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, September 29, 2021**. Based on the threat of COVID-19 as reflected in the Proclamations of Emergency issued by both the Governor of the State of California and the San Luis Obispo County Emergency Services Director, as well as the Governor's Executive Orders N-08-21 and N-15-21, issued on June 11, 2021 and September 20, 2021 respectively, relating to the convening of public meetings in response to the COVID-19 pandemic, this meeting will be conducted as a phone-in/web-based meeting only. There will be no physical meeting location for this BMC Meeting. Members of the public can participate via phone or by logging into the web-based meeting.

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 dheimel@wsc-inc.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

Additional information on how to submit Public Comment is provided on page 3 of this Agenda.

<u>Directors</u>: 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 and Executive Order N 29-20, 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 dheimel@wsc-inc.com.

BASIN MANAGEMENT COMMITTEE BOARD OF DIRECTORS AGENDA

- 1. CALL TO ORDER
- 2. ROLL CALL
- 3. 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.

4. SPECIAL PRESENTATION

None

5. 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. Approval of Minutes from July 21, 2021 BMC Meeting
- b. Approval of Minutes from June 16, 2021 BMC Meeting
- c. 2021 Budget Update and Invoice Register

6. 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.

7. EXECUTIVE DIRECTOR'S REPORT

None

8. ACTION ITEMS

a. Draft Spring 2021 Lower Aquifer Groundwater Basin Monitoring Results

Recommendation: Receive an update on early findings for the Spring 2021 Lower Aquifer Groundwater Monitoring results.

b. Sustainable Yield_x Methodology Review and Recommendations

Recommendation: Receive information from BMC Staff's review of the Sustainable Yield $_{\rm x}$ methodology and provide direction on Staff's recommendations regarding: 1) revisions to the methodology; and 2) the procedure / timeline by which the Sustainable Yield will be calculated each year.

 Consider authorizing continuation of remote teleconferencing of public meetings based on findings that COVID-19 remains a serious risk to public health and safety and use of video at future remote BMC Meetings

Recommendation: Staff recommends that the BMC: 1) adopt a resolution authorizing the BMC to continue remote teleconferencing of public meetings based on findings that COVID-19 remains a serious risk to public health and safety; and 2) provide input on the use of video at future remote BMC Meetings.

9. ADJOURNMENT

Notice of Meeting LOS OSOS GROUNDWATER BASIN, BASIN MANAGEMENT COMMITTEE

CONFERENCE CALL/WEBINAR ONLY

Wednesday, Sep. 29, 2021 at 1:30 PM

Important Notice Regarding COVID-19: Based on guidance from the California Department of Public Health and the California Governor's Office, in order to minimize the spread of the COVID-19 virus, please note the following:

- 1. The meeting will only be held telephonically and via internet via the number and website link information provided on the agenda. After each item is presented, Committee Members will have the opportunity to ask questions. Participants on the phone or on the computer will then be provided an opportunity to speak for 3 minutes as public comment prior to Committee deliberations and/or actions or moving on to the next item. If a participant wants to provide public comment on an item they should select the "Raise Hand" icon on the Zoom Online Meeting platform or press *9 if on the phone. The meeting host will then unmute the participant when it is their turn to speak and allow them to provide public comment.
- 2. The Committee's agenda and staff reports are available at the following website: https://www.slocounty.ca.gov/Departments/Public-Works/Committees-Programs/Los-Osos-Basin-Management-Committee-(BMC).aspx
- 3. If you choose not to participate in the meeting and wish to make a written comment on any matter within the Committee's subject matter jurisdiction, regardless of whether it is on the agenda for the Committee's consideration or action, please submit your comment via email or U.S. Mail by 5:00 p.m. on the day prior to the Committee meeting. Please submit your comment to Dan Heimel at dheimel@wsc-inc.com. Your comment will be placed into the administrative record of the meeting.
- 4. If you choose not to participate in the meeting and wish to submit verbal comment, please call (805) 457-8833 x104 and ask for Dan Heimel. If leaving a message, state and spell your name, mention the agenda item number you are calling about and leave your comment. The verbal comments must be received by no later than 9:00 a.m. on the morning of the noticed meeting and will be limited to 3 minutes. Every effort will be made to include your comment into the record, but some comments may not be included due to time limitations.

Mailing Address: Attn: Dan Heimel Basin Management Committee 2122 9th St. Suite 110 Los Osos, CA 93402

All Americans with Disabilities Act (ADA) accommodations shall be promptly reviewed and resolved. Persons who require accommodations for any audio, visual or other disability in order to review an agenda, or to participate in the meeting of the Basin Management Committee per the ADA, are encouraged to request such accommodation 48 hours in advance of the meeting from Dan Heimel at (805) 457-8833 x104.

BASIN MANAGEMENT COMMITTEE BOARD OF DIRECTORS

Agenda Item 5a: Minutes of the Meeting of July 21, 2021

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	Chairperson Ochylski called the meeting to order at 1:30 pm.
2. ROLL CALL	Daniel Heimel, Executive Director, called roll to begin the meeting. Chairperson Marshall
	Ochylski, Director Charlie Cote, Director Bruce Gibson and Director Mark Zimmer were
	present.
3. BOARD MEMBER	Board Comment
COMMENTS	Cote: Recommends BMC continues to meet on Zoom due to covid risk.
4. Special Presentation	None.
5. CONSENT AGENDA	
5a. Approval of Minutes of	Review of minutes from June 16, 2021 Meeting and 2021 Budget Update and Invoice
June 16, 2021 Meeting	Register.
	Public Comment
	Patrick McGibney
	Babak Naficy
5b. Approval of 2021	Larry Raio
Budget Update and Invoice	Linde Owen
Register	
	Board Action
	The Board of Directors approved pulling Item 5a Minutes of June 16, 2021, to revise as
	action minutes with heading and reintroduce at the next meeting; and Approved Item 5b
	2021 Budget Update and Invoice Register.
	Ayes: Chairperson Ochylski, Director Cote, Director Gibson, and Vice Chairperson
	Zimmer
	Nays: None
	Abstain: None
	Absent: None
6. PUBLIC COMMENTS ON	Public Comment
ITEMS NOT APPEARING ON	Lindi Doud
THE AGENDA	Larry Raio
	Deborah Howe
	Eve Gruntfest
	Linde Owen
	Jeff Edwards
	Patrick
	Babak Naficy

7. EXECUTIVE DIRECTOR'S	Dublic Comment
	Public Comment
REPORT	Jeff Edwards
	Linde Owen
	Deborah Howe
	Board Direction
	Committee received and files the Executive Director's Report.
8. ACTION ITEMS	
9a Baquiraments	Pacamandation: Passive information on requirements framework and methodology
8a. Requirements, Framework and	Recommendation : Receive information on requirements, framework, and methodology
	for the SJ Required Annual Report for the Los Osos Basin and provide direction to Staff.
Methodology for	Dublic Commont
Preparation of SJ Required	Public Comment
Annual Report	Anonymous (online)
	Patrick
	Babak Naficy
	Keith Weimer
	Jeff Edwards
	Larry Raio
	Linde Owen
	Board Direction
	1) Change proposed Sustainable Yield Update Procedure to include evaluation of
	Sustainable Yield on an annual basis; 2) clarify process for how updated Sustainable Yield
	estimate will be incorporated into Annual Monitoring Report preparation process; 3) and
	begin evaluation of the Sustainable Yield estimate and bring back recommendations to
	the BMC
	the Bivic
8b. Update on Status of	Recommendation: Receive report and provide input to staff on future direction.
Basin Plan Programs	
	Public Comment
	Jeff Edwards
	Keith
	Patrick
	Linde Owen
	Dogud Astion.
	Board Action:
	None.
9. ADJOURNMENT	Meeting adjourned at approximately 4:20 PM.
J. ADJOURINILINI	The ways regularly school and reacting in Medicarday, Court 15, 2024 at 4:20 PM

The next regularly scheduled meeting is Wednesday, Sept. 15, 2021 at 1:30 PM.

