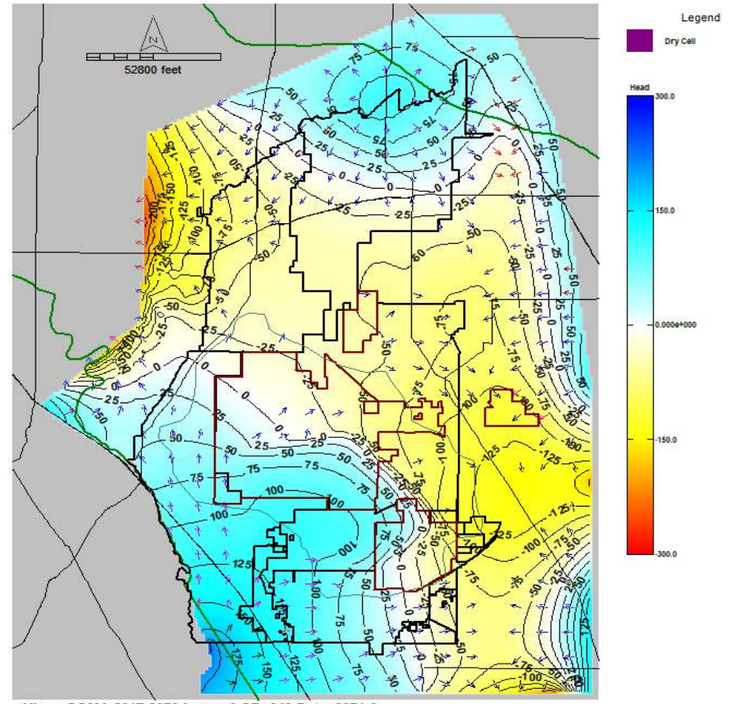


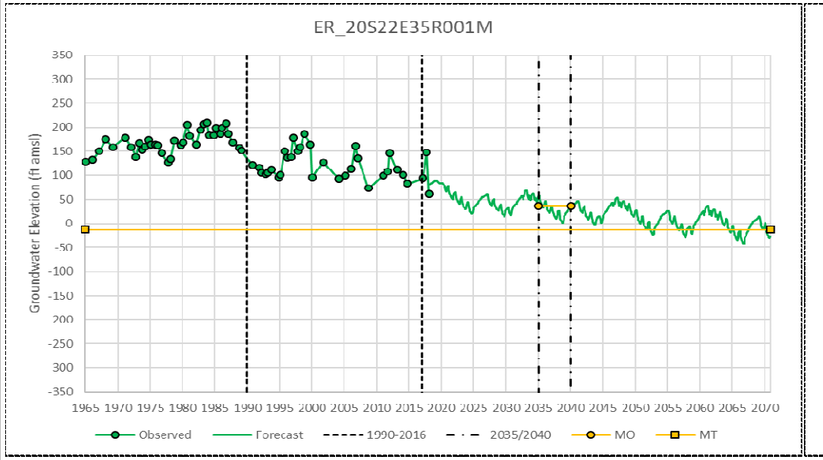
Kings SGMA 2017-2070 Layer: 6 SP: 649 Date: 2071.0

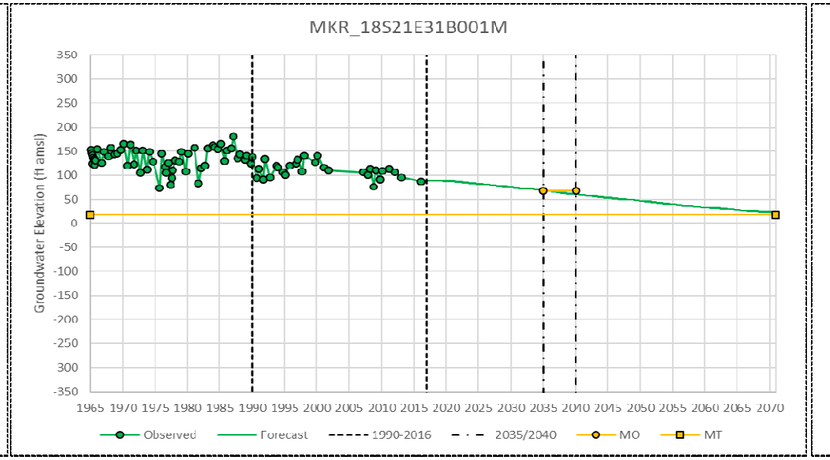
2070 Baseline Forecast Groundwater Elevations and Groundwater Flow Vectors

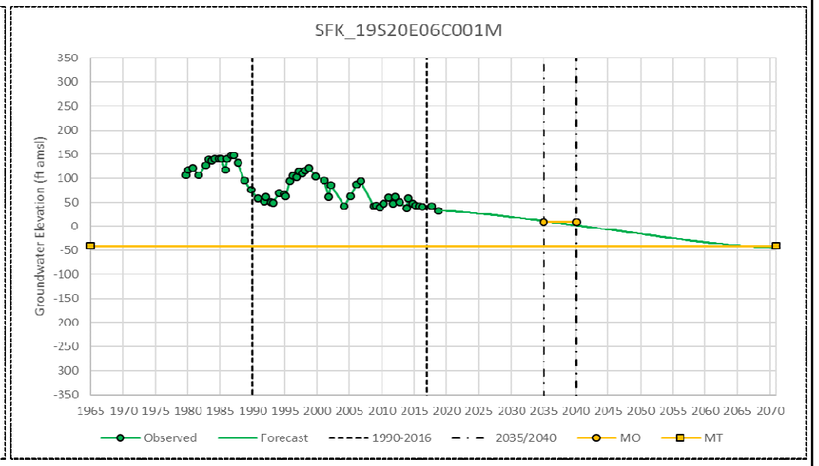
Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: dmb	Date: 12/12/2019	Project No.: FR18161220
		Figure **D7-5b**

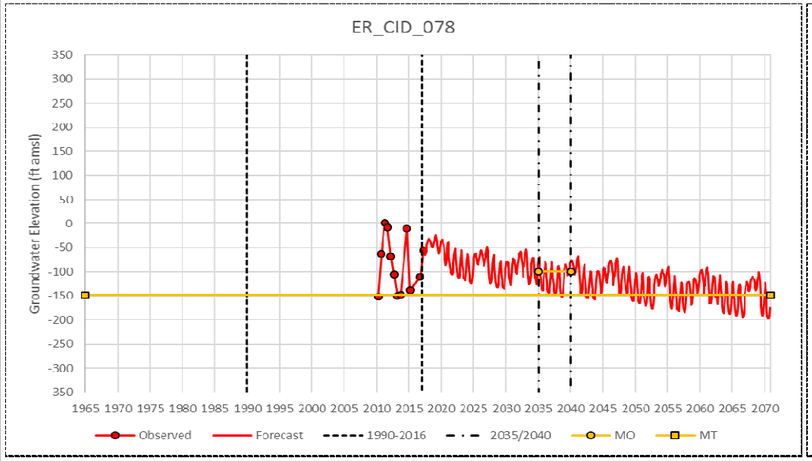
Above the Corcoran Clay

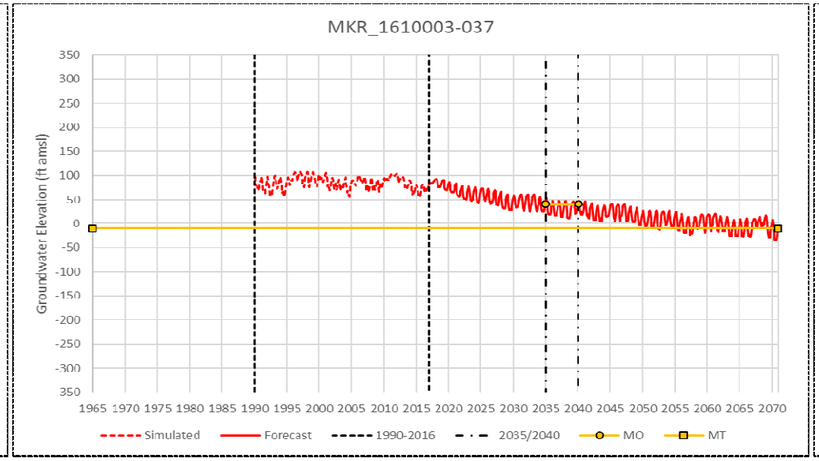


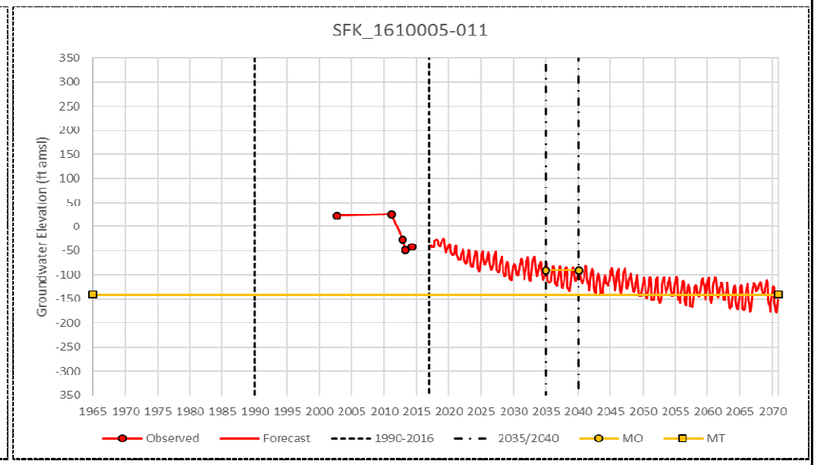




Corcoran **Hanford** **Lemoore**





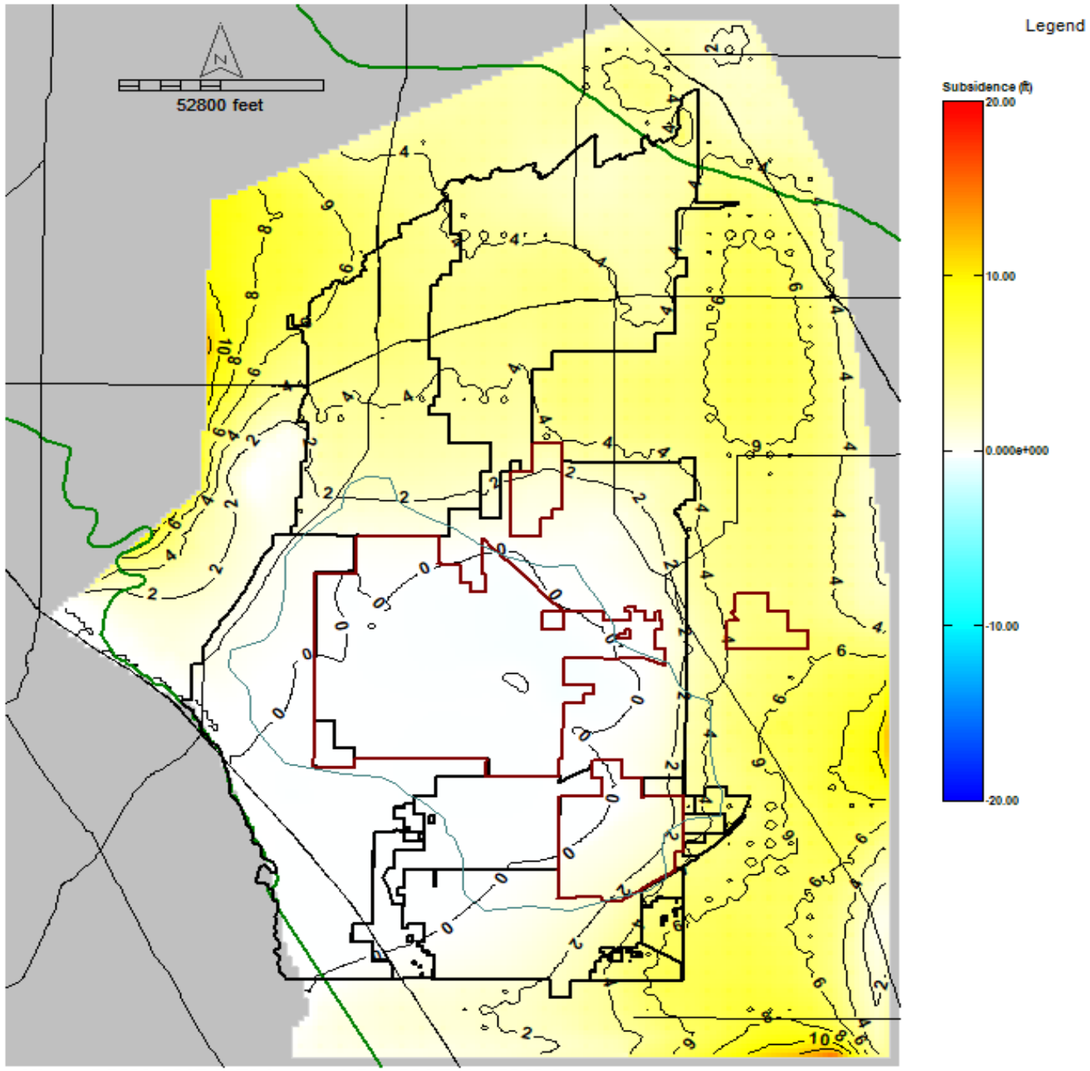


Below the Corcoran Clay

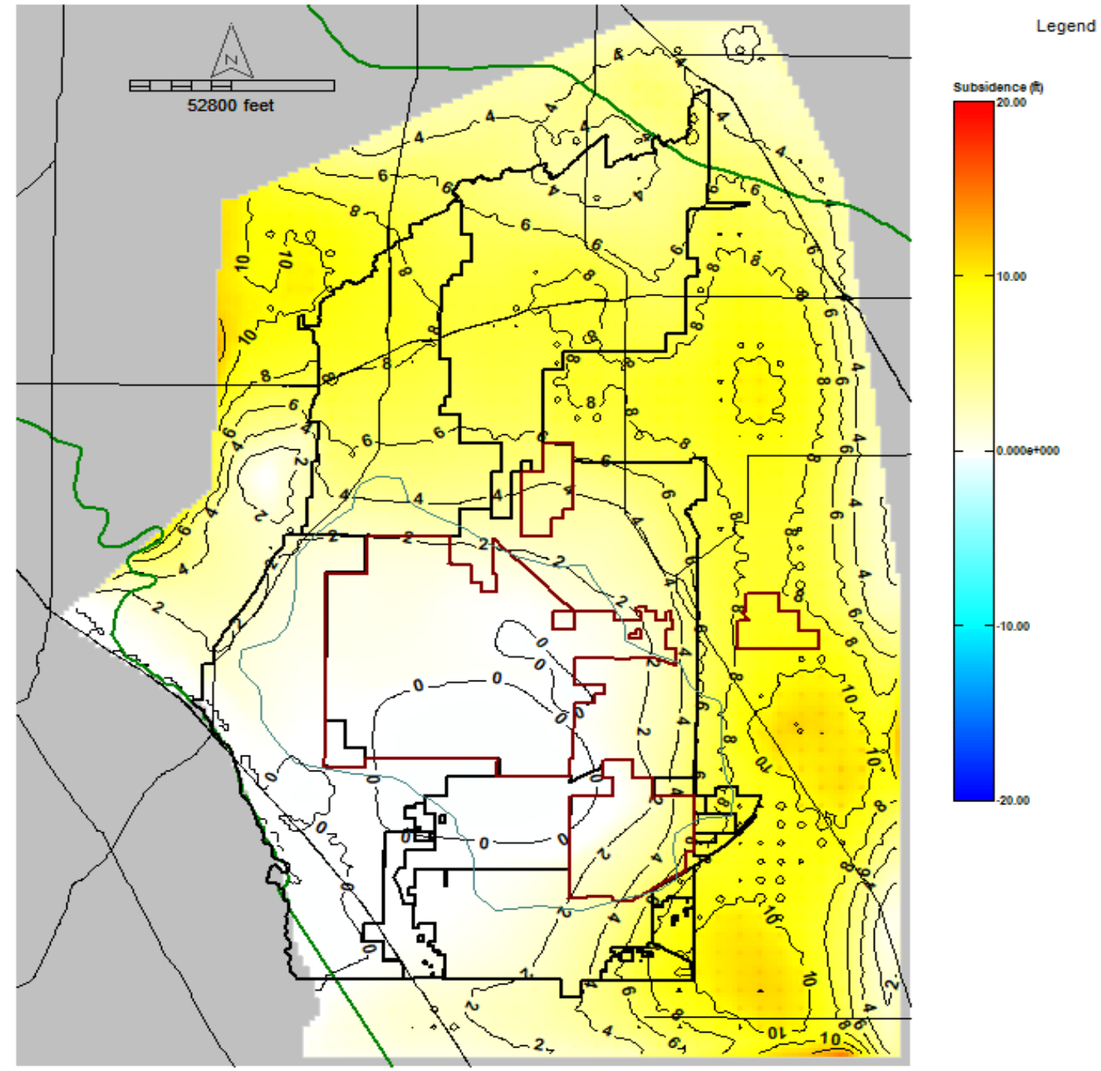
Baseline Forecast Hydrographs for Selected Compliance Wells

Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: dmb	Date: 12/12/2019	Project No.: FR18161220
		Figure **D7-6**



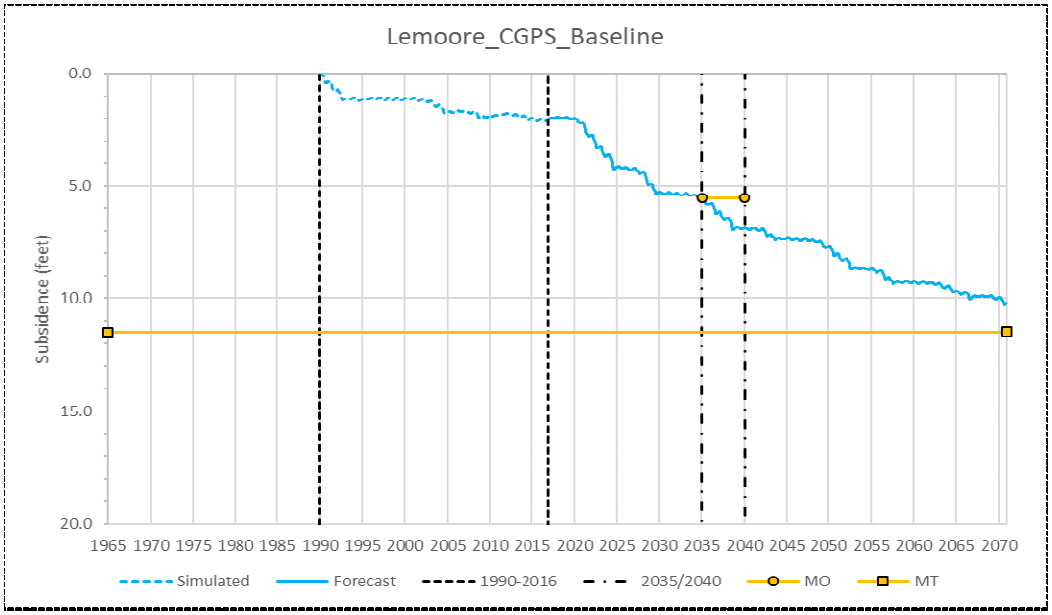
Kings SGMA 2017-2070 Layer: 1 SP: 284 Date: 2040.6

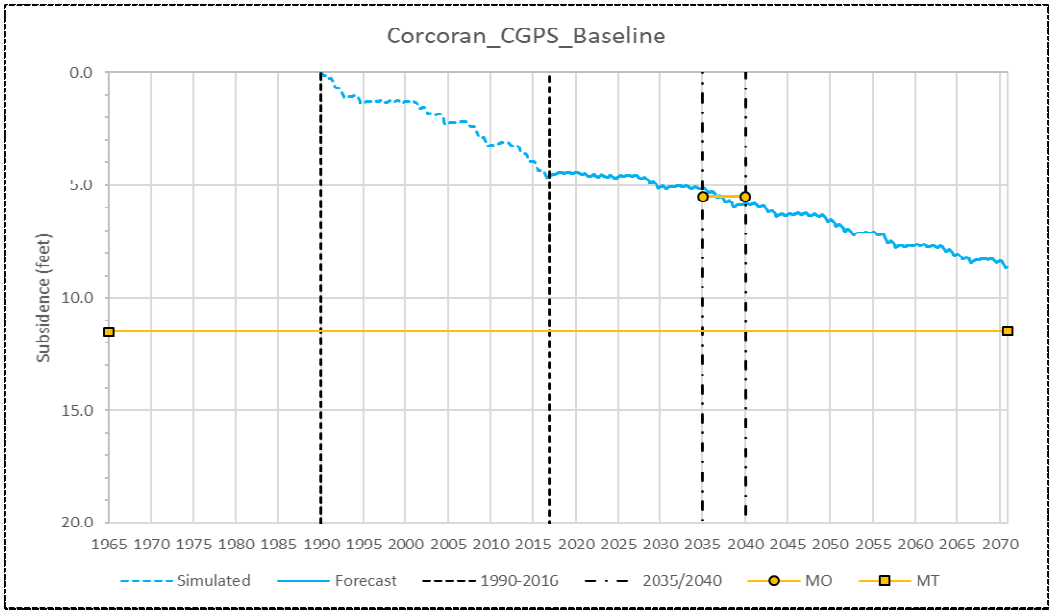


Kings SGMA 2017-2070 Layer: 1 SP: 649 Date: 2071.0

Cumulative Subsidence Since 2017
Baseline Forecast 2040 and 2070
Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: dmb	Date: 12/12/2019	Project No.: FR18161220
		Figure **D7-7**



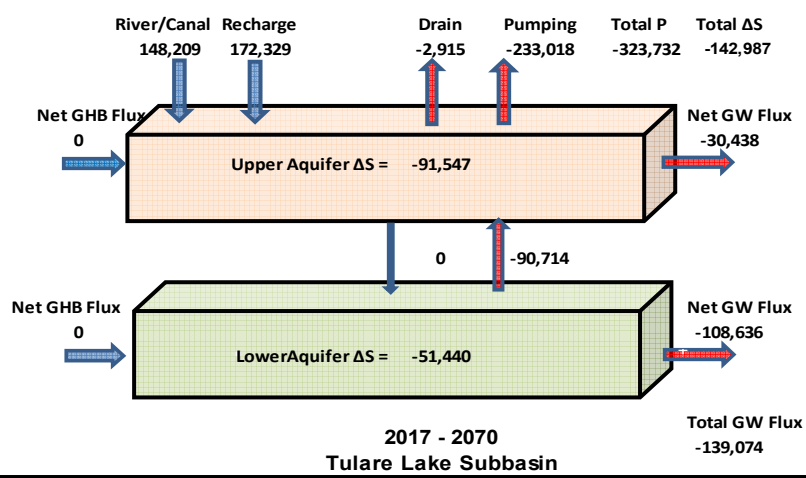


Baseline Forecast Cumulative Subsidence Compliance Monitoring Points

Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

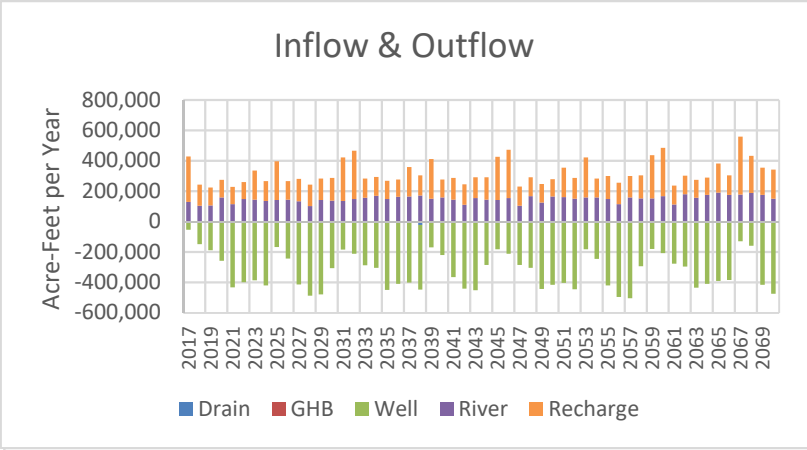
By: dmb	Date: 12/12/2019	Project No.: FR18161220
		Figure **D7-8**

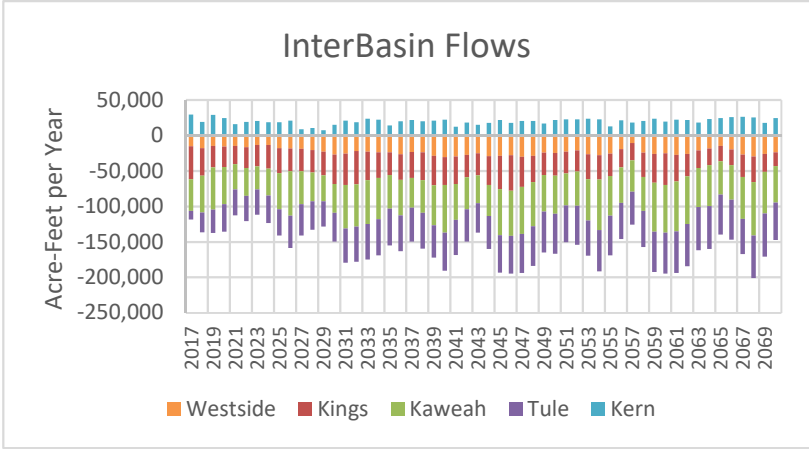
2017-2070
Average Baseline Forecast
Tulare Lake SB

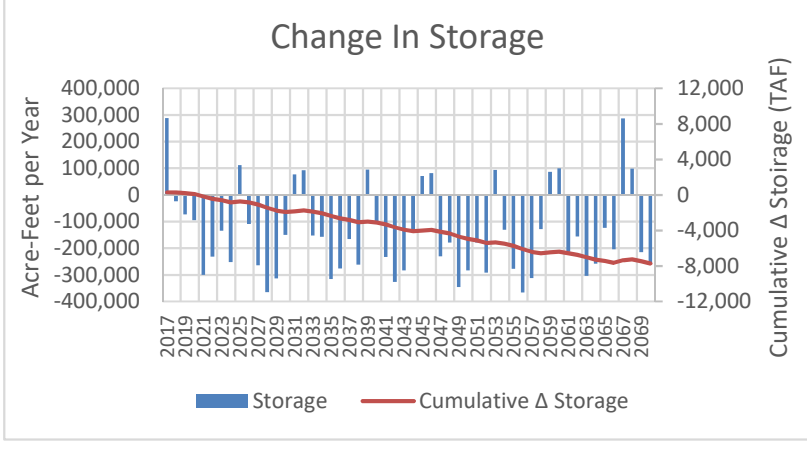


2017 - 2070
Tulare Lake Subbasin

TulareLake Date	Net Drain	Net GHB	Net Well	Net River	Net Recharge	Net Storage	Interbasin TulareLake	Interbasin Westside	Interbasin Kings	Interbasin Kaweah	Interbasin Tule	Interbasin Kern
2017	-3,292	0	-50,431	129,387	298,093	287,496	0	-15,464	-46,141	-45,027	-11,808	29,206
2018	-750	0	-148,570	103,459	138,862	-24,232	0	-17,988	-38,795	-51,760	-28,153	18,718
2019	-396	0	-188,615	104,781	118,404	-74,022	0	-15,131	-29,903	-59,520	-32,928	28,989
2020	-1,210	0	-257,766	157,370	117,021	-95,284	0	-15,775	-29,008	-52,335	-38,614	24,297
2021	-2,134	0	-431,121	113,552	113,998	-301,058	0	-14,764	-25,890	-35,441	-36,496	15,557
2022	-9,578	0	-389,656	148,571	110,833	-232,720	0	-16,726	-29,434	-38,896	-35,732	18,943
2023	-9,797	0	-377,216	144,092	191,118	-135,035	0	-13,681	-29,968	-32,679	-35,692	20,379
2024	-9,276	0	-411,385	134,798	130,845	-252,348	0	-13,684	-33,320	-37,721	-38,735	18,554
2025	-9,008	0	-159,588	141,173	253,920	111,310	0	-17,983	-35,252	-50,832	-36,944	18,440
2026	-9,295	0	-234,658	143,339	121,516	-109,828	0	-18,531	-31,998	-62,773	-45,480	20,936
2027	-3,084	0	-411,439	132,425	148,658	-264,518	0	-18,810	-31,605	-46,647	-44,056	8,731
2028	-4,347	0	-482,752	101,674	139,826	-365,116	0	-20,740	-31,663	-40,554	-40,011	10,437
2029	-6,207	0	-473,450	141,914	140,738	-313,258	0	-22,944	-33,514	-36,563	-35,540	7,245
2030	-5,243	0	-300,946	136,633	150,653	-150,025	0	-27,132	-41,551	-40,361	-40,522	14,791
2031	-1,757	0	-183,915	134,735	285,585	76,477	0	-25,861	-44,113	-61,335	-48,021	20,901
2032	-2,659	0	-210,461	147,907	316,900	92,627	0	-22,307	-46,545	-59,821	-49,298	18,382
2033	-6,860	0	-282,130	156,810	126,029	-152,839	0	-23,116	-40,010	-61,887	-49,937	23,404
2034	-3,818	0	-300,116	169,446	122,795	-157,549	0	-23,758	-36,466	-58,144	-50,904	22,083
2035	-8,633	0	-441,194	147,758	120,698	-315,937	0	-23,778	-32,290	-47,258	-51,696	13,843
2036	-2,844	0	-407,576	162,808	113,725	-277,090	0	-26,818	-35,974	-49,950	-50,780	19,653
2037	-6,973	0	-393,826	164,766	193,473	-165,962	0	-23,577	-36,481	-41,818	-47,739	21,758
2038	-23,724	0	-423,714	170,466	133,975	-261,844	0	-23,777	-39,306	-46,292	-50,188	20,025
2039	-8,671	0	-162,253	150,468	261,073	94,885	0	-28,683	-41,620	-56,396	-45,765	20,788
2040	-8,057	0	-212,170	157,556	119,233	-106,996	0	-30,546	-39,238	-67,365	-53,540	21,850
2041	-5,104	0	-361,502	144,072	142,798	-233,348	0	-29,977	-38,432	-50,504	-49,720	12,021
2042	-2,748	0	-438,341	110,385	133,689	-327,522	0	-27,427	-31,574	-45,003	-45,971	18,233
2043	-1,965	0	-450,808	154,853	135,856	-283,322	0	-25,454	-30,918	-39,388	-41,293	15,057
2044	0	0	-285,516	142,901	148,782	-136,357	0	-29,141	-40,661	-43,988	-46,473	17,555
2045	0	0	-183,727	141,152	284,955	70,430	0	-29,079	-46,558	-65,167	-52,607	21,462
2046	0	0	-211,949	154,734	316,279	81,644	0	-27,918	-50,088	-63,422	-53,666	17,673
2047	0	0	-285,777	102,969	125,867	-230,338	0	-30,204	-42,632	-66,180	-54,785	20,405
2048	0	0	-305,758	167,267	123,023	-179,098	0	-28,919	-36,899	-62,428	-55,825	20,440
2049	0	0	-444,243	125,538	120,150	-346,793	0	-24,332	-31,416	-51,824	-57,332	16,661
2050	0	0	-415,786	163,797	114,030	-283,289	0	-25,029	-31,754	-53,927	-56,321	21,685
2051	0	0	-404,556	159,642	194,042	-178,887	0	-23,093	-30,523	-44,967	-51,903	22,394
2052	0	0	-446,277	150,374	135,694	-291,833	0	-21,035	-29,966	-48,316	-54,946	22,494
2053	0	0	-183,305	159,180	263,059	93,063	0	-26,612	-35,116	-58,392	-49,382	23,630
2054	0	0	-244,986	159,110	123,386	-131,840	0	-28,062	-34,361	-71,317	-58,079	22,469
2055	0	0	-420,853	148,192	151,360	-277,705	0	-25,895	-31,453	-55,998	-55,894	12,657
2056	0	0	-496,998	114,335	140,360	-366,983	0	-19,449	-25,676	-50,048	-50,927	21,022
2057	0	0	-504,789	159,039	140,232	-312,851	0	-10,938	-24,080	-44,316	-46,355	17,853
2058	0	0	-294,759	152,165	150,384	-129,034	0	-24,334	-34,112	-48,062	-51,043	20,463
2059	0	0	-180,750	151,281	284,994	86,505	0	-26,011	-40,937	-68,809	-56,756	23,490
2060	0	0	-208,497	167,175	316,329	99,201	0	-25,369	-44,674	-67,186	-57,771	19,186
2061	0	0	-278,224	111,075	125,072	-214,084	0	-27,627	-37,207	-70,470	-58,722	21,985
2062	0	0	-295,518	179,447	121,650	-156,830	0	-26,398	-31,219	-67,227	-59,432	21,834
2063	0	0	-435,625	155,188	119,632	-304,744	0	-21,333	-24,539	-55,367	-60,737	17,855
2064	0	0	-410,660	176,101	112,798	-258,488	0	-18,537	-23,571	-57,476	-60,516	23,108
2065	0	0	-390,901	190,501	191,607	-124,017	0	-14,810	-21,614	-47,222	-56,154	24,170
2066	0	0	-385,749	175,809	126,968	-204,212	0	-19,675	-22,308	-48,698	-56,466	25,517
2067	0	0	-130,038	177,997	380,464	286,962	0	-27,089	-31,484	-59,206	-49,777	26,094
2068	0	0	-159,015	188,104	244,419	97,660	0	-29,769	-36,271	-75,275	-59,838	25,307
2069	0	0	-416,014	176,019	178,001	-215,012	0	-26,190	-25,091	-58,935	-60,557	17,413
2070	0	0	-475,674	149,023	191,903	-257,301	0	-24,047	-19,259	-51,309	-53,012	24,403
2017-2070 Average	**-2,915**	**0**	**-323,732**	**148,209**	**172,329**	**-142,987**	**0**	**-23,062**	**-34,157**	**-53,181**	**-48,534**	**19,860**
2040-2048 Average	**-1,986**	**0**	**-303,950**	**141,765**	**170,054**	**-149,434**	**0**	**-28,740**	**-39,667**	**-55,938**	**-50,431**	**18,299**

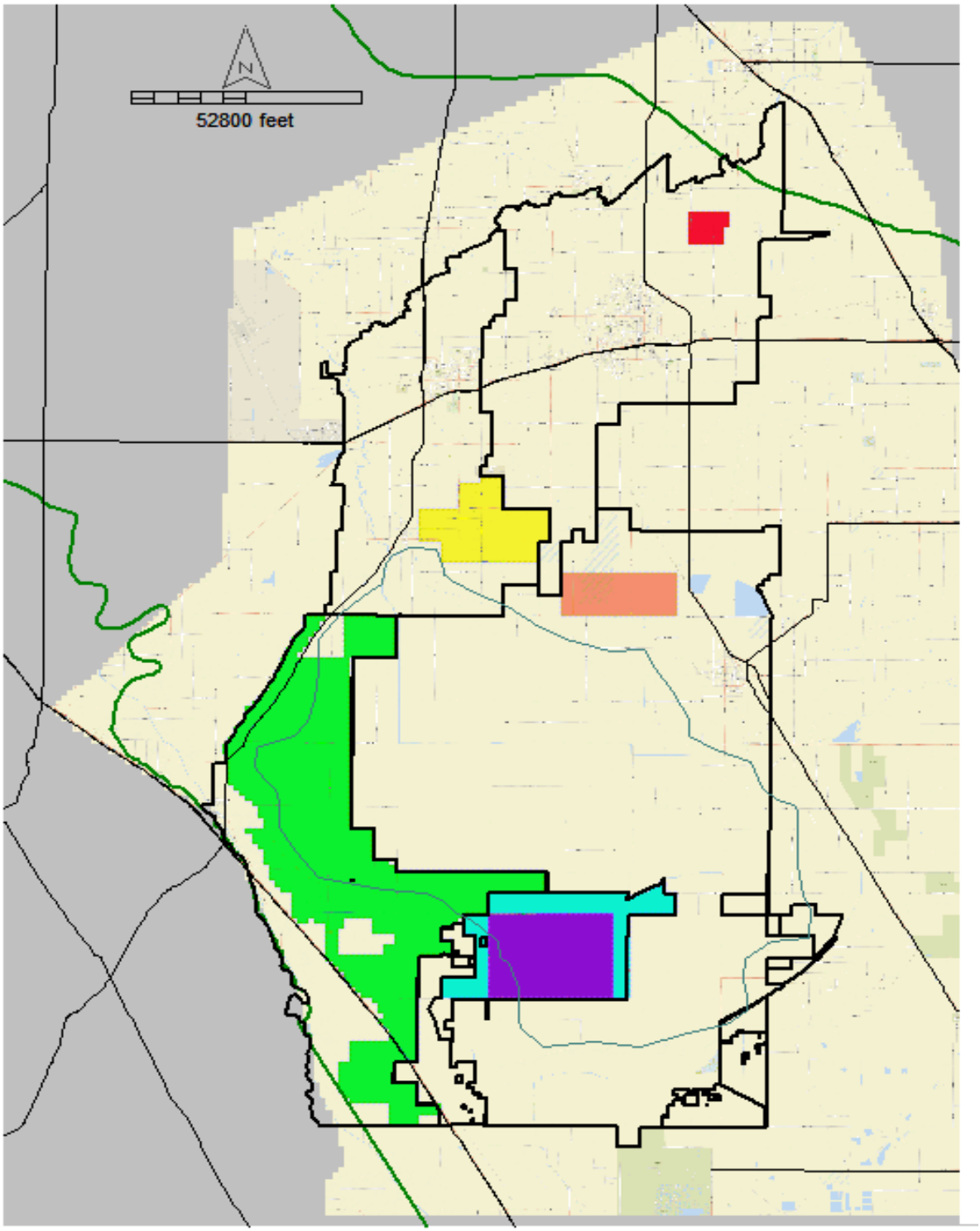






Baseline Forecast Groundwater
Mass Balance Tulare Lake Subbasin
Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: dmb	Date: 12/15/19	Project No.: FR18161220
		Figure **D7-9**



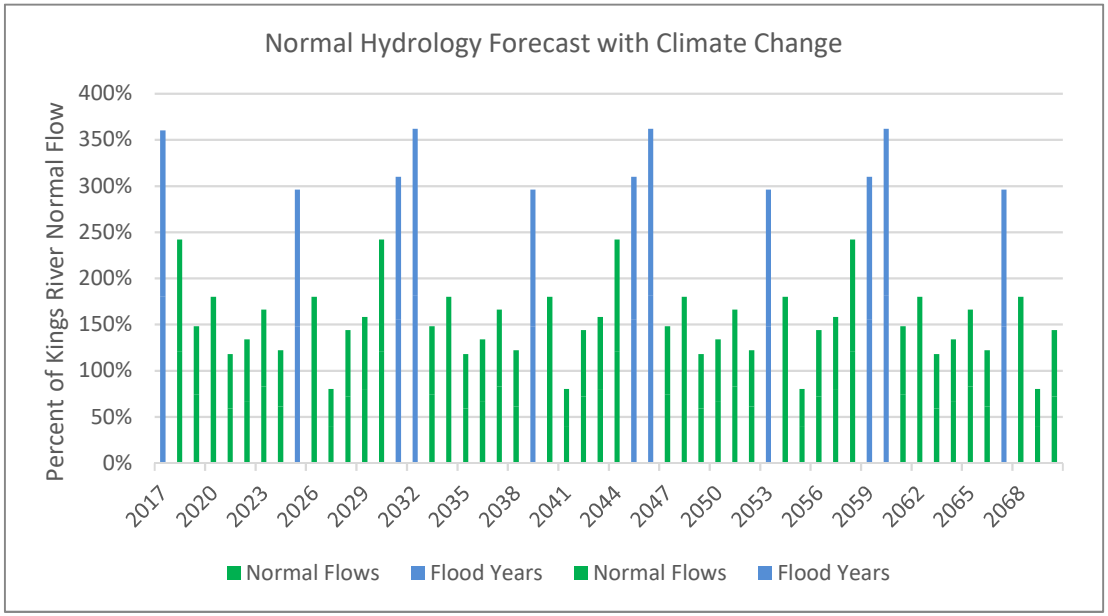
Explanation

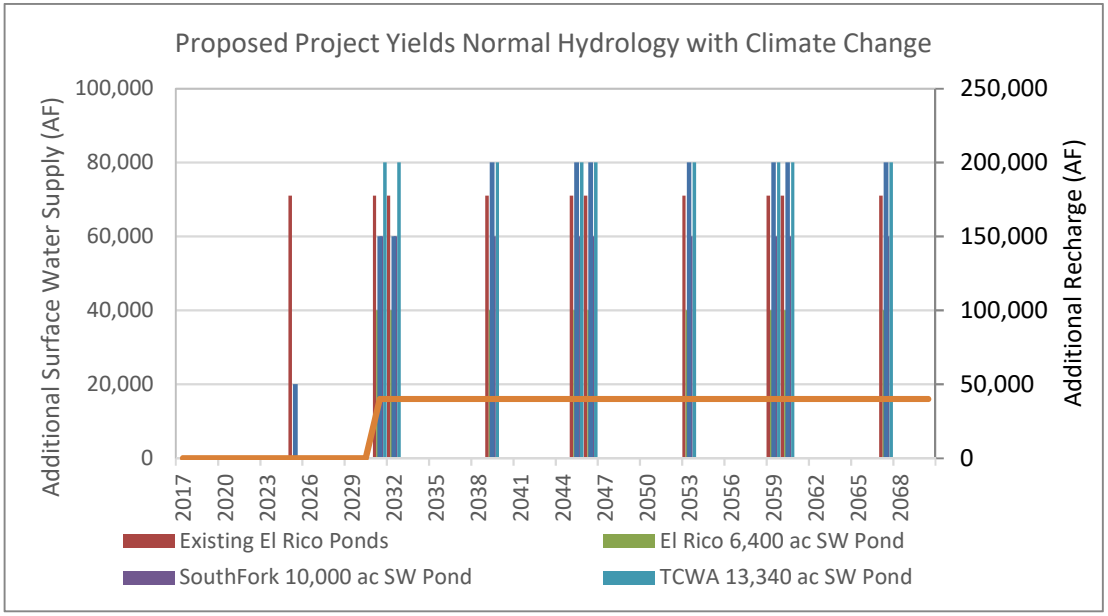
- Mid-Kings River GSA Intentional Recharge Basins
- El Rico GSA Intermittal Surface Water Storage Ponds
- South Fork Kings GSA Surface Water Storage Ponds
- TCWA GSA Surface Water Storage Ponds
- Southwest Kings GSA Land Fallowing
- TCWA GSA Land Fallowing

Forecast Project Areas

Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: dmb	Date: 07/30/19	Project No.: FR18161220
		Figure **D7-10**

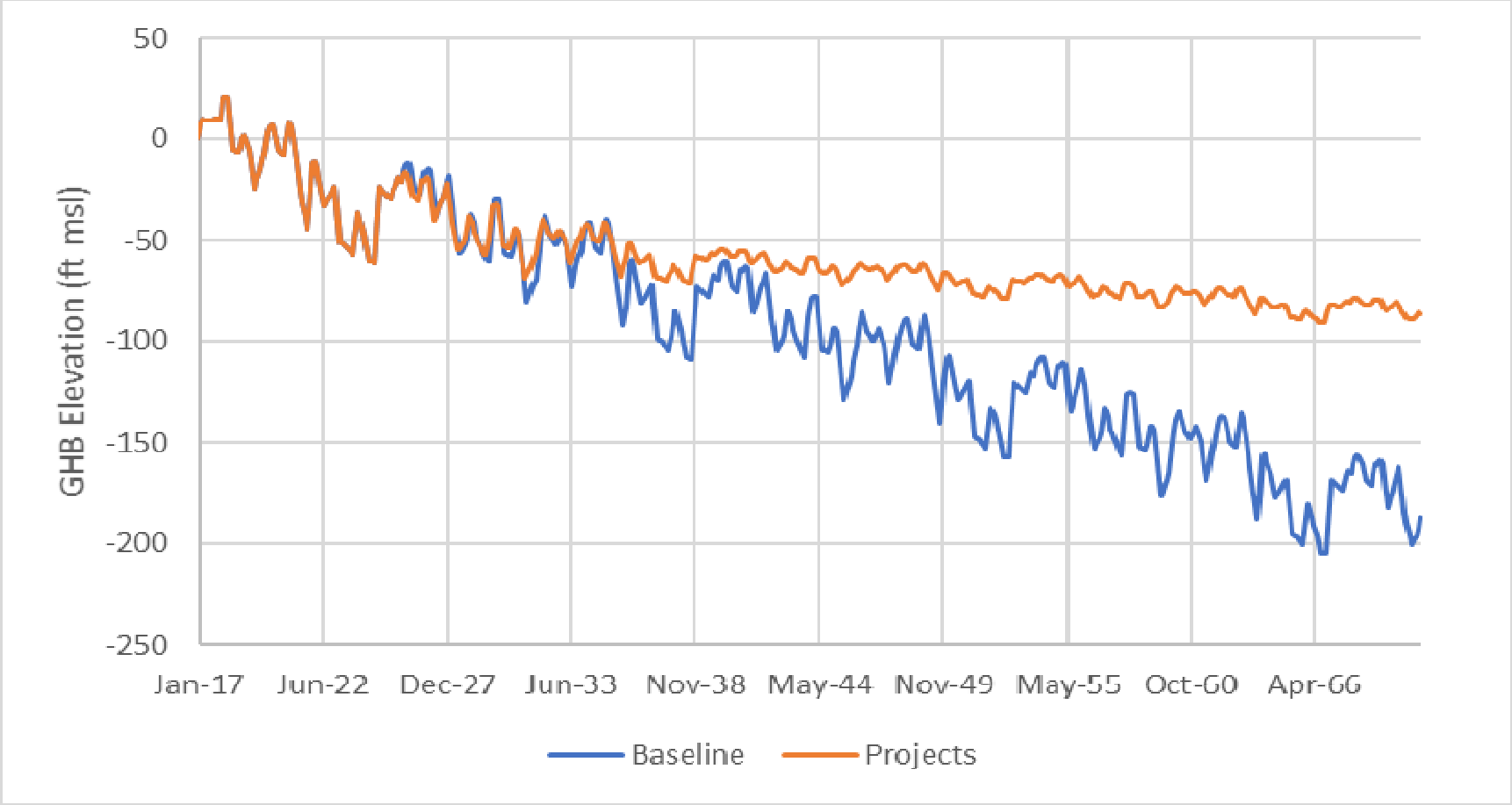




Project Forecast Flood Years and Project Performance

Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

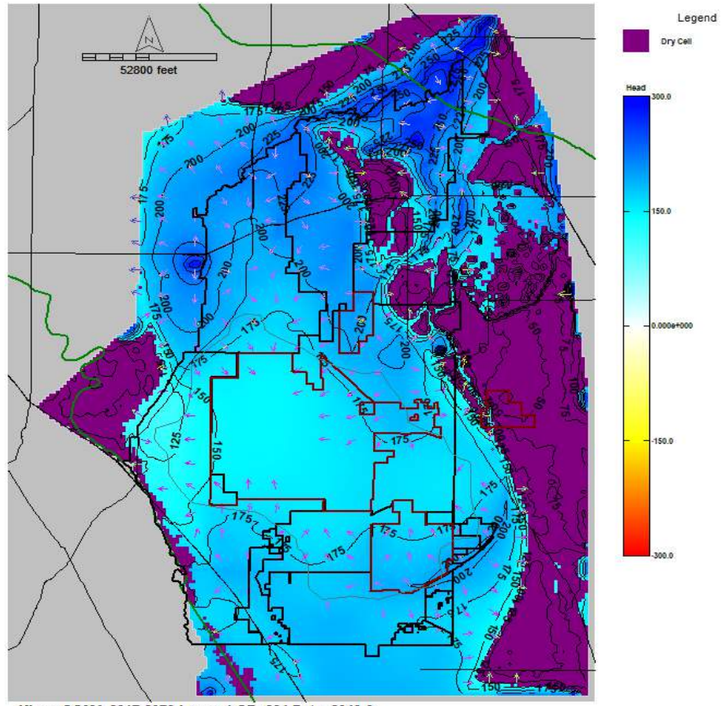
By: dmb	Date: 07/30/19	Project No.: FR18161220
		Figure **D7-11**



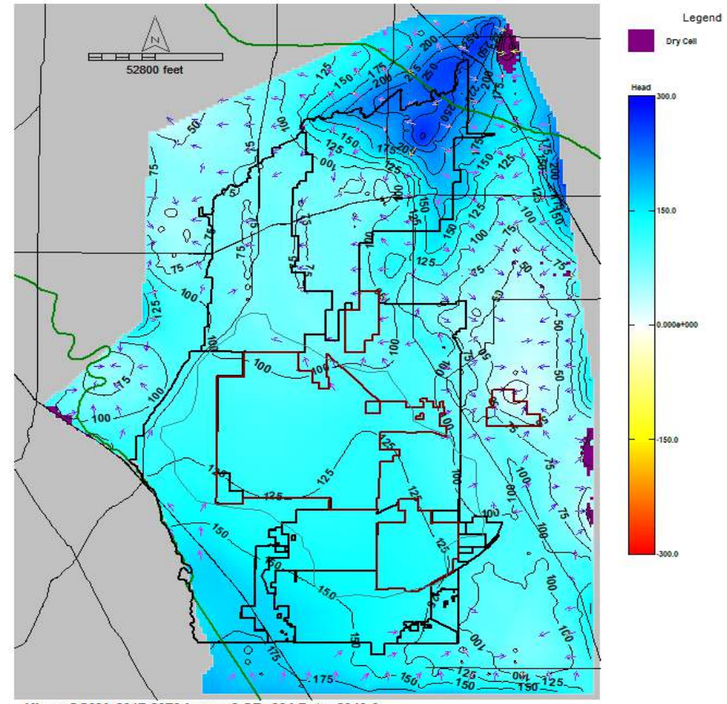
Project vs Baseline GHB Example

Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

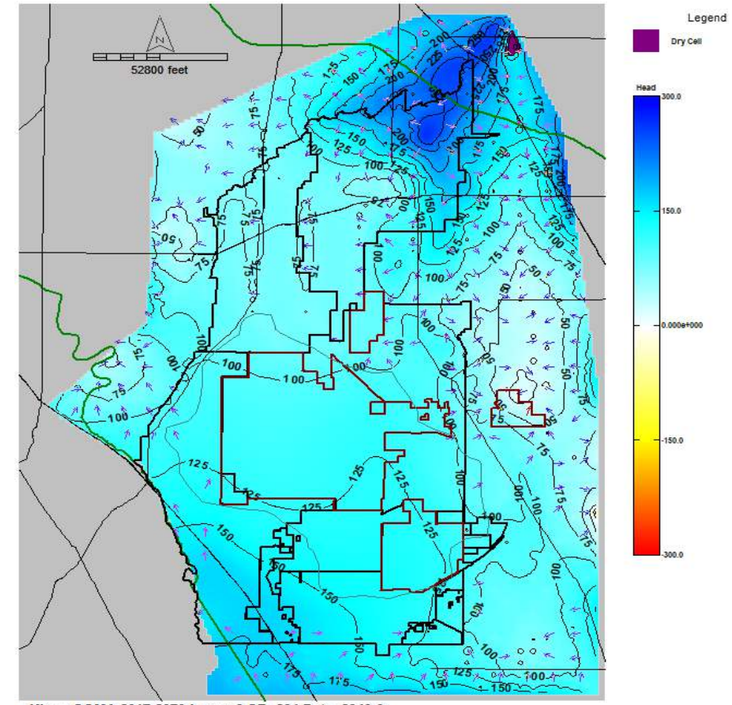
By: dmb	Date: 07/30/19	Project No.: FR18161220
		Figure **D7-12**



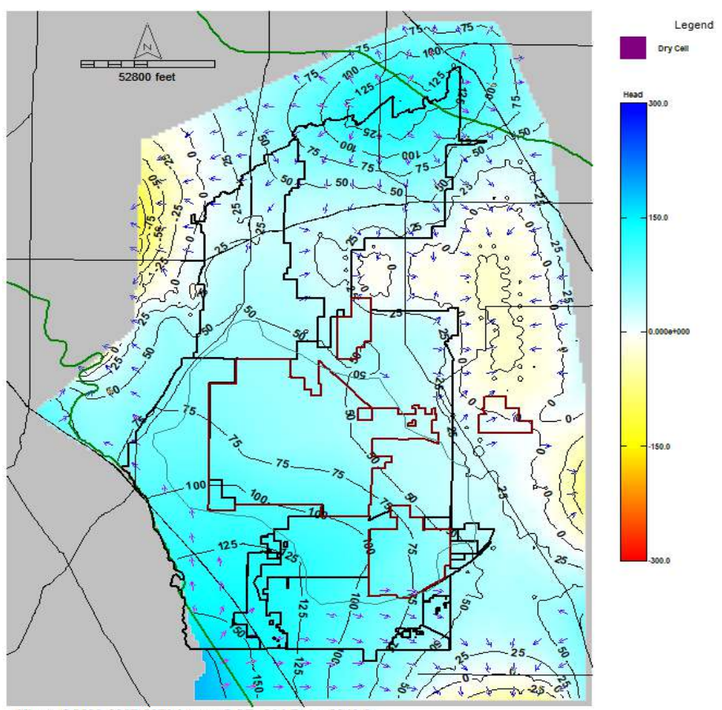
Kings SGMA 2017-2070 Layer: 1 SP: 284 Date: 2040.6



Kings SGMA 2017-2070 Layer: 2 SP: 284 Date: 2040.6



Kings SGMA 2017-2070 Layer: 3 SP: 284 Date: 2040.6



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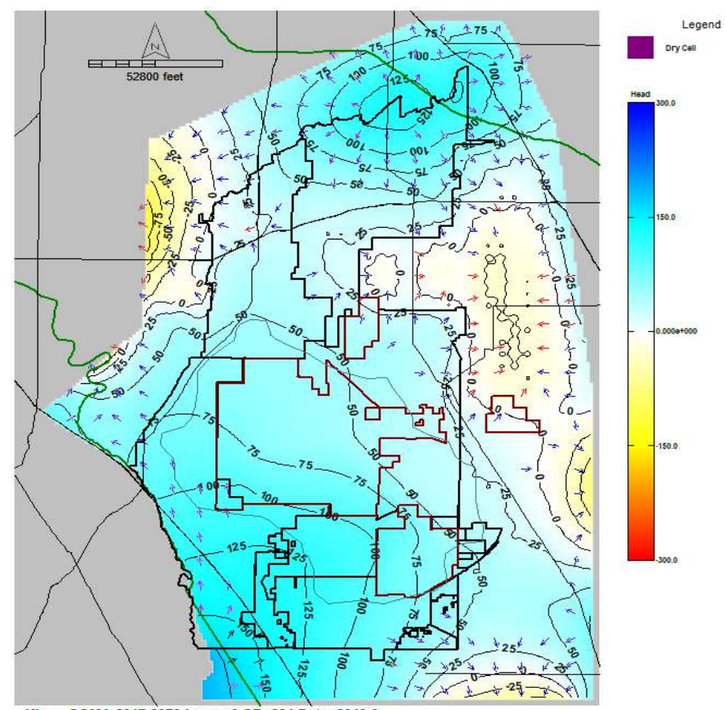
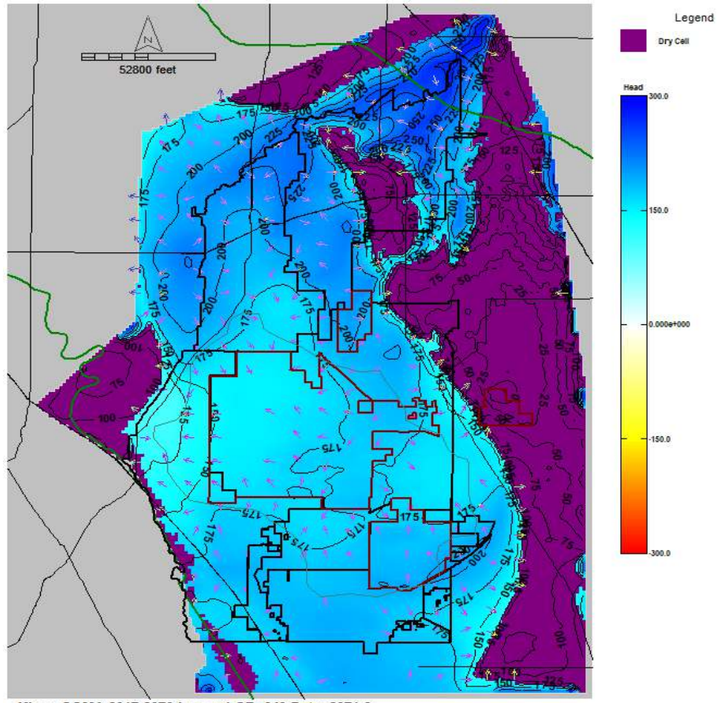


Kings SGMA 2017-2070 Layer: 6 SP: 284 Date: 2040.6

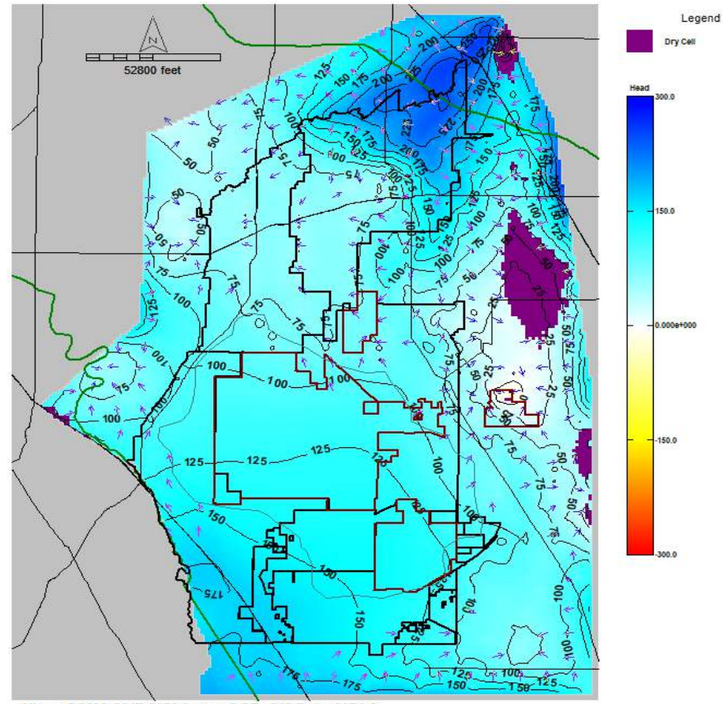
2040 Project Forecast Groundwater Elevations and Groundwater Flow Vectors

Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

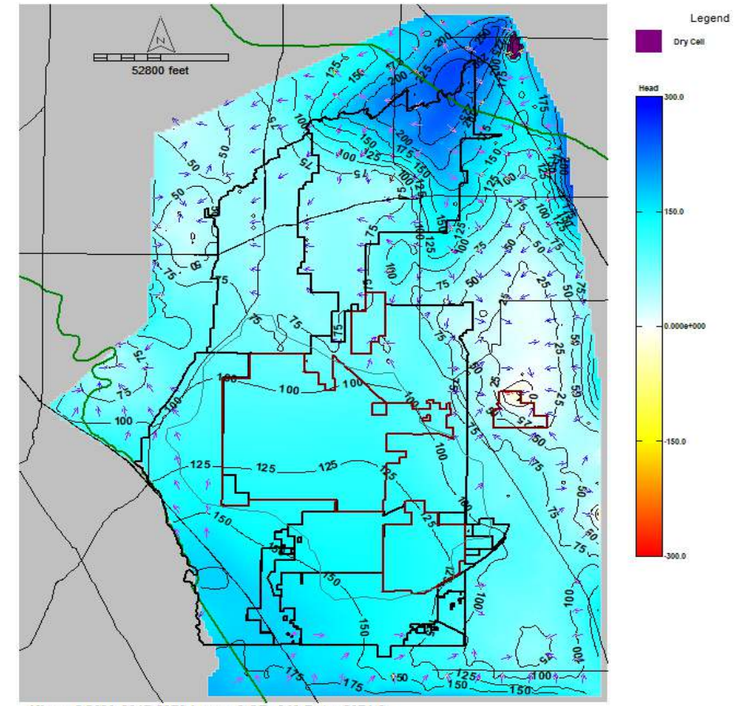
By: dmb	Date: 12/12/2019	Project No.: FR18161220
		Figure **D7-13**



Kings SGMA 2017-2070 Layer: 1 SP: 649 Date: 2071.0



Kings SGMA 2017-2070 Layer: 2 SP: 649 Date: 2071.0



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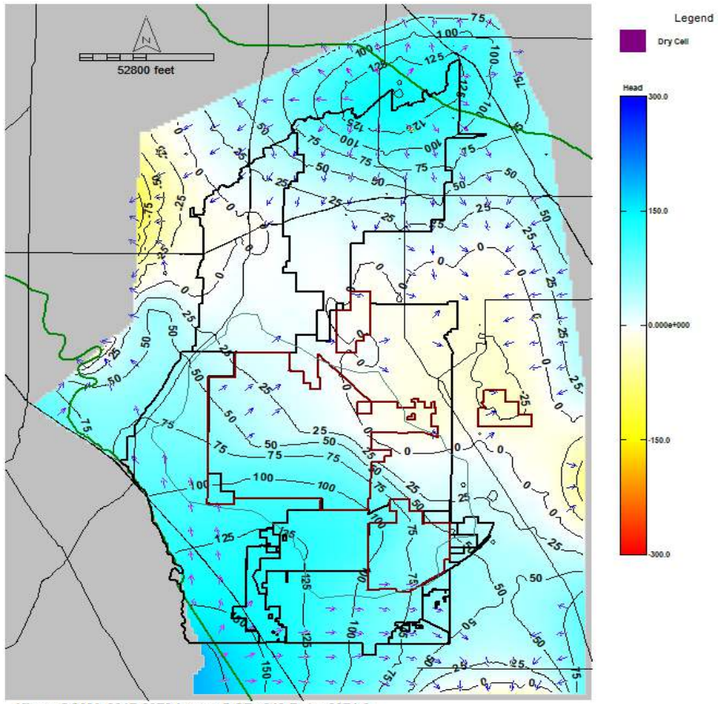
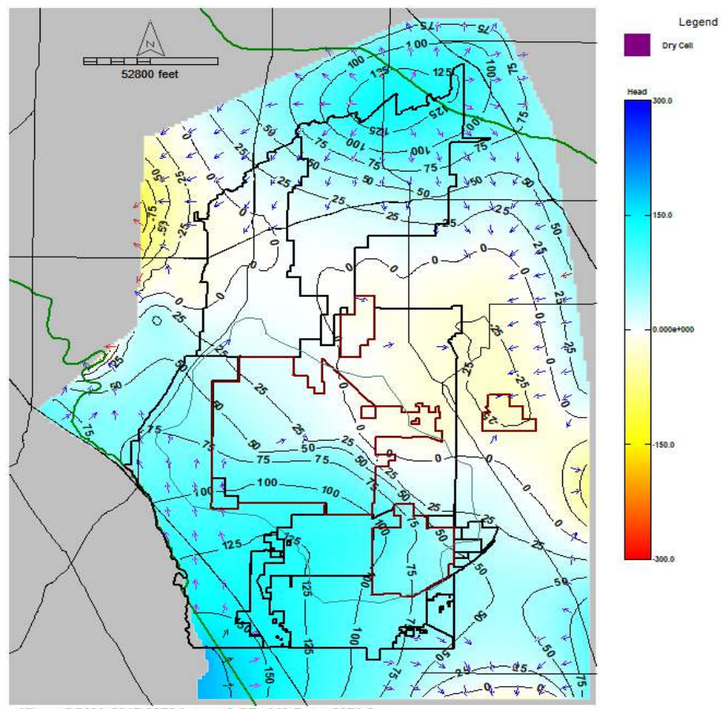


Kings SGMA 2017-2070 Layer: 5 SP: 649 Date: 2071.0



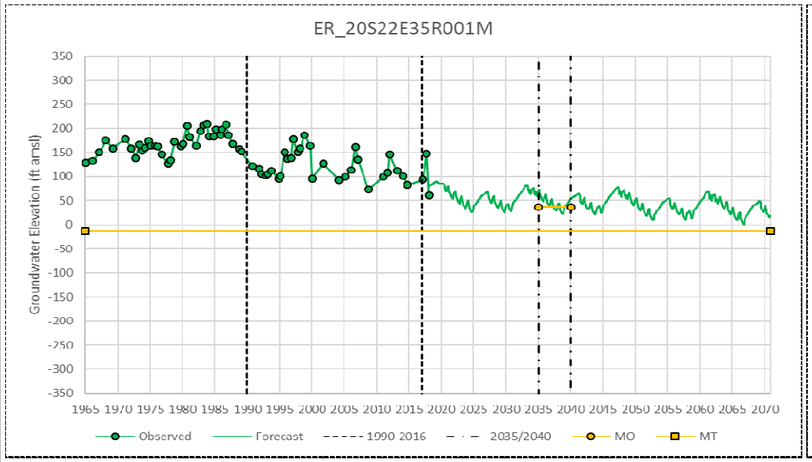
Kings SGMA 2017-2070 Layer: 6 SP: 649 Date: 2071.0

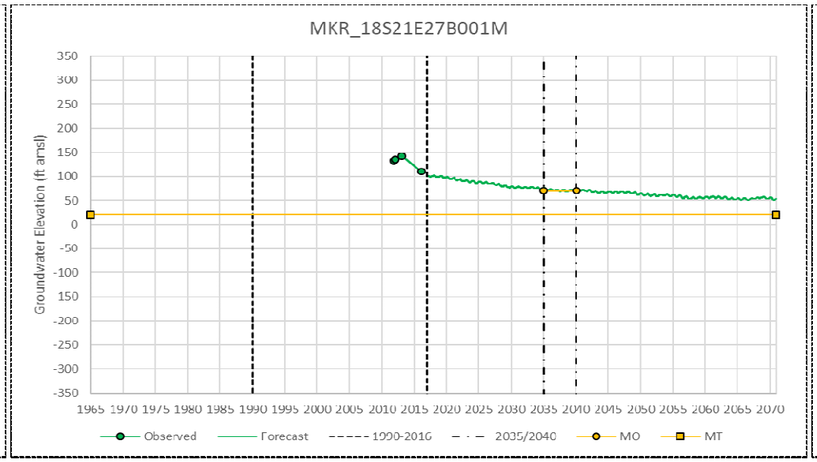
2070 Project Forecast Groundwater Elevations and Groundwater Flow Vectors

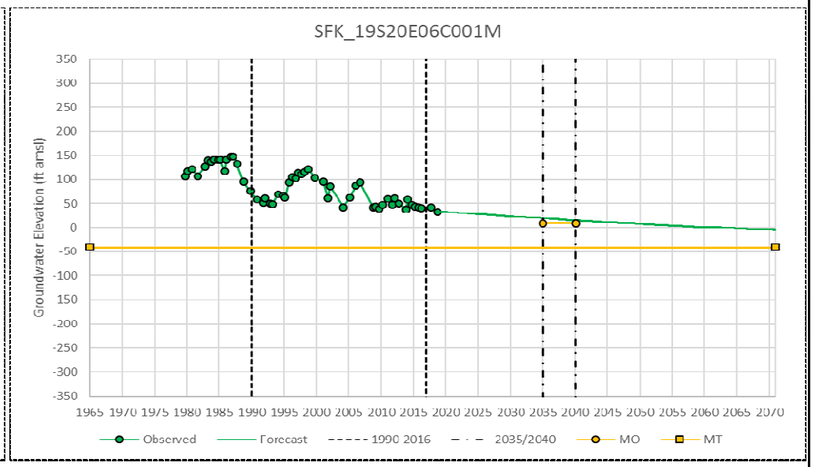
Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: dmb	Date: 12/12/2019	Project No.: FR18161220
		Figure **D7-14**

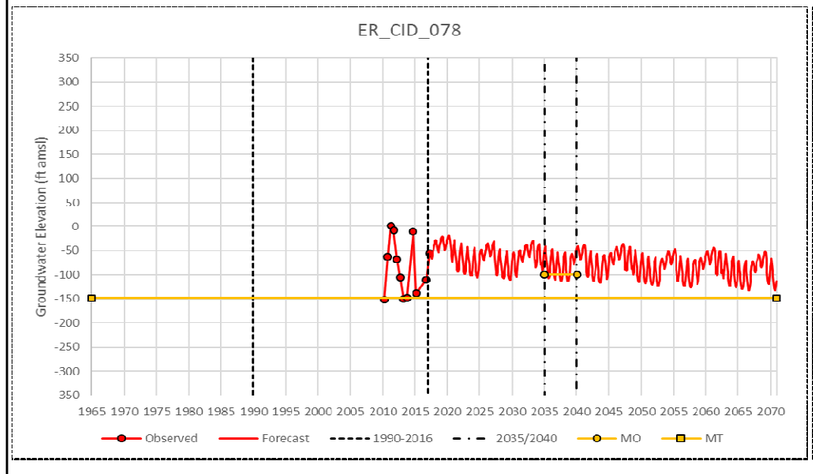
Above the Corcoran Clay



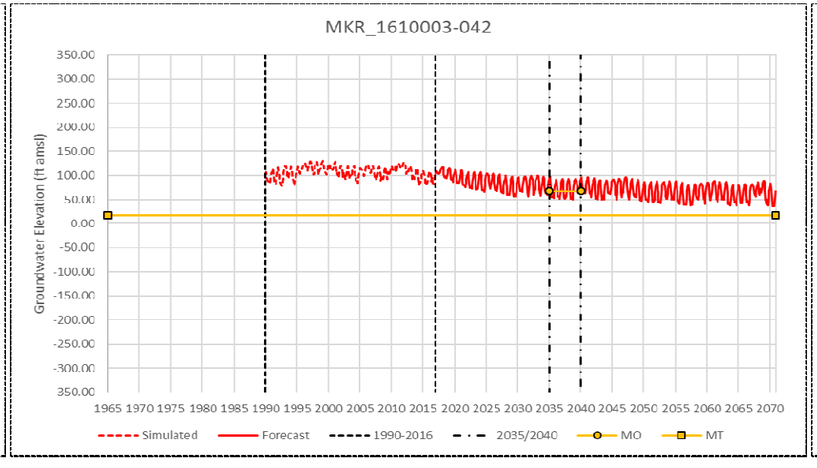




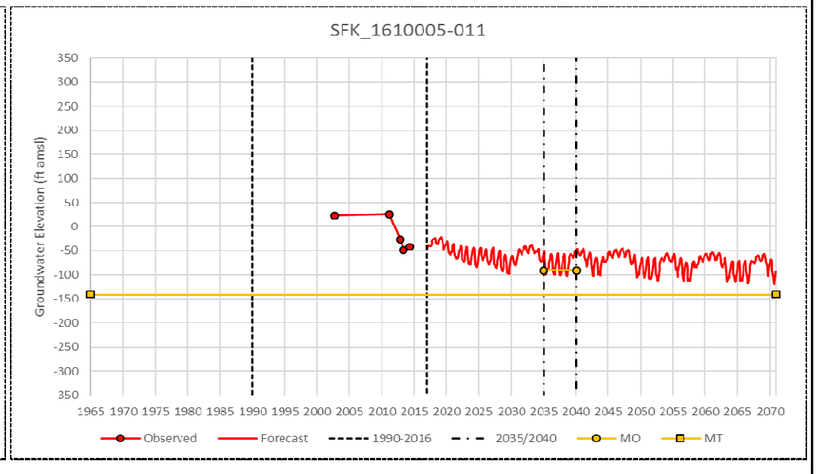
Corcoran



Hanford



Lemoore

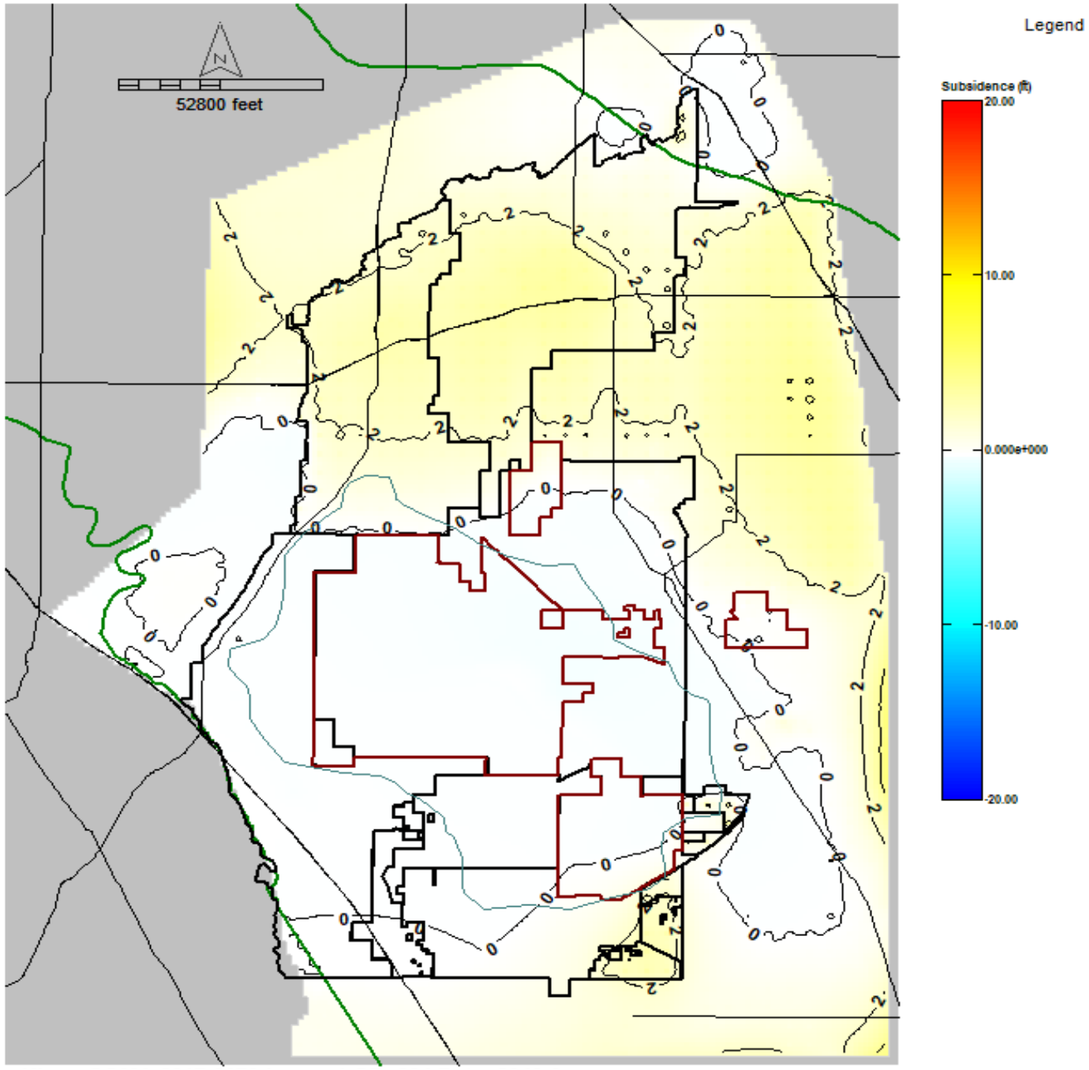


Below the Corcoran Clay

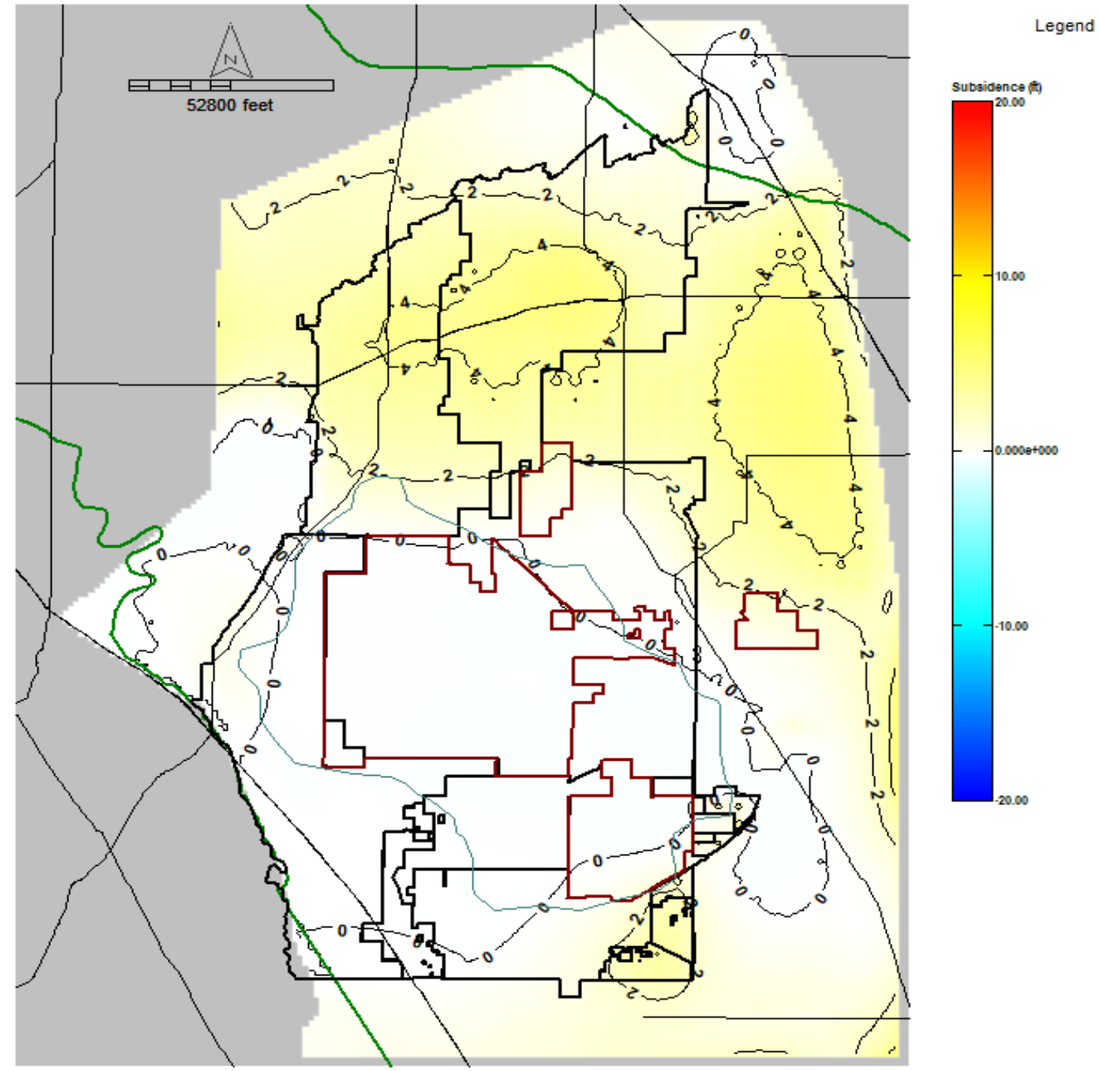
Project Forecast Hydrographs for Selected Compliance Wells

Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

By: dmb	Date: 12/12/2019	Project No.: FR18161220
		Figure **D7-15**



Kings SGMA 2017-2070 Layer: 1 SP: 284 Date: 2040.6



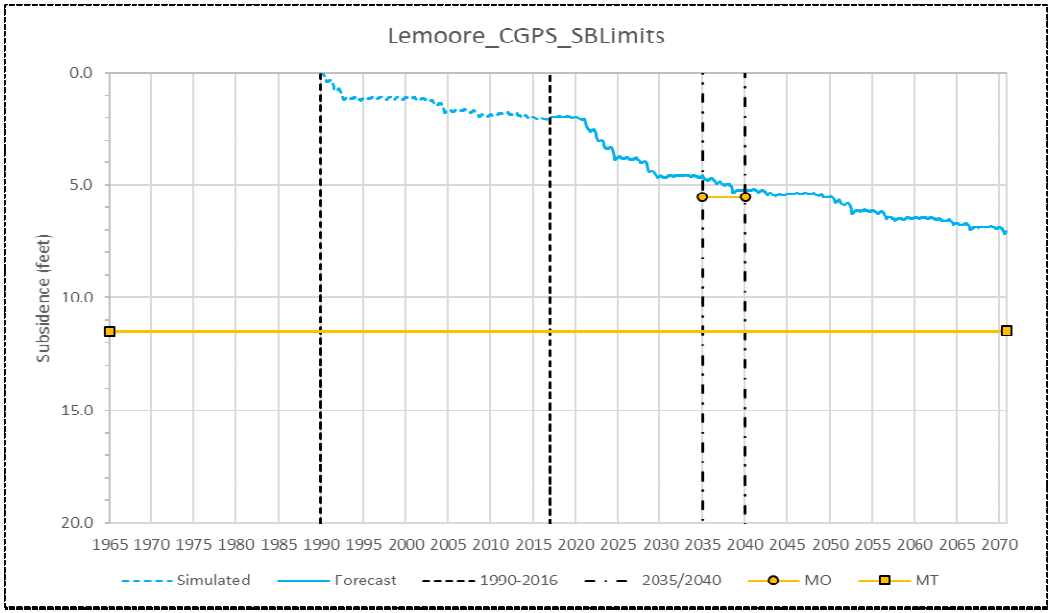
Kings SGMA 2017-2070 Layer: 1 SP: 649 Date: 2071.0

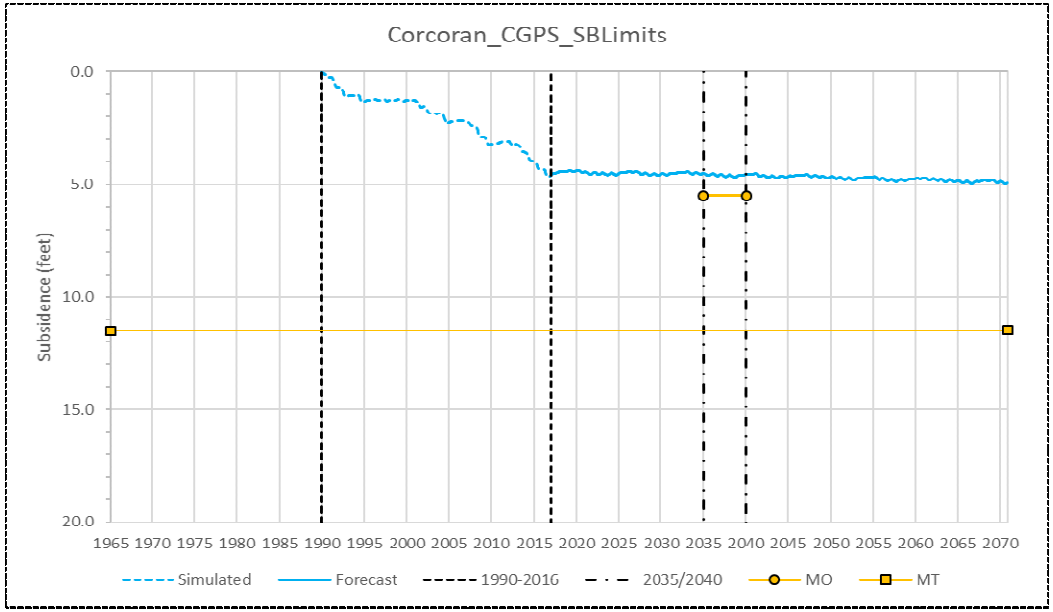
Cumulative Subsidence Since 2017
Project Forecast 2040 and 2070

Tulare Lake Subbasin Groundwater Sustainability Plan

Kings County, California

By: dmb	Date: 12/12/2019	Project No.: FR18161220
		Figure **D7-16**



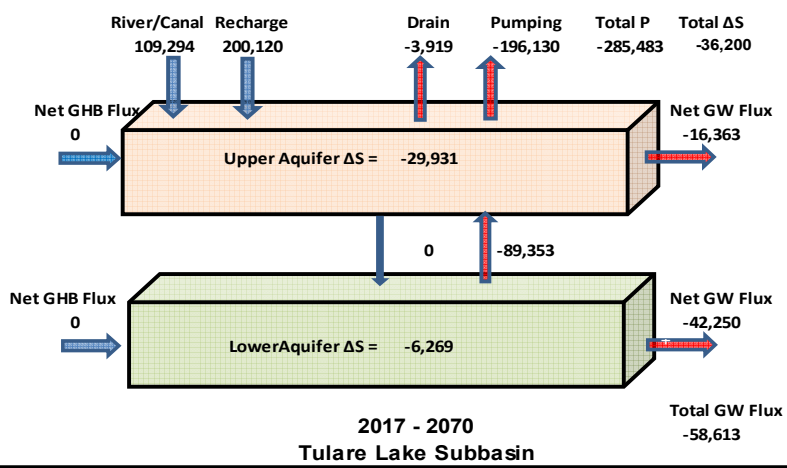


Project Forecast with Subbasin Pumping Limits Cumulative Subsidence Compliance Monitoring Points

Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

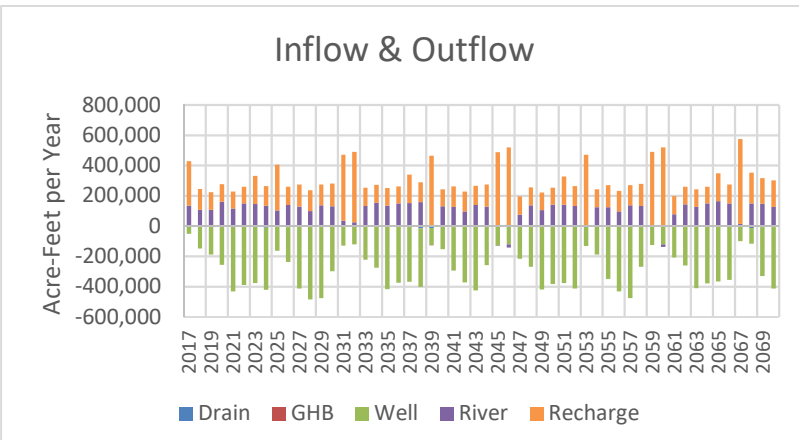
By: dmb	Date: 12/12/2019	Project No.: FR18161220
		Figure **D7-17**

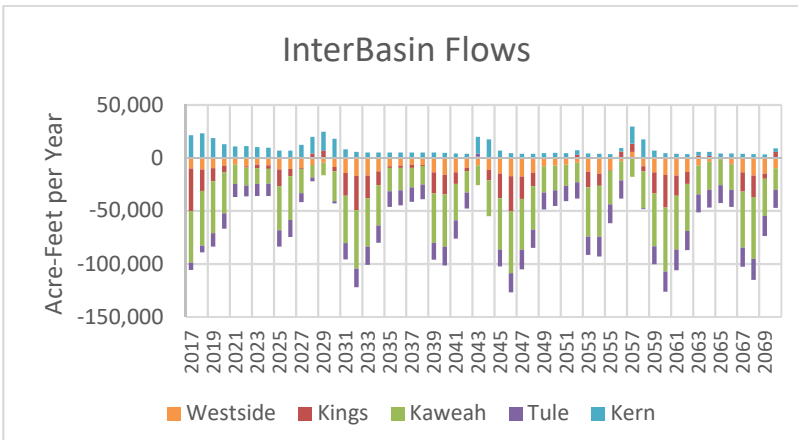
2017-2070
Average Projects Forecast
Tulare Lake SB

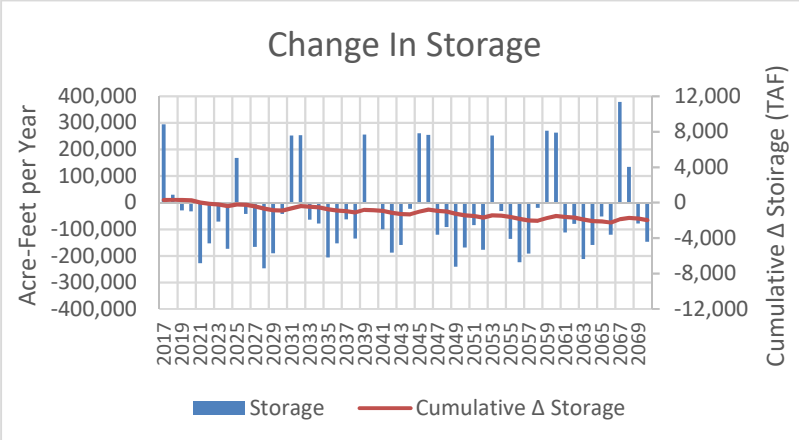


2017 - 2070
Tulare Lake Subbasin

TulareLake Date	Net Drain	Net GHB	Net Well	Net River	Net Recharge	Net Storage	Interbasin TulareLake	Interbasin Westside	Interbasin Kings	Interbasin Kaweah	Interbasin Tule	Interbasin Kern
2017	-768	0	-49,996	134,061	294,631	293,851	0	-9,992	-40,297	-48,598	-6,953	21,200
2018	-51	0	-147,931	106,461	137,333	29,785	0	-10,916	-20,328	-51,541	-6,322	23,003
2019	-69	0	-188,204	107,068	117,120	-29,333	0	-9,689	-12,439	-49,028	-12,606	18,498
2020	-751	0	-255,895	160,022	116,429	-33,567	0	-7,499	-6,200	-38,702	-14,321	12,890
2021	-2,567	0	-429,344	114,591	113,000	-228,163	0	-6,324	1,150	-18,147	-12,345	9,568
2022	-742	0	-387,832	149,597	110,391	-153,344	0	-8,036	-1,192	-16,819	-10,142	11,115
2023	-2,081	0	-375,607	144,279	186,092	-72,254	0	-6,559	-3,333	-14,772	-11,461	10,147
2024	-12,152	0	-409,790	134,618	129,097	-173,684	0	-6,923	-3,333	-14,122	-11,585	9,682
2025	-5,901	0	-158,066	103,591	300,300	167,712	0	-11,065	-15,504	-41,827	-15,388	6,934
2026	-6,425	0	-231,683	138,003	120,755	-42,544	0	-10,328	-7,050	-41,311	-15,866	6,838
2027	-4,097	0	-408,650	128,404	144,489	-166,792	0	-9,442	-924	-23,018	-8,481	12,393
2028	-3,806	0	-479,787	98,269	137,572	-247,432	0	-6,650	4,048	-12,008	-3,496	15,713
2029	-4,776	0	-470,493	136,664	136,267	-190,413	0	-4,525	6,786	-11,984	87	17,840
2030	-2,184	0	-296,843	131,230	148,799	-43,406	0	-8,521	-4,397	-27,797	-2,292	17,851
2031	-1,342	0	-128,244	34,194	435,214	252,338	0	-14,173	-21,527	-44,586	-15,432	8,110
2032	-2,135	0	-118,244	25,043	464,633	253,462	0	-16,860	-32,389	-55,308	-17,407	5,767
2033	-2,751	0	-219,926	132,336	120,754	-64,405	0	-16,851	-21,233	-45,466	-17,455	5,077
2034	-2,351	0	-273,863	153,223	119,220	-78,745	0	-12,647	-13,009	-38,118	-16,298	4,879
2035	-1,785	0	-414,804	134,016	116,897	-206,981	0	-7,842	-1,636	-21,888	-14,849	4,870
2036	-1,969	0	-372,544	149,859	110,501	-153,893	0	-7,391	-2,192	-21,086	-14,068	4,967
2037	-4,264	0	-363,305	152,162	186,307	-63,641	0	-6,467	-2,997	-18,447	-13,642	4,983
2038	-15,878	0	-386,782	158,310	129,519	-135,618	0	-6,736	-1,043	-17,305	-13,856	4,989
2039	-12,937	0	-112,427	-1,549	463,139	255,562	0	-13,698	-19,924	-46,314	-16,200	4,904
2040	-4,822	0	-147,191	129,532	113,179	-3,861	0	-15,971	-18,585	-49,122	-17,955	4,620
2041	-6,403	0	-288,654	125,667	136,255	-100,523	0	-13,749	-10,872	-34,353	-17,111	4,246
2042	-2,511	0	-369,213	97,116	129,325	-188,355	0	-9,518	-2,914	-20,346	-15,076	3,738
2043	-5,152	0	-419,146	138,244	128,118	-160,121	0	-7,192	1,016	-18,647	3,140	15,790
2044	-1,928	0	-256,990	128,874	144,339	-23,229	0	-11,233	-9,893	-34,027	233	17,141
2045	-1,615	0	-127,421	-2,607	487,733	260,886	0	-14,968	-23,284	-48,182	-15,906	6,928
2046	-2,192	0	-118,440	-22,036	518,991	254,254	0	-17,181	-33,280	-58,225	-18,145	4,513
2047	-1,846	0	-213,881	74,677	120,491	-120,887	0	-17,529	-21,199	-48,012	-18,486	3,949
2048	-3,121	0	-266,286	136,608	119,296	-92,692	0	-14,027	-12,735	-41,083	-17,137	3,833
2049	-955	0	-417,584	104,902	116,316	-241,563	0	-8,059	420	-24,754	-15,986	3,853
2050	-2,104	0	-380,556	141,874	110,770	-169,379	0	-7,332	852	-23,106	-14,955	3,988
2051	-2,151	0	-373,868	139,939	186,903	-85,094	0	-6,328	191	-20,161	-14,365	4,080
2052	-2,945	0	-409,066	132,768	131,240	-178,002	0	-4,743	2,951	-18,330	-15,302	4,171
2053	-1,757	0	-130,174	5,547	465,172	251,586	0	-13,057	-14,939	-46,488	-17,189	4,219
2054	-5,694	0	-182,931	124,170	117,298	-32,521	0	-14,787	-11,432	-48,072	-18,716	3,894
2055	-2,953	0	-346,167	123,932	144,789	-137,299	0	-11,714	-597	-31,503	-17,950	3,589
2056	-5,089	0	-426,442	96,606	136,007	-224,340	0	-3,053	5,860	-18,230	-17,157	3,278
2057	-2,832	0	-472,419	136,967	132,395	-192,493	0	5,515	7,767	-17,808	129	16,150
2058	-1,986	0	-265,982	132,665	145,904	-19,975	0	-8,004	-4,928	-34,531	-1,020	17,529
2059	-1,441	0	-124,741	1,848	487,775	270,056	0	-13,579	-19,998	-49,951	-16,865	6,926
2060	-5,248	0	-115,440	-16,351	519,068	263,398	0	-16,253	-30,525	-60,325	-19,196	4,327
2061	-878	0	-207,328	77,986	119,694	-112,695	0	-16,694	-19,066	-50,528	-19,593	3,699
2062	-6,177	0	-255,034	141,942	117,940	-79,683	0	-13,385	-11,283	-44,118	-18,210	3,559
2063	-2,104	0	-409,125	127,082	115,805	-213,067	0	-7,479	2,086	-27,132	-16,779	3,593
2064	-2,912	0	-375,558	149,053	109,563	-159,420	0	-3,670	1,802	-26,339	-16,899	3,789
2065	-4,655	0	-360,424	163,296	184,366	-52,779	0	-1,038	-312	-24,380	-16,820	4,124
2066	-4,273	0	-350,525	150,290	122,618	-121,655	0	-5,683	-471	-24,161	-15,961	4,244
2067	-5,939	0	-94,695	15,041	558,534	377,959	0	-13,561	-18,174	-52,954	-18,116	3,915
2068	-13,107	0	-102,855	148,782	203,000	133,847	0	-16,690	-20,384	-58,120	-19,784	3,545
2069	-7,533	0	-321,613	147,416	168,607	-78,689	0	-14,878	-4,800	-35,079	-19,070	3,256
2070	-7,539	0	-406,054	125,600	176,541	-146,985	0	-9,685	5,622	-20,423	-17,074	3,291
2017-2070 Average	**-3,919**	**0**	**-285,483**	**109,294**	**200,120**	**-36,200**	**0**	**-10,086**	**-8,890**	**-33,827**	**-13,587**	**7,778**
2040-2048 Average	**-3,288**	**0**	**-245,247**	**89,564**	**210,859**	**-19,392**	**0**	**-13,485**	**-14,638**	**-39,111**	**-12,938**	**7,195**







Projects Forecast Groundwater Mass Balance Tulare Lake Subbasin

Tulare Lake Subbasin Groundwater Sustainability Plan
Kings County, California

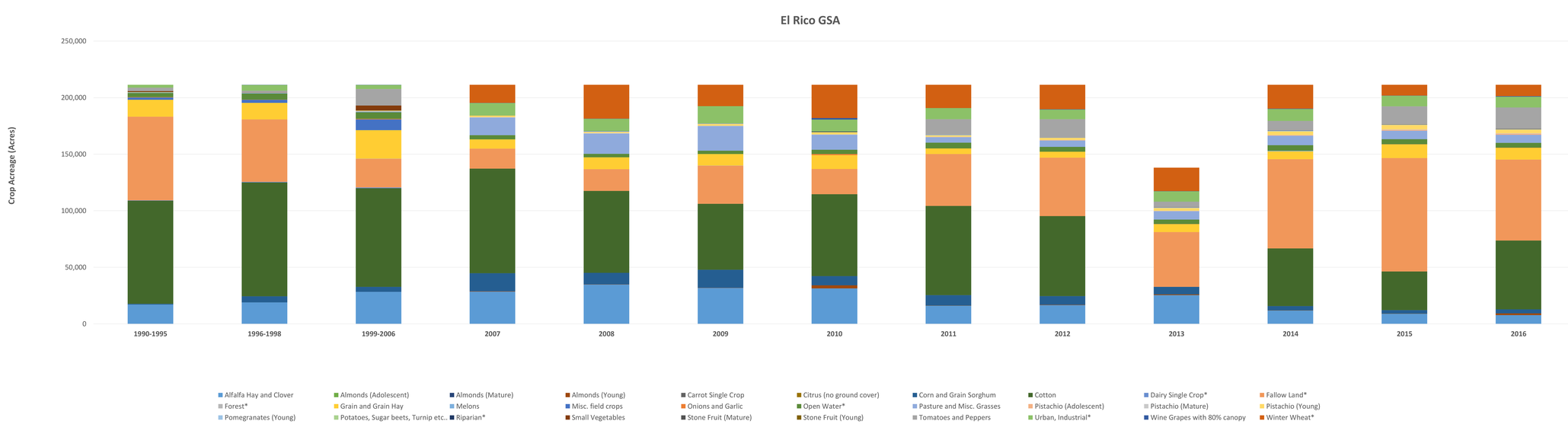
By: dmb	Date: 12/16/19	Project No.: FR18161220
		Figure **D7-18**

Appendix D1
Land Use and Crop Acreage

APPENDIX D1-1

Sum of Crop Acreage (Acres) Tulare Lake Subbasin	1990-1995	1996-1998	1999-2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
El Rico GSA													
Alfalfa Hay and Clover	17062	18882	28224	28550	34759	31625	31388	16035	16646	25428	11801	8919	7682
Almonds (Adolescent)	0	0	0	0	0	0	0	2	1	1	8	2	4
Almonds (Mature)	0	0	0	0	0	0	0	0	0	0	0	0	0
Almonds (Young)	0	0	0	258	180	197	2669	238	259	636	208	246	1546
Carrot Single Crop	0	0	0	0	0	0	0	6	2	0	0	0	4
Citrus (no ground cover)	0	0	0	0	0	0	0	5	0	2	0	1	1
Corn and Grain Sorghum	782	5521	4532	16009	10213	16088	8204	9059	7686	6589	3771	2958	3518
Cotton	91026	100576	87075	92487	72329	58241	72345	78989	70591	0	50987	34147	60879
Dairy Single Crop*	386	493	718	0	0	0	0	0	0	0	0	0	0
Fallow Land*	73850	55208	25343	17545	19197	33697	22362	45881	51731	48511	78767	100327	71667
Forest*	0	12	156	0	3	36	1	0	0	0	0	0	0
Grain and Grain Hay	15048	14737	25257	8152	10582	10260	12219	4876	5254	7028	7005	12142	10308
Melons	0	0	0	0	0	0	0	1	6	1	491	3	63
Misc. field crops	2012	2737	9414	0	2	0	0	0	0	0	0	0	0
Onions and Garlic	253	165	606	0	0	0	1031	26	59	28	43	82	62
Open Water*	3550	5363	5676	3742	3038	2939	3748	5020	4152	4064	4826	4456	4232
Pasture and Misc. Grasses	444	682	902	15534	17925	21653	13233	4887	5745	7242	8473	7506	7212
Pistachio (Adolescent)	0	0	0	0	0	0	0	168	188	225	433	732	931
Pistachio (Mature)	0	0	0	519	494	348	294	286	281	260	259	414	386
Pistachio (Young)	0	92	612	1286	1030	1613	2066	1148	1837	2468	3146	3862	3324
Pomegranates (Young)	0	0	0	3	518	237	24	460	92	425	541	324	292
Potatoes, Sugar beets, Turnip etc..	465	0	0	5	0	0	0	1	0	1	0	1	1
Riparian*	0	0	260	11	59	93	386	20	14	54	83	92	101
Small Vegetables	807	298	4282	0	0	2	58	14	18	67	64	5	73
Stone Fruit (Mature)	0	0	0	0	0	0	0	0	0	0	0	0	0
Stone Fruit (Young)	0	0	0	2	13	64	3	4	123	1	2	57	60
Tomatoes and Peppers	3069	1361	14625	5	1	67	0	13774	16185	4920	8549	16040	18943
Urban, Industrial*	2645	5070	3531	11025	10872	15246	10536	9841	8535	9304	10539	9274	9570
Wine Grapes with 80% canopy	0	196	130	160	142	18	1400	89	407	36	215	186	377
Winter Wheat*	0	0	0	16033	29951	18879	29323	20451	21465	20757	21059	9497	10032
El Rico GSA Irrigated Crop Acreage	**130966**	**145246**	**175658**	**162969**	**148189**	**140412**	**144935**	**130069**	**125380**	**128584**	**95998**	**87624**	**115666**
El Rico GSA Total Crop Acreage	**211398**	**211393**	**211342**	**211325**	**211311**	**211301**	**211291**	**211282**	**211278**	**211273**	**211272**	**211270**	**211268**

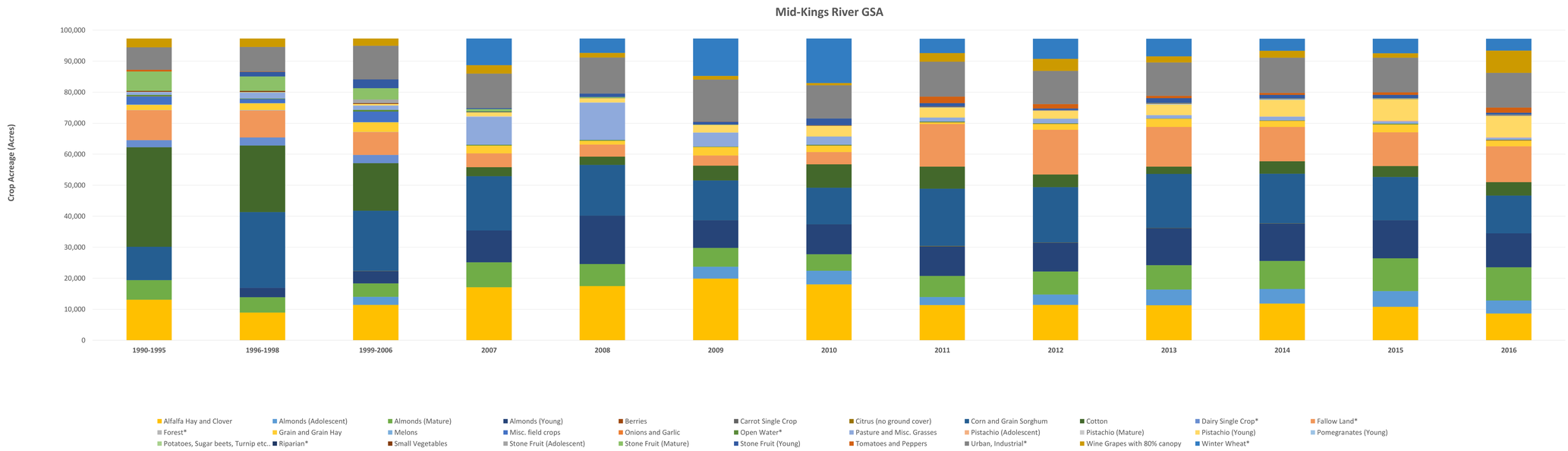
Notes: Fields with an Asterisk (*) are not Irrigated; Annual Total is by Calendar Year



APPENDIX D1-2

Sum of Crop Acreage (Acres) Tulare Lake Subbasin	1990-1995	1996-1998	1999-2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Mid-Kings River GSA													
Alfalfa Hay and Clover	13077	8955	11390	17127	17455	19907	17997	11349	11422	11310	11841	10814	8641
Almonds (Adolescent)	0	0	2646	0	0	3787	4400	2615	3312	5048	4677	5026	4221
Almonds (Mature)	6279	4955	4272	8040	7115	6086	5356	6765	7410	7851	9051	10582	10643
Almonds (Young)	0	3000	4011	10240	15571	8903	9640	9566	9308	11916	12070	12231	10961
Berries	0	0	0	0	0	0	0	0	1	2	0	0	0
Carrot Single Crop	0	0	0	0	0	0	0	1	2	0	2	0	4
Citrus (no ground cover)	0	0	21	0	10	9	4	110	27	89	30	17	4
Corn and Grain Sorghum	10777	24410	19454	17506	16434	12857	11789	18456	17872	17415	16054	13966	12211
Cotton	32138	21479	15330	2895	2617	4746	7523	7128	4136	2391	4027	3536	4295
Dairy Single Crop*	2278	2624	2666	0	0	0	0	0	0	0	0	0	0
Fallow Land*	9607	8651	7329	4456	3877	3288	3992	13754	14408	12757	11022	10897	11563
Forest*	93	163	71	2	0	7	1	0	0	1	0	0	0
Grain and Grain Hay	1658	2181	3123	2539	1275	2690	2058	498	1815	2657	1915	2558	1776
Melons	151	56	27	0	0	0	0	1	3	4	0	0	13
Misc. field crops	2574	1297	3410	0	0	0	0	0	0	0	0	0	0
Onions and Garlic	58	0	0	0	0	1	20	36	71	4	61	7	118
Open Water*	457	209	560	246	228	121	274	280	177	103	122	203	212
Pasture and Misc. Grasses	860	1881	1360	8942	12009	4550	2646	1272	1468	1001	1177	750	595
Pistachio (Adolescent)	0	0	0	0	0	0	0	2	14	41	112	244	227
Pistachio (Mature)	99	78	74	244	95	46	27	25	17	16	14	14	19
Pistachio (Young)	0	137	452	1302	1386	2477	3444	3198	2521	3410	5367	6919	6844
Pomegranates (Young)	0	0	0	1	21	5	5	114	50	254	220	26	74
Potatoes, Sugar beets, Turnip etc..	0	1	0	2	0	2	0	0	0	0	0	0	1
Riparian*	0	20	20	178	18	20	4	66	9	29	69	10	38
Small Vegetables	336	348	236	15	1	2	98	99	64	102	87	29	92
Stone Fruit (Adolescent)	0	0	1183	0	0	3	60	100	124	69	46	191	166
Stone Fruit (Mature)	6217	4597	3662	793	345	29	7	3	23	41	23	27	39
Stone Fruit (Young)	0	1504	2816	342	1126	953	2187	1008	485	1549	1150	1093	612
Tomatoes and Peppers	589	132	48	1	0	35	0	2108	1412	788	603	763	1651
Urban, Industrial*	7209	7934	10796	11097	11599	13542	10655	11296	10679	10709	11395	11219	11192
Wine Grapes with 80% canopy	2868	2713	2368	2768	1506	1180	778	2768	3935	2023	2241	1448	7218
Winter Wheat*	0	0	0	8574	4606	12043	14313	4658	6509	5691	3894	4696	3835
Mid-Kings River GSA Irrigated Crop	**77681**	**77725**	**75883**	**72754**	**76968**	**68269**	**68042**	**67222**	**65492**	**67981**	**70768**	**70242**	**70424**
Mid-Kings River GSA Total Crop Acr	**97326**	**97326**	**97325**	**97307**	**97296**	**97289**	**97282**	**97276**	**97273**	**97272**	**97269**	**97267**	**97265**

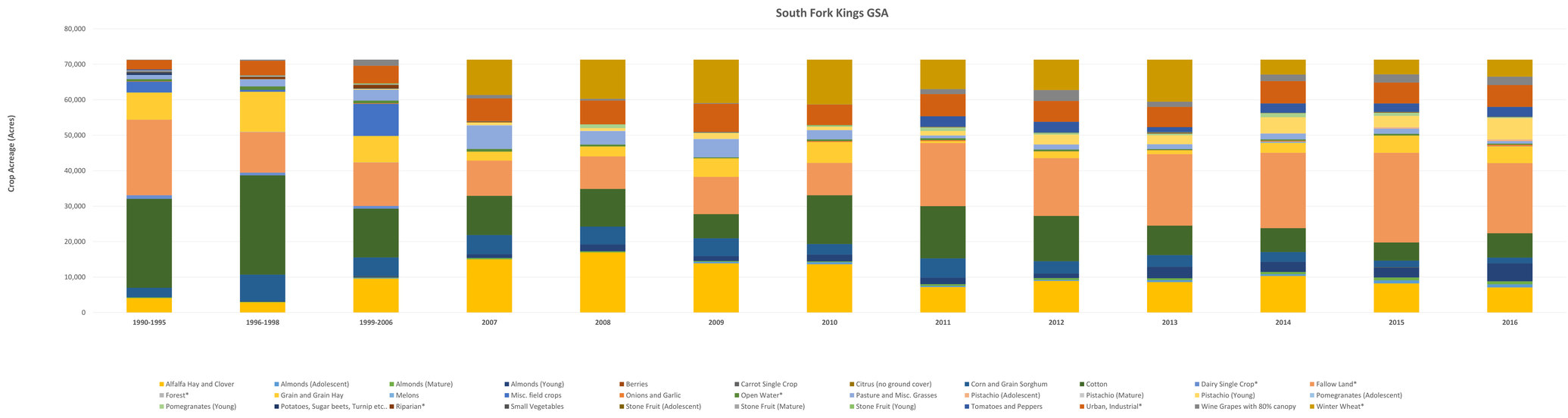
Notes: Fields with an Asterisk (*) are not Irrigated; Annual Total is by Calendar Year



APPENDIX D1-3

Sum of Crop Acreage (Acres) Tulare Lake Subbasin	1990-1995	1996-1998	1999-2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
South Fork Kings GSA													
Alfalfa Hay and Clover	4030	2892	9546	14989	16927	13848	13603	7183	8911	8561	10328	8208	7048
Almonds (Adolescent)	0	0	172	0	0	431	605	301	272	538	469	857	905
Almonds (Mature)	213	143	135	383	332	259	221	507	522	584	651	818	829
Almonds (Young)	0	188	322	1113	1972	1328	1916	1794	1231	3147	2833	2825	5066
Berries	0	0	0	0	0	0	0	0	0	0	0	0	0
Carrot Single Crop	0	0	0	0	0	0	0	1	0	2	0	2	7
Citrus (no ground cover)	0	0	5	0	0	0	0	4	1	5	0	1	1
Corn and Grain Sorghum	2721	7461	5363	5344	4974	5058	2951	5499	3523	3375	2758	1893	1639
Cotton	25101	27984	13748	11091	10661	6816	13753	14685	12783	8294	6759	5136	6829
Dairy Single Crop*	998	761	781	0	0	0	0	0	0	0	0	0	0
Fallow Land*	21306	11422	12200	9929	9182	10491	9125	17821	16304	20156	21235	25318	19818
Forest*	6	106	97	4	1	4	3	0	0	0	0	1	0
Grain and Grain Hay	7688	11325	7401	2545	2791	5254	5903	570	1868	1073	2824	4829	4710
Melons	0	0	0	0	0	0	5	0	2	1	302	0	10
Misc. field crops	3029	537	9083	0	0	0	0	0	0	0	0	0	0
Onions and Garlic	146	0	164	0	0	4	278	262	63	61	316	40	446
Open Water*	568	944	770	707	508	239	479	505	493	289	363	435	314
Pasture and Misc. Grasses	1196	1992	3076	6612	3776	5167	2585	764	1385	1335	1598	1466	736
Pistachio (Adolescent)	0	0	0	0	0	0	0	0	15	20	45	388	391
Pistachio (Mature)	0	0	0	138	122	64	61	61	61	56	51	50	58
Pistachio (Young)	0	34	231	784	778	1662	903	1265	2756	2520	4547	3177	6029
Pomegranates (Adolescent)	0	0	0	0	0	0	0	0	0	0	3	16	27
Pomegranates (Young)	0	0	0	10	1005	102	188	996	411	467	1142	933	292
Potatoes, Sugar beets, Turnip etc..	468	0	209	0	0	2	0	0	0	38	0	1	0
Riparian*	0	648	841	190	14	66	27	101	22	212	32	124	43
Small Vegetables	430	2	0	5	0	8	11	14	30	43	4	38	28
Stone Fruit (Adolescent)	0	0	65	0	0	0	0	1	0	0	1	0	4
Stone Fruit (Mature)	408	316	192	3	0	0	0	0	0	0	0	0	0
Stone Fruit (Young)	0	94	245	38	53	95	229	61	94	86	85	32	40
Tomatoes and Peppers	287	51	0	93	2	8	12	2982	3060	1400	2605	2355	2749
Urban, Industrial*	2631	4086	4952	6415	6654	7933	5793	6213	5863	5729	6304	5928	6151
Wine Grapes with 80% canopy	80	317	1706	974	503	254	60	1408	3084	1481	1877	2279	2329
Winter Wheat*	0	0	0	9941	11051	12214	12590	8305	8551	11832	4173	4154	4807
South Fork Kings GSA Irrigated Crop	**45796**	**53338**	**51663**	**44120**	**43896**	**40359**	**43287**	**38359**	**40073**	**33087**	**39198**	**35344**	**40172**
South Fork Kings GSA Total Crop Acı	**71305**	**71305**	**71305**	**71305**	**71305**	**71305**	**71305**	**71305**	**71305**	**71305**	**71305**	**71305**	**71305**

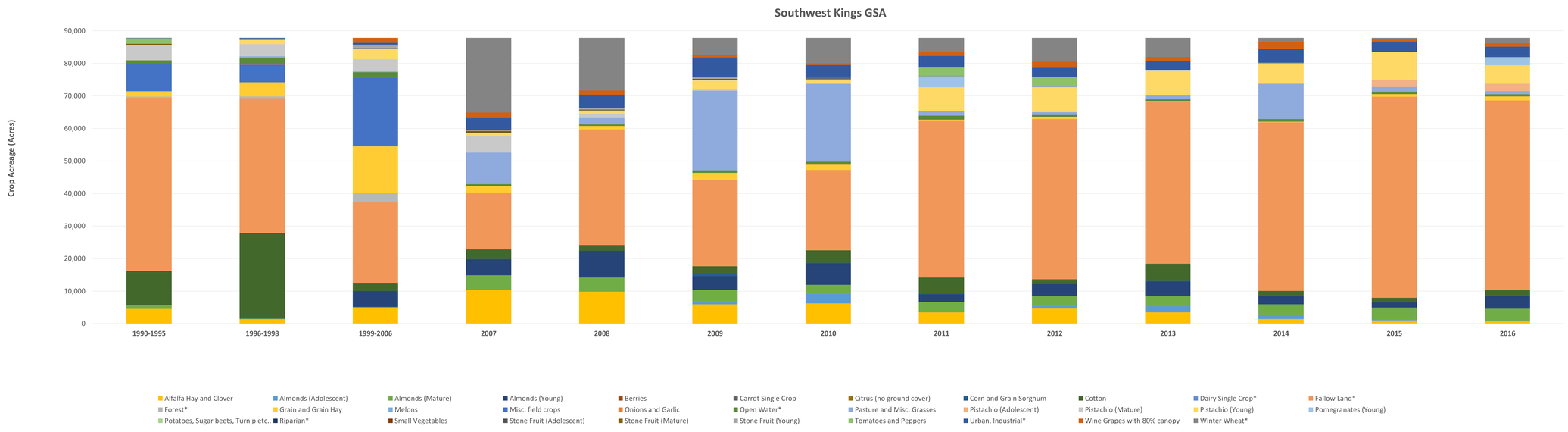
Notes: Fields with an Asterisk (*) are not Irrigated; Annual Total is by Calendar Year



Sum of Crop Acreage (Acres) — **APPENDIX D1-4**

Tulare Lake Subbasin	1990-1995	1996-1998	1999-2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Southwest Kings GSA													
Alfalfa Hay and Clover	4524	1347	4850	10391	9787	5943	6228	3472	4626	3475	1381	960	715
Almonds (Adolescent)	0	0	90	0	0	908	2921	304	879	1889	1372	337	235
Almonds (Mature)	1190	143	143	4474	4377	3481	2797	2867	2887	3005	3175	3646	3633
Almonds (Young)	0	90	4957	4922	8214	4248	6657	2329	3744	4631	2555	1577	3997
Berries	20	0	0	0	0	0	0	0	0	0	0	0	0
Carrot Single Crop	0	0	0	0	0	0	0	0	0	0	0	0	0
Citrus (no ground cover)	0	0	0	0	3	4	0	0	2	3	59	4	4
Corn and Grain Sorghum	0	17	0	66	18	640	85	492	32	73	34	4	31
Cotton	10438	26255	2279	2960	1746	2428	3832	4690	1444	5300	1466	1388	1671
Dairy Single Crop*	39	0	15	0	0	0	0	0	0	0	0	0	0
Fallow Land*	53229	41443	25225	17464	35584	26521	24733	48292	49251	49716	51859	61821	58286
Forest*	321	527	2617	0	0	0	0	0	0	0	0	3	0
Grain and Grain Hay	1595	4379	14293	1981	1010	2189	1583	188	597	306	132	796	1251
Melons	100	0	257	0	0	0	9	0	0	0	4	0	1
Misc. field crops	8580	5377	20902	0	0	0	0	0	0	0	2	0	0
Onions and Garlic	0	314	0	0	0	2	25	64	104	2	80	20	15
Open Water*	902	1805	1657	606	473	737	891	1233	536	543	749	774	619
Pasture and Misc. Grasses	0	472	276	9716	1984	24511	23979	1343	898	1176	10802	1403	998
Pistachio (Adolescent)	0	0	0	0	0	0	0	0	1	84	293	2212	2288
Pistachio (Mature)	4595	3730	3730	5195	1195	476	21	21	20	17	6	6	6
Pistachio (Young)	0	1316	3094	829	1002	2610	1360	7358	7551	7459	5794	8509	5688
Pomegranates (Young)	0	0	0	49	147	166	16	3397	249	241	161	23	2448
Potatoes, Sugar beets, Turnip etc..	0	0	0	0	0	0	0	2	0	0	0	0	0
Riparian*	0	0	0	76	1	219	186	35	27	13	25	13	12
Small Vegetables	27	0	0	1	1	0	38	14	19	2	9	5	5
Stone Fruit (Adolescent)	0	0	229	0	0	11	6	0	0	0	0	0	0
Stone Fruit (Mature)	445	72	0	518	198	139	11	0	0	0	0	0	0
Stone Fruit (Young)	0	229	1124	289	416	462	83	4	10	4	102	0	2
Tomatoes and Peppers	1689	83	3	19	0	1	0	2601	3012	3	144	7	54
Urban, Industrial*	169	262	546	3643	4212	6157	4050	3619	2776	2885	4250	3199	3148
Wine Grapes with 80% canopy	0	0	1576	1684	1312	788	505	1093	1796	1113	2137	757	1060
Winter Wheat*	0	0	0	22975	16175	5212	7839	4436	7394	5913	1262	388	1688
Southwest Kings GSA Irrigated Crop	**33202**	**43824**	**57801**	**43094**	**31411**	**49008**	**50156**	**30239**	**27869**	**28783**	**29707**	**21654**	**24100**
Southwest Kings GSA Total Crop Ac	**87862**	**87862**	**87860**	**87858**	**87856**	**87855**	**87854**	**87854**	**87853**	**87853**	**87852**	**87852**	**87852**

Notes: Fields with an Asterisk (*) are not Irrigated; Annual Total is by Calendar Year



APPENDIX D1-5

Sum of Crop Acreage (Acres) Tulare Lake Subbasin	1990-1995	1996-1998	1999-2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Tri-County Water Authority GSA													
Alfalfa Hay and Clover	2917	488	290	1402	1672	181	469	750	526	544	469	765	159
Almonds (Adolescent)	0	0	0	0	0	0	0	0	0	0	0	0	0
Almonds (Young)	0	0	0	5	28	2	6	42	21	11	12	104	7
Carrot Single Crop	0	0	0	0	0	0	0	2	0	9	0	0	0
Citrus (no ground cover)	0	0	0	0	0	0	0	1	0	0	0	0	0
Corn and Grain Sorghum	0	1486	0	347	123	0	2	274	62	114	20	5	1
Cotton	830	4665	6333	172	952	210	714	49	39	104	147	325	47
Dairy Single Crop*	116	199	205	0	0	0	0	0	0	0	0	0	0
Fallow Land*	35703	21667	19509	15775	17303	25691	29979	26643	41003	41346	32290	39427	39639
Forest*	0	0	14	0	0	0	0	0	0	0	0	0	0
Grain and Grain Hay	2719	15911	12888	4050	12212	7013	4217	1625	433	130	336	872	1024
Melons	0	0	0	0	0	0	0	0	0	0	0	15	0
Misc. field crops	921	2871	8503	0	0	0	0	0	0	0	0	0	0
Onions and Garlic	0	0	0	0	0	0	3	22	5	0	1	0	2
Open Water*	90	771	305	274	49	13	42	665	86	45	764	51	58
Pasture and Misc. Grasses	0	1	1	9885	8538	11063	10637	6414	3873	4601	11501	4618	4202
Pistachio (Adolescent)	0	0	0	0	0	0	0	0	0	0	0	0	0
Pistachio (Mature)	0	0	0	0	0	0	0	0	0	0	0	0	0
Pistachio (Young)	0	1	1	151	63	164	309	16	11	22	342	212	685
Pomegranates (Young)	0	0	0	0	14	35	22	46	2	8	143	7	5
Potatoes, Sugar beets, Turnip etc..	4803	0	0	0	0	0	0	6	0	1	0	0	0
Riparian*	0	0	0	63	42	0	11	3	67	5	30	9	1
Small Vegetables	0	0	0	0	0	0	6	0	1	30	0	1	1
Stone Fruit (Mature)	0	0	0	0	0	0	0	0	0	0	0	0	0
Stone Fruit (Young)	0	0	0	1	0	0	0	0	0	0	1	0	0
Tomatoes and Peppers	0	0	0	0	0	0	0	17	1	4	20	46	24
Urban, Industrial*	0	39	50	1247	1374	1594	1184	1122	722	740	1413	910	868
Wine Grapes with 80% canopy	0	2	0	2	36	0	3	2	6	2	3	2	0
Winter Wheat*	0	0	0	14715	5675	2104	462	10361	1199	337	563	685	1327
Irrigated Crop Acreage	**12191**	**25423**	**28017**	**16014**	**23638**	**18668**	**16387**	**9267**	**4981**	**5582**	**12994**	**6971**	**6157**
Total Crop Acreage	**48099**	**48099**	**48099**	**48088**	**48081**	**48070**	**48064**	**48061**	**48059**	**48056**	**48053**	**48053**	**48051**

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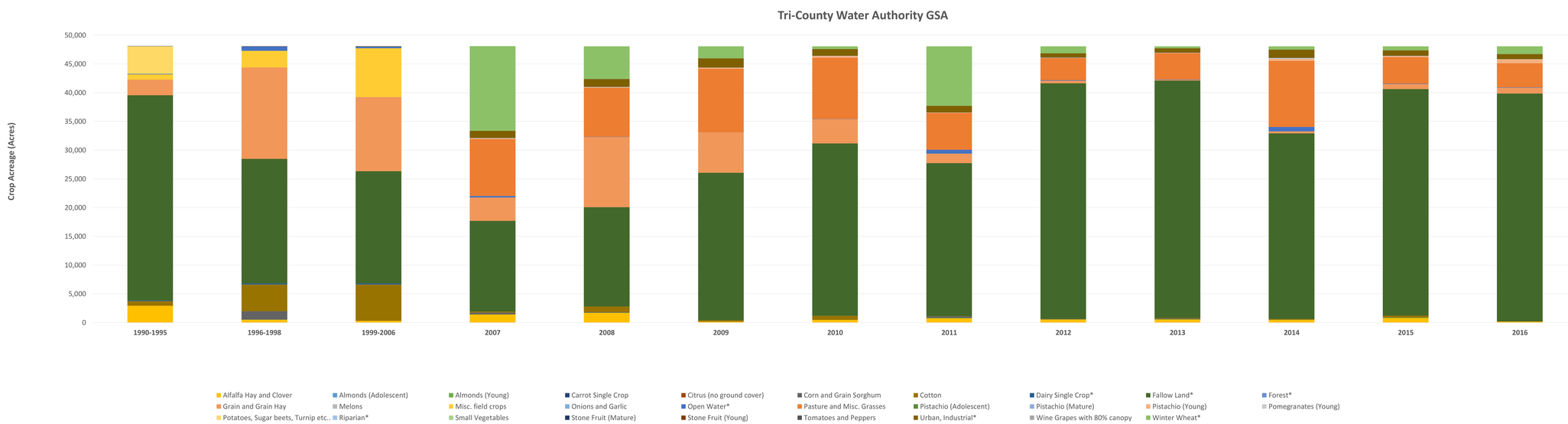

APPENDIX D1-6

Sum of Crop Acreage (Acres) Tulare Lake Subbasin	1990-1995	1996-1998	1999-2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Tulare Lake Subbasin													
Alfalfa Hay and Clover	41604	32564	54301	72459	80600	71504	69685	38789	42131	49318	35820	29665	24245
Almonds (Adolescent)	0	0	2908	0	0	5127	7927	3222	4464	7476	6526	6222	5365
Almonds (Mature)	7682	5241	4550	12897	11825	9826	8374	10140	10818	11441	12876	15046	15105
Almonds (Young)	0	3278	9290	16538	25966	14678	20887	13968	14564	20341	17678	16983	21576
Berries	20	0	0	0	0	0	0	0	1	2	0	0	0
Carrot Single Crop	0	0	0	0	0	0	0	11	5	12	2	2	16
Citrus (no ground cover)	0	0	25	0	13	14	4	120	29	100	89	22	9
Corn and Grain Sorghum	14280	38896	29349	39271	31762	34643	23031	33780	29175	27566	22638	18826	17400
Cotton	159534	180960	124764	109605	88304	72441	98167	105541	88993	89317	63385	44532	73720
Dairy Single Crop*	3816	4077	4385	0	0	0	0	0	0	0	0	0	0
Fallow Land*	193695	138392	89606	65169	85144	99688	90192	152391	172697	172486	195172	237790	200972
Forest*	420	809	2955	6	5	46	5	0	0	1	0	4	0
Grain and Grain Hay	28708	48533	62962	19266	27870	27406	25980	7758	9968	11194	12213	21196	19069
Melons	250	56	284	0	0	0	14	2	11	7	797	18	86
Misc. field crops	17116	12819	51311	0	2	0	0	0	0	0	2	0	0
Onions and Garlic	457	479	770	0	0	7	1358	411	302	94	502	149	644
Open Water*	5568	9092	8968	5576	4296	4049	5434	7703	5443	5045	6824	5919	5435
Pasture and Misc. Grasses	2500	5029	5615	50688	44232	66944	53080	14680	13368	15355	33551	15744	13743
Pistachio (Adolescent)	0	0	0	0	0	0	0	170	218	370	882	3575	3836
Pistachio (Mature)	4694	3808	3804	6096	1907	934	404	394	380	348	330	485	469
Pistachio (Young)	0	1580	4390	4351	4259	8527	8083	12985	14676	15878	19195	22678	22570
Pomegranates (Adolescent)	0	0	0	0	0	0	0	0	0	0	3	16	27
Pomegranates (Young)	0	0	0	61	1705	545	256	5012	804	1395	2207	1312	3111
Potatoes, Sugar beets, Turnip etc..	5736	1	209	6	0	3	0	9	0	41	0	2	2
Riparian*	0	668	1120	517	134	398	615	226	138	313	239	248	194
Small Vegetables	1599	647	4518	20	2	13	212	142	133	244	165	78	198
Stone Fruit (Adolescent)	0	0	1478	0	0	14	66	100	125	69	47	191	170
Stone Fruit (Mature)	7070	4985	3854	1314	544	168	18	3	23	41	23	27	39
Stone Fruit (Young)	0	1827	4185	672	1609	1573	2502	1077	712	1641	1340	1183	713
Tomatoes and Peppers	5634	1627	14676	117	2	110	12	21482	23670	7114	11922	19211	23420
Urban, Industrial*	12654	17391	19875	33427	34711	44471	32218	32091	28576	29366	33901	30530	30930
Wine Grapes with 80% canopy	2948	3226	5779	5588	3499	2240	2746	5361	9228	4655	6472	4672	10985
Winter Wheat*	0	0	0	72238	67458	50451	64526	48212	45118	44530	30950	19420	21690
Tulare Lake Subbasin Irrigated Crop	**299832**	**345557**	**389021**	**338951**	**324102**	**316717**	**322806**	**275156**	**263796**	**264018**	**248665**	**221837**	**256519**
Tulare Lake Subbasin Total Crop Acr	**515986**	**515986**	**515931**	**515883**	**515849**	**515821**	**515796**	**515779**	**515768**	**515759**	**515751**	**515747**	**515741**

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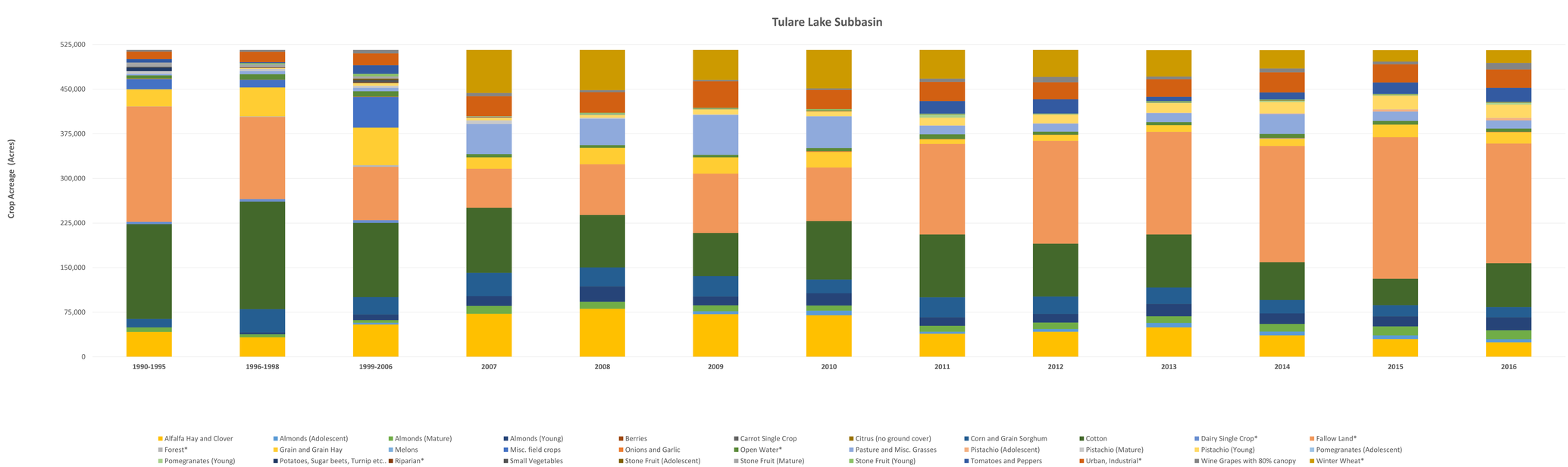

APPENDIX D1-7

Sum of Crop Acreage (Acres) Kaweah Subbasin	1990-1995	1996-1998	1999-2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Kaweah Subbasin													
Alfalfa Hay and Clover	27850	25488	29418	43095	41094	43668	40716	32231	33810	31880	30293	28662	26949
Almonds (Adolescent)	0	0	771	0	0	1532	2066	872	1229	1617	1456	1803	3445
Almonds (Mature)	3153	2535	2191	1736	1410	1077	921	1634	1819	1926	2456	2749	2995
Almonds (Young)	0	790	398	6870	11485	6194	8294	5130	4634	6064	9091	13550	14488
Berries	0	9	9	0	0	0	0	0	0	0	0	0	0
Carrot Single Crop	0	0	0	0	0	0	0	26	2	0	3	0	4
Citrus (no ground cover)	0	0	0	4	10	15	4	12	10	53	73	5	8
Corn and Grain Sorghum	26638	43219	43776	27456	32303	22468	21812	45387	47930	48395	48640	42286	34456
Cotton	59129	39071	33139	13910	9429	11494	18937	17481	13112	10144	9699	6535	10619
Dairy Single Crop*	4739	5962	6386	0	0	0	0	0	0	0	0	0	0
Fallow Land*	9002	7460	7147	2975	2992	3242	3633	15205	9874	13007	11274	12526	11575
Forest*	176	46	35	0	1	20	0	0	0	1	3	0	0
Grain and Grain Hay	7117	7703	8178	6799	501	2199	1849	745	1957	2730	1408	2541	1462
Melons	153	101	101	0	0	1	0	3	1	14	0	2	102
Misc. field crops	1745	1167	1439	0	1	1	0	0	0	0	0	0	0
Onions and Garlic	429	229	229	0	0	0	33	167	24	1	9	4	277
Open Water*	1210	726	866	246	233	247	516	579	378	199	277	492	424
Pasture and Misc. Grasses	1206	1112	1494	14364	26396	9090	9378	3711	6078	5345	5242	4515	4501
Pistachio (Adolescent)	0	0	0	0	0	0	0	336	493	880	1833	4513	4211
Pistachio (Mature)	1020	955	955	2307	1657	1343	1083	1034	886	794	771	1046	900
Pistachio (Young)	0	1985	2037	2026	2702	4762	4110	8081	9263	8907	9834	8573	8411
Pomegranates (Young)	0	0	0	4	155	10	3	89	52	430	128	102	395
Potatoes, Sugar beets, Turnip etc..	419	684	611	6	0	1	0	107	58	3	205	155	188
Riparian*	0	934	934	16	14	32	3	13	15	59	34	9	58
Small Vegetables	1749	3208	3163	89	1	5	2	175	490	782	766	780	725
Stone Fruit (Adolescent)	0	0	1320	0	0	22	26	20	128	382	403	82	30
Stone Fruit (Mature)	1645	883	762	125	24	5	0	19	3	7	70	94	17
Stone Fruit (Young)	0	1360	310	120	828	489	824	923	1191	818	1005	558	258
Tomatoes and Peppers	752	2013	1691	14	1	16	0	1188	384	697	546	1415	1750
Urban, Industrial*	3123	3412	3648	7583	7565	10932	7414	7056	6340	6453	6684	6941	6921
Wine Grapes with 80% canopy	801	1007	1036	1909	1183	630	547	1589	1944	1146	1170	862	4520
Winter Wheat*	0	0	0	20373	12023	32495	29802	8152	9855	9222	8580	11152	12262
Kaweah Subbasin Irrigated Crop Acr	**133807**	**133516**	**133027**	**120832**	**129180**	**105020**	**110604**	**120961**	**125498**	**123017**	**125103**	**120831**	**120710**
Kaweah Subbasin Total Crop Acreag	**152057**	**152057**	**152044**	**152025**	**152007**	**151987**	**151972**	**151966**	**151959**	**151957**	**151955**	**151951**	**151949**

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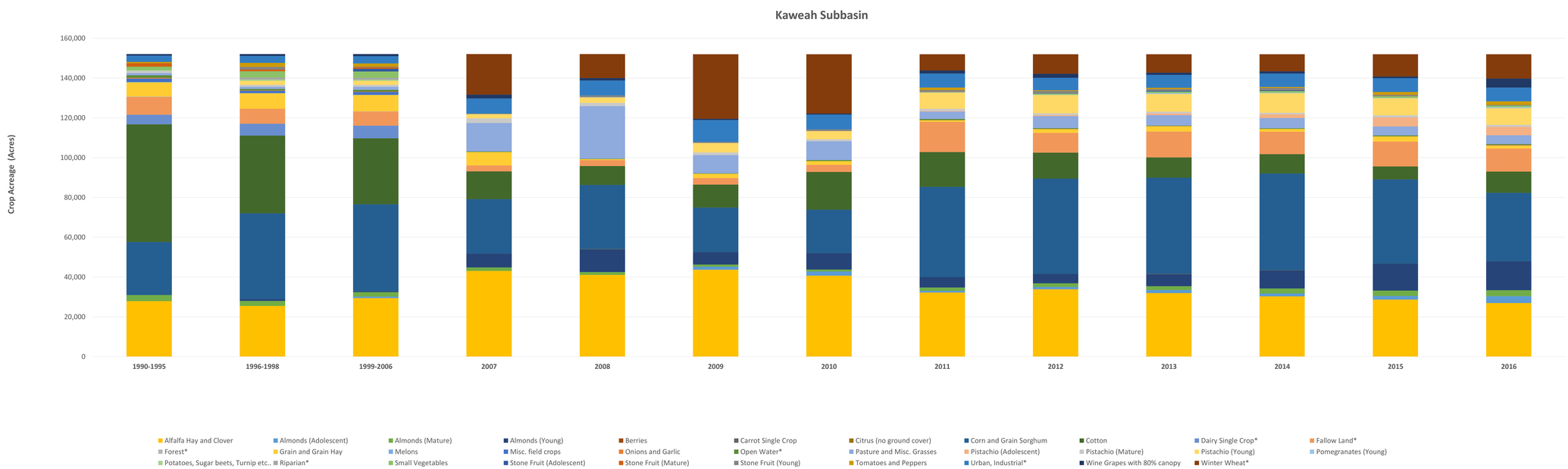

Sum of Crop Acreage (Acres) — **APPENDIX D1-8**

Kern County Subbasin	1990-1995	1996-1998	1999-2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Kern County Subbasin													
Alfalfa Hay and Clover	4901	4407	1624	4680	3816	4559	6610	2076	2224	3033	3011	2533	2915
Almonds (Adolescent)	0	0	812	0	0	1015	2696	295	249	1001	1166	529	567
Almonds (Mature)	1966	1035	402	2459	2384	2079	1689	1674	1889	1875	1878	2559	2635
Almonds (Young)	0	835	2229	5818	7283	2776	1820	1994	3570	4715	3756	3421	2367
Berries	0	0	0	0	0	0	0	0	0	8	0	0	0
Carrot Single Crop	53	0	0	0	0	0	0	0	0	3	1	1	2
Citrus (no ground cover)	0	0	0	0	131	278	0	2	19	2	152	1	1
Corn and Grain Sorghum	234	184	439	635	878	504	218	964	1186	852	491	614	144
Cotton	7102	10686	800	474	798	283	1970	614	385	66	120	30	62
Dairy Single Crop*	1	0	331	0	0	0	0	0	0	0	0	0	0
Fallow Land*	48223	31069	38616	13275	16082	6615	6146	40232	43273	36573	35547	40594	38237
Forest*	168	3	4832	0	1	1	0	0	2	0	0	0	0
Grain and Grain Hay	4362	11541	8261	506	1043	838	1682	1944	1374	1267	1078	1121	2860
Melons	0	0	0	0	0	1	0	0	21	8	1	0	4
Misc. field crops	2316	1463	1842	0	0	0	0	0	0	0	0	0	0
Onions and Garlic	130	56	0	0	0	0	9	52	71	10	16	34	102
Open Water*	2	308	376	513	376	796	241	553	408	202	331	137	126
Pasture and Misc. Grasses	1641	3129	2856	35869	32488	45504	44155	8180	8962	13185	18668	10827	9311
Pistachio (Adolescent)	0	0	0	0	0	0	0	0	0	2	61	758	807
Pistachio (Mature)	1847	1786	1775	2033	207	1	0	0	0	0	0	0	0
Pistachio (Young)	0	1906	4110	1063	631	663	1182	5304	7047	7601	4011	8202	6088
Pomegranates (Young)	0	0	0	0	361	0	0	5246	486	199	188	59	3850
Potatoes, Sugar beets, Turnip etc..	84	0	0	0	0	1	0	0	1	0	2	5	1
Riparian*	0	4723	4997	1015	956	1662	470	406	748	1307	571	1029	788
Small Vegetables	22	0	50	0	2	0	12	4	12	9	6	11	12
Stone Fruit (Adolescent)	0	0	20	0	0	0	0	0	0	0	0	0	3
Stone Fruit (Mature)	1600	245	202	0	0	0	0	0	0	0	0	0	0
Stone Fruit (Young)	0	27	3	5	124	60	14	42	14	25	246	24	119
Tomatoes and Peppers	724	766	0	0	0	1	0	83	80	17	24	28	127
Urban, Industrial*	16	237	266	2445	2462	4764	3065	2002	1443	1807	2236	1848	1751
Wine Grapes with 80% canopy	1779	2764	2324	2284	1647	852	1439	1520	1657	1530	2223	1418	1343
Winter Wheat*	0	0	0	4077	5456	3860	3684	3907	1963	1781	1292	1290	2849
Kern County Subbasin Irrigated Crop	**28760**	**40830**	**27749**	**55826**	**51792**	**59414**	**63495**	**29994**	**29247**	**35407**	**37098**	**32174**	**33318**
Kern County Subbasin Total Crop Ac	**77170**	**77170**	**77168**	**77150**	**77125**	**77111**	**77102**	**77094**	**77084**	**77078**	**77074**	**77073**	**77070**

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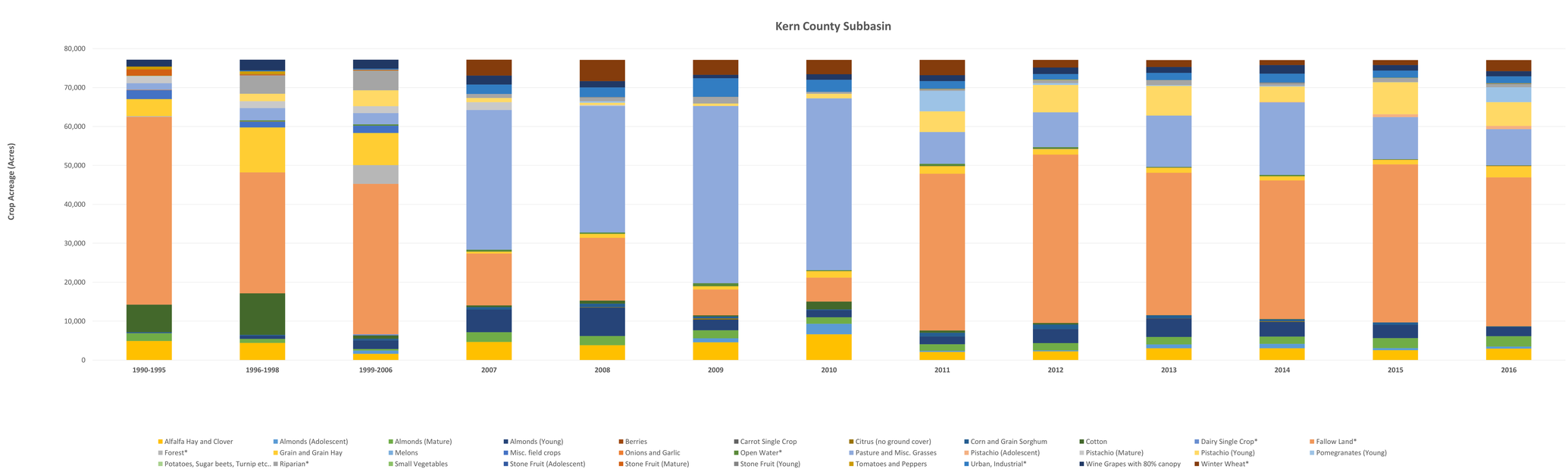

Sum of Crop Acreage (Acres) — **APPENDIX D1-9**

Kings Subbasin	1990-1995	1996-1998	1999-2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Kings Subbasin													
Alfalfa Hay and Clover	16306	11835	14019	24478	21394	30890	33571	14356	14247	13523	17393	14242	12182
Almonds (Adolescent)	0	0	3414	0	0	10231	8066	3031	3819	5446	5193	4806	8502
Almonds (Mature)	4542	3495	3350	5386	4752	3247	2623	5737	5882	3838	4426	6262	5965
Almonds (Young)	0	3529	1164	26493	40739	14505	10844	19230	18486	16474	23168	29556	14910
Berries	0	3	3	0	0	0	0	0	2	16	0	0	0
Carrot Single Crop	0	0	0	0	0	0	0	14	1	2	36	0	8
Citrus (no ground cover)	532	557	557	74	93	851	57	206	148	1165	2395	975	570
Corn and Grain Sorghum	9363	14915	13000	5986	10644	6420	7212	13547	12495	9374	12586	9486	8811
Cotton	17806	11022	8861	3151	3700	3875	7667	6017	4335	2911	4225	2613	3156
Dairy Single Crop*	2549	2553	2615	0	0	0	0	0	0	0	0	0	0
Fallow Land*	9327	7519	6268	4149	1922	4614	3512	10692	11063	6697	5755	7343	8050
Forest*	413	229	266	17	9	22	9	2	11	2	2	4	16
Grain and Grain Hay	3299	2801	3445	1384	1109	2770	3757	987	1365	3407	1774	2054	677
Melons	407	180	130	0	3	18	4	1	10	33	7	9	29
Misc. field crops	3315	3204	3954	0	0	1	0	0	0	0	0	0	0
Onions and Garlic	0	0	106	27	58	91	38	175	73	65	389	107	236
Open Water*	671	893	1398	536	483	241	350	473	459	471	418	539	374
Pasture and Misc. Grasses	3833	2326	1914	9370	10809	5861	6552	1431	2665	2291	1789	1361	1172
Pistachio (Adolescent)	0	0	0	0	0	0	0	3	10	3	21	38	34
Pistachio (Mature)	172	109	109	96	73	66	59	59	58	58	56	56	34
Pistachio (Young)	0	9	121	1806	1466	3603	1931	5141	3223	3251	4585	2899	4214
Pomegranates (Young)	0	0	0	142	194	337	312	966	661	581	601	414	315
Potatoes, Sugar beets, Turnip etc..	0	31	233	1	0	2	0	9	0	0	0	2	0
Riparian*	0	584	821	417	54	454	44	280	110	147	219	75	67
Small Vegetables	1465	961	728	9	38	3	15	80	133	591	63	20	52
Stone Fruit (Adolescent)	0	0	8693	0	0	9	87	120	241	326	234	311	141
Stone Fruit (Mature)	20143	16740	16500	1663	324	64	42	12	15	12	32	24	14
Stone Fruit (Young)	0	8804	865	632	3153	3757	6595	4583	2872	14281	4299	3588	1501
Tomatoes and Peppers	51	450	309	15	4	147	23	632	484	1101	554	489	1483
Urban, Commercial*	234	0	0	0	0	0	0	0	0	0	0	0	0
Urban, Industrial*	4096	4846	4942	9013	8793	12129	8555	8395	7942	10273	7943	8218	8190
Wine Grapes with 80% canopy	20602	21532	21331	16829	6248	5113	8126	17826	21517	14294	17966	19448	34154
Winter Wheat*	0	0	0	7416	3009	9737	8988	5024	6696	8390	2883	4070	4153
Kings Subbasin Irrigated Crop Acrea	**101836**	**102501**	**102807**	**97542**	**104801**	**91860**	**97580**	**94163**	**92742**	**93040**	**101794**	**98762**	**98160**
Kings Subbasin Total Crop Acreage	**119125**	**119125**	**119116**	**119090**	**119071**	**119056**	**119038**	**119030**	**119023**	**119019**	**119014**	**119012**	**119009**

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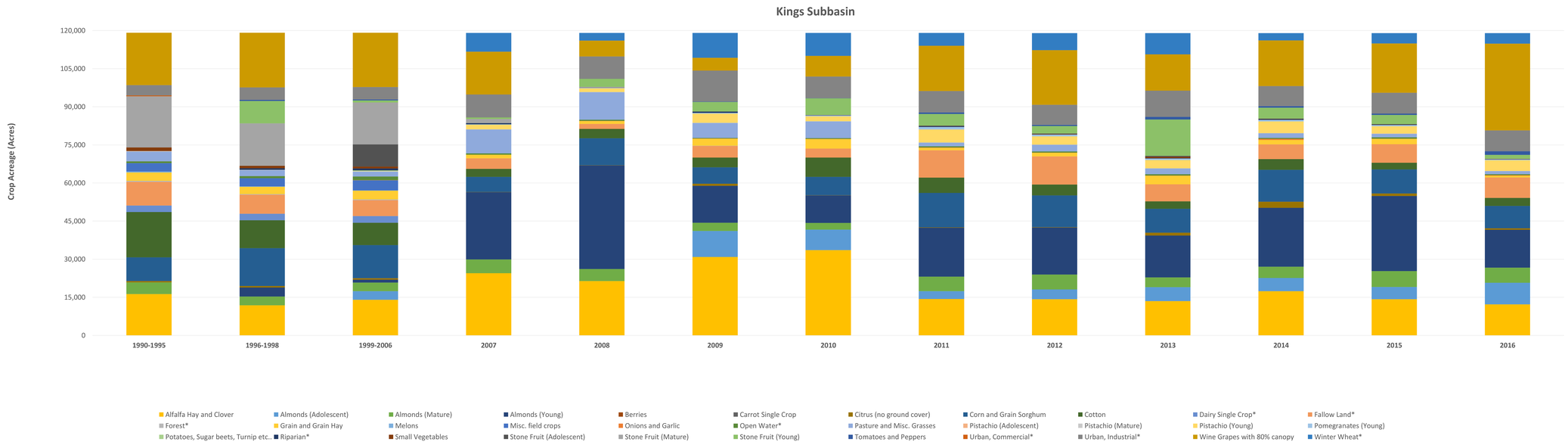

Sum of Crop Acreage (Acres) — **APPENDIX D1-10**

Tule Subbasin	1990-1995	1996-1998	1999-2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Tule Subbasin													
Alfalfa Hay and Clover	11815	24766	24766	24935	23335	18778	21039	12659	13696	12191	12634	10375	10831
Almonds (Adolescent)	0	0	2	0	0	48	32	5	3	20	48	98	413
Almonds (Mature)	43	13	13	0	0	0	0	3	0	0	0	6	6
Almonds (Young)	0	2	0	656	1520	1020	306	1111	740	1320	2101	2193	1892
Berries	0	0	0	0	0	0	0	0	0	0	0	0	0
Carrot Single Crop	0	0	0	0	0	0	0	1	0	0	0	1	17
Citrus (no ground cover)	0	0	0	0	0	0	0	5	0	3	4	2	1
Corn and Grain Sorghum	7656	13330	13330	8428	8660	5049	3069	18412	17304	11863	13687	10594	6087
Cotton	26378	13577	13577	1320	1507	2684	5541	2100	1527	1080	1498	1346	1809
Dairy Single Crop*	1668	3213	3213	0	0	0	0	0	0	0	0	0	0
Fallow Land*	50291	34370	34370	19350	25634	23018	24491	57622	52185	58262	47946	49332	40907
Forest*	59	9	9	0	0	13	0	0	0	0	0	0	0
Grain and Grain Hay	20747	22935	22934	3486	3875	4813	8244	6775	6675	7204	8679	11225	13366
Melons	12	0	0	0	0	5	0	1	2	1	65	4	27
Misc. field crops	1909	2492	2494	0	0	0	0	0	0	0	0	0	0
Onions and Garlic	2	0	0	1	0	0	83	41	103	1	5	20	59
Open Water*	2437	1373	1373	686	547	653	788	935	437	716	654	700	650
Pasture and Misc. Grasses	238	2419	2419	36249	38175	33240	40465	7292	14196	15170	18730	15904	11931
Pistachio (Adolescent)	0	0	0	0	0	0	0	459	371	429	624	995	1192
Pistachio (Mature)	0	0	0	100	67	41	33	33	33	32	32	398	398
Pistachio (Young)	0	201	201	1954	1313	3170	3336	2747	3086	4184	4677	4328	6906
Pomegranates (Young)	0	0	0	2	98	67	17	1076	2311	1363	2648	2709	2393
Potatoes, Sugar beets, Turnip etc..	929	2278	2278	0	0	1	0	1	1	1	4	7	1
Riparian*	0	2509	2509	199	121	57	183	186	58	158	68	63	47
Small Vegetables	0	517	517	1	1	5	204	10	33	31	55	43	236
Stone Fruit (Adolescent)	0	0	20	0	0	0	0	0	0	0	0	0	0
Stone Fruit (Mature)	9	0	0	0	0	0	0	0	0	0	0	0	0
Stone Fruit (Young)	0	20	0	7	72	9	2	35	31	1	43	41	6
Tomatoes and Peppers	2	18	18	1	0	2	0	105	108	72	268	233	658
Urban, Industrial*	950	1116	1116	4262	4258	6251	4117	3636	3116	3057	3771	3517	3402
Wine Grapes with 80% canopy	71	61	61	35	93	33	99	124	187	32	106	119	136
Winter Wheat*	0	0	0	23544	15937	26255	13161	9833	9005	8017	6859	10955	21832
Tule Subbasin Irrigated Crop Acreag	**69813**	**82629**	**82629**	**77175**	**78716**	**68963**	**82470**	**52997**	**60406**	**54997**	**65908**	**60640**	**58368**
Tule Subbasin Total Crop Acreage	**125218**	**125218**	**125218**	**125215**	**125214**	**125210**	**125209**	**125208**	**125207**	**125206**	**125206**	**125206**	**125205**

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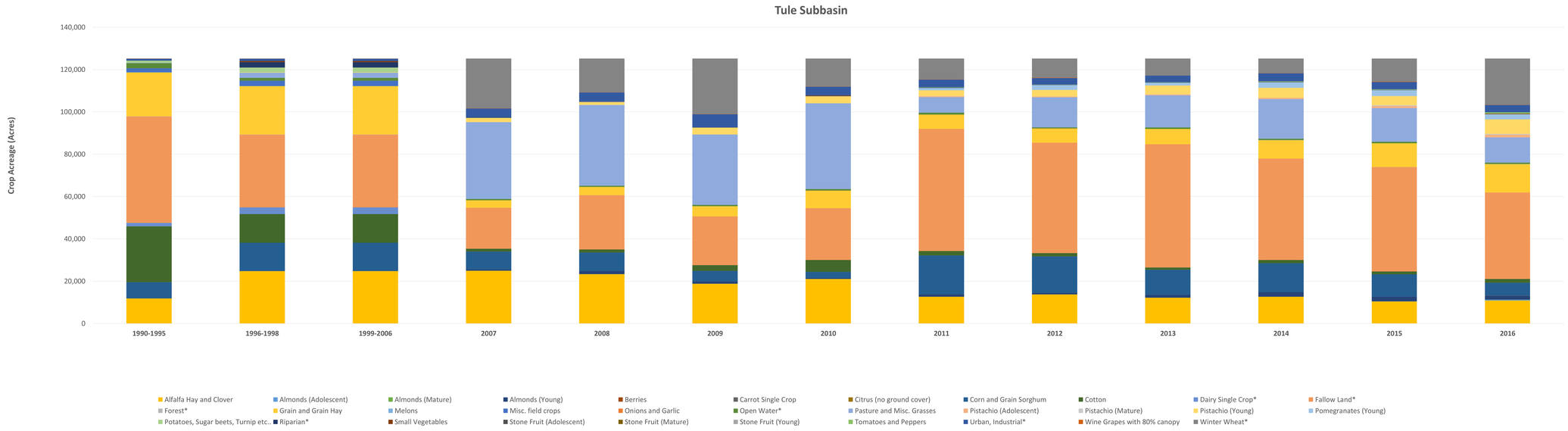

Sum of Crop Acreage (Acres) — **APPENDIX D1-11**

Westside Subbasin	1990-1995	1996-1998	1999-2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Westside Subbasin													
Alfalfa Hay and Clover	3565	1318	4209	5516	7401	9897	6821	2099	2614	2755	1895	1262	1284
Almonds (Adolescent)	0	0	485	0	0	1873	2016	183	381	1622	1309	802	736
Almonds (Mature)	152	0	0	1044	968	729	240	1962	2029	2068	2348	3129	2866
Almonds (Young)	0	492	680	3525	4619	1617	3064	2645	2375	2820	2693	2702	3720
Berries	12	9	11	0	0	0	0	0	194	0	0	0	30
Carrot Single Crop	0	0	0	0	0	0	0	52	0	1	3	28	2
Citrus (no ground cover)	8	7	18	0	37	16	0	72	0	128	276	27	146
Corn and Grain Sorghum	484	805	423	3151	3625	4814	1747	312	302	9	29	8	45
Cotton	39262	43751	28342	19395	8364	4552	11801	22437	17678	8400	5293	4097	5286
Dairy Single Crop*	95	0	0	0	0	0	0	0	0	0	0	0	0
Fallow Land*	12574	9781	4611	12872	16866	19744	11787	11910	13995	19578	26359	36778	32844
Forest*	47	0	0	11	3	112	206	0	0	11	0	0	0
Grain and Grain Hay	5433	4637	8954	2865	5720	1326	3954	952	7891	2061	3743	1900	2345
Melons	777	2323	1020	3	3702	556	2743	368	414	741	394	158	85
Misc. field crops	5520	3801	14307	0	0	0	14	0	0	0	0	0	0
Onions and Garlic	1997	2306	3392	767	381	1373	385	3942	4252	4107	3712	3762	4236
Open Water*	517	986	678	490	351	385	275	348	379	233	369	479	364
Pasture and Misc. Grasses	0	2	74	2414	2521	2822	4201	429	894	988	881	254	280
Pistachio (Adolescent)	0	0	0	0	0	0	0	900	1016	1184	1676	1740	1956
Pistachio (Mature)	1089	1048	1046	748	387	3	2	2	2	1	0	874	876
Pistachio (Young)	0	382	481	3177	3380	2036	3957	4225	4973	5282	7563	3854	4571
Pomegranates (Adolescent)	0	0	0	0	0	0	0	0	0	24	0	0	0
Pomegranates (Young)	0	0	0	259	395	136	645	251	168	210	13	168	239
Potatoes, Sugar beets, Turnip etc..	0	0	1051	106	0	0	0	30	0	0	0	0	2
Riparian*	0	0	0	19	8	348	39	11	2	17	10	6	8
Small Vegetables	651	537	281	2210	421	286	305	834	878	1259	2529	385	814
Stone Fruit (Adolescent)	0	0	67	0	0	87	42	50	40	13	53	0	0
Stone Fruit (Mature)	865	712	508	1081	867	605	494	435	1	0	6	0	0
Stone Fruit (Young)	0	101	1173	250	485	452	1600	520	127	114	86	2	60
Tomatoes and Peppers	4765	4606	4502	2001	77	1284	497	7045	8011	10820	9286	6558	6171
Urban, Commercial*	21	0	0	0	0	0	0	0	0	0	0	0	0
Urban, Industrial*	2219	2465	3683	6617	6463	8360	6217	5623	4131	4533	4628	4411	4697
Wine Grapes with 80% canopy	353	341	408	1780	1265	714	686	725	1333	1503	1881	1261	1756
Winter Wheat*	0	0	0	10100	12089	16257	16641	12017	6298	9893	3340	5724	4952
Westside Subbasin Irrigated Crop Ac	**64932**	**67173**	**71432**	**50291**	**44615**	**35179**	**45215**		**55572**	**46111**	**45668**	**32972**	**37506**
Westside Subbasin Total Crop Acrea	**80405**	**80405**	**80404**	**80400**	**80394**	**80386**	**80381**	**80378**	**80376**	**80375**	**80373**	**80371**	**80371**

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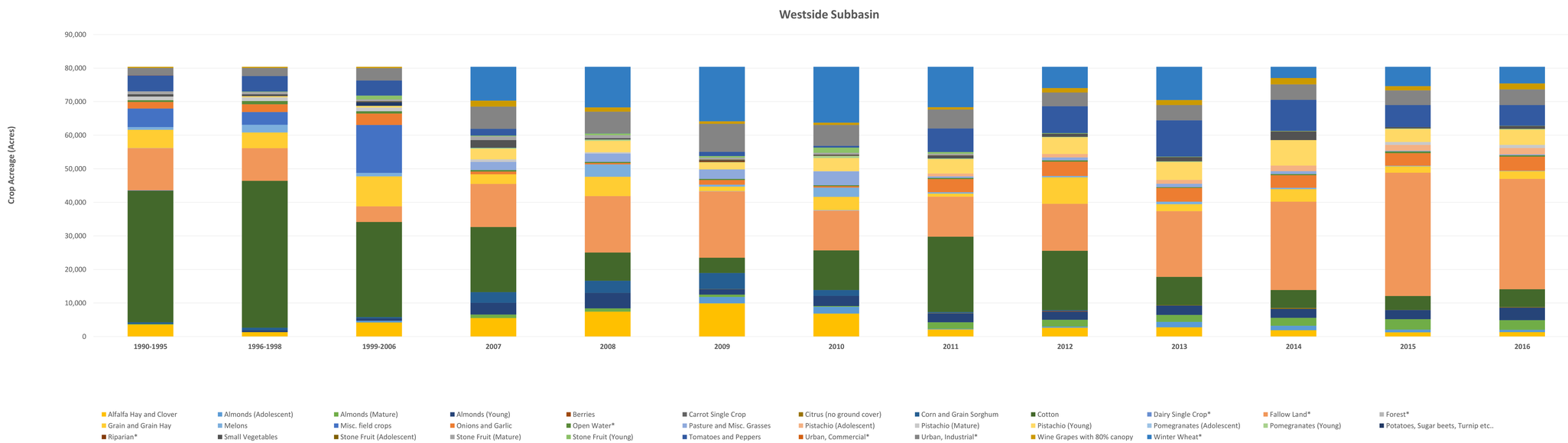


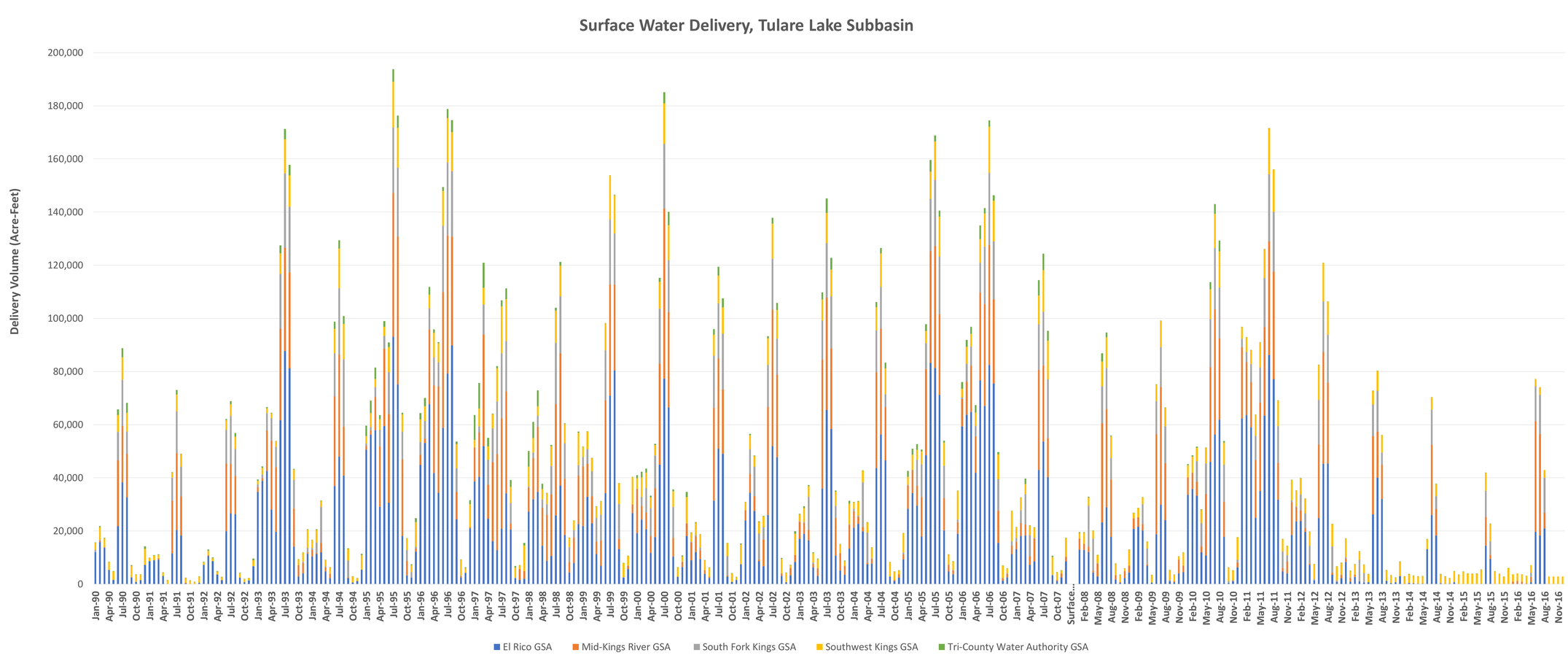
Appendix D2
Monthly Surface Water Deliveries by GSA and Subbasin

APPENDIX D2-1

Surface Water Delivery (Acre-Feet)	El Rico GSA	Mid-Kings River GSA	South Fork Kings GSA	Southwest Kings GSA	Tri-County Water Authority GSA	Tulare Lake Subbasin Total
Jan-90	12096	0	799	2753	12	15660
Feb-90	15780	532	389	4646	439	21787
Mar-90	13668	183	0	3383	136	17370
Apr-90	5311	0	0	3008	136	8454
May-90	1550	0	0	3191	159	4900
Jun-90	21777	24810	10647	6343	2198	65774
Jul-90	38337	21228	17294	8527	3431	88817
Aug-90	32604	16448	8315	7059	3826	68253
Sep-90	2580	0	0	4198	328	7106
Oct-90	788	0	0	2760	78	3626
Nov-90	1498	0	0	2048	164	3709
Dec-90	7192	0	0	6100	889	14181
Jan-91	8679	0	0	1104	181	9965
Feb-91	8930	0	0	1727	185	10843
Mar-91	9149	547	0	1291	182	11170
Apr-91	3017	45	0	1251	62	4375
May-91	114	0	0	1304	1	1420
Jun-91	11492	19825	8674	2059	6	42056
Jul-91	20315	29037	15627	6390	1621	72990
Aug-91	18326	14618	11119	4857	21	48941
Sep-91	329	202	0	1793	3	2328
Oct-91	58	0	0	1244	1	1303
Nov-91	111	0	0	725	1	837
Dec-91	540	0	0	2339	8	2888
Jan-92	7246	0	0	920	273	8440
Feb-92	10577	299	0	1569	546	12991
Mar-92	8589	0	0	1126	352	10067
Apr-92	3607	0	0	1104	175	4886
May-92	1444	0	0	1157	101	2702
Jun-92	19886	25477	12628	3649	434	62074
Jul-92	26610	18544	18112	4383	1222	68870
Aug-92	26266	14436	10146	4586	1475	56908
Sep-92	2425	0	17	1607	210	4260
Oct-92	733	0	0	1107	50	1890
Nov-92	1399	0	42	788	105	2334
Dec-92	6752	0	0	2247	568	9567
Jan-93	34635	1882	1061	1250	518	39346
Feb-93	38849	1049	1263	2577	606	44344
Mar-93	42588	15260	6536	1765	484	66632
Apr-93	27978	25934	8549	1783	190	64434
May-93	19683	24280	7672	2096	49	53781
Jun-93	61633	34418	20707	7760	2909	127427
Jul-93	87698	38923	27999	12806	3881	171307
Aug-93	81214	36099	24734	11805	3983	157835
Sep-93	14088	14353	10776	3878	252	43346
Oct-93	2877	4303	0	2120	24	9326
Nov-93	3993	3868	580	3408	51	11900
Dec-93	11465	490	1753	6678	277	20663
Jan-94	10334	2575	689	2961	7	16565
Feb-94	11346	324	3923	4813	240	20646
Mar-94	12003	3460	13518	2370	74	31425
Apr-94	4798	1453	468	2327	74	9121
May-94	2215	1617	63	2408	87	6390
Jun-94	36961	33759	16145	9249	2660	98774
Jul-94	48009	38368	25061	14823	3141	129403
Aug-94	40822	18407	25402	13274	2948	100854
Sep-94	2209	284	6397	4309	208	13407
Oct-94	589	0	0	2259	43	2891
Nov-94	1124	0	0	1123	90	2336
Dec-94	5419	0	0	5487	486	11392
Jan-95	50543	1489	872	2742	4002	59648
Feb-95	56193	1601	1274	5234	4718	69020
Mar-95	57904	12501	3713	3136	4209	81464
Apr-95	29106	22707	6177	3981	1644	63614
May-95	59386	29180	4786	3452	2211	99016
Jun-95	30642	33398	15773	9446	1637	90896
Jul-95	93097	54051	24738	17192	4769	193847
Aug-95	75149	55594	25997	14978	4617	176335
Sep-95	18055	28881	10439	6469	600	64444
Oct-95	3250	5460	4122	4404	130	17366
Nov-95	2410	0	1993	2751	275	7430
Dec-95	12155	1222	586	9321	1489	24773
Jan-96	44804	3917	4812	8505	2349	64387
Feb-96	53068	1691	6610	5587	3070	70027
Mar-96	67724	28082	7981	5191	2808	111787
Apr-96	41794	32997	10433	9367	1218	95808
May-96	34362	40058	8963	7192	410	90985
Jun-96	58752	51099	24996	13079	1533	149459
Jul-96	79092	52174	27425	16679	3469	178839
Aug-96	89843	40906	24649	14773	4495	174666
Sep-96	24394	10256	8963	9114	940	53668
Oct-96	2515	415	373	5858	131	9293
Nov-96	4276	0	0	1720	277	6274
Dec-96	21009	507	0	8581	1500	31597
Jan-97	38642	12784	0	2864	9282	63572
Feb-97	40362	16730	2192	6744	9729	75757
Mar-97	51972	41932	11303	6310	9411	120928
Apr-97	24596	12751	9437	5063	3232	55079
May-97	16136	29820	12593	5395	166	64110
Jun-97	12763	36157	19809	12465	842	82036
Jul-97	20865	41549	24488	17688	2223	106812
Aug-97	34090	38432	18975	15742	4045	111285
Sep-97	20520	2208	7805	6062	2594	39189
Oct-97	2187	0	294	3743	581	6804
Nov-97	1598	4010	0	1392	172	7173
Dec-97	1959	2947	0	9663	931	15499
Jan-98	27236	9019	488	7448	5942	50133
Feb-98	31844	15587	1993	5453	6191	61069
Mar-98	34696	24491	4235	3483	6014	72919
Apr-98	14460	14200	3219	3832	2058	37768
May-98	8776	17329	3981	4124	109	34318
Jun-98	10527	23256	10677	7449	401	52311
Jul-98	25767	42068	22992	12083	1124	104033
Aug-98	37026	49842	21467	11524	1358	121217
Sep-98	18449	21166	13410	7283	192	60500
Oct-98	4362	4005	5516	3488	45	17417
Nov-98	7941	9537	2820	3536	99	23932
Dec-98	22517	18341	3900	12154	528	57440
Jan-99	21858	22424	3602	3790	92	51766
Feb-99	32889	12418	5423	6632	105	57468
Mar-99	22875	10239	9343	4919	89	47466
Apr-99	11286	4682	8966	4310	35	29278
May-99	6892	9519	9693	5002	8	31114
Jun-99	34267	34956	18737	10197	60	98216
Jul-99	70847	41958	24375	16565	114	153859
Aug-99	80450	32271	19217	14414	173	146525
Sep-99	13128	3880	13204	7652	87	37951
Oct-99	2379	0	306	5179	4	7868
Nov-99	5597	1225	223	3566	9	10619
Dec-99	26748	3260	3	10193	47	40249
Jan-00	19168	16688	0	3981	1203	41040
Feb-00	24248	5154	3492	7221	2132	42247
Mar-00	20602	6407	9117	5813	1472	43410
Apr-00	11770	6319	10455	4060	687	33292
May-00	17655	18463	12305	3963	345	52732
Jun-00	44925	37946	20771	10132	1476	115251
Jul-00	77296	63999	24480	15187	4158	185120
Aug-00	66535	35841	19517	13197	5017	140108
Sep-00	10350	7067	11589	5866	714	35586
Oct-00	2705	0	0	3524	169	6399
Nov-00	6375	1920	167	1939	357	10757
Dec-00	18044	4739	148	9827	1933	34689
Jan-01	8961	6643	306	3439	7	19357
Feb-01	12104	5840	413	4738	249	23344
Mar-01	9359	3393	955	5022	77	18805
Apr-01	3836	1392	0	3725	77	9030
May-01	2267	621	0	3302	90	6280
Jun-01	31309	35031	19672	7838	2141	95991
Jul-01	50997	33980	20650	10499	3334	119460
Aug-01	49055	24248	20927	9909	3350	107488
Sep-01	2898	319	7363	4769	186	15535
Oct-01	808	0	0	3235	44	4088
Nov-01	1545	0	0	1047	93	2685
Dec-01	7472	0	0	7351	505	15328
Jan-02	23954	3915	0	2950	50	30869
Feb-02	34366	7194	9184	5270	523	56538
Mar-02	27523	5518	11211	3970	187	48409
Apr-02	8687	535	9845	4403	163	23633
May-02	6720	10074	4546	4164	176	25680
Jun-02	25952	40777	15782	9963	815	93288
Jul-02	51918	51345	19135	13258	2180	137837
Aug-02	47781	31068	13428	10907	2618	105802
Sep-02	3024	974	0	5499	364	9861
Oct-02	753	0	0	3507	86	4346
Nov-02	3255	2826	0	1030	182	7292
Dec-02	8335	2524	0	8095	984	19937
Jan-03	17035	6380	178	2599	251	26443
Feb-03	18975	3997	356	5205	759	29292
Mar-03	16464	3997	12382	4018	398	37259
Apr-03	6235	1332	536	3573	240	11916
May-03	3104	2694	180	3447	189	9614
Jun-03	35955	48545	14724	7872	2655	109751
Jul-03	65530	42356	20487	11279	5552	145204
Aug-03	58315	30398	19584	10022	4429	122748
Sep-03	10724	14051	4602	5418	390	35185
Oct-03	5060	6628	0	3235	93	15015
Nov-03	3534	3270	0	1849	195	8849
Dec-03	13310	8954	246	7783	1057	31349
Jan-04	21193	6202	887	2469	169	30920
Feb-04	22630	2751	421	5211	232	31245
Mar-04	19750	1700	16892	4331	188	42861
Apr-04	7463	567	11364	3817	76	23287
May-04	7649	1847	202	4028	23	13750
Jun-04	43669	36111	15703	8761	1864	106108
Jul-04	56276	39905	15616	12716	2044	126557
Aug-04	46550	20059	4869	9753	2102	83334
Sep-04	2893	0	0	5344	48	8285
Oct-04	1143	426	0	3106	11	4686
Nov-04	2473	1234	27	1335	24	5093
Dec-04	9313	1915	630	7305	130	19292
Jan-05	28328	8681	318	3073	2183	42584
Feb-05	34297	8543	211	5698	2211	50959
Mar-05	29485	7573	9716	3712	2191	52678
Apr-05	17953	14774	12322	4882	736	50667
May-05	48534	32390	9719	4539	2573	97756
Jun-05	83212	42082	19626	10292	4362	159573
Jul-05	81301	45958	24885	14477	2262	168883
Aug-05	71251	30263	21741	15052	2244	140551
Sep-05	20198	12158	12151	8680	770	53957
Oct-05	4823	2388	126	3795	5	11137
Nov-05	3751	1321	193	3261	10	8536
Dec-05	18891	4407	951	10899	57	35205
Jan-06	59292	10338	592	3257	2512	75991
Feb-06	63754	12505	6626	6422	2541	91849
Mar-06	64764	17538	6973	4837	2663	96774
Apr-06	41883	13691	3840	5137	2833	67383
May-06	76704	32999	11252	8857	5127	134938
Jun-06	67064	38328	21556	12485	2077	141510
Jul-06	82441	45232	27164	17302	2425	174563
Aug-06	75475	31743	21761	15341	2036	146355
Sep-06	15527	12043	11907	9365	807	49649
Oct-06	1262	853	149	4680	33	6977
Nov-06	2510	1310	156	1921	11	5908
Dec-06	11319	3168	1686	11288	62	27522
Jan-07	13171	2716	1406	4102	0	21395
Feb-07	18115	4927	4753	4776	12	32582
Mar-07	18252	4158	11450	3792	2061	39713
Apr-07	7207	3220	7950	3630	4	22010
May-07	8494	8585	313	3894	4	21291
Jun-07	42957	37657	17154	10846	5784	114397
Jul-07	53608	28757	20138	15667	6199	124370
Aug-07	40221	14702	22073	14551	3777	95325
Sep-07	3237	0	300	6629	473	10638
Oct-07	1095	474	0	2879	2	4449
Nov-07	2519	1514	0	1013	5	5050
Dec-07	8543	1666	0	7129	24	17363

APPENDIX D2-1 (Cont)

Surface Water Delivery (Acre-Feet)	El Rico GSA	Mid-Kings River GSA	South Fork Kings GSA	Southwest Kings GSA	Tri-County Water Authority GSA	Tulare Lake Subbasin Total
Jan-08	12877	4236	0	2158	249	19521
Feb-08	12794	2358	0	4154	286	19592
Mar-08	12030	2029	15452	3035	260	32806
Apr-08	4310	676	12129	2975	94	20185
May-08	2848	4804	280	2918	14	10863
Jun-08	23201	37252	14023	9327	3063	86866
Jul-08	28911	36960	15430	11570	1795	94666
Aug-08	17737	21618	8115	8066	321	55857
Sep-08	1686	1694	0	4266	28	7674
Oct-08	535	324	0	2614	7	3479
Nov-08	2311	2600	0	966	14	5891
Dec-08	4305	2578	0	6083	77	13042
Jan-09	20714	4035	0	1996	0	26745
Feb-09	21578	3528	0	3511	2	28619
Mar-09	20219	2386	7422	2559	1	32585
Apr-09	6912	583	5834	2571	1	15900
May-09	626	0	0	2805	1	3432
Jun-09	18684	37791	12420	6179	3	75077
Jul-09	29891	44375	14955	9897	7	99125
Aug-09	24119	21353	13859	7115	9	66454
Sep-09	992	0	583	3621	1	5197
Oct-09	662	513	0	2362	0	3537
Nov-09	4030	5151	0	1119	1	10300
Dec-09	4435	2475	0	4964	3	11878
Jan-10	33578	6591	0	4533	503	45205
Feb-10	35716	6121	0	6119	503	48460
Mar-10	33280	5202	7720	5041	503	51746
Apr-10	11965	2285	8767	4939	168	28125
May-10	10826	23142	11452	5874	0	51294
Jun-10	45995	35698	18042	11282	2611	113628
Jul-10	56367	47091	23080	12815	3684	143036
Aug-10	61845	30709	19039	13661	4026	129280
Sep-10	17793	13208	13979	8270	556	53806
Oct-10	417	0	736	5071	0	6224
Nov-10	1053	221	221	3629	0	5126
Dec-10	6255	1797	1065	8405	1	17524
Jan-11	62292	26805	3271	4336	0	96704
Feb-11	63568	19954	3729	5631	17	92899
Mar-11	58959	17047	6734	5266	5	88011
Apr-11	24884	21763	9084	8007	5	63744
May-11	34998	33281	13176	9466	6	90927
Jun-11	63404	33286	18476	10767	26	125958
Jul-11	86173	42788	25299	17245	72	171578
Aug-11	77137	40417	22548	15888	87	156077
Sep-11	31800	13857	13793	9652	12	69114
Oct-11	4824	1194	6244	4587	3	16851
Nov-11	4056	4435	2415	3445	6	14358
Dec-11	18473	12326	750	7661	34	39243
Jan-12	23492	5381	289	6088	0	35250
Feb-12	23705	4034	5923	6199	14	39875
Mar-12	19686	1379	5543	5520	4	32131
Apr-12	7287	460	6581	5292	4	19625
May-12	1402	0	454	5644	5	7504
Jun-12	24802	27755	16731	13201	21	82510
Jul-12	45234	42066	19057	14465	60	120883
Aug-12	45391	30434	18014	12409	72	106320
Sep-12	3441	840	9880	8366	10	22537
Oct-12	777	123	405	5250	2	6556
Nov-12	2219	1192	59	4525	5	8001
Dec-12	8318	1267	508	7047	28	17168
Jan-13	893	1266	330	2519	0	5009
Feb-13	2596	939	7	3906	14	7463
Mar-13	1013	33	8164	3040	4	12254
Apr-13	613	11	3540	3028	4	7196
May-13	717	0	0	3016	5	3738
Jun-13	26176	29510	11863	5136	22	72707
Jul-13	39994	17398	15372	7502	61	80327
Aug-13	31989	12980	4464	6522	74	56030
Sep-13	1222	0	0	4031	11	5264
Oct-13	371	0	0	2910	2	3284
Nov-13	665	0	0	1723	5	2393
Dec-13	3004	99	0	5274	29	8405
Jan-14	31	27	0	2773	0	2831
Feb-14	331	0	7	3338	9	3686
Mar-14	231	138	0	2791	3	3163
Apr-14	120	0	0	2745	3	2869
May-14	141	0	0	2816	3	2959
Jun-14	13183	0	0	3744	14	16941
Jul-14	25975	26500	13175	4647	41	70337
Aug-14	18326	9961	4790	4555	49	37681
Sep-14	246	0	90	3414	7	3757
Oct-14	71	0	0	2751	2	2824
Nov-14	138	0	0	2041	3	2182
Dec-14	681	0	0	4106	19	4806
Jan-15	4	0	0	3439	0	3443
Feb-15	32	0	0	4691	2	4725
Mar-15	45	0	31	3836	3	3915
Apr-15	27	0	11	3764	2	3804
May-15	32	0	0	3840	2	3874
Jun-15	55	0	65	5326	4	5451
Jul-15	14382	10880	9816	6779	10	41868
Aug-15	9458	1549	5162	6539	9	22718
Sep-15	23	0	0	4764	2	4788
Oct-15	17	0	0	3743	1	3761
Nov-15	25	0	0	2725	2	2752
Dec-15	75	0	0	5887	6	5968
Jan-16	0	896	0	2854	0	3750
Feb-16	116	1103	0	2854	0	4073
Mar-16	0	896	0	2854	0	3750
Apr-16	0	299	0	2854	0	3153
May-16	672	2004	1559	2854	0	7089
Jun-16	19693	41699	12988	2854	0	77234
Jul-16	18328	38082	14830	2854	0	74094
Aug-16	20982	5884	13154	2854	0	42874
Sep-16	0	0	0	2854	0	2854
Oct-16	0	0	0	2854	0	2854
Nov-16	0	0	0	2854	0	2854
Dec-16	0	0	0	2854	0	2854

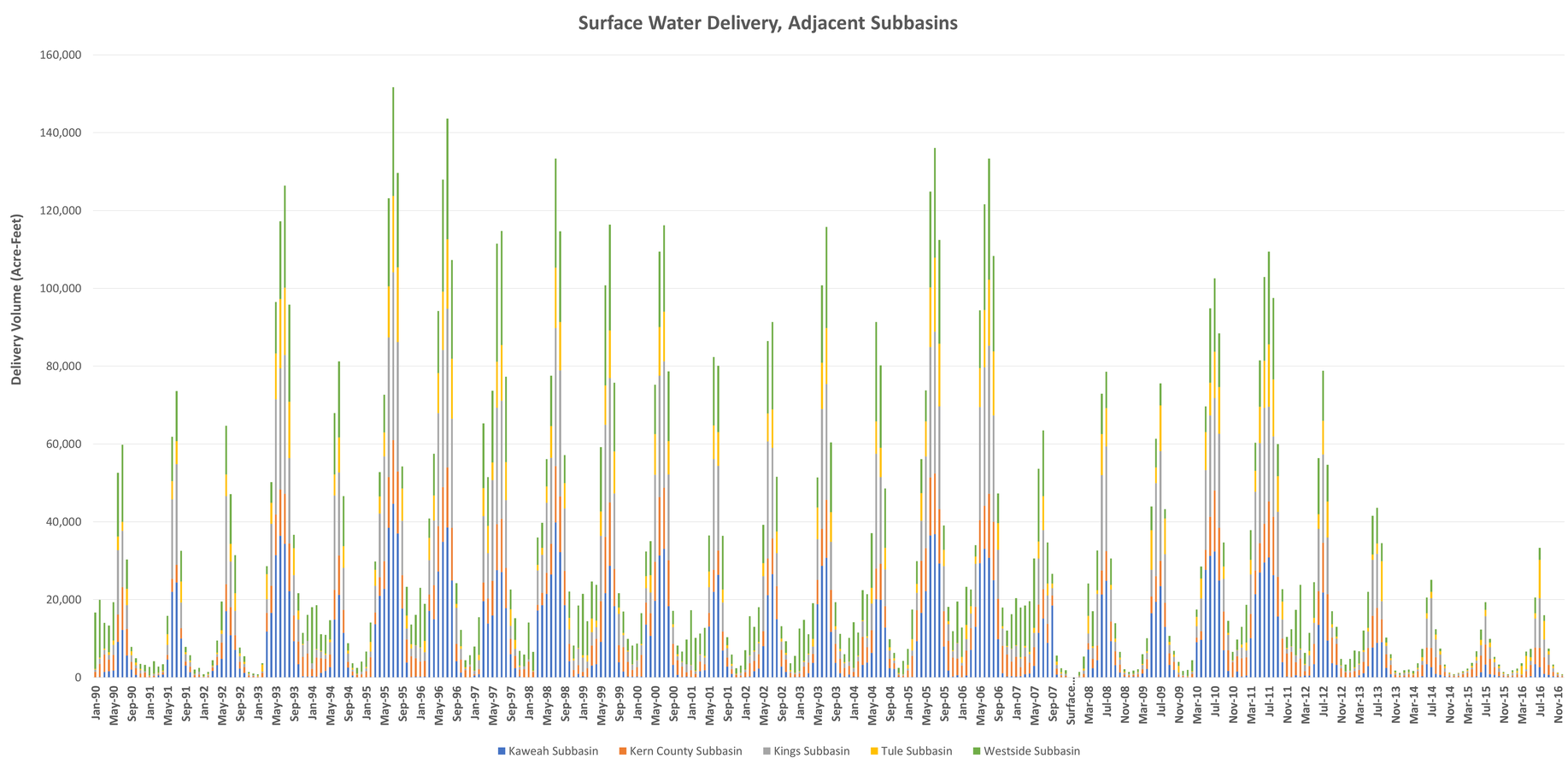


APPENDIX D2-2

Surface Water Delivery (Acre-Feet)	Kaweah Subbasin	Kern County Subbasin	Kings Subbasin	Tule Subbasin	Westside Subbasin
Jan-90	47	1371	641	98	14547
Feb-90	130	3377	1373	244	14780
Mar-90	1444	4469	1141	386	6613
Apr-90	1596	2992	1217	636	6917
May-90	1731	4044	2573	1121	9906
Jun-90	9129	7032	16562	3468	16410
Jul-90	12238	10939	14508	2300	19830
Aug-90	5593	6916	6048	4178	7587
Sep-90	2007	1975	1688	1038	1151
Oct-90	652	1725	781	670	1147
Nov-90	85	936	851	296	1291
Dec-90	41	1201	324	59	1575
Jan-91	8	307	94	53	2212
Feb-91	42	378	461	131	3188
Mar-91	605	178	324	159	1529
Apr-91	760	466	259	269	1647
May-91	4621	1175	2598	2722	4730
Jun-91	22007	3359	20363	4708	11412
Jul-91	24361	4596	25900	5856	12927
Aug-91	9982	2702	6574	5370	7908
Sep-91	3052	1040	1852	547	1387
Oct-91	1344	1418	1184	359	1441
Nov-91	53	485	336	159	972
Dec-91	143	566	763	32	960
Jan-92	7	103	99	82	508
Feb-92	55	251	386	204	558
Mar-92	1716	798	320	249	1368
Apr-92	3133	2152	715	429	3036
May-92	4802	4154	2222	941	7373
Jun-92	17030	6905	22629	5580	12539
Jul-92	10891	7189	11734	4545	12735
Aug-92	7065	3767	6252	4529	9834
Sep-92	2278	1713	1418	842	1429
Oct-92	1139	1486	843	560	1418
Nov-92	35	460	326	248	374
Dec-92	24	270	322	49	366
Jan-93	3	233	45	223	283
Feb-93	24	1115	327	1878	329
Mar-93	11765	4796	3525	6456	2058
Apr-93	16628	6952	15864	5452	5331
May-93	31394	10498	29534	11882	13180
Jun-93	36360	11963	31144	17772	19969
Jul-93	34332	12848	35642	17361	26255
Aug-93	22197	12206	21941	14504	24952
Sep-93	9298	6569	10424	6972	3412
Oct-93	3372	5814	5706	2284	4458
Nov-93	284	4976	3108	248	2854
Dec-93	253	5866	3255	31	6689
Jan-94	293	1859	1457	62	14391
Feb-94	235	4902	2052	154	11245
Mar-94	1174	3746	1735	187	4253
Apr-94	1700	3097	1026	352	4789
May-94	2645	3262	3119	733	4923
Jun-94	14876	7646	24290	5384	15762
Jul-94	21182	10130	21360	9021	19556
Aug-94	11467	5895	10842	5542	12822
Sep-94	2504	1525	2089	759	1917
Oct-94	455	1049	516	434	1230
Nov-94	27	623	151	187	1490
Dec-94	50	801	649	37	2553
Jan-95	62	1517	822	294	3945
Feb-95	107	5076	1466	2446	4999
Mar-95	13717	2946	6844	4178	2134
Apr-95	21008	4724	16379	4430	6216
May-95	22750	7162	26917	6118	9726
Jun-95	38495	12984	35898	13129	22645
Jul-95	44604	16411	43101	19611	27976
Aug-95	36972	16002	33223	19211	24260
Sep-95	17742	8571	13976	8283	5616
Oct-95	3822	5892	2839	3356	7384
Nov-95	171	5241	1991	1162	5016
Dec-95	241	4683	3265	112	7753
Jan-96	257	3830	3497	171	15241
Feb-96	227	4045	2233	2850	9564
Mar-96	17084	4212	8807	5755	4982
Apr-96	14994	8713	16632	6401	10742
May-96	27215	11626	29126	10291	15910
Jun-96	34883	14051	35248	14968	28780
Jul-96	38539	15436	40793	17823	31016
Aug-96	24891	13542	28073	15431	25341
Sep-96	4141	4517	9234	1028	5287
Oct-96	1268	3364	2693	684	4243
Nov-96	43	1779	492	306	1763
Dec-96	33	2734	452	60	2416
Jan-97	465	318	888	96	6174
Feb-97	780	1350	2277	1360	9686
Mar-97	19616	4778	17019	7234	16640
Apr-97	13855	6395	11696	7037	12485
May-97	15904	8934	25906	4524	18409
Jun-97	27570	11860	29858	11890	30312
Jul-97	27017	13740	30387	14320	29306
Aug-97	17755	10410	17428	9734	21987
Sep-97	5995	3886	3381	4308	5058
Oct-97	2392	3114	1834	2352	5550
Nov-97	209	1807	686	391	3755
Dec-97	86	2021	735	57	2950
Jan-98	40	4058	557	53	9421
Feb-98	16	1413	136	180	4800
Mar-98	17198	1462	8816	1500	6959
Apr-98	18553	3193	9764	1807	6464
May-98	21517	5380	17966	4202	7069
Jun-98	26476	7845	22139	8145	12919
Jul-98	39784	14518	35487	15503	28073
Aug-98	32219	14327	32359	12476	23258
Sep-98	18559	8841	16058	6449	7230
Oct-98	4207	4416	3715	2929	6783
Nov-98	184	1743	2377	583	3331
Dec-98	877	2290	4223	202	10884
Jan-99	270	1175	3687	554	15754
Feb-99	128	2220	1732	1655	8688
Mar-99	3039	5126	3462	3523	9463
Apr-99	3354	6552	3010	1742	9135
May-99	9147	10436	16776	6266	16579
Jun-99	21666	14488	28786	10130	25709
Jul-99	28645	16359	31931	12287	27148
Aug-99	18298	9651	19378	10795	17599
Sep-99	3892	4405	8003	1635	3740
Oct-99	1489	6242	3144	537	5503
Nov-99	233	3775	2670	237	2996
Dec-99	186	1789	1369	47	4824
Jan-00	183	2447	1682	75	4298
Feb-00	195	5584	2515	351	7826
Mar-00	13554	5723	3625	3107	6384
Apr-00	10637	5906	5303	4436	8766
May-00	19686	10031	22335	10465	12749
Jun-00	31336	15006	31244	12509	19346
Jul-00	33065	15694	32482	12724	22269
Aug-00	18279	11856	22034	8593	17887
Sep-00	3187	5443	4314	769	3424
Oct-00	618	3815	1001	512	2275
Nov-00	165	2624	1086	226	2571
Dec-00	181	1151	2033	45	6332
Jan-01	96	1721	1304	73	14080
Feb-01	79	836	681	182	8421
Mar-01	1619	2440	1699	222	5282
Apr-01	1845	1588	1697	375	7266
May-01	13061	3564	6552	4061	9234
Jun-01	22013	5679	28434	8687	17537
Jul-01	26342	6281	21764	8711	16982
Aug-01	6921	4870	7429	3397	13782
Sep-01	2808	2297	2379	753	2108
Oct-01	904	1182	867	501	2447
Nov-01	47	561	206	222	1305
Dec-01	58	412	728	44	1826
Jan-02	111	1242	555	77	5044
Feb-02	263	3354	1887	191	10078
Mar-02	1567	2679	2407	232	6151
Apr-02	2279	3694	2782	392	8934
May-02	8056	3793	14135	3426	9804
Jun-02	21134	9403	30090	7238	18587
Jul-02	26501	9237	23318	9796	22521
Aug-02	14993	8456	8492	5606	14048
Sep-02	2807	4270	2133	787	3193
Oct-02	1460	3142	1181	524	2963
Nov-02	54	1076	411	348	1778
Dec-02	127	689	375	57	4261
Jan-03	125	882	459	181	10900
Feb-03	103	2700	1212	218	10555
Mar-03	1043	2788	2060	266	4915
Apr-03	3767	2265	1936	1959	9139
May-03	18843	6246	10425	8209	7639
Jun-03	28702	9500	30798	11859	19955
Jul-03	30699	14946	29784	14417	25924
Aug-03	11713	10773	12405	7635	17902
Sep-03	3771	4893	3616	901	6180
Oct-03	1102	3625	2000	600	3883
Nov-03	224	2201	1216	265	2084
Dec-03	729	2211	1061	53	6090
Jan-04	205	1248	884	83	11775
Feb-04	127	4067	1213	207	5917
Mar-04	3259	7192	4015	252	7697
Apr-04	3828	3913	2446	426	10818
May-04	6348	5772	6833	4041	14128
Jun-04	20114	7846	29563	8286	25508
Jul-04	19954	9223	22297	7586	21170
Aug-04	12796	5486	9468	5573	15280
Sep-04	2383	2398	2093	855	2084
Oct-04	2235	1451	661	569	1365
Nov-04	96	485	345	252	1231
Dec-04	36	392	340	50	3433
Jan-05	37	1723	515	973	4077
Feb-05	142	5371	1397	2875	7664
Mar-05	9329	7917	4535	2312	5803
Apr-05	16557	13449	10234	7101	8779
May-05	22141	11096	23578	9012	7929
Jun-05	36488	14923	33535	15303	24589
Jul-05	36866	15534	36452	19067	28207
Aug-05	29242	14034	26373	16129	26623
Sep-05	7968	9057	11583	4196	6209
Oct-05	1790	7564	4348	715	3728
Nov-05	191	4929	1583	316	4856
Dec-05	574	4297	3944	63	10618
Jan-06	44	3048	619	1536	7565
Feb-06	498	6448	2851	3751	9719
Mar-06	7048	5619	3734	1916	4257
Apr-06	13024	5112	11080	1843	2963
May-06	29347	11068	29089	9981	14873
Jun-06	33094	11030	35571	14724	27155
Jul-06	30714	16449	38124	16978	31089
Aug-06	24962	15057	27330	16460	24540
Sep-06	9862	10336	12634	6849	7608
Oct-06	1096	6974	4504	591	4830
Nov-06	216	5659	1983	261	3936
Dec-06	311	3774	3280	52	8834
Jan-07	261	5025	2830	143	12097
Feb-07	306	2356	2228	298	12803
Mar-07	863	4484	2370	363	10386
Apr-07	985	2811	2165	612	13021
May-07	2965	4835	3624	1350	17784
Jun-07	11494	7256	11801	4407	18668
Jul-07	15168	7529	15169	8696	16893
Aug-07	8858	4901	7301	3060	10555
Sep-07	18477	2571	1890	1228	2441
Oct-07	713	1595	948	818	1590
Nov-07	57	536	396	361	1003
Dec-07	58	366	463	72	896

APPENDIX D2-2 (Cont)

Surface Water Delivery (Acre-Feet)	Kaweah Subbasin	Kern County Subbasin	Kings Subbasin	Tule Subbasin	Westside Subbasin
Jan-08	18	152	246	83	902
Feb-08	76	852	802	552	3112
Mar-08	7172	1651	2476	4489	8384
Apr-08	2395	2361	2802	424	9010
May-08	4395	3761	13361	934	10147
Jun-08	21269	6219	24490	10546	10365
Jul-08	24815	7612	26919	9910	9325
Aug-08	9279	5128	8168	1262	6755
Sep-08	3121	3576	2429	849	3966
Oct-08	1277	2028	1254	566	1414
Nov-08	205	549	529	250	602
Dec-08	80	454	359	50	502
Jan-09	228	401	302	81	756
Feb-09	94	767	377	200	680
Mar-09	988	1077	1194	244	2448
Apr-09	2213	2440	1660	416	3365
May-09	16510	4280	6848	10204	6105
Jun-09	19393	6669	23889	3994	7381
Jul-09	23418	6562	28183	11783	5651
Aug-09	13001	6142	12501	9198	2372
Sep-09	3185	3051	2110	827	1515
Oct-09	1964	2051	1283	551	1004
Nov-09	98	627	533	1747	945
Dec-09	52	348	244	48	967
Jan-10	9	193	118	75	1524
Feb-10	91	784	555	203	2815
Mar-10	9084	1151	2912	2390	1932
Apr-10	9661	2259	8354	5168	3111
May-10	27630	5169	20455	9836	6608
Jun-10	31224	10058	26047	8433	19120
Jul-10	32344	15684	23806	11894	18808
Aug-10	24931	13524	24152	12023	13783
Sep-10	7017	9882	8430	3200	6138
Oct-10	1650	5379	3908	511	3096
Nov-10	55	3811	363	226	2129
Dec-10	1501	3942	1547	46	2707
Jan-11	199	4763	2695	829	4520
Feb-11	452	4746	1734	2065	9670
Mar-11	10065	6270	10124	3745	7657
Apr-11	21424	6019	20262	5438	7172
May-11	26993	7494	25764	9322	11941
Jun-11	29531	9935	29828	12067	21540
Jul-11	30783	14434	24313	16092	23798
Aug-11	26314	14932	20716	14640	20960
Sep-11	15653	10223	16679	9216	8234
Oct-11	3935	6062	4893	4634	3188
Nov-11	193	5978	1164	247	2826
Dec-11	101	6460	1375	49	4443
Jan-12	583	3300	1743	82	11629
Feb-12	260	4623	2325	204	16398
Mar-12	442	1161	1600	248	2847
Apr-12	441	2454	2814	1126	4631
May-12	3353	5228	5466	1221	9250
Jun-12	13499	8711	16026	3763	14397
Jul-12	21816	12788	22698	8687	12811
Aug-12	9476	11893	14638	9194	9482
Sep-12	3692	6552	2578	840	3343
Oct-12	3264	5333	1361	559	2483
Nov-12	108	2295	520	247	1604
Dec-12	18	1308	252	49	1642
Jan-13	36	1248	396	82	2969
Feb-13	152	1411	828	204	4297
Mar-13	574	1361	1343	248	3226
Apr-13	1043	2932	2598	419	5102
May-13	2885	4727	4167	923	9255
Jun-13	7655	8186	14386	1376	9966
Jul-13	8922	8924	13925	2653	9178
Aug-13	9089	5862	4616	10351	4590
Sep-13	2433	3503	2168	840	1332
Oct-13	782	2414	1215	559	963
Nov-13	82	597	423	247	375
Dec-13	59	378	269	49	431
Jan-14	109	361	701	82	559
Feb-14	22	840	299	204	616
Mar-14	18	523	202	248	704
Apr-14	63	1566	438	419	1138
May-14	269	2973	990	923	2222
Jun-14	3386	4293	7480	1376	3990
Jul-14	2612	4990	12797	1604	3047
Aug-14	940	4270	4563	1248	1399
Sep-14	647	2565	2645	840	729
Oct-14	287	1166	906	559	381
Nov-14	108	413	376	247	122
Dec-14	22	272	291	49	184
Jan-15	59	336	607	82	70
Feb-15	27	805	325	204	225
Mar-15	114	1076	416	248	433
Apr-15	154	1989	413	419	793
May-15	266	3394	693	923	1440
Jun-15	1336	4267	2704	1376	2637
Jul-15	3306	5141	7295	1604	1975
Aug-15	852	3915	2958	1248	937
Sep-15	610	2046	1250	840	528
Oct-15	287	1166	906	559	381
Nov-15	108	413	376	247	263
Dec-15	22	272	291	49	155
Jan-16	109	361	701	142	559
Feb-16	22	840	299	477	616
Mar-16	18	523	202	2211	704
Apr-16	63	1566	438	3442	1138
May-16	269	2973	990	923	2222
Jun-16	3386	4293	7480	1376	3990
Jul-16	2612	4990	12797	9836	3047
Aug-16	940	4270	4563	4806	1399
Sep-16	647	2565	2645	840	729
Oct-16	287	1166	906	559	381
Nov-16	108	413	376	247	122
Dec-16	22	272	291	49	184

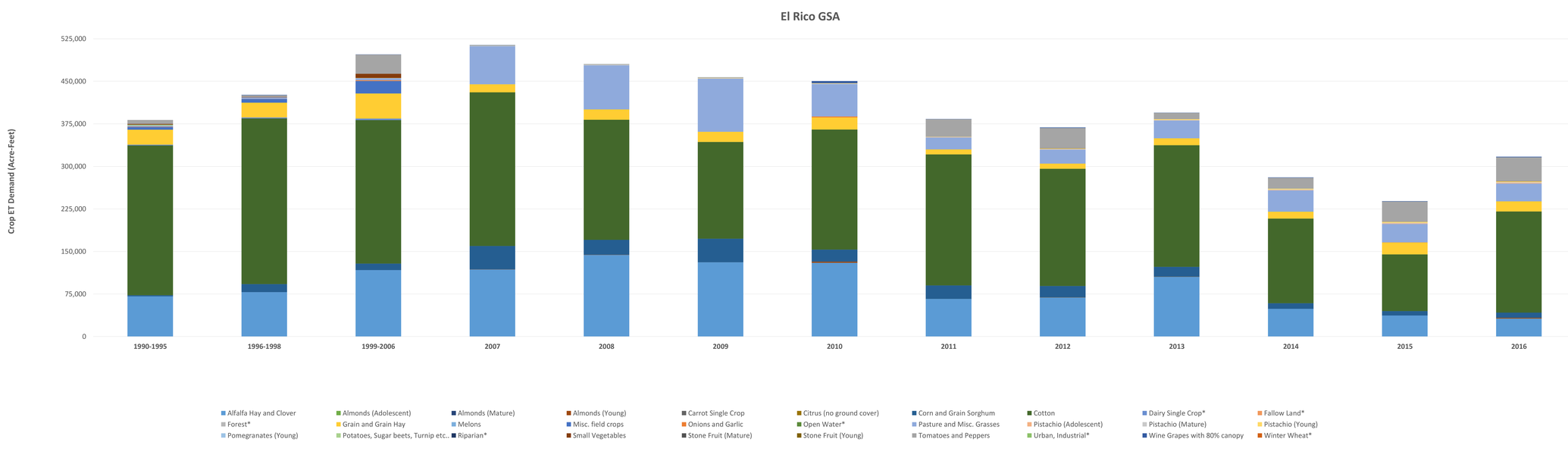


Appendix D3
Summary of Crop Demand

Sum of Crop ET Demand (Acre-Feet/Year) — **APPENDIX D3-1**

Tulare Lake Subbasin	1990-1995	1996-1998	1999-2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
El Rico GSA													
Alfalfa Hay and Clover	70729	78296	117038	118221	143932	130955	129971	66396	68927	105292	48866	36930	31810
Almonds (Adolescent)	0	0	0	0	0	0	0	3	2	2	18	5	10
Almonds (Mature)	0	0	0	0	0	0	0	0	0	0	0	0	0
Almonds (Young)	0	0	0	188	146	145	1951	180	194	477	170	185	1163
Carrot Single Crop	0	0	0	0	0	0	0	19	8	1	0	0	16
Citrus (no ground cover)	0	0	0	0	0	0	0	16	0	7	0	2	4
Corn and Grain Sorghum	2018	14258	11703	41343	26375	41546	21187	23395	19850	17015	9740	7639	9086
Cotton	264279	292007	252807	270755	211744	170500	211791	231241	206654	214373	149263	99964	178223
Dairy Single Crop*	1445	1847	2688	0	0	0	0	0	0	0	0	0	0
Fallow Land*	0	0	0	0	0	0	0	0	0	0	0	0	0
Forest*	0	0	0	0	0	0	0	0	0	0	0	0	0
Grain and Grain Hay	26296	25753	44136	14205	18440	17878	21292	8497	9155	12247	12207	21158	17961
Melons	0	0	0	0	0	0	0	1	8	2	728	4	93
Misc. field crops	4755	6468	22248	0	4	0	0	0	0	0	0	0	0
Onions and Garlic	446	291	1070	0	0	0	1834	47	105	49	77	146	111
Open Water*	0	0	0	0	0	0	0	0	0	0	0	0	0
Pasture and Misc. Grasses	1917	2947	3895	67107	77436	93539	57165	21110	24818	31286	36605	32424	31157
Pistachio (Adolescent)	0	0	0	0	0	0	0	211	277	370	687	1003	1370
Pistachio (Mature)	0	0	0	1232	1293	983	897	932	917	847	842	1184	1122
Pistachio (Young)	0	23	221	322	376	619	698	392	735	1140	1492	1535	1315
Pomegranates (Young)	0	0	0	0	91	42	4	81	24	93	148	164	162
Potatoes, Sugar beets, Turnip etc..	1508	0	0	14	0	0	0	4	0	4	0	3	3
Riparian*	0	0	0	0	0	0	0	0	0	0	0	0	0
Small Vegetables	1430	528	7590	0	0	3	94	23	29	107	103	8	116
Stone Fruit (Mature)	0	0	0	0	0	0	0	0	0	0	0	0	0
Stone Fruit (Young)	0	0	0	2	9	44	2	3	85	1	2	40	78
Tomatoes and Peppers	7067	3135	33674	11	2	150	0	30683	36052	10959	19043	35729	42194
Urban, Industrial*	0	0	0	0	0	0	0	0	0	0	0	0	0
Wine Grapes with 80% canopy	0	503	334	407	362	47	3559	227	1035	92	546	472	958
Winter Wheat*	0	0	0	0	0	0	0	0	0	0	0	0	0
El Rico GSA Irrigated ET Demand	**380445**	**424208**	**494716**	**513807**	**480209**	**456451**	**450445**	**383463**	**368875**	**394364**	**280539**	**238594**	**316952**
El Rico GSA Total ET Demand	**381890**	**426054**	**497404**	**513807**	**480209**	**456451**	**450445**	**383463**	**368875**	**394364**	**280539**	**238594**	**316952**

Notes: Fields with an Asterisk (*) are not Irrigated; Annual Total is by Calendar Year



APPENDIX D3-2

Sum of Crop ET Demand (Acre-Feet/Year) Tulare Lake Subbasin	1990-1995	1996-1998	1999-2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Mid-Kings River GSA													
Alfalfa Hay and Clover	54225	37134	47231	70920	72279	82432	74524	46996	47297	46833	49033	44781	35779
Almonds (Adolescent)	0	0	7382	0	0	8287	11414	6655	7948	12571	11964	12357	10700
Almonds (Mature)	21899	17282	14900	29318	25948	22195	19532	24669	27021	28629	33006	38590	38813
Almonds (Young)	0	2093	2798	7469	15899	9090	8694	9270	9515	11128	12224	11764	10892
Berries	0	0	0	0	0	0	0	0	1	6	0	0	0
Carrot Single Crop	0	0	0	0	0	0	0	4	7	1	7	0	14
Citrus (no ground cover)	0	0	75	0	32	31	14	370	89	299	102	56	12
Corn and Grain Sorghum	27832	63039	50239	45210	42440	33204	30445	47662	46154	44975	41460	36068	31535
Cotton	93307	62361	44507	8474	7660	13894	22023	20867	12109	7001	11789	10353	12573
Dairy Single Crop*	8529	9826	9984	0	0	0	0	0	0	0	0	0	0
Fallow Land*	0	0	0	0	0	0	0	0	0	0	0	0	0
Forest*	0	0	0	0	0	0	0	0	0	0	0	0	0
Grain and Grain Hay	2897	3811	5457	4423	2221	4688	3586	868	3163	4629	3337	4457	3095
Melons	248	92	45	0	0	0	0	2	5	6	0	0	20
Misc. field crops	6082	3065	8059	0	0	0	0	0	0	0	0	0	0
Onions and Garlic	102	0	0	0	0	1	36	65	126	7	109	13	210
Open Water*	0	0	0	0	0	0	0	0	0	0	0	0	0
Pasture and Misc. Grasses	3717	8128	5877	38630	51880	19656	11431	5495	6343	4322	5084	3241	2570
Pistachio (Adolescent)	0	0	0	0	0	0	0	2	18	55	152	343	350
Pistachio (Mature)	321	254	241	675	270	135	86	83	57	52	45	46	55
Pistachio (Young)	0	34	215	326	374	674	983	947	885	1156	1706	2353	2641
Pomegranates (Young)	0	0	0	0	4	1	1	20	10	46	40	5	13
Potatoes, Sugar beets, Turnip etc..	0	4	0	5	0	5	0	1	0	1	0	1	2
Riparian*	0	0	0	0	0	0	0	0	0	0	0	0	0
Small Vegetables	595	617	418	24	2	4	158	159	103	164	139	46	147
Stone Fruit (Adolescent)	0	0	3393	0	0	5	126	230	290	171	105	414	416
Stone Fruit (Mature)	22291	16483	13130	2753	1199	102	26	11	80	141	79	95	136
Stone Fruit (Young)	0	1079	2020	237	879	730	1645	958	386	1186	1054	845	560
Tomatoes and Peppers	1355	304	110	2	0	77	0	4695	3145	1754	1343	1699	3679
Urban, Industrial*	0	0	0	0	0	0	0	0	0	0	0	0	0
Wine Grapes with 80% canopy	7381	6981	6093	7034	3829	2999	1976	7037	10002	5141	5696	3681	18346
Winter Wheat*	0	0	0	0	0	0	0	0	0	0	0	0	0
Mid-Kings River GSA Irrigated ET De	**242254**	**222759**	**212189**	**215500**	**224914**	**198211**	**186699**	**177065**	**174754**	**170274**	**178474**	**171208**	**172557**
Mid-Kings River GSA Total ET Dema	**250784**	**232585**	**222173**	**215500**	**224914**	**198211**	**186699**	**177065**	**174754**	**170274**	**178474**	**171208**	**172557**

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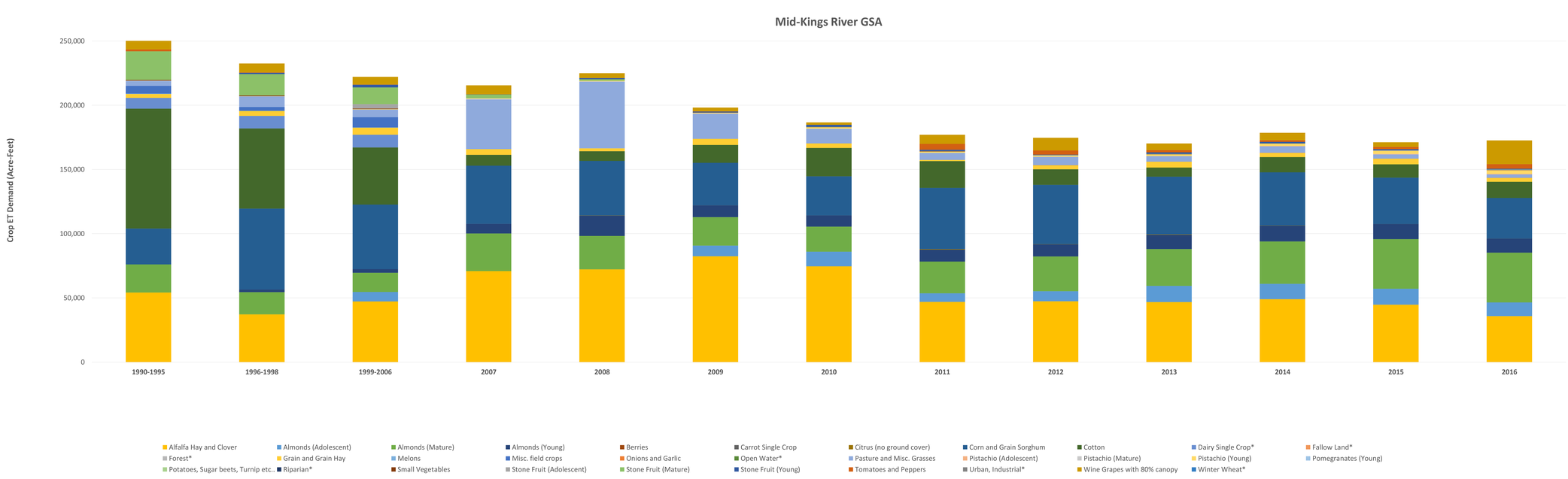

Sum of Crop ET Demand (Acre-Feet/Year) — **APPENDIX D3-3**

Tulare Lake Subbasin	1990-1995	1996-1998	1999-2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
South Fork Kings GSA													
Alfalfa Hay and Clover	16709	11994	39584	62068	70090	57340	56328	29744	36900	35451	42768	33986	29185
Almonds (Adolescent)	0	0	480	0	0	944	1576	777	652	1305	1236	1974	2399
Almonds (Mature)	743	499	472	1396	1211	944	805	1850	1903	2131	2373	2984	3024
Almonds (Young)	0	131	225	812	1861	1270	1646	1631	1226	2518	2843	2414	4672
Berries	0	0	0	0	0	0	0	0	1	0	0	1	0
Carrot Single Crop	0	0	0	0	0	0	0	4	2	7	0	6	26
Citrus (no ground cover)	0	0	17	0	0	0	0	14	3	18	0	2	2
Corn and Grain Sorghum	7027	19269	13851	13800	12846	13062	7622	14201	9097	8717	7123	4889	4232
Cotton	72878	81246	39915	32470	31210	19953	40263	42989	37422	24280	19786	15035	19992
Dairy Single Crop*	3737	2849	2925	0	0	0	0	0	0	0	0	0	0
Fallow Land*	0	0	0	0	0	0	0	0	0	0	0	0	0
Forest*	0	0	0	0	0	0	0	0	0	0	0	0	0
Grain and Grain Hay	13435	19790	12933	4435	4864	9156	10285	993	3255	1869	4921	8414	8207
Melons	0	0	0	0	0	0	8	1	2	2	448	0	15
Misc. field crops	7159	1270	21466	0	0	0	0	1	0	0	0	0	0
Onions and Garlic	258	0	289	0	0	8	495	467	112	108	563	71	795
Open Water*	0	0	0	0	0	0	0	0	0	0	0	0	0
Pasture and Misc. Grasses	5165	8608	13288	28562	16311	22322	11169	3302	5982	5766	6903	6334	3180
Pistachio (Adolescent)	0	0	0	0	0	0	0	0	19	29	64	504	585
Pistachio (Mature)	1	0	0	311	306	176	184	200	199	181	168	162	177
Pistachio (Young)	0	9	83	196	206	442	246	360	878	1028	1600	1130	1957
Pomegranates (Adolescent)	0	0	0	0	0	0	0	0	0	0	5	23	41
Pomegranates (Young)	0	0	0	2	176	19	41	196	121	161	294	393	140
Potatoes, Sugar beets, Turnip etc..	1518	0	676	0	0	5	0	0	0	119	0	3	1
Riparian*	0	0	0	0	0	0	0	0	0	0	0	0	0
Small Vegetables	762	3	0	8	0	13	18	23	49	69	7	62	44
Stone Fruit (Adolescent)	0	0	188	0	0	0	0	1	1	0	2	0	9
Stone Fruit (Mature)	1463	1135	688	9	0	0	0	0	0	0	0	0	0
Stone Fruit (Young)	0	67	175	26	38	67	167	47	69	61	60	28	28
Tomatoes and Peppers	660	117	0	207	3	17	26	6642	6816	3119	5802	5246	6122
Urban, Industrial*	0	0	0	0	0	0	0	0	0	0	0	0	0
Wine Grapes with 80% canopy	205	816	4390	2477	1278	644	153	3578	7838	3765	4771	5792	5920
Winter Wheat*	0	0	0	0	0	0	0	0	0	0	0	0	0
South Fork Kings GSA Irrigated ET D	**127983**	**144955**	**148720**	**146777**	**140400**	**126381**	**131035**	**107022**	**112547**	**90701**	**101735**	**89454**	**90754**
South Fork Kings GSA Total ET Dem	**131720**	**147804**	**151645**	**146777**	**140400**	**126381**	**131035**	**107022**	**112547**	**90701**	**101735**	**89454**	**90754**

