LOS OSOS GROUNDWATER BASIN, BASIN MANAGEMENT COMMITTEE

NOTICE OF MEETING

NOTICE IS HEREBY GIVEN that the Los Osos Groundwater Basin, Basin Management Committee Board of Directors will hold a **Regular Board Meeting** at **1:30 P.M.** on **Wednesday, February 15, 2023** at the **Los Osos Community Services District Boardroom,** located at 2122 9th Street, Suite 106, Los Osos, CA 93402 Members of the public may participate in this meeting in person or via teleconference and/or electronically.

For quick access, go to https://us04web.zoom.us/j/778762508
(This link will help connect both your browser and telephone to the call)
If not using a computer, dial 1 (669) 900-6833 or 1 (346) 248-779 and enter **778 762 508**

All persons desiring to speak during any Public Comment can submit a comment by:

- Email at danheimel@ConfluenceES.com by 5:00 PM on the day prior to the Committee meeting.
- Teleconference by phone at 1 (669) 900-6833 and enter **778 762 508**
- Teleconference by phone at 1 (346) 248-7799 and enter **778 762 508**
- Teleconference meeting at https://us04web.zoom.us/j/778762508
- Mail by 5:00 PM on the day prior to the Committee meeting to:
  Attn: Dan Heimel (Basin Management Committee)
  2122 9th St.
  Suite 110
  Los Osos, CA 93402

Directors: Agenda items are numbered for identification purposes only and may not necessarily be considered in numerical order.

NOTE: The Basin Management Committee reserves the right to limit each speaker to three (3) minutes per subject or topic. In compliance with the Americans with Disabilities Act, all possible accommodations will be made for individuals with disabilities, so they may participate in the meeting. Persons who require accommodation for any audio, visual or other disability in order to participate in the meeting of the BMC are encouraged to request such accommodation 48 hours in advance of the meeting from Dan Heimel at danheimel@ConfluenceES.com.

BASIN MANAGEMENT COMMITTEE BOARD OF DIRECTORS AGENDA

1. **CALL TO ORDER**

2. **ROLL CALL**

3. **PLEDGE OF ALLEGIANCE**

4. **BOARD MEMBER COMMENTS**

   Board members may make brief comments, provide project status updates, or communicate with other directors, staff, or the public regarding non-agenda topics.

5. **SPECIAL PRESENTATION**

   None

6. CONSENT AGENDA

The following routine items listed below are scheduled for consideration as a group. Each item is recommended for approval unless noted and may be approved in their entirety by one motion. Any member of the public who wishes to comment on any Consent Agenda item may do so at this time. Consent items generally require no discussion. However, any Director may request that any item be withdrawn from the Consent Agenda and moved to the "Action Items" portion of the Agenda to permit discussion or to change the recommended course of action. The Board may approve the remainder of the Consent Agenda on one motion.

a. 2022 Budget Update and Invoice Register
b. 2023 Budget Update and Invoice Register
c. Approval of Minutes from November 16, 2022 BMC Meeting

7. PUBLIC COMMENTS ON ITEMS NOT APPEARING ON THE AGENDA

The Basin Management Committee will consider public comments on items not appearing on the agenda and within the subject matter jurisdiction of the Basin Management Committee. The Basin Management Committee cannot enter into a detailed discussion or take any action on any items presented during public comments at this time. Such items may only be referred to the Executive Director or other staff for administrative action or scheduled on a subsequent agenda for discussion. Persons wishing to speak on specific agenda items should do so at the time specified for those items. The presiding Chair shall limit public comments to three minutes.

8. EXECUTIVE DIRECTOR'S REPORT

9. ACTION ITEMS

a. Appointment of BMC Officers for Calendar Year 2023

Recommendation: For the BMC to review the existing officer positions and appoint officers for CY 2023 or provide alternative direction to staff.

b. Draft Fall 2022 Los Osos Basin Lower Aquifer Water Quality Monitoring Results and Updated Chloride Metric

Recommendation: Receive an update on the Draft Fall 2022 Los Osos Basin Lower Aquifer Water Quality Monitoring Results and Updated Chloride Metric.

10. ADJOURNMENT

TO: **Los Osos Basin Management Committee**

FROM: **Daniel Heimel, Executive Director**

DATE: **February 15, 2023**

SUBJECT: **Item 6 – Approval of Budget Update/Invoice Register and Meeting Minutes**

Recommendations

Staff recommends that the BMC review and consider approval of Budget/Invoice Register and Meeting Minutes or provide alternate direction to Staff.

Discussion

BMC Staff has prepared a summary of costs incurred as compared to the adopted budget and a running invoice register and Meeting Minutes from previous BMC Meetings (see Attachments).

Attachment 1: Cost Summary (January 2022 to Current Date) for Calendar Year 2022 Budget

Item	Description	Budget Amount	Approved Contingency Allocation	Updated Allocated Budget Amount	Costs Incurred	Percent Incurred	Remaining Budget
1	BMC Executive Director Facilitation and Legal Counsel Contingency	$90,000		$90,000	$62,156.25	69.1%	$27,844
2	Meeting Expenses - facility rent	$1,500		$1,500	$0.00	0.0%	$1,500
3	Meeting Expenses - audio and video services	$6,000		$6,000	$1,750.00	29.2%	$4,250
4	Technical Support/Adaptive Management Services	$15,000	$19,676	$34,676	$46,195.50	133.2%	-$11,520
5	Groundwater Monitoring	$42,000		$42,000	$42,732.60	101.7%	-$733
6	2021 Annual Report	$56,000	$1,910	$57,910	$57,910.00	100.0%	$0
7	Grant Pursuit Contingency	$5,000		$5,000	$0.00	0.0%	$5,000
8	WRFP Study Year 1 (Peer Review)	$15,000		$15,000	$0.00	0.0%	$15,000
9	Lower Aquifer Monitoring Well Improvement	$25,000	$6,514	$31,514	$34,527.25	109.6%	-$3,013
10	Los Osos Creek Stream Gage Rating Curve	$25,000		$25,000	$7,403.40	29.6%	$17,597
	Subtotal	$280,500		$308,600	$252,675		$55,925
	10% Contingency (rounded to nearest $100)	$28,100					
	Total	**$308,600**			**$252,675**	**81.9%**	**$55,925**
	LOCSD (38%)	$117,268					
	GSWC (38%)	$117,268					
	County of SLO/SLOCFC&WCD (20%)	$61,720					
	S&T Mutual (4%)	$12,344					

Attachment 2: Invoice Register for Los Osos BMC for Calendar Year 2022

Vendor	Invoice No.	Amount	Month of Service	Description	Budget Item	Date Executive Director Approved	Date BMC Chairperson Approved	Date BMC Approved
CHG	20211203	$6,490.00	Dec-21	Annual Report Preparations	6	Jan-22		
CHG	20211204	$2,534.40	Dec-21	Groundwater Monitoring	5	Jan-22		
CHG	20211205	$5,076.40	Dec-21	Rating Curve Development	11	Jan-22		
ConfluenceES	1011	$5,100.00	Jan-22	BMC Executive Director Services	1		Feb-22	
CHG	20220103	$20,495.00	Jan-22	Annual Report Preparations	6	Mar-22		
CHG	20220104	$1,319.40	Jan-22	Groundwater Monitoring	5	Mar-22		
CHG	20220105	$2,327.00	Jan-22	Rating Curve Development	11	Mar-22		
CHG	20220204	$15,400.00	Feb-22	Annual Report Preparations	6	Mar-22		
CHG	20220205	$320.00	Feb-22	Technical Support - Data Request Response	4			Apr-22
ConfluenceES	1018	$5,700.00	Feb-22	BMC Executive Director Services	1		Mar-22	
CHG	20220303	$10,740.00	Mar-22	Annual Report Preparations	6	Apr-22		
CHG	20220304	$1,740.00	Mar-22	Groundwater Monitoring	5	Apr-22		
CHG	20220305	$1,440.00	Mar-22	Technical Support - Monitoring Well Invest.	4			May-22
ConfluenceES	1026	$4,050.00	Mar-22	BMC Executive Director Services	1		Apr-22	
CHG	20220405	$2,545.00	Apr-22	Annual Report Preparations	6	May-22		
CHG	20220406	$11,370.00	Apr-22	Groundwater Monitoring	5	May-22		
ConfluenceES	1031	$7,450.00	Apr-22	BMC Executive Director Services	1		May-22	
CHG	20220501	$3,200.00	May-22	Technical Support - Program C Evaluation	4	Jun-22		
CHG	20220503	$2,772.00	May-22	Groundwater Monitoring	5	Jun-22		
CHG	20220502	$1,600.00	May-22	Annual Report Preparations	6			Jun-22
ConfluenceES	1037	$8,493.75	May-22	BMC Executive Director Services	1		Jun-22	
CHG	20220610	$1,280.00	Jun-22	Technical Support - Monitoring Well Invest.	4			Jul-22
CHG	20220611	$640.00	Jun-22	Annual Report Preparations	6			Jul-22
ConfluenceES	1043	$5,837.50	Jun-22	BMC Executive Director Services	1		Jul-22	
CHG	20220705	$1,510.00	Jul-22	Technical Support - Monitoring Well Invest.	4			Sep-22
ConfluenceES	1046	$6,250.00	Jul-22	BMC Executive Director Services	1		Aug-22	
CHG	20220805	$1,597.50	Aug-22	Technical Support - ITRC Coordination, LA6	4			Sep-22
ConfluenceES	1050	$3,900.00	Aug-22	BMC Executive Director Services	1		Sep-22	
CHG	20220905	$5,128.00	Sep-22	Groundwater Monitoring	5	Oct-22		
AGP	14692	$1,350.00	Sep-22	BMC Meeting Recording Hosting	3	Oct-22		
ConfluenceES	1053	$6,250.00	Sep-22	BMC Executive Director Services	1		Oct-22	
CHG	20221003	$12,902.30	Oct-22	Groundwater Monitoring	5	Nov-22		
ConfluenceES	1057	$5,000.00	Oct-22	BMC Executive Director Services	1		Nov-22	
AGP	14692	$200.00	Oct-22	BMC Meeting Recording Hosting	3	Nov-22		
SCI	SBS10539	$9,375.00	Nov-22	Funding Study	NA	Dec-22		

CHG	20221106	$1,920.00	Nov-22	Technical Support - Program C Evaluation	4	Dec-22		
CHG	20221108	$8,167.00	Nov-22	Technical Support - GIS Well Database	4	Dec-22		
CHG	20221108	$692.00	Nov-22	Technical Support - Lower Aquifer Nitrate	4	Dec-22		
CHG	20221107	$4,966.50	Nov-22	Groundwater Monitoring	5			
ConfluenceES	1061	$2,725.00	Nov-22	BMC Executive Director Services	1		Jan-23	
F&T Drilling	36571	$30,403.65	Dec-22	LA 13 Well Modification	9			
CHG	20221206	$4,123.60	Dec-22	LA 13 Well Modification	9			
ConfluenceES	1070	$1,400.00	Dec-22	BMC Executive Director Services	1		Jan-23	
CHG	20001204	$15,829.00	Dec-22	Technical Support - GIS Well Database	4	Jan-23		
CHG	20230106	$865.00	Dec-22	Technical Support - Lower Aquifer Nitrate	4	Jan-23		
AGP	16600	$200.00	Nov-22	BMC Meeting Recording Hosting	3	Feb-23		
	2022 Total	**$252,675.00**						To be approved

Attachment 1: Cost Summary (January 2023 to Current Date) for Calendar Year 2023 Budget

Item	Description	Budget Amount	Approved Contingency Allocation	Updated Allocated Budget Amount	Costs Incurred	Percent Incurred	Remaining Budget
1	BMC Administration and Facilitation	$70,000		$70,000	$0.00	0.0%	$70,000
2	BMC Legal Counsel	$20,000		$20,000	$0.00	0.0%	$20,000
3	Meeting expenses: Audio and video services	$1,000		$1,000	$0.00	0.0%	$1,000
4	Technical Support/Adaptive Management Services	$15,000		$15,000	$1,005.00	6.7%	$13,995
5	2023 Groundwater Monitoring	$48,500		$48,500	$0.00	0.0%	$48,500
6	2022 Annual Report	$65,000		$65,000	$13,850.60	21.3%	$51,149
7	WRFP Study Peer Review - Year 1	$15,000		$15,000	$0.00	0.0%	$15,000
8	New "Skyline" Monitoring Well	$85,000		$85,000	$0.00	0.0%	$85,000
9	Los Osos Creek Stream Gage Rating Curve	$17,000		$17,000	$0.00	0.0%	$17,000
	Subtotal	$336,500		$336,500	$14,856		$321,644
	5% Contingency	$16,825					
	Total	**$353,325**			**$14,856**	**4.2%**	**$338,469**
	LOCSD (38%)	$134,264					
	GSWC (38%)	$134,264					
	County of SLO/SLOCFC&WCD (20%)	$70,665					
	S&T Mutual (4%)	$14,133					

Attachment 2: Invoice Register for Los Osos BMC for Calendar Year 2023

Vendor	Invoice No.	Amount	Month of Service	Description	Budget Item	Date Executive Director Approved	Date BMC Chairperson Approved	Date BMC Approved
CHG	20221205	$2,342.00	Dec-22	Annual Report Preparations	6	Jan-23		
CHG	20230104	$11,508.60	Jan-23	Annual Report Preparations	6	Feb-23		
CHG	20230105	$1,005.00	Jan-23	Technical Support: AEM Survey	4			
	2023 Total	**$14,855.60**						To be approved

BASIN MANAGEMENT COMMITTEE BOARD OF DIRECTORS

Agenda Item 6b: Minutes of the Meeting of November 16, 2022

The following is a summary of the actions taken at the Basin Management Committee Board of Directors Meeting. The official record for the meeting is the recording that can be found at:
https://slo-span.org/static/meetings-LOBMC.php

Agenda Item	Discussion or Action
1. Call to Order	Director Zimmer called the meeting to order at approximately 1:30 PM.
2. Roll Call	Daniel Heimel, Executive Director, called roll to begin the meeting. Director Reineke, Director Reely, Director Cesena, Director Zimmer
3. Pledge of Allegiance	
4. Board Member Comments	None
5. Special Presentation	Los Osos CSD Water Resiliency Intertie Project (0:06)
6. Consent Agenda **6a. 2022 Budget Update and Invoice Register** **6b. Approval of Minutes from October 19, 2022 BMC Meeting** **6c. Updated Minutes from September 21, 2022 BMC Meeting**	**Public Comment** (8:43) Becky McFarland Patrick McGibney **Board Action 6a and 6b and 6c** (13:00) Approve Consent Agenda with direction to modify the 2023 Budget Updates to include additional information on re-allocated funds, when applicable. **Motion**: Director Cesena **Second**: Director Reely **Ayes**: Director Reineke, Director Reely, Director Cesena, Director Zimmer **Nays**: None **Abstain**: None **Absent**: None
7. Public Comments on Items Not Appearing on the Agenda	**Public Comment** (15:15) Patrick McGibney Becky McFarland
8. Executive Director's Report	**Public Comment** (26:03) Patrick McGibney Emily Miggins Becky McFarland
9. Action Items	
9a. Calendar Year 2023 BMC Budget	**Recommendation**: 1) approve the proposed Calendar Year 2023 BMC Budget; 2) approve Calendar Year 2023 BMC Executive Director and Hydrogeologist Consultant Proposals; or 3) provide alternate direction to staff. **Public Comment** (47:30) Charlie Cote Becky McFarland Deborah Howe Emily Miggins

	<u>Board Action</u> (1:05:00) 1) approve the proposed Calendar Year 2023 BMC Budget and Consultant Proposals with the modification to Attachment 1 of the Staff Report to remove the statement "to replace the LA 10 (Rosina Well) in the Chloride Metric." **Motion:** Director Reely **Second:** Director Cesena **Ayes:** Director Reineke, Director Reely, Director Cesena, Director Zimmer **Nays:** None **Abstain:** None **Absent:** None
10. Adjournment	Meeting adjourned at approximately 3:00 PM. The next regularly scheduled meeting is Wednesday, December 16th, 2022, at 1:30 PM.

TO: **Los Osos Basin Management Committee**

FROM: **Dan Heimel, Executive Director**

DATE: **February 15, 2023**

SUBJECT: **Item 8 – Executive Director's Report**

Recommendations

Staff recommends that the Committee receive and file the report and provide staff with any direction for future discussions. Sections of the Executive Director's Report that have been updated or significantly changed from the previous meeting's version are underlined.

Discussion

This report was prepared to summarize administrative matters not covered in other agenda items and to provide a general update on staff activities.

Presentations

10/14/2022 – The Executive Director provide a presentation to the Regional Water Quality Control Board to provide an update on the condition of the Los Osos Basin.

Funding and Financing Programs to Support Basin Plan Implementation

SGM Implementation Grant: This grant program is administered by the California Department of Water Resources (DWR) to provide funding for projects that encourage sustainable management of groundwater resources that support Sustainable Groundwater Management Act (SGMA) and/or invest in groundwater recharge projects for surface water, stormwater, recycled water, and other conjunctive use projects. Round 1 funding was provided to Critically Overdrafted (COD) Basins. The Round 2 solicitation occurred in December 2022. Eligible applicants for Round 2 included Groundwater Sustainability Agencies or agencies within adjudicated basins. However, the Round 2 solicitation was limited to applicants that are located in Medium, High and COD basins. The Los Osos Basin is currently prioritized as Very Low priority as a result of conditions being met under sub-component C of the Draft SGMA 2019 Basin Prioritizations (i.e. non-adjudicated pumping is less than 9,500 acre-feet per year) and thus did not appear to be eligible for Round 2 SGM Implementation Grant Funding.

Prop 1 GWGP: The Prop 1 GWGP Round 3 solicitation was released on July 6th, 2021 with Concept Proposals due September 7th, 2021. However, as indicated in the January 2018 BMC meeting, the State Board confirmed that seawater intrusion mitigation projects under Program C are eligible for low interest loans but are not currently eligible for grants under the Proposition 1 Groundwater Grant Program (GWGP). New wells in the upper and lower aquifer are viewed as aquifer management, not

aquifer clean-up as defined by the State, therefore we will need to look for future funding rounds and other opportunities. Aquifer clean-up projects (e.g. Community Nitrate Facility, Upper Aquifer Capture and Treatment) could be considered for pursuing grant funding through this program. Unfortunately, this is the 3rd and last round for this Program and they are only looking to fund implementation projects (i.e. projects that have design, CEQA and other planning components completed and are ready for construction), not planning projects.

IRWM: The Program A upper aquifer well at 8th Street was submitted by Los Osos CSD to the local IRWM process in 2019 as part of the Round 1, Prop 1 Implementation Grant cycle and was subsequently selected to be a part of the application for the current funding opportunity. The application for this grant was submitted in December 2019 and the Project was included in the Department of Water Resource's July 2020 Final Funding Award List for the full grant request ($238,000). Prop 1, Round 2 Implementation grant cycle has been initiated and the Call for Projects opened on April 7th, 2022 and closed April 28th, 2022. The BMC did not submit any projects as it was determined that there were not projects that were sufficiently far enough along to be competitive for this grant opportunity.

Prop 1 SWGP: The concept of urban storm water recovery at 8th and El Moro was ranked in the County Stormwater Resource Plan. The Project is labeled as "Capture and Reuse of Storm Water" and listed as a Los Osos Community Services District project. The Stormwater Resource Plan can be found here: https://www.slocounty.ca.gov/Departments/Public-Works/Committees-Programs/Stormwater-Resource-Plan.aspx. The Project is additionally described in the following locations:

- It is **described** here in our SWRP Appendix 4B under "Capture and Reuse of Storm Water" at 9th and El Morro: https://www.slocounty.ca.gov/Departments/Public-Works/Forms-Documents/Committees-Programs/Stormwater-Resource-Plan/Documents/SWRP-Appendix-4-B-Identified-Project-and-Program-D.pdf

- It is **ranked** here on our SWRP website on the **SWRP Project List** link under "Capture and Reuse of Storm Water": https://www.slocounty.ca.gov/Departments/Public-Works/Forms-Documents/Committees-Programs/Stormwater-Resource-Plan/Documents/SWRP-Program-Master-Project-Info-2020-04-16.pdf

- It is also on the **IRWM Project list** under "Capture and Reuse of Storm Water": https://www.slocounty.ca.gov/Departments/Public-Works/Forms-Documents/Committees-Programs/Integrated-Regional-Water-Management-(IRWM)/Current-IRWM-Full-Project-List_20220322.pdf

Grant funding may be available through the Prop 1 Storm Water Grant Program (SWGP). However, the application period for Round 2 of SWGP funding has closed. Information about the Storm Water Grant Program can be found here:
https://www.waterboards.ca.gov/water_issues/programs/grants_loans/swgp/prop1/

WRFP: The State Water Resource Control Board (SWRCB) increased the amount for Water Recycled Program Planning (WRFP) grants from $75k to $150k. This could provide a grant funding opportunity to advance Basin Plan initiatives, with a reduced cost to the community of Los Osos, through preparation of a Recycled Water Facilities Planning Study (RWFPS). Potential scope items for the RWFPS could include:

- Transient Groundwater Model Development
- Soil Aquifer Treatment (SAT) Assessment
- Broderson/Creek Discharge Scenario Analysis
- Stormwater and Perched Water Recovery Project – Feasibility Study
- Adaptive Management Groundwater Modeling
- RWFPS Report Development

Recent communication with the SWRCB Representatives confirmed that this funding program is still fully funded and WRFP grants are available. On 2/11/2022 the Los Osos Community Services District (Los Osos CSD) submitted an application for a WRFP grant to develop a transient model and analyze recycled water and supplemental water projects to improve the sustainability of the Los Osos Basin (WRFP Study) and is still waiting for notification. At its May 5th, 2022 Meeting the Los Osos CSD approved the RFP for the WRFP Study and is waiting on approval of the grant before releasing it. The LOCSD was recently contacted by the SWRCB representatives asking if they would like to resubmit their application for a larger grant amount. The SWRCB is increasing the grant award amount from $150k to $250k. Accessing this additional grant funding would provide the BMC with an opportunity to improve the quality of the model and further analyze recycled water and other supplemental water supply opportunities. Los Osos CSD and BMC Staff submitted and updated grant application to request additional grant funding for the WRFP Study. Los Osos CSD was notified of the award of the grant in January 2023 and all the required documents were signed and fully executed. The Los Osos CSD Board approved the release of the RFP in May 2022 so CSD staff will be working with BMC staff to initiate the process.

Status of BMC Initiatives

DWR AEM Survey: In December 2022, BMC Staff were notified that the Los Osos Basin would be included in the Department of Water Resources (DWR) upcoming Statewide Airborne Electromagnetic (AEM) Survey in April 2023. To assist DWR in preparing flight lines for the AEM Survey, BMC Staff provided DWR with lithologic information for the Los Osos Basin and prepared an Area of Interest Map (attached). The data collected during the AEM survey will improve DWR and the BMC's understanding of local groundwater resources and seawater intrusion. Additional information on DWR's Statewide AEM Survey Project can be found here:
https://water.ca.gov/Programs/Groundwater-Management/Data-and-Tools/AEM

Sustainable Yield: At its October 27th, 2021 Meeting, the BMC unanimously approved a Sustainable Yield estimate of 2,380 AFY for Calendar Year 2022 and these actions will be documented in the 2021 Annual Report. Prior to the beginning of Calendar Year 2023, the BMC is tasked with establishing a Sustainable Yield estimate for 2023. At its October 19th, 2023 Meeting, the BMC unanimously approved retaining the current Sustainable Yield estimate of 2,380 AFY for CY 2023 for the following reasons: 1) No new infrastructure, not already considered in the 2022 Sustainable Yield Estimate, has been constructed; 2)

estimates for the development of the Broderson Mound and long-term average rainfall were updated and incorporated into the CY 2022 Sustainable Yield Estimate and are not anticipated to change significantly on a year-over-year basis; 3) no significant hydrogeologic investigations have been conducted that would warrant an update to the steady-state groundwater model utilized to develop the Sustainable Yield Estimate.

Los Osos Basin Well Database: Cleath-Harris Geologists (CHG) completed the development of the Los Osos Basin Well Database and after review by BMC and BMC Party Staff it will be presented to the BMC at a future meeting.

Basin Metric Evaluation: Analysis of potential modifications to the Basin Metric's is currently on hold. Proposed modifications to the metrics were provided to BMC Party Staff for review. However, BMC Party Staff requested that potential improvements to the existing BMC Monitoring Program (i.e. modifications to an existing wells or a new monitoring well) be evaluated prior to modifying the Basin Metrics. Recommendations regarding potential improvements to the Basin Monitoring Network will be brought to the BMC at a future meeting, followed by potential modifications to the Basin Metrics.

Transient Groundwater Model: At its October 27th, 2021 Meeting, the BMC authorized the preparation of a Water Recycling Funding Program Grant Application and to request access to the $150,000 of funding that the County budgeted for a transient groundwater model for Los Osos. The Los Osos CSD will be the lead agency for the grant on behalf of the BMC. The grant application was submitted to the SWRCB by Los Osos CSD on 2/11/2022 for $150k in grant funds and the County approved providing $150k to the Los Osos CSD for a Transient Model for the Los Osos Basin. After receiving approval from the SWRCB, the Los Osos CSD will solicit proposals from consulting firms through an RFP process to procure the necessary services to develop the model and complete the WRFP Study. See update under WRFP Grant above.

Lower Aquifer Nitrate Investigation:

Wellhead Survey: At its October 27th, 2021 Meeting, the BMC authorized Twin Cities Surveying to survey additional wells in Los Osos Basin and for BMC Staff to request that the County survey the wells in their monitoring program. Both Twin Cities Surveying and the County completed their wellhead surveys in November and December. BMC monitoring network wellhead elevations are now up to date.

Lower Aquifer Monitoring Evaluation: At its October 27th, 2021 Meeting, the BMC authorized CHG to evaluate the feasibility and cost of modifying existing wells or construction a new monitoring well(s) to improve monitoring of Zone E water quality. BMC Party Staff evaluated the potential to fund a new monitoring well in 2022, but there is not sufficient budget. BMC Party Staff will target including a new monitoring well in the Calendar Year 2023 Budget. At the September 21st, 2022 BMC Meeting, the BMC authorized funding for modifications to the Ferrell Well (LA 13) to improve its ability to monitor seawater intrusion in Zone E. The Los Osos CSD contracted with Filiponi and Thompson Drilling to complete the modifications in December 2022, see attached Well Completion Report for additional

detailed information. Sampling data from this new well will be incorporated into the BMC's annual groundwater monitoring program and included in future Annual Monitoring Reports.

Program C Adaptive Management: At its April 20th, 2022 Meeting, the BMC approved CHG to evaluate the re-inclusion of the 3rd Well into Program C. Additional detail regarding the history of the 3rd Program C Well is available in the April 20th, 2022 BMC Agenda Packet. CHG is currently evaluating the anticipated increase in the Sustainable Yield that the 2nd and 3rd Program C Wells would provide utilizing the criteria for calculating the Sustainable Yield approved by the BMC at their October 27th, 2021 Meeting. Results from this evaluation will be presented to BMC Party Staff and then to the BMC at a future meeting.

Status of Basin Plan Implementation and Funding Plans

The BMC has requested an integrated funding plan for project implementation and BMC monitoring and administration. BMC Staff and BMC Party Staff have formed a Funding and Organizational Working Group to identify and evaluate potential future funding and organization structures for the BMC and implementation of the Basin Plan. Consistent with the Basin Plan, the Working Group is identifying and evaluating funding and organizational structures that will provide a long-term mechanism for funding BMC Administration and Basin Plan Implementation costs and that allocate costs equitably amongst all who benefit from the Basin's water resources.

The Working Group reviewed previously completed analysis on BMC funding and organization structures, documenting the different alternatives and identifying data/information gaps that may require outside technical support. At its October 27th, 2021 Meeting, the BMC approved a proposal from SCI Consulting Group to provide an updated funding options analysis and assessment evaluation. SCI has prepared a draft Technical Memorandum (TM), that includes their evaluation of funding alternatives and findings from the funding model. The draft TM was shared with the BMC at the July 27, 2022 Meeting and the BMC requested that Staff return with additional information on the BMC's options for moving forward. BMC Staff worked with SCI to develop a Work Plan and Budget to assist the BMC in understanding the key decision points, timeline and costs for establishing a more formal organizational and funding structure. A roadmap for how the BMC could implement a special tax was provided to the BMC at the October 19th, 2022 Meeting and the BMC provided direction for the Executive Director to work with BMC Party Staff to further discuss different options for a JPA with or without a special tax, strategies to educate the community about the proposed tax and its benefits and bring additional information back the BMC at a future meeting.

JPA Formation: Staff level discussions continue to focus on the need for, and benefits of, forming a JPA, see table below, to assist with implementation of the Basin Plan.

Table 1. JPA Formation Considerations

Pros	Cons
• Common ownership of basin assets	• Complexity and community perception
• Ability to contract for services as an entity	• Potential for difficulty in formal proceedings - less nimble
• GSWC can participate as a director	• More difficult to exit/change if needed
• Could cover entire limits of basin for funding	
• If carefully done, incremental costs could be limited to insurance and up-front legal expenses	
• Ability to carry-over funds from one budget year to another	

As indicated in previous meetings, it was determined that GSWC could serve as an appointed JPA director without forming a separate Mutual Water Company entity, which would simplify the process.

Discussions with BMC Party Staff indicate that the BMC Parties would like to execute the Implementation Plan initiative to first develop a roadmap for the BMC and then evaluate the potential formation of a JPA or other governance structure once there is a more defined plan for future BMC initiatives.

BMC Legal Counsel – At the December 15, 2021 BMC Meeting, the BMC included in the authorization of the Calendar Year 2022 Budget $20,000 for Legal Counsel Contingency to be included in Executive Director's Budget. The BMC additionally authorized the Executive Director to utilize up to $5,000 before requiring BMC approval and for the Executive Director to provide updates on legal counsel spending in the Executive Director's Report. A Request for Qualifications (RFQ) was approved by the BMC at its April 20th, 2022 Meeting and subsequently released to solicit legal counsel representation for the BMC. BMC Staff received seven Statements of Qualifications (SOQs) and BMC Party Staff interviewed four legal firms. At the September 21st, 2022 BMC Meeting the BMC approved selection of RWG Law to provide contract legal services for the BMC.

Program B Implementation Process and Funding: The existing nitrate removal facility owned by GSWC is intended to serve existing development, so it is likely that a Program B facility intended for future development would be jointly owned by either a JPA or by one of the public agencies.

- Likely next steps for the implementation of Program B projects include:
    - Technical Studies to validate and update cost estimates
    - Siting Studies to identify project locations
    - AB 1600 analysis to evaluate funding options relative to future development in coordination with the Los Osos Community Plan
    - Environmental Review (CEQA)

- Land Use Permitting (e.g. Coastal Development Permits, etc.)

Land Use Planning Process Update

Guide to Planning Information for Development in Los Osos:

This website is intended to provide planning information outlining what type of development is currently allowed within https://www.slocounty.ca.gov/Departments/Planning-Building/Grid-Items/Community-Engagement/Communities-Villages/Los-Osos.aspx.

Topics covered include but are not limited to:

- Which types of permit applications are currently being accepted for processing
- Status of the building moratorium and waitlist for undeveloped parcels in the sewer service area (still in place)
- Status of the Communitywide Habitat Conservation Plan

Los Osos Retrofit-to-Build Program (Title 19 Water Offset Requirement) Update:

Maddaus Water Management Inc. is preparing a study to update water usage estimates for urban and rural residences sourcing water from the Los Osos Groundwater Basin, propose new water conservation measures for the retrofit-to-build program, and estimate remaining water savings potential for the community. The project timeline was extended to secure usable results and facilitate a thorough exploration of potential water conservation measures. Maddaus and County Planning staff are planning and preparing a technical memorandum describing the analysis carried out in the study. Scheduling updates will be posted at: https://www.slocounty.ca.gov/Departments/Planning-Building/Grid-Items/Community-Engagement/Active-Planning-Projects/Los-Osos-Water-Offset-Study.aspx#:~:text=Los%20Osos%20Water%20Offset%20Study%20The%20County%20has,is%20anticipated%20to%20be%20completed%20in%20March%202022.

Los Osos Community Plan:

The Los Osos Community Plan is being reviewed by the California Coastal Commission and a hearing date has not yet been scheduled. In the meantime, the County is meeting with BMC staff to discuss potential policy changes considering ongoing basin monitoring and Basin Plan program implementation efforts. On December 15, 2020, the County Board of Supervisors adopted the Los Osos Community Plan ("LOCP") update and Final Environmental Impact Report ("FEIR"). The LOCP policies are still subject to change based on California Coastal Commission review. The LOCP and FEIR considered by the Board on December 15 are available at: https://www.slocounty.ca.gov/LosOsosPlan-1.aspx.

Background

The Board authorized preparation of this update on December 11, 2012. A series of community outreach meetings to unveil the Community Plan were conducted in the Spring of 2015. The plan was prepared to be consistent and coordinated with the draft groundwater basin management plan and the draft Habitat Conservation Plan ("HCP"). The draft Environmental Impact Report was released on September 12, 2019; comments were due December 11, 2019. A Community Meeting on the Draft Environmental Impact Report for the LOCP, HCP, and associated Environmental Documents was held on

October 28, 2019. The Final Environmental Impact Report and Public Hearing Draft were released on June 8, 2020. The Planning Commission held hearings on July 9, 2020, August 13, 2020, and October 8, 2020. At the October 8, 2020 hearing, the Planning Commission recommended approval of the Plan to the Board of Supervisors.

Coastal Zone Accessory Dwelling Unit (ADU) Ordinance:
On March 21, 2023, the County BOS will review Coastal Commission's suggested modifications. Please use the following link to access the agenda when it is published: https://www.slocounty.ca.gov/Home/Meetings-Calendar.aspx Meetings-Calendar - County of San Luis Obispo. The Coastal Commission's suggested modifications approved at their February 11, 2022 meeting are available at: https://www.coastal.ca.gov/meetings/agenda/#/2022/2 (Agenda Item # 16a). Significant suggested modifications include not allowing ADUs within the Los Osos Groundwater Basin boundary and/or within the Los Osos Groundwater Basin Plan Area.

Los Osos Vacation Rental Ordinance:
On June 7, 2022, the County Board of Supervisors held a hearing and adopted a resolution to accept the California Coastal Commission's suggested modifications to the Los Osos Vacation Rental Ordinance. On July 14, 2022 the Coastal Commission certified the Los Osos Vacation Rental Ordinance, as part of the Local Coastal Plan.

The Los Osos Vacation Rental Ordinance includes a standard to encourage reducing water usage: "A minimum of one water conservation sign shall be posted in each restroom and kitchen of the dwelling. Water conservation signs shall encourage occupants to reduce water usage by stating (a) the importance of conserving water in Los Osos and (b) ways in which occupants can reduce the amount of water used during the stay. Water conservation signs hall be created and posted utilizing County approved language." Coastal's suggested modifications approved at their February 11, 2022 meeting are available at: https://www.coastal.ca.gov/meetings/agenda/#/2022/2 (Agenda Item # 16b).

Los Osos Wastewater Project Flow and Connection Update

The following table summarizes flows from the LOWRF based on the available data. Past flows have been revised. The plant has a complicated method of calculating effluent flows, which has been confusing and they are in the process of correcting.

LOWRF Wastewater and Recycled Water Flows

Year	Month	Influent	Broderson	Bayridge	Sea Pines	Giaco-mazzi	Construction Water	Ag Users	Discharge/ Recycled Water Delivery Total (AF)
2022	Jan	x	46	1.2	1.3	0.0	0.0	0.0	48
2022	Feb	41	34	1.3	5.8	0.0	0.0	0.1	41
2022	Mar	45	32	1.5	4.0	0.0	0.0	0.2	38
2022	Apr	43	38	1.4	4.7	0.0	0.0	0.2	44
2022	May	45	29	1.7	9.1	0.0	0.0	0.3	40
2022	Jun	43	27	1.6	11	0.0	0.3	0.3	40
2022	Jul	44	32	1.6	10.8	0.0	0.1	0.4	45
2022	Aug	45	32	1.8	7.7	0.0	0.0	0.4	42
2022	Sept	43	39	1.7	3.9	0.0	0.0	0.3	45
2022	Oct	44.7	37.8	1.3	5.0	0.0	0.0	0.6	44.9
2022	Nov	43.8	44.4	1.3	2.3	0.0	0.1	0.3	48.4
2022	Dec	46.3	45.8	1.0	0.4	0.0	0.0	0.0	47.2
Total		528.8	437.0	17.4	66.0	0.0	0.5	3.1	523.5

Enforcement: A list of properties that were not connected were transferred to County Code Enforcement and Notice of Violations were issued last year in Feb. 2019. That list was about 70 properties. As of 5/12/2021, the sewer service area has a 99.4% connection status with a total of 36 properties not yet connected. Of those, one is not required to connect because there is no structure (demolished), 18 have expired building permits, and the rest have an open Code Enforcement case.

The County has assigned staff in code enforcement to Los Osos. Expired permits did not receive a Code Enforcement case because those properties have their own noticing process through the Building Department which, if not corrected, could result in a Notice of Violation.

Recycled Water Connections: The County approved $350,000 in funding from the American Rescue Plan Act of 2021 for connecting new users to the LOWRF Recycled Water System. Additional funding was approved for improvements at the LOWRF and the Broderson Leach field.

Water Conservation Update

Rebate Update: Average indoor water usage for 2021 was estimated to be 38 gpd per person and remains at that number currently.

The Sustainable Groundwater Management Act (SGMA)

SGMA Overview: SGMA took effect on January 1, 2015.[1] SGMA provides new authorities to local agencies with water supply, water management or land use responsibilities and requires various actions be taken in order to achieve sustainable groundwater management in high and medium priority groundwater basins. Los Osos Valley Groundwater Basin (Los Osos Basin) was subject to SGMA based on the 2014 Basin Prioritization by the California Department of Water Resources (DWR) that listed the Los Osos Basin as high priority and in critical conditions of overdraft.[2]

Basin Prioritization: On December 18, 2019, DWR released the SGMA 2019 Basin Prioritizations. Basins or subbasins reassess to low or very low priority basins or subbasins are not subject to SGMA regulations. A summary of DWR's Final SGMA Prioritizations for the Los Osos Area Subbasin and Warden Creek Subbasin are listed below:

- Los Osos Area Subbasin is listed as **very low** priority for SGMA[3] and in critical conditions of overdraft [4]
- SGMA does not apply to the portions of Los Osos Basin that are adjudicated provided that certain requirements are met (Water Code §10720.8).
- Warden Creek Subbasin is listed as **very low** priority for SGMA[3]

For more information on DWR's basin boundary modification and prioritization process, please visit: https://water.ca.gov/Programs/Groundwater-Management/Basin-Prioritization

Additional Attachments:

1. Updated Status of Basin Plan Programs
2. DWR AEM Survey Area of Interest Map
3. Modified Ferrell Well (LA 13) Well Completion Report

[1] On September 16, 2014, Governor Jerry Brown signed into law a three-bill legislative package, composed of AB 1739 (Dickinson), SB 1168 (Pavley), and SB 1319 (Pavley), collectively known as SGMA

[2] SGMA mandates that all groundwater basins identified by DWR as high- or medium-priority by January 31, 2015, must have groundwater sustainability agencies established by June 30, 2017. The act also requires that all high- and medium-priority basins classified as being subject to critical conditions of overdraft in Bulletin 118, as of January 1, 2017, be covered by groundwater sustainability plans, or their equivalent, by January 31, 2020. Groundwater sustainability plans, or their equivalent, must be established for all other high- and medium-priority basins by January 31, 2022.

[3] As noted by DWR, the priority for the subbasin has been set to very low (0 total priority points) as a result of conditions being met under sub-component C of the Draft SGMA 2019 Basin Prioritizations.

[4] Critical conditions of overdraft have been identified in 21 groundwater basins as described in Bulletin 118 (Water Code Section 12924). Bulletin 118 (updates 2003) defines a groundwater basin subject to condition of critical overdraft as: "A basin is subject to critical conditions of overdraft when continuation of present water management practices would probably result in significant adverse overdraft-related environmental, social, or economic impacts."

Update on Status of Basin Plan Infrastructure Projects

Program Name	Project Name	Parties Involved	BMC Budgeted Amount	Funding Status	Anticipated Planning/Pre-Construction Cost	Anticipated Capital Cost	Status/Notes
Program A – Shift groundwater production from Lower Aquifer to Upper Aquifer	Water Systems Interconnection	LOCSD/ GSWC	NA	NA	NA	NA	**Completed**
	Upper Aquifer Well (8th Street)	LOCSD	NA	Fully Funded	NA	$307,000	The 8th St. Upper Aquifer Well is fully operational.
	South Bay Well Nitrate Removal	LOCSD	NA	NA	NA	NA	**Completed**
	Palisades Well Modifications	LOCSD	NA	NA	NA	NA	**Completed**
	Blending Project (Skyline Well)	GSWC	NA	NA	NA	NA	**Completed**
	Water Meters	S&T	NA	NA	NA	NA	**Completed**
Program B - Shift groundwater production from Lower Aquifer to Upper Aquifer	LOCSD Wells (Upper Aquifer)	LOCSD		Not Funded	TBD	BMP: $2.7 mil	Project not initiated
	GSWC Wells (Upper Aquifer)	GSWC		Not Funded	TBD	BMP: $3.2 mil	Project not initiated
	Community Nitrate Removal Facility	LOCSD/GSWC/S&T	TBD	Partial, GSWC portion funded	TBD	GSWC: $1.23 mil	GSWC's Program A Blending Project might be capable of expanding to be the first phase of the Program B Community Nitrate Removal Facility.
Program C - Shift production within the Lower Aquifer from the Western Area to the Central Area of the Basin	Expansion Well No. 1 (Los Olivos)	GSWC	NA	NA	NA	NA	**Completed**
	Expansion Well No. 2 (Lower Aquifer)	LOCSD		LOCSD	TBD	BMP: $2.5 mil	The well construction and development activities are completed; the water transmission main design is complete, and that phase of the project will go out to bid in March. The well equipping phase is in design and is scheduled to be completed mid-April. Completion of all phases of the project is estimated to be June 2024.
	Expansion Well 3 (Lower Aquifer) and LOVR Water Main Upgrade	GSWC/LOCSD		Cooperative Funding	TBD	BMP: $1.6 mil	This project has been deferred under Adaptive Management.
	LOVR Water Main Upgrade	GSWC		May be deferred	TBD	BMP: $1.53 mil	Project may not be required, depending on the pumping capacity of the drilled Program C wells. It may be deferred to Program D.
	S&T/GSWC Interconnection	S&T/ GSWC		Pending	TBD	BMP: $30,000	Currently on hold pending further evaluation of the project.

Program Name	Project Name	Parties Involved	BMC Budgeted Amount	Funding Status	Anticipated Planning/Pre-Construction Cost	Anticipated Capital Cost	Status/Notes
Program D - Shift production within the Lower Aquifer from the Western Area to the Eastern Area of the Basin							Currently being considered for deferment through Adaptative Management. BMC to review on an annual or semi-annual basis.
Program M – Groundwater Monitoring Plan	New Zone D/E lower aquifer monitoring well in Cuesta by the Sea	All Parties	NA	NA	NA	NA	**Completed**
Program U - Urban Water Reinvestment Program	Creek Discharge Program	All Parties				TBD	These activities are currently on hold.
	8th and El Moro Urban Storm Water Recovery Project	All Parties				TBD	These activities are currently on hold.

N

E

B

E'

B'

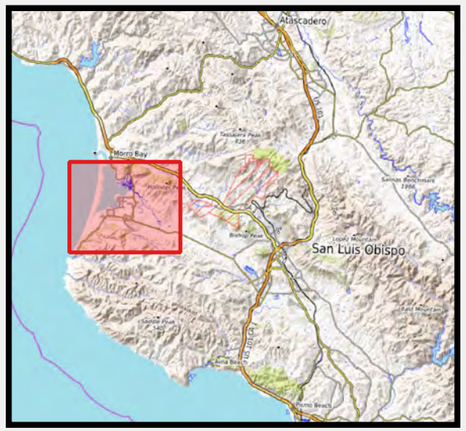
DUNES AND BAY AREA

CENTRAL AREA

WESTERN AREA

EASTERN AREA

0 3,000 6,000 ft



Explanation

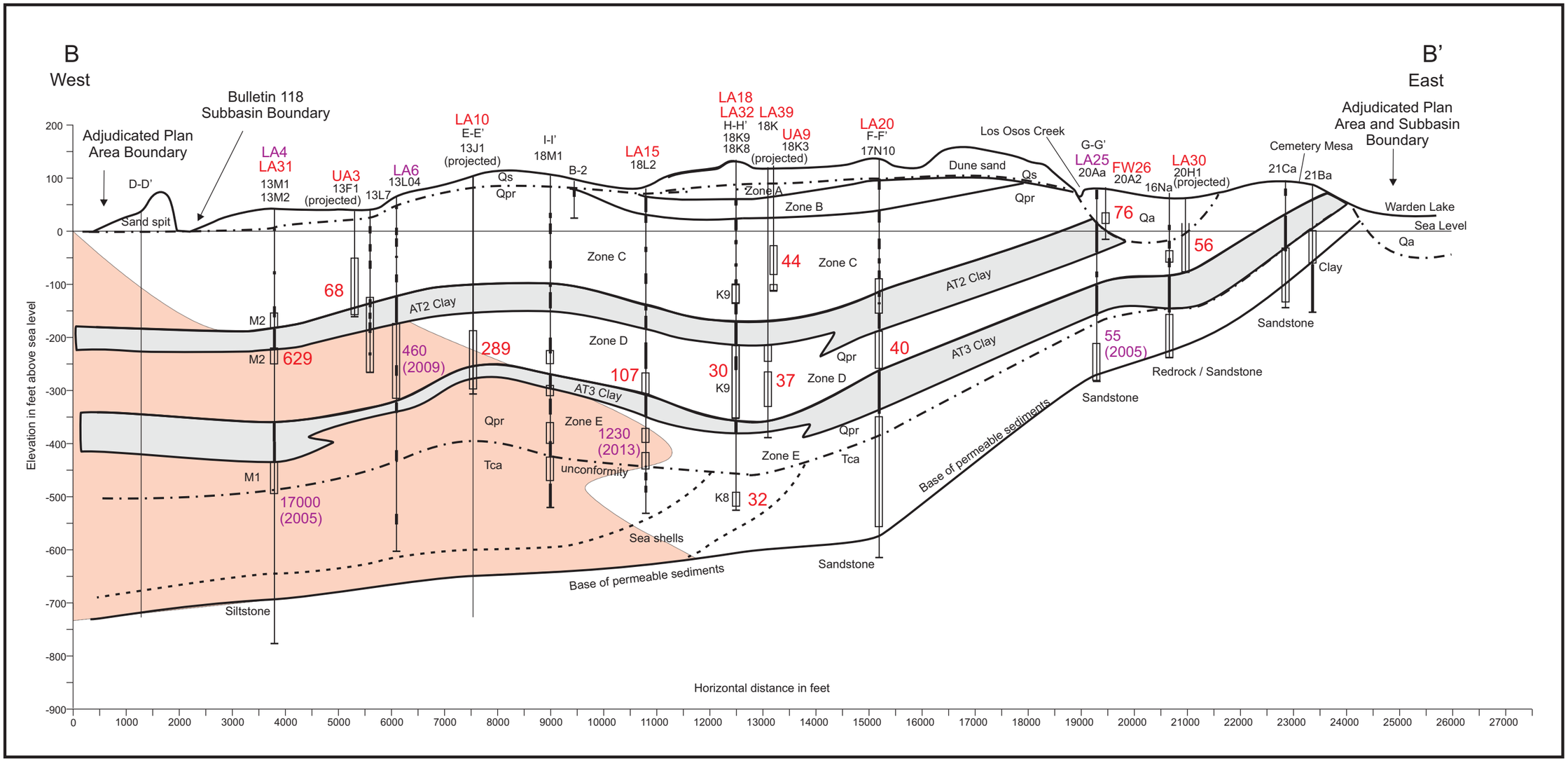
- Basin Boundary
- Adjudicated Plan Area
- Cross-section line

Figure 1
Plan Areas

AEM Planning
Los Osos Basin

Cleath-Harris Geologists

2023-01-18



Aquifer Zones:
Zone A - Perched Aquifer
Zone B - Transitional Aquifer
Zone C - Upper Aquifer
Zone D - Lower Aquifer (shallow)
Zone E - Lower Aquifer (deep)

Well data point
18M1 Well ID
Clay layer
Well screen
Clay layers not shown at projected wells

Formation:
Qa - alluvium
Qs - dune sand
Qpr - Paso Robles Formation
Tca - Careaga Formation

Cross-section alignment shown in Figure 1

LA31 - LOBP Monitoring Network ID

310 - Chloride concentration in mg/L (Fall 2021)

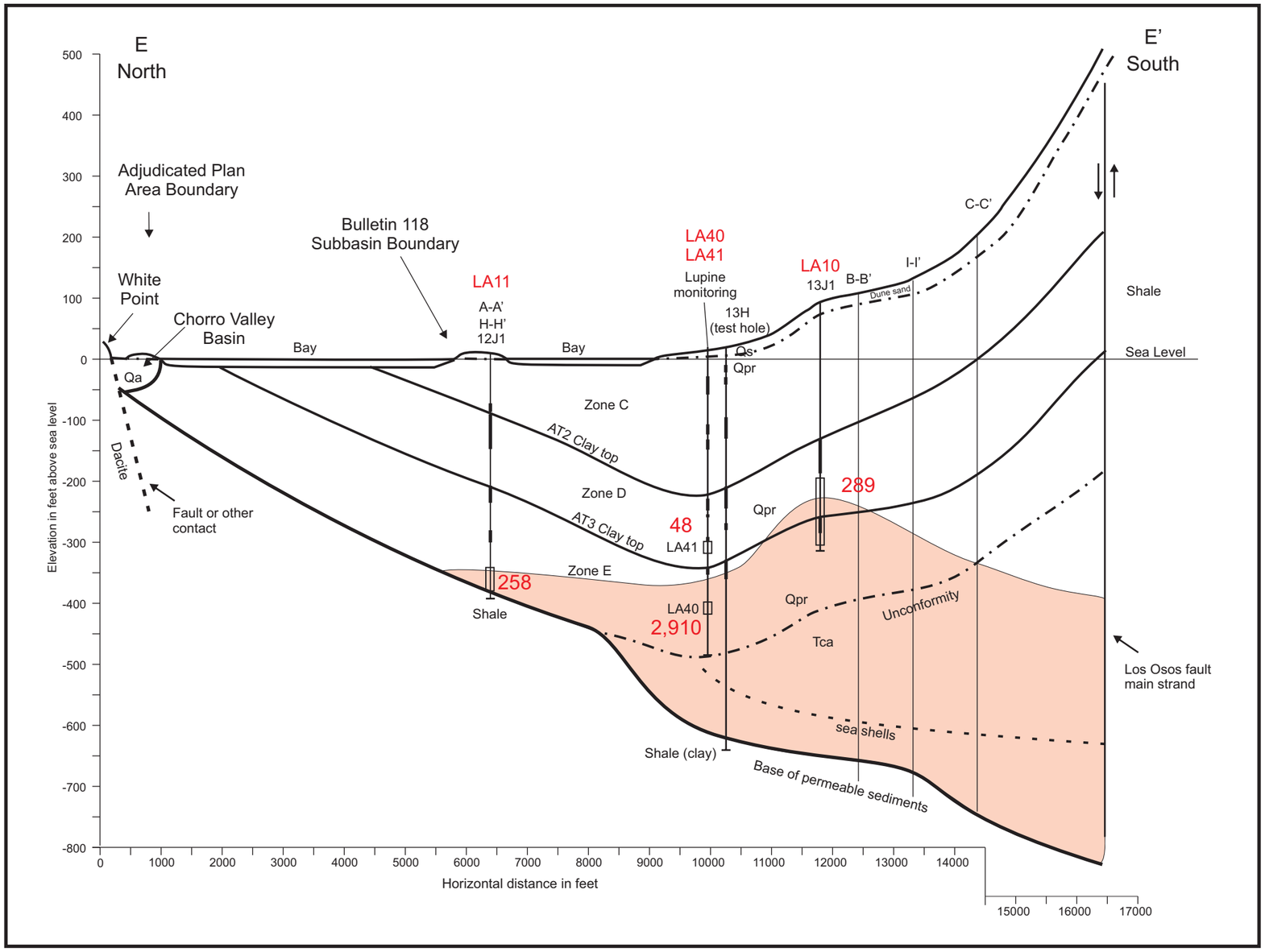
Estimated extent of seawater intrusion (Fall 2021)

460 - Historical Chloride concentration in mg/L (year listed)

Figure 19

Seawater Intrusion Front
Cross-Section B-B'
Los Osos Groundwater Basin
2021 Annual Report

Cleath-Harris Geologists



Aquifer Zones:
Zone A - Perched Aquifer
Zone B - Transitional Aquifer
Zone C - Upper Aquifer
Zone D - Lower Aquifer (shallow)
Zone E - Lower Aquifer (deep)

Well data point
12J1 Well ID
Clay layer
Well screen

Formation:
Qa - alluvium
Qs - dune sand
Qpr - Paso Robles Formation
Tca - Careaga Formation

Cross-section alignment shown in Figure 1

LA31 - LOBP Monitoring Network ID

289 - Chloride concentration in mg/L (Fall 2021)

Estimated extent of seawater intrusion (Fall 2021)

Figure 20

Seawater Intrusion Front
Cross-Section E-E'
Los Osos Groundwater Basin
2021 Annual Report

Cleath-Harris Geologsts

N

MB-1

LO-1

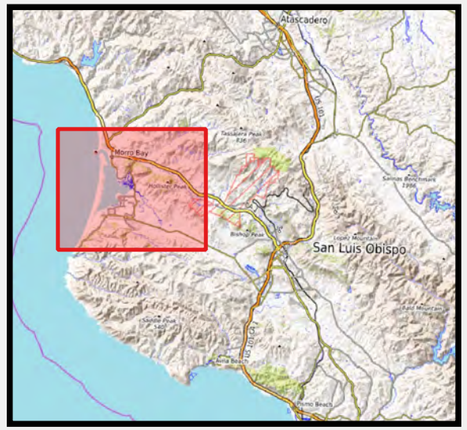
LO-2

LO-3

LO-4

LO-5

0 4,000 8,000 ft



Explanation

- Basin Boundary
- Adjudicated Plan Area
- Seawater Intrusion Front Fall 2021 Zone E

Area of Interest

- Los Osos Basin
- Morro Basin

Figure 2
Areas of Interest / Open Space

AEM Planning
Los Osos Basin

Cleath-Harris Geologists

2023-01-18

State of California

Well Completion Report

Form DWR 188 Submitted 1/11/2023

WCR2023-000386

Owner's Well Number LA13 | Date Work Began 12/21/2022 | Date Work Ended 12/28/2022

Local Permit Agency San Luis Obispo County Environmental Health Services

Secondary Permit Agency | Permit Number 2022-090 | Permit Date 12/15/2022

Well Owner (must remain confidential pursuant to Water Code 13752)

Name LOS OSOS CSD,

Mailing Address 2122 9TH ST

#102

City LOS OSOS State CA Zip 93402

Planned Use and Activity

Activity Other - MONITORING

Planned Use Monitoring

Well Location

Address 1927 7TH ST

City LOS OSOS Zip 93402 County San Luis Obispo

Latitude 35 Deg. 18 Min. 57.2399 Sec. N

Longitude -120 Deg. 50 Min. 8.88 Sec. W

Dec. Lat. 35.3159 Dec. Long. -120.8358

Vertical Datum Horizontal Datum WGS84

Location Accuracy Location Determination Method

APN 074-251-006

Township 30 S

Range 11 E

Section 18

Baseline Meridian Mount Diablo

Ground Surface Elevation

Elevation Accuracy

Elevation Determination Method

Borehole Information

Orientation Vertical Specify

Drilling Method Direct Rotary Drilling Fluid

Total Depth of Boring 537 Feet

Total Depth of Completed Well 537 Feet

Water Level and Yield of Completed Well

Depth to first water (Feet below surface)

Depth to Static Water Level 99.3 (Feet) Date Measured 12/28/2022

Estimated Yield* (GPM) Test Type

Test Length (Hours) Total Drawdown (feet)

*May not be representative of a well's long term yield.

Casings

Casing #	Depth from Surface Feet to Feet		Casing Type	Material	Casings Specificatons	Wall Thickness (inches)	Outside Diameter (inches)	Screen Type	Slot Size if any (inches)	Description
1	0	510	Blank	PVC	OD: 2.875 in. | SDR: SCH 80 | Thickness: 0.276 in.					
1	510	530	Screen	PVC	OD: 2.875 in. | SDR: SCH 80 | Thickness: 0.276 in.			Saw Cut	0.02	

Annular Material

Depth from Surface Feet to Feet		Fill	Fill Type Details	Filter Pack Size	Description
0	3	Cement	Portland Cement/Neat Cement		
3	377	Filter Pack	8 x 20	SAND	
377	499	Bentonite	Other Bentonite		CHIPS
499	533	Filter Pack	8 x 20	SAND	
533	537	Bentonite	Other Bentonite		CHIPS

Other Observations:

Borehole Specifications

Depth from Surface Feet to Feet		Borehole Diameter (inches)
0	537	12

Certification Statement

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief

Name: FILIPPONI-THOMPSON DRILLING INC (Person, Firm or Corporation)

P O BOX 845 (Address) | ATASCADERO (City) | CA (State) | 93423 (Zip)

Signed: *electronic signature received* (C-57 Licensed Water Well Contractor) | 01/11/2023 (Date Signed) | 432680 (C-57 License Number)

DWR Use Only

CSG #	State Well Number	Site Code	Local Well Number

				N
				W

Latitude Deg/Min/Sec | Longitude Deg/Min/Sec

TRS:

APN:

RECEIVED
JAN 26 2023
BY:

TO: **Los Osos Basin Management Committee**

FROM: **Dan Heimel, Executive Director**

DATE: **February 15, 2023**

SUBJECT: **Item 9a: Appointment of BMC Officers for Calendar Year 2023**

Recommendations

For the BMC to review the existing officer positions and appoint officers for CY 2023 or provide alternative direction to staff.

Discussion

The adopted Rules and Regulations (January 2016) for the BMC require appointment of the Committee's officers as noted in the excerpt below from Section 4.2:

> *Appointment of Officers. The officers shall be appointed annually by, and serve at the pleasure of, the Basin Management Committee. Officers shall be elected at the first Basin Management Committee meeting, and thereafter at the first Basin Management Committee meeting following December 1 of each year. An Officer may serve for multiple consecutive terms. Any Officer may resign at any time upon written notice to the Basin Management Committee. The Secretary or Treasurer may be removed and replaced by an affirmative decision of the Basin Management Committee*.

The current BMC officers are as follows:

Director Ochylski: Chairperson
Director Zimmer: Vice Chairperson
Director Reineke: Secretary
Director Gibson: Treasurer

TO: **Los Osos Basin Management Committee**

FROM: **Dan Heimel, Executive Director**

DATE: **February 15, 2023**

SUBJECT: **Item 9b – Draft Fall 2022 Los Osos Basin Lower Aquifer Water Quality Monitoring Results and Updated Chloride Metric**

Recommendations

Receive an update on the Draft Fall 2022 Los Osos Basin Lower Aquifer Water Quality Monitoring Results and Updated Chloride Metric.

Discussion

Please find the attached Draft Fall 2022 Los Osos Basin Lower Aquifer Water Quality Monitoring Results and Updated Chloride Metric for the Los Osos Basin. As described in Section 5.14 of the Stipulated Judgment and Chapter 7 of the Basin Plan, the Basin Management Committee (BMC) established a groundwater monitoring program to provide the BMC, parties to the adjudication, private Basin water users and public agencies with updated information on groundwater resources in the Los Osos Basin. The final results, including water levels and results from the First Water and Upper Aquifer monitoring, will be included in the 2022 Annual Report.

Los Osos BMC Water Quality Results - Lower Aquifer Monitoring

Station ID	Well Name	Basin Plan Well ID	Aquifer Zone	Date	HCO3	Total Hardness	Cond	pH	TDS	Cl	NO3-N	SO4	Ca	Mg	K	Na
					mg/l	mg/l	µmhos/cm		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
30S/10E-11A2	Sand Spit #1 East	LA2	D	3/14/2005	180	4600	16000	7.3	8900	5400	ND	430	770	640	20	1300
				10/21/2015	150	6640	17700	7.4	13100	6300	ND	740	1030	990	31	1560
				11/5/2020	220	6700	18000	7.7	15300	5890	ND	777	1140	936	38	1560
30S/10E-12J1	MBO5 DWR Obs.	LA11	E	2/14/2005	350	370	1300	8.1	840	77	ND	190	51	58	6.1	110
				11/20/2009	300	360	1150	7.5	732	83	ND	190	51	58	4.4	95
				7/24/2014	360	489	1290	7.7	780	105	ND	212	69	77	5	88
				4/22/2015	360	475	1290	7.8	810	112	ND	189	65	76	5	88
				10/1/2015	250	486	1280	7.3	840	117	ND	188	68	77	4	85
				4/20/2016	330	524	1370	n/a	840	151	ND	193	73	40	5	83
				10/10/2016	350	497	1370	7.1	930	173	ND	189	69	79	4	81
				4/11/2017	350	541	1380	7.5	880	167	ND	186	75	86	4	81
				10/4/2017	300	543	1370	7	850	162	ND	191	76	86	5	90
				4/10/2018	350	595	1390	7.6	820	173	ND	192	85	93	5	97
				10/2/2018	350	497	1340	7.4	870	160	ND	160	69	79	3	87
				4/9/2019	350	539	1430	7.4	860	196	ND	189	76	85	4	85
				10/2/2019	250	290	1520	7.6	1000	187	ND	189	80	90	5	91
				4/14/2020	350	667	1580	7	950	222	ND	187	81	113	5	83
				10/1/2020	350	763	1650	7.1	1040	242	ND	183	85	134	5	88
				4/5/2021	345	612	1630	7.6	1050	256	ND	192	88	96	5	91
				10/6/2021	340	569	1710	7.3	1020	258	ND	176	83	88	5	82
				4/13/2022	330	620	1800	7.3	1020	287	ND	183	90	96	4	87
				10/6/2022	350	633	1720	7.7	1220	**279**	ND	195	89	100	5	93
30S/10E-13Bb	Lupine Zone D	LA41	D	11/7/2019	210	312	1310	7.7	760	136	3.1	188	69	34	4	140
				4/8/2020	310	204	943	7.1	560	68	0.3	109	44	23	2	101
				10/8/2020	340	263	920	7.1	490	52	0.1	89.4	51	33	2	72
				4/14/2021	333	289	855	7.9	505	66	ND	86	53	38	2	60
				10/11/2021	340	309	812	7.2	460	48	ND	80	58	40	2	64
				4/12/2022	330	309	818	8.3	500	47	ND	67	58	40	2	58
				10/11/2022	340	315	766	7.6	470	**48**	ND	71	62	39	2	57

Los Osos BMC Water Quality Results - Lower Aquifer Monitoring

Station ID	Well Name	Basin Plan Well ID	Aquifer Zone	Date	HCO3	Total Hardness	Cond	pH	TDS	Cl	NO3-N	SO4	Ca	Mg	K	Na
					mg/l	mg/l	µmhos/cm		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
30S/10E-13Ba	Lupine Zone E	LA40	E	11/6/2019	210	2090	5330	7	4750	1460	1.3	224	388	272	6	182
				4/7/2020	240	3300	7360	7.6	6340	2190	0.3	202	569	458	7	203
				10/7/2020	270	4100	8220	6.9	7930	2220	ND	192	720	560	8	217
				4/15/2021	274	3760	8590	7.4	6760	2510	ND	217	558	576	7	210
				10/13/2021	270	3540	8930	7.4	7430	2910	ND	201	544	530	6	190
				4/14/2022	270	3780	8790	7.3	6790	2410	ND	187	523	601	6	178
				10/12/2022	280	3860	8860	7.5	8340	**2900**	ND	221	569	594	7	186
30S/10E-13J1* Highlighted chloride values have been adjusted for wellbore leakage	GSWC Rosina	LA10	D,E	12/20/2004	72	230	720	7.1	410	150	1.6	14	38	33	1.4	29
				1/14/2010	35	260	778	6	435	200	1.6	13	41	38	1.5	33
				7/24/2014	80	418	1200	7.3	910	303	1.7	16	67	61	2	39
				4/22/2015	80	431	1230	7.1	750	331	1.9	20	69	63	2	39
				10/5/2015	70	460	1280	7	950	329	1.7	19	74	67	2	41
				4/26/2016	80	412	1170	7.1	840	299	1.8	18	66	60	2	37
				10/12/2016	60	509	1430	6.8	1100	389	1.8	26.7	82	74	2	44
				4/10/2017	80	327	957	6.9	720	300	2.6	14.7	52	48	2	35
				10/12/2017	80	245	702	6.9	510	220	3.4	12.5	39	36	2	33
				4/24/2018	70	188	620	7.4	400	190	4.3	12.3	29	28	1	29
				10/9/2018	70	265	730	7.1	450	210	3.2	12.7	42	39	2	34
				4/15/2019	80	251	744	7	600	174	1.9	10.4	38	38	2	31
				10/14/2019	80	332	961	7.1	830	229	2	12.7	54	48	1	33
				4/21/2020	80	353	1310	6.4	970	250	2.1	14.2	59	50	2	32
				10/7/2020	70	183	618	7.6	430	310	4.6	11.3	29	27	1	33
				4/6/2021	81	405	1110	7.6	815	258	2.1	16.1	66	58	2	36
				10/8/2021	80	413	1180	7.2	790	289	2.1	16.8	65	61	2	37
				4/18/2022	70	192	612	7.1	420	220	5.8	14.9	29	29	1	37
				12/5/2022	90	327	911	7.7	690	**235**	2	13.4	52	48	2	33

Los Osos BMC Water Quality Results - Lower Aquifer Monitoring

Station ID	Well Name	Basin Plan Well ID	Aquifer Zone	Date	HCO3	Total Hardness	Cond	pH	TDS	Cl	NO3-N	SO4	Ca	Mg	K	Na
					mg/l	mg/l	µmhos/cm		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
30S/10E-13M2 4/1/2021 sample results show Upper Aquifer influence due to reduced pumping	Howard East	LA31	C,D	11/22/2004	51	810	2900	7.3	1500	810	0.5	140	60	120	4.7	210
				12/9/2009	55	1100	3740	7.1	2170	1100	0.5	220	160	160	4.8	370
				8/4/2014	60	757	3340	7.1	2450	990	0.6	178	117	113	5	382
				4/21/2015	60	739	3430	7.3	1930	950	0.6	178	117	113	5	382
				10/6/2015	30	756	3370	7.1	2140	960	0.5	185	115	114	5	342
				4/20/2016	50	726	3520	7.2	2190	941	0.7	179	113	108	5	400
				10/19/2016	70	722	3420	7.4	2190	943	0.6	182	113	107	4	398
				4/17/2017	60	733	3380	6.8	2060	907	0.6	178	114	109	4	413
				10/5/2017	60	738	3350	7.5	2190	960	0.7	160	116	109	5	411
				4/24/2018	70	664	3370	7.2	2020	946	0.6	2.8	103	99	4	367
				10/17/2018	60	740	3400	7.3	2180	834	0.6	153	115	110	5	414
				4/3/2019	70	640	3290	7.8	2010	940	0.6	179	103	93	4	341
				10/3/2019	70	574	3120	7.4	2120	827	0.7	169	90	85	4	340
				4/9/2020	70	519	2970	7.8	1740	738	0.6	152	86	74	4	258
				10/1/2020	70	774	3330	8	2080	844	0.7	169	94	131	5	495
				4/1/2021	218	187	1010	8.3	581	161	2.9	47	31	27	20	113
				11/4/2021	70	509	2780	7.9	1700	629	0.6	124	77	77	4	305
				5/11/2022	70	388	2550	7.6	1540	578	0.6	134	60	58	3	303
				10/6/2022	70	506	2520	8.3	1840	**636**	0.7	145	79	75	4	268
30S/10E-13N	S&T #5	LA8	D	11/23/2004	42	80	390	6.9	200	67	5.9	9.2	13	12	1.7	38
				11/19/2009	41	89	386	6.8	267	73	6.1	11	15	13	1.4	38
				7/24/2014	50	100	438	7.4	270	76	7	10	17	14	2	38
				4/21/2015	50	98	445	6.9	280	77	7.7	11	16	14	2	38
				10/6/2015	40	98	422	7.2	310	75	6.8	10	16	14	1	38
				4/20/2016	20	97.5	446	7	320	76	7.2	12	16	14	1	38
				10/13/2016	50	104	470	8	320	79	7.2	12	17	15	1	40
				4/11/2017	50	100	434	7.4	270	77	7.3	12.4	17	14	1	38
				10/2/2017	30	95	438	7.2	290	78	7.6	13.2	15	14	1	36
				4/11/2018	60	104	440	7	260	79	7.9	13.5	17	15	1	39
				10/3/2018	60	107	430	6.5	340	66	6.7	12.9	18	15	2	40
				4/3/2019	50	100	434	6.3	250	75	7.3	12.7	17	14	1	36
				10/7/2019	60	95	446	7.6	250	77	7.7	14.4	15	14	1	37
				4/13/2020	60	104	443	8	300	75	7.4	14.5	17	15	2	37
				10/1/2020	60	108	464	7.9	300	76	7.5	14.4	17	16	1	40
				4/6/2021	63	103	438	7.4	302	78	7.8	13.1	17	15	1.4	38
				10/8/2021	60	108	443	7.8	290	77	7.5	13.3	17	16	2	41
				4/13/2022	60	106	449	8.1	270	76	7.3	12.8	16	16	1	40
				10/4/2022	60	108	432	7.4	280	**77**	6.6	13.1	17	16	2	38
30S/10E-14B2	Sand Spit #3 Deep	LA3	D	3/15/2005	100	3600	30000	8	17000	8500	ND	960	1200	130	34	4300
				10/21/2015	ND	7140	29500	11	24700	10000	ND	530	2830	20	80	4040

Los Osos BMC Water Quality Results - Lower Aquifer Monitoring

Station ID	Well Name	Basin Plan Well ID	Aquifer Zone	Date	HCO3	Total Hardness	Cond	pH	TDS	Cl	NO3-N	SO4	Ca	Mg	K	Na
					mg/l	mg/l	µmhos/cm		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
30S/10E-24C1	GSWC Cabrillo	LA9	D	12/20/2004	64	130	610	7	310	110	4.5	19	22	19	1.6	50
				11/20/2009	60	150	611	7.1	347	130	4.1	22	23	22	1.6	52
				7/24/2014	40	69	339	7.6	240	46	8.4	6	11	10	1	32
				4/22/2015	70	117	530	7.3	320	95	5.5	16	19	17	2	45
				10/5/2015	50	75	349	7.6	270	50	7.6	7	12	11	1	34
				4/26/2016	70	115	499	7	300	90	5.6	16	18	17	2	44
				10/12/2016	70	111	506	7.1	320	93	5.5	15.1	18	16	1	44
				4/10/2017	70	111	490	7	310	89	5.7	15.9	18	16	1	43
				10/12/2017	70	117	484	7	270	89	6	16.3	19	17	2	46
				4/24/2018	70	115	486	7.8	300	90	6.2	16.7	18	17	1	43
				10/9/2018	60	135	477	6.9	280	76	5.8	17.2	21	20	2	50
				4/15/2019	70	112	488	7.1	310	92	5.7	15.6	17	17	2	45
				10/14/2019	no sample (off-line)											
				4/21/2020	300	75.2	674	6.71	370	37	0.2	28.4	3	35	2	42
				10/7/2020	60	102	460	7.4	270	75	6.6	13.1	16	15	1	40
				4/6/2021	63	98.6	443	7.89	287	78	6.8	12.2	16	15	1	39
				10/8/2021	60	112	490	7.7	280	86	6.4	16	17	17	2	44
				4/18/2022	70	126	533	7.23	330	93	6.2	16.2	19	19	2	46
				10/19/2022	70	126	502	7.4	310	**93**	6.5	15.6	19	19	2	48
30S/11E-7Q3	LOCSD 8th St.	LA12	D	11/18/2004	250	270	790	7.5	410	73	ND	39	44	40	2.3	48
				11/19/2009	220	290	782	7.4	465	92	ND	46	46	42	1.9	53
				7/23/2014	290	303	876	7.6	460	91	ND	43	49	44	2	54
				4/21/2015	290	305	897	7.7	500	101	ND	55	48	45	2	59
				10/6/2015	280	298	828	7.4	490	91	ND	46	47	44	2	55
				4/20/2016	190	307	907	7.7	520	91	ND	49	49	45	2	54
				10/11/2016	280	278	827	4.9	490	93	ND	46.2	44	41	2	52
				4/10/2017	300	294	839	7.3	480	91	ND	49.5	47	43	2	54
				10/4/2017	220	305	826	6.5	470	92	ND	45	48	45	2	56
				4/10/2018	300	319	814	7.7	440	93	ND	46.2	52	46	2	56
				10/2/2018	290	283	822	7.3	470	78	ND	50.1	46	41	1	53
				4/9/2019	300	301	844	7.5	480	94	ND	49.7	48	44	2	53
				10/2/2019	290	312	877	8	530	91	ND	50.9	49	46	2	56
				4/16/2020	310	301	883	7.8	500	94	ND	54.7	48	44	2	52
				10/5/2020	300	321	891	7.9	510	89	ND	49.6	51	47	2	57
				4/5/2021	305	297	849	7.7	504	94	ND	54.1	48	43	2	54
				10/6/2021	300	283	874	7.5	510	95	ND	55	46	41	2	51
				4/13/2022	300	276	879	7.4	490	94	ND	51.5	43	41	2	50
				10/4/2022	310	285	839	7.9	500	**94**	ND	51.5	45	42	2	52

Los Osos BMC Water Quality Results - Lower Aquifer Monitoring

Station ID	Well Name	Basin Plan Well ID	Aquifer Zone	Date	HCO3	Total Hardness	Cond	pH	TDS	Cl	NO3-N	SO4	Ca	Mg	K	Na
					mg/l	mg/l	µmhos/cm		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
30S/11E-17E8	So. Bay Obs. Middle	LA22	D	1/14/2005	150	150	440	7.5	290	34	2.2	11	24	22	1.4	28
				11/20/2009	120	160	455	7.3	255	42	4.3	12	25	23	1.3	29
				7/23/2014	150	166	500	7.6	270	43	6.3	10	27	24	2	28
				4/21/2015	150	157	481	7.6	270	49	7.1	13	25	23	1	28
				10/1/2015	120	164	475	7.4	290	44	6.6	10	26	24	1	28
				4/19/2016	150	164	476	6.9	290	45	6.9	12	26	24	1	29
				10/13/2016	140	161	521	7.3	290	46	6.9	11.9	25	24	1	29
				4/13/2017	150	164	466	7.3	300	46	6.7	13.2	26	24	1	29
				10/11/2017	150	168	476	7.7	260	47	7.2	14	26	25	1	29
				4/16/2018	150	165	473	6.4	310	47	6.7	14.2	25	25	1	29
				10/10/2018	150	160	471	7.5	250	43	6.1	15	26	23	1	28
				4/10/2019	180	153	466	7.2	290	46	5.8	13.6	25	22	1	28
				10/9/2019	150	155	485	7.3	270	49	7	14.9	24	23	1	28
				4/14/2020	160	164	482	8	280	48	6.3	14.9	26	24	1	27
				10/6/2020	160	181	506	7.5	340	47	6.7	14.7	28	27	1	30
				4/8/2021	159	154	470	7.5	329	46	5.8	12.5	24	23	1	27
				10/19/2021	170	181	480	7.4	310	41	5.8	14.9	28	27	1	29
				4/20/2022	160	178	518	7.6	320	43	7.4	14.6	27	27	1	29
				10/17/2022	180	213	485	7.4	300	**45**	7	16.5	31	33	2	32
30S/11E-17N10	GSWC So. Bay #1	LA20	C,D,E	Jan 2003	250	--	510	7.1	290	37	ND	21	41	25	1.3	35
				11/20/2009	230	220	638	7.3	357	41	0.5	30	35	33	1.7	37
				7/24/2014	280	232	646	7.7	370	37	0.5	24	37	34	2	41
				4/22/2015	290	234	653	7.4	360	43	0.6	27	36	35	2	42
				10/5/2015	280	227	614	7.2	370	38	0.5	23	35	34	2	41
				4/26/2016	230	227	629	7.1	360	39	0.6	27	35	34	2	40
				10/12/2016	290	221	631	7	370	40	0.6	25.2	34	33	2	40
				4/10/2017	280	227	624	7.2	380	39	0.6	26.7	35	34	2	40
				10/12/2017	260	240	583	6.6	320	41	0.7	27.9	37	36	2	43
				4/24/2018	200	166	515	7.4	330	43	3.2	23.2	27	24	2	31
				10/9/2018	290	273	632	7.2	340	38	0.6	29.2	42	41	3	47
				4/15/2019	200	181	559	7.4	310	42	3.1	21.7	28	27	2	34
				10/14/2019	290	221	626	7.2	380	41	0.7	29	34	33	2	40
				4/21/2020	300	230	705	7	400	50	0.7	26.9	36	34	2	42
				10/7/2020	290	227	654	7.5	350	40	0.7	27	35	34	2	42
				4/6/2021	204	178	529	7.9	329	43	3	21.1	29	26	2	33
				10/7/2021	290	245	633	6.8	340	40	0.7	27.8	37	37	2	43
				4/18/2022	280	242	636	7.4	360	39	0.7	26.6	36	37	2	42
				10/19/2022	300	245	616	7.6	330	**40**	0.7	26.4	37	37	2	43

Los Osos BMC Water Quality Results - Lower Aquifer Monitoring

Station ID	Well Name	Basin Plan Well ID	Aquifer Zone	Date	HCO3	Total Hardness	Cond	pH	TDS	Cl	NO3-N	SO4	Ca	Mg	K	Na
					mg/l	mg/l	µmhos/cm		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
30S/11E-18K8	10th St. Obs. East (Deep)	LA18	E	1/19/2005	260	290	650	7.5	370	33	ND	38	62	33	2.5	28
				11/20/2009	230	220	620	7.5	378	32	ND	40	51	24	1.8	23
				7/24/2014	290	271	647	7.5	380	28	ND	34	56	32	2	27
				4/21/2015	290	265	634	7.7	400	33	ND	39	55	31	2	27
				10/19/2015	230	256	621	7.3	370	29	ND	33	53	30	2	26
				4/20/2016	190	265	700	7.5	390	31	ND	38	55	31	2	26
				10/18/2016	290	256	615	6.8	370	31	ND	35.9	53	30	2	26
				4/12/2017	290	274	616	7.5	450	31	ND	38	57	32	2	27
				10/10/2017	220	271	619	7.8	350	30	ND	35.5	56	32	2	27
				4/17/2018	290	260	625	7.3	390	33	ND	39.9	53	31	2	27
				10/10/2018	290	254	608	7.5	360	31	ND	39.8	54	29	2	26
				4/10/2019	290	245	620	7.6	380	32	ND	37.4	52	28	2	25
				10/9/2019	290	253	647	7.9	390	33	ND	40.5	52	30	2	26
				4/14/2020	290	269	629	7.5	400	33	ND	40.2	55	32	2	26
				10/22/2020	300	247	669	7.5	370	32	ND	38.2	51	29	3	26
				4/12/2021	298	267	621	7.6	389	32	ND	41.2	54	32	2	27
				10/19/2021	300	287	657	7.4	400	32	ND	38.4	59	34	2	28
				4/15/2022	290	257	638	8.3	420	31	ND	36.5	52	31	2	25
				10/10/2022	310	278	613	8.0	400	**33**	ND	39.3	57	33	2	29
30S/11E-18K9	LOCSD 10th St.	LA32	C,D	May 2002	250	--	550	6.9	320	37	0.2	26	31	32	--	39
				11/20/2009	180	160	539	7.2	307	36	1	27	27	24	1.3	32
				7/23/2014	220	190	546	7.7	300	32	1	20	30	28	1	35
				4/21/2015	190	108	504	7.6	270	38	1.6	20	17	16	1	27
				10/6/2015	50	62	248	7.2	190	31	5.9	3	10	9	ND	21
				4/20/2016	130	121	382	7.5	220	32	3.3	12	19	18	1	27
				10/11/2016	200	168	511	6.6	270	36	1.2	21.5	26	25	1	34
				4/10/2017	190	155	461	7.3	270	35	1.9	19.1	24	23	1	31
				10/9/2017	200	168	493	7.6	270	36	1.4	23.1	26	25	1	33
				4/10/2018	50	75.2	256	7.7	150	35	6.5	28.6	12	11	ND	23
				10/2/2018	210	168	492	7.3	270	36	1.3	22	26	25	ND	33
				4/9/2019	200	172	474	7.6	270	34	1.6	21.5	26	26	1	33
				10/2/2019	200	185	531	7.4	310	36	1.4	24.7	28	28	1	35
				4/16/2020	60	72.7	272	8.1	190	35	6	5.4	11	11	ND	20
				10/6/2020	60	68.6	246	8	180	30	4	4.9	11	10	ND	21
				4/5/2021	143	128	390	7.8	247	34	2.1	15.7	20	19	1	27
				10/6/2021	60	68.6	255	7.7	150	30	3.9	5.7	11	10	ND	20
				4/13/2022	70	66.1	262	7.6	150	30	3.8	5.2	10	10	ND	20
				10/6/2022	200	211	461	7.7	260	**38**	1.4	23.5	32	32	2	58

Los Osos BMC Water Quality Results - Lower Aquifer Monitoring

Station ID	Well Name	Basin Plan Well ID	Aquifer Zone	Date	HCO3	Total Hardness	Cond	pH	TDS	Cl	NO3-N	SO4	Ca	Mg	K	Na
					mg/l	mg/l	µmhos/cm		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
30S/11E-18K	GSWC Los Olivos #5	LA39	D	4/15/2019	290	230	619	8.1	350	38	ND	27.4	33	36	2	41
				10/14/2019	300	225	628	7.2	370	37	ND	28.6	34	34	1	41
				4/21/2020	300	236	674	6.9	370	37	0.2	28.4	37	35	2	42
				10/7/2020	300	227	657	7.4	360	37	ND	28.2	35	34	2	43
				4/6/2021	301	226	629	8.0	382	38	ND	25.8	34	34	2	40
				10/8/2021	300	253	638	7.4	360	37	ND	29.3	37	39	2	45
				4/18/2022	250	209	561	7.6	330	34	ND	17.8	31	32	2	34
				10/19/2022	310	236	617	7.6	330	**37**	ND	28	37	35	2	44
30S/11E-18L2**	LOCSD Palisades	LA15	D,E	11/18/2004	220	330	880	7.3	420	120	ND	31	54	48	2.2	40
				11/19/2009	200	590	1460	7.2	890	360	0.4	39	94	86	2	44
			D	7/23/2014	250	293	783	7.8	390	90	0.4	26	48	42	2	40
				4/29/2015	80	78	348	7.4	230	43	5	10	13	11	ND	30
				10/28/2015	230	288	782	7.4	420	104	0.6	29	46	42	ND	36
				4/27/2016	230	264	796	7.3	450	93	0.9	28	43	38	2	43
				10/11/2016	200	221	694	7	380	91	1.7	25.5	36	32	1	35
				10/5/2017	180	306	768	7.6	400	102	0.7	27	50	44	2	40
				4/10/2018	250	311	767	7.3	420	100	0.8	32.4	52	44	2	40
				10/23/2018	250	288	772	7.7	440	83	0.6	30.7	48	41	1	38
				4/9/2019	250	301	774	7.4	460	102	0.8	29.2	48	44	1	38
				11/14/2019	210	303	806	7.8	430	107	0.7	32.9	49	44	2	39
				4/16/2020	260	299	832	7.7	460	109	0.8	32.5	49	43	2	37
				10/5/2020	250	319	841	7.8	450	109	0.7	29.7	52	46	2	41
				4/6/2021	234	290	780	7.7	444	108	1	27.2	47	42	2	38
				10/6/2021	250	295	856	7.3	490	107	0.5	32.8	49	42	2	37
				4/13/2022	250	330	876	7.3	470	116	0.5	30.3	53	48	2	43
				10/4/2022	250	326	885	7.7	610	**138**	0.8	31.2	53	47	2	40

ND = Not Detected

Chloride Metric Wells in Green (13J1 weighted x2); current chloride concentrations in red

*Chloride concentrations at 13J1 can vary seasonally by 100+ mg/l and are affected by well production and borehole leakage, so fluctuations are expected.

**Water from 18L2 affected by wellbore leakage/upper aquifer influence when inactive

Legend and Detection Limits

Constituer	Description	Practical Quantitation Limit*
HCO3	Bicarbonate Alkalinity in mg/L CaCO3	10.0
Total Hardı	Total Hardness in mg/L CaCO3	--
Cond	Electrical Conductance in μmhos/cm	1.0
pH	pH in pH units	--
TDS	Total Dissolved Solids in mg/L	20.0
Cl	Chloride concentration in mg/L	1.0
NO3-N	Nitrate as Nitrogen concentration in mg/L	0.1
SO4	Sulfate concentration in mg/L	2.0
Ca	Calcium concentration in mg/L	1.0
Mg	Magnesium concentration in mg/L	1.0
K	Potassium concentration in mg/L	1.0
Na	Sodium concentration in mg/L	1.0

*where dilution not required

*where dilution not required

FALL 2022 DRAFT