BASIN MANAGEMENT COMMITTEE BOARD OF DIRECTORS

Agenda Item 5b: Minutes of the Meeting of June 16, 2021

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	Chairperson Ochylski called the meeting to order at 1:30 pm.
2. ROLL CALL	Daniel Heimel, Executive Director, called roll to begin the meeting. Chairperson Marshall Ochylski, Director Charlie Cote, Director Bruce Gibson and Director Mark Zimmer were present.
3. BOARD MEMBER	Board Comment
COMMENTS	None.
5. CONSENT AGENDA	
5a. Approval of Minutes of	Review of minutes from May 19, 2021 Meeting, March 25 th , 2021 Meeting and 2021
May 19, 2021 Meeting	Budget Update and Invoice Register.
	Public Comment
5b. Approval of Amended Minutes of March 25, 2021	None
Meeting	Board Action
	The Board of Directors approved Consent Agenda.
5c. Approval of 2021 Budget	
Update and Invoice Register	Ayes: Chairperson Ochylski, Director Cote, Director Gibson, and Vice Chairperson
	Zimmer
	Nays: None
	Abstain: None
	Absent: None
6. PUBLIC COMMENTS ON	Public Comment
ITEMS NOT APPEARING ON	Jeff Edwards
THE AGENDA	Linde Owen
	Patrick McGibney
	Babak Naficy
7. EXECUTIVE DIRECTOR'S	Public Comment
REPORT	None.
	Board Direction
	Committee received and files the Executive Director's Report.
	·

8. ACTION ITEMS 8a. Final Draft 2020 Annual **Recommendation**: Receive the Final 2020 Annual Report and authorize submission to the Report Court or provide alternate direction to staff. **Public Comment** Patrick McGibney Jeff Edwards **Babak Naficy Board Action** The Board of Directors approved submitting the 2020 Final Draft Annual Report to the Court, but clarified that approval of the report should not be construed as "evaluating, setting or establishing" the sustainable yield under the terms of the Stipulated Judgement. Staff will review the sustainable yield estimate and major management decisions would be deferred until updated sustainable yield is reviewed and approved by the BMC through a more formal process in accordance with the requirements of the Stipulated Judgement. Ayes: Chairperson Ochylski, Director Gibson, and Vice Chairperson Zimmer **Navs: Director Cote Abstain: None Absent: None 8b.** Update on Potential Recommendation: Receive an update on potential geophysics opportunities for the Los **Geophysics Opportunities** Osos Basin and provide direction to staff. for the Los Osos Basin **Public Comment Anonymous Deborah Howe** Linde Owen **Board Action** The Board of Directors directed staff to draft a Letter to Senator Laird, on behalf of BMC, to support Aerial Electromagnetic Testing for the Los Osos Basin. Ayes: Chairperson Ochylski, Director Gibson, Director Cote and Vice Chairperson Zimmer **Nays: None Abstain: None Absent: None** 9. ADJOURNMENT Meeting adjourned at approximately 4:13 PM.

The next regularly scheduled meeting is Wednesday, July 21, 2021 at 1:30 PM.

TO: Los Osos Basin Management Committee

FROM: Dan Heimel, Executive Director

DATE: September 29, 2021

SUBJECT: Item 5c – Approval of Budget Update and Invoice Register through

September 2021

Recommendations

Staff recommends that the Committee review and approve the report.

Discussion

Staff has prepared a summary of costs incurred as compared to the adopted budget for 2021 (see Attachment 1). A running invoice register is also provided as Attachment 2.

Attachment 1: Cost Summary (January 2021 to Current Date) for Calendar Year 2021 Budget

	Attachment 1. cost sur	, ,	Approved	,			
			Contingency	Updated Allocated			
Item	Description	Budget Amount	Allocation	Budget Amount	Costs Incurred	Percent Incurred	Remaining Budget
	BMC Executive Director Facilitation- meeting facilitation,						
1	including preparation, staff coordination, and attendance	\$70,000		\$70,000	\$31,411.25	44.9%	\$38,589
2	Meeting Expenses - facility rent	\$1,500		\$1,500			\$1,500
3	Meeting expenses - audio and video services	\$6,000		\$6,000	\$350.00	5.8%	\$5,650
4	Technical Support/Adaptive Management Services	\$15,000		\$15,000	\$930.00	6.2%	\$14,070
5	Semi Annual Seawater Intrusion Monitoring	\$52,000		\$52,000	\$22,768.80	43.8%	\$29,231
6	2020 Annual Report	\$56,000	\$1,240	\$57,240	\$55,243.92	96.5%	\$1,996
7	Grant Pursuit Contingency	\$5,000		\$5,000	\$0.00	0.0%	\$5,000
8	Funding and Organization Studies	\$40,000		\$40,000	\$0.00	0.0%	\$40,000
9	Recycled Water Beneficial Use Evaluation	\$15,000		\$15,000	\$0.00	0.0%	\$15,000
10	Implementation Initiative Evaluation	\$25,000		\$25,000	\$0.00	0.0%	\$25,000
	Subtotal	\$285,500		\$286,740	\$110,704		\$176,036
	10% Contingency (rounded to nearest \$100)	\$28,600					
	Total	\$314,100			\$110,704	35.2%	\$203,396
	LOCSD (38%)	\$119,358					
	GSWC (38%)	\$119,358					
	County of SLO/SLOCFC&WCD (20%)	\$62,820					
	S&T Mutual (4%)	\$12,564					
		, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					

Attachment 2: Invoice Register for Los Osos BMC for Calendar Year 2021

Vendor	Invoice No.	Amount	Month of Service	Description	Budget Item	Date Executive Director Approved	Date BMC Chairperson Approved	Date BMC Approved
WSC	5337	\$11,520.00	Dec-20	Monthly Meeting Administration	1		Mar-21	
CHG	20210102	\$13,728.92	Jan-21	Annual Report Preparation	6	Mar-21		
AGP	8386	\$150.00	Jan-21	Video Production	3	Mar-21		
CHG	20210202	\$5,342.50	Feb-21	Annual Report Preparation	6	Mar-21		
WSC	5558	\$9,167.50	Jan-Mar-21	BMC Executive Director Facilitation	1		May-21	
CHG	20210303	\$17,047.50	Mar-21	Annual Report Preparation	6	Apr-21		
CHG	20210304	\$6,839.18	Mar-21	Semi Annual Seawater Intrusion Monitoring	5	Apr-21		
CHG	20210404	\$7,110.00	Apr-21	Annual Report Preparation	6	May-21		
CHG	20210405	\$11,079.62	Apr-21	Semi Annual Seawater Intrusion Monitoring	5	May-21		
CHG	20210406	\$930.00	Apr-21	LOSG Meeting and Response to Comments	4			May-21
CHG	20210506	\$870.00	May-21	Annual Report Preparation	6	Jun-21		
CHG	20210507	\$3,170.00	May-21	Semi Annual Seawater Intrusion Monitoring	5	Jun-21		
WSC	5671	\$12,027.50	Apr/May-21	BMC Executive Director Facilitation	1		Jun-21	
CHG	20210605	\$3,845.00	Jun-21	Annual Report Preparation	6	Jul-21		
CHG	20210606	\$1,240.00	Jun-21	Annual Report Preparation	6			Jul-21
WSC	5849	\$10,216.25	Jun-21	BMC Executive Director Facilitation	1		Aug-21	
AGP	8526	\$200.00	Jun-21	Video Production	3	Aug-21		
CHG	20210704	\$1,550.00	Aug-21	Sustainable yield and metrics review	6	Sep-21		
CHG	20210705	\$1,680.00	Aug-21	Groundwater monitoring	5	Sep-21		
CHG	20210803	\$4,510.00	Sep-21	Sustainable yield modeling	6	Sep-21		
	2021 Total	\$110,703.97				-		

To be approved

TO: Los Osos Basin Management Committee

FROM: Daniel Heimel, Executive Director

DATE: September 29, 2021

SUBJECT: Item 8a - Draft 2021 Spring Lower Aguifer Groundwater Basin Monitoring

Results

Recommendations

Receive an update on early findings for the Spring 2021 Lower Aquifer Groundwater Monitoring results.

Discussion

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 continuously updated information on groundwater resources in the Basin. The BMC retained Cleath Harris Geologists (CHG) to perform the groundwater monitoring program for 2021. The following attachments include the draft results from the Spring 2021 lower aquifer groundwater monitoring and updated Water Level and Chloride Metrics. Final results, including water levels and results from the first water and upper aquifer monitoring, will be included in the 2021 Annual Report.

Financial Considerations

Budget items 5 in the adopted calendar year 2021 budget address monitoring. At this time, no budget adjustments are recommended.

