

## 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, August 16, 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 HeimeI (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 HeimeI 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

Los Osos Water Offset Study – County of San Luis Obispo, Planning and Building Department

**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. **2023 Budget Update and Invoice Register**
- b. **Approval of Minutes from June 21, 2023 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. **Program C Modifications**

Recommendation: Receive information and consider removing the deferral of the 3rd Well from Program C or provide alternate direction to staff.

**10. ADJOURNMENT**

**TO:** Los Osos Basin Management Committee

**FROM:** Daniel Heimel, Executive Director

**DATE:** August 16, 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).





**BASIN MANAGEMENT COMMITTEE BOARD OF DIRECTORS**

**Agenda Item 6b: Minutes of the Meeting of June 21, 2023**

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>

<b>Agenda Item</b>	<b>Discussion or Action</b>
<b>1. Call to Order</b>	Chair Zimmer called the meeting to order at approximately 1:30 PM.
<b>2. Roll Call</b>	Daniel Heimel, Executive Director, called roll to begin the meeting. Director Gibson, Director Cesena, Chair Zimmer were present.
<b>3. Pledge of Allegiance</b>	
<b>4. Board Member Comments</b>	<b>Public Comment</b> (3:00) None
<b>5. Special Presentation</b>	None
<b>6. Consent Agenda</b>  <b>6a. 2023 Budget Update and Invoice Register</b>  <b>6b. Approval of Minutes from May 17<sup>th</sup>, 2023 BMC Meeting</b>	<b>Public Comment</b> None  <b>Board Action 6a and 6b</b> (4:00) Approve Consent Agenda. <b>Motion:</b> Director Gibson <b>Second:</b> Director Cesena <b>Ayes:</b> All <b>Nays:</b> None <b>Abstain:</b> None <b>Absent:</b> Director Reineke
<b>7. Public Comments on Items Not Appearing on the Agenda</b>	<b>Public Comment</b> (5:00) Jeff Edwards Becky McFarland
<b>8. Executive Director's Report</b>	<b>Public Comment</b> (13:00) Jeff Edwards Becky McFarland
<b>9. Action Items</b>	
<b>9a. Presentation of Final Draft 2022 Annual Monitoring Report</b>	<b>Public Comment</b> (28:00) Becky McFarland  <b>Board Action</b> (35:00) Approve submission of the Final 2022 Annual Monitoring Report to the Court. <b>Motion:</b> Director Gibson <b>Second:</b> Director Cesena <b>Ayes:</b> All <b>Nays:</b> None <b>Abstain:</b> None <b>Absent:</b> Director Reineke

<p><b>b. Draft 2023 Spring Lower Aquifer Groundwater Basin Monitoring Results</b></p>	<p><b>Public Comment</b> (48:00) Lynette Tornatzky Becky McFarland</p> <p><b>Board Discussion</b> (51:00)</p>
<p><b>c. WRF Study Peer Review Consultant Selection Recommendation</b></p>	<p><b>Public Comment</b> None</p> <p><b>Board Action</b> (59:00) Approve the selection of GSI Water Solutions to provide Peer Review consulting services for the WRF Study.</p> <p><b>Motion:</b> Director Cesena <b>Second:</b> Director Reineke <b>Ayes:</b> All <b>Nays:</b> None <b>Abstain:</b> None <b>Absent:</b> Director Reineke</p>
<p><b>d. Skyline Monitoring Well Design and Construction Management Consultant Recommendation</b></p>	<p><b>Public Comment</b> None</p> <p><b>Board Action 9d</b> (1:10:00) Approve the selection of Cleath-Harris Geologist to provide Monitoring Well Design and Construction Management consulting services for the Skyline Monitoring Well.</p> <p><b>Motion:</b> Chair Zimmer <b>Second:</b> Director Gibson <b>Ayes:</b> All <b>Nays:</b> None <b>Abstain:</b> None <b>Absent:</b> Director Reineke</p>
<p><b>e. Program C Adaptive Management Modifications (Re-inclusion of 3rd Well)</b></p>	<p><b>Public Comment</b> (1:24:00) Becky McFarland</p> <p><b>Board Action 9e</b> (Continued to a future meeting because the connection to the online meeting platform was lost)</p>
<p><b>10. Adjournment</b></p>	<p>Meeting adjourned at approximately 3:06 PM. The next regularly scheduled meeting for Wednesday, July 19, 2023.</p>

**TO:** Los Osos Basin Management Committee

**FROM:** Dan Heimel, Executive Director

**DATE:** August 16, 2023

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

## Recommendations

Staff recommends that the Basin Management Committee (BMC) 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 and sections of the report that have not had any recent or anticipated updates have been removed.

## 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

No recent or planned presentations

## Funding and Financing Programs to Support Basin Plan Implementation

**WRFP Grant:** On February 11<sup>th</sup>, 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). Los Osos CSD was notified of the award of the grant in January 2023 and all the required documents were signed and fully executed. On May 17<sup>th</sup>, 2023 the BMC approved Cleath-Harris Geologist (CHG) to complete the WRFP Study and the WRFP Study is underway.

BMC Staff will continue to monitor potential additional grant funding opportunities and bring information on these opportunities to the BMC for consideration as they become available.

## Status of BMC Initiatives

**DWR AEM Survey:** On 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 Spring 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. The data collected during the AEM survey will improve DWR and the BMC’s understanding of Los Osos Basin hydrogeology and seawater intrusion. The AEM Survey for the San Luis Obispo and Santa Barbara

County basins was initiated on April 26<sup>th</sup>, 2023, however, due to weather conditions and the need to support emergency flood response efforts elsewhere in the State, DWR was not able to complete the survey of the Los Osos Basin. DWR has indicated that they will return in Fall 2023 to complete the survey. 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 27<sup>th</sup>, 2021 Meeting, the BMC unanimously approved an updated Sustainable Yield estimate of 2,380 Acre-Feet per Year (AFY) for Calendar Year 2022 and at its October 19<sup>th</sup>, 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 Broderon 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 CHG and County are currently working to redact confidential information from the database.

**Basin Monitoring Program Improvement:** BMC Staff are working on permitting and construction of a new monitoring well at the eastern end of Skyline Drive in 2023. At its June 21<sup>st</sup>, 2023 Meeting the BMC approved CHG to provide hydrogeologic consultant services for the Well Design and Construction Management for the Skyline Monitoring Well. On July 27<sup>th</sup>, 2023 the Los Osos CSD released the bid package for the Skyline Monitoring Well and bids are due August 24<sup>th</sup>, 2023.

**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. BMC Staff are currently working on construction of a new monitoring well at the eastern end of Skyline Drive. This new well could be incorporated into the updated Basin Metrics. Once the new monitoring well is completed, recommendations on potential modifications to the Basin Metrics will be brought to the BMC for their consideration.

**Transient Groundwater Model:** See update under WRFP Grant above.

**Lower Aquifer Nitrate Investigation:** On October 19<sup>th</sup>, 2022 the BMC authorized Calendar Year (CY) 2022 funding to perform additional Nitrate Source Investigation to better understand the source of nitrate impacting the S&T Mutual Water Company's LA8 Well. However, due to the inability to obtain well owner permission to sample the desired wells, much of that work was not completed in 2022. Subsequently, the Regional Water Quality Control Board (RWQCB) staff reviewed the investigation

information and findings available to date and provided a presentation to the BMC at its March 15<sup>th</sup>, 2023 Meeting. BMC Party Staff is working with RWQCB Staff to identify potential additional investigations to help better inform the sources of the nitrate in the LA8 Well and additional information will be provided to the BMC, once available.

**Program C Adaptive Management:** At its April 20<sup>th</sup>, 2022 Meeting, the BMC approved CHG to evaluate the re-inclusion of the 3<sup>rd</sup> Well into Program C. CHG completed the evaluation of the anticipated increase to the Sustainable Yield that the 2<sup>nd</sup> and 3<sup>rd</sup> Program C Wells would provide utilizing the new criteria for calculating the Sustainable Yield approved by the BMC at their October 27<sup>th</sup>, 2021 Meeting. The results of this evaluation were presented to the BMC at its March 15<sup>th</sup>, 2023 Meeting and agenda Item 9a of this agenda packet includes a recommendation to remove the deferral of the 3<sup>rd</sup> Well from Program C.

## Status of Basin Plan Implementation and Funding Plans

The BMC has requested an integrated funding plan for project implementation and BMC monitoring and administration. At its October 27<sup>th</sup>, 2021 Meeting, the BMC approved a proposal from SCI Consulting Group to provide an updated funding options analysis and assessment evaluation. SCI prepared a draft Technical Memorandum (TM), that includes evaluation of funding alternatives and findings from the funding model. The draft TM was shared with the BMC at the July 27<sup>th</sup>, 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, timelines and costs for establishing a more formal organization and funding structure. A roadmap for how the BMC could implement a special tax was provided at the October 19<sup>th</sup>, 2022 BMC 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. BMC Staff are evaluating different organization and funding strategies to achieve the desired objectives and will bring back additional information/recommendations to the BMC when complete.

## Land Use Planning Process Update

### Guide to Planning Information for Development in Los Osos:

This website is intended to provide relevant planning information and an outline of what type of development is currently allowed within Los Osos:

<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:

- Types of permit applications 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. 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 was completed and published on June 30<sup>th</sup>, 2023. The Planning & Building Department will give a presentation on the study results at the August 16<sup>th</sup> BMC public meeting and the August 24<sup>th</sup> Los Osos Community Advisory Council public meeting.

**Los Osos Community Plan:**

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

**LOCP 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 (BOS).

**Los Osos Habitat Conservation Plan (HCP):**

On August 2<sup>nd</sup>, 2023 the Planning & Building Department submitted the Los Osos Communitywide Habitat Conservation Plan (LOHCP) to the U.S. Fish and Wildlife Service (USFWS) for approval. The USFWS will review the LOHCP and determine whether to issue an Incidental Take Permit for impacts to Morro Shoulderband Snail, Morro Bay Kangaroo Rat, Morro Manzanita, and Indian Knob Mountainbalm species to the County. In the coming months, the Department will be going to the Board of Supervisors to ask for a General Fund loan to begin implementing the LOHCP through land acquisition and habitat restoration projects. This will allow the Department to accrue LOHCP credits and that can be issued as "certificates of inclusion" to mitigate against infrastructure and development project habitat impacts.

**Coastal Zone Accessory Dwelling Unit (ADU) Ordinance:**

On April 4th, 2023, the County BOS approved the Coastal Commission’s suggested modifications. The suggested modifications included an action to remove ADUs as an allowable use in Los Osos. The Coastal Commission certified the BOS-approved modifications on May 11<sup>th</sup>, 2023.

Please use the following link to access the recorded April 4<sup>th</sup>, 2023 BOS Meeting:

<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 Water Recycling Facility Project Update**

The following table summarizes flows from the LOWRF based on the available data.

**LOWRF Wastewater and Recycled Water Flows (Acre Feet)**

Year	Month	Influent	Broderson	Bayridge	Sea Pines	Ag Users	Effluent
2023	Jan	46.78	50.82	1.45	0.03	0.00	55.24
2023	Feb	41.07	41.90	1.10	1.26	0.00	42.92
2023	Mar	62.28	52.37	1.19	0.02	0.00	53.58
2023	Apr	55.94	42.44	1.16	2.35	0.14	46.09
2023	May	55.07	40.84	1.23	0.21	0.34	42.62
2023	Jun	50.97	21.81	1.23	18.31	0.38	41.74
2023	Jul	53.67	40.14	1.32	4.11	0.46	47.05
2023	Aug						
2023	Sept						
2023	Oct						
2023	Nov						
2023	Dec						
Total		261.14	228.37	6.13	3.87	0.48	240.45

**LOWRF Project Updates:**

- The County is preparing recycled water connection plans for the four school sites in Los Osos and the Los Osos Community Park. The County has 95% plans for Los Osos Middle School and the 100% plans Los Osos Community Park and anticipates having all the site plans completed in August 2023. The County will submit the final plans to the State for review and approval. Contracts between the County, the water purveyors and the San Luis Coastal Unified School

District are required prior to going out to bid for construction. Historically, the priority site for the Basin has been Los Osos Middle School and the connection will be dependent on contract negotiations and available funding. The County has received some funding through the ARPA grant program.

- The Broderson Flow Meter Project was awarded by the Board of Supervisors and the notice to proceed to the contractor will be given in August. The project includes a flow meter and two isolation gate valves for maintenance. The current method for calculating the volume of water at Broderson Leach Field is a calculation based on other meters in the recycled water distribution system. The flow meter will improve the accuracy of water discharged here and will be connected to the LOWRF's SCADA system through the existing local control panel. The project is funded by ARPA grant money.
- The County has completed the Recycled Water Distribution Model that evaluates existing and future uses within the recycled water system. The model identified setpoints for the future effluent pump station VFDs at the LOWRF that will result in energy savings.
- The County is working with a consultant for preparing design plans for installing VFDs on the LOWRF's effluent pumps. This will allow the pumps to ramp up and down based on the need in the recycled water distribution system and the plant return water supply. Currently the pumps only have the capability to run at one speed and that leads to increased wear and tear on the motor and impellers. The VFDs will be set to specific pressure setpoints that will be determined using the recycled water distribution model. The expected outcome from installing the VFDs is decreased energy consumption and recirculated water within the system.
- The County is working with PG&E and AESC on an energy audit that reviews existing energy use and operations to identify potential energy savings. The final Energy Action Plan identified two projects that could reduce energy usage at the site. A Project Feasibility Study is underway to evaluate the selected project. Implementation of the chosen project will be in Winter 2023.

**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.

## Water Conservation Update

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

## Sustainable Groundwater Management Act (SGMA)

**SGMA Overview:** SGMA took effect on January 1, 2015.<sup>1</sup> 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.<sup>2</sup>

**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<sup>3</sup> and in critical conditions of overdraft<sup>4</sup>
- 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<sup>3</sup>

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

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<sup>1</sup> 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

<sup>2</sup> 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.

<sup>3</sup> 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.

<sup>4</sup> 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
<b>Program A</b> – Shift groundwater production from Lower Aquifer to Upper Aquifer	Water Systems Interconnection	LOCS D/ GSWC	NA	NA	NA	NA	<b>Completed</b>
	Upper Aquifer Well (8 <sup>th</sup> Street)	LOCS D	NA	Fully Funded	NA	\$307,000	<b>Completed</b>
	South Bay Well Nitrate Removal	LOCS D	NA	NA	NA	NA	<b>Completed</b>
	Palisades Well Modifications	LOCS D	NA	NA	NA	NA	<b>Completed</b>
	Blending Project (Skyline Well)	GSWC	NA	NA	NA	NA	<b>Completed</b>
	Water Meters	S&T	NA	NA	NA	NA	<b>Completed</b>
<b>Program B</b> - Shift groundwater production from Lower Aquifer to Upper Aquifer	LOCS D Wells (Upper Aquifer)	LOCS D		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	LOCS D/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.
<b>Program C</b> - 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	<b>Completed</b>
	Expansion Well No. 2 (Lower Aquifer)	LOCS D		LOCS D	TBD	BMP: \$2.5 mil	<u>The well construction is complete and the water transmission main and well equipping design and construction activities are currently underway. Completion of all phases of the project is estimated to occur in June 2024.</u>
	Expansion Well 3 (Lower Aquifer) and LOVR Water Main Upgrade	GSWC/LOCS D		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.
<b>Program D</b> - Shift production within the Lower Aquifer from the Western Area to the Eastern Area of the Basin							Currently being considered for deferment through Adaptive Management. BMC to review on an annual or semi-annual basis.
<b>Program M</b> – Groundwater Monitoring Plan	New Zone D/E lower aquifer monitoring well in Cuesta by the Sea	All Parties	NA	NA	NA	NA	<b>Completed</b>

Program Name	Project Name	Parties Involved	BMC Budgeted Amount	Funding Status	Anticipated Planning/Pre-Construction Cost	Anticipated Capital Cost	Status/Notes
Program U - Urban Water Reinvestment Program	Creek Discharge Program	All Parties				TBD	These activities are currently on hold.
	8 <sup>th</sup> and El Moro Urban Storm Water Recovery Project	All Parties				TBD	These activities are currently on hold.

**TO:** Los Osos Basin Management Committee

**FROM:** Dan Heimel, Executive Director

**DATE:** August 16, 2023

**SUBJECT:** Item 9a – Program C Modifications

## Recommendations

Receive information and consider removing the deferral of the 3rd Well from Program C or provide alternate direction to staff.

## Discussion

The 2015 Basin Plan included three (3) wells in Program C to shift Lower Aquifer Pumping from the western area to the central areas of the Los Osos Basin (Basin) to reduce the threat of seawater intrusion. On August 30<sup>th</sup>, 2018, the Basin Management Committee (BMC) received the Los Osos Basin Plan Metric Trends Review and Infrastructure Program C Evaluation Technical Memorandum (CHG, 2018), which recommended the deferral of the 3<sup>rd</sup> Program C Well. Based on estimates of demand and the Sustainable Yield at that time it was anticipated that the 2<sup>nd</sup> and 3<sup>rd</sup> Program C wells were not needed to achieve the Basin Yield Metric target of 80 (i.e. where the estimated Basin pumping equals 80% or less than the estimated Sustainable Yield for the Basin). Based on these findings, the BMC made the determination to defer the 3<sup>rd</sup> Well from Program C and retain the 2<sup>nd</sup> well to account for other considerations, including water system reliability, drought protection and recycled water reuse.

In 2021, the BMC updated the methodology for estimating the Sustainable Yield for the Basin to incorporate updated hydrology or rainfall data, characterize the Broderson Mound as being 50% developed and modify the seawater intrusion criteria to limit it at its current extent, see the October 27<sup>th</sup>, 2021 BMC Agenda Packet for additional detail. Utilizing the updated methodology, the BMC estimated and unanimously approved a Sustainable Yield estimate of 2,380 Acre-Feet for Calendar Year 2022 and subsequently approved that same estimate for 2023. While this Sustainable Yield estimate is greater than current estimates of groundwater pumping in the Basin (~2,000 Acre-Feet per Year ([AFY])), the target for Basin pumping, established during the development of the Basin Plan, is 80% of the Sustainable Yield or 1,904 AFY to account for uncertainty and reduce degradation from seawater intrusion. The estimate for groundwater pumping in the Basin in 2022 is 2,010 AF, which is lower than the estimated Sustainable Yield, but corresponds to a Basin Yield Metric of 84 and indicates that pumping is exceeding the target established in the Basin Plan.

To achieve a target ratio of 80 or less between the estimated production in the Basin and the Sustainable Yield estimate, additional water conservation measures, further implementation of additional Basin Plan Programs, enhanced use of recycled water and/or importation of supplemental water supplies are needed under current conditions. At its April 20<sup>th</sup>, 2022 Meeting, the BMC approved CHG to evaluate the re-inclusion of the 3rd Well into Program C. CHG completed the evaluation of the

anticipated increase to the Sustainable Yield that the 2<sup>nd</sup> and 3<sup>rd</sup> Program C Wells would provide utilizing the new criteria for calculating the Sustainable Yield and presented the findings in the attached November 11<sup>th</sup>, 2022 Technical Memorandum.

As discussed in the Technical Memorandum, changing the methodology for calculating the Sustainable Yield for the Los Osos Basin in 2021 significantly lowered the current estimate of Sustainable Yield (2,380 AFY) from the 2019 estimate of 2,760 AFY. This reduction and the impact on the Basin Yield Metric warrants a re-evaluation of the deferral of the 3<sup>rd</sup> Well from Program C, which was approved in 2018 when the Sustainable Yield estimate, utilizing the previously approved methodology, was significantly higher.

The updated Program C evaluation predicts that construction of the 2<sup>nd</sup> Program C Well would allow the Basin to reach the Basin Yield Metric Target of 80. However, this is based on assumptions that demands does not increase and that the Broderson Mound fully develops. Construction of a 3<sup>rd</sup> Program C well is predicted to further increase the Sustainable Yield for the Basin and assist the BMC in achieving and/or exceeding its target of a Basin Yield Metric of 80 or groundwater production equal to or less than 80% of the Sustainable Yield estimate. Due to uncertainty regarding future demands, the development of the Broderson Mound and climactic changes that could impact the sustainable yield for the Basin, BMC Staff recommends that the BMC remove the deferral of the 3<sup>rd</sup> Well from Program C to improve the water supply reliability for the community of Los Osos.

## Attachments

1. Draft Los Osos Basin Sustainable Yield Update for Program C Wells with Adaptive Method Technical Memorandum, CHG November 2022

# DRAFT

Cleath-Harris Geologists, Inc.  
75 Zaca Lane, Suite 110  
San Luis Obispo, CA 93401  
(805) 543-1413



## DRAFT Technical Memorandum

**Date:** November 11, 2022

**From:** Spencer Harris, HG 633

**To:** Dan Heimel, P.E., Executive Director  
Los Osos Basin Management Committee

**SUBJECT: Los Osos Basin Sustainable Yield Update for Program C Wells with Adaptive Method.**

Dear Mr. Heimel:

As requested, Cleath-Harris Geologists (CHG) has updated the estimated sustainable yield of the Los Osos Basin (Basin) with Program C Expansion Wells in place. The purpose of the update is to apply the Adaptive Method for estimating Basin sustainable yield that was approved by the Los Osos Basin Management Committee (BMC) in 2021<sup>1</sup>.

### Background

Los Osos Basin Plan (LOBP) Program C includes a set of infrastructure improvements that would allow the water purveyors to shift some groundwater production within the Lower Aquifer from the Western Area to the Central Area. Groundwater production from the Central Area generally results in less seawater intrusion than the same amount of production from the Western Area, which increases the sustainable yield of the Basin. Program C originally consisted of three Expansion Wells located on the eastern side of the Central Area, and associated pipelines. Implementation of Program C was projected to have a direct, beneficial impact on mitigating seawater intrusion<sup>2</sup>.

The LOBP estimated that, without supplemental water, the existing population scenario would require 2,230 acre-feet per year (AFY) of groundwater to meet Basin demand (LOBP Table 46). In recent years, estimated Basin water demand has declined from 2,560 acre-feet in 2013 to 2,000 acre-feet in 2021<sup>3</sup>. As a result of significantly lower water demand for the existing population, a reduction from three to two Expansion Wells for Program C was recommended in 2019<sup>4</sup>. The first Expansion Well had been constructed in 2016, and alternate sites for the second Expansion Well were evaluated in 2020<sup>5</sup>.

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<sup>1</sup> Los Osos BMC meeting, October 27, 2021, Agenda Item 8a – Sustainable Yield Methodology Review and Recommendations (reprinted in 2021 Annual Monitoring Report, Appendix A).

<sup>2</sup> ISJ, Los Osos Basin Plan Update, January 2015

<sup>3</sup> CHG, Los Osos Basin Plan Groundwater Monitoring Program, 2021 Annual Monitoring Report, June 2022

<sup>4</sup> CHG, Los Osos Basin Plan Metric Trends Review and Infrastructure Program C Evaluation, February 28, 2019.

<sup>5</sup> CHG, Los Osos Basin Plan Program C Expansion Well No. 2 Sites Alternatives Update, February 19, 2020.



## **Sustainable Yield Methodology**

Sustainable yield is determined for a given set of basin infrastructure in place by using the Basin model to determine the maximum amount of groundwater extractions that may occur with a stable seawater intrusion front (no further inland advance) and with no active purveyor well producing water with chloride concentrations above 250 mg/L. The Historical Method does not place any restriction on where the seawater front stabilizes, while the Adaptive Method restricts intrusion to the current (2021) extents.

Both the Adaptive Method and the Historical Method incorporate updated maximum production capacities for individual purveyor wells, along with minimum production allowances for selected wells, and a long-term average precipitation value of 17.3 inches per year. The Adaptive Method reduces the estimated sustainable yield of the Basin, compared to the Historical Method, and both methods reduce the estimated sustainable yield, compared to the reported LOBP values.

For example, the estimated Sustainable Yield<sub>2022</sub> would be 2,760 acre-feet per year (AFY) using the Historical Method with the original maximum purveyor well production capacities and a long-term average precipitation of 17.5 inches, as approved during LOBP preparations. Using the Historical Method with updated maximum production capacities, minimum production allowances, and slightly lower long-term precipitation, the estimated Sustainable Yield<sub>2022</sub> declines to 2,650 AFY. Using the Adaptive Method, which also incorporates maximum production capacities, minimum production allowances, and slightly lower long-term precipitation, the estimated Sustainable Yield<sub>2022</sub> declines to 2,510 AFY. A further reduction in Sustainable Yield<sub>2022</sub> to 2,380 AFY was approved by the BMC based on 50 percent development of the Broderson mound<sup>6</sup>.

## **Summary of Program C Well Sites**

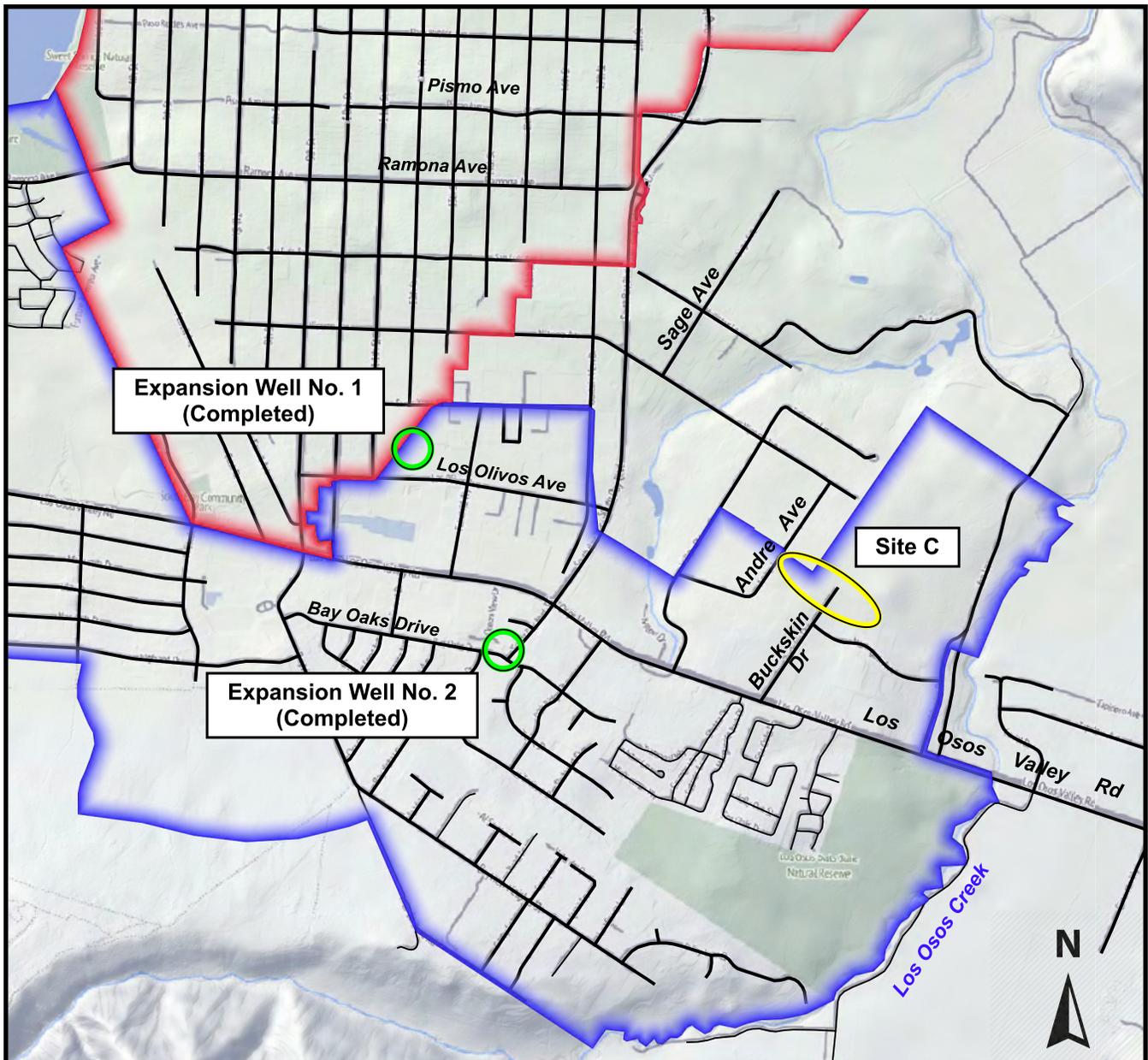
General areas for the three Program C Expansion Wells were described in the LOBP (pages 239-240). Expansion Well No. 1 was originally planned in the vicinity of Buckskin Avenue north of Los Osos Valley Road and within the Golden State Water Company (GSWC) service area (Site C on Figure 1). Expansion Well No. 1 was relocated to Los Olivos Avenue and GSWC constructed a new Lower Aquifer well there in 2016 (Figure 1).

The Los Osos Community Services District (LOCSO) was tasked with developing Expansion Well No. 2, and selected Site E (Bay Oaks Drive; Figure 1) for their new well. The Bay Oaks well was recently complete and is scheduled to be active in 2024, following pipeline construction.

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<sup>6</sup>Los Osos BMC meeting, October 27, 2021, Agenda Item 8a – Sustainable Yield Methodology Review and Recommendations (reprinted in 2021 Annual Monitoring Report, Appendix A).

# DRAFT



Base Image: Stamen-Terrain

0 750 1,500 2,250 3,000 ft



Scale: 1 inch ≈ 1,500 feet

### Explanation

 Completed Expansion Well Site

 Potential Expansion Well Site

### Water Systems

 Golden State Water Company - Los Osos

 Los Osos CSD

Figure 1  
Expansion Well Locations  
Los Osos Groundwater Basin  
Program C Update

Cleath-Harris Geologists



As mentioned, the third Program C well appeared unnecessary in 2019 due to significant reductions in the projected water demand for the existing population scenario. However, this recommendation was based on an estimated sustainable yield of 2,760 AFY<sup>7</sup>. The Sustainable Yield<sub>2022</sub> estimate adopted by the BMC, based on the Adaptive Method, is substantially lower than the 2019 estimate, and a third Program C well may now be appropriate.

Several locations for Expansion Well No. 2 were evaluated by the LOCS D during the project, and the two highest ranking sites were Site C and Site E (Bay Oaks). Site C had a greater potential for Basin sustainable yield benefit, but Site E was ultimately selected due to more favorable site access, well constructability, environmental constraints, opportunity for Upper Aquifer development at the site in the future, and other considerations<sup>8</sup>. For the purposes of this Program C update, Site C is assumed to be the location for a third Expansion Well, if completed (Figure 1). A brief summary of Site C follows:

SITE C - Vicinity of Andre Avenue and Buckskin Avenue, equivalent to the original location identified for Expansion Well No. 2 in the LOBP. There are a few parcels that may be considered for Site C. Due to multiple private wells in the proximity, a well survey and groundwater impacts evaluation was performed for the site<sup>9</sup>. Site C is expected to meet or exceed the minimum production objective of 200 AFY.

### **Basin Sustainable Yield Update**

Table 1 presents the updated Basin sustainable yield estimates for Program C wells in place and using the Adaptive Method.

<b>Table 1 – Updated Basin Sustainable Yield Estimates for LOBP Program C</b>		
<b>Program C Expansion Well Scenario</b>	<b>Total Expansion Well Production (AFY)</b>	<b>Estimated Sustainable Yield using Adaptive Method (AFY)*</b>
Well No. 1 only	150	2,510
Wells No. 1 and No. 2	300	2,540
Wells No. 1 No. 2, and No. 3	450	2,610

\*with the Broderson mound fully developed and Expansion Well No. 3 at Site C

As calculated from Table 1 results, the benefit to the Basin sustainable yield of adding the second Program C Expansion Well is estimated at 30 AFY, and adding a third Expansion Well at Site C

<sup>7</sup>CHG, Los Osos Basin Plan Metric Trends Review and Infrastructure Program C Evaluation, February 28, 2019

<sup>8</sup>LOCS D Board Meeting, November 21, 2020, Agenda Item 2A – Program C Site Selection.

<sup>9</sup>CHG, DRAFT Well Survey and Groundwater Impacts Evaluation related to Site C Expansion Well, Los Osos Groundwater Basin, August 27, 2018.



is estimated at 70 AFY (total of 100 AFY added sustainable yield). Other observations related to Program C wells are summarized below.

- The updated Basin sustainable yield with all Program C wells in place is estimated at 2,610 AFY, compared to an estimated 3,000 AFY reported in the LOBP. This decline in sustainable yield is due to:
  - Restrictions on further inland movement of the seawater intrusion front (the Adaptive Method).
  - Revised maximum production rates and minimum allowances for individual purveyor wells.
  - Changes in Expansion Well locations.
- The incremental increase to the Basin sustainable yield is greatest when adding the third Expansion Well at Site C, which is closer to the Los Osos Creek valley, compared to the other two Expansion Wells (Figure 1). Moving Lower Aquifer production away from the coast and closer to the Los Osos Creek valley results in greater recharge to the Lower Aquifer from the creek valley, and increases Basin sustainable yield.
- A third Expansion Well at Site C would have a minimum production objective of 200 AFY, which is the maximum production for the well assumed in sustainable yield scenarios. If a greater production capacity is available, the estimated sustainable yield of the Basin will increase. For example, increasing the production capacity of a third expansion well by 50 AFY results in a 20 AFY increase to the estimated Basin sustainable yield.
- Assuming Basin groundwater production of 2,000 AFY (the average production over the last five years), and the Broderson mound fully developed, the Basin Yield Metric is 79 with Program C wells No. 1 and No. 2 in place, which meets the LOBP target of BYM 80 or less. Adding a third Expansion Well at Site C will lower the Basin Yield Metric from 79 to 77 (an improvement).