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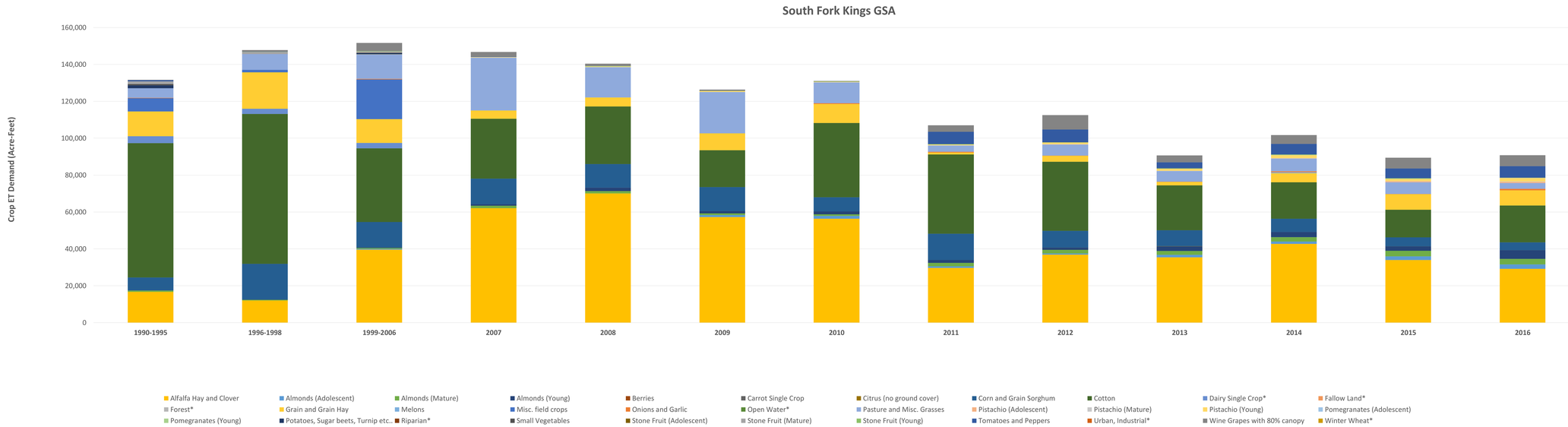

Sum of Crop ET Demand (Acre-Feet/Year)							APPENDIX D3-4						
Tulare Lake Subbasin	**1990-1995**	**1996-1998**	**1999-2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
Southwest Kings GSA													
Alfalfa Hay and Clover	18759	5587	20110	43026	40528	24609	25791	14378	19154	14389	5716	3975	2961
Almonds (Adolescent)	0	0	251	0	0	1987	6874	691	2030	4651	3718	819	604
Almonds (Mature)	4150	497	497	16316	15963	12694	10200	10456	10526	10960	11577	13295	13247
Almonds (Young)	0	63	3457	3590	8199	4939	5669	2319	3629	4328	2374	1340	3474
Berries	47	0	0	0	0	0	0	0	0	0	0	0	0
Carrot Single Crop	0	0	0	0	0	0	0	1	0	0	0	0	1
Citrus (no ground cover)	0	0	0	0	10	15	0	1	6	12	197	13	13
Corn and Grain Sorghum	0	45	0	170	47	1654	219	1271	82	188	89	10	80
Cotton	30305	76227	6616	8666	5111	7109	11217	13730	4226	15517	4291	4063	4891
Dairy Single Crop*	145	0	55	0	0	0	0	0	0	0	0	0	0
Fallow Land*	0	0	0	0	0	0	0	0	0	0	0	0	0
Forest*	0	0	0	0	0	0	0	0	0	0	0	0	0
Grain and Grain Hay	2788	7652	24977	3452	1759	3814	2758	328	1041	533	231	1387	2180
Melons	165	0	423	0	0	0	14	0	1	0	6	0	1
Misc. field crops	20277	12708	49397	0	1	0	0	0	0	0	4	0	0
Onions and Garlic	0	555	0	0	0	3	45	113	186	3	143	36	26
Open Water*	0	0	0	0	0	0	0	0	0	0	0	0	0
Pasture and Misc. Grasses	0	2040	1192	41974	8570	105889	103590	5801	3878	5081	46667	6062	4311
Pistachio (Adolescent)	0	0	0	0	0	0	0	0	1	105	387	2863	3399
Pistachio (Mature)	14907	12101	12101	15614	3811	1532	68	68	64	55	20	20	20
Pistachio (Young)	0	328	1744	208	396	675	390	2026	3269	4168	3397	3156	2931
Pomegranates (Young)	0	0	0	9	30	30	3	596	56	74	30	5	430
Potatoes, Sugar beets, Turnip etc..	0	0	0	0	0	0	0	7	0	0	0	0	1
Riparian*	0	0	0	0	0	0	0	0	0	0	0	0	0
Small Vegetables	47	0	0	1	1	0	61	23	30	2	14	8	8
Stone Fruit (Adolescent)	0	0	658	0	0	23	12	0	0	0	0	0	0
Stone Fruit (Mature)	1596	257	0	1799	688	482	38	0	0	0	0	0	0
Stone Fruit (Young)	0	164	806	200	307	376	64	3	7	3	70	0	1
Tomatoes and Peppers	3889	191	6	42	0	2	0	5793	6709	6	321	16	120
Urban, Industrial*	0	0	0	0	0	0	0	0	0	0	0	0	0
Wine Grapes with 80% canopy	0	0	4055	4280	3334	2002	1284	2777	4565	2829	5430	1925	2694
Winter Wheat*	0	0	0	0	0	0	0	0	0	0	0	0	0
Southwest Kings GSA Irrigated ET D	**96929**	**118416**	**126291**	**139347**	**88756**	**167834**	**168296**	**60381**	**59459**	**62904**	**84684**	**38993**	**41393**
Southwest Kings GSA Total ET Dem	**97074**	**118416**	**126346**	**139347**	**88756**	**167834**	**168296**	**60381**	**59459**	**62904**	**84684**	**38993**	**41393**

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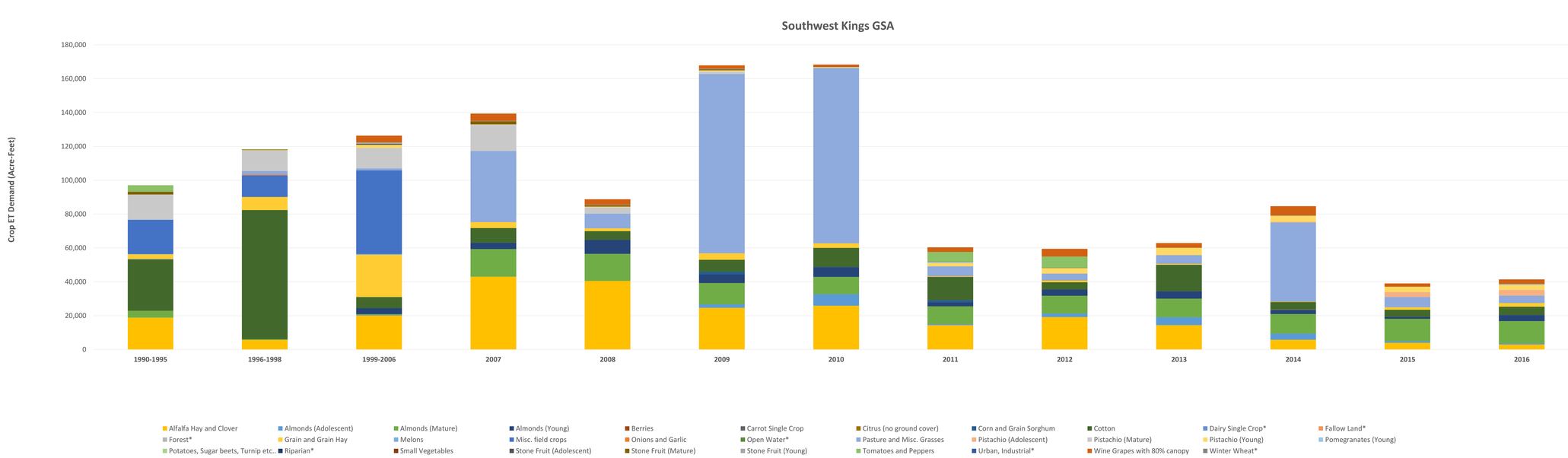
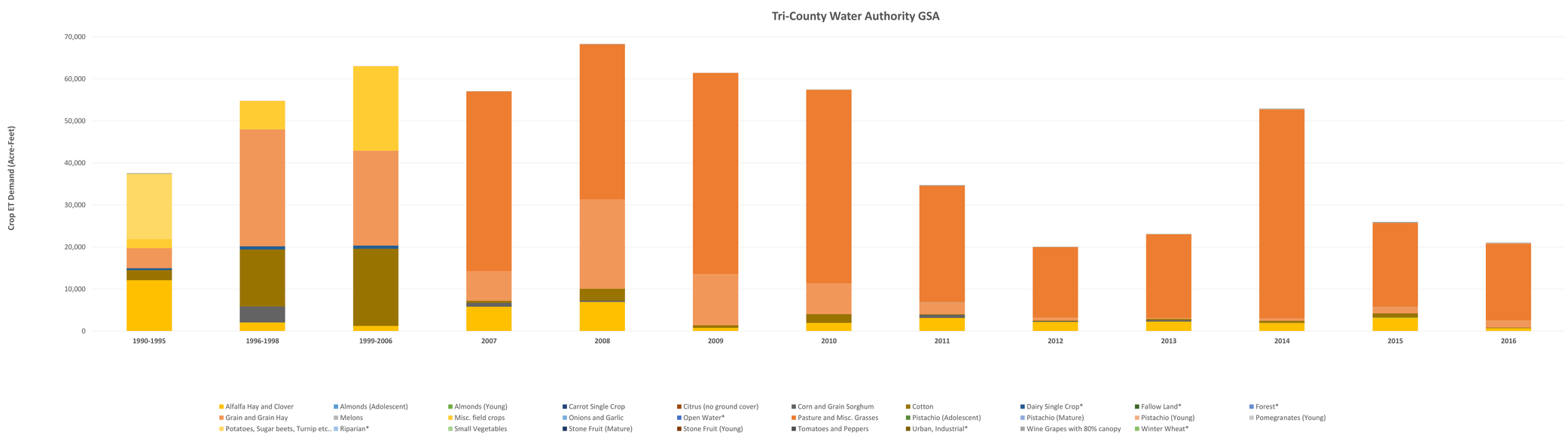


APPENDIX D3-5

Sum of Crop ET Demand (Acre-Feet/Year) Tulare Lake Subbasin	1990-1995	1996-1998	1999-2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Tri-County Water Authority GSA													
Alfalfa Hay and Clover	12097	2022	1204	5806	6923	750	1941	3106	2180	2254	1941	3166	659
Almonds (Adolescent)	0	0	0	0	0	0	0	0	0	0	0	0	0
Almonds (Young)	0	0	0	4	21	1	4	30	16	8	9	76	5
Carrot Single Crop	0	0	0	0	0	0	0	9	0	32	0	0	0
Citrus (no ground cover)	0	0	0	0	0	0	0	4	0	0	0	0	0
Corn and Grain Sorghum	0	3839	0	895	319	1	5	706	160	294	51	13	2
Cotton	2410	13544	18387	505	2786	616	2089	143	115	306	431	952	136
Dairy Single Crop*	433	747	768	0	0	0	0	0	0	0	0	0	0
Fallow Land*	0	0	0	0	0	0	0	0	0	0	0	0	0
Forest*	0	0	0	0	0	0	0	0	0	0	0	0	0
Grain and Grain Hay	4751	27805	22522	7057	21279	12220	7349	2832	755	227	585	1519	1785
Melons	0	0	0	0	0	0	0	0	0	0	0	22	0
Misc. field crops	2177	6785	20095	0	0	0	0	0	0	0	0	0	0
Onions and Garlic	0	0	0	0	0	0	6	40	9	0	1	0	4
Open Water*	0	0	0	0	0	0	0	0	0	0	0	0	0
Pasture and Misc. Grasses	0	4	4	42701	36886	47791	45951	27710	16730	19878	49684	19952	18152
Pistachio (Adolescent)	0	0	0	0	0	0	0	0	0	0	0	0	0
Pistachio (Mature)	0	0	0	0	0	0	0	0	0	0	0	0	0
Pistachio (Young)	0	0	1	38	18	44	78	4	3	5	87	57	180
Pomegranates (Young)	0	0	0	0	2	6	4	8	0	1	25	1	1
Potatoes, Sugar beets, Turnip etc..	15578	0	0	0	0	0	0	17	0	3	0	0	0
Riparian*	0	0	0	0	0	0	0	0	0	0	0	0	0
Small Vegetables	0	0	0	0	0	0	10	1	1	48	1	2	2
Stone Fruit (Mature)	1	0	0	0	0	0	0	0	0	0	0	0	0
Stone Fruit (Young)	0	0	0	1	0	0	0	0	0	0	0	0	0
Tomatoes and Peppers	0	0	0	0	0	0	0	38	3	8	46	102	53
Urban, Industrial*	0	0	0	0	0	0	0	0	0	0	0	0	0
Wine Grapes with 80% canopy	0	0	0	5	91	0	7	6	16	6	7	5	1
Winter Wheat*	0	0	0	0	0	0	0	0	0	0	0	0	0
Irrigated ET Demand	**37015**	**53999**	**62214**	**57010**	**68324**	**61429**	**57443**	**34654**	**19988**	**23072**	**52867**	**25868**	**20980**
Total ET Demand	**37449**	**54746**	**62982**	**57010**	**68324**	**61429**	**57443**	**34654**	**19988**	**23072**	**52867**	**25868**	**20980**

Notes: Fields with an Asterisk (*) are not Irrigated; Annual Total is by Calendar Year



Sum of Crop ET Demand (Acre-Feet/Year) — **APPENDIX D3-6**

Tulare Lake Subbasin	1990-1995	1996-1998	1999-2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Tulare Lake Subbasin													
Alfalfa Hay and Clover	172519	135032	225167	300041	333752	296086	288555	160621	174457	204219	148325	122839	100395
Almonds (Adolescent)	0	0	8113	0	0	11218	19864	8127	10631	18529	16937	15155	13714
Almonds (Mature)	26791	18278	15869	47030	43122	35832	30537	36976	39450	41720	46956	54869	55084
Almonds (Young)	0	2287	6480	12062	26125	15445	17964	13431	14580	18458	17621	15779	20206
Berries	47	0	0	0	0	0	0	0	2	6	0	1	0
Carrot Single Crop	0	0	0	0	0	0	0	37	16	41	7	6	56
Citrus (no ground cover)	0	0	91	0	42	46	14	405	99	335	300	74	32
Corn and Grain Sorghum	36877	100450	75793	101418	82027	89467	59478	87236	75344	71190	58462	48619	44935
Cotton	463179	525386	362232	320870	258511	212071	287383	308970	260527	261476	185559	130368	215815
Dairy Single Crop*	14290	15268	16421	0	0	0	0	0	0	0	0	0	0
Fallow Land*	0	0	0	0	0	0	0	0	0	0	0	0	0
Forest*	0	0	0	0	0	0	0	0	0	0	0	0	0
Grain and Grain Hay	50167	84811	110025	33572	48563	47755	45271	13518	17369	19505	21282	36934	33228
Melons	413	92	468	0	0	0	21	3	16	10	1182	27	128
Misc. field crops	40450	30296	121265	0	5	0	0	1	0	0	4	0	0
Onions and Garlic	807	846	1359	0	0	12	2417	731	538	167	893	266	1146
Open Water*	0	0	0	0	0	0	0	0	0	0	0	0	0
Pasture and Misc. Grasses	10799	21726	24256	218974	191082	289198	229306	63417	57751	66333	144942	68014	59370
Pistachio (Adolescent)	0	0	0	0	0	0	0	213	315	559	1290	4713	5704
Pistachio (Mature)	15229	12354	12341	17831	5680	2825	1236	1283	1237	1135	1075	1412	1374
Pistachio (Young)	0	394	2265	1091	1370	2454	2395	3729	5770	7498	8281	8231	9024
Pomegranates (Adolescent)	0	0	0	0	0	0	0	0	0	0	5	23	41
Pomegranates (Young)	0	0	0	11	303	99	52	901	210	376	537	567	746
Potatoes, Sugar beets, Turnip etc..	18604	4	676	19	0	10	0	29	0	127	0	7	7
Riparian*	0	0	0	0	0	0	0	0	0	0	0	0	
Small Vegetables	2835	1147	8009	33	3	20	340	227	212	390	264	126	317
Stone Fruit (Adolescent)	0	0	4238	0	0	28	138	232	291	171	106	414	425
Stone Fruit (Mature)	25350	17875	13818	4560	1886	584	64	11	80	141	79	95	136
Stone Fruit (Young)	0	1310	3001	466	1234	1217	1879	1010	547	1250	1186	913	667
Tomatoes and Peppers	12971	3747	33791	261	5	246	26	47851	52725	15847	26555	42793	52168
Urban, Industrial*	0	0	0	0	0	0	0	0	0	0	0	0	0
Wine Grapes with 80% canopy	7586	8301	14872	14203	8893	5692	6980	13625	23455	11832	16450	11874	27920
Winter Wheat*	0	0	0	0	0	0	0	0	0	0	0	0	0
Tulare Lake Subbasin Irrigated ET De	**884626**	**964336**	**1044130**	**1072442**	**1002603**	**1010305**	**993918**	**762584**	**735624**	**741315**	**698299**	**564117**	**642636**
Tulare Lake Subbasin GSA Total ET D	**898916**	**979604**	**1060551**	**1072442**	**1002603**	**1010305**	**993918**	**762584**	**735624**	**741315**	**698299**	**564117**	**642636**

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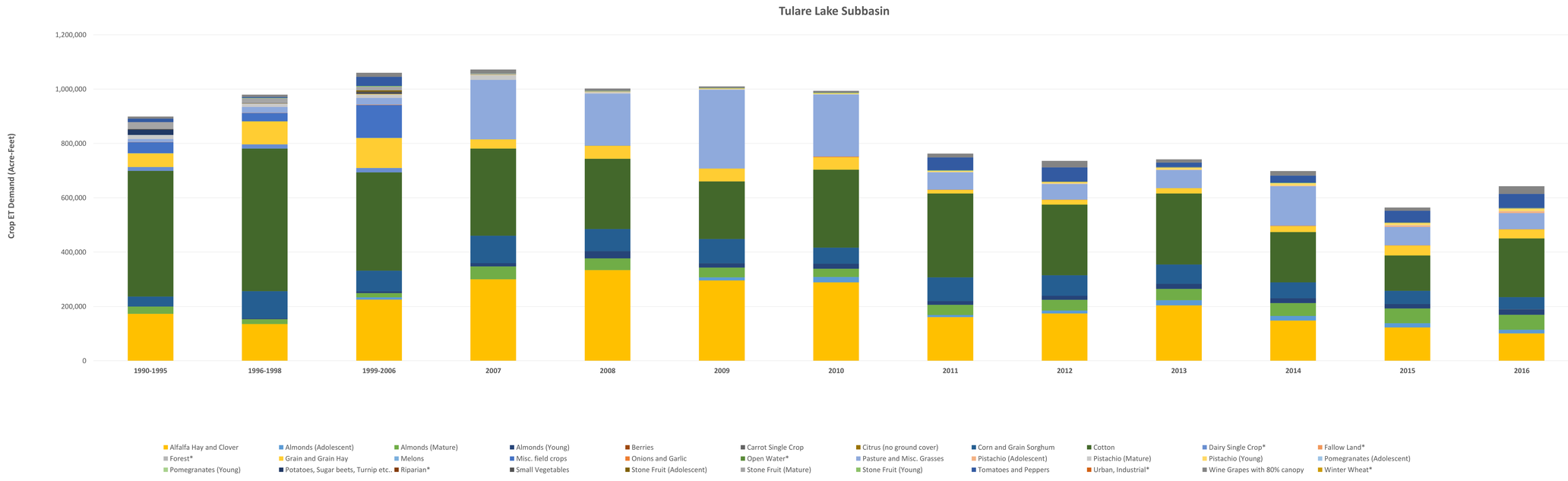

APPENDIX D3-7

Sum of Crop Acreage (Acres) Kaweah Subbasin	1990-1995	1996-1998	1999-2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Kaweah Subbasin													
Alfalfa Hay and Clover	115486	105689	121989	178448	170164	180822	168599	133463	140002	132011	125440	118685	111593
Almonds (Adolescent)	0	0	2151	0	0	3352	5331	2218	2912	4107	3639	4441	8087
Almonds (Mature)	10994	8841	7642	6331	5140	3927	3359	5959	6632	7023	8956	10024	10922
Almonds (Young)	0	551	277	5010	10534	5981	7005	4784	4303	5354	7935	12728	14258
Berries	0	20	20	0	0	0	0	0	1	1	0	0	0
Carrot Single Crop	0	0	0	0	0	0	0	91	6	0	10	1	14
Citrus (no ground cover)	0	0	0	14	32	52	14	41	35	178	247	18	26
Corn and Grain Sorghum	68793	111613	113052	70905	83423	58024	56330	117213	123778	124980	125613	109204	88983
Cotton	171670	113435	96213	40721	27603	33648	55438	51177	38387	29695	28395	19132	31086
Dairy Single Crop*	17748	22327	23914	0	0	0	0	0	0	0	0	0	0
Fallow Land*	0	0	0	0	0	0	0	0	0	0	0	0	0
Forest*	0	0	0	0	0	0	0	0	0	0	0	0	0
Grain and Grain Hay	12438	13462	14290	11846	873	3831	3221	1298	3410	4757	2453	4427	2548
Melons	253	167	167	0	0	1	0	4	2	21	0	3	151
Misc. field crops	4124	2758	3400	0	2	2	0	0	0	0	0	0	0
Onions and Garlic	758	404	404	0	0	0	59	297	43	2	16	7	492
Open Water*	0	0	0	0	0	0	0	0	0	0	0	0	0
Pasture and Misc. Grasses	5210	4802	6452	62054	114029	39268	40513	16032	26257	23092	22644	19504	19446
Pistachio (Adolescent)	0	0	0	0	0	0	0	421	701	1303	2697	6183	6637
Pistachio (Mature)	3309	3097	3097	7106	5394	4376	3529	3368	2888	2586	2512	3113	2640
Pistachio (Young)	0	495	1990	508	928	1646	1688	2718	4237	5070	5543	3449	3661
Pomegranates (Young)	0	0	0	1	28	2	0	16	9	76	24	22	81
Potatoes, Sugar beets, Turnip etc..	1361	2217	1983	18	0	2	0	332	180	9	634	478	580
Riparian*	0	0	0	0	0	0	0	0	0	0	0	0	0
Small Vegetables	3100	5686	5606	142	2	7	3	281	783	1251	1226	1248	1160
Stone Fruit (Adolescent)	0	0	3787	0	0	45	68	44	272	852	1000	191	70
Stone Fruit (Mature)	5897	3165	2730	433	84	18	0	66	9	25	244	328	60
Stone Fruit (Young)	0	975	222	83	602	359	606	770	1131	749	864	472	255
Tomatoes and Peppers	1732	4634	3894	31	2	36	0	2646	855	1553	1216	3151	3897
Urban, Industrial*	0	0	0	0	0	0	0	0	0	0	0	0	0
Wine Grapes with 80% canopy	2062	2591	2667	4852	3006	1600	1390	4039	4940	2914	2975	2190	11487
Winter Wheat*	0	0	0	0	0	0	0	0	0	0	0	0	0
Kaweah Subbasin Irrigated ET Dema	**407187**	**384603**	**392034**	**388504**	**421846**	**336999**	**347154**	**347277**	**361772**	**347610**	**344283**	**318999**	**318135**
Kaweah Subbasin Total ET Demand	**424935**	**406930**	**415948**	**388504**	**421846**	**336999**	**347154**	**347277**	**361772**	**347610**	**344283**	**318999**	**318135**

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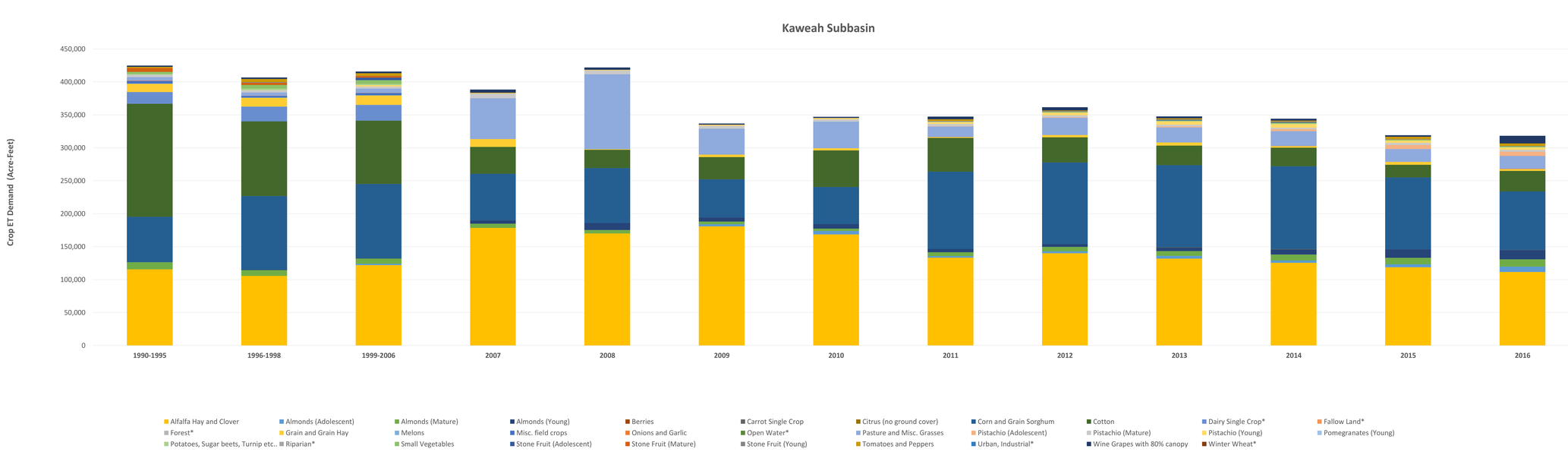

Sum of Crop ET Demand (Acre-Feet/Year) — **APPENDIX D3-8**

Kern County Subbasin	1990-1995	1996-1998	1999-2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Kern County Subbasin													
Alfalfa Hay and Clover	20321	18273	6736	19380	15803	18878	27373	8596	9207	12561	12467	10488	12071
Almonds (Adolescent)	0	0	2266	0	0	2222	6474	833	571	2331	3094	1258	1413
Almonds (Mature)	6857	3611	1401	8966	8694	7583	6160	6105	6889	6838	6847	9333	9610
Almonds (Young)	0	583	1555	4243	7634	3583	1592	1620	3251	4381	3710	3081	2335
Berries	0	0	0	0	0	0	0	0	0	18	0	0	0
Carrot Single Crop	188	0	0	0	0	0	0	1	0	10	5	3	5
Citrus (no ground cover)	0	0	0	0	440	935	0	6	64	7	510	4	3
Corn and Grain Sorghum	603	475	1135	1640	2267	1302	562	2488	3062	2200	1269	1586	371
Cotton	20621	31026	2324	1387	2337	829	5767	1798	1127	192	351	89	181
Dairy Single Crop*	3	0	1239	0	0	0	0	0	0	0	0	0	0
Fallow Land*	0	0	0	0	0	0	0	0	0	0	0	0	0
Forest*	0	0	0	0	0	0	0	0	0	0	0	0	0
Grain and Grain Hay	7623	20168	14436	881	1817	1460	2931	3387	2394	2208	1878	1953	4984
Melons	0	0	0	0	0	1	0	0	31	12	2	0	6
Misc. field crops	5473	3458	4354	0	0	0	0	0	0	0	0	0	0
Onions and Garlic	230	99	0	0	0	1	16	92	127	18	28	60	181
Open Water*	0	0	0	0	0	0	0	0	0	0	0	0	0
Pasture and Misc. Grasses	7088	13517	12338	154954	140349	196576	190751	35338	38717	56959	80646	46771	40224
Pistachio (Adolescent)	0	0	0	0	0	0	0	0	0	2	77	966	1205
Pistachio (Mature)	5993	5796	5758	6465	674	2	0	0	0	0	0	0	0
Pistachio (Young)	0	476	2322	266	174	174	300	1350	2464	3525	2055	2939	2940
Pomegranates (Young)	0	0	0	0	63	0	0	921	158	42	35	16	679
Potatoes, Sugar beets, Turnip etc..	272	0	0	0	0	2	0	1	2	0	6	17	2
Riparian*	0	0	0	0	0	0	0	0	0	0	0	0	0
Small Vegetables	38	0	88	0	2	0	19	6	19	14	9	17	19
Stone Fruit (Adolescent)	0	0	58	0	0	0	0	0	0	0	0	0	7
Stone Fruit (Mature)	5735	877	723	0	0	0	0	0	0	0	0	0	0
Stone Fruit (Young)	0	19	2	4	86	44	10	30	11	18	174	22	85
Tomatoes and Peppers	1667	1763	0	0	0	2	0	185	178	37	53	63	283
Urban, Industrial*	0	0	0	0	0	0	0	0	0	0	0	0	0
Wine Grapes with 80% canopy	4578	7112	5979	5806	4185	2166	3657	3862	4212	3889	5651	3603	3413
Winter Wheat*	0	0	0	0	0	0	0	0	0	0	0	0	0
Kern County Subbasin Irrigated ET D	**87287**	**107253**	**61474**	**203992**	**184526**	**235758**	**245611**	**66619**	**72486**	**95264**	**118867**	**82269**	**80017**
Kern County Subbasin Total ET Dem	**87290**	**107253**	**62713**	**203992**	**184526**	**235758**	**245611**	**66619**	**72486**	**95264**	**118867**	**82269**	**80017**

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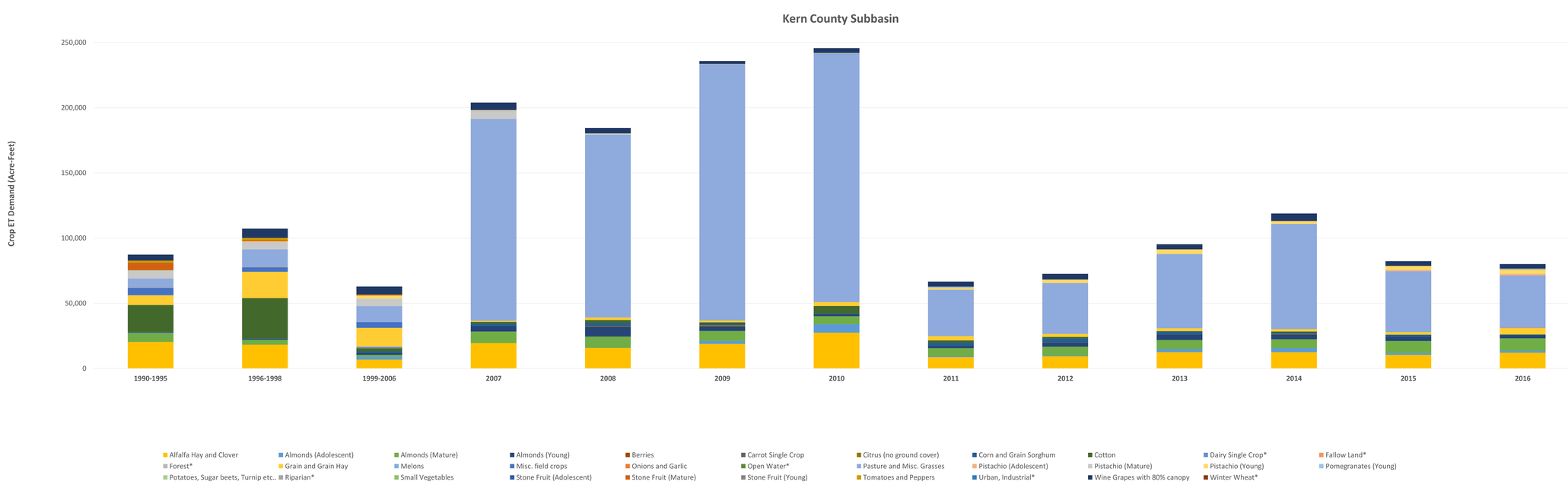

Sum of Crop ET Demand (Acre-Feet/Year) — **APPENDIX D3-9**

Kings Subbasin	1990-1995	1996-1998	1999-2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Kings Subbasin													
Alfalfa Hay and Clover	67617	49074	58132	101357	88588	127908	139012	59444	58992	55996	72022	58974	50444
Almonds (Adolescent)	0	0	9525	0	0	22385	21317	7909	9004	13168	13348	11819	19720
Almonds (Mature)	15841	12188	11683	19642	17328	11842	9567	20922	21449	13995	16138	22835	21754
Almonds (Young)	0	2461	812	19323	43483	16082	9544	17088	18720	15125	20298	30152	15595
Berries	0	8	8	0	0	0	0	1	5	38	0	0	0
Carrot Single Crop	0	0	0	0	0	0	0	48	5	7	126	0	30
Citrus (no ground cover)	1912	2002	2002	249	313	2861	192	694	496	3915	8050	3278	1915
Corn and Grain Sorghum	24180	38518	33574	15458	27487	16580	18626	34985	32268	24209	32503	24496	22755
Cotton	51696	32000	25728	9225	10830	11344	22446	17615	12690	8521	12370	7650	9240
Dairy Single Crop*	9546	9561	9791	0	0	0	0	0	0	0	0	0	0
Fallow Land*	0	0	0	0	0	0	0	0	0	0	0	0	0
Forest*	0	0	0	0	0	0	0	0	0	0	0	0	0
Grain and Grain Hay	5766	4894	6019	2412	1933	4827	6546	1719	2379	5936	3092	3579	1179
Melons	671	297	215	0	5	27	6	1	15	48	11	14	42
Misc. field crops	7835	7572	9345	0	0	2	0	0	0	0	0	0	0
Onions and Garlic	0	0	188	47	103	162	67	312	130	116	692	190	420
Open Water*	0	0	0	0	0	0	0	0	0	0	0	0	0
Pasture and Misc. Grasses	16557	10047	8269	40480	46696	25318	28303	6182	11512	9898	7730	5879	5061
Pistachio (Adolescent)	0	0	0	0	0	0	0	4	13	4	27	50	50
Pistachio (Mature)	558	353	353	289	229	212	192	192	188	187	184	183	111
Pistachio (Young)	0	2	37	453	385	955	571	1349	1006	949	1302	943	1353
Pomegranates (Young)	0	0	0	25	38	67	71	189	187	119	107	97	60
Potatoes, Sugar beets, Turnip etc..	0	99	754	2	0	5	0	27	1	1	1	8	0
Riparian*	0	0	0	0	0	0	0	0	0	0	0	0	0
Small Vegetables	2596	1703	1291	15	61	5	24	127	212	945	102	32	84
Stone Fruit (Adolescent)	0	0	24935	0	0	19	185	261	517	747	529	673	329
Stone Fruit (Mature)	72220	60018	59160	5770	1126	223	144	42	51	41	111	84	48
Stone Fruit (Young)	0	6313	620	439	2253	2798	4964	4060	2371	10498	4070	2798	1273
Tomatoes and Peppers	117	1037	711	33	9	327	51	1407	1078	2452	1235	1090	3304
Urban, Commercial*	0	0	0	0	0	0	0	0	0	0	0	0	0
Urban, Industrial*	0	0	0	0	0	0	0	0	0	0	0	0	0
Wine Grapes with 80% canopy	53016	55408	54892	42775	15880	12995	20652	45308	54690	36332	45665	49431	86809
Winter Wheat*	0	0	0	0	0	0	0	0	0	0	0	0	0
Kings Subbasin Irrigated ET Demand	**320581**	**283996**	**308252**	**257993**	**256747**	**256945**	**282481**	**219886**	**227981**	**203247**	**239711**	**224256**	**241575**
Kings Subbasin Total ET Demand	**330127**	**293556**	**318043**	**257993**	**256747**	**256945**	**282481**	**219886**	**227981**	**203247**	**239711**	**224256**	**241575**

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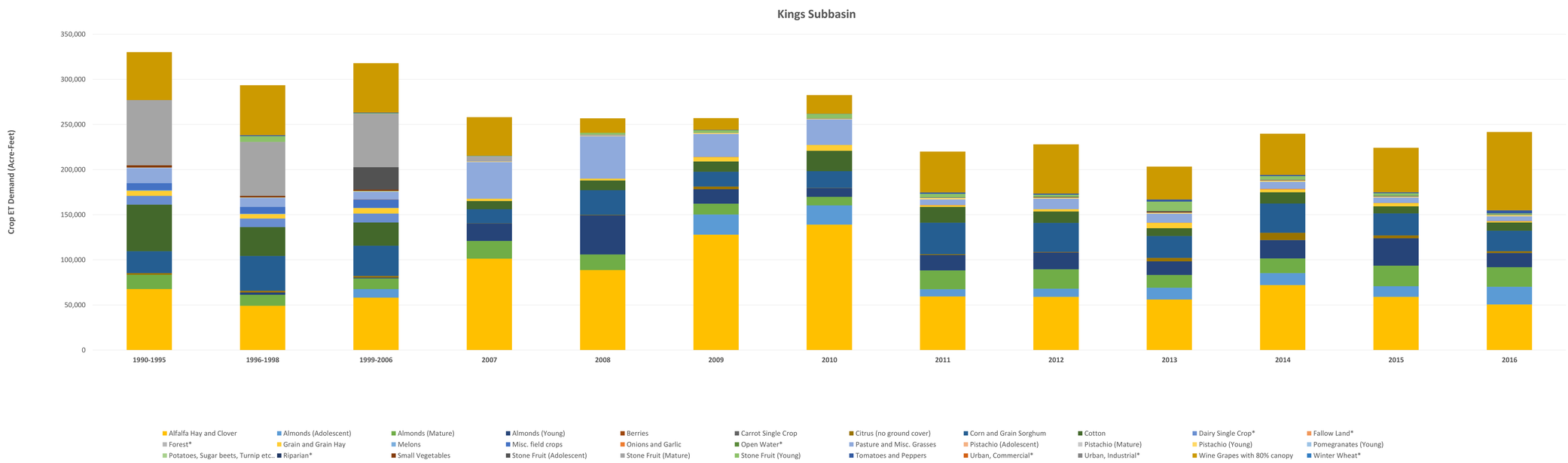
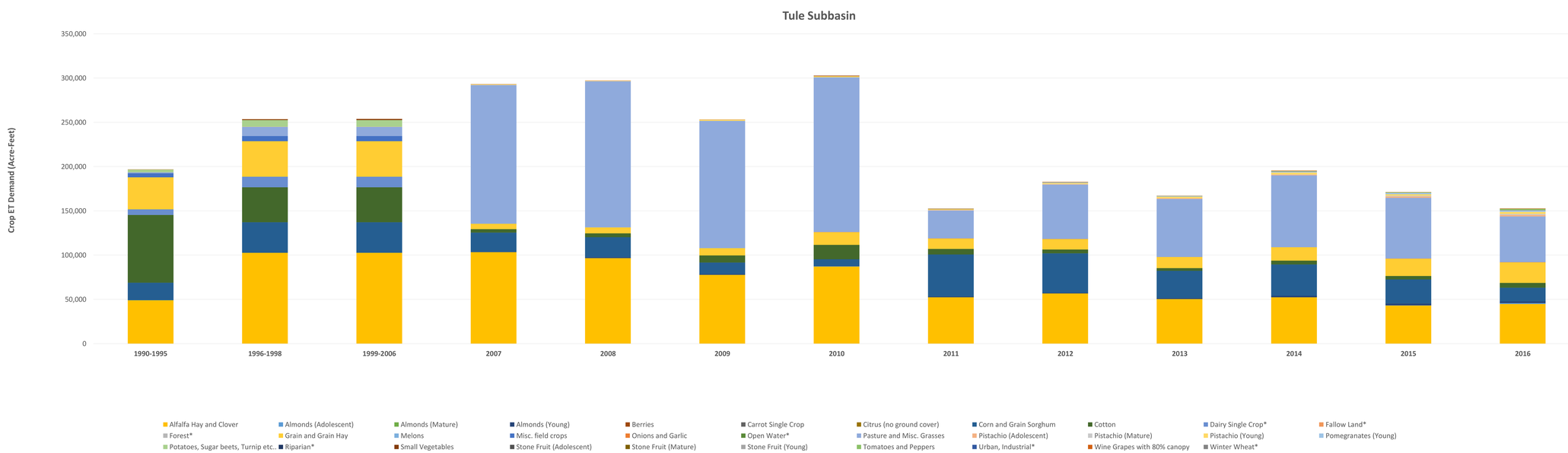


Sum of Crop ET Demand (Acre-Feet/Year)							APPENDIX D3-10						
Tule Subbasin	**1990-1995**	**1996-1998**	**1999-2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
Tule Subbasin													
Alfalfa Hay and Clover	48995	102696	102695	103253	96627	77757	87117	52421	56712	50482	52317	42961	44851
Almonds (Adolescent)	0	0	6	0	0	104	83	13	8	45	113	223	943
Almonds (Mature)	152	45	45	0	0	0	0	12	1	1	1	22	22
Almonds (Young)	0	2	0	479	1195	833	245	820	590	1052	1679	1995	1722
Berries	0	0	0	0	0	0	0	0	0	0	0	0	0
Carrot Single Crop	0	0	0	0	0	0	0	4	2	1	0	2	61
Citrus (no ground cover)	0	0	0	0	0	0	0	17	1	11	15	7	4
Corn and Grain Sorghum	19772	34425	34425	21765	22365	13040	7925	47549	44687	30636	35347	27359	15720
Cotton	76583	39418	39418	3865	4411	7859	16222	6149	4469	3160	4387	3940	5296
Dairy Single Crop*	6246	12030	12030	0	0	0	0	0	0	0	0	0	0
Fallow Land*	0	0	0	0	0	0	0	0	0	0	0	0	0
Forest*	0	0	0	0	0	0	0	0	0	0	0	0	0
Grain and Grain Hay	36255	40079	40077	6075	6753	8386	14365	11806	11631	12553	15122	19560	23291
Melons	20	0	0	0	0	7	0	2	4	2	96	5	40
Misc. field crops	4512	5890	5893	0	0	0	0	0	0	0	0	0	0
Onions and Garlic	4	0	0	1	0	0	147	73	183	1	9	36	105
Open Water*	0	0	0	0	0	0	0	0	0	0	0	0	0
Pasture and Misc. Grasses	1030	10450	10450	156596	164915	143596	174809	31502	61326	65535	80914	68705	51541
Pistachio (Adolescent)	0	0	0	0	0	0	0	575	558	722	1073	1324	1792
Pistachio (Mature)	0	0	0	301	218	135	108	107	106	106	105	929	1021
Pistachio (Young)	0	50	201	490	528	1184	1246	793	1182	1770	2221	1795	2525
Pomegranates (Young)	0	0	0	0	17	12	3	189	545	585	1024	1409	1596
Potatoes, Sugar beets, Turnip etc..	3015	7388	7388	0	0	2	0	4	3	2	11	21	3
Riparian*	0	0	0	0	0	0	0	0	0	0	0	0	0
Small Vegetables	0	916	916	1	1	7	326	15	53	49	88	68	378
Stone Fruit (Adolescent)	0	0	58	0	0	0	0	0	0	0	0	0	0
Stone Fruit (Mature)	33	0	0	0	0	0	0	0	0	0	0	0	0
Stone Fruit (Young)	0	15	0	5	50	6	1	25	22	1	30	29	5
Tomatoes and Peppers	4	40	40	3	0	5	0	234	239	159	597	518	1466
Urban, Industrial*	0	0	0	0	0	0	0	0	0	0	0	0	0
Wine Grapes with 80% canopy	183	157	157	88	237	83	252	314	476	81	269	304	346
Winter Wheat*	0	0	0	0	0	0	0	0	0	0	0	0	0
Tule Subbasin Irrigated ET Demand	**190557**	**241571**	**241770**	**292921**	**297316**	**253017**	**302850**	**152624**	**182797**	**166953**	**195419**	**171213**	**152727**
Tule Subbasin Total ET Demand	**196803**	**253600**	**253800**	**292921**	**297316**	**253017**	**302850**	**152624**	**182797**	**166953**	**195419**	**171213**	**152727**

Notes: Fields with an Asterisk (*) are not Irrigated; Annual Total is by Calendar Year



Sum of Crop ET Demand (Acre-Feet/Year) — **APPENDIX D3-11**

Westside Subbasin	1990-1995	1996-1998	1999-2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Westside Subbasin													
Alfalfa Hay and Clover	14783	5463	17452	22840	30645	40982	28245	8690	10822	11407	7847	5227	5318
Almonds (Adolescent)	0	0	1353	0	0	4098	5704	471	870	3772	3691	1847	1898
Almonds (Mature)	530	0	0	3808	3528	2660	877	7155	7400	7542	8563	11411	10450
Almonds (Young)	0	343	474	2571	5132	1461	2712	2247	2802	2334	2597	2396	3486
Berries	29	22	27	0	0	0	0	0	462	0	0	0	71
Carrot Single Crop	0	0	0	0	0	0	0	183	2	5	10	99	9
Citrus (no ground cover)	30	23	64	0	124	53	0	241	0	430	927	90	491
Corn and Grain Sorghum	1249	2078	1093	8137	9361	12433	4512	806	779	23	75	20	115
Cotton	113990	127022	82287	56779	24486	13325	34546	65685	51753	24591	15497	11995	15476
Dairy Single Crop*	354	0	0	0	0	0	0	0	0	0	0	0	0
Fallow Land*	0	0	0	0	0	0	0	0	0	0	0	0	0
Forest*	0	0	0	0	0	0	0	0	0	0	0	0	0
Grain and Grain Hay	9494	8102	15647	4992	9968	2311	6890	1659	13750	3591	6523	3310	4086
Melons	1280	3829	1681	4	5492	824	4069	545	615	1099	584	235	126
Misc. field crops	13047	8983	33812	0	0	0	33	0	0	0	0	0	0
Onions and Garlic	3528	4074	5993	1365	678	2444	685	7017	7569	7310	6608	6697	7539
Open Water*	0	0	0	0	0	0	0	0	0	0	0	0	0
Pasture and Misc. Grasses	0	7	320	10430	10890	12191	18149	1854	3863	4268	3807	1098	1211
Pistachio (Adolescent)	0	0	0	0	0	0	0	1128	1498	1959	2858	2443	2926
Pistachio (Mature)	3533	3399	3392	2354	1261	11	6	6	6	3	0	1971	2172
Pistachio (Young)	0	95	399	796	1355	1077	1795	1444	2313	2857	3446	2046	1707
Pomegranates (Adolescent)	0	0	0	0	0	0	0	0	0	35	0	0	0
Pomegranates (Young)	0	0	0	45	90	43	139	91	65	49	2	30	42
Potatoes, Sugar beets, Turnip etc..	0	0	3407	326	0	0	0	92	0	0	0	0	7
Riparian*	0	0	0	0	0	0	0	0	0	0	0	0	0
Small Vegetables	1154	951	498	3536	674	458	488	1335	1405	2014	4046	616	1302
Stone Fruit (Adolescent)	0	0	191	0		182	101	112	83	35	112	0	0
Stone Fruit (Mature)	3100	2553	1822	3750	3010	2099	1713	1511	3	1	20	0	0
Stone Fruit (Young)	0	72	841	174	419	391	1171	527	95	119	68	2	41
Tomatoes and Peppers	10971	10604	10367	4457	172	2860	1108	15693	17844	24101	20685	14607	13747
Urban, Commercial*	0	0	0	0	0	0	0	0	0	0	0	0	0
Urban, Industrial*	0	0	0	0	0	0	0	0	0	0	0	0	0
Wine Grapes with 80% canopy	907	877	1050	4524	3216	1815	1743	1842	3387	3819	4781	3205	4462
Winter Wheat*	0	0	0	0	0	0	0	0	0	0	0	0	0
Westside Subbasin Irrigated ET Dem	**177626**	**178498**	**182172**	**130889**	**110499**	**101717**	**114687**	**120333**	**127387**	**101365**	**92746**	**69345**	**76682**
Westside Subbasin Total ET Demand	**177980**	**178498**	**182172**	**130889**	**110499**	**101717**	**114687**	**120333**	**127387**	**101365**	**92746**	**69345**	**76682**

Notes: Fields with an Asterisk (*) are not Irrigated; Annual Total is by Calendar Year

Appendix D4
Annualized Specified Pumping by Well Field

Annualized Specified Pumping

Well field	Well_ID	1990 (AF/Y)	1991 (AF/Y)	1992 (AF/Y)	1993 (AF/Y)	1994 (AF/Y)	1995 (AF/Y)	1996 (AF/Y)	1997 (AF/Y)	1998 (AF/Y)	1999 (AF/Y)	2000 (AF/Y)	2001 (AF/Y)	2002 (AF/Y)	2003 (AF/Y)	2004 (AF/Y)	2005 (AF/Y)	2006 (AF/Y)	2007 (AF/Y)	2008 (AF/Y)	2009 (AF/Y)	2010 (AF/Y)	2011 (AF/Y)	2012 (AF/Y)	2013 (AF/Y)	2014 (AF/Y)	2015 (AF/Y)	2016 (AF/Y)
Angiola	E1	1,604.65	742.73	1,063.30	189.08	520.29	0.00	0.00	0.00	0.00	0.00	215.37	737.90	842.44	712.03	850.95	21.02	4.48	865.63	722.27	839.96	501.51	251.90	430.85	678.40	615.44	671.56	645.49
Angiola	E10	1,604.65	742.73	1,063.30	189.08	520.29	0.00	0.00	0.00	0.00	0.00	215.37	737.90	842.44	712.03	850.95	21.02	4.48	865.63	722.27	839.96	501.51	251.90	430.85	678.40	615.44	671.56	645.49
Angiola	E11	1,604.65	742.73	1,063.30	189.08	520.29	0.00	0.00	0.00	0.00	0.00	215.37	737.90	842.44	712.03	850.95	21.02	4.48	865.63	722.27	839.96	501.51	251.90	430.85	678.40	615.44	671.56	645.49
Angiola	E13	1,604.65	742.73	1,063.30	189.08	520.29	0.00	0.00	0.00	0.00	0.00	215.37	737.90	842.44	712.03	850.95	21.02	4.48	865.63	722.27	839.96	501.51	251.90	430.85	678.40	615.44	671.56	645.49
Angiola	E14	1,604.65	742.73	1,063.30	189.08	520.29	0.00	0.00	0.00	0.00	0.00	215.37	737.90	842.44	712.03	850.95	21.02	4.48	865.63	722.27	839.96	501.51	251.90	430.85	678.40	615.44	671.56	645.49
Angiola	E15	0.00	742.73	1,063.30	189.08	520.29	0.00	0.00	0.00	0.00	0.00	215.37	737.90	842.44	712.03	850.95	21.02	4.48	865.63	722.27	839.96	501.51	251.90	430.85	678.40	615.44	671.56	645.49
Angiola	E16	0.00	742.73	1,063.30	189.08	520.29	0.00	0.00	0.00	0.00	0.00	215.37	737.90	842.44	712.03	850.95	21.02	4.48	865.63	722.27	839.96	501.51	251.90	430.85	678.40	615.44	671.56	645.49
Angiola	E17	0.00	742.73	1,063.30	189.08	520.29	0.00	0.00	0.00	0.00	0.00	215.37	737.90	842.44	712.03	850.95	21.02	4.48	865.63	722.27	839.96	501.51	251.90	430.85	678.40	615.44	671.56	645.49
Angiola	E18	0.00	742.73	1,063.30	189.08	520.29	0.00	0.00	0.00	0.00	0.00	215.37	737.90	842.44	712.03	850.95	21.02	4.48	865.63	722.27	839.96	501.51	251.90	430.85	678.40	615.44	671.56	645.49
Angiola	E19	0.00	742.73	1,063.30	189.08	520.29	0.00	0.00	0.00	0.00	0.00	215.37	737.90	842.44	712.03	850.95	21.02	4.48	865.63	722.27	839.96	501.51	251.90	430.85	678.40	615.44	671.56	645.49
Angiola	E20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	432.82	361.13	419.98	250.76	125.95	215.42	339.20	307.72	335.78	322.74
Angiola	E21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	865.63	722.27	839.96	501.51	251.90	430.85	678.40	615.44	671.56	645.49
Angiola	E22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	722.27	839.96	501.51	251.90	430.85	678.40	615.44	671.56	645.49
Angiola	E23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	722.27	839.96	501.51	251.90	430.85	678.40	615.44	671.56	645.49
Angiola	E24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	722.27	839.96	501.51	251.90	430.85	678.40	615.44	671.56	645.49
Angiola	E4	1,604.65	742.73	1,063.30	189.08	520.29	0.00	0.00	0.00	0.00	0.00	215.37	737.90	842.44	712.03	850.95	21.02	4.48	865.63	722.27	839.96	501.51	251.90	430.85	678.40	615.44	671.56	645.49
Angiola	E5	1,604.65	742.73	1,063.30	189.08	520.29	0.00	0.00	0.00	0.00	0.00	215.37	737.90	842.44	712.03	850.95	21.02	4.48	865.63	722.27	839.96	501.51	251.90	430.85	678.40	615.44	671.56	645.49
Angiola	E7	1,604.65	742.73	1,063.30	189.08	520.29	0.00	0.00	0.00	0.00	0.00	215.37	737.90	842.44	712.03	850.95	21.02	4.48	865.63	722.27	839.96	501.51	251.90	430.85	678.40	615.44	671.56	645.49
Angiola	G1	802.33	371.37	531.65	94.54	260.14	0.00	0.00	0.00	0.00	0.00	107.68	368.95	421.22	356.02	425.48	10.51	2.24	432.82	361.13	419.98	250.76	125.95	215.42	339.20	307.72	335.78	322.74
Angiola	G11	1,604.65	742.73	1,063.30	189.08	520.29	0.00	0.00	0.00	0.00	0.00	215.37	737.90	842.44	712.03	850.95	21.02	4.48	865.63	722.27	839.96	501.51	251.90	430.85	678.40	615.44	671.56	645.49
Angiola	G13	1,604.65	742.73	1,063.30	189.08	520.29	0.00	0.00	0.00	0.00	0.00	215.37	737.90	842.44	712.03	850.95	21.02	4.48	865.63	722.27	839.96	501.51	251.90	430.85	678.40	615.44	671.56	645.49
Angiola	G14	802.33	371.37	531.65	94.54	260.14	0.00	0.00	0.00	0.00	0.00	107.68	368.95	421.22	356.02	425.48	10.51	2.24	432.82	361.13	419.98	250.76	125.95	215.42	339.20	307.72	335.78	322.74
Angiola	G16	802.33	371.37	531.65	94.54	260.14	0.00	0.00	0.00	0.00	0.00	107.68	368.95	421.22	356.02	425.48	10.51	2.24	432.82	361.13	419.98	250.76	125.95	215.42	339.20	307.72	335.78	322.74
Angiola	G17	1,604.65	742.73	1,063.30	189.08	520.29	0.00	0.00	0.00	0.00	0.00	215.37	737.90	842.44	712.03	850.95	21.02	4.48	865.63	722.27	839.96	501.51	251.90	430.85	678.40	615.44	671.56	645.49
Angiola	G18	0.00	742.73	1,063.30	189.08	520.29	0.00	0.00	0.00	0.00	0.00	215.37	737.90	842.44	712.03	850.95	21.02	4.48	865.63	722.27	839.96	501.51	251.90	430.85	678.40	615.44	671.56	645.49
Angiola	G19	0.00	742.73	1,063.30	189.08	520.29	0.00	0.00	0.00	0.00	0.00	215.37	737.90	842.44	712.03	850.95	21.02	4.48	865.63	722.27	839.96	501.51	251.90	430.85	678.40	615.44	671.56	645.49
Angiola	G2(NEW)	802.33	371.37	531.65	94.54	260.14	0.00	0.00	0.00	0.00	0.00	107.68	368.95	421.22	356.02	425.48	10.51	2.24	432.82	361.13	419.98	250.76	125.95	215.42	339.20	307.72	335.78	322.74
Angiola	G20	0.00	742.73	1,063.30	189.08	520.29	0.00	0.00	0.00	0.00	0.00	215.37	737.90	842.44	712.03	850.95	21.02	4.48	865.63	722.27	839.96	501.51	251.90	430.85	678.40	615.44	671.56	645.49
Angiola	G21	0.00	742.73	1,063.30	189.08	520.29	0.00	0.00	0.00	0.00	0.00	215.37	737.90	842.44	712.03	850.95	21.02	4.48	865.63	722.27	839.96	501.51	251.90	430.85	678.40	615.44	671.56	645.49
Angiola	G22	0.00	742.73	1,063.30	189.08	520.29	0.00	0.00	0.00	0.00	0.00	215.37	737.90	842.44	712.03	850.95	21.02	4.48	865.63	722.27	839.96	501.51	251.90	430.85	678.40	615.44	671.56	645.49
Angiola	G23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	432.82	361.13	419.98	250.76	125.95	215.42	339.20	307.72	335.78	322.74
Angiola	G24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	432.82	361.13	419.98	250.76	125.95	215.42	339.20	307.72	335.78	322.74
Angiola	G25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	432.82	361.13	419.98	250.76	125.95	215.42	339.20	307.72	335.78	322.74
Angiola	G26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	865.63	722.27	839.96	501.51	251.90	430.85	678.40	615.44	671.56	645.49
Angiola	G27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	865.63	722.27	839.96	501.51	251.90	430.85	678.40	615.44	671.56	645.49
Angiola	G28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	865.63	722.27	839.96	501.51	251.90	430.85	678.40	615.44	671.56	645.49
Angiola	G29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	722.27	839.96	501.51	251.90	430.85	678.40	615.44	671.56	645.49
Angiola	G3	802.33	371.37	531.65	94.54	260.14	0.00	0.00	0.00	0.00	0.00	107.68	368.95	421.22	356.02	425.48	10.51	2.24	432.82	361.13	419.98	250.76	125.95	215.42	339.20	307.72	335.78	322.74
Angiola	G5	802.33	371.37	531.65	94.54	260.14	0.00	0.00	0.00	0.00	0.00	107.68	368.95	421.22	356.02	425.48	10.51	2.24	432.82	361.13	419.98	250.76	125.95	215.42	339.20	307.72	335.78	322.74
Angiola	G7	1,604.65	742.73	1,063.30	189.08	520.29	0.00	0.00	0.00	0.00	0.00	215.37	737.90	842.44	712.03	850.95	21.02	4.48	865.63	722.27	839.96	501.51	251.90	430.85	678.40	615.44	671.56	645.49
Angiola	W11	1,604.65	742.73	1,063.30	189.08	520.29	0.00	0.00	0.00	0.00	0.00	215.37	737.90	842.44	712.03	850.95	21.02	4.48	865.63	722.27	839.96	501.51	251.90	430.85	678.40	615.44	671.56	645.49
Angiola	W12	1,604.65	742.73	1,063.30	189.08	520.29	0.00	0.00	0.00	0.00	0.00	215.37	737.90	842.44	712.03	850.95	21.02	4.48	865.63	722.27	839.96	501.51	251.90	430.85	678.40	615.44	671.56	645.49
Angiola	W13	1,604.65	742.73	1,063.30	189.08	520.29	0.00	0.00	0.00	0.00	0.00	215.37	737.90	842.44	712.03	850.95	21.02	4.48	865.63	722.27	839.96	501.51	251.90	430.85	678.40	615.44	671.56	645.49
Angiola	W14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	432.82	361.13	419.98	250.76	125.95	215.42	339.20	307.72	335.78	322.74
Angiola	W15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	722.27	839.96	501.51	251.90	430.85	678.40	615.44	671.56	645.49
Angiola	W16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	722.27	839.96	501.51	251.90	430.85	678.40	615.44	671.56	645.49
Angiola	W17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	722.27	839.96	501.51	251.90	430.85	678.40	615.44	671.56	645.49
Angiola	W6	802.33	371.37	531.65	94.54	260.14	0.00	0.00	0.00	0.00	0.00	107.68	368.95	421.22	356.02	425.48	10.51	2.24	432.82	361.13	419.98	250.76	125.95	215.42	339.20	307.72	335.78	322.74
Angiola	W7	1,604.65	742.73	1,063.30	189.08	520.29	0.00	0.00	0.00	0.00	0.00	215.37	737.90	842.44	712.03	850.95	21.02	4.48	865.63	722.27	839.96	501.51	251.90	430.85	678.40	615.44	671.56	645.49
Angiola	W8	1,604.65	742.73	1,063.30	189.08	520.29	0.00	0.00	0.00	0.00	0.00	215.37	737.90	842.44	712.03	850.95	21.02	4.48	865.63	722.27	839.96	501.51	251.90	430.85	678.40	615.44	671.56	645.49
Angiola	W9	1,604.65	742.73	1,063.30	189.08	520.29	0.00	0.00	0.00	0.00	0.00	215.37	737.90	842.44	712.03	850.95	21.02	4.48	865.63	722.27	839.96	501.51	251.90	430.85	678.40	615.44	671.56	645.49
El Rico	ER_C-16	1,800.27	2,870.99	1,808.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,571.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
El Rico	ER_C-33	2,310.31	1,917.00	2,319.99	0.00	723.00	81.00	0.00	0.00	0.00	0.00	0.00	0.00	635.00	567.00	1,894.00	0.00	0.00	1,774.02	451.00	177.17	0.00	0.00	676.60	692.36	721.93	0.00	0.00
El Rico	ER_G-9	0.00	557.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	611.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
El Rico	ER_Heck1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,155.63	976.07	2,999.27	2,409.04
El Rico	ER_HR-190	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,754.98	2,495.81	1,925.97	905.10	7.48	2,119.00	1,963.66	1,667.61	1,279.25	1,120.47
El Rico	ER_HR-28	0.00	835.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,611.30	972.50	449.34	1,175.75	0.00	0.00	1,045.76	1,002.92	914.27	503.12	0.00	1,240.01	868.40	865.22	653.07	211.39
El Rico	ER_HR-29	0.00	739.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,116.93	1,132.31	424.33	1,056.00	0.00	0.00	979.28	755.17	742.50	376.96	3.11	792.86	654.05	533.04	436.01	408.77
El Rico	ER_HR-30	0.00	872.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,018.00	1,042.20	431.86	1,236.00	0.00	0.00	1,031.59	1,209.69	788.33	400.12	3.22	881.46	704.78	668.79	562.82	501.81
El Rico	ER_M-137	2,847.89	2,264.10	2,855.99	247.00	1,829.00	42.98	0.00	0.00	0.00	0.00	204.00	2,001.81	1,470.62	1,297.66	2,097.00	0.00	0.00	2,047.10	2,261.11	2,271.83	896.08	6.20	2,050.50	1,369.69	1,879.81	1,526.53	1,849.82
El Rico	ER_M-140	2,150.06	1,811.41	2,157.00	261.00	1,459.00	35.01	0.00	0.00	0.00	0.00	1,102.84	2,286.25	1,710.31	1,045.01	1,756.00	0.00	0.00	1,875.32	2,064.27	1,891.50	1,143.24	52.52	1,846.08	1,408.40	570.87	411.26	0.00
El Rico	ER_M-141	1,176.07	885.72	1,180.00	146.00	573.00	21.00	0.00	0.00	0.00	0.00	860.64	1,162.00	798.00	543.00	805.00	0.00	0.00	727.97	69.14	655.19	342.10	2.60	0.00	0.00	0.00	0.00	0.00
El Rico	ER_M-143	1,017.51	883.69	1,022.00	131.00	1,690.00	24.00	0.00	0.00	0.00	0.00	580.31	1,240.48	843.00	493.00	590.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
El Rico	ER_M-144	1,837.75	1,248.17	1,844.00	241.00	1,186.00	35.01	0.00	0.00	0.00	0.00	1,117.95	1,782.20	1,041.81	502.87	1,101.00	0.00	0.00	1,086.25	928.44	833.34	242.64	5.58	865.23	791.49	658.50	185.54	683.66
El Rico	ER_M-145	1,268.00	1,065.48	1,268.00	172.00	878.00	24.00	0.00	0.00	0.00	0.00	820.56	1,334.00	999.00	606.00	783.00	0.00	0.00	898.42	967.08	820.42	476.67	3.57	1,210.60	1,085.95	1,041.87	912.18	636.02
El Rico	ER_M-146	1,125.00	980.69	1,125.00	145.00	875.00	30.00	0.00	0.00	0.00	0.00	865.15	1,713.00	1,076.00	692.00	555.00	0.00	0.00	1,074.51	1,038.96	517.93	332.79	0.00	1,041.64	781.67	494.71	404.75	351.36
El Rico	ER_M-147	2,298.75	1,695.17	2,304.99	205.00	1,411.00	40.00	0.00	0.00	0.00	0.00	944.77	2,163.00	1,509.00	995.00	1,501.00	0.00	0.00	1,368.64	1,389.19	1,215.32	429.98	13.42	1,015.01	938.89	1,700.98	1,777.19	1,779.69
El Rico	ER_M-148	3,241.85	2,353.72	3,250.99	362.00	2,009.00	55.00	0.00	0.00	0.00	0.00	1,553.20	2,601.99	2,049.00	1,251.00	2,180.99	0.00	0.00	2,229.32	2,555.65	2,400.02	1,366.79	41.82	2,535.94	2,111.49	2,253.66	2,289.41	2,275.77
El Rico	ER_M-149	2,739.24	2,182.51	2,746.99	264.00	1,663.00	47.00	0.00	0.00	0.00	0.00	1,592.32	2,389.99	1,937.00	1,032.00	2,080.00	0.00	0.00	1,755.84	1,804.78	495.83	1,394.04	49.18	2,045.42	2,154.85	1,995.12	657.24	0.00
El Rico	ER_M-150	2,509.06	2,156.20	2,515.99	283.00	1,045.00	14.00	0.00	0.00	0.00	0.00	1,097.00	2,673.99	1,866.00	1,149.00	2,161.00	0.00	0.00	2,094.07	2,558.80	2,194.59	1,186.13	50.26	2,225.49	2,046.19	1,761.41	1,642.53	1,503.20
El Rico	ER_M-151	2,081.75	792.00	2,088.00	234.00	1,300.00	0.00	0.00	0.00	0.00	0.00	103.98	431.00	0.00	0.00	419.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
El Rico	ER_M-153	2,282.17	1,905.10	2,288.99	300.00	1,270.00	27.00	0.00	0.00	0.00	0.00	0.00	1,375.00	1,417.00	419.00	1,811.00	0.00	0.00	1,536.96	1,878.58	1,621.68	629.88	6.61	1,835.05	2,307.41	2,093.23	1,684.08	1,388.40
El Rico	ER_M-154	2,199.44	1,761.58	2,205.99	275.00	1,222.00	25.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	240.05	1,615.00	0.00	0.00	1,509.29	1,523.09	1,568.91	618.14	6.45	448.82	0.00	0.00	789.05	1,514.80

Annualized Specified Pumping

Well field	Well_ID	1990 (AF/Y)	1991 (AF/Y)	1992 (AF/Y)	1993 (AF/Y)	1994 (AF/Y)	1995 (AF/Y)	1996 (AF/Y)	1997 (AF/Y)	1998 (AF/Y)	1999 (AF/Y)	2000 (AF/Y)	2001 (AF/Y)	2002 (AF/Y)	2003 (AF/Y)	2004 (AF/Y)	2005 (AF/Y)	2006 (AF/Y)	2007 (AF/Y)	2008 (AF/Y)	2009 (AF/Y)	2010 (AF/Y)	2011 (AF/Y)	2012 (AF/Y)	2013 (AF/Y)	2014 (AF/Y)	2015 (AF/Y)	2016 (AF/Y)
El Rico	ER_M-158	2,232.55	1,527.82	2,238.99	132.00	1,323.00	0.00	0.00	0.00	0.00	0.00	0.00	661.00	1,400.00	846.00	1,190.00	0.00	0.00	677.03	1,736.03	1,542.60	616.54	16.26	825.51	0.00	0.00	0.00	0.00
El Rico	ER_M-159	0.00	75.00	908.00	101.00	361.00	825.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
El Rico	ER_M-161	0.00	0.00	1,840.00	375.00	1,728.00	42.98	0.00	0.00	0.00	0.00	129.11	3,048.72	1,916.85	661.65	2,271.99	0.00	0.00	1,259.21	1,953.95	1,996.68	841.78	7.98	1,943.88	1,984.78	318.00	0.00	0.00
El Rico	ER_M-163	0.00	0.00	1,680.00	318.00	1,778.00	966.00	0.00	0.00	0.00	0.00	173.73	2,395.99	1,344.00	619.00	1,481.00	0.00	0.00	1,210.58	1,728.49	1,099.94	513.17	4.13	1,317.26	523.36	0.00	0.00	0.00
El Rico	ER_M-166	0.00	0.00	1,671.00	346.00	1,758.00	42.98	0.00	0.00	0.00	0.00	593.35	2,699.66	2,148.02	1,280.59	2,262.99	0.00	0.00	2,247.74	2,390.46	2,402.21	725.28	6.82	2,328.07	1,810.63	0.00	0.00	0.00
El Rico	ER_M-168	0.00	0.00	1,254.00	320.00	1,546.00	32.02	0.00	0.00	0.00	0.00	325.06	2,667.79	1,735.12	592.18	1,117.00	0.00	0.00	1,672.00	2,185.50	1,940.01	784.63	0.04	2,027.28	2,070.43	1,386.28	1,832.52	1,772.13
El Rico	ER_M-169	0.00	0.00	1,381.00	316.00	1,526.00	30.03	0.00	0.00	0.00	0.00	325.67	2,724.11	1,755.43	645.10	2,174.00	0.00	0.00	1,733.90	2,405.69	1,549.94	257.02	4.94	1,077.09	1,111.80	1,011.80	913.28	0.00
El Rico	ER_M-170	0.00	0.00	254.00	304.00	1,534.00	32.02	0.00	0.00	0.00	0.00	307.88	2,575.19	1,683.01	747.92	2,075.00	0.00	0.00	1,731.22	2,450.65	2,231.45	862.97	7.96	2,152.31	2,235.27	2,145.84	2,026.97	1,951.97
El Rico	ER_M-171	0.00	0.00	147.00	1,413.00	1,510.00	28.00	0.00	0.00	0.00	0.00	343.99	2,442.99	1,501.00	666.00	756.00	0.00	0.00	1,526.34	2,208.94	2,000.90	537.82	29.32	0.00	0.00	0.00	0.00	0.00
El Rico	ER_M-172	0.00	0.00	0.00	0.00	772.00	0.00	0.00	0.00	0.00	0.00	253.00	2,315.99	1,447.00	141.00	1,546.00	0.00	0.00	1,179.42	1,821.88	1,344.49	655.27	6.37	1,674.70	1,562.70	1,539.75	1,396.80	1,251.10
El Rico	ER_M-175	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	235.20	1,674.00	1,046.00	389.00	1,134.00	0.00	0.00	854.99	1,165.23	1,061.06	280.26	1.45	674.27	648.82	539.98	405.57	0.06
El Rico	ER_M-176	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	223.54	1,577.00	1,125.00	431.00	1,102.00	0.00	0.00	862.71	924.46	618.59	215.46	2.88	821.85	625.79	517.70	511.23	485.09
El Rico	ER_M-178	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,946.00	1,348.00	554.00	1,566.00	0.00	0.00	1,008.86	1,816.84	1,504.51	550.40	5.14	1,412.16	1,476.51	1,344.94	939.62	0.00
El Rico	ER_M-179	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	86.00	247.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
El Rico	ER_M-181	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	166.07	1,374.00	872.00	337.00	982.00	0.00	0.00	738.93	931.46	880.21	346.94	3.47	38.47	0.00	0.00	0.00	0.00
El Rico	ER_R-26	2,265.99	411.00	2,265.99	222.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	38.00	514.00	411.00	0.00	0.00	999.00	746.36	255.13	0.00	0.00	1,221.08	1,143.98	948.86	653.64	174.78
El Rico	ER_R-27	1,861.00	34.00	1,861.00	296.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	443.00	0.00	0.00	0.00	831.00	238.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00
El Rico	ER_R-33	0.00	787.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	42.00	436.00	1,203.00	0.00	0.00	1,440.66	1,668.12	156.32	0.00	0.00	2.00	0.00	0.00	0.00	0.00
El Rico	ER_R-35	2,144.00	471.00	2,144.00	279.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	154.00	30.00	865.00	0.00	0.00	1,351.84	1,004.22	0.00	0.00	0.00	1,435.08	888.81	0.00	0.00	0.00
El Rico	ER_R-47	1,859.48	1,610.93	1,863.00	121.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,228.00	1,344.00	520.00	1,640.00	0.00	0.00	6.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
El Rico	ER_S-111	90.00	239.00	90.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
El Rico	ER_S-113	90.00	763.27	90.00	0.00	360.00	0.00	0.00	0.00	0.00	0.00	0.00	822.00	660.00	171.00	678.00	0.00	0.00	359.45	636.40	532.75	230.80	2.08	525.67	384.38	470.03	367.38	263.73
El Rico	ER_S-120	3,124.06	2,198.62	3,132.99	366.22	706.00	43.00	0.00	0.00	0.00	0.00	162.29	2,702.99	1,663.00	604.00	1,984.00	0.00	0.00	1,888.04	2,234.46	1,852.52	691.55	6.36	1,787.12	1,656.47	1,153.40	842.51	351.44
El Rico	ER_S-127	2,904.44	2,011.31	2,911.99	348.00	1,759.00	49.03	0.00	0.00	0.00	0.00	319.14	2,693.46	1,654.08	563.24	1,964.00	0.00	0.00	1,847.00	1,906.27	416.61	830.46	7.27	2,028.06	2,000.17	1,434.00	0.00	0.00
El Rico	ER_S-160	1,615.41	1,776.86	1,622.00	255.00	928.00	20.00	0.00	0.00	0.00	0.00	0.00	1,017.00	1,337.00	487.00	1,657.00	0.00	0.00	908.71	1,722.46	1,049.80	0.00	13.15	1,006.31	934.65	652.22	43.90	370.48
El Rico	ER_S-162	2,015.00	1,912.27	2,015.00	502.00	1,738.00	56.00	0.00	0.00	0.00	0.00	282.02	3,407.99	2,171.00	786.00	2,689.99	0.00	0.00	2,433.37	2,850.05	1,979.59	530.13	7.00	1,926.89	1,854.70	1,649.31	1,422.80	1,393.60
El Rico	ER_S-164	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,461.00	314.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
El Rico	ER_S-165	1,045.00	1,445.69	1,045.00	220.00	1,030.00	0.00	0.00	0.00	0.00	0.00	74.60	2,489.99	1,641.00	592.00	2,034.00	0.00	0.00	1,639.21	1,711.75	520.57	796.53	10.19	574.24	551.17	394.73	0.00	0.00
El Rico	ER_S-167	1,626.00	1,618.86	1,626.00	384.00	1,888.00	52.00	0.00	0.00	0.00	0.00	152.49	3,048.99	1,893.00	684.00	2,262.99	0.00	0.00	2,065.85	1,245.14	0.00	0.00	0.00	0.00	1,440.79	1,077.44	1,535.36	311.72
El Rico	ER_S-173	0.00	2,085.34	0.00	106.00	2,092.00	63.00	0.00	0.00	0.00	0.00	0.00	2,325.99	2,373.99	886.00	2,969.99	0.00	0.00	1,859.87	2,717.95	2,087.83	998.67	10.23	2,932.26	3,120.53	3,114.65	3,063.55	1,652.10
El Rico	ER_S-174	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,529.99	2,101.00	779.00	2,558.99	0.00	0.00	2,185.60	2,743.38	2,424.90	966.68	7.94	1,877.19	563.24	730.78	603.26	502.54
El Rico	ER_S-188	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	985.80	1,507.20	1,185.16	288.20	3.33	750.92	311.28	679.15	409.23	196.40
El Rico	ER_S-191	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	258.84	0.00	0.00	0.00	0.00	0.00	238.00	0.00	0.00
El Rico	ER_S-192	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,099.00	2,470.89	1,076.58	0.00	2,565.67	2,601.49	2,322.96	2,055.21	1,804.77
El Rico	ER_S-193	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,983.06	2,102.49	1,079.61	9.36	2,559.21	2,639.88	2,346.56	2,241.24	2,036.11
El Rico	ER_S-194	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,558.77	2,582.76	1,082.20	9.02	2,216.67	1,910.75	910.07	358.99	2.97
El Rico	ER_S-195	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,460.00	2,699.86	1,153.29	10.14	2,836.87	3,126.31	2,966.75	2,880.80	2,816.01
El Rico	ER_S-196	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,325.00	2,731.97	1,106.82	9.67	2,402.58	2,731.07	2,569.80	2,426.92	2,298.25
El Rico	ER_S-198	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,213.84	2,609.13	1,148.39	0.00	2,777.98	2,751.41	2,415.86	2,114.48	1,830.73
El Rico	ER_S-199	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	676.34	2,409.49	1,142.78	10.16	2,677.37	2,887.71	2,794.52	2,505.17	2,553.13
El Rico	ER_S-200	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,168.99	1,105.84	0.00	2,759.92	2,870.49	2,742.45	2,169.81	1,614.97
El Rico	ER_S-201	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	748.95	1,142.04	10.57	1,918.94	2,450.16	2,382.50	1,667.81	2,142.77
El Rico	ER_S-202	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	544.42	15.16	3,460.57	3,338.14	2,617.87	1,693.30	1,718.73
El Rico	ER_S-203	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	230.77	15.70	3,884.90	4,107.45	4,368.74	4,445.74	4,282.34
El Rico	ER_S-205	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4,781.11	5,081.66	4,185.44	3,486.88	5,161.08
El Rico	ER_S-206	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4,533.13	4,681.16	4,513.79	3,703.62
El Rico	ER_S-209	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,196.76	3,963.35	3,437.13	3,401.15
El Rico	ER_S-211	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,256.46	4,387.34	4,068.25	3,619.99
El Rico	ER_S-213	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4,064.55	3,900.73	3,966.16
El Rico	ER_S-214	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3,635.46	4,518.85	4,306.07
El Rico	ER_S-215	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,909.40	3,886.35	3,975.84
El Rico	ER_S-216	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,425.40	4,537.42	4,416.25
El Rico	ER_S-217	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,757.98	4,318.93	4,497.61
El Rico	ER_S-218	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,118.39	4,278.81	4,292.27
El Rico	ER_S-219	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	498.85	4,477.82	4,406.65
El Rico	ER_S-220	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4,283.65	4,397.68
El Rico	ER_S-221	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,924.61	3,970.97
El Rico	ER_S-222	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,122.29	3,786.41
El Rico	ER_S-223	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	766.91	3,935.35
El Rico	ER_S-224	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3,925.50
El Rico	ER_S-225	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3,580.64
El Rico	ER_S-226	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,928.44
El Rico	ER_S-227	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,191.19
El Rico	ER_S-228	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,146.70
El Rico	ER_S-229	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	864.59
El Rico	ER_S-70	2,569.10	2,001.72	2,574.99	314.00	1,537.00	15.00	0.00	0.00	0.00	0.00	0.00	1,928.00	1,664.00	559.00	1,956.00	0.00	0.00	1,608.48	2,251.61	1,886.48	486.25	90.47	1,655.35	1,622.35	1,081.70	622.95	0.00
El Rico	ER_SR-13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	314.00	186.00	484.00	0.00	0.00	424.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
El Rico	ER_SR-14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	208.00	1,430.00	0.00	0.00	585.19	1,471.77	399.48	0.00	0.00	0.00	789.73	1,810.23	1,103.14	0.00
El Rico	ER_SR-15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	826.00	544.00	1,209.00	0.00	0.00	1,203.67	1,687.76	295.48	0.00	0.00	0.00	381.63	1,020.65	237.17	0.00
El Rico	ER_SR-5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	181.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
El Rico	ER_SR-8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	429.00	453.00	270.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
El Rico	ER_T-155	3,088.17	2,219.82	3,096.99	362.00	1,759.00	45.00	0.00	0.00	0.00	0.00	0.00	1,761.00	2,039.00	774.00	2,166.00	0.00	0.00	2,213.87	2,242.79	1,778.14	947.64	7.04	1,646.97	2,306.66	1,547.05	1,031.41	0.00
El Rico	ER_T-156	2,771.68	668.00	2,775.99	42.00	498.00	53.00	0.00	0.00	0.00	0.00	0.00	2,541.99	1,238.00	53.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
El Rico	ER_T-157	3,306.20	2,238.96	3,312.99	384.00	777.00	0.00	0.00	0.00	0.00	0.00	0.00	2,203.99	1,890.00	719.00	1,344.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Annualized Specified Pumping

Well field	Well_ID	1990 (AF/Y)	1991 (AF/Y)	1992 (AF/Y)	1993 (AF/Y)	1994 (AF/Y)	1995 (AF/Y)	1996 (AF/Y)	1997 (AF/Y)	1998 (AF/Y)	1999 (AF/Y)	2000 (AF/Y)	2001 (AF/Y)	2002 (AF/Y)	2003 (AF/Y)	2004 (AF/Y)	2005 (AF/Y)	2006 (AF/Y)	2007 (AF/Y)	2008 (AF/Y)	2009 (AF/Y)	2010 (AF/Y)	2011 (AF/Y)	2012 (AF/Y)	2013 (AF/Y)	2014 (AF/Y)	2015 (AF/Y)	2016 (AF/Y)
El Rico	ER_T-177	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	928.17	975.13	389.17	707.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
El Rico	ER_T-182	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,705.00	1,842.00	664.00	1,235.00	0.00	0.00	2,364.40	523.65	0.00	118.30	2.38	518.39	756.61	221.34	0.00	0.00
El Rico	ER_T-61	3,222.89	1,635.00	3,227.99	303.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	424.18	523.48	874.00	0.00	0.00	0.00	1,318.20	305.96	0.00	0.00	1,302.55	0.00	0.00	0.00	0.00
Creighton Ranch	CR_CR-2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,626.79	1,849.41	1,705.15	1,320.74
Creighton Ranch	CR_CR-3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	433.41	538.08	437.91	289.92
Creighton Ranch	CR_CR-6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	170.04	523.12	512.68	511.33
Creighton Ranch	CR_CR-7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,022.41	1,342.09	1,098.35	830.86
Creighton Ranch	CR_EC-1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	964.80	1,521.00	436.50	2,028.60	0.00	0.00	1,361.81	1,442.77	1,011.40	468.42	3.94	825.11	735.16	834.01	767.03	681.29
Creighton Ranch	CR_EC-2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,816.20	1,339.20	437.40	1,433.70	0.00	0.00	752.12	811.61	953.34	353.70	2.89	849.40	897.20	817.27	540.13	517.71
Creighton Ranch	CR_EC-3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,686.60	1,033.20	262.80	1,071.90	0.00	0.00	775.64	980.13	486.81	192.35	3.54	1,528.18	999.18	897.40	790.45	691.30
Creighton Ranch	CR_EC-4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,782.90	1,187.10	88.20	715.50	0.00	0.00	757.83	1,016.12	887.14	327.42	2.73	925.07	886.85	819.55	780.30	706.68
Creighton Ranch	CR_EC-5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	742.50	358.20	1,557.90	0.00	0.00	1,378.09	1,865.43	1,654.84	638.59	0.00	1,507.24	1,543.45	1,420.86	1,348.86	1,157.05
Creighton Ranch	CR_EC-6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	474.30	430.20	1,954.80	0.00	0.00	1,449.81	2,367.72	2,217.50	701.82	2.38	1,973.90	2,059.83	2,022.39	1,912.80	279.52
Creighton Ranch	CR_EC-7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,329.30	0.00	0.00	1,545.86	2,080.28	2,066.13	674.60	6.43	834.67	1,737.98	1,554.98	1,247.94	1,058.44
Creighton Ranch	CR_S-100	484.00	1,074.20	484.00	110.00	314.00	15.02	0.00	0.00	0.00	0.00	0.00	1,197.05	875.26	261.80	1,050.00	0.00	0.00	923.62	1,118.45	963.91	363.81	3.60	1,104.47	1,106.76	778.83	0.00	0.00
Creighton Ranch	CR_S-103	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	534.00	0.00	0.00	705.72	1,531.18	1,498.63	612.45	5.52	1,625.00	1,620.42	1,502.45	1,447.79	553.63
Creighton Ranch	CR_S-105	708.30	768.38	708.30	149.40	355.50	29.72	0.00	0.00	0.00	0.00	73.37	1,603.90	1,026.61	283.76	770.40	0.00	0.00	1,231.92	1,223.44	363.33	100.91	2.13	567.39	165.91	0.00	0.00	0.00
Creighton Ranch	CR_S-106	324.00	568.80	324.00	121.50	342.00	36.00	0.00	0.00	0.00	0.00	199.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Creighton Ranch	CR_S-108	1,727.10	1,190.05	1,727.10	231.30	1,715.40	2.70	0.00	0.00	0.00	0.00	0.00	1,631.12	1,249.14	314.31	1,623.60	0.00	1.83	1,204.17	1,722.36	1,942.71	804.47	28.36	1,572.01	980.71	669.79	615.39	1,481.35
Creighton Ranch	CR_S-109	1,227.32	1,847.11	1,227.60	244.80	1,749.60	51.30	0.00	0.00	0.00	0.00	204.62	1,324.71	772.55	316.10	1,602.90	0.00	62.02	1,180.48	1,599.53	1,427.47	615.08	27.28	1,294.39	1,561.03	873.80	859.07	1,343.12
Creighton Ranch	CR_S-110	698.12	2,335.62	698.40	0.00	0.00	48.61	0.00	0.00	0.00	0.00	343.99	1,954.25	1,495.75	487.94	2,233.79	0.00	0.00	1,657.27	2,046.15	1,234.31	700.55	16.33	1,647.26	1,635.60	1,468.44	1,304.75	1,317.23
Creighton Ranch	CR_S-114	928.80	1,416.78	928.80	165.60	1,148.40	33.31	0.00	0.00	0.00	0.00	261.45	1,418.76	966.67	384.07	1,386.90	107.10	2.05	989.20	1,273.28	1,170.74	462.43	16.27	434.15	454.04	361.08	274.32	176.55
Creighton Ranch	CR_S-115	666.90	1,254.50	666.90	114.30	817.20	23.38	0.00	0.00	0.00	0.00	185.45	1,221.72	704.39	311.38	1,257.30	89.10	0.00	891.02	1,171.90	894.20	453.19	49.00	1,020.84	946.69	819.85	543.40	507.17
Creighton Ranch	CR_S-116	544.50	1,058.24	544.50	93.60	673.20	19.80	0.00	0.00	0.00	0.00	205.84	1,075.84	803.80	305.65	1,145.70	88.20	1.61	747.45	530.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Creighton Ranch	CR_S-117	449.10	1,125.46	449.10	0.00	724.50	21.58	0.00	0.00	0.00	0.00	140.88	1,006.30	706.05	252.59	1,020.60	72.00	1.21	765.57	374.45	291.06	127.03	1.15	815.08	892.15	822.96	753.26	663.00
Creighton Ranch	CR_S-119	513.90	1,080.96	513.90	105.30	762.30	22.50	0.00	0.00	0.00	0.00	339.04	1,780.48	1,407.59	272.69	1,035.00	0.00	0.00	781.30	1,021.43	830.78	349.24	3.50	721.75	919.82	919.48	770.81	915.08
Creighton Ranch	CR_S-121	847.67	1,873.11	847.80	161.10	469.80	37.80	0.00	0.00	0.00	0.00	67.28	1,963.80	1,543.50	435.60	1,830.60	0.00	0.00	1,680.41	1,933.83	1,435.48	553.40	5.57	1,595.17	1,629.63	1,328.48	1,101.72	874.44
Creighton Ranch	CR_S-122	2,289.44	1,427.02	2,295.89	272.70	516.60	38.70	0.00	0.00	0.00	0.00	0.00	1,411.20	1,286.10	379.80	853.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Creighton Ranch	CR_S-123	508.37	1,211.83	508.50	95.40	1,029.60	127.80	0.00	0.00	0.00	0.00	227.00	1,639.80	1,062.00	295.20	1,207.80	0.00	0.00	1,125.99	1,361.89	1,066.67	395.97	4.23	1,169.63	1,288.35	1,285.32	978.43	1,006.36
Creighton Ranch	CR_S-124	757.80	511.20	757.80	117.90	1,155.60	35.10	0.00	0.00	0.00	0.00	264.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	719.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Creighton Ranch	CR_S-125	1,151.10	1,813.87	1,151.10	201.33	1,332.90	31.51	0.00	0.00	0.00	0.00	335.24	2,151.89	1,446.94	524.45	1,735.20	111.60	1.20	1,420.40	1,714.76	1,417.40	687.57	33.42	1,603.42	1,483.27	1,278.20	1,084.70	1,174.88
Creighton Ranch	CR_S-129	468.90	1,062.90	468.90	119.70	351.90	26.07	0.00	0.00	0.00	0.00	0.00	1,038.39	989.14	276.02	1,067.40	0.00	0.00	997.00	1,387.29	1,195.67	447.46	0.00	1,177.31	1,141.83	1,174.67	1,119.90	1,135.92
Creighton Ranch	CR_S-130	476.00	700.52	476.00	110.00	298.00	22.99	0.00	0.00	0.00	0.00	0.00	1,009.59	830.71	229.05	780.00	0.00	0.00	191.76	924.84	203.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Creighton Ranch	CR_S-131	311.40	1,239.39	311.40	123.30	335.70	24.27	0.00	0.00	0.00	0.00	0.00	1,011.77	978.22	283.66	1,216.80	0.00	0.00	1,014.61	1,284.51	1,152.84	449.99	4.01	1,256.76	1,404.28	1,256.95	1,118.88	990.26
Creighton Ranch	CR_S-132	1,333.24	836.22	1,337.40	141.30	358.20	29.72	0.00	0.00	0.00	0.00	0.00	1,127.70	930.20	240.93	709.20	0.00	0.00	1,361.83	1,332.57	1,340.85	513.02	4.58	1,373.03	1,394.13	1,306.25	1,205.36	1,196.98
Creighton Ranch	CR_S-134	345.60	1,211.96	345.60	66.60	511.20	15.31	0.00	0.00	0.00	0.00	0.00	333.32	901.23	287.95	1,387.80	0.00	1.70	995.66	1,358.11	1,217.67	496.88	4.70	980.34	958.35	1,108.44	1,043.79	648.49
Creighton Ranch	CR_S-135	549.00	1,267.62	549.00	138.00	394.00	30.03	0.00	0.00	0.00	0.00	0.00	1,372.00	1,061.00	305.07	1,111.00	0.00	0.00	773.37	701.81	454.06	347.44	3.81	1,070.52	730.93	863.08	835.17	890.83
Creighton Ranch	CR_S-138	1,602.46	1,463.52	1,607.40	196.20	342.00	26.10	0.00	0.00	0.00	0.00	0.00	1,140.30	1,193.40	328.45	1,539.90	0.00	0.00	1,248.92	1,700.89	1,542.83	510.08	10.12	1,457.37	1,035.02	1,300.24	1,288.59	1,304.07
Creighton Ranch	CR_S-183	0.00	1,593.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	801.00	1,554.30	370.80	2,181.59	0.00	0.00	1,765.58	1,797.71	1,785.59	710.78	18.40	1,503.65	1,560.04	1,370.94	691.79	342.08
Creighton Ranch	CR_S-187	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,312.39	1,696.80	1,498.09	538.34	4.52	1,216.82	898.60	748.61	435.77	0.00
Creighton Ranch	CR_S-189	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	676.47	1,397.26	507.94	4.93	1,251.80	864.87	1,089.38	1,090.70	1,085.31
Creighton Ranch	CR_S-197	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,375.06	3,016.17	1,130.32	9.76	2,937.88	2,980.16	3,049.06	3,425.72	3,342.29
Creighton Ranch	CR_S-204	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4,989.78	5,174.18	4,814.78	4,644.04	4,492.56
Creighton Ranch	CR_S-207	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	460.40	5,700.81	4,838.66	4,195.61	2,838.11
Creighton Ranch	CR_S-208	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,429.56	5,504.19	5,132.88	4,673.93	4,034.77
Creighton Ranch	CR_S-210	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,853.51	4,542.36	3,990.52	3,818.24
Creighton Ranch	CR_S-212	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	341.65	4,909.10	4,612.65	4,075.88
Creighton Ranch	CR_S-79	1,079.66	1,386.12	1,080.00	142.20	273.60	19.80	0.00	0.00	0.00	0.00	0.00	421.20	1,057.50	237.74	1,513.80	0.00	0.00	1,255.70	1,616.90	1,390.51	499.91	6.25	1,480.50	1,529.03	1,431.37	1,366.64	1,175.41
Creighton Ranch	CR_S-80	738.00	830.23	738.00	121.50	118.80	0.00	0.00	0.00	0.00	0.00	0.00	400.50	636.30	240.30	900.90	0.00	0.00	753.18	798.32	343.46	313.21	2.57	744.00	736.72	721.53	582.38	141.32
Creighton Ranch	CR_S-81	1,371.38	1,280.23	1,375.20	159.30	339.30	25.20	0.00	0.00	0.00	0.00	0.00	1,034.10	1,034.10	310.50	1,264.50	0.00	0.00	1,093.82	1,233.06	916.40	301.90	3.08	1,304.50	1,210.52	934.69	789.60	676.48
Creighton Ranch	CR_S-82	906.86	1,271.32	909.90	63.90	346.50	23.40	0.00	0.00	0.00	0.00	0.00	819.00	801.00	274.13	1,414.80	0.00	0.00	884.21	985.61	971.44	204.58	8.16	320.34	358.49	355.36	300.10	302.90
Creighton Ranch	CR_S-83	1,645.63	442.80	1,650.60	165.60	168.30	12.60	0.00	0.00	0.00	0.00	0.00	6.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Creighton Ranch	CR_S-84	1,746.68	1,157.21	1,751.40	197.10	415.80	28.80	0.00	0.00	0.00	0.00	0.00	1,094.40	573.30	172.80	903.60	0.00	0.00	1,224.11	1,380.55	855.35	416.28	4.44	1,638.18	1,755.27	1,418.07	890.68	644.51
Creighton Ranch	CR_S-88	414.00	1,271.67	414.00	0.00	342.90	25.20	0.00	0.00	0.00	0.00	0.00	1,073.70	1,019.70	279.90	1,264.50	0.00	0.00	1,137.49	2,337.77	1,382.07	768.63	6.34	2,118.27	2,076.08	1,631.52	1,872.64	1,919.45
Creighton Ranch	CR_S-92	406.80	911.70	406.80	106.20	283.50	20.70	0.00	0.00	0.00	0.00	0.00	805.50	639.00	180.00	876.60	0.00	0.00	930.40	1,204.58	78.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Corcorian ID	CID_001	2,016.23	1,449.20	898.28	204.16	1,072.20	77.47	157.42	0.00	0.00	247.35	511.99	96.71	137.48	1,030.94	330.71	14.42	0.00	571.89	193.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Corcorian ID	CID_002	1,343.58	1,129.61	773.27	276.09	1,236.20	84.51	232.23	0.00	0.00	223.41	300.51	298.76	922.95	331.81	608.88	102.08	0.00	568.81	424.68	488.77	22.38	0.04	511.54	784.41	661.26	269.84	269.84
Corcorian ID	CID_003	2,295.40	2,455.53	1,798.95	272.49	737.44	2.14	61.66	0.00	0.00	255.57	468.39	957.97	1,569.26	871.26	554.29	0.00	0.00	1,334.59	925.45	845.58	281.71	41.63	208.52	0.00	0.00	0.00	0.00
Corcorian ID	CID_004	1,103.53	87.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Corcorian ID	CID_005	739.82	589.79	486.41	34.03	284.93	0.00	46.86	0.00	0.00	23.03	131.08	381.60	411.78	284.75	233.00	38.68	55.15	542.51	510.74	271.16	0.00	0.00	210.74	378.57	233.77	562.40	562.40
Corcorian ID	CID_006	554.73	449.73	364.07	26.09	243.38	0.00	45.95	0.00	0.00	102.98	216.29	421.32	598.01	79.91	346.99	99.29	83.11	928.85	590.30	271.35	0.00	0.00	80.23	297.22	683.04	580.99	580.99
Corcorian ID	CID_007	1,472.15	845.16	684.22	66.14	812.91	59.64	416.42	412.17	0.00	619.70	68.04	1,241.44	1,434.43	1,397.27	1,250.77	97.77	0.00	305.84	561.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Corcorian ID	CID_008	613.99	509.01	379.24	46.12	287.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Corcorian ID	CID_009	544.71	450.01	463.61	86.54	196.62	10.93	10.05	0.00	0.00	3.12	7.90	241.43	759.95	390.53	582.83	0.41	0.00	515.74	518.44	559.73	99.80	0.00	781.35	317.26	150.07	70.00	70.00
Corcorian ID	CID_010	627.86	634.04	535.86	20.58	386.64	0.00	50.68	0.00	0.00	166.19	91.94	560.84	611.82	401.46	637.43	49.50	27.84	563.95	514.06	426.49	144.73	0.05	629.21	743.55	626.48	843.38	843.38
Corcorian ID	CID_011	1,095.87	852.03	699.44	24.83	487.89	0.00	20.24	0.00	0.00	181.05	167.53	281.89	3.23	600.15	1,188.49	88.36	107.58	939.77	800.67	1,339.42	372.23	33.88	235.38	0.05	0.00	0.00	0.00
Corcorian ID	CID_012	2,646.53	2,904.86	2,402.93	731.41	2,376.85	172.13	961.47	832.87	159.92	1,247.80	0.00	0.00	0.00	1,249.09	1,340.48	495.63	552.67	2,241.76	1,920.72	1,547.25	482.90	218.98	929.05	1,794.97	1,578.69	1,413.54	1,413.54
Corcorian ID	CID_013	688.46	424.26	301.06	24.57	278.99	0.00	2.00	0.00	0.00	47.82	129.14	32.96	240.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Corcorian ID	CID_014	1,064.50	823.87	638.99	0.00	514.76	0.00	100.05	0.00	0.00	88.62	133.40	247.50	383.97	604.77	439.13	85.99	0.00	1,680.93	417.98	1,111.68	333.57	27.58	1,025.94	1,168.49	765.75	12.56	12.56
Corcorian ID	CID_015	983.35	681.20	471.33	35.58	420.81	0.00	84.55	0.00	0.00	102.53	108.71	631.10	613.15	336.36	580.81	58.85	12.85	465.51	172.01	151.65	0.01	660.30	307.92	122.48	0.00	0.00	0.00
Corcorian ID	CID_016	533.37	547.86	425.90	23.03	351.59	36.12	28.90	0.00	0.00	77.11	106.72	88.60	0.12	52.11	199.39	7.69	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Corcorian ID	CID_017	1,278.44	1,386.96	975.15	176.79	1,293.32	206.88	499.85	261.66	0.00	818.02	1,242.18	1,747.47	1,247.56	488.25	448.95	408.94	101.82	1,389.98	1,473.27	1,463.99	133.79	38.17	1,244.58	1,309.51	1,183.41	980.85	980.85

Annualized Specified Pumping

Well field	Well_ID	1990 (AF/Y)	1991 (AF/Y)	1992 (AF/Y)	1993 (AF/Y)	1994 (AF/Y)	1995 (AF/Y)	1996 (AF/Y)	1997 (AF/Y)	1998 (AF/Y)	1999 (AF/Y)	2000 (AF/Y)	2001 (AF/Y)	2002 (AF/Y)	2003 (AF/Y)	2004 (AF/Y)	2005 (AF/Y)	2006 (AF/Y)	2007 (AF/Y)	2008 (AF/Y)	2009 (AF/Y)	2010 (AF/Y)	2011 (AF/Y)	2012 (AF/Y)	2013 (AF/Y)	2014 (AF/Y)	2015 (AF/Y)	2016 (AF/Y)
Corcorian ID	CID_018	943.66	749.64	701.03	152.18	949.61	64.22	0.00	0.00	0.00	389.81	552.60	674.14	968.82	810.87	919.52	489.30	96.06	1,480.59	1,008.63	729.60	264.65	240.75	1,249.10	1,122.97	980.39	887.85	887.85
Corcorian ID	CID_019	1,141.43	1,055.25	797.10	130.18	733.06	0.00	116.50	0.00	0.00	258.48	146.36	940.79	750.55	896.51	1,415.36	306.71	199.99	1,279.65	1,343.86	929.27	154.62	81.15	1,217.95	1,479.14	1,039.33	1,226.58	1,226.58
Corcorian ID	CID_020	1,682.59	1,222.03	743.03	73.31	1,142.60	87.36	155.47	0.00	0.00	127.25	523.92	1,049.50	1,208.63	1,367.01	1,039.10	273.64	197.83	843.20	988.20	641.34	300.74	119.40	1,241.00	1,151.67	1,028.68	772.84	772.84
Corcorian ID	CID_021	973.70	1,019.30	717.27	161.22	1,259.62	42.20	283.41	765.16	116.83	574.45	1,003.18	1,414.21	600.80	1,031.67	1,343.40	264.05	220.09	1,377.89	1,046.65	649.39	393.76	12.50	974.52	792.87	797.92	128.61	128.61
Corcorian ID	CID_022	992.52	810.03	693.96	141.75	643.68	75.24	111.76	0.00	0.00	43.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Corcorian ID	CID_023	858.00	744.13	547.71	0.00	558.21	26.48	116.26	0.00	0.00	400.61	518.95	462.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Corcorian ID	CID_024	1,836.70	2,033.55	1,689.40	368.63	2,092.55	105.69	290.01	980.44	130.41	924.59	1,393.04	1,348.60	1,555.08	523.66	1,441.63	175.26	169.60	1,959.05	1,197.09	2,036.26	709.24	21.26	1,397.81	213.99	1,318.92	195.89	195.89
Corcorian ID	CID_025	2,200.45	1,742.98	1,395.37	237.66	1,347.50	141.01	330.06	599.95	134.92	599.76	1,311.78	1,680.88	1,414.68	951.18	1,395.77	369.19	311.44	2,117.80	1,833.45	1,897.24	401.36	506.80	1,865.98	1,963.80	1,541.33	1,589.06	1,589.06
Corcorian ID	CID_026	2,054.10	1,752.35	2,044.83	332.41	1,992.01	313.63	186.98	755.01	229.09	735.74	1,095.24	1,398.85	1,363.25	309.84	1,420.85	693.28	217.92	2,049.11	1,398.39	1,446.66	108.73	235.06	1,581.51	1,821.77	1,704.64	1,538.76	1,538.76
Corcorian ID	CID_027	1,346.31	1,366.56	837.69	112.16	1,086.54	79.80	538.93	671.98	0.00	369.42	704.45	1,400.45	1,106.74	693.76	388.57	366.41	76.24	332.03	645.93	1,061.16	153.59	125.36	949.56	768.78	500.00	514.07	514.07
Corcorian ID	CID_028	1,759.43	2,454.37	1,851.81	384.68	2,660.59	150.14	845.41	514.20	94.87	1,819.92	2,777.40	3,244.34	1,540.61	2,267.13	2,119.73	347.32	671.10	2,370.25	2,101.08	1,720.37	158.47	0.00	0.00	1,149.04	1,854.99	1,267.36	1,267.36
Corcorian ID	CID_029	1,869.41	2,096.46	1,683.73	321.28	2,311.90	282.17	567.92	372.23	83.58	1,331.91	2,515.63	2,623.93	1,646.22	1,753.96	1,496.24	790.66	0.20	618.44	340.29	0.00	68.66	0.00	0.00	677.62	1,008.13	194.65	194.65
Corcorian ID	CID_030	1,033.99	234.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Corcorian ID	CID_031	744.47	606.00	617.43	125.94	688.72	64.45	0.00	0.00	0.00	243.97	433.74	311.91	522.61	794.13	451.74	113.97	132.28	423.17	340.78	185.08	0.00	0.63	0.00	0.00	0.00	0.00	0.00
Corcorian ID	CID_032	2,478.85	1,769.45	1,965.95	543.81	1,931.68	161.50	804.49	732.98	247.42	1,111.84	0.00	0.00	0.00	301.13	633.74	271.47	0.00	0.00	1,496.72	1,712.44	847.98	65.61	1,540.00	1,633.14	1,514.64	1,385.37	1,385.37
Corcorian ID	CID_033	1,379.94	899.71	1,359.42	306.02	1,413.69	150.67	288.74	0.00	0.00	734.29	1,294.95	1,373.09	1,628.69	1,515.12	1,217.83	337.36	125.60	1,773.95	1,764.90	694.03	630.17	133.66	1,365.41	812.42	22.00	453.53	453.53
Corcorian ID	CID_034	1,618.32	1,291.57	1,024.49	120.41	1,097.03	105.03	37.67	0.00	0.00	480.87	771.69	1,259.83	507.95	654.28	999.16	129.75	62.81	1,283.75	847.22	659.79	115.26	0.00	1,091.28	1,129.49	1,225.34	1,204.38	1,204.38
Corcorian ID	CID_035	1,295.37	1,693.60	1,493.93	333.89	1,721.01	111.08	512.54	273.14	215.25	1,426.21	1,590.00	499.62	0.00	985.65	2,204.94	509.33	437.62	2,442.24	2,187.69	2,419.10	871.86	58.45	1,869.01	496.05	0.00	0.00	0.00
Corcorian ID	CID_036	993.71	1,106.31	1,222.96	292.35	1,126.13	165.28	472.55	253.53	0.00	699.75	1,053.95	1,700.40	1,307.80	1,160.17	897.62	304.18	251.08	1,215.38	1,130.81	1,395.02	1,055.11	316.34	1,239.06	1,380.37	1,078.82	1,278.24	1,278.24
Corcorian ID	CID_037	1,344.64	1,981.76	1,250.45	260.64	1,723.95	150.68	600.69	341.34	65.27	128.13	419.34	741.83	1,268.20	1,484.38	1,878.90	582.54	351.38	1,532.13	1,230.39	1,151.86	538.73	23.36	612.84	0.00	-0.02	0.00	0.00
Corcorian ID	CID_038	2,139.10	2,553.65	2,343.27	360.78	2,614.25	224.79	776.11	378.39	0.00	1,367.84	1,564.95	2,101.25	2,025.91	1,740.78	1,318.42	645.71	484.89	2,221.00	2,099.24	2,049.18	810.60	27.00	1,906.51	1,063.32	2.80	369.57	369.57
Corcorian ID	CID_039	588.86	605.10	338.75	22.95	135.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Corcorian ID	CID_040	926.15	1,394.96	2,165.44	856.73	2,185.85	430.57	435.13	222.54	4.40	496.27	226.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Corcorian ID	CID_041	1,728.95	1,941.95	1,528.32	166.00	1,191.76	19.27	183.57	60.48	0.00	365.75	330.60	283.99	276.67	239.43	708.61	112.37	26.96	454.23	371.59	370.87	92.05	0.00	0.00	0.00	0.00	0.00	0.00
Corcorian ID	CID_042	1,692.50	864.41	1,239.68	250.66	1,566.67	118.48	210.11	0.00	0.00	616.36	1,002.06	1,448.33	1,428.97	1,081.34	867.66	303.24	288.09	1,578.76	1,448.04	627.67	501.39	152.11	1,365.87	1,229.59	121.05	467.66	467.66
Corcorian ID	CID_043	284.50	1,025.86	788.77	0.00	945.45	0.00	188.63	0.00	0.00	450.51	352.45	735.51	786.59	229.17	743.31	634.30	278.22	1,412.90	1,390.02	1,292.64	351.27	61.51	1,094.73	1,052.46	1,104.45	1,163.51	1,163.51
Corcorian ID	CID_044	2,029.22	2,100.06	1,637.63	709.97	1,802.08	547.81	731.24	162.90	29.33	484.21	922.29	1,556.49	455.60	1,084.36	758.02	104.03	57.82	637.83	1,063.14	1,054.04	174.91	8.30	272.36	121.12	0.02	0.00	0.00
Corcorian ID	CID_045	1,224.74	1,179.34	928.36	211.27	1,088.56	110.45	292.71	464.68	0.00	936.86	1,366.65	1,420.29	1,187.86	1,415.47	757.22	403.80	260.08	1,157.39	555.50	0.03	52.14	21.44	376.24	8.26	0.00	233.10	233.10
Corcorian ID	CID_046	989.39	998.34	534.12	129.56	997.58	218.11	218.98	14.94	0.00	533.14	1,338.92	971.73	1,018.56	505.35	471.23	357.23	286.09	522.10	319.19	1,059.49	388.39	16.28	727.21	0.00	0.00	133.84	133.84
Corcorian ID	CID_047	734.05	533.05	64.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Corcorian ID	CID_048	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Corcorian ID	CID_049	1,536.11	1,242.17	1,007.51	476.14	1,683.34	172.65	513.42	502.13	102.50	962.82	61.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Corcorian ID	CID_050	836.66	847.12	348.50	457.36	1,775.01	319.22	759.79	617.50	114.57	166.79	0.00	772.26	1,706.63	938.81	1,506.57	365.02	464.85	1,370.48	2,063.72	1,776.53	859.53	351.17	1,995.65	1,794.20	1,651.95	1,581.65	1,581.65
Corcorian ID	CID_051	1,263.69	903.10	610.18	13.28	758.27	1.42	166.40	0.00	0.00	168.74	286.75	750.62	883.60	695.86	1,150.74	63.77	0.00	1,168.23	643.60	730.05	776.54	0.00	328.34	498.59	883.24	1,006.86	1,006.86
Corcorian ID	CID_052	1,991.91	995.68	1,036.49	0.00	749.17	80.23	149.37	87.23	0.00	0.69	414.45	750.07	1,464.56	704.16	1,556.32	127.65	0.00	1,189.35	1,446.50	831.86	576.55	72.77	1,394.98	0.36	769.40	1,783.85	1,783.85
Corcorian ID	CID_053	1,836.83	1,344.56	1,165.61	99.22	832.81	0.00	98.02	762.31	0.00	539.91	907.06	1,523.06	1,816.36	676.03	1,526.97	409.15	309.93	1,543.69	1,958.95	1,697.35	534.79	186.30	2,064.82	1,397.63	1,401.31	812.65	812.65
Corcorian ID	CID_054	1,451.67	1,174.62	1,135.27	279.69	1,492.00	217.17	413.17	229.71	121.84	743.08	1,167.10	873.06	544.35	920.54	963.95	257.76	122.34	1,244.66	1,464.17	727.87	526.74	12.28	714.45	1,678.15	1,507.17	1,201.17	1,201.17
Corcorian ID	CID_055	2,365.41	1,436.58	1,476.88	441.19	1,386.77	121.08	275.37	679.83	0.00	564.72	1,197.01	2,607.04	1,613.90	2,007.08	1,746.33	132.10	565.44	1,492.46	1,945.02	1,958.99	1,268.44	210.35	1,910.51	2,189.52	1,816.23	1,667.14	1,667.14
Corcorian ID	CID_056	738.47	899.22	907.33	30.66	525.20	0.00	90.85	0.00	0.00	137.20	146.30	240.95	112.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Corcorian ID	CID_057	608.80	531.36	439.66	31.84	571.42	0.00	112.63	0.00	0.00	206.13	124.98	141.95	937.95	465.40	896.06	269.11	382.14	992.97	817.96	677.84	93.08	45.76	655.66	806.32	455.50	190.09	190.09
Corcorian ID	CID_058	782.84	1,487.40	1,445.57	72.68	1,461.54	8.37	275.47	0.00	0.00	592.73	566.75	701.85	1,246.44	1,368.91	2,152.07	435.74	390.39	657.44	1,068.66	767.14	71.18	0.00	220.51	1,016.28	541.40	0.00	0.00
Corcorian ID	CID_059	1,064.65	789.51	878.63	29.92	859.07	0.00	126.21	0.00	0.00	183.55	89.17	444.63	631.08	483.03	1,203.38	83.63	156.67	1,246.42	794.91	608.13	329.65	238.86	887.67	434.38	581.54	1,126.40	1,126.40
Corcorian ID	CID_060	1,186.15	836.46	764.81	24.75	564.07	0.00	59.39	0.00	0.00	148.74	141.85	305.96	524.69	548.08	718.07	15.28	78.66	688.72	627.04	743.75	165.17	43.44	506.06	385.22	555.47	1,243.15	1,243.15
Corcorian ID	CID_061	1,839.79	1,763.78	1,343.82	96.53	1,166.08	0.00	42.90	0.00	0.00	225.47	161.15	749.72	1,345.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Corcorian ID	CID_062	1,510.19	1,402.87	851.17	74.78	567.56	0.00	48.19	0.00	0.00	300.69	85.41	49.06	444.21	304.33	526.07	64.98	2.41	164.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Corcorian ID	CID_063	2,116.83	2,169.74	1,729.88	664.94	1,792.09	275.77	981.68	887.72	167.38	1,181.73	0.00	0.00	0.00	1,438.93	1,750.63	550.79	538.72	1,868.28	1,484.65	1,675.69	1,293.54	203.43	965.59	280.73	0.03	0.00	0.00
Corcorian ID	CID_064	2,074.68	1,327.64	1,123.30	543.00	1,087.03	2.46	512.08	662.32	126.51	746.76	0.00	0.00	0.00	883.95	1,208.47	440.98	383.93	699.74	0.00	1,510.93	548.35	329.55	1,622.10	816.65	1,052.12	822.86	822.86
Corcorian ID	CID_065	1,942.43	1,804.73	2,012.33	8.49	1,601.31	235.59	660.05	338.52	68.98	7.07	56.60	809.67	361.00	912.87	570.92	294.10	290.66	1,146.88	112.93	27.01	0.87	14.62	706.91	728.36	433.30	489.35	489.35
Corcorian ID	CID_066	898.36	2,125.69	1,738.59	341.96	2,000.57	224.44	632.38	306.49	102.26	1,174.19	1,328.18	1,311.76	1,753.59	1,384.98	1,760.36	518.70	352.57	1,539.70	1,329.17	615.29	680.97	44.63	627.21	1,497.67	1,680.60	1,581.47	1,581.47
Corcorian ID	CID_067	501.07	1,786.21	1,343.64	0.90	1,171.53	362.37	630.97	259.32	60.60	1,063.45	1,475.18	2,016.68	1,693.56	1,248.29	738.11	541.95	256.87	1,379.68	708.03	1,415.60	600.85	44.10	1,440.96	1,606.41	1,662.27	1,577.51	1,577.51
Corcorian ID	CID_068	686.17	2,321.54	2,221.60	590.11	2,542.92	257.96	448.15	331.17	75.84	732.05	1,387.50	1,606.13	2,023.64	2,071.91	2,455.38	783.78	483.49	2,285.23	2,022.20	1,924.91	891.60	122.02	2,103.11	1,980.63	1,948.43	2,031.33	2,031.33
Corcorian ID	CID_069	660.62	1,174.00	1,257.34	83.78	910.55	0.00	118.40	0.00	0.00	322.60	254.88	834.92	1,318.93	1,334.52	1,335.06	142.86	151.90	1,038.21	966.18	1,481.98	581.05	59.73	1,369.45	1,773.00	1,234.69	1,662.08	1,662.08
Corcorian ID	CID_070	184.97	275.55	165.35	27.69	107.46	4.60	21.23	134.21	15.16	14.33	0.00	22.15	257.37	230.30	197.92	17.42	7.54	189.28	10.66	14.26	63.64	6.27	0.00	124.92	124.32	137.06	137.06
Corcorian ID	CID_071	0.00	118.15	142.04	0.00	103.91	9.51	56.51	153.38	17.39	32.98	93.47	255.58	240.42	184.43	216.73	27.04	10.50	59.65	0.00	21.80	106.99	12.30	320.79	344.77	231.63	240.45	240.45
Corcorian ID	CID_072	0.00	95.97	109.90	36.91	29.04	7.31	8.98	22.36	0.00	9.99	104.91	119.09	80.83	0.00	3.58	7.98	6.65	0.00	0.00	0.00	-0.90	0.89	0.01	0.00	0.00	0.04	0.04
Corcorian ID	CID_073	0.00	142.84	310.98	67.77	234.63	11.31	11.59	0.00	0.00	122.98	180.62	243.11	343.09	202.04	163.85	22.48	16.64	226.31	202.17	0.00	60.93	100.01	0.00	196.04	85.09	0.00	0.00
Corcorian ID	CID_074	0.00	0.00	364.26	397.13	1,245.96	125.65	293.08	0.00	0.00	622.39	620.98	1,253.41	1,834.78	1,616.65	2,471.79	1,059.92	512.47	2,121.78	2,147.19	1,894.95	865.95	105.57	330.88	0.57	0.00	0.00	0.00
Corcorian ID	CID_075	0.00	0.00	251.55	225.46	989.02	0.00	105.87	0.00	0.00	305.79	314.55	1,173.34	1,238.55	1,362.63	1,757.47	111.55	91.83	978.03	819.89	843.24	0.00	0.00	2.00	959.89	1,013.14	1,098.97	1,098.97
Corcorian ID	CID_076	0.00	0.00	0.00	0.00	234.89	111.78	634.61	541.05	0.00	272.51	610.40	1,860.09	1,638.49	1,356.17	1,835.78	425.89	380.38	2,196.13	2,152.32	1,863.13	790.24	97.44	1,954.80	2,143.33	219.61	0.36	0.36
Corcorian ID	CID_077	0.00	0.00	0.00	0.00	0.00	0.00	0.00	123.51	0.00	237.17	187.97	225.90	298.14	320.75	99.52	57.46	74.24	140.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Corcorian ID	CID_078	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,668.87	1,369.61	1,606.41	1,482.16	308.50	144.84	982.56	962.93	729.61	0.00	81.84	1,049.74	1,049.20	1,186.57	72.24	72.24
Corcorian ID	CID_079	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,735.25	1,734.52	1,824.40	1,342.88	325.61	197.09	1,309.95	1,359.77	1,443.55	340.79	170.81	1,080.45	550.07	746.57	907.46	907.46
Corcorian ID	CID_080	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,660.37	1,583.12	1,635.26	1,523.73	347.82	282.27	1,443.19	871.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Corcorian ID	CID_081	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	487.72	1,518.23	1,538.22	152.23	78.55	1,271.28	1,444.23	1,641.26	313.71	99.39	444.08	722.62	1,122.74	1,585.55	1,585.55
Corcorian ID	CID_082	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	315.07	1,287.24	245.95	186.05	1,239.63	492.18	922.72	497.22	18.21	1,269.58	1,409.00	1,376.68	1,127.54	1,127.54
Corcorian ID	CID_083	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	91.59	663.41	437.53	112.73	1,368.03	1,577.93	1,328.94	465.39	222.46	1,239.53	1,601.77	1,425.61	869.57	869.57
Corcorian ID	CID_084	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	125.95	183.58	93.35	834.67	947.18	988.60	223.77	37.16	540.41	0.01	49.57	987.79	987.79
Corcorian ID	CID_085	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	534.63	296.53	1,886.07	1,778.62	1,746.80	709.95	220.89	1,615.89	1,673.35	1,168.21	0.00	0.00
Corcorian ID	CID_086	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	160.70	1,036.72	330.95	1,000.21	397.67	5.91	816.21	398.68	0.04	0.00	0.00
Corcorian ID	CID_087	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	378.71	1,827.95	1,247.36	1,274.21	211.04	224.24	1,023.00	1,371.43	1,466.07	1,521.31	1,521.31
Corcorian ID	CID_088	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,263.58	1,261.12	1,461.71	246.31	0.00	1,146.15	1,440.28	1,179.16	1,313.66	1,313.66
Corcorian ID	CID_089	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	349.93	538.06	1,434.87	454.84	0.00	1,193.74	1,389.61	0.03	0.00	0.00
Corcorian ID	CID_090	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	607.56	1,291.87	467.41	0.00	342.47	1,557.85	1,126.84	1,427.48	1,427.48
Corcorian ID	CID_091	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	859.04	1,767.72	592.13	0.01	1,413.28	2,641.50	1,826.26	1,869.65	1,869.65

Annualized Specified Pumping

Well field	Well_ID	1990 (AF/Y)	1991 (AF/Y)	1992 (AF/Y)	1993 (AF/Y)	1994 (AF/Y)	1995 (AF/Y)	1996 (AF/Y)	1997 (AF/Y)	1998 (AF/Y)	1999 (AF/Y)	2000 (AF/Y)	2001 (AF/Y)	2002 (AF/Y)	2003 (AF/Y)	2004 (AF/Y)	2005 (AF/Y)	2006 (AF/Y)	2007 (AF/Y)	2008 (AF/Y)	2009 (AF/Y)	2010 (AF/Y)	2011 (AF/Y)	2012 (AF/Y)	2013 (AF/Y)	2014 (AF/Y)	2015 (AF/Y)	2016 (AF/Y)
Corcorian ID	CID_092	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	859.35	1,550.38	437.84	244.98	1,141.08	1,105.51	1,066.16	1,298.44	1,298.44
Corcorian ID	CID_093	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	741.70	1,487.20	372.01	165.25	750.50	1,032.04	999.00	1,253.67	1,253.67
Corcorian ID	CID_094	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	896.47	1,692.61	626.91	145.20	1,171.04	1,738.69	1,475.47	1,674.79	1,674.79
Corcorian ID	CID_095	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	627.84	1,662.93	573.14	87.26	1,072.90	1,293.26	1,510.39	1,427.72	1,427.72
Corcorian ID	CID_096	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	38.47	54.99	317.46	3,420.23	2,889.80	3,510.53	3,510.53
Corcorian ID	CID_097	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	155.44	3,085.52	2,159.80	2,290.52	2,290.52
Corcorian ID	CID_098	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,056.92	1,361.42	1,473.69	1,473.69
Corcorian ID	CID_099	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,209.37	517.23	517.23
Corcorian ID	CID_100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,885.47	1,884.87	1,884.87
Corcorian ID	CID_101	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	74.34	975.48	975.48
Corcorian ID	CID_102	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Corcorian ID	CID_103	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Corcorian ID	CID_104	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Corcorian ID	CID_105	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Westlands WD	WWD_18S19E-18Q01	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_18S19E-19K01	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_18S19E-20E01	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_18S19E-20F01	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_18S19E-28M02	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_18S19E-29D01	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_18S19E-31N01	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_19S19E-04M01	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_19S19E-05K01	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_19S19E-07N02	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_19S19E-08N04	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_19S19E-10E02	550.08	725.53	680.15	461.72	573.98	338.21	360.23	325.08	253.81	400.51	512.10	606.57	629.47	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.18	600.17	728.11	711.26	728.11
Westlands WD	WWD_19S19E-15D02	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_19S19E-15D03	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_19S19E-15E02	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_19S19E-15N01	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_19S19E-18C01	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_19S19E-19K01	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_19S19E-26D03	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_19S19E-26E03	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_19S19E-27D01	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_19S19E-27M01	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_19S19E-28K02	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_19S19E-29A01	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_19S19E-29A02	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_19S19E-29A03	328.85	485.30	444.10	316.62	391.76	250.01	282.69	247.40	199.56	283.18	410.21	459.73	477.57	329.33	290.74	199.55	205.46	399.29	552.81	580.16	372.56	215.27	401.83	520.17	556.07	566.97	556.07
Westlands WD	WWD_19S19E-29J01	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_19S19E-30L01	655.02	887.19	827.97	461.72	671.23	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_19S19E-30M01	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_19S19E-30M02	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_19S19E-31A01	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_19S19E-31D03	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_19S19E-31N03	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_19S19E-32K01	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_19S19E-33E01	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_19S19E-33Q02	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_20S18E-24H01	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_20S18E-25E01	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_20S18E-26K01	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_20S18E-35D02	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_20S18E-35E03	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_20S18E-36C03	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_20S18E-36D05	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_20S19E-02A01	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_20S19E-02D01	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_20S19E-02E02	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_20S19E-02J01	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_20S19E-02N01	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_20S19E-04D02	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_20S19E-04D03	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_20S19E-04H01	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_20S19E-06N04	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_20S19E-07D01	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_20S19E-07G01	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_20S19E-07G02	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_20S19E-08M01	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_20S19E-09D02	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_20S19E-09D03	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_20S19E-09N02	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11

Annualized Specified Pumping

Well field	Well_ID	1990 (AF/Y)	1991 (AF/Y)	1992 (AF/Y)	1993 (AF/Y)	1994 (AF/Y)	1995 (AF/Y)	1996 (AF/Y)	1997 (AF/Y)	1998 (AF/Y)	1999 (AF/Y)	2000 (AF/Y)	2001 (AF/Y)	2002 (AF/Y)	2003 (AF/Y)	2004 (AF/Y)	2005 (AF/Y)	2006 (AF/Y)	2007 (AF/Y)	2008 (AF/Y)	2009 (AF/Y)	2010 (AF/Y)	2011 (AF/Y)	2012 (AF/Y)	2013 (AF/Y)	2014 (AF/Y)	2015 (AF/Y)	2016 (AF/Y)
Westlands WD	WWD_20S19E-10E01	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_20S19E-11D03	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_20S19E-11E01	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_20S19E-14A01	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_20S19E-14E01	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_20S19E-14F01	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_20S19E-14H01	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_20S19E-17M01	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_20S19E-17M02	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_20S19E-18D02	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_20S19E-19D03	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_20S19E-19N01	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_20S19E-19N02	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_20S19E-19R01	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_20S19E-20D01	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_20S19E-20D02	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_20S19E-20D03	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_20S19E-23K01	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_20S19E-26C01	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_20S19E-31D01	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_20S19E-35D02	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_20S19E-35M01	686.94	957.05	941.26	461.72	765.21	338.21	360.23	325.08	253.81	413.11	512.10	660.00	688.37	378.27	364.24	199.55	205.46	470.25	653.10	659.00	378.80	215.27	497.87	600.17	728.11	711.26	728.11
Westlands WD	WWD_21S17E-24J01	324.49	578.77	528.71	222.32	333.06	76.85	59.76	85.38	112.32	176.41	280.46	342.34	301.91	155.73	140.09	21.62	7.59	219.12	303.24	431.66	160.11	0.00	247.66	478.21	647.24	652.89	647.24
Westlands WD	WWD_21S18E-01B02	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_21S18E-01N01	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_21S18E-02C03	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_21S18E-02D03	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_21S18E-03G01	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_21S18E-09L01	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_21S18E-10B01	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_21S18E-11C01	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_21S18E-11D03	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_21S18E-11N01	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_21S18E-11Q01	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_21S18E-14M07	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_21S18E-15M02	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_21S18E-16N01	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_21S18E-16P01	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_21S18E-17N03	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_21S18E-18R01	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_21S18E-22B05	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_21S18E-22E01	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_21S18E-23B02	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_21S18E-23D07	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_21S18E-23E01	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_21S18E-26N01	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_21S18E-27B01	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_21S18E-27E01	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_21S18E-27K02	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_21S18E-28G06	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_21S18E-28Q02	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_21S18E-29E02	324.49	578.77	528.71	222.32	333.06	76.85	59.76	85.38	112.32	176.41	280.46	342.34	301.91	155.73	140.09	21.62	7.59	219.12	303.24	431.66	160.11	0.00	247.66	478.21	647.24	652.89	647.24
Westlands WD	WWD_21S18E-29N02	324.49	578.77	528.71	222.32	333.06	76.85	59.76	85.38	112.32	176.41	280.46	342.34	301.91	155.73	140.09	21.62	7.59	219.12	303.24	431.66	160.11	0.00	247.66	478.21	647.24	652.89	647.24
Westlands WD	WWD_21S18E-31H01	324.49	578.77	528.71	222.32	333.06	76.85	59.76	85.38	112.32	176.41	280.46	342.34	301.91	155.73	140.09	21.62	7.59	219.12	303.24	431.66	160.11	0.00	247.66	478.21	647.24	652.89	647.24
Westlands WD	WWD_21S18E-32R01	324.49	578.77	528.71	222.32	333.06	76.85	59.76	85.38	112.32	176.41	280.46	342.34	301.91	155.73	140.09	21.62	7.59	219.12	303.24	431.66	160.11	0.00	247.66	478.21	647.24	652.89	647.24
Westlands WD	WWD_21S18E-33G01	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_21S18E-33N02	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_21S18E-35D01	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_21S18E-35Q01	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_21S18E-35Q02	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_21S19E-06B01	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_21S19E-07D01	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_21S19E-07N02	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_21S19E-17E01	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_21S19E-17Q01	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_21S19E-18N03	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_21S19E-19C03	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_21S19E-20D01	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_21S19E-30D04	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_21S19E-30D05	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_22S18E-01E02	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_22S18E-01K01	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_22S18E-02G05	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_22S18E-03B01	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00

Annualized Specified Pumping

Well field	Well_ID	1990 (AF/Y)	1991 (AF/Y)	1992 (AF/Y)	1993 (AF/Y)	1994 (AF/Y)	1995 (AF/Y)	1996 (AF/Y)	1997 (AF/Y)	1998 (AF/Y)	1999 (AF/Y)	2000 (AF/Y)	2001 (AF/Y)	2002 (AF/Y)	2003 (AF/Y)	2004 (AF/Y)	2005 (AF/Y)	2006 (AF/Y)	2007 (AF/Y)	2008 (AF/Y)	2009 (AF/Y)	2010 (AF/Y)	2011 (AF/Y)	2012 (AF/Y)	2013 (AF/Y)	2014 (AF/Y)	2015 (AF/Y)	2016 (AF/Y)
Westlands WD	WWD_22S18E-04H01	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_22S18E-05B01	324.49	578.77	528.71	222.32	333.06	76.85	59.76	85.38	112.32	176.41	280.46	342.34	301.91	155.73	140.09	21.62	7.59	219.12	303.24	431.66	160.11	0.00	247.66	478.21	647.24	652.89	647.24
Westlands WD	WWD_22S18E-10A01	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_22S18E-10C01	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_22S18E-11C02	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_22S18E-11C03	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_22S18E-11G01	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_22S18E-12R01	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_22S18E-13K02	311.52	472.04	476.59	181.10	319.20	90.51	81.94	82.06	67.59	130.95	153.24	309.43	288.00	200.33	216.07	35.99	56.71	149.91	276.10	338.57	136.64	34.49	310.36	401.68	562.00	523.80	562.00
Westlands WD	WWD_FARM_24_141	951.61	864.42	802.36	423.25	712.63	212.87	419.18	510.96	243.94	496.07	558.07	770.78	779.45	759.89	763.70	239.73	166.23	639.83	707.60	747.47	496.10	212.44	632.85	857.61	918.01	900.73	918.01
Westlands WD	WWD_FARM_25_012	613.28	515.09	548.89	17.77	269.36	16.44	41.24	119.70	65.89	127.75	104.06	441.50	427.47	413.57	529.14	116.35	52.19	289.39	509.78	542.56	89.33	4.46	311.87	800.63	1,036.48	1,023.31	1,036.67
Westlands WD	WWD_FARM_25_044	613.28	515.09	548.89	17.77	269.36	16.44	41.24	119.70	65.89	127.75	104.06	441.50	427.47	413.57	529.14	116.35	52.19	289.39	509.78	542.56	89.33	4.46	311.87	800.63	1,036.48	1,023.31	1,036.67
Westlands WD	WWD_FARM_26_001	275.60	386.59	450.92	156.07	326.58	44.00	104.66	157.88	36.72	316.41	86.83	162.60	181.16	157.15	177.76	9.55	0.00	89.14	208.00	178.48	2.45	0.00	23.43	190.50	369.83	287.40	369.83
Westlands WD	WWD_FARM_26_003	275.60	386.59	450.92	156.07	326.58	44.00	104.66	157.88	36.72	316.41	86.83	162.60	181.16	157.15	177.76	9.55	0.00	89.14	208.00	178.48	2.45	0.00	23.43	190.50	369.83	287.40	369.83
Westlands WD	WWD_FARM_26_008	275.60	386.59	450.92	156.07	326.58	44.00	104.66	157.88	36.72	316.41	86.83	162.60	181.16	157.15	177.76	9.55	0.00	89.14	208.00	178.48	2.45	0.00	23.43	190.50	369.83	287.40	369.83
Westlands WD	WWD_FARM_26_015	275.60	386.59	450.92	156.07	326.58	44.00	104.66	157.88	36.72	316.41	86.83	162.60	181.16	157.15	177.76	9.55	0.00	89.14	208.00	178.48	2.45	0.00	23.43	190.50	369.83	287.40	369.83
Westlands WD	WWD_FARM_26_029	275.60	386.59	450.92	156.07	326.58	44.00	104.66	157.88	36.72	316.41	86.83	162.60	181.16	157.15	177.76	9.55	0.00	89.14	208.00	178.48	2.45	0.00	23.43	190.50	369.83	287.40	369.83
City of Hanford	Hanford_02	102.40	99.06	105.88	111.91	120.67	118.07	142.15	143.82	129.29	147.07	151.50	156.30	269.50	233.05	299.93	328.43	299.61	334.24	305.46	3.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00
City of Hanford	Hanford_11	113.39	112.69	122.58	128.31	140.26	137.11	168.62	167.88	159.18	179.28	184.81	192.29	234.03	230.14	275.32	184.07	266.40	311.91	324.67	291.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00
City of Hanford	Hanford_18	186.85	181.48	191.61	204.13	219.22	215.95	254.91	256.53	234.21	263.63	270.19	280.47	520.85	405.58	331.20	317.92	336.53	559.96	854.08	615.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
City of Hanford	Hanford_31	261.74	251.86	263.87	280.59	299.14	294.73	340.76	344.91	307.34	348.05	356.58	368.32	822.26	681.10	697.40	548.66	670.78	707.48	349.60	91.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00
City of Hanford	Hanford_32	96.22	95.54	103.07	107.80	116.74	115.68	141.62	140.22	130.28	147.78	151.05	157.56	225.24	134.37	210.78	314.05	158.14	249.19	280.72	154.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00
City of Hanford	Hanford_33	206.19	193.86	204.59	218.47	235.94	226.56	269.86	276.06	243.13	274.60	286.68	291.22	587.13	73.84					13.89	426.27	487.42	935.72	285.66	312.93	48.94	31.23	11.56
City of Hanford	Hanford_34	614.68	597.66	631.99	667.18	710.53	705.48	816.25	819.50	741.51	838.28	855.84	887.24	1,846.51	1,293.61	1,238.78	1,121.06	1,770.59	1,731.57	1,188.37	888.77	233.03	0.00	0.00	0.00	0.00	0.00	0.00
City of Hanford	Hanford_35	285.27	272.85	287.83	305.56	327.44	319.54	372.41	377.61	337.77	381.36	393.84	404.11	842.03	1,097.87	1,122.26	1,277.45	854.27	464.84	832.93	403.41	347.71	315.84	288.32	278.63	25.49	58.73	68.08
City of Hanford	Hanford_36	211.55	201.39	212.34	226.34	242.33	236.11	276.88	283.06	249.97	282.84	292.62	299.34	629.07	626.07	628.28	901.04	795.99	178.64	995.84	451.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00
City of Hanford	Hanford_37																73.90	435.65	374.67	266.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
City of Hanford	Hanford_38	100.71	97.15	105.18	110.65	120.04	116.39	143.06	145.01	129.90	149.22	154.17	159.32	241.52	179.08	116.58	163.01	200.08	223.35	322.31	174.12	283.19	262.46	377.34	430.89	146.21	139.46	5.52
City of Hanford	Hanford_40	404.29	393.17	416.59	438.20	466.63	461.04	535.33	535.83	485.52	548.53	562.80	581.17	1,192.58	1,109.49	1,047.04	862.25	123.37	1,717.66	1,523.56	525.05	601.79	446.13	456.49	814.28	1,077.77	361.24	536.60
City of Hanford	Hanford_41	700.43	682.01	725.15	766.28	818.86	810.69	968.71	974.11	871.39	993.08	1,014.91	1,053.27	1,998.41	357.39	1,593.93	1,953.86	1,871.00	1,941.46	1,909.83	1,060.98	0.00	0.00	0.00	0.00	0.00	0.00	126.92
City of Hanford	Hanford_42	676.84	646.25	684.73	728.22	782.32	760.35	899.56	916.40	815.26	924.48	956.39	981.47	1,916.88	1,433.44	1,197.86	0.00	0.00	0.00	707.22	1,259.53	994.28	1,246.09	1,592.03	1,671.66	1,921.12	1,343.45	1,222.72
City of Hanford	Hanford_43																			80.08	97.72	4.07	96.72	192.33	511.79	520.62	1,265.51	964.64
City of Hanford	Hanford_44																			0.00	67.06	1,326.56	2,300.01	2,306.05	497.23	1,769.99	1,601.15	1,432.46
City of Hanford	Hanford_45(16)	592.06	571.40	602.83	637.05	679.68	669.17	775.47	779.09	701.87	792.49	813.78	839.64	1,789.82	678.50	378.47	433.81	391.24	404.94	0.00	1,182.88	2,173.71	1,624.04	1,697.82	1,836.68	1,207.41	3,184.25	1,505.65
City of Hanford	Hanford_46(8)	387.84	394.83	424.30	442.70	477.72	480.41	581.43	567.39	543.16	611.14	619.96	653.80	908.09	0.55						962.51	1,337.10	643.47	602.00	997.27	1,119.86	926.88	620.64
City of Hanford	Hanford_47(22)	254.40	252.00	271.68	284.61	305.69	303.22	373.64	371.65	338.02	387.11	394.79	412.43	634.56	2.17	1.27	0.17	0.28	0.00	0.00	0.00	127.95	1,195.99	1,034.26	1,497.96	811.55	617.40	694.24
City of Hanford	Hanford_48(25)	296.46	296.08	315.90	330.28	351.96	354.39	423.87	416.57	382.60	436.75	440.52	464.36	834.77	564.41	547.16	711.74	229.77	503.55	344.90	0.00	307.79	951.61	782.60	1,647.20	639.09	246.90	957.11
City of Hanford	Hanford_49	389.12	379.55	405.57	427.31	457.80	453.78	543.29	545.98	490.71	557.99	571.50	591.86	1,064.12	48.56		440.11	356.84	522.45	637.00	361.32	0.00	0.00	0.00	0.00	0.00	0.00	47.23
City of Lemoore	LEM_02	290.78	282.54	299.17	316.07	337.92	333.04	390.89	392.77	339.74	309.35	261.46	215.75	178.77	233.66	284.18	574.32	590.44	594.39	634.47	620.90	594.92	593.46	0.00	75.87	0.00	360.17	0.00
City of Lemoore	LEM_04	290.78	282.54	299.17	316.07	337.92	333.04	390.89	392.77	339.74	309.35	261.46	215.75	178.77	233.66	284.18	574.32	590.44	594.39	634.47	620.90	594.92	593.46	446.96	836.73	1,068.20	360.96	4.38
City of Lemoore	LEM_05	290.78	282.54	299.17	316.07	337.92	333.04	390.89	392.77	339.74	309.35	261.46	215.75	178.77	233.66	284.18	574.32	590.44	594.39	634.47	620.90	594.92	593.46	0.00	86.80	268.55	382.28	60.44
City of Lemoore	LEM_06	290.78	282.54	299.17	316.07	337.92	333.04	390.89	392.77	339.74	309.35	261.46	215.75	178.77	233.66	284.18	574.32	590.44	594.39	634.47	620.90	594.92	593.46	1,811.88	1,454.78	886.18	599.81	947.31
City of Lemoore	LEM_07	290.78	282.54	299.17	316.07	337.92	333.04	390.89	392.77	339.74	309.35	261.46	215.75	178.77	233.66	284.18	574.32	590.44	594.39	634.47	620.90	594.92	593.46	185.36	589.68	101.76	461.95	427.91
City of Lemoore	LEM_08	290.78	282.54	299.17	316.07	337.92	333.04	390.89	392.77	339.74	309.35	261.46	292.25	357.47	315.26	423.81	600.92	616.80	601.25	611.47	501.97	548.90	560.06	132.40	75.87	0.00	360.17	0.00
City of Lemoore	LEM_09	290.78	282.54	299.17	316.07	337.92	333.04	390.89	392.77	339.74	309.35	261.46	211.56	191.52	228.92	394.94	559.85	540.33	450.23	538.57	625.12	548.15	528.96	136.28	75.87	0.00	360.17	0.00
City of Lemoore	LEM_10	290.78	282.54	299.17	316.07	337.92	333.04	390.89	392.77	526.94	1,420.70	2,072.97	2,416.84	2,570.42	2,298.46	2,205.27	574.32	590.44	594.39	634.47	620.90	594.92	593.46	1,809.74	1,482.52	1,784.18	862.75	1,541.31
City of Lemoore	LEM_11	290.78	282.54	299.17	316.07	337.92	333.04	390.89	392.77	339.74	309.35	261.46	215.75	3,175.77	4,259.05	1,243.12	574.32	590.44	594.39	634.47	620.90	594.92	593.46	661.39	622.93	713.77	506.67	599.20
City of Lemoore	LEM_12	290.78	282.54	299.17	316.07	337.92	333.04	390.89	392.77	339.74	309.35	261.46	473.76	2,597.27	1,461.96	2,834.40	574.32	590.44	594.39	634.47	620.90	594.92	593.46	972.56	873.70	126.17	543.30	535.47
City of Lemoore	LEM_13	290.78	282.54	299.17	316.07	337.92	333.04	390.89	392.77	339.74	309.35	261.46	215.75	178.77	233.66	284.18	574.32	590.44	594.39	634.47	620.90	594.92	593.46	853.49	1,279.86	1,636.77	862.22	1,445.57
City of Lemoore	LEM_14	290.78	282.54	299.17	316.07	337.92	333.04	390.89	392.77	339.74	309.35	261.46	215.75	178.77	233.66	284.18	574.32	590.44	594.39	634.47	620.90	594.92	593.46	841.73	460.35	1,056.74	709.06	799.97
Apex Ranch	APEX_RW-1	--	--	--	--	--	--	--	--	--	--	--	--	0	105.2	182.4	0	1387.8	1263.8	1087	1535.4	1269	0	1808.8	994	59.6	0	0
Apex Ranch	APEX_RW-2	--	--	--	--	--	--	--	--	--	--	--	--	0	105.2	182.4	0	1387.8	1263.8	1087	1535.4	1269	0	1808.8	994	59.6	0	0
Apex Ranch	APEX_RW-3	--	--	--	--	--	--	--	--	--	--	--	--	0	105.2	182.4	0	1387.8	1263.8	1087	1535.4	1269	0	1808.8	994	59.6	0	0
Apex Ranch	APEX_RW-4	--	--	--	--	--	--	--	--	--	--	--	--	0	105.2	182.4	0	1387.8	1263.8	1087	1535.4	1269	0	1808.8	994	59.6	0	0
Apex Ranch	APEX_RW-5	--	--	--	--	--	--	--	--	--	--	--	--	0	105.2	182.4	0	1387.8	1263.8	1087	1535.4	1269	0	1808.8	994	59.6	0	0

Appendix D5
Observed and Simulated Target Well Hydrographs

Table o□Con□en□s

Well ID	Page □
C□ar□Legend	1
□R_1□S21□31R001_L3	1
□R_19S22□22A001_L3	1
□R_20S21□11D001_L6	1
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□R_20S22□33F001_L3	□
□R_20S23□08G001_L3	□
□R_20S2□□2□□001_L1	□
□R_21S21□0□K001_L6	□
□R_21S21□1□D001_L6	□
□R_21S21□1□K001_L6	□
□R_21S21□21D001_L6	□
□R_21S22□09D001_L6	□
□R_21S22□09□001_L6	6
□R_21S22□22M001_L1	6
□R_23S2□□09□002_L3	6
□R_2□S22□2□B001_L6	6
□R_26S23□1□A001_L6	□
□R_CID_001_L□	□
□R_CID_002_L□	□
□R_CID_003_L3	□
□R_CID_00□_L2	8
□R_CID_006_L2	8
□R_CID_00□_L□	8
□R_CID_009_L□	8
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□R_CID_032_L3	13
□R_CID_03□_L□	13
□R_CID_03□_L6	13
□R_CID_036_L□	1□
□R_CID_03□_L□	1□

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□R_CID_0□3_L□	1□
□R_CID_0□□_L□	1□
□R_CID_0□□_L□	1□
□R_CID_0□6_L□	1□
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□R_CID_0□0_L3	16
□R_CID_0□1_L□	16
□R_CID_0□2_L3	16
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□R_CID_090_L□	22
□R_CID_091_L3	23
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□R_M-166_L6	23
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KG_1□S19□3□□002_L6	26
KG_1□S20□02□001_L3	26
KG_1□S20□11□001_L3	26
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KG_1□S20□28□001_L3	2□
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Well ID	Page □
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KG_1□S21□19R001_L3	28
KG_1□S21□20G001_L3	29
KG_1□S21□22C001_L2	29
KG_1□S21□29D003_L3	29
KG_1□S22□0□A001_L3	29
KG_1□S22□11P001_L2	30
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KW_18S23□21□001_L3	□3
KW_18S23□26L001_L3	□□
KW_18S23□2□P001_L2	□□
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KW_19S21□13A001_L3	□6
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KW_19S21□26B001_L6	□□
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KW_19S22□32D001_L6	□0
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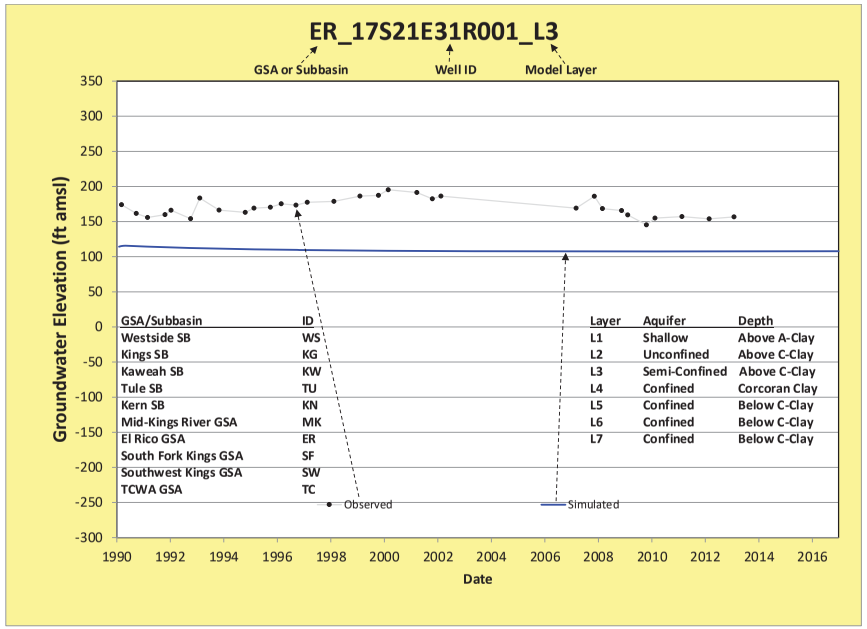
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Date
Observed
Simulated
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Kaweah SB KW
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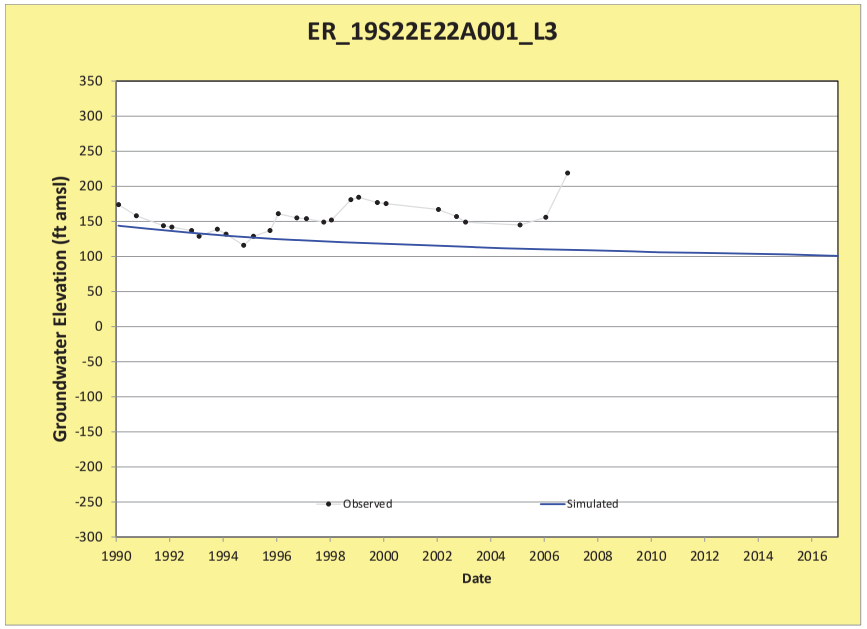
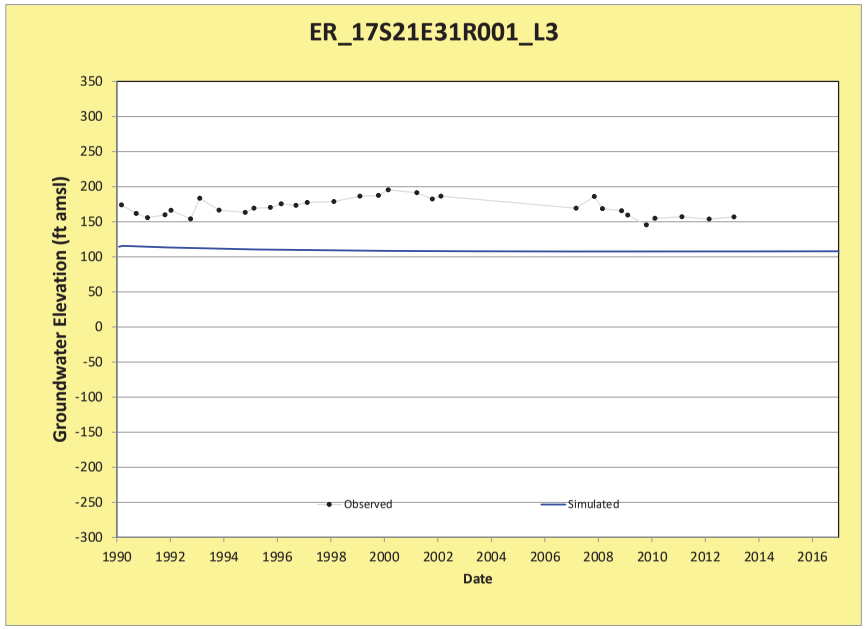
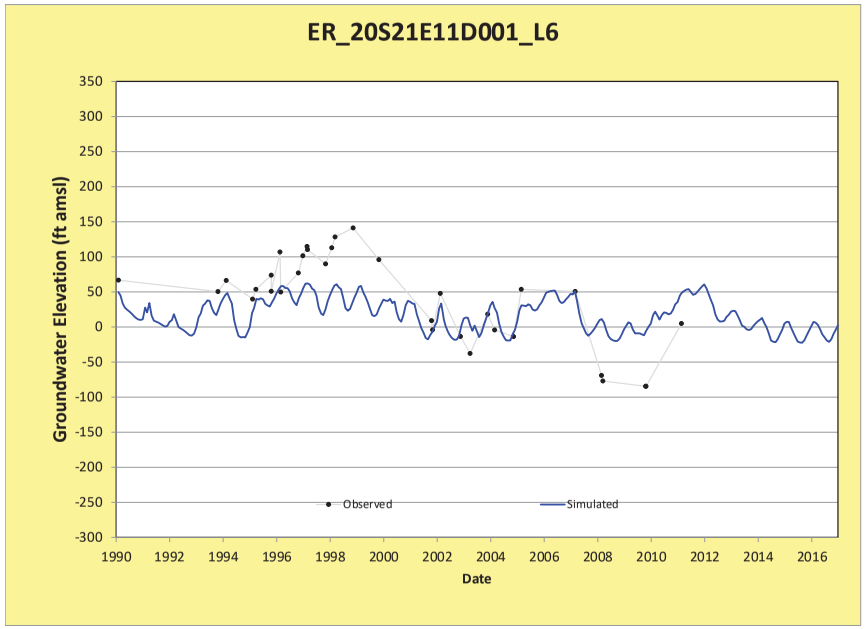
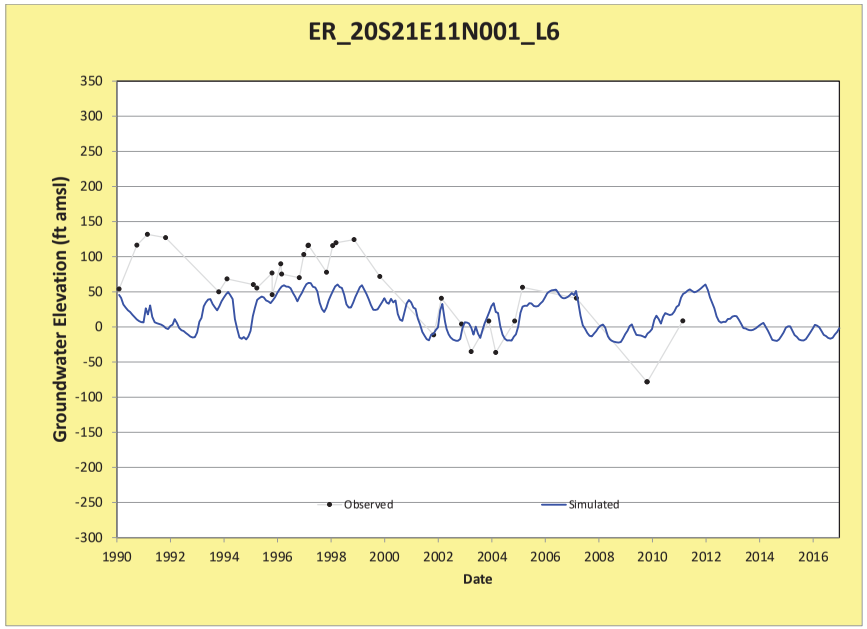
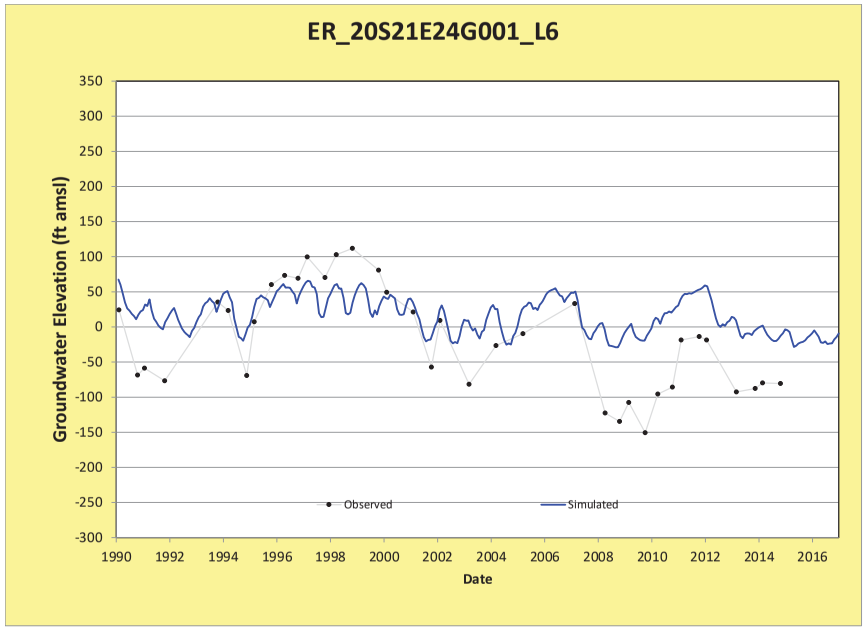
El Rico GSA ER
South Fork Kings GSA SF
Southwest Kings GSA SW
TCWA GSA TC
Layer Aquifer Depth
L1 Shallow Above A-Clay
L2 Unconfined Above C-Clay
L3 Semi-Confined Above C-Clay
L4 Confined Corcoran Clay
L5 Confined Below C-Clay
L6 Confined Below C-Clay
L7 Confined Below C-Clay

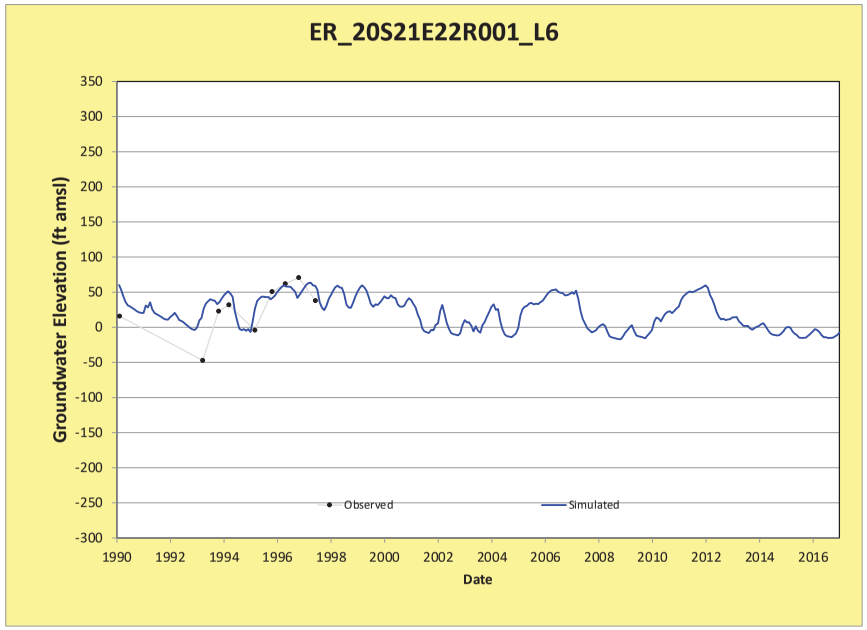

ER_19S22E22A001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

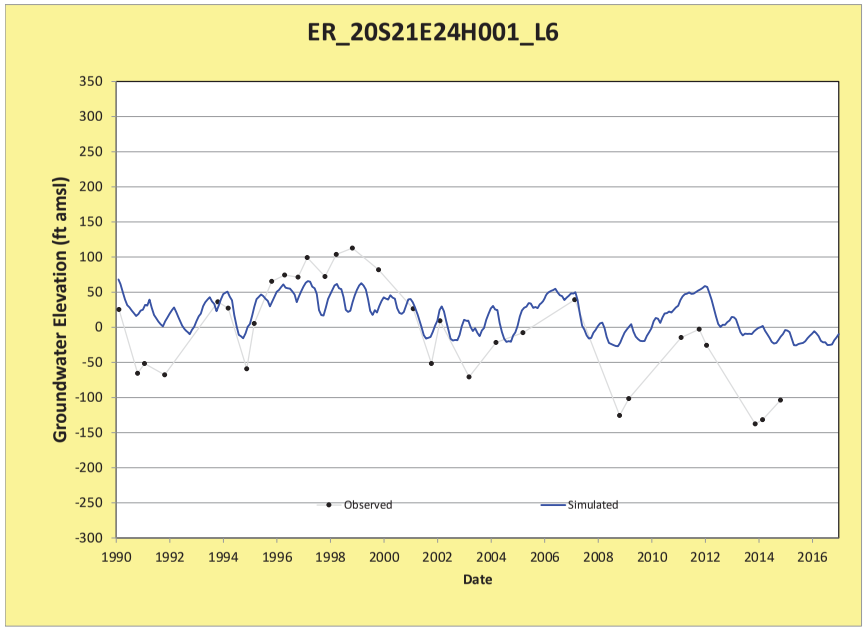

ER_17S21E31R001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

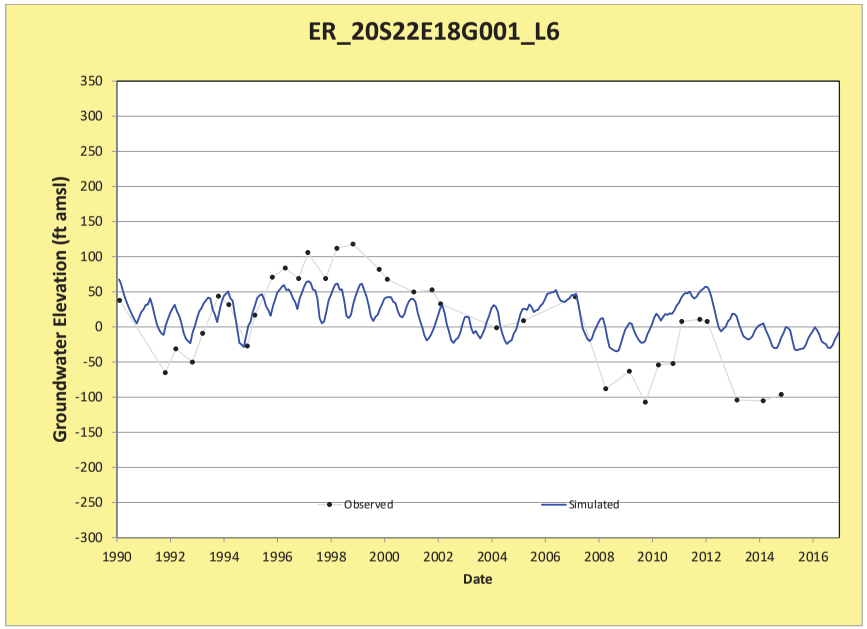

ER_20S21E11D001_L6
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

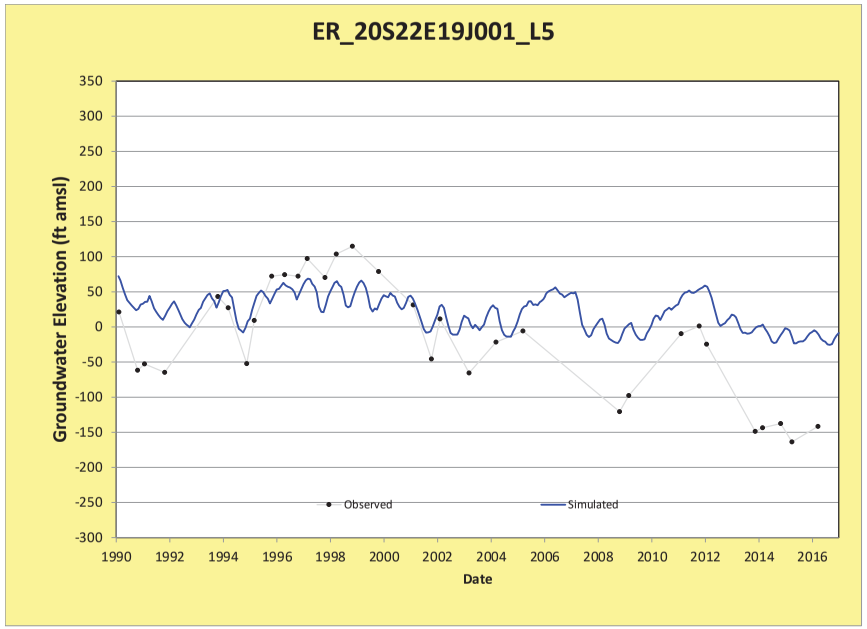

ER_20S21E11N001_L6
Groundwater Elevation (ft amsl)
350
300
250
200
150
100
50
0
-50
-100
-150
-200
-250
-300
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
Date
Observed
Simulated

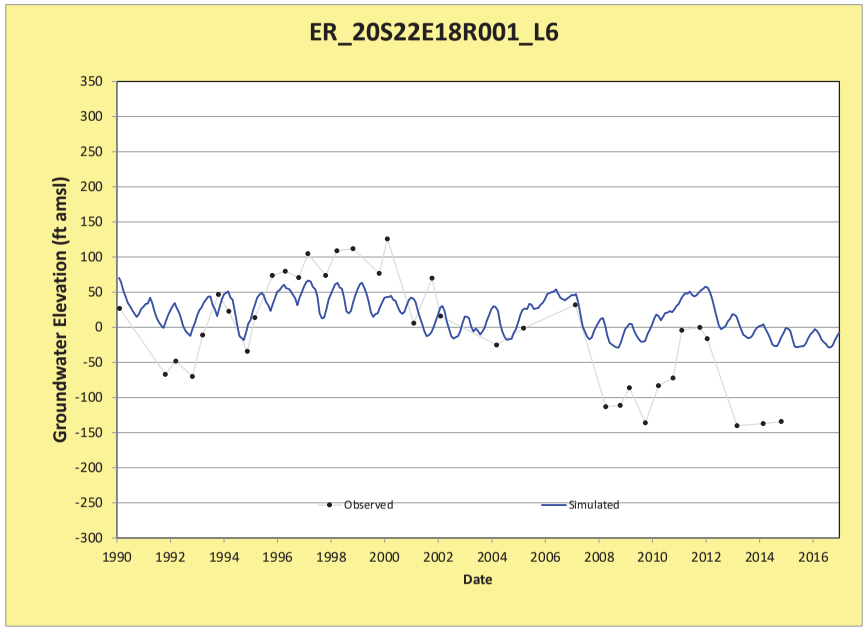

ER_20S21E24G001_L6
Groundwater Elevation (ft amsl)
350
300
250
200
150
100
50
0
-50
-100
-150
-200
-250
-300
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
Date
Observed
Simulated

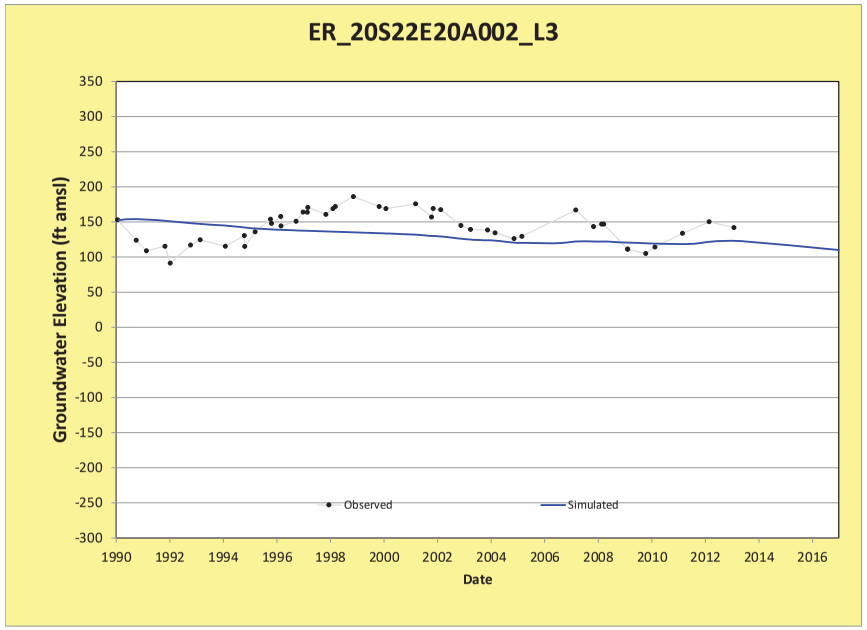

ER_20S21E22R001_L6
Groundwater Elevation (ft amsl)
350
300
250
200
150
100
50
0
-50
-100
-150
-200
-250
-300
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
Date
Observed
Simulated

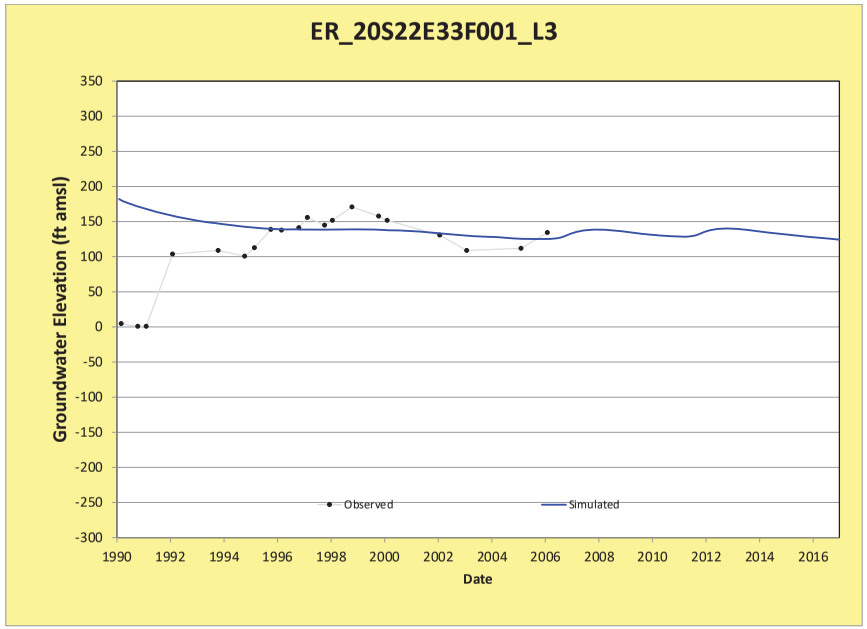

ER_20S21E24H001_L6
Groundwater Elevation (ft amsl)
350
300
250
200
150
100
50
0
-50
-100
-150
-200
-250
-300
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
Date
Observed
Simulated

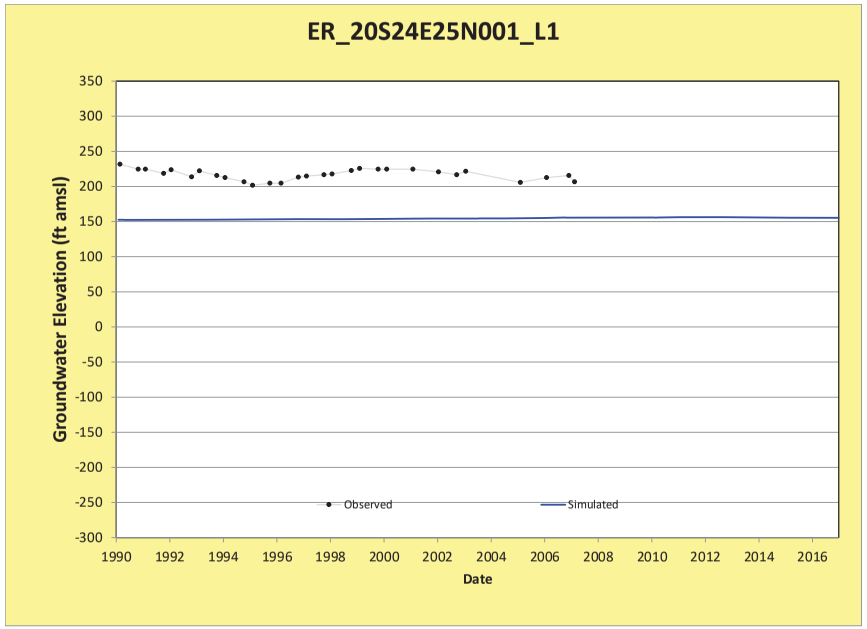

ER_20S22E18G001_L6
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

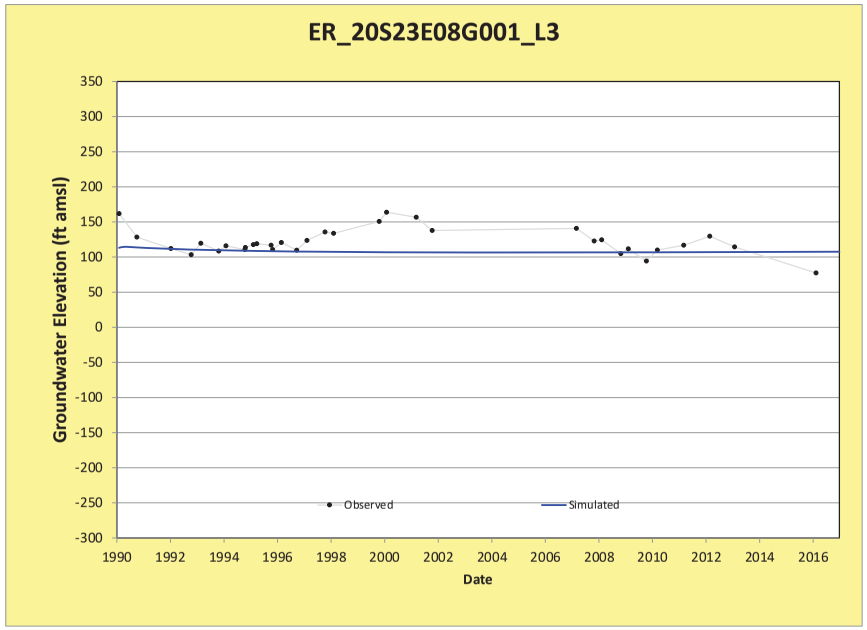

ER_20S22E19J001_L5
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

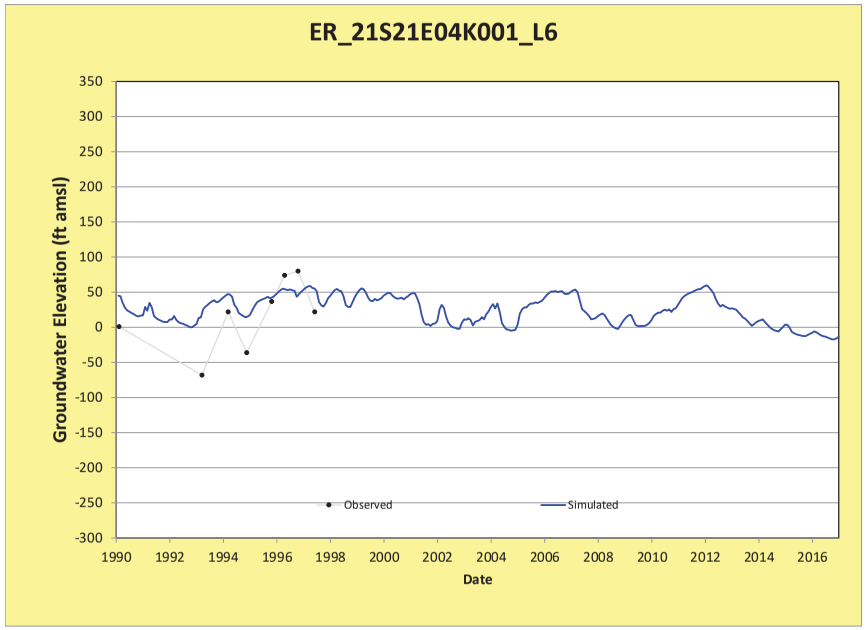

ER_20S22E18R001_L6
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

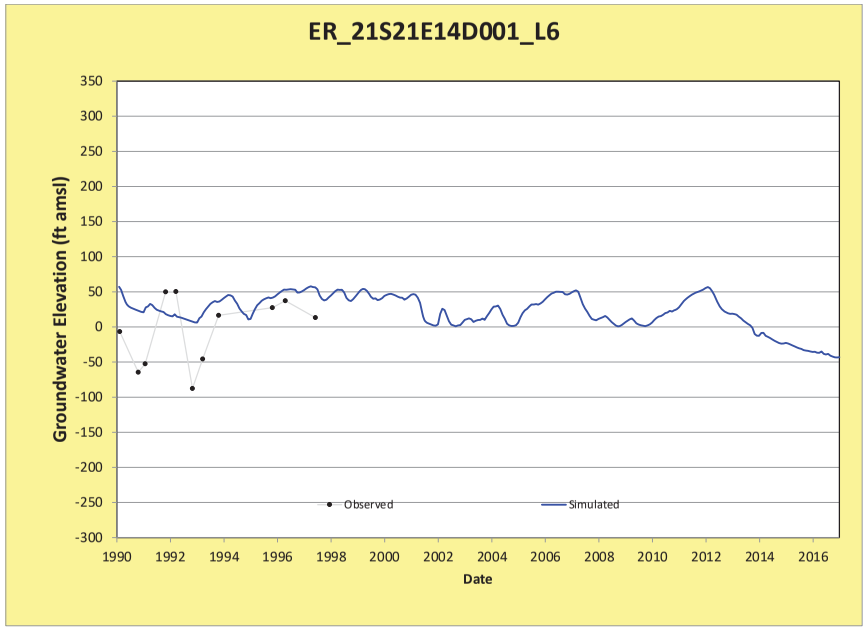

ER_20S22E20A002_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


ER_20S22E33F001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


ER_20S24E25N001_L1
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


ER_20S23E08G001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


ER_21S21E04K001_L6
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


ER_21S21E14D001_L6
Groundwater Elevation (ft amsl)
350
300
250
200
150
100
50
0
-50
-100
-150
-200
-250
-300
1990
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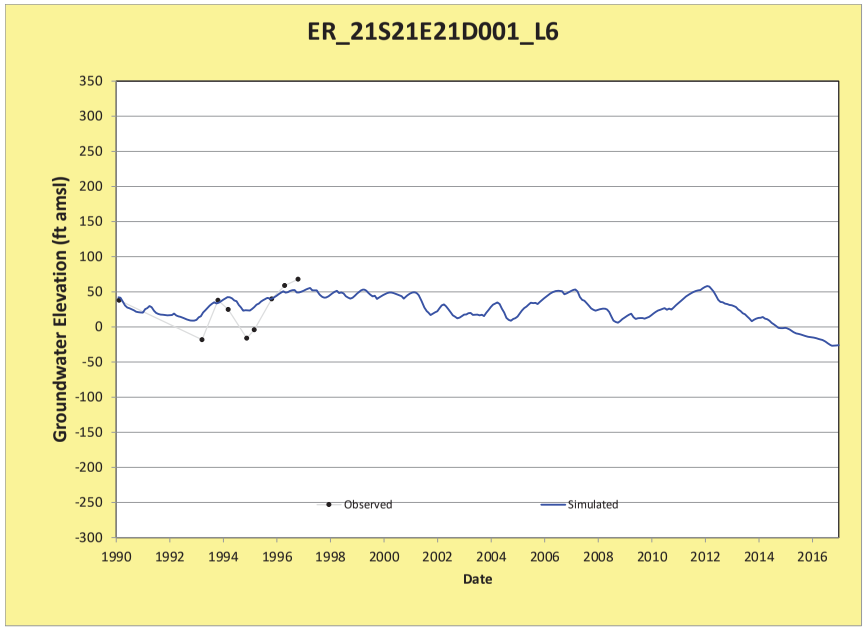
2012
2014
2016
Date
Observed
Simulated


ER_21S21E21D001_L6
Groundwater Elevation (ft amsl)
350
300
250
200
150
100
50
0
-50
-100
-150
-200
-250
-300
1990
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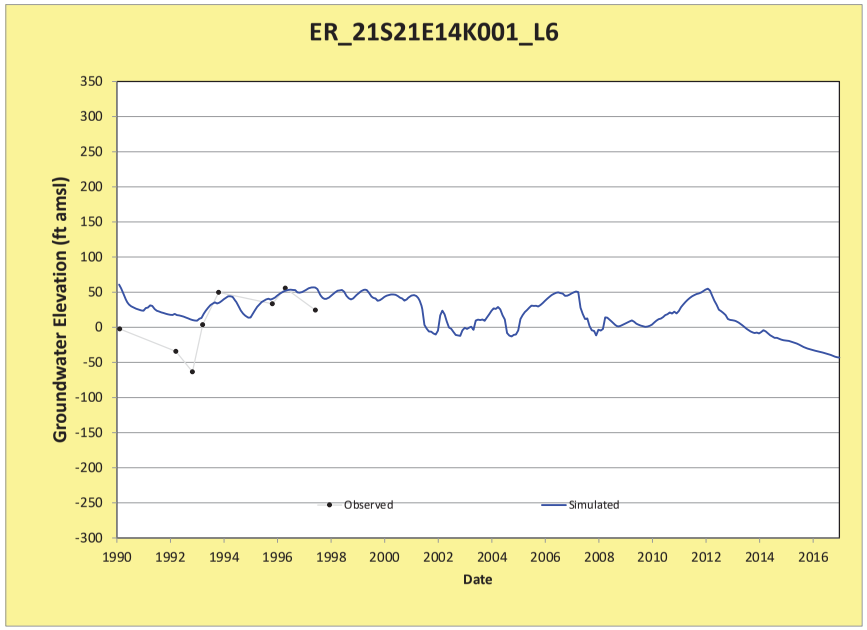
2016
Date
Observed
Simulated


ER_21S21E14K001_L6
Groundwater Elevation (ft amsl)
350
300
250
200
150
100
50
0
-50
-100
-150
-200
-250
-300
1990
1992
1994
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2012
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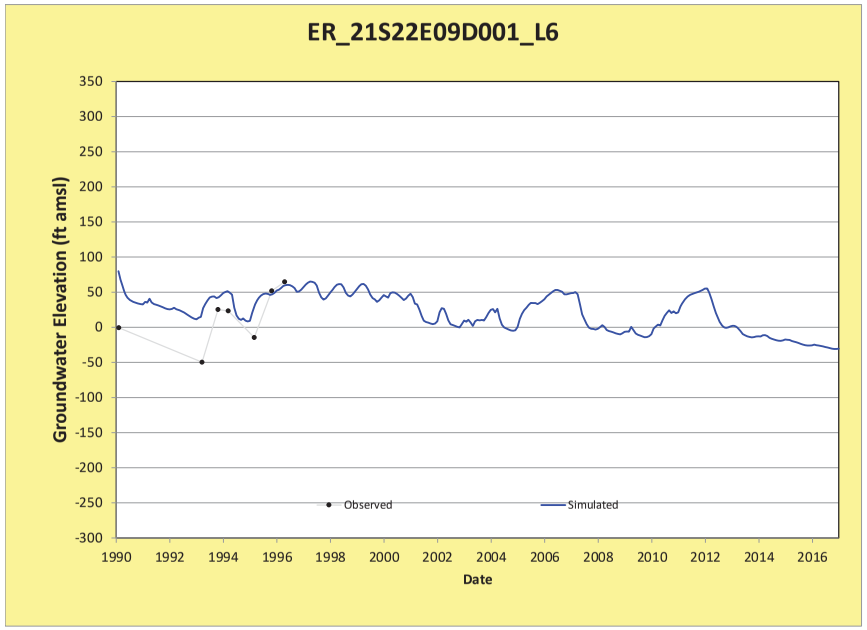
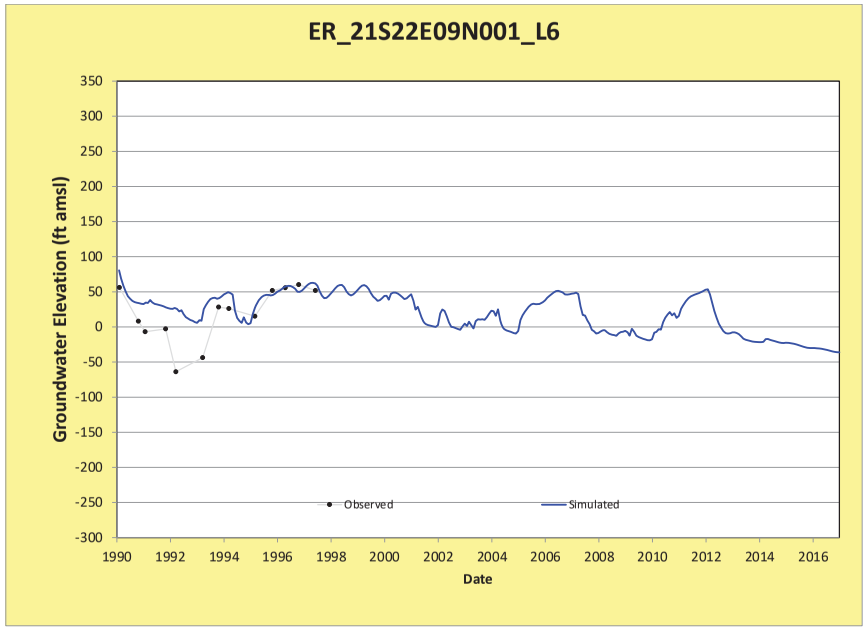
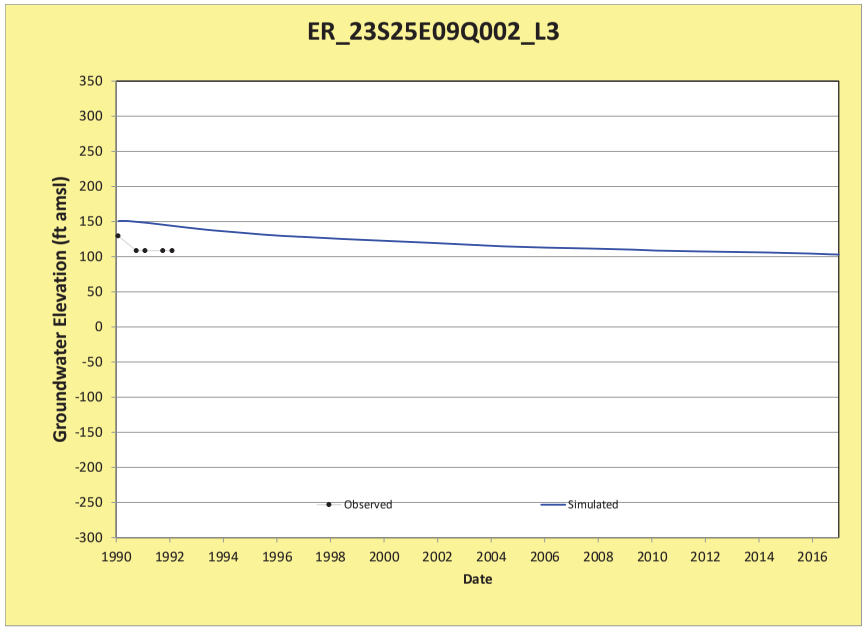
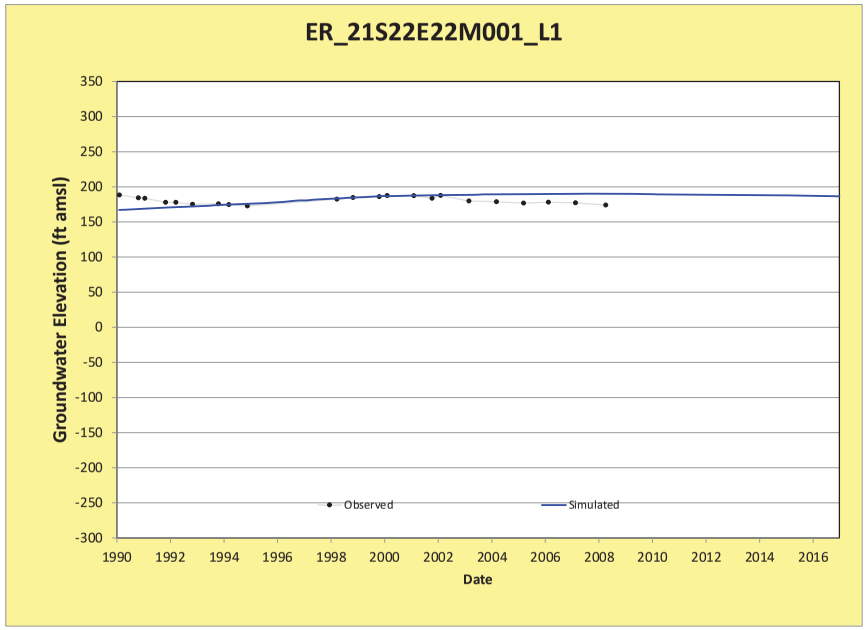
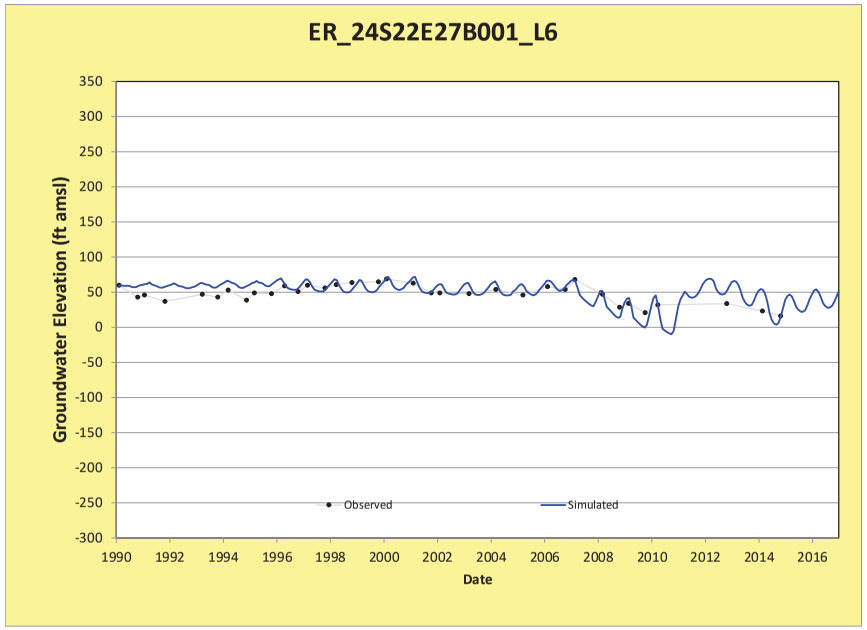
2016
Date
Observed
Simulated

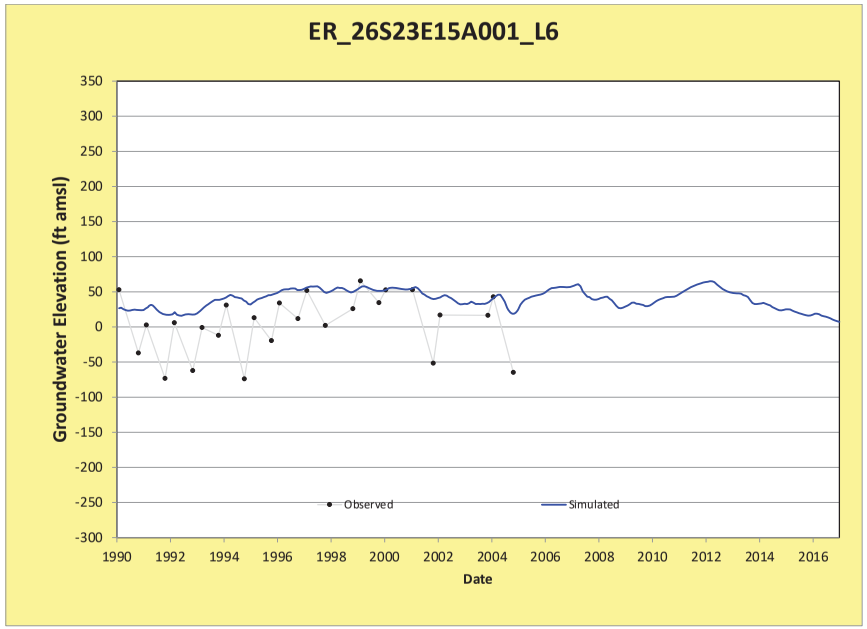

ER_21S22E09D001_L6
Groundwater Elevation (ft amsl)
350
300
250
200
150
100
50
0
-50
-100
-150
-200
-250
-300
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
Date
Observed
Simulated

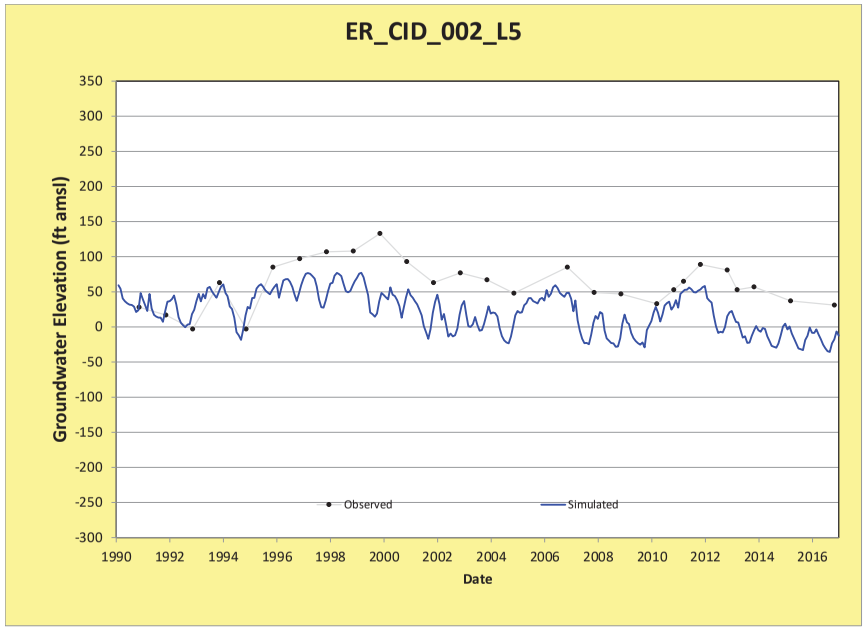

ER_21S22E09N001_L6
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

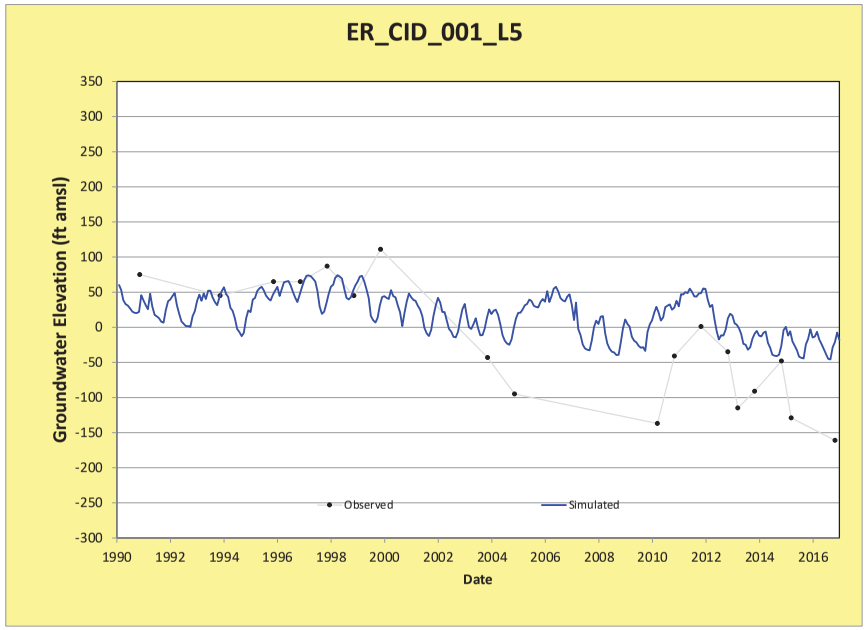

ER_23S25E09Q002_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

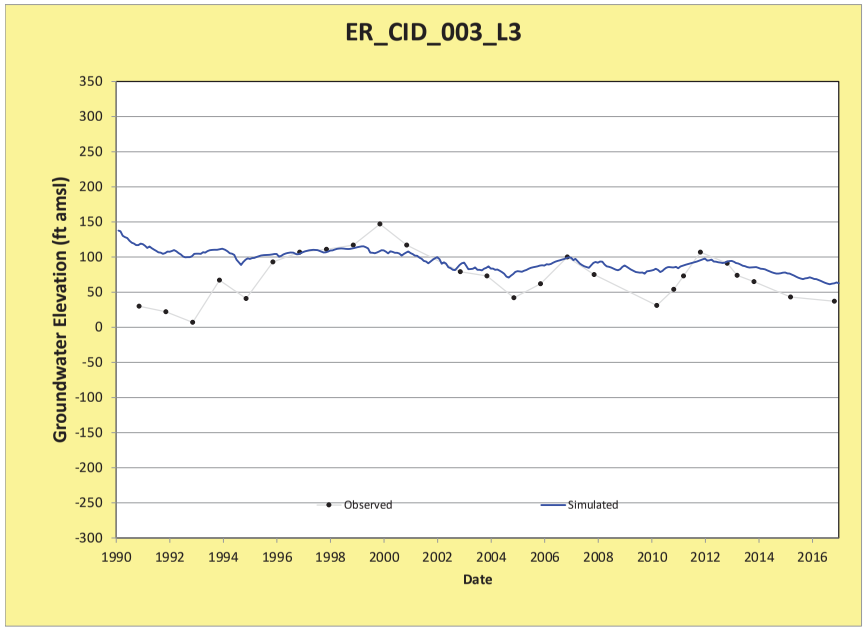

ER_21S22E22M001_L1
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

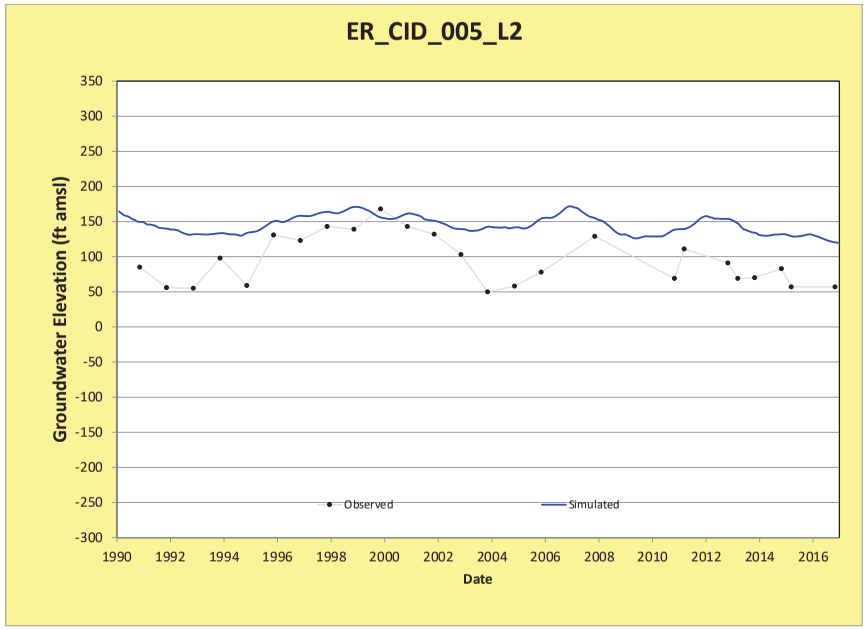

ER_24S22E27B001_L6
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

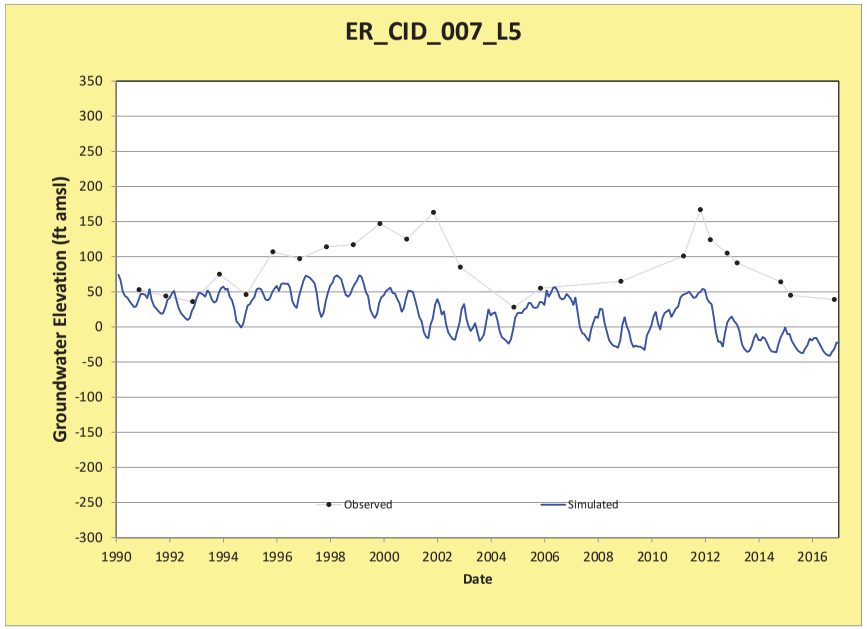

ER_26S23E15A001_L6
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

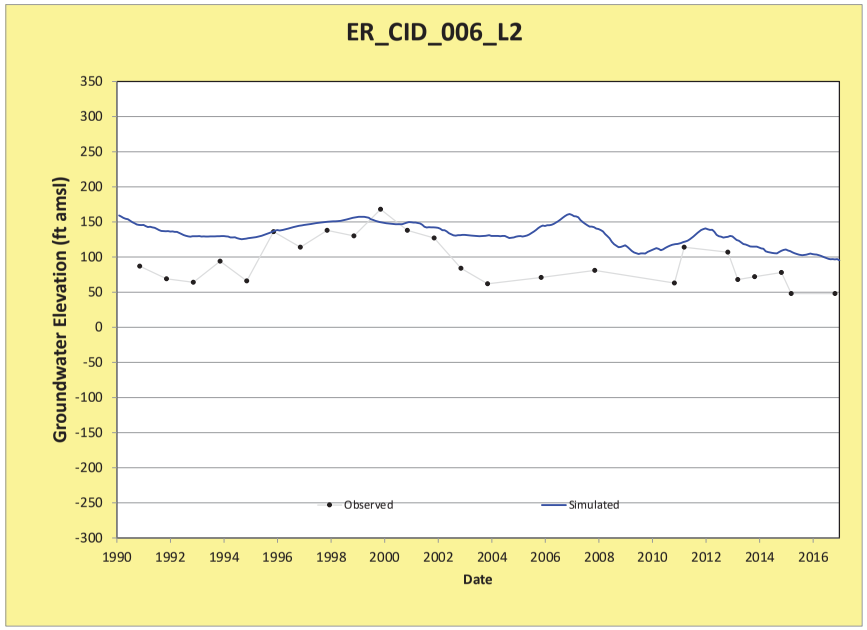

ER_CID_002_L5
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

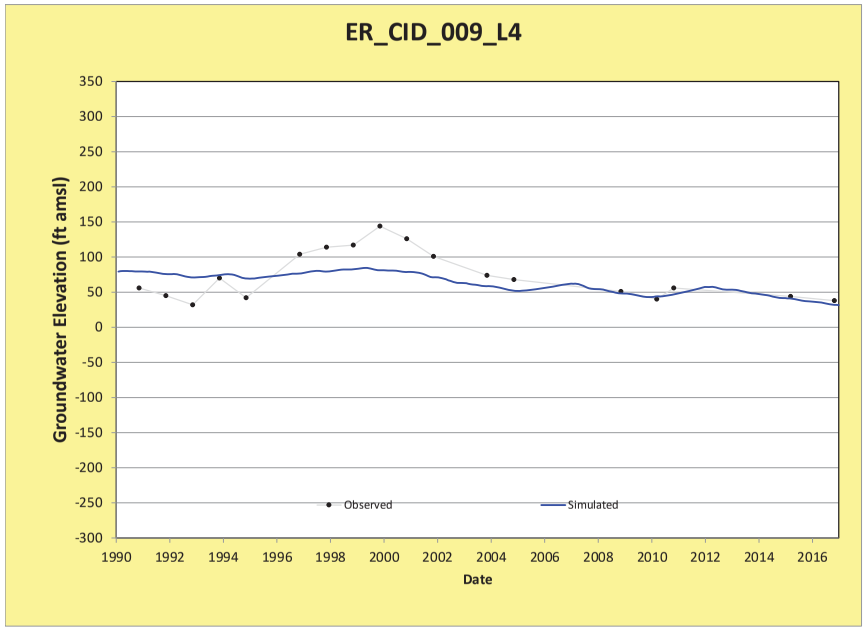

ER_CID_001_L5
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

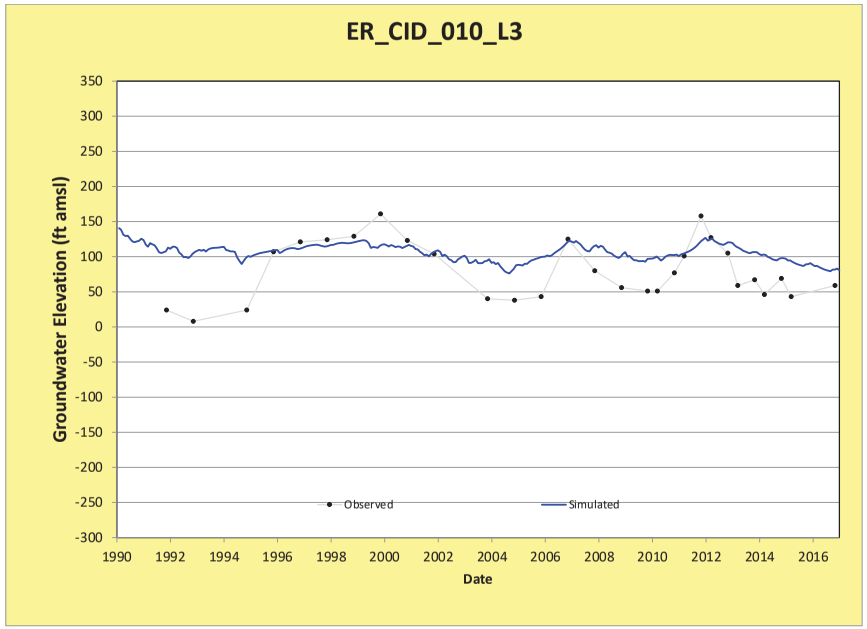

ER_CID_003_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

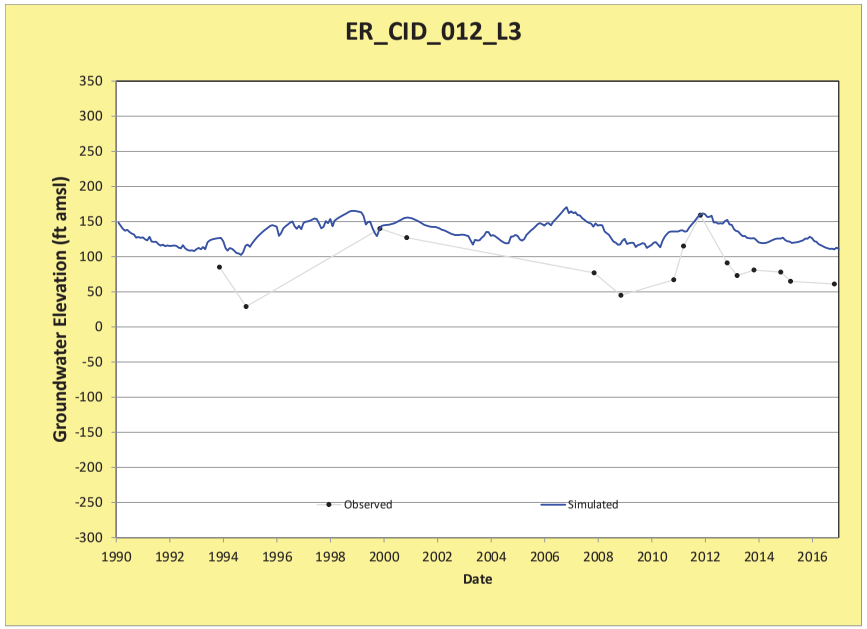

ER_CID_005_L2
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

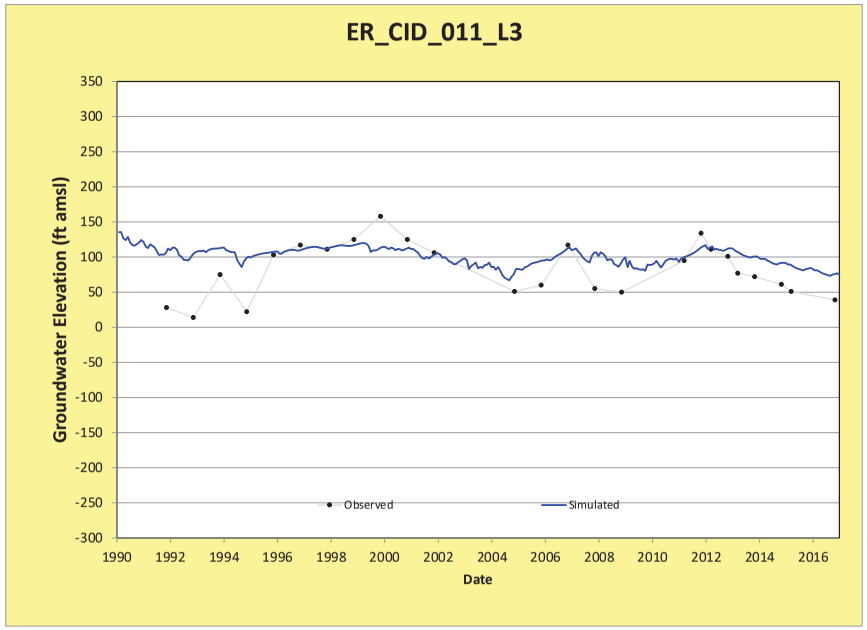

ER_CID_007_L5
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

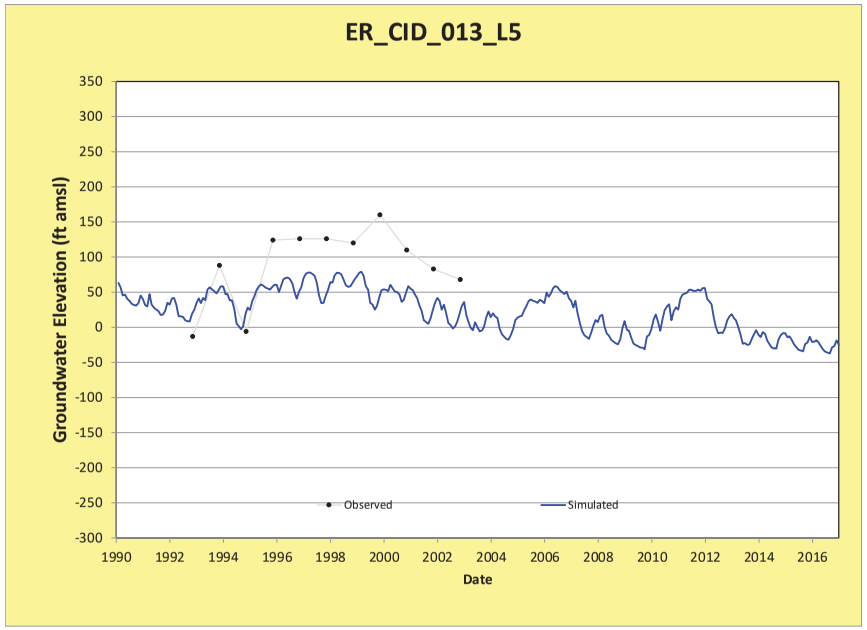

ER_CID_006_L2
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

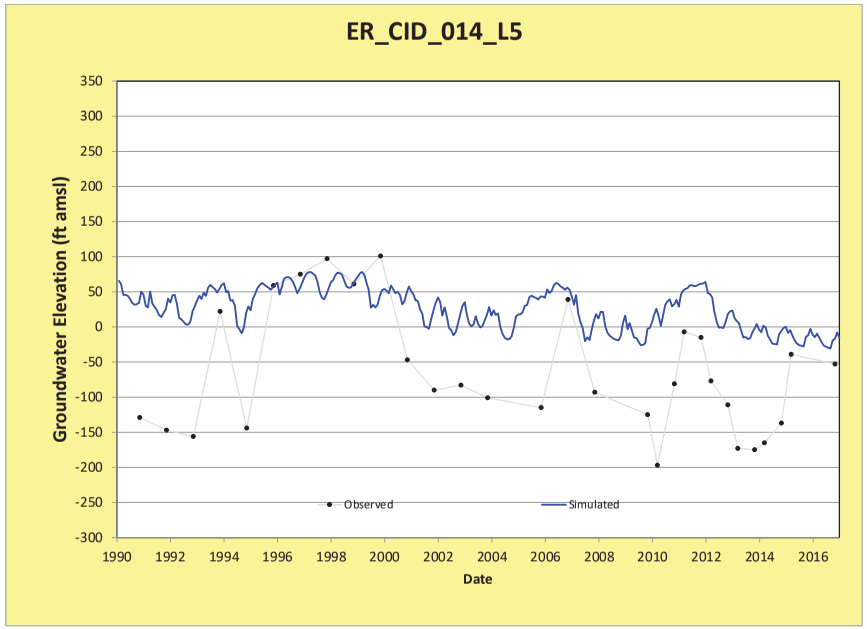

ER_CID_009_L4
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

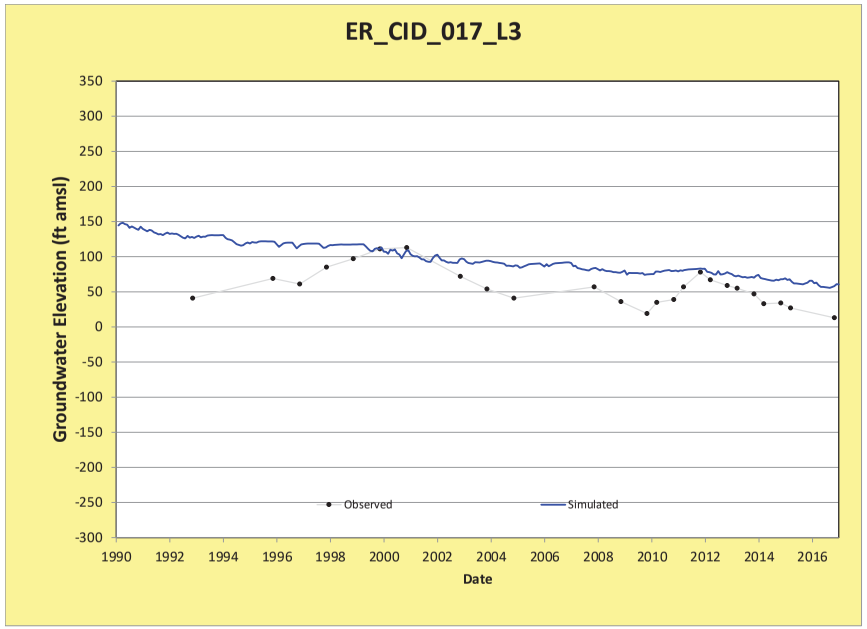

ER_CID_010_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

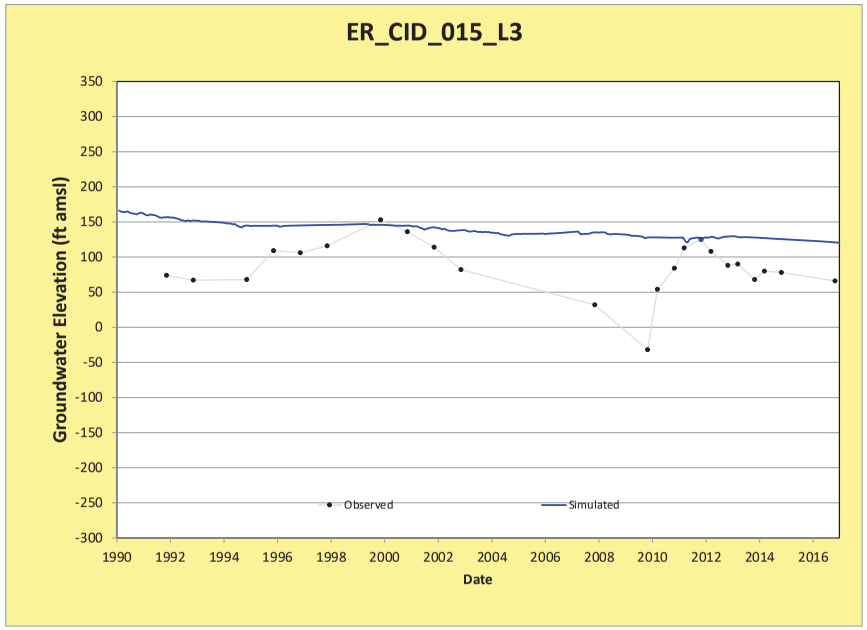

ER_CID_012_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

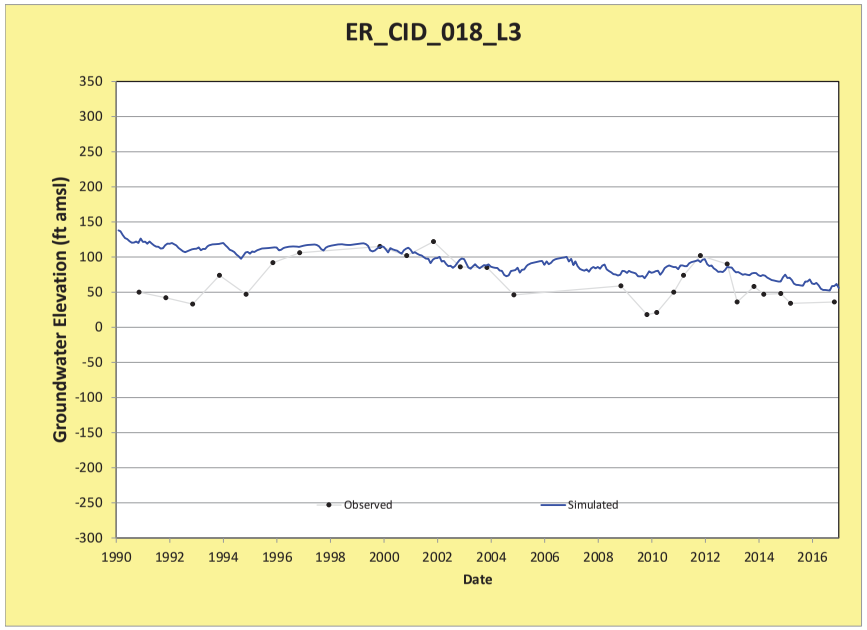

ER_CID_011_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

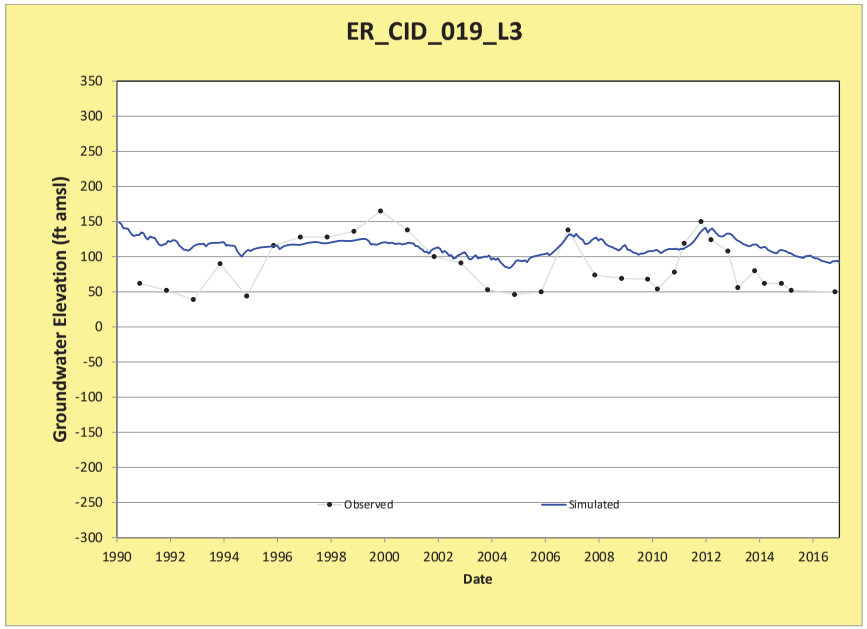

ER_CID_013_L5
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

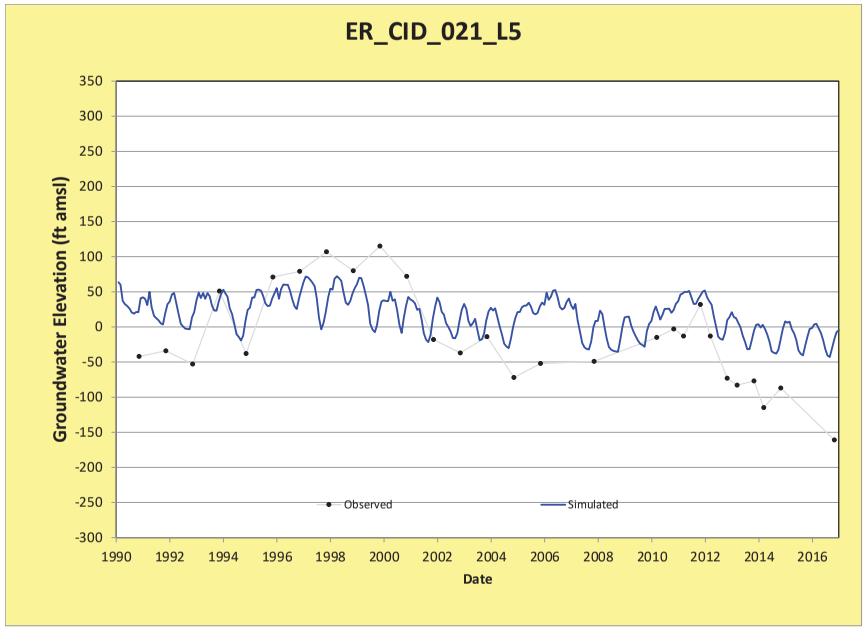

ER_CID_014_L5
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

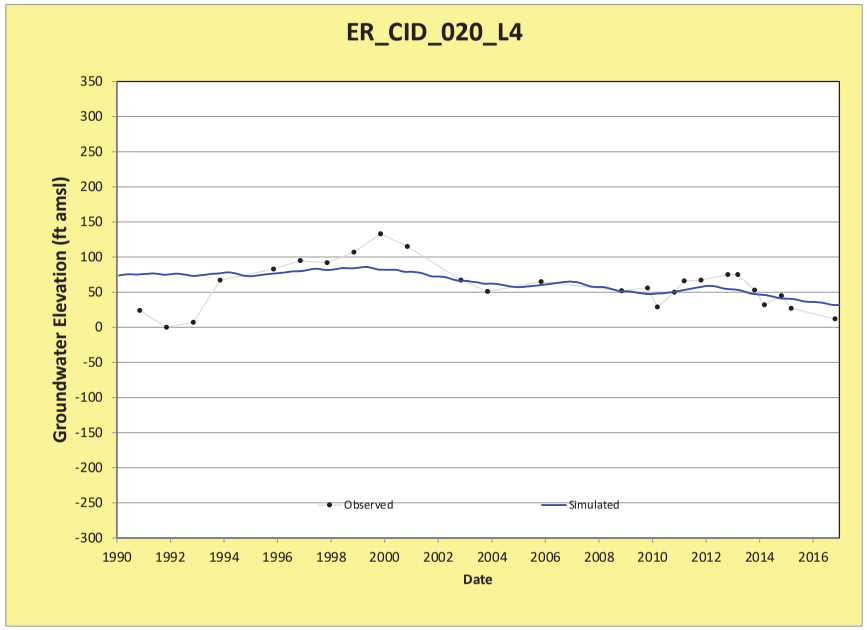

ER_CID_017_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

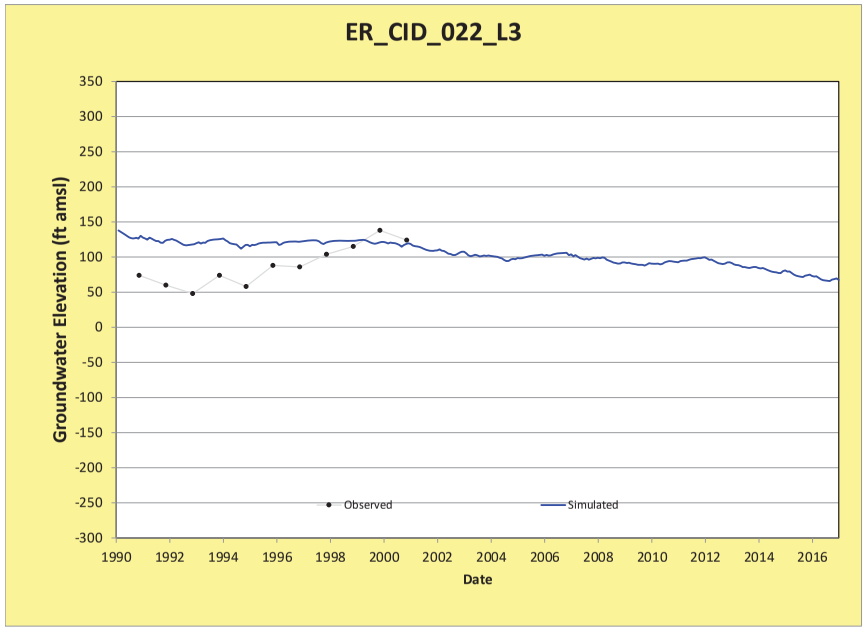

ER_CID_015_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

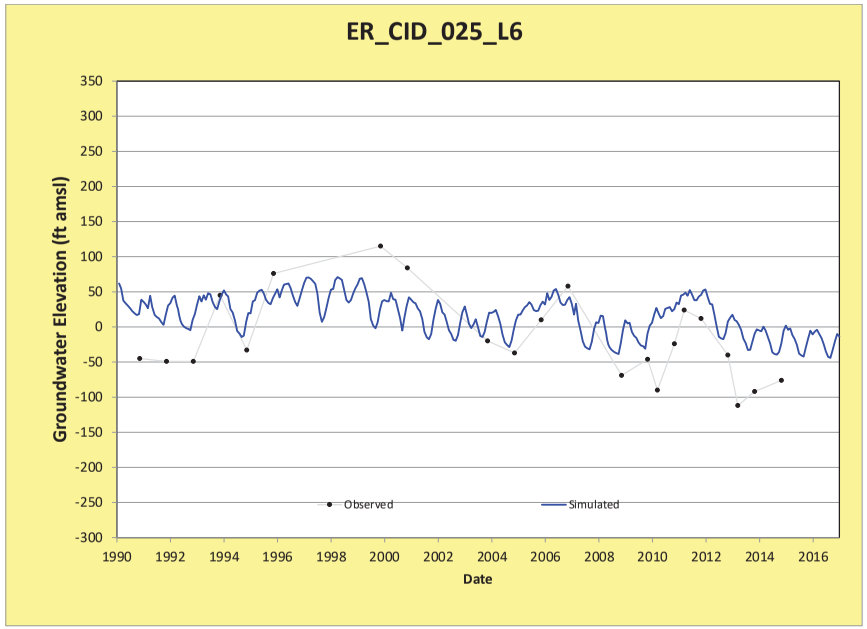

ER_CID_018_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

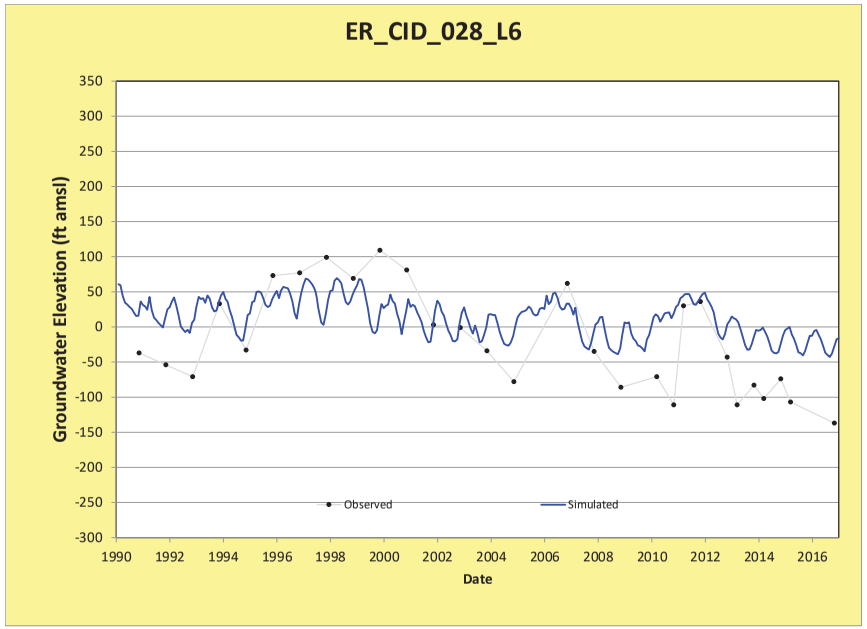

ER_CID_019_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

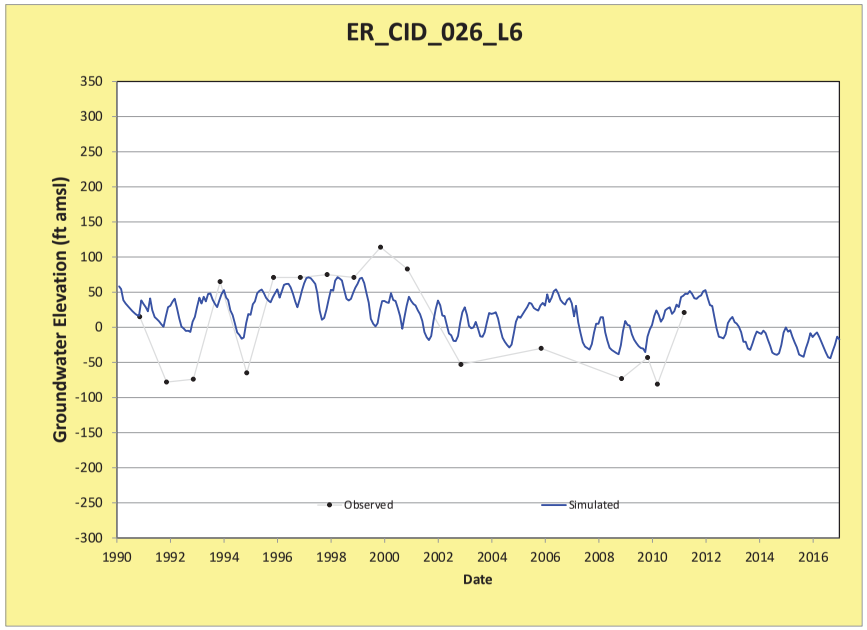

ER_CID_021_L5
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

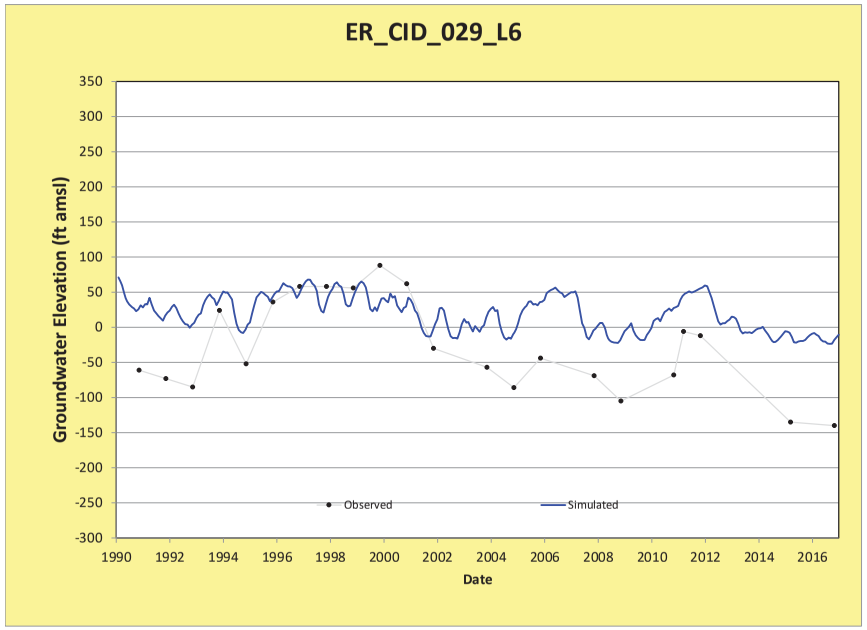

ER_CID_020_L4
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

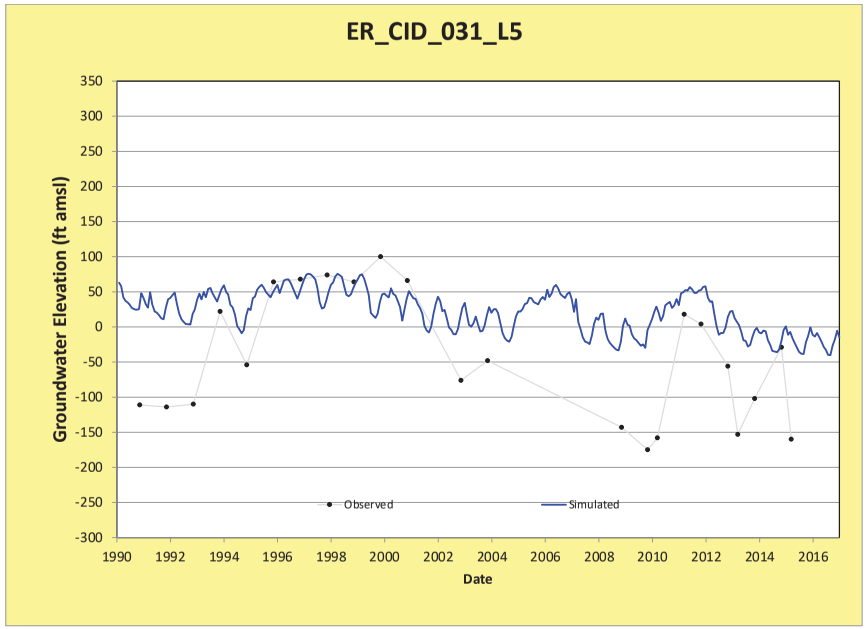

ER_CID_022_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

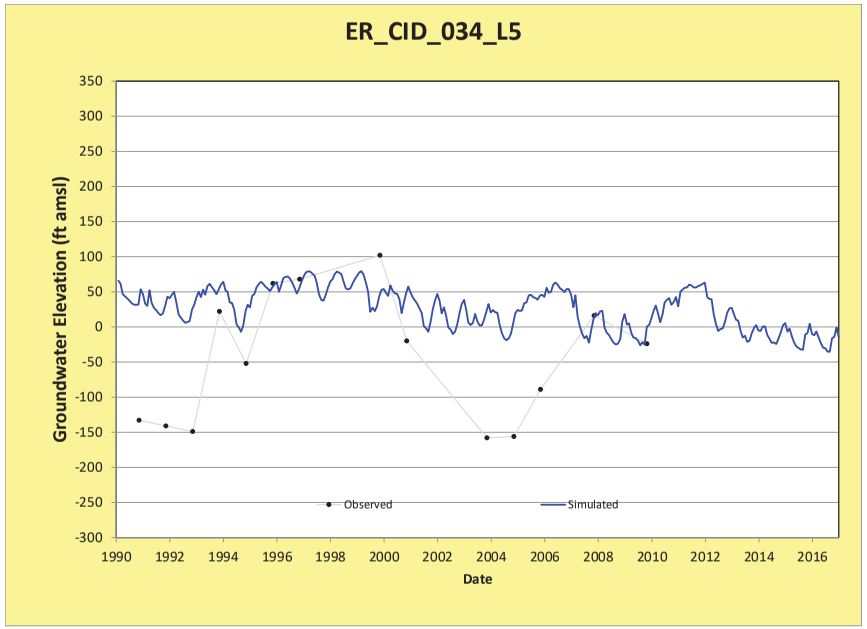

ER_CID_025_L6
Groundwater Elevation (ft amsl)
350
300
250
200
150
100
50
0
-50
-100
-150
-200
-250
-300
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
Date
Observed
Simulated

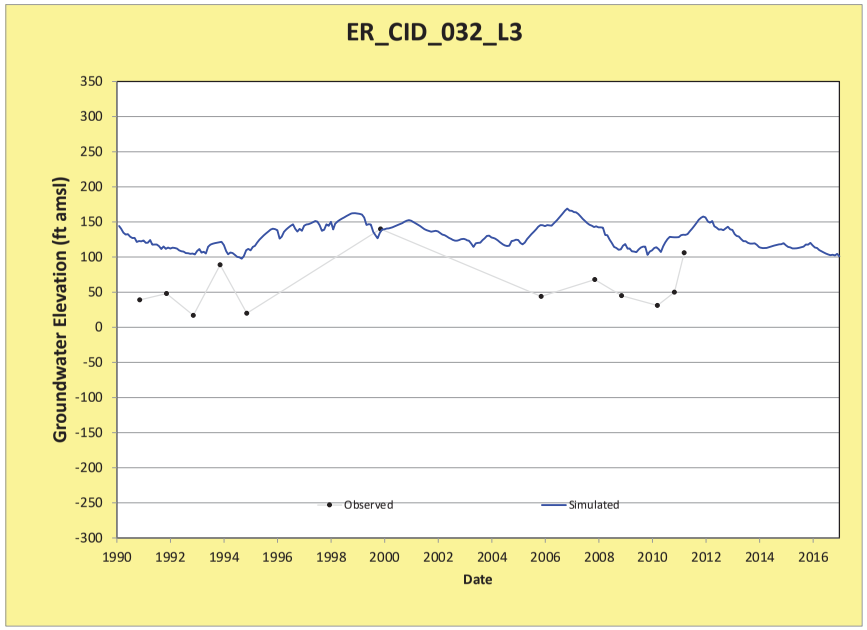

ER_CID_028_L6
Groundwater Elevation (ft amsl)
350
300
250
200
150
100
50
0
-50
-100
-150
-200
-250
-300
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
Date
Observed
Simulated

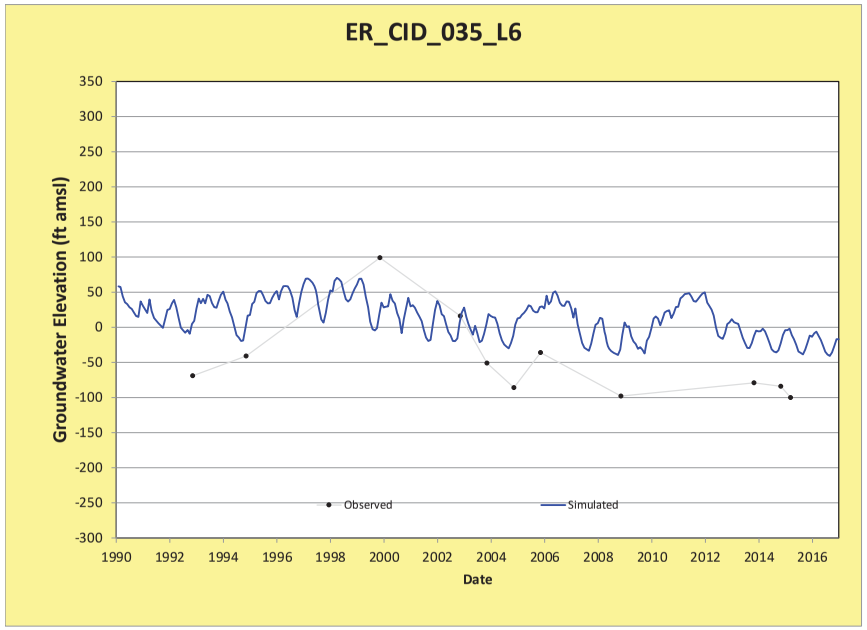

ER_CID_026_L6
Groundwater Elevation (ft amsl)
350
300
250
200
150
100
50
0
-50
-100
-150
-200
-250
-300
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
Date
Observed
Simulated

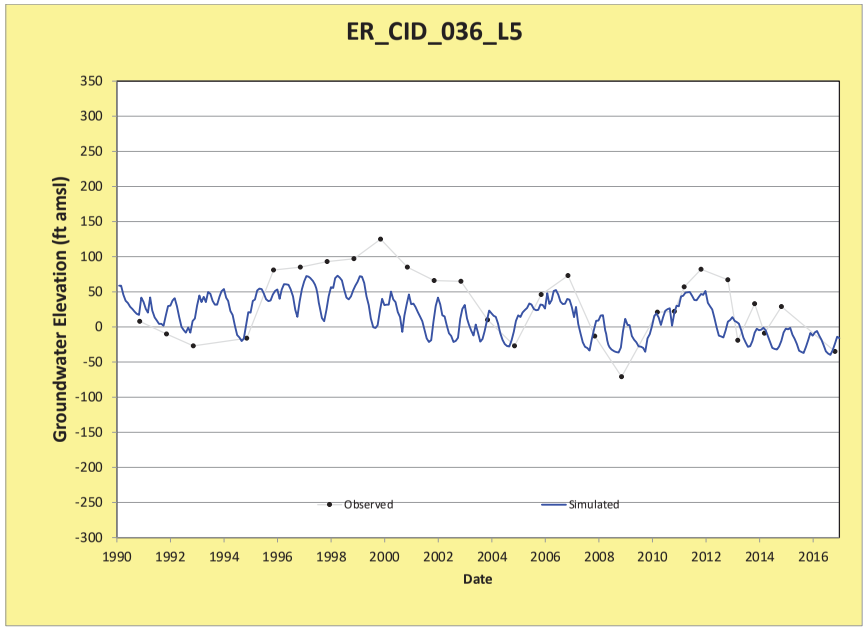

ER_CID_029_L6
Groundwater Elevation (ft amsl)
350
300
250
200
150
100
50
0
-50
-100
-150
-200
-250
-300
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
Date
Observed
Simulated

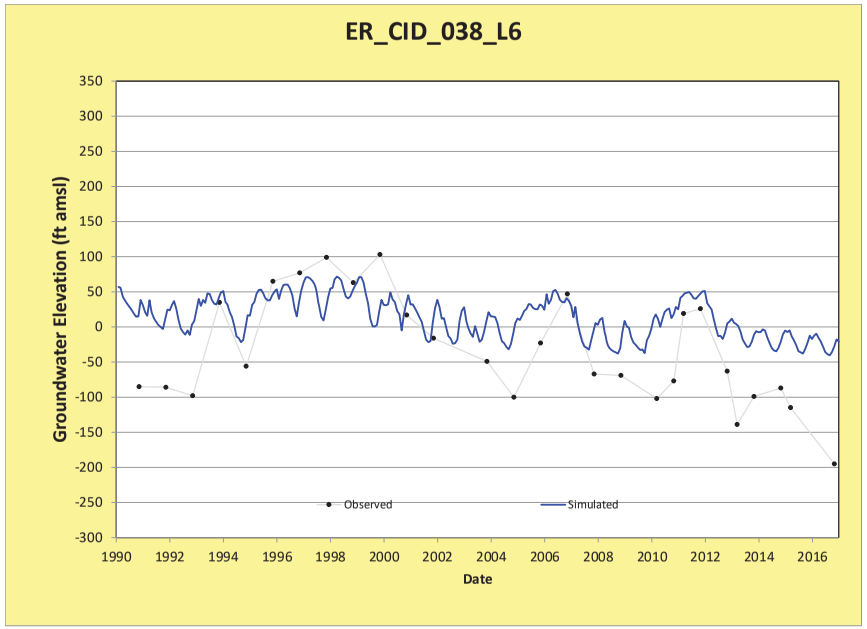

ER_CID_031_L5
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

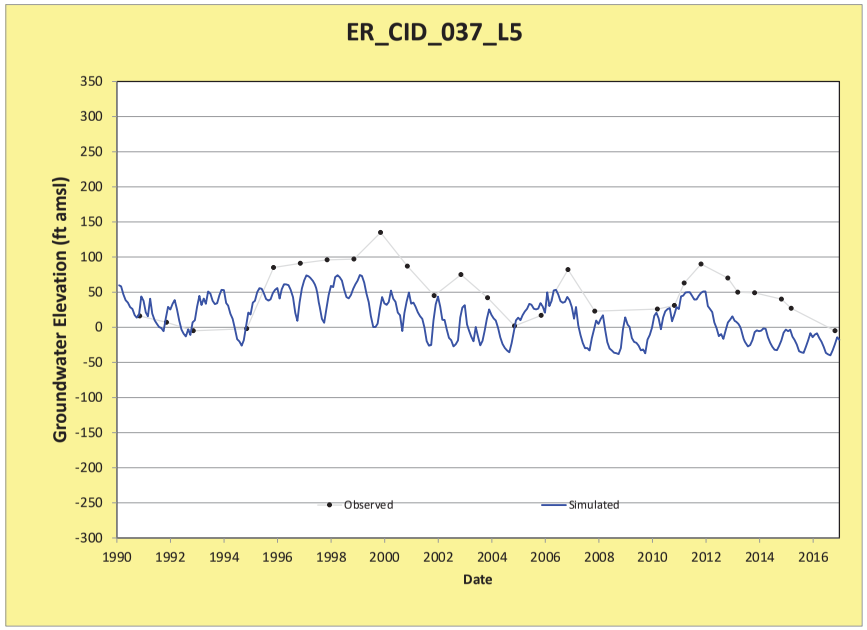

ER_CID_034_L5
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

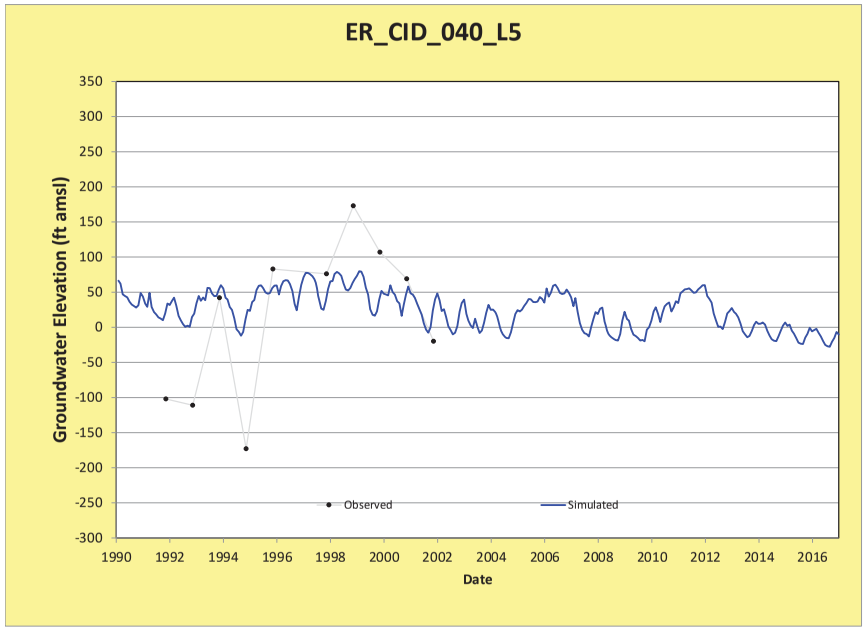

ER_CID_032_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

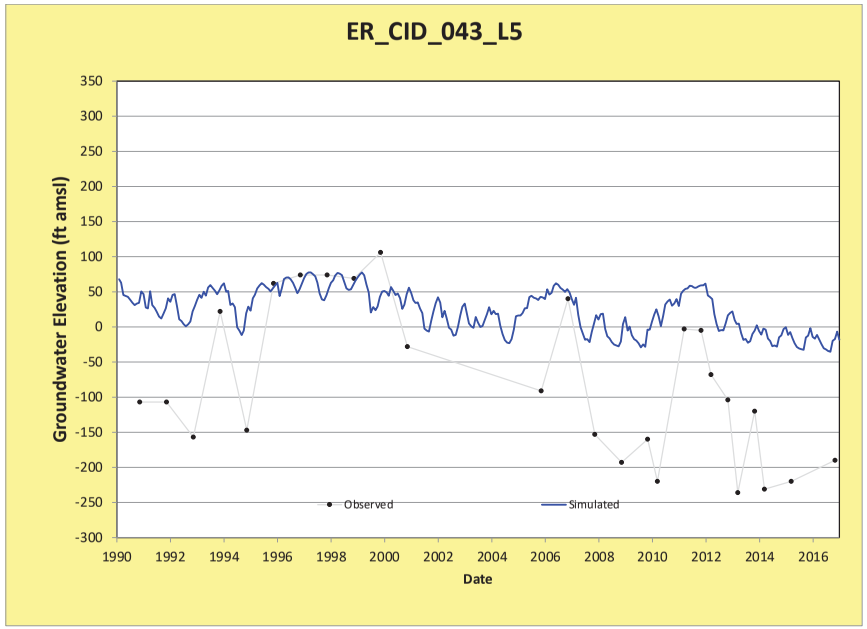

ER_CID_035_L6
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

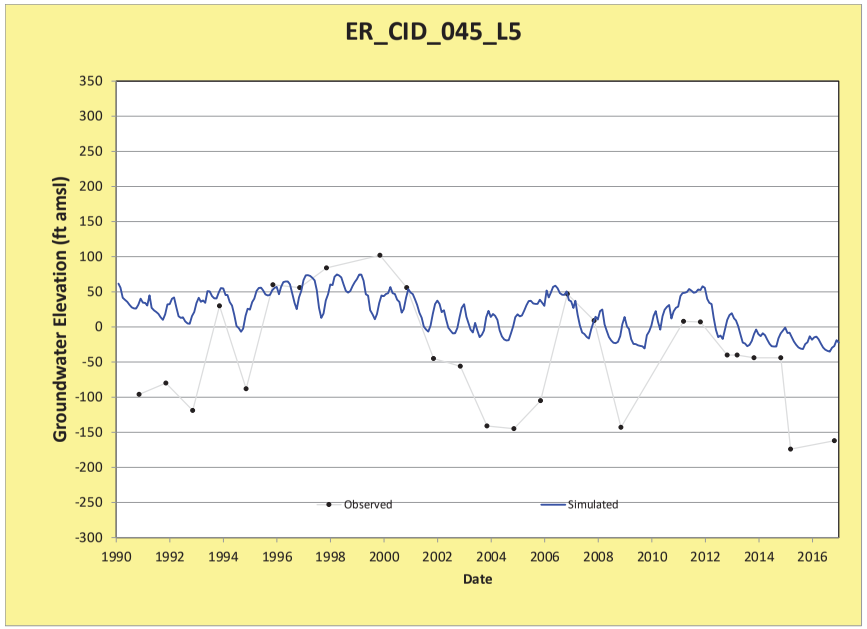

ER_CID_036_L5
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

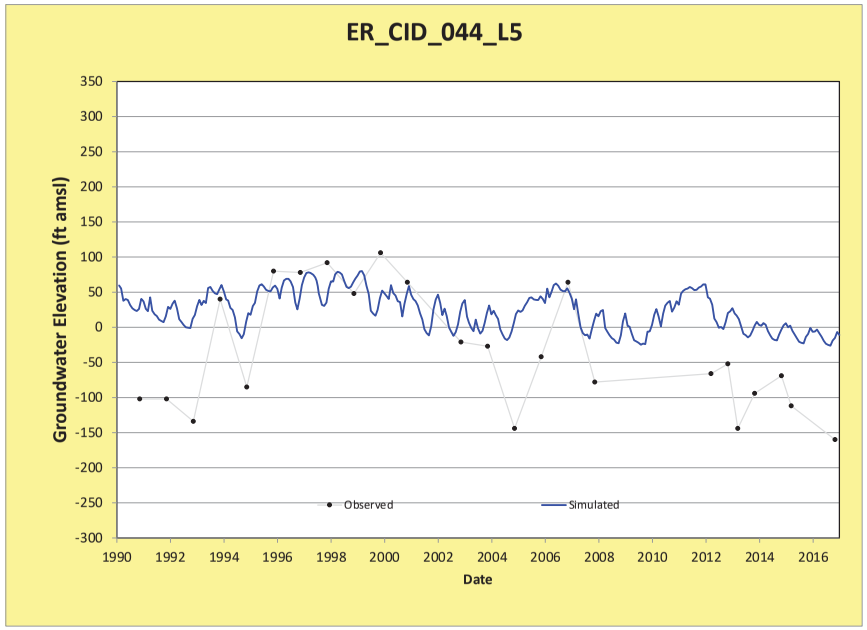

ER_CID_038_L6
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

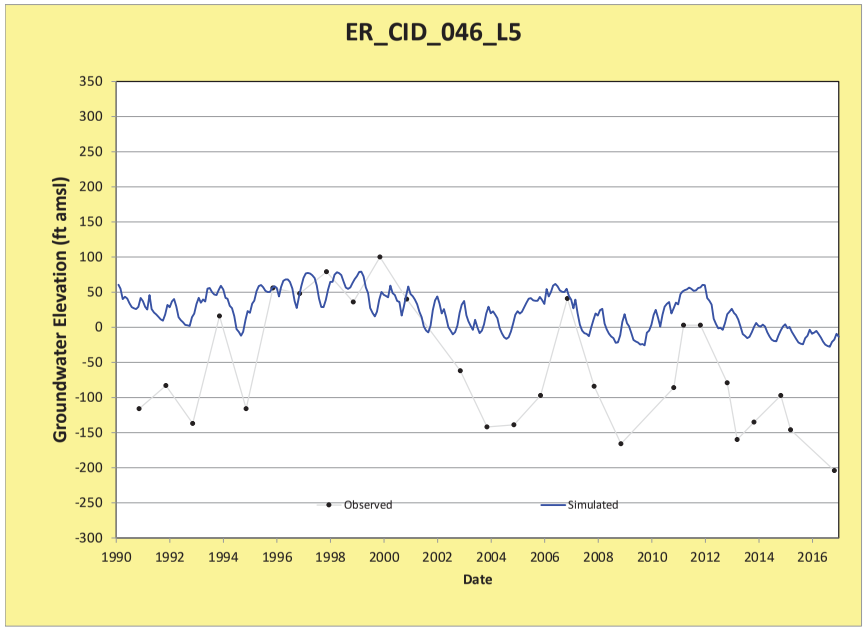

ER_CID_037_L5
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

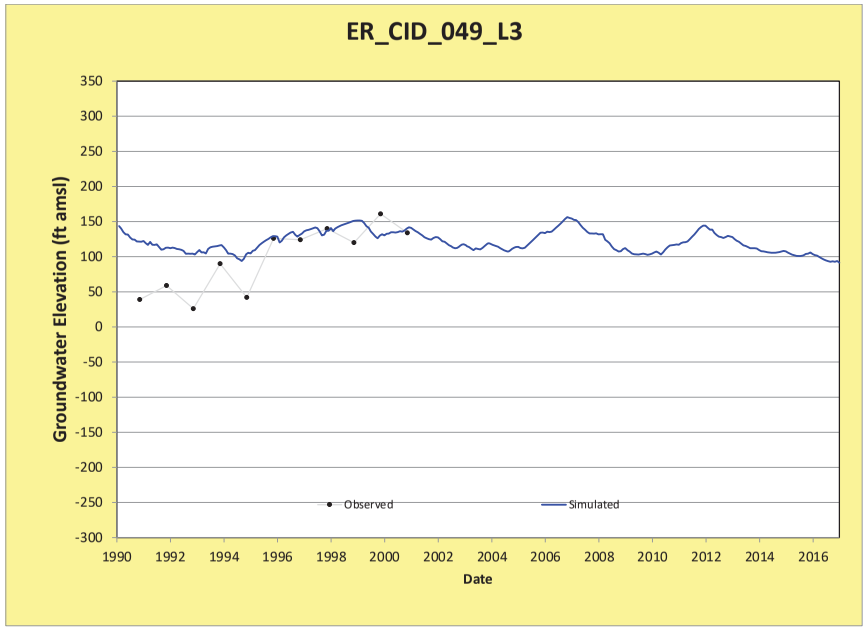

ER_CID_040_L5
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

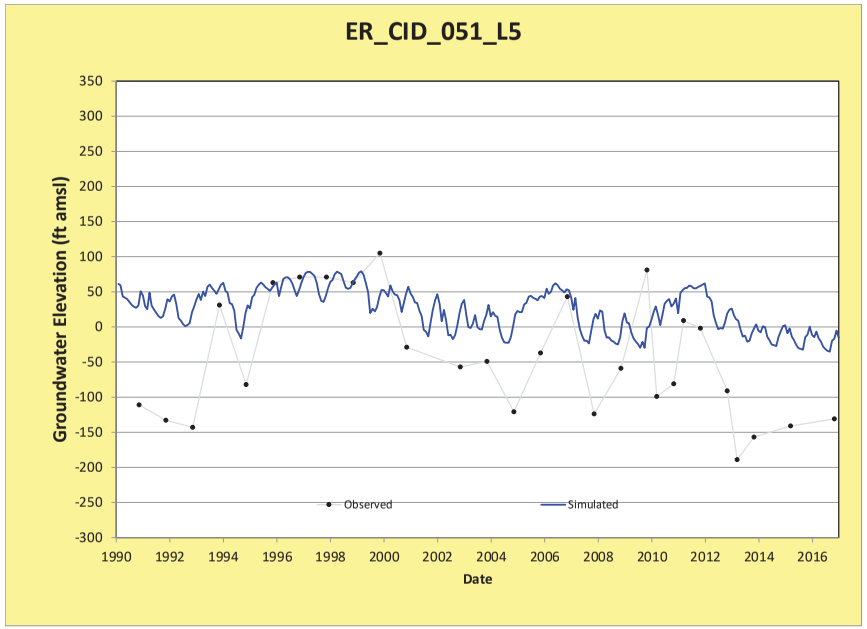

ER_CID_043_L5
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

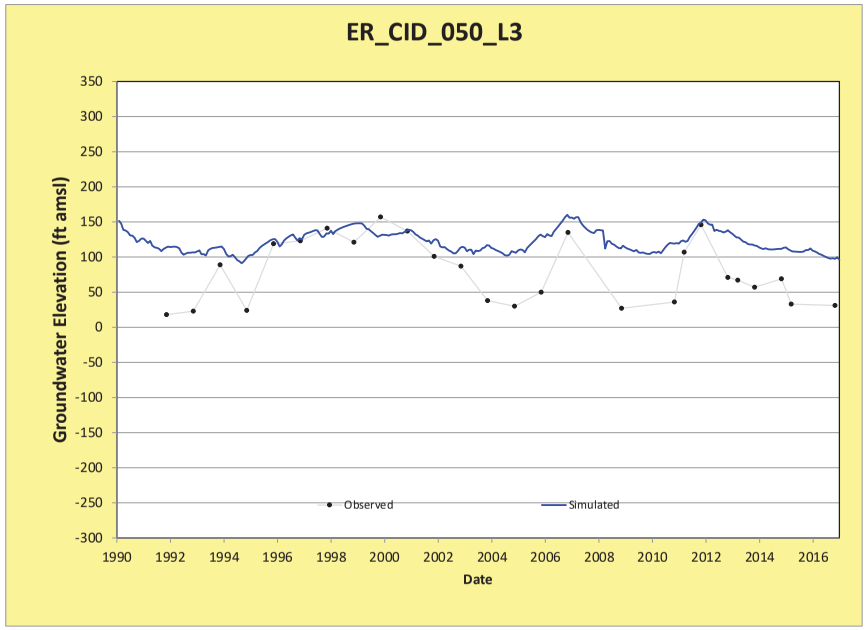

ER_CID_045_L5
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

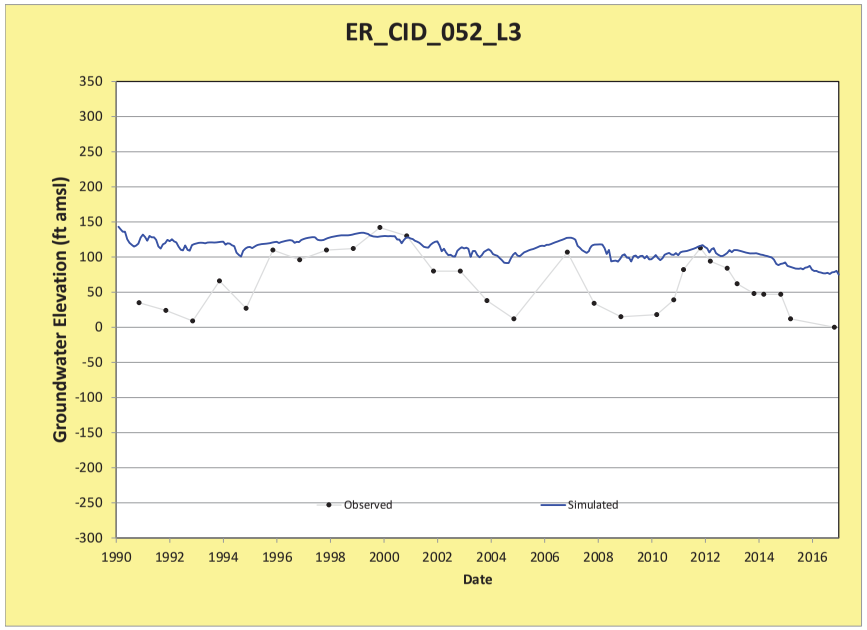

ER_CID_044_L5
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

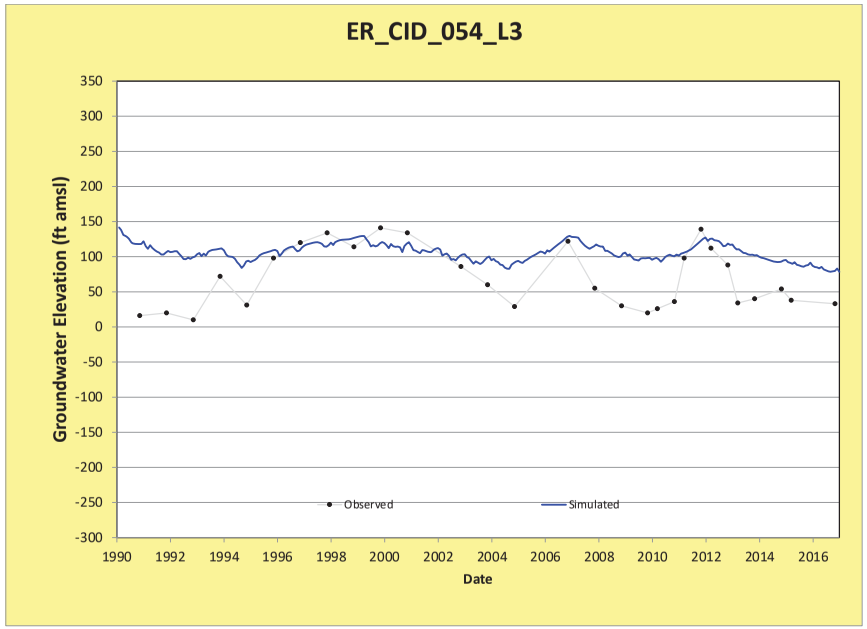

ER_CID_046_L5
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

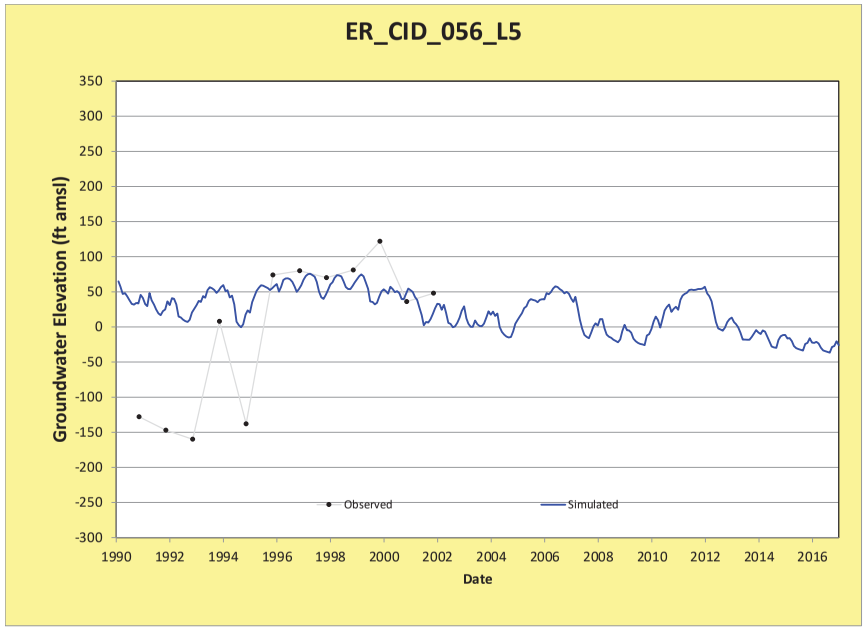

ER_CID_049_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

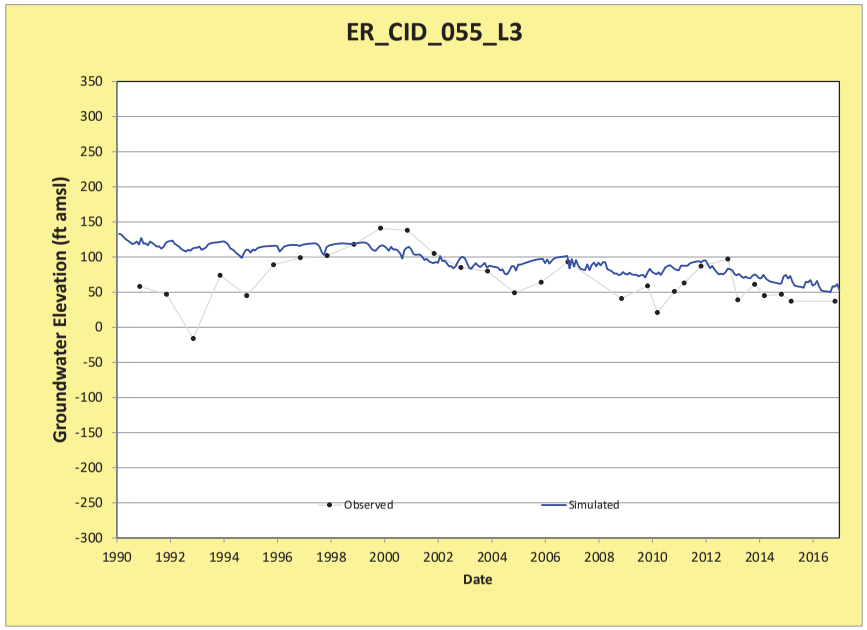

ER_CID_051_L5
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

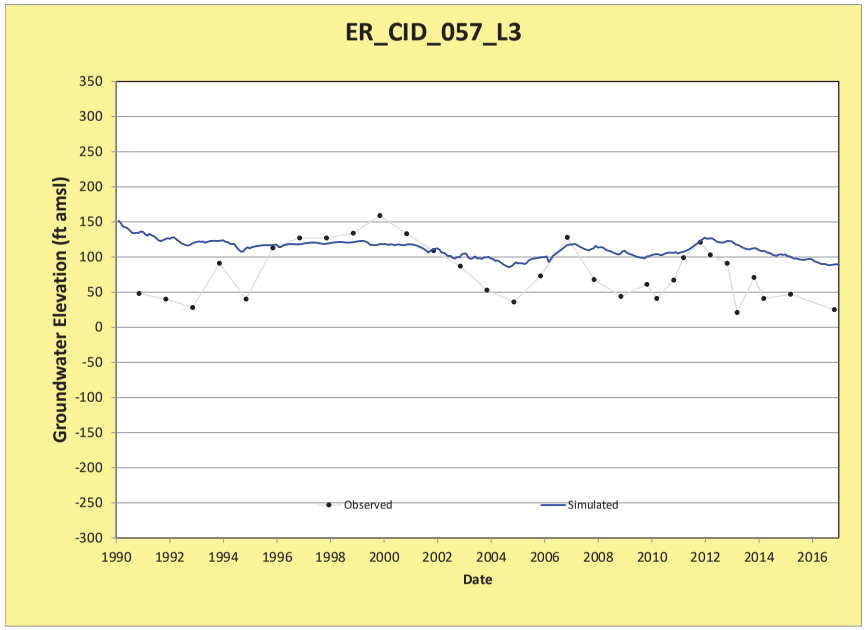

ER_CID_050_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

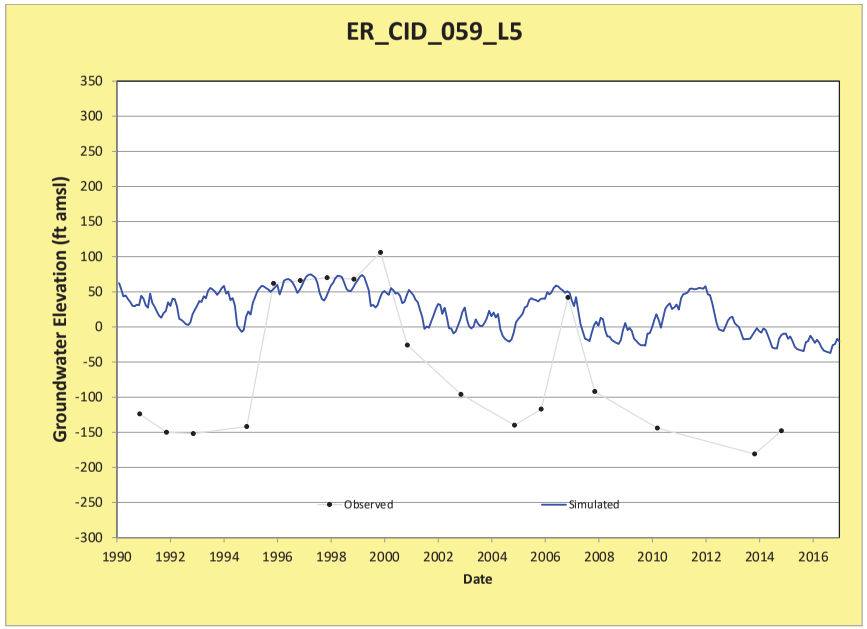

ER_CID_052_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

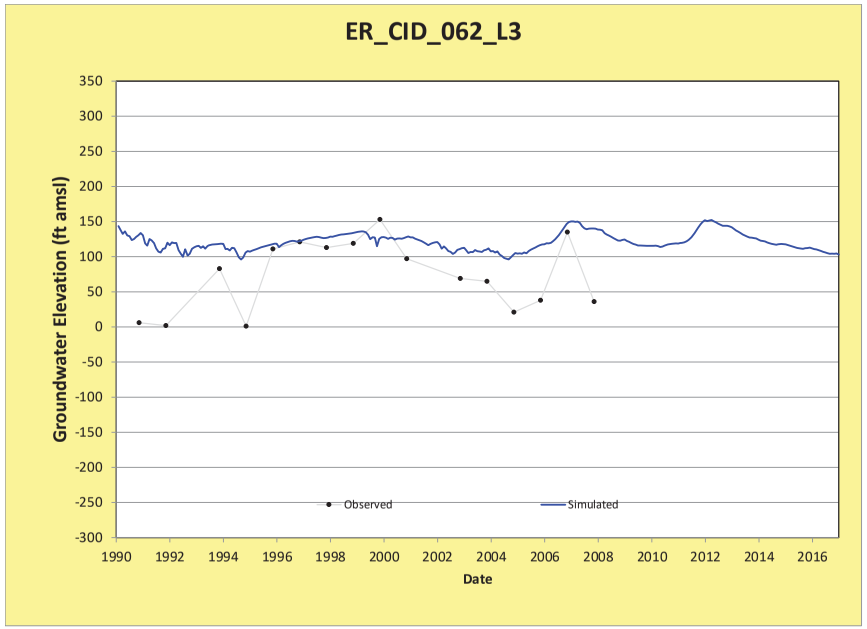

ER_CID_054_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

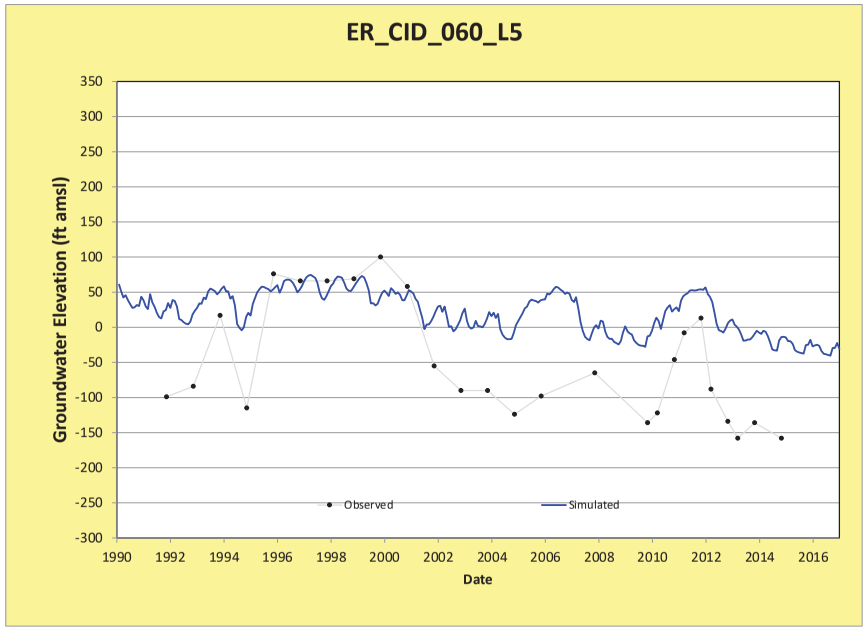

ER_CID_056_L5
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

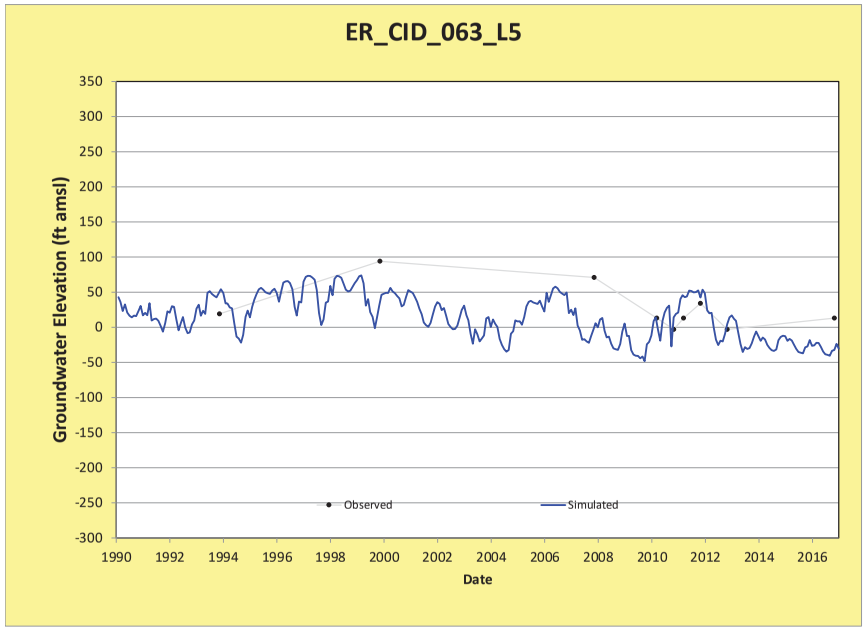

ER_CID_055_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

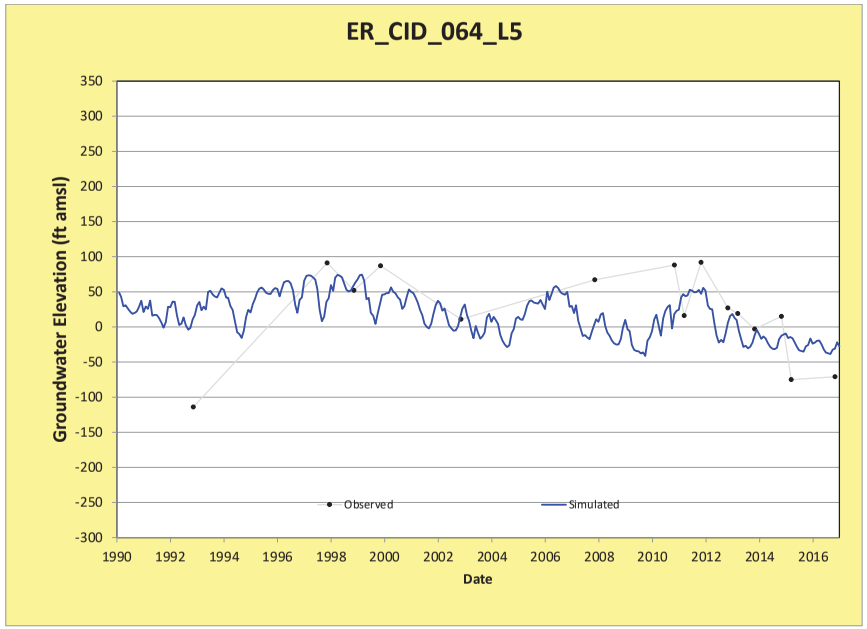

ER_CID_057_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

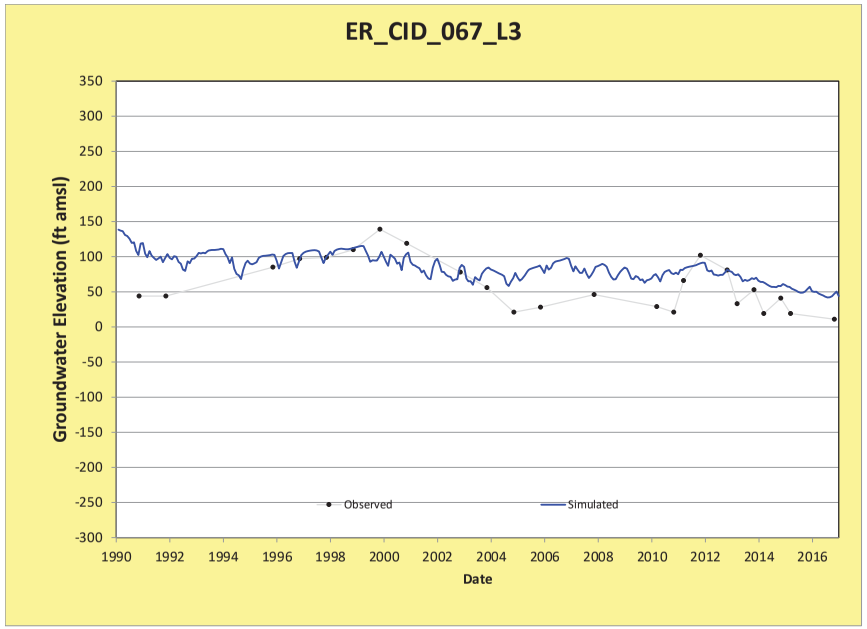

ER_CID_059_L5
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

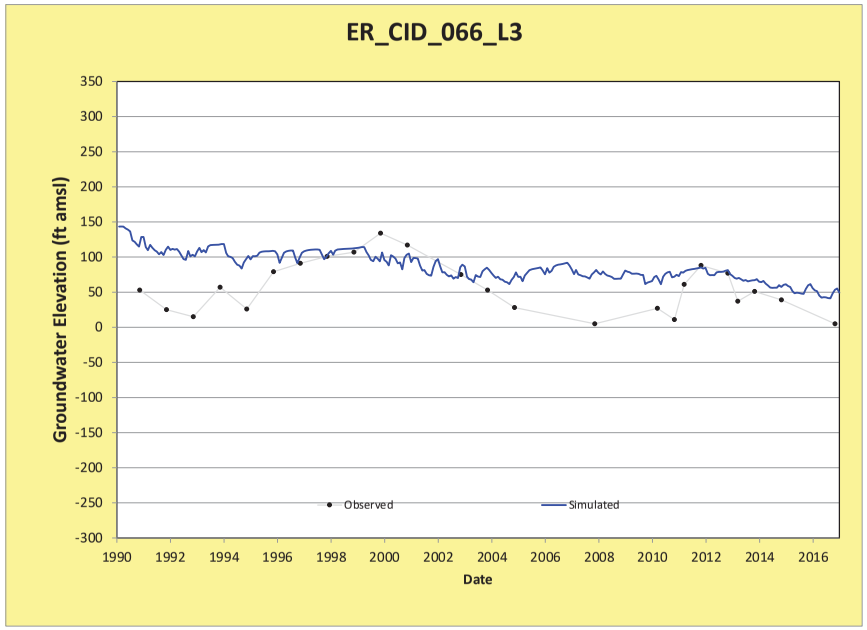

ER_CID_062_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

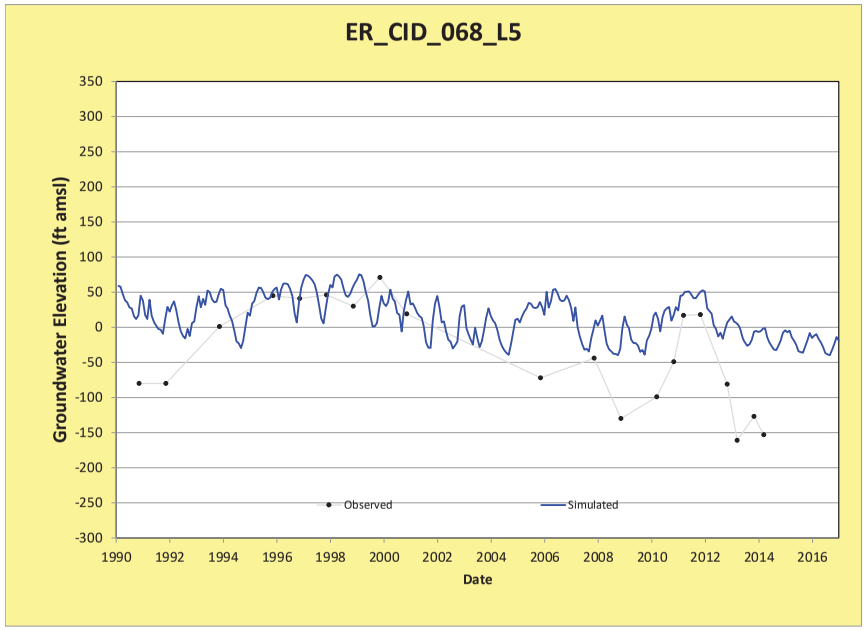

ER_CID_060_L5
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

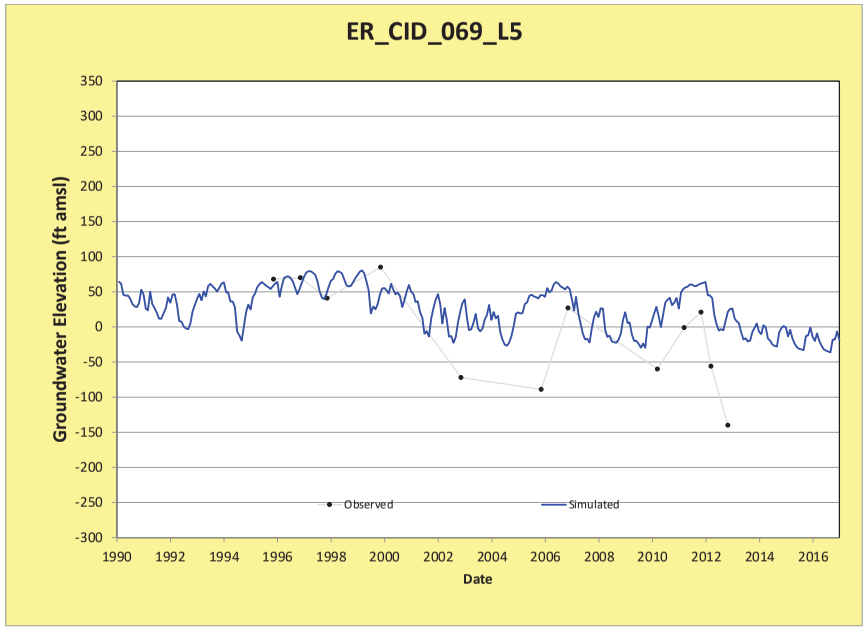

ER_CID_063_L5
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

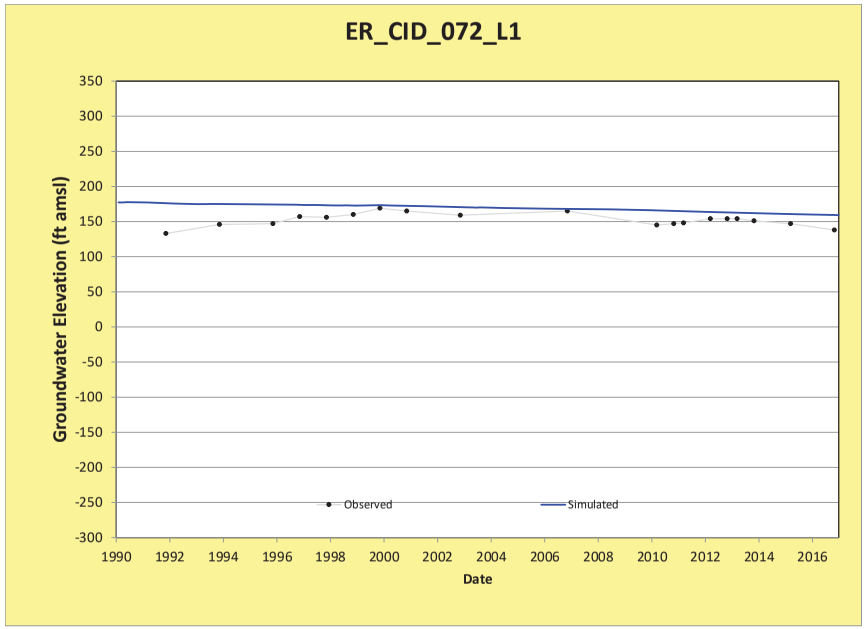

ER_CID_064_L5
Groundwater Elevation (ft amsl)
350
300
250
200
150
100
50
0
-50
-100
-150
-200
-250
-300
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
Date
Observed
Simulated

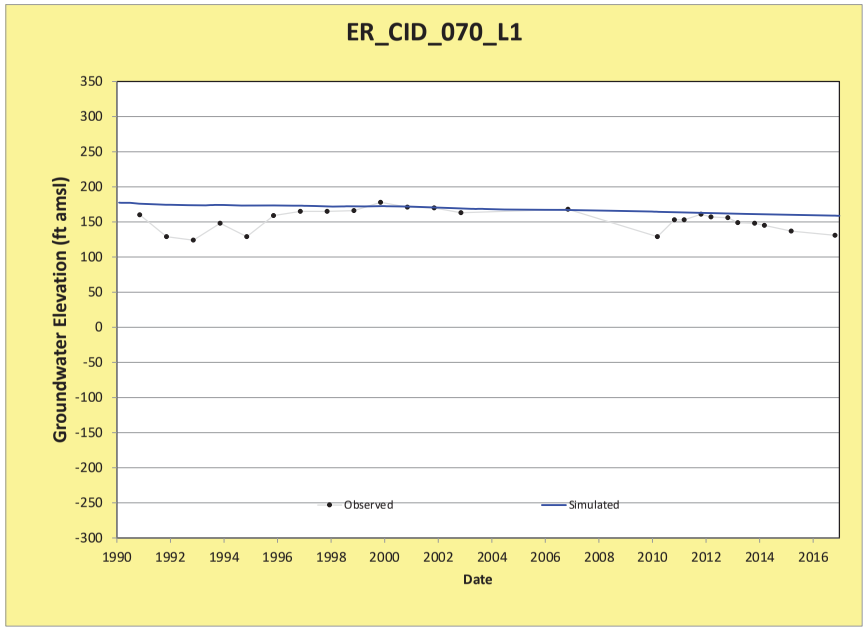

ER_CID_067_L3
Groundwater Elevation (ft amsl)
350
300
250
200
150
100
50
0
-50
-100
-150
-200
-250
-300
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
Date
Observed
Simulated

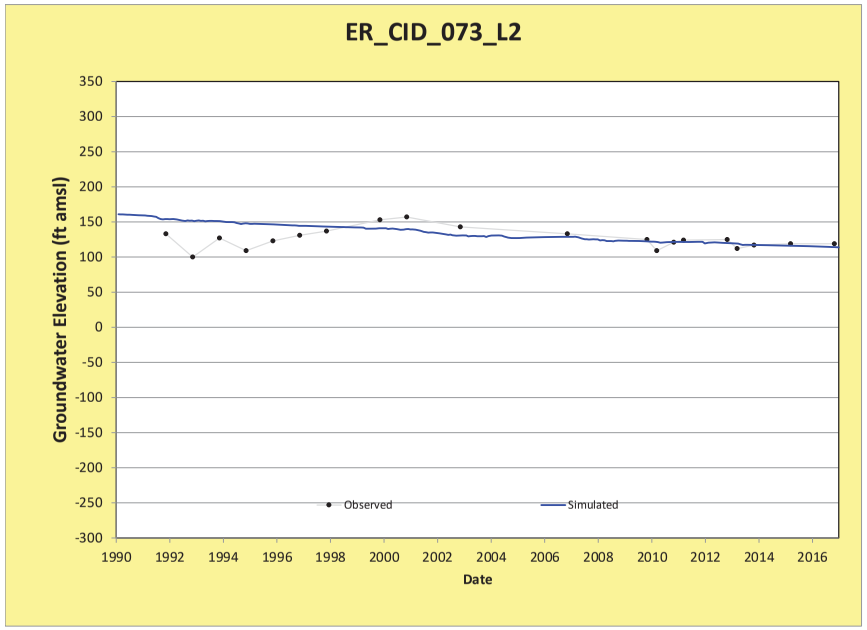

ER_CID_066_L3
Groundwater Elevation (ft amsl)
350
300
250
200
150
100
50
0
-50
-100
-150
-200
-250
-300
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
Date
Observed
Simulated

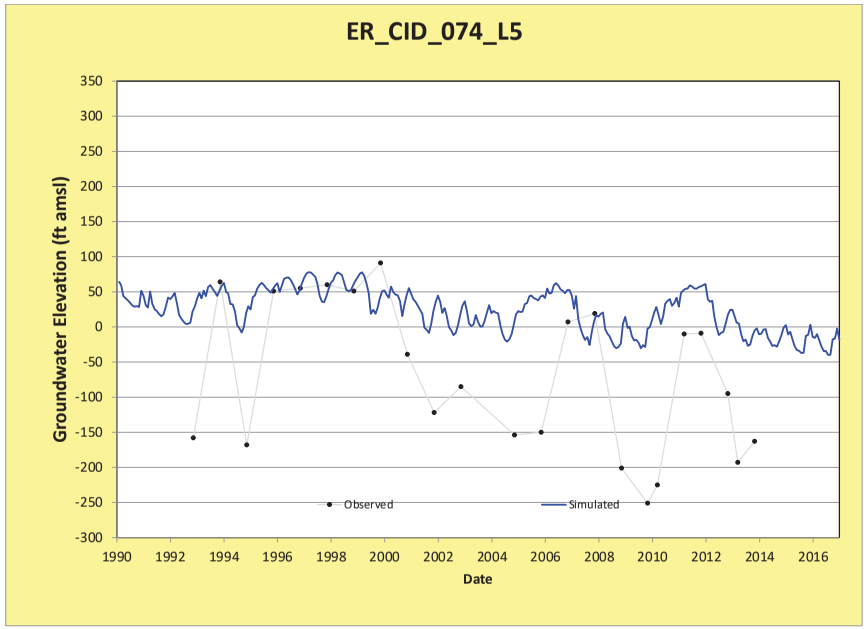

ER_CID_068_L5
Groundwater Elevation (ft amsl)
350
300
250
200
150
100
50
0
-50
-100
-150
-200
-250
-300
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
Date
Observed
Simulated

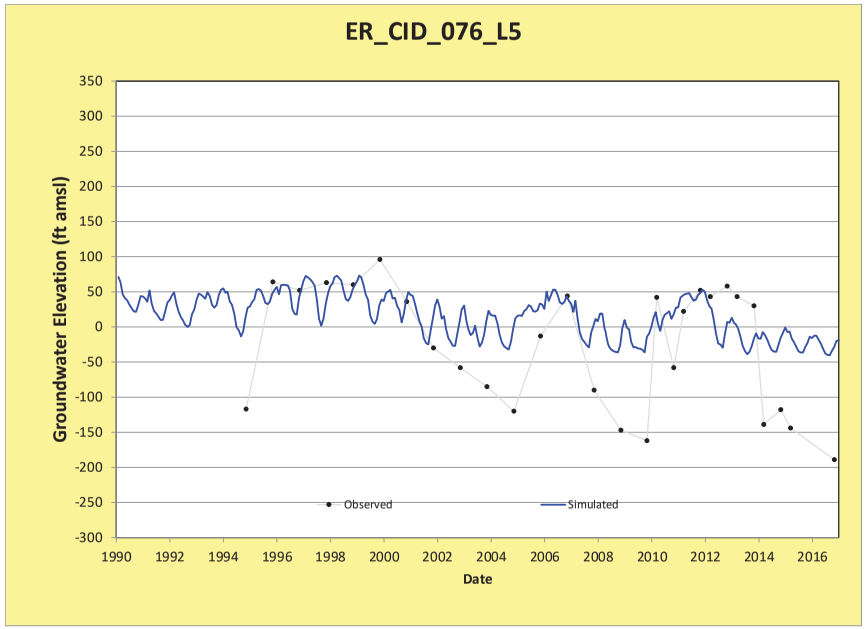

ER_CID_069_L5
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

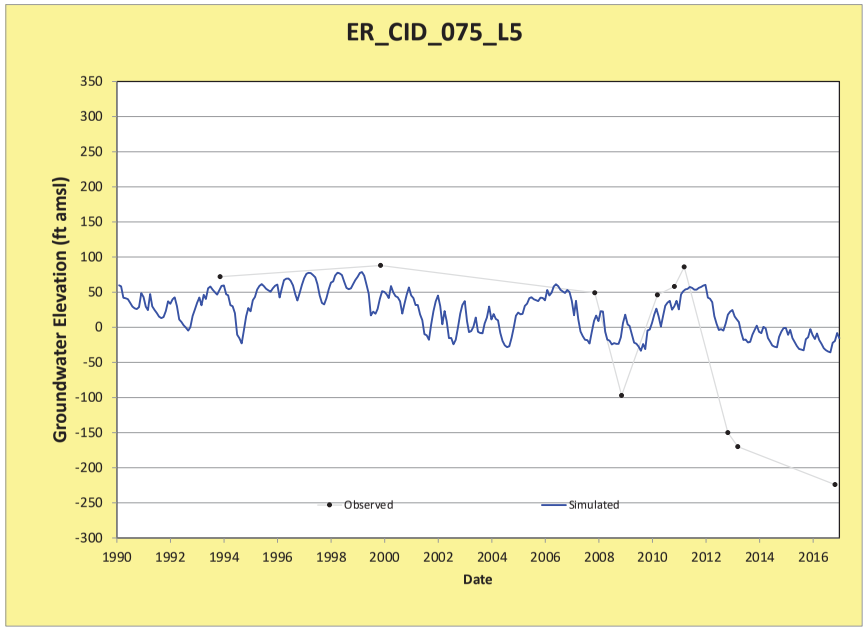

ER_CID_072_L1
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

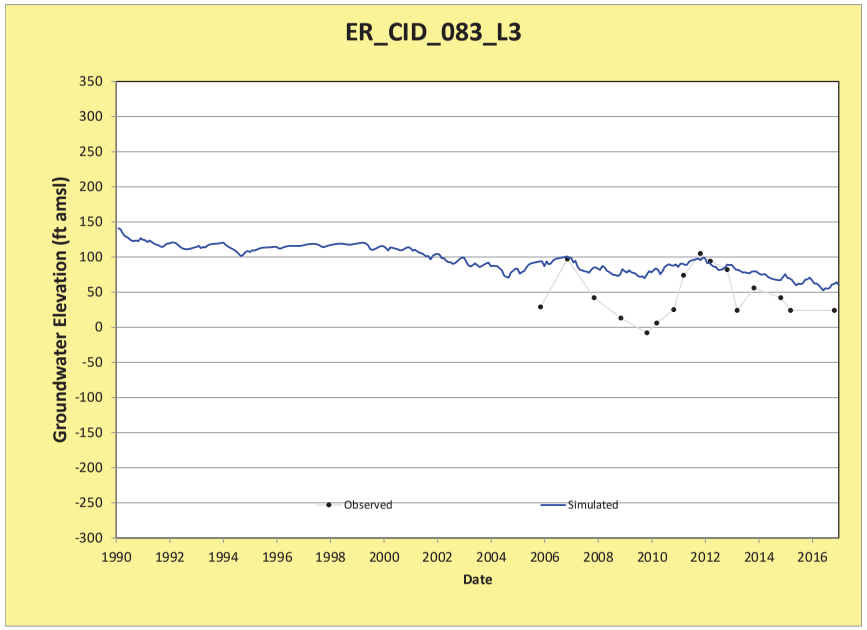

ER_CID_070_L1
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

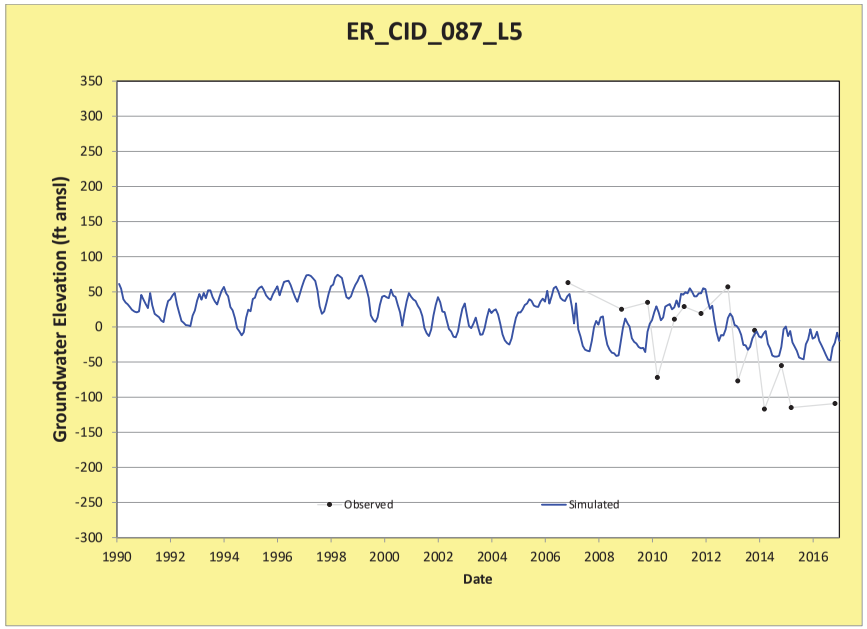

ER_CID_073_L2
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

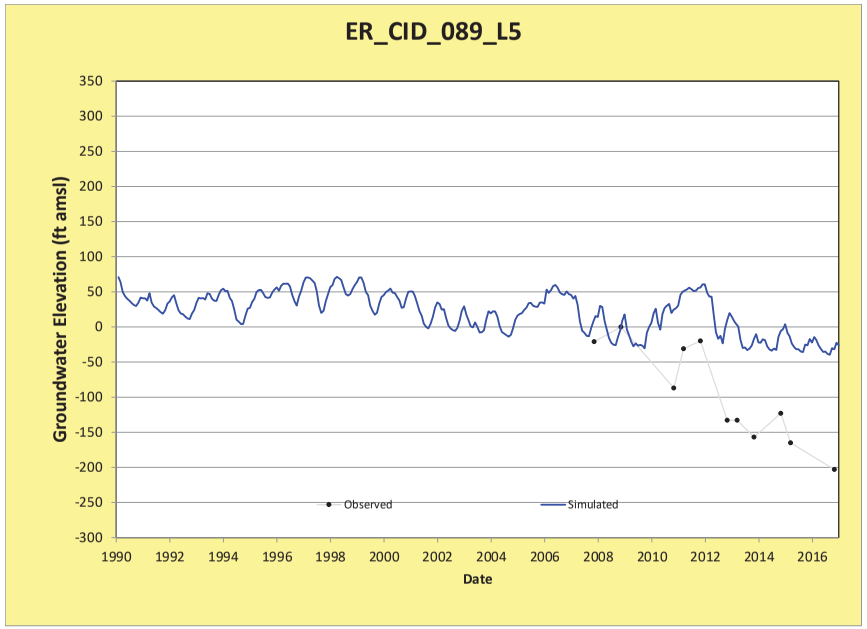

ER_CID_074_L5
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

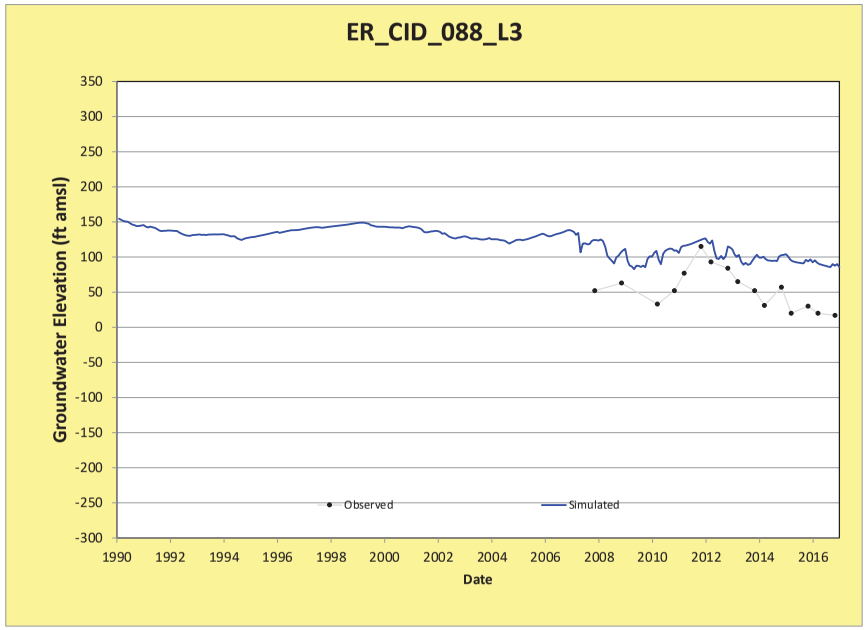

ER_CID_076_L5
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

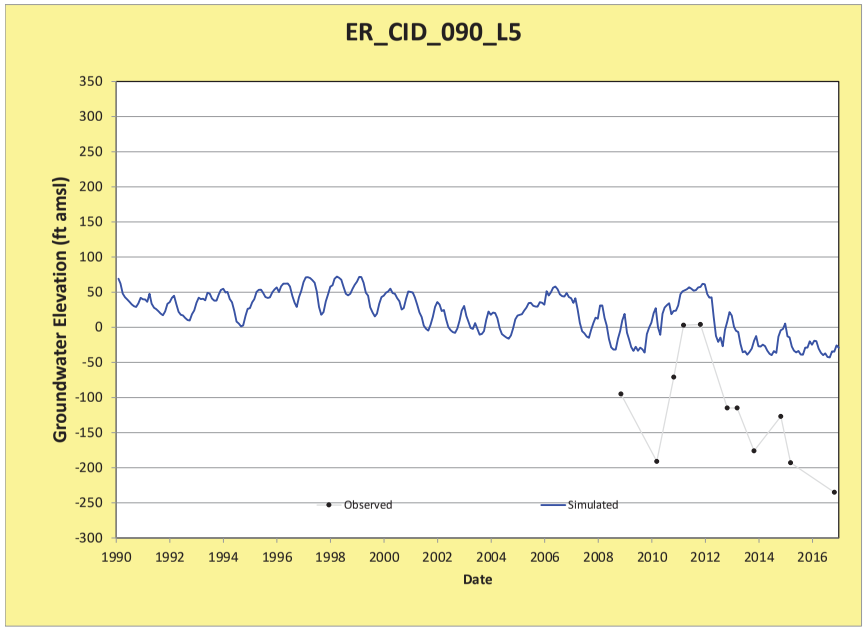

ER_CID_075_L5
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

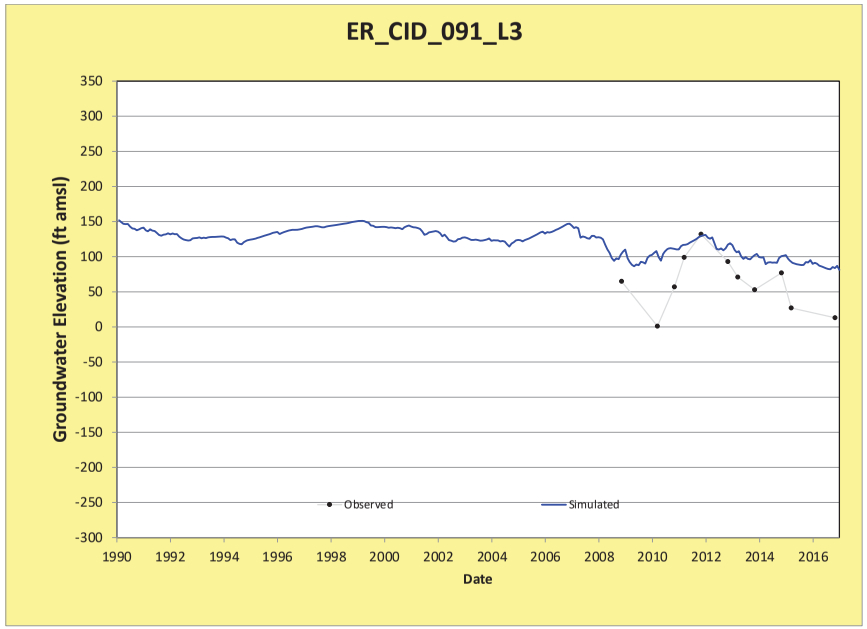

ER_CID_083_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

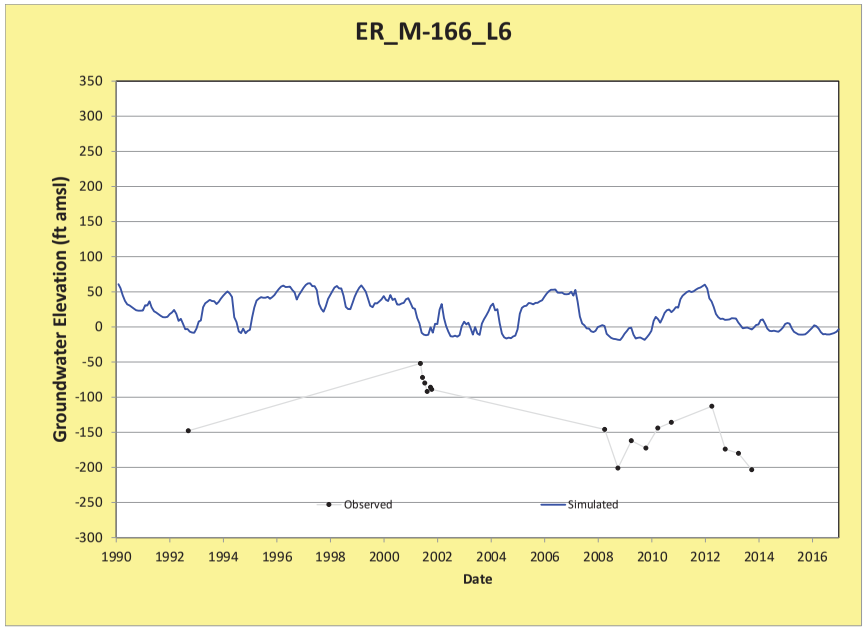

ER_CID_087_L5
Groundwater Elevation (ft amsl)
350
300
250
200
150
100
50
0
-50
-100
-150
-200
-250
-300
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
Date
Observed
Simulated

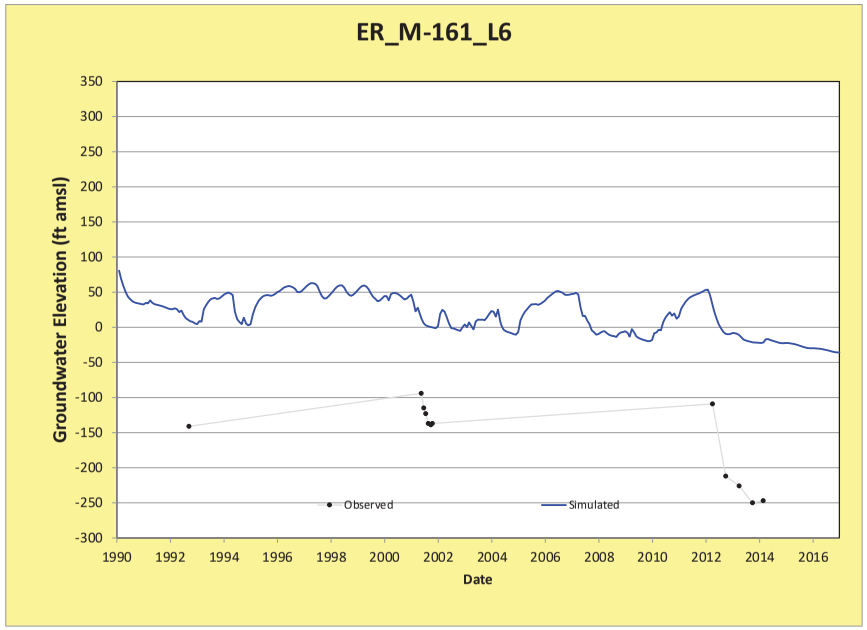

ER_CID_089_L5
Groundwater Elevation (ft amsl)
350
300
250
200
150
100
50
0
-50
-100
-150
-200
-250
-300
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
Date
Observed
Simulated

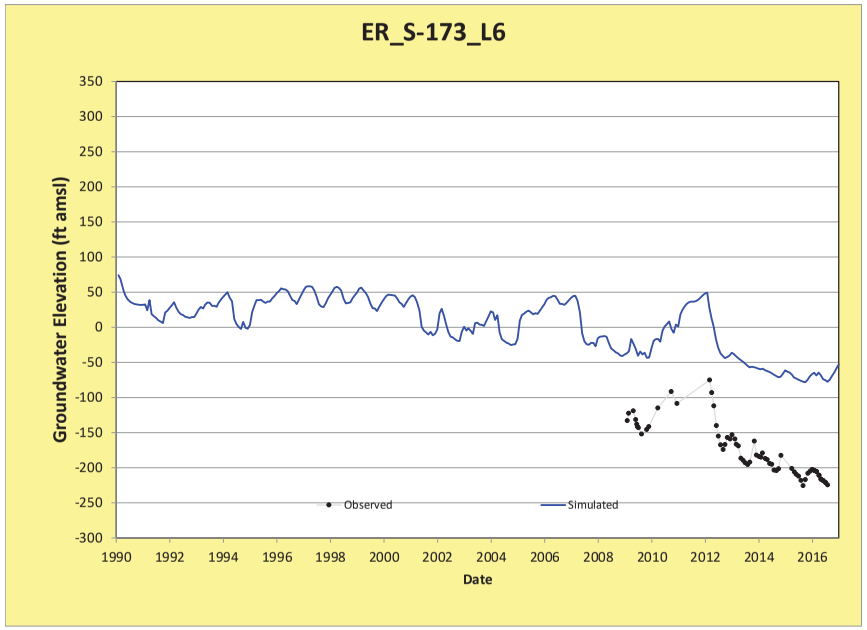

ER_CID_088_L3
Groundwater Elevation (ft amsl)
350
300
250
200
150
100
50
0
-50
-100
-150
-200
-250
-300
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
Date
Observed
Simulated

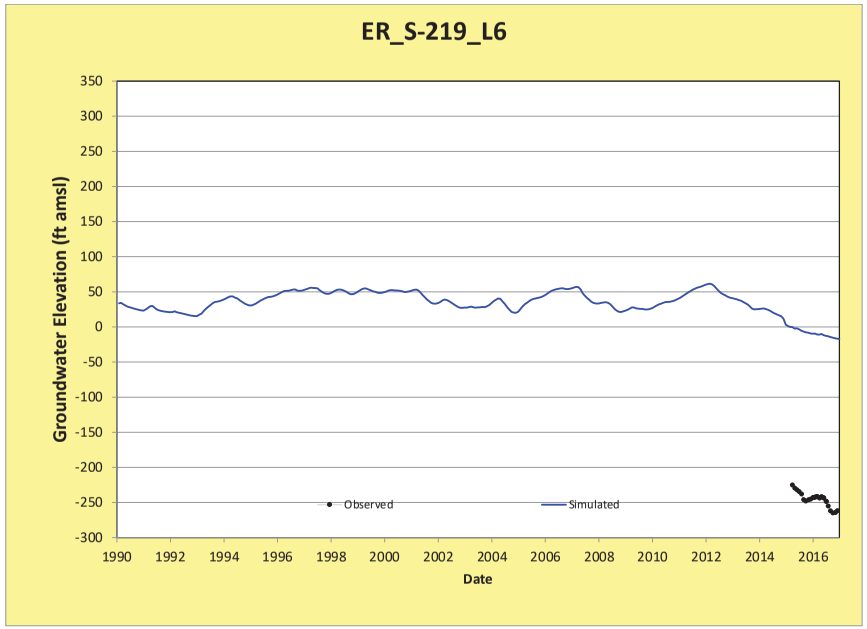

ER_CID_090_L5
Groundwater Elevation (ft amsl)
350
300
250
200
150
100
50
0
-50
-100
-150
-200
-250
-300
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
Date
Observed
Simulated

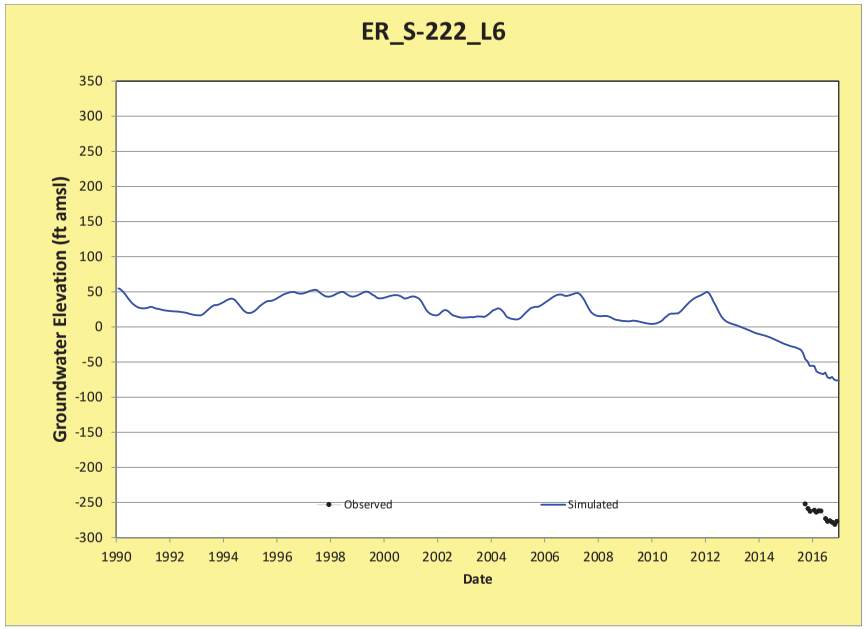

ER_CID_091_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

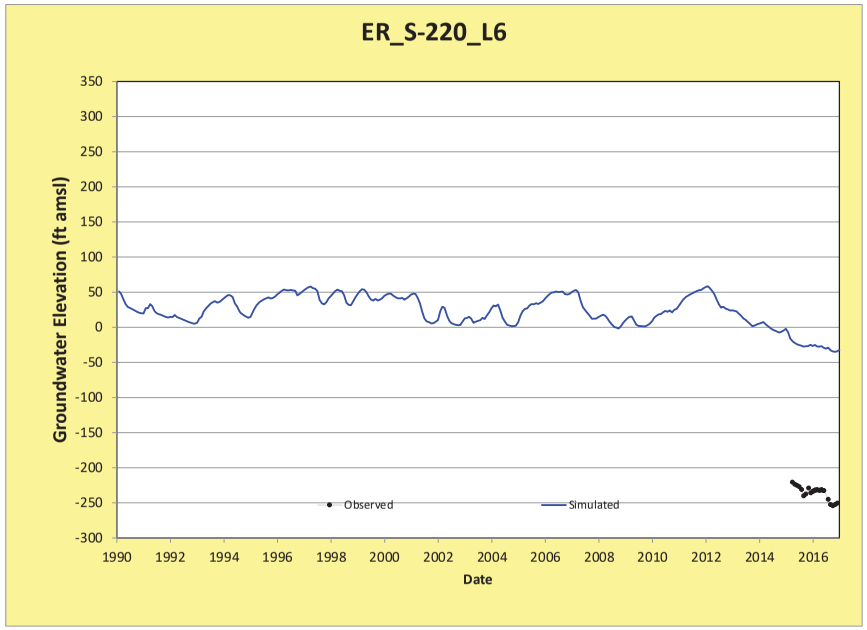

ER_M-166_L6
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

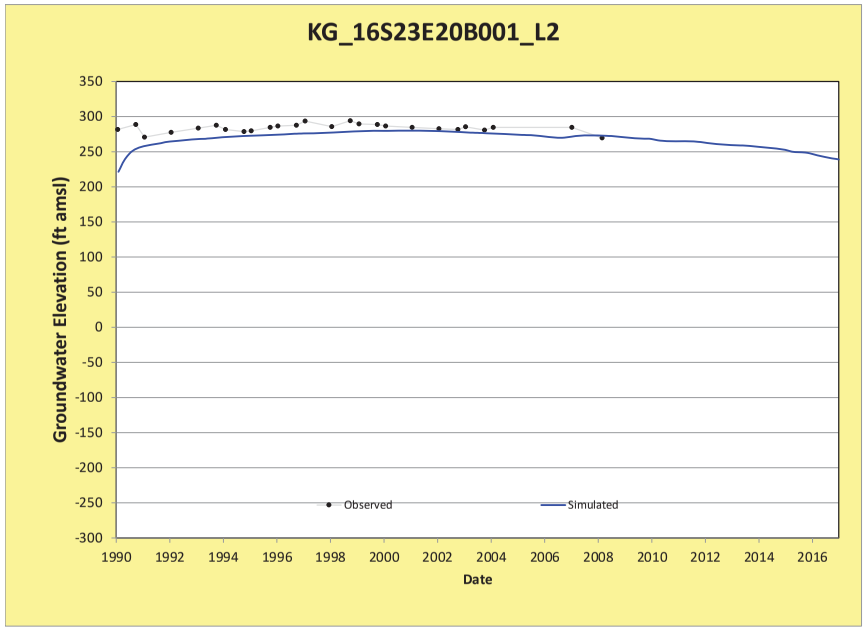

ER_M-161_L6
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

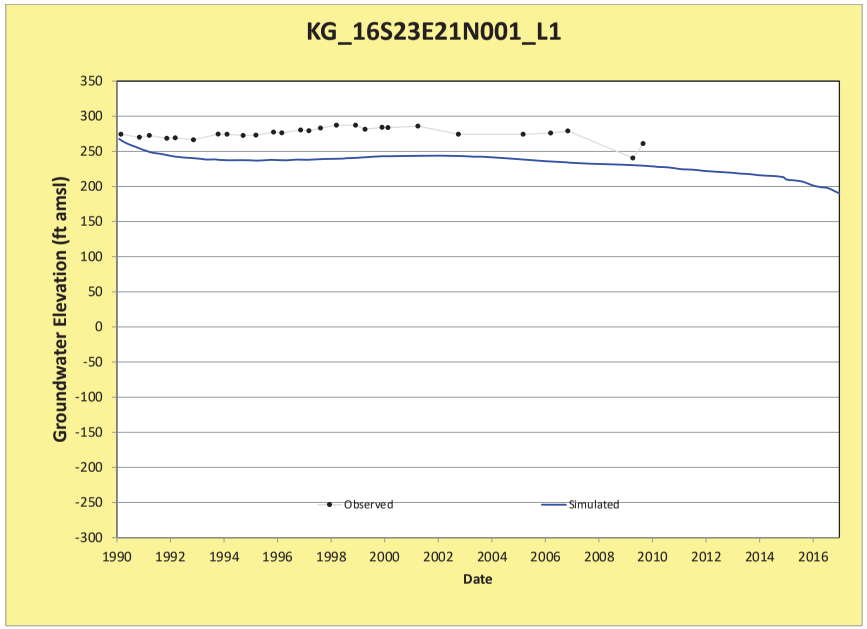

ER_S-173_L6
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

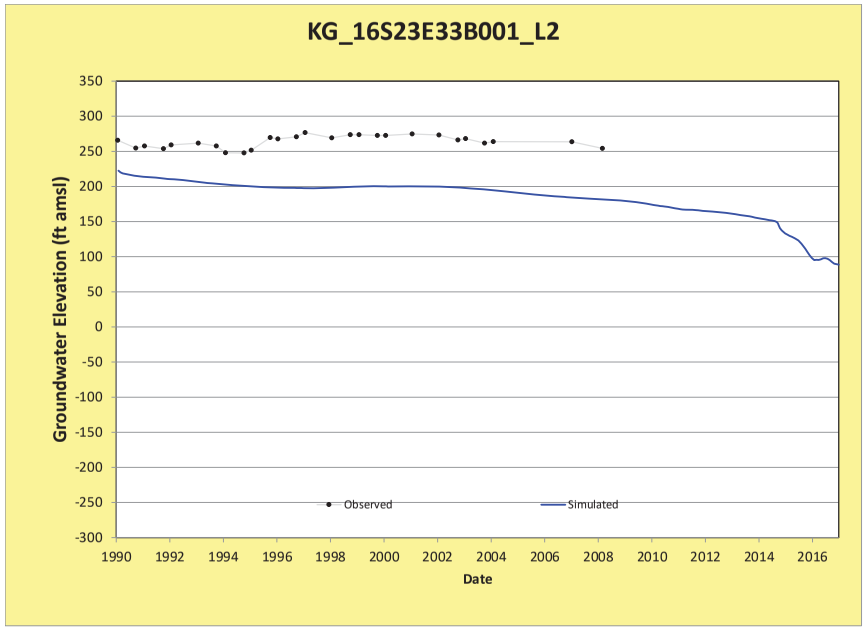

ER_S-219_L6
Groundwater Elevation (ft amsl)
350
300
250
200
150
100
50
0
-50
-100
-150
-200
-250
-300
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
Date
Observed
Simulated

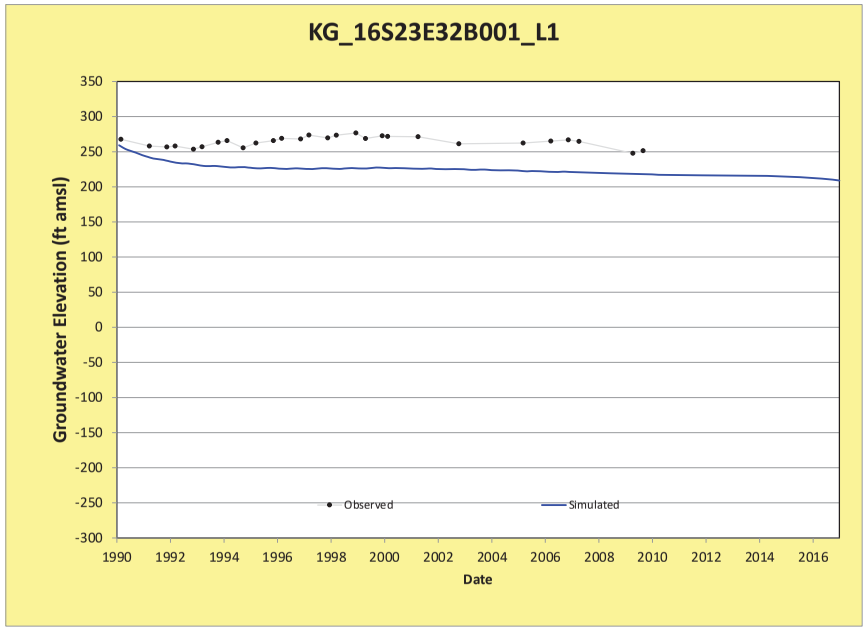

ER_S-222_L6
Groundwater Elevation (ft amsl)
350
300
250
200
150
100
50
0
-50
-100
-150
-200
-250
-300
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
Date
Observed
Simulated

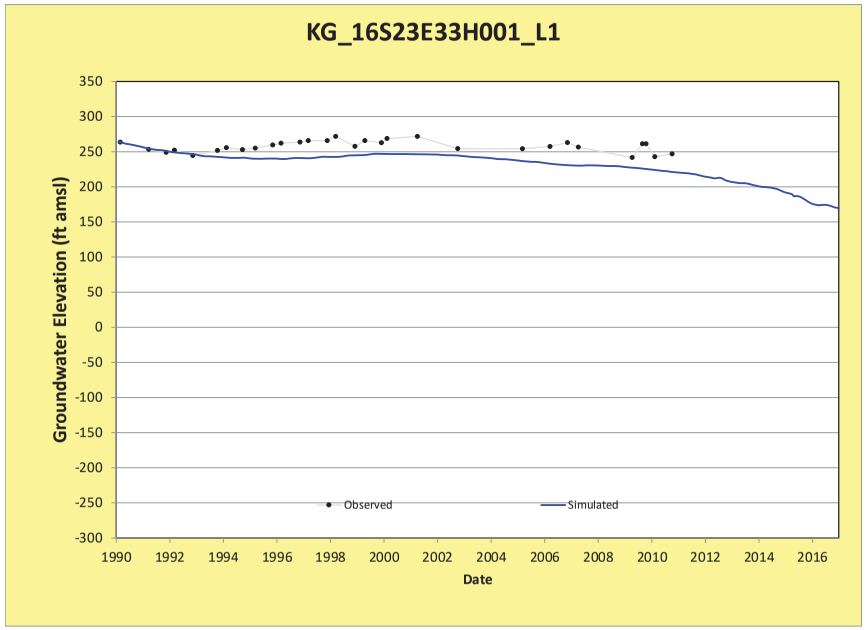

ER_S-220_L6
Groundwater Elevation (ft amsl)
350
300
250
200
150
100
50
0
-50
-100
-150
-200
-250
-300
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
Date
Observed
Simulated

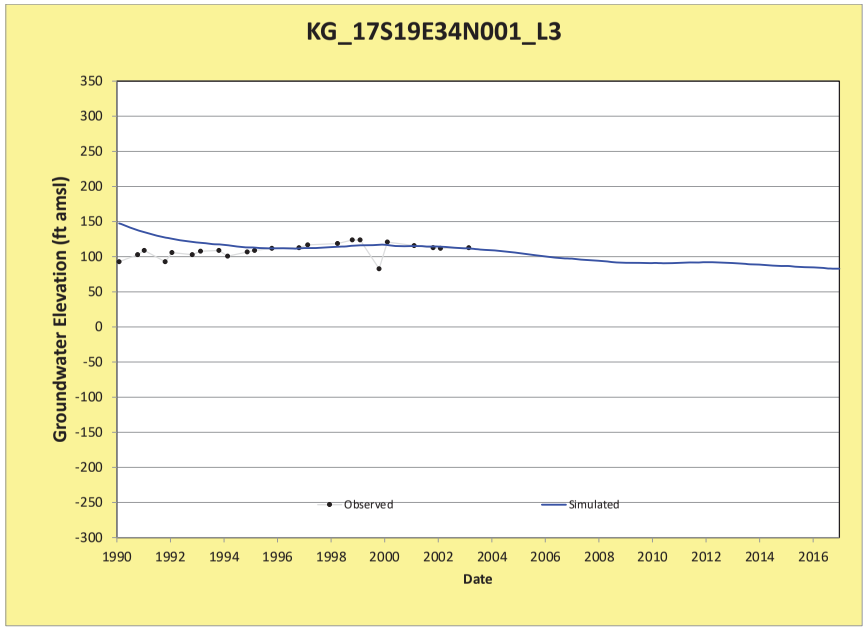

KG_16S23E20B001_L2
Groundwater Elevation (ft amsl)
350
300
250
200
150
100
50
0
-50
-100
-150
-200
-250
-300
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
Date
Observed
Simulated

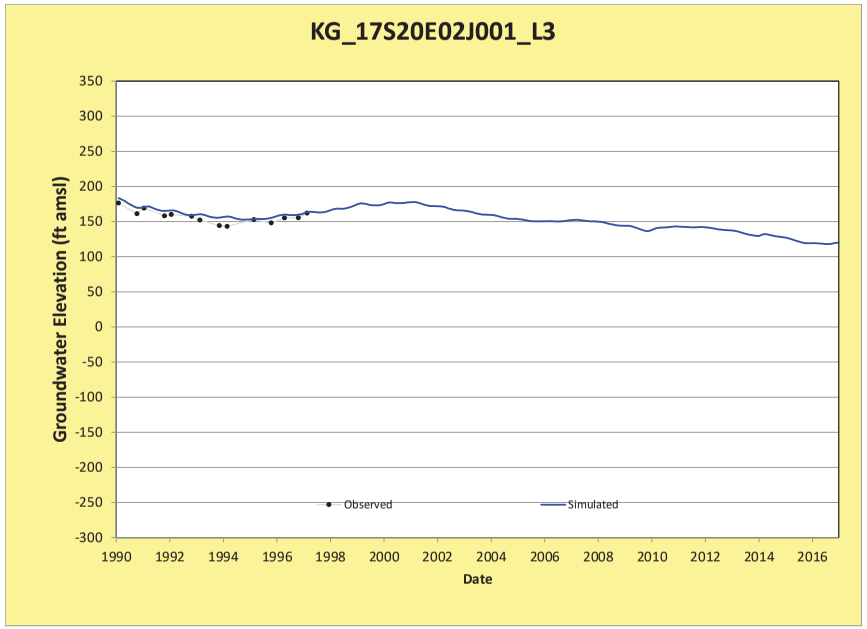

KG_16S23E21N001_L1
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

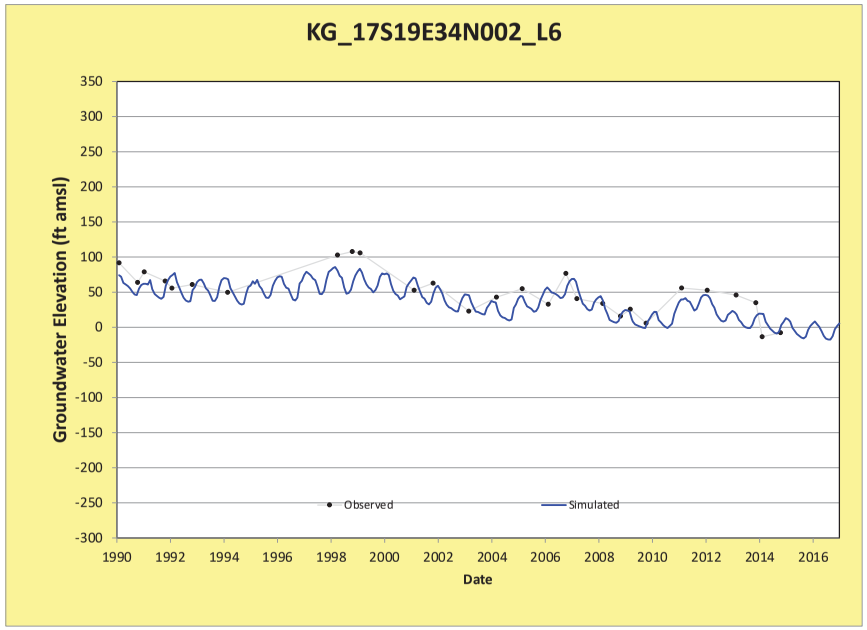

KG_16S23E33B001_L2
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

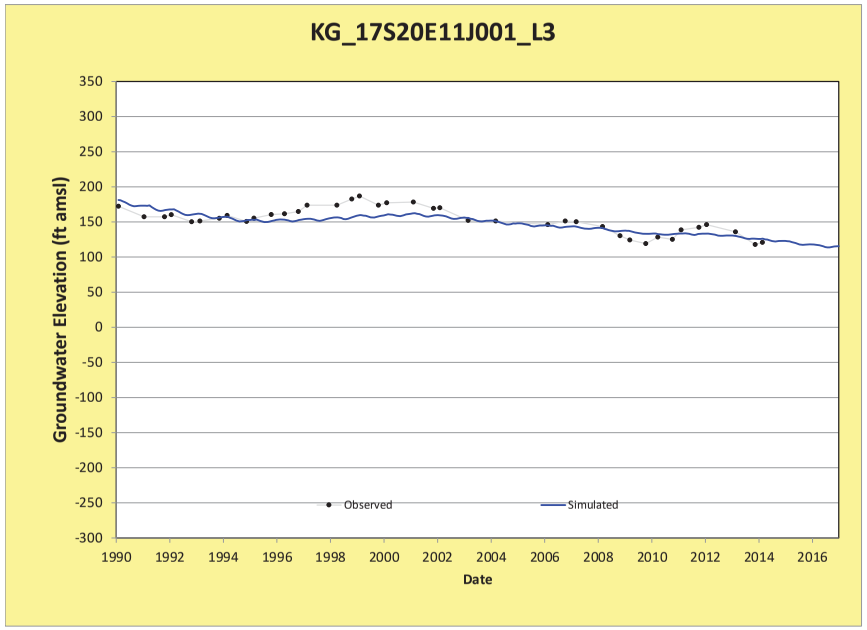

KG_16S23E32B001_L1
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

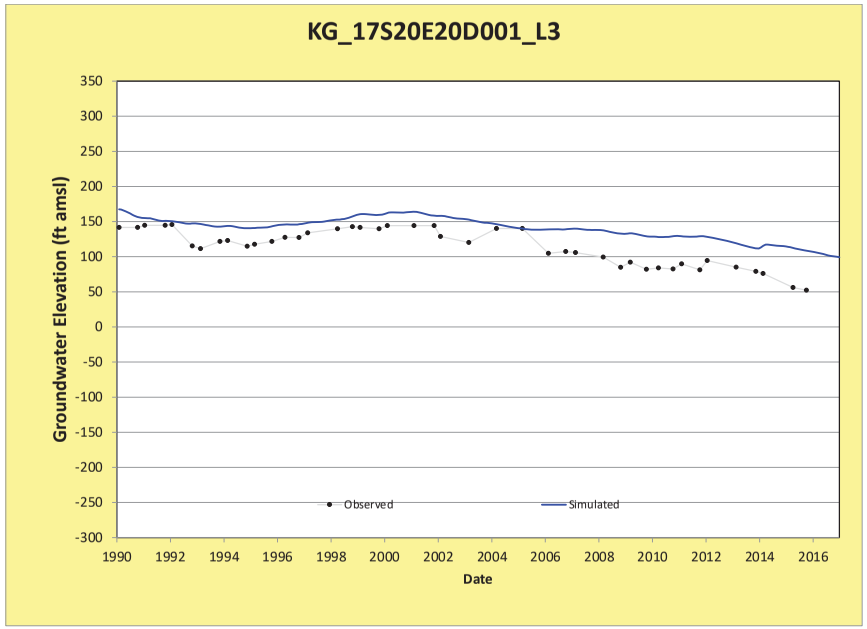

KG_16S23E33H001_L1
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

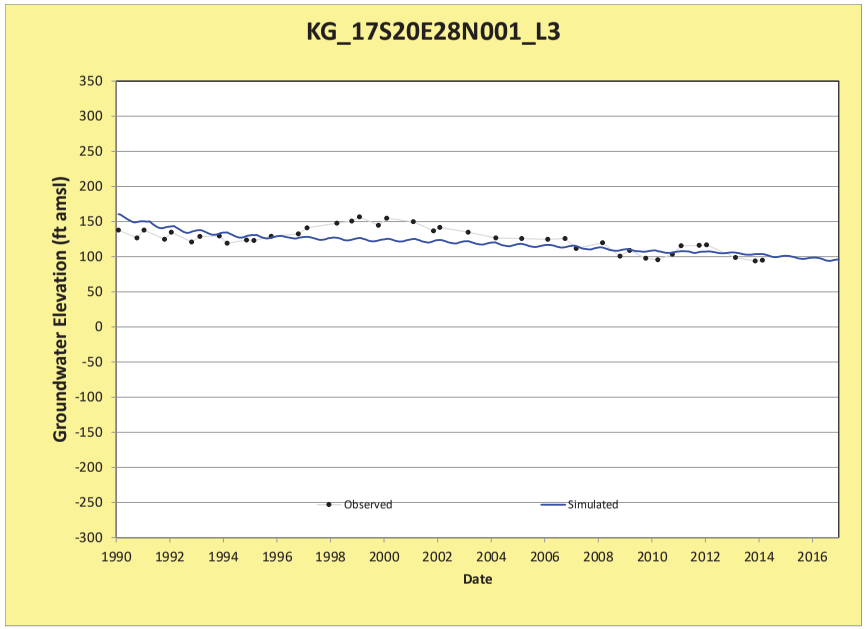

KG_17S19E34N001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

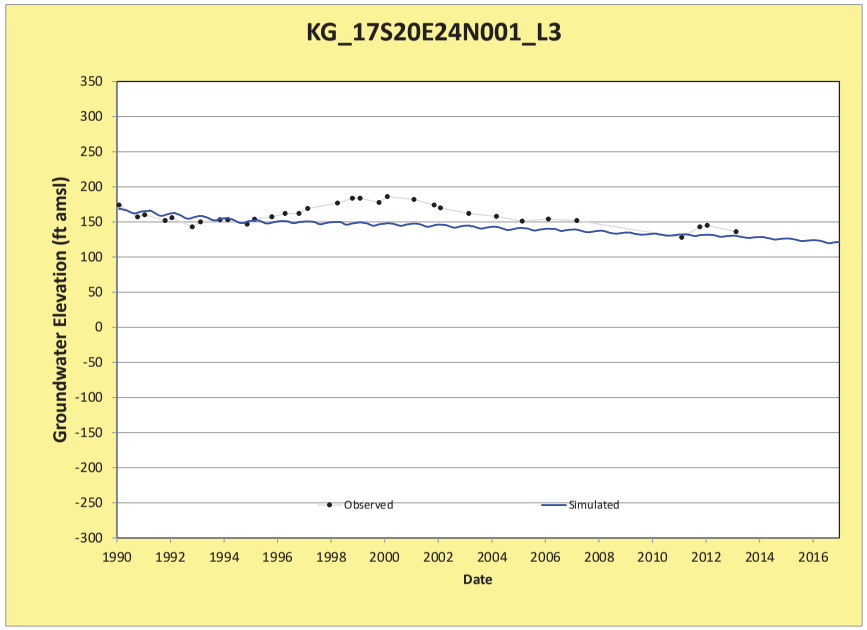

KG_17S20E02J001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

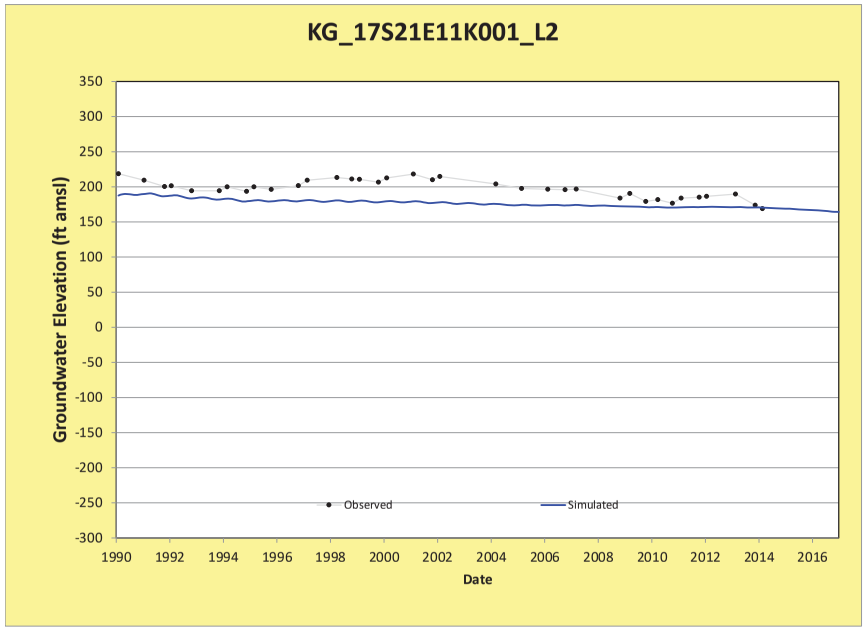

KG_17S19E34N002_L6
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

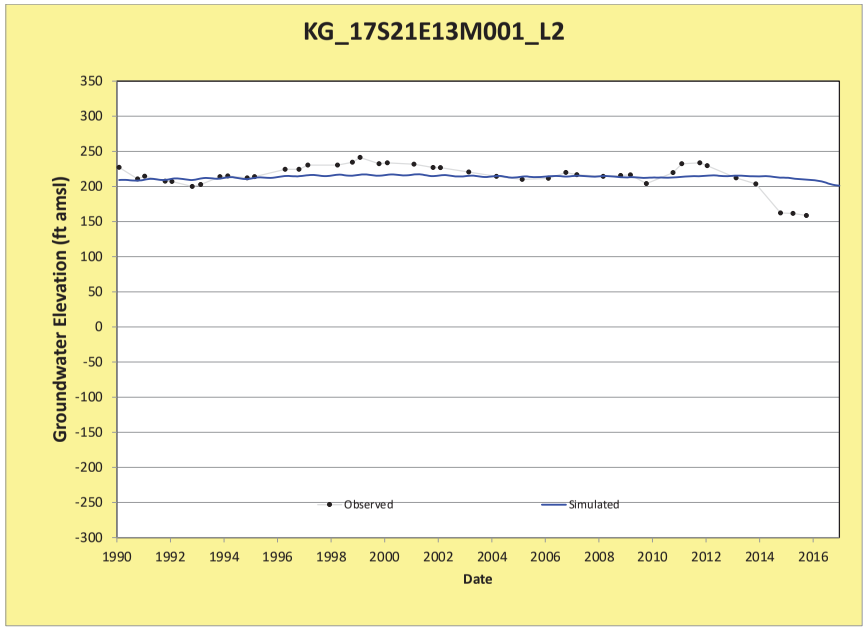

KG_17S20E11J001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

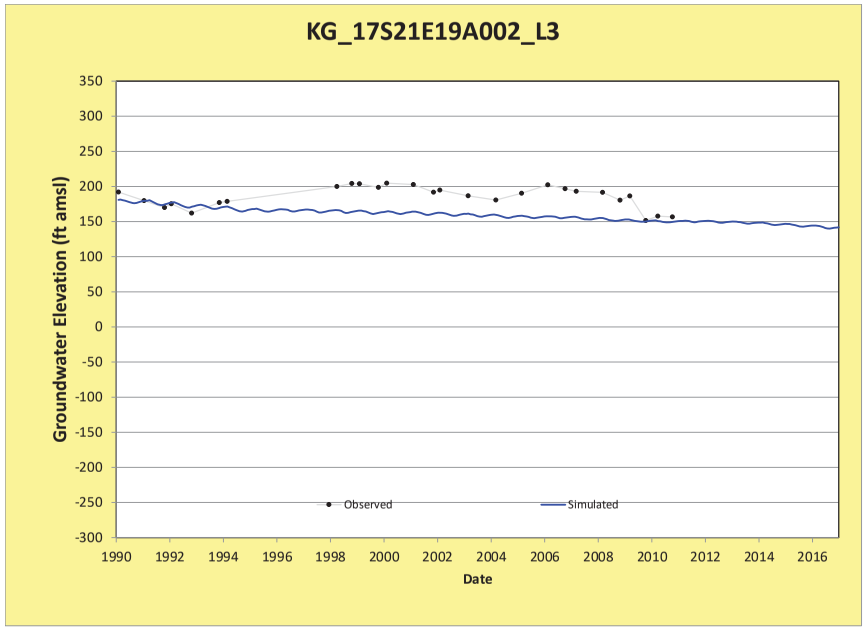

KG_17S20E20D001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

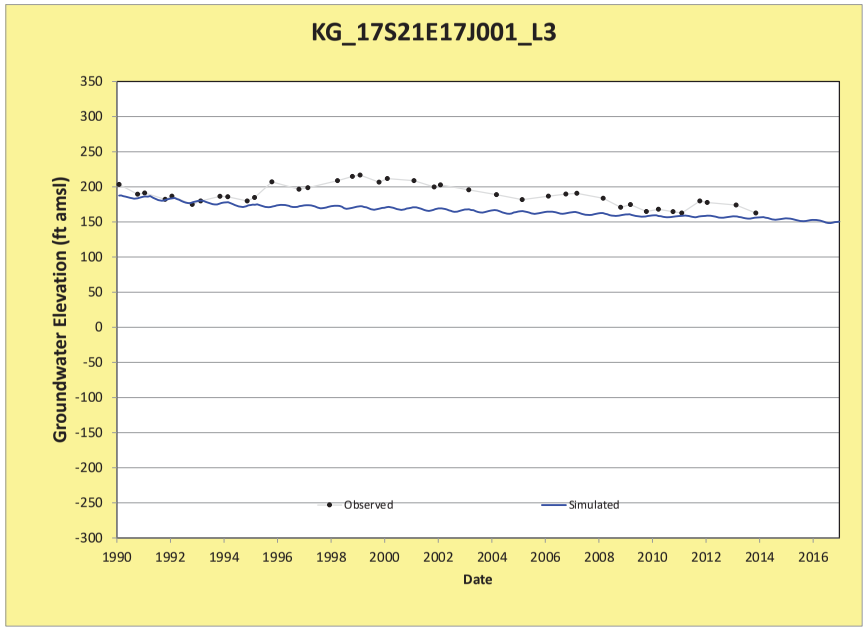

KG_17S20E28N001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

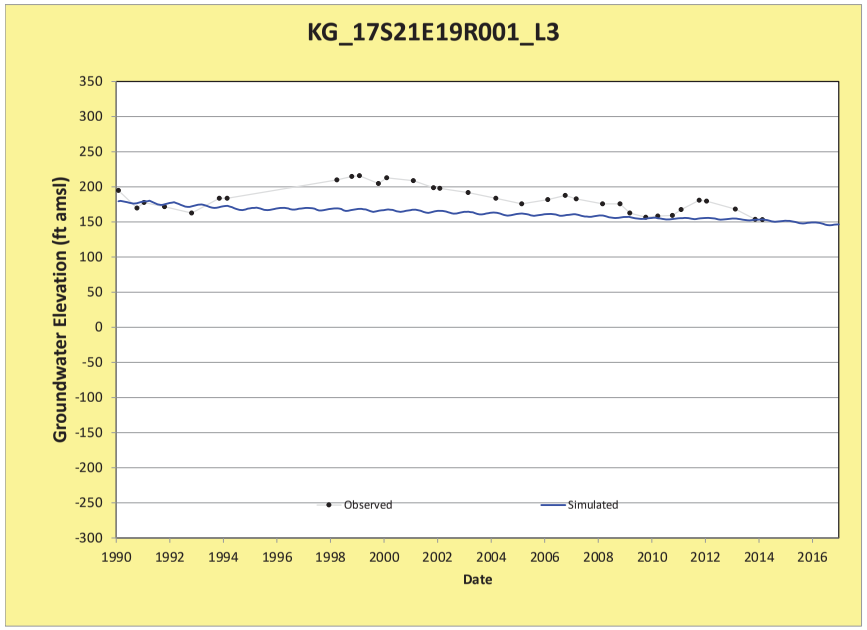

KG_17S20E24N001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KG_17S21E11K001_L2
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KG_17S21E13M001_L2
Groundwater Elevation (ft amsl)
350
300
250
200
150
100
50
0
-50
-100
-150
-200
-250
-300
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
Date
Observed
Simulated


KG_17S21E19A002_L3
Groundwater Elevation (ft amsl)
350
300
250
200
150
100
50
0
-50
-100
-150
-200
-250
-300
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
Date
Observed
Simulated


KG_17S21E17J001_L3
Groundwater Elevation (ft amsl)
350
300
250
200
150
100
50
0
-50
-100
-150
-200
-250
-300
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
Date
Observed
Simulated


KG_17S21E19R001_L3
Groundwater Elevation (ft amsl)
350
300
250
200
150
100
50
0
-50
-100
-150
-200
-250
-300
1990
1992
1994
1996
1998
2000
2002
2004
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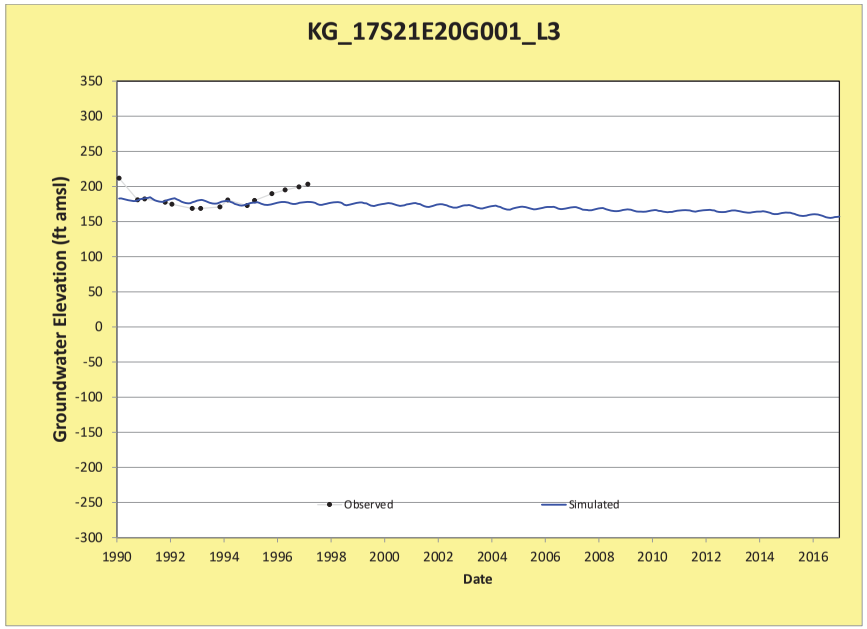
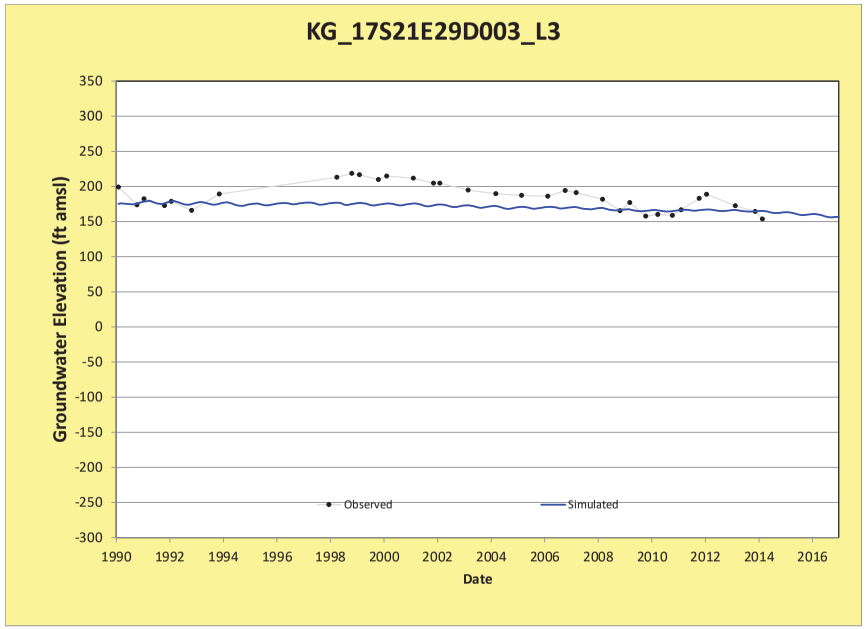
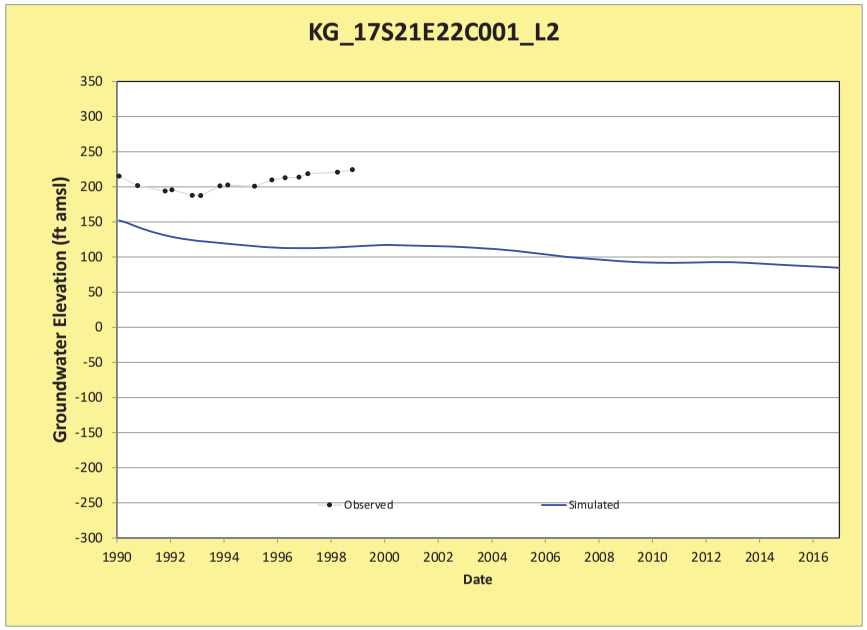
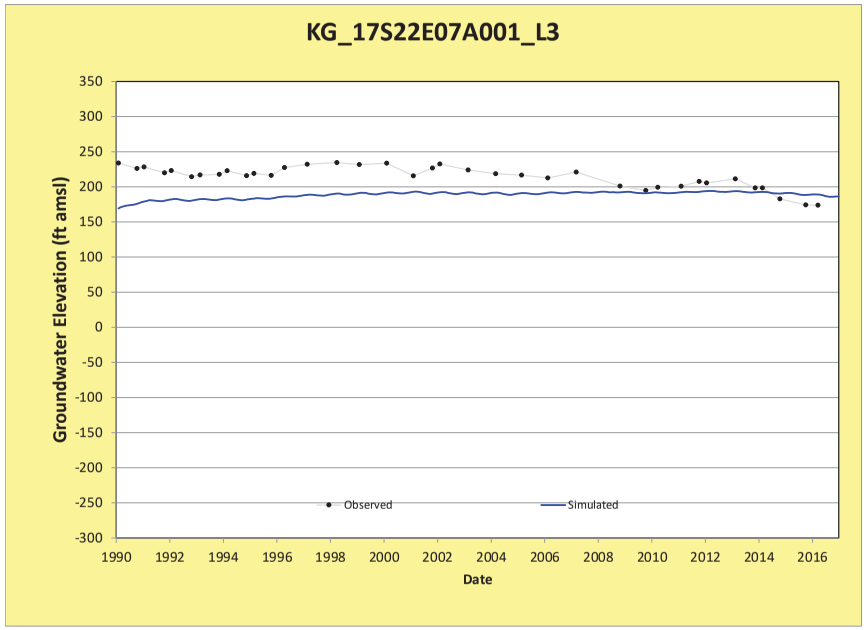
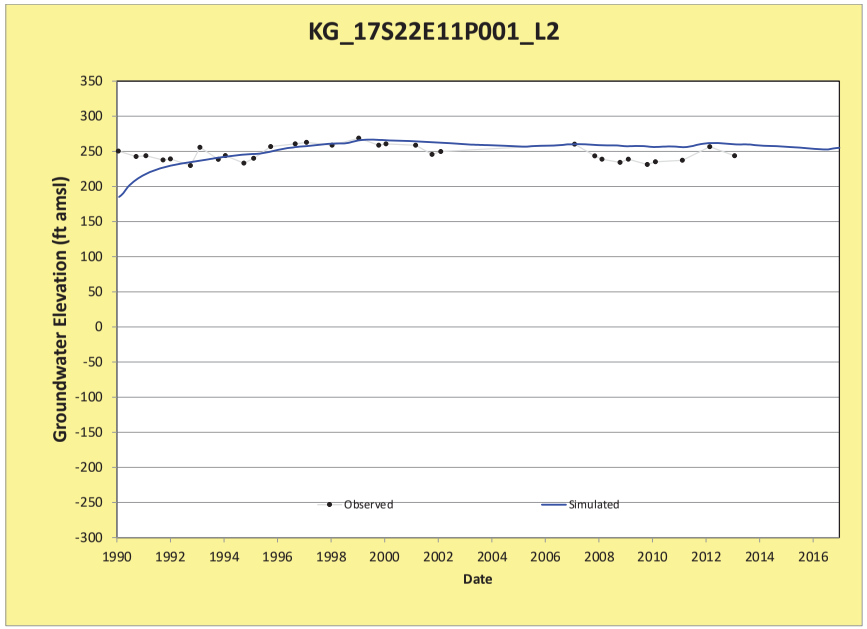
2008
2010
2012
2014
2016
Date
Observed
Simulated

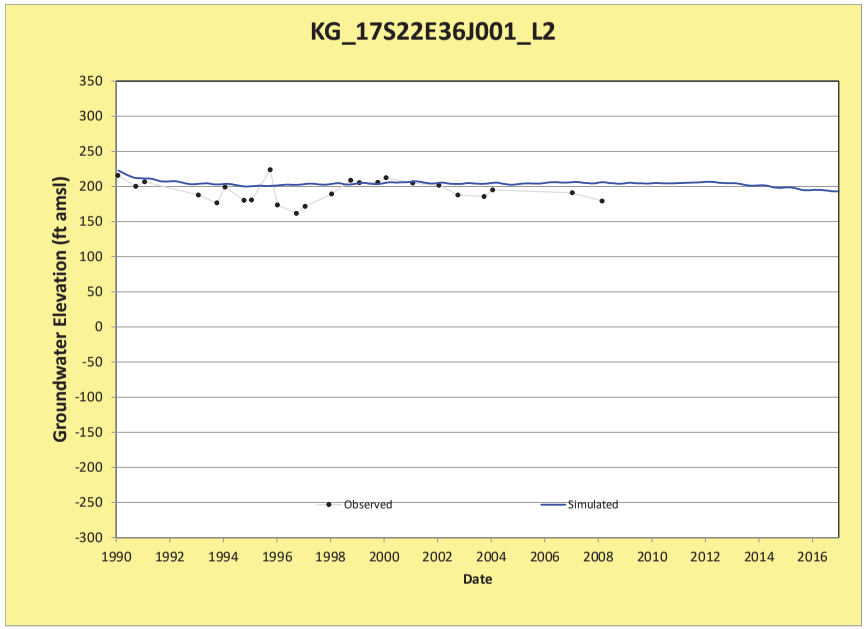

KG_17S21E20G001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

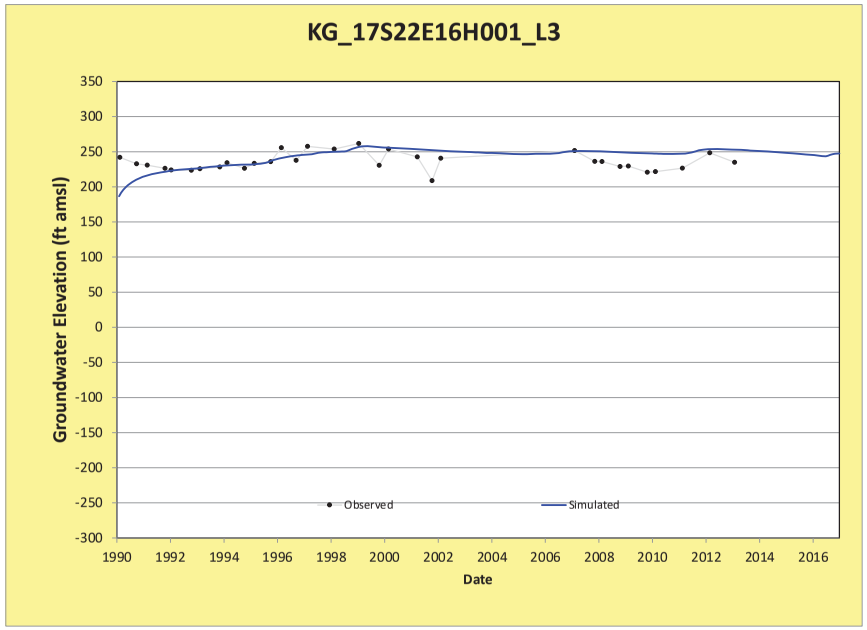

KG_17S21E29D003_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

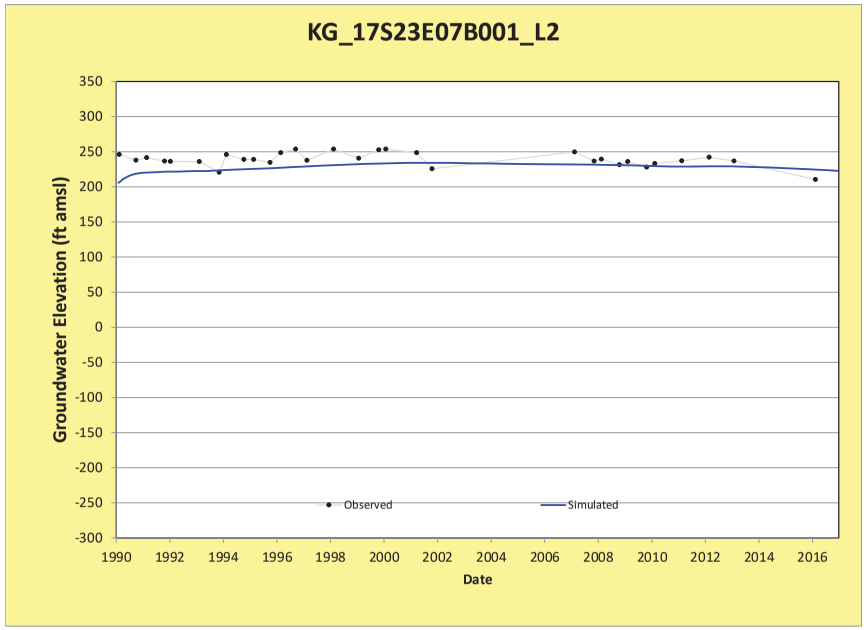

KG_17S21E22C001_L2
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

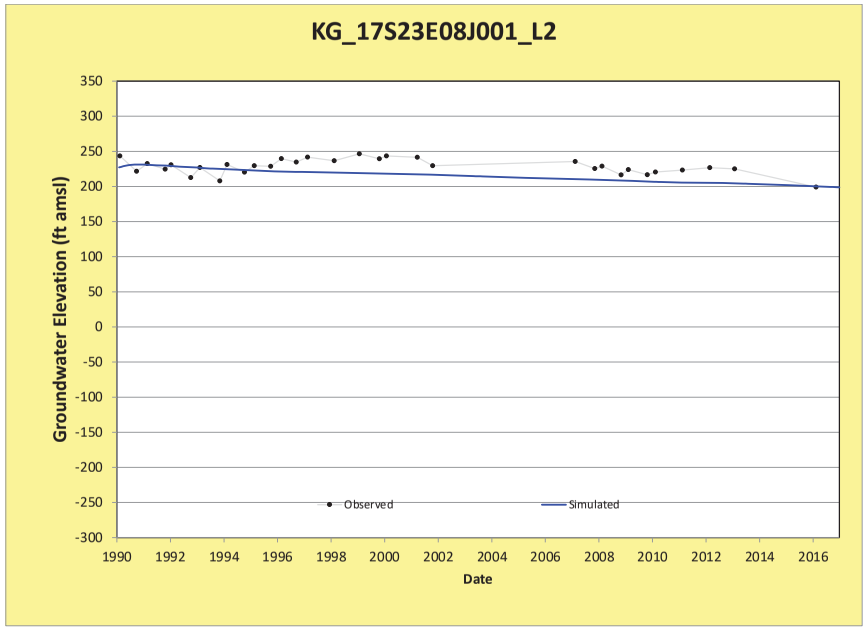

KG_17S22E07A001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

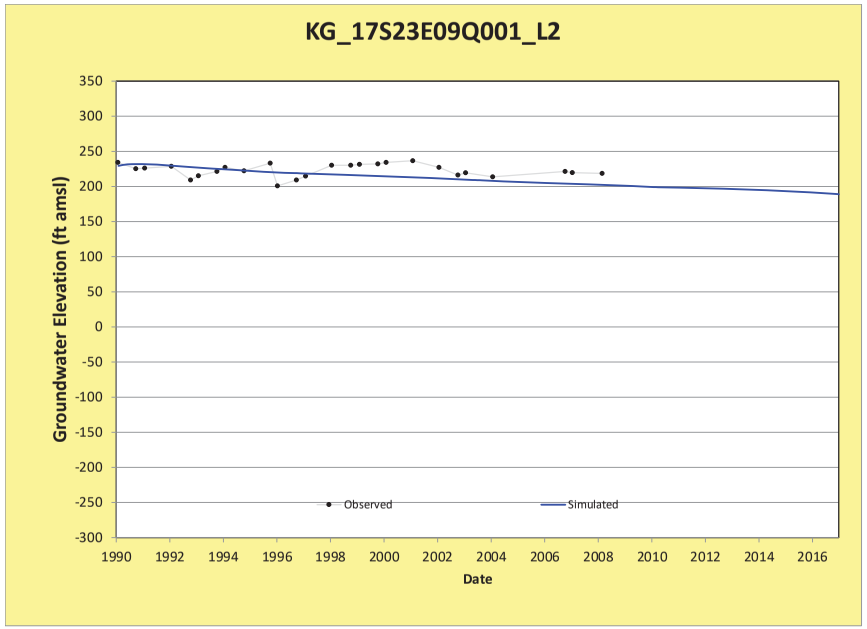

KG_17S22E11P001_L2
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

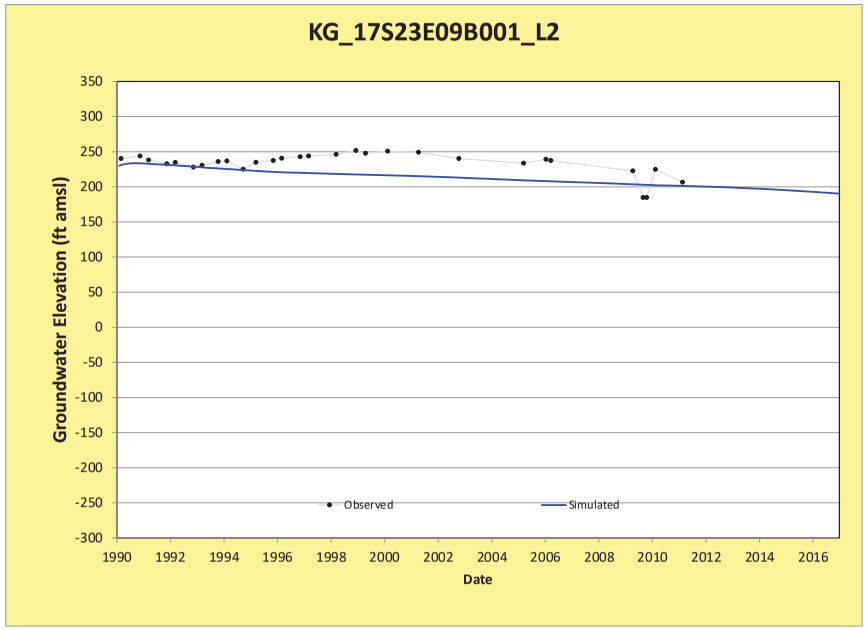

KG_17S22E36J001_L2
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

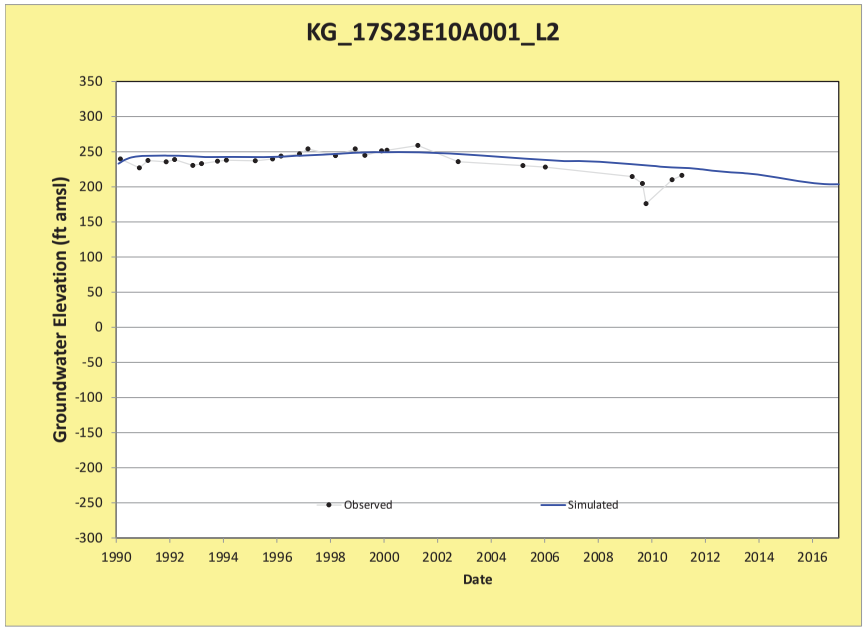

KG_17S22E16H001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

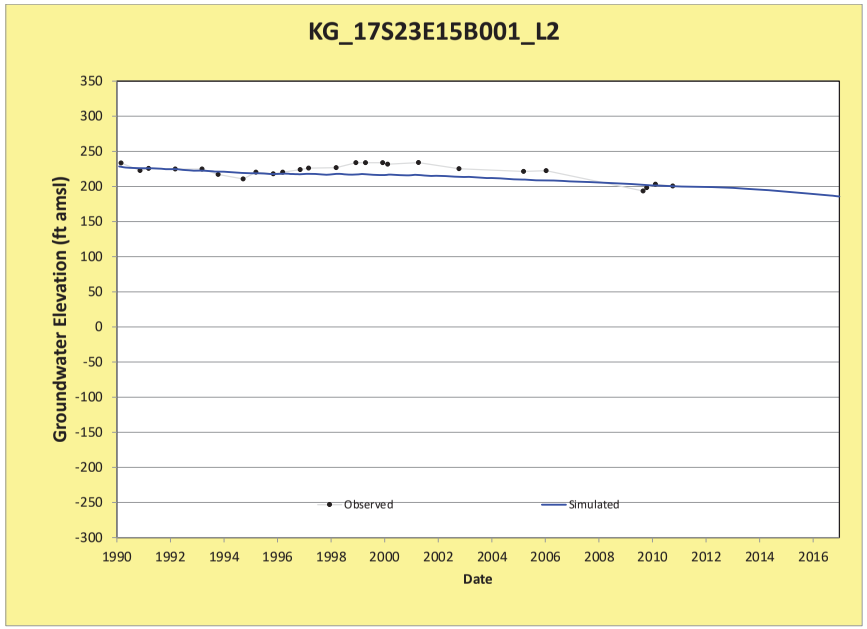

KG_17S23E07B001_L2
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

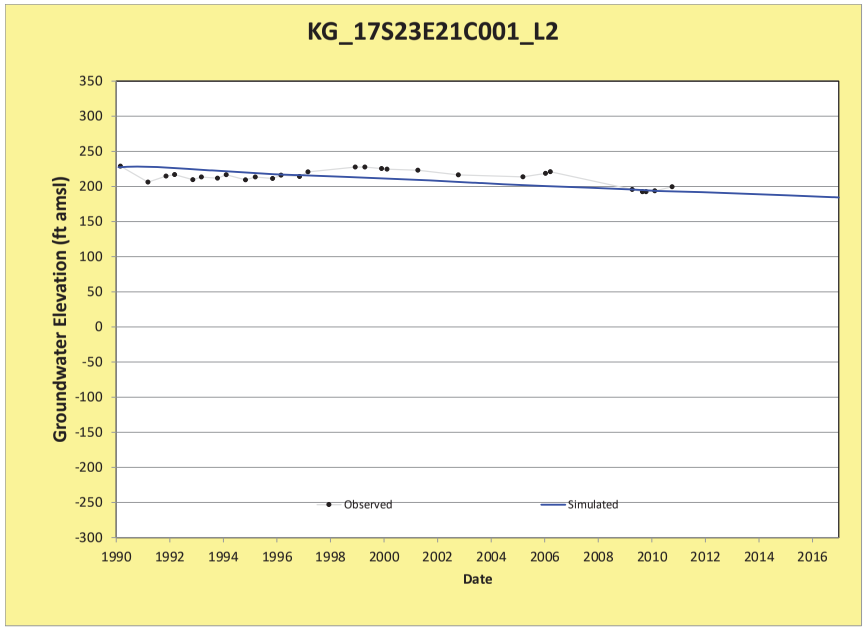

KG_17S23E08J001_L2
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

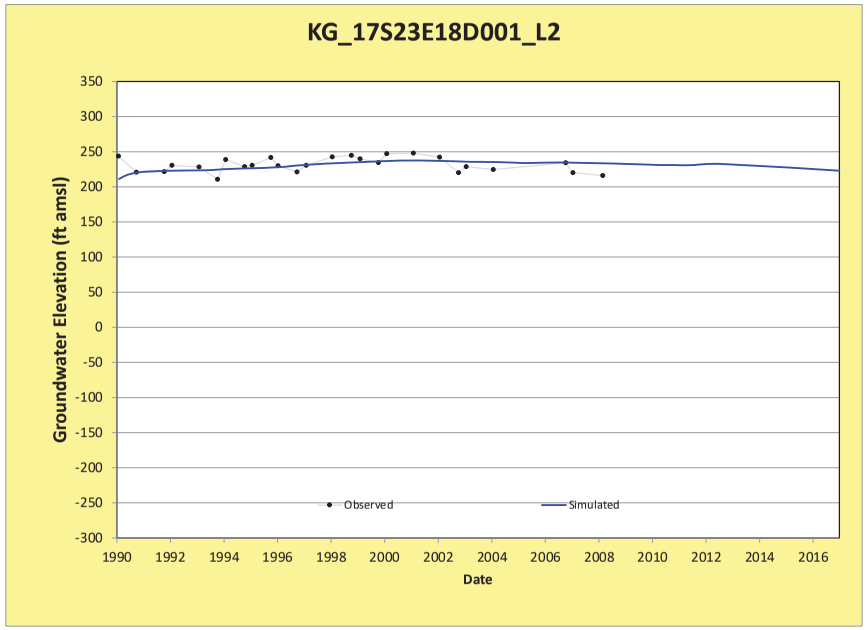

KG_17S23E09Q001_L2
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

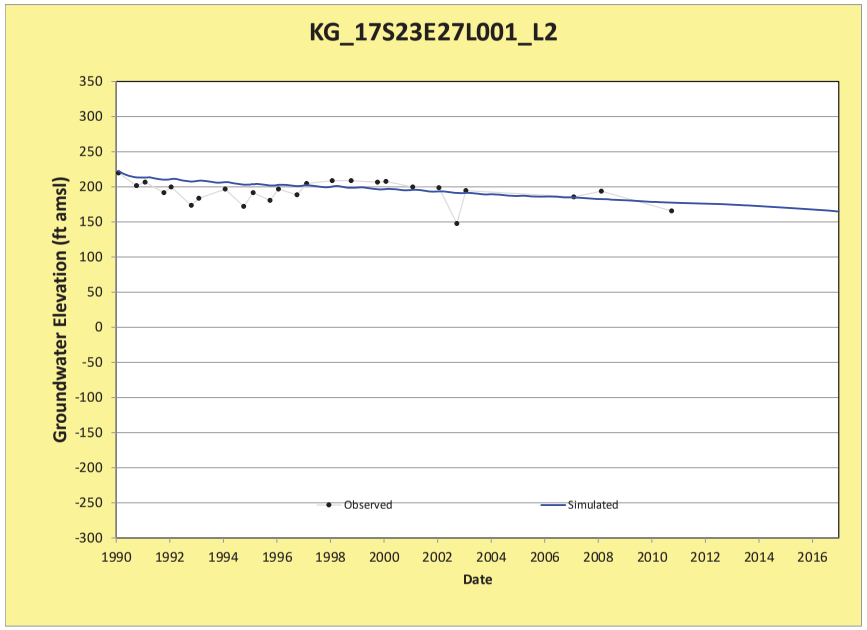

KG_17S23E09B001_L2
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

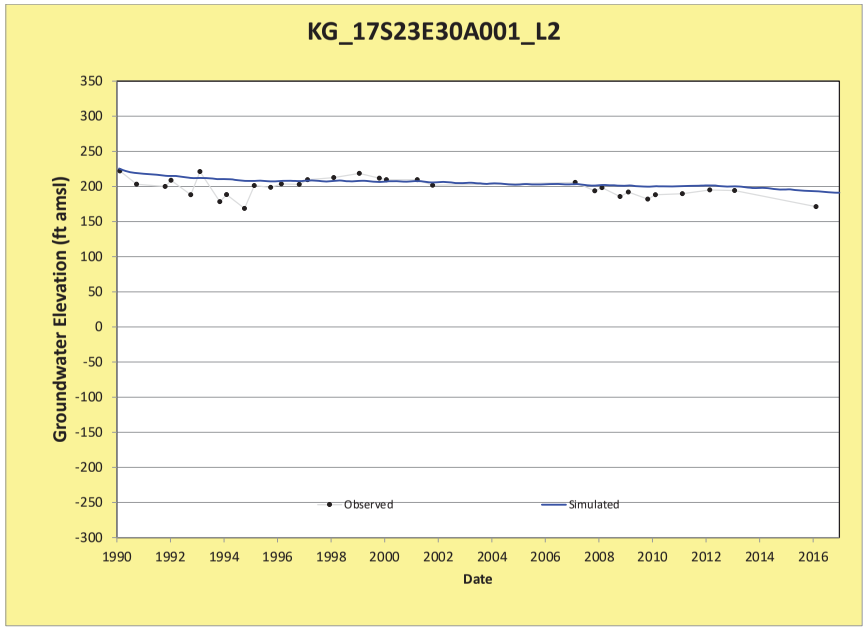

KG_17S23E10A001_L2
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

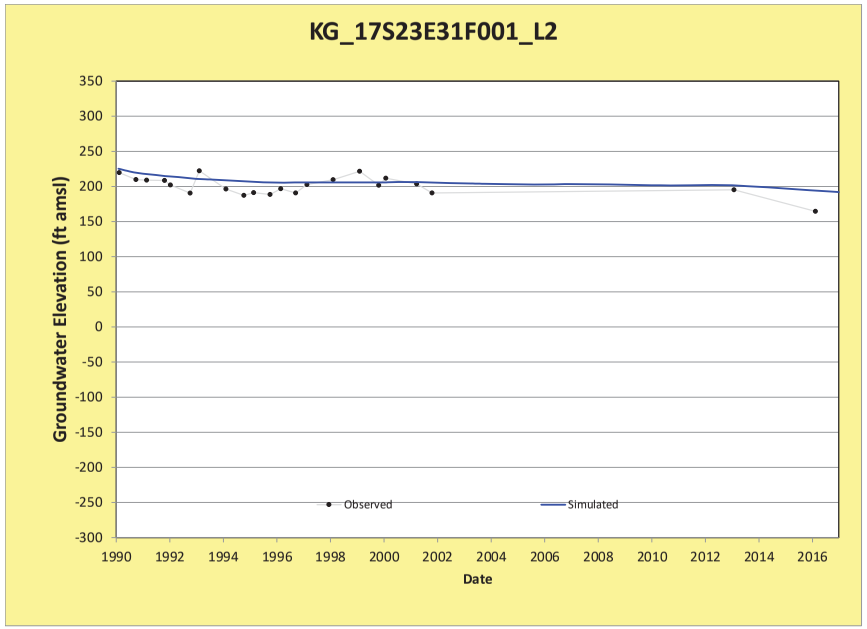

KG_17S23E15B001_L2
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KG_17S23E21C001_L2
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KG_17S23E18D001_L2
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KG_17S23E27L001_L2
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KG_17S23E30A001_L2
Groundwater Elevation (ft amsl)
Date
Observed
Simulated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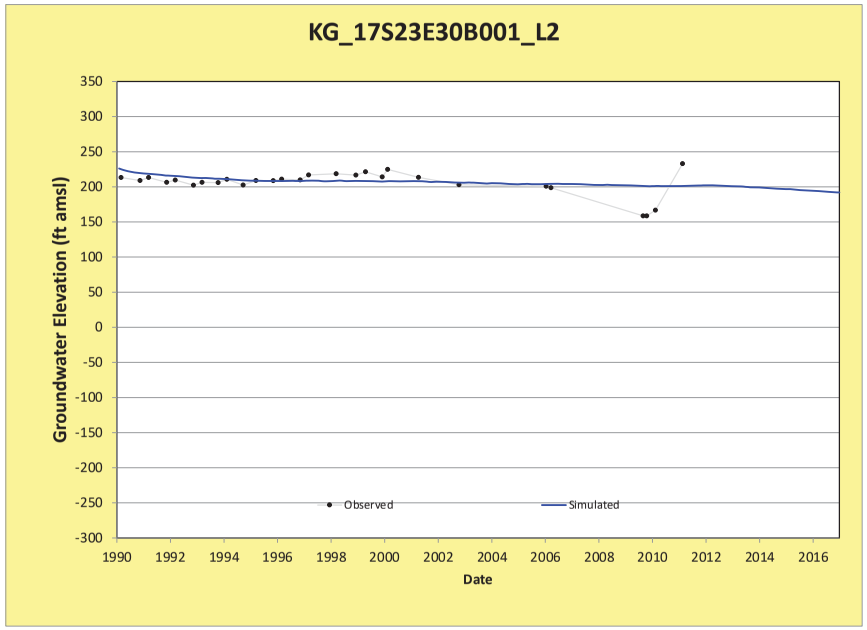
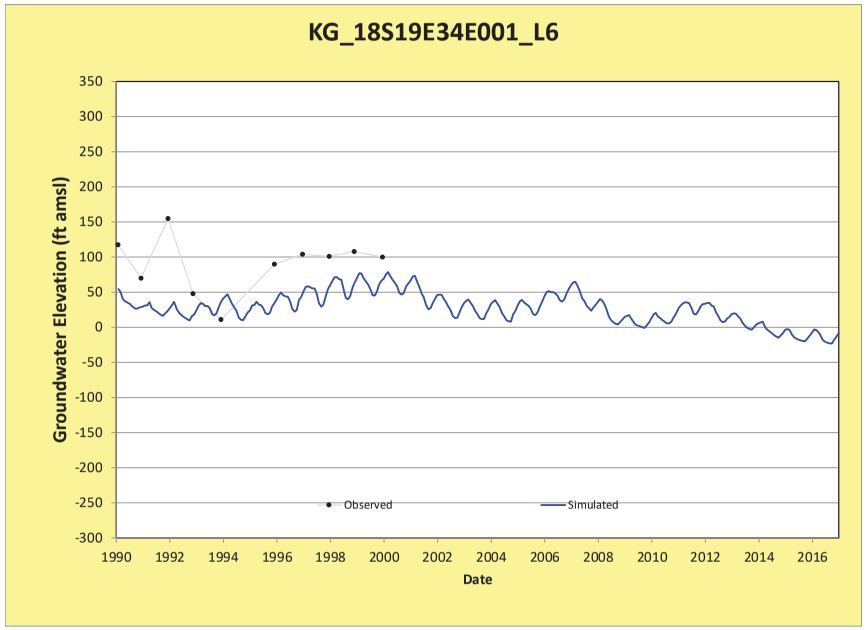
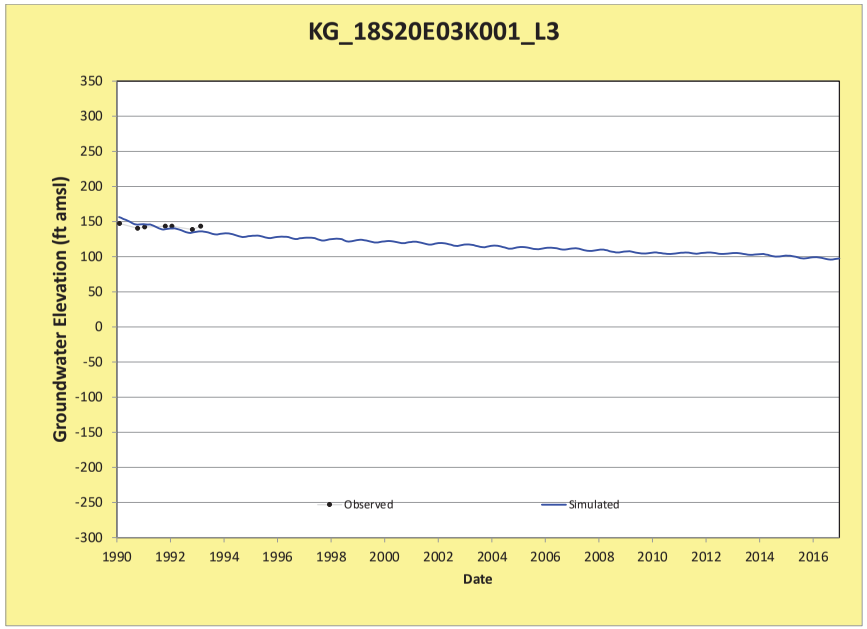
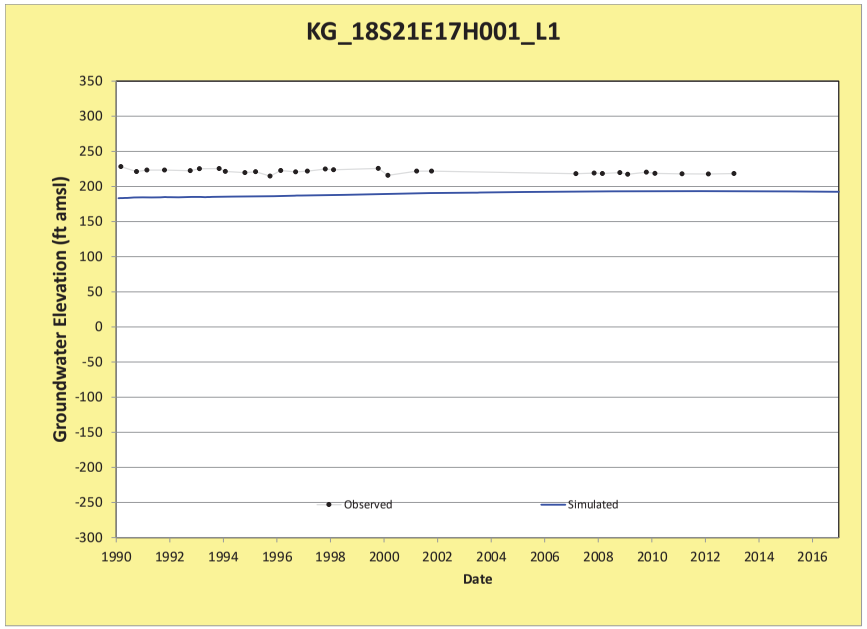
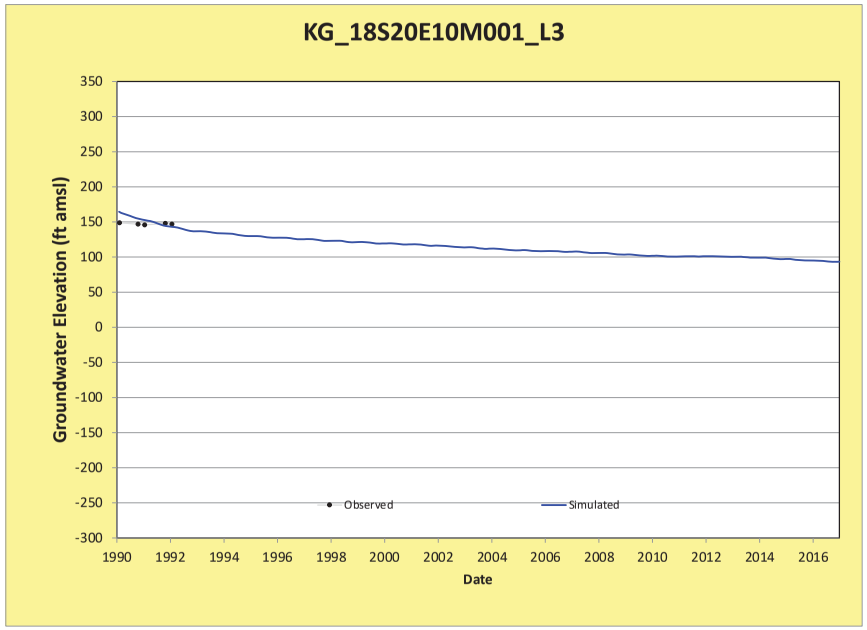
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

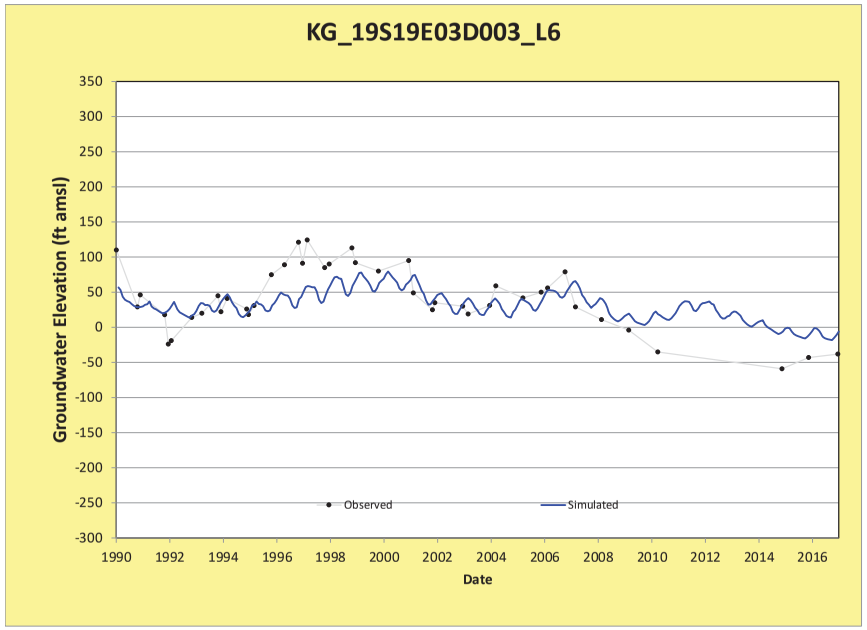

KG_17S23E30B001_L2
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

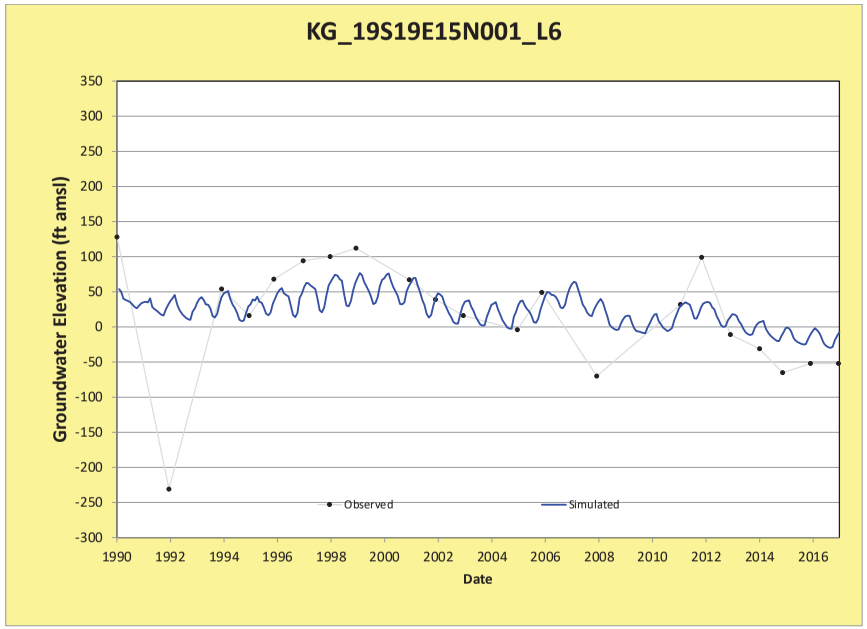

KG_18S19E34E001_L6
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

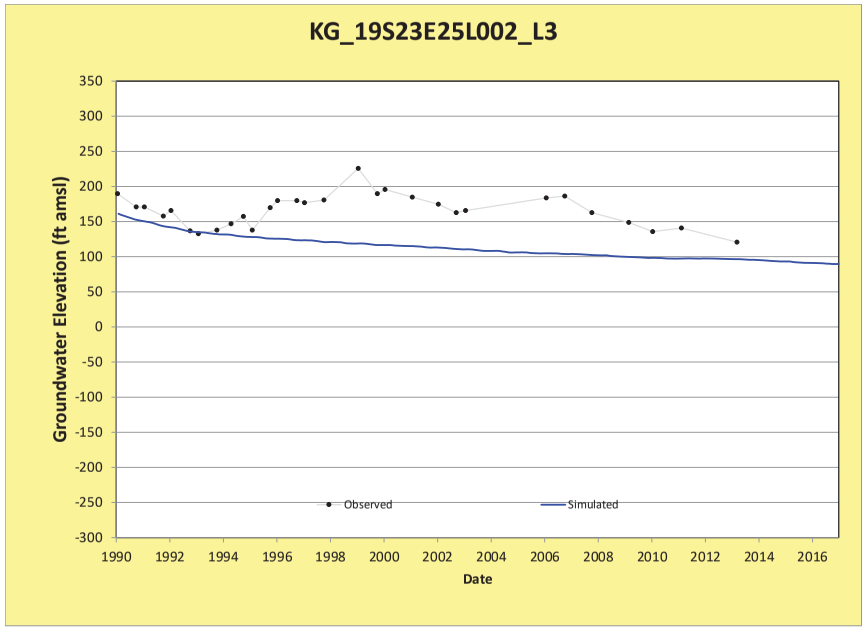

KG_18S20E03K001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

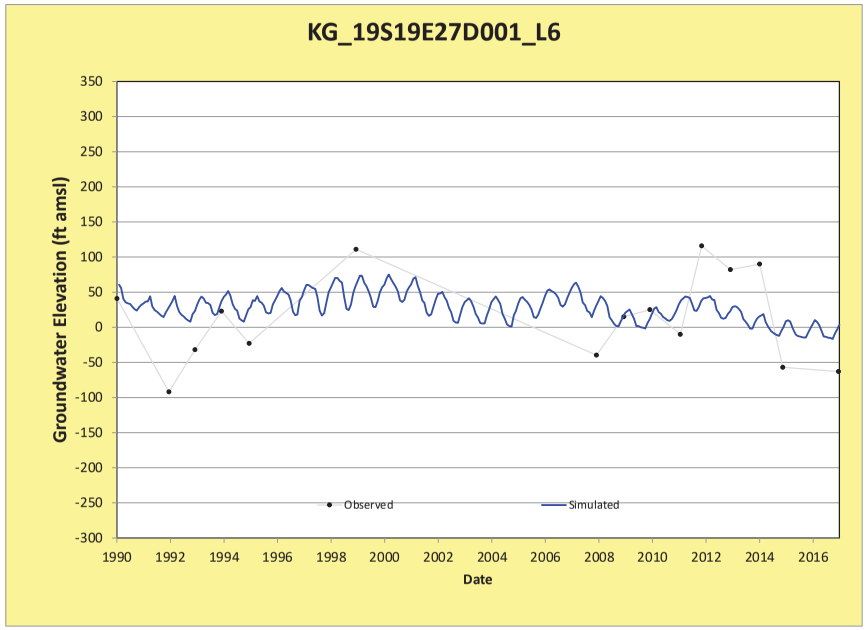

KG_18S21E17H001_L1
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

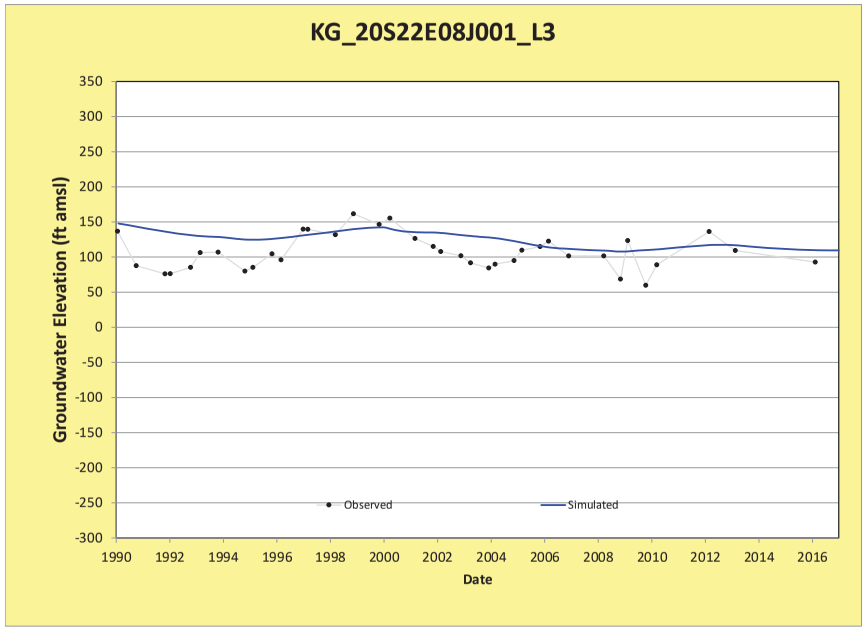

KG_18S20E10M001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

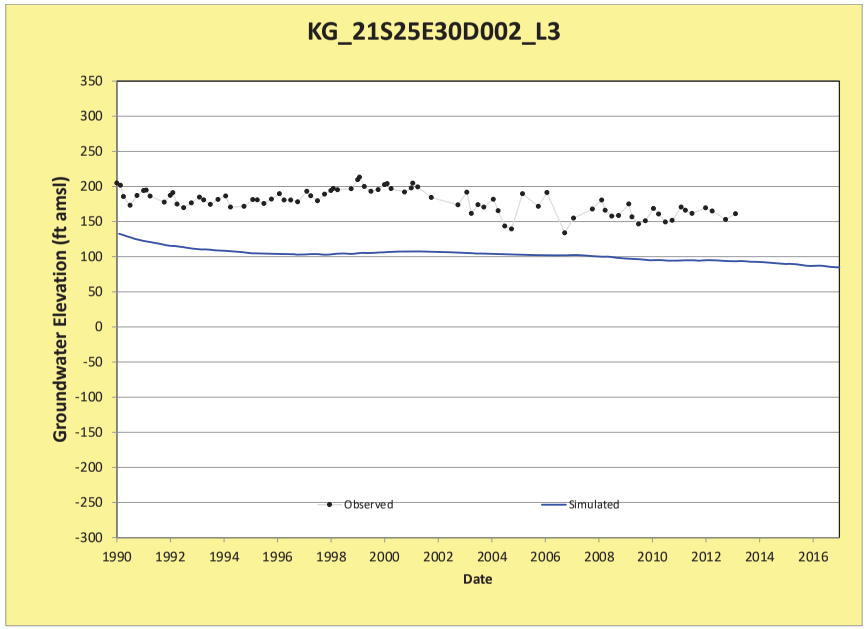

KG_19S19E03D003_L6
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

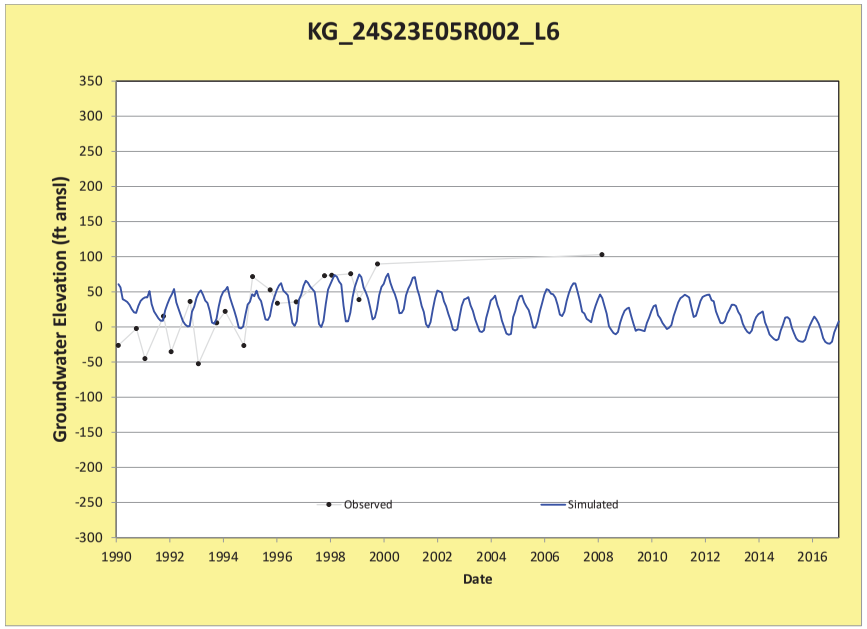

KG_19S19E15N001_L6
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

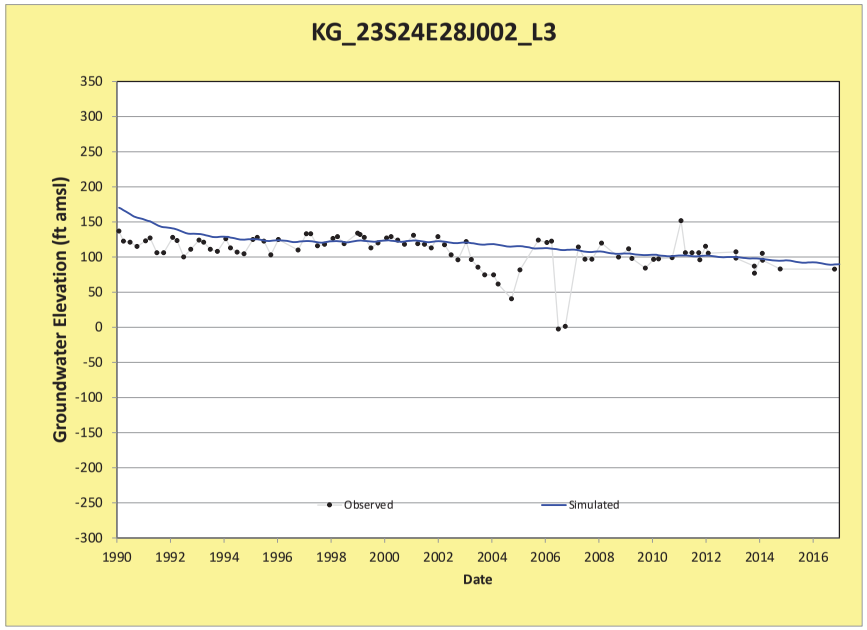

KG_19S23E25L002_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

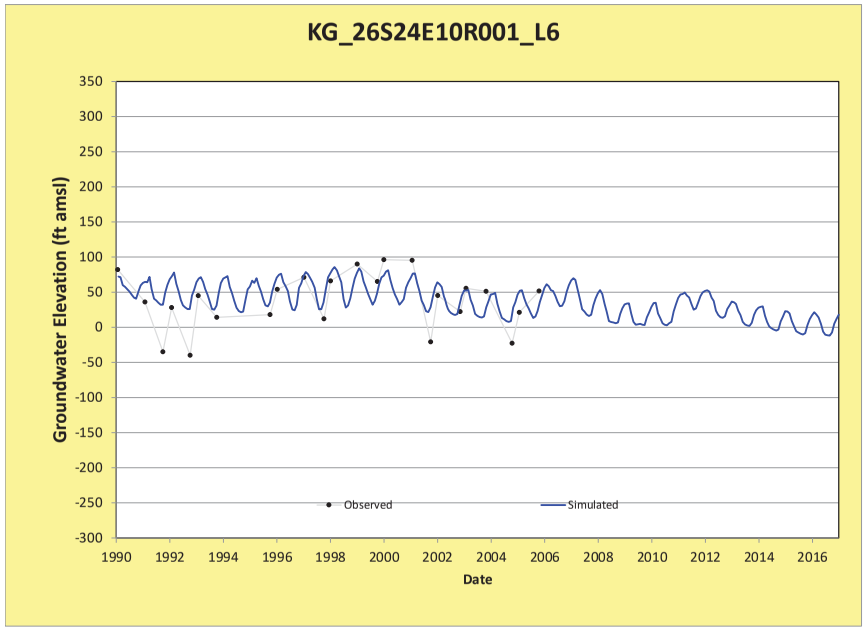

KG_19S19E27D001_L6
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

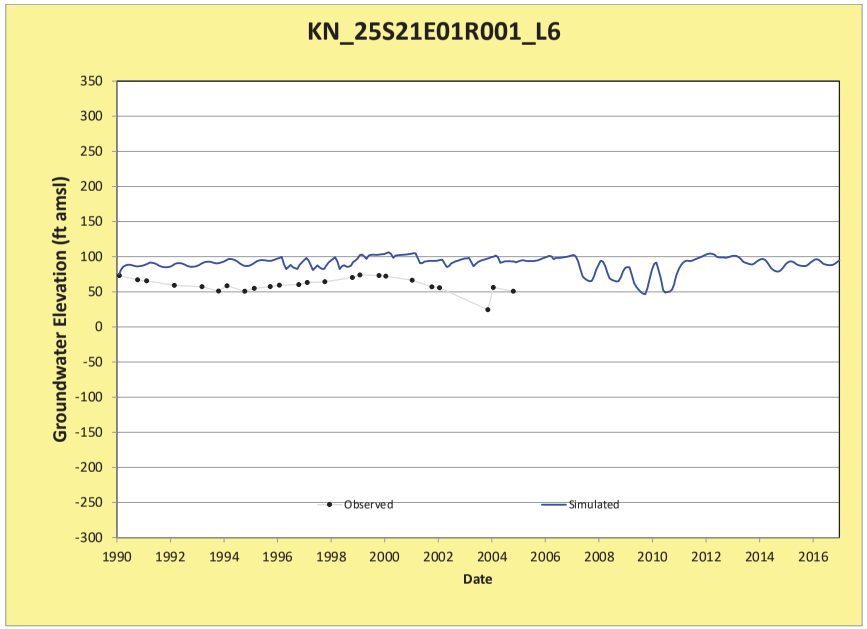

KG_20S22E08J001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

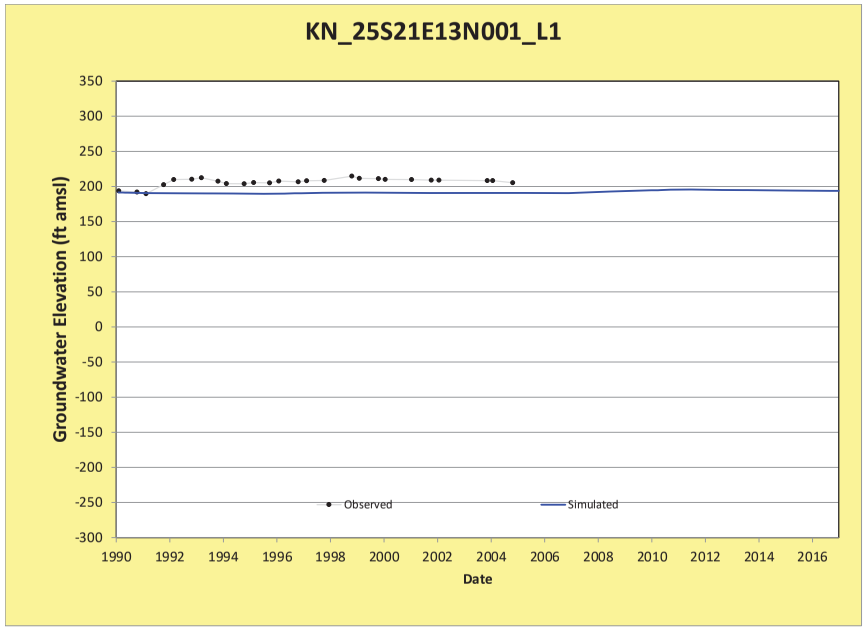

KG_21S25E30D002_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

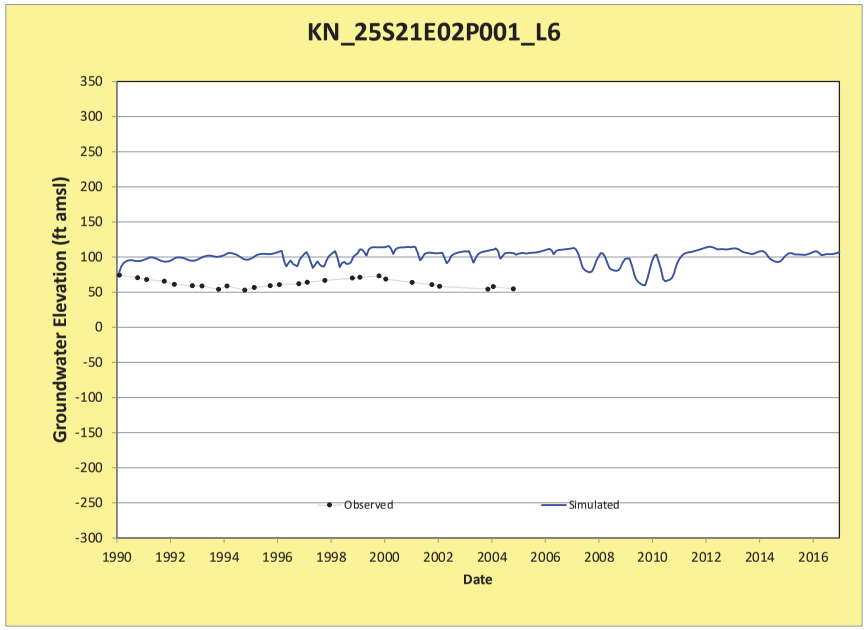

KG_24S23E05R002_L6
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

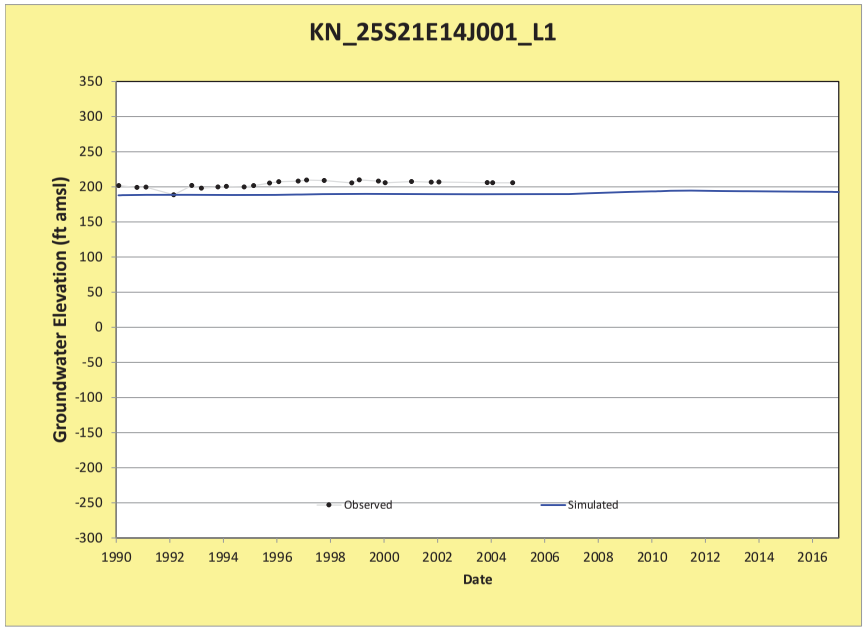

KG_23S24E28J002_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

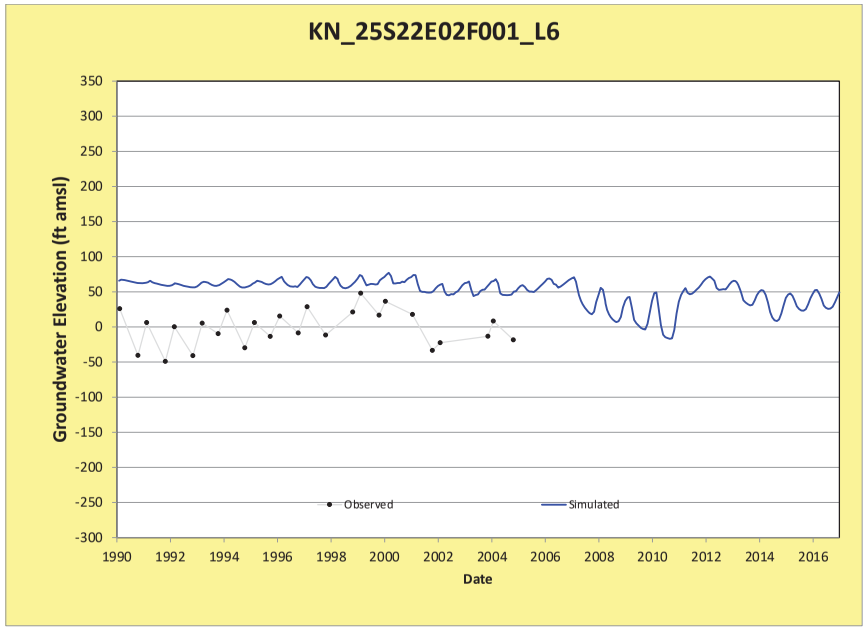

KG_26S24E10R001_L6
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KN_25S21E01R001_L6
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KN_25S21E13N001_L1
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KN_25S21E02P001_L6
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KN_25S21E14J001_L1
Groundwater Elevation (ft amsl)
Date
Observed
Simulated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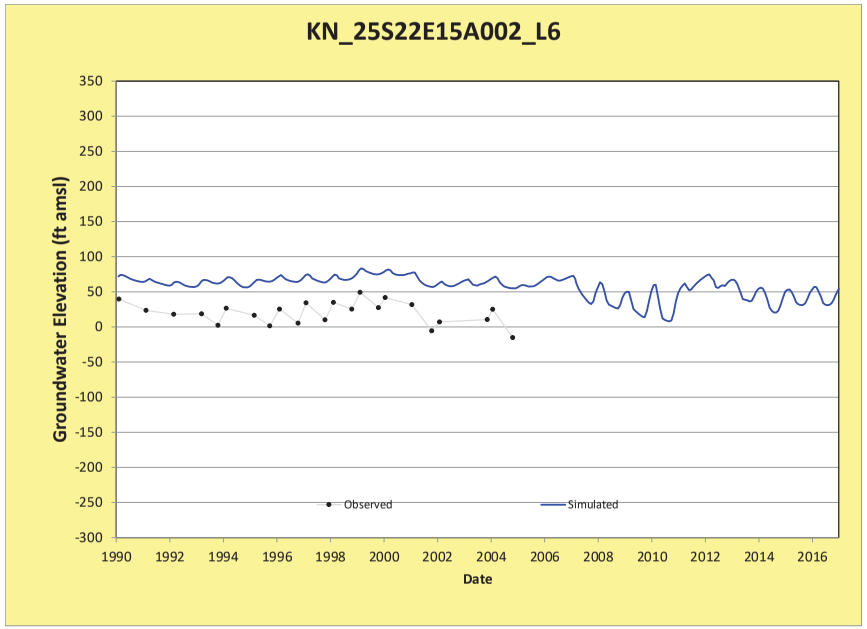
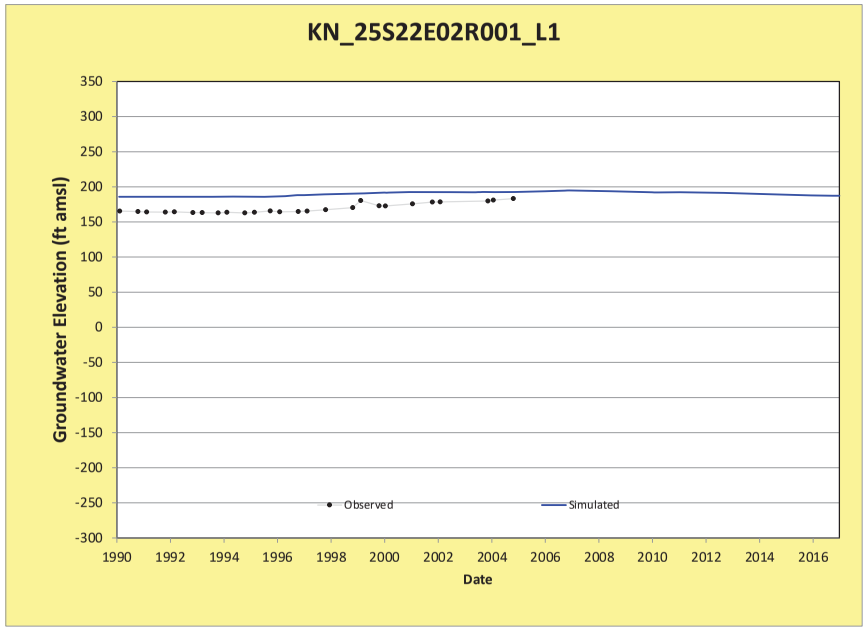
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KN_25S22E15A002_L6
Groundwater Elevation (ft amsl)
Date
Observed
Simulated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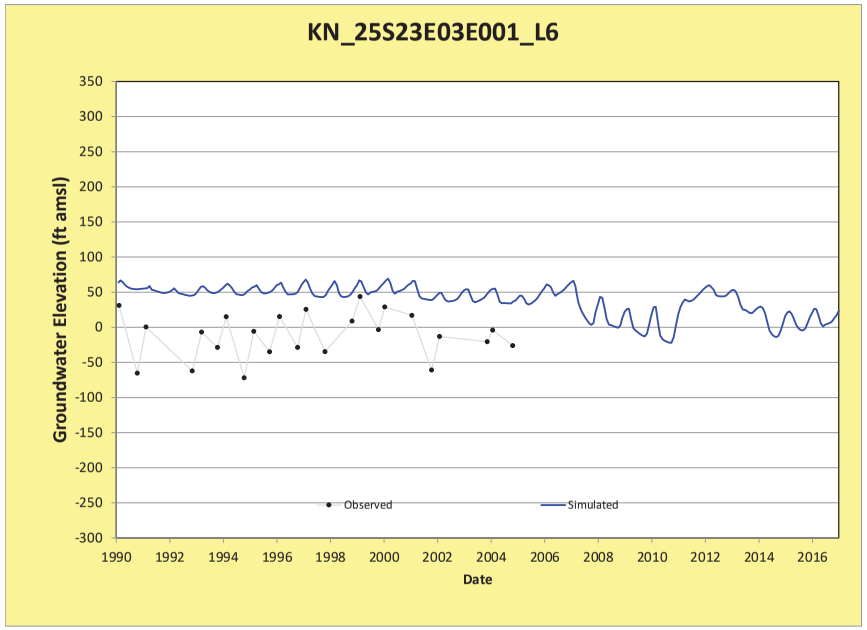
Groundwater Elevation (ft amsl)
Date
Observed
Simulated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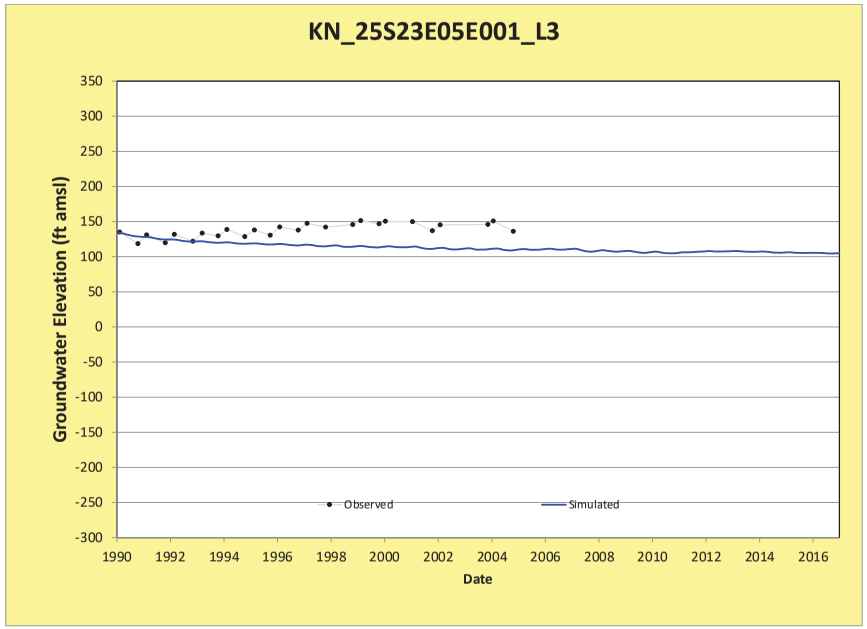
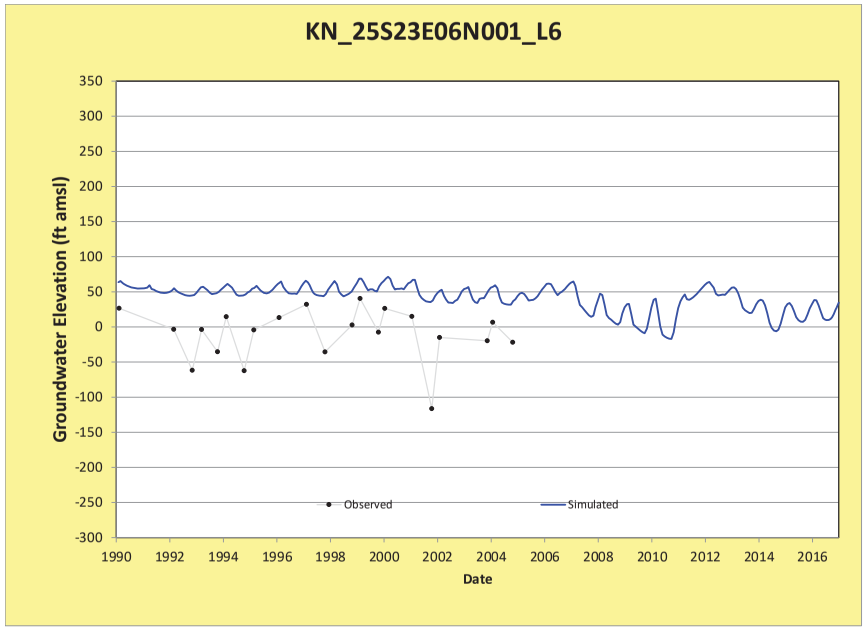
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KN_25S23E05E001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated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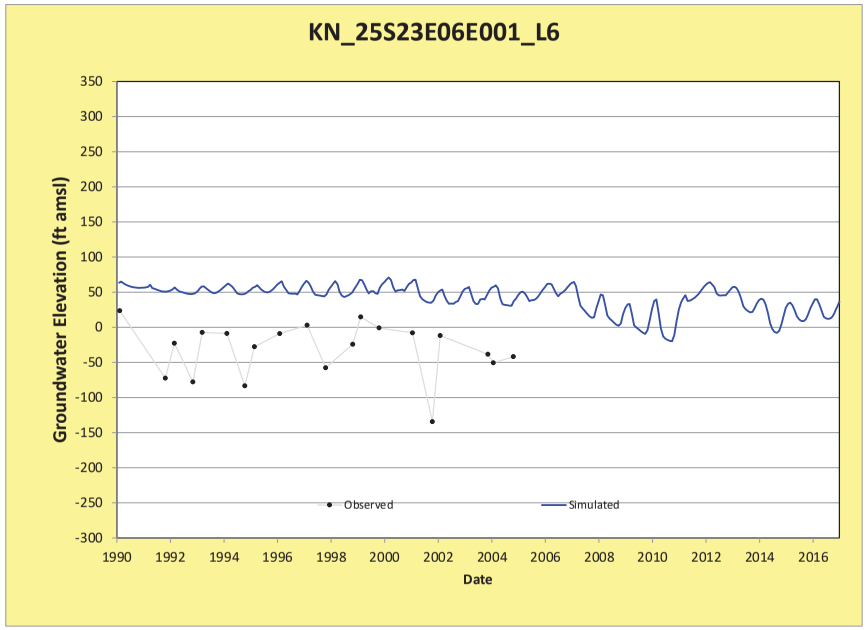
Groundwater Elevation (ft amsl)
Date
Observed
Simulated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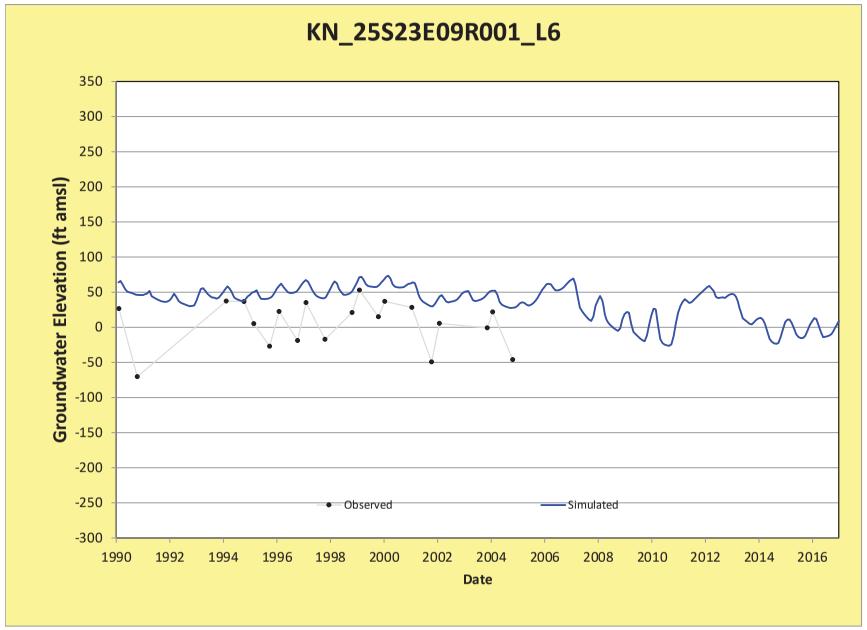
Groundwater Elevation (ft amsl)
Date
Observed
Simulated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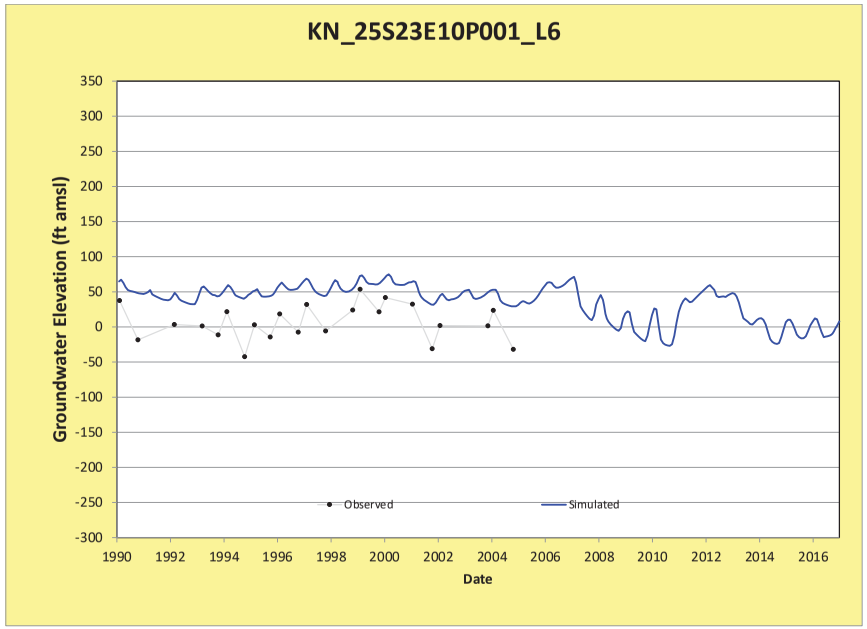
Groundwater Elevation (ft amsl)
Date
Observed
Simulated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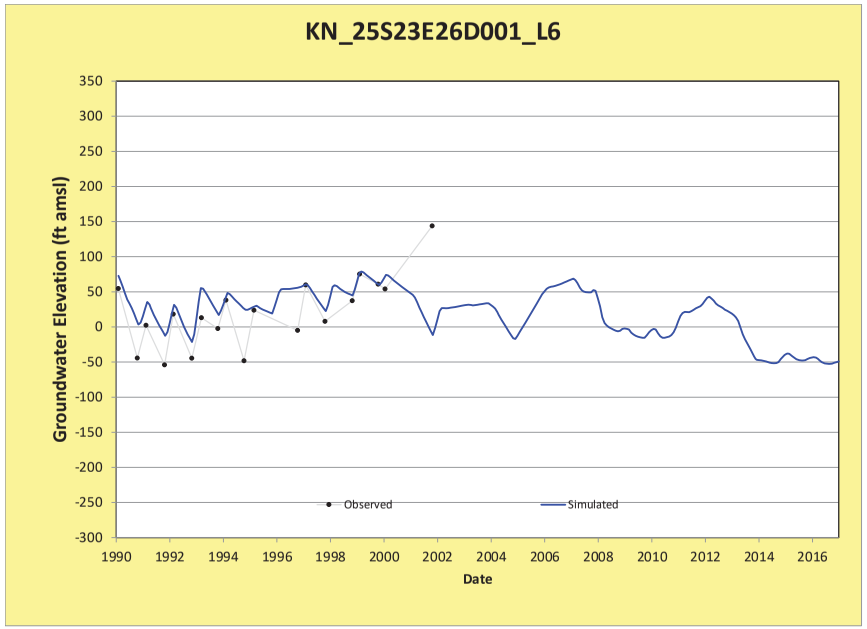
Groundwater Elevation (ft amsl)
Date
Observed
Simulated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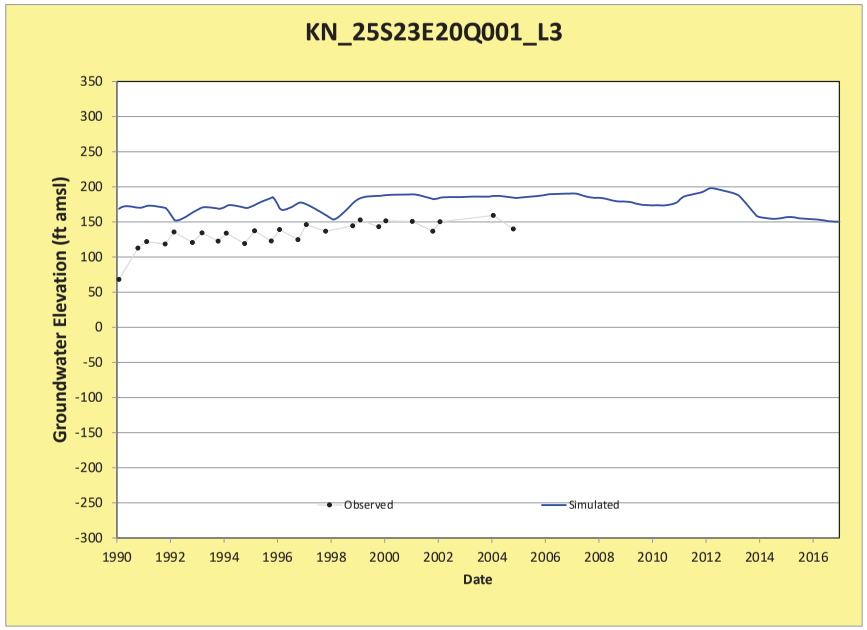
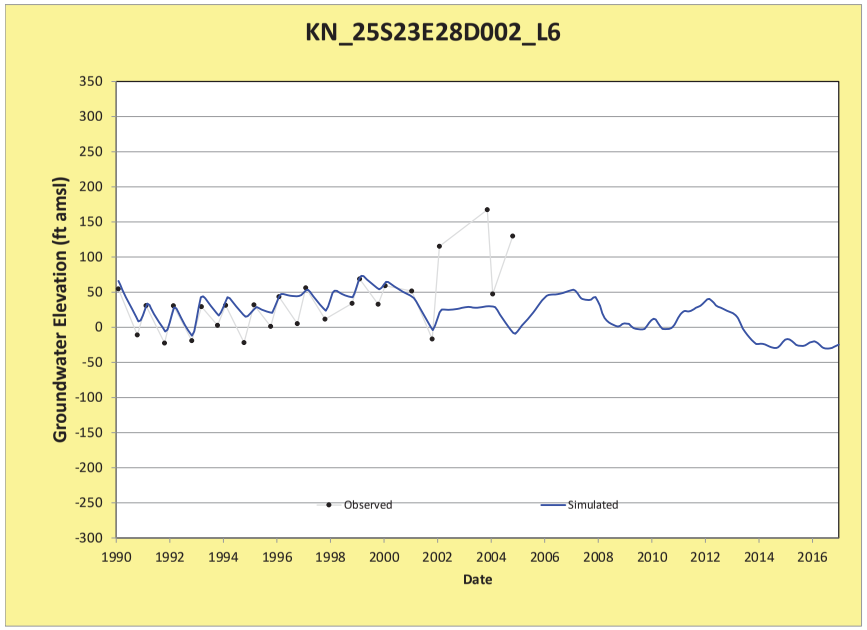
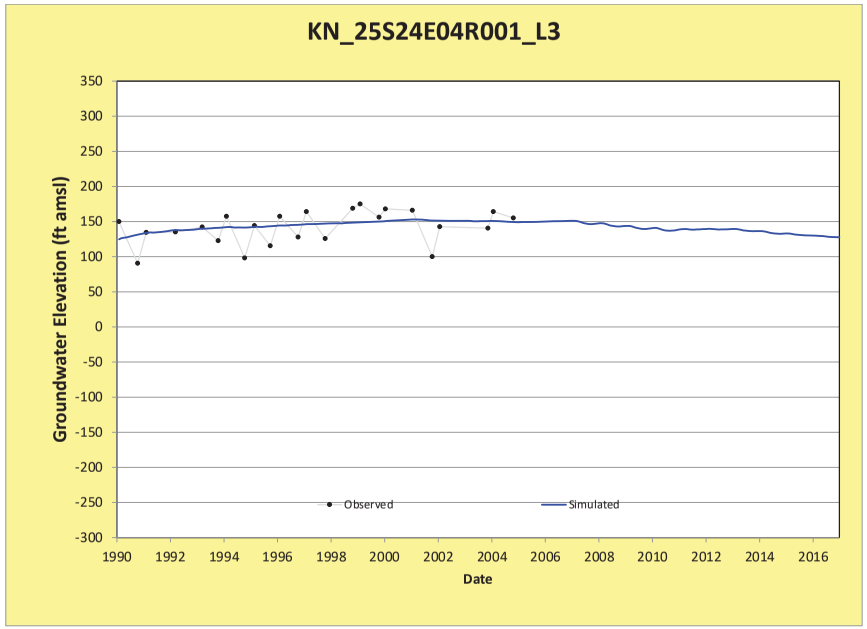
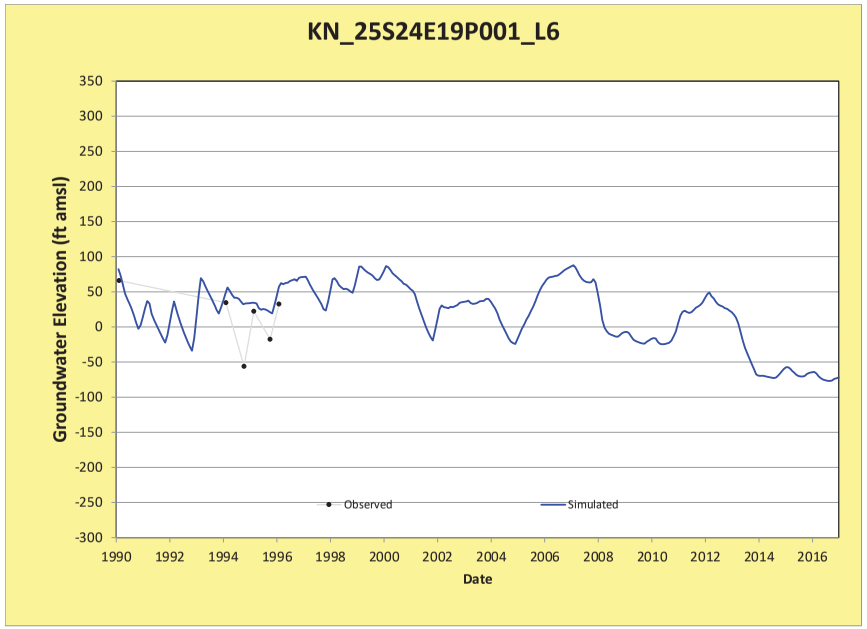
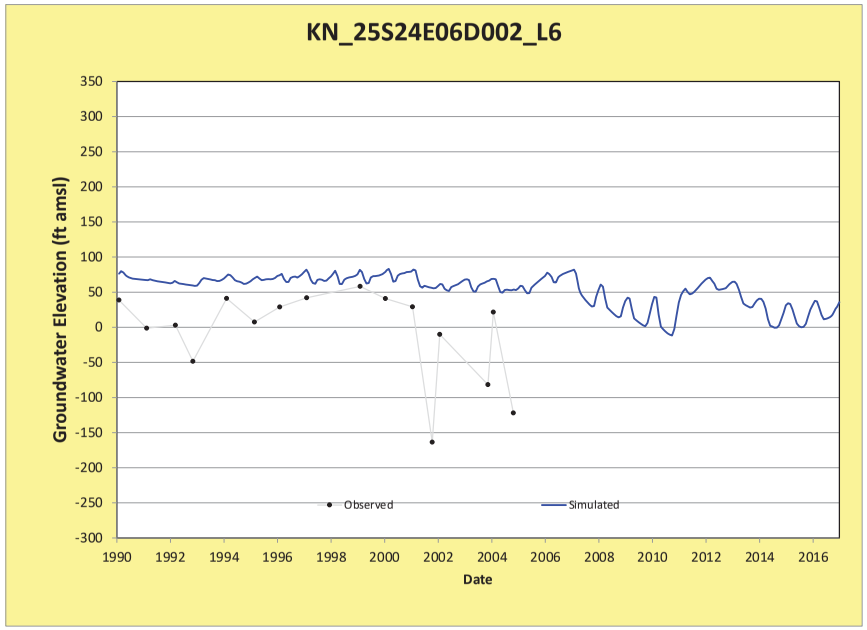
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

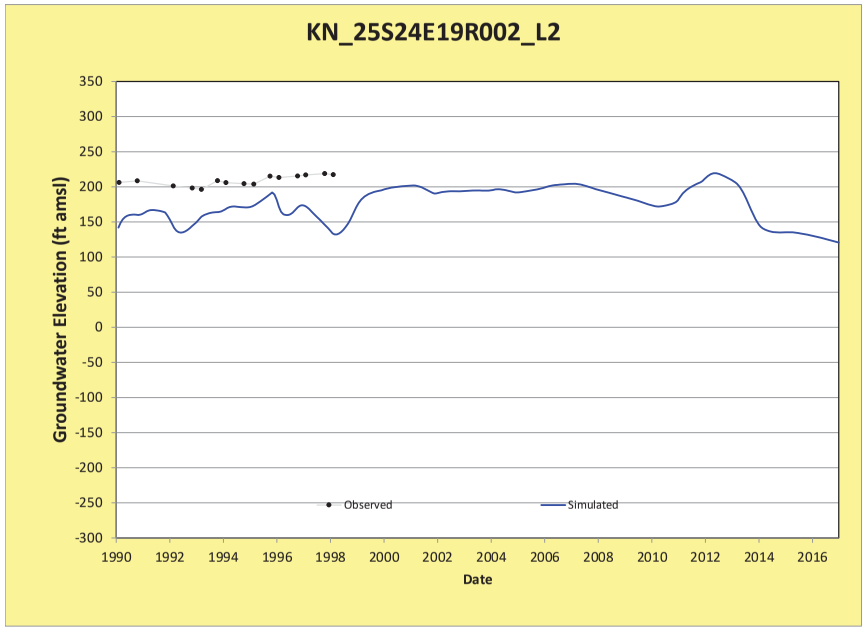

KN_25S23E20Q001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

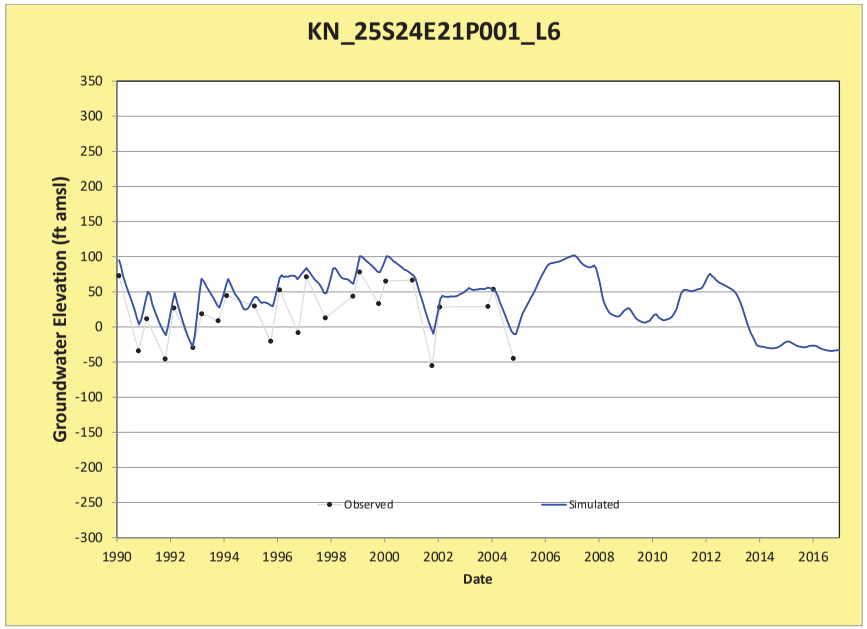

KN_25S23E28D002_L6
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

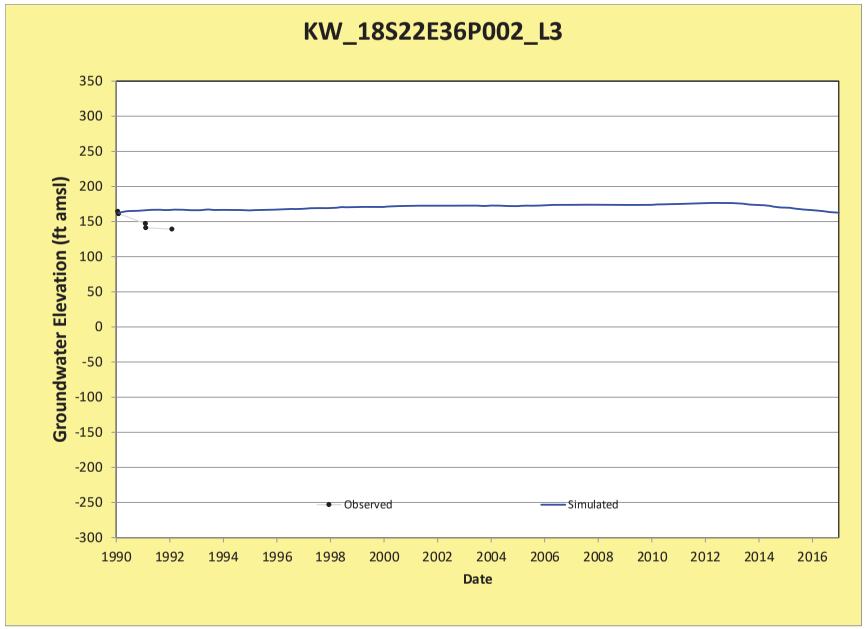

KN_25S24E04R001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

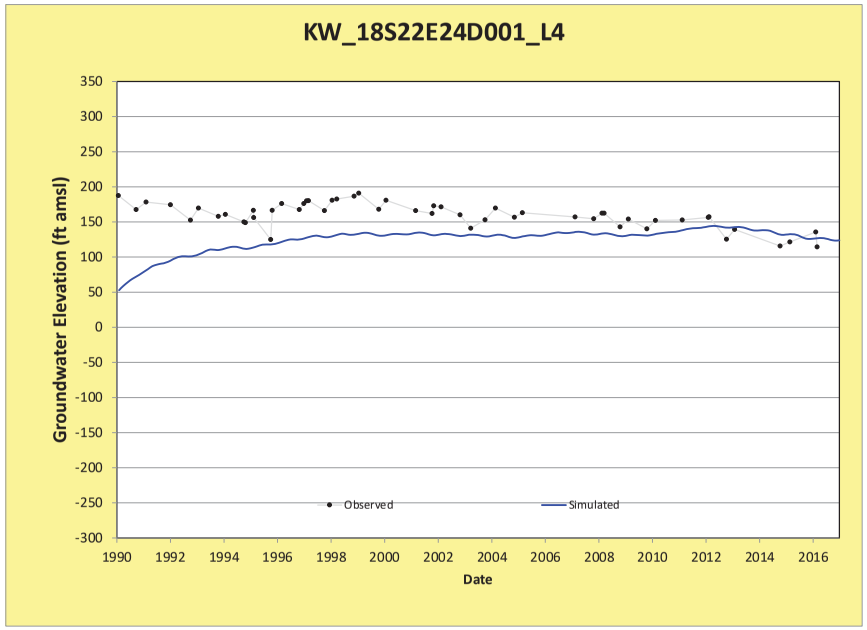

KN_25S24E19P001_L6
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

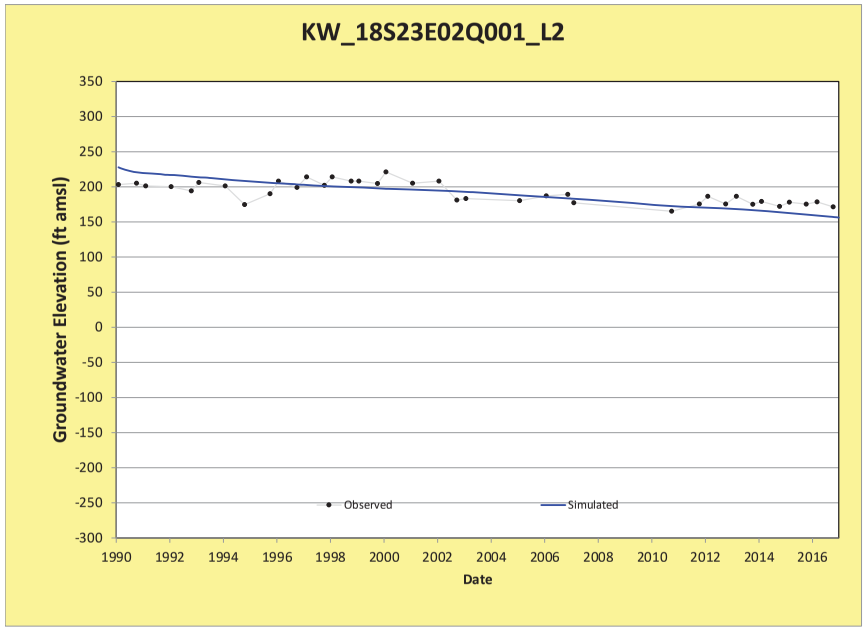

KN_25S24E06D002_L6
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

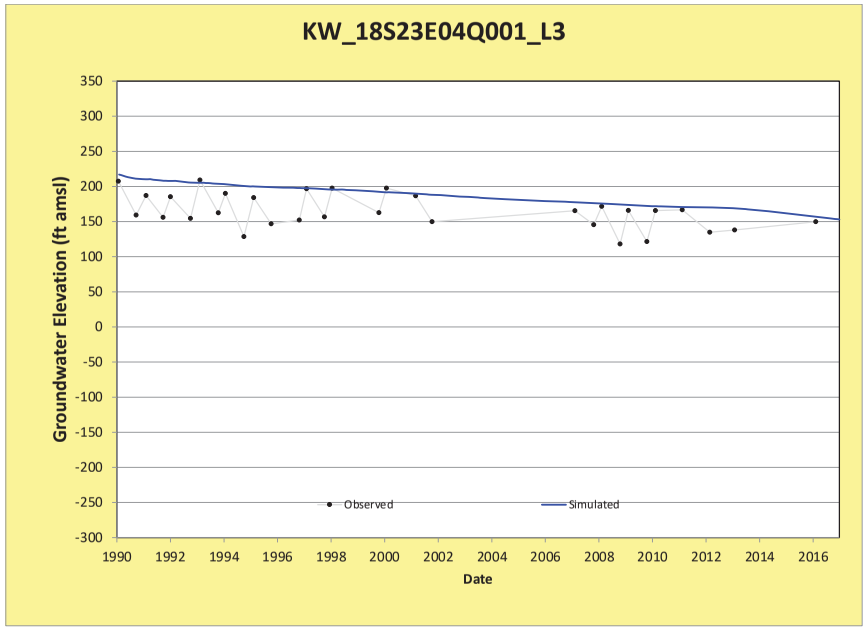

KN_25S24E19R002_L2
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KN_25S24E21P001_L6
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KW_18S22E36P002_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KW_18S22E24D001_L4
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KW_18S23E02Q001_L2
Groundwater Elevation (ft amsl)
Date
Observed
Simulated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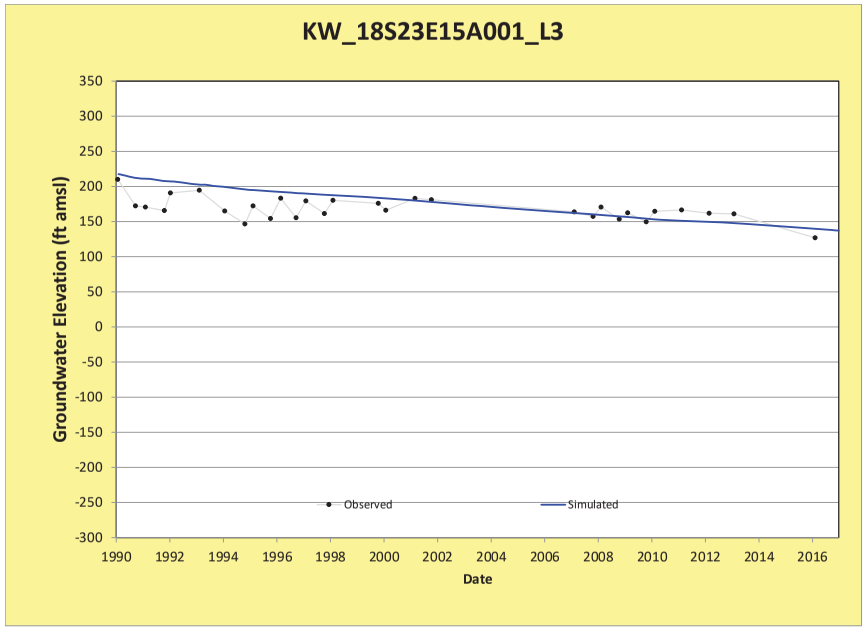
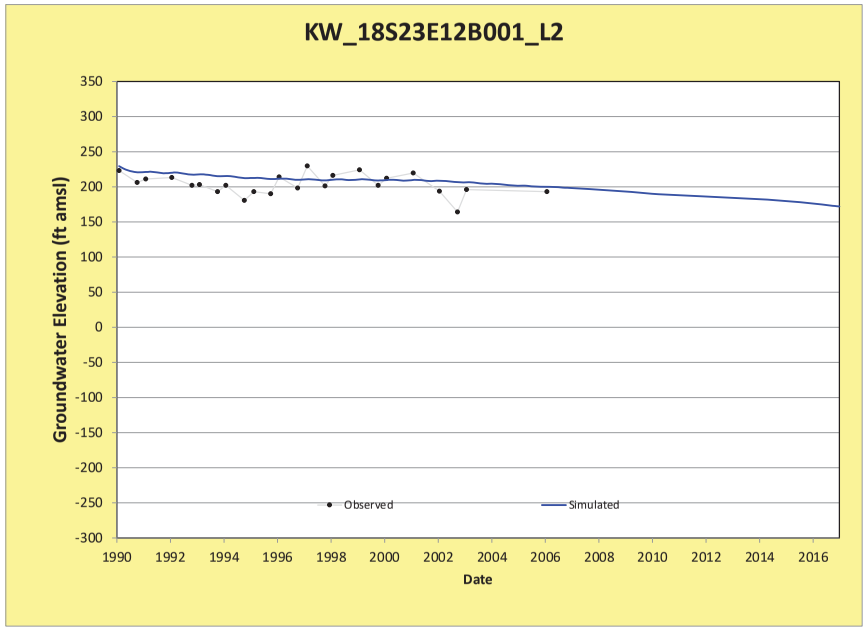
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KW_18S23E15A001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated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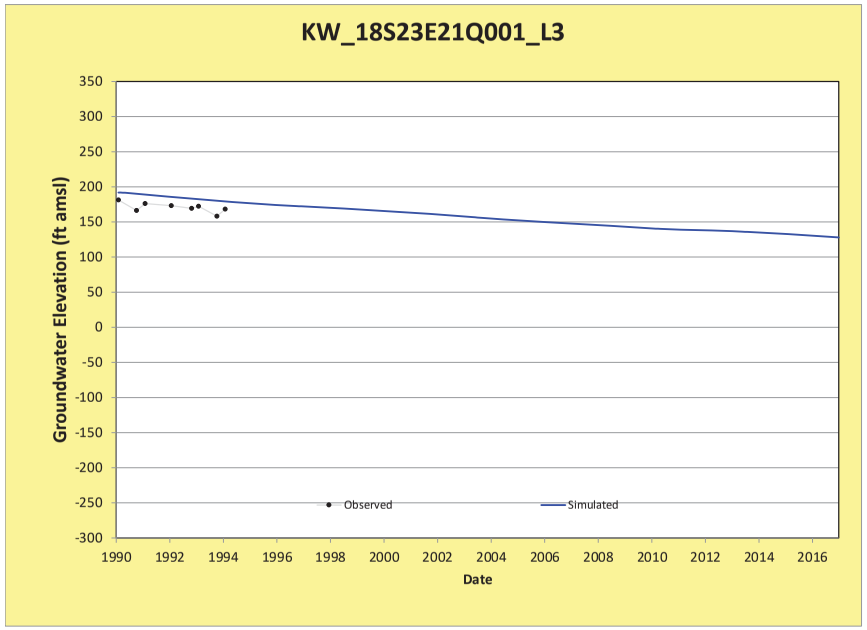
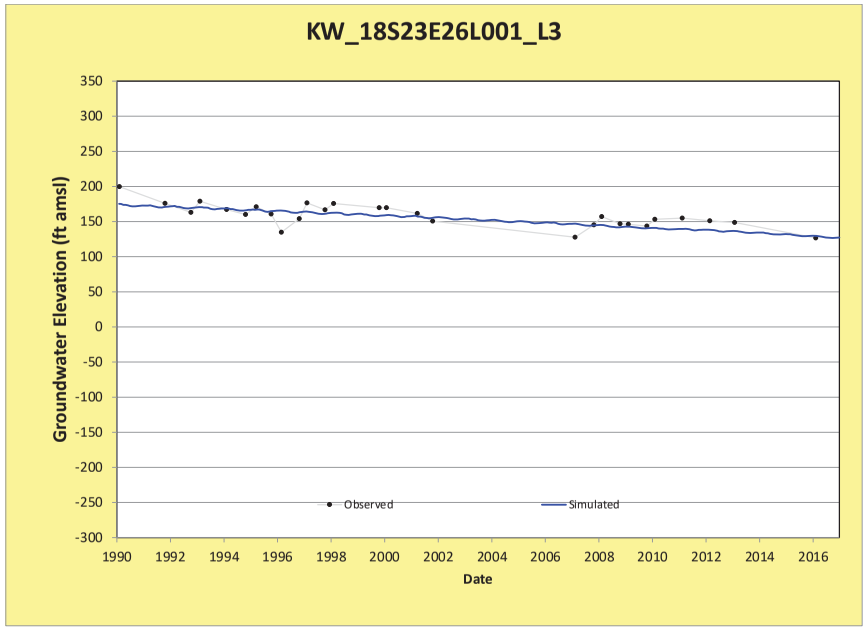
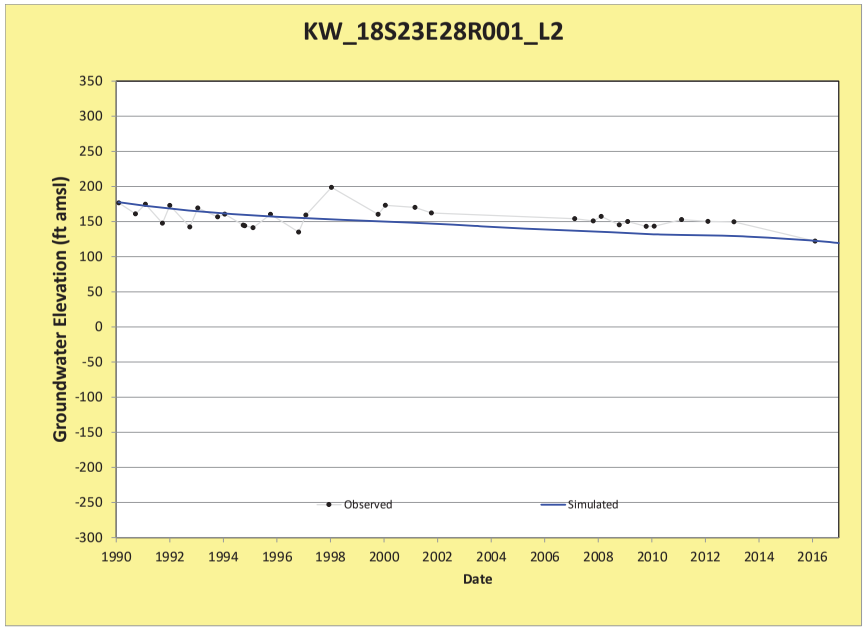
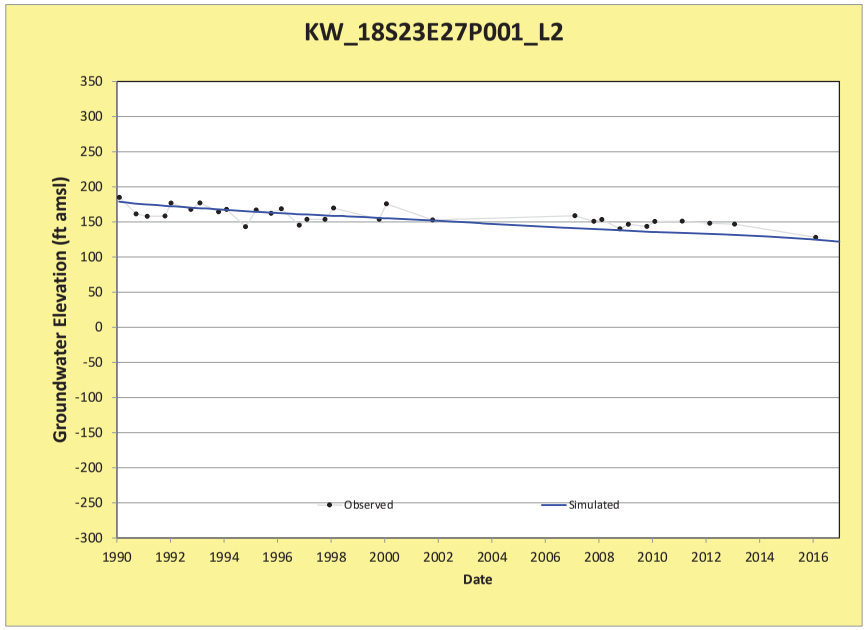
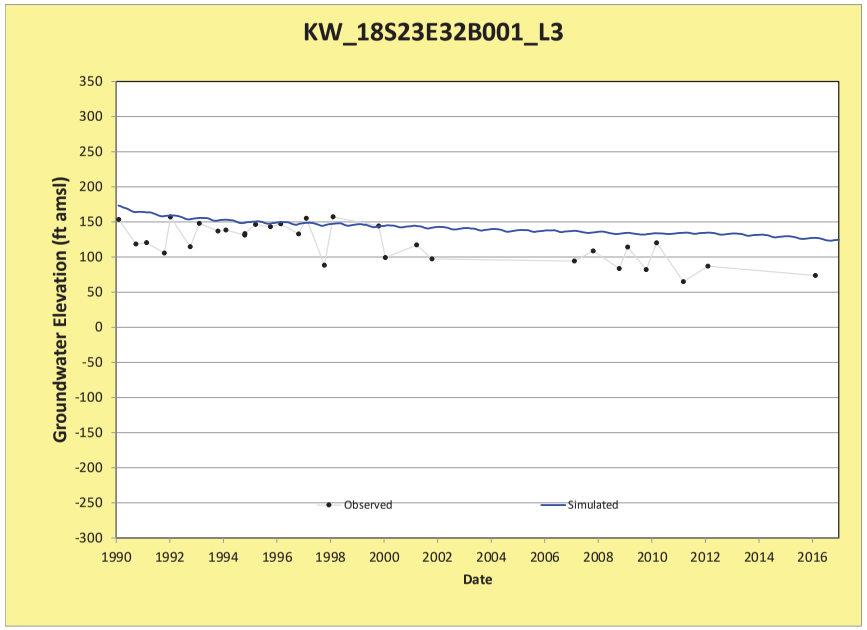
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

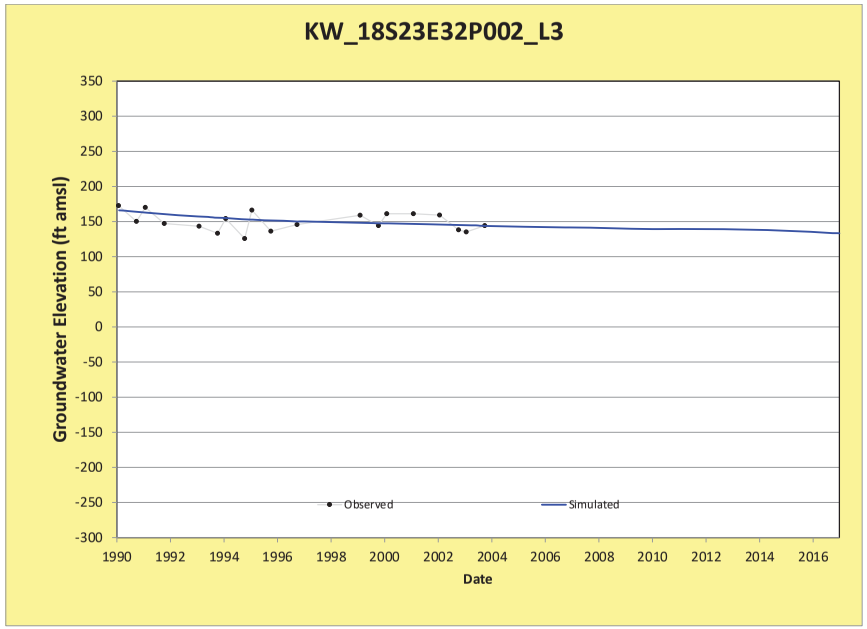

KW_18S23E21Q001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KW_18S23E26L001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KW_18S23E28R001_L2
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KW_18S23E27P001_L2
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KW_18S23E32B001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated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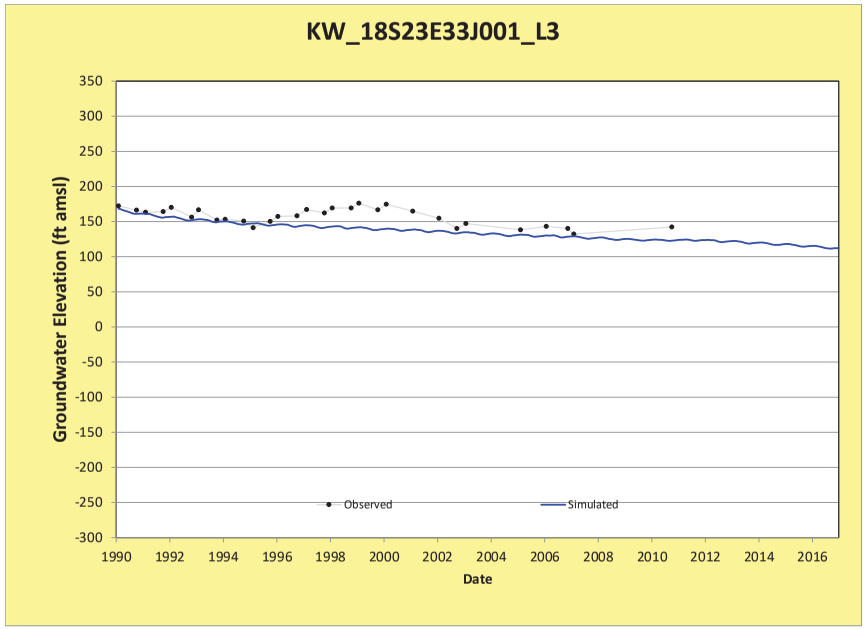
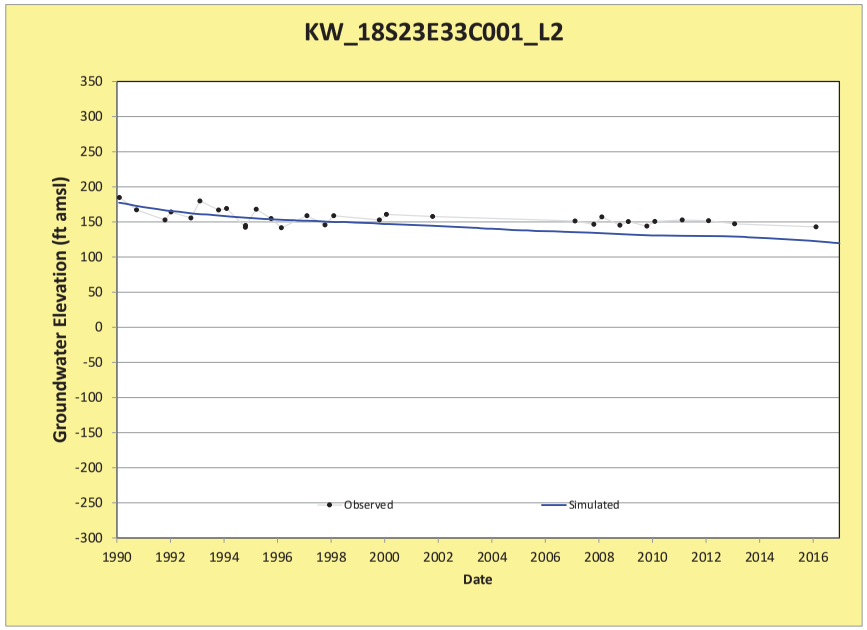
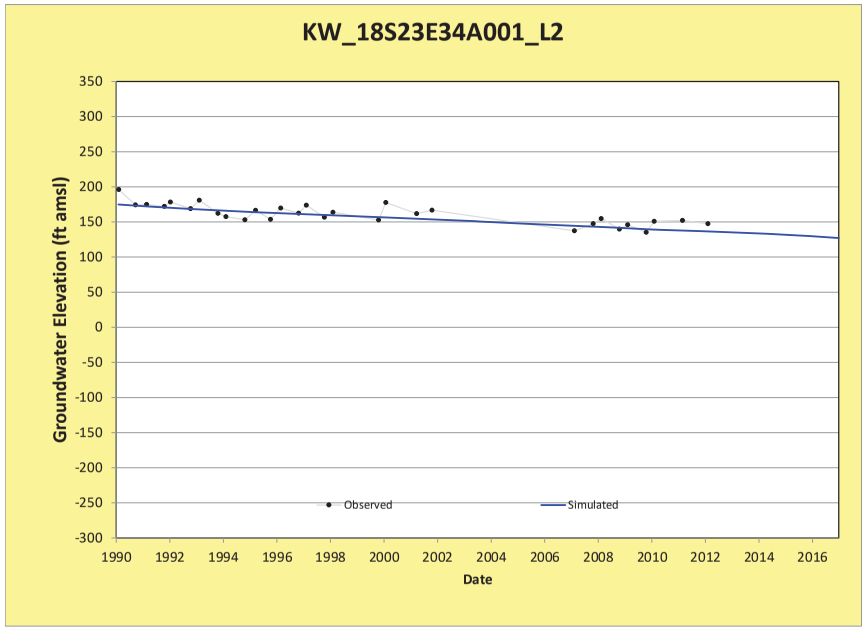
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KW_18S23E33J001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KW_18S23E33C001_L2
Groundwater Elevation (ft amsl)
Date
Observed
Simulated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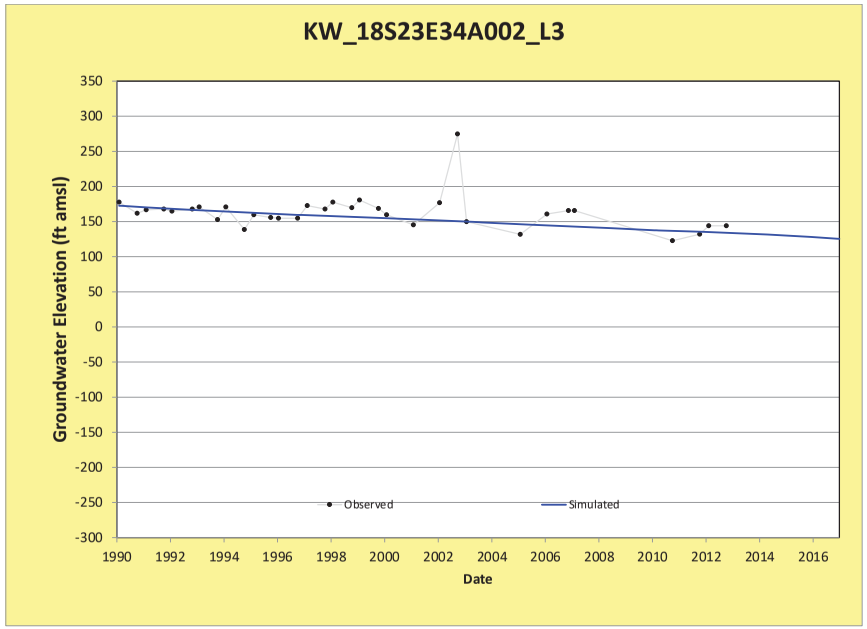
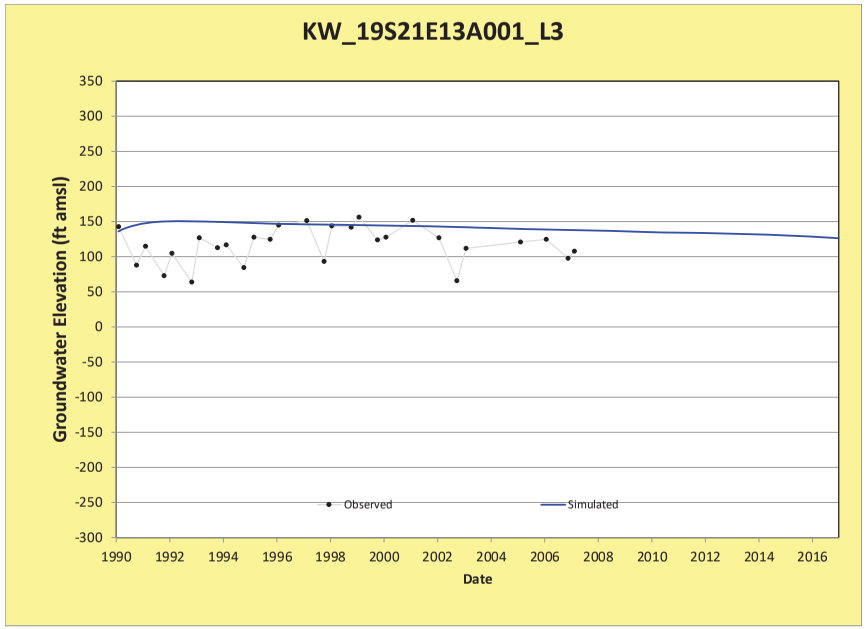
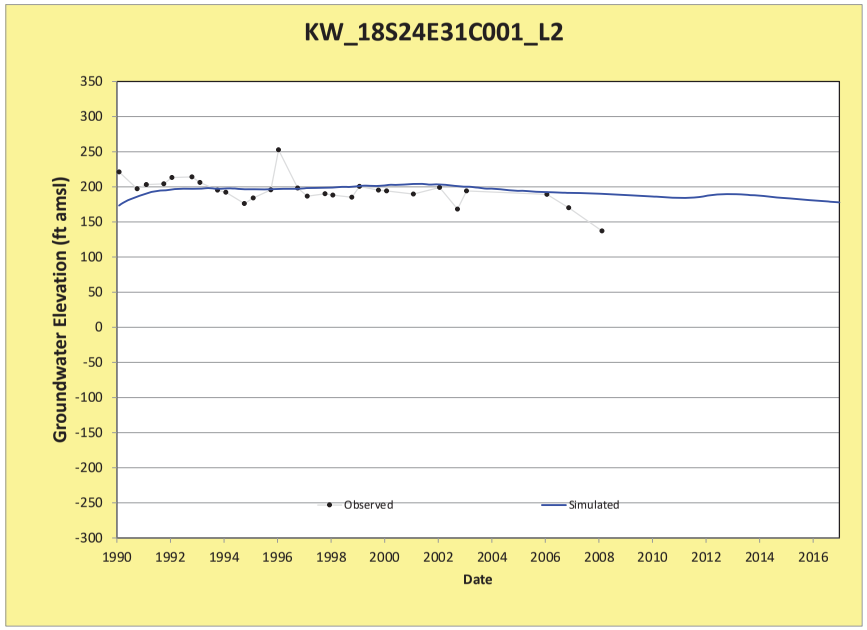
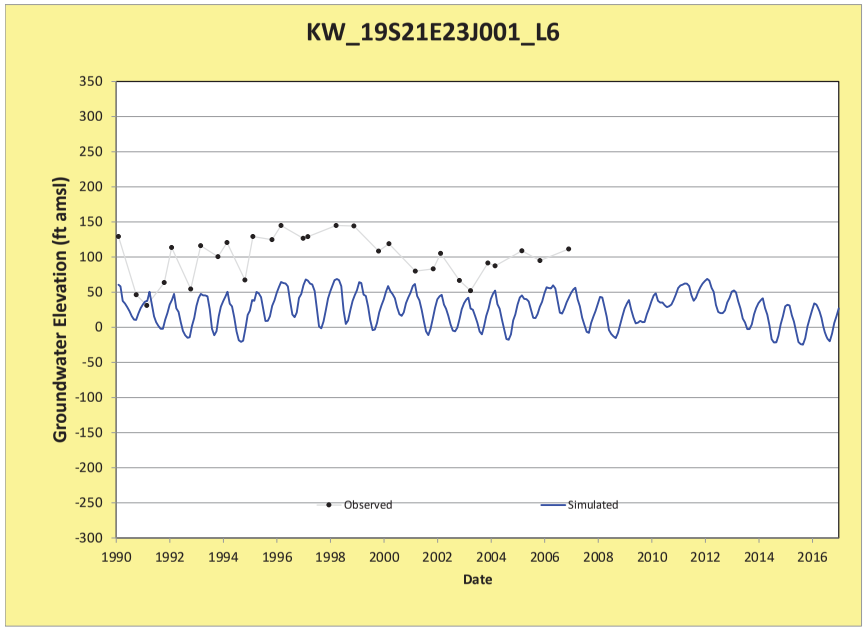
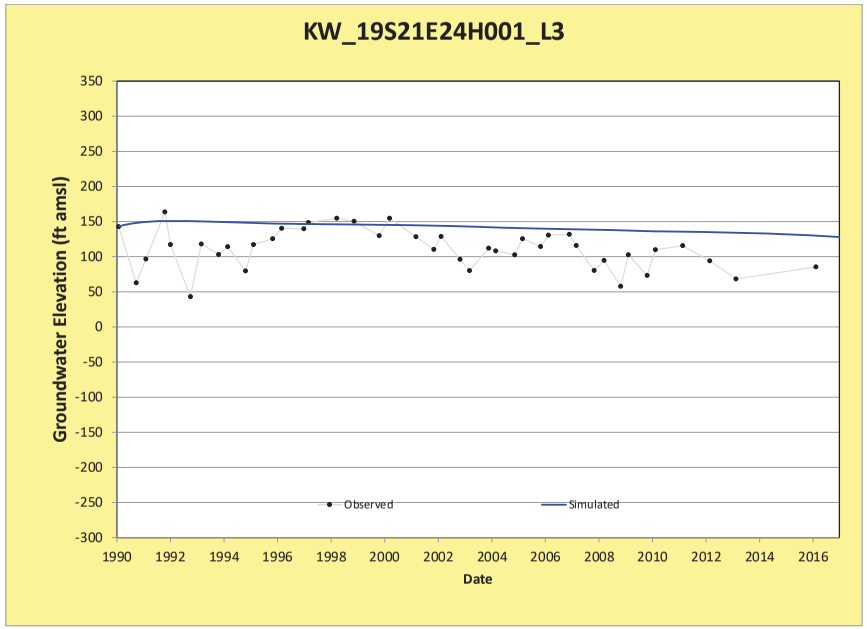
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

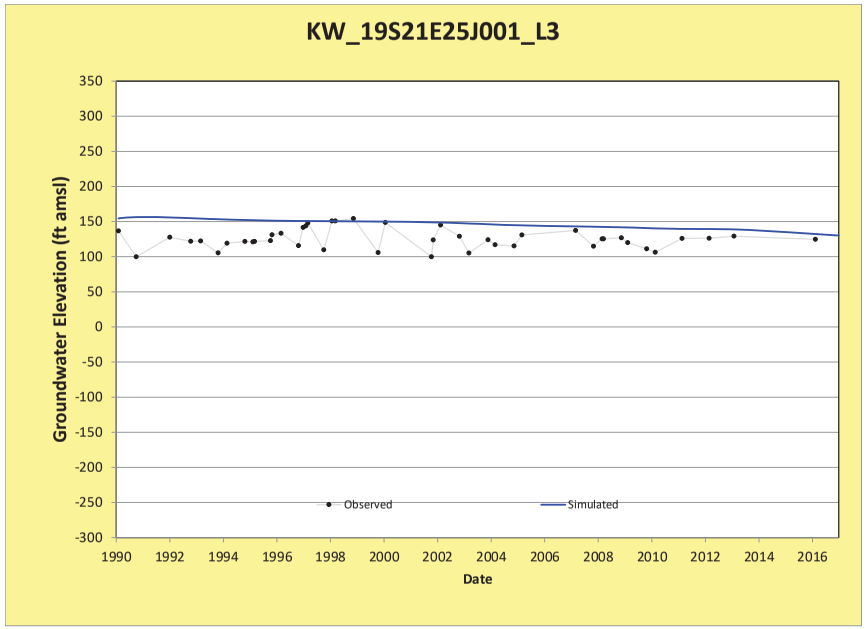

KW_18S23E34A002_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

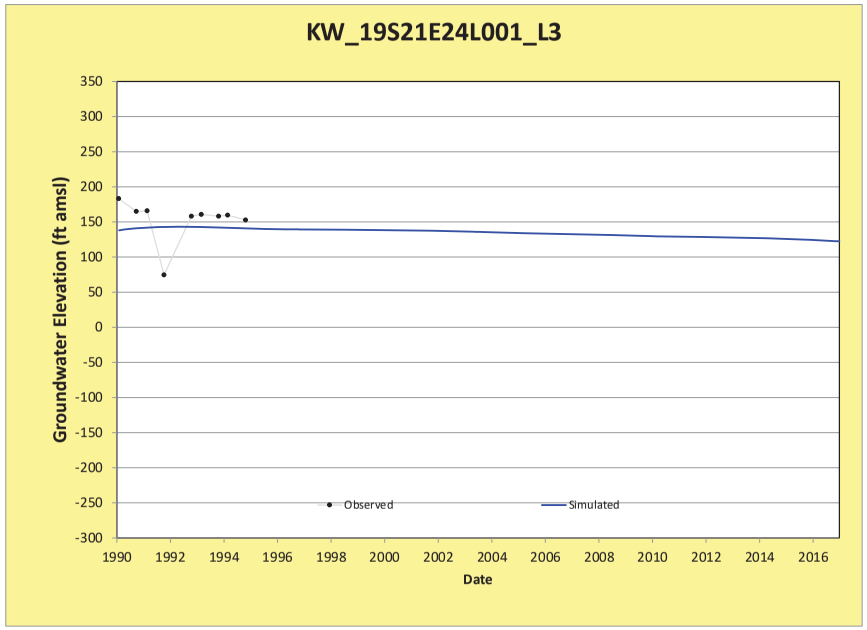

KW_19S21E13A001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KW_18S24E31C001_L2
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KW_19S21E23J001_L6
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KW_19S21E24H001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KW_19S21E25J001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated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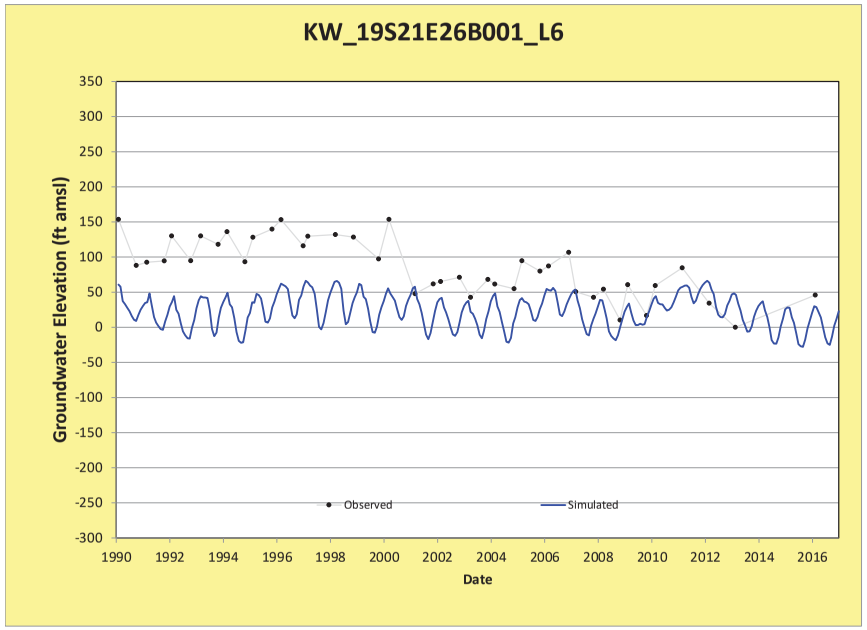
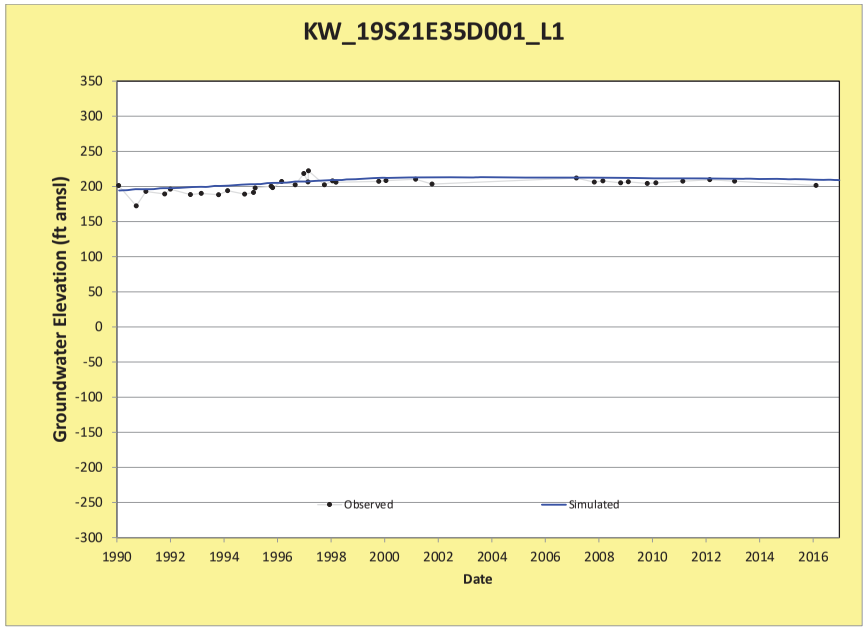
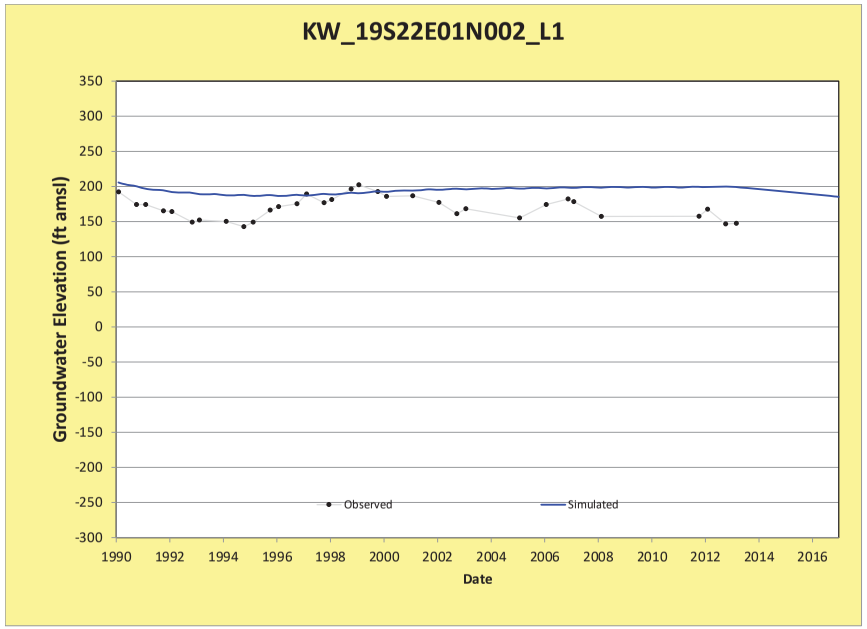
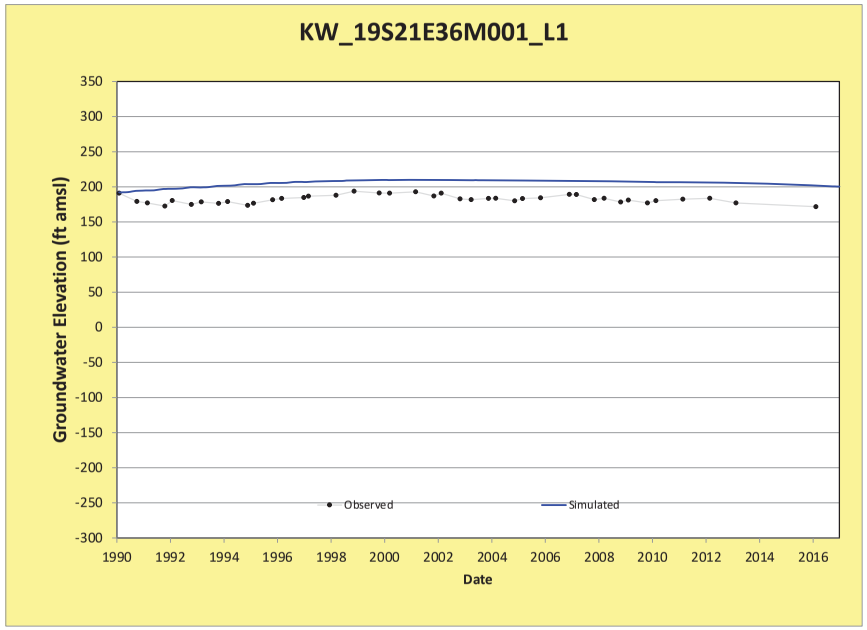
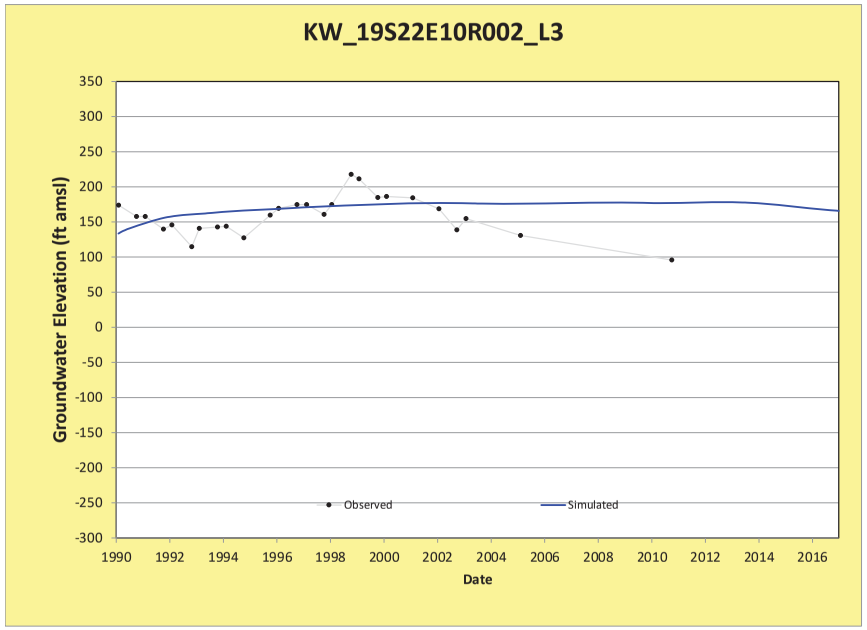
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

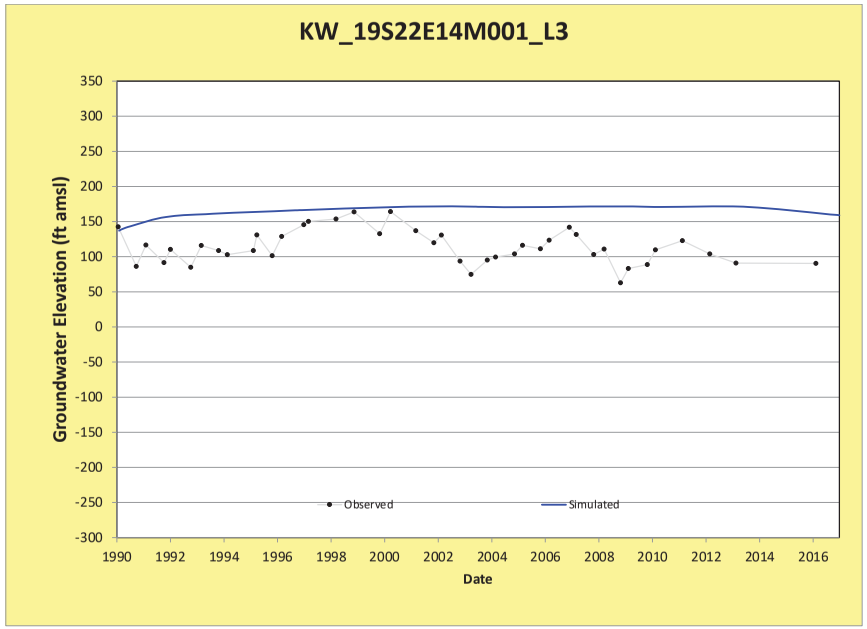

KW_19S21E26B001_L6
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

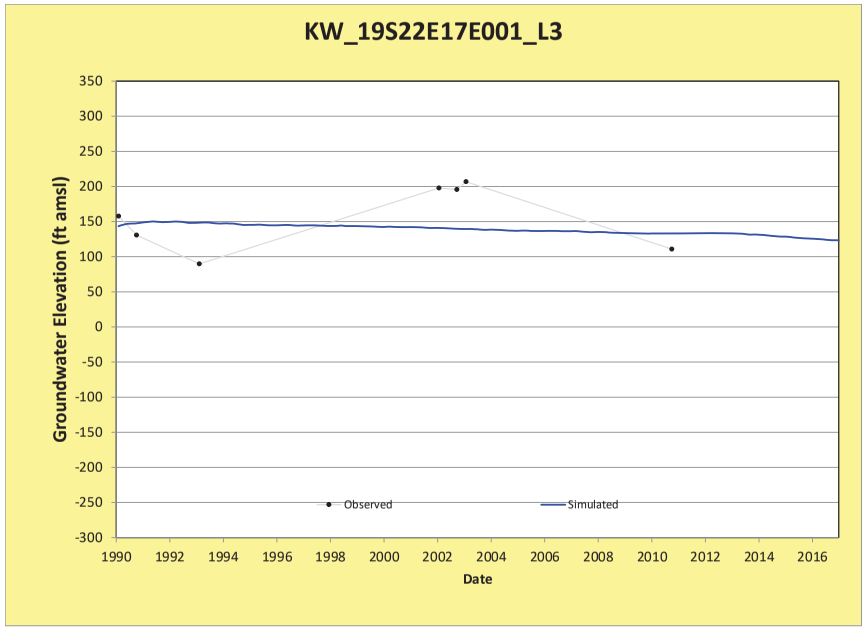

KW_19S21E35D001_L1
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

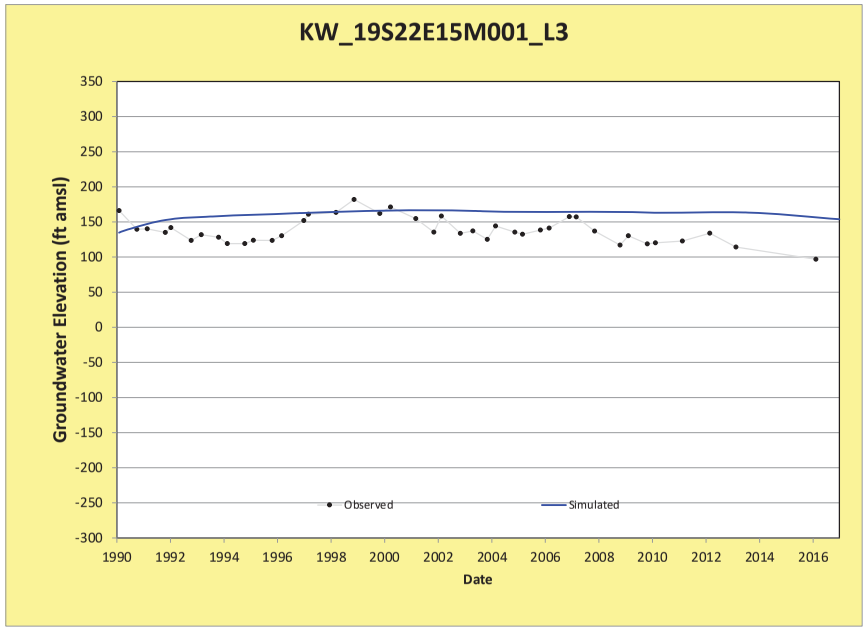

KW_19S22E01N002_L1
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

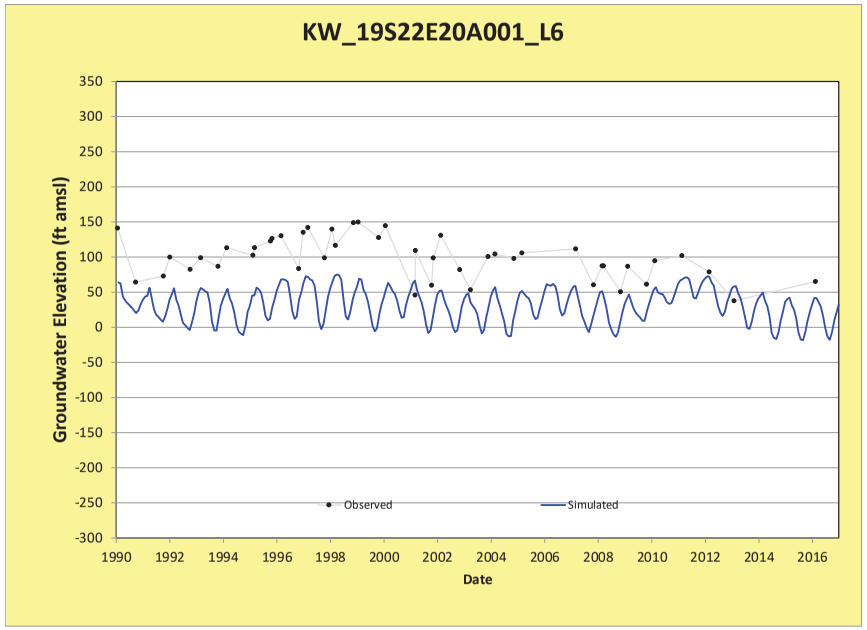

KW_19S21E36M001_L1
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

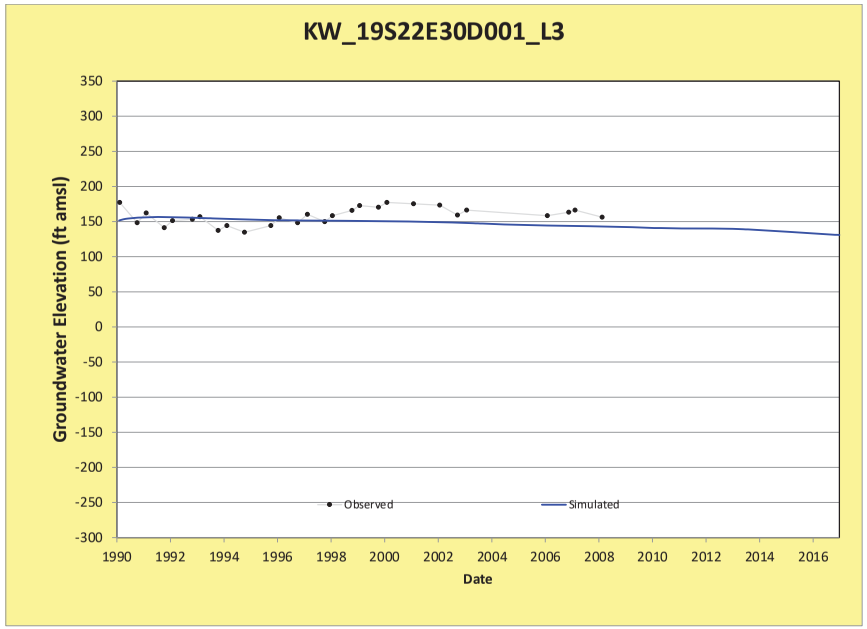

KW_19S22E10R002_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

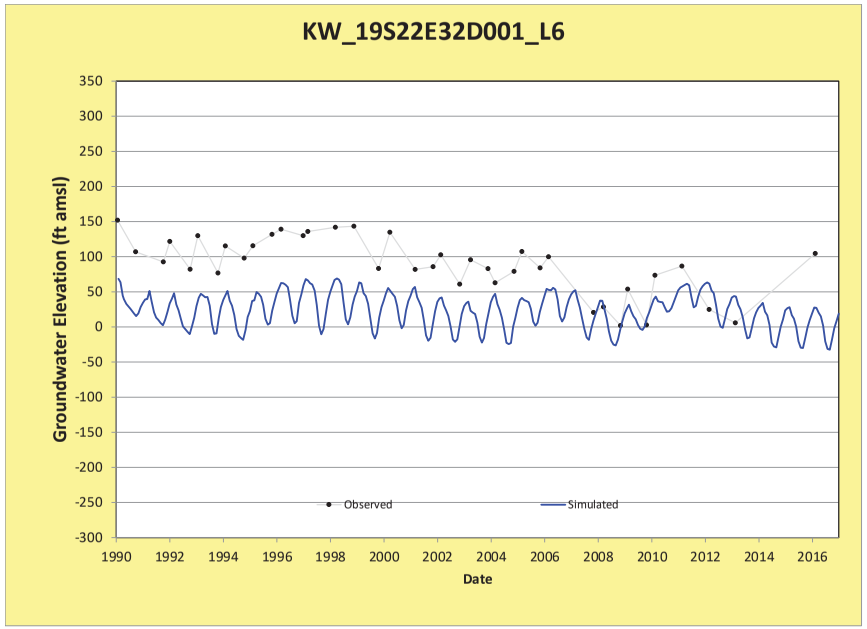

KW_19S22E14M001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

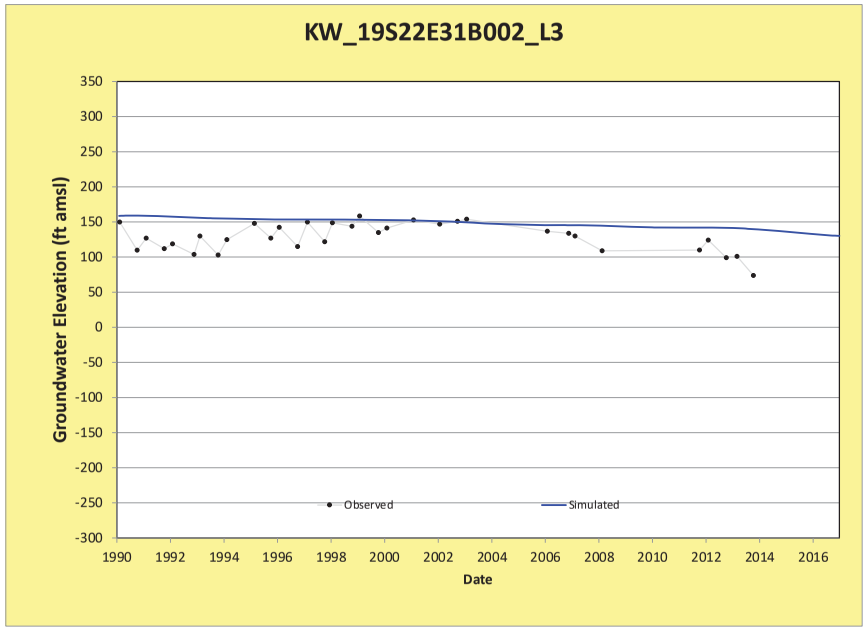

KW_19S22E17E001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

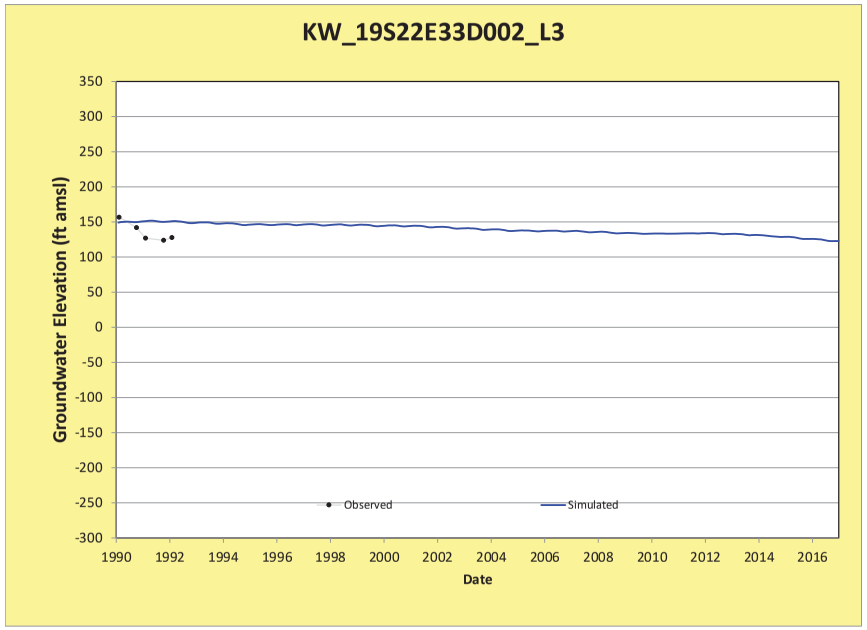

KW_19S22E15M001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

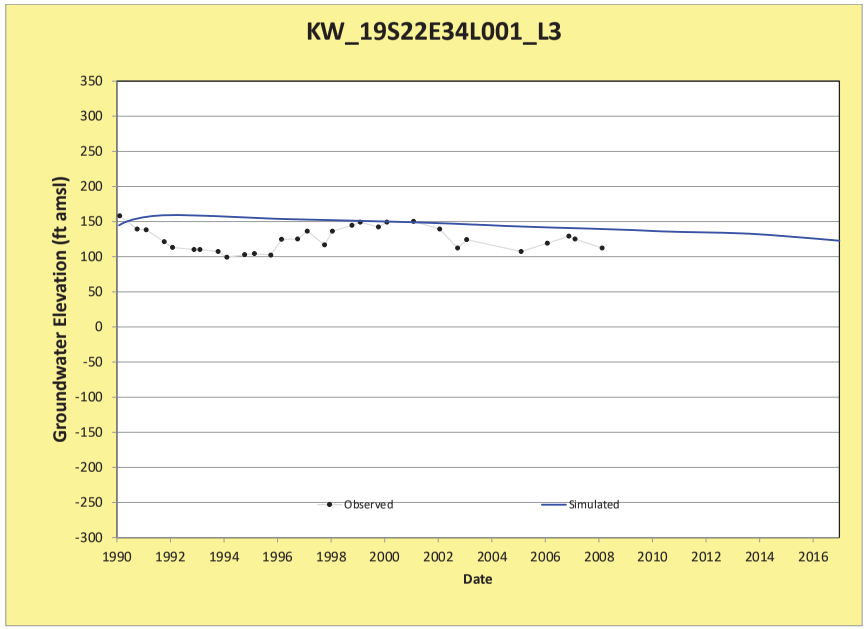

KW_19S22E20A001_L6
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

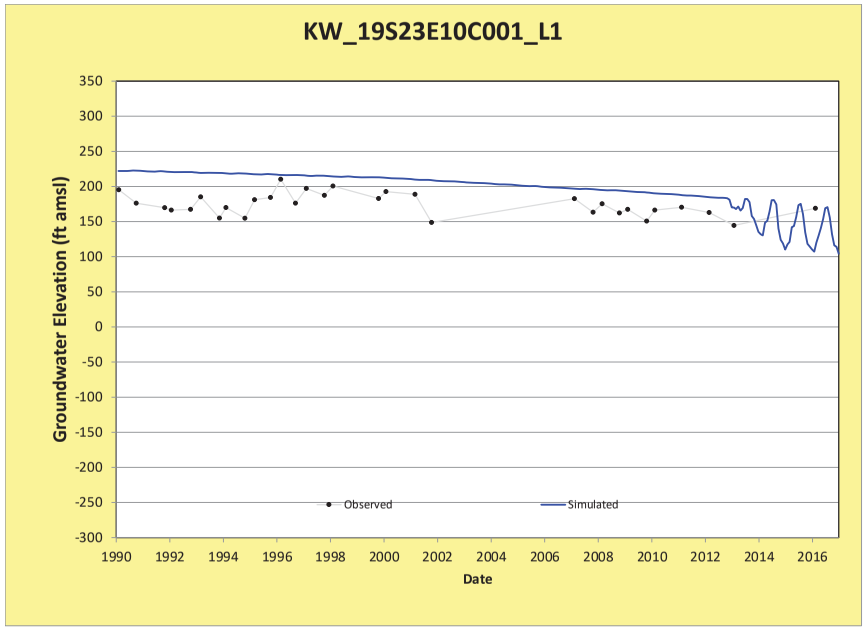

KW_19S22E30D001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

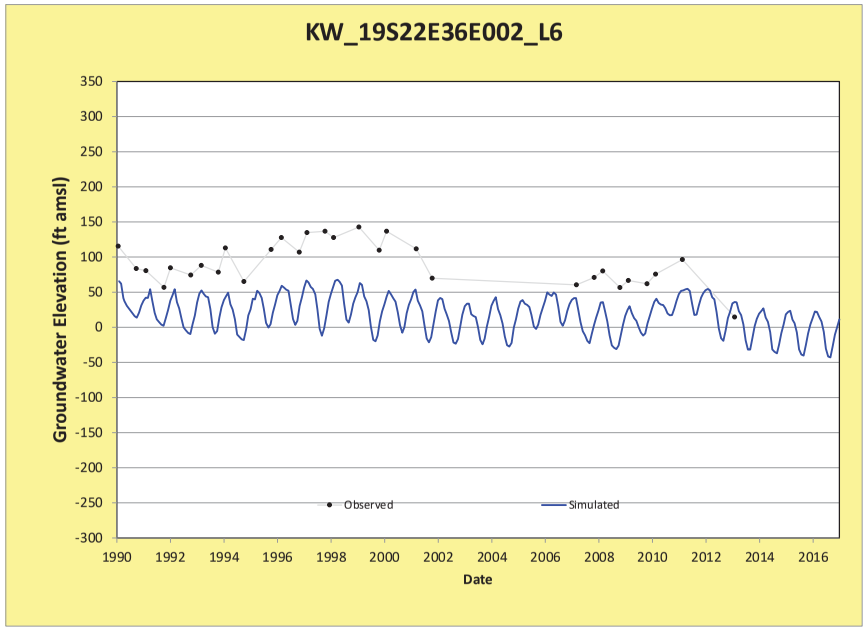

KW_19S22E32D001_L6
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

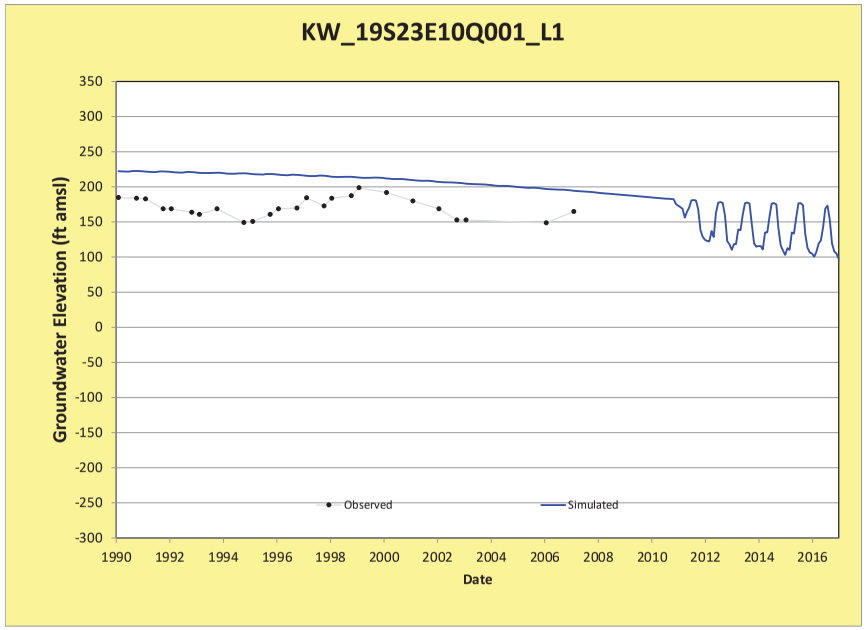

KW_19S22E31B002_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KW_19S22E33D002_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KW_19S22E34L001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KW_19S23E10C001_L1
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KW_19S22E36E002_L6
Groundwater Elevation (ft amsl)
Date
Observed
Simulated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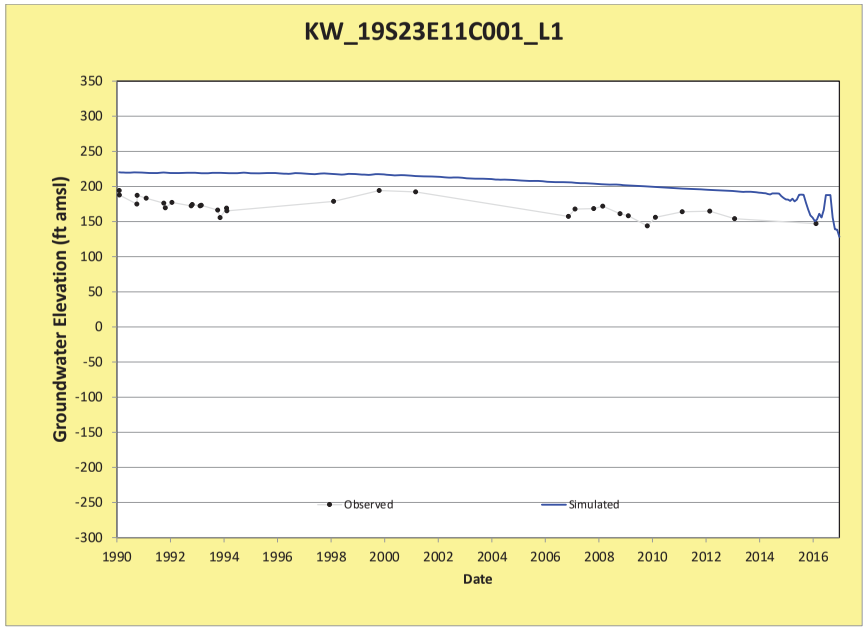
Groundwater Elevation (ft amsl)
Date
Observed
Simulated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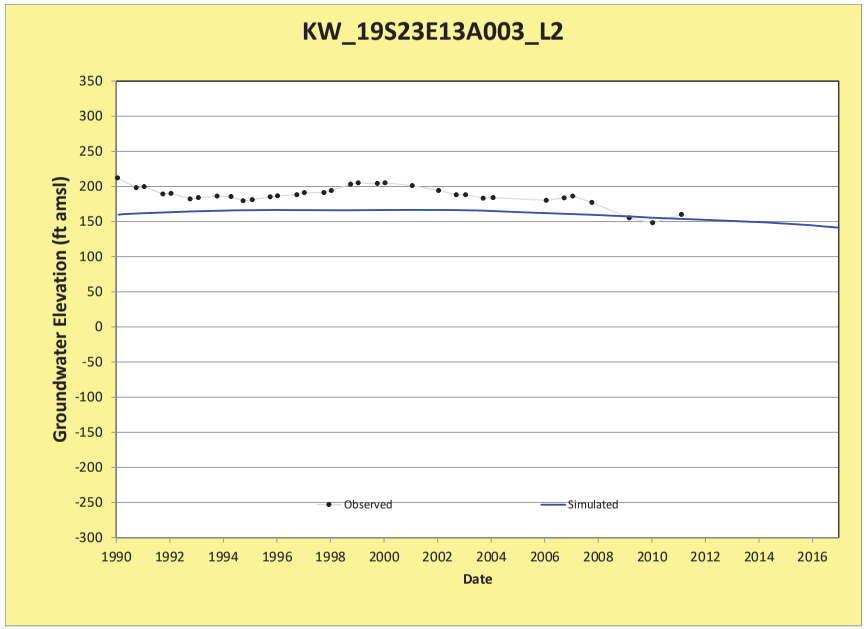
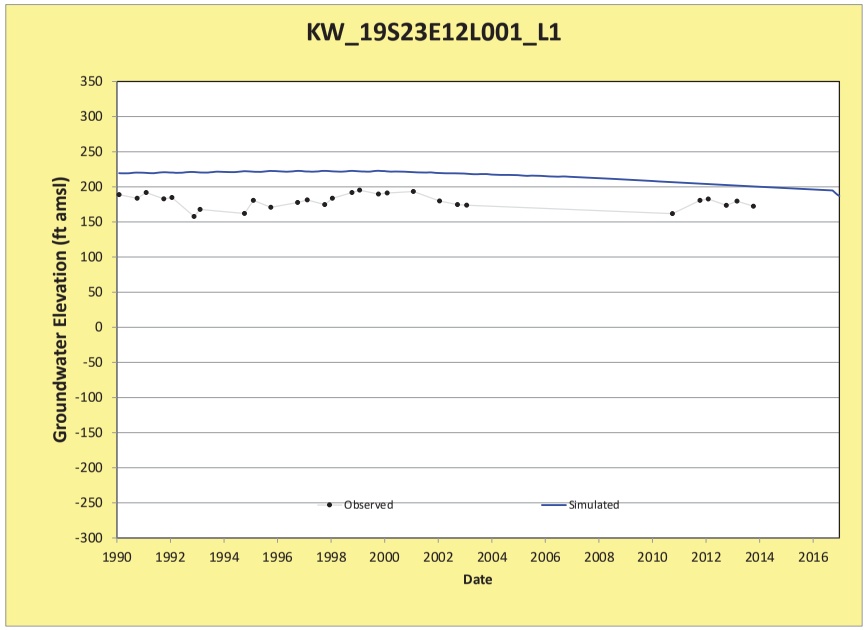
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KW_19S23E13A003_L2
Groundwater Elevation (ft amsl)
Date
Observed
Simulated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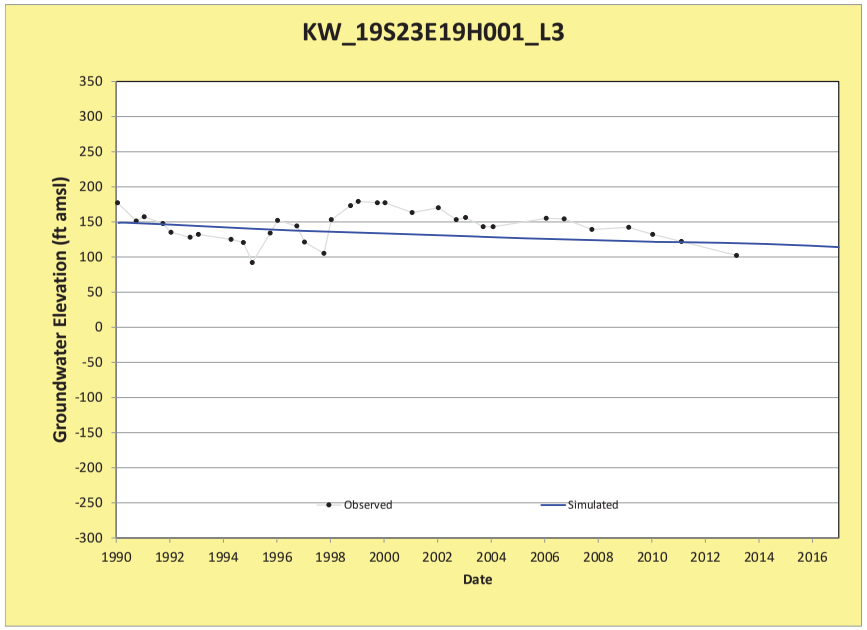
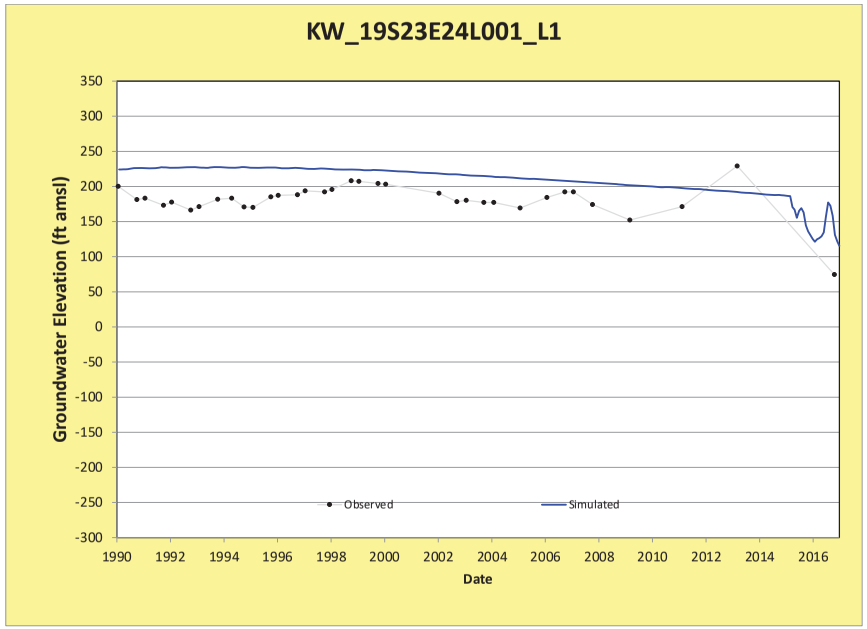
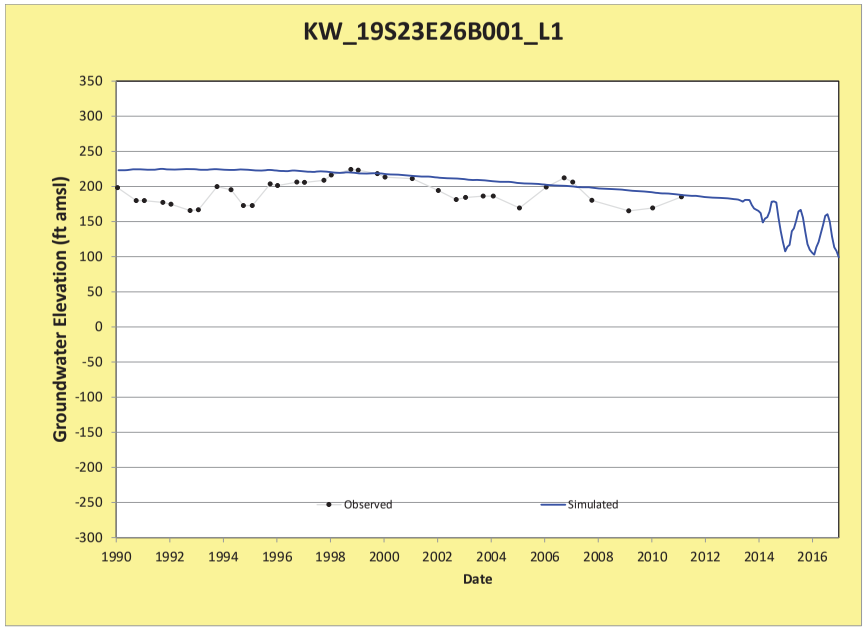
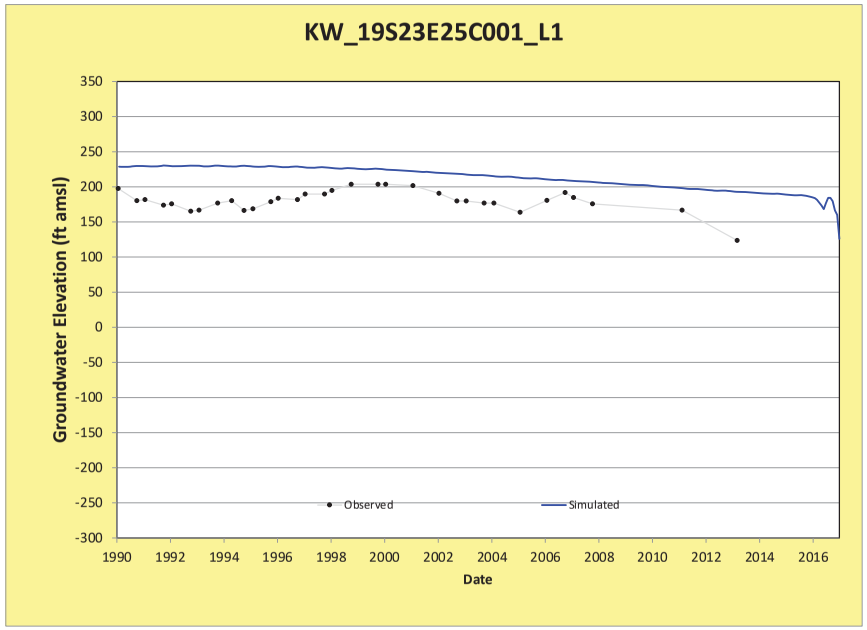
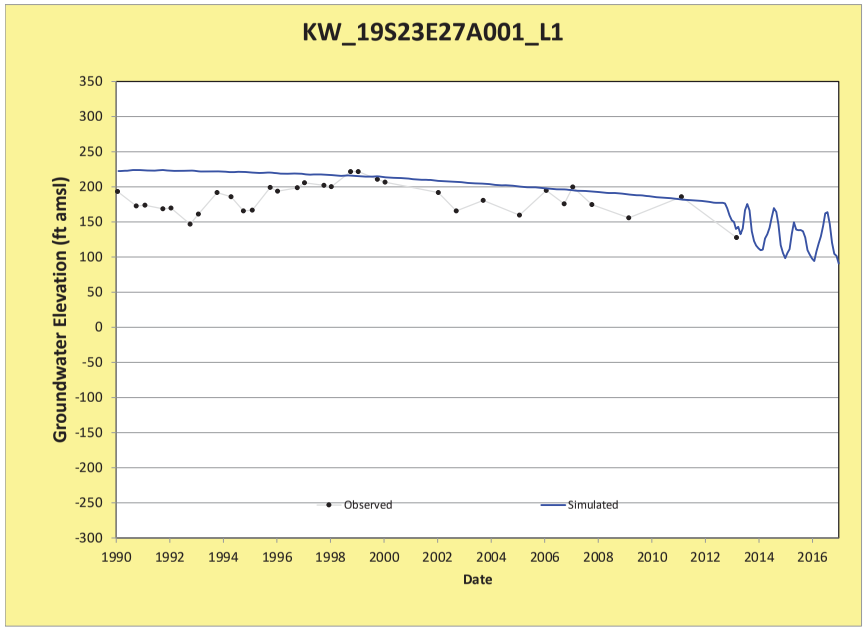
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

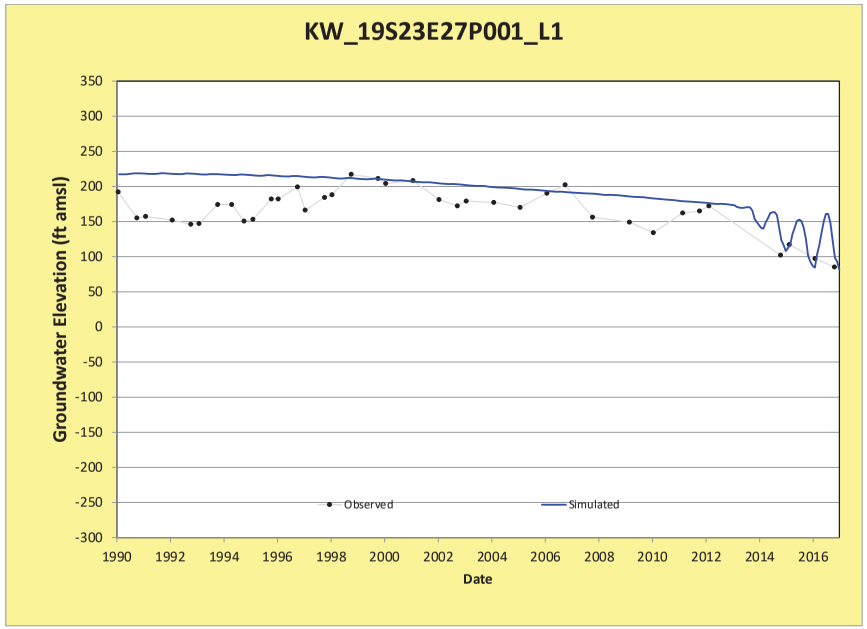

KW_19S23E19H001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

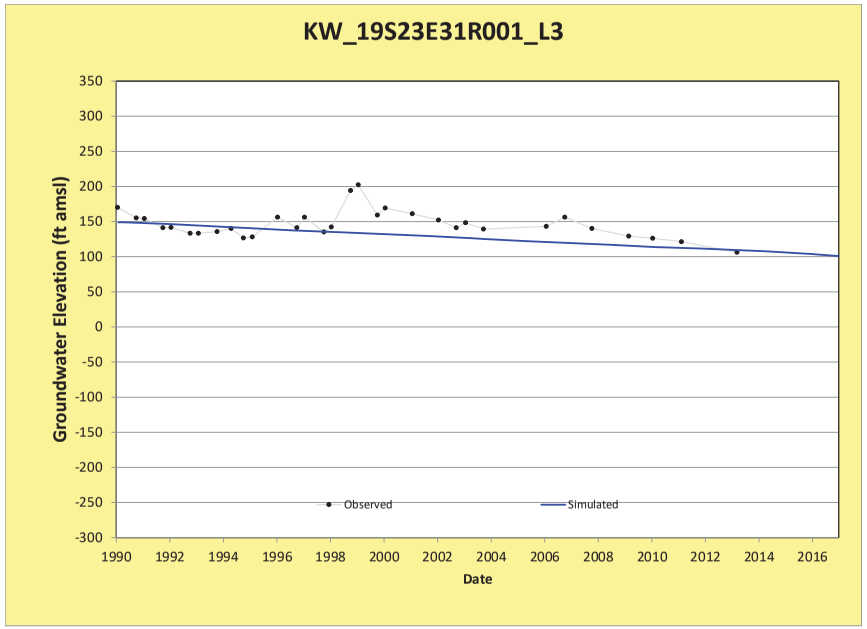

KW_19S23E24L001_L1
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

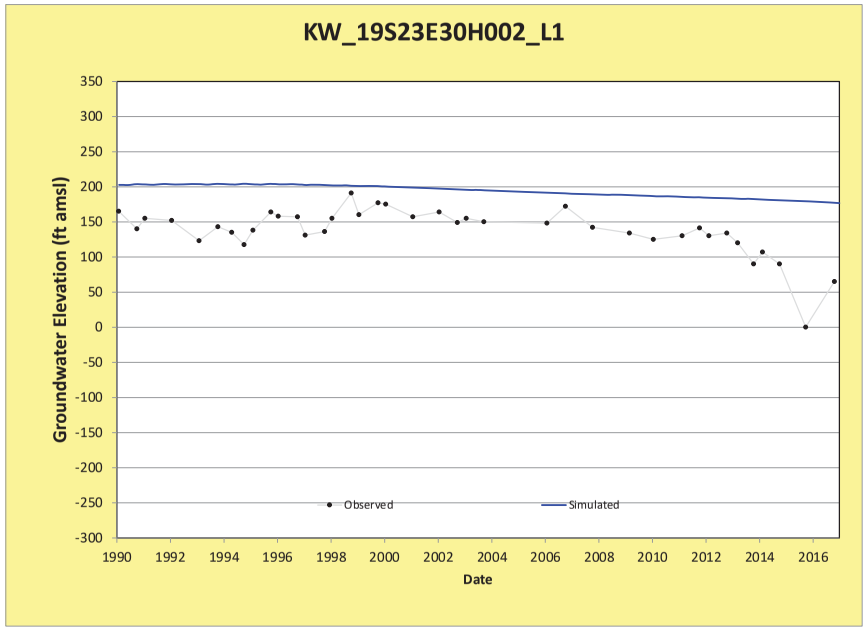

KW_19S23E26B001_L1
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

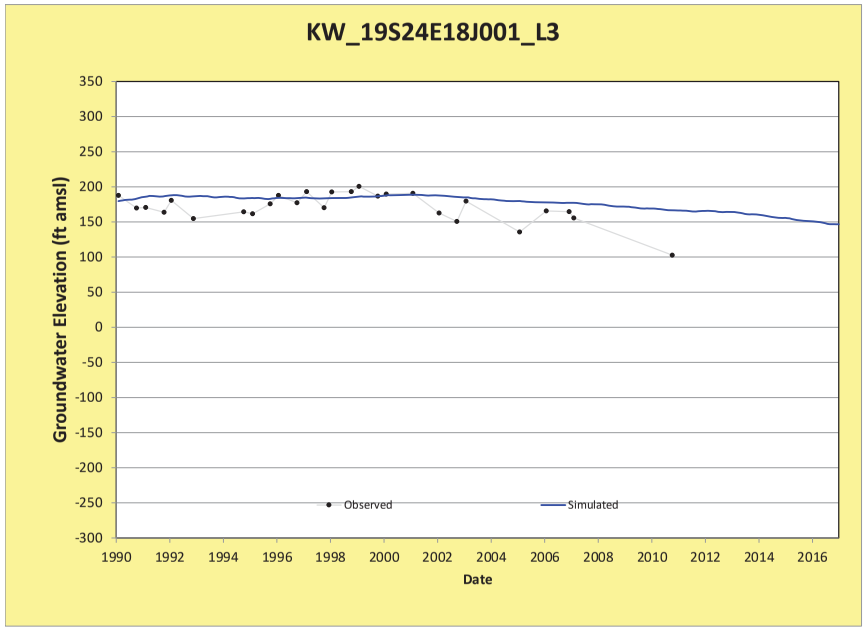

KW_19S23E25C001_L1
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

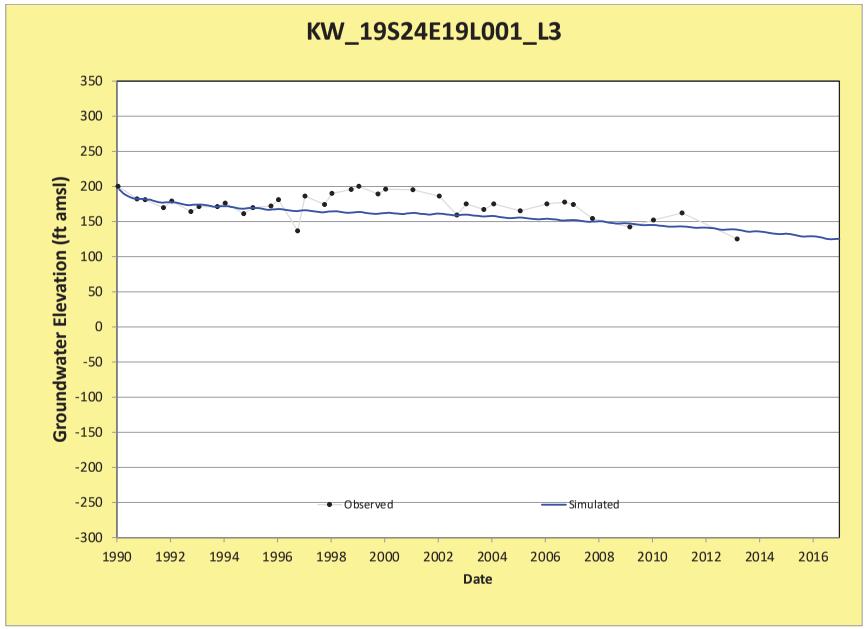

KW_19S23E27A001_L1
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KW_19S23E27P001_L1
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KW_19S23E31R001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KW_19S23E30H002_L1
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KW_19S24E18J001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated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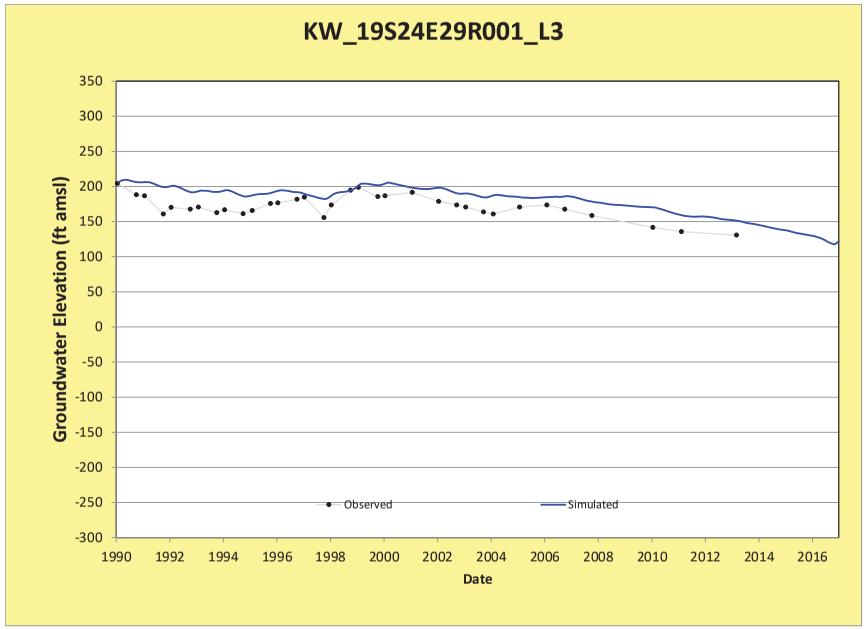
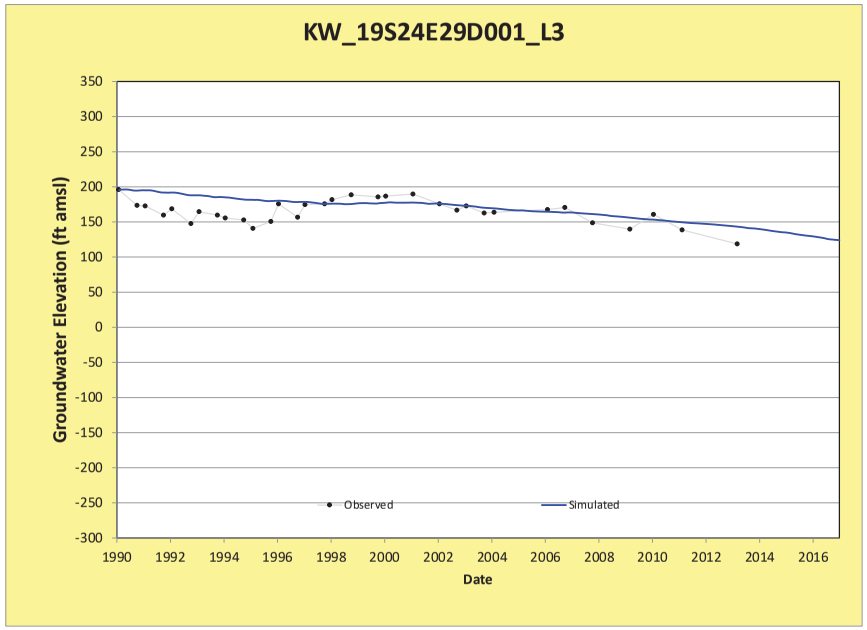
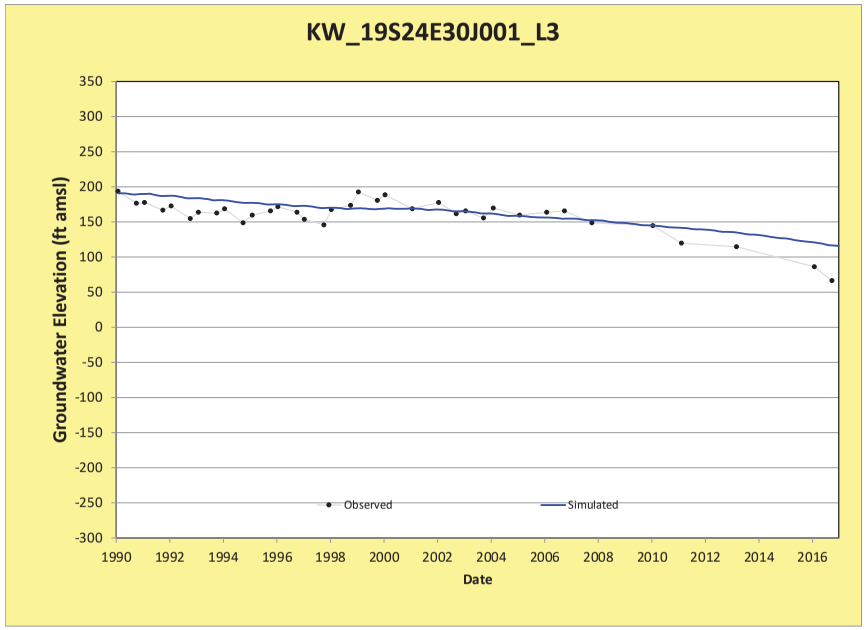
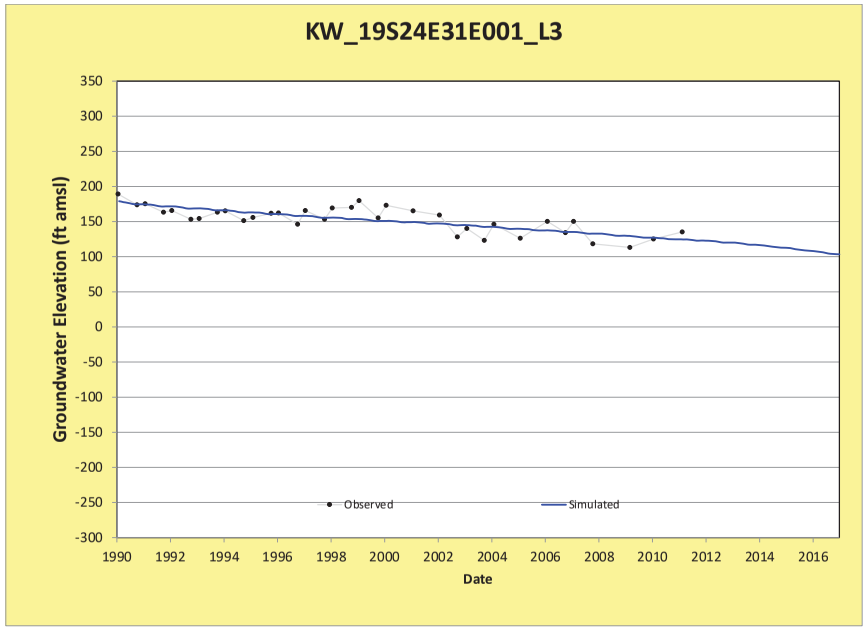
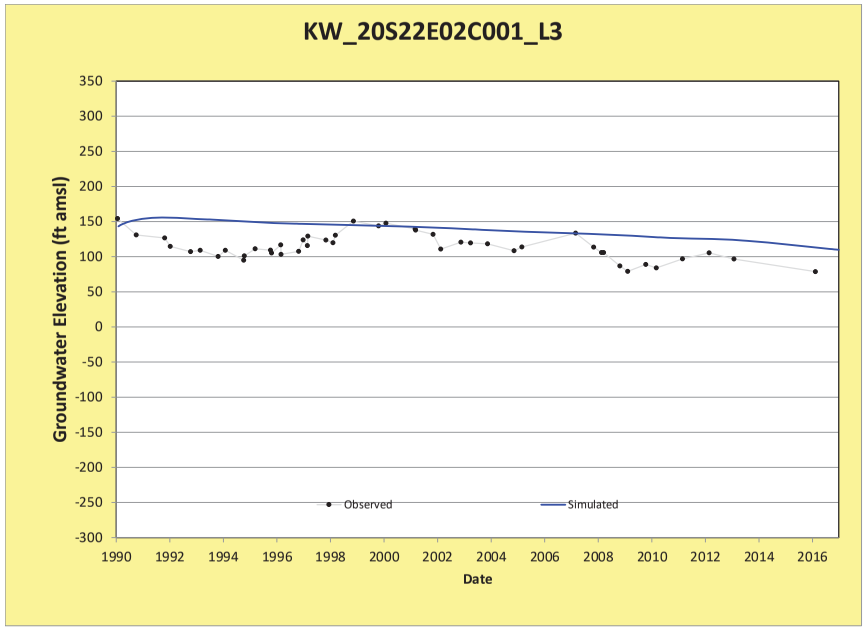
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

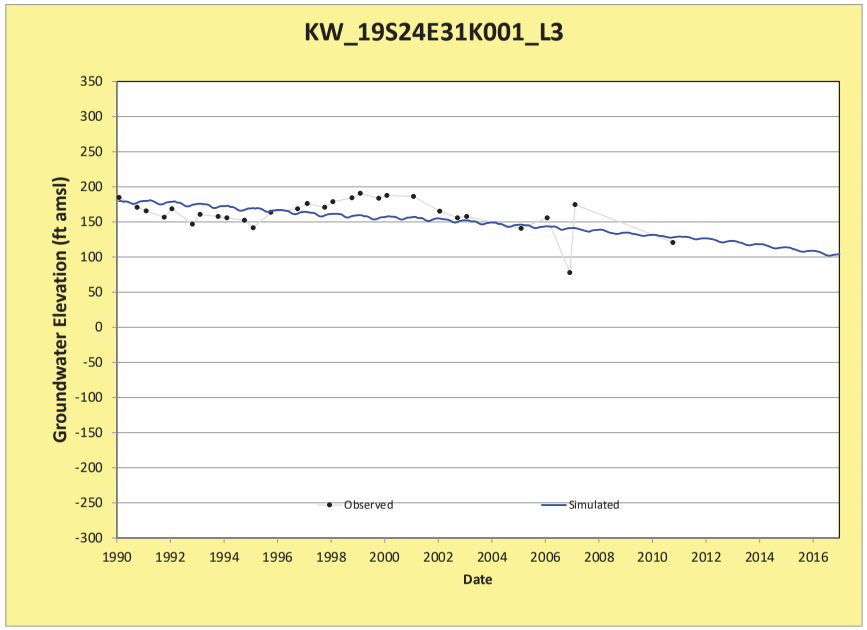

KW_19S24E29R001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

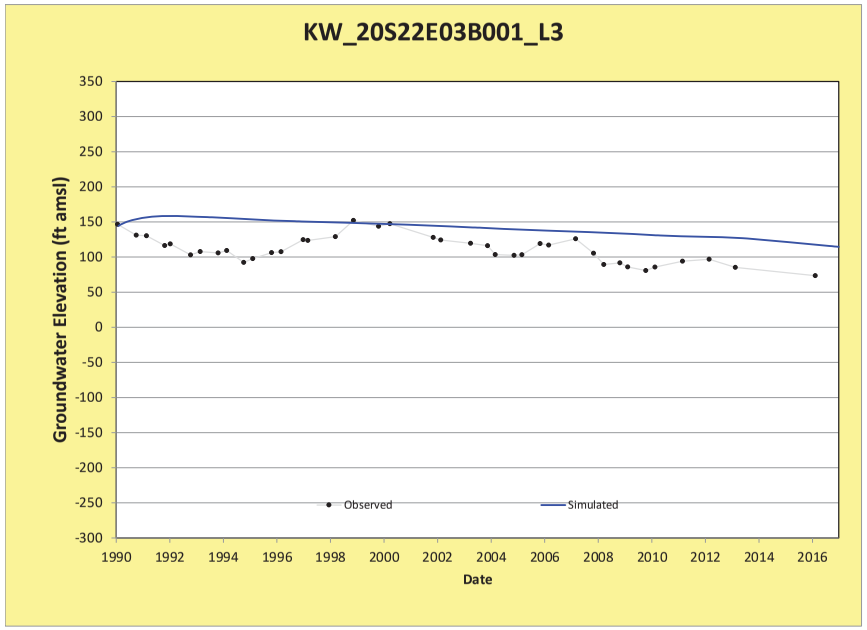

KW_19S24E29D001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KW_19S24E30J001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KW_19S24E31E001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KW_20S22E02C001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KW_19S24E31K001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated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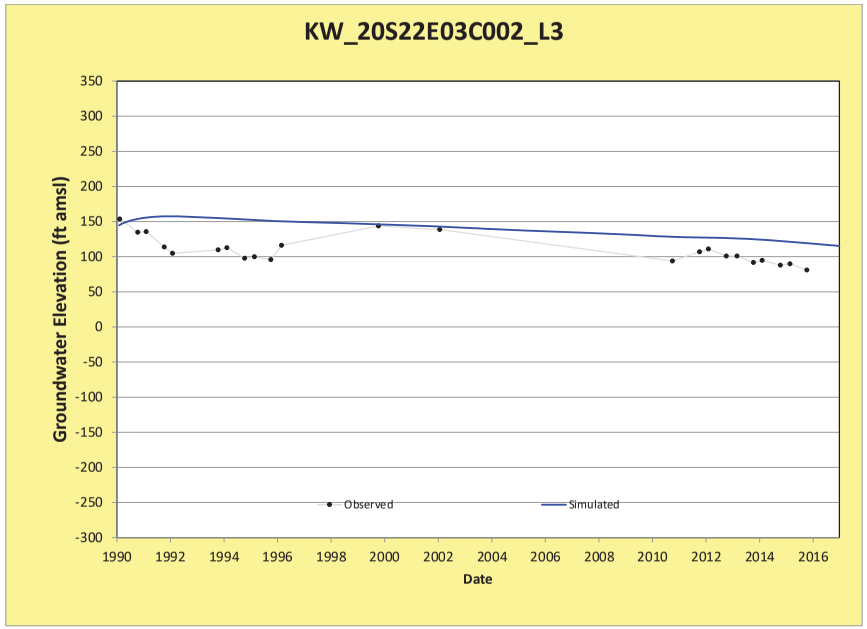
Groundwater Elevation (ft amsl)
Date
Observed
Simulated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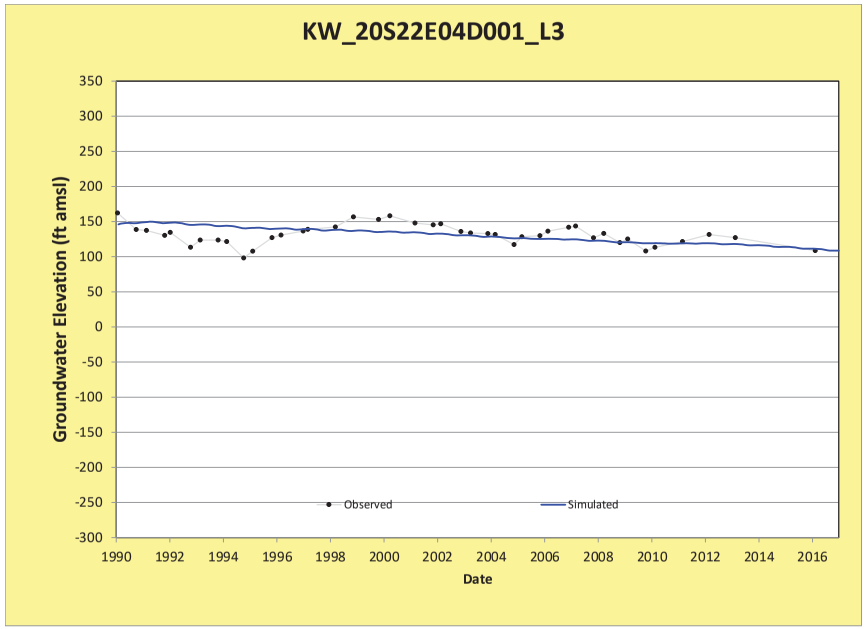
Groundwater Elevation (ft amsl)
Date
Observed
Simulated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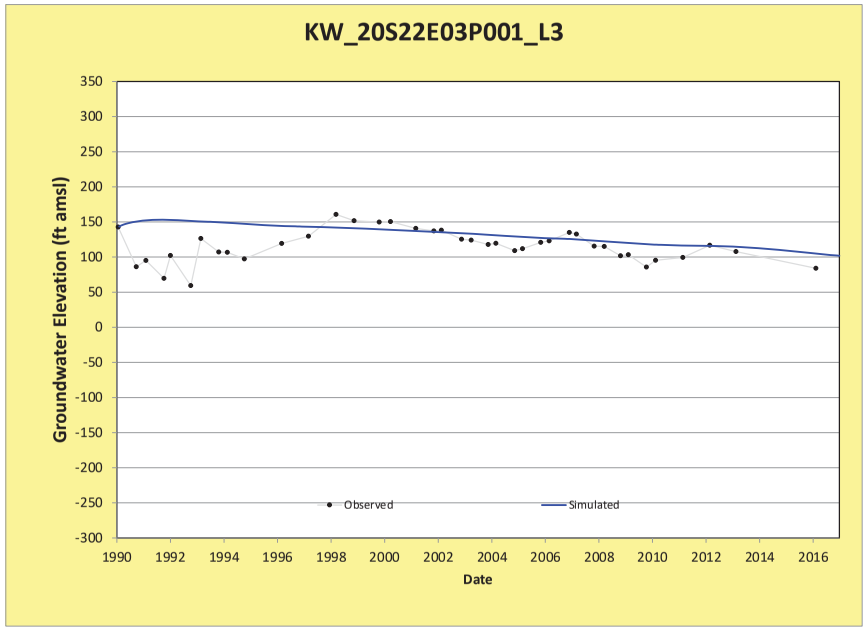
Groundwater Elevation (ft amsl)
Date
Observed
Simulated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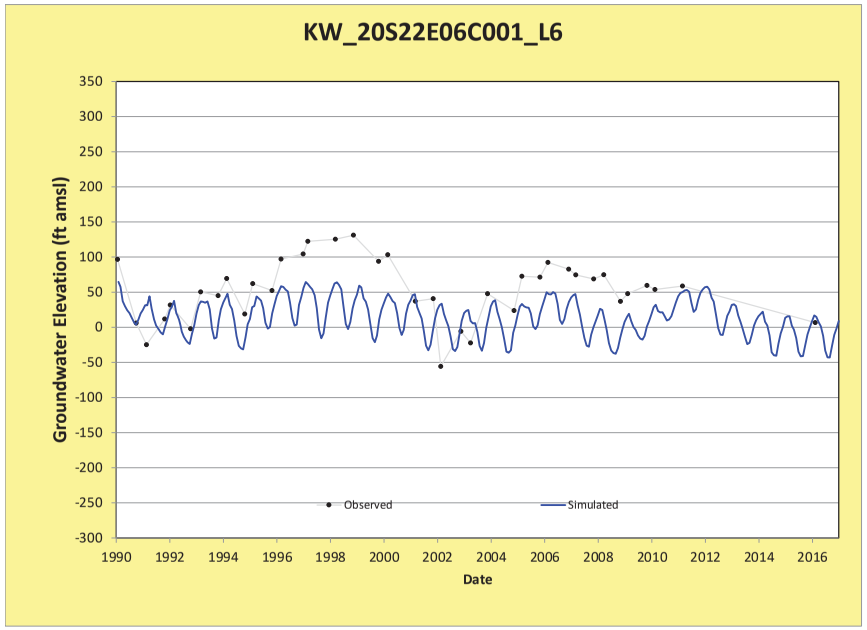
Groundwater Elevation (ft amsl)
Date
Observed
Simulated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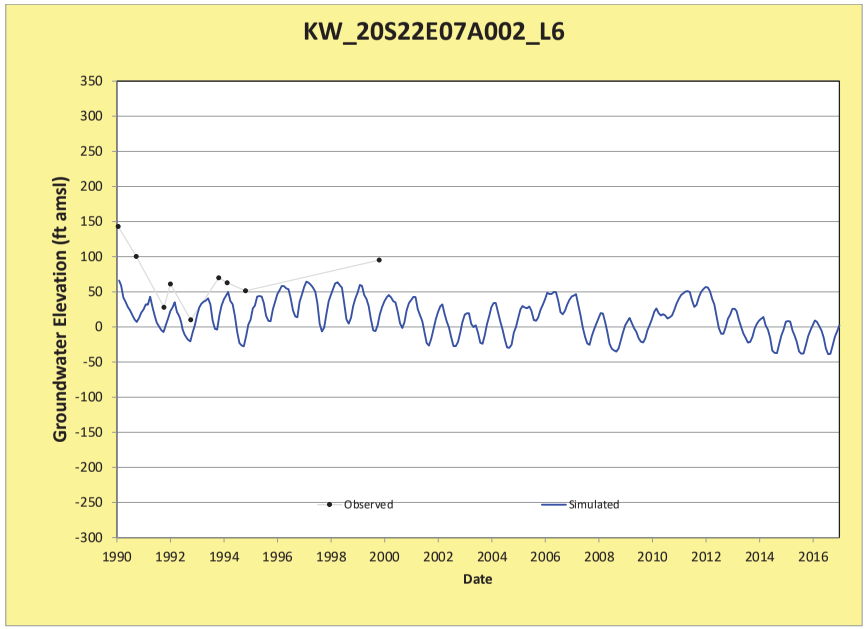
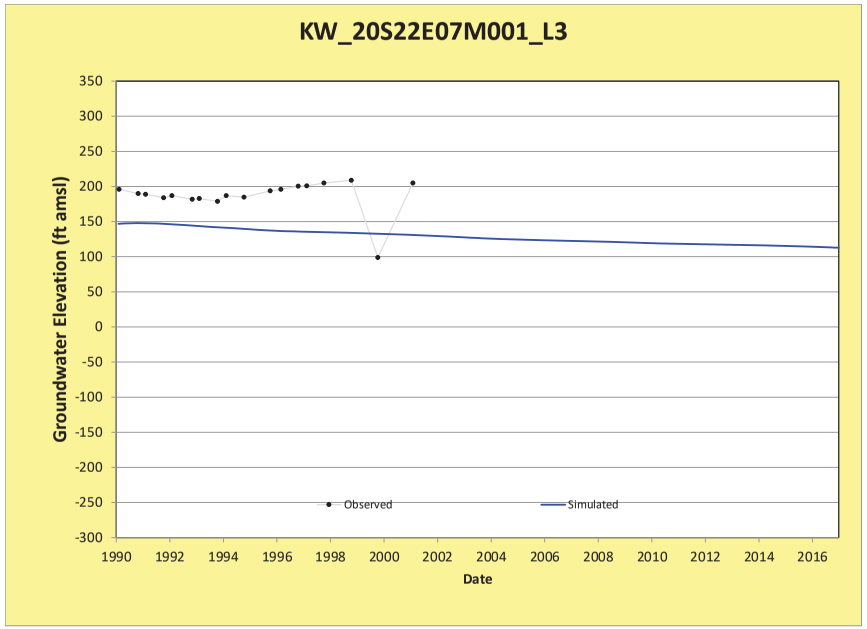
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KW_20S22E07A002_L6
Groundwater Elevation (ft amsl)
Date
Observed
Simulated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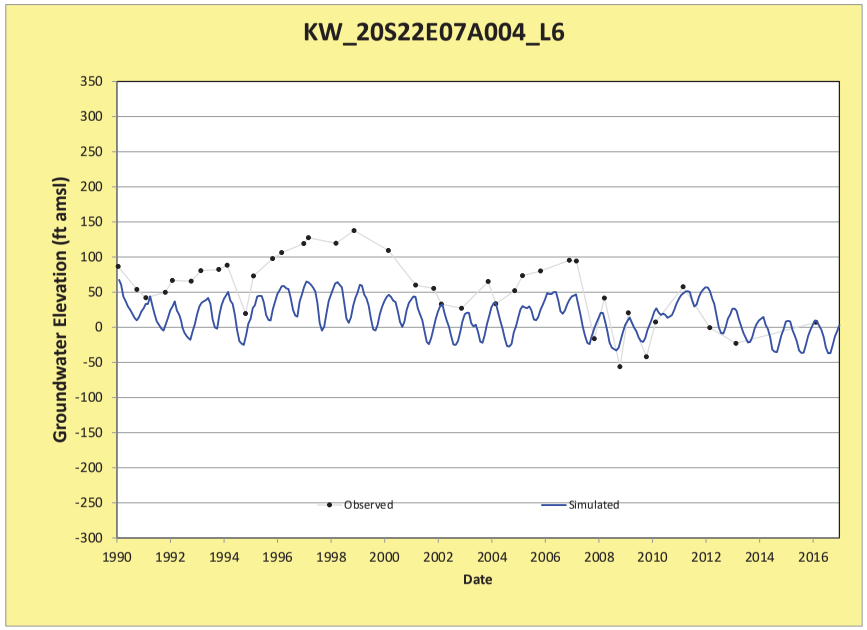
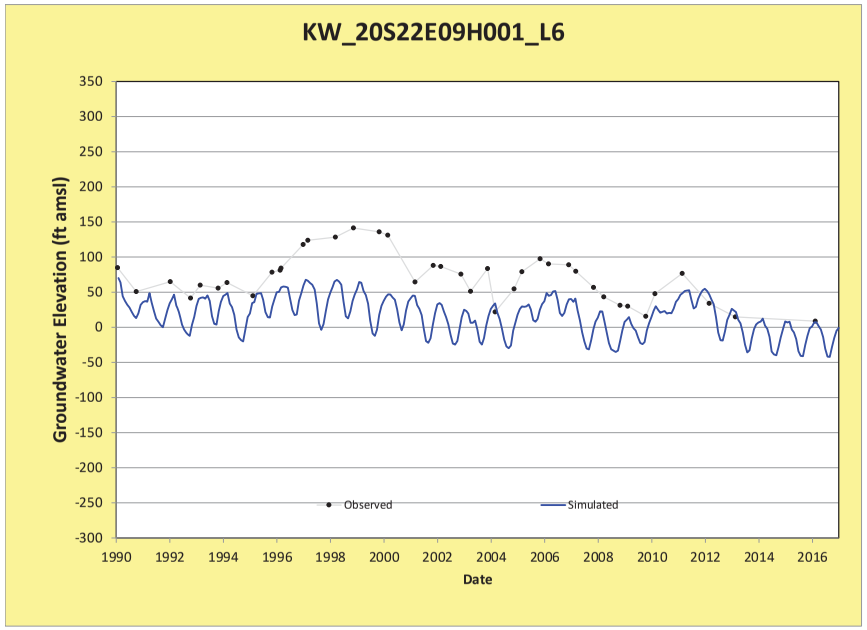
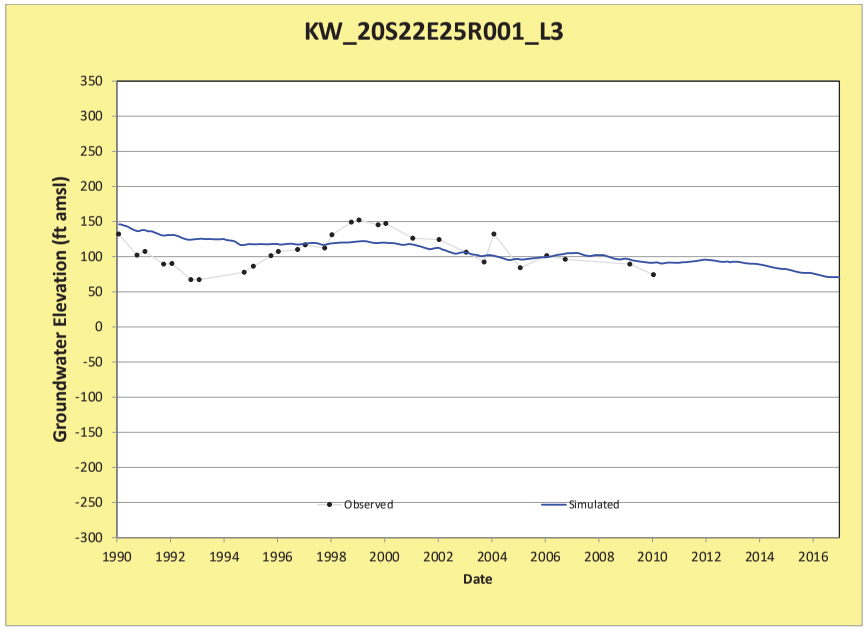
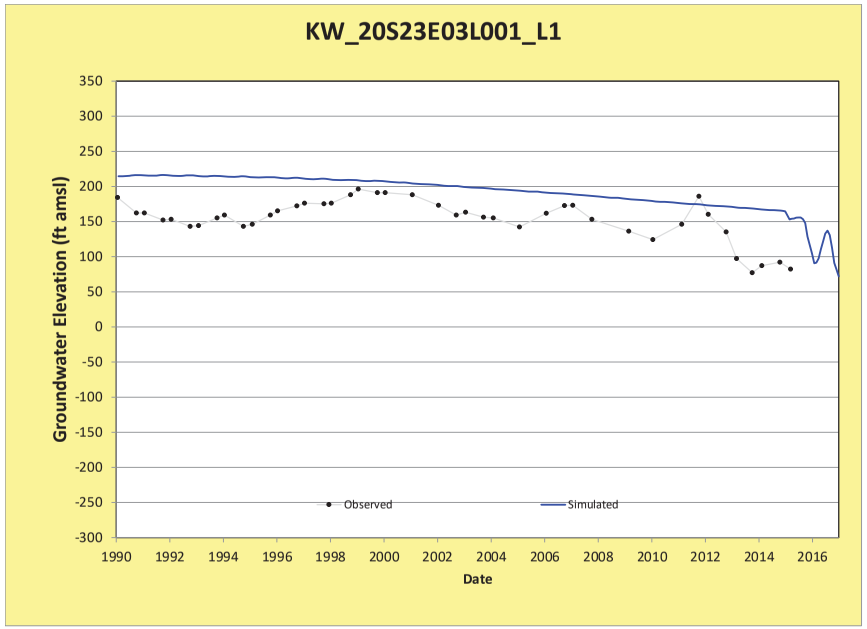
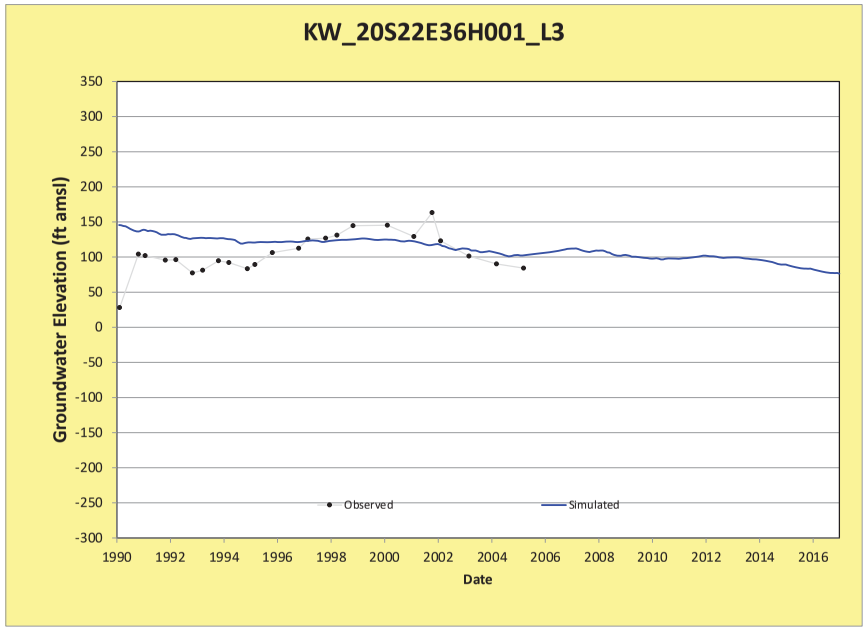
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

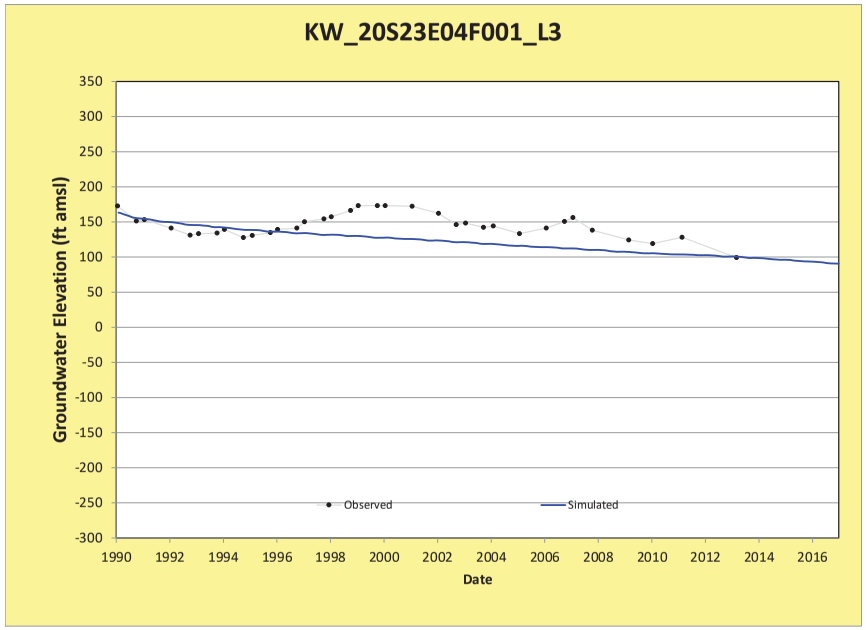

KW_20S22E07A004_L6
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

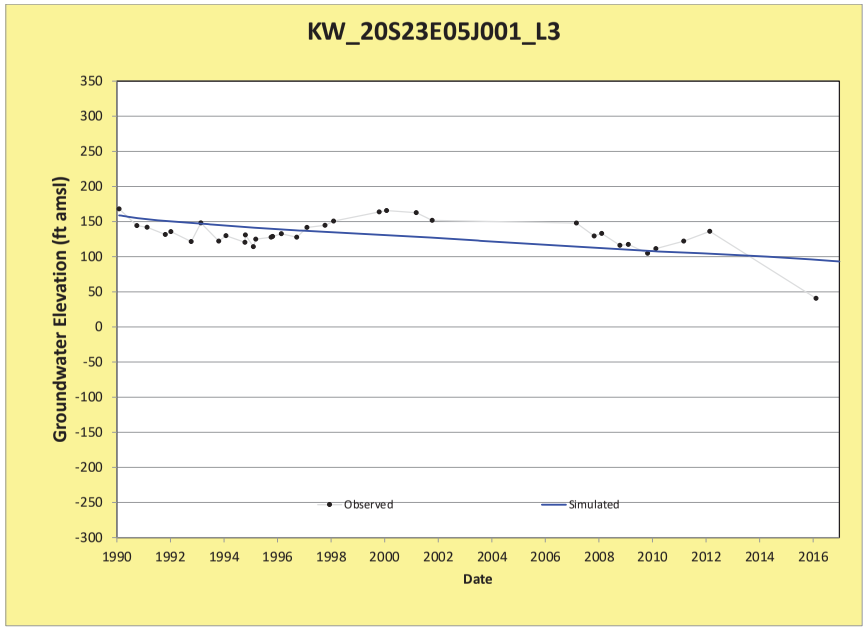

KW_20S22E09H001_L6
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

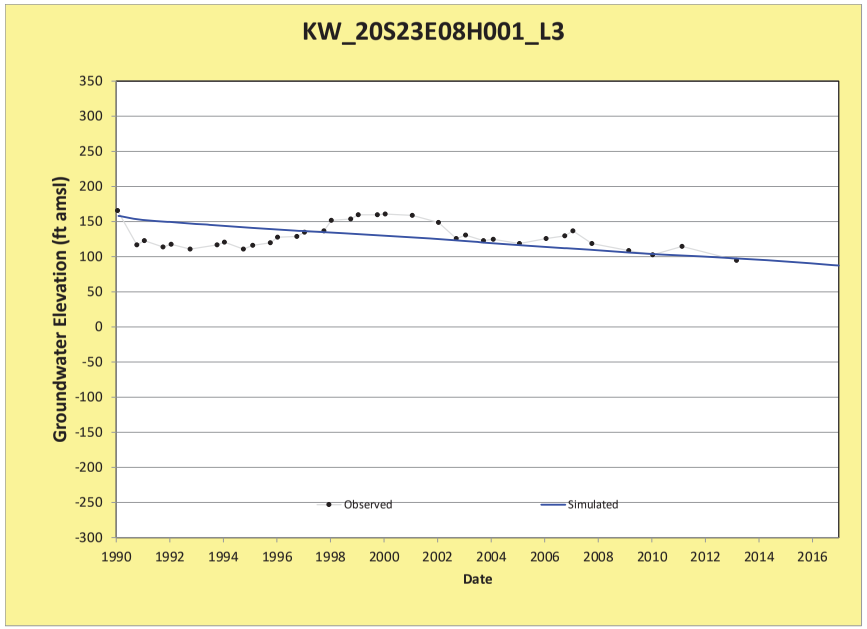

KW_20S22E25R001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KW_20S23E03L001_L1
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KW_20S22E36H001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KW_20S23E04F001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KW_20S23E05J001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated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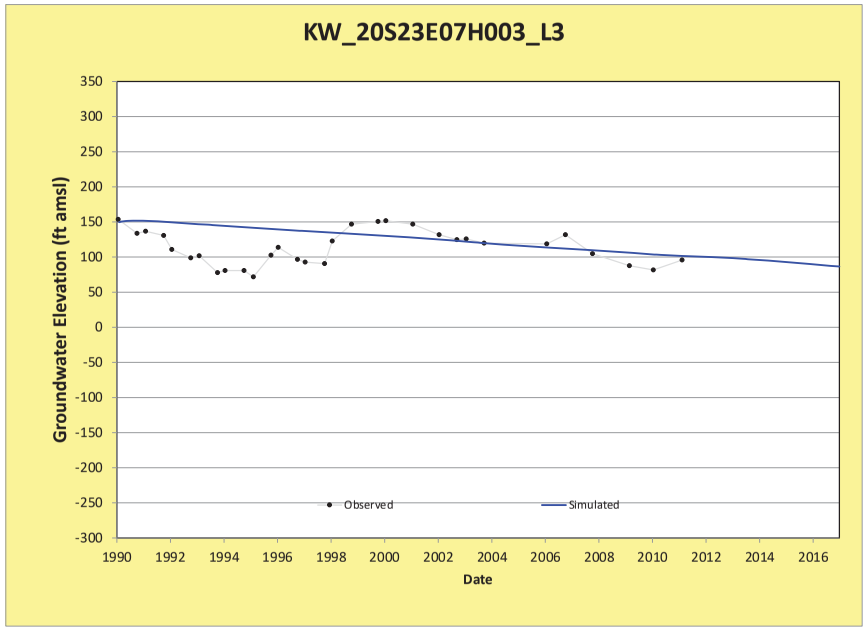
Groundwater Elevation (ft amsl)
Date
Observed
Simulated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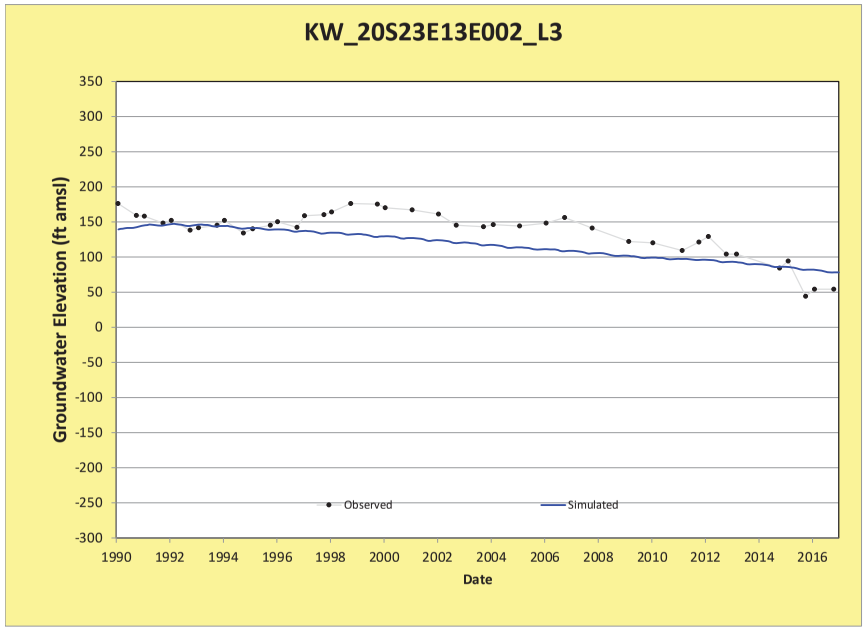
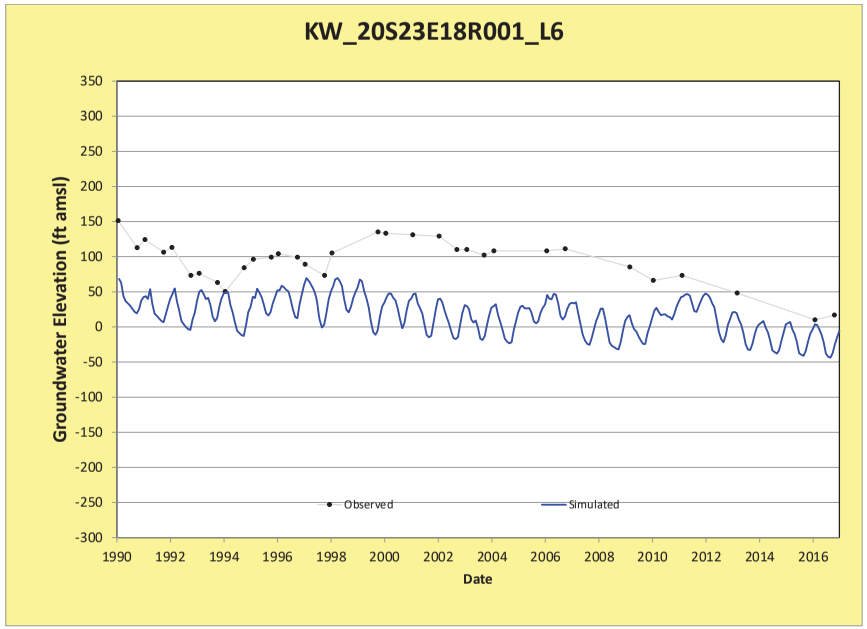
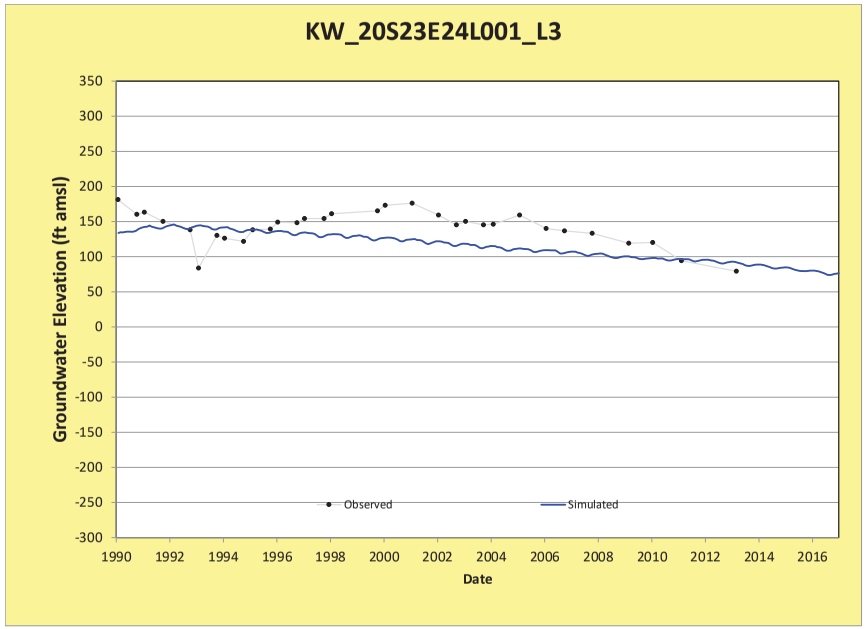
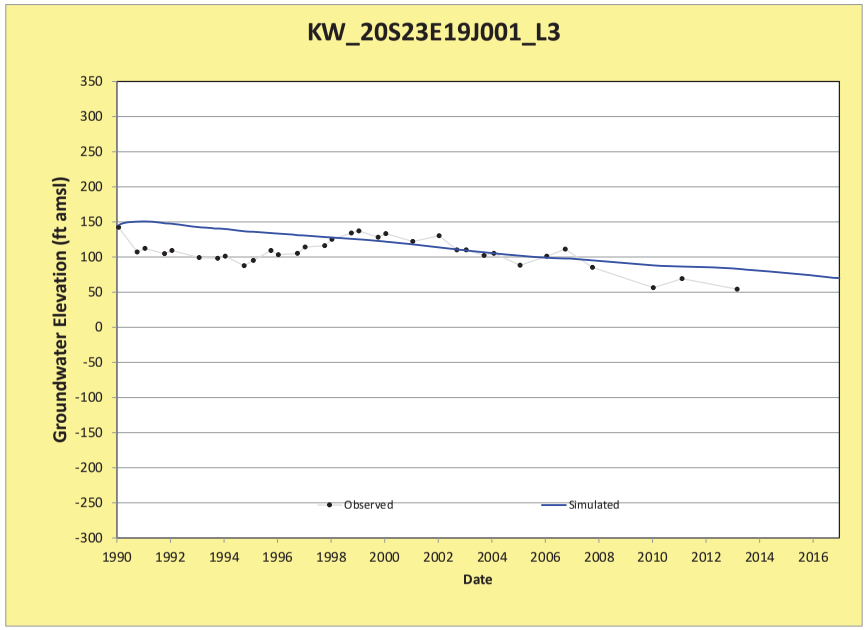
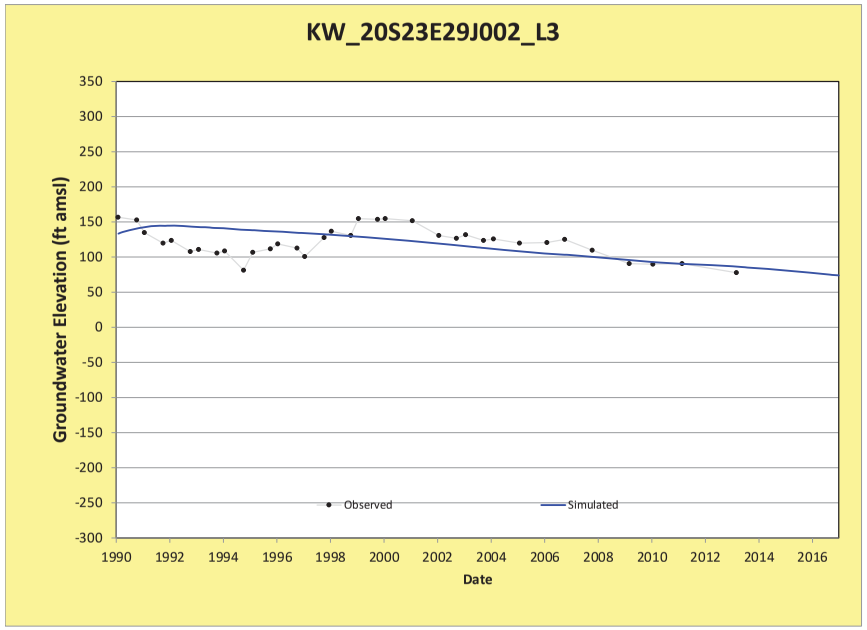
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

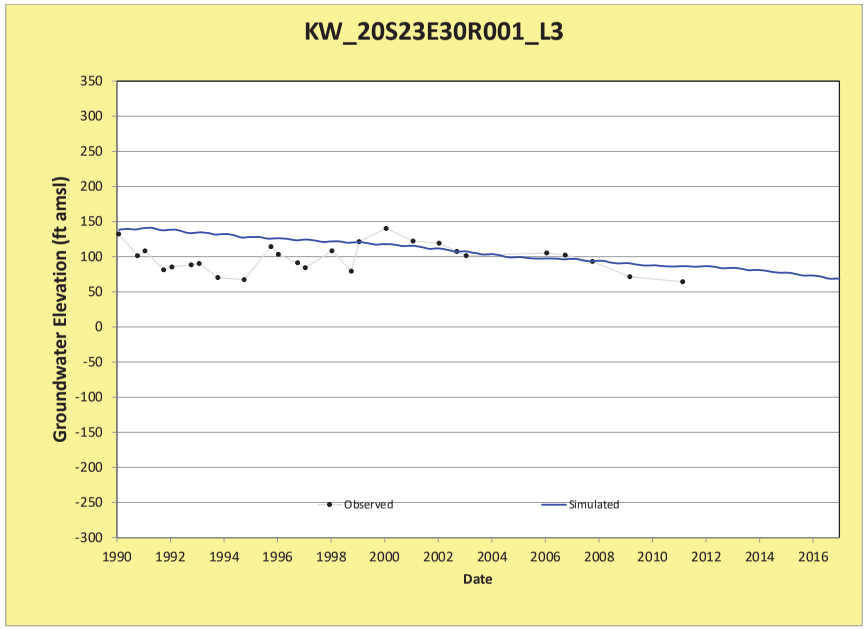

KW_20S23E13E002_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

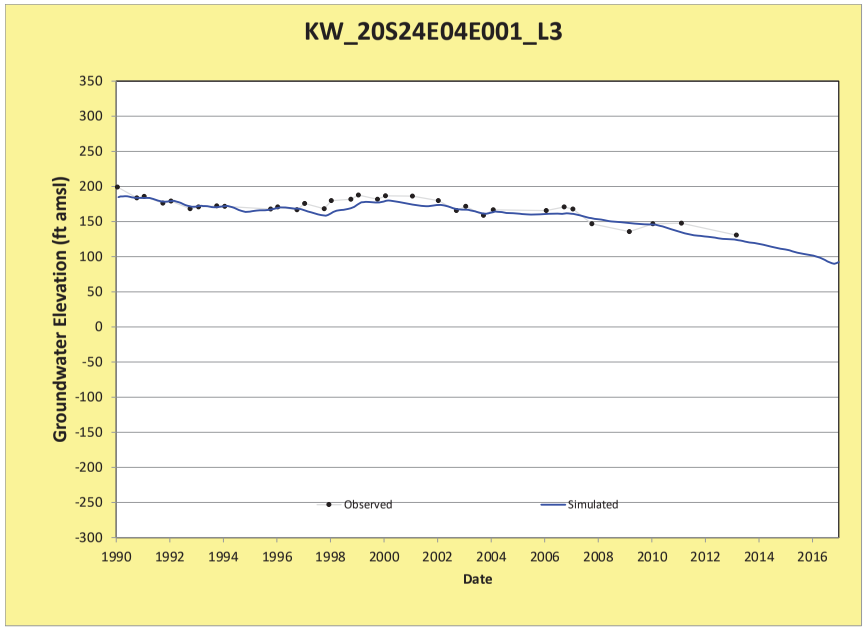

KW_20S23E18R001_L6
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

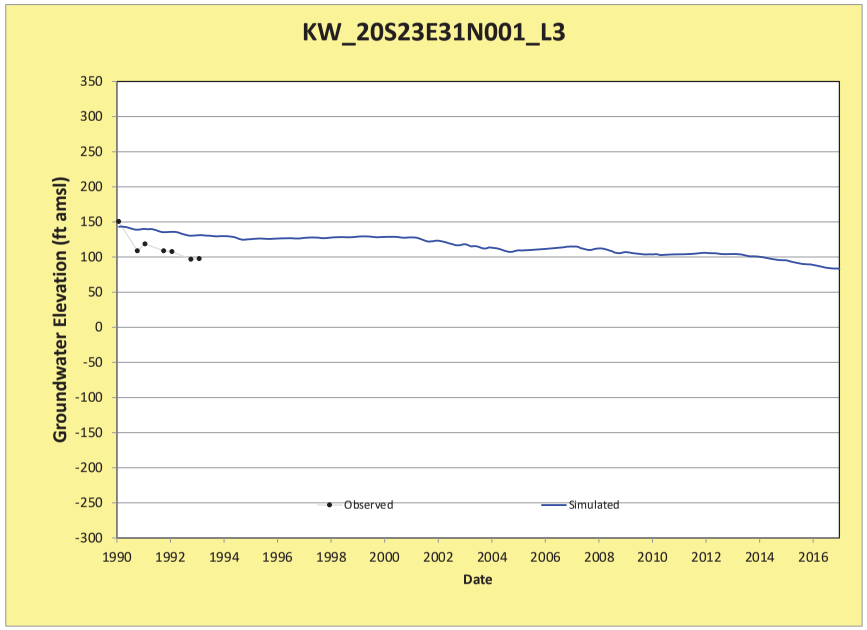

KW_20S23E24L001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KW_20S23E19J001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KW_20S23E29J002_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KW_20S23E30R001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KW_20S24E04E001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated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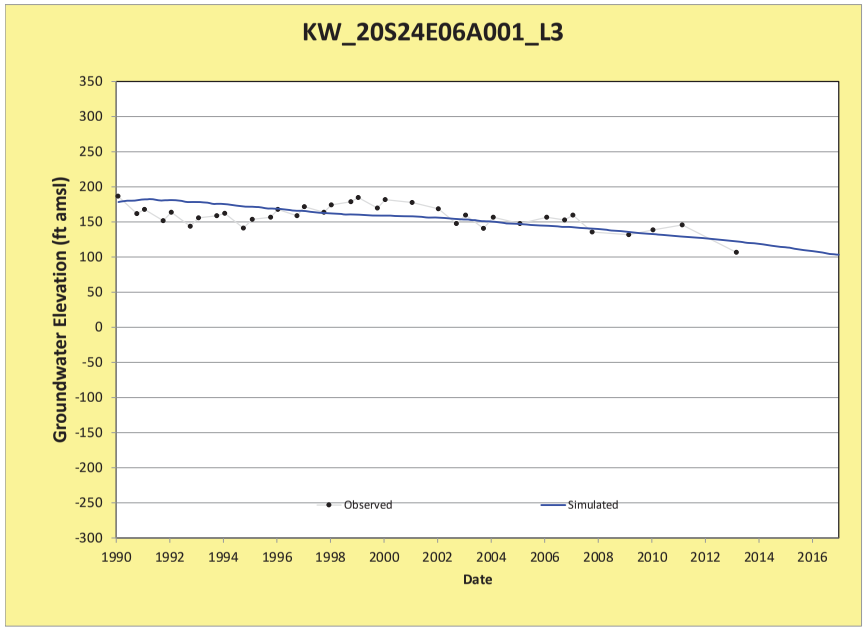
Groundwater Elevation (ft amsl)
Date
Observed
Simulated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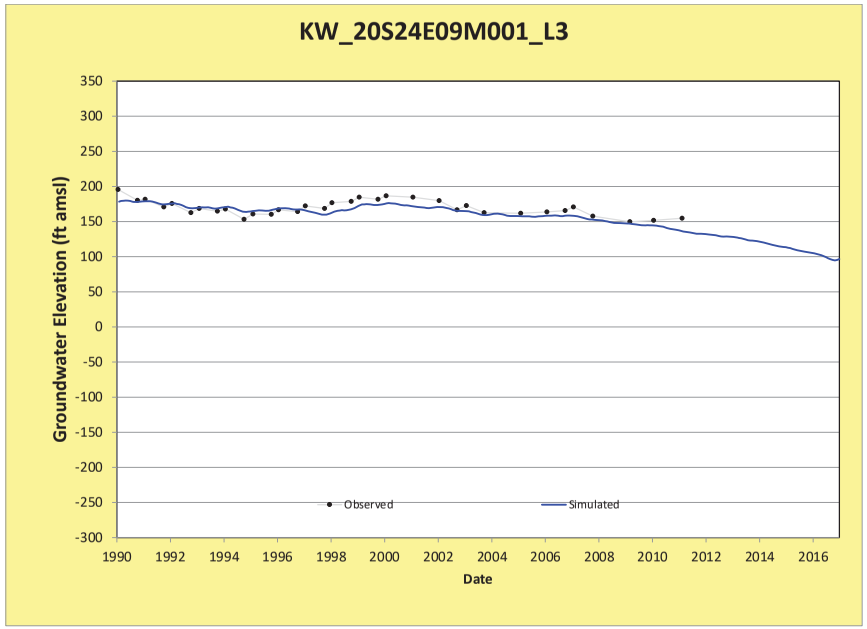
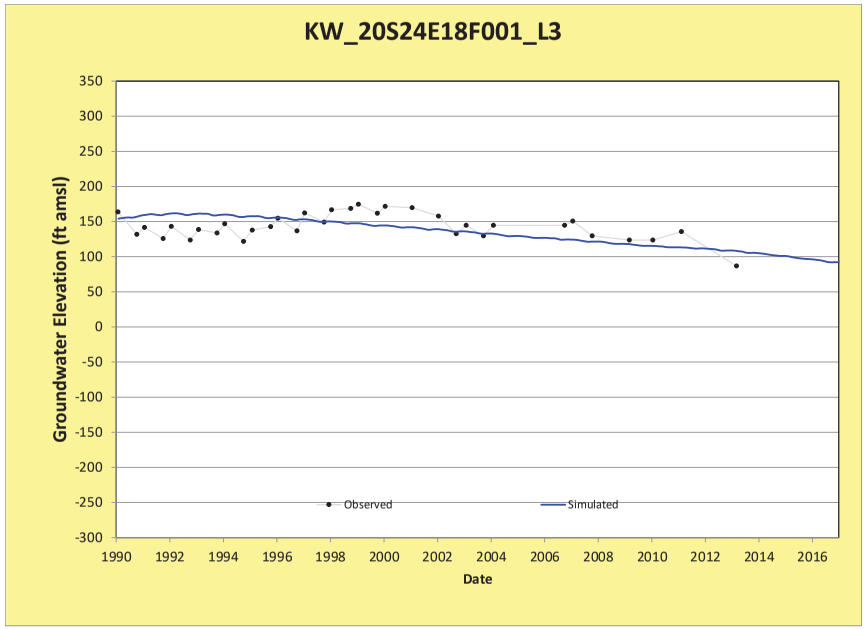
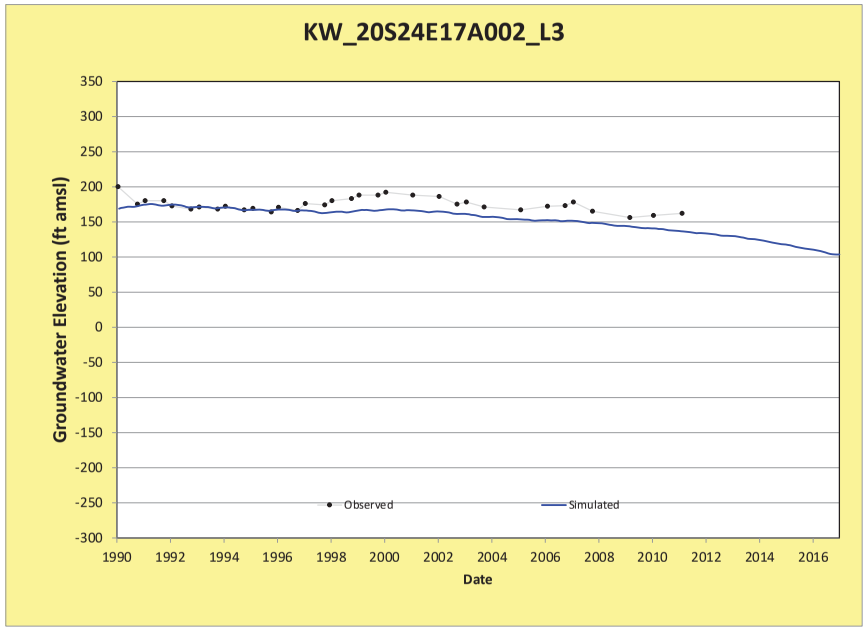
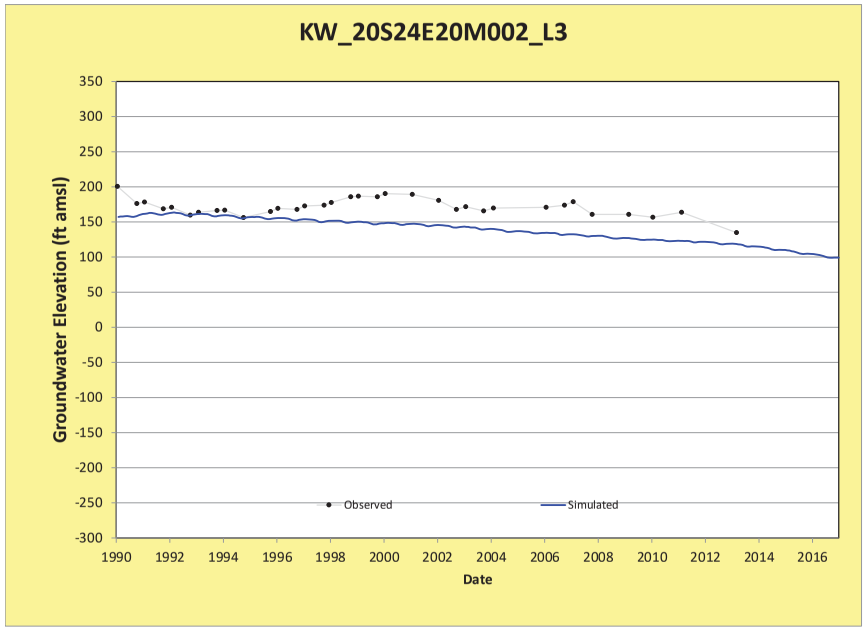
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KW_20S24E09M001_L3
Groundwater Elevation (ft amsl)
350
300
250
200
150
100
50
0
-50
-100
-150
-200
-250
-300
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
Date
Observed
Simulated


KW_20S24E18F001_L3
Groundwater Elevation (ft amsl)
350
300
250
200
150
100
50
0
-50
-100
-150
-200
-250
-300
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
Date
Observed
Simulated


KW_20S24E17A002_L3
Groundwater Elevation (ft amsl)
350
300
250
200
150
100
50
0
-50
-100
-150
-200
-250
-300
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
Date
Observed
Simulated


KW_20S24E20M002_L3
Groundwater Elevation (ft amsl)
350
300
250
200
150
100
50
0
-50
-100
-150
-200
-250
-300
1990
1992
1994
1996
1998
2000
2002
2004
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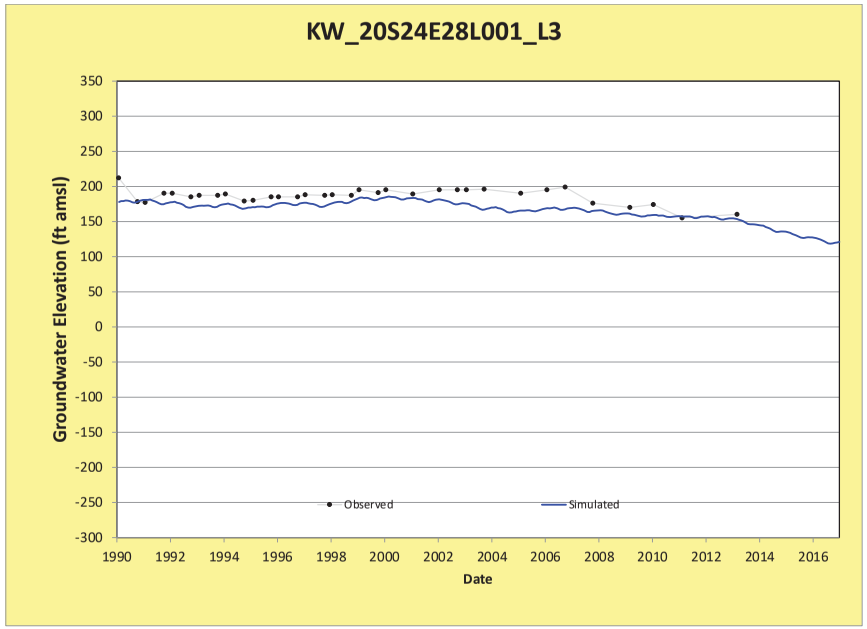
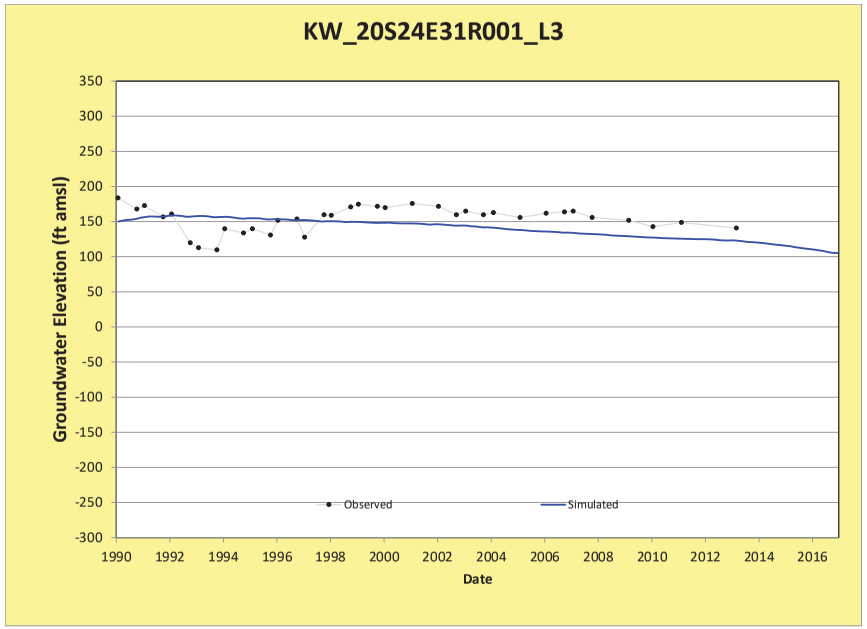
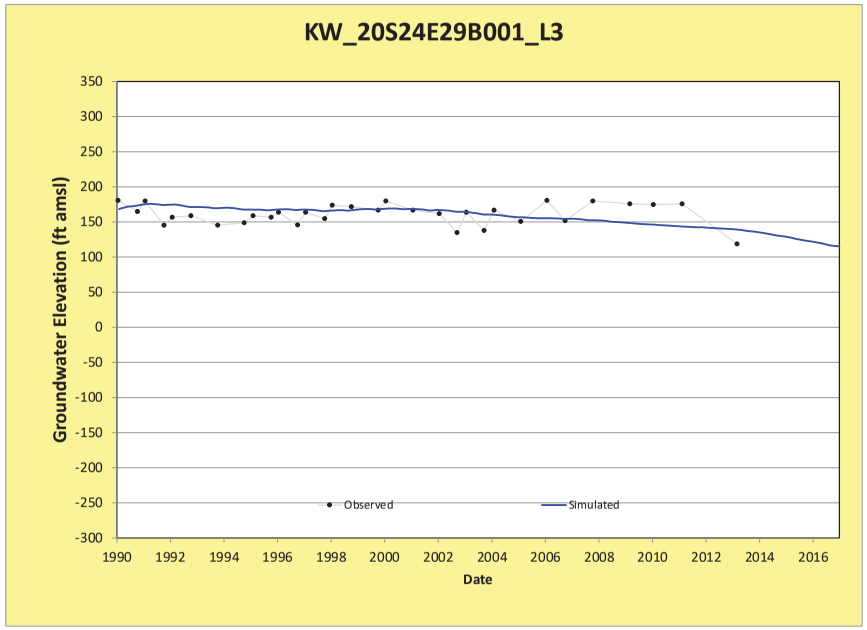
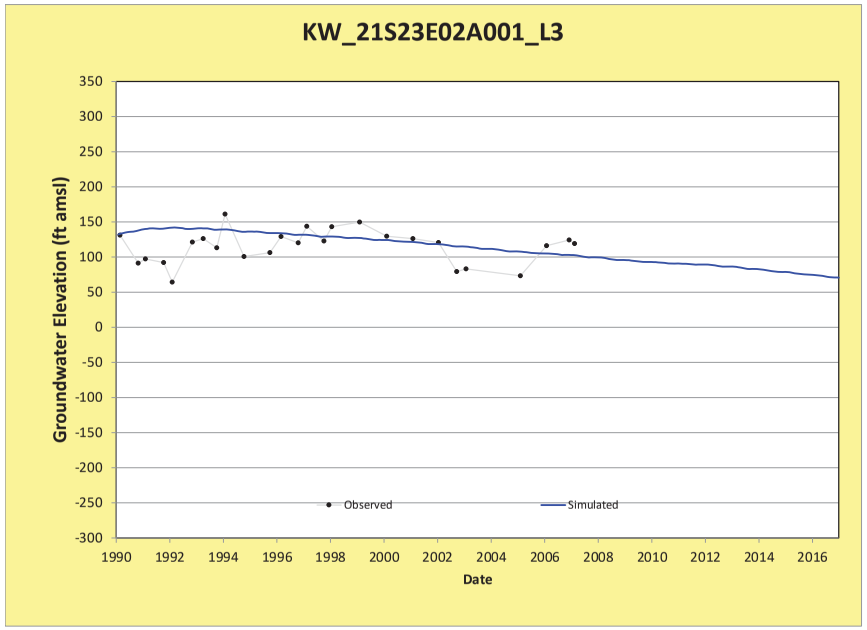
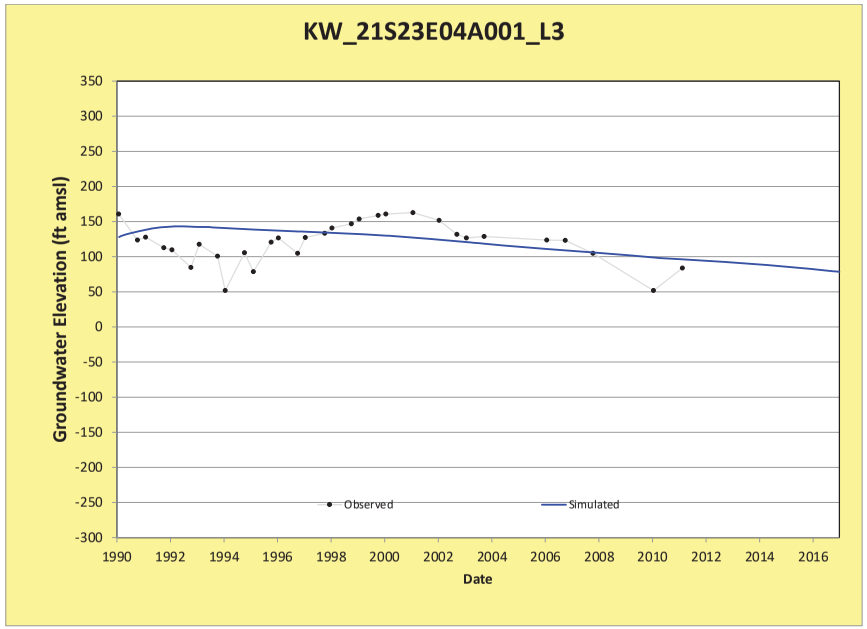
2008
2010
2012
2014
2016
Date
Observed
Simulated

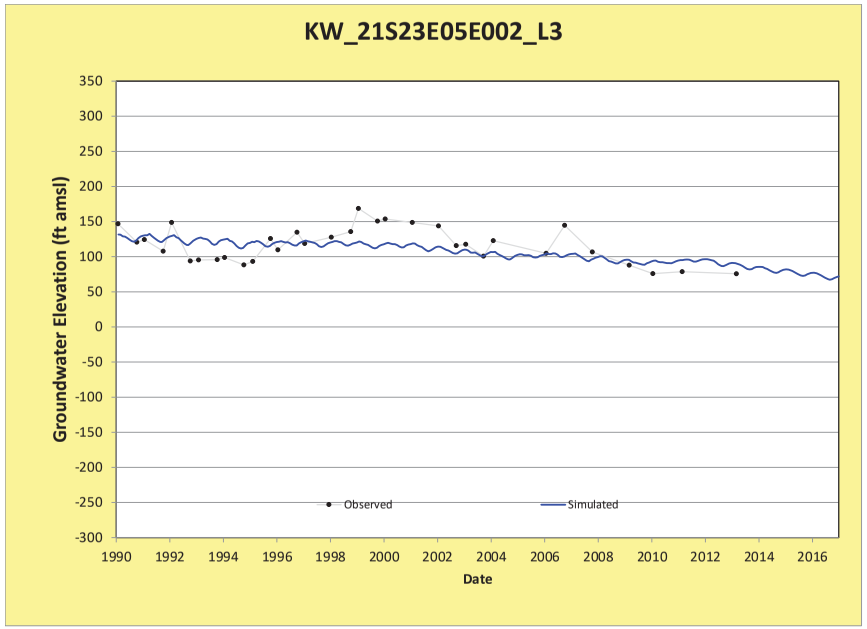

KW_20S24E28L001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

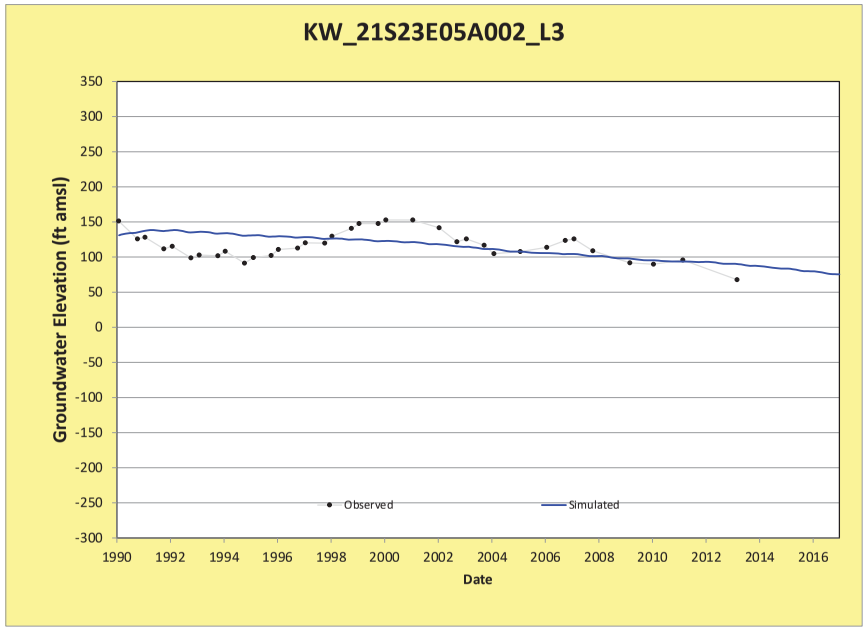

KW_20S24E31R001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

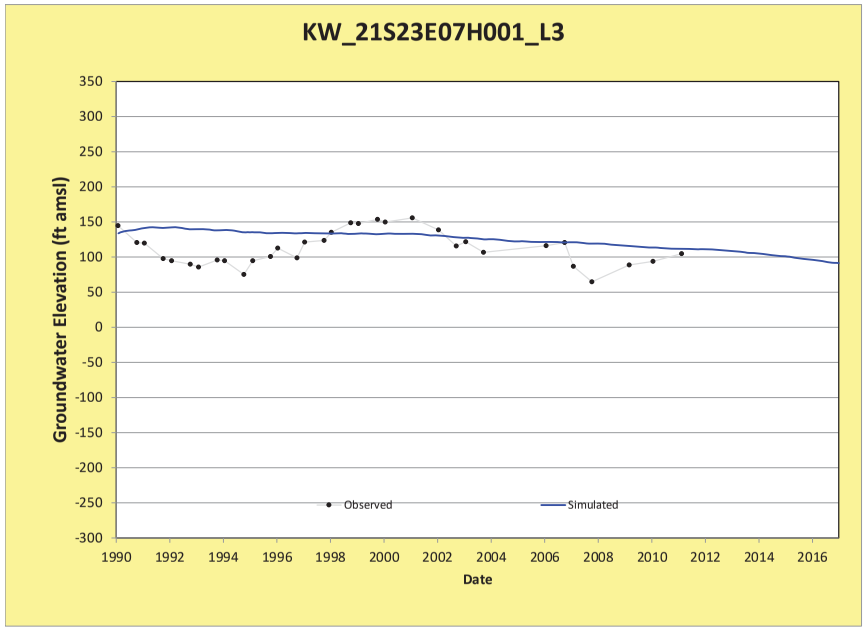

KW_20S24E29B001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

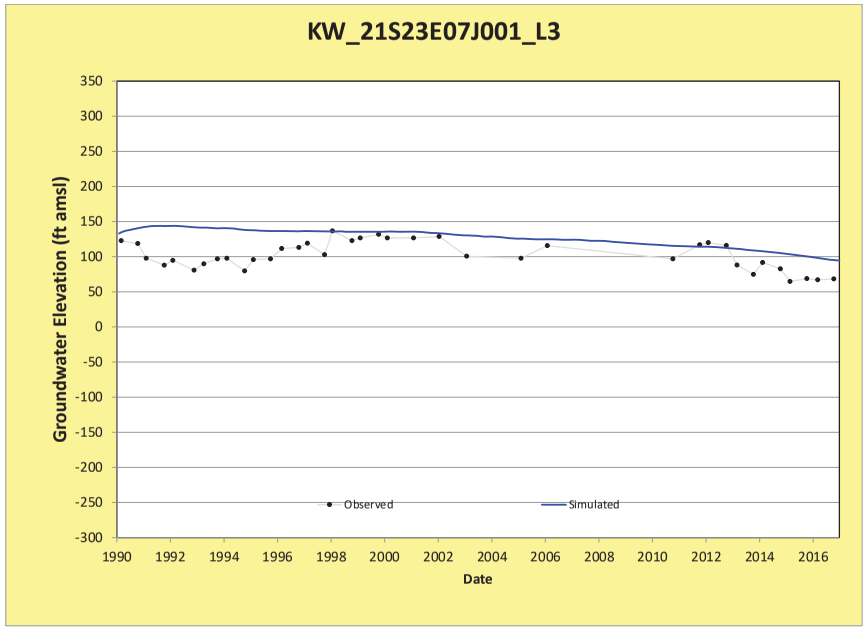

KW_21S23E02A001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

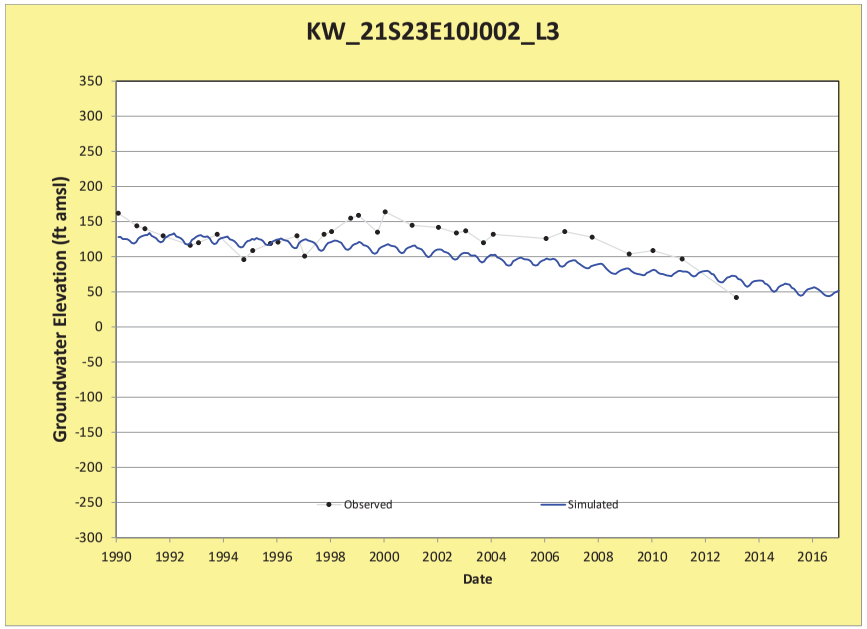

KW_21S23E04A001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

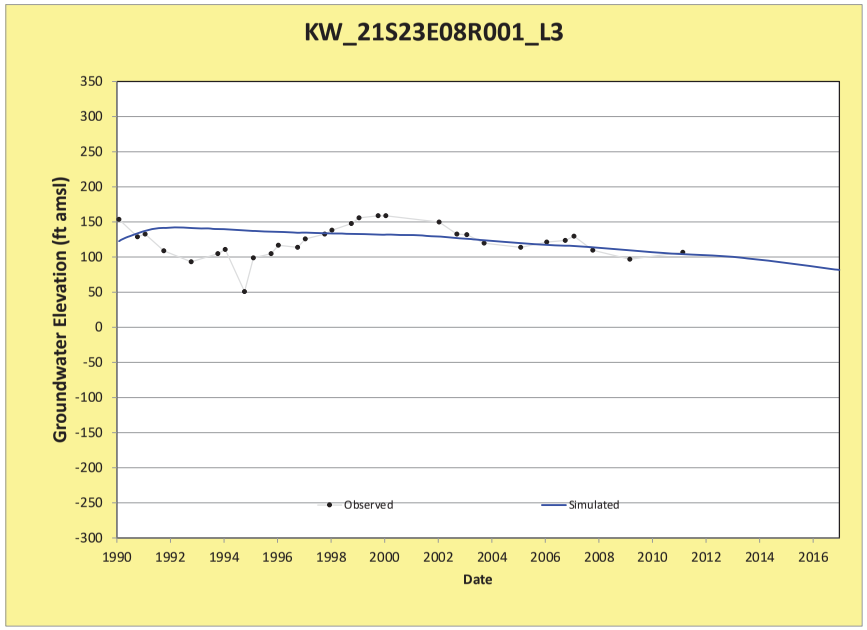

KW_21S23E05E002_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

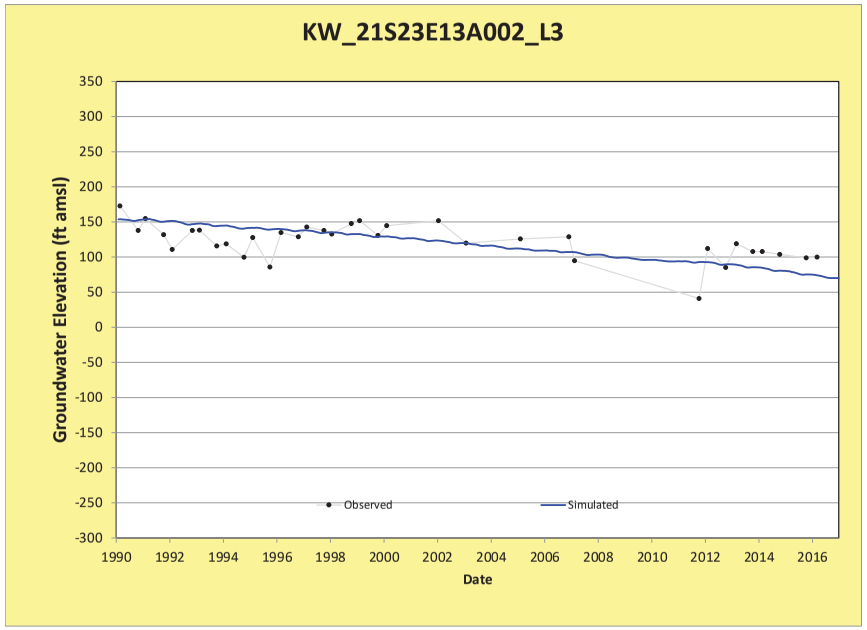

KW_21S23E05A002_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

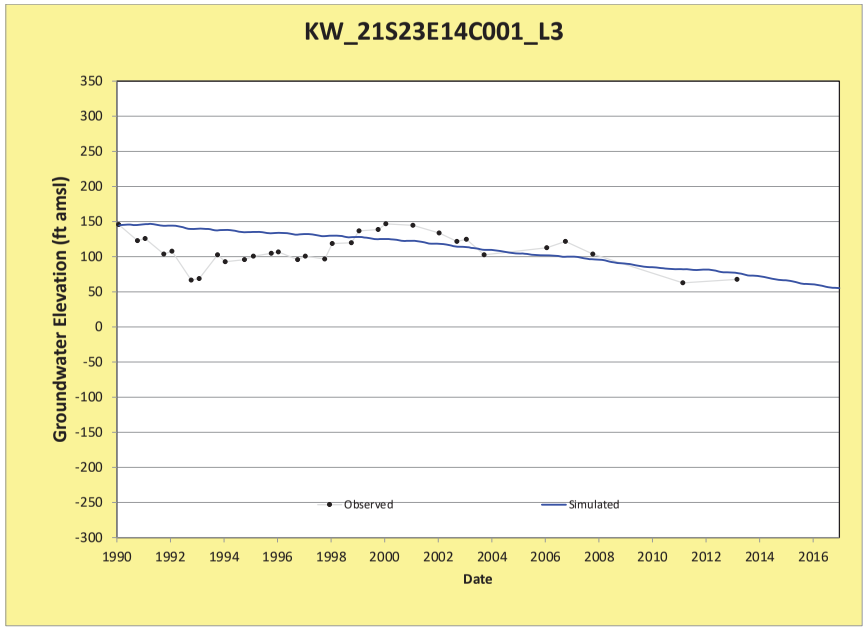

KW_21S23E07H001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

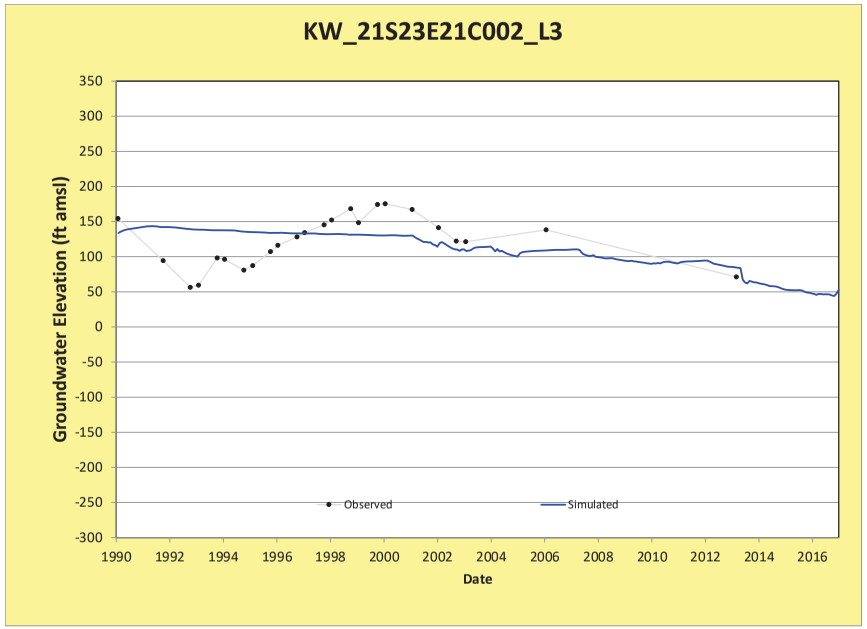

KW_21S23E07J001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

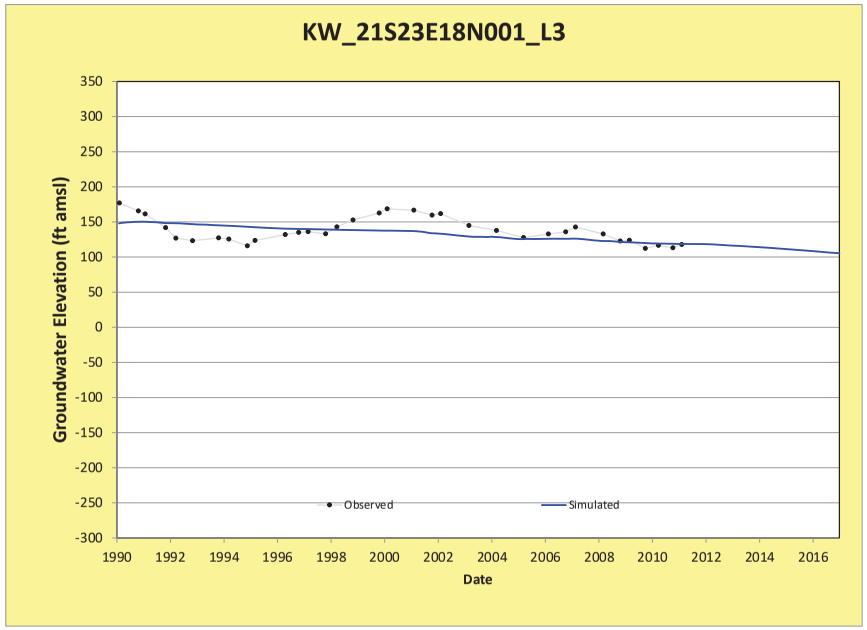

KW_21S23E10J002_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

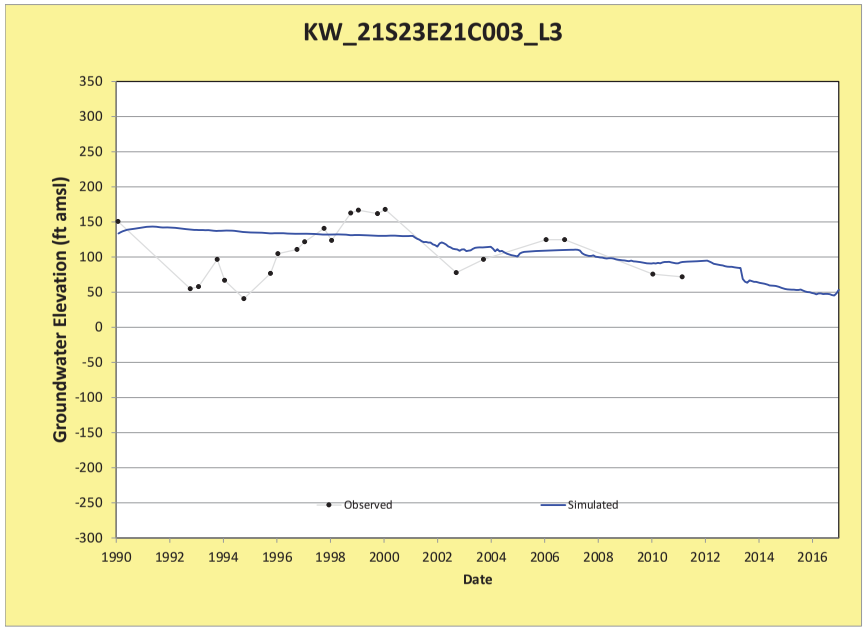

KW_21S23E08R001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

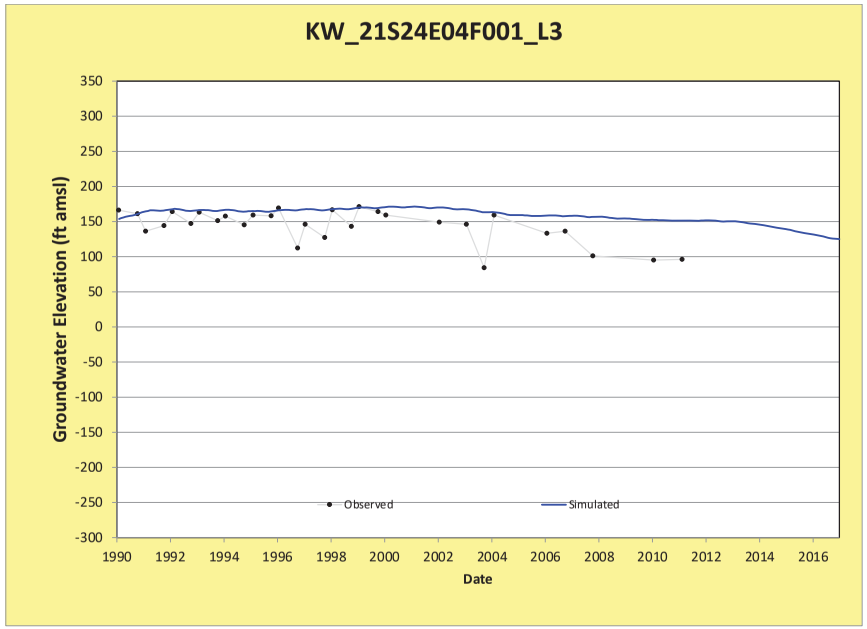

KW_21S23E13A002_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

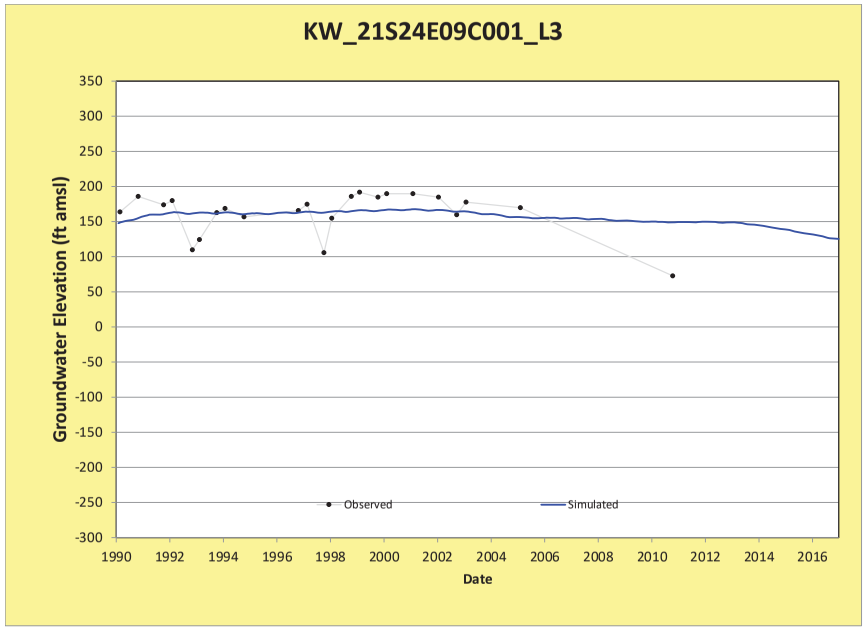

KW_21S23E14C001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

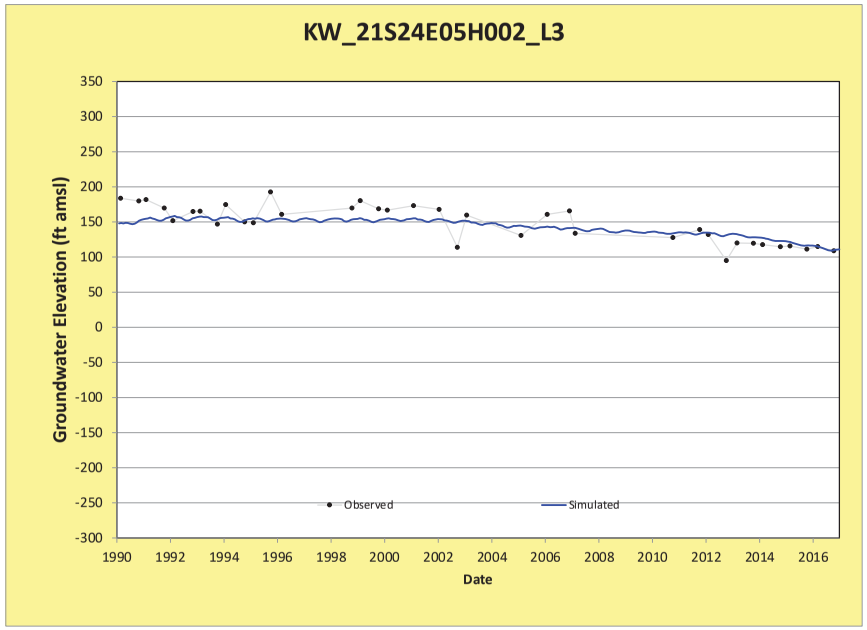

KW_21S23E21C002_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

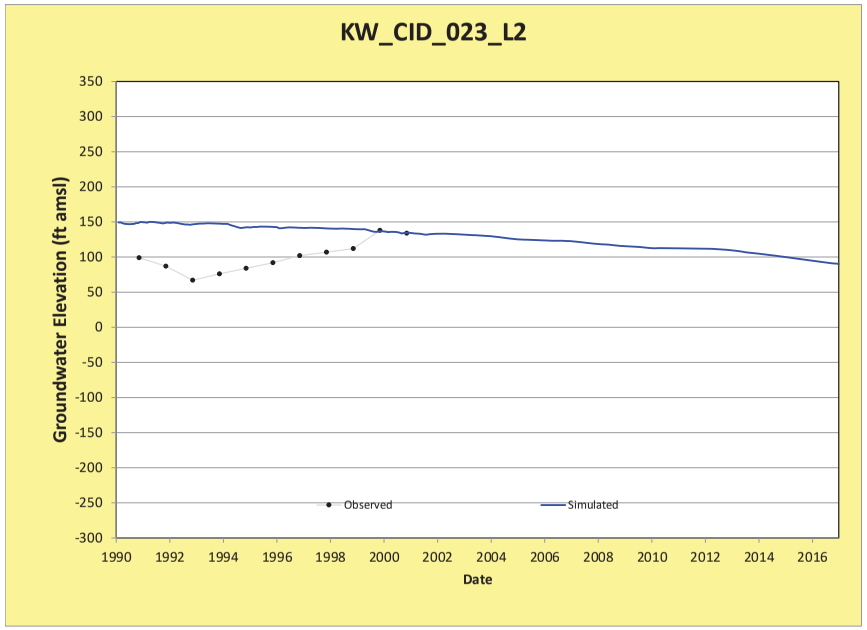

KW_21S23E18N001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

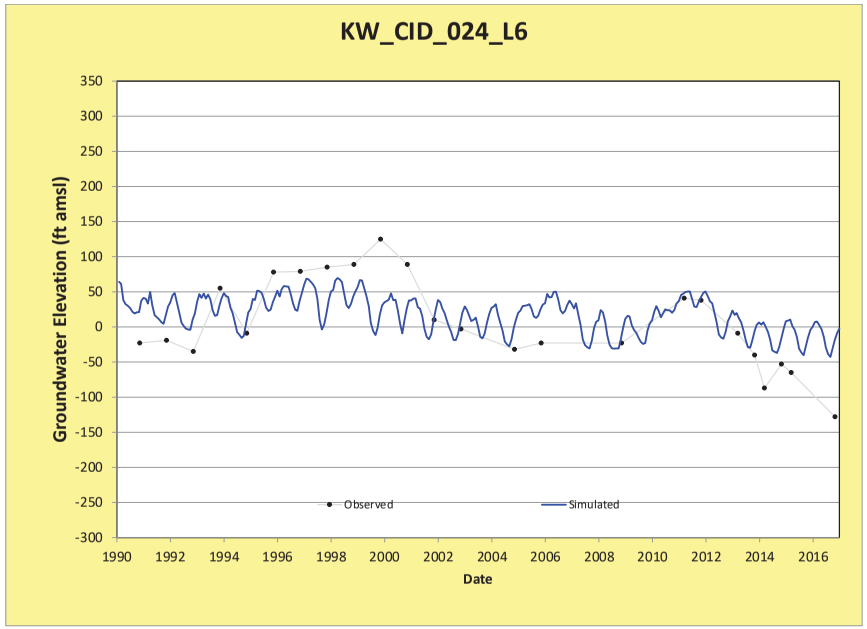

KW_21S23E21C003_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

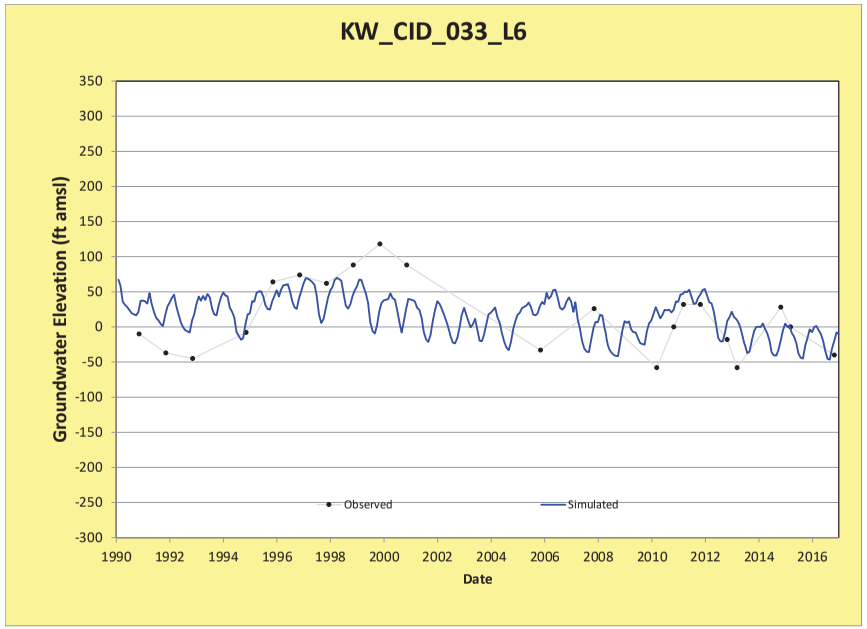

KW_21S24E04F001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

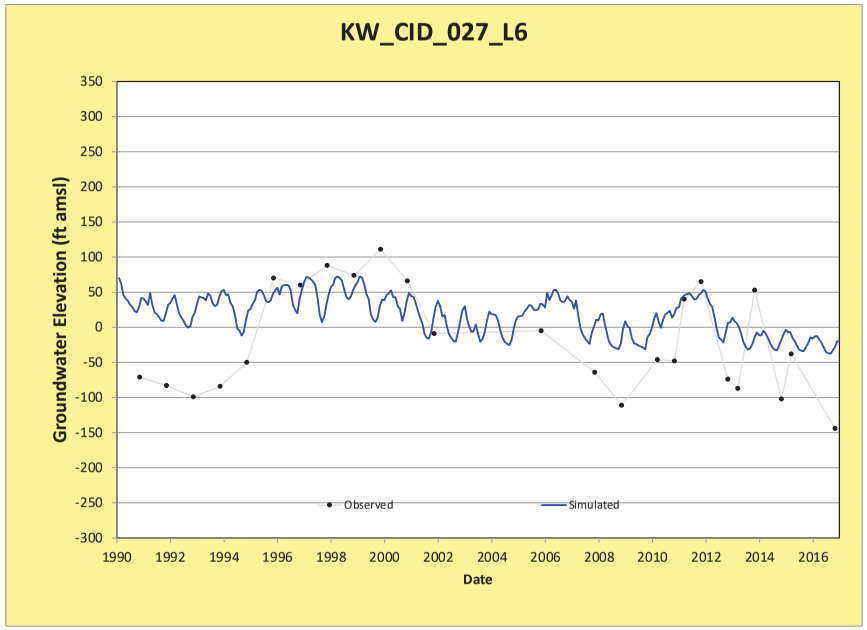

KW_21S24E09C001_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

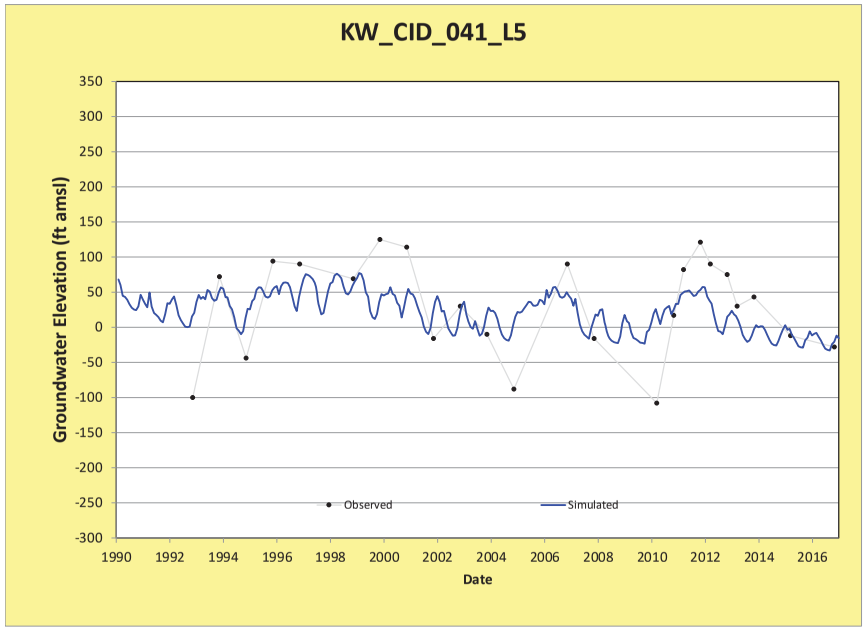

KW_21S24E05H002_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

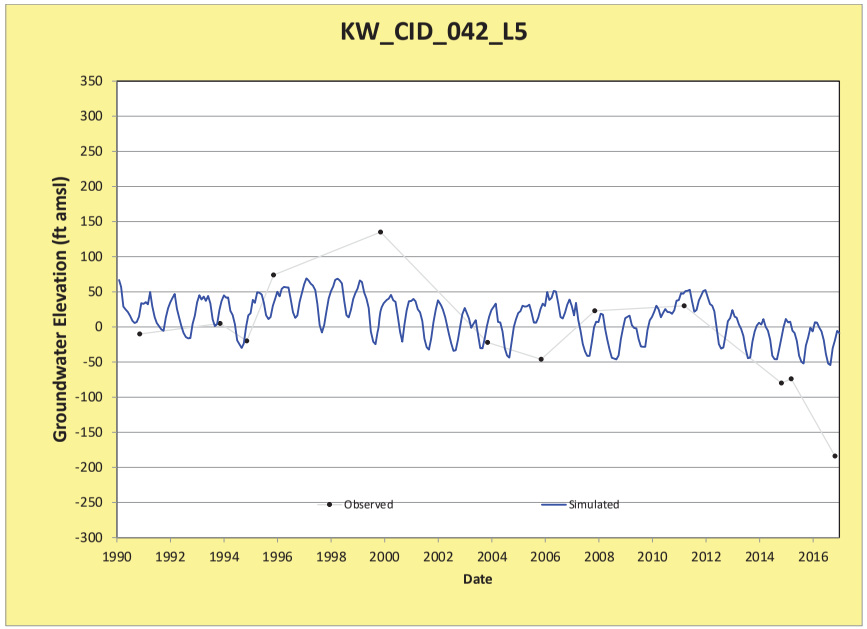

KW_CID_023_L2
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

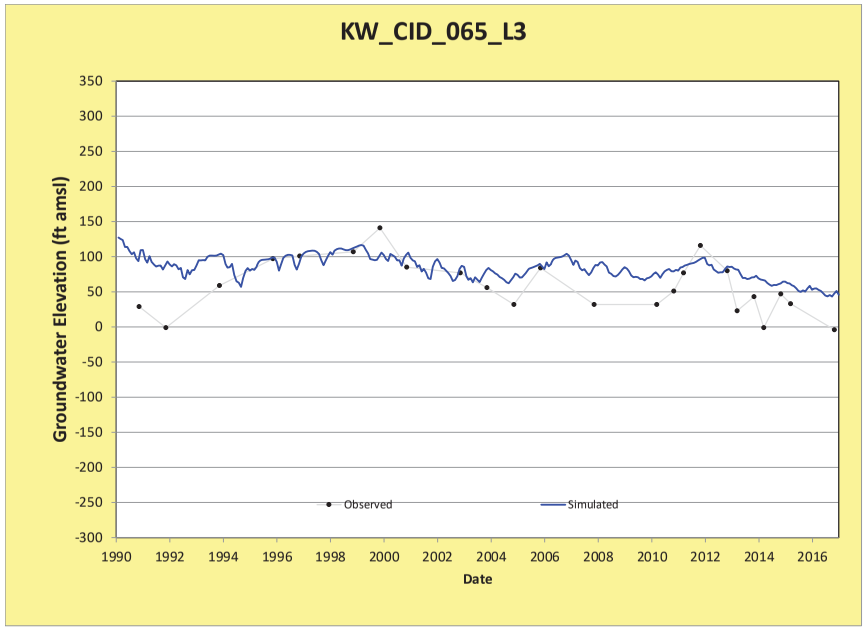

KW_CID_024_L6
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

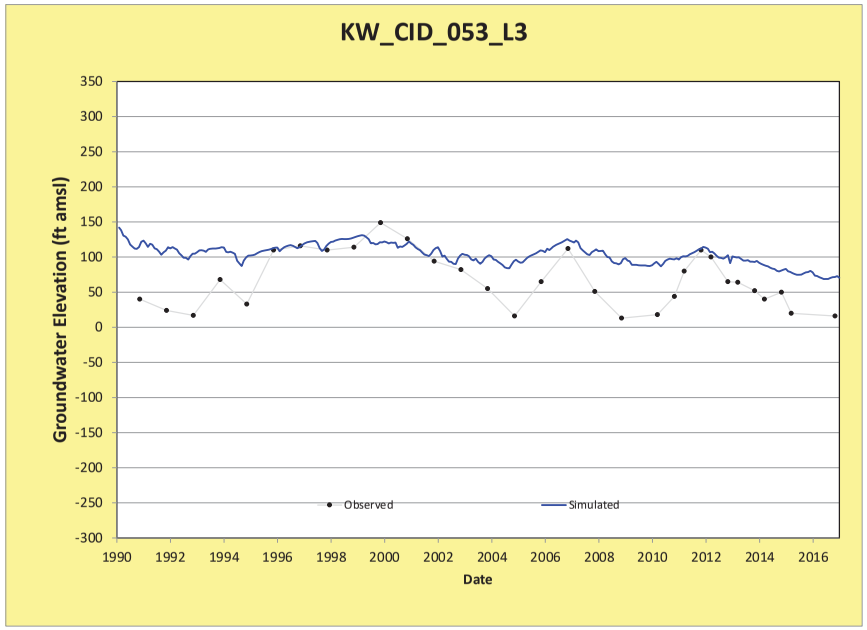

KW_CID_033_L6
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

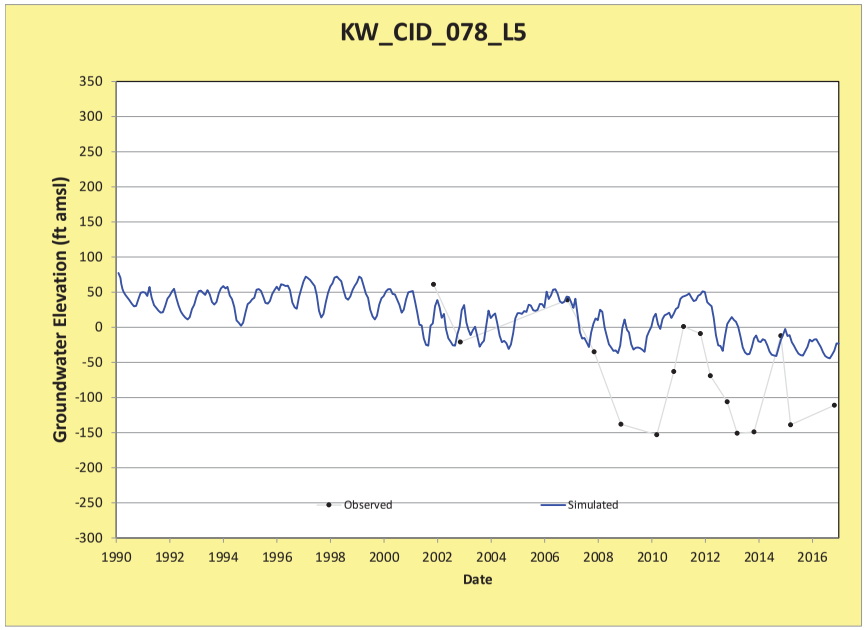

KW_CID_027_L6
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

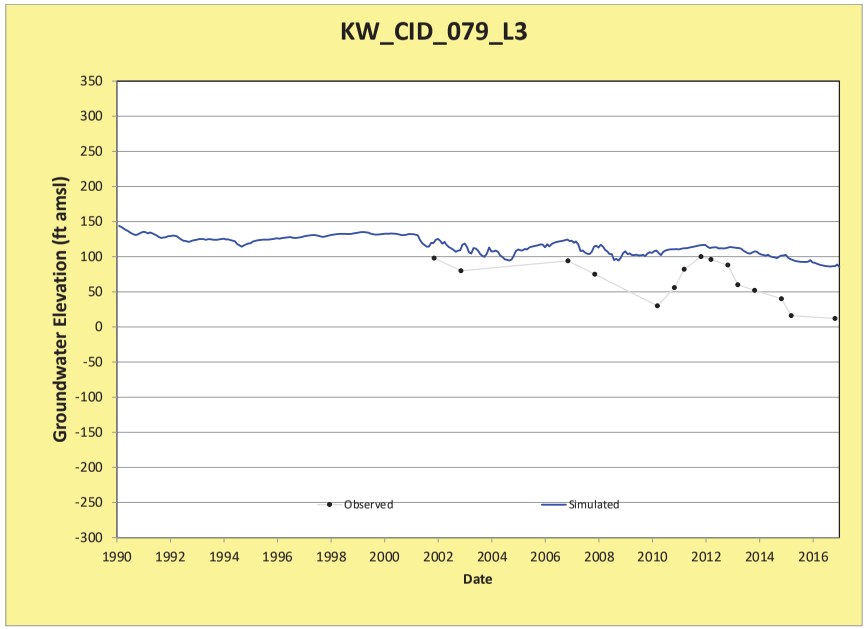

KW_CID_041_L5
Groundwater Elevation (ft amsl)
Date
Observed
Simulated

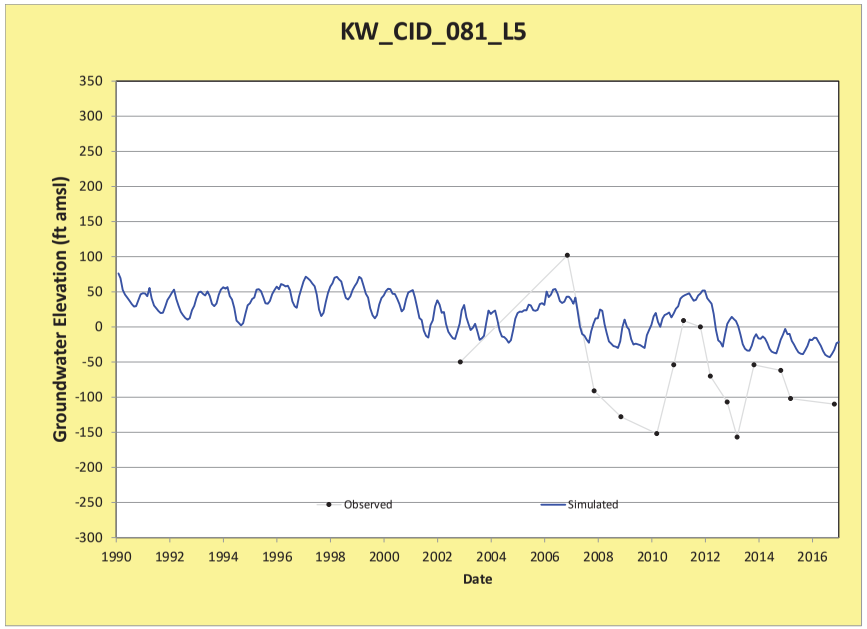

KW_CID_042_L5
Groundwater Elevation (ft amsl)
350
300
250
200
150
100
50
0
-50
-100
-150
-200
-250
-300
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
Date
Observed
Simulated

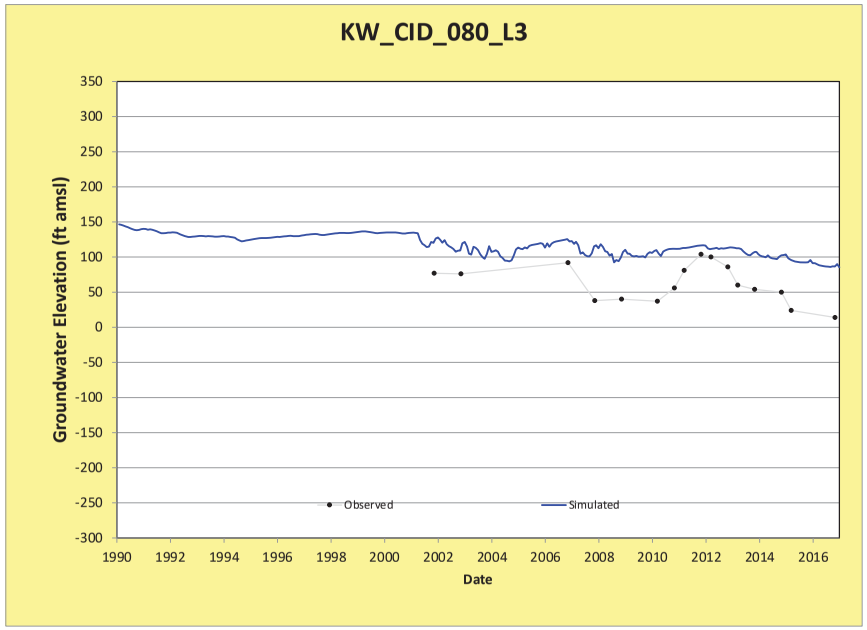

KW_CID_065_L3
Groundwater Elevation (ft amsl)
350
300
250
200
150
100
50
0
-50
-100
-150
-200
-250
-300
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
Date
Observed
Simulated

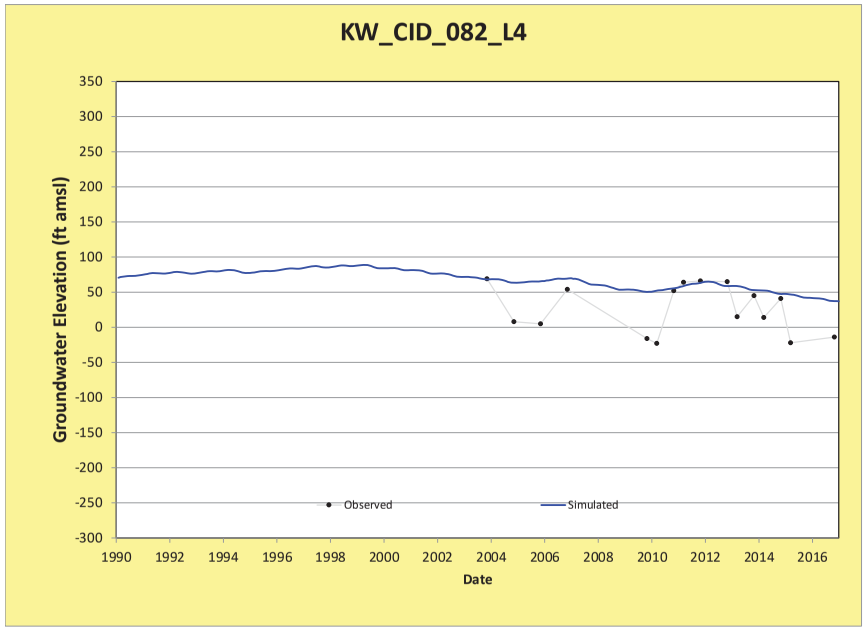

KW_CID_053_L3
Groundwater Elevation (ft amsl)
350
300
250
200
150
100
50
0
-50
-100
-150
-200
-250
-300
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
Date
Observed
Simulated


KW_CID_078_L5
Groundwater Elevation (ft amsl)
350
300
250
200
150
100
50
0
-50
-100
-150
-200
-250
-300
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
Date
Observed
Simulated


KW_CID_079_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KW_CID_081_L5
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KW_CID_080_L3
Groundwater Elevation (ft amsl)
Date
Observed
Simulated


KW_CID_082_L4
Groundwater Elevation (ft amsl)
Date
Observed
Simulated