1441 Schilling Place Salinas, CA 93901



# **Meeting Agenda - Final**

Wednesday, July 7, 2021

8:30 AM

# IMPORTANT COVID-19 NOTICE ON PAGE 2-4 AVISO IMPORTANTE SOBRE COVID-19 EN LA PAGINA 2-4 Water Resources Agency Basin Management Advisory Committee

John Baillie
Deidre Sullivan
Matthew Simis
David Bunn
Bill Lipe
Kevin Piearcy
Amy White
Marisela Cerda
Patrick Breen
Patrick Collins

# IMPORTANT NOTICE REGARDING COVID 19 AND PARTICIPATION IN THE BASIN MANAGEMENT ADVISORY COMMITTEE MEETING

The Basin Management Advisory Committee meeting will be held by teleconference in order to minimize the spread of the COVID 19 virus, in accordance with the State of Emergency proclaimed by Governor Newsom on March 4, 2020, Executive Order N 29 20 issued by Governor Newsom on March 17, 2020, and the Shelter in Place Order issued by the Monterey County Health Officer on March 17, 2020, as may be periodically amended.

To participate in this Basin Management Advisory Committee meeting, the public is invited to observe and address the Committee telephonically or electronically. Instructions for public participation are below:

1. For ZOOM participation please join by computer audio at: https://montereycty.zoom.us/j/99621772720

OR to participate by phone call any of these numbers below: +1 669 900 6833 US (San Jose)

- +1 346 248 7799 US (Houston)
- +1 312 626 6799 US (Chicago)
- +1 929 205 6099 US (New York)
- +1 253 215 8782 US +1 301 715 8592 US

Enter this Meeting ID number: 996 2177 2720 PASSWORD: 478310 when prompted. Please note there is no Participant Code, you will just hit # again after the recording prompts you. You will be placed in the meeting as an attendee; when you are ready to make a public comment, if joined by computer audio, please Raise your Hand; and by phone, please push \*9 on your keypad.

2. If you wish to comment on a specific agenda item while the matter is being heard, you may participate by the following means:

When the Chair calls for public comment on an agenda item, the Zoom Meeting Host, or his or her designee, will first ascertain who wants to comment (among those who are in the meeting electronically or telephonically) and will then call on speakers and unmute their device one at a time. Public speakers may be broadcast in audio form only.

- 3. If you wish to comment on a particular agenda item, please submit your comments in writing via email to Monterey County Water Resources Agency at WRApubliccomment@co.monterey.ca.us by 5:00 p.m. on the Tuesday prior to the Committee meeting. To assist Agency staff in identifying the agenda item to which the comment relates please indicate the Basin Management Advisory Committee meeting date and agenda number in the subject line. Comments received by the 5:00 p.m. Tuesday deadline will be distributed to the Committee and will be placed in the record.
- 4. If you wish to make either a general public comment for items not on the day's agenda or to comment on a specific agenda item as it is being heard, please submit your comment, limited to 250

words or less, to the Monterey County Water Resources Agency at

WRApubliccomment@co.monterey.ca.us. In an effort to assist Agency staff in identifying the agenda item relating to your public comment please indicate in the subject line, the meeting body (i.e. Basin Management Advisory Committee) and item number (i.e. Item No. 10). Every effort will be made to read your comment into the record, but some comments may not be read due to time limitations. Comments received after an agenda item will be made part of the record if received prior to the end of the meeting.

- 5. If speakers or other members of the public have documents they wish to distribute to the Committee for an agenda item, they are encouraged to submit such documents by 5:00 p.m. on Tuesday before the meeting to: WRApubliccomment@co.monterey.ca.us. To assist Agency staff in identifying the agenda item to which the comment relates, the public is requested to indicate the Basin Management Advisory Committee date and agenda number in the subject line.
- 6. If members of the public want to present documents/Power Point presentations while speaking, they should submit the document electronically by 5:00 p.m. on Tuesday before the meeting at WRApubliccomment@co.monterey.ca.us. (If submitted after that deadline, staff will make best efforts, but cannot guarantee, to make it available to present during the Committee meeting.)
- 7. Individuals with disabilities who desire to request a reasonable accommodation or modification to observe or participate in the meeting may make such request by sending an email to WRApubliccomment@co.monterey.ca.us. The request should be made no later than noon on the Wednesday prior to the Committee meeting in order to provide time for the Agency to address the request.
- 8. The Chair and/or Secretary may set reasonable rules as needed to conduct the meeting in an orderly manner.

#### AVISO IMPORTANTE SOBRE COVID 19 Y PARTICIPACIÓN EN LA REUNIÓN DEL COMITE DE ASESOR DE GESTION DE LA CUENCA

La reunión del Comité de Asesor de Gestion de la Cuenca se llevará a cabo por teleconferencia para minimizar la propagación del virus COVID 19, de acuerdo con el Estado de Emergencia proclamado por el Gobernador Newsom el 4 de Marzo del 2020, Orden Ejecutiva N 29 20 emitida por el Gobernador Newsom el 17 de Marzo del 2020, y la Orden de Refugio en el Lugar") emitida por el Oficial de Salud del Condado de Monterey el 17 de Marzo del 2020, según se pueda enmendar periódicamente.

Para participar en esta reunión del Comité de Asesor de Gestion de la Cuenca el público están invitados a observar y dirigirse al Comité telefónicamente o por vía electrónica. Las instrucciones para la participación pública están a continuación:

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siguiente enlace: https://monterevcty.zoom.us/j/99621772720

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Se le colocará en la reunión como asistente; cuando esté listo para hacer un comentario público si se une al audio de la computadora, levante la mano; y por teléfono presione \* 9 en su teclado.

2. Los miembros del público que desean comentar en un artículo específico de la agenda, mientras que el artículo se este presentando durante la reunión, pueden participar por cualquiera de los siguientes medios:

Cuando el Presidente del Comité solicite comentarios públicos sobre un artículo de la agenda, el anfitrión de la reunión Zoom o su designado, primero determinará quién quiere testificar (entre los que están en la reunión por vía electrónica o telefónica) y luego llamará a los oradores (speakers) y activará la bocina para el orador, uno a la vez. Todo orador, será transmitido por audio en altavoz solamente.

- 3. Si un miembro del público desea comentar sobre un artículo de la agenda en particular, se le es sumamente recomendable que envie sus comentarios por escrito por correo electrónico a la Agencia de Administración de Recursos del Agua (Agencia) a WRApubliccomment@co.monterey.ca.us antes de las 5:00 P. M. el Martes antes de la reunión del Comité. Para ayudar al personal de la Agencia a identificar el número del artículo de la agenda con el cual se relaciona el comentario, se solicita al público que indique la fecha de la reunión del Comité y el número del artículo de la agenda en la línea de asunto. Comentarios recibidos en la fecha limite del Martes a las 5 P.M, serán distribuidos al Comité y serán colocados en el registro.
- 4. Los miembros del público que deseen hacer un comentario público general para temas que no están en la agenda del día o que deseen comentar en un artículo específico mientras se escucha la presentación, lo pueden hacer enviando un comentario por correo electrónico, preferiblemente limitado a 250 palabras o menos, a WRApubliccomment@co.monterey.ca.us. Para ayudar al personal de la Agencia a identificar el artículo de la agenda con el cual se relaciona el comentario, se solicita al público que indique el nombre del Comité (por ejemplo: Comité de Asesor de Gestion de la Cuenca) y el número del artículo de la agenda (por ejemplo: Artículo # 10). Se hará todo lo

posible para leer el comentario en el registro, pero algunos comentarios pueden no leerse en voz alta debido a limitaciones de tiempo. Los comentarios recibidos después del cierre del período de comentarios públicos sobre un artículo de la agenda serán parte del registro si se reciben antes que termine la reunión del Comité.

- 5. Si los oradores u otros miembros del público tienen documentos que desean distribuir al Comité para un artículo de la agenda, se les recomienda enviar dichos documentos antes de las 5:00 P.M. el Martes antes de la reunión a: WRApubliccomment@co.monterey.ca.us. Para ayudar al personal de la Agencia a identificar el número del artículo de la agenda con el cual se relaciona el comentario, se solicita al público que indique la fecha de la reunion del Comité y el número de agenda en la línea de asunto.
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- 8. El Presidente y / o Secretario pueden establecer reglas razonables según sea necesario para llevar a cabo la reunión de manera ordenada.

#### Call to Order

#### Roll Call

#### **Public Comment**

#### **Consent Calendar**

**1.** Approve the Minutes of the Basin Management Advisory Committee meeting held on June 2, 2021.

Attachments: Draft Action Minutes June 2, 2021

#### **Scheduled Matters**

2. Consider receiving a report on moving averages representing different periods of average groundwater elevations and precipitation and provide guidance to Staff for a

report to the Agency Board of Directors.

Attachments: Board Report

Moving Averages Data Packet

**3.** Consider receiving a draft outline for a Special Report on Salinas Valley Water

Usage: An Analysis of 25 Years of Groundwater Extraction Reporting and

provide guidance to Staff.

Attachments: Board Report

Salinas Valley Water Usage

#### **Staff Reports**

**4.** Proposition 1 Implementation Grant Update: *Protection of Domestic Drinking* 

Water Supplies for the Lower Salinas Valley

Attachments: Proposition 1 Grant Update

**5.** Update on Well Permit Application Activities

<u>Attachments:</u> Well Permit Application Activities

**6.** Update on Groundwater Sustainability Agency activities in the Salinas Valley Basin

Attachments: 4 GSA Activities Update

**7.** Update on Agency Modeling Activities

<u>Attachments:</u> <u>Agency Modeling Activities</u>

#### **Status Report**

#### **Calendar**

**8.** Consider future agenda items and set next meeting date

#### **Adjournment**



# Item No.1

Board of Supervisors Chambers 168 W. Alisal St., 1st Floor Salinas, CA 93901

July 07, 2021

## **Board Report**

Legistar File Number: WRABMAC 21048

Introduced: 6/29/2021 Current Status: Draft

Version: 1 Matter Type: WRA BMAC Item

Approve the Minutes of the Basin Management Advisory Committee meeting held on June 2, 2021.

1441 Schilling Place Salinas, CA 93901



# **Action Minutes - Draft**

Wednesday, June 2, 2021 8:30 AM

# IMPORTANT COVID-19 NOTICE ON PAGE 2-4 AVISO IMPORTANTE SOBRE COVID-19 EN LA PAGINA 2-4

# Water Resources Agency Basin Management Advisory Committee

John Baillie
Deidre Sullivan
Matthew Simis
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y serán colocados en el registro.

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- 5. Si los oradores u otros miembros del público tienen documentos que desean distribuir al Comité para un artículo de la agenda, se les recomienda enviar dichos documentos antes de las 5:00 P.M. el Martes antes de la reunión a: WRApubliccomment@co.monterey.ca.us. Para ayudar al personal de la Agencia a identificar el número del artículo de la agenda con el cual se relaciona el comentario, se solicita al público que indique la fecha de la reunion del Comité y el número de agenda en la línea de asunto.
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- 8. El Presidente y / o Secretario pueden establecer reglas razonables según sea necesario para llevar a cabo la reunión de manera ordenada.

#### Call to Order

The meeting was called to order at 8:32 a.m.

#### Roll Call

Present: John Baillie, Deidre Sullivan, Matthew Simis, Amy White, Marisela Cerda, Patrick Breen Absent: David Bunn, Patrick Collins

Joined after Roll Call: Amy White, Bill Lipe, Kevin Piearcy

#### **Public Comment**

None

#### **Consent Calendar**

1. Approve the Minutes of the Basin Management Advisory Committee meetings held on May 5, 2021.

Attachments: Draft Minutes BMAC May 5, 2021

Upon Motion by Matthew Simis and Second by Diedre Sullivan the Committee approved the Minutes of the Basin Management Advisory Committee meeting held on May 5, 2021.

Ayes: Baillie, Sullivan, Simis, Lipe, White, Cerda, Breen

Noes: None

Absent: Bunn, Collins, Piearcy

2. Consider recommending that the Monterey County Water Resources Agency Board of Directors enter into a multi-year cooperative agreement with the US Geological Survey and the Salinas Valley Basin Groundwater Sustainability Agency to support the continued development of the Salinas Valley Integrated Hydrologic Model

Attachments: Board Report

**Draft Salinas Valley Cooperative Science Proposal** 

BIII Lipe recused himself because of his involvement with the Salinas Valley Groundwater Sustainability Agency.

Upon Motion by Amy White and Second by Kevin Piearcy, the Committee moved to request that staff bring the multi-year cooperative agreement with the US Geological Survey and the Salinas Valley Basin Groundwater Sustainability Agency back to the Committee when it is in a more final form

Ayes: Baillie, Sullivan, Simis, White, Cerda, Breen, Piearcy

Noes: None

Absent: Bunn, Collins, Lipe

Public Comment: Tom Virsik, George Fontes

#### **Scheduled Matters**

#### **Staff Reports**

**3.** Proposition 1 Implementation Grant Update: Protection of Domestic Drinking Water Supplies for the Lower Salinas Valley

<u>Attachments:</u> Proposition 1 Grant Update

**4.** Update on Well Permit Application Activities

<u>Attachments:</u> Well Permit Application Activities Update

**5.** Update on Groundwater Sustainability Agency activities in the Salinas Valley Basin

Attachments: GSA Activities Update

**6.** Update on Agency Modeling Activities

<u>Attachments:</u> Agency Modeling Activities Update

#### Calendar

7. Consider future agenda items and set next meeting date

#### **Adjournment**

The meeting adjourned at 9:15 a.m.



#### Item No.2

Board of Supervisors Chambers 168 W. Alisal St., 1st Floor Salinas, CA 93901

July 07, 2021

#### **Board Report**

Legistar File Number: WRABMAC 21-054

Introduced:6/30/2021Current Status:Agenda ReadyVersion:1Matter Type:WRA BMAC Item

Consider receiving a report on moving averages representing different periods of average groundwater elevations and precipitation and provide guidance to Staff for a report to the Agency Board of Directors.

#### RECOMMENDATION:

It is recommended that the Water Resources Agency Basin Management Advisory Committee:

Receive a report on moving averages representing different periods for average groundwater elevations and precipitation and provide guidance to Staff for a report to the Agency Board of Directors.

#### SUMMARY:

The Agency uses a 30-year period to compare trends in average groundwater levels and precipitation as a long-term "normal". At their June 21st meeting, the Agency Board of Directors asked Staff to generate moving averages with shorter timesteps than 30-years for comparison. This report shows what 15-, 10-, and 5-year moving averages would look like for groundwater levels as well as a 15-year period for precipitation.

#### DISCUSSION:

At their June 21st meeting, the Agency Board of Directors received a report on drought conditions in Monterey County. During the presentation of groundwater levels, the question of why a 30-year average was used to represent average groundwater level trends was discussed. The Board of Directors asked Staff to generate moving averages with shorter timesteps than 30-years (e.g., 15-, 10-year) for comparison.

The Agency uses a 30-year period to compare trends in groundwater levels and precipitation as a long-term "normal". A 30-year period is an accepted convention in the scientific community to get a reliable estimate of an average. It is also the period used by the World Meteorological Organization to define Climate Normals. In the Quarterly Water Conditions Report, average groundwater elevations in the major hydrologic subareas are graphed to compare the current water year's levels to the previous water year's levels, a dry year's levels (water year 2015), and a 30-year average of monthly groundwater levels. Staff performed a comparison of what the 30-year average versus the 15-, 10- and 5-year averages would look like. These can be found in Attachment 1.

The Agency uses Climate Normals produced by the National Centers for Environmental Information (NCEI) to represent precipitation normals. These are the official U.S. normals that are released every

10 years. Updated Climate Normals for 1991-2020 were released earlier this year. These showed a 0.25- and 0.23-inch decline in annual total precipitation at the Salinas and King City stations, respectively, from the 1981-2010 Climate Normals.

One view is that with the increasing impacts of climate change, the use of a 30-year period may not represent the current state of the climate. To account for this, the NCEI also released supplemental 15-year normals with the recent update. A comparison of the 1981-2010 and 1991-2020 climate normals, in addition to the supplemental 15-year normals for 2006-2020, for the Salinas and King City stations can be found in Attachment 1.

#### OTHER AGENCY INVOLVEMENT:

None.

#### FINANCING:

There is no financial impact in receiving this report. Funds 111, 116: Data Collection, Processing, Analysis and Reporting

Prepared by: Howard Franklin, Senior Hydrologist, (831) 755-4860

Tamara Voss, Associate Hydrologist, (831) 755-4860

Nicole Koerth, Hydrologist, (831) 755-4860

Approved by: Brent Buche, General Manager

Attachment:

Moving Averages Data Packet



#### Item No.

Board of Supervisors Chambers 168 W. Alisal St., 1st Floor Salinas, CA 93901

July 07, 2021

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#### DISCUSSION:

At their June 21st meeting, the Agency Board of Directors received a report on drought conditions in Monterey County. During the presentation of groundwater levels, the question of why a 30-year average was used to represent average groundwater level trends was discussed. The Board of Directors asked Staff to generate moving averages with shorter timesteps than 30-years (e.g., 15-, 10-year) for comparison.

The Agency uses a 30-year period to compare trends in groundwater levels and precipitation as a long-term "normal". A 30-year period is an accepted convention in the scientific community to get a reliable estimate of an average. It is also the period used by the World Meteorological Organization to define Climate Normals. In the Quarterly Water Conditions Report, average groundwater elevations in the major hydrologic subareas are graphed to compare the current water year's levels to the previous water year's levels, a dry year's levels (water year 2015), and a 30-year average of monthly groundwater levels. Staff performed a comparison of what the 30-year average versus the 15-, 10- and 5-year averages would look like. These can be found in Attachment 1.

The Agency uses Climate Normals produced by the National Centers for Environmental Information (NCEI) to represent precipitation normals. These are the official U.S. normals that are released every

10 years. Updated Climate Normals for 1991-2020 were released earlier this year. These showed a 0.25- and 0.23-inch decline in annual total precipitation at the Salinas and King City stations, respectively, from the 1981-2010 Climate Normals.

One view is that with the increasing impacts of climate change, the use of a 30-year period may not represent the current state of the climate. To account for this, the NCEI also released supplemental 15-year normals with the recent update. A comparison of the 1981-2010 and 1991-2020 climate normals, in addition to the supplemental 15-year normals for 2006-2020, for the Salinas and King City stations can be found in Attachment 1.

#### OTHER AGENCY INVOLVEMENT:

None.

#### FINANCING:

There is no financial impact in receiving this report. Funds 111, 116: Data Collection, Processing, Analysis and Reporting

Prepared by: Howard Franklin, Senior Hydrologist, (831) 755-4860

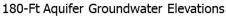
Tamara Voss, Associate Hydrologist, (831) 755-4860

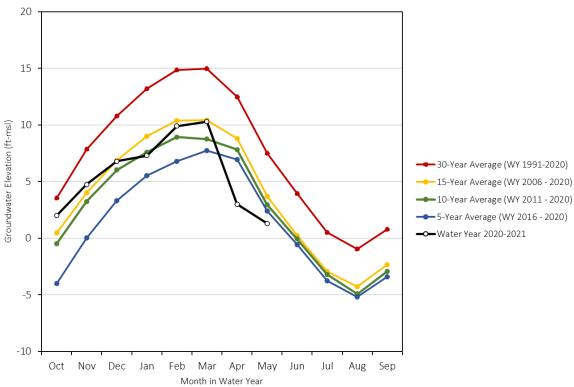
Nicole Koerth, Hydrologist, (831) 755-4860

Approved by: Brent Buche, General Manager

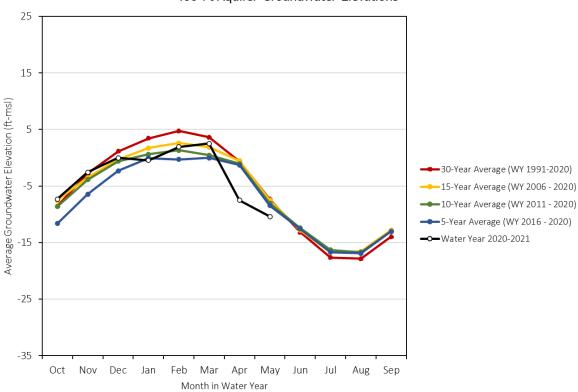
Attachment:

Moving Averages Data Packet

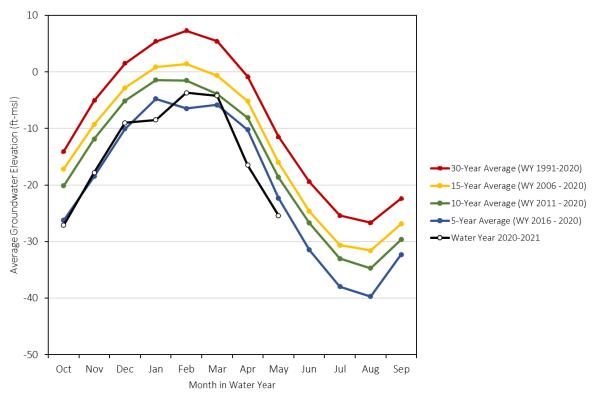




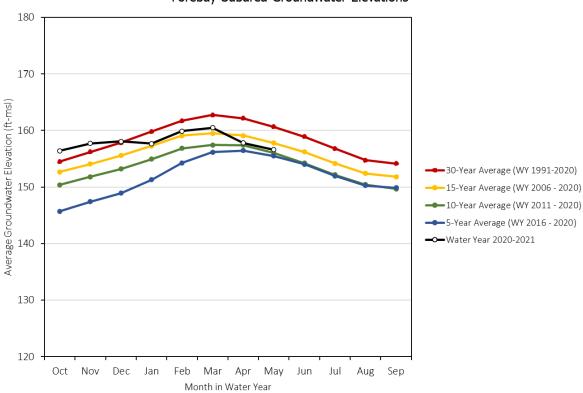
#### 400-Ft Aquifer Groundwater Elevations

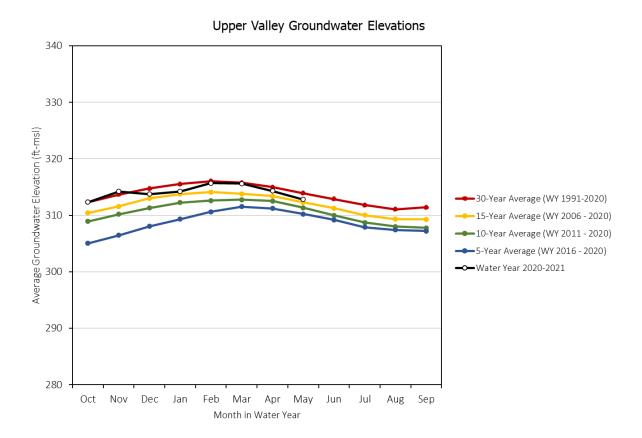


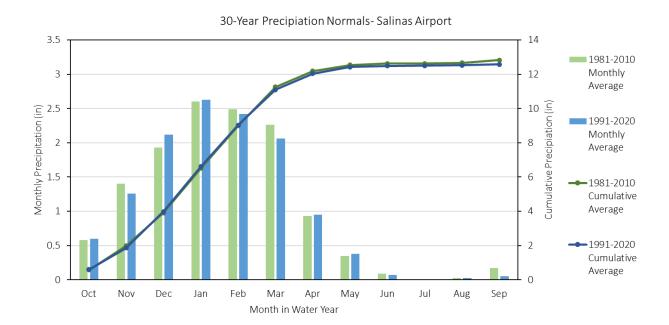


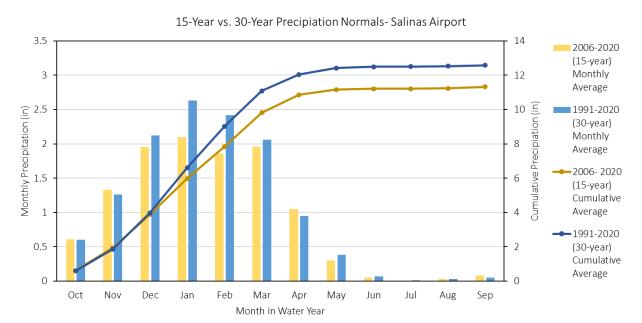


#### Forebay Subarea Groundwater Elevations



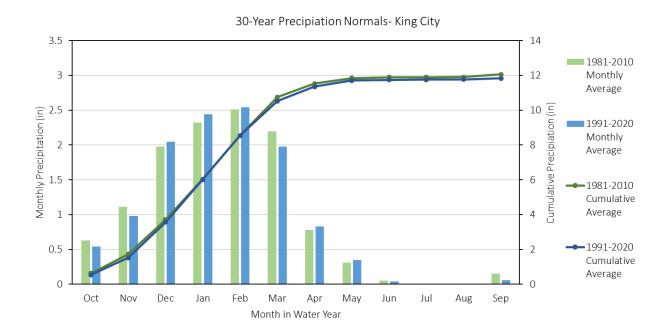


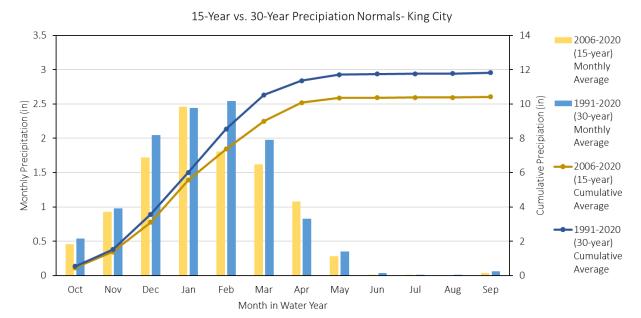




Salinas Airport Station					
Period	Annual Total (inches)				
1981-2010 (30-year Climate Normal)	12.83				
1991-2020 (30-year Climate Normal)	12.58				
2006-2020 (15-year supplemental normal)	11.32				

The 30-Year Climate Normals and supplemental 15-Year normal are the official U.S. Climate Normals generated by the National Centers for Environmental Information (NCEI). More information can be found at: <a href="https://www.ncei.noaa.gov/products/us-climate-normals">https://www.ncei.noaa.gov/products/us-climate-normals</a>





King City Station				
Period	Annual Total (inches)			
1981-2010 (30-year Climate Normal)	12.06			
1991-2020 (30-year Climate Normal)	11.83			
2006-2020 (15-year supplemental normal)	10.42			

The 30-Year Climate Normals and supplemental 15-Year normal are the official U.S. Climate Normals generated by the National Centers for Environmental Information (NCEI). More information can be found at: <a href="https://www.ncei.noaa.gov/products/us-climate-normals">https://www.ncei.noaa.gov/products/us-climate-normals</a>



#### Item No.3

Board of Supervisors Chambers 168 W. Alisal St., 1st Floor Salinas, CA 93901

July 07, 2021

#### **Board Report**

Legistar File Number: WRABMAC 21-055

Introduced:6/30/2021Current Status:Agenda ReadyVersion:1Matter Type:WRA BMAC Item

Consider receiving a draft outline for a Special Report on Salinas Valley Water Usage: An Analysis of 25 Years of Groundwater Extraction Reporting and provide guidance to Staff.

#### RECOMMENDATION:

It is recommended that the Water Resources Agency Basin Management Advisory Committee:

Receive a draft outline for a Special Report on Salinas Valley Water Usage: An Analysis of 25 Years of Groundwater Extraction Reporting and provide guidance to Staff.

#### SUMMARY:

Information about the amount of groundwater extractions and water demand in the Area of Impact and Zone 2B, presented to the BMAC at their April 7th and May 5th meetings, is now being incorporated into a Special Report. This will be an informational report focused on analyzing trends in groundwater extractions, water and land use, water conservation data from the last 25 years, and some discussion of the relationship to recent climate patterns.

#### **DISCUSSION:**

At the April 7th and May 5th BMAC meetings, Staff presented an evaluation of the number of wells and amount of groundwater extractions occurring within the Area of Impact and Zone 2B of the Salinas Valley Groundwater Basin. The Committee provided feedback and guidance to Staff on ways to focus their investigation, and better ways to present the information.

This information is now being incorporated into a Special Report focused on the water usage throughout the entire Salinas Valley. The Agency has collected groundwater extraction and water conservation information through the Groundwater Extraction Management System (GEMS) program since 1995. While the annual summary reports summarize data submitted each reporting year, no long-term analysis of these data has been done. This Special Report will analyze the water usage throughout the Salinas Valley over the last 25 years. This is an informational report and will not be making recommendations. The focus of this report is to show trends in the amount of groundwater extracted and used over time, changes in water and land use and water conservation practices, and the relationship to recent climate patterns.

A draft outline of this report is included as Attachment 1. This is a draft outline, and some topics may or may not be included in the final report. Staff is looking for guidance and recommendations from the BMAC on additional topics to consider adding to this report. The estimated timeline is 3-6 months, depending on Staff availability.

#### OTHER AGENCY INVOLVEMENT:

None.

#### FINANCING:

There is no financial impact in receiving this report. Funds 111, 116: Data Collection, Processing, Analysis and Reporting

Prepared by: Howard Franklin, Senior Hydrologist, (831) 755-4860

Tamara Voss, Associate Hydrologist, (831) 755-4860

Nicole Koerth, Hydrologist, (831) 755-4860

Approved by: Brent Buche, General Manager

Attachment:

Special Report: Salinas Valley Water Usage: An Analysis of 25 Years of Groundwater

Extraction Reporting - Draft Outline



#### Item No.

Board of Supervisors Chambers 168 W. Alisal St., 1st Floor Salinas, CA 93901

July 07, 2021

#### **Board Report**

Legistar File Number: WRABMAC 21-055

Introduced:6/30/2021Current Status:Agenda ReadyVersion:1Matter Type:WRA BMAC Item

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A draft outline of this report is included as Attachment 1. This is a draft outline, and some topics may or may not be included in the final report. Staff is looking for guidance and recommendations from the BMAC on additional topics to consider adding to this report. The estimated timeline is 3-6 months, depending on Staff availability.

#### OTHER AGENCY INVOLVEMENT:

None.

#### FINANCING:

There is no financial impact in receiving this report. Funds 111, 116: Data Collection, Processing, Analysis and Reporting

Prepared by: Howard Franklin, Senior Hydrologist, (831) 755-4860

Tamara Voss, Associate Hydrologist, (831) 755-4860

Nicole Koerth, Hydrologist, (831) 755-4860

Approved by: Brent Buche, General Manager

Attachment:

Special Report: Salinas Valley Water Usage: An Analysis of 25 Years of Groundwater

Extraction Reporting - Draft Outline

#### **Special Report-Outline**

# Salinas Valley Water Usage: An Analysis of 25 Years of Groundwater Extraction Reporting

#### 1. Introduction

#### 1.1. Objective

Groundwater extraction and water conservation information have been collected by the Agency through the Groundwater Extraction Management System (GEMS) program since 1995. This Special Report will analyze the water usage throughout the Salinas Valley over the last 25 years. The focus is to show trends in the amount of groundwater extracted and used over time, changes in water and land use and water conservation practices, and the relationship to recent climate patterns.

#### 1.2. Background

- 1.2.1. GEMS Program (ordinances, how data is reported, information collected, who is required to report, period of record)
- 1.2.2. Pressure Subarea (area, hydrogeology/major aquifers)
- 1.2.3. East Side Subarea (area, hydrogeology/major aquifers)
- 1.2.4. Forebay Subarea (area, hydrogeology/major aquifers)
- 1.2.5. Upper Valley Subarea (area, hydrogeology/major aquifers)
- 1.2.6. Zone 2B & the Area of Impact (area, how zones formed)

### 2. Groundwater Extractions (1995-2020)

#### 2.1. Pressure Subarea

- 2.1.1. 180-Ft Aguifer
- 2.1.2. 400-Ft Aquifer
- 2.1.3. Dual Screened Wells
- 2.1.4. Deep Aquifers
- 2.1.5. Area of Impact
- 2.2. East Side Subarea
- 2.3. Forebay Subarea
- 2.4. Upper Valley Subarea

#### 3. CSIP Water Usage (Zone 2B)

- **3.1.** Overview of Project, original goals, sources of water
- **3.2.** SVRP Treated Water
- 3.3. SRDF Diverted Water
- **3.4.** CSIP-Supplemental Extractions
- **3.5.** Additional Groundwater Extractions in Zone 2B (by Aquifer, trends over time)
- **3.6.** Changes in total CSIP Demands over time

#### 4. Water and Land Use

- **4.1.** Groundwater extractions, by Subarea, by crop type, changes over time
- **4.2.** Irrigated net acres, by Subarea, by crop type, changes over time
- **4.3.** Acre-Ft/Acre of water used, by Subarea, by crop type, changes over time

#### 5. Water Conservation Practices

#### 5.1. Agricultural Water Conservation

- 5.1.1. Irrigation Methods, practices by crop type, trends over time
- 5.1.2. Trends in best management practices

#### 5.2. Urban Water Conservation

- 5.2.1. Water usage per connection class over time
- 5.2.2. Trends in best management practices

#### 6. Climate Trends

#### 6.1. Stations, POR, sources used

#### 6.2. Climate (1995-2020)

- 6.2.1. Temperature
- 6.2.2. Precipitation
- 6.2.3. Evapotranspiration

# 6.3. Correlation of Groundwater Extraction and Water Usage Trends to Climate Patterns

#### 7. Summary



# Item No.4

Board of Supervisors Chambers 168 W. Alisal St., 1st Floor Salinas, CA 93901

July 07, 2021

## **Board Report**

Legistar File Number: WRABMAC 21-049

Introduced: 6/29/2021 Current Status: Draft

Version: 1 Matter Type: WRA BMAC Item

Proposition 1 Implementation Grant Update: Protection of Domestic Drinking Water Supplies for the Lower Salinas Valley

Update on Proposition 1 Implementation Grant – Protection of Domestic Drinking Water Supplies for the Lower Salinas Valley Project

#### **SUMMARY:**

Implementation of the *Protection of Domestic Drinking Water Supplies for the Lower Salinas Valley* project (Project) is ongoing. The Project is funded in part by a Proposition 1 Implementation Grant from the State Water Resources Control Board (SWRCB).

#### **DISCUSSION:**

#### Request for Proposals

The submittal deadline for responses to the Project RFP for a well destruction contractor occurred on June 17, 2021. MCWRA has assembled a review panel which is actively scoring the submitted proposals. MCWRA expects to release the tentative award letter(s) in July 2021.

#### OTHER AGENCY INVOLVEMENT:

State Water Resources Control Board

#### FINANCING:

Project totals \$9,125,524 over a three-year period. The Project is funded in part (54%) by the SWRCB (\$4,927,729) with the remaining 46% of the funding as local match from MCWRA. MCWRA is satisfying the match through a combination of in-kind services (\$1,534,495) and additional funds (\$2,663,300).

MCWRA was originally responsible for the full \$2,663,300 in additional funds, but that amount has been reduced to \$2,115,801 due to contributions from the Monterey County Cannabis Assignment (\$399,499), Monterey One Water (\$65,000), and Castroville Community Services District (\$83,000). MCWRA has identified reserves in Fund 134 to cover any portion of the remaining \$2,198,801 in additional funds that is not covered by contributions from outside sources.

In June 2021, MCWRA received reimbursement from the SWRCB for the first two quarters of the project, with funds totaling \$78,314.

There is no financial impact in receiving this update.

Prepared by: Amy Woodrow, Hydrologist, (831) 755-4860

Tamara Voss, Associate Hydrologist, (831) 755-4860 Howard Franklin, Senior Hydrologist, (831) 755-4680



# Item No.5

Board of Supervisors Chambers 168 W. Alisal St., 1st Floor Salinas, CA 93901

July 07, 2021

## **Board Report**

**Legistar File Number: WRABMAC 21-050** 

Introduced: 6/29/2021 Current Status: Draft

Version: 1 Matter Type: WRA BMAC Item

Update on Well Permit Application Activities

Well Permit Application Activities Update

#### SUMMARY/DISCUSSION:

In support of Monterey County's Well Permit Application Program the Agency acts as technical advisor to the program's lead agency, the Environmental Health Bureau (EHB). In accordance with a 1991 interdepartmental Memorandum of Agreement between the Agency and EHB, the Agency performs a comprehensive review process on well permit applications for new wells pumping five acre-feet of water or more per year, as well as for proposed well destructions and repairs.

The Agency provides review and/or advisement to EHB within five (5) business days of receiving new well permit applications. The Agency also reviews final well designs and annular seal depth proposals on an on-going basis and is committed to providing a response to EHB within twenty-four (24) hours of receiving design proposals.

The Agency receives funds that cover staff time for well application review, well completion report processing, and database maintenance from fees collected by EHB. The Agency's fees are defined in Article XI of the Monterey County Fee Resolution.

Table 1 (attached) provides a summation of well permit applications received in the last month for evaluation by Agency staff, categorized by permit type, Agency management area, and aquifer unit. Also included is a tabulation of new well applications reviewed for the fiscal year. This table is provided to the Board of Directors and Basin Management Advisory Committee on a monthly basis.

Publication of the Agency's Report, "Recommendations To Address the Expansion of Seawater Intrusion in the Salinas Valley Groundwater Basin (October, 2017) and subsequent adoption of Interim Urgency Ordinance 5302 and Ordinance 5303 by the Monterey County Board of Supervisors (May 22, 2018 and June 26, 2018, respectively) have led to increased interest in data related to wells in and extractions from the Deep Aquifers (Figure 1).

Figure 2 depicts the history of well installation in the Deep Aquifers by water use category. As illustrated in the chart, a total of fifty-seven (57) wells have been installed in the Deep Aquifers since 1974, with twenty-five (25) of those wells being constructed in the last ten years, including fourteen (14) within the last three years. Figure 2 includes a tabular historical summary of reported annual Deep Aquifer well extractions by water use category.

Two (2) additional permits have been issued for new Deep Aquifers wells but construction has not been completed as of the date of this report. The proposed wells were applied for as replacement wells after the expiration of Ordinance No. 5302, which expired on May 21, 2020.

#### **OTHER AGENCY INVOLVEMENT:**

None

#### FINANCING:

None

Prepared by: Nicole Koerth, Hydrologist, (831) 755-4860

Amy Woodrow, Hydrologist, (831) 755-4860

Tamara Voss, Associate Hydrologist (831) 744-4860 Howard Franklin, Senior Hydrologist, (831) 755-4860

#### Attachments:

Table 1 - Summary of Well Permits Received

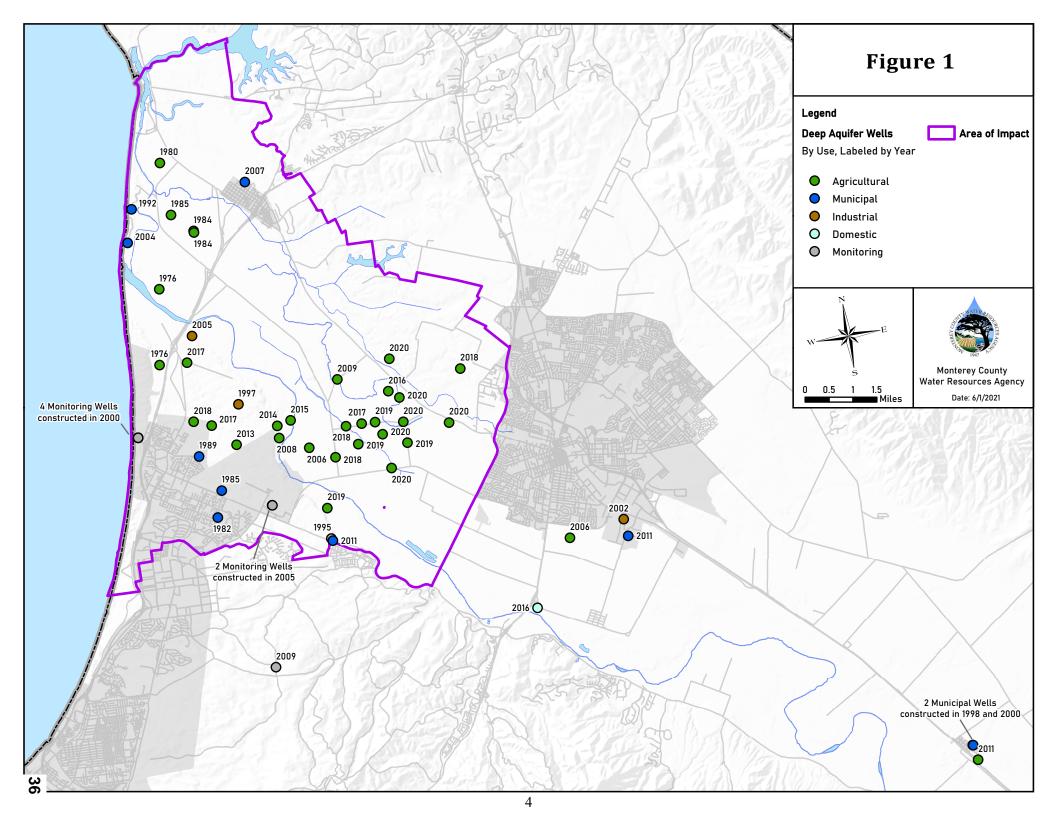
Figure 1- Map showing Deep Aquifer Wells

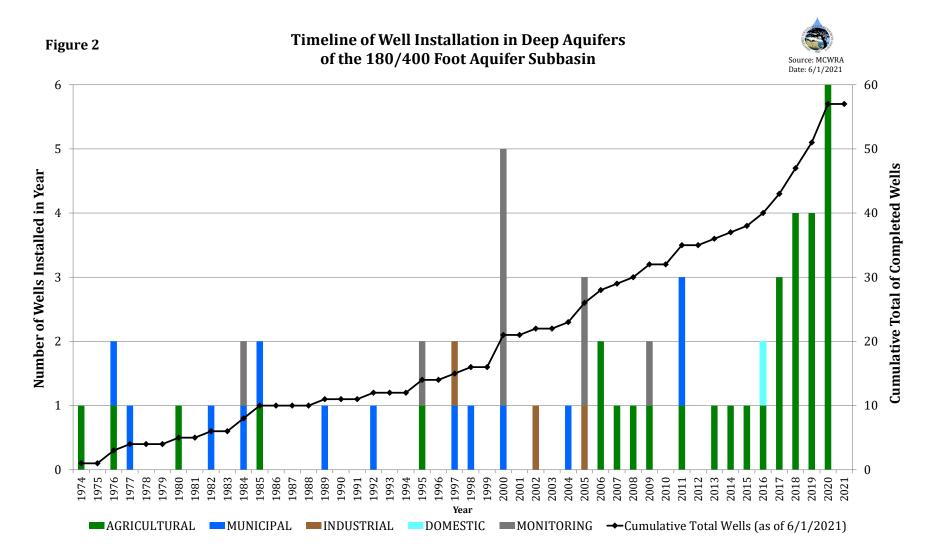
Figure 2 - Timeline of Well Installation in the Deep Aquifers with Summary of Deep Aquifer

**Groundwater Extractions** 

Table 1. Well Permit Applications Received by Category - May, 2021

Subarea/ Aquifer	Construction	Destruction	Repair	Other	Total	FY (20/21) Total
180-Ft Aquifer						10
400-Ft Aquifer						10
Deep Aquifers						7
East Side	2				2	15
Forebay						11
Upper Valley	1				1	6
Outside Zone 2C, Undefined GW Basin	1			2	3	44
Total	4			2	6	103





#### **Deep Aquifers Groundwater Extraction History Since 1993\***

1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
2,054	1,992	2,036	2,137	2,170	1,906	2,056	2,302	2,355	2,399	2,366	2,442	2,358	2,005	1,738	2,004	2,102	1,903	1,803	2,044	1,989	3,784	3,746	3,788	4,116	4,605	4,820
1,507	2,620	2,302	1,990	2,556	1,648	96	1	0	0	0	0	0	0	58	384	696	982	927	1,397	1,097	2,031	2,010	4,194	4,834	4,749	5,331
0	0	0	0	0	0	0	3	13	17	379	305	343	336	393	371	348	333	370	380	523	620	617	569	567	291	196
3,561	4,612	4,338	4,127	4,725	3,554	2,151	2,307	2,368	2,416	2,745	2,747	2,701	2,341	2,189	2,759	3,146	3,218	3,100	3,821	3,608	6,436	6,373	8,551	9,516	9,645	10,347

<sup>\*</sup> Notes: Table includes all reported extraction data for the thirty-four (34) Deep Aquifer production wells that have reported extractions since inception of the Agency's GEMS program in 1993. Data are reported in acre-feet. Colors denote water use category (Municipal, Agricultural, Industrial). An additional twelve (12) recently constructed Deep Aquifers Agricultural production wells have yet to report extractions as of Reporting Year 2019.



#### **Monterey County**

#### Item No.6

Board of Supervisors Chambers 168 W. Alisal St., 1st Floor Salinas, CA 93901

July 07, 2021

#### **Board Report**

Legistar File Number: WRABMAC 21-051

Introduced: 6/29/2021 Current Status: Draft

Version: 1 Matter Type: WRA BMAC Item

Update on Groundwater Sustainability Agency activities in the Salinas Valley Basin

Update on Groundwater Sustainability Activities for June 2021

#### **SUMMARY:**

Monterey County Water Resources Agency (Agency) staff continues to meet regularly with Salinas Valley Basin Groundwater Sustainability Agency (SVBGSA) staff to discuss projects or other aspects of implementing Groundwater Sustainability Plans that may involve Agency staff or infrastructure. In addition to these meetings the Agency is represented on the Advisory Committee of the SVBGSA and participates on the Seawater Intrusion Group (SWIG) and SWIG-TAC.

#### DISCUSSION:

- The Agency, SVBGSA, and USGS are continuing efforts to develop a multi-year cooperative agreement to support continued work on the Salinas Valley Integrated Hydrologic Model, as discussed at the June 2, 2021 BMAC meeting.
- At the June 17, 2021 meeting of the SVBGSA Advisory Committee, members received reports on (https://d3n9y02raazwpg.cloudfront.net/svbgsa/1e430f7a-505b-11eb-920e-0050569183fa-55ab52bf-8db9-4b38-9bb3-c22d83c76d92-1624025547.pdf)
  - o The Deep Aquifers Study
  - Water Quality Update
  - GSP & Subbasins Overviews for the Eastside, Forebay, Langley and Upper Valley; as well as preliminary Drafts of Chapters 2 (Communications and Public Engagement), 9 (Projects and Management Actions) and 10 (Implementation)
  - o Update on DWR's approval of the 180/400-Foot Groundwater Sustainability Plan
- At the June 28, 2021 meeting of the SWIG
   (https://d3n9y02raazwpg.cloudfront.net/svbgsa/42b0f2c1-e176-11ea-9419-0050569183fa-ed9fe6eb-9410-446c-8e20-bb140a046169-1624492074.pdf)
  - SVBGSA staff presented a summary of a SWIG-TAC survey on seawater intrusion monitoring
  - Agency staff made a presentation on drought conditions in Monterey County (Attachment 1)
- On June 30, 2021 at a Special Joint Meeting, the SVBGSA held a workshop in partnership with the Agency and the USGS on the Salinas Valley Integrated Hydrologic Model (SVIHM) and Salinas Valley Operational Model (SVOM)
   (https://svbgsa.granicus.com/AgendaViewer.php?view\_id=1&event\_id=609)

#### OTHER AGENCY INVOLVEMENT

None.

#### **FINANCING**:

There is no financial impact for receiving this report.

Prepared by: Howard Franklin, Senior Hydrologist, (831) 755-4860

Approved by: Brent Buche, General Manager

## **Drought Update Monterey County**

## **Salinas Valley Groundwater Basin**

Peter Kwiek, P.G. Hydrologist Howard Franklin, P.G. Senior Hydrologist



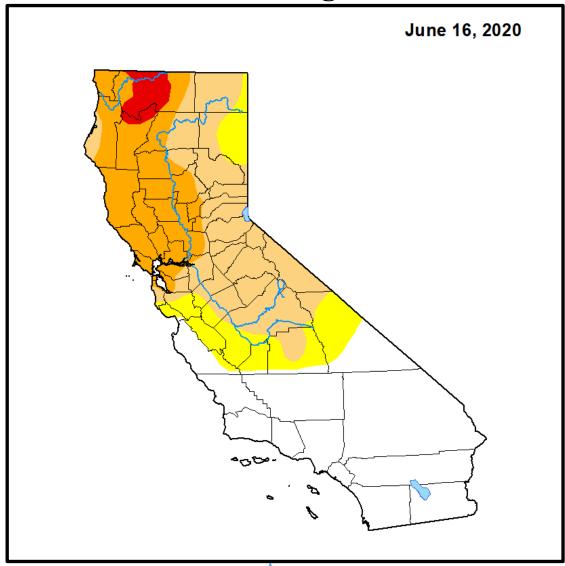
#### **Overview**

- 1. Monterey County is experiencing extreme drought conditions
- 2. The 2021 fire season has already had greater than normal activity
- 3. Reservoir operations continue
- 4. Groundwater Impacts are delayed
- 5. Monterey County Water Recycling Projects continue to provide water with anticipated limitations



### **Summer 2020 Drought Monitor**











#### **Current Conditions**

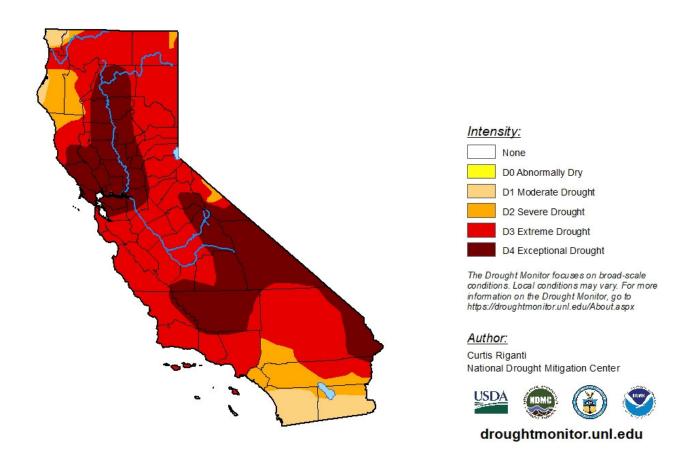


U.S. Drought Monitor

California

June 22, 2021 (Released Thursday, Jun. 24, 2021) Valid 8 a.m. EDT





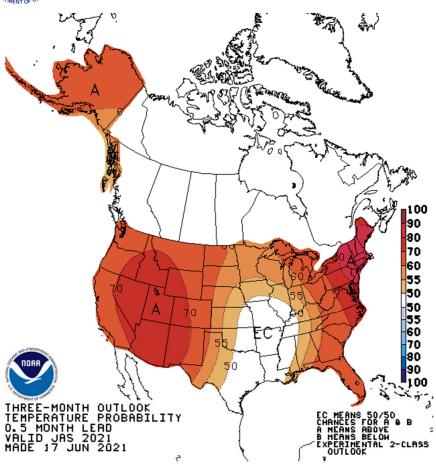
June 28, 2021 Page 3

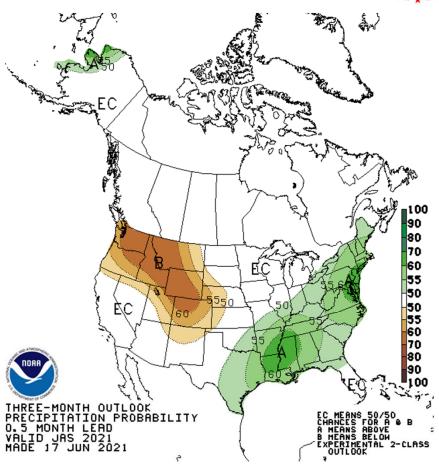




#### **Fire Season Outlook**





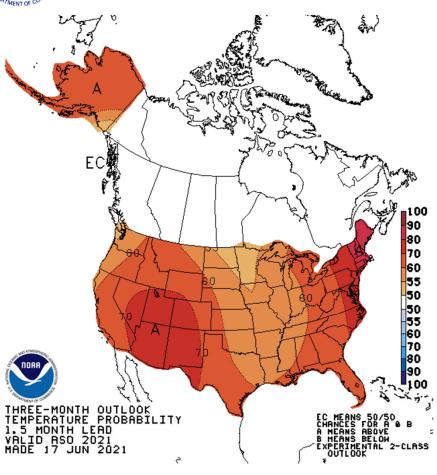


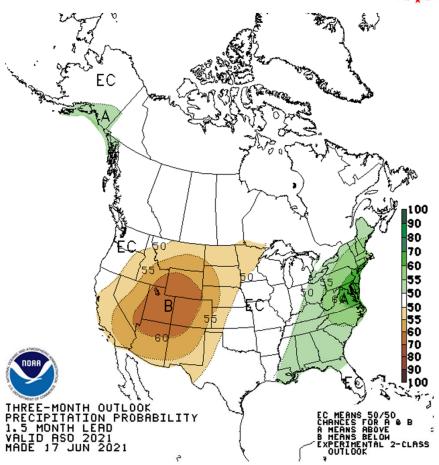




#### **Fire Season Outlook**





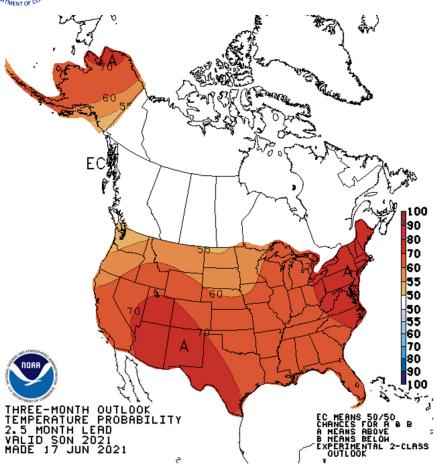


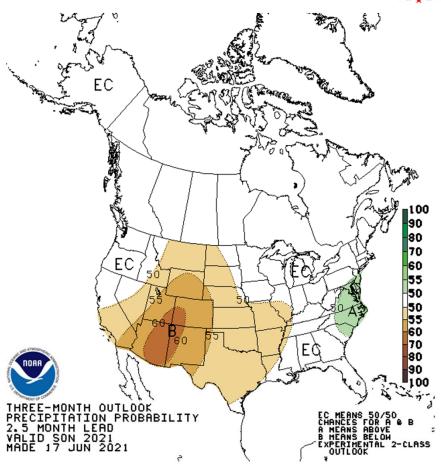




#### **Fire Season Outlook**















## **Reservoir Operations**

# Peter Kwiek, P.G. Hydrologist Water Resources Agency



#### **Take Home**

- 1. Drought conditions do not have an immediate impact on operations.
- 2. Without significant inflows in 2022, there will be little if any water for operations next spring and summer.
- 3. Extended drought conditions impact our operations well beyond the period of drought.



#### **Take Home**

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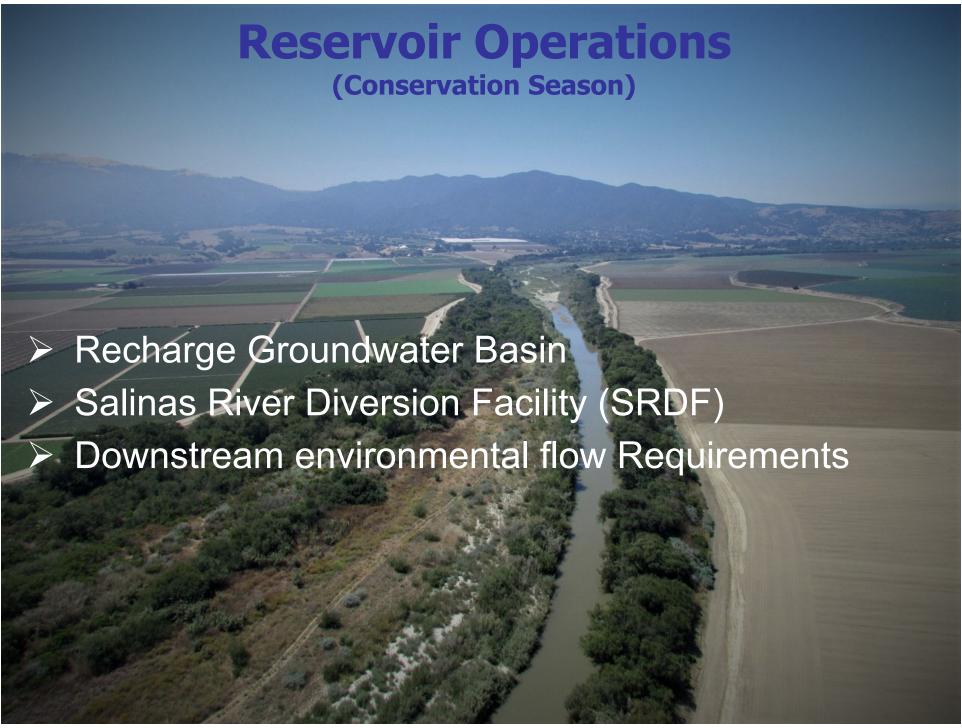
## **Reservoir Operations**



Nacimiento Reservoir Completed in 1957 Lake Capacity 377,900 AF San Antonio Reservoir Completed in 1967 Lake Capacity 335,000 AF





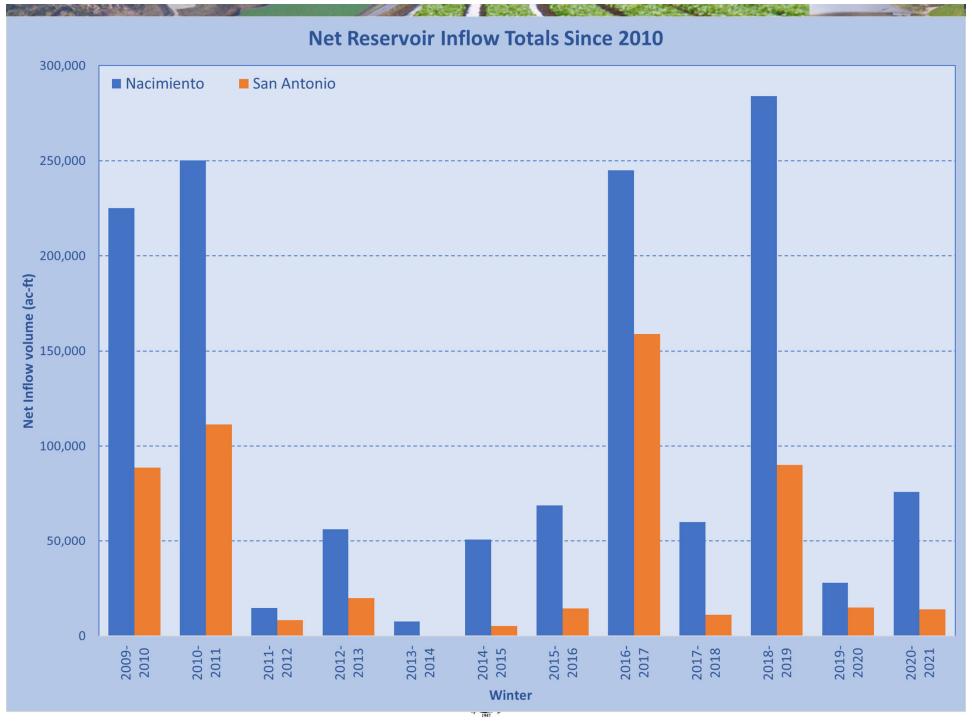


## **Reservoir Operations**

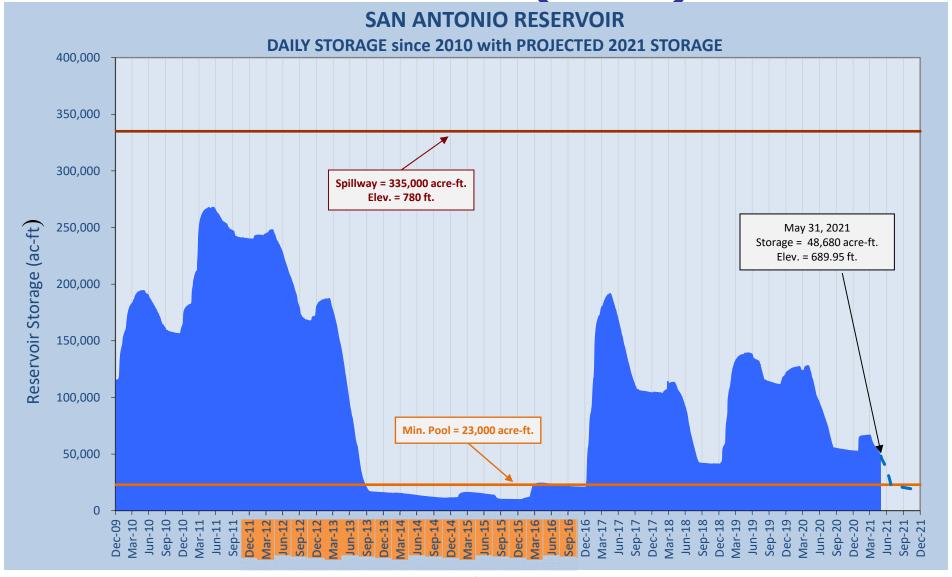
## Current Reservoir Conditions (6/25/21)

	Nacimiento	San Antonio
Percentage of Capacity	23%	12%
Elevation (ft.)	727.4	681.95
Storage (ac-ft)	85,780	38,593
Releases (cfs)	425	215





## Discussion (cont.)

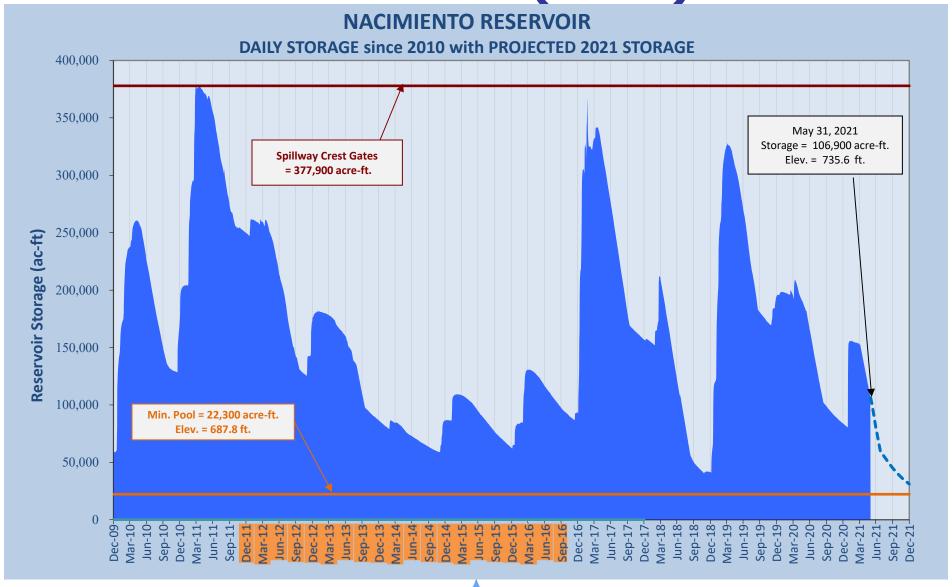


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## Discussion (cont.)



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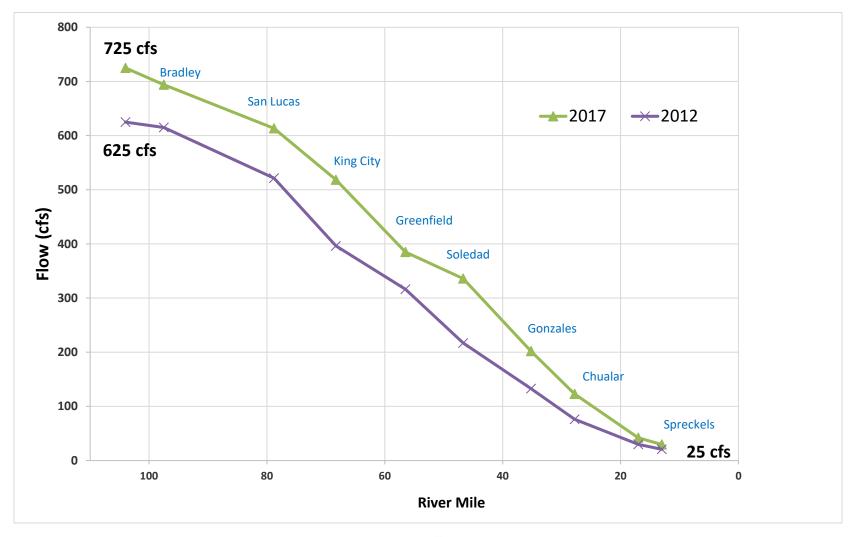
## **How Much Water is Needed to Operate?**

## Depends on Many factors .....

- ➤ Weather
- ➤ Groundwater Extractions
- ➤ Surface Water Diversions
- ➤ Agricultural Return Flow
- ➤ Riparian Evapotranspiration
- ➤ Cumulative effects of extended weather conditions (droughts, wet periods)



## **Releases & Streamflow**





### **Summary**

- Because of our reservoirs, drought conditions do not have an immediate impact on operations, and in some cases they can get us through dry periods.
- Without significant inflows in 2022, there will be little if any water in storage for groundwater recharge or SRDF operations next spring and summer.
- Extended drought conditions impact our operations well beyond the period of drought.



#### **Groundwater**

# Howard Franklin, P.G. Senior Hydrologist Water Resources Agency



## **Discussion**

- Monterey County relies on Groundwater, and the Agency utilizes the reservoirs to help manage those supplies
- Of the last 10 years...
  - 8 of the last 10 years have been dry or drought conditions
  - 5 consecutive drought years from 2012-2016
  - 3 of the last 4 years have been dry or drought conditions
  - The last two consecutive years have been dry or drought conditions



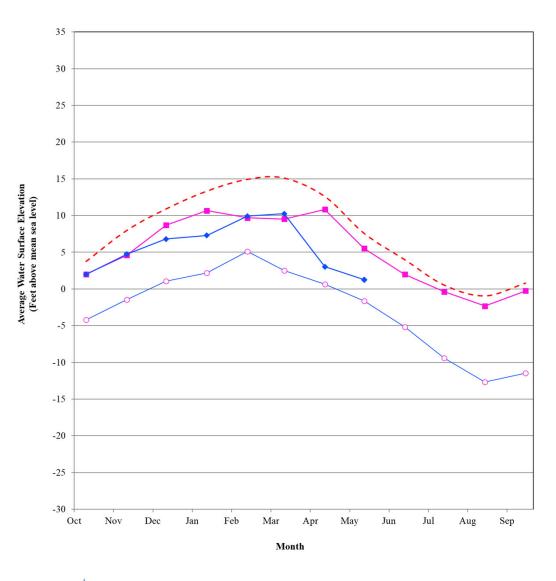
#### **180-Ft Aquifer**

Average Groundwater Elevations N=8 wells

→ 2021 WY

2020 WY

—O— 2015 WY (Dry)



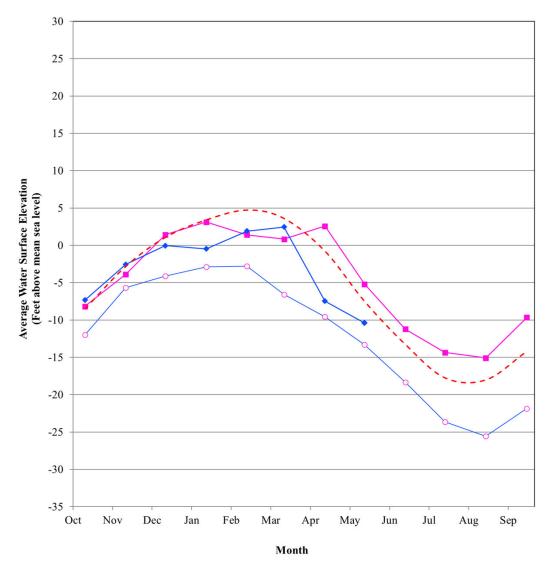


#### **400-Ft Aquifer**

Average Groundwater Elevations N=12 wells

→ 2021 WY

-0-2015 WY (Dry)





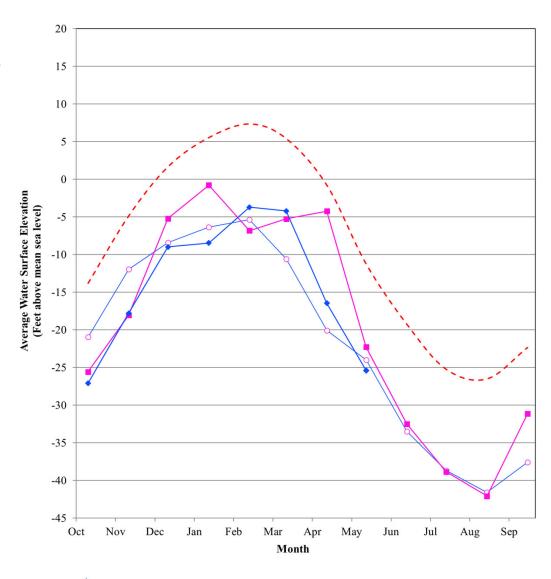
#### **East Side Subarea**

Average Groundwater Elevations N=12 wells

→ 2021 WY

2020 WY

—O— 2015 WY (Dry)





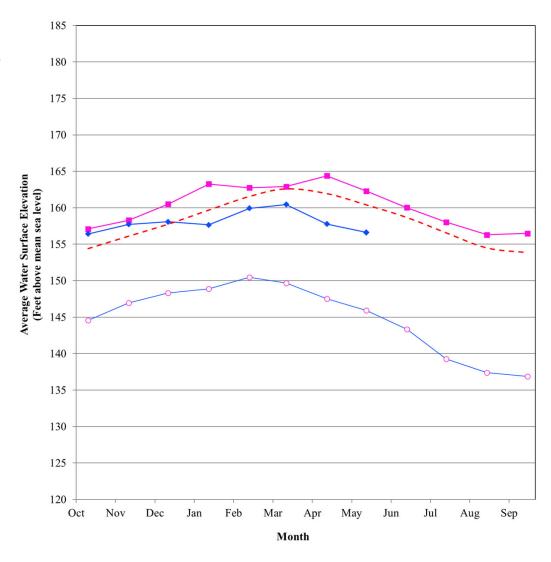
#### **Forebay Subarea**

Average Groundwater Elevations N=13 wells

→ 2021 WY

2020 WY

—O— 2015 WY (Dry)





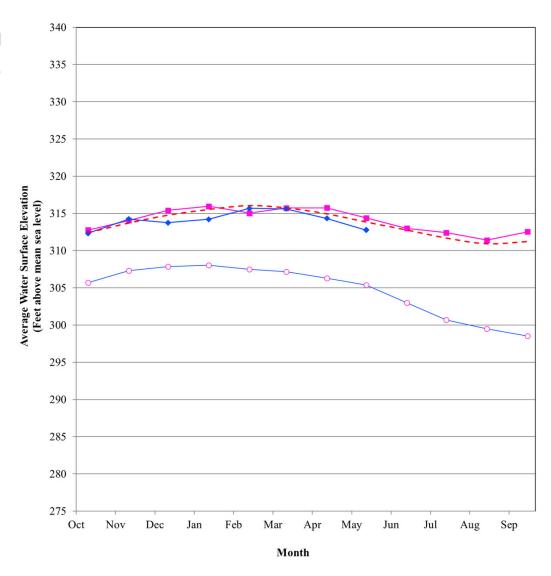
### **Upper Valley Subarea**

Average Groundwater Elevations N=9 wells

→ 2021 WY

2020 WY

-0- 2015 WY (Dry)





## **Discussion**

- If we see a third consecutive dry winter this season (2021 2022) then next year:
  - Limited surface water available from the reservoirs for groundwater recharge and diversions
  - Localized impact to groundwater supplies
    - Groundwater levels and water quality will continue to decline
    - Expansion of SWI in the coastal aquifers



## **Discussion**

- If we see a fourth consecutive dry winter in 2022
   2023:
  - Extreme limits to surface water availability from the reservoirs
  - Significant impacts to groundwater supplies throughout the Basin
    - Groundwater levels and water quality will decline, approaching historic lows in all aquifers



## **Discussion (cont.)**

- Forebay and Upper Valley Subareas
  - » Municipal water supplies in some areas will become threatened
  - » Agricultural practices will be impacted
- In Coastal Areas
  - » SWI in the coastal aquifers will continue to expand
  - » Deep Aquifers will be further stressed



## **Monterey County Water Recycling Projects**

# Peter Kwiek, P.G. Hydrologist Water Resources Agency

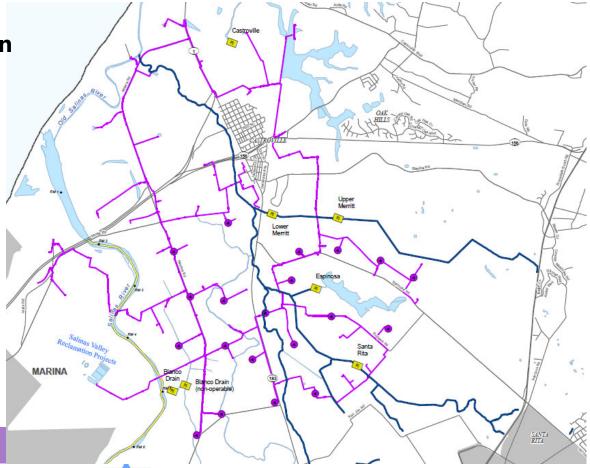


Monterey County Water Recycling Projects became operational in 1998 to slow the rate of seawater intrusion in the Pressure 400 Aquifer

### **DISTRIBUTION SYSTEM**

Castroville Seawater Intrusion Project (CSIP)

- 48 miles of pipeline
- 21 supplemental wells
- 222 parcels
- 112 turnouts
- 9 monitoring stations
- 3 booster pumps stations
- \$37M Capital
- \$1.7M Annual O&M (excludes loan payment)



12,080 acres



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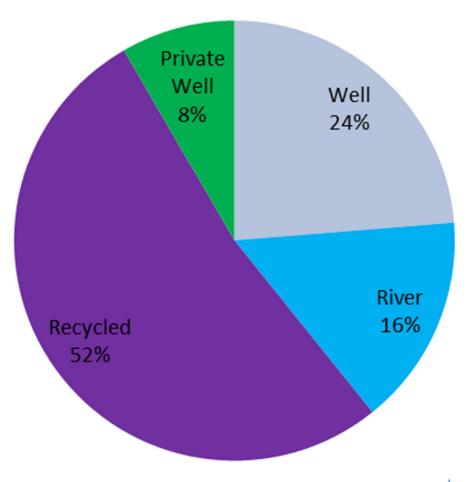


M1W
Regional
Treatment
Plant

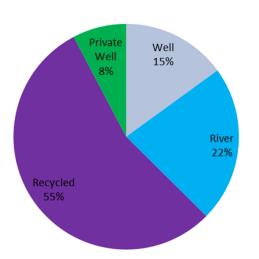




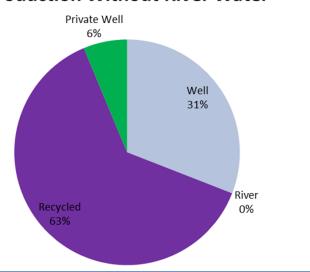
## Average Annual Total Water Production By Source



## Average Annual Total Water Production With River Water



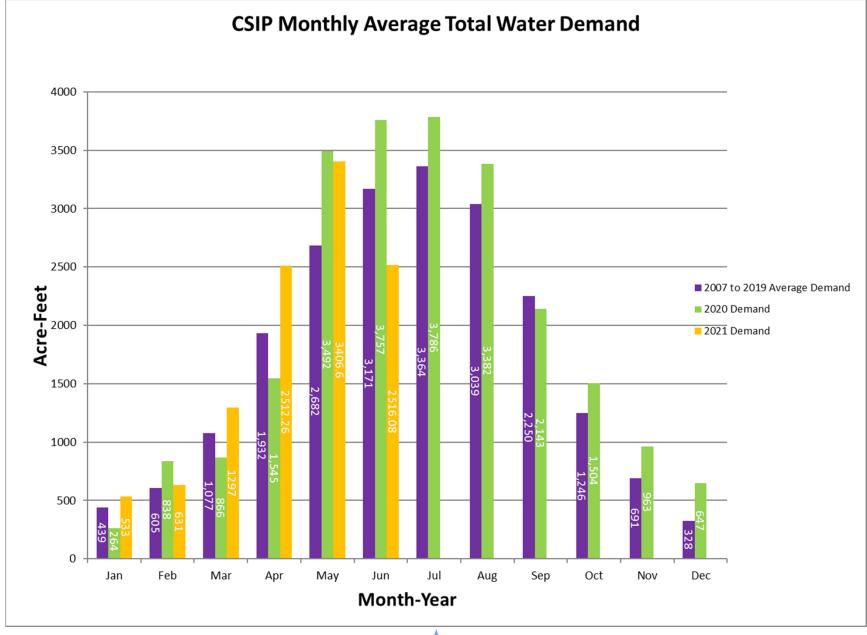
### Average Annual Total Water Production Without River Water



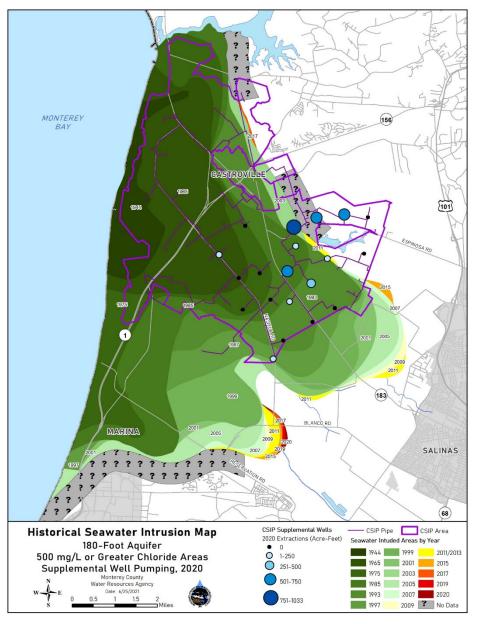
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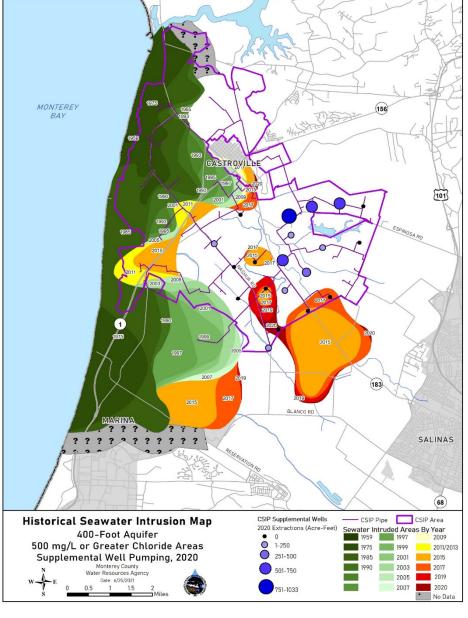


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# **Current Drought Situation**

- Reduction of all three water sources:
  - Wastewater decline since 1998
  - Well supply decline since 1998
  - River water unavailable, July 2021
- Irrigation demand has increased



# **Current Drought Situation**

- Water scheduling and limiting total daily demand will be necessary this season
  - 10-30% reduction in total supply
  - 16-hour irrigation day to reduce daily peaks



# **Longer Term Solutions**

- Optimization and conservation efforts
- Project boundary expansion
- New wells inside or outside of Project boundary
- Additional new sources of water
- Build project using other water rights
- Store water when there is excess
  - Increase storage throughout the system
  - Increased storage at the reservoirs
- Drought reserve/water banking
  - Increase use of recycled water in off-peak season in exchange for reduction in groundwater pumping



## **Summary**

- CSIP has reduced the rate of seawater intrusion in the Pressure Subarea.
- Consecutive dry years affect water in storage at the Reservoirs and reduce water supply to CSIP.



## **Summary**

- Monterey County is experiencing extreme drought conditions.
- Reservoir releases will be curtailed this season.
- Groundwater Impacts are delayed but a third consecutive dry winter will result in little if any water in storage for groundwater recharge and SRDF operations next year resulting in localized impacts to groundwater supplies.
- A fourth consecutive dry winter in 2022 2023 will result in significant basinwide impacts to groundwater supplies.
- Extended drought conditions will impact reservoir operations well beyond the period of drought.
- CSIP continues to provide water but with looming limitations and expected further reductions in water supply if drought conditions persist.
- Numerous long-term solutions exist.





### **Monterey County**

### Item No.7

Board of Supervisors Chambers 168 W. Alisal St., 1st Floor Salinas, CA 93901

July 07, 2021

#### **Board Report**

Legistar File Number: WRABMAC 21-052

Introduced: 6/29/2021 Current Status: Draft

Version: 1 Matter Type: WRA BMAC Item

Update on Agency Modeling Activities

Update on Agency Modeling Activities

#### **SUMMARY:**

The Monterey County Water Resources Agency (Agency) continues to work on multiple projects involving the Salinas Valley Integrated Hydrologic Model (SVIHM or "historical model") and/or the Salinas Valley Operational Model (SVOM or "operational model"). Both the SVIHM and SVOM are tools developed by the U.S. Geological Survey (USGS), Agency, and Monterey County; the SVOM has been refined for use on the Interlake Tunnel Project by Wood Environment & Infrastructure, Inc. (Wood).

In addition to the Interlake Tunnel Project, the Agency is working with Monterey County to utilize the models are part of the Salinas Valley Basin Investigation.

#### DISCUSSION:

- The Salinas Valley Basin Groundwater Sustainability Agency (SVBGSA) hosted a technical workshop on the model for stakeholders on June 30, 2021.
- Agency staff is coordinating with the USGS on refinements related to groundwater pumping in the SVIHM.
- The Agency, SVBGSA, and USGS are continuing efforts to develop a multi-year cooperative agreement to support continued work on the Salinas Valley Integrated Hydrologic Model, as discussed at the June 2, 2021 BMAC meeting.
- The Agency and Wood continue to work closely with another consultant, ICF, to use the SVOM in support if ICF's work on the Environmental Impact Report for the Interlake Tunnel Project.

#### OTHER AGENCY INVOLVEMENT

None.

#### FINANCING:

There is no financial impact for receiving this report.

Prepared by: Amy Woodrow, Hydrologist, (831) 755-4860

Howard Franklin, Senior Hydrologist, (831) 755-4860

Approved by: Brent Buche, General Manager



### **Monterey County**

### Item No.8

Board of Supervisors Chambers 168 W. Alisal St., 1st Floor Salinas, CA 93901

July 07, 2021

#### **Board Report**

**Legistar File Number: WRABMAC 21-053** 

Introduced: 6/29/2021 Current Status: Draft

Version: 1 Matter Type: WRA BMAC Item

Consider future agenda items and set next meeting date