

Report on Salinas Valley Water Conditions for the Second Quarter of Water Year 2018-2019

SUMMARY/DISCUSSION:

This report covers the second quarter of Water Year 2018-2019 (WY19), January through March, 2019. It provides a brief overview of water conditions in the Salinas Valley (Attachment A) with discussion of precipitation, reservoir storage, and groundwater level trends. Data for each of these components are included as graphs and tables in Attachments B through J.

Precipitation – Preliminary National Weather Service rainfall data indicates that the second quarter of WY19 brought near normal rainfall to Salinas and above normal rainfall to King City. Totals for the quarter were 7.27 inches (99% of normal rainfall of 7.35 inches for the quarter) at the Salinas Airport, and 11.14 inches (158% of normal rainfall of 7.03 inches for the quarter) in King City.

Attachment B contains graphs for both stations showing monthly and cumulative precipitation data for the current and a “normal” water year, based on long-term monthly precipitation averages. Attachment B also includes tables showing values for precipitation totals as well as percent of “normal” precipitation.

Reservoirs - The following table compares second quarter storage at Nacimiento and San Antonio reservoirs for the past two years. Storage in Nacimiento Reservoir is 114,025 acre-feet higher than in March 2018, and storage in San Antonio Reservoir is 18,402 acre-feet higher.

Reservoir	March 31, 2019 (WY19) Storage in acre-feet	March 31, 2018 (WY18) Storage in acre-feet	Difference in acre-feet
Nacimiento	325,700	211,675	114,025
San Antonio	132,965	114,563	18,402

Graphs showing daily reservoir storage for the last five water years along with 30-year average daily storage for comparison are included as Attachments C and D.

Groundwater Levels – More than 90 wells are measured monthly throughout the Salinas Valley to monitor seasonal groundwater level fluctuations. Data from approximately 50 of these wells are used in the preparation of this report. The measurements are categorized by hydrologic subarea, averaged, and graphed to compare current water levels (WY19) with selected past conditions. Graphs for individual subareas, showing the current year’s water level conditions, last year’s conditions (WY18) and dry conditions (WY15) are found in Attachments E through I. For comparison to long term conditions, a curve showing monthly water levels averaged over the most recent 30 years (WY1988-WY2018) is included on each graph. Attachment J is a summary of water level changes for all subareas.

Groundwater level measurements document a net recovery of water levels in the second quarter of WY19 in all subareas. However, over the last month of the quarter, groundwater levels declined in all subareas, except the Pressure 180-Foot Aquifer which rose by less than one foot, while the Pressure 400-Foot Aquifer and Forebay Subarea decreased by one foot, the East Side Subarea decreased by four feet, and the Upper Valley Subarea decreased by less than one foot.

Compared to March 2018, average groundwater levels in March 2019 were up by seven feet in the Pressure 180-Foot Aquifer, by four feet the Pressure 400-Foot Aquifer, by two feet in the East Side Subarea, by six feet in the Forebay Subarea, and by three feet in the Upper Valley Subarea.

When compared to 30 year average groundwater conditions, March 2019 water levels were down by less than one foot in the Pressure 180-Foot Aquifer and by eight feet in the East Side Subarea, while water levels were up by less than one foot in the Pressure 400-Foot Aquifer and in the Forebay and Upper Valley Subareas.

Average groundwater levels at end of the second quarter of WY19 were higher in all subareas than in WY15 (dry conditions).

OTHER AGENCY INVOLVEMENT:

None

FINANCING:

Funds 111, 116

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Attachments:

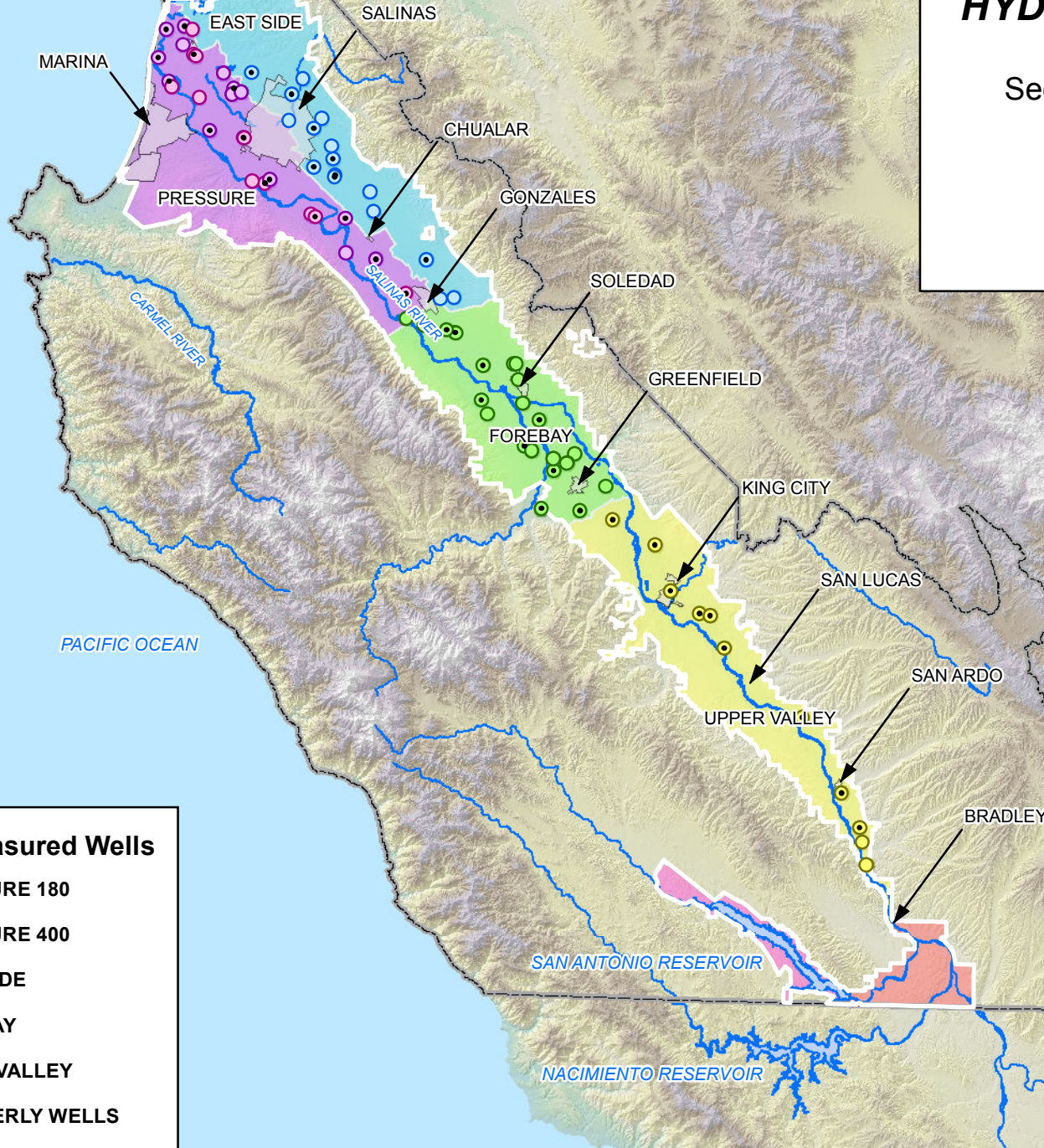
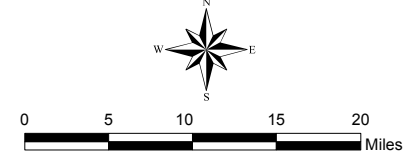
1. Attachment A, Salinas Valley Hydrologic Subareas Map
2. Attachment B, Salinas and King City Precipitation Graphs
3. Attachment C, Nacimiento Reservoir Graph
4. Attachment D, San Antonio Reservoir Graph
5. Attachment E, Groundwater Trends Pressure 180-Foot Aquifer
6. Attachment F, Groundwater Trends Pressure 400-Foot Aquifer
7. Attachment G, Groundwater Trends East Side Subarea

8. Attachment H, Groundwater Trends Forebay Subarea
9. Attachment I, Groundwater Trends Upper Valley Subarea
10. Attachment J, Groundwater Trends Summary

SALINAS VALLEY GROUNDWATER BASIN HYDROLOGIC SUBAREAS

ZONE 2C

Second Quarter of Water Year
2018-2019

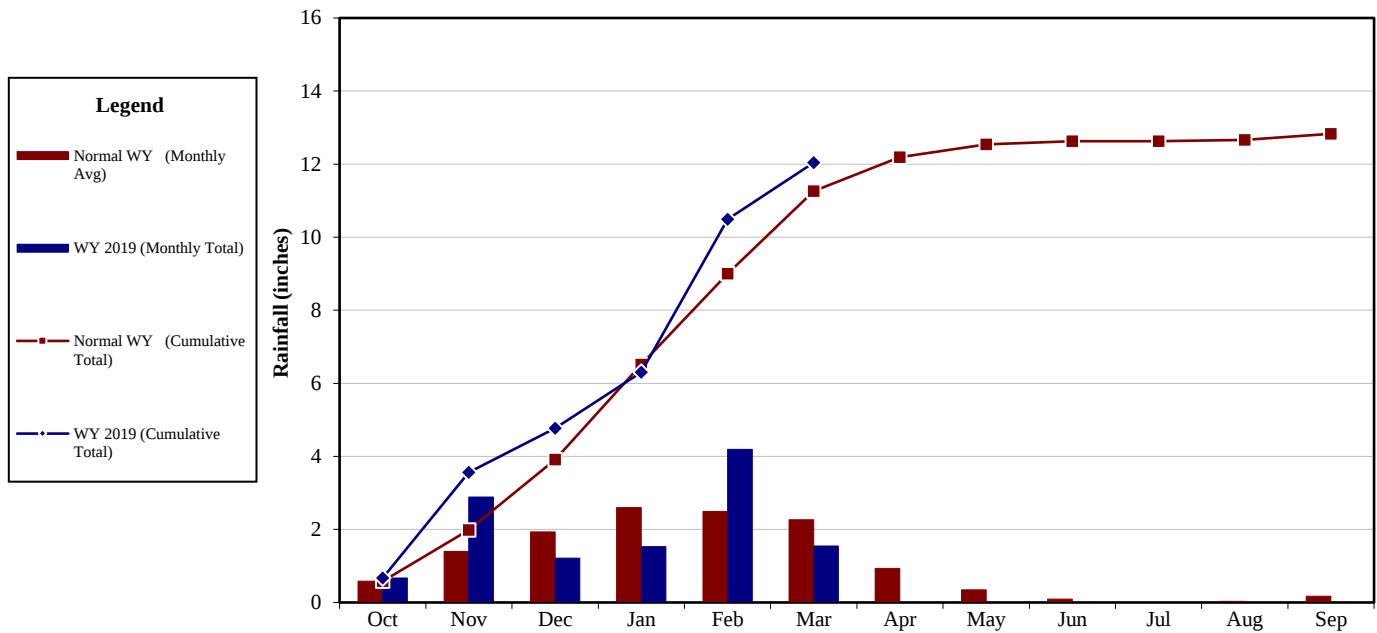


Monthly Measured Wells

- PRESSURE 180
- PRESSURE 400
- EAST SIDE
- FOREBAY
- UPPER VALLEY
- QUARTERLY WELLS

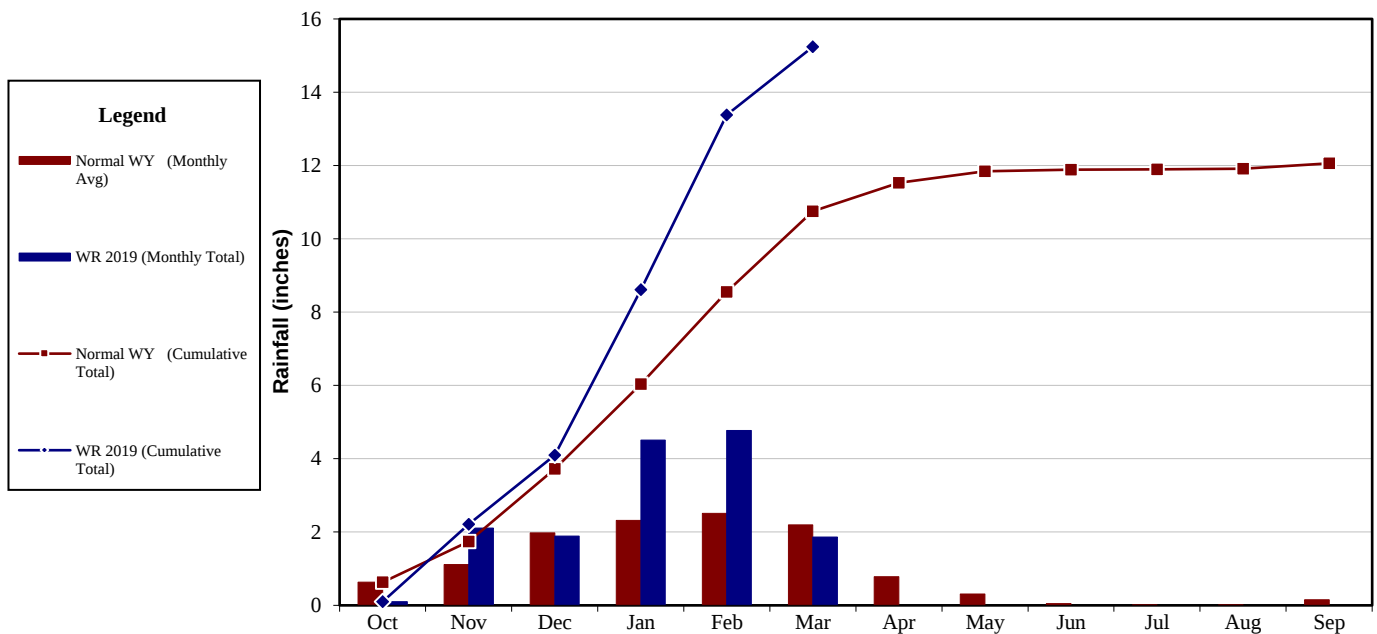
ATTACHMENT A

SALINAS AIRPORT RAINFALL WATER YEAR 2019



Monthly Rainfall (WY 2019)	0.67	2.89	1.21	1.53	4.19	1.55						
Monthly Rainfall (Normal WY*)	0.58	1.40	1.93	2.60	2.49	2.26	0.93	0.35	0.09	0.00	0.03	0.17
Percent of Normal for Month	116%	206%	63%	59%	168%	69%						
Cumulative Rainfall (WY 2019)	0.67	3.56	4.77	6.30	10.49	12.04						
Cumulative Rainfall (Normal WY*)	0.58	1.98	3.91	6.51	9.00	11.26	12.19	12.54	12.63	12.63	12.66	12.83
Percent of Cumulative Normal	116%	180%	122%	97%	117%	107%						

KING CITY RAINFALL WATER YEAR 2019

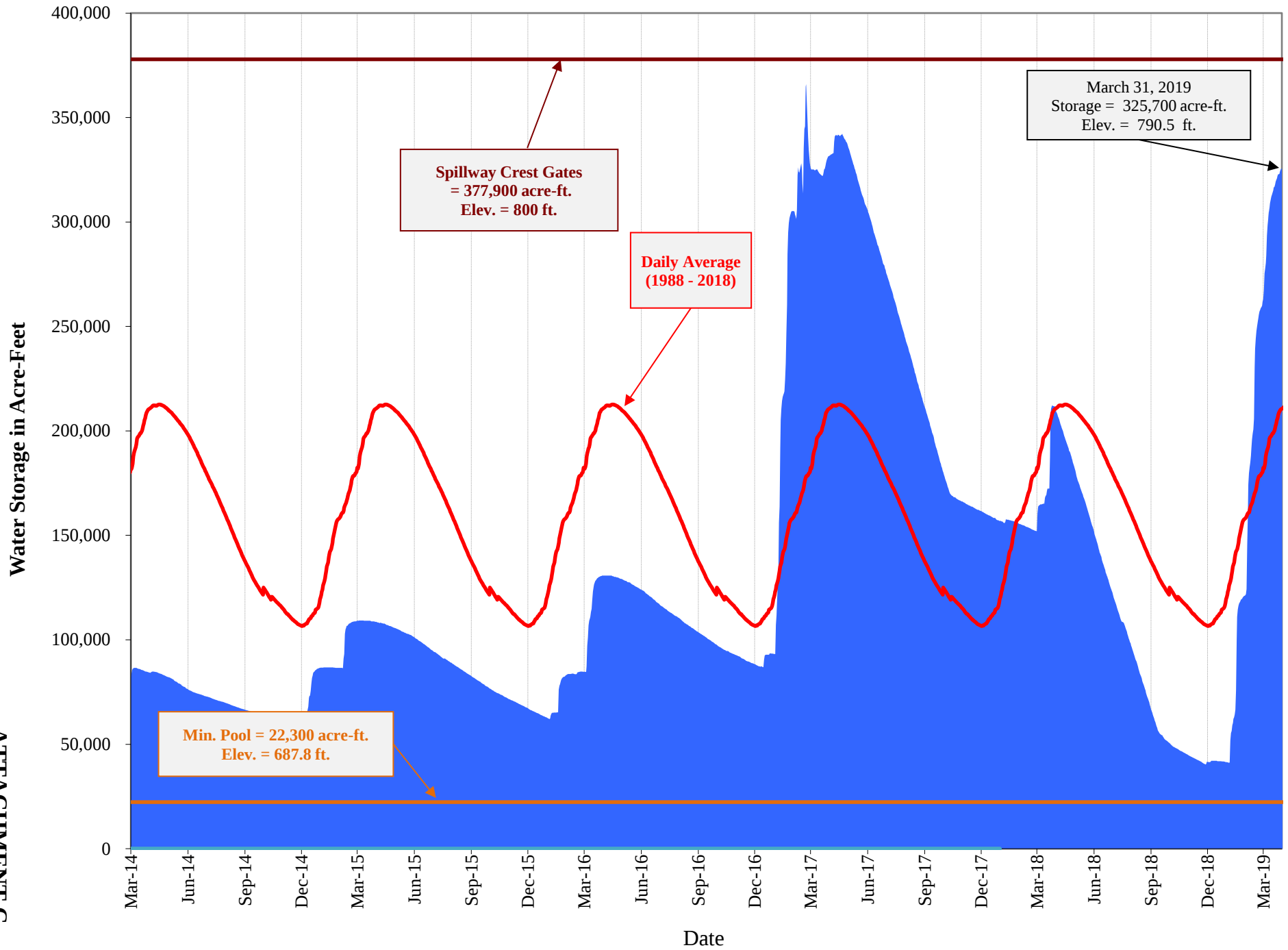


Monthly Rainfall (WR 2019)	0.10	2.11	1.89	4.51	4.77	1.86						
Monthly Rainfall (Normal WY*)	0.63	1.11	1.98	2.32	2.51	2.20	0.78	0.31	0.05	0.01	0.01	0.15
Percent of Normal for Month	16%	190%	95%	194%	190%	85%						
Cumulative Rainfall (WR 2019)	0.10	2.21	4.10	8.61	13.38	15.24						
Cumulative Rainfall (Normal WY*)	0.63	1.74	3.72	6.04	8.55	10.75	11.53	11.84	11.89	11.90	11.91	12.06
Percent of Cumulative Normal	16%	127%	110%	143%	156%	142%						

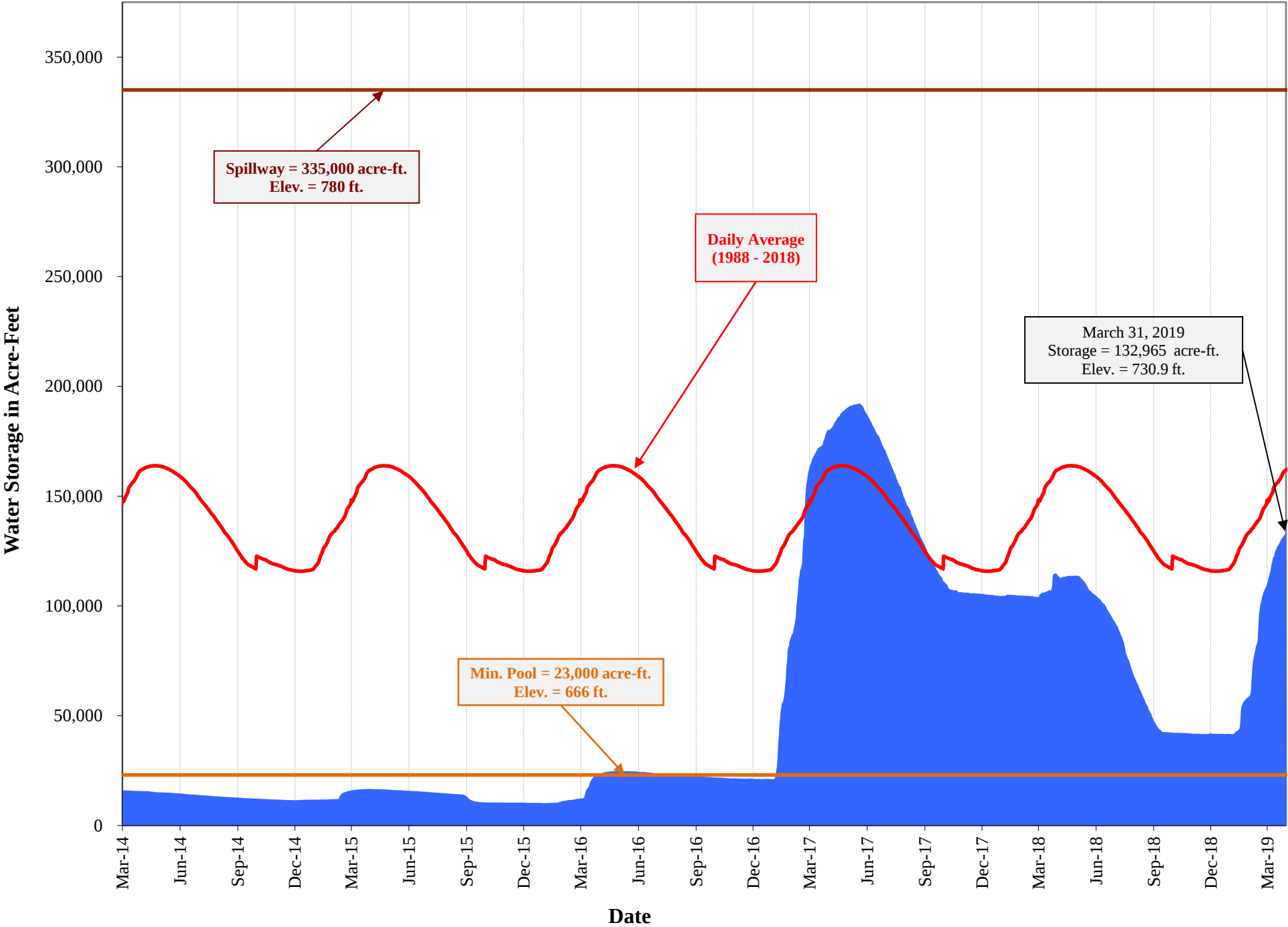
*Average precipitation over the most recent 30-year period ending in a decade (1981-2010)

ATTACHMENT B

NACIMIENTO RESERVOIR DAILY STORAGE



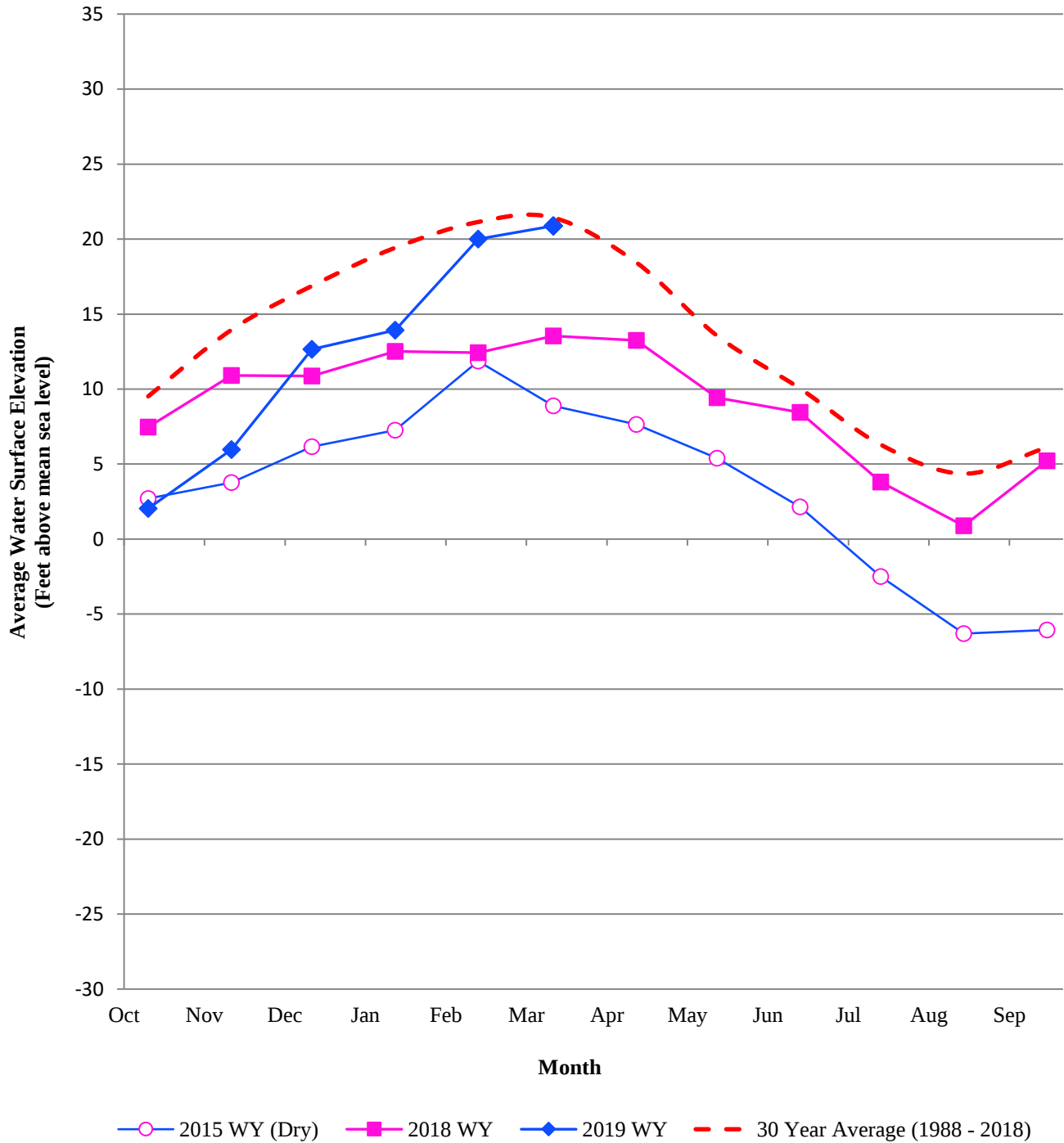
**SAN ANTONIO RESERVOIR
DAILY STORAGE**



GROUNDWATER TRENDS

PRESSURE 180-FOOT AQUIFER

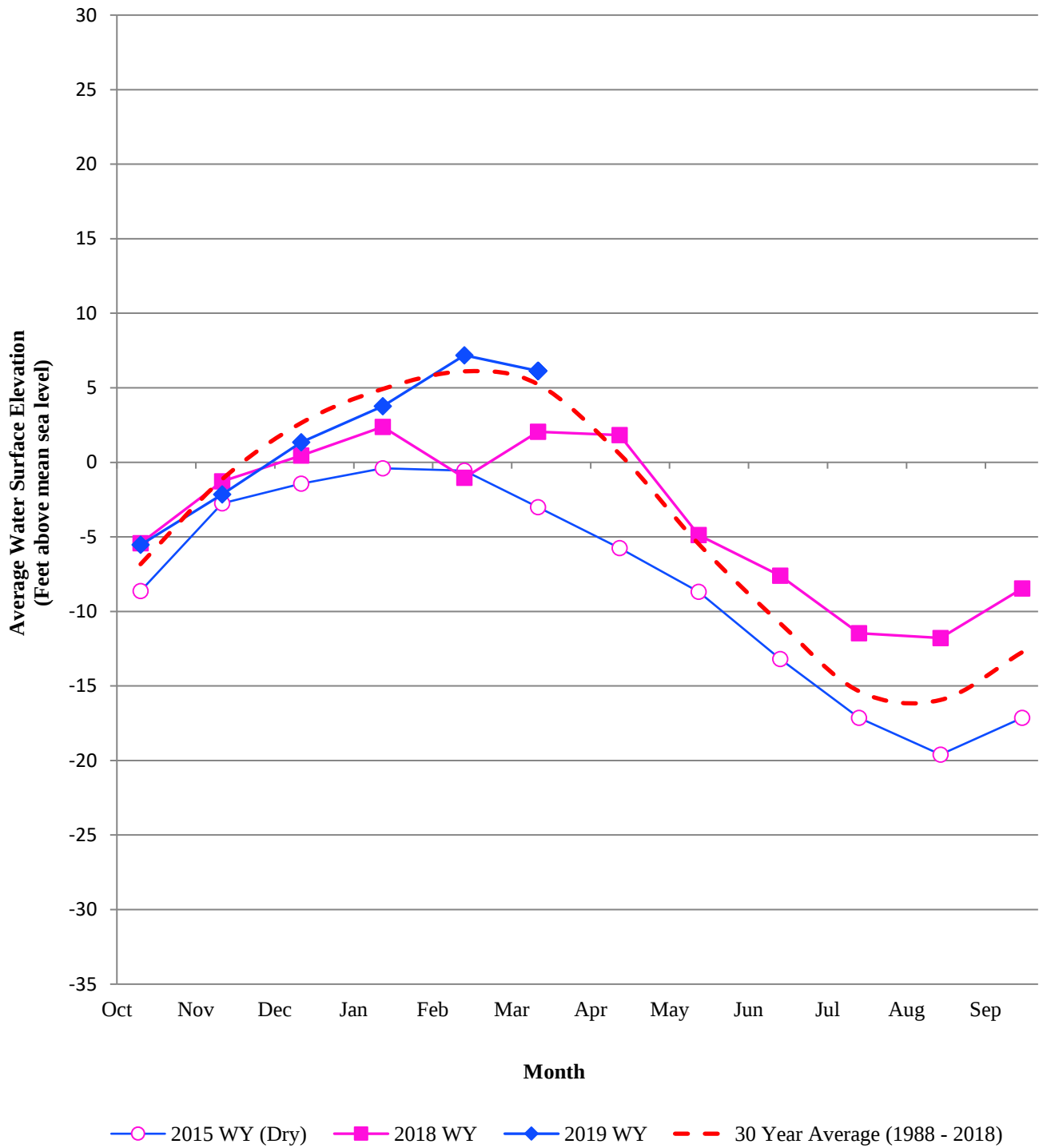
5 Wells



GROUNDWATER TRENDS

PRESSURE 400-FOOT AQUIFER

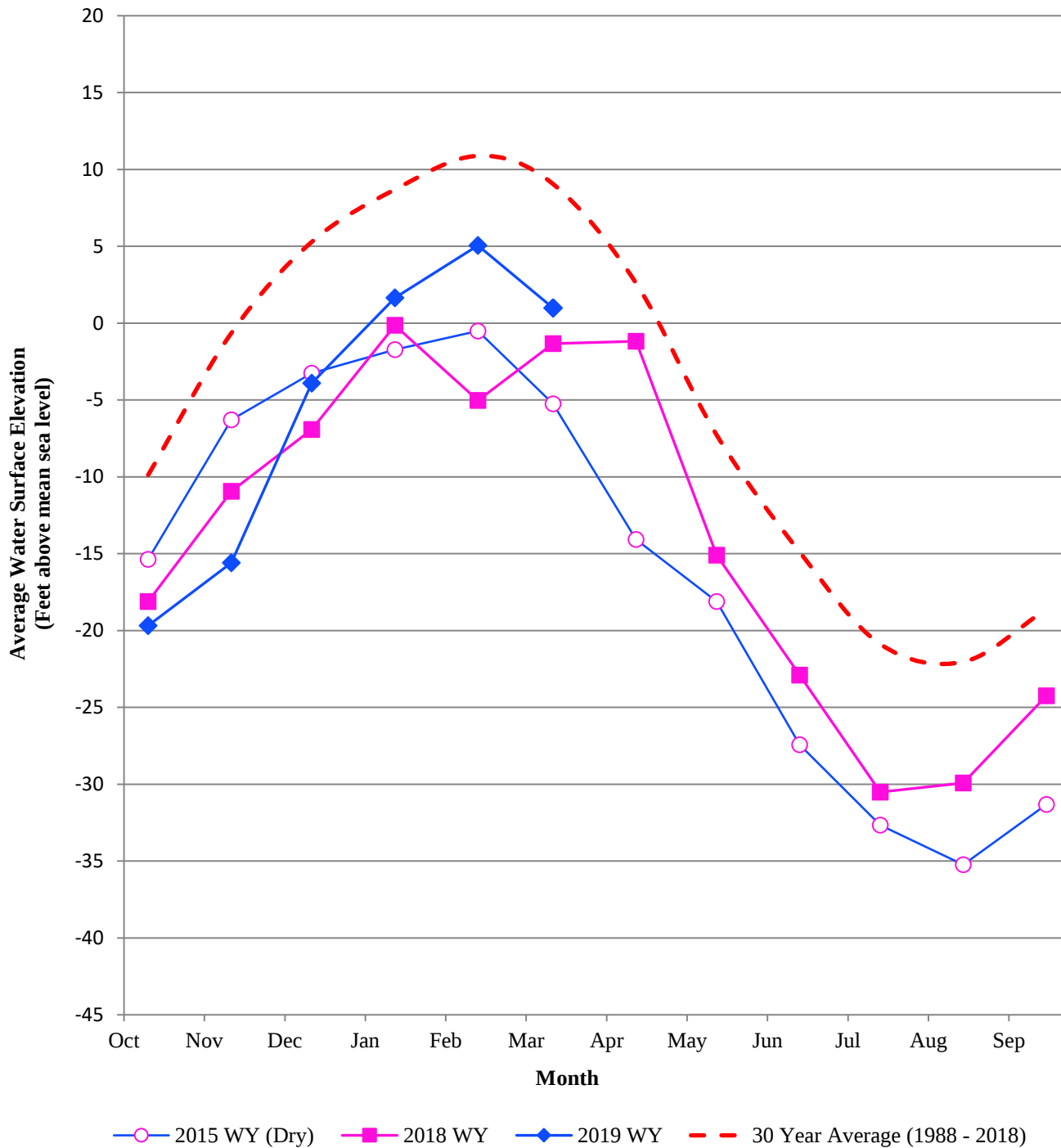
11 Wells



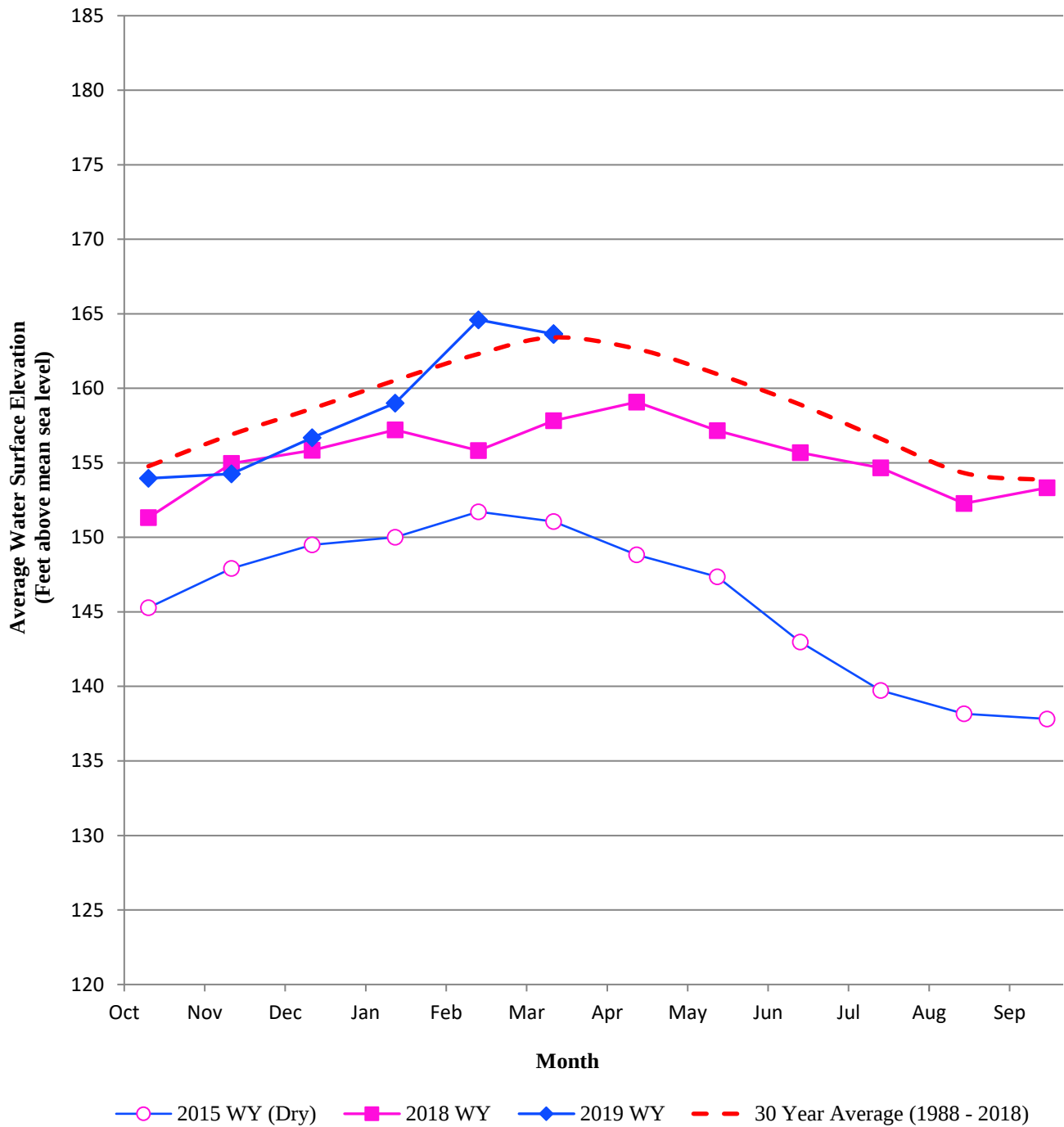
GROUNDWATER TRENDS

EAST SIDE SUBAREA

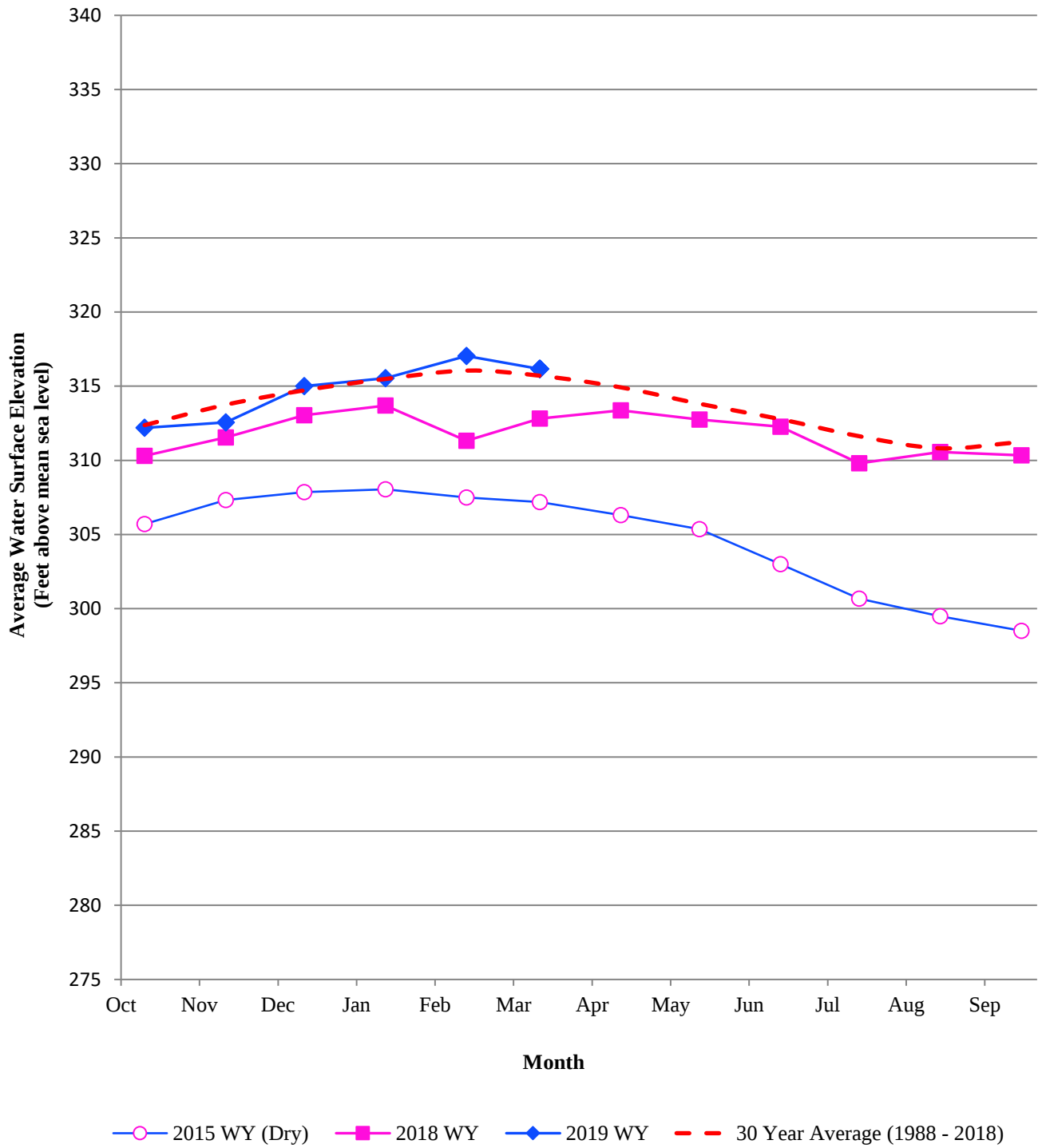
11 Wells



GROUNDWATER TRENDS FOREBAY SUBEREA 10 Wells



GROUNDWATER TRENDS UPPER VALLEY SUBAREA 9 Wells



Groundwater Trends Summary March 2019

Area	March 2019 Groundwater Elevation (ft msl)	1 Year Change	Difference from 30 year Average Elevation	1 Month Change
Pressure 180-Foot Aquifer	21 '	Up 7 '	Down < 1 '	Up < 1 '
Pressure 400-Foot Aquifer	6 '	Up 4 '	Up < 1 '	Down 1 '
East Side Subarea	1 '	Up 2 '	Down 8 '	Down 4 '
Forebay Subarea	164 '	Up 6 '	Up < 1 '	Down 1 '
Upper Valley Subarea	316 '	Up 3 '	Up < 1 '	Down < 1 '