Station ID	Well Name	Basin Plan	Aquifer	Date	НСО3	Total Hardness	Cond	рН	TDS	CI	NO3-N	SO4	Са	Mg	K	Na
		Well ID	Zone		mg/l	mg/l	umhos/ cm		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
	Sand Spit #1		_	3/14/2005	180	4600	16000	7.3	8900	5400	ND	430	770	640	20	
30S/10E-11A2	East	LA2	D	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
				2/14/2005	350	370	1300	8.1	840	77	ND	190	51	58	6.1	110
				11/20/2009	300 360	360 489	1150 1290	7.5	732 780	83 105	ND ND	190	51 69	58	4.4	95 88
				7/24/2014 4/22/2015	360	489 475	1290	7.7 7.8	810	112	ND ND	212 189	65	77 76	<u>5</u>	
				10/1/2015	250	486	1280	7.3	840	117	ND ND	188	68	77	4	85
				4/20/2016	330	524	1370	n/a	840	151	ND	193	73	40	5	
				10/10/2016	350	497	1370	7.1	930	173	ND	189	69	79	4	81
000//05 /0//	MBO5 DWR		_	4/11/2017	350	541	1380	7.5	880	167	ND	186	75	86	4	81
30S/10E-12J1	Obs.	LA11	E	10/4/2017	300	543	1370	7	850	162	ND	191	76	86	5	
				4/10/2018	350	595	1390	7.6	820	173	ND	192	85	93	5	
				10/2/2018	350	497	1340	7.4	870	160	ND	160	69	79	3	
				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	
				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	
				4/5/2021	345	612	1630	7.6	1050	256	ND	192	88	96	5	
				11/7/2019	210	312	1310	7.7	760	136	3.1	188	69	34	4	
30S/10E-13Bb	Lupine Zone D	LA41	D	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	51	33	2	
				4/14/2021	333	289 2090	855 5330	7.9	505 4750	66 1460	ND 1.3	86 224	53 388	38 272	<u>2</u>	60 182
				11/6/2019 4/7/2020	210 240	3300	7360	7.6	6340	2190	0.3	202	569	458	7	203
30S/10E-13Ba	Lupine Zone E	LA40	Е	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
				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	
				10/5/2015	70	460	1280	7	950	329	1.7	19	74	67	2	41
30S/10E-13J1*				4/26/2016	80	412	1170	7.1	840	299	1.8	18	66	60	2	37
Highlighted				10/12/2016	60	509	1430	6.8	1100	389	1.8	27	82	74	2	44
chloride values	GSWC Rosina	LA10	D,E	4/10/2017	80	327	957	6.9	720	300	2.6	15	52	48	2	
have been	001101103110	2,110	٥,٢	10/12/2017	80	245	702	6.9	510	220	3.4	13	39	36	2	33
adjusted for				4/24/2018	70	188	620	7.4	400	190	4.3	12	29	28	1	29
wellbore leakage				10/9/2018	70	265	730	7.1	450	210	3.2	13	42	39	2	34
				4/15/2019	80	251	744	7	600	174	1.9	10	38	38	2	31
				10/14/2019	80	332	961	7.1	830	229	2	13	54	48	1	33
				4/21/2020	80	353	1310	6.4	970	250	2.1	14	59	50	2 1	32
				10/7/2020	70 81	183 405	618 1110	7.6 7.6	430 815	310 258	4.6 2.1	11 16	29 66	27 58	1 2	33 36
				4/6/2021	81	405	1110	7.6	815	258	2.1	16	90	58	2	36

Station ID	Well Name	Basin Plan	Aquifer	Date	НСО3	Total Hardness	Cond	рН	TDS	CI	NO3-N	SO4	Ca	Mg	К	Na
Citation 15	Won Humo	Well ID	Zone		mg/l	mg/l	umhos/ cm		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
				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
30S/10E-13M2				4/20/2016	50	726	3520	7.2	2190	941	0.7	179	113	108	5	400
4/1/2021 sample				10/19/2016	70	722	3420	7.4	2190	943	0.6	182	113	107	4	398
results show	Howard East	LA31	C,D	4/17/2017	60	733	3380	6.8	2060	907	0.6	178	114	109	4	413
Upper Aquifer			,	10/5/2017	60	738	3350	7.5	2190	960	0.7	160	116	109	5	411
influence due to				4/24/2018	70	664	3370	7.2	2020	946	0.6	2.8	103	99	4	367
reduced pumping				10/17/2018	60 70	740	3400	7.3	2180	834	0.6	153	115	110	5	414
				4/3/2019 10/3/2019	70	640 574	3290 3120	7.8 7.4	2010 2120	940 827	0.6	179 169	103 90	93 85	4	341 340
				4/9/2020	70	519	2970	7.4	1740	738	0.7	152	86	74	4	258
				10/1/2020	70	774	3330	8	2080	844	0.6	169	94	131	5	495
				4/1/2021	218	187	1010	8.3	581	161	2.9	47	31	27	20	113
				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	_	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		12	16	14	1	38
				10/13/2016	50	104	470	8	320	79	7.2	12	17	15	1	40
	00= #=		_	4/11/2017	50	100	434	7.4	270	77	7.3	12	17	14	1	38
30S/10E-13N	S&T #5	LA8	D	10/2/2017	30	95	438	7.2	290	78	7.6	13	15	14	1	36
				4/11/2018	60	104	440	7	260	79	7.9	14	17	15	1	39
				10/3/2018	60	107	430	6.5	340	66	6.7	13	18	15	2	40
				4/3/2019	50	100	434	6.3	250	75	7.3	13	17	14	1	36
				10/7/2019	60	95	446	7.6	250	77	7.7	14	15	14	1	37
				4/13/2020	60	104	443	8	300	75	7.4	15	17	15	2	37
				10/1/2020	60	108	464	7.9	300	76	7.5	14	17	16	1	40
				4/6/2021	63	103	438	7.4	302	78	7.8	13	17	15	1.4	38
30S/10E-14B2	Sand Spit #3	LA3	D	3/15/2005	100	3600	30000	8	17000	8500	ND	960	1200	130	34	4300
303/10L-14D2	Deep	LAS	D	10/21/2015	ND	7140	29500	11	24700	10000	ND	530	2830	20	80	4040
				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
	0014/0			10/12/2016	70	111	506	7.1	320	93		15	18	16	1	44
30S/10E-24C1	GSWC	LA9	D	4/10/2017	70		490		310			16		16	1	43
	Cabrillo			10/12/2017	70	117	484	7	270		6	16	19	17	2	46 43
				4/24/2018	70	115	486	7.8	300	90		17	18	17	1	43
				10/9/2018	60	135	477	6.9	280				21	20	2	50
				4/15/2019	70	112	488	7.1	310			16	17	17	2	45
				10/14/2019	200	75.0	071	0 74	no sam					0.5		
				4/21/2020	300	75.2	674	6.71	370			28	3	35	2	42
				10/7/2020	60		460	7.4	270			13	16	15	1	40 39
				4/6/2021	63	98.6	443	7.89	287	78	6.8	12	16	15	1	<u> </u>

Station ID	Well Name	Basin Plan	Aquifer	Date	HCO3	Total Hardness	Cond	рН	TDS	CI	NO3-N	SO4	Са	Mg	K	Na
Otation 15	VV OII TUINIO	Well ID	Zone	Bato	mg/l	mg/l	umhos/ cm		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
				11/18/2004	250	270	790	7.5	410	73		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		44	41	2	52
30S/11E-7Q3	LOCSD 8th St.	LA12	D	4/10/2017 10/4/2017	300 220	294 305	839 826	7.3 6.5	480 470	91 92	ND ND	49.5 45	47 48	43 45	2	54 56
				4/10/2018	300	319	814	7.7	440	92	ND ND		52	45	2	56
				10/2/2018	290	283	822	7.7	470	78		50.1	46	41	1	53
				4/9/2019	300	301	844	7.5	480	94			48	44	2	53
				10/2/2019	290	312	877	8	530	91	ND ND		49	46	2	56
				4/16/2020	310	301	883	7.8	500	94			48	44	2	52
				10/5/2020	300	321	891	7.9	510	89	ND		51	47	2	57
				4/5/2021	305	297	849	7.7	504	94	ND		48	43	2	54
				1/14/2005	150	150	440	7.5	290	34		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		11.9	25	24	1	29
30S/11E-17E8	So. Bay Obs.	LA22	D	4/13/2017	150	164	466	7.3	300	46		13.2	26	24	1	29
000/112 1/20	Middle	LIVEZ		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		14.2	25	25	1	29
				10/10/2018	150	160	471	7.5	250	43		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		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	159 250	154	470 510	7.5 7.1	329 290	46 37	5.8 ND	12.5 21	24 41	23 25	1 2	27 35
				Jan 2003 11/20/2009	230	220	638	7.1	357	41	0.5	30	35	33	1.3	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		27	36	35	2	42
				10/5/2015	280	227	614	7.4	370	38		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	7.1	370	40		25.2	34	33	2	40
000/445 475/40	GSWC So.	1.400	0.0.5	4/10/2017		227	624	7.2	380	39		26.7	35		2	40
30S/11E-17N10	Bay #1	LA20	C,D,E	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		23.2	27	24	2	31
				10/9/2018	290	273	632	7.2	340	38		29.2	42	41	3	47
				4/15/2019	200	181	559	7.4	310	42		21.7	28	27	2	34
				10/14/2019	290	221	626	7.2	380	41		29	34	33	2	40
				4/21/2020	300	230	705	7	400	50		26.9	36	34	2	42
				10/7/2020	290	227	654	7.5	350	40		27	35	34	2	42
				4/6/2021	204	178	529	7.9	329	43	3	21.1	29	26	2	33

Station ID	Well Name	Basin Plan	Aquifer	Date	НСО3	Total Hardness	Cond	рН	TDS	CI	NO3-N	SO4	Ca	Mg	K	Na
Ctation 15	Well Name	Well ID	Zone	Date	mg/l	mg/l	umhos/ cm		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
				1/19/2005	260	290	650	7.5	370	33		38	62	33	2.5	28
				11/20/2009	230	220	620	7.5	378	32		40	51	24	1.8	23
				7/24/2014	290	271	647	7.5	380	28		34	56	32	2	27
				4/21/2015	290	265	634	7.7	400	33		39	55		2	27
				10/19/2015	230	256	621	7.3	370	29		33	53		2	26
				4/20/2016	190	265	700	7.5	390	31	ND	38	55		2	26
				10/18/2016	290	256	615	6.8	370	31	ND	35.9	53		2	26
30S/11E-18K8	10th St. Obs.	LA18	Е	4/12/2017	290	274	616	7.5	450	31	ND	38	57	32	2	27
300/11L-1010	East (Deep)	LATO	_	10/10/2017	220	271	619	7.8	350	30			56		2	27
				4/17/2018	290	260	625	7.3	390	33			53		2	27
				10/10/2018	290	254	608	7.5	360	31	ND		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		40.5	52	30	2	26
				4/14/2020	290	269	629	7.5	400	33	ND	40.2	55		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
				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		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		1	27
				10/11/2016	200	168	511	6.6	270	36	1.2	21.5	26		1	34
30S/11E-18K9	LOCSD 10th	LA32	C,D	4/10/2017	190	155	461	7.3	270	35	1.9	19.1	24	23	1	31
303/11E-10K9	St.	LASZ	C,D	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		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
				4/15/2019	290	230	619	8.1	350	38	ND	27.4	33	36	2	41
	COMOL			10/14/2019	300	225	628	7.2	370	37	ND	28.6	34	34	1	41
30S/11E-18K	GSWC Los	LA39	D	4/21/2020	300	236	674	6.9	370	37	0.2	28.4	37	35	2	42
	Olivos #5			10/7/2020	300	227	657	7.4	360	37	ND	28.2	35		2	43
				4/6/2021	301	226	629	8.0	382	38	ND	25.8	34	34	2	40

Station ID	Well Name	Basin Plan	Aquifer	Date	НСО3	Total Hardness	Cond	рН	TDS	CI	NO3-N	SO4	Са	Mg	K	Na
Station	Well Name	Well ID	Zone	те Бате	mg/l	mg/l	umhos/ cm		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
			D,E	11/18/2004	220	330	880	7.3	420	120	ND	31	54	48	2.2	40
			υ,⊏	11/19/2009	200	590	1460	7.2	890	360	0.4	39	94	86	2	44
				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	
				10/28/2015	230	288	782	7.4	420	104	0.6	29	46	42	ND	
				4/27/2016	230	264	796	7.3	450	93	0.9	28	43	38	2	43
	LOCSD			10/11/2016	200	221	694	7	380	91	1.7	25.5	36	32	1	35
30S/11E-18L2**	Palisades	LA15		10/5/2017	180	306		7.6	400	102	0.7		50		2	40
	Palisaues		D	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

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.

Legend and Detection Limits

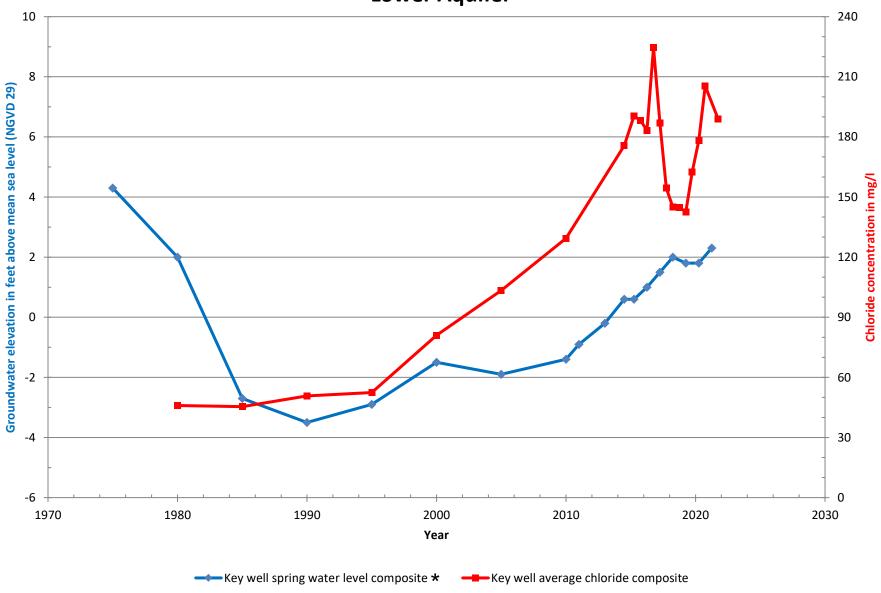
Constituent	Description	Practical Quantitation Limit*
HCO3	Bicarbonate Alkalinity in mg/L CaCO3	10.0
Total Hardness	Total Hardness in mg/L CaCO3	
Cond	Electrical Conductance in µmhos/cm	1.0
рН	pH in pH units	
TDS	Total Dissolved Solids in mg/L	20.0
CI	Chloride concentration in mg/L	1.0
NO3-N	Nitrate 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

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

Spring 2021 DRAFT

Chloride and Water Level Metric Lower Aquifer



^{*}Spring 2021 water levels not available at Morro Bay sand spit wells (used Spring 2020 values for metric calculation)

TO: Los Osos Basin Management Committee

FROM: Dan Heimel, Executive Director

DATE: September 29, 2021

SUBJECT: Item 8b – Sustainable Yield_x Methodology Review and Recommendations

Recommendations

Receive information from BMC Staff's review of the Sustainable Yield_x methodology and provide direction on Staff's recommendations regarding; 1) revisions to the methodology; and 2) the procedure / timeline by which the Sustainable Yield will be calculated each year.

Discussion

Background

In the Stipulated Judgement (SJ) and the Basin Plan, the BMC Parties agreed on a framework and methodology for estimating and updating the Sustainable Yield for the Los Osos Basin (Basin), referred to as Sustainable Yield_x, where "X" represents the Sustainable Yield estimate for that year. The SJ and Basin Plan require the BMC to annually evaluate, confirm and set the Sustainable Yield_x based on the best available data and evidence. At the July 21, 2021 BMC Meeting the BMC directed staff to review the Sustainable Yield estimate and to bring back recommendations for calculating the Sustainable Yield_x.

The Sustainable Yield_x calculation is a critical component of the basin monitoring and management framework established for the Basin. As specified in the Basin Plan, the Sustainable Yield_x is defined as the maximum amount of groundwater that may be extracted from the Basin, with the existing infrastructure, in Year "X" (1) without causing seawater to advance further inland or (2) while maintaining a stable seawater intrusion front and with no active well producing water with chloride concentrations above 250 mg/L. The amount of water that can be extracted under this criteria is determined using the numeric groundwater model (Model) created for the Basin. Additional information regarding the Model and its development and calibration is available in Basin Plan Section 5.6.5.

The Sustainable Yield_x is used to guide the BMC in making decisions regarding the current sustainability and management of pumping by the purveyors within the Basin and is included in calculation of the following metrics and management mechanisms:

Basin Yield Metric

The Basin Yield Metric (BYM) is one of the metrics that the BMC utilizes to track progress in the fight against seawater intrusion. The BYM compares the actual amount of groundwater extractions in a given year with the Sustainable Yield_x for that year. The equation for calculating the Basin Yield is shown below.

Basin Yield Metric =
$$\frac{\text{Year}_{xx} \text{ Groundwater Production}}{\text{Sustainable Yield}_{x}} * 100$$

Figure 1. Basin Yield Metric Equation

The target BYM identified in the Basin Plan is 80 or lower. This target, which includes a 20% buffer or safety factor was incorporated into the BYM to target Basin conditions that would push the freshwater-seawater interface or seawater intrusion front seaward and to protect against uncertainty. The types of potential uncertainty identified in the Basin Plan include: physical and pumping assumptions in the Model; Model limitations (i.e. Steady State); changes in agricultural pumping; effectiveness in the Urban Water Use Efficiency Program; changes in population; climate variability (including climate change); and natural hazards. Figure 2, which is Figure 38 from the Basin Plan, illustrates the anticipated location of the seawater intrusion front under the Sustainable Yield (BYM 100) pumping scenario and the location under the BYM 80 (20% safety factor) pumping scenario. As shown, with the reduced pumping associated with a BYM of 80 the Model predicts that the seawater intrusion front will be pushed seaward.

The BMC evaluates the BYM on an annual basis and compares the BYM for that year against the target of 80 for estimating whether or not the pumping occurring in a given year is sustainable given the available infrastructure (i.e. wells). A BYM value below 80 is an indicator that Basin pumping is below the maximum sustainable level and a BYM value above 80 indicates that pumping need to be reduced or additional infrastructure is needed to achieve sustainable conditions.

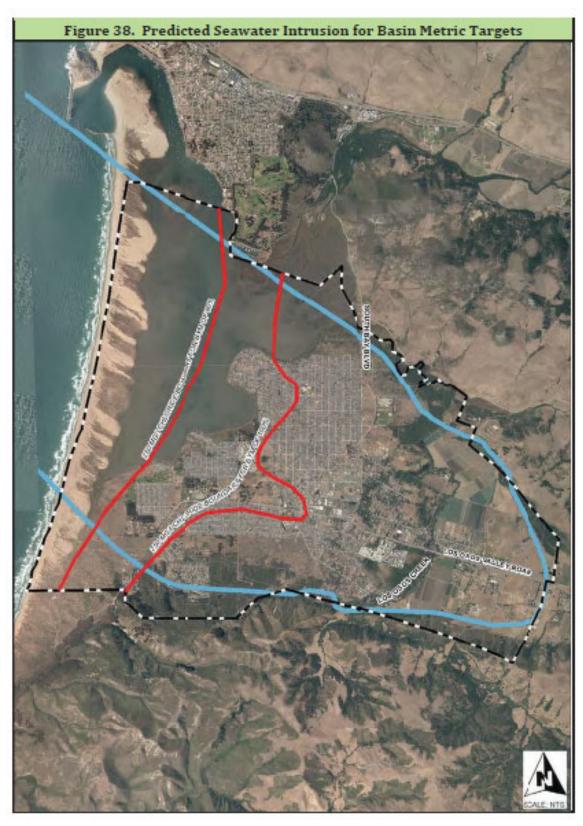


Figure 2. Figure 38 from Basin Plan illustrating seawater intrusion front at BYM 100 and BYM 80

Basin Development Metric

The Basin Development Metric is a comparison of the Sustainable Yield_x and the potential Sustainable Yield that could be achieved through completion of all the potential projects identified in the Basin Plan for implementation. This metric provides the BMC with an indication of how much progress has been made toward implementing the programs identified in the Basin Plan for increasing the Sustainable Yield.

Purveyor Pool

The Sustainable Yield_x is also used for the purposes of determining the Purveyor Pool. The SJ establishes four Pools: the Purveyor Pool; Agricultural Pool; Community Pool; and Private Domestic Pool for the purposes of dividing the Sustainable Yield_x amongst the different groundwater user types within the Basin. The allocation percentages for a Sustainable Yield_x estimate of 2,400 AFY for each of the Pools is shown in Figure 3 below. The SJ currently only allows for adjustments to the Purveyor Pool based on changes to the Sustainable Yield_x (because no private pumpers are parties). Additional information on the Purveyor Pool and its relationship to the Sustainable Yield_x can be found in Section 4 of the SJ.

Table 3. Pool	Table 3. Pool Allocation Based on Sustainable Yield _X of 2,400										
TI	Pool Share (%)	Pool Allowance (AFY)									
User											
Purveyor Pool	59.58	1,430									
Agricultural Pool	31.25	750.0									
Community Pool	2.92	70.0									
Private Domestic Pool	6.25	150.0									
Subtotal	100.00	2,400									

Figure 3. Pool Allocation Based on Sustainable Yield_x of 2,400 AFY

Sustainable Yield_x Methodology and Key Assumptions Review

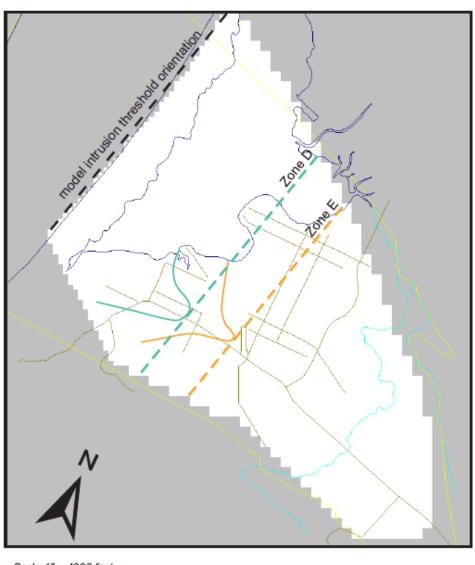
As directed by the BMC, BMC Staff and BMC Party Staff, which includes staff representatives from each of the BMC Parties, reviewed the current methodology and key assumptions for the Sustainable Yield calculation. Based on the review, BMC Staff prepared the following recommendations for the BMC's consideration when approaching the Sustainable Yield_x calculation.

Sustainable Yield Threshold

As described previously, the Sustainable Yield_x is defined as the maximum amount of groundwater that may be extracted from the Basin in Year "X" (1) without causing seawater to advance further inland or (2) while maintaining a stable seawater intrusion front and with no active well producing water with chloride concentrations above 250 mg/L. Based on policy direction that was provided during the development of the Stipulated Judgement, the Basin Plan and the previously developed Sustainable Yield estimates, this was interpreted to allow for the development of Sustainable Yield pumping scenarios and calculation of the Sustainable Yield_x that included seawater intruding further into the

basin than has previously occurred to date (i.e. losing additional ground to seawater intrusion) before stabilizing and meeting the criteria described above.

BMC Staff propose evaluating an alternative approach, which would not allow seawater to intrude further than has been observed to-date (i.e. holding ground against further seawater intrusion). This approach would include establishing thresholds or limits for future seawater intrusion in the basin based on the current extent of seawater intrusion for Zones D and E. These new thresholds or limits would then be the limiting constraints for calculating the Sustainable Yield_x or the amount of pumping that the Model predicts could be achieved without inducing further seawater intrusion into the Basin. Figure 4 illustrates the current estimated extents of seawater intrusion in Zones D and E of the Basin and the associated "intrusion front" threshold lines that could be used as the limiting constraint for the proposed alternative approach to calculating the Sustainable Yield.



Scale 1" = 4000 feet

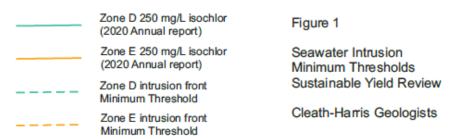


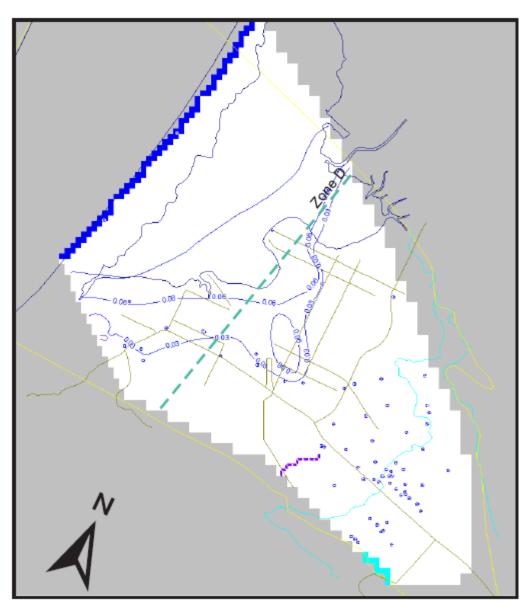
Figure 4. Current estimates of seawater intrusion extent within the basin

For comparison purposes, the estimated extent of seawater intrusion included in the "Basin Yield Metric response to reduced long-term precipitation in the Los Osos Groundwater Basin" 2017 Technical Memorandum Sustainable Yield calculation, is shown in Figure 5 and Figure 6. As shown in these figures, the model estimates that pumping occurring at the 2,760 AFY Sustainable Yield would allow seawater to

intrude further inland than the current extent of seawater intrusion, illustrated by the proposed "intrusion front" threshold developed based on the current extent of seawater intrusion in the Basin.

Based on the desire to avoid further degradation of the Basin from seawater intrusion, BMC Staff recommends that the threshold for calculating Sustainable Yield be modified to represent the current extents of seawater intrusion. Under the proposed alternative approach, the Sustainable Yield_x would be calculated as the amount of water that could be extracted from the basin, with existing infrastructure, without causing seawater to intrude further than the current extent and with no active well producing water with a chloride concentration above 250 mg/L.

Establishing this new threshold is consistent with how basins with similar seawater intrusion threats approach the development of Sustainable Management Criteria (SMC) under the Sustainable Groundwater Management Act (SGMA). SGMA calls for the development of SMC that includes Minimum Thresholds and Measurable Objectives. Minimum Thresholds are established as the minimum threshold or worst-case condition that cannot be exceeded without having undesirable results or detrimental impacts on the basin. Measurable Objectives are set as the desired objective that indicate maintenance or improvement of specific groundwater conditions that is desired to achieve. Under the proposed alternative approach, the "intrusion front" thresholds, established based on the current extent of seawater intrusion, could be the equivalent of the Minimum Threshold under SGMA and the BYM target of 80 could be the equivalent of the Measurable Objective.



Scale 1" = 4000 feet

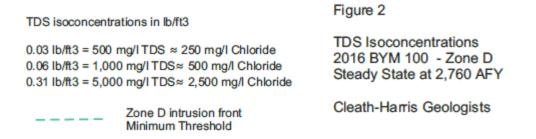
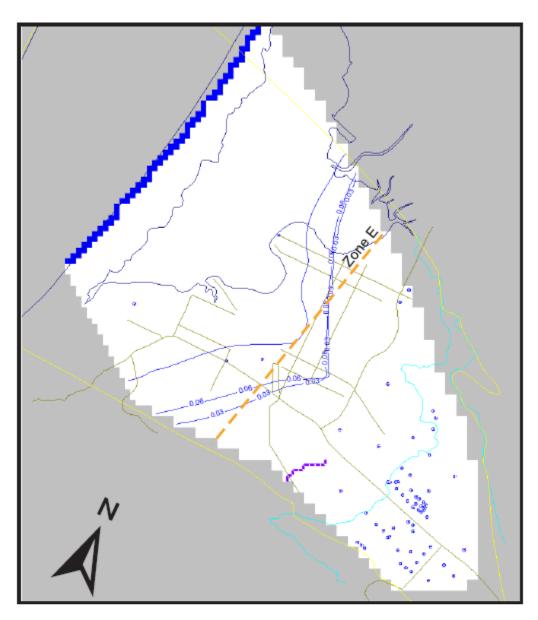


Figure 5. Estimated extent of Zone D seawater intrusion in 2,760 AFY Sustainable Yield estimate



Scale 1" = 4000 feet

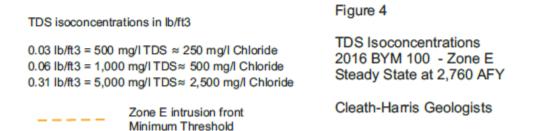


Figure 6. Estimated extent of Zone E seawater intrusion in 2,760 AFY Sustainable Yield estimate

Precipitation

Precipitation in the Model is currently assumed to be 17.5 inches per year. This average was based on correlating annual rainfall at Morro Bay Fire Department (which has the longest period of record) with rainfall at the South Bay Fire Department (Los Osos). The original correlation (Yates and Williams 2003) resulted in a multiplier of 1.05 (Morro Bay rainfall x 1.05 = Los Osos rainfall). Using the long-term average annual rainfall at Morro Bay of 16.72 inches (through 2003) the corresponding long-term average for Los Osos was 17.5 inches. BMC Staff reviewed the rainfall assumption and performed an evaluation that incorporated the most recent data available from the PRISM Climate Group and the Los Osos Landfill and Morro Bay Fire Department rain gauges. The results of the PRISM data set evaluation, which included data from 1981 - 2010 and is the latest available 30-year normal isohyetal data provided a weighted rainfall average estimate for Los Osos of 17.1 inches/year. The analysis and updated correlation of rainfall data from the Morro Bay Fire Station and the South Bay Fire Department/Los Osos Landfill incorporating data from 1960 – 2020 produced an average rainfall estimate for Los Osos of 17.5 inches/year. Based on the results of this evaluation, BMC Staff is recommending reducing the rainfall/precipitation assumption in the model from 17.5 inches/year to 17.3 inches/year, which represents an average of the results from the two updated evaluations. Additional information on the rainfall analysis is included in Appendix A.

Other Sustainable Yield_x Assumptions

There are number of other assumptions that are utilized within the Model when performing the calculation of Sustainable Yield_x, which are described below. BMC Staff reviewed these assumptions and determined them to be suitably conservative for the Sustainable Yield_x calculation and additional changes are not recommended.

Stream Inflow – Stream Inflow in the Model is limited at 800 AFY and is constrained by stream bed seepage capacity to be approximately 20% of the estimated average watershed runoff.

Recycled Water – Recycled water delivery assumptions included in the Model include 448 AFY to Broderson and 33 AFY to Bayridge Estates.

Non-Purveyor Pumping – Non-Purveyor pumping assumptions in the model are listed below:

Non-Purveyor Pumping Type	Assumed Pumping Rate (AFY)	Notes
Agriculture	750	
Private Domestic	220	
Sea Pines Golf Course*	50	Assumed 30 AFY recycled water from Monarch WWTP (prior to recycled water deliveries from LOWRF)
Memorial Park	50	
Community Park	0	Assumed 5 AFY recycled water

^{*}Pumping rate for Sea Pines to be adjusted based on projected demand and LOWRF recycled water deliveries.

Purveyor Pumping – The amount of purveyor pumping included in the Sustainable Yield_x calculation is iteratively determined by increasing purveyor well pumping until the identified threshold is reached. Pumping rates for individual purveyor wells are optimized, based on available infrastructure, to shift purveyor pumping from the lower aquifer to eastern portions of the Basin and/or to the upper aquifer.

Sea Level – Sea level in the Model is assumed to be 0 ft elevation in National Geodetic Vertical Datum of 1929 (NGVD 29) which is roughly equivalent to Mean Sea Level for the Port San Luis buoy of 2.72 ft in North America Vertical Datum of 1988 (NAVD 88).

Proposed Sustainable Yield Update Process

To meet the requirements of the SJ to determine the Sustainable Yield $_x$ on an annual basis the following process is proposed.

- 1. Beginning in July of a given year, BMC Staff will evaluate the Sustainable Yield_x for the upcoming year based on changes in Basin Plan infrastructure, groundwater inflow or outflow parameters, the understanding of hydrogeologic or geologic features in the basin or other factors.
- 2. BMC Staff will then provide a recommendation to the BMC on Sustainable Yield_x for the upcoming year and the reasoning for that recommendation.
 - a. If the recommendation is to modify the Sustainable Yield_x, then recommendations for which parameters to modify from the previous Sustainable Yield_x will be provided.
 - If the BMC approves the recommended modifications to the Sustainable Yield_x, BMC Staff will perform the updated Sustainable Yield_x calculations and bring the results back to the BMC for consideration and approval.
 - ii. If the updated Sustainable Yield_x results are unanimously approved by the BMC then the updated Sustainable Yield_x will be documented in the Annual Report for that Year and used for calculation of the Basin Yield Metric, Basin Development Metric and Purveyor Pool for the upcoming year.
 - b. If the recommendation is to not modify the Sustainable Yield_x and the BMC agrees, then the Sustainable Yield_x will remain the same as the previously approved Sustainable Yield_x by the BMC.
 - c. If the BMC cannot come to unanimous agreement of whether or not to modify the Sustainable Yield_x then the Sustainable Yield_x will remain the same as the previously approved Sustainable Yield_x and the BMC will provide direction to Staff on how to proceed.

An example timeline for the envisioned process of updating the Sustainable Yield_x and incorporating it into the BMC monitoring, management and Annual Monitoring Report processes is outlined below:

- 1. July 2021 BMC Staff begins evaluation of Sustainable Yield₂₀₂₂
- 2. BMC Staff presents recommendations for Sustainable Yield₂₀₂₂
- 3. Before January 2022 BMC approves Sustainable Yield₂₀₂₂
- 4. Sustainable Yield₂₀₂₂ used to establish Purveyor Pool for 2022

- 5. Sustainable Yield₂₀₂₂ incorporated into Basin Yield and Basin Development Metric calculations for 2022 Annual Monitoring Report (AMR)
- 6. Sustainable Yield₂₀₂₂ described in 2021 AMR

Financial Considerations

Minimal costs associated with developing a Sustainable Yield_x were included in the BMC CY 2021 Budget as part of Task 6 (2020 Annual Report). However, Cleath-Harrris Geologists (CHG) has been tasked to provide additional analysis and attend multiple meetings in support of the Sustainable Yield_x evaluation and calculation and it is recommended that the BMC authorize the Executive Director to utilize \$12,000 of contingency funds, as needed, to compensate CHG for their additional effort and support in preparing the Sustainable Yield₂₀₂₂ calculations. There are currently contingency and Technical Support/Adaptive Management Services funds in the CY 2021 Budget that could be put toward this additional effort associated with the evaluating and updating the Sustainable Yield_x.

Appendix A

Los Osos Long-Term Annual Rainfall

Method 1: Isohyetal map (PRISM 1981-2010 data set)

The Basin area between each isohyetal contour was measured. These areas were multiplied by the intermediate isohyetal value, and added together to determine average annual rainfall, which was 17.1 inches. See attached Figure 1.

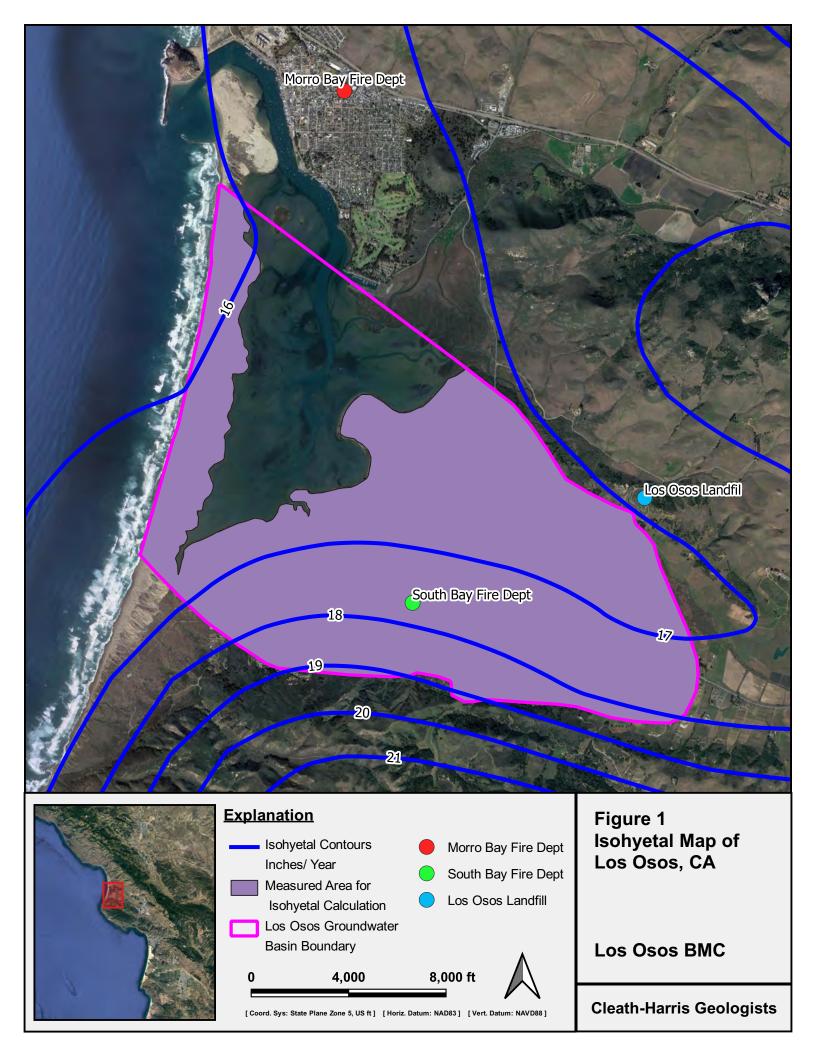
Rainfall (in)	Area (acres)	Ratio	weighted rainfall (in)
16	178	0.037	0.59
16.5	2496	0.518	8.55
17.5	1493	0.31	5.43
18.5	617	0.128	2.37
19	32	0.007	0.13
Total	4816	1	17.1

Method 2: Correlation with long-term rainfall data at the Morro Bay Fire Department.

Rainfall data at the South Bay Fire Department (1975-2001) and the Los Osos Landfill (2006-2020) were combined into a single dataset and correlated with rainfall at the Morro Bay Fire Department. The best fit linear trend line indicates Los Osos averaged 8.7 percent wetter than Morro Bay. The corresponding long-term annual rainfall for Los Osos is 17.5 inches, based on multiplying the long-term annual rainfall value of 16.1 in/year at Morro Bay Fire Department (1960-2020) by 1.0874. See attached Figure 2.

Long-Term Annual Rainfall

Results from the two methods (17.1 inches and 17.5 inches) were averaged to establish the updated long-term annual rainfall of **17.3 inches** for Los Osos.



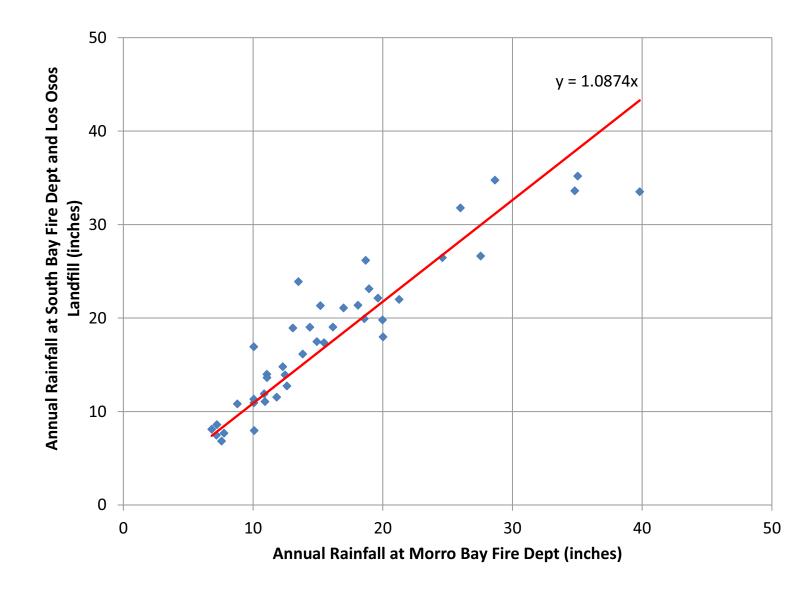


Figure 2

Los Osos - Morro Bay Rainfall Correlation

Los Osos BMC

Cleath-Harris Geologists

TO: Los Osos Basin Management Committee

FROM: Dan Heimel, Executive Director

DATE: September 29, 2021

SUBJECT: Item 8c – Consider authorizing continuation of remote teleconferencing of public meetings based on findings that COVID-19 remains a serious risk to public health and safety and use of video at future remote BMC Meetings

Recommendations

Staff recommends that the BMC: 1) adopt a resolution authorizing the BMC to continue remote teleconferencing of public meetings based on findings that COVID-19 remains a serious risk to public health and safety; and 2) provide input on the use of video at future remote BMC Meetings

Discussion

Remote Meetings

The Brown Act (Gov. Code § 54950 et seq.) guarantees the public's right to attend and participate in the meetings of local legislative bodies. As such, the Brown Act requires that meetings of legislative bodies and local public agencies be noticed, open, and public. The Brown Act requirements for teleconferencing public meetings include:

- Each must be teleconference location be open to the public;
- Members of the public must be able to address the body at each teleconference location;
- At least a quorum of the body must be within the body's territorial jurisdiction at the time of the meeting;
- All votes must be counted via rollcall

E.O. N-29-20, which was issued on March 17, 2020 in response to the COVID-19 pandemic, allows local agencies to hold public meetings remotely by suspending many of the Brown Act limitations on teleconferencing. During its tenure, local agencies are permitted to hold meetings through teleconference so long as members of the public are permitted to participate electronically and the agency meets additional requirements for notice and accessibility. It generally waives requirements regarding public access to any teleconference location from which a member of the legislative body will be participating remotely in a public meeting, and also waives the requirement that at least a quorum of members participate from locations within the territorial boundaries over which the body exercises jurisdiction.

E.O. N-08-21, issued June 11, 2021, stated that these loosened teleconference rules are to expire on September 30. However, due to the recent passing of AB 361 and AB 339, many remote teleconferencing options will still be available during state-proclaimed emergencies. Both of these bills modify the Brown Act's teleconferencing requirements (Gov. Code § 54953(b)).

I. Assembly Bill 361 – Amendments to the Brown Act's Teleconferencing Requirements During a Declared State of Emergency

Assembly Bill 361 was passed on September 10 and signed on September 16. The bill is an urgency statute and was operative immediately upon signing and is set to expire on December 31, 2023. AB 361 amends Government Code section 54593, effectively allowing local agencies to continue conducting meetings virtually so long as the Governor has proclaimed a state of emergency.

AB 361 allows agencies to hold virtual meetings and allow remote participation by the public with requirements similar to those that have been in place under E.O. N-29-20, with some new requirements. These teleconferencing options will only be available in the event that a gubernatorial state of emergency has been issued and remains active; therefore a locally-proclaimed state of emergency will be insufficient to trigger the remote teleconferencing rules set forth in AB 361. While this bill was adopted in the context of COVID-19, it applies to any gubernatorially-proclaimed emergencies at a local, state, or national level and will likely be useful in other potential emergency situations – including earthquakes and fires – during which it would be dangerous or exceedingly difficult for public meetings to be held in person.

The most significant requirements under AB 361 are laid out below.

<u>Authorization for modified teleconferencing requirements</u>: The modified teleconferencing requirements established in AB 361 (now Gov. Code § 54953(e)) may be utilized by an agency to hold public meetings, so long as:

- There is a gubernatorially declared state of emergency as defined under Section 8625 of the California Emergency Services Act (Gov. Code § 52953(e)(1), (e)(4));
- One of the following circumstances is present: (1) state or local officials have imposed or recommended measures to promote social distancing, (2) the legislative body is holding a meeting for the purpose of determining whether the emergency at hand presents imminent risks of health and safety to attendees if meetings were held in person, or (3) the legislative body has already held a meeting and determined (by majority vote) that such health and safety risks are present (Gov. Code § 54953(e)(1)); and
- A decision to meet telephonically must be renewed at least every 30 days with the legislative body finding (by majority vote) that either the emergency situation continues to impact the ability of members and the public to meet in person or state *or* local officials continue to impose social distancing measures (Gov. Code § 54953(e)(3)).

<u>Conducting public meetings via teleconference</u>: Recognizing that an emergency situation might limit the availability of public meeting places or teleconferencing locations, for an AB 361 teleconferenced meeting to be proper:

• There is no requirement that at least a quorum of board members participate from within the territorial bounds of the agency's jurisdiction (Gov. Code § 54953(e)(1));

- The agency must give notice and publish meeting agendas as normally required by the Brown Act (Gov. Code § 54953(e)(2)(A));
- The agenda must list how the public can attend and comment on the meeting electronically (via call-in or internet service options), *however*, the agency is not required to offer any in-person options for the public to view and comment on the meeting (Gov. Code § 54953(e)(2)(B);
- The agency must provide a reasonable amount of time for the public to comment on each agenda item (and register, if necessary) or must provide at least the amount of time allowed per agency meeting protocols whichever is longer (Gov. Code § 54953(e)(2)(F-G));
- The agency shall not require public comments to be submitted in advance of the meeting, rather the agency must provide an opportunity for public comment during the meeting (Gov. Code §54953(e)(2)(E)). Note that this may require officials to schedule longer meeting times to ensure that there is sufficient time for comment during the meeting;
- No action may be taken during a disruption in the broadcast of the meeting or one that inhibits
 the public's ability to comment (Gov. Code § 54953(e)(2)(D)). Note that the agency should likely
 test their remote meeting setup before and during any meeting to ensure there are no issues;
- All votes must be made via rollcall (Gov. Code §54953(b)(2));
- The agency must take all precautions to protect the statutory and constitutional rights of the public (Gov. Code § 54953(e)(2)(C)).

As an urgency statute, AB 361 is effective at the date of signature (September 16), meaning a local agency would be required to following these new regulations as of this date. However, today, the Governor released E.O. N-15-21, clarifying that local agencies can continue to meet telephonically pursuant to the waiver in E.O. N-08-21 through September 30, 2021 with the following exception: any local agency that meets to take a majority vote pursuant to Government Code 54953(e)(1)(B) shall conduct the meeting at which such vote is taken as required by Government Code 54953(e)(2). E.O. N-08-21 expires on October 1, 2021, at which time local agencies will need to follow the Brown Act (as amended by AB 361).

II. Assembly Bill 339 – Public Access to Virtual Meetings in Large Jurisdictions

¹ As outlined in more detail in the bullet points above, these requirements include:

Providing notice and publishing the meeting agendas as normally required by the Brown Act (Gov. Code § 54953(e)(2)(A));

[•] Listing on the agenda how the public can attend and comment on the meeting electronically (i.e., via call-in or internet service options) (Gov. Code § 54953(e)(2)(B));

Taking all precautions to protect the statutory and constitutional rights of the public (Gov. Code § 54953(e)(2)(C));

[•] Not taking action during a disruption in the broadcast of the meeting or one that inhibits the public's ability to comment (Gov. Code § 54953(e)(2)(D));

Not requiring public comments to be submitted in advance of the meeting (Gov. Code §54953(e)(2)(E)); and

Providing a reasonable amount of time for the public to comment on each agenda item or
providing at least the amount of time allowed per agency meeting protocols – whichever is longer
(Gov. Code § 54953(e)(2)(F-G)).

Assembly Bill 339 contains provisions parallel to those found in AB 361, with a greater focus on public access to attend and participate in public meetings via electronic methods, regardless of whether the agency is holding the meeting solely via teleconference. However, any requirements beyond those already set forth by AB 361 affect only city councils or county boards of supervisors in jurisdictions with at least 250,000 people.

Under this bill:

- Any city council or county board of supervisors that governs a jurisdiction containing at least 250,000 people must provide an opportunity for members of the public to attend all public meetings via a two-way telephonic or internet-based option (Gov. Code § 54953.9. (a)(1)(A));
- Jurisdictions with at least 250,000 residents must provide at least one physically accessible meeting location, unless emergency declarations and laws prohibit public gatherings (Gov. Code § 54953(a)(3));
- Any city council or county board of supervisors in a jurisdiction with at least 250,000 residents that has, as of June 15, 2021, provided video streaming of at least one of its meetings must continue to provide that video streaming (Gov. Code § 54953(a)(2)).

AB 339 is still awaiting the Governor's signature and must be signed into law by October 10, 2021. AB 339 is not an urgency statute and, if signed, will not go into effect until January 1, 2022. This bill is also set to expire on December 31, 2023.

Video Meetings

Since moving to remote meetings, allowed under E.O. N-29-20 and in response to the COVID-19 pandemic, the BMC Meetings have been audio only, with the exception of screen sharing. The online meeting platform (Zoom) that the BMC is utilizing for its remote meetings does allow for the use of video. If desired, future BMC Meetings could include video to allow the participants to view the Directors, Staff and key presenters during the meeting through use of their webcams. Please provide input to BMC Staff on whether or not the BMC would like to include video as part of future BMC Meetings.

RESOLUTION NO.

A RESOLUTION OF THE LOS OSOS BASIN MANAGEMENT COMMITTEE PROCLAIMING A LOCAL EMERGENCY, RATIFYING THE PROCLAMATION OF A STATE OF EMERGENCY ISSUED BY THE GOVERNOR OF THE STATE OF CALIFORNIA ON MARCH 4, 2020 AND AUTHORIZING REMOTE TELECONFERENCE MEETINGS FOR THE PERIOD 9/30/2021-10/29/2021 PURSUANT TO BROWN ACT PROVISIONS.

WHEREAS, the Los Osos Basin Management Committee ("Committee") is committed to preserving and nurturing public access and participation in meetings of the Committee; and

WHEREAS, as set forth in the Stipulated Judgment in *Los Osos Community Services District v. Golden State Water Company, et al.*, Civil Case No. GIN 040126 (San Luis Obispo County Superior Court), all meetings of the Committee are open and public, as required by the Ralph M. Brown Act (Cal. Gov. Code 54950 – 54963), so that any member of the public may attend, participate and watch the Committee conduct their business; and

WHEREAS, the Brown Act, Government Code section 54953(e), makes provisions for remote teleconferencing participation in meetings by members of a legislative body, without compliance with the requirements of Government Code section 54953(b)(3), subject to the existence of certain conditions; and

WHEREAS, a required condition is that a state of emergency is declared by the Governor pursuant to Government Code section 8625, proclaiming the existence of conditions of disaster or of extreme peril to the safety of persons and property within the state caused by conditions as described in Government Code section 8558; and

WHEREAS, a proclamation is made when there is an actual incident, threat of disaster, or extreme peril to the safety of persons and property within the jurisdictions that are within the Committee's boundaries, caused by natural, technological, or human-caused disasters; and

WHEREAS, it is further required that state or local officials have imposed or recommended measures to promote social distancing, or, the legislative body meeting in person would present imminent risks to the health and safety of attendees; and

WHEREAS, such conditions now exist in the Committee, specifically, a state of emergency has been claimed on March 4, 2020 in response to the COVID-19 pandemic remains ongoing; and

WHEREAS, COVID-19 remains a primary concern to public safety as the United States' Center for Disease Control ("CDC") announced in August that the Delta variant is more than twice as contagious as previous variants, it has a greater risk of infection even among vaccinated individuals, and that it may cause more serious illness than previous variants; and

¹ CDC COVID-19 August 26 update on the Delta Variant (CDC website).

WHEREAS, San Luis Obispo County ("County") has seen an increase of cases and deaths related to COVID-19 since June with the emergence of the Delta variant² and the County's Public Health Department recently released an order requiring all vaccinated and unvaccinated individuals to wear masks in indoor public settings, citing a recent increase in hospitalizations and the high transmissibility of the Delta variant³;

WHEREAS, the Committee's Board of Directors does hereby find that the higher transmission rate and significant health risks posed by the Delta variant has caused, and will continue to cause, conditions of peril to the safety of persons within the Committee that are likely to be beyond the control of services, personnel, equipment, and facilities of the Committee, and desires to proclaim a local emergency and ratify the proclamation of state of emergency by the Governor of the State of California; and

WHEREAS, as a consequence of the local emergency, the Committee does hereby find that it shall conduct its meetings without compliance with paragraph (3) of subdivision (b) of Government Code section 54953, as authorized by subdivision (e) of section 54953, and that the Committee shall comply with the requirements to provide the public with access to the meetings as prescribed in paragraph (2) of subdivision (e) of section 54953; and

WHEREAS, pursuant to the Brown Act as amended after September 30, 2021,⁴ the Committee is including instructions for the public to virtually attend and comment on the meeting by telephone or through Zoom on each meeting agenda, which is posted on the Committee's website prior to the meeting.

NOW, THEREFORE, THE LOS OSOS BASIN MANAGEMENT COMMITTEE DOES HEREBY RESOLVE AS FOLLOWS:

Section 1. Recitals. The Recitals set forth above are true and correct and are incorporated into this Resolution by this reference.

Section 2. <u>Proclamation of Local Emergency</u>. The Committee hereby proclaims that a local emergency now exists throughout the Committee's jurisdiction, and due to the high transmission rate of the Delta variant, risk to unvaccinated and vaccinated individuals, greater risk of transmission at indoor gatherings, and significant increase in the County's number of COVID-19 cases since June, meeting in person would present imminent risk to the health and safety of board members and the public.

Section 3. Ratification of Governor's Proclamation of a State of Emergency. The Committee hereby ratifies the Governor of the State of California's Proclamation of State of Emergency, effective as of its issuance date of March 4, 2020.

⁴ Gov. Code § 54953(e)

² According to the state's most recent COVID-19 data tracking statistics by county, (COVID19.CA.GOV).

³ August 31, 2021 San Luis Obispo County Health Officer Order (https://www.emergencyslo.org/en/resourcesGeneral/9.1.2021-Health-Order-6---Mask-Mandate.pdf)

- **Section 4**. Remote Teleconference Meetings. The general manager and Committee are hereby authorized and directed to take all actions necessary to carry out the intent and purpose of this Resolution including, conducting open and public meetings in accordance with Government Code section 54953(e) and other applicable provisions of the Brown Act.
- Section 5. <u>Effective Date of Resolution</u>. This Resolution shall take effect immediately upon its adoption and shall be effective until the earlier of (i) October 29, 2021, or such time the Committee adopts a subsequent resolution in accordance with Government Code section 54953(e)(3) to extend the time during which the Committee may continue to teleconference without compliance with paragraph (3) of subdivision (b) of section 54953.

PASSED AND ADOPTED by the Los Osos Basin Management Committee, this 29th of	lay of
September, 2021, by the following vote:	

AYES:
NOES:
ABSENT:
ABSTAIN: