



Fillmore and Piru Basins
Groundwater Sustainability Agency

Board of Directors Meeting
Thursday
November 19, 2020
5:00p.m.

In accordance with the California Governor's Executive Stay at Home Order and the County of Ventura Health Officer Declared Local Health Emergency and Be Well at Home Order resulting from the novel coronavirus (COVID-19), the Fillmore City Hall is closed to the public. Therefore, the FPB GSA will be holding its Regular Board of Directors meeting virtually using the ZOOM video conferencing application.

If you are new to ZOOM video conferencing, please visit this help page in advance of the meeting date and time:
<https://support.zoom.us/hc/en-us/articles/201362193-How-Do-I-Join-A-Meeting->

To participate in the Board of Directors meeting via Zoom, please access:

<https://us02web.zoom.us/j/87851955491?pwd=M0NOdGRHNDElYTBpZG9LSjlGcEVDZz09>

Meeting ID: **878 5195 5491**

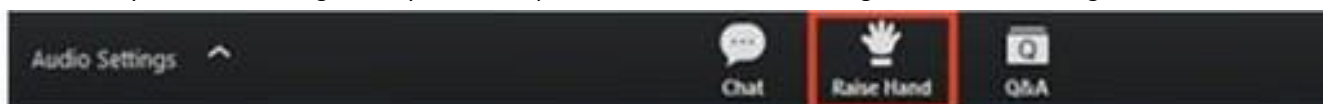
Password: **FPBGSA**

To hear just the audio portion of the meeting, phone into the toll-free number 877 853 5247
Meeting ID: **878 5195 5491**

All participants are asked to join the meeting at least five minutes in advance of the 5pm start time and be aware that all participants will be "muted" until recognized by the host. If your computer has a camera, please enable it so we can ensure better engagement between participants.

If you would like to address the Board with a question or offer a comment, please follow these simple instructions to engage the host (Clerk of the Board):

1. During a meeting, click on the icon labeled "Participants" at the bottom center of your computer screen.
2. At the bottom of the window on the right side of the screen, click the button labeled "Raise Hand."
3. Once you've been recognized by the Chair, please click on "Raise Hand" again to remove the signal.



Similarly, if you have a comment or question for the Board, you can use the "Chat" button to convey your question or comment to the HOST, who will put you in line to address the Board.

The Fillmore and Piru Basins GSA Board of Directors appreciates your participation and patience in using Zoom to conduct its public meeting.

AGENDA

1. Call to Order – First Open Session

1A Pledge of Allegiance

1B Directors Roll Call

1C Public Comments

Fillmore and Piru Basins Groundwater Sustainability Agency (Agency) will accept public comment concerning agenda items at the time the item is considered and on any non-agenda item within the jurisdiction of the Board during the agendaized Public Comment period. No action will be taken by the Board on any non-agenda item. In accordance with Government Code § 54954.3(b)(1), public comment will be limited to three (3) minutes per speaker per issue.

1D Approval of Agenda

Motion

2. Updates

2A Director Announcements/Board Communications:

Oral Reports from the Board

Fillmore Pumpers Association Stakeholder Director Update

Piru Pumpers Association Stakeholder Director Update

Environmental Stakeholder Director Update

City of Fillmore Member Director Update

United Water Conservation District Member Director Update

County of Ventura Member Director Update

2B Executive Director Update

Information Item

The Executive Director will provide an informational update on Agency activities since the previous Board meeting of October 15, 2020.

2C Legal Counsel Update

Information Item

Legal Counsel will provide an informational update on Agency's legal issues and concerns since the previous Board meeting of October 15, 2020.

2D GSP Consultant Update

Information Item

Representatives from Daniel B Stephens & Associates and UWCD will provide an informational update on Agency's GSP development activities since the previous Board meeting of October 15, 2020.

3. CONSENT CALENDAR

All matters listed under the Consent Calendar are considered routine by the Board and will be enacted by one motion. There will be no separate discussion of these items unless a Board member pulls an item from the Calendar. Pulled items will be discussed and acted on separately by the Board. Members of the public who want to comment on a Consent Calendar item should do so under Public Comments. (ROLL CALL VOTE REQUIRED)

3A Approval of Minutes

The Board will consider approving the Minutes from the Board Meeting of October 15, 2020.

3B Approval of Warrants

The Board will consider approving the following invoices for payment:

| | |
|---------------------------------------|-------------|
| Daniel B. Stephens & Associates, Inc. | \$29,950.18 |
|---------------------------------------|-------------|

3C Monthly Financial Report

The Board will receive the Agency's monthly profit and loss statement and balance sheet.

3D Fiscal Year 2019-2020 Financial Report

The Board will receive the Agency's Fiscal Year 2019-2020 financial reports.

4. MOTION ITEMS

4A Sustainable Management Criteria

Motion

The Board will receive a report from a representative of the Daniel B. Stephens & Associates team on the development of the Agency's Draft Sustainable Groundwater Management Criteria and provide comments and recommendations.

4B Monitoring Wells Project

Motion

The Board will receive a report from staff and a representative of the Daniel B. Stephens & Associates team on the Monitoring Wells Project and provide comments and recommendations.

FUTURE TOPICS FOR BOARD DISCUSSION

ADJOURNMENT

The Board will adjourn to the next **Regular Board Meeting** on Thursday, **December 17, 2020** or call of the Chair

Materials, which are non-exempt public records and are provided to the Board of Directors to be used in consideration of the above agenda items, including any documents provided subsequent to the publishing of this agenda, are available for inspection at UWCD's offices at 1701 N. Lombard Street in Oxnard during normal business hours.

The Americans with Disabilities Act provides that no qualified individual with a disability shall be excluded from participation in, or denied the benefits of, the District's services, programs or activities because of any disability. If you need special assistance to participate in this meeting, or if you require agenda materials in an alternative format, please contact the UWCD Office at (805) 525-4431 or the City of Fillmore at (805) 524-1500. Notification of at least 48 hours prior to the meeting will enable the District to make appropriate arrangements.

Approved: 
Board Chair Kelly Long

Posted: (date) November 16, 2020 (time) 12:00 pm (attest) Eva Ibarra
At: <https://www.FPBGSA.org>

Posted: (date) November 16, 2020 (time) 12:30 pm (attest) Eva Ibarra
At: <https://www.facebook.com/FPBGSA/>

Posted: (date) November 16, 2020 (time) 2:00 pm (attest) Erika Herrera
At: Fillmore City Hall, 250 Central Avenue, Fillmore CA 93015

Posted: (date) November 16, 2020 (time) 2:00 pm (attest) Eva Ibarra
At: UWCD, 1701 N. Lombard Street, Oxnard CA 93030



Board of Directors Meeting

October 15, 2020

Via Zoom

MINUTES

Directors Present

Director Kelly Long, Chair
Director Ed McFadden, Vice Chair
Director Tim Holmgren
Director Gordon Kimball
Director Candice Meneghin
Director Glen Pace

Staff Present

Anthony Emmert, executive director
Scott Nave, legal counsel
Eva Ibarra, clerk of the board

Public Present

Lisa Ballin, CSUS/DBS&A
Bryan Bondy, Fillmore and Piru Pumpers Associations
Frank Brommenschenkel
Dan Detmer, UWCD
Debbie Jackson
Steven Zimmer
Burt Handy
Dr. Zachary Hanson, UWCD
Tony Morgan, DBS&A
Patrick O'Connell, DBS&A
Ambry Tibay, UWCD
Dr. Jason Sun, UWCD

1. Call to Order – First Open Session 5:00p.m.

Vice Chair McFadden called the meeting to order at 5p.m.

1A. Pledge of Allegiance

Vice Chair McFadden asked everyone to join him in reciting the Pledge of Allegiance

1B. Directors Roll Call

Chair Long asked the Clerk to call roll. 6 directors were present (Holmgren, Kimball, Chair Long, Vice Chair McFadden, Meneghin, Pace.)

1C. Public Comments

Chair Long asked if there were any public comments, none were offered.

1D. Approval of Agenda

Executive Director Tony Emmert stated staff would like to pull agenda item 3D and bring it back for next Board meeting in November.

Motion

Motion to approve the agenda with the removal of item 3D, Vice Chair McFadden; Second, Director Meneghin. Voice vote: 6 ayes (Holmgren, Kimball, Chair Long, Vice Chair McFadden, Meneghin, Pace); none opposed; Motion carries 6/0. Chair Long was reminded by Scott Nave, we must do roll call votes for virtual meetings.

2. Director Announcements/Board Communications

2A Fillmore Pumpers Association Stakeholder Director Update

Information Item

Director Kimball stated the Fillmore Pumpers Association meet Tuesday, October 13th and had a great discussion about water use. Stakeholders have requested Stakeholder meetings be via Zoom and not webinar for better ease of communication. A letter has been created to be sent to the GSA by both Fillmore and Piru associations regarding SMC and will be presented at the next Board meeting.

Piru Pumpers Association Stakeholder Director Update

Information Item

Director Pace stated pretty much the same as Fillmore Pumpers. Pumpers working on getting their estimates for their future water uses for both basins.

City of Fillmore Member Director Update

Information Item

Director Holmgren had no updates and stated he felt the October 1st, Workshop was very informational and a success.

Environmental Stakeholder Director Update

Information Item

Director Meneghin reported they will be having their Fillmore Water Talk next Wednesday from 6-8 via Zoom and she be circulating flyer to all.

United Water Conservation District Member Director Update

Information Item

Vice Chair McFadden reported United continues with Water Release from the Santa Felicia Dam and farmers are happy to see such great water levels.

County of Ventura Member Director Update

Information Item

Chair Long stated we are in the COVID-19 red tier and hoping in 4 weeks we can make our way to orange in hopes that students can go back to school, if their district approves it.

2B Executive Director Update
Information Item

Executive Director Anthony Emmert reported United staff recently completed the Agency's groundwater billings for the period ending June thirtieth and is working with legal counsel to explore ways to collect outstanding delinquent charges from prior periods. Mr. Emmert discussed the grant status for United and mentioned validation for Groundwater model is ongoing and all documentation is due to be completed at the end of December. Mr. Emmert stated he continues to coordinate with Santa Clarita Valley Water Agency to share information helpful to both parties.

2C. Legal Counsel Update
Information Item

Legal Counsel Scott Nave (covering for Steve O'Neill) had no updates.

2D. GSP Consultant Update
Information Item

Tony Morgan, representing DBS&A presented (see slide) regarding the GSP development timeline.

3. CONSENT CALENDAR

3A Approval of Minutes

The Board will consider approving the Minutes from the Board Meeting of September 17, 2020.

3B Approval of Warrants

The Board will consider approving the following invoices for payment:
Daniel B. Stephens & Associates, Inc. \$49,359.92

3C Monthly Financial Report

The Board will receive a monthly profit and loss statement and balance sheet for the FPBGSA from UWCD's accounting staff.

3D Fiscal Year 2019-2020 Budget Report

The Board will receive the Agency's Fiscal Year 2019-2020 financial reports.

Motion to approve the Consent Calendar with the removal of item 3D, Vice Chair McFadden; Second, Director Pace. Voice vote 6 ayes, (Holmgren, Kimball, Chair Long, Vice Chair McFadden, Meneghin, Pace). None opposed. Motion carries unanimously 6/0.

4. MOTION ITEMS

4A Sustainable Management Criteria

Motion

The Board will receive a report from representatives from Daniel B. Stephens & Associates and ad hoc committee members regarding the development of the Agency's Draft Sustainable Groundwater Management Criteria and provide direction regarding upcoming actions, including setting a date for a special board meeting to focus exclusively on completing the Draft Sustainable Management Criteria.

The Board received a report from Tony Morgan of Daniel B. Stephens & Associates

Mrs. Lisa Ballin shared poll results from the October first, Stakeholder Workshop.

Various Board members expressed their concern over the small number of attendees for the October first Workshop, asking Mrs. Ballin what her thoughts were regarding the low turnout. Mrs. Ballin made suggestions on ways to possibly bring in more interest for future Workshops.

Mr. Tony Morgan committed to providing a Strawman Sustainable Management Criteria Matrix for consideration by the Board and stakeholders for the upcoming Special Board Meeting.

Board and staff discussed content, dates and times for a Special Board and settled on November fourth for Special Board Meeting.

Motion to approve Special Board Meeting for November fourth, Director Meneghin; Second, Vice Chair McFadden. Voice vote 6 ayes, (Holmgren, Kimball, Chair Long, Vice Chair McFadden, Meneghin, Pace). None opposed. Motion carries 6/0.

4B Groundwater Sustainability Plan Stakeholder Workshop3 Groundwater Model and Water Budget

Motion

The Board will consider setting a date for Stakeholder Workshop 3, provide comments on the draft agenda and authorize staff to mail invitations to pumpers.

Brian Bondy expressed his opinion on the upcoming Stakeholder Workshop.

Board and staff discussed dates and times and agreed on December ninth for the next Stakeholder Workshop.

Motion to approve Stakeholder Workshop for December ninth and approve cost for mailings to pumpers, Director Meneghin; Second, Vice Chair McFadden. Voice vote 6 ayes, (Holmgren, Kimball, Chair Long, Vice Chair McFadden, Meneghin, Pace). None opposed. Motion carries 6/0.

4C Amendment to Agreement with Daniel B. Stephens & Associates Inc. for Assistance with Monitoring Wells Project.

Motion

The Board will consider approving an Amendment to the Agreement with Daniel B. Stephens & Associates Inc. for assistance with the siting, design, construction and reporting for the Monitoring Wells Project.

Executive Director Tony Emmert explained the need for the agreement amendment.

Motion to approve Amendment to agreement for DBS&A and approve the budget, Vice Chair McFadden; Second, Director Pace. Voice vote 5 ayes, (Holmgren, Kimball, Chair Long, Vice Chair McFadden, Meneghin, Pace). None opposed. One abstaining (Kimball). Motion carries 5/0/1.

FUTURE TOPICS FOR BOARD DISCUSSION

Billing information, pumpers letter and United to share their water projects for next year.

ADJOURNMENT 7:01 p.m.

The Board will adjourn to the next **Regular Board Meeting** on Thursday, **November 19, 2020** or call of the Chair.

ATTEST: _____
Kelly Long, Chair, FPB GSA Board of Directors

I certify that the above is a true and correct copy of the minutes of the Fillmore and Piru Basins Groundwater Sustainability Agency's Board of Directors meeting of October 15, 2020.

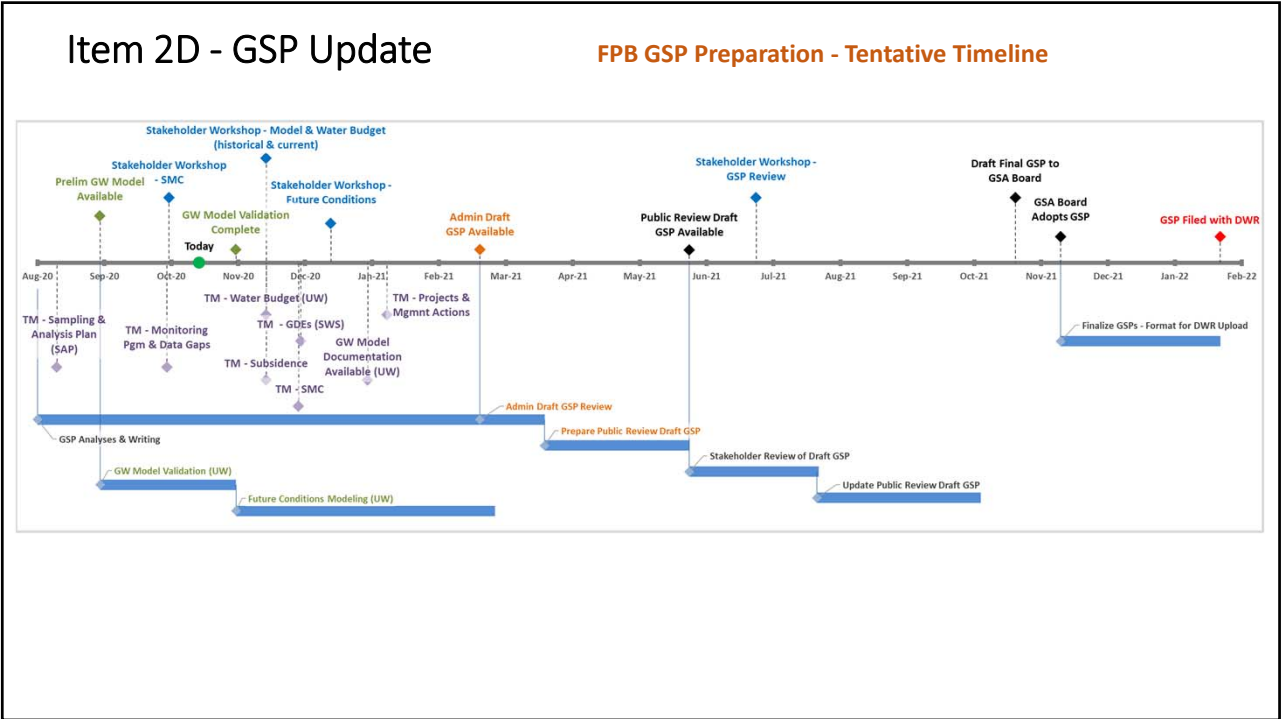
ATTEST: _____
Eva Ibarra, Clerk of the Board

Item 2D - GSP Consultant Update

- Sustainable Management Criteria - Agenda Item 4A
- Groundwater Sustainability Plan Stakeholder Workshop #3 (Groundwater Model and Water Budget) - Agenda Item 4B
- Amendment to Agreement with Daniel B. Stephens & Associates, Inc. for Assistance with Monitoring Wells Project - Agenda Item 4C



DBS&A
Daniel B. Stephens & Associates, Inc.





Questions ?

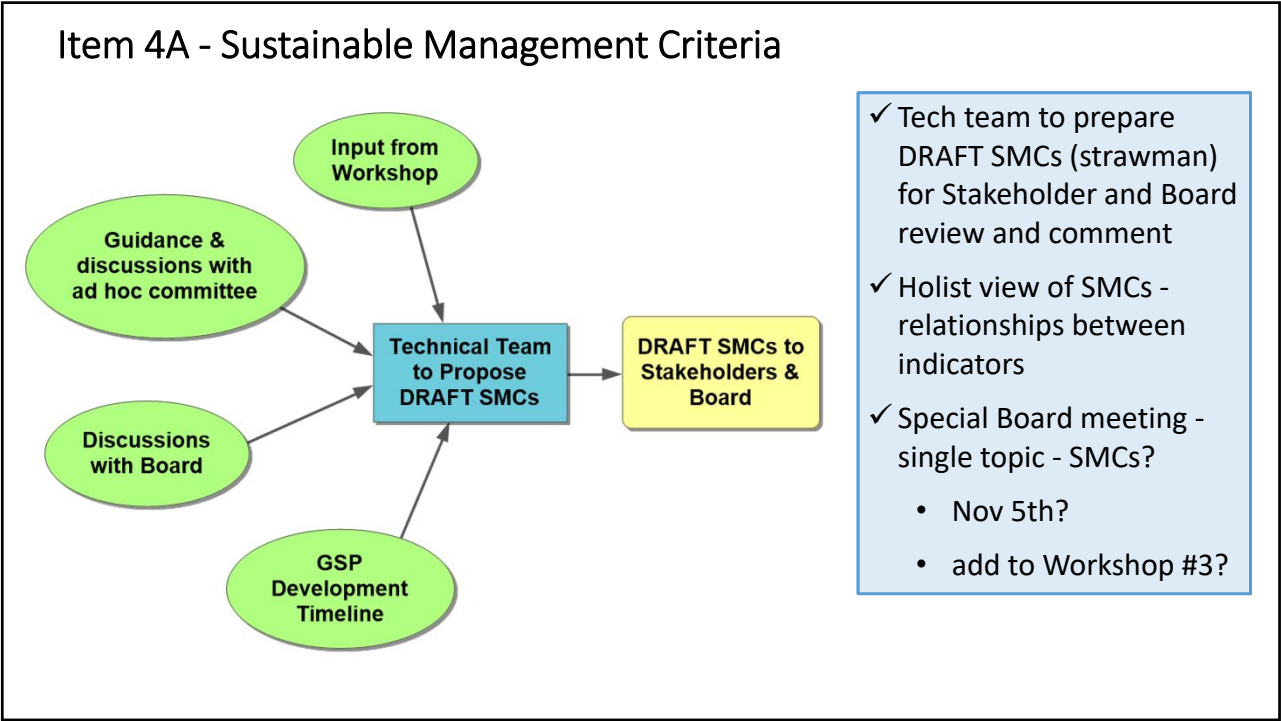


Item 4A - Sustainable Management Criteria

- Stakeholder Workshop #2 - Sustainable Management Criteria
- SMC ad hoc committee debriefing of Workshop #2 - path forward to developing draft SMC

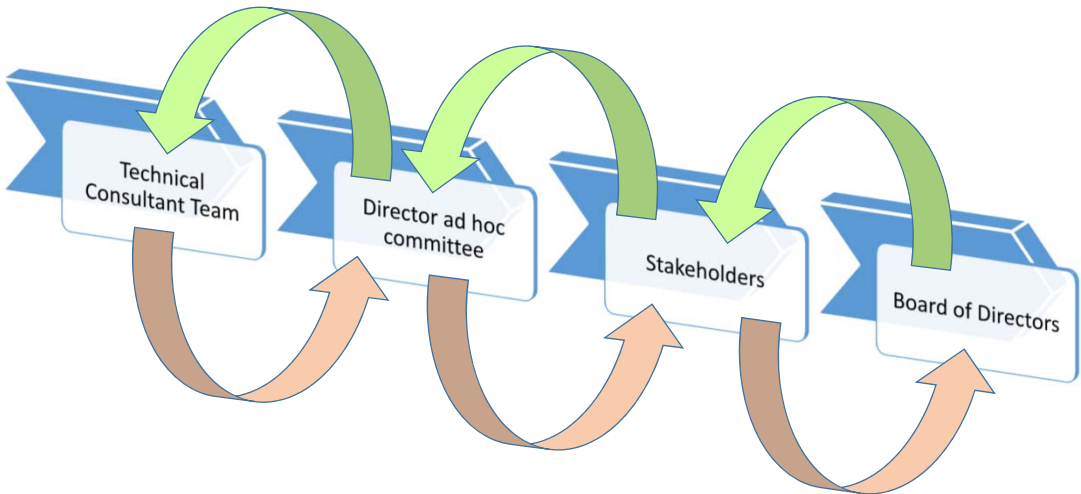


DBS&A
Daniel B. Stephens & Associates, Inc.



Item 4A - Sustainable Management Criteria

Work Flow



Item 4A - Sustainable Management Criteria

| SM Indicator | Example Possible Undesirable Results | Metric / Measurement Methodology | MT | MO |
|----------------------|--|----------------------------------|----------------|----------------|
| GW Elevation | GW levels declining below the top of the well screen | ? | ? | ? |
| GW Storage Reduction | inadequate GW storage to last through multi-year drought without GW extraction limitations | ? | ? | ? |
| SW Depletion | GW elevations drops below the rooting depth of GDE vegetation communities | ? | ? | ? |
| Land Subsidence | land subsidence amounts that interfere with infrastructure operations | ? | ? | ? |
| Degraded WQ | water quality degradation that impairs the beneficial use of the resource | ? | ? | ? |
| Seawater Intrusion | Not Applicable | Not Applicable | Not Applicable | Not Applicable |

Questions?





Fillmore and Piru Basins
Groundwater Sustainability Agency

SPECIAL Board of Directors Meeting
Wednesday, November 4, 2020 at 5:00 p.m.

Directors Present

Director Kelly Long, Chair
Director Ed McFadden, Vice Chair
Director Tim Holmgren
Director Gordon Kimball
Director Glen Pace

Directors Absent

Director Candice Meneghin

Staff Present

Anthony Emmert, executive director
Eva Ibarra, clerk of the board

Public Present

Lisa Ballin, CSUS/DBS&A
Bryan Bondy, Fillmore and Piru Pumpers Associations
Christian Braudrick, Stillwater Science
Katie Brokaw
Frank Brommenschkel, Frank B. & Associates
Emilio Cervantes, Fivepoint Newhall
Guy Cole, Cole Ranch
Dan Detmer, UWCD
Matt Freeman
Barb Fillicks
Carole Fornoff, Westchester/Global AG
Burt Handy
Dr. Zachary Hanson, UWCD
Kris Helm, Independent Water Resource Consultant
Debbie Jackson, Brokaw Ranch Company
Scott Klittich
Rachel Laenen, Fillmore & Piru Basin Pumpers
Bill Lindsay, Beans Ranch LLC & Snabe LLC
Russell Marlow, CalTrout
Victor Mellon, Beans Ranch LLC
Manuel Minjares
Tony Morgan, DBS&A
Patrick O'Connell, DBS&A
Brisa Romero, One Step A La Vez
Clete Saunier, City of Santa Paula Public Works
Kat Selm, The Nature Conservancy
Mary Shore
Steve Slack, CDFW
Jeffrey Steinberg
Dr. Jason Sun, UWCD
Ambry Tibay, UWCD
Christopher Veitch
Gilead Wurman
Steven Zimmer

Call to Order 5:00 pm

Chair Long called the meeting to order at 5:00p.m.

1A Pledge of Allegiance

Chair Long lead everyone to the pledge allegiance.

1B

Directors Roll

Chair Long asked the Clerk to call roll. 5 Directors were present (Holmgren, Kimball, Long, McFadden, Pace.) Director Meneghin was absent.

1C. Public Comments

Chair Long asked if there were any public comments

Kat Selm from The Nature Conservancy (TNC) of Ventura County voiced her concern over the future dewatering of groundwater dependent ecosystems, such as what occurred during the most recent drought and shared a link in the meeting chat regarding guidance framework from TNC.

1. MOTION ITEMS

2.A Sustainable Management Criteria

Motion

The Board received a presentation from representatives of Daniel B. Stephens & Associates on the Agency's "Straw Man" Draft Sustainable Groundwater Management Criteria (SMC) and provided comments and recommendations regarding developing the Agency's Draft SMC for further analysis during the groundwater sustainability planning process. Mr. Tony Morgan presented (see slides).

Mr. Patrick O'Connell also presented slides regarding the use of historical data to evaluate the groundwater level minimum thresholds and measurable objectives.

Chair Kelly Long asked about the groundwater levels and well screen. Mr. Morgan explained the reasoning for the draft minimum thresholds and measurable objectives.

Vice Chair McFadden asked about how the draft minimum thresholds and measurable objectives would work with wells with multiple screened sections and aquifer zones A B & C. Mr. Morgan explained that the draft minimum thresholds and measurable objectives would still work with multiple-screened wells and for the three aquifer zones. He stated that Mr. O'Connell had evaluated over three hundred wells to see what effects would occur.

Mr. Tony Morgan read all questions in the public chat and provided feedback and clarifications as requested.

Vice Chair McFadden requested clarification on the clay layers of concern regarding the potential for subsidence. Mr. Tony Morgan explained that some areas in the Fillmore Basin do have clay layers that might compress during future drawdowns of water levels, so subsidence is a concern that must be addressed in the groundwater sustainability plans. He stated that he is confident that subsidence can be adequately addressed, with the help of the Board.

Mr. Tony Morgan reviewed all listed questions on the public chat and provided answers and made clarifications on all the questions.

Chair Kelly Long stated the SMC Matrix shown on the screen by Mr. Tony Morgan is only a draft and is the first time seen by the Board, and therefore input from stakeholders and the Board is very important. Chair Long then opened the discussion to the Board.

Vice Chair McFadden made comments and voiced his concerns regarding subsidence, groundwater elevations, and groundwater storage reduction.

Chair Kelly Long stated her concerns on the current information used for the SMC development.

Director Kimball explained the purpose of the Sustainable Groundwater Management Act and the need for GPS stations in key locations to obtain subsidence measurements and not base subsidence SMC on historical water levels information. Director Kimball also suggested the Board needs to be careful to avoid setting minimum thresholds that will be overly restrictive on pumpers during future drought periods.

Director Pace explained that we can now use the model to obtain more data driven decisions going forward and not just base the decision on historical data. He encouraged that team to utilize the model as soon as possible to test the draft SMC. Director Pace also mentioned the idea of pushing back the administrative draft, because of time restraints, and felt that more time working on the SMC would be more useful than preparing early administrative drafts of the plans.

Chair Kelly Long encouraged more discussion from stakeholders.

Chair Kelly Long asked Mr. Tony Morgan if he had any questions for the Directors. Mr. Morgan stated that feedback and comments are what he wanted from this discussion with Board regarding the Strawman Draft SMC. Mr. Morgan reminded the Board that the current analysis is based on historical data sets and that all new projections on future conditions will be added to the model and then future scenarios will be run to test the effects of the draft SMC.

Chair Kelly Long mentioned the draft of the Strawman will be available on the website and stated this is only a draft and not mandated. Chair Long opened it up for public comment and mentioned the public can type their questions in the chat. None were offered.

Vice Chair McFadden stated he would like for the Board to meet as a whole Board on the SMC Matrix for further definition and encouraged Stakeholders to send in their comments and questions.

Brian Bondy stated the Board might consider holding back on the idea of an administrative draft to allow time and space for the best development of the SMC.

Director Kimball requested Mr. Tony Morgan to bring up the slide regarding the schedule. Director Kimball voiced his thoughts on how he feels things should be proceeded and mentioned the idea of removing the administrative draft.

Executive Director Tony Emmert stated legal counsel was not in attendance but stated a technical draft that is made available to Board members is a public document and agreed with others that spending more time on developing good quality SMC is important, and that the Agency can hold back on the administrative draft.

Chair Kelly Long asked Mr. Tony Morgan if they are able work on the draft groundwater sustainability plans. Mr. Morgan stated yes, but the subjects discussed during this meeting

Fillmore and Piru Basins Groundwater Sustainability Agency

Board of Directors Meeting -

November 4, 2020

Page 4

are going to be the meat of the document. Chair Long asked that Stakeholders tell their friends about the Agency's discussions on SMC, as it is extremely important to obtain their feedback.

Vice Chair McFadden stated he supports Director Kimball's suggestion to direct staff and consultant to look at the groundwater sustainability planning timeline and adjust it to give more time to develop the SMCs and refine them.

Chair Kelly Long also mentioned the letter dated October 13, 2020 from the Fillmore Basin Pumpers Association and the and Piru Basin Pumpers Association addressing the SMC development process.

Motion to approve to receive and file, Vice Chair McFadden; Second, Director Kimball. Roll call vote: Five ayes (Holmgren, Kimball, Long, McFadden, Pace), none opposed. Motion carries unanimously 5/0. Director Meneghin absent.

ADJOURNMENT

Chair Long adjourned the meeting at 7:09 p.m. to the next **Regular Board Meeting** on Thursday, **November 19, 2020** or call of the Chair

ATTEST: _____
Kelly Long, Chair, FPB GSA Board of Directors

I certify that the above is a true and correct copy of the minutes of the Fillmore and Piru Basins Groundwater Sustainability Agency's Board of Directors meeting of October 15, 2020.

ATTEST: _____
Eva Ibarra, Clerk of the Board



Fillmore and Piru Basins
Groundwater Sustainability Agency

Special Board
Meeting
Nov 4, 2020


Sustainable
Management
Criteria

Sustainable Groundwater Management Act (SGMA)
Background

What is SGMA?

Sustainable Groundwater Management Act

SGMA is a State law that requires the management of *high and medium priority* groundwater basins to ensure their sustainability



Preliminary Draft - For Discussion Purposes Only

Six Sustainability Indicators
(aka **6 Deadly Sins of SGMA**)

Sustainability Indicators

Lowering GW Levels

Chronic lowering of GW levels indicating S&U depletion of supply

Surface Water Depletion

Depletions of interconnected SW that have S&U impacts on beneficial uses of SW

Degraded Quality

S&U degraded water quality

Land Subsidence

S&U land subsidence that interferes with surface land uses

Seawater Intrusion

S&U seawater intrusion

Reduction of Storage

S&U reduction of GW storage

S&U = significant and unreasonable

undesirable results have these effects

Sustainable Groundwater Management Act (SGMA)
Definitions

Significant and Unreasonable – defined by GSA. Basic element of “local control” inherent to SGMA.

Minumum Threshold – a numeric value for each sustainability indicator used to define undesirable results. A quantitative value that if exceeded may cause an “undesirable result” - cannot be an arbitrary number.

Measurable Objective – specific, quantifiable goals for the maintenance or improvement of specified groundwater conditions. Included in an adopted Plan to document progress towards achieving the sustainability goal for the basin.

2

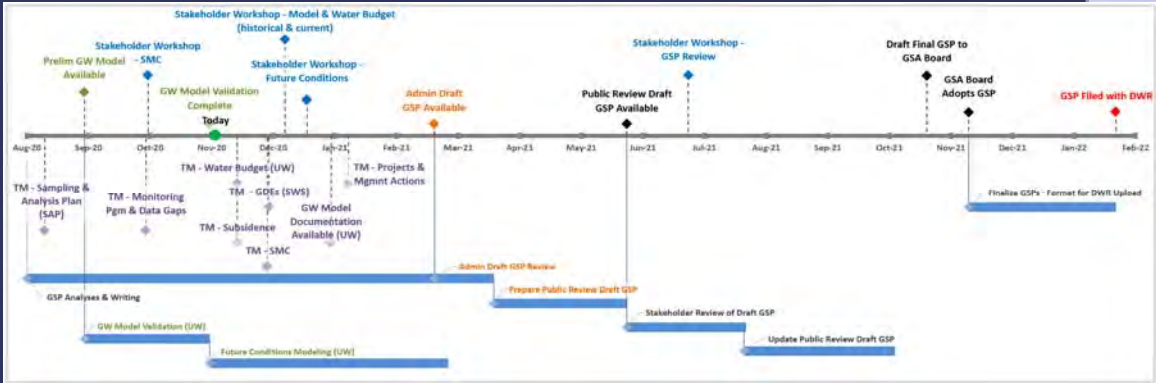
Preliminary Draft - For Discussion Purposes Only

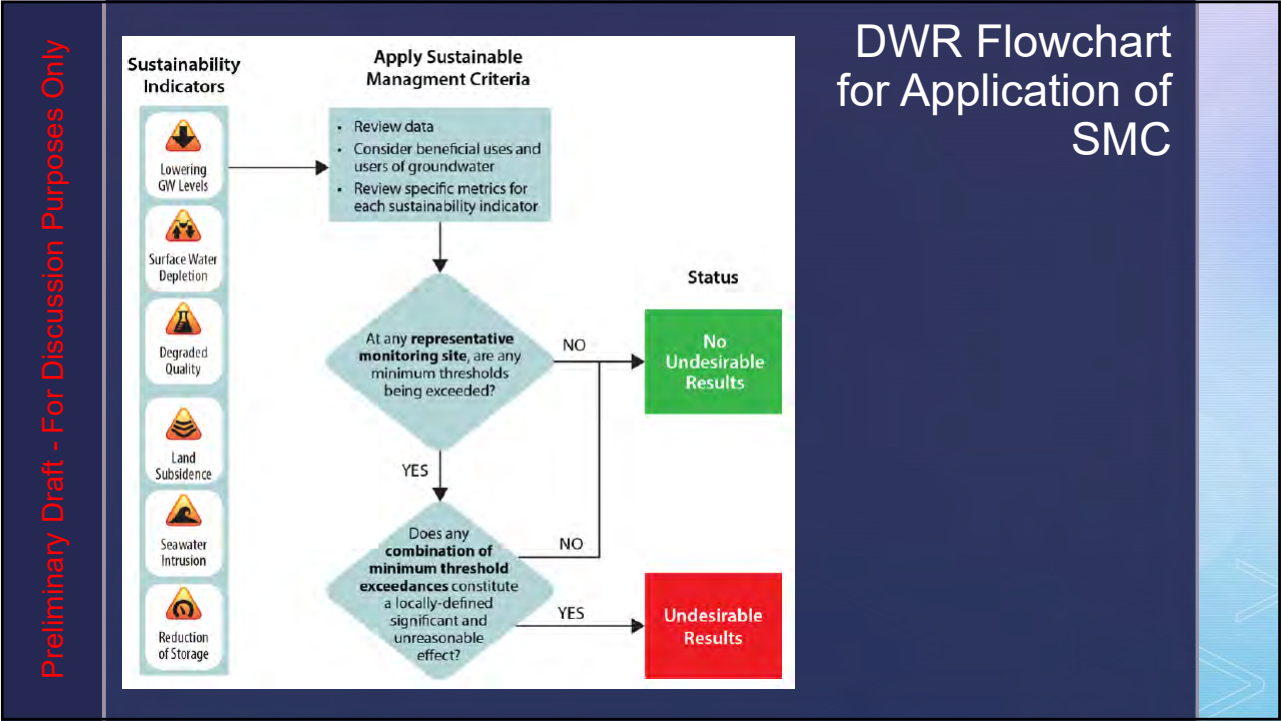
How did we get to this point?

- SMC ad hoc committee sessions
- Presentations to Board of Directors
- Stakeholder Workshops
- Technical consultant to craft **draft** SMC for stakeholder and Board of Directors consideration
 - Simple “fact sheet” for each SM indicator to provide context and summarize the proposed language

Preliminary Draft - For Discussion Purposes Only

GSP timeline





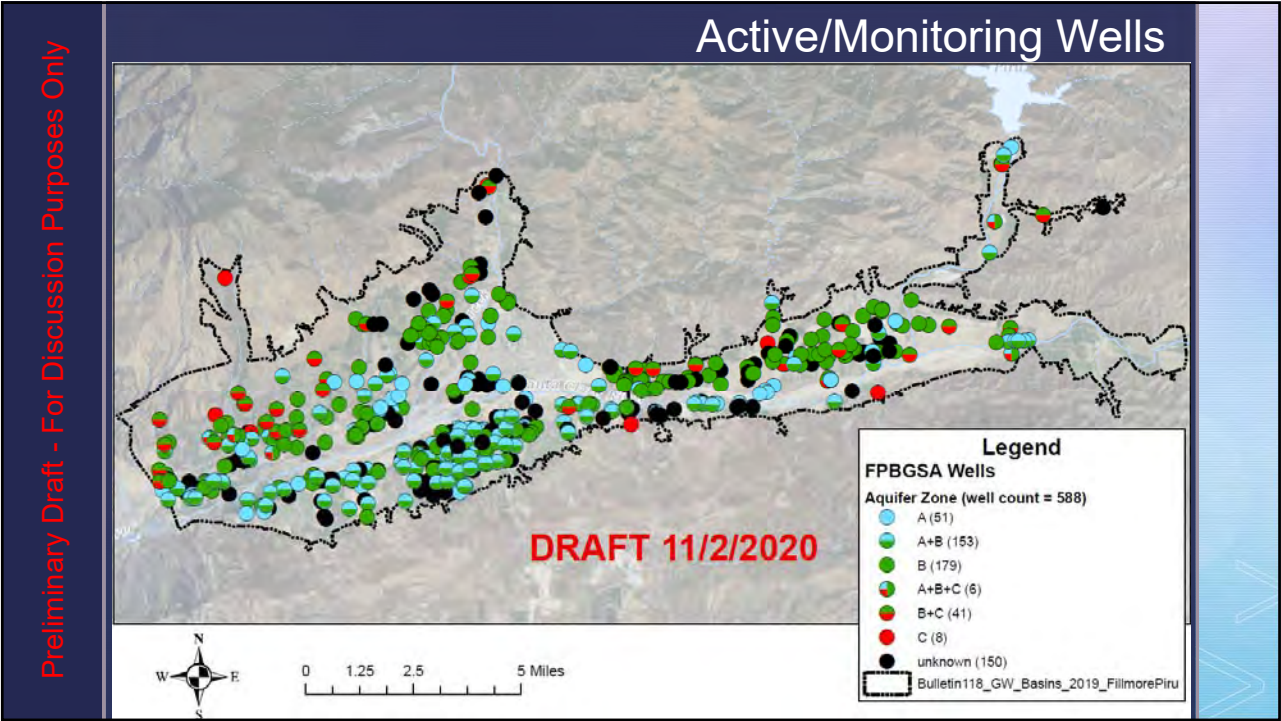
Fillmore and Piru Basins
Groundwater Sustainability Agency

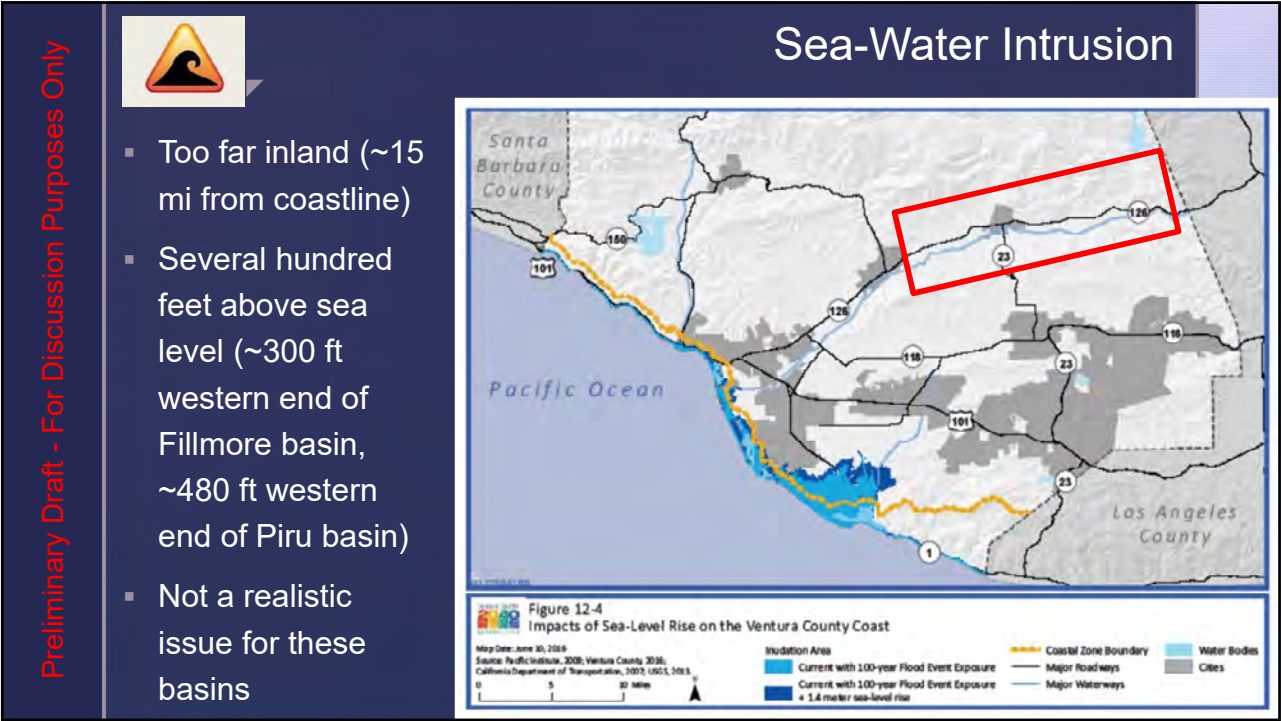
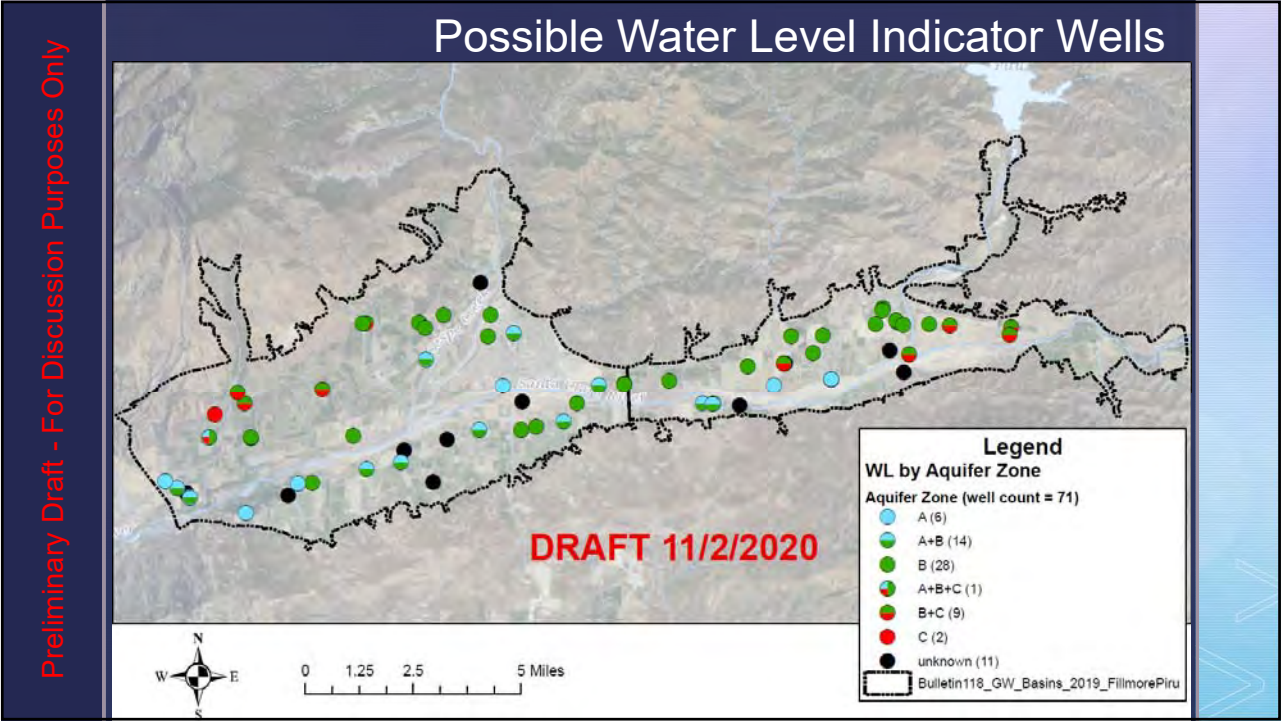
Special Board
Meeting
Nov 4, 2020

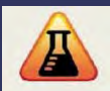
Potential
Sustainable
Management
Criteria

Preliminary Draft - For Discussion Purposes Only

| Draft SMC Matrix | | | | |
|----------------------|---|---|---|---|
| SM Indicator | Example Possible Undesirable Results | Metric / Measurement Method | MT | MO |
| GW Elevation | Option A - Static GW levels decline below the top of the well screen | GW level measurements / Depth to water / Future simulated GW levels | Static GW levels equal to the top of the well screen | Static water levels at or near 2011 water levels |
| GW Elevation | Option B - Static GW levels decline below the bottom of the well | GW level measurements / Depth to water / Future simulated GW levels | Static GW levels at or below the bottom of the well screen | Static water levels at least 70 feet above the bottom of the well screen |
| GW Storage Reduction | Inadequate GW storage to last through multi-year drought without GW extraction limitations | GW level measurements / Depth to water / Future simulated GW levels | Static water levels equal to the top of the well screen. | Static water levels equivalent to 2011-2016 water level decline above the top of the well screen. |
| SW Depletion | Surface water flows are depleted by groundwater extractions or GSA projects and management actions that impairs the beneficial use of the resource | GW level measurements / Depth to water / Future simulated GW levels | ? | ? |
| Land Subsidence | land subsidence amounts that interfere with critical infrastructure operations / >1 ft of subsidence in a single year OR 1 ft of cumulative net subsidence over 5 years | InSAR data for recent historical monitoring / Potential Subsidence Screening Tool for potential future subsidence | Water levels twenty (20) feet below the historic low water levels | Water levels at (or above) historical low levels |
| Degraded WQ | water quality degradation that occurs due to GSA projects or management actions that impairs the beneficial use of the resource | Groundwater and surface water sampling and laboratory analyses | Option A - Water quality values included in existing or future regulations. | Option A - The authority to regulate water quality is afforded to State and Federal agencies other than the FPBGSA. FPBGSA is not a water purveyor and does not have the authority for water quality compliance but will cooperate with appropriately empowered entities. |
| Degraded WQ | water quality degradation that occurs due to GSA projects or management actions that impairs the beneficial use of the resource | Groundwater and surface water sampling and laboratory analyses | Option B - Maximum Contaminant Level (MCL), Health Goal, or other value specific to beneficial use (e.g., agriculture, vegetation, industrial), as appropriate. | Option B - FPBGSA is not a groundwater producer, and as such, does not function as a potable or irrigation water purveyor. FPBGSA does not have the authority for water quality compliance but will cooperate with appropriately empowered entities. |
| Seawater Intrusion | Not Applicable | Not Applicable | Not Applicable | Not Applicable |







Water Quality Degradation

- ✓ **DWR has not prepared BMP or Guidance Document**
- ✓ Regulations focused on contaminated sites - do not address naturally occurring compounds (e.g., TDS, arsenic)
- ✓ **GSAs generally do not have authority over water quality (RWQCB, DTSC, EPA) or some of the aspects that can impact water quality (e.g., land use)**
 - Not responsible for enforcing water quality standards or collecting data to support existing water quality programs
- ✓ **GSA not required to “fix” issues existing prior to 01 Jan 2015 (when SGMA became effective)**
 - ...but GSP should not make conditions worse



Water Quality Degradation

- ✓ **GSAs have broad powers “...perform any act necessary or proper to carry out the purposes of SGMA...”**

Gray Zone:

- Are GSAs responsible to address WQ problems that were present prior to 01Jan15 and have gotten worse?
- Are GSAs responsible for WQ problems not being addressed by other regulatory agencies?

Preliminary Draft - For Discussion Purposes Only

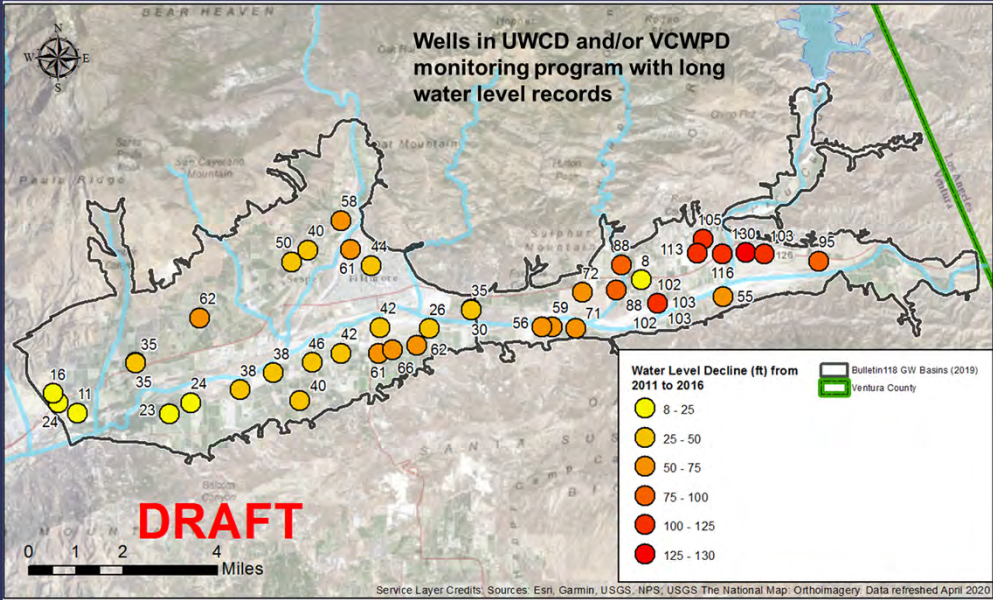
Water Quality Degradation - draft SMC language

| SM Indicator | Example Possible Undesirable Results | Metric / Measurement Method | MT | MO |
|--------------|---|--|---|---|
| Degraded WQ | water quality degradation that occurs due to GSA projects or management actions that impairs the beneficial use of the resource | Groundwater and surface water sampling and laboratory analyses | Option A - Water quality values included in existing or future regulations. | Option A - The authority to regulate water quality is afforded to State and Federal agencies other than the FPBGSA. FPBGSA is not a water purveyor and does not have the authority for water quality compliance but will cooperate with appropriately empowered entities. |
| Degraded WQ | water quality degradation that occurs due to GSA projects or management actions that impairs the beneficial use of the resource | Groundwater and surface water sampling and laboratory analyses | Option B - Maximum Contaminant Level (MCL), Health Goal, or other value specific to beneficial use (e.g., agriculture, vegetation, industrial), as appropriate. | Option B - FPBGSA is not a groundwater producer, and as such, does not function as a potable or irrigation water purveyor. FPBGSA does not have the authority for water quality compliance but will cooperate with appropriately empowered entities. |

Preliminary Draft - For Discussion Purposes Only



Groundwater Levels



Preliminary Draft - For Discussion Purposes Only



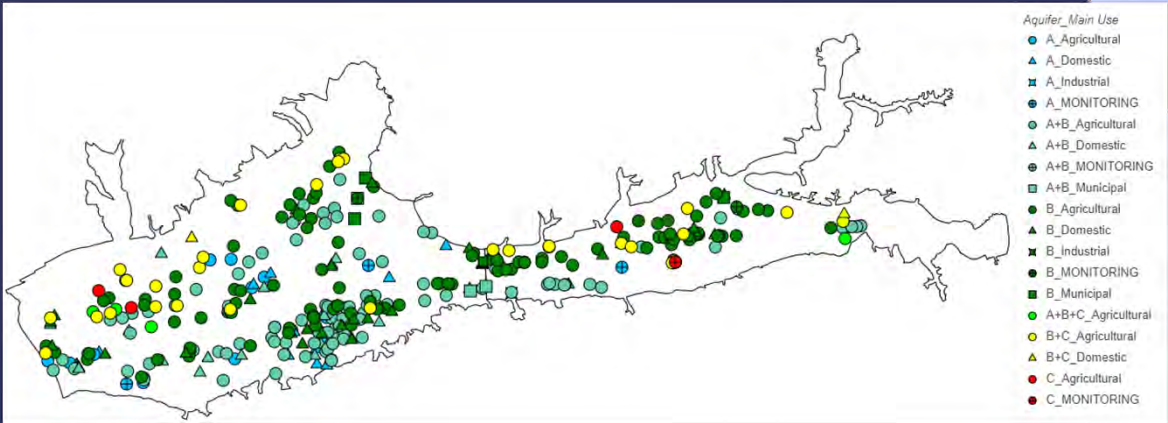
Groundwater Levels - draft SMC language

| SM Indicator | Example Possible Undesirable Results | Metric / Measurement Method | MT | MO |
|--------------|--|---|--|--|
| GW Elevation | Option A - Static GW levels decline below the top of the well screen | GW level measurements / Depth to water / Future simulated GW levels | Static GW levels equal to the top of the well screen | Static water levels at or near 2011 water levels |
| GW Elevation | Option B - Static GW levels decline below the bottom of the well | GW level measurements / Depth to water / Future simulated GW levels | Static GW levels at or below the bottom of the well screen | Static water levels at least 70 feet above the bottom of the well screen |

Preliminary Draft - For Discussion Purposes Only



Active/Monitoring Wells (with Screen Info) in GW Model

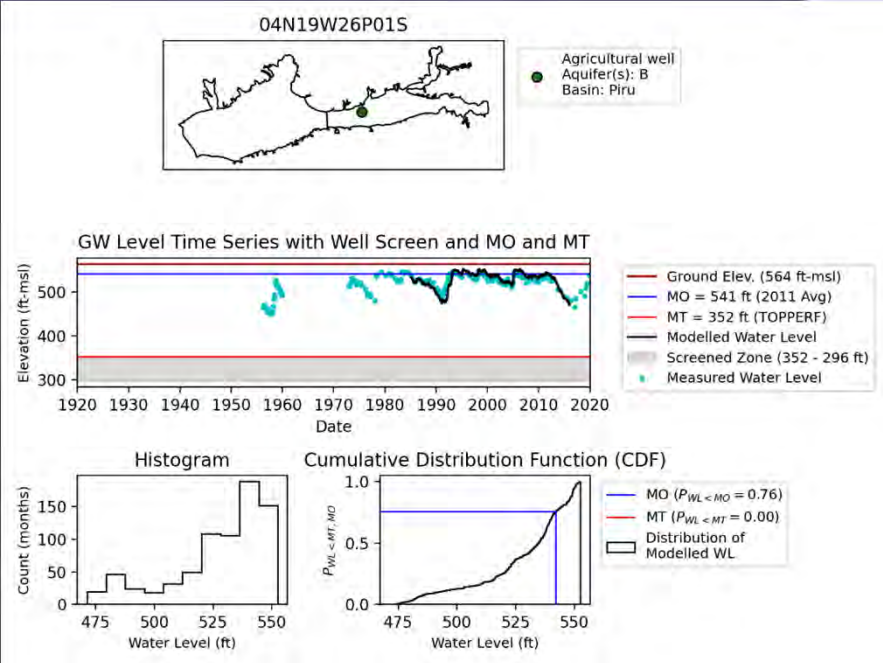


Preliminary Draft - For Discussion Purposes Only



Groundwater Levels – Historical Water Levels

- WLS always above well screen

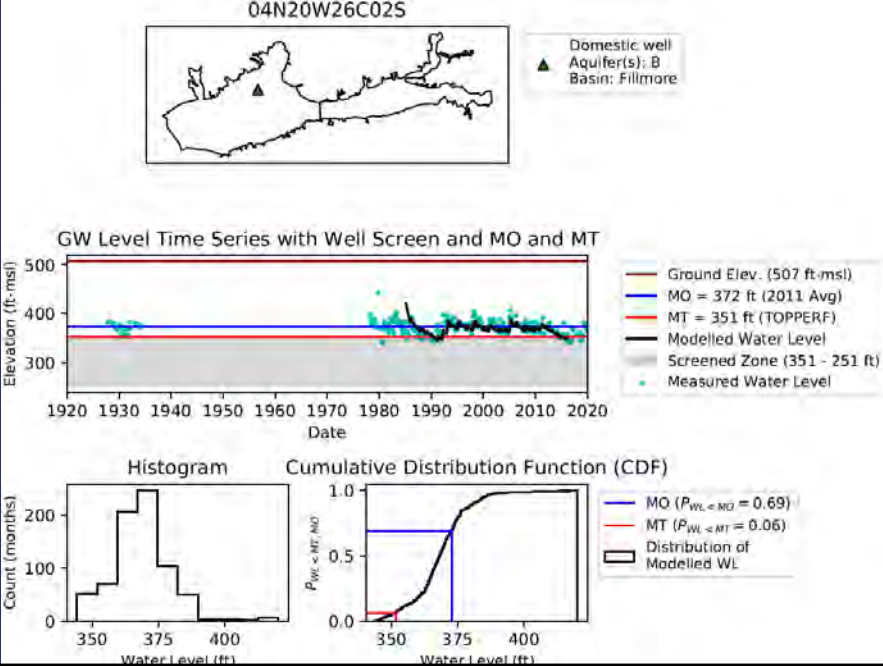


Preliminary Draft - For Discussion Purposes Only



Groundwater Levels – Historical Water Levels

- WLS usually above well screen

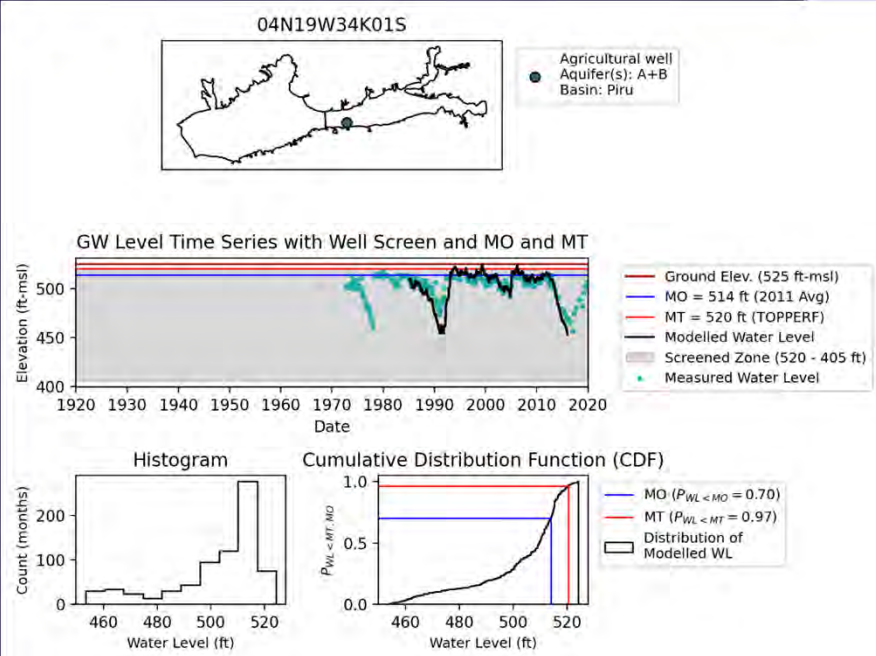


Preliminary Draft - For Discussion Purposes Only



Groundwater Levels – Historical Water Levels

- WLs always below well screen

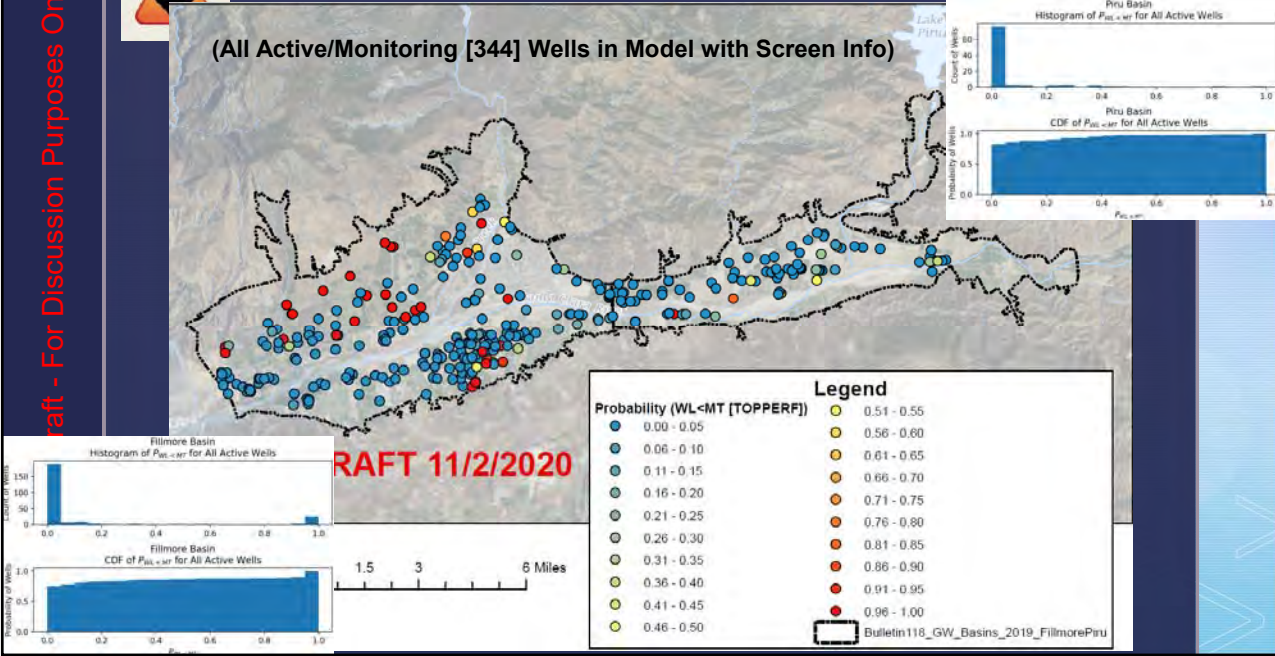


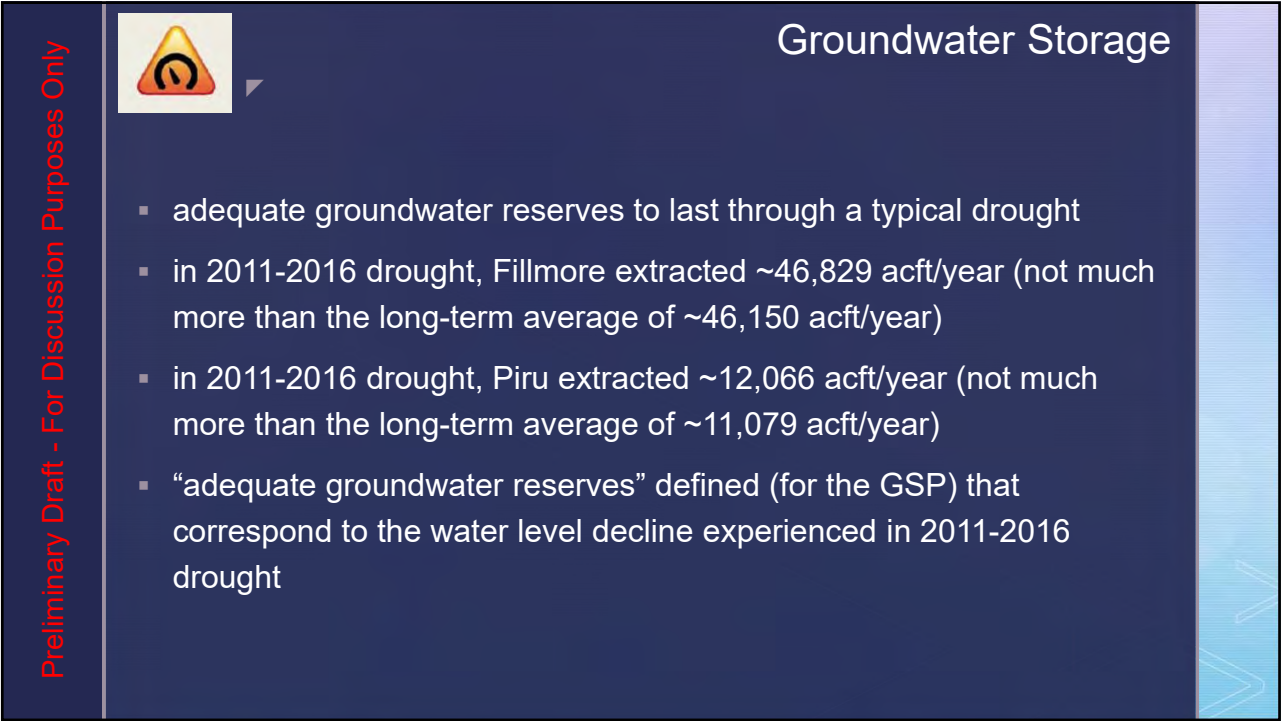
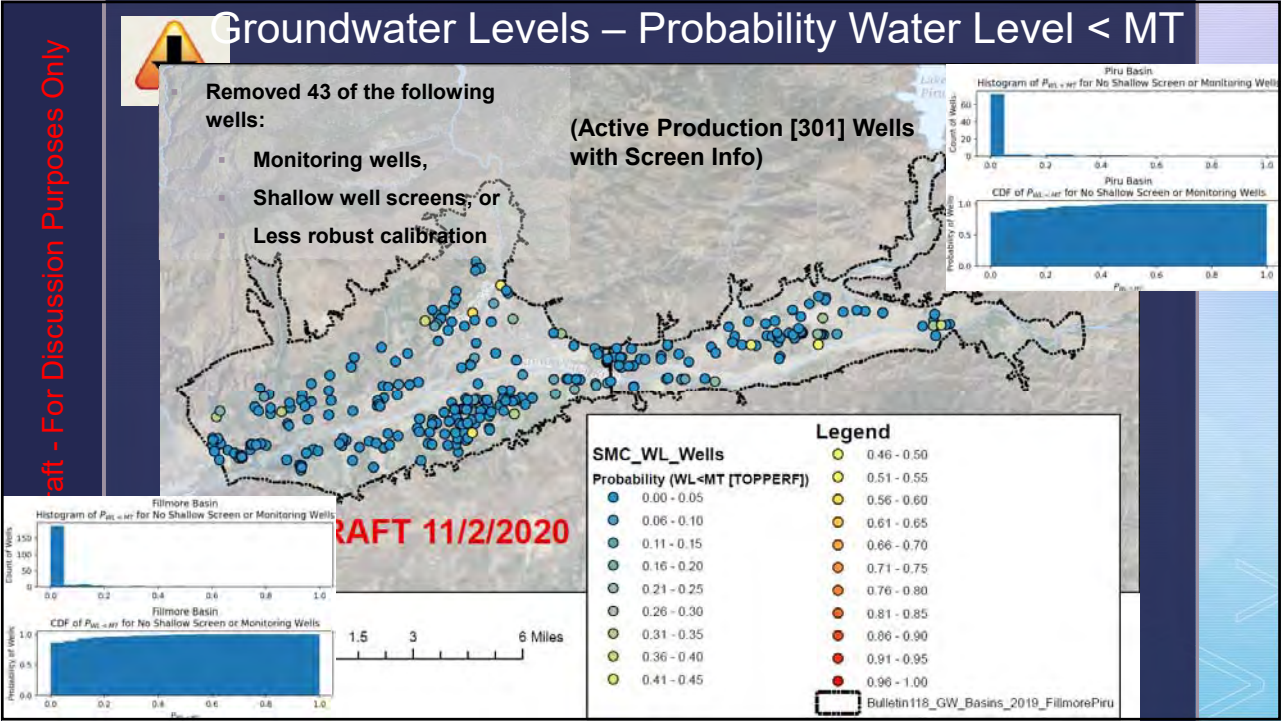
Preliminary Draft - For Discussion Purposes Only



Groundwater Levels – Probability Water Level < MT

(All Active/Monitoring [344] Wells in Model with Screen Info)





Preliminary Draft - For Discussion Purposes Only

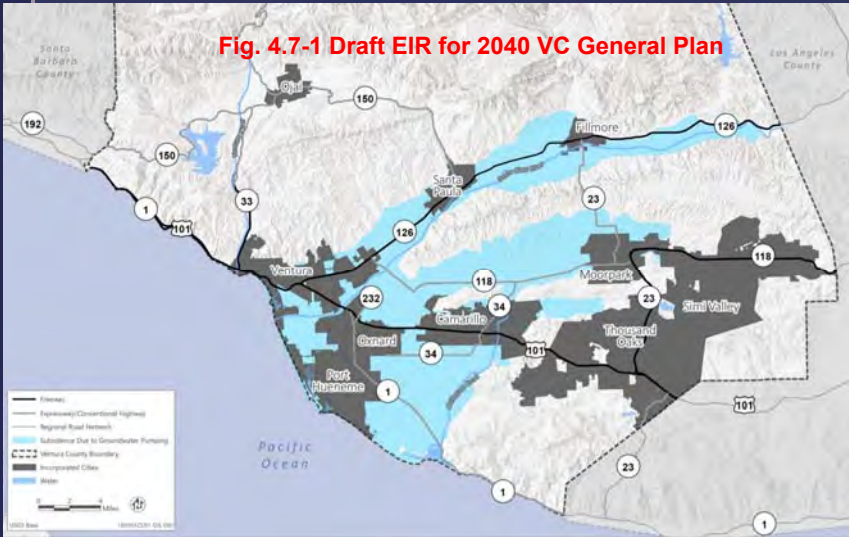
Groundwater Storage - draft SMC language

| SM Indicator | Example Possible Undesirable Results | Metric / Measurement Method | MT | MO |
|----------------------|--|---|--|---|
| GW Storage Reduction | inadequate GW storage to last through multi-year drought without GW extraction limitations | GW level measurements / Depth to water / Future simulated GW levels | Static water levels equal to the top of the well screen. | Static water levels equivalent to 2011-2016 water level decline above the top of the well screen. |

Preliminary Draft - For Discussion Purposes Only



Subsidence

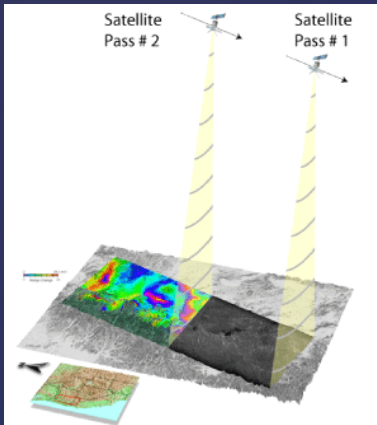


- Subsidence due to GW pumping in both Fillmore & Piru basins
- No data or report to substantiate

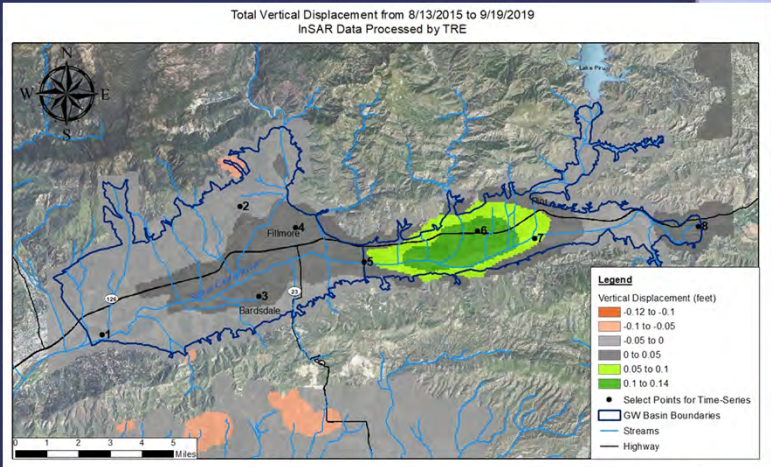
Preliminary Draft - For Discussion Purposes Only

Subsidence Metrics

recent historical estimates of subsidence

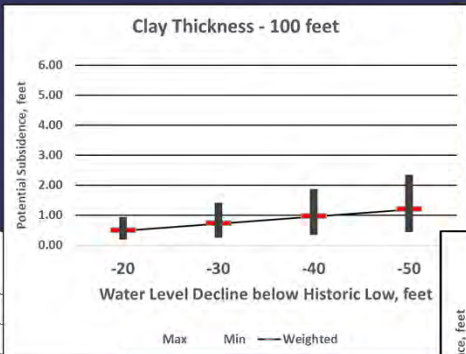
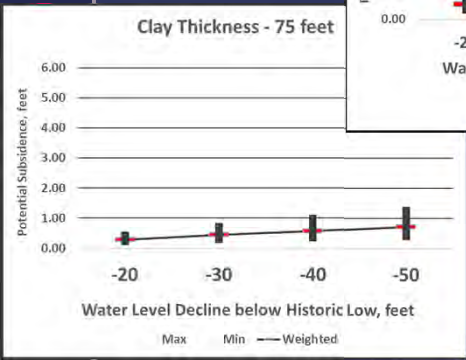


InSAR - Interferometric Synthetic Aperture Radar



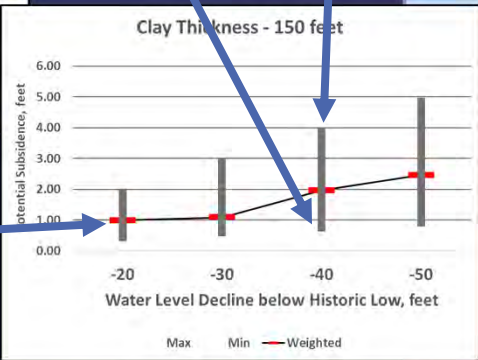
Influence of Clay Thickness & Water Level on Potential Subsidence

scussion



Subsidence Metrics

future estimates of subsidence



Max estimated subsidence

Min estimated subsidence

Weighted estimated subsidence

Preliminary Draft - For Discussion Purposes Only

Subsidence MT

▪

WL data from wells with long records often suggest that water levels in 1940 - 1970 were lower than 2016 drought low

▪

Data from 1940 - 1970 sparse, but useful

▪

Subsidence MT

○

2016 low WL

○

minus 20 ft to estimate historical WLs

○

minus 20 ft to approximate a maximum of 1 ft of allowable subsidence

○

So, MT = 2016 low WL - 40 ft

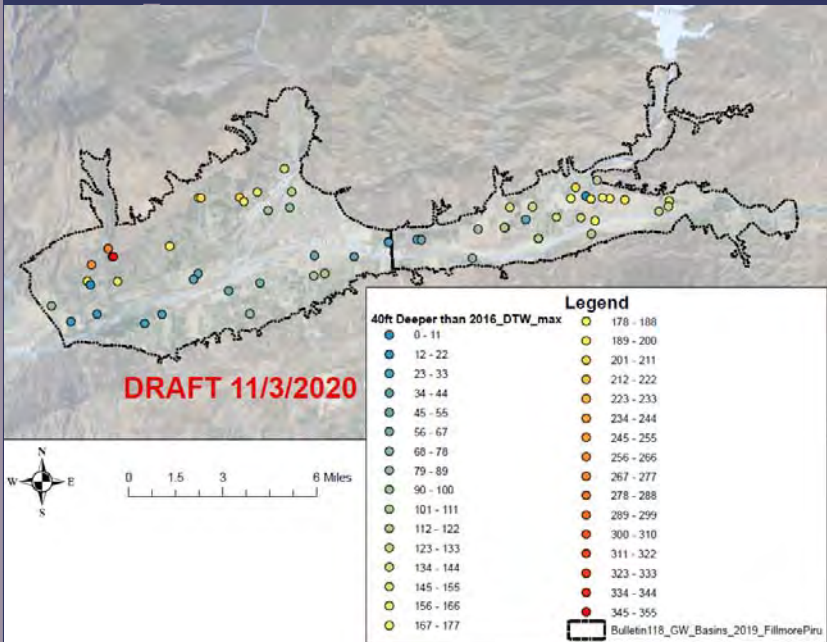
Preliminary Draft - For Discussion Purposes Only

Subsidence - draft SMC language

| SM Indicator | Example Possible Undesirable Results | Metric / Measurement Method | MT | MO |
|-----------------|---|---|---|--|
| Land Subsidence | land subsidence amounts that interfere with critical infrastructure operations / >1 ft of subsidence in a single year OR 1 ft of cumulative net subsidence over 5 years | InSAR data for recent historical monitoring / Potential Subsidence Screening Tool for potential future subsidence | Water levels twenty (20) feet below the historic low water levels | Water levels at (or above) historical low levels |

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Proposed Subsidence MT

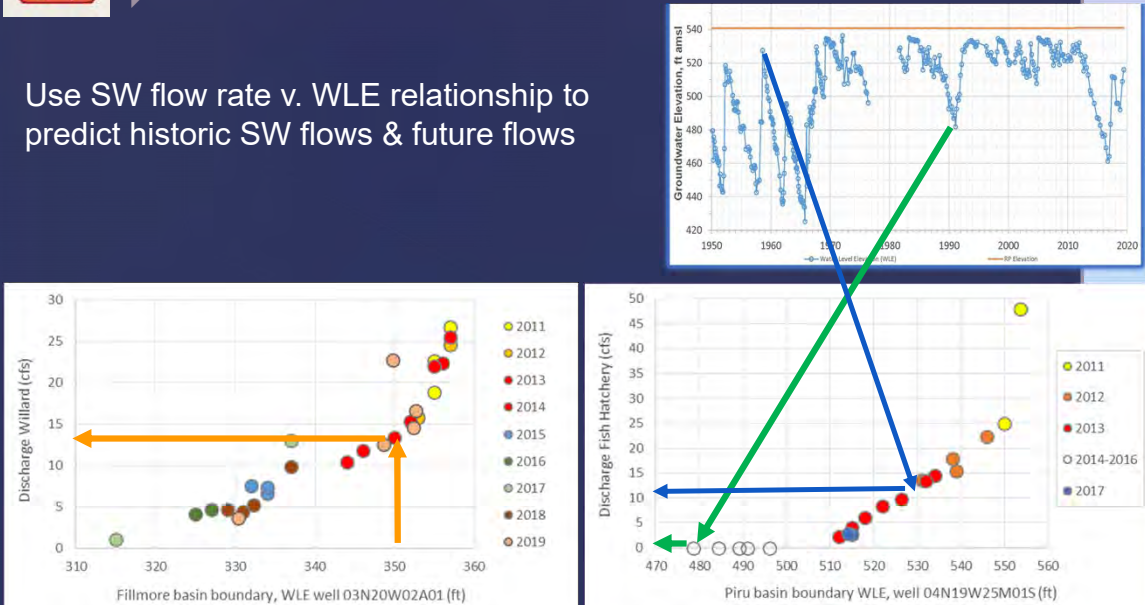


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Depletion of Interconnected Surface Waters

Use SW flow rate v. WLE relationship to predict historic SW flows & future flows



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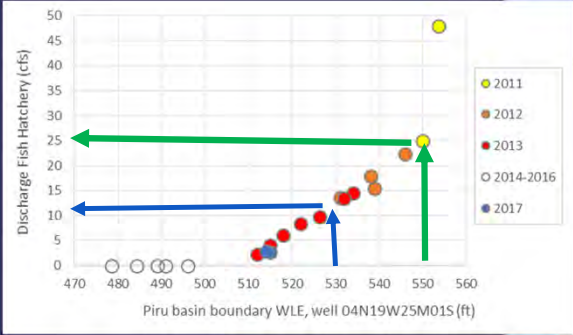


Depletion of Interconnected Surface Waters

Use SW flow rate v. WLE relationship with GW pumping = 0 to estimate impact of pumping on SW flow

If WLE =530 ft with pumping, but 550 ft w/o pumping

550 ft = 25 cfs
530 ft = 12 cfs
Estimated pumping impact is 13 cfs



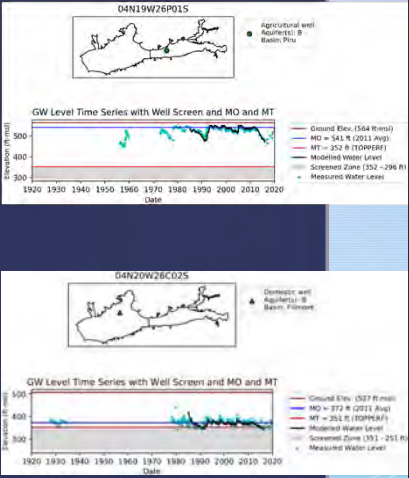
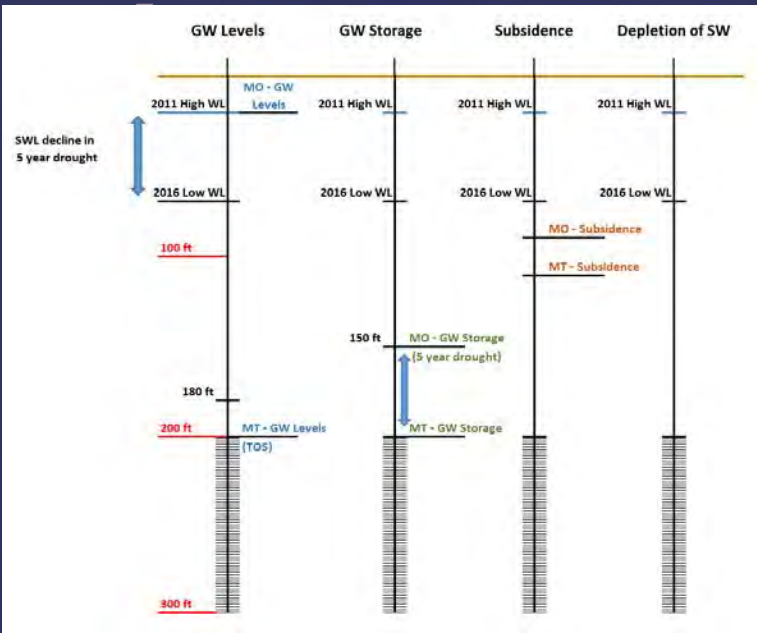
Preliminary Draft - For Discussion Purposes Only

Depletion of Interconnected Surface Waters - draft SMC language

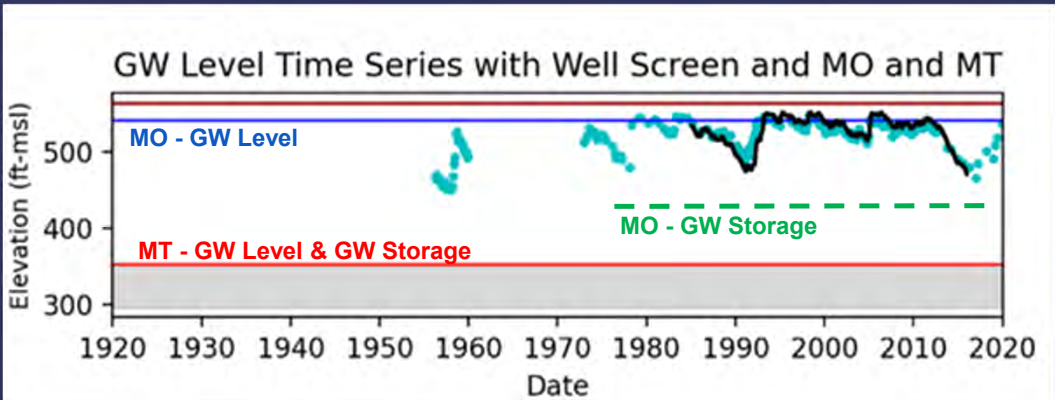
| SM Indicator | Example Possible Undesirable Results | Metric / Measurement Method | MT | MO |
|--------------|--|---|----|----|
| SW Depletion | Surface water flows are depleted by groundwater extractions or GSA projects and management actions that impairs the beneficial use of the resource | GW level measurements / Depth to water / Future simulated GW levels | ? | ? |

Preliminary Draft - For Discussion Purposes Only

MT - MO Summary



MT - MO Summary

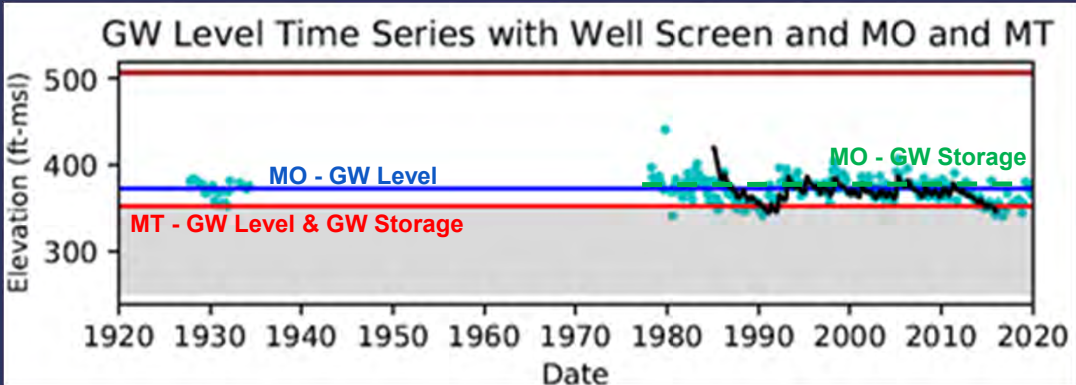


Preliminary Draft - For Discussion Purposes Only

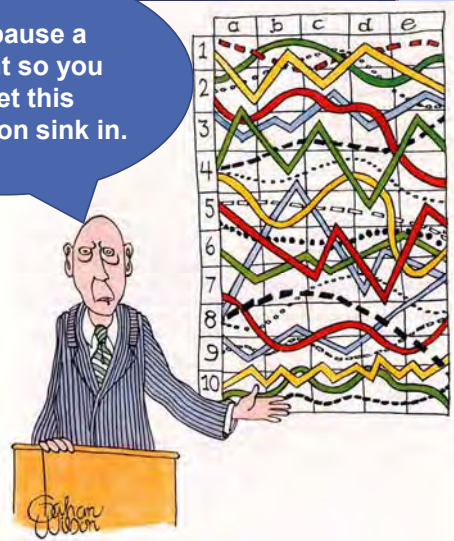
Preliminary Draft - For Discussion Purposes Only

MT - MO Summary

for this specific well, MO for GW level \approx MO for GW Storage



I will pause a moment so you can let this information sink in.



**Fillmore and Piru Basins
Groundwater Sustainability Agency**

Special Board Meeting
Nov 4, 2020

SUSTAINABLE MANAGEMENT CRITERIA MATRIX (DRAFT - FOR INTERNAL DISCUSSIONS ONLY) 04Nov20

| SM Indicator | Example Possible Undesirable Results | Metric / Measurement Method | MT | MO |
|----------------------|---|---|---|---|
| GW Elevation | <i>Option A</i> - Static GW levels decline below the top of the well screen | GW level measurements / Depth to water / Future simulated GW levels | Static GW levels equal to the top of the well screen | Static water levels at or near 2011 water levels |
| GW Elevation | <i>Option B</i> - Static GW levels decline below the bottom of the well | GW level measurements / Depth to water / Future simulated GW levels | Static GW levels at or below the bottom of the well screen | Static water levels at least 70 feet above the bottom of the well screen |
| GW Storage Reduction | inadequate GW storage to last through multi-year drought without GW extraction limitations | GW level measurements / Depth to water / Future simulated GW levels | Static water levels equal to the top of the well screen. | Static water levels equivalent to 2011-2016 water level decline above the top of the well screen. |
| SW Depletion | Surface water flows are depleted by groundwater extractions or GSA projects and management actions that impairs the beneficial use of the resource | GW level measurements / Depth to water / Future simulated GW levels | ? | ? |
| Land Subsidence | land subsidence amounts that interfere with critical infrastructure operations / >1 ft of subsidence in a single year OR 1 ft of cumulative net subsidence over 5 years | InSAR data for recent historical monitoring / Potential Subsidence Screening Tool for potential future subsidence | Water levels twenty (20) feet below the historic low water levels | Water levels at (or above) historical low levels |
| Degraded WQ | water quality degradation that occurs due to GSA projects or management actions that impairs the beneficial use of the resource | Groundwater and surface water sampling and laboratory analyses | Option A - Water quality values included in existing or future regulations. | Option A - The authority to regulate water quality is afforded to State and Federal agencies other than the FPBGSA. FPBGSA is not a water purveyor and does not have the authority for water quality compliance but will cooperate with appropriately empowered entities. |
| Degraded WQ | water quality degradation that occurs due to GSA projects or management actions that impairs the beneficial use of the resource | Groundwater and surface water sampling and laboratory analyses | Option B - Maximum Contaminant Level (MCL), Health Goal, or other value specific to beneficial use (e.g., agriculture, vegetation, industrial), as appropriate. | Option B - FPBGSA is not a groundwater producer, and as such, does not function as a potable or irrigation water purveyor. FPBGSA does not have the authority for water quality compliance but will cooperate with appropriately empowered entities. |
| Seawater Intrusion | Not Applicable | Not Applicable | Not Applicable | Not Applicable |

SUSTAINABLE MANAGEMENT INDICATOR - Groundwater Levels (Fillmore and Piru basins)

BACKGROUND

DWR (2017) provides the following considerations “...when establishing minimum thresholds for groundwater levels at a given representative monitoring site may include, but are not limited to...”

What are the historical groundwater conditions in the basin?

Groundwater conditions (i.e., water levels) in these basins vary based on water year type, the amount of reservoir releases or imports of State Water Project water, and groundwater extractions (see key well hydrographs attached at the end of this document).

What are the average, minimum, and maximum screen and casing depths of municipal, agricultural, and domestic wells?

| | Depth to Top of Screen (ft) | | | | | | | | | |
|-------|-----------------------------|----------|------------|------------|-----------|--------------|----------|------------|------------|-----------|
| Basin | Fillmore | | | | | Piru | | | | |
| Use | Agricultural | Domestic | Industrial | Monitoring | Municipal | Agricultural | Domestic | Industrial | Monitoring | Municipal |
| count | 214 | 86 | 2 | 5 | 8 | 87 | 15 | 2 | 12 | 3 |
| min | 11 | 26 | 200 | 1 | 50 | 5 | 20 | 57 | 18 | 160 |
| 50% | 120 | 98 | 200 | 10 | 95 | 180 | 140 | 209 | 75 | 160 |
| max | 633 | 294 | 200 | 120 | 260 | 568 | 220 | 360 | 590 | 400 |

| | Depth to Bottom of Screen (ft) | | | | | | | | | |
|-------|--------------------------------|----------|------------|------------|-----------|--------------|----------|------------|------------|-----------|
| Basin | Fillmore | | | | | Piru | | | | |
| Use | Agricultural | Domestic | Industrial | Monitoring | Municipal | Agricultural | Domestic | Industrial | Monitoring | Municipal |
| count | 214 | 86 | 2 | 5 | 8 | 87 | 15 | 2 | 12 | 3 |
| min | 86 | 68 | 600 | 12 | 150 | 40 | 47 | 93 | 43 | 450 |
| 50% | 280 | 200 | 600 | 40 | 269 | 304 | 200 | 307 | 110 | 470 |
| max | 1580 | 555 | 600 | 300 | 502 | 800 | 420 | 520 | 610 | 480 |

| | Total Depth of Well Casing (ft) | | | | | | | | | |
|-------|---------------------------------|----------|------------|------------|-----------|--------------|----------|------------|------------|-----------|
| Basin | Fillmore | | | | | Piru | | | | |
| Use | Agricultural | Domestic | Industrial | Monitoring | Municipal | Agricultural | Domestic | Industrial | Monitoring | Municipal |
| count | 212 | 90 | 2 | 5 | 9 | 86 | 15 | 2 | 12 | 3 |
| min | 30 | 52 | 600 | 12 | 150 | 60 | 47 | 103 | 43 | 450 |
| 50% | 300 | 183 | 600 | 40 | 270 | 330 | 200 | 312 | 114 | 480 |
| max | 1620 | 575 | 600 | 300 | 502 | 820 | 428 | 520 | 610 | 490 |

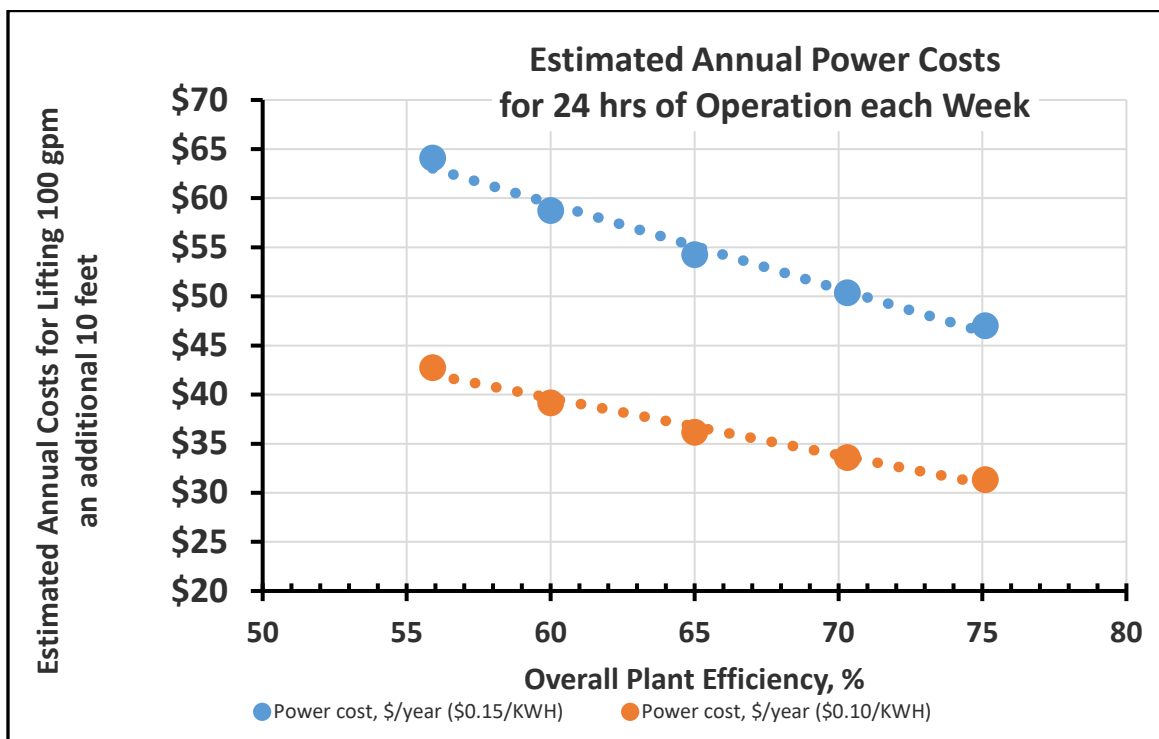
What are the screen intervals of the wells?

See above for general statistics - for individual wells, please refer to *Appendix A Groundwater Level Hydrographs in Fillmore and Piru Groundwater Basins Monitoring Program and Data Gap Analysis DRAFT Technical Memorandum* OR the online database at www.fillmore-piru.gladata.com.

SUSTAINABLE MANAGEMENT INDICATOR - Groundwater Levels (Fillmore and Piru basins)

What impacts do water levels have on pumping costs (e.g., energy cost to lift water)?

Calculation of the additional costs to lift groundwater depends on the amount of water (i.e., flow rate [gpm]), amount of the additional lift, overall plant efficiency [OPE], and cost of power. These variables are often well specific, but the general relationship of energy cost to increasing lift and groundwater extraction amount are shown in the graph below:



What are the adjacent basin's minimum thresholds for groundwater elevations?

The Santa Paula basin is located down gradient and immediately west of the Fillmore basin. This basin is adjudicated and is not required to develop sustainable management criteria (e.g., minimum thresholds).

The Upper Santa Clara River basin is located east of the Piru basin and immediately upgradient of the basin. The draft GSP for this basin proposes a minimum threshold of _____.

What are the potential impacts of changing groundwater levels on groundwater dependent ecosystems?

TBD (see the Surface Water – Groundwater Interactions Fact Sheet).

Which principal aquifer, or aquifers, is the representative monitoring site evaluating?

TBD

SUSTAINABLE MANAGEMENT INDICATOR - Groundwater Levels (Fillmore and Piru basins)

UNDESIRABLE RESULT(S)

Proposed language: **Option A** - An *Undesirable Result* occurs when static groundwater levels decline below the top of the well screen.

Proposed language: **Option B** - An *Undesirable Result* occurs when static groundwater levels decline below the bottom of the well.

METRIC AND MEASUREMENT METHODOLOGY

Proposed metric: Groundwater level measurements / Depth to water

Proposed Measurement Methodology: The groundwater level measurements performed for several wells in the basins by UWCD and VCWPD will be used to monitor recent historical and ongoing groundwater level fluctuations.

Future groundwater fluctuations will be evaluated using the future conditions water levels predicted by the groundwater flow model developed by United Water Conservation District (UWCD).

MINIMUM THRESHOLD (MT)

Proposed language: **Option A** - Static water levels equal to the top of the well screen.

Proposed language: **Option B** - Static water levels at or below the bottom of the well screen.

MEASURABLE OBJECTIVE (MO)

Proposed language: **Option A** - Static water levels at or near 2011 levels.

Proposed language: **Option B** - Static water levels at least 70 ft above the bottom of the well screen.

Assumptions:

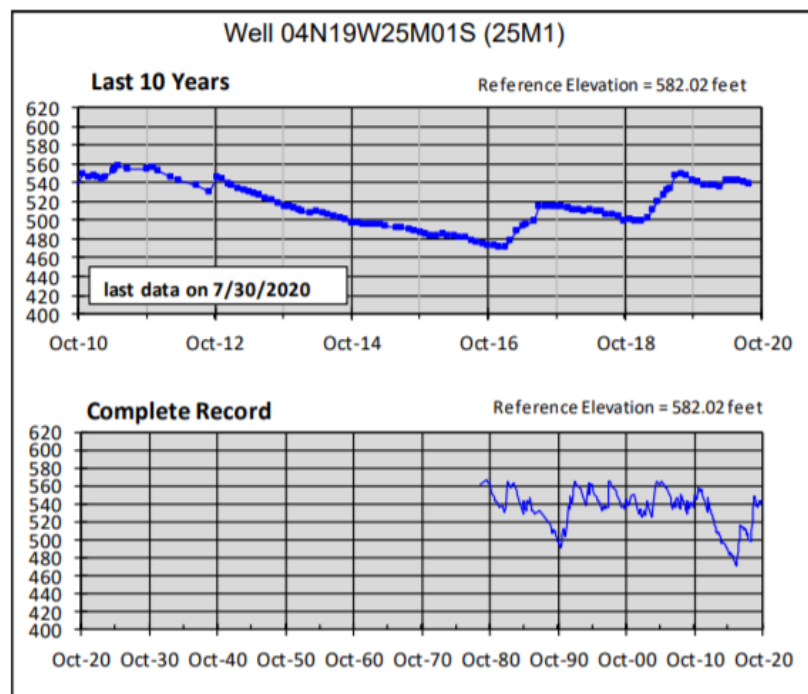
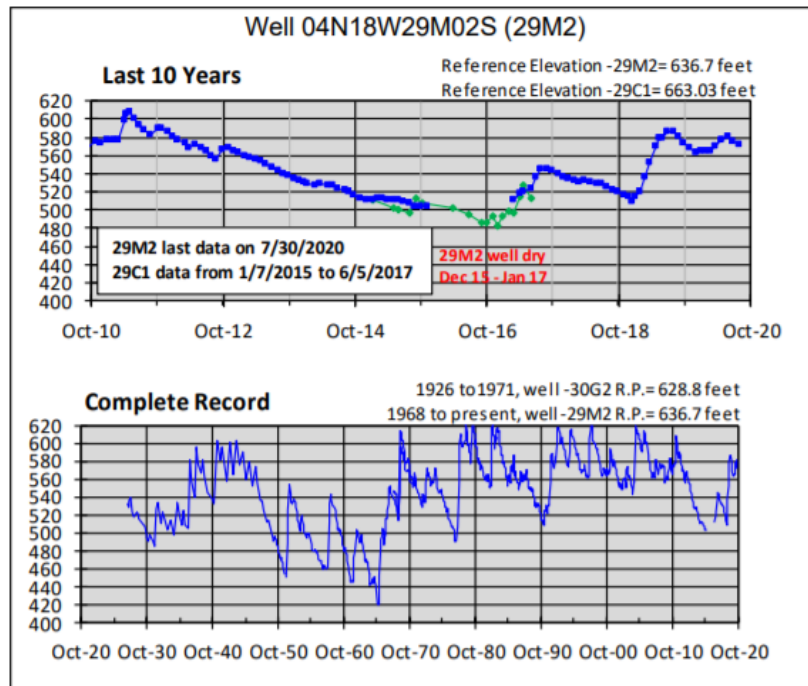
- 8 ft long pump bowls
- 10 ft of water above the top of bowls
- 50 ft of drawdown due to pumping (1,000 gpm for a well with 20 gpm/ft specific capacity)
- About 70 ft of water level

REFERENCES

California Dept of Water Resources, 2017, Sustainable Management Criteria Best Management Practices - Draft, November 2017.

SUSTAINABLE MANAGEMENT INDICATOR - Groundwater Levels (Fillmore and Piru basins)

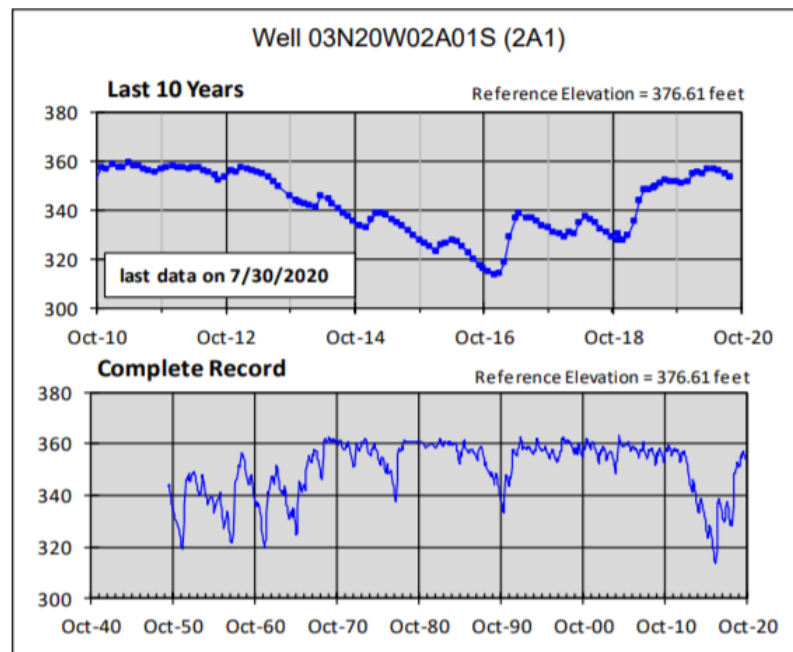
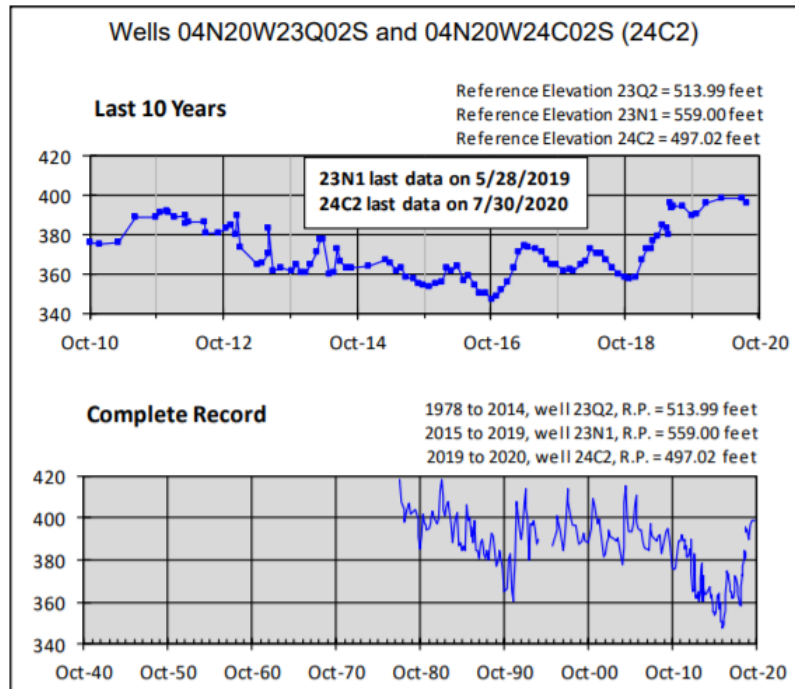
Piru Basin Key Wells Groundwater Elevation Records



UWCD July 2020 Hydrologic Conditions Report. Page 4

SUSTAINABLE MANAGEMENT INDICATOR - Groundwater Levels (Fillmore and Piru basins)

Fillmore Basin Key Wells Groundwater Elevation Records



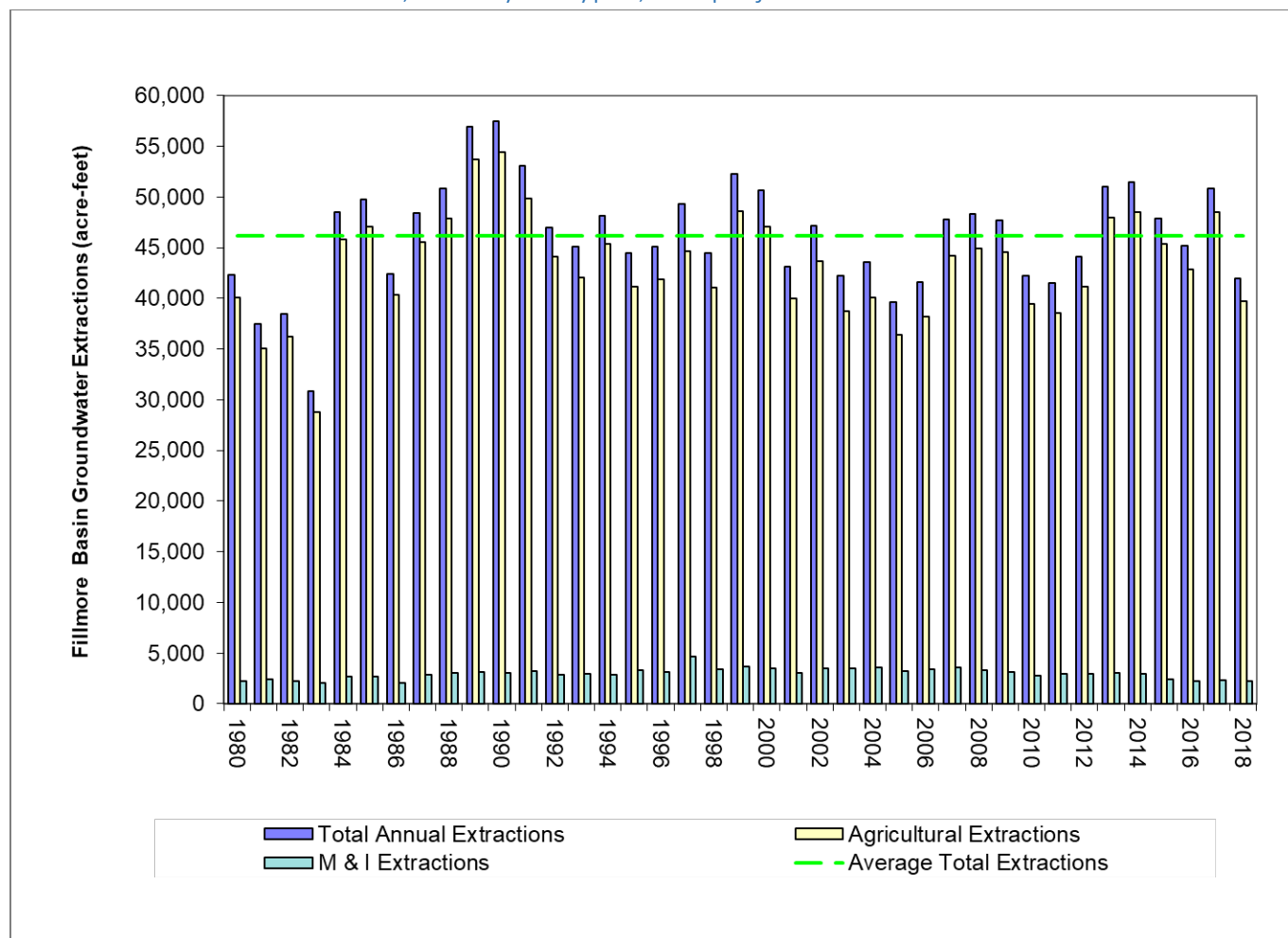
UWCD July 2020 Hydrologic Conditions Report. Page 5

SUSTAINABLE MANAGEMENT INDICATOR - Groundwater Storage (Fillmore and Piru basins)

BACKGROUND

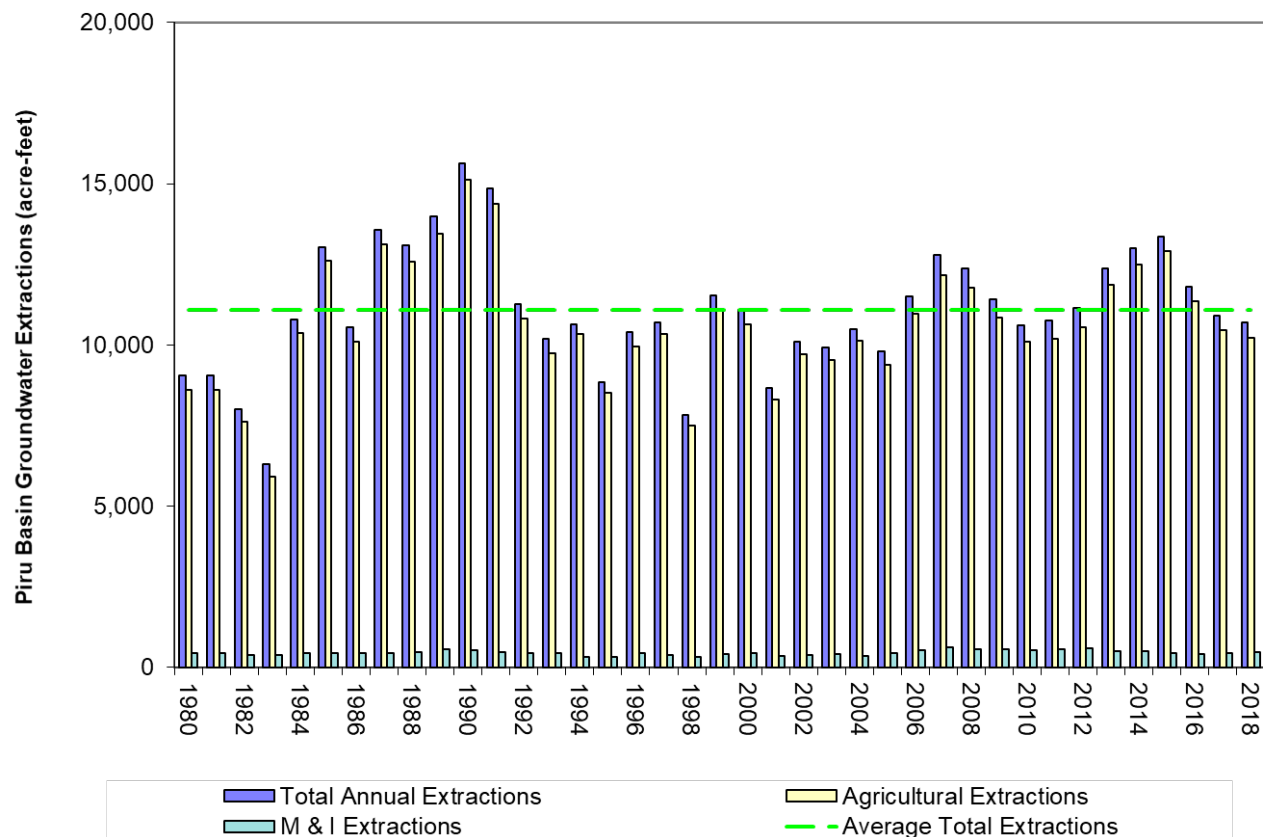
DWR (2017) provides the following considerations “...when establishing minimum thresholds for groundwater storage may include, but are not limited to...”

What are the historical trends, water year types, and projected water use in the basin?



| | Acre-feet |
|--|-----------|
| average 1980-2018 | 46,150 |
| average 1984-1991 | 50,918 |
| average 1992-2018 | 46,054 |
| median 1980-2018 | 46,948 |
| 2011-2016 drought extractions | 280,974 |
| 2011-2016 average annual drought extractions | 46,829 |

SUSTAINABLE MANAGEMENT INDICATOR - Groundwater Storage (Fillmore and Piru basins)



| | Acre-feet |
|--|-----------|
| average 1980-2018 | 11,079 |
| average 1984-1991 | 13,187 |
| average 1992-2018 | 10,895 |
| median 1980-2018 | 10,790 |
| 2011-2016 drought extractions | 72,397 |
| 2011-2016 average annual drought extractions | 12,066 |

What groundwater reserves are needed to withstand future droughts?

Based on historical pumping (2011-2016), Fillmore Basin pumped about 47,000 AFY and Piru pumped about 12,000 AFY. For future projections, we will rely on the groundwater flow model to estimate how much storage reserves are needed to withstand expected droughts.

SUSTAINABLE MANAGEMENT INDICATOR - Groundwater Storage (Fillmore and Piru basins)

Have production wells ever gone dry?

There is no substantiated record of a potable water well going dry in either basin. Based on water level declines in the 2011-2016 drought period, a single agricultural irrigation well is thought to have had water levels drop below the bottom of the well.

What is the effective storage of the basin? This may include understanding of the:

TBD

- ✓ Average, minimum, and maximum depth well screen and casing of municipal, agricultural, and domestic wells.

| | Depth to Top of Screen (ft) | | | | | | | | | |
|-------|-----------------------------|----------|------------|------------|-----------|--------------|----------|------------|------------|-----------|
| Basin | Fillmore | | | | | Piru | | | | |
| Use | Agricultural | Domestic | Industrial | Monitoring | Municipal | Agricultural | Domestic | Industrial | Monitoring | Municipal |
| count | 214 | 86 | 2 | 5 | 8 | 87 | 15 | 2 | 12 | 3 |
| min | 11 | 26 | 200 | 1 | 50 | 5 | 20 | 57 | 18 | 160 |
| 50% | 120 | 98 | 200 | 10 | 95 | 180 | 140 | 209 | 75 | 160 |
| max | 633 | 294 | 200 | 120 | 260 | 568 | 220 | 360 | 590 | 400 |

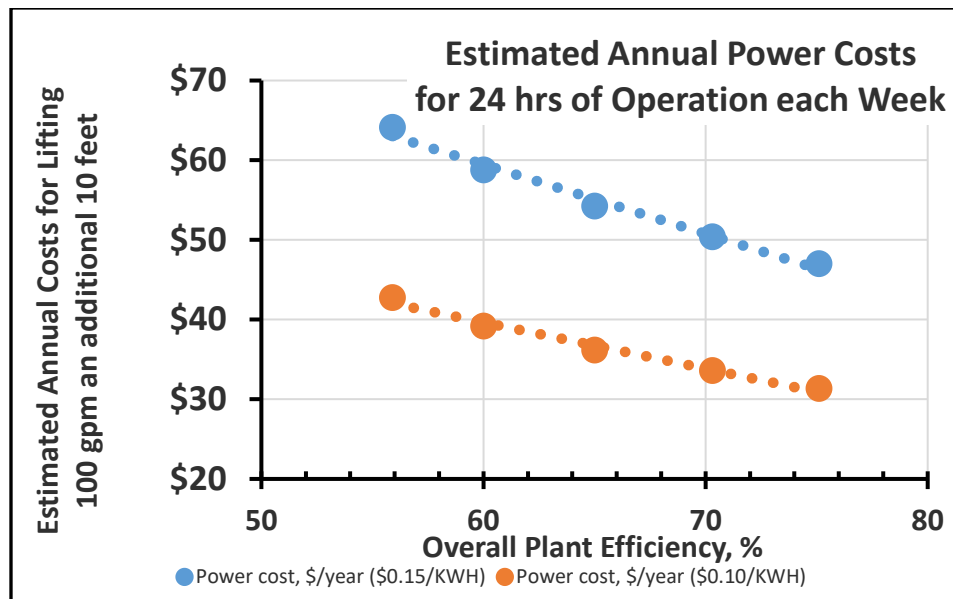
| | Depth to Bottom of Screen (ft) | | | | | | | | | |
|-------|--------------------------------|----------|------------|------------|-----------|--------------|----------|------------|------------|-----------|
| Basin | Fillmore | | | | | Piru | | | | |
| Use | Agricultural | Domestic | Industrial | Monitoring | Municipal | Agricultural | Domestic | Industrial | Monitoring | Municipal |
| count | 214 | 86 | 2 | 5 | 8 | 87 | 15 | 2 | 12 | 3 |
| min | 86 | 68 | 600 | 12 | 150 | 40 | 47 | 93 | 43 | 450 |
| 50% | 280 | 200 | 600 | 40 | 269 | 304 | 200 | 307 | 110 | 470 |
| max | 1580 | 555 | 600 | 300 | 502 | 800 | 420 | 520 | 610 | 480 |

| | Total Depth of Well Casing (ft) | | | | | | | | | |
|-------|---------------------------------|----------|------------|------------|-----------|--------------|----------|------------|------------|-----------|
| Basin | Fillmore | | | | | Piru | | | | |
| Use | Agricultural | Domestic | Industrial | Monitoring | Municipal | Agricultural | Domestic | Industrial | Monitoring | Municipal |
| count | 212 | 90 | 2 | 5 | 9 | 86 | 15 | 2 | 12 | 3 |
| min | 30 | 52 | 600 | 12 | 150 | 60 | 47 | 103 | 43 | 450 |
| 50% | 300 | 183 | 600 | 40 | 270 | 330 | 200 | 312 | 114 | 480 |
| max | 1620 | 575 | 600 | 300 | 502 | 820 | 428 | 520 | 610 | 490 |

- ✓ Impacts on pumping costs (i.e., energy cost to lift water).

Calculation of the additional costs to lift groundwater depends on the amount of water (i.e., flow rate [gpm]), amount of the additional lift, overall plant efficiency [OPE], and cost of power. These variables are often well specific, but the general relationship of energy cost to increasing lift and groundwater extraction amount are shown in the graph below:

SUSTAINABLE MANAGEMENT INDICATOR - Groundwater Storage (Fillmore and Piru basins)



What are the adjacent basin's minimum thresholds?

The Santa Paula basin is located down gradient and immediately west of the Fillmore basin. This basin is adjudicated and is not required to develop sustainable management criteria (e.g., minimum thresholds).

The Upper Santa Clara River basin is located east of the Piru basin and immediately upgradient of the basin. The draft GSP for this basin proposes a minimum threshold of _____.

UNDESIRABLE RESULT(S)

Proposed language: **Option A** - An *Undesirable Result* occurs when there is inadequate groundwater storage to last through a multi-year drought (e.g., 5 years) without groundwater extraction limitations

METRIC AND MEASUREMENT METHODOLOGY

Proposed metric: Groundwater level measurements / Depth to water

Proposed Measurement Methodology: The groundwater level measurements performed for several wells in the basins by UWCD and VCWPD will be used to monitor recent historical and ongoing groundwater level fluctuations.

Future groundwater fluctuations will be evaluated using the future conditions water levels predicted by the groundwater flow model developed by United Water Conservation District (UWCD).

MINIMUM THRESHOLD (MT)

Proposed language: **Option A** - Static water levels equal to the top of the well screen.

SUSTAINABLE MANAGEMENT INDICATOR - Groundwater Storage (Fillmore and Piru basins)

MEASURABLE OBJECTIVE (MO)

Proposed language: **Option A** - Static water levels equivalent to the 2011-2016 water level decline above the top of the well screen.

REFERENCES

California Dept of Water Resources, 2017, Sustainable Management Criteria Best Management Practices - Draft, November 2017.

SUSTAINABLE MANAGEMENT INDICATOR - SUBSIDENCE

(Fillmore and Piru basins)

BACKGROUND

DWR (2014) lists Fillmore basin with low potential for future subsidence. The ranking was determined from long term water level trends (well records greater than 10 years) above historical lows and one active continuous GPS monitoring station (see *Geodetic Data*) showing 0.03 feet of maximum decrease in ground elevation. The Piru basin had insufficient data to establish a subsidence ranking.

DWR (2017) provides the following considerations “...when establishing minimum thresholds for land subsidence at a given representative monitoring site may include, but are not limited to...”

Do principal aquifers in the basin contain aquifer material susceptible to subsidence?

A review of driller’s logs and borehole geophysical logs from representative wells in the basin indicate that aquifer zones A, B, and C contain fine-grained sediments that may be susceptible to subsidence. The thickness of those materials varies at each well location.

What is the historical rate and extent of subsidence?

Subsidence has not been documented by historical anecdotal observations, physical manifestations (e.g., well heads suspended above ground, collapsed well casings, offset roadways) or quantitative methods in these basins. DWR (2014) reports Low subsidence potential for the Fillmore basin and insufficient data to make an evaluation for the Piru basin.

What are the land uses and property interests in areas susceptible to subsidence?

Land use in these basins is predominately agriculture with municipal development associated with the City of Fillmore and Town of Piru and numerous single family residences/farms scattered throughout the basins.

What is the location of infrastructure and facilities susceptible to subsidence (e.g., canals, levees, pipelines, major transportation corridors)?

Conveyance infrastructure in the basin includes:

- ✓ transportation routes such as Highway 126 and other local roadways, as well as related structures (e.g., bridges, overpasses);
- ✓ pipelines for water distribution in the City of Fillmore and Town of Piru;
- ✓ pipelines for sewage collection in the City of Fillmore and Town of Piru and delivery of that sewage to their respective treatment plants;
- ✓ pipelines for natural gas distribution - major pipelines for natural gas transmission generally follow the Hwy 126 alignment except near the City of Fillmore where the alignment deviates to the north near Sespe Creek (<https://socalgas.maps.arcgis.com/apps/webappviewer/index.html?id=12cb8fddd6184f1bafc565ed09e4f631>). Additionally, a natural gas pipeline oriented north-south extends from Torrey Canyon south the the Santa Clara River northward along Torrey Road/Bridge and into the Town of Piru (<https://pvnpm.phmsa.dot.gov/PublicViewer/>) ;
- ✓ field-scale irrigation systems; and
- ✓ surface-water diversion structures (e.g., Piru Mutual Water Company structures on Piru Creek).

SUSTAINABLE MANAGEMENT INDICATOR - SUBSIDENCE

(Fillmore and Piru basins)

These features are considered critical infrastructure.

What are the adjacent basin's minimum thresholds?

The Santa Paula basin is located down gradient and immediately west of the Fillmore basin. This basin is adjudicated and is not required to develop sustainable management criteria (e.g., minimum thresholds).

The Upper Santa Clara River basin is located east of the Piru basin and immediately upgradient of the basin. The draft GSP for this basin proposes a minimum threshold of _____.

UNDESIRABLE RESULT(S)

Proposed language: An *Undesirable Result* is inelastic land subsidence amounts that interfere with critical infrastructure operations. *Undesirable Results* are expected to occur when net subsidence rates are greater than or equal to 1 ft/year or a cumulative net subsidence greater than or equal to 1 foot over a 5 year period.

METRIC AND MEASUREMENT METHODOLOGY

Proposed metric: Subsidence rate (e.g., feet/year) and cumulative net subsidence.

Proposed Measurement Methodology: Recent historical subsidence (May 2015 - September 2019) will be evaluated using InSAR data provided by the CA DWR. The InSAR data set will be used to monitor subsidence amounts and rates in arrears for each year the data sets are provided by CA DWR.

Future subsidence potential will be evaluated using the Texas Water Development Board (TWDB) Potential Subsidence Prediction Screening Tool (LRE, Inc., 2018). Future water levels at key indicator wells in each basin will be predicted by using the groundwater elevation output from the groundwater flow model developed by United Water Conservation District (UWCD) in the screening tool and using the tool to estimate future potential subsidence under various future hydrologic conditions.

MINIMUM THRESHOLD (MT)

Proposed language: **Proxy MT** - Water levels twenty (20) feet below the historic low water levels (2016 low water level minus 20 feet). The TWDB Subsidence Prediction Screening Tool suggests that water levels can decline by at least 20 feet below their historical low levels and the predicted total subsidence will be less than 1 foot.

MEASURABLE OBJECTIVE (MO)

Proposed language: **Proxy MO** - Water levels at or above the historical low values will be sufficient to preclude subsidence.

REFERENCES

Borchers, James W., Grabert, Vicki Kretsinger, Carpenter, Michael, Dalgish, Barbara, and Cannon Debra, 2014, Land Subsidence from Groundwater Use in California, prepared by Luhdorff & Scalmanni Consulting Engineers.

SUSTAINABLE MANAGEMENT INDICATOR - SUBSIDENCE (Fillmore and Piru basins)

California Dept of Water Resources, 2017, Sustainable Management Criteria Best Management Practices - Draft, November 2017.

California Department of Water Resources, 2014, Summary of Recent, Historical, and Estimated Future Land Subsidence in California.

LRE Water, LLC, 2018, Texas Aquifer Potential Subsidence Prediction Screening Tool User's Guide, Version 1.0, TWDB Contract Number 1648302062, March 21, 2018.

SUSTAINABLE MANAGEMENT INDICATOR - Depletion of Interconnected Surface Waters (Fillmore and Piru basins)

BACKGROUND

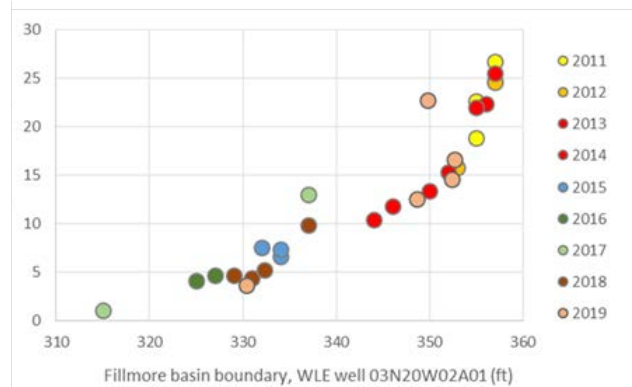
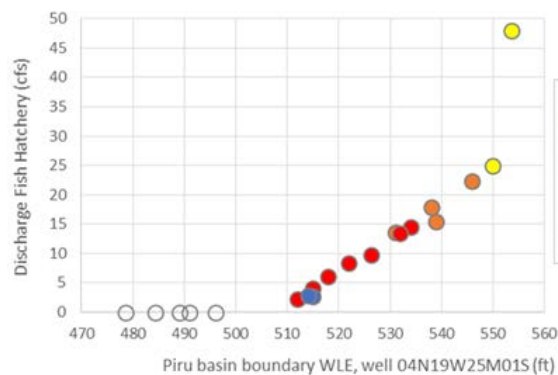
DWR (2017) provides the following considerations “...when establishing minimum thresholds for groundwater levels at a given representative monitoring site may include, but are not limited to...”

What are the historical rates of stream depletion (*from groundwater extractions*) for different water year types?

TBD - see discussion below

What is the uncertainty in streamflow depletion estimates (*from groundwater extractions*) from analytical and numerical tools?

This question is currently being explored using two different methods. At the basin boundaries in the areas of the rising groundwater, there are apparent relationships between surface water flow rates and the water levels in a nearby well (graphs below). UWCD staff are researching their database to determine if other wells have a similar relationship. The goal is to identify, where possible, a relationship between surface water flows and groundwater elevations in the shallow aquifers near the areas with rising groundwater. Using this relationship, it would be possible to estimate the surface water flow rates when the groundwater elevations are known from direct measurement or from model simulations.



The second analytical approach being explored uses the UWCD groundwater flow model. UWCD staff are running a scenario (over the historical and validation timeline [1985-2019]) where the groundwater extractions in the shallow aquifers (Aquifer Zones A and B) are terminated and the differences in groundwater elevations compared to the water levels from the historical (i.e., status quo) scenario. Groundwater elevations from the simulation can then be used to infer the degree of impact pumping has on surface water flow.

What is the proximity of pumping to streams?

There are several wells in close proximity to the streams in the Fillmore and Piru basins. The streams are ephemeral in nature with gaining reaches of the Santa Clara River associated with the boundaries between

SUSTAINABLE MANAGEMENT INDICATOR - Depletion of Interconnected Surface Waters (Fillmore and Piru basins)

Piru/Fillmore basins and Fillmore/Santa Paula basins. The potential impacts of groundwater extraction on surface water flow in the gaining reaches of the Santa Clara River are being studied (see above).

Where are groundwater dependent ecosystems in the basin?

Groundwater dependent ecosystems (GDEs) are primarily focused in the gaining reaches of the Santa Clara River (i.e., boundaries between Piru/Fillmore basins and Fillmore/Santa Paula basins). Much of the remaining reaches of the Santa Clara River are characterized as naturally occurring losing reaches that remain dry except due to storm runoff and/or man-made releases of water from nearby reservoirs.

What are the agricultural and municipal surface water needs in the basin?

Agricultural and municipal water demand is not significantly satisfied by the surface water sources in these basins. The ephemeral nature of the Santa Clara River does not provide a reliable water source. Piru Mutual Water Company has a surface water diversion facility on Piru Creek.

What are the applicable State or federally mandated flow requirements?

Currently, Federally mandated flow rates are restricted to the Santa Clara River and Piru Creek downstream of Santa Felicia Dam. The flow rates were established to enhance the potential for fish passage during storm events (Santa Clara River) and to augment fish passage and spawning habitats along Piru Creek. UWCD releases water from Lake Piru via the Santa Felicia Dam in accordance with regulatory requirements. The FPBGSA does not own or control the operation of Santa Felicia Dam, and therefore has no direct involvement in compliance with the Federally mandated flow rates.

UNDESIRABLE RESULT(S)

Proposed language: **Option A** - An *Undesirable Result* occurs when surface water flows are depleted by groundwater extractions or GSA projects and management actions that impairs the beneficial use of the resource.

METRIC AND MEASUREMENT METHODOLOGY

Proposed metric: Groundwater level measurements / Depth to water

Proposed Measurement Methodology: The groundwater level measurements performed for several wells in the basins by UWCD and VCWPD will be used to monitor recent historical and ongoing groundwater level fluctuations.

Future groundwater fluctuations will be evaluated using the future conditions water levels predicted by the groundwater flow model developed by United Water Conservation District (UWCD).

MINIMUM THRESHOLD (MT)

Proposed language: **Option A** - Surface water flows...

SUSTAINABLE MANAGEMENT INDICATOR - Depletion of Interconnected Surface Waters (Fillmore and Piru basins)

MEASURABLE OBJECTIVE (MO)

Proposed language: **Option A** - Surface water flows...

REFERENCES

California Dept of Water Resources, 2017, Sustainable Management Criteria Best Management Practices - Draft, November 2017.

SUSTAINABLE MANAGEMENT INDICATOR - Water Quality Degradation (Fillmore and Piru basins)

BACKGROUND

DWR (2017) provides the following considerations “...when establishing minimum thresholds for groundwater storage may include, but are not limited to...”

What are the historical and spatial water quality trends in the basin?

Historically water quality chemicals (analytes or constituents) of concern (COCs) in the basins have generally included, but are not necessarily limited to, the following analytes:

- Total Dissolved Solids (TDS)
- Sulfate
- Chloride
- Nitrate
- Boron (UWCD monitoring program only)

See Tables 4-3 and 4-4 (attached) for more details.

What is the number of impacted supply wells?

TBD – see the Draft Monitoring Program and Data Gap Analysis Technical Memorandum for more details.

What aquifers are primarily used for providing water supply?

| Fillmore Basin Pumping | | | | Piru Basin Pumping | | | |
|------------------------|-----------------|--------------------|------------------|--------------------|-----------------|--------------------|------------------|
| Aquifer Zone(s) | Number of Wells | Extractions in AFY | Percent of Total | Aquifer Zone(s) | Number of Wells | Extractions in AFY | Percent of Total |
| A | 24 | 422 | 1.0 | A | 3 | 35 | 0.3 |
| A-B | 97 | 13,857 | 33.0 | A-B | 12 | 809 | 7.6 |
| B | 86 | 16,556 | 39.4 | B | 55 | 5,765 | 53.9 |
| A-C | 3 | 804 | 1.9 | A-C | 1 | 93 | 0.9 |
| B-C | 18 | 3,660 | 8.7 | B-C | 12 | 1,801 | 16.8 |
| C | 2 | 340 | 0.8 | C | 2 | 338 | 3.2 |
| Unknown | 71 | 6,338 | 15.1 | Unknown | 22 | 1,849 | 17.3 |
| 2018 Total | 301 | 41,977 | 100 | 2018 Total | 107 | 10,689 | 100 |

Table 5-5: Summary of Fillmore and Piru basins wells accessing groundwater from each aquifer zone or zones in 2018.

Approximately 72% of the groundwater extractions came from Aquifer Zone A-B and B in the Fillmore basin with ~61% of the groundwater extractions came from these same Aquifer Zones in the Piru basin. The Piru basin also had another ~17% of extractions from Aquifer Zone B-C.

SUSTAINABLE MANAGEMENT INDICATOR - Water Quality Degradation (Fillmore and Piru basins)

What is the estimated volume of contaminated water in the basin?

TBD – see the Draft Monitoring Program and Data Gap Analysis Technical Memorandum for more details.

What are the spatial and vertical extents of major contaminant plumes in the basin, and how could plume migration be affected by regional pumping patterns?

From (UWCD, 2016): “Over the past 15 years the main water quality concern for agricultural users in the Piru basin has been impacts associated with high chloride concentrations in the Santa Clara River flows sourcing from Los Angeles County. The high chloride concentrations in the eastern portion of the basin associated with these discharges has made a steady advance westward with groundwater flow down the Piru basin. The Piru basin generally does not have problems with nitrate contamination, and samples collected in 2015 show only two wells exceeding the MCL of 45 mg/L.”

From (UWCD, 2016): “The Fillmore basin is not known for having any pervasive water quality issues. TDS concentrations can be somewhat elevated in some locations, as in other groundwater basins along the Santa Clara River Valley. The City of Fillmore no longer uses wells near the Santa Clara River favoring locations near Sespe Creek where TDS tends to be lower. Naturally-occurring boron sourcing from the Sespe watershed, however, is sometimes a concern for citrus growers and the City of Fillmore. Deeper aquifer units may have elevated concentrations of iron and manganese, a common occurrence throughout Ventura County.”

What are the applicable local, State, and federal water quality standards?

Major regulating agencies include:

SUSTAINABLE MANAGEMENT INDICATOR - Water Quality Degradation (Fillmore and Piru basins)

| Jurisdictions | Regulating agency |
|---|--|
| Waste discharge requirements (WDRs and waivers); underground storage tanks; and groundwater clean-up programs | SWRCB |
| Overall groundwater quality (policies & enforcement); underground storage tanks; groundwater clean-up programs; Bay-Delta region; aquifer exemptions (SDWA) | SWRCB |
| Safe drinking water quality requirements | Division of Drinking Water (SWRCB, CalEPA) |
| Hazardous waste management and remediation requirements | Department of Toxic Substances Control (CalEPA) |
| Superfund requirements; aquifer exemptions (SDWA) | United States Environmental Protection Agency |
| Underground injection wells (Class II); aquifer exemptions (under SDWA) | Division of Oil, Gas, and Geothermal Resources (DOC) |
| Pesticide use and reporting requirements | Department of Pesticide Regulation (CalEPA) |
| Well construction/destruction; wellhead protection; septic systems; storage/leaking of hazardous materials, etc.; pesticides; SDWA enforcement (where delegated by DDW) | Counties and cities |

(modified from Moran and Belin, 2019)

Water quality standards include, for example, Maximum Contaminant Levels (MCLs), Basin Plan Water Quality Objectives (WBOs) from RWQCB, and informal suitability assessments (e.g., 117mg/L maximum chloride for avocados).

SUSTAINABLE MANAGEMENT INDICATOR - Water Quality Degradation (Fillmore and Piru basins)

| Chemical | Chemical Formula | EPA MCL (mg/l) <i>unless noted</i> | CCR, Title 22 MCL (mg/l) |
|--|------------------|---------------------------------------|-----------------------------|
| Gross Alpha | | 15 pCi/L | |
| Lead | Pb | 0.015* | |
| Nitrate (as Nitrogen) | N | 10 | 10 |
| Nitrate | NO ₃ | | 45 |
| Selenium | Se | 0.05 | 0.05 |
| Uranium | U | 0.03 (~20 pCi/L) | |
| | | Secondary MCL (mg/l) | |
| Boron | B | | 1** |
| Chloride | Cl | 250 | |
| Iron | Fe | 0.3 | |
| Manganese | Mn | 0.05 | |
| Sulfate | SO ₄ | 250 | |
| Total Dissolved Solids | TDS | 500 | |
| *0.015 mg/L (15 µg/L) is the Action Level for Lead, the public health goal is zero. | | | |
| **California State Notification Level, Boron is an unregulated chemical without an established | | | |

Table 4-2. Select U.S. Environmental Protection Agency Primary and Secondary Standards (May 2009) and California Code of Regulations, Title 22 Maximum Contaminant Levels (February 2012).

What are the major sources of point and nonpoint source pollution in the basin, and what are their chemical constituents?

Point sources include, but are not limited to, the following:

- City of Fillmore Waste Water Treatment Plant (chloride, TDS, TSS);
- County of Ventura (VCWWD No.16) serving Town of Piru (chloride, TDS, TSS); and
- Saugus and Valencia Wastewater Reclamation Plants (chloride).

Non-point sources include, but are not limited to, the following:

- Legacy oilfield brine disposal in the Santa Clara River (chloride in Piru basin east of Piru Creek); and
- Legacy Saugus and Valencia Wastewater Reclamation Plants (chloride).

SUSTAINABLE MANAGEMENT INDICATOR - Water Quality Degradation (Fillmore and Piru basins)

What regulatory projects and actions are currently established to address water quality degradation in the basin (e.g., an existing groundwater pump and treat system), and how could they be impacted by future groundwater management actions?

TBD

What are the adjacent basin's minimum thresholds?

The Santa Paula basin is located down gradient and immediately west of the Fillmore basin. This basin is adjudicated and is not required to develop sustainable management criteria (e.g., minimum thresholds).

The Upper Santa Clara River basin is located east of the Piru basin and immediately upgradient of the basin. The draft GSP for this basin proposes a minimum threshold of _____.

UNDESIRABLE RESULT(S)

Proposed language: **Option A** - An *Undesirable Result* occurs when water quality degradation that occurs due to GSA projects or management actions that impair the beneficial use of the resource.

METRIC AND MEASUREMENT METHODOLOGY

Proposed metric: Groundwater and surface water sampling and laboratory analyses results.

Proposed Measurement Methodology: The groundwater quality sampling and laboratory analyses are routinely performed by VCWPD, UWCD, City of Fillmore, and Waring Water. Surface water quality sampling is conducted by UWCD.

MINIMUM THRESHOLD (MT)

Proposed language: **Option A** - Water quality values included in existing or future regulations.

Proposed language: **Option B** - Maximum Contaminant Level (MCL), Health Goal, or other value specific to beneficial use (e.g., agriculture, vegetation, industrial), as appropriate.

MEASURABLE OBJECTIVE (MO)

Proposed language: **Option A** - The authority to regulate water quality is afforded to State and Federal agencies other than the FPBGSA. FPBGSA is not a water purveyor and does not have the authority for water quality compliance but will cooperate with appropriately empowered entities.

Proposed language: **Option B** - FPBGSA is not a groundwater producer, and as such, does not function as a potable or irrigation water purveyor. FPBGSA does not have the authority for water quality compliance but will cooperate with appropriately empowered entities.

REFERENCES

California Dept of Water Resources, 2017, Sustainable Management Criteria Best Management Practices - Draft, November 2017.

SUSTAINABLE MANAGEMENT INDICATOR - Water Quality Degradation (Fillmore and Piru basins)

Moran, T. and Belin, A. (2019), A Guide to Water Quality Requirements under the Sustainable Groundwater Management Act, Stanford Digital Repository, <https://purl.stanford.edu/dw122nb4780>.

UWCD, 2016, 2014 and 2015 Piru and Fillmore Basins Biennial Groundwater Conditions Report, Open-File Report 216-01, June 2016

SUSTAINABLE MANAGEMENT INDICATOR - Water Quality Degradation (Fillmore and Piru basins)

| SWN | DWR Basin (2019) | Screen, ft bgs | Short-Term TDS Trend | Short-Term Sulfate (SO4) Trend | Short-Term Chloride (Cl) Trend | Short-Term Nitrate (NO3) Trend | Short-Term Boron (B) Trend |
|----------------|------------------|--------------------|----------------------|--------------------------------|--------------------------------|--------------------------------|----------------------------|
| 03N19W06D03S | Fillmore | 184-400 | Decreasing | Decreasing | Increasing | Increasing | Decreasing |
| 03N20W01D03S | Fillmore | Unknown | Decreasing | Decreasing | Decreasing | Decreasing | Relatively Stable |
| 03N20W01F05S | Fillmore | 100-200 | Decreasing | Decreasing | Relatively Stable | Decreasing | Relatively Stable |
| 03N20W02R05S | Fillmore | 93-133 | Relatively Stable | Relatively Stable | Increasing | Trend Reversal | Relatively Stable |
| 03N20W03D03S | Fillmore | 102-397 | Insufficient Data | Insufficient Data | Insufficient Data | Increasing | Insufficient Data |
| 03N20W03D05S | Fillmore | 274-436 | Relatively Stable | Relatively Stable | Increasing | Relatively Stable | Relatively Stable |
| 03N20W03D07S | Fillmore | 224-484 | Decreasing | Decreasing | Relatively Stable | Decreasing | Increasing |
| 03N20W05C04S | Fillmore | 221-362 | Insufficient Data | Insufficient Data | Insufficient Data | Increasing | Insufficient Data |
| 03N20W06N02S | Fillmore | 240-350 | Decreasing | Decreasing | Increasing | Decreasing | Relatively Stable |
| 03N20W08F01S | Fillmore | 100-152 | Insufficient Data | Insufficient Data | Insufficient Data | Increasing | Insufficient Data |
| 03N21W01P05/8S | Fillmore | 180-380 160-260 | Decreasing | Decreasing | Relatively Stable | No Clear Trend | Relatively Stable |
| 03N21W12H01S | Fillmore | 74-150 | Increasing | Relatively Stable | Increasing | Increasing | Relatively Stable |
| 04N19W30D01S | Fillmore | 60-380 | Increasing | Increasing | Increasing | Increasing | Relatively Stable |
| 04N19W31F01S | Fillmore | 60-100 | Insufficient Data | Relatively Stable | Relatively Stable | Relatively Stable | Relatively Stable |
| 04N19W33M05S | Fillmore | 37-107 | Decreasing | Decreasing | Increasing | Relatively Stable | Decreasing |
| 04N20W24E01S | Fillmore | 80-500 | Insufficient Data | Insufficient Data | Insufficient Data | Relatively Stable | Insufficient Data |
| 04N20W24G01S | Fillmore | 100-260 | Increasing | Insufficient Data | No Clear Trend | Decreasing | Increasing |
| 04N20W24Q04S | Fillmore | 90-300 | Increasing | Increasing | Increasing | Increasing | Increasing |
| 04N20W25B01S | Fillmore | 50-280 | Increasing | Increasing | Increasing | Increasing | Relatively Stable |
| 04N20W25D01S | Fillmore | 67-187 | Relatively Stable | Relatively Stable | Increasing | Relatively Stable | Insufficient Data |
| 04N20W26G03S | Fillmore | 294-374 | Decreasing | Relatively Stable | Decreasing | Trend Reversal | Relatively Stable |
| 04N20W33C03S | Fillmore | 470-700 | Decreasing | Relatively Stable | Increasing | No Clear Trend | Relatively Stable |
| 04N20W36D07S | Fillmore | 120-280 | Insufficient Data | Decreasing | Increasing | Relatively Stable | Relatively Stable |
| 04N20W36MW104 | Fillmore | 10-40 | Increasing | Increasing | Increasing | Increasing | Increasing |
| | | | | | | | |
| SWN | DWR Basin (2019) | Screen, ft bgs | Long-Term TDS Trend | Long-Term Sulfate (SO4) Trend | Long-Term Chloride (Cl) Trend | Long-Term Nitrate (NO3) Trend | Long-Term Boron (B) Trend |
| 03N20W03D05S | Fillmore | 274-436 | Relatively Stable | Insufficient Data | Trend Reversal | Decreasing | Insufficient Data |
| 03N20W03D07S | Fillmore | 224-484 | Relatively Stable | Relatively Stable | Relatively Stable | Decreasing | Insufficient Data |
| 03N20W05C04S | Fillmore | 221-362 | Insufficient Data | Insufficient Data | Insufficient Data | Trend Reversal | Insufficient Data |
| 03N20W06N02S | Fillmore | 240-350 | Relatively Stable | Relatively Stable | Increasing | Decreasing | Relatively Stable |
| 03N21W01P05/8S | Fillmore | 180-380 160-260 | Insufficient Data | Relatively Stable | Increasing | Increasing | Relatively Stable |
| 04N19W30D01S | Fillmore | 60-380 | Increasing | Insufficient Data | Increasing | Relatively Stable | Insufficient Data |
| 04N20W25B01S | Fillmore | 50-280 | Increasing | Increasing | Increasing | Increasing | Insufficient Data |
| 04N20W25D01S | Fillmore | 67-187 | Relatively Stable | Relatively Stable | Trend Reversal | Decreasing | Insufficient Data |

Table 4-3: Fillmore basin groundwater quality Trend Analysis summary.

SUSTAINABLE MANAGEMENT INDICATOR - Water Quality Degradation (Fillmore and Piru basins)

| SWN | DWR Basin (2019) | Screen, ft bgs | Short-Term TDS Trend | Short-Term Sulfate (SO ₄) Trend | Short-Term Chloride (Cl) Trend | Short-Term Nitrate (NO ₃) Trend | Short-Term Boron (B) Trend |
|--------------|------------------|----------------|----------------------|---|--------------------------------|---|----------------------------|
| 04N18W20M01S | Piru | 220-420 | Increasing | Increasing | Increasing | Relatively Stable | Relatively Stable |
| 04N18W20M02S | Piru | 160-369 | Increasing | Relatively Stable | Increasing | Relatively Stable | Increasing |
| 04N18W20M03S | Piru | 160-450 | Increasing | Increasing | Increasing | Increasing | Increasing |
| 04N18W20P02S | Piru | 137-177 | Decreasing | Decreasing | No Clear Trend | Relatively Stable | Increasing |
| 04N18W20P04S | Piru | 100-140 | Decreasing | Decreasing | No Clear Trend | No Clear Trend | Relatively Stable |
| 04N18W20R01S | Piru | 190-319 | Increasing | Relatively Stable | Trend Reversal | Increasing | Relatively Stable |
| 04N18W27B01S | Piru | 156-280 | Increasing | Increasing | Increasing | Increasing | Relatively Stable |
| 04N18W27H01S | Piru | 40-120 | Relatively Stable | Relatively Stable | Insufficient Data | Increasing | Relatively Stable |
| 04N18W29C01S | Piru | 356-500 | Relatively Stable | Relatively Stable | No Clear Trend | Relatively Stable | Relatively Stable |
| 04N18W29F01S | Piru | 110-275 | Relatively Stable | Relatively Stable | No Clear Trend | Decreasing | No Clear Trend |
| 04N18W30J04S | Piru | 79-250 | Increasing | Increasing | Increasing | Increasing | Increasing |
| 04N18W31D03S | Piru | 590-610 | Relatively Stable | Relatively Stable | Increasing | Increasing | Relatively Stable |
| 04N18W31D04S | Piru | 310-330 | Decreasing | Decreasing | Relatively Stable | Relatively Stable | Decreasing |
| 04N18W31D05S | Piru | 220-240 | Trend Reversal | Relatively Stable | Increasing | Relatively Stable | Relatively Stable |
| 04N18W31D06S | Piru | 140-160 | Increasing | Increasing | Increasing | Increasing | Increasing |
| 04N18W31D07S | Piru | 50-70 | Relatively Stable | Relatively Stable | No Clear Trend | Increasing | Relatively Stable |
| 04N19W25K03S | Piru | 400-480 | Insufficient Data | Insufficient Data | Insufficient Data | Decreasing | Insufficient Data |
| 04N19W25K04S | Piru | 220-370 | Relatively Stable | Relatively Stable | Relatively Stable | Relatively Stable | Relatively Stable |
| 04N19W25M03S | Piru | 210-250 | Increasing | Relatively Stable | Increasing | Increasing | Increasing |
| 04N19W26H01S | Piru | 568-612 | Decreasing | Decreasing | Increasing | Decreasing | Relatively Stable |
| 04N19W26J02S | Piru | Unknown | Insufficient Data | Decreasing | Decreasing | Decreasing | Relatively Stable |
| 04N19W26J03S | Piru | 400-650 | Decreasing | Relatively Stable | Relatively Stable | Decreasing | Relatively Stable |
| 04N19W26J05S | Piru | 200-250 | Relatively Stable | Relatively Stable | Relatively Stable | Increasing | Relatively Stable |
| 04N19W33B01S | Piru | 206-306 | Trend Reversal | Relatively Stable | Trend Reversal | Increasing | Decreasing |
| 04N19W34J04S | Piru | 60-160 | Relatively Stable | Relatively Stable | Increasing | Increasing | Relatively Stable |
| 04N19W35G01S | Piru | 24-79 | Relatively Stable | Relatively Stable | No Clear Trend | Relatively Stable | Relatively Stable |
| 04N19W36D01S | Piru | 18-73 | Increasing | Relatively Stable | Increasing | Increasing | Relatively Stable |
| SWN | DWR Basin (2019) | Screen, ft bgs | Long-Term TDS Trend | Long-Term Sulfate (SO ₄) Trend | Long-Term Chloride (Cl) Trend | Long-Term Nitrate (NO ₃) Trend | Long-Term Boron (B) Trend |
| 04N18W20M01S | Piru | 220-420 | No Clear Trend | Relatively Stable | No Clear Trend | Relatively Stable | Insufficient Data |

Table 4-4: Piru basin groundwater quality Trend Analysis summary.

Fillmore and Piru Basins GSA
Check Detail
November 12, 2020

| Type | Num | Date | Name | Account | Original Amount |
|-----------------|-------|------------|--------------------------------------|----------------------------|-----------------|
| Bill Pmt -Check | 11098 | 11/12/2020 | Daniel B Stephens & Associates, Inc. | 10000 · Bank of the Sierra | -69,108.11 |
| Bill Pmt -Check | 11099 | 11/12/2020 | Olivarez Madruga Lemeiux O'Neill LLP | 10000 · Bank of the Sierra | -4,828.60 |
| Bill Pmt -Check | 11100 | 11/12/2020 | The Fillmore Gazette | 10000 · Bank of the Sierra | -180.00 |
| TOTAL | | | | | -74,116.71 |



Fillmore and Piru Basins
Groundwater Sustainability Agency

Item No. **3C Consent Calendar**

DATE: **November 19, 2020**

TO: **Board of Directors**

SUBJECT: Monthly Financial Report

SUMMARY

The Board will receive the monthly financial report for the Fillmore and Piru Basins Groundwater Sustainability Agency (Agency).

BACKGROUND

UWCD accounting staff has prepared financial reports based on the Agency revenue and expenses for the month of October 2020.

FISCAL IMPACT

None

Attachments: October 31, 2020 P/L Budget Performance
 October 31, 2020 Balance Sheet

Fillmore and Piru Basins GSA

Profit & Loss Budget Performance

July through October 2020

| | Jul - Oct 20 | Annual Budget | Budget |
|--|--------------|---------------|--------|
| Income | | | |
| 40001 · Groundwater Extraction Charge | 0.00 | 540,000.00 | |
| 41000 · Grant Revenue | | | |
| 41001 · State Grants | 49,206.33 | 698,246.00 | |
| Total 41000 · Grant Revenue | 49,206.33 | 698,246.00 | |
| 47000 · Other Revenue | | | |
| 47001 · Late Fees | 0.00 | 0.00 | |
| 47012 · Returned Check Charges | 0.00 | 0.00 | |
| Total 47000 · Other Revenue | 0.00 | 0.00 | |
| Total Income | 49,206.33 | 1,238,246.00 | |
| Gross Profit | 49,206.33 | 1,238,246.00 | |
| Expense | | | |
| 52200 · Professional Services | | | |
| 52240 · Prof Svcs - IT Consulting | 0.00 | 980.00 | |
| 52250 · Prof Svcs - Groundwtr/GSP Prep | | | |
| 52251 · Prof Svcs - UWCD GW Services | 0.00 | 50,000.00 | |
| 52252 · Prof Svcs - GSP Consultant | 151,718.46 | 350,814.00 | 43.25% |
| Total 52250 · Prof Svcs - Groundwtr/GSP Prep | 151,718.46 | 400,814.00 | 37.85% |
| 52270 · Prof Svcs - Accounting | 0.00 | 10,000.00 | |
| 52275 · Prof Svcs - Admin/Clerk of Bd | 0.00 | 10,000.00 | |
| 52280 · Prof Svcs - Executive Director | 0.00 | 40,000.00 | |
| 52290 · Prof Svcs - Other | 0.00 | 1,000.00 | |
| Total 52200 · Professional Services | 151,718.46 | 462,794.00 | 32.78% |
| 52500 · Legal Fees | | | |
| 52501 · Legal Counsel | 8,116.10 | 20,000.00 | |
| Total 52500 · Legal Fees | 8,116.10 | 20,000.00 | 40.58% |
| 53000 · Office Expenses | | | |
| 53010 · Public Information | 0.00 | 1,000.00 | |
| 53020 · Office Supplies | 0.00 | 500.00 | |
| 53026 · Postage & Mailing | 0.00 | 2,000.00 | |
| 53040 · Membership Dues | 0.00 | 0.00 | |
| 53060 · Computer Software | 0.00 | 0.00 | |
| 53110 · Travel & Training | 0.00 | 4,000.00 | |
| Total 53000 · Office Expenses | 0.00 | 7,500.00 | |
| 53500 · Insurance | | | |
| 53510 · Liability Insurance | 0.00 | 2,500.00 | |
| Total 53500 · Insurance | 0.00 | 2,500.00 | |
| 70000 · Interest & Debt Service | | | |
| 70120 · Interest Expense | 0.00 | 0.00 | |
| Total 70000 · Interest & Debt Service | 0.00 | 0.00 | |
| 70130 · Bank Service Charges | 0.00 | 0.00 | |
| 80000 · AR Write-Offs - Bad Debt Exp. | 0.00 | 0.00 | |
| 81000 · Capital Expenditures | 0.00 | 200,000.00 | |
| Total Expense | 159,834.56 | 692,794.00 | 23.07% |

Fillmore and Piru Basins GSA
Profit & Loss Budget Performance
July through October 2020

| | Jul - Oct 20 | Annual Budget | Budget |
|------------|--------------|---------------|---------|
| Net Income | -110,628.23 | 545,452.00 | -20.28% |

Fillmore and Piru Basins GSA
Balance Sheet
As of October 31, 2020

| | <u>Oct 31, 20</u> |
|---------------------------------------|--------------------------|
| ASSETS | |
| Current Assets | |
| Checking/Savings | |
| 10000 - Bank of the Sierra | 438,820.53 |
| Total Checking/Savings | <u>438,820.53</u> |
| Accounts Receivable | |
| 11000 - Accounts Receivable | 275,418.27 |
| Total Accounts Receivable | <u>275,418.27</u> |
| Total Current Assets | <u>714,238.80</u> |
| TOTAL ASSETS | <u><u>714,238.80</u></u> |
| LIABILITIES & EQUITY | |
| Liabilities | |
| Current Liabilities | |
| Accounts Payable | |
| 20000 - Accounts Payable | 74,116.71 |
| Total Accounts Payable | <u>74,116.71</u> |
| Total Current Liabilities | <u>74,116.71</u> |
| Total Liabilities | 74,116.71 |
| Equity | |
| 32000 - Retained Earnings | 750,750.32 |
| Net Income | -110,628.23 |
| Total Equity | <u>640,122.09</u> |
| TOTAL LIABILITIES & EQUITY | <u><u>714,238.80</u></u> |



Fillmore and Piru Basins
Groundwater Sustainability Agency

Item No. **3D Consent Calendar**

DATE: **November 19, 2020**

TO: **Board of Directors**

SUBJECT: Fiscal Year 2019-2020 Budget Report

SUMMARY

The Board will receive the annual financial reports for the Fillmore and Piru Basins Groundwater Sustainability Agency (Agency).

BACKGROUND

UWCD accounting staff has prepared financial reports based on the Agency revenue and expenses for Fiscal Year 2019-2020.

FISCAL IMPACT

None

Attachments: FY 19-20 P/L Budget Performance - Final
 FY 19-20 Balance Sheet - Final

Fillmore and Piru Basins GSA
Profit & Loss Budget Performance
July 2019 through June 2020

| | <u>Jul '19 - Jun 20</u> | <u>Annual Budget</u> | <u>Budget</u> |
|--|-------------------------|----------------------|----------------|
| Income | | | |
| 40001 • Groundwater Extraction Charge | 576,936.64 | 668,964.00 | 86.24% |
| 41000 • Grant Revenue | | | |
| 41001 • State Grants | 239,354.18 | 154,485.32 | |
| Total 41000 • Grant Revenue | 239,354.18 | 154,485.32 | 154.94% |
| 47000 • Other Revenue | | | |
| 47001 • Late Fees | 10,141.38 | 0.00 | |
| 47012 • Returned Check Charges | 20.00 | 0.00 | |
| Total 47000 • Other Revenue | 10,161.38 | 0.00 | |
| Total Income | 826,452.20 | 823,449.32 | |
| Gross Profit | 826,452.20 | 823,449.32 | 100.36% |
| Expense | | | |
| 52200 • Professional Services | | | |
| 52240 • Prof Svcs - IT Consulting | 504.34 | 980.00 | 51.46% |
| 52250 • Prof Svcs - Groundwtr/GSP Prep | | | |
| 52251 • Prof Svcs - UWCD GW Services | 129.93 | 25,800.00 | 0.50% |
| 52252 • Prof Svcs - GSP Consultant | 264,367.05 | 242,914.00 | 108.83% |
| 52250 • Prof Svcs - Groundwtr/GSP Prep - Other | 0.00 | 0.00 | |
| Total 52250 • Prof Svcs - Groundwtr/GSP Prep | 264,496.98 | 268,714.00 | 98.43% |
| 52270 • Prof Svcs - Accounting | 21,615.79 | 10,000.00 | 216.16% |
| 52275 • Prof Svcs - Admin/Clerk of Bd | 10,461.15 | 7,000.00 | 149.45% |
| 52280 • Prof Svcs - Executive Director | 30,271.56 | 42,000.00 | 72.08% |
| 52290 • Prof Svcs - Other | 550.00 | 0.00 | |
| Total 52200 • Professional Services | 327,899.82 | 328,694.00 | 99.76% |
| 52500 • Legal Fees | | | |
| 52501 • Legal Counsel | 8,862.50 | 25,000.00 | |
| Total 52500 • Legal Fees | 8,862.50 | 25,000.00 | 35.45% |
| 53000 • Office Expenses | | | |
| 53010 • Public Information | 521.00 | 1,000.00 | 52.10% |
| 53020 • Office Supplies | 39.56 | 500.00 | 7.91% |
| 53026 • Postage & Mailing | 1,021.92 | 2,000.00 | 51.10% |
| 53040 • Membership Dues | 0.00 | 0.00 | |
| 53060 • Computer Software | 0.00 | 0.00 | |
| 53110 • Travel & Training | 757.93 | 4,000.00 | 18.95% |
| Total 53000 • Office Expenses | 2,340.41 | 7,500.00 | 31.21% |
| 53500 • Insurance | | | |
| 53510 • Liability Insurance | 2,115.73 | 2,500.00 | |
| Total 53500 • Insurance | 2,115.73 | 2,500.00 | 84.63% |
| 70000 • Interest & Debt Service | | | |
| 70120 • Interest Expense | 0.00 | 0.00 | |
| Total 70000 • Interest & Debt Service | 0.00 | 0.00 | |
| 70130 • Bank Service Charges | 20.00 | 0.00 | |
| 80000 • AR Write-Offs - Bad Debt Exp. | 0.00 | 0.00 | |
| 81000 • Capital Expenditures | 0.00 | 100,000.00 | |
| Total Expense | 341,238.46 | 463,694.00 | 73.59% |
| Net Income | <u>485,213.74</u> | <u>359,755.32</u> | <u>134.87%</u> |

Fillmore and Piru Basins GSA
Balance Sheet
As of June 30, 2020

| | <u>Jun 30, 20</u> |
|---------------------------------------|--------------------------|
| ASSETS | |
| Current Assets | |
| Checking/Savings | |
| 10000 · Bank of the Sierra | 324,809.85 |
| Total Checking/Savings | 324,809.85 |
| Accounts Receivable | |
| 11000 · Accounts Receivable | 473,694.08 |
| Total Accounts Receivable | 473,694.08 |
| Total Current Assets | 798,503.93 |
| TOTAL ASSETS | <u><u>798,503.93</u></u> |
| LIABILITIES & EQUITY | |
| Liabilities | |
| Current Liabilities | |
| Accounts Payable | |
| 20000 · Accounts Payable | 47,573.61 |
| Total Accounts Payable | 47,573.61 |
| Total Current Liabilities | 47,573.61 |
| Total Liabilities | 47,573.61 |
| Equity | |
| 32000 · Retained Earnings | 265,536.58 |
| Net Income | 485,213.74 |
| Total Equity | 750,750.32 |
| TOTAL LIABILITIES & EQUITY | <u><u>798,323.93</u></u> |



Fillmore and Piru Basins

Groundwater Sustainability Agency

Item No. **4.A Motion Item**

DATE: **November 12, 2020 (for November 17, 2020 meeting)**

TO: **Board of Directors**

FROM: **Anthony Emmert, Executive Director**

SUBJECT: **Sustainable Management Criteria**

SUMMARY:

The Agency formed a Sustainable Management Criteria Ad Hoc Committee to develop a “Straw Man” set of Sustainability Goals and Undesirable Results, to provide a starting point for discussions with stakeholders. After significant effort, the Ad Hoc Committee recommended that the Sustainability Goals and Undesirable Results would be better developed by the whole Board and requested that the Daniel B. Stephens & Associates team develop the “Straw Man” proposal. The Board agreed and held a single-purpose special Board meeting to discuss and receive comments on the initial Sustainability Goals and Undesirable Results. The Agency also posted several technical documents on its website that can be referenced by stakeholders to inform their comments regarding Sustainable Management Criteria. Representatives from Daniel B. Stephens & Associates will provide the Board with a report on progress made on development of the Agency’s “Straw Man” Draft Sustainable Groundwater Management Criteria, after receiving input during the special board meeting.

RECCOMENDATION:

The Board will receive a report from a representative of Daniel B. Stephens & Associates on the development of the Agency’s Draft Sustainable Groundwater Management Criteria and provide comments and recommendations.

BACKGROUND

The Agency’s Sustainable Management Criteria Ad Hoc Committee, assisted by staff from Daniel B. Stephens and Associates (DBS&A), worked diligently for several weeks toward development of a draft set of Sustainable Management Criteria (SMC), or “Straw Man” SMC, to present to the Board and stakeholders for consideration. The effort focused primarily on the development of draft Sustainability Goals and Undesirable Results. Progress was slow and the Ad Hoc Committee recommended that the effort would be more effective if the whole Agency Board worked through the SMC development. On October 13, 2020, the Agency received a letter from the Fillmore Basin Pumpers Association and the Piru Basin Pumpers Association recommending a more public SMC development process, confirming the recommendation of the Committee.

On October 1, 2020, the Agency held a workshop to provide information on the SMC development process and to receive comments and questions from stakeholders regarding Sustainability Goals and Undesirable Results. At its October 15, 2020 meeting, the Board agreed

that the SMC development process needs to be a focus of the whole board and stakeholders and scheduled a special board meeting to further the process, and scheduled a special meeting for November 4, 2020. At the November 4, 2020 special meeting, the DBS&A team provided a presentation on the “Straw Man” SMC. The Board and stakeholders provided feedback to the DBS&A team regarding the Undesirable Results and Sustainability Goals, and recommended that staff and DBS&A revise the groundwater sustainability planning schedule to lengthen the time that the Board and stakeholders can develop the SMC in a public process.

To provide background information on the basin conditions on which stakeholders can provide their comments, the Agency has posted several technical documents on its website, under the “Resources” drop-down menu, under “Technical Data.” Reports include those regarding groundwater conditions, groundwater management, water quality, historical ecology, and riparian vegetation mapping. Agency staff and consultants are also working to complete and post various technical memoranda that stakeholders may also wish to reference when forming their comments on the Sustainability Goals and Undesirable Results. Additionally, the Agency posted several technical memoranda on its website, under the “GSP” drop-down menu. Technical memoranda include past groundwater models and water budgets, groundwater monitoring program and data gaps analysis, and monitoring protocols and standard methods.

For the Agency to maintain its groundwater sustainability planning schedule and produce Sustainable Groundwater Management Act (SGMA) compliant groundwater sustainability plans by December 2021, the Agency must finalize its draft SMCs in the very near future. Agency consultants and staff will use these draft SMC’s to conduct forward-looking modeling, as required by SGMA. If the Agency develops its draft SMC’s soon, there may be time amend the SMCs following the first round of forward-looking modeling. The DBS&A team is working to incorporate direction and comments received from the Board and stakeholders into the Draft SMC. To allow more time to develop the Draft SMC, the team has modified the overall project schedule.

FISCAL IMPACT

None.

ATTACHMENTS

None.

Proposed Motion:

1st: Director _____

Voice/Roll call vote: Director Holmgren

Director Meneghin

2nd: Director _____

Director Kimball:

Director Long:

Director McFadden

Director Pace



Fillmore and Piru Basins
Groundwater Sustainability Agency

Item No. **4.B Motion Item**

DATE: **November 12, 2020 (for November 17, 2020 meeting)**

TO: **Board of Directors**

FROM: **Anthony Emmert, Executive Director**

SUBJECT: **Monitoring Wells Project**

SUMMARY:

The Agency's work plan includes the siting and construction of additional monitoring wells to fill recognized gaps in data that will be needed by the Agency to evaluate its progress toward basins sustainability and to inform future updates of its groundwater sustainability plans. The monitoring wells are a significant scope item in the Agency's \$1.5 million grant from the California Department of Water Resources. Staff and consultants have developed a prioritized list of monitoring wells locations and project approach for consideration by the Board.

RECOMMENDATION:

The Board will receive a report from staff and a representative of Daniel B. Stephens & Associates on the Monitoring Wells Project and provide comments and recommendations.

BACKGROUND

The siting and construction of additional monitoring wells is included in the Agency's planned scope of work, in order to fill recognized gaps in data that will be needed by the Agency to evaluate its progress toward basins sustainability and to inform future updates of its groundwater sustainability plans (GSPs). The monitoring wells are also a significant scope item in the Agency's \$1.5 million groundwater sustainability planning grant from the California Department of Water Resources. The current Agency work plan and budget anticipates siting these wells, securing the property access easements, performing preliminary design, and procuring a well drilling contractor before the end of June 2021, and then constructing the wells during the first quarter of the next fiscal year.

The Board has previously heard presentations on data gaps and the Monitoring Wells Project, including potential construction of two multiple completion (nested) wells near the basins boundaries (Piru-Fillmore, and Fillmore-Santa Paula), and an alternative approach of construction of several shallower monitoring wells in lieu of one of the nested wells. The Agency's staff and consultant team has prepared a prioritized list of monitoring wells locations and project approach for consideration by the Board.

FISCAL IMPACT

None.

ATTACHMENTS

None.

Proposed Motion:

1st: Director _____

2nd: Director _____

Voice/Roll call vote: Director Holmgren:

Director Kimball:

Director Long:

Director McFadden

Director Meneghin

Director Pace: