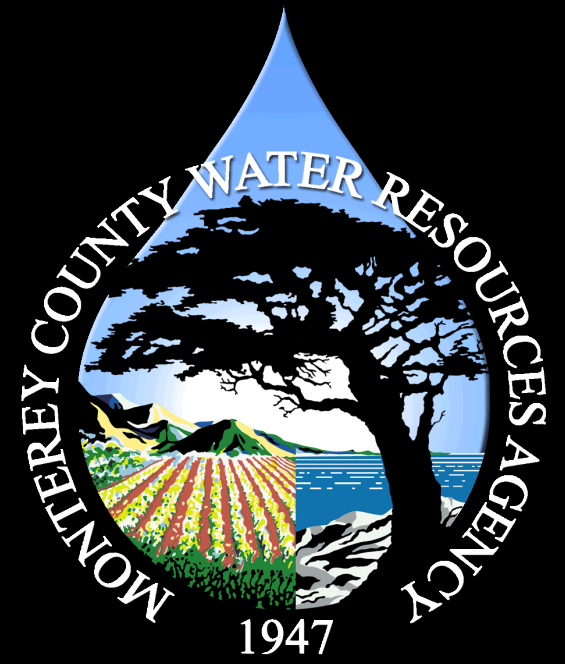
MONTEREY COUNTY WATER RESOURCES AGENCY
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Today's Action

Consider receiving a report on the activities of the Salinas Valley Basin Groundwater Sustainability Agency's Seawater Intrusion Group (SWIG) and the County of Monterey CAO's Deep Aquifers Wells Working Group (DAWWG)

SWIG

- Formation of a seawater intrusion group was identified in the SVBGSA's 180/400 Foot Subbasin Groundwater Sustainability Plan in section 9.3.7
  - Priority Management Action 6: Seawater Intrusion working Group

"SVBGSA will develop and coordinate a working group to address the issues associated with seawater intrusion."

SWIG cont.

- The preliminary goal will be to develop consensus on the science of seawater intrusion in the Salinas Valley Groundwater Basin.
- The ultimate goal will be to develop a comprehensive set of projects and management actions that control seawater intrusion while providing cost effective water supplies for the region.

SWIG cont.

- Who is the SWIG…
  - Agencies with Decision Making Power
    - Castroville CSD
    - Monterey One Water
    - City of Salinas
    - City of Marina
    - County of Monterey Environmental Health Bureau
    - Monterey County Water Resources Agency
    - Marina Coast Water District
    - SVBGSA
  - Stakeholders

SWIG cont.

- July 27th Meeting:
  - Agreed on fourth Monday of the month for SWIG Meetings
  - Agreed SWIG would work with GSA Staff to identify South County representative to the group
  - Agreed to possibly open SWIG meetings for public observation and participation.

SWIG cont.

- For Next SWIG Meeting (August 24th):
  - Form Technical Advisory Committee
    - Each agency or organization can propose representative
    - Must be qualified (hydrologist or other science background)
    - Funded by the agency or organization
    - TAC will develop Scope of Work for Deep Aquifer RFP
  - Funding for Deep Aquifer Study
    - Grants
    - Regulatory Fees
    - Permit Fees

Questions on SWIG

DAWWG

- After the Agency's presentations to the BOD and BOS in May of the report

  Recommendations to Address the Expansion of Seawater Intrusion in the Salinas Valley Groundwater Basin: 2020 Update

…on May 19th, the Monterey County Board of Supervisors directed the County CAO to form a working group…

DAWWG cont.

Formed to…

- Make advisory recommendations to the CAO regarding the placement of new wells in the 180/400 subbasin
- With consensus as the desired outcome
- Meeting as necessary to reach agreement
  - First meeting was held on June 11th
- With all information developed by the working group to be presented in public forums to interested parties to gain further input.

DAWWG cont.

- Who is on the DAWWG…
  - CAO
  - County Counsel
  - MCWRA
  - Environmental Health Bureau
  - SVBGSA
  - Farm Bureau
  - Grower's Shippers

DAWWG cont.

- Process
  - Review and evaluate through deliberations MCWRA recommendations ***(ongoing…)***
  - Then present to the Public results of deliberations for further input and deliberation
    - Schedule two public forums
    - Utilize websites for announcing meetings and sharing presentations
    - Provide opportunity for written input

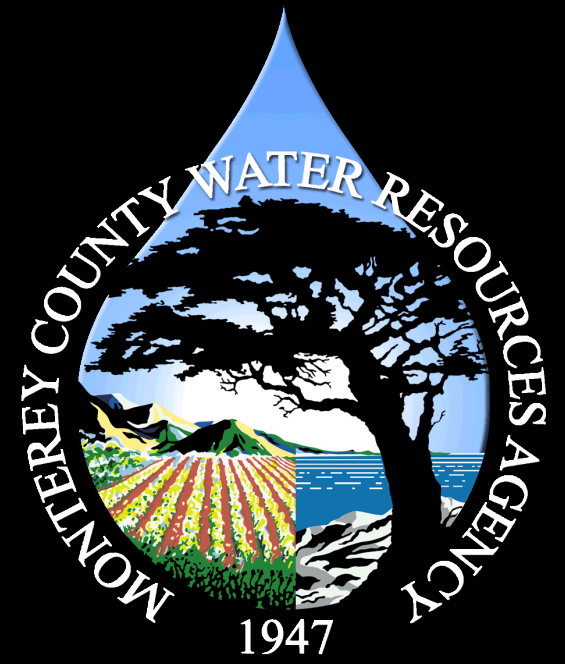
DAWWG cont.

- Reconvene DAWWG after public forums
  - Discuss information from public forums
  - Develop CAO Recommendations Report
- Present CAO Recommendations Report to BOS
- Develop ordinance for BOS from CAO recommendations and BOS Direction

Questions on DAWWG

Today's Action

Receive a report on the activities of the Salinas Valley Basin Groundwater Sustainability Agency's Seawater Intrusion Group and the County of Monterey CAO's Deep Aquifers Wells Working Group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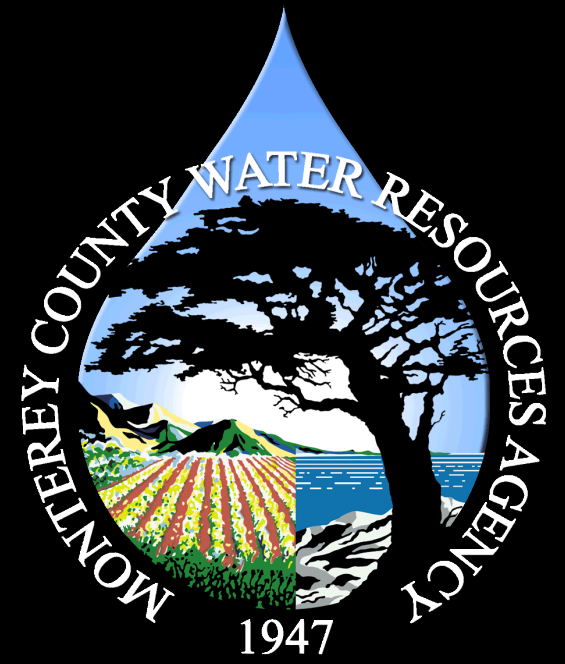
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TODAY'S ACTION

Consider receiving a report on the Agency's well permit application review and reporting procedures

Financial Impact

- There is no financial impact in receiving this report.

Prior Committee/BOD Action

- In January 2020 a revised Well Permit Application Update was presented to BMAC and the BOD; both approved of the proposed revisions.
  - BMAC on January 7, 2020
  - BOD on January 21, 2020

Discussion

- Committee member discussion at July BMAC meeting indicated that more detailed information about the format and content of the Well Permit Application Update could be useful.

Discussion (cont.)

- This presentation will cover:
  - Agency role in reviewing well permit applications
  - Criteria that determine scope of review
  - Background and evolution of Well Permit Application Activities Update

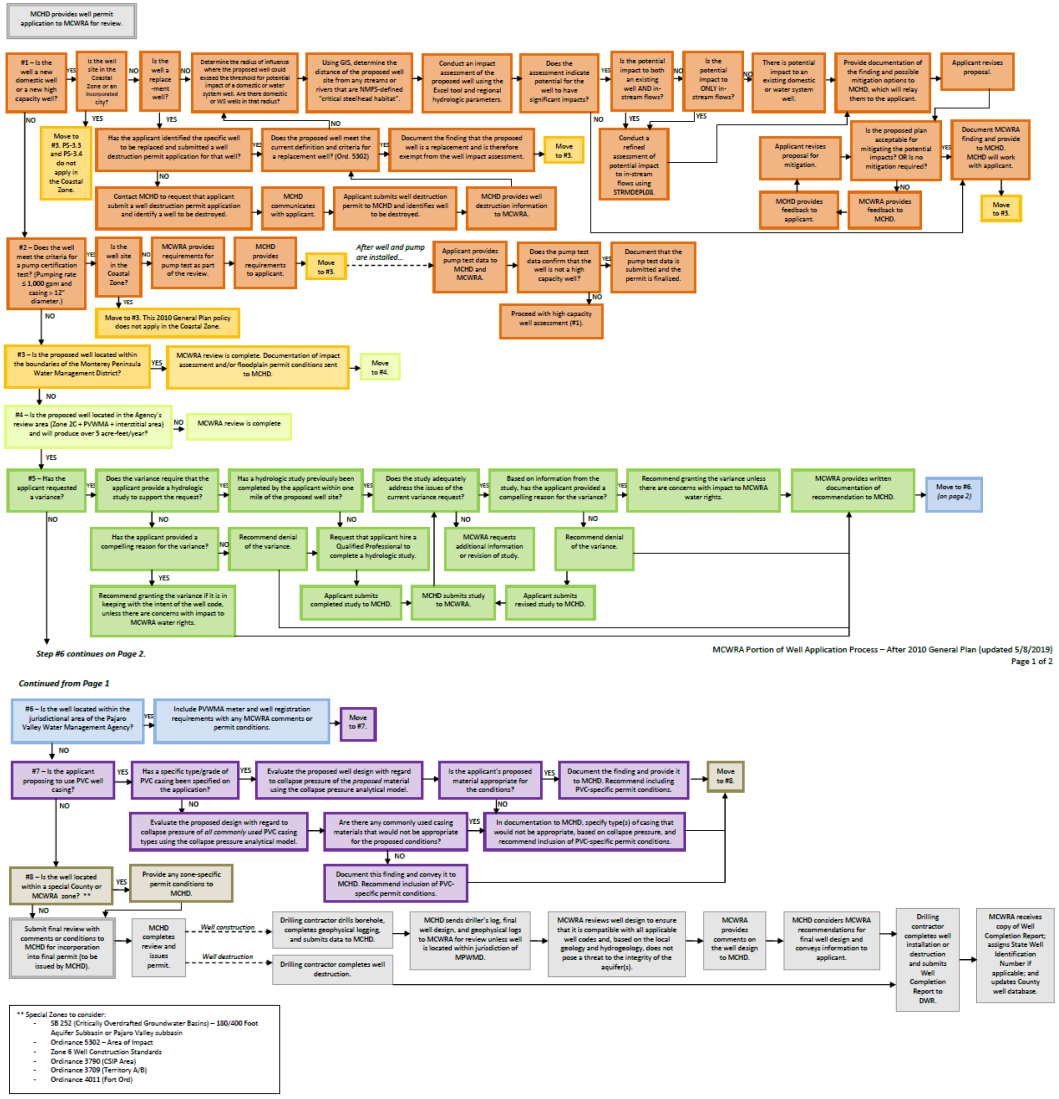
Agency Role

- Well permits are issued by Monterey County Health Department, Environmental Health Bureau (EHB)

- The Agency acts as a technical advisor to EHB.
  - Well construction, repair, and destruction
  - Level of involvement varies by permit type and location

- Agency staff effort is covered by a portion of the well permit fee.

Agency Role


MCHD provides well permit application to MCWRA for review.
#1 – Is the well a new domestic well or a new high capacity well?
Is the well site in the Coastal Zone or an unsurveyed city?
Is the well a replacement well?
Determine the radius of influence where the proposed well could exceed the threshold for potential impact of a domestic or water system well. Are there domestic or WS wells in that radius?
Using GIS, determine the distance of the proposed well site from any streams or rivers that are NMFS-defined "critical steelhead habitat".
Conduct an impact assessment of the proposed well using the Excel tool and regional hydrologic parameters.
Does the assessment indicate potential for the well to have significant impacts?
Is the potential impact to both an existing well AND in-stream flows?
Is the potential impact to ONLY in-stream flows?
There is potential impact to an existing domestic or water system well.
Provide documentation of the finding and possible mitigation options to MCHD, which will relay them to the applicant.
Applicant revises proposal.
Move to #3. PS-3.3 and PS-3.4 do not apply in the Coastal Zone.
Has the applicant identified the specific well to be replaced and submitted a well destruction permit application for that well?
Does the proposed well meet the current definition and criteria for a replacement well? (Ord. 5302)
Document the finding that the proposed well is a replacement and is therefore exempt from the well impact assessment.
Move to #3.
Conduct a refined assessment of potential impact to in-stream flows using STRMDEPL08.
Applicant revises proposal for mitigation.
Is the proposed plan acceptable for mitigating the potential impacts? OR Is no mitigation required?
Document MCWRA finding and provide to MCHD. MCHD will work with applicant.
Move to #3.
Contact MCHD to request that applicant submit a well destruction permit application and identify a well to be destroyed.
MCHD communicates with applicant.
Applicant submits well destruction permit to MCHD and identifies well to be destroyed.
MCHD provides well destruction information to MCWRA.
MCHD provides feedback to applicant.
MCWRA provides feedback to MCHD.
#2 – Does the well meet the criteria for a pump certification test? (Pumping rate ≤ 1,000 gpm and casing > 12" diameter.)
Is the well site in the Coastal Zone?
MCWRA provides requirements for pump test as part of the review.
MCHD provides requirements to applicant.
Move to #3.
After well and pump are installed...
Applicant provides pump test data to MCHD and MCWRA.
Does the pump test data confirm that the well is not a high capacity well?
Document that the pump test data is submitted and the permit is finalized.
Proceed with high capacity well assessment (#1).
Move to #3. This 2010 General Plan policy does not apply in the Coastal Zone.
#3 – Is the proposed well located within the boundaries of the Monterey Peninsula Water Management District?
MCWRA review is complete. Documentation of impact assessment and/or floodplain permit conditions sent to MCHD.
Move to #4.
#4 – Is the proposed well located in the Agency's review area (Zone 2C + PVMA + interstitial area) and will produce over 5 acre-feet/year?
MCWRA review is complete
#5 – Has the applicant requested a variance?
Does the variance require that the applicant provide a hydrologic study to support the request?
Has a hydrologic study previously been completed by the applicant within one mile of the proposed well site?
Does the study adequately address the issues of the current variance request?
Based on information from the study, has the applicant provided a compelling reason for the variance?
Recommend granting the variance unless there are concerns with impact to MCWRA water rights.
MCWRA provides written documentation of recommendation to MCHD.
Move to #6 (on page 2)
Has the applicant provided a compelling reason for the variance?
Recommend denial of the variance.
Request that applicant hire a Qualified Professional to complete a hydrologic study.
MCWRA requests additional information or revision of study.
Recommend denial of the variance.
Recommend granting the variance if it is in keeping with the intent of the well code, unless there are concerns with impact to MCWRA water rights.
Applicant submits completed study to MCHD.
MCHD submits study to MCWRA.
Applicant submits revised study to MCHD.
Step #6 continues on Page 2.
MCWRA Portion of Well Application Process – After 2010 General Plan (updated 5/8/2019)
Page 1 of 2
Continued from Page 1
#6 – Is the well located within the jurisdictional area of the Pajaro Valley Water Management Agency?
Include PVMA meter and well registration requirements with any MCWRA comments or permit conditions.
Move to #7.
#7 – Is the applicant proposing to use PVC well casing?
Has a specific type/grade of PVC casing been specified on the application?
Evaluate the proposed well design with regard to collapse pressure of the proposed material using the collapse pressure analytical model.
Is the applicant's proposed material appropriate for the conditions?
Document the finding and provide it to MCHD. Recommend including PVC-specific permit conditions.
Move to #8.
Evaluate the proposed design with regard to collapse pressure of all commonly used PVC casing types using the collapse pressure analytical model.
Are there any commonly used casing materials that would not be appropriate for the proposed conditions?
In documentation to MCHD, specify type(s) of casing that would not be appropriate, based on collapse pressure, and recommend inclusion of PVC-specific permit conditions.
Document this finding and convey it to MCHD. Recommend inclusion of PVC-specific permit conditions.
#8 – Is the well located within a special County or MCWRA zone? **
Provide any zone-specific permit conditions to MCHD.
Submit final review with comments or conditions to MCHD for incorporation into final permit (to be issued by MCHD).
MCHD completes review and issues permit.
Well construction
Well destruction
Drilling contractor drills borehole, completes geophysical logging, and submits data to MCHD.
Drilling contractor completes well destruction.
MCHD sends driller's log, final well design, and geophysical logs to MCWRA for review unless well is located within jurisdiction of MPWMD.
MCWRA reviews well design to ensure that it is compatible with all applicable well codes and, based on the local geology and hydrogeology, does not pose a threat to the integrity of the aquifer(s).
MCWRA provides comments on the well design to MCHD.
MCHD considers MCWRA recommendations for final well design and conveys information to applicant.
Drilling contractor completes well installation or destruction and submits Well Completion Report to DWR.
MCWRA receives copy of Well Completion Report; assigns State Well Identification Number if applicable; and updates County well database.
** Special Zones to consider:
- 58 252 (Critically Overdrafted Groundwater Basins) – 180/400 Foot Aquifer Subbasin or Pajaro Valley subbasin
- Ordinance 5302 – Area of Impact
- Zone 6 Well Construction Standards
- Ordinance 3790 (CSIP Area)
- Ordinance 3709 (Territory A/B)
- Ordinance 4011 (Fort Ord)

Scope of Agency Review

- Determining factors:
  - Well permit type
    - Construction, repair, destruction
  - Well permit geographic location
  - Applicability of ordinances or other policies
  - Proposed well use
    - Domestic, agricultural, stock, monitoring
  - Proposed pumping rate
    - High capacity wells (>1,000 gpm)

Scope of Agency Review

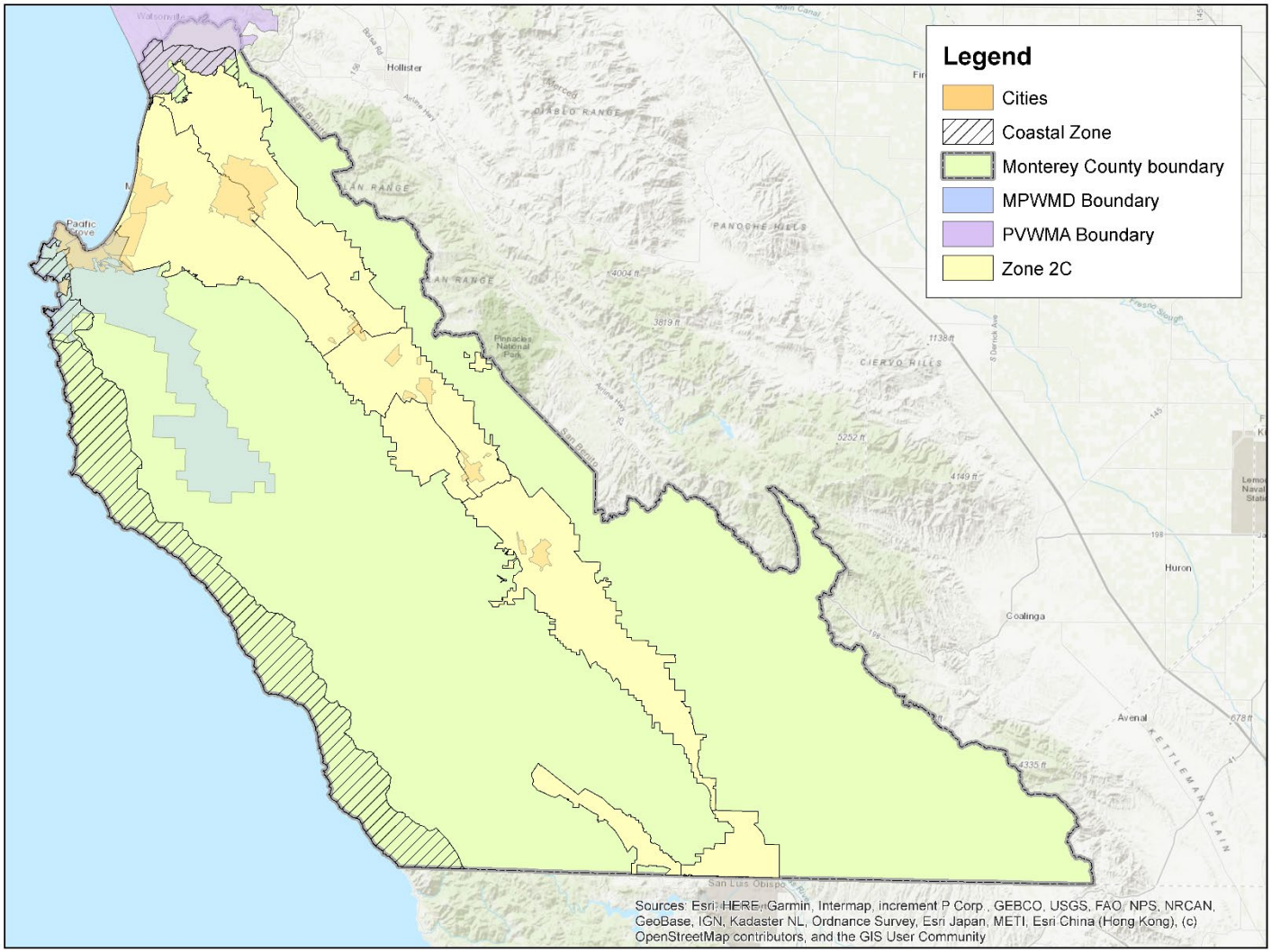
- The Agency performs some level of review for well permits throughout the County

  - **Permit conditions** for well construction, repair, and destruction within Zone 2C and PVWMA jurisdiction

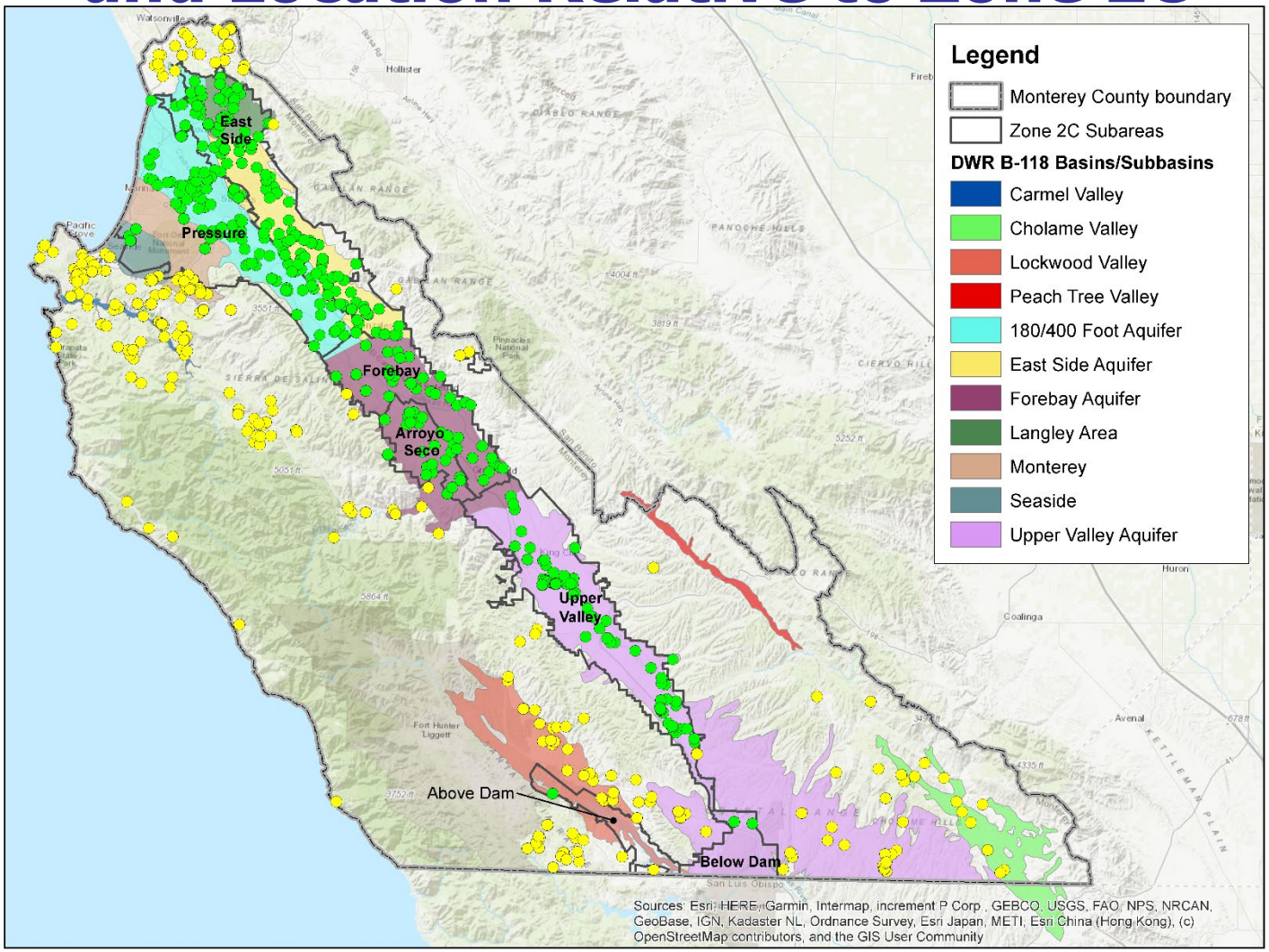
  - Perform **well impact assessments** related to the 2010 General Plan for inland (non-Coastal) unincorporated County
    - Applies to new domestic and new high capacity wells

  - Maintain **well records** throughout County

Scope of Agency Review



Well Construction Permits Reviewed Since 2009 and Location Relative to Zone 2C



Well Construction Permits Reviewed Since 2009 and Location Relative to Zone 2C

Well Use	Within Zone 2C	Outside Zone 2C
Ag. irrigation	290	59
Cathodic protection	1	0
Domestic	67	182
Domestic/irrigation	2	6
Injection	3	0
Industrial	4	2
Monitoring	5	1
Municipal	2	0
Residential irrigation	0	12
Stock	2	5
Test boring	1	0
TOTAL, all uses	**377** (59%)	**267** (41%)

Scope of Agency Review

WELL CONSTRUCTION

Annual Extraction	Location		Expected pumping rate	Use	Permit Conditions	Well Log Database	General Plan Assessment
Over 5 acre-feet per year	Outside Coastal Zone	Zone 2C and PVWMA jurisdiction	Over 1,000 gpm	Any	✓	✓	✓
			1,000 gpm or less	Domestic	✓	✓	✓
				Other	✓	✓	×
		Elsewhere in Monterey County	Over 1,000 gpm	Any	×	✓	✓
			1,000 gpm or less	Domestic	×	✓	✓
				Other	×	✓	×
	Within Coastal Zone	Zone 2C and PVWMA jurisdiction	Any pumping rate	Any well type	✓	✓	×
		Elsewhere in Monterey County	Any pumping rate	Any well type	×	✓	×
Less than 5 acre-feet per year	Outside Coastal Zone	Zone 2C and PVWMA jurisdiction	1,000 gpm or less	Domestic	×	✓	✓
				Other	×	✓	×
	Within Coastal Zone	Elsewhere in Monterey County	1,000 gpm or less	Any well type	×	✓	×
Monitoring	Any area		n/a	Monitoring	×	×	×

WELL REPAIR

Location	Use	Permit Conditions	Well Log Database
Zone 2C and PVWMA jurisdiction	Any	✓	×
Elsewhere in Monterey County	Any	×	×

WELL DESTRUCTION

Location	Use	Permit Conditions	Well Log Database
Zone 2C and PVWMA jurisdiction	Any	✓	✓
Elsewhere in Monterey County	Any	×	✓

Scope of Agency Review

- 2010 Monterey County General Plan
  - Policies PS-3.3 and PS-3.4 call on MCWRA to evaluate the potential impact of proposed new domestic or high capacity wells on existing domestic wells, water system wells, or in-stream flows.
  - Applies County-wide except for in the Coastal Zone or within City limits.
  - The Agency began performing this assessment in November 2011.

Well Permit Application Activities Update

- Update was first provided to the Agency BOD in December 2013.
  - Provided monthly to BOD and BMAC.

- Update was in response to questions and comments about the well impact assessments required by implementation of the 2010 General Plan policies.

- Intended to show outcomes of the well impact assessments and geographic distribution of affected wells.

Well Permit Application Activities Update

Summary of Well Impact Evaluations
Conducted per 2010 Monterey County General Plan

DOMESTIC WELLS						
Evaluation Outcome	Pressure	East Side	Forebay	Upper Valley	Outside Zone 2C	TOTAL
No potential impact.	0	3	1	1	55	60
Replacement (exempt).	0	2	0	0	2	4
Potential impact - no mitigation yet proposed.	0	0	0	0	1	1
Potential impact - acceptable mitigation proposed.	0	0	0	0	0	0
TOTAL	0	5	1	1	58	65
Subarea Total as Percentage	*0%*	*8%*	*2%*	*2%*	*89%*	

HIGH CAPACITY WELLS						
Evaluation Outcome	Pressure	East Side	Forebay	Upper Valley	Outside Zone 2C	TOTAL
No potential impact.	3	8	1	5	5	22
Replacement (exempt).	6	0	0	4	0	10
Potential impact - acceptable mitigation proposed.	1	1	0	5	0	7
Potential impact - no mitigation yet proposed.	0	1	0	3	2	6
TOTAL	10	10	1	17	7	45
Subarea Total as Percentage	*22%*	*22%*	*2%*	*38%*	*16%*	

Totals as of: 10-Dec-13
Initiated November 2011

Total Assessments Conducted to Date: 110

Well Permit Application Activities Update

- Impact assessment is fully integrated into the well permit review process.

- In January 2020, staff recommended a revised report that captures all well permit review activities.
  - Added information about Deep Aquifers wells.

- BMAC and BOD approved revised report that is now in use.

Well Permit Application Activities Update

Agency management area and aquifer

Table 1. W l Permit Applications Received by Category - June, 2020

Subbasin/ Aquifer	Construction	Destruction	Repair	Other	Total	FY (19/20) Total
Pressure 180-Ft Aquifer						4
Pressure 400-Ft Aquifer			1		1	16
Pressure Deep Aquifers	3				3	10
East Side	2	1			3	17
Forebay						8
Upper Valley	2	1			3	9
Outside Zone 2C, Undefined GW Basin	3				3	57
Total	**10**	**2**	**1**		**13**	**121**

Well Permit Application Activities Update

Well permit type

Table 1. Well Permit Applications Received by Category - June, 2020

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Total	**10**	**2**	**1**		**13**	**121**

Well Permit Application Activities Update

Monthly and Fiscal Year-To-Date Totals

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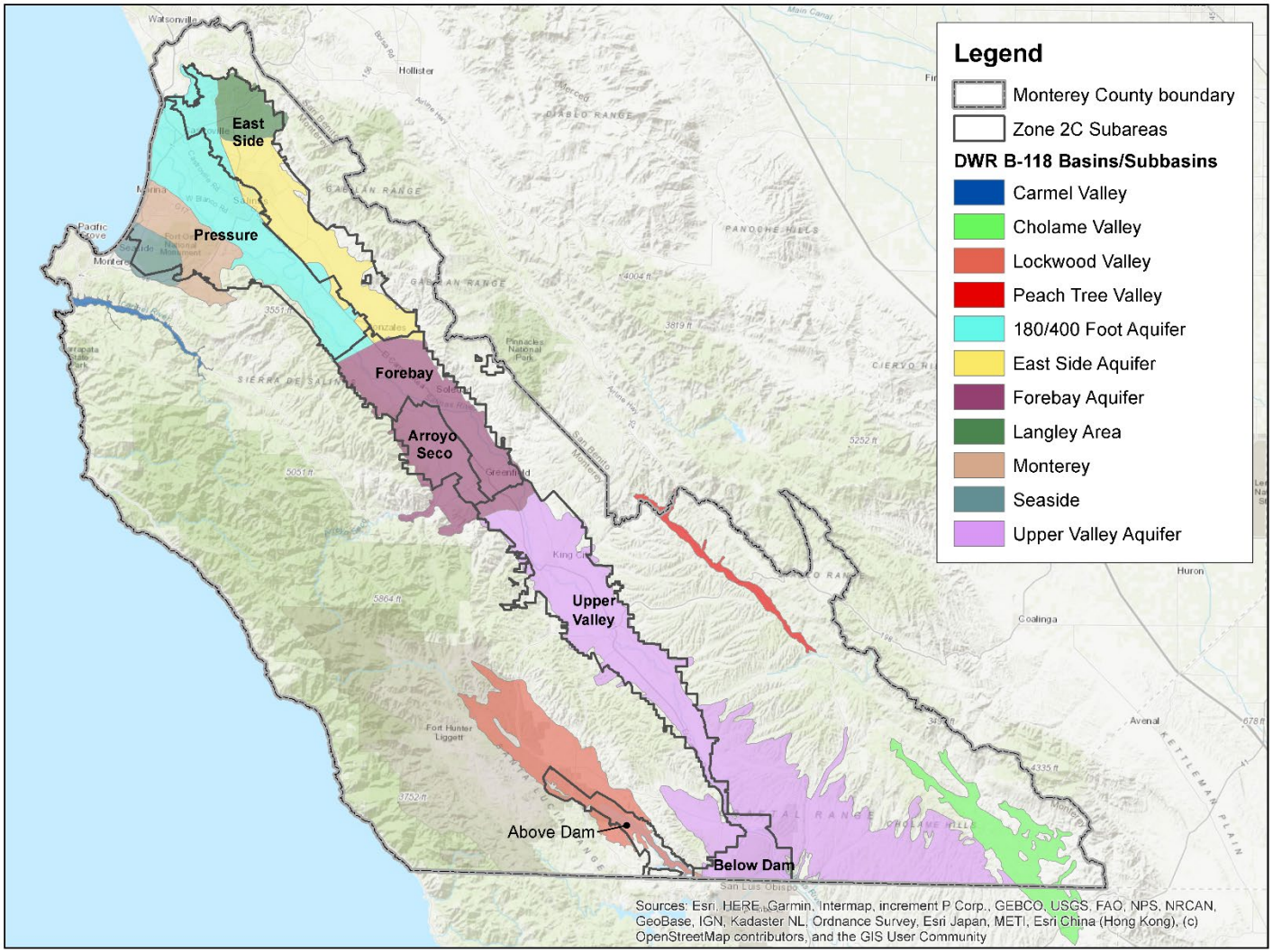
Zone 2C Subareas vs B-118 Subbasins



Well Construction Permits Reviewed Since 2009 and Location Relative to Zone 2C

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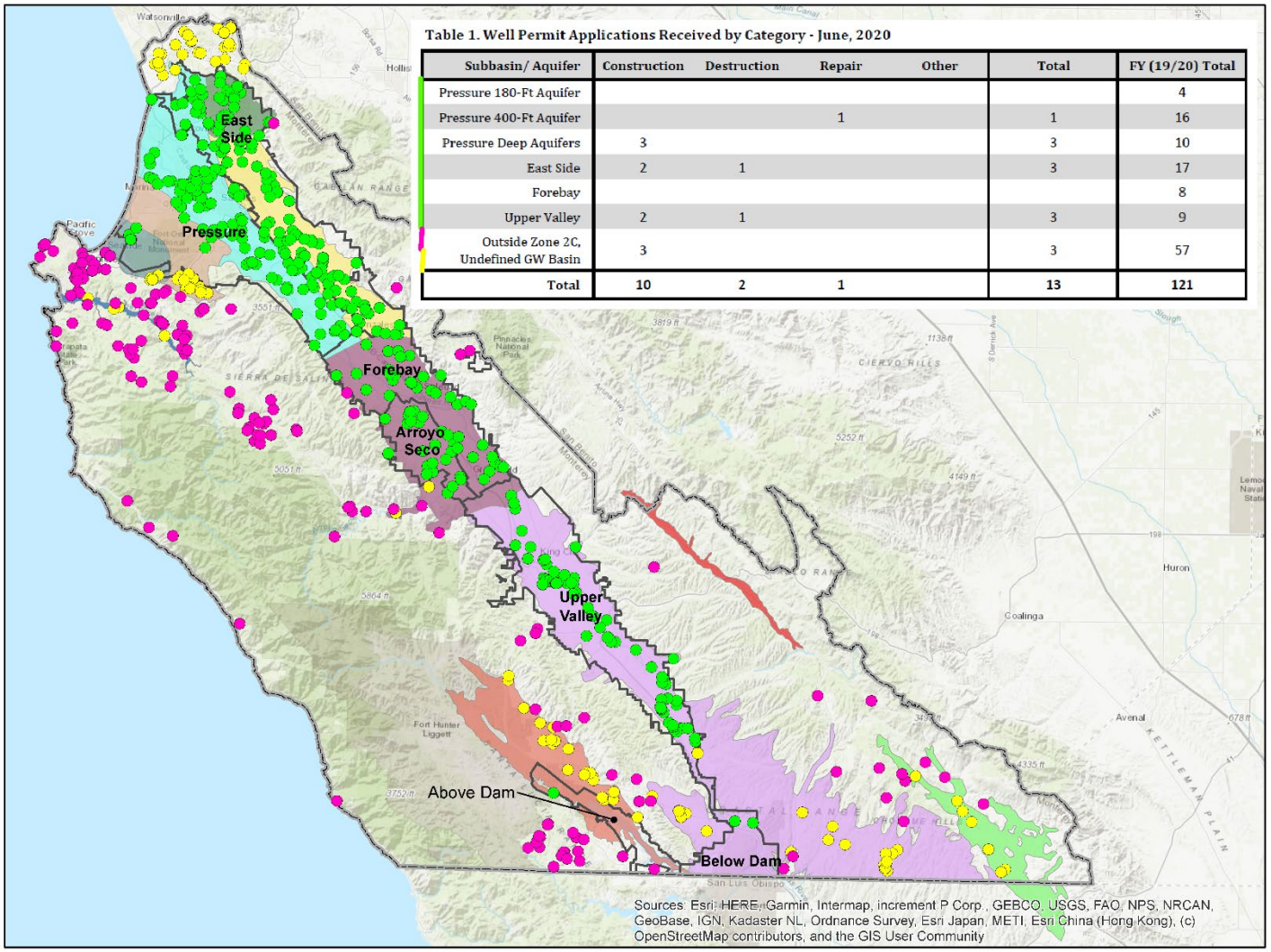
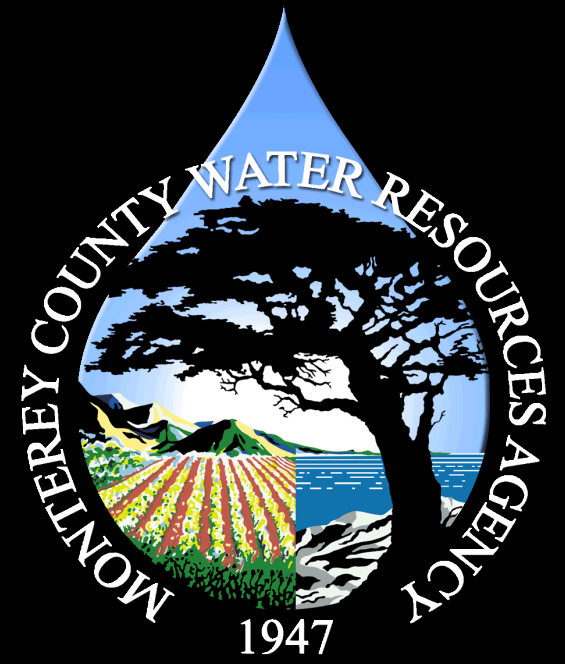


Well Permit Application Activities Update

Original Version (2013-2019)	Revised Version (2020)
• County-wide data	• County-wide data
• Data limited to well permits requiring an impact assessment per General Plan.	• Includes data for all well permits reviewed.
• Showed impact assessment outcomes by Zone 2C subarea.	• Well permit counts by Zone 2C subarea and aquifer zone.
	• Eliminated data on outcome of well impact assessment.

TODAY'S ACTION

Receive a report on the Agency's well permit application review and reporting procedures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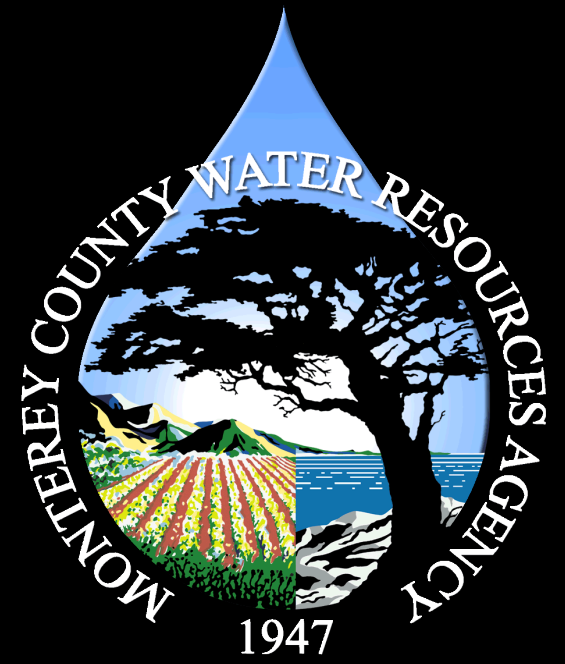
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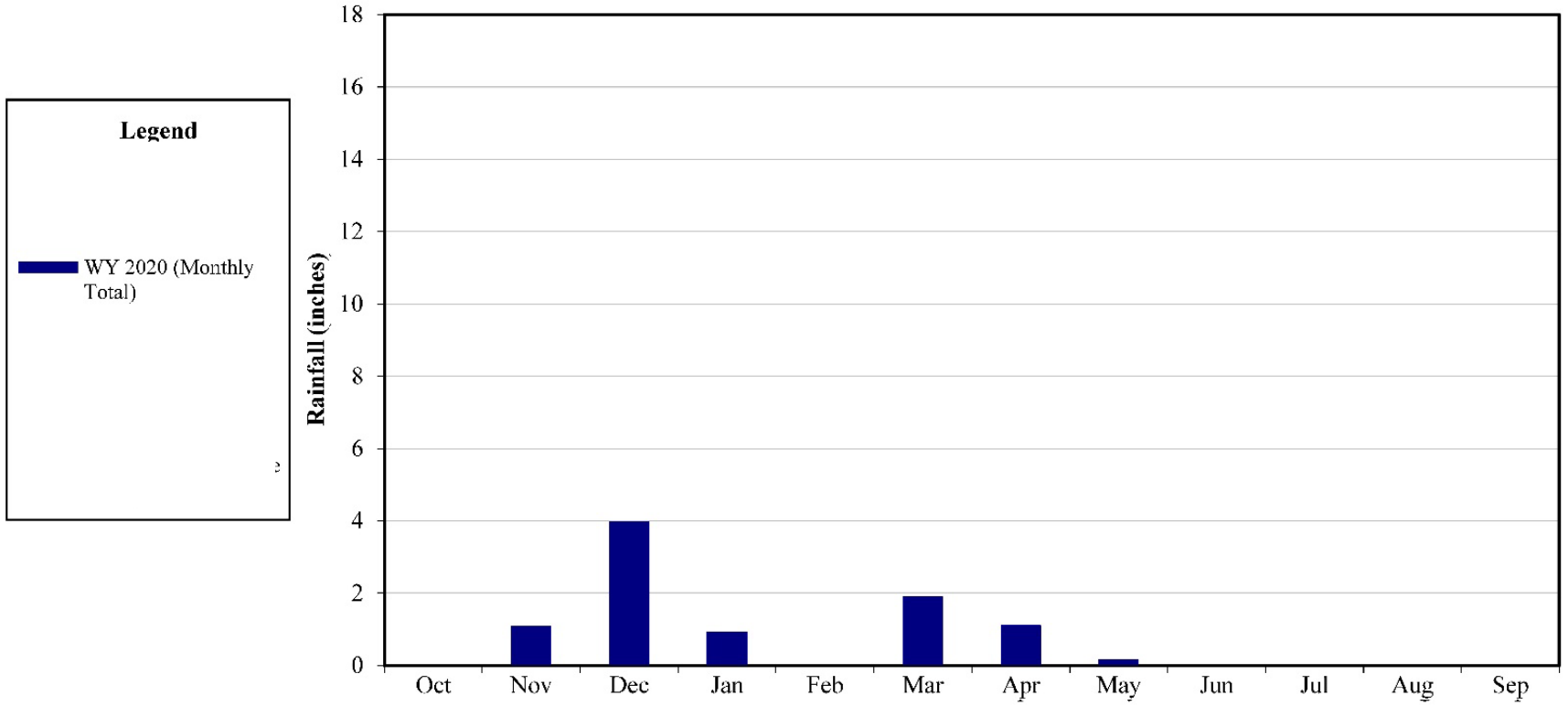
Receive Report on
Salinas Valley Water Conditions
Third Quarter of Water Year 2019-2020

Quarterly Water Conditions Report

- 3rd Quarter (April- June)

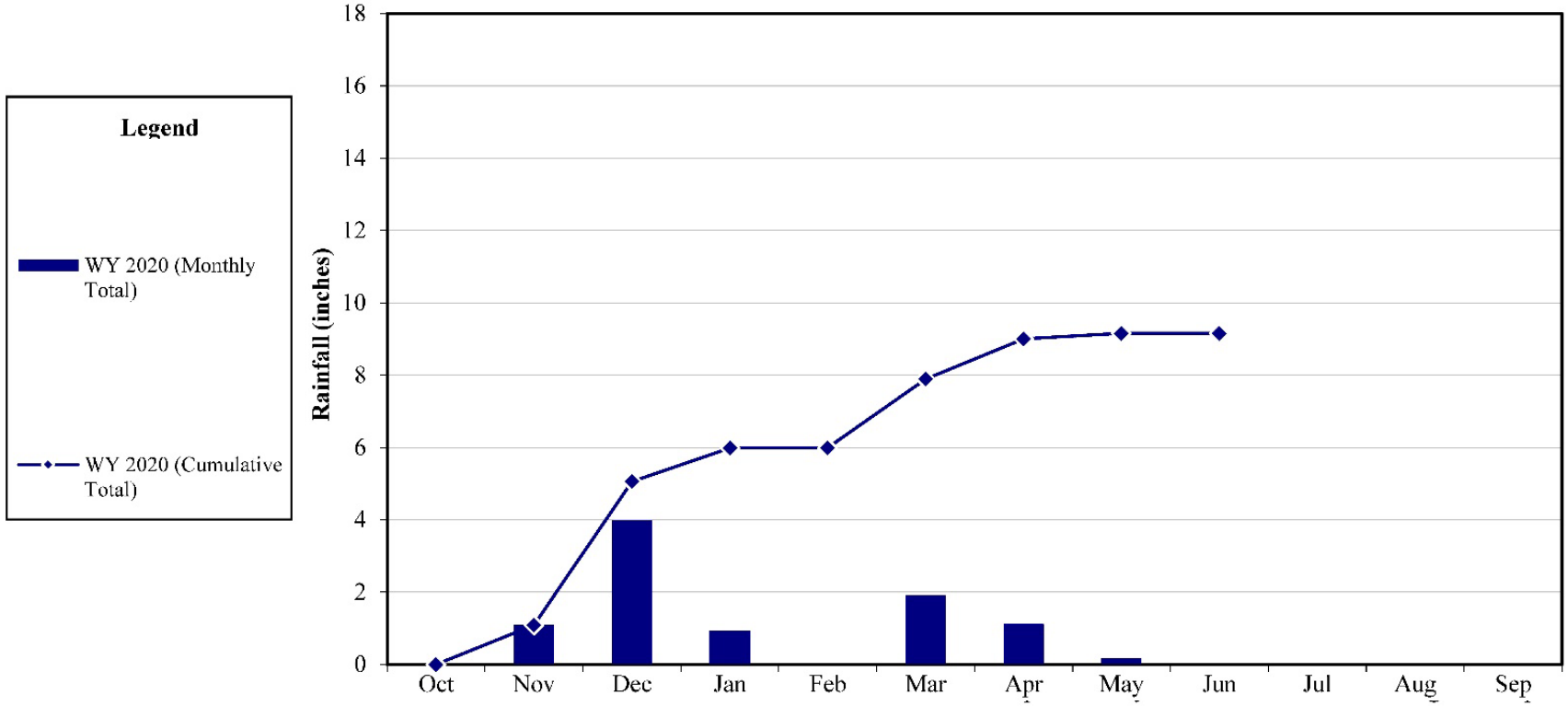
- Summary of water conditions
  - Rainfall, Reservoirs, Groundwater Levels

SALINAS AIRPORT RAINFALL
WATER YEAR 2020



Monthly Rainfall (WY 2020)	0.00	1.09	3.97	0.93	0.00	1.90	1.11	0.16	0.00			
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	0%	78%	206%	36%	0%	84%	119%	46%	0%	0%	0%	0%
Cumulative Rainfall (WY 2020)	0.00	1.09	5.06	5.99	5.99	7.89	9.00	9.16	9.16			
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	0%	55%	129%	92%	67%	70%	74%	73%	73%			

SALINAS AIRPORT RAINFALL
WATER YEAR 2020



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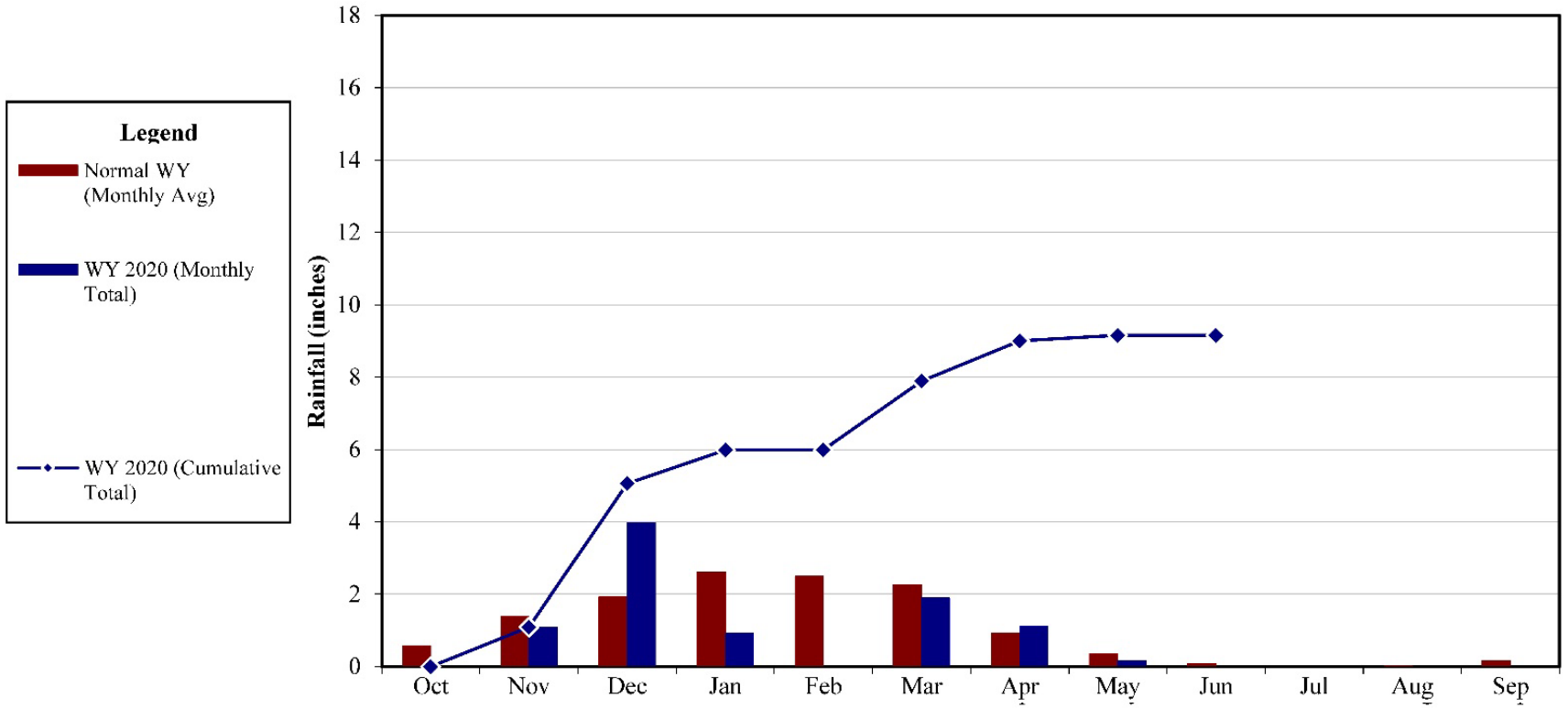
WATER YEAR 2020



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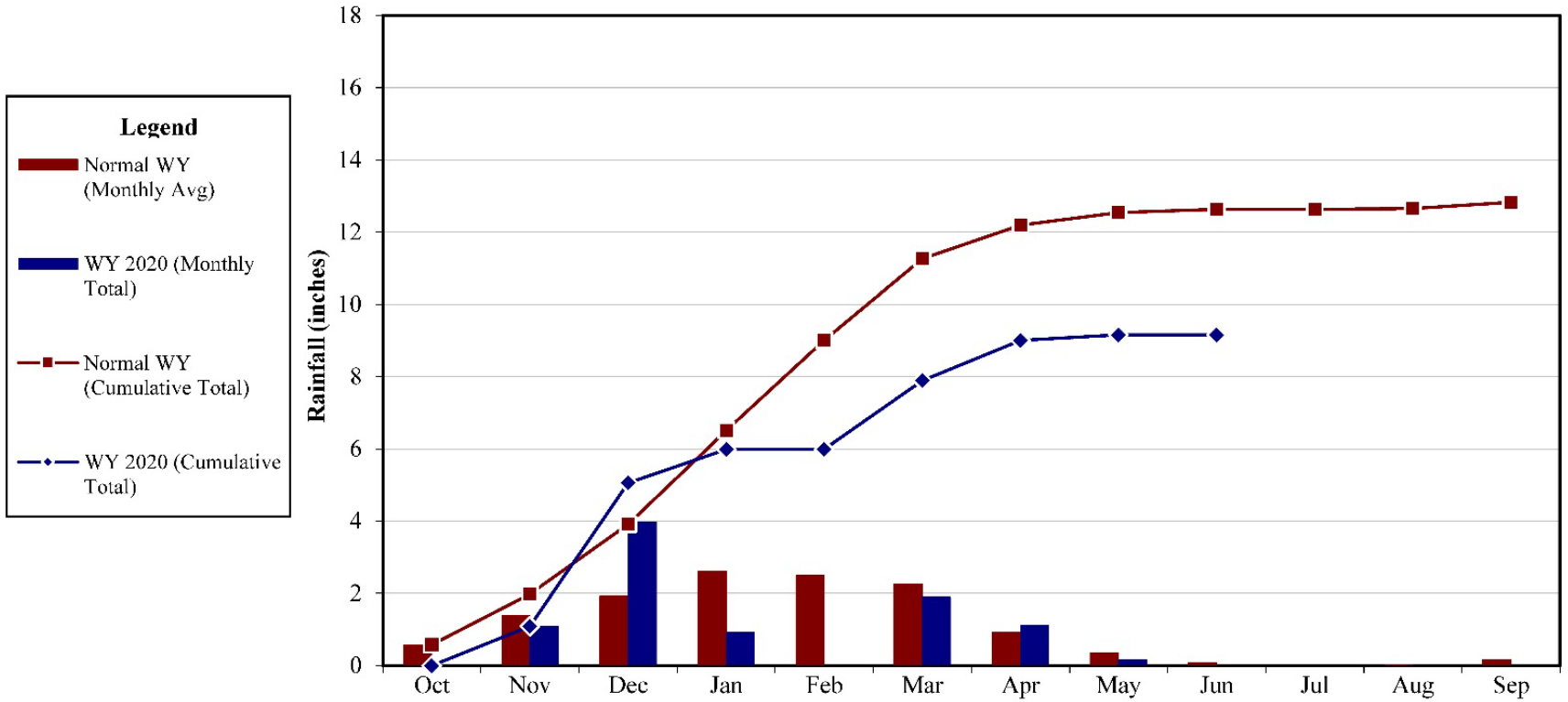
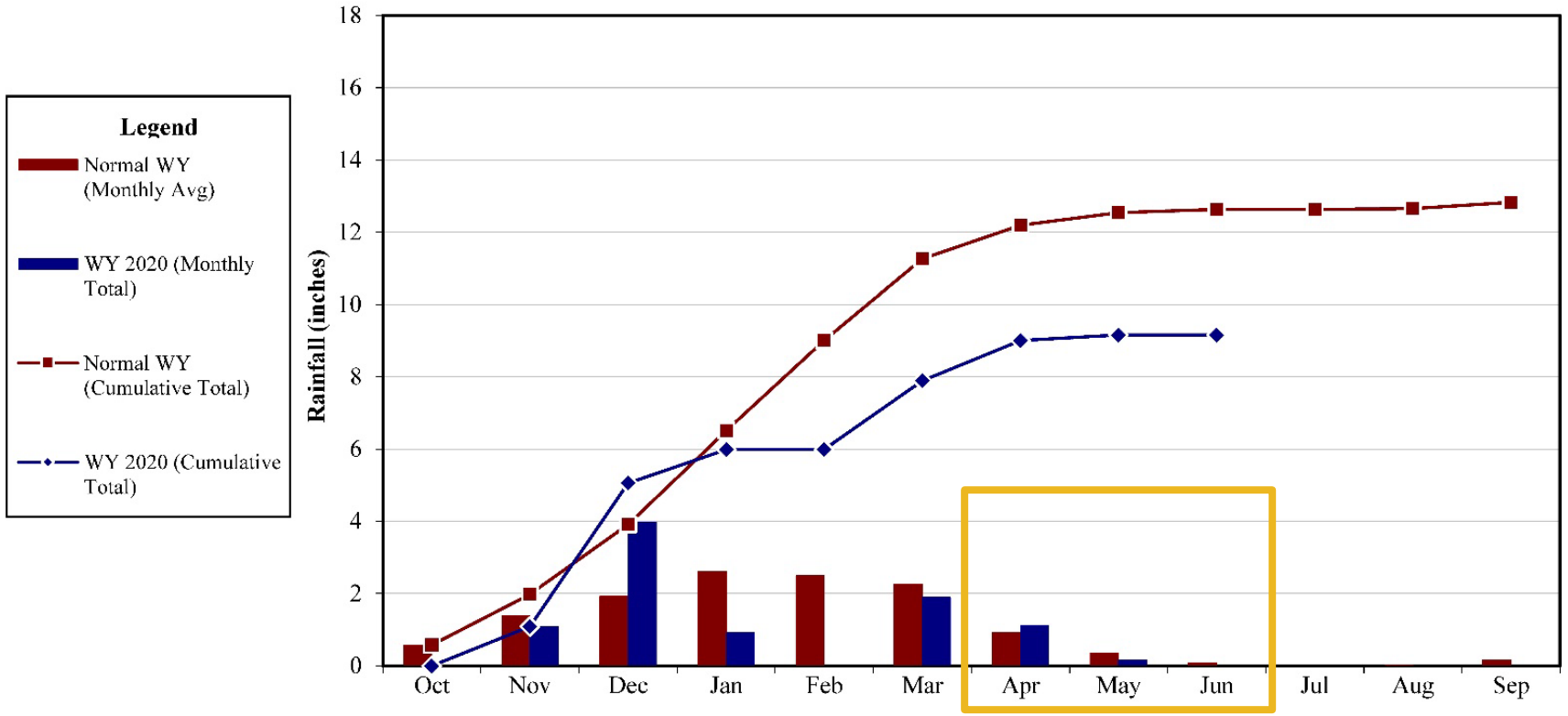
SALINAS AIRPORT RAINFALL
WATER YEAR 2020



Monthly Rainfall (WY 2020)	0.00	1.09	3.97	0.93	0.00	1.90	1.11	0.16	0.00			
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	0%	78%	206%	36%	0%	84%	119%	46%	0%	0%	0%	0%
Cumulative Rainfall (WY 2020)	0.00	1.09	5.06	5.99	5.99	7.89	9.00	9.16	9.16			
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	0%	55%	129%	92%	67%	70%	74%	73%	73%			

SALINAS AIRPORT RAINFALL
WATER YEAR 2020



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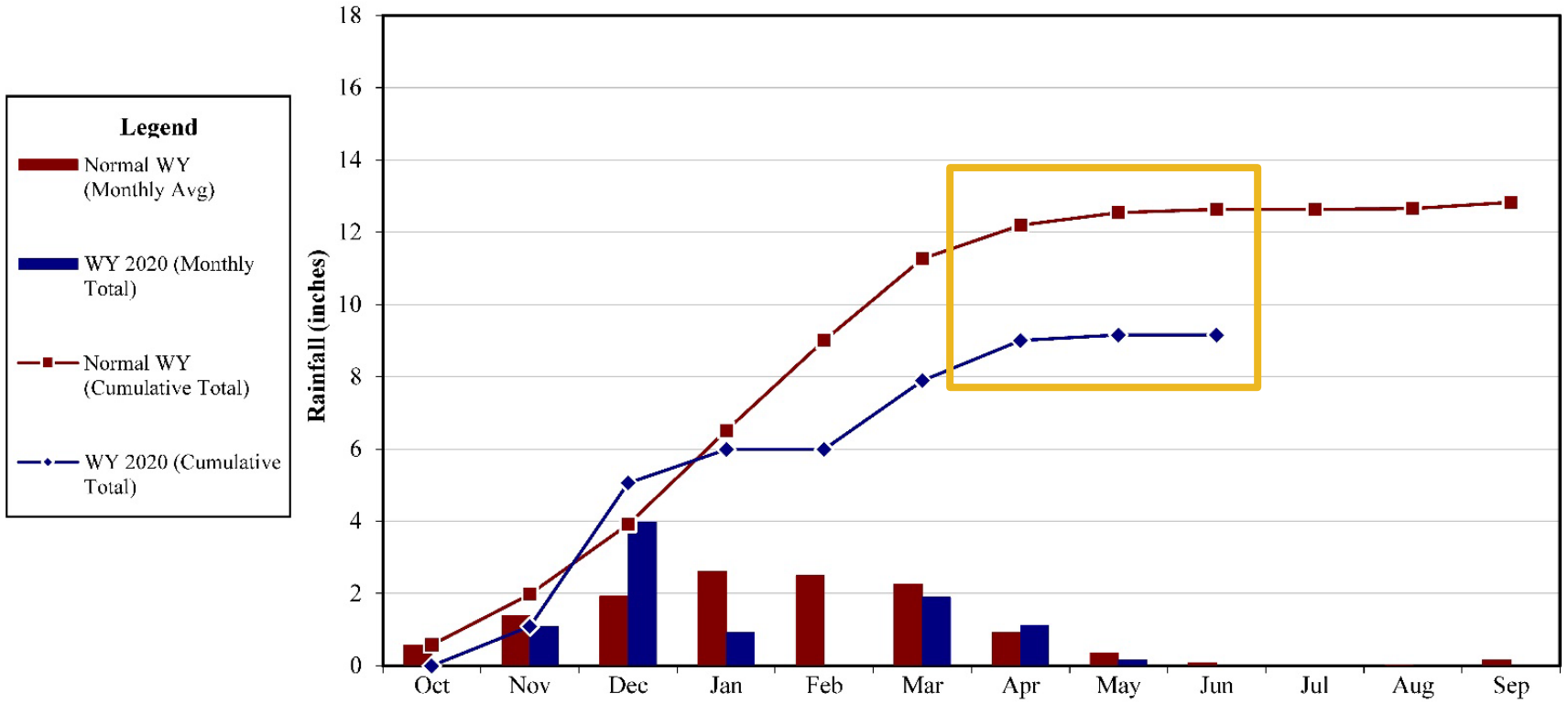
WATER YEAR 2020



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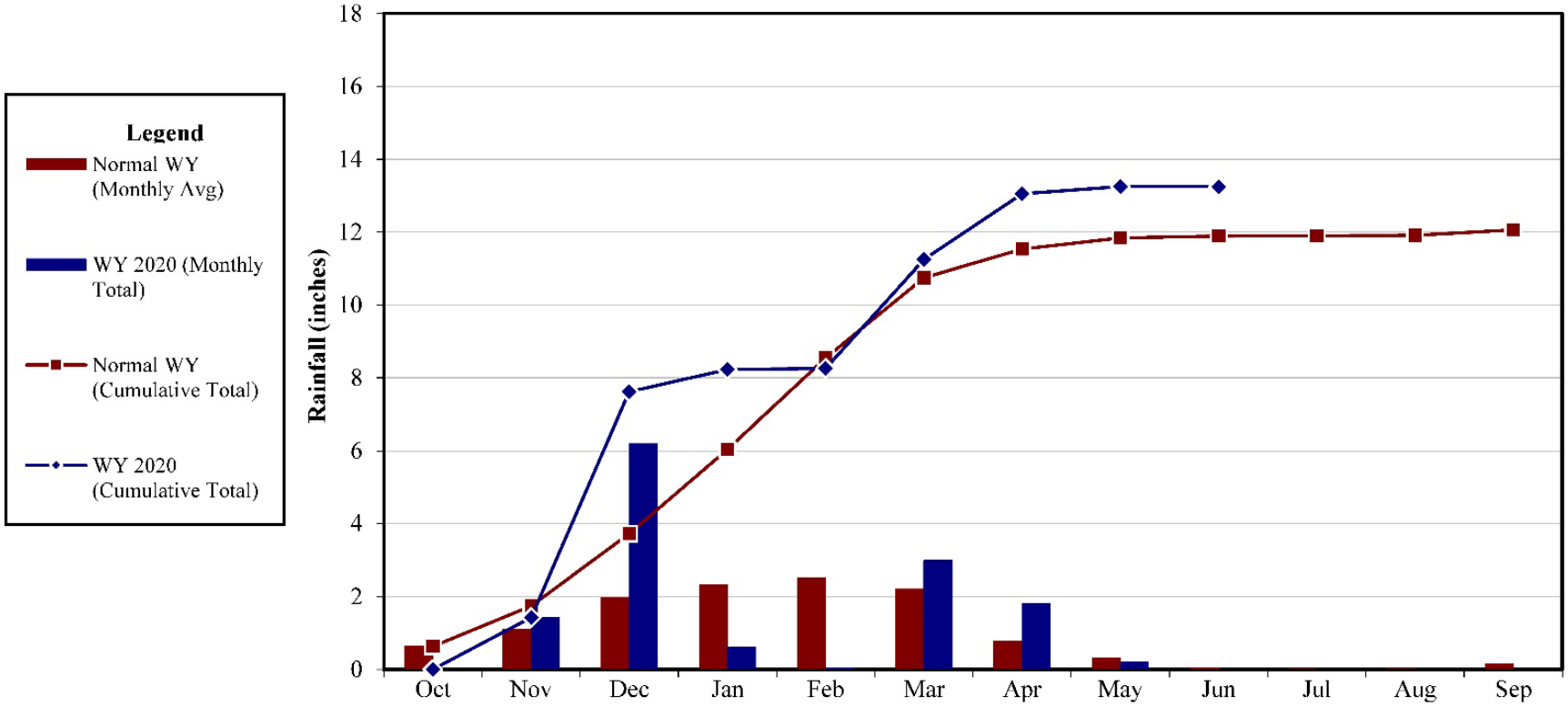
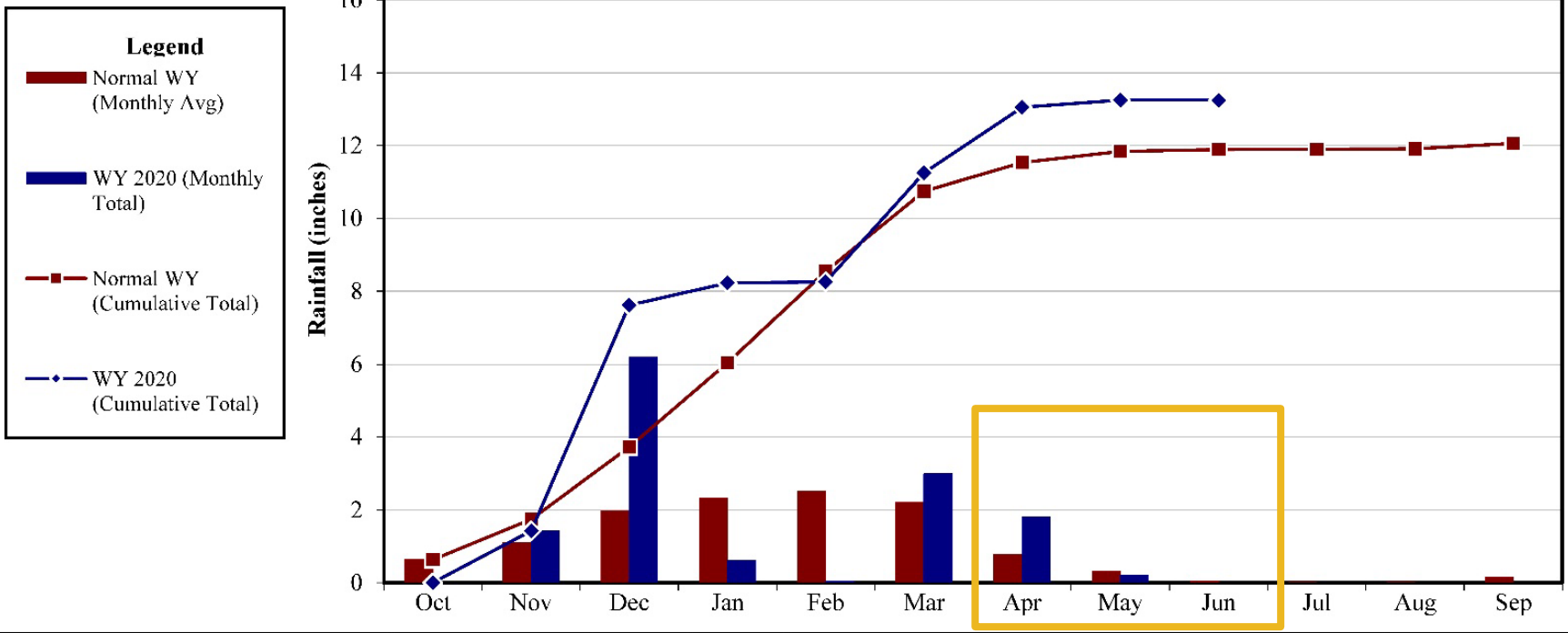
KING CITY RAINFALL
WATER YEAR 2020



Monthly Rainfall (WY 2020)	0.00	1.43	6.19	0.61	0.03	2.99	1.80	0.20	0.00			
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	0%	129%	313%	26%	1%	136%	231%	65%	0%	0%	0%	0%
Cumulative Rainfall (WY 2020)	0.00	1.43	7.62	8.23	8.26	11.25	13.05	13.25	13.25			
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	0%	82%	205%	136%	97%	105%	113%	112%	111%			

KING CITY RAINFALL
WATER YEAR 2020



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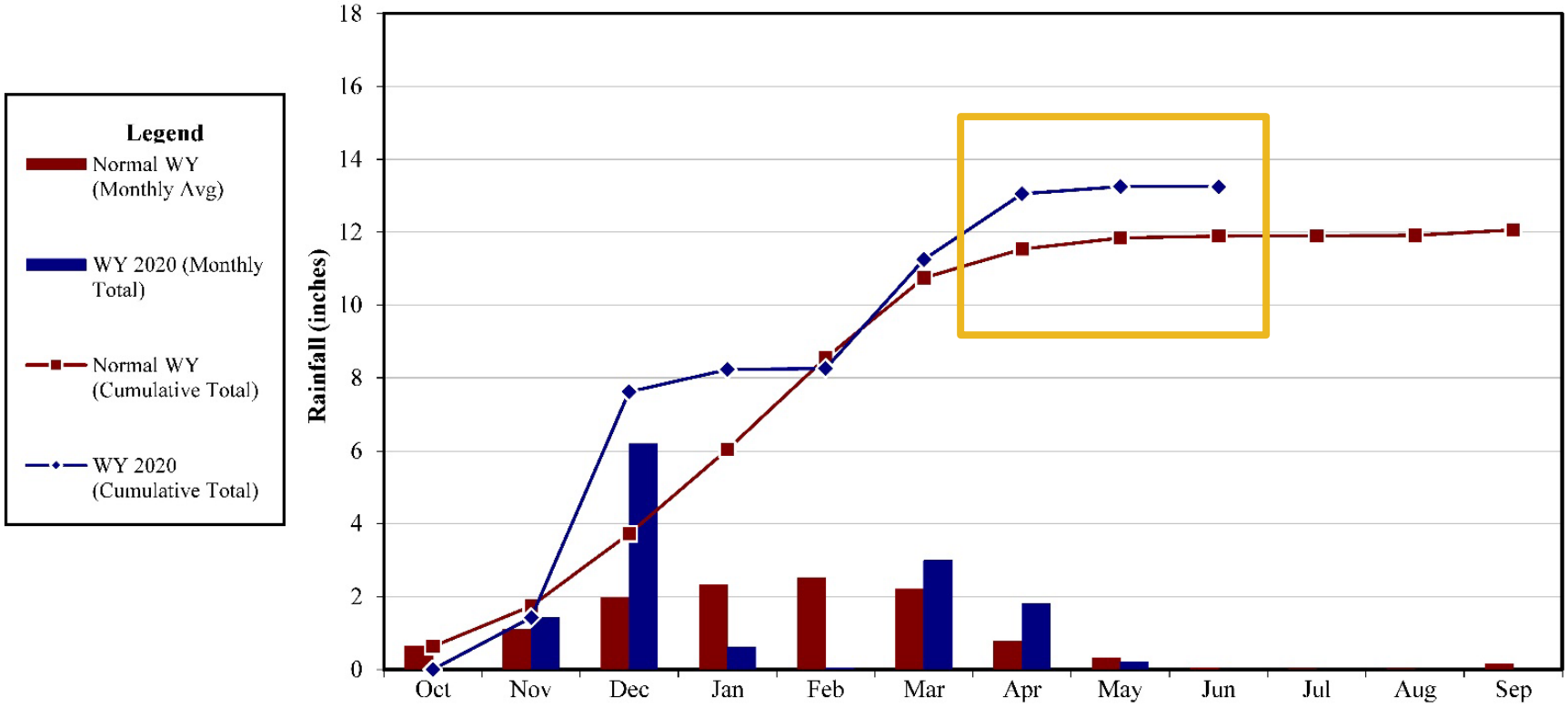
KING CITY RAINFALL
WATER YEAR 2020



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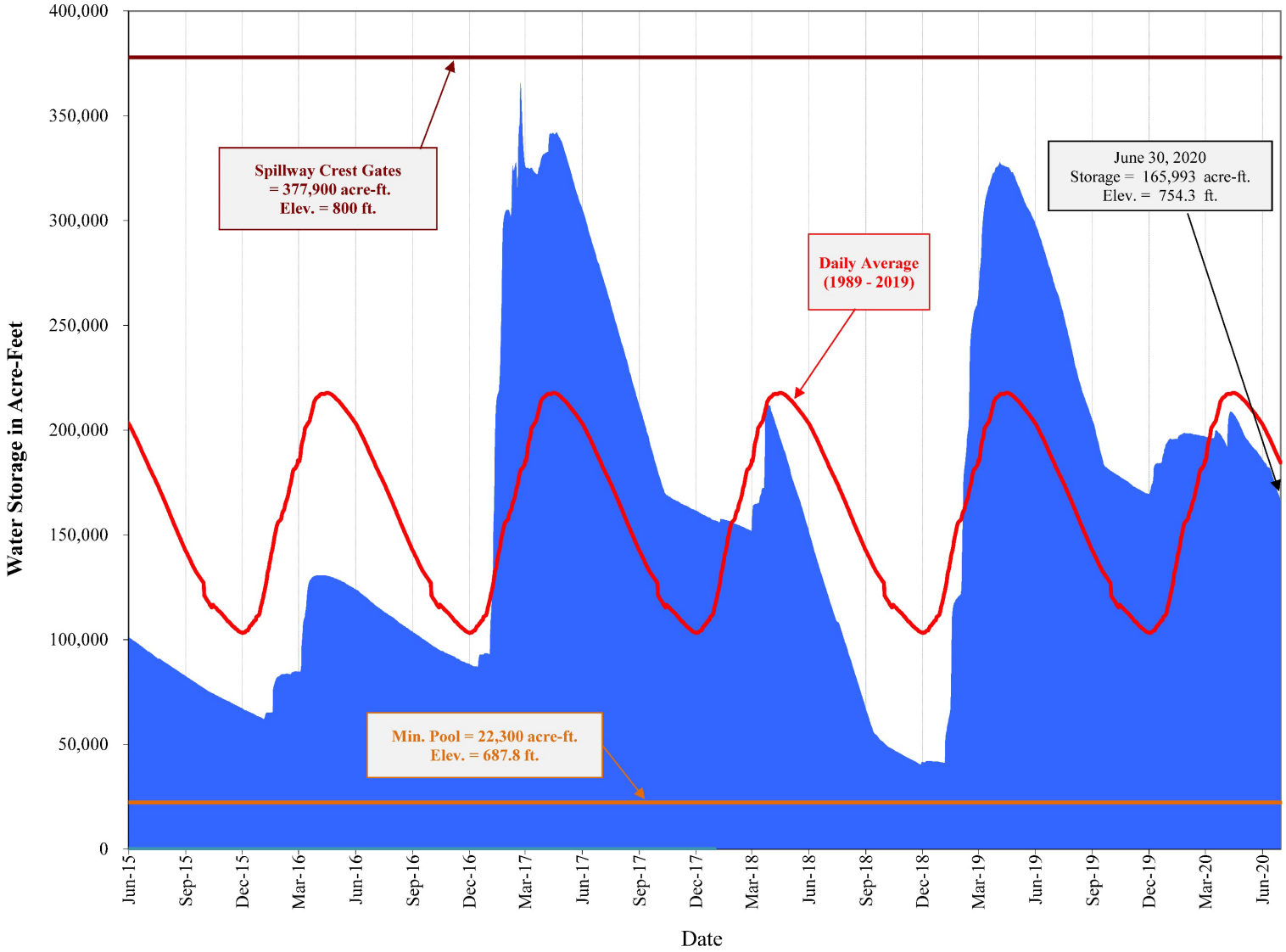
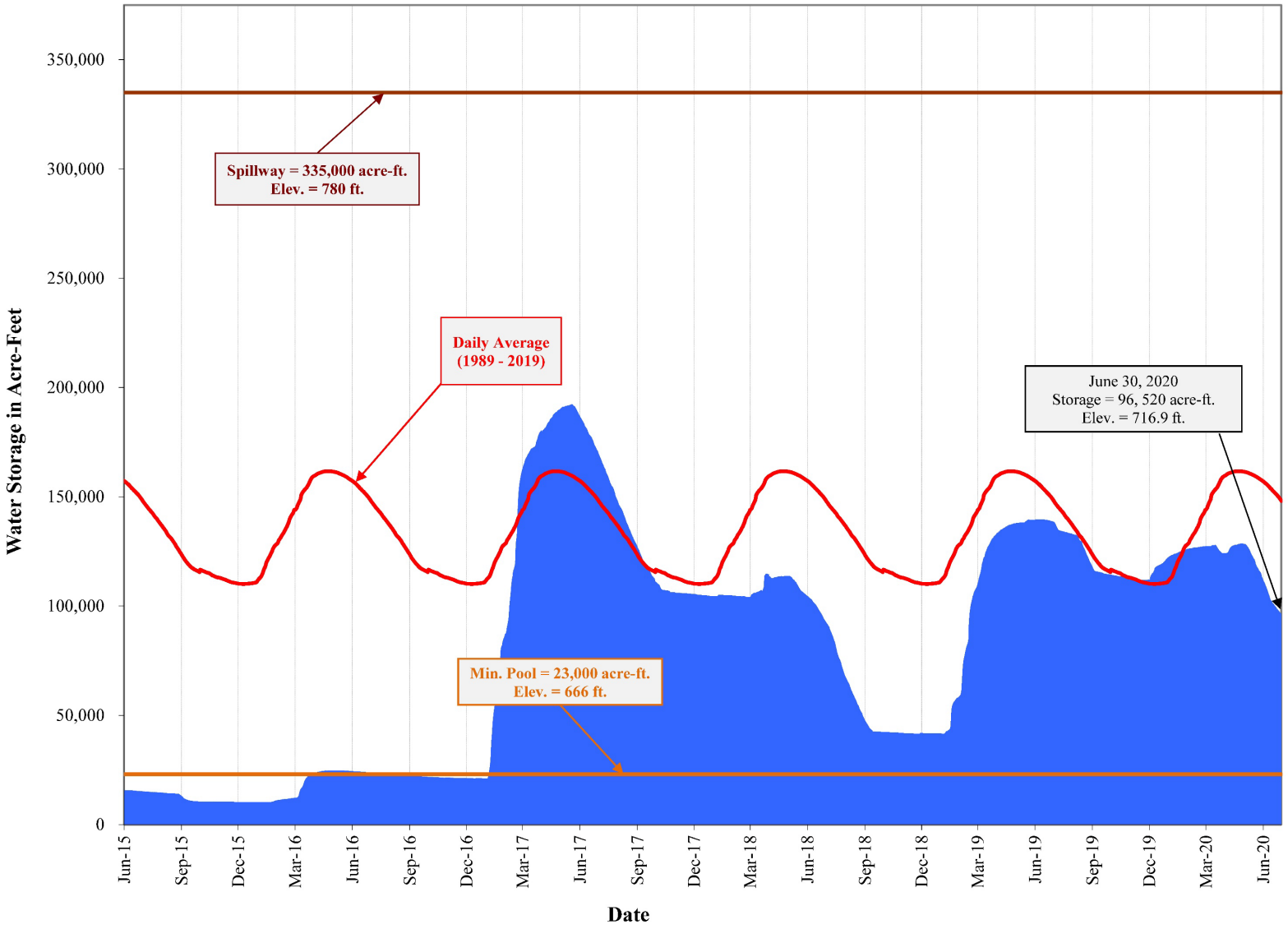
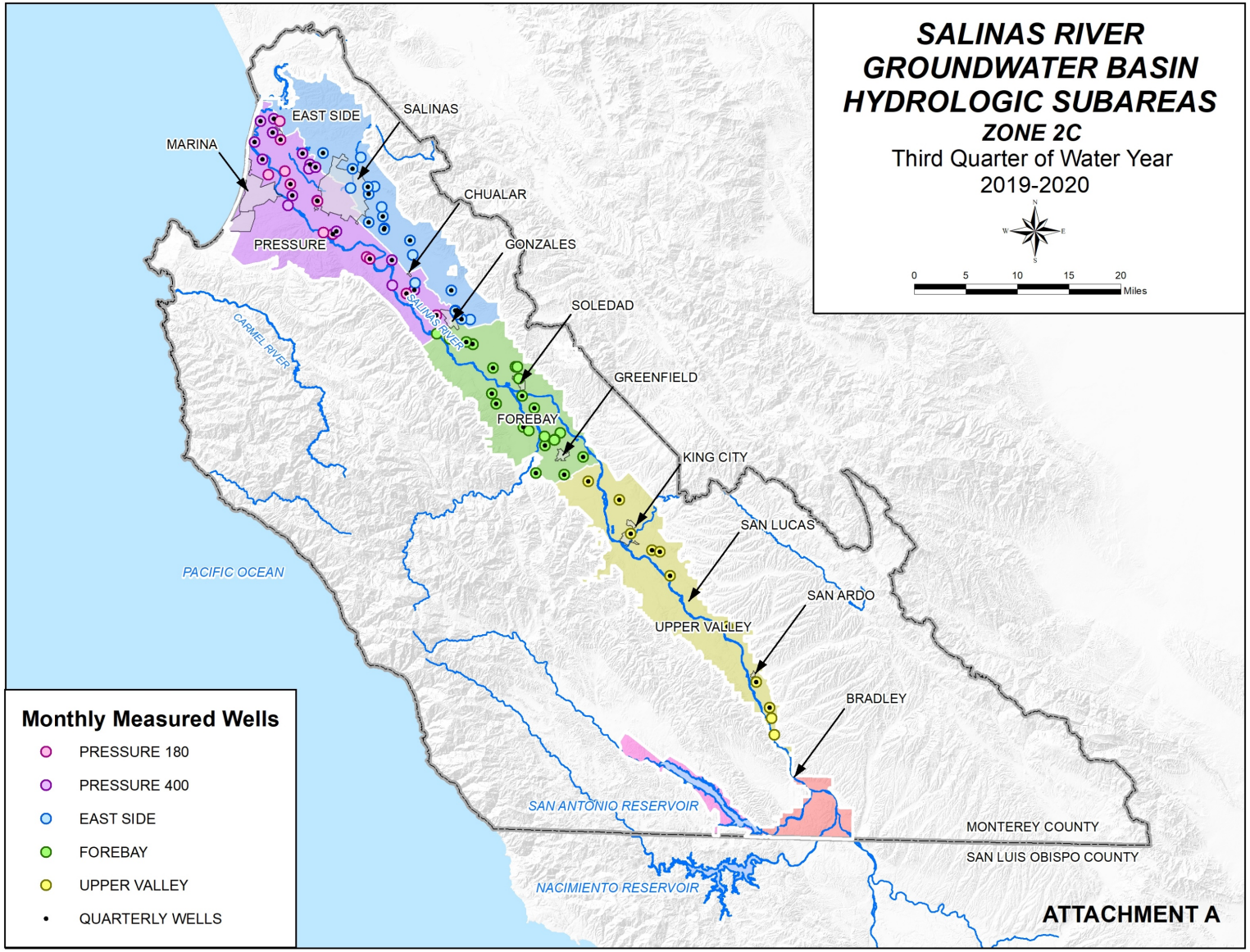
NACIMIENTO RESERVOIR
DAILY STORAGE

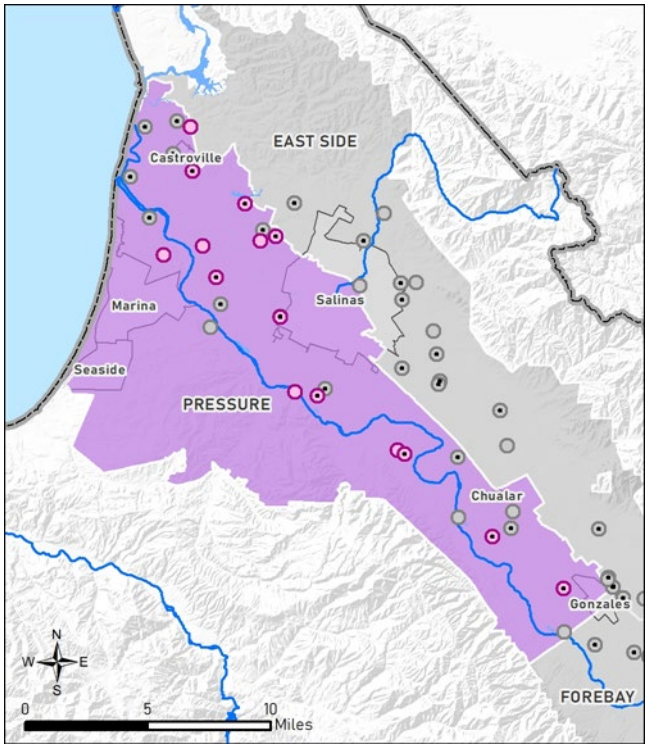


SAN ANTONIO RESERVOIR
DAILY STORAGE

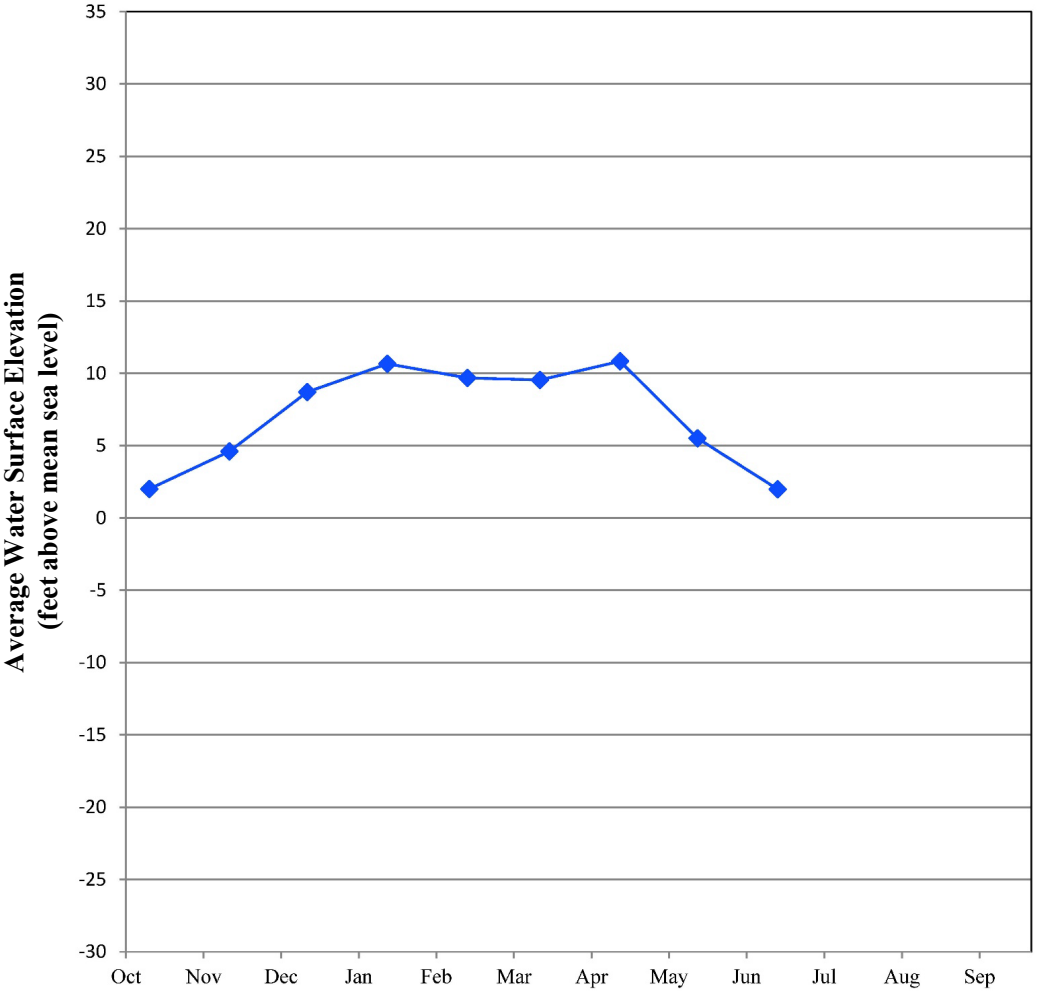



SALINAS RIVER
GROUNDWATER BASIN
HYDROLOGIC SUBAREAS
ZONE 2C
Third Quarter of Water Year
2019-2020
0 5 10 15 20
Miles
EAST SIDE
SALINAS
MARINA
CHUALAR
PRESSURE
GONZALES
SOLEDAD
CARMEL RIVER
SALINAS RIVER
GREENFIELD
FOREBAY
KING CITY
SAN LUCAS
PACIFIC OCEAN
SAN ARDO
UPPER VALLEY
BRADLEY
SAN ANTONIO RESERVOIR
MONTEREY COUNTY
SAN LUIS OBISPO COUNTY
NACIMIENTO RESERVOIR
ATTACHMENT A
Monthly Measured Wells
PRESSURE 180
PRESSURE 400
EAST SIDE
FOREBAY
UPPER VALLEY
QUARTERLY WELLS

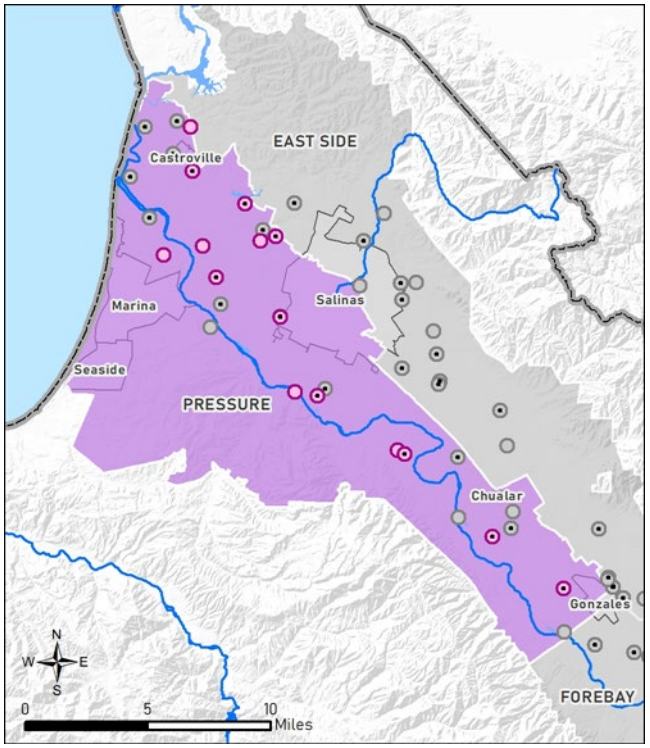
Groundwater Trends
Pressure 180-Foot Aquifer
8 Wells



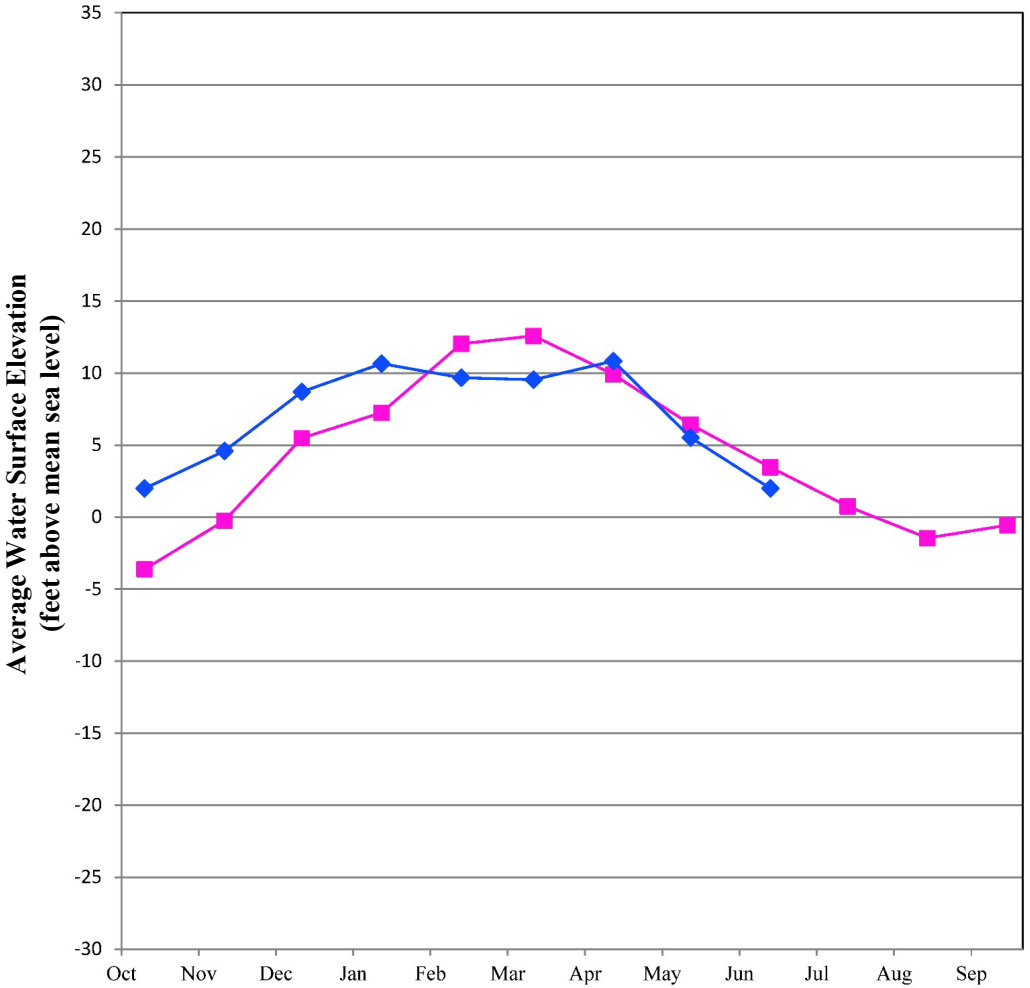
2020 WY



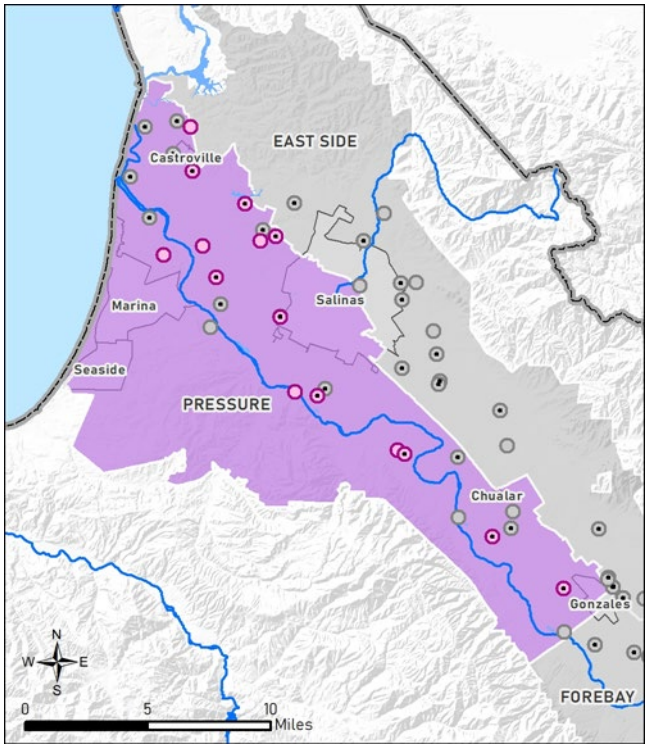
Groundwater Trends
Pressure 180-Foot Aquifer
8 Wells

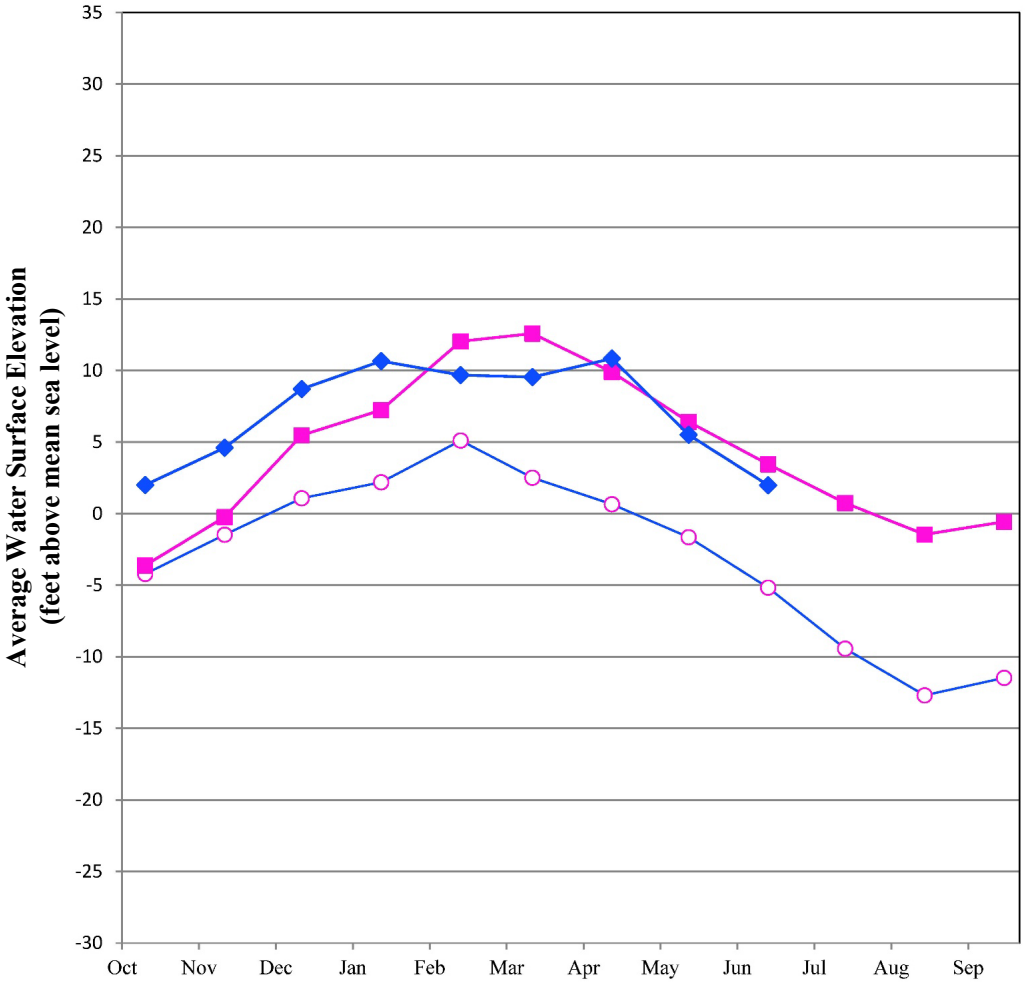


2020 WY
2019 WY

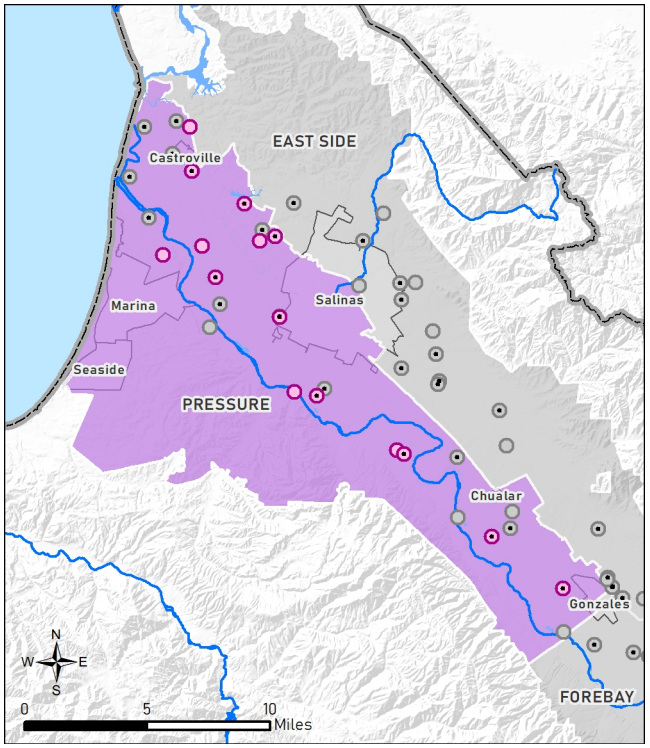


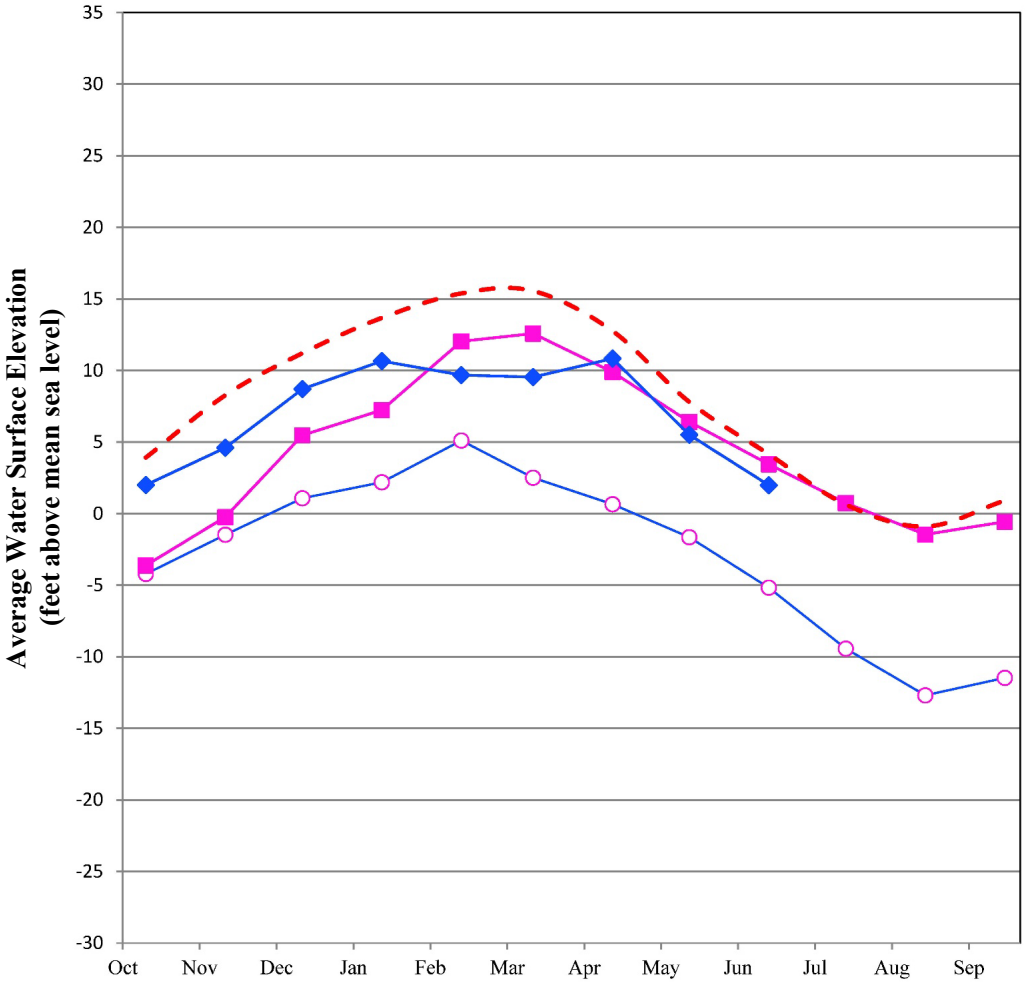
Groundwater Trends
Pressure 180-Foot Aquifer
8 Wells



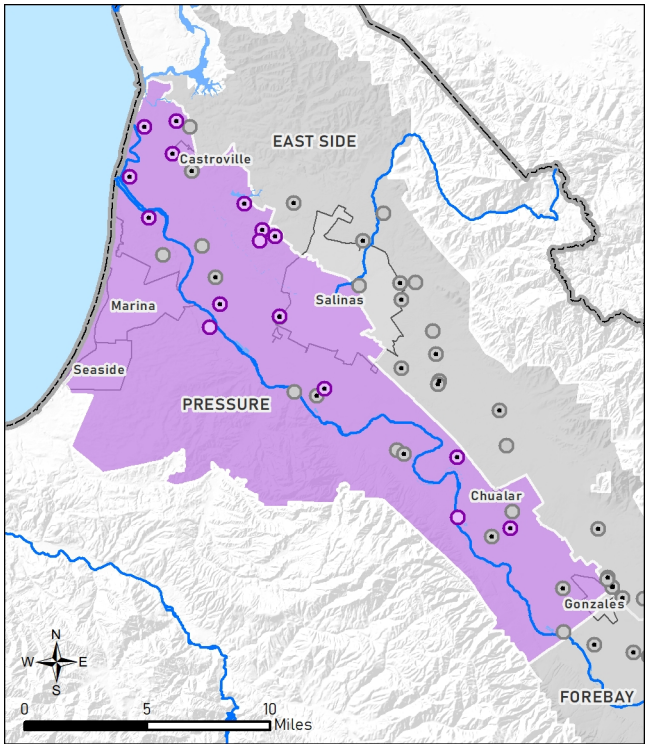


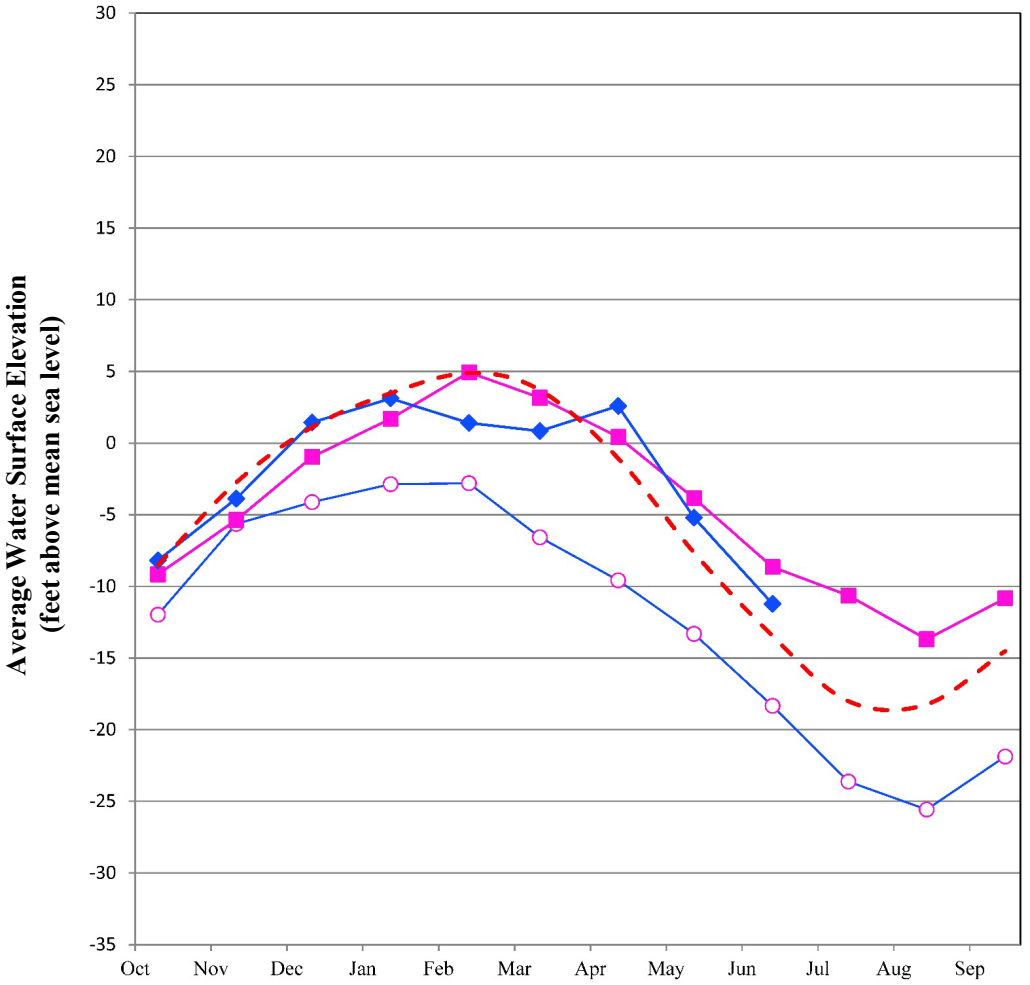
Groundwater Trends
Pressure 180-Foot Aquifer
8 Wells



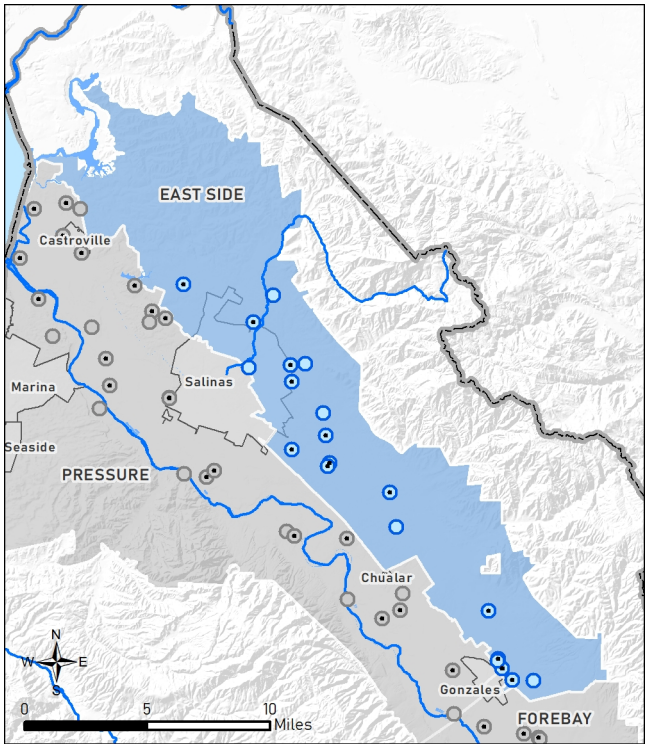


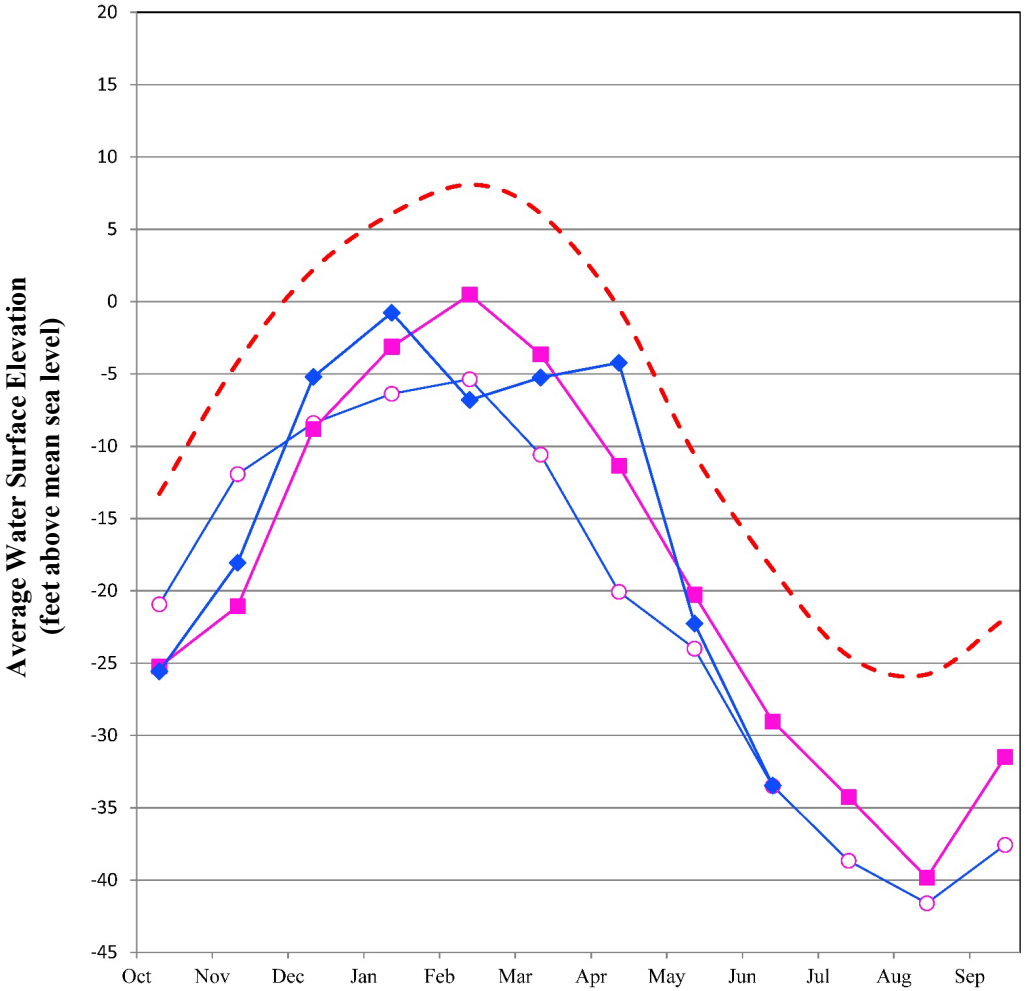
Groundwater Trends
Pressure 400-Foot Aquifer
11 Wells





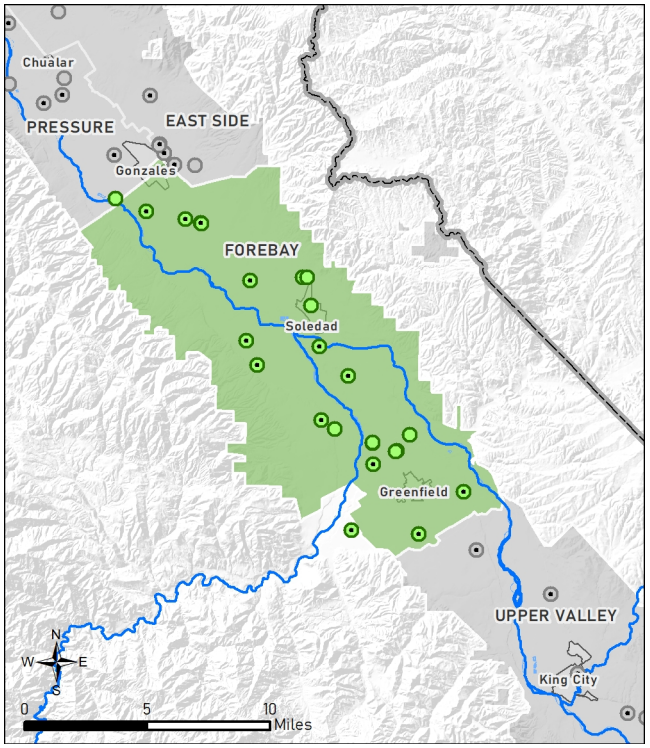
Groundwater Trends
East Side Subarea
12 Wells

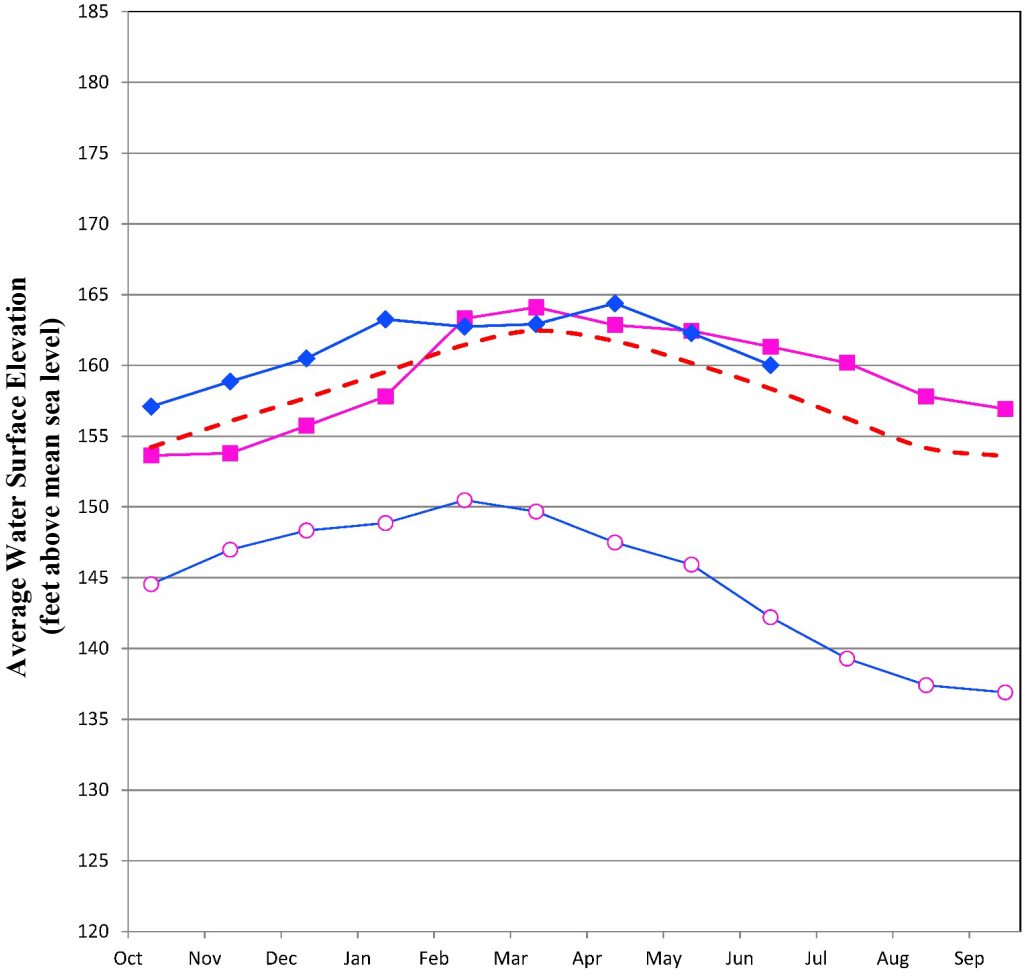




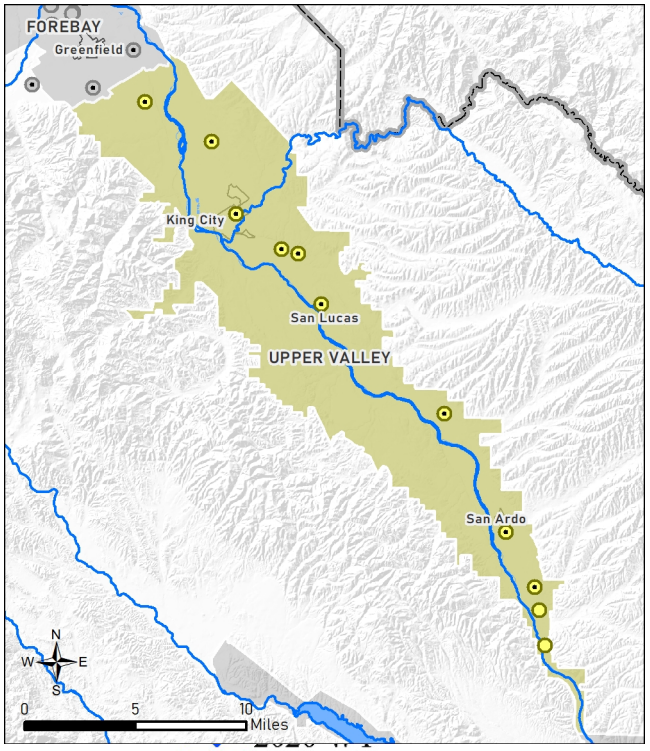
2020 WY
2019 WY
2015 WY (Dry)
30 Year Average (1989-2019)

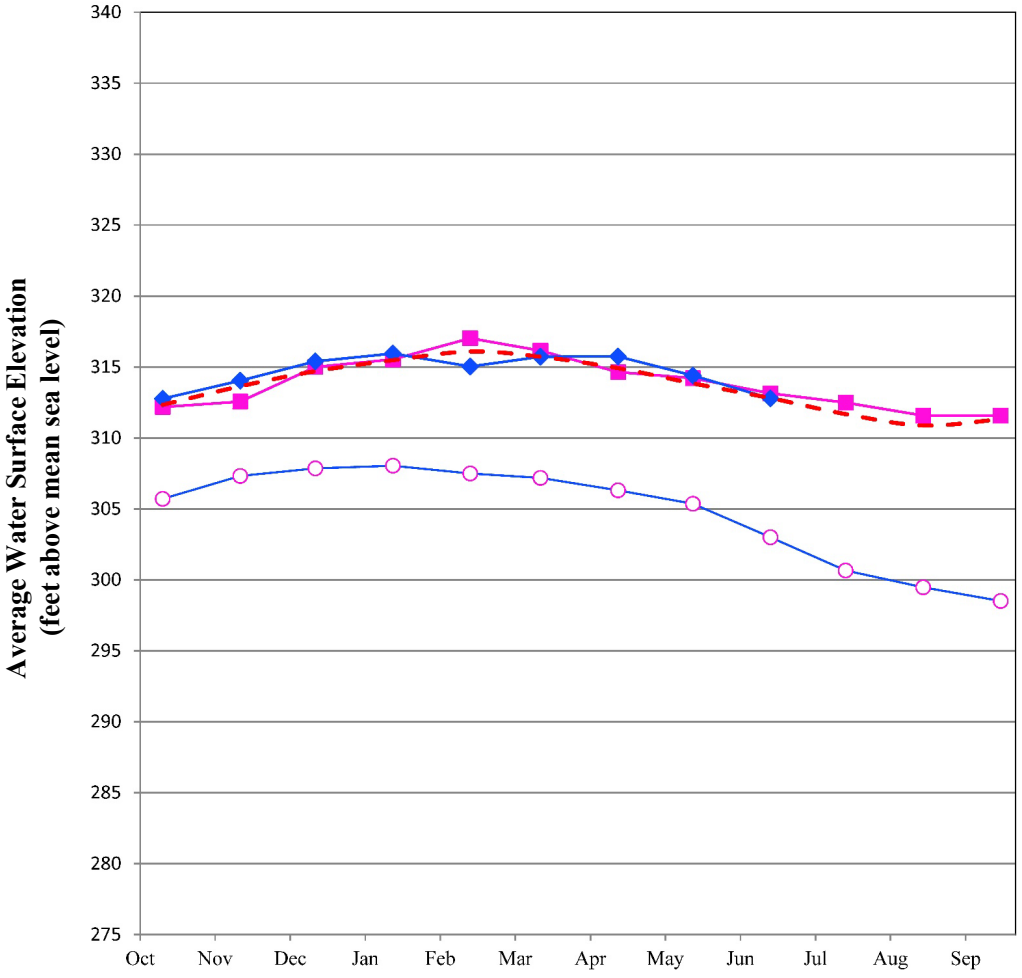
Groundwater Trends
Forebay Subarea
13 Wells





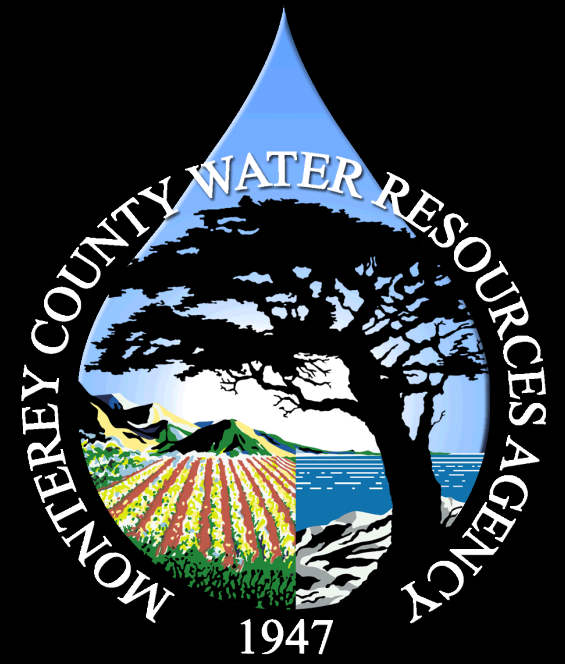
Groundwater Trends
Upper Valley Subarea
10 Wells





Groundwater Trends Summary
June 2020

Area	June 2020 Groundwater Elevation (ft msl)	Change over Third Quarter	1 Year Change	Difference from 30 year Average Elevation
Pressure 180-Foot Aquifer	2 '	Down 8 '	Down 2 '	Down 2 '
Pressure 400-Foot Aquifer	-11 '	Down 12 '	Down 3 '	Up 2 '
East Side Subarea	-34 '	Down 28 '	Down 4 '	Down 15 '
Forebay Subarea	160 '	Down 3 '	Down 1 '	Up 2 '
Upper Valley Subarea	313 '	Down 3 '	Down < 1 '	No Change


MONTEREY COUNTY WATER RESOURCES AGENCY
1947

Salinas Valley Groundwater Level Changes

1944 - 2019 Annual Fall Averages