**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 **Board Meeting** at **1:30 P.M.** on **Wednesday, November 15, 2017** at the South Bay Community Center, 2180 Palisades Ave, 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 attend and participate in meetings.*

**BASIN MANAGEMENT COMMITTEE BOARD OF DIRECTORS AGENDA**

1. **CALL TO ORDER**

2. **PLEDGE OF ALLEGIANCE**

3. **ROLL CALL**

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. **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 However, any Director may request that any item be withdrawn from the Consent Agenda and moved to the "Action Items" portion of the Agenda to permit discussion or to change the recommended course of action.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 September 20, 2017 Meeting**
   b. **Approval of Warrants, Budget Update and Invoice Register through October 2017**

6. **EXECUTIVE DIRECTOR'S REPORT**

7. **ACTION ITEMS**

   a. **Update on Status of Basin Plan Infrastructure Projects**

      Recommendation: Receive report and provide input to staff for future action.

   b. **Water Conservation Program Update**

      Recommendation: Receive update and provide input to staff for future action.

   c. **Review and Discussion of Fall 2017 Monitoring Data**

      Recommendation: Receive report and provide input to staff for future action.

**d. Review and Discussion of Recycled Water Management**

Recommendation: Receive report and provide input to staff for future action.

## 8. 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.

## 9. ADJOURNMENT

**BASIN MANAGEMENT COMMITTEE BOARD OF DIRECTORS**

**Agenda Item 5a: Minutes of the Meeting of September 20th, 2017**

| Agenda Item | Discussion or Action |
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| **1. CALL TO ORDER**<br><br>**2. PLEDGE OF ALLIGANCE**<br><br>**3. ROLL CALL** | Director Ochylski serving as chair called the meeting to order at 1:34 pm and led the Pledge of Allegiance.<br><br>Mr. Miller, acting Clerk, called roll to begin the meeting. Director Zimmer, Alternative Hutchinson, and Chairperson Ochylski present, Director Garfinkel was absent. |
| **4. Board Member Comments** | No Comments. |
| **5a. Minutes of the Meeting of September 20th, 2017**<br><br>**5b. Approval of Budget update and Invoice Register through June 30,2017** | Mr. Miller: There was a correction to the budget update that got posted because there was an invoice that came out after the first publication. We would like to go with the corrected version.<br><br>Director Ochylski: That was forwarded to everyone?<br><br>Mr. Miller: Yes, and posted on the website.<br><br>Director Zimmer: The minutes are good and detailed but are we incurring too much cost to have these minutes recorded?<br><br>Mr. Miller: They are detailed because we only meet twice a month, but it is not a huge cost because it cuts down on my review and prep time.<br><br>Director Ochylski: It is also helpful for those who have satellite and don't have access to the video.<br><br>Director Ochylski: Let the record show that S&T Alternative Charlie Cote arrived.<br><br><u>Public Comment</u><br>No public comment on consent agenda.<br><br>Director Zimmer: Motion to approve consent agenda as it stands.<br>Director Hutchinson: Second, consent agenda.<br><br>Committee Accepted Items 5a and 5b.<br><br>**Ayes: Unanimous**<br>**Nays: None**<br>**Abstain: None**<br>**Absent: None** |

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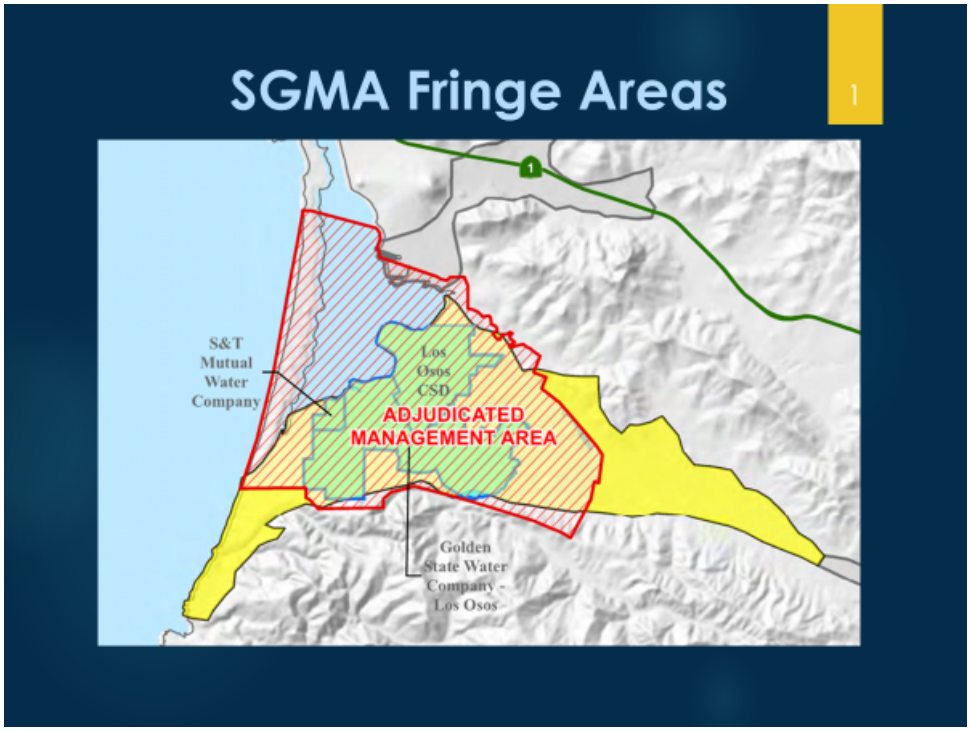
| **6. Executive Director's Report** | Executive Director, Rob Miller, provided a verbal overview of the written content of the Executive Director's report. |




Director Alternative Hutchinson: The direction of the Groundwater Sustainability Agency and the Cleath study is to get the State to match their groundwater boundary with the community's boundary. Then additional funds would not be required in the Fringe areas.

Director Alternative Hutchinson: Staff Report shows 282 properties not connected, which includes the low-income properties that are in the County program, funded by the federal government. We are on the verge of getting those connected. Once that happens we will be down below 200 properties. We expect to be above 95% connected before we get too far into the fall. We are working with the water purveyors to deliver recycled water. However, it is taking some time since we have to collect end user and site manager information beforehand.

<u>Questions from the Board</u>

Director Ochylski: You don't have a date for recycled water delivery but is there an expectation?

Director Alternative Hutchinson: It was expected in July of this year, but we are still working on it.

Director Zimmer: Is the discharge to Broderson from March of this year? The report says August.

Mr. Miller: August of last year.

Director Ochylski: Please clarify that in the minutes, because it is not clear.

Director Zimmer: I think we should be looking at the discharge a little bit closer. We know

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| | how much is going to the treatment plant, but we should figure out how much is actually discharging at Broderson. Also, we should see if there is any negative or positive response from Broderson, and is it meeting our expectations? Is there any water currently going to Bay Ridge?<br><br>Director Alternative Hutchinson: Potential for discharging at the Bay Ridge leach field is an environment requirement so it is dependent on monitoring in the Willow Creek area. At this point, everything is still going to Broderson. Also, there is currently no response at the Broderson wells.<br><br>Director Zimmer: So, all the water is going to Broderson?<br><br>Director Alternative Hutchinson: Yes, with exception of the pond evaporation.<br><br>Director Ochylski: Is any water going to the agricultural users?<br><br>Director Alternative Hutchinson: No, it is only Broderson at this point.<br><br>Director Zimmer: Is there any benefit for our group to have this information?<br><br>Mr. Miller: I think so, when this data comes out I will report it, usually semiannually.<br><br><u>Public Comment</u><br>Mr. Best: Regarding Broderson, the treatment plant is only removing things like nitrates and fecal material. It is not taking out salts, CEC's, medications, or paint thinners. This recycled water is being discharged at Broderson and it's streamlining all of those things into the upper aquifer. We risk poisoning the upper aquifer with theses recycled chemicals. What are we doing to reduce this?<br><br>Ms. Owen: There is about 400,000 gallons going to Broderson, what is the full amount of processed water? Morro Bay is about to spend money on a treatment plant, I wonder if they would be able to send us their wastewater and reduce everyone's cost. I would like to see if there is a way to work with them and build pipes between cities to reduce costs.<br><br>Mr. Margetson: At what point do we take an official stance that recycled water to the dryland farmers is no longer on the table? It is wasted infrastructure and costs that were supported by the residents of this community. The mitigation for these farmers is zero. The goal of this project was to send recycled water to those areas with the highest mitigation factor for seawater intrusion.<br><br>Mr. Best: I have a plan that can modify the existing wastewater facility and turn it into a potable water generating facility. It would be solar with no fossil fuel foot print and could handle 1.5 – 2 acre ft. per day. It could also be completed with grant funding. Selling this potable water back to the community would generate funding through this program.<br><br><u>Response from the BMC</u><br>Mr. Miller: Regarding the discharge at Broderson, many of our local aquifers are being replenished in the same way as Broderson. Over time there could be more stringent requirements in the future on salts and CEC's. The use of Broderson is addressed in Chapter 9 of the Basin Plan. Essentially that discharge was intended to replenish our upper aquifer. Now that Morro Bay and Cayucos are going in different directions, coupled with 50% capacity, I'd be happy to make that call if needed. |

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| | Director Alternative Hutchinson: Morro Bay has already made that call to us, and we are open to any sort of partnering program that they propose. I heard flows from Morro Bay at times are in excess of 1.0 million gallons?<br><br>Mr. Miller: That includes Cayucos.<br><br>Director Alternative Hutchinson: One of the challenges for Morro Bay is that they will want their water back. So, it would get treated, pumped back to them, and they would treat it some more. If Morro Bay wants to partner with Los Osos, the option is there and we are willing to see what kind of savings we can get.<br><br>Mr. Miller: Do you want to touch on the cemetery?<br><br>Director Alternative Hutchinson: I'm not sure where the cemetery is on the idea of receiving recycled water. There are priorities for recycled water, so we are currently working on those.<br><br>Director Alternative Cote: To take a step back here, should Rob make the call to Morro Bay or should the County?<br><br>Director Alternative Hutchinson: The issue with Morro Bay is there are many different ideas on where to go with their wastewater project. We are very open to the idea of a partnership, but we cannot be an influencer.<br><br>Director Alternative Cote: I think the BMC should make the contact that Mr. Miller had mentioned.<br><br>Mr. Miller: I'd be happy to do that. That water today from Morro Bay goes to an ocean outfall, but the plan is to reuse it.<br><br>Mr. Miller: I also wanted to address the concept of solar distillation. It's an alternative to reverse osmosis and doesn't create the brine stream. It's an interesting process and Nipomo looked at it a few years back, we can look at those data points for reference. |

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| **7a. Update on Status of Basin Plan Infrastructure Projects** | Mr. Miller: Gave detailed overview and updates on projects under Programs A & C.<br><br>Public Comment<br><br>No public comment.<br><br>Response from the BMC<br><br>Director Ochylski: The recommended action is to provide input for staff for future action. I am fine with the report the way it is. |
| **7b. Water Conservation Program Update** | Mr. Miller: Gave detailed overview on the Water Conservation Program.<br><br>Director Ochylski: The last sentence under the Title 19 status, I am not clear what you're saying there.<br><br>Mr. Miller: Right now, Title 19 is purely on a case-by-case basis. So, if you are looking to get Title 19 certificates, you have to suggest and negotiate quantities and this approach could be formalized in accordance with what we have produced.<br><br>Director Zimmer: Regarding the subcommittee we are going to discuss next meeting, I don't know if it's one of the options we went over, I think Marshall mentioned an evening meeting, or workshop, when we bring it back can we add that as a line item for a possible alternative?<br><br>Mr. Miller: Yes.<br><br>Public Comment<br><br>Mr. Edwards: I am asking the BMC to ask the County to include all the measures you've incorporated for the rebates, into Title 19.<br><br>Ms. Owen: Regarding conservation information, I've heard ads on a radio for other cities directing people to City websites, I think it would be easy for us to piggyback on those same ideas. Do we have a plan to put dye into Broderson disposal, so we can see where the water is going, and how long?<br><br>BMC Comments<br><br>Director Ochylski: I agree with the Title 19 issue that we should refer to the County. I think the idea of having some surety would be helpful.<br><br>Mr. Miller: I can do that with your authorization. |

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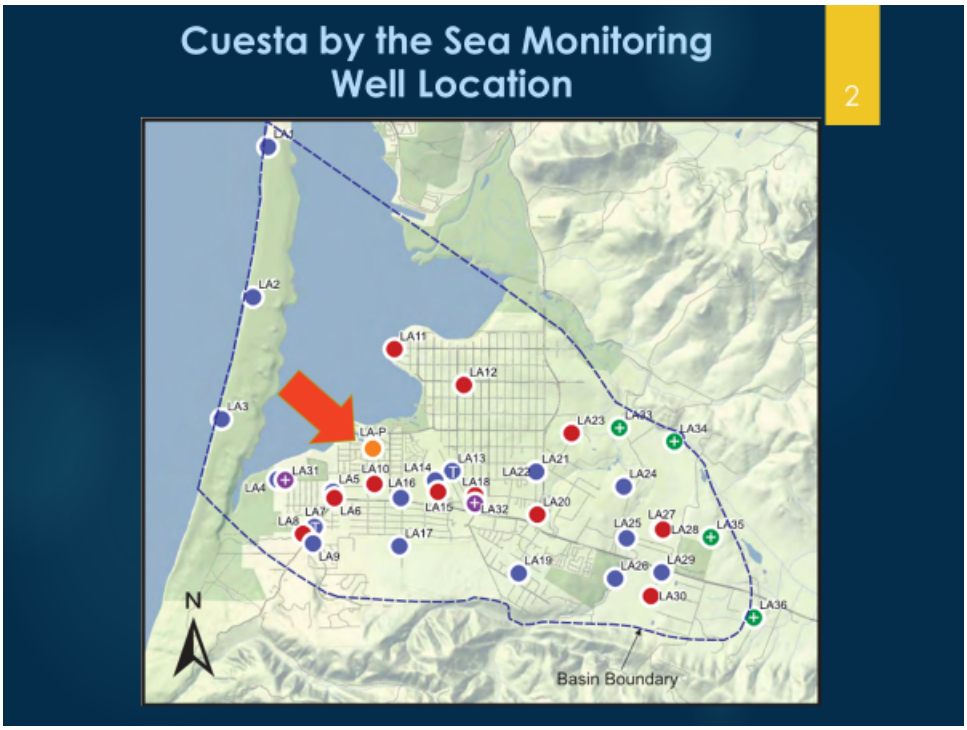
| | Director Ochylski: Do you have any comment on the water dye?<br><br>Mr. Miller: Yes, we sometimes call it a tracer. It is of technical interest to see if there are elements that are in the waste water that would persist as a tracer. Maybe Mr. Hutchinson we can work with your team to see if there are one or two things we can look for in future testing. |
| **7c. Cuesta by the Sea Monitoring Well** | Mr. Miller: Provided a verbal overview of the awarded contract to Cleath Harris Geologists for the Design of Cuesta by the Sea Lower Aquifer Monitoring Well.<br><br>  <br><br>Director Zimmer: When Mr. Miller talks about someone needing to own the physical work, are you talking about Cleath Harris' work for the actual well?<br><br>Mr. Miller: Even though the funding is coming from different entities for the well, there would need to be one actual owner.<br><br>Director Alternative Cote: I think there should be a way to do that, where all four of the entities pay for the well, and the BMC is the owner.<br><br>Mr. Miller: The BMC is not an entity that can own things the way we are currently formed. An individual entity would need to take ownership.<br><br>Director Ochylski: That becomes part of the agreement from all the parties. Say (for example) the CSD would own it, the agreement would state that all the other entities would have access to that well.<br><br>Director Alternative Cote: These kinds of things have to be drawn up, but I don't think this should slow us down for achieving that well.<br><br>Director Zimmer: I don't think I can commit to that at this time for Golden State. |

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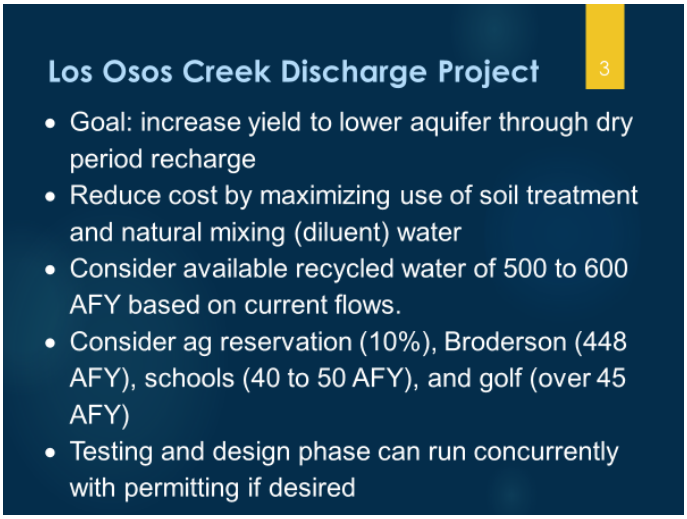
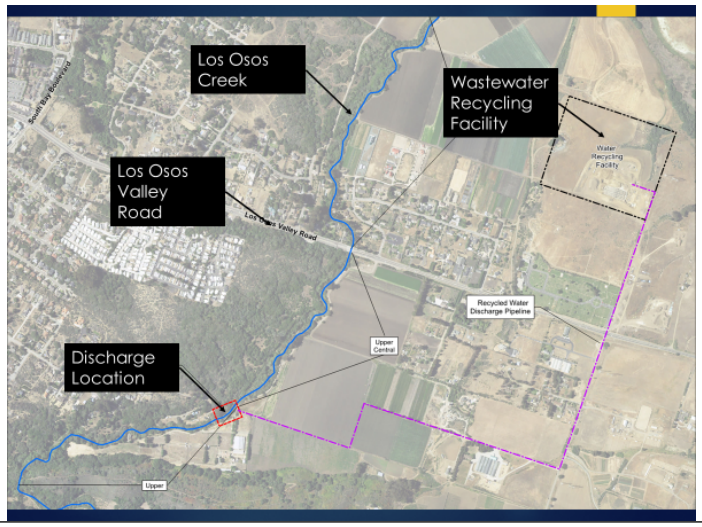
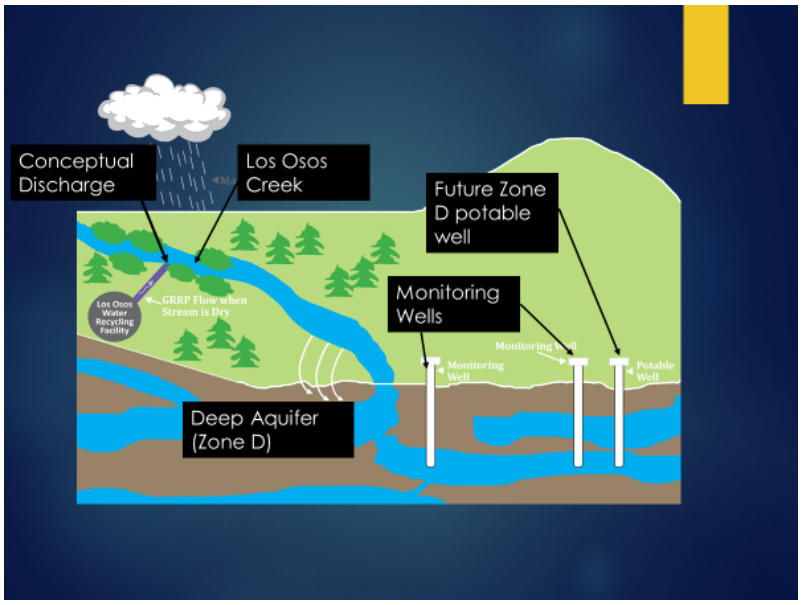
| | Director Ochylski: Correct, none of us can commit at this time. We will all need to get approval from our boards beforehand.<br><br>Mr. Miller: Why don't we just say the soft cost for the designing the well for now, bring back bids, and decide how we want to do the ownership.<br><br><u>Public Comment</u><br><br>No public comment.<br><br>Director Zimmer: Motion to award the contract for the soft costs and design to Cleath Harris, NTE $15,000.<br><br>Director Alternative Cote: I will second that motion.<br><br>**Ayes: Unanimous**<br>**Nays: None**<br>**Abstain: None**<br>**Absent: None** |
| **7d. Creek Discharge Plan Technical Memo** | Mr. Miller: Gave a detailed overview of the awarded Creek Discharge Plan Technical Memo.<br><br>  <br><br><br>  <br> |




## Groundwater Recharge and Replenishment (GRRP) Requirements

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- Meet requirements for various dissolved contaminants
- Virus and pathogen reduction beyond tertiary treatment
- Credit available in the soil column: Soil Aquifer Treatment
- Extensive monitoring and regulation required
- Pilot testing and field studies

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**Table 3**
**Analytical Cost during GRRP Operation**

| Test | Frequency (number per year) | | | | Cost per Analysis | Annual Cost |
|---|---|---|---|---|---|---|
| | WRF Effluent | Diluent | Monitoring Wells (2) | Total per Year | | |
| Inorganic Chemicals | 4 | 4 | 8 | 16 | $650 | $10,400 |
| Radionuclides | 4 | 4 | 8 | 16 | $650 | $10,400 |
| Organic Chemicals | 4 | 4 | 8 | 16 | $1975 | $31,600 |
| DBPs | 4 | 4 | 8 | 16 | $400 | $6,400 |
| Lead and Copper | 4 | 4 | 8 | 16 | $42 | $672 |
| TOC | 48 | | | 48 | $65 | $3,120 |
| Total Nitrogen | 104 | | | 104 | $70 | $7,280 |
| Total Annual (rounded) | | | | | | $70,000 |

Notes: Costs reflect lab analyses only, based on 2017 rates, and do not include sampling costs. These costs are in addition to analyses currently being conducted at the WRF, with the exception of half of the Total Nitrogen tests.

## Effluent Treatment Options

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- Membrane and reverse osmosis – not currently viable due to brine production (required for direct well injection)
- Granular activated carbon, capital cost of $1.2M, O&M of $2,200 per acre-ft
- Biologically active carbon, capital cost of $3M, O&M of $200 per acre-ft
- Advanced oxidation, capital cost of $3.5M, O&M cost of $400 to $700

**Table 5**
**Recommended Los Osos Creek GRRP Treatment Evaluation Budget**

| Task | Recommended Budget | | |
|---|---|---|---|
| | Planning/ Engineering | Sampling/Lab Costs | Total |
| **Phase 1** | | | |
| 1. Develop water quality baseline | $ 14,000 | $ 41,000 | $ 55,000 |
| 2. SAT Evaluation | $ 47,000 | $ 25,000 | $ 72,000 |
| Allowance for DDW Review | $ 5,000 | - | - |
| ***Subtotal Phase 1*** | ***$ 66,000*** | ***$ 66,000*** | ***$ 132,000*** |
| **Phase 2** | | | |
| 3. Hydrogeological Analysis | $ 55,000 | $ 32,000 | $ 87,000 |
| 4. Design/Construct 2 nested monitoring wells | $ 20,000 | $ 100,000 | $ 120,000 |
| 5. Source Water Evaluation | $ 10,000 | - | $ 10,000 |
| 6. Treatment Evaluation | $ 27,000 | - | $ 27,000 |
| 7. Pilot Studies | $ 15,000 | $ 150,000 | $ 165,000 |
| 8. Feasibility Report | $ 26,000 | - | $ 26,000 |
| 9. Allowance for DDW Review | $ 15,000 | - | $ 15,000 |
| ***Subtotal Phase 2*** | ***$ 168,000*** | ***$ 282,000*** | ***$ 450,000*** |
| **Total Phase 1 + Phase 2** | **$ 234,000** | **$ 348,000** | **$ 582,000** |
| Note: Task 3, Hydrogeological Analysis, includes 1 year of quarterly groundwater sampling/analyses of the two new monitoring wells. | | | |



## Next Steps

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- Discuss allocation of effluent given actual volumes
- If creek discharge selected, pursue funding for testing and monitoring wells
- If desired, process land use approvals concurrently to keep options open
- Continue landowner discussions

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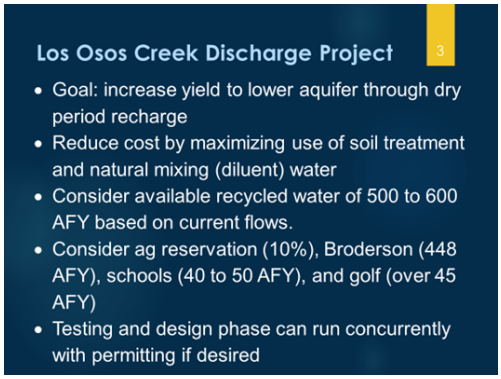
| | Director Alternative Cote: This seems expensive compared to other options that we've looked at already. Would this fit into the BMC current project plans, perhaps to be considered after other methods of recharge have proven ineffective?<br><br>Mr. Miller: The basin plan does mention creek recharge as a project but doesn't put a number on it because these regulations were in their infancy when we drafted the plan and now they have come to fruition.<br><br>Director Alternative Hutchinson: Regarding the MKN report, it's not real clear that they understand those advanced treatment options that create a brine stream are problematic in Los Osos to say the least. As I'm looking at your next steps, I really think the BMC needs to discuss the best use of effluent. When you look at our discharge sites in town, the high priority ones, which are replacing potable water use for irrigation and greenspace, that's less than 100 acre feet. Then it gets substantially less efficient for the remaining 300-400 ft. for what we're doing. I'd be real curious about the return on investment when we're down into those kinds of numbers. If we're talking about getting into the details in the order that we talked about; and at the same time there is an availability of grants to do that first section of work that's in the technical report, I think we should really discuss that over the next couple of meetings.<br><br>Director Ochylski: When we get to Table 4& 5 which has the task and costs, the costs and tasks don't seem to correlate and fit with each other. I would like staff or MKN to take a more detailed look at these costs and make sure that they are value engineered to represent true costs.<br><br>Mr. Miller: Fair enough.<br><br>Director Zimmer: I agree with Director Ochylski, I would like the costs clarified a little better. There is a high benefit but also some risk involved. With so much cost going into this project it would be important to know if this will be a big benefit or an expensive project with not much benefit to offer. With the grant funding, is that something the Morro Bay National Estuary Program would still be participating in or are they done? With regards to protecting existing production wells in that area; is there potential for risk with existing production?<br><br>Mr. Miller: Regarding the Morro Bay Estuary Program, as funding is available, and having similar interests such as creek testing, it addresses their mandates as well as ours. As funding allows, some of that they may be willing to participate in because there funding is limited as well.<br><br><u>Public Comment</u><br><br>Mr. Edwards: I would respectfully submit to this committee that this creek discharge project could be one of the single most important basin management efforts you could endeavor upon. I fully endorse the GRRP and its implementation. As Rob mentioned, the creek is connected to our lower basin, in other words D & E sweep up and daylight at the creek bottom. This is how our lower basin is recharged naturally during the wet weather. This should be the highest priority for allocating treated effluent. It beats Broderson since we get water into the lower basin where the intrusion is happening. I urge the committee to process the CDP for this project at the earliest possible time.<br><br>Ms. Owen: Regarding Broderson, the water we put into the ground goes into the upper aquifer, and we eventually find it in the monitoring wells. What is the point of putting |

water into the upper aquifer? In the long term, we are hoping it goes through the aquitard into the lower aquifer. Is there already seawater intrusion into the lower aquifer? If there is intrusion why would we be trying to get water down there? Are we any closer to getting monitoring on private well use?

Mr. Best: If we are going to put water back into the ground to replenish the aquifer we should be doing it right by making sure the water we are putting back is clean.

Mr. Margetson:




Regarding this slide, if you go back to the Coastal Commission and say this Plan now doesn't fit the current flows. We aren't sure of that 10% AG reserve or where it will go. The only chance for it will be through contracts with the dryland farmers since the other farmers don't want that water. This can have an impact on rate payers in the future.

Public comment was very helpful in preparing staff for the next meeting. In response to Ms. Owen, regarding that wedge that comes off of Broderson, is there a portion that ends up going into the seawater intruded lower aquifer; it's an interesting question that I don't immediately have an answer for. That is something we would want to look for, is that spreading to the point where some of that water is simply lost. I also think it is important to monitor all wells and all extractions that happen within the basin.

Director Ochylski: Well monitoring is under the purview of the County and it's a decision that the board would have to make isn't that correct Director Alternative Hutchinson?

Director Alternative Hutchinson: Correct, unless Sacramento decides it for us.

Director Alternative Cote: I have heard Richard's comments many times about the dryland farmer recharge projects and I haven't heard much come back from this Committee to discuss that. I think that at the next meeting it could be a discussion item.

Director Ochylski: What Richard is saying is true, because I was on that technical advisory committee. There was a projection of "x" amount of water being generated, and there had to be silos where that water could be used of disposed of.

Rob: That will be the substance of what we talk about at the next meeting; how do we prioritize this?

Director Zimmer: Could we have staff look at some next steps of funding mechanisms that we could utilize for next steps without incurring a lot of cost at this point.

Mr. Miller: Yes, we have already reached out to some of the grant agencies and are

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| | beginning that process, so we will bring that back. |
| **8. PUBLIC COMMENTS ON ITEMS NOT APPEARING ON THE AGENDA** | Mr. Edwards: I work a lot with both County staff and Coastal Commission staff and for the most part they don't have any understanding of the numbers relative to the basin such as safe yield and demand. Even the Basin Management Plan has outdated numbers. I think it's critically important that we update the County and the State with more updated numbers concerning our basin.<br><br>Ms. Owen: We have no excess water, so we need to start importing water. Instead of paying millions of dollars to import water it would be helpful to import Morro Bay's water if we could work out a deal with their wastewater.<br><br>Mr. Best: We need to focus on growing in a way to benefit the community. We have to make sure we do not poison the aquifers, and make sure we are putting clean water back into the aquifers. |
| **9. ADJOURNMENT** | Meeting was adjourned at 3:35 pm.<br>The next meeting will be on November 15th at the South Bay Community Center in Los Osos at 1:30pm. |

**TO:** **Los Osos Basin Management Committee**

**FROM:** **Rob Miller, Interim Executive Director**

**DATE:** **November 15, 2017**

**SUBJECT:** **Item 5b – Approval of Budget Update and Invoice Register through November 15, 2017**

## 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 through November 15, 2017 (see Attachment 1). A running invoice register is also provided as Attachment 2. Staff recommends that the Committee approve the current invoices, outlined in Attachment 3. It should be noted that budget items 5 and 6 can be combined in 2018, since they are essentially a combined effort by Cleath Harris Geologists. The total amount between the two items is approximately $50,000, which conforms to the approved total budget.

Payment of invoices will continue to be processed through Brownstein Hyatt as noted in previous meetings.

**Attachment 1: Cost Summary (Year to Date) for Calendar Year 2017 (updated through November 15, 2017)**

| Item | Description | Budget Amount | Costs Incurred Through December 31 | Percent Incurred | Remaining Budget |
|---|---|---|---|---|---|
| 1 | Monthly meeting administration, including preparation, staff notes, and attendance | $50,000 | $34,389.22 | 68.8% | $15,611 |
| 2 | Meeting expenses - facility rent (if SBCC needed for larger venue) | $1,000 | $600.00 | 60.0% | $400 |
| 3 | Meeting expenses - audio and video services | $6,000 | $3,750.00 | 62.5% | $2,250 |
| 4 | Legal counsel (special counsel for funding measure) | $10,000 | $0.00 | 0.0% | $10,000 |
| 5 | Semi annual seawater intrusion monitoring | $15,000 | $24,616.66 | 164.1% (see staff note for explanation) | -$9,617 |
| 6 | Annual report - not including Year 1 start up costs | $35,000 | $25,590.00 | 73.1% | $9,410 |
| 8 | Grant writing (outside consultant) | $12,000 | $1,102.50 | 9.2% | $10,898 |
| 9 | Creek Recharge and Replenishment Studies | $25,000 | $19,693.08 | 78.8% | $5,307 |
| 10 | Funding measure including Proposition 218 process | $100,000 | $0.00 | 0.0% | $100,000 |
| 11 | Conservation programs (not including member programs) | $10,000 | $0.00 | 0.0% | $10,000 |
| | Subtotal | $264,000 | | | $154,259 |
| | 10% Contingency | $26,400 | | | |
| | **Total** | **$290,400** | **$109,741.46** | **37.8%** | **$180,659** |
| | | | | | |
| | LOCSD (38%) | $110,352 | | | |
| | GSWC (38%) | $110,352 | | | |
| | County of SLO (20%) | $58,080 | | | |
| | S&T Mutual (4%) | $11,616 | | | |
| Notes | | | | | |

**Attachment 2: Invoice Register for Los Osos BMC for Calendar Year 2017 (through November 15, 2017)**

| Vendor | Invoice No. | Amount | Month of Service | Description | Budget Item | Previously Approved |
|---|---|---|---|---|---|---|
| Wallace Group | 43235 | $6,056.77 | Jan-17 | BMC admin services | 1 | x |
| Wallace Group | 43389 | $1,418.50 | Feb-17 | BMC admin services | 1 | x |
| Wallace Group | 43548 | $5,000.41 | Mar-17 | BMC admin services | 1 | x |
| Wallace Group | 43783 | $1,500.54 | Apr-17 | BMC admin services | 1 | x |
| Wallace Group | 43926 | $5,372.38 | May-17 | BMC admin services | 1 | x |
| Wallace Group | 44538 | $1,165.65 | Aug-17 | BMC admin services | 1 | x |
| Wallace Group | 44161 | $4,415.88 | Jun-17 | BMC admin services | 1 | |
| Wallace Group | 44325 | $3,729.18 | Jul-17 | BMC admin services | 1 | |
| Wallace Group | 44756 | $3,914.91 | Sep-17 | BMC admin services | 1 | |
| Wallace Group | TBD | $1,815.00 | Oct-17 | BMC admin services | 1 | |
| South Bay Comm. Center | 105 | $120.00 | Mar-17 | Meeting Expenses-Facility Rent | 2 | x |
| South Bay Comm. Center | 106 | $120.00 | May-17 | Meeting Expenses-Facility Rent | 2 | x |
| South Bay Comm. Center | 108 | $120.00 | Jul-17 | Meeting Expenses-Facility Rent | 2 | x |
| South Bay Comm. Center | 109 | $120.00 | Jun-17 | Meeting Expenses-Facility Rent | 2 | x |
| South Bay Comm. Center | 110 | $120.00 | Sep-17 | Meeting Expenses-Facility Rent | 2 | |
| AGP | 6849 | $675.00 | Jan-17 | Audio services | 3 | x |
| AGP | 6912 | $775.00 | Mar-17 | Video/Audio | 3 | x |
| AGP | 6981 | $775.00 | May-17 | Video/Audio | 3 | x |
| AGP | 7022 | $800.00 | Jun-17 | Video/Audio | 3 | x |
| AGP | 7046 | $725.00 | Jul-17 | Video/Audio | 3 | x |
| State Water Resources | RW-1008149 | $837.20 | Jan-17 | Creek Discharge | 9 | x |
| Cleath Harris Geologists | 20170302 | $3,196.25 | Mar-17 | Semi-Annual Seawater Intrusion Monitoring | 5 | x |
| Cleath Harris Geologists | 20170400 | $7,683.01 | Apr-17 | Semi-Annual Seawater Intrusion Monitoring | 5 | x |
| Cleath Harris Geologists | 20170504 | $11,990.00 | May-17 | Annual Report Preparations | 6 | x |
| Cleath Harris Geologists | 20170503 | $253.00 | May-17 | Semi-Annual Seawater Intrusion Monitoring | 5 | x |
| Cleath Harris Geologists | 20170401 | $8,387.50 | Apr-17 | Annual Report Preparations | 6 | x |
| Cleath Harris Geologists | 20170904 | $2,210.00 | Sep-17 | Semi-Annual Seawater Intrusion Monitoring | 5 | |
| Cleath Harris Geologists | 20171002 | $11,274.40 | Oct-17 | Semi-Annual Seawater Intrusion Monitoring | 5 | |
| MKN | 3548 | $10,197.00 | Jul-17 | Boundary-Creek Discharge Study | 9 | x |
| MKN | 3652 | $1,487.50 | Aug-17 | Boundary-Creek Discharge Study | 9 | x |
| MKN | 3707 | $7,171.38 | Sep-17 | Boundary-Creek Discharge Study | 9 | |
| Cleath Harris Geologists | 20170303 | $5,212.50 | Mar-17 | Annual Report Preparations | 6 | x |
| WSC | 2205 | $1,102.50 | Apr-17 | Grant Writing | 8 | x |
| **Total** | | **$109,741.46** | | | | |

Not yet approved

**ATTACHMENT 3**

**Current Invoices Subject to Approval for Payment (Warrant List as of November 15, 2017):**

| Vendor | Invoice # | Date of Services | Amount of Invoice |
|---|---|---|---|
| Wallace Group | 44161 | Jun-17 | $4,415.88 |
| Wallace Group | 44325 | Jul-17 | $3,729.18 |
| Wallace Group | 44756 | Sep-17 | $3,914.91 |
| Wallace Group | | Oct-17 | $1,815.00 |
| SBCC | 110 | Sep-17 | $120.00 |
| Cleath Harris Geologists | 20170904 | Sep-17 | $2,210.00 |
| Cleath Harris Geologists | 20171002 | Oct-17 | $11,274.40 |
| MKN | 3707 | Sep-17 | $7,171.38 |

**TO:** **Los Osos Basin Management Committee**

**FROM:** **Rob Miller, Interim Executive Director**

**DATE:** **November 15, 2017**

**SUBJECT:** **Item 6 – Executive Director's Report**

**Recommendations**

Staff recommends that the Committee receive and file the report, and provide staff with any direction for future discussions.

**Discussion**

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

Funding and Financing Programs to Support Basin Plan Implementation

As indicated in the September meeting the State Board confirmed that sea water intrusion mitigation projects under Program C are eligible for low interest loans, but are not currently eligible for grants under Proposition 1. New wells in the upper and lower aquifer are viewed as aquifer management, not aquifer clean-up as defined by the State, therefore we will need to look for future funding rounds and other opportunities. Staff has engaged in the IRWM process with SLO County for the Los Osos Creek Replenishment and Recharge Project (IRWM Project ID 2017 NT-07).

Status of Zone of Benefit Analysis

Similar to previous updates, no special tax measure is being pursued by staff to fund BMC administrative or capital costs, though some funding has been set aside in the 2017 BMC budget to advance a funding measure if needed. This funding has been allocated to the construction of a Cuesta by the Sea monitoring well for calendar year 2017 as approved in the July 2017 BMC meeting. Staff's current approach to capital projects under the Basin Plan Infrastructure Program is to advance the needed projects through the property acquisition, environmental review, and Coastal Development Permit phases.

Sustainable Groundwater Management Act (SGMA) Compliance and Pending Deadlines

As indicated in the July 2017 update, the Plan Area defined in the Los Osos Basin Plan and adopted by the Court is not subject to the requirements of SGMA. However, SGMA is required on the areas outside of the Plan Area, but within the State's designated basin boundary (i.e., "fringe areas"). On April 4, 2017, the County of San Luis Obispo (County) Board of Supervisors became the Groundwater Sustainability Agency (GSA) for the Los Osos Basin "Fringe Areas".

The County is continuing efforts on the basin characterization study of the basin "fringe areas" through its consultant Cleath-Harris Geologists, in preparation for submitting a basin boundary

modification application to the Department of Water Resources in early 2018. Pending County Board action to initiate the basin boundary modification process in early 2018, the County would engage basin users and water purveyors through a community meeting, and seek documentation of support from water purveyors.

Los Osos Wastewater Project Flow and Connection Update

Staff plans to provide periodic updates on the status of connections and flows from the LOWWP. The following is an update on the status:

- As of 11/1/17, 94.5% of the lateral connections have been completed, an increase of 16 connections since last month.
- Of the 237 unconnected properties, 79 are waiting for the County/USDA/LOCSD low-income grant program to pay for their connection leaving 158 properties that may require enforcement.
- Of the 158 properties, 55 are in the process of connecting (ie: obtained a building permit), 26 have responded to the County's survey giving reasons why they are not connected yet. This leaves 77 properties (1.8% of 4,200 connections) that are the focus of the Code enforcement process. Please see the County staff report regarding enforcement program scheduled for November 7, 2017.
- Influent flows into the treatment facility are peaking at 0.48 mgd.
- Effluent is being discharged to both Broderson and Bayridge leach fields. October's effluent disposal total was 43 AF.
- No recycled water has been delivered to irrigation customers to date, but final negotiations are ongoing.

Monitoring Well Project Update

The Committee approved Cleath-Harris' contract at the September 20, 2017 BMC meeting. Staff is currently working on fine tuning the monitoring well location.

Option to Bring Morro Bay Wastewater to Los Osos WWRF

As directed by the Committee at the previous meeting, an initial discussion was held with the City of Morro Bay's wastewater treatment plan consultant. It was determined that both summer and winter peak day flows at the City of Morro Bay are expected to exceed the available capacity in the Los Osos Wastewater Reclamation Facility, and therefore an expansion would be required to accommodate the higher flows. A number of peak day flows of over 3 mgd have been observed at the existing Morro Bay facility. Additional information on the Morro Bay project can be found here: http://morrobaywrf.com/.

**TO:** **Los Osos Basin Management Committee**

**FROM:** **Rob Miller, Interim Executive Director**

**DATE:** **November 15, 2017**

**SUBJECT:** **Item 7A. – Update on Status of Basin Plan Infrastructure Projects**

**Recommendations**
Receive report and provide input to staff for future action.

**Discussion**
The Basin Management Plan for the Los Osos Groundwater Basin (Plan) was approved by the Court in October, 2015. The Plan provided a list of projects that comprise the Basin Infrastructure Program (Program) that were put forth to address the following immediate and continuing goals:

Immediate Goals

1. Halt or, to the extent possible, reverse seawater intrusion into the Basin.
2. Provide sustainable water supplies for existing residential, commercial, community and agricultural development overlying the Basin.

Continuing Goals

1. Establish a strategy for maximizing the reasonable and beneficial use of Basin water resources.
2. Provide sustainable water supplies for future development within Los Osos, consistent with local land use planning policies.
3. Allocate costs equitably among all parties who benefit from the Basin's water resources, assessing special and general benefits.

The Program is divided into four parts, designated Programs A through D. Programs A and B shift groundwater production from the Lower Aquifer to the Upper Aquifer, and Programs C and D shift production within the Lower Aquifer from the Western Area to the Central and Eastern Areas, respectively. Program M was also established in the Basin Management Plan for the development of a Groundwater Monitoring Program (See Chapter 7 of the BMP), and a new lower aquifer monitoring well in the Cuesta by the Sea area was recommended in the 2015 Annual Report. The following Table provides an overview of status of the Projects that are currently moving forward or have been completed.

As indicated in the July 2017 BMC meeting, the LOCSD has implemented new water rates intended to provide net revenue for capital funding over the next three fiscal years as follows:

- FY 17/18: $500,000
- FY 18/19: $700,000

- FY 19/20: $900,000

These rates will be sufficient to fully fund the District's portion of all Program A and C projects, either using debt service or pay-as-you-go. Additional cooperative funding approaches with other BMC members could also be considered for Expansion Well No. 3 or other program elements.

| Project Name | Parties Involved | Funding Status | Capital Cost | Status |
|---|---|---|---|---|
| **Program A** | | | | |
| Water Systems Interconnection | LOCSD/ GSWC | Fully Funded | Construction Value: $103,550 | Project completed February 2017, with final approval in March 2017 |
| Upper Aquifer Well (8th Street) | LOCSD | Fully Funded | $250,000 | Well was drilled and cased in December 2016. Budget remaining $250,000 to equip the well. Design RFP was issued in April, and a consultant was retained in June 2017. Amended design contract to go to LOCSD Board in December. Project to be completed by Summer 2018 or earlier if possible. |
| South Bay Well Nitrate Removal | LOCSD | Completed | | |
| Palisades Well Modifications | LOCSD | Completed | | |
| Blending Project (Skyline Well) | GSWC | Fully Funded | Previously funded through rate case | The Rosina Nitrate Unit was brought on-line on October 9, 2017, and it is producing 160 gallons per minute of treated water. |
| Water Meters | S&T | Completed | | |
| **Program B** | | | | |
| LOCSD Wells | LOCSD | Not Funded | BMP: $2.7 mil | Project not initiated |
| GSWC Wells | GSWC | Not Funded | BMP: $3.2 mil | Project not initiated |
| Community Nitrate Removal Facility | LOCSD/GSWC | Partial | First phase combined with GSWC Program A | GSWC's Program A Blending Project allows for incremental expansion of the nitrate facility and can be considered a first phase in Program B. |
| **Program C** | | | | |
| Expansion Well No. 1 (Los Olivos) | GSWC | Fully Funded | Previously funded through rate case | Well is now fully operational as of the end of June 2017. |

| Project Name | Parties Involved | Funding Status | Capital Cost | Status |
|---|---|---|---|---|
| Expansion Well No. 2 | GSWC/LOCSD | Cooperative Funding | BMP: $2.0 mil | Property acquisition phase is on-going through efforts of LOCSD. Three sites are currently being reviewed, and all appear to be viable for new east side lower aquifer wells, Environmental studies were initiated in December 2016 for expansion well #2. |
| Expansion Well 3 and LOVR Water Main Upgrade | GSWC/LOCSD | Cooperative Funding | BMP: $1.6 mil | Property acquisition phase is on-going through efforts of LOCSD. |
| LOVR Water Main Upgrade | GSWC | May be deferred | 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 | BMP: $30,000 | Conceptual design |
| **Program M** | | | | |
| New Zone D/E lower aquifer monitoring well in Cuesta by the Sea | All Parties | Funded through BMC Budget | $100,000 | Cleath-Harris scope was approved in September 2017 meeting, and site selection is underway. Bidding for well construction is anticipated in Q1, 2018. |

**TO:** **Los Osos Basin Management Committee**

**FROM:** **Rob Miller, Interim Executive Director**

**DATE:** **November 15, 2017**

**SUBJECT:** **Item 7b – Water Conservation Program Update**

**Recommendations**
Received update and provide input to staff for future action.

**Discussion**
In November 2016, the BMC reviewed and endorsed an Addendum to the Water Conservation Implementation Plan for the Los Osos Wastewater Project. The document can be found at the following web address:

http://slocountywater.org/site/Water%20Resources/LosOsos/pdf/WCIP_Addendum%201_rev.pdf

In June 2017, the County approved a subset of the BMC rebate programs intended for properties connect to the Los Osos Wastewater Project as shown on the attached summary (Exhibit A). Two of the BMC's recommended measures are not included in the staff recommendation. These are the septic tank repurposing program (BMC Outdoor 1) and the Low Impact Development Landscape measure (BMC Outdoor 4). While both measures are reasonable elements of a community water conservation program, they are not recommended for inclusion in the County's efforts because there is no clear nexus between the wastewater project and the reduction of outdoor irrigation using potable water supplies. On June 20, 2017, the County submitted the measures in Exhibit A to the Executive Director of the California Coastal Commission. In August 2017, the Coastal Commission requested clarification, and the County is responding by submitting an updated Recycled Water Management Plan, which staff believes will be submitted prior to the November BMC meeting. County staff anticipates that it will receive notification that the Coastal Commission agrees that the rebate changes are consistent with the requirements of the Coastal Development Permit. The County will begin implementing the rebate changes upon receipt of said notification.

Conservation Outreach
In July 2017, the BMC discussed a number of alternatives for the formation of a subcommittee to discuss outreach efforts for water conservation. A copy of the July staff note is attached for reference. As indicated at the September meeting, staff estimates the cost to be in the range of $1,400 to $1,800 per meeting for a Brown Act subcommittee, assuming that the meeting would not be televised and would be held in the LOCSD Board chambers. The BMC currently has an annual budget of $10,000 per year for water conservation activities. As an alternative, an evening meeting could be scheduled and advertised to gather community input on the public outreach process in a more open format.

Title 19 Status

As described in the March 2017 BMC meeting, Title 19 retrofits are pursued by private parties in order to facilitate development within the community. In recent years, the County has found that minimal retrofit opportunities are available through pre-approved measures with published values for water savings. This situation primarily impacts new development that is either outside of the prohibition zone, or not subject to Special Condition 6 of the Los Osos Wastewater Project's Coast Development Permit. The County currently considers retrofits on a case by case basis, including the installation of high-efficiency clothes washers. Since such retrofits are expected to continue irrespective of rebate funding, the BMC asked staff to continue to communicate with County Planning regarding the inclusion of measures from the Addendum to the Water Conservation Implementation Plan within an updated version of Title 19.

**EXHIBIT A**

| **Water Conservation Implementation Plan, Los Osos Wastewater Project**<br>**Proposed Rebate Program**<br>*changes in italics* | | | |
|---|---|---|---|
| Measures Required for Connection to the Wastewater System | | | |
| *Fixture or Appliance* | *Existing Fixture Flow Rate* | *New Fixture Flow Rate Eligible for Rebate* | *Rebates* |
| Toilets<br>Residential & Commercial | Greater than 1.6 gpf | 1.28 gpf or less | $250 |
| Showerheads<br>Residential & Commercial | Greater than 2.0 gpm | 1.5 gpm or less | $40 |
| Faucet Aerators<br>Residential | Greater than 1.5 gpm | 1.5 gpm or less | $5 |
| Faucet Aerators<br>Commercial | Greater than 0.5 gpm | 0.5 gpm | $5 |
| Urinals<br>Commercial | Greater than 1.0 gpf | 0.5 gpf or less | $500 |
| Pre-rinse Spray Valves<br>Commercial | Greater than 1.15 gpm | 1.15 gpm or less | N/A |
| Optional Measures Eligible for Rebates<br>(Requires Connection to the Wastewater System and Compliance with Above Measures) | | | |
| Toilets<br>Residential & Commercial | Equal to 1.6 gpf | ~~1.0~~ *1.28* gpf or less | $250 |
| Washers<br>Residential & Commercial | Less than Tier 3, Water Factor 4 | Tier 3, Water Factor 4 or Less | ~~$150~~ *$450 (1)* |
| *Hot Water Recirc System*<br>*Residential & Commercial* | *N/A* | *N/A* | *$350* |
| *Showerheads*<br>*Residential & Commercial* | *1.5 gpm or more* | *Less than 1.5 gpm* | *$40* |
| *Complete Gray Water System* | *N/A* | *N/A* | *$500* |
| *Laundry only Gray Water System* | *N/A* | *N/A* | *$50* |
| *Recycled Water Irrigation*<br>*Commercial & Institutional* | *N/A* | *N/A* | *negotiated* |
| ~~Alternative Measures~~ | ~~1.28 gpf toilet~~<br>~~1.5 gpm showerhead~~<br>~~1.5 gpm faucet aerators~~ | ~~Needs prior approval~~ | ~~$300~~ |

gpf = gallons per flush
gpm = gallons per minute

*NOTES: (1) Rebate not retroactive to prior*

**TO:** **Los Osos Basin Management Committee**

**FROM:** **Rob Miller, Interim Executive Director**

**DATE:** **July 14, 2017**

**SUBJECT:** **Item 7b – Options for Formation of a Conservation Subcommittee for Public Outreach**

**Recommendation:**

It is recommended that the Basin Management Committee (Committee) review and consider options for the formation of a Conservation Subcommittee and direct staff to return with a resolution forming an *ad hoc* advisory subcommittee of the Committee composed of two (2) directors whose combined voting percentages total less than fifty percent (50%).

**Discussion:**

Your Committee has discussed the potential formation of a subcommittee in connection with water conservation efforts within the Los Osos Basin (Basin) (Conservation Subcommittee) on a number of occasions. The purpose of the Conservation Subcommittee would be to advise the Committee on the development of a public outreach plan to increase public awareness of the various existing and proposed conservation programs within the Basin (*e.g.* the water conservation program connected to the Los Osos Wastewater Project and the water conservation program contained within Title 19 of the San Luis Obispo County Code of Ordinances). On June 20, the Board of Supervisors authorized a number of new rebates as a result of previous BMC discussions. A copy of the draft resolution and amended rebate list is attached. At its meeting on March 15, 2017, the Committee requested that legal counsel determine its authority to form a Conservation Subcommittee. Legal counsel for both the County and Golden State Water Company assisted in the preparation of this report.

Authority to Form Subcommittees:
Both the Stipulated Judgment (Section 5.9.8) and the Committee Bylaws (Article 9) permit the Committee to form subcommittees by resolution:

> *From time to time, the Basin Management Committee may, by resolution, establish one or more subcommittees for such purposes as the Basin Management Committee may designate. Any such subcommittee shall have such scope of authority as the Basin Management Committee may designate in the subcommittee enabling resolution.*

Brown Act:

Under the Brown Act (Government Code Section 54950 *et seq.*), a committee or other body of a local agency, whether permanent or temporary, decision making or advisory,

created by resolution or formal action of a legislative body is subject to the Brown Act with the exception of advisory committees (that do not constitute standing committees – *i.e.* committees with continuing subject matter jurisdiction or a meeting scheduled fixed by resolution or formal action of the legislative body) composed solely of the members of the legislative body that are less than a quorum of the legislative body (Government Code Section 54952(b)). In addition, a private committee that receives funds from a local agency and the membership of whose governing body includes a member of the legislative body of the local agency appointed to that governing body as a full voting member is also subject to the Brown Act (Government Code Section 54950(c)(1)(B)).

Formation Options:

***Option 1:*** *Ad Hoc Advisory Subcommittee Composed of Less a Quorum of Directors*

By resolution, the Committee could form the Conservation Subcommittee as an *ad hoc* advisory committee composed of less than a quorum (*i.e.* two (2)) Directors). Pursuant to both the Stipulated Judgment (Section 5.11.1) and the Committee Bylaws (Article 7.3) a quorum of the Committee is three (3) Directors. Staff recommends this option because it would be the most flexible and efficient provided that the Conservation Committee is established as a temporary *ad hoc* advisory committee for the sole purpose of providing advice to the Committee regarding the public outreach plan. The Conservation Subcommittee would terminate upon the Committee's adoption of the plan.

It is anticipated that the two (2) Conservation Subcommitee members would work closely with staff, as necessary, and conduct one (1) or more public community outreach meetings to solicit and incorporate community member comments. If the Committee selects this option, staff recommends that the Conservation Subcommittee be composed of two (2) Directors whose voting percentages do not exceed 50 percent (50%) (*i.e.* that the Director representing S&T Mutual Water Company be one (1) of the Directors appointed to the Conservation Subcommittee).

***Option 2:*** *Brown Act Subcommitee*

By resolution, the Committee could form the Conservation Subcommittee as a committee subject to the Brown Act. The advantage to such a Conservation Subcommittee is that the composition of the subcommittee would be less constrained. For example, members of the public could serve directly on the Conservation Subcommittee. Staff does not recommend this option given the Conservation Subcommittee's limited and defined role, the time and expense associated with managing a Brown Act committee and the fact that staff believes that community involvement can be adequately considered through the public community outreach meeting(s) discussed in Option 1 above.

***Option 3:*** *No Subcommittee – Direct Staff to Develop the Community Outreach Plan*

The Committee could elect not to proceed with the formation of a separate Conservation Subcommittee and instead direct the Executive Director, in coordination with staff from the members, to develop the community outreach plan for consideration by the Committee. As in Option 1, under this option staff could also conduct one (1) or more community outreach meetings to solicit and incorporate community member comments. Although the Executive Director could undertake such a task, staff believes that an option that includes more direct Director involvement is preferable.

***Option 4:*** *No Subcommittee – Solicit Input from Existing Community Groups*

The Committee could elect not to proceed with the formation of a separate Conservation Subcommittee and instead request that existing community groups provide focused input on the contents of the community outreach plan. For example, the Sierra Club previously provided helpful comments with respect to additional measures to be included with the Water Conservation Implementation Plan and would likely have valuable input with respect to the development of the community outreach plan. Under this option, the Committee would solicit additional focused input from members of the community during upcoming meetings.

**Conclusion:**

Both Options 1 and 2 require the preparation of a resolution which staff could bring back for your Committee's consideration at the next meeting. For the reasons indicated above, staff recommends Option 1 over Option 2. If your Committee prefers Option 3 or 4, your Committee could direct staff to commence development of the community outreach plan or to solicit input from certain community groups, respectively.

**TO:** **Los Osos Basin Management Committee**

**FROM:** **Rob Miller, Interim Executive Director**

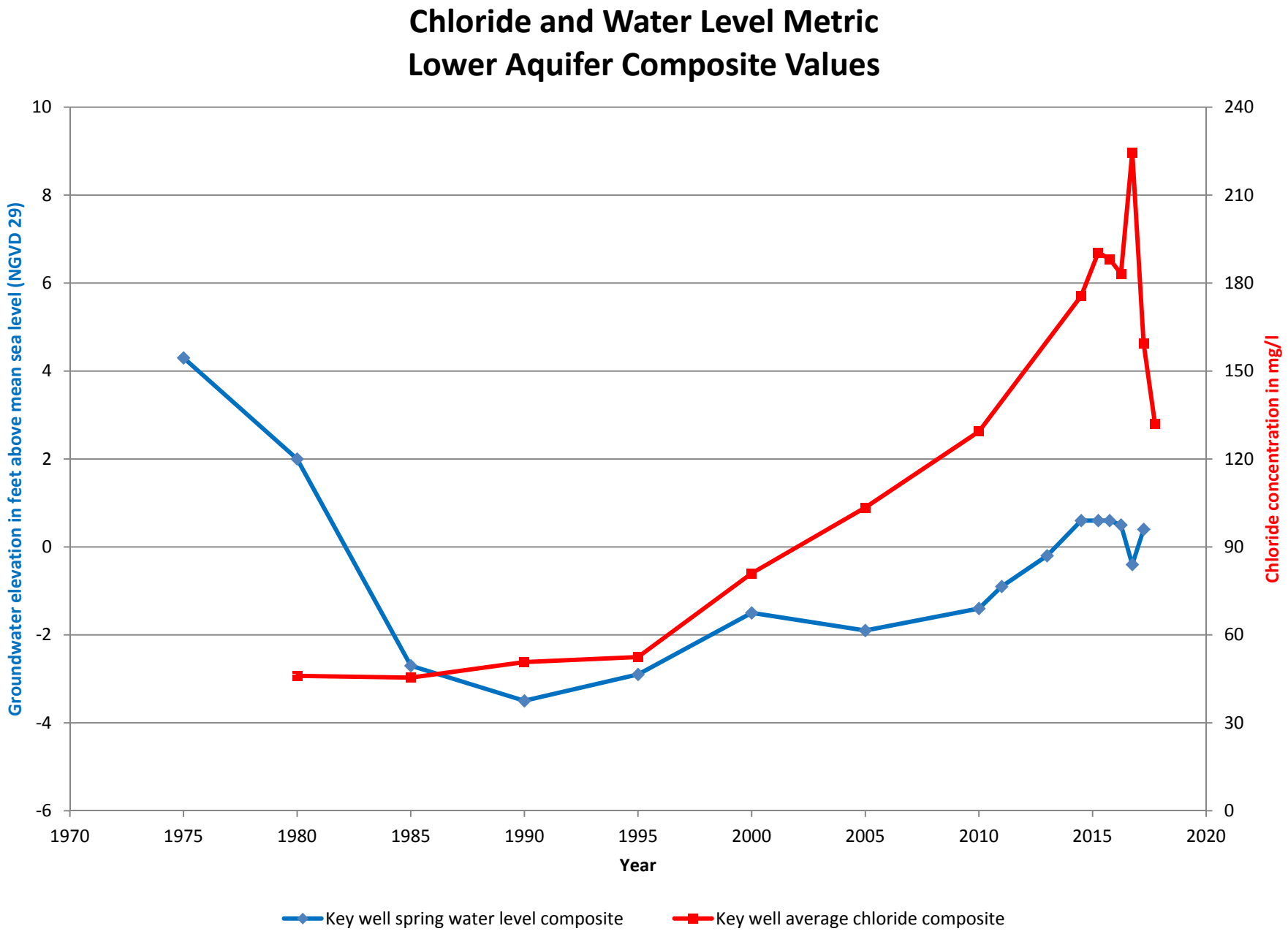
**DATE:** **November 15, 2017**

**SUBJECT:** **Item 7c. Review and Discussion of Fall 2017 Monitoring Data**

**Recommendations**
Receive report and provide input to staff for future action.

**Discussion**
The BMC monitors basin conditions within the lower aquifer in October and April of each year. Data regarding both water levels and water quality was collected in October 2017, and the results of the water quality analysis are attached. As of this writing, the water level data had not yet been compiled and transmitted from County Public Works. The positive data obtained in this sampling event followed an exceptional rainfall year, where approximately 27 inches of rainfall accumulated at the Los Osos landfill gauge, which is 50% more than the average amount. Staff would like to remind the Committee and public that conclusions on the status of seawater intrusion should not be drawn from a single year of monitoring.

DRAFT


Chloride and Water Level Metric
Lower Aquifer Composite Values
Groundwater elevation in feet above mean sea level (NGVD 29)
Chloride concentration in mg/l
Year
10
8
6
4
2
0
-2
-4
-6
240
210
180
150
120
90
60
30
0
1970
1975
1980
1985
1990
1995
2000
2005
2010
2015
2020
Key well spring water level composite
Key well average chloride composite

# Water Quality Results - Lower Aquifer Monitoring

| Station ID | Well Name | Basin Plan Well ID | Aquifer Zone | Date | HCO3 | Total Hardness | Cond | pH | TDS | Cl | NO3 | SO4 | Ca | Mg | K | Na |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | mg/l | mg/l | umhos/cm | | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l |
| 30S/10E-11A2 | Sand Spit #1 East | LA2 | D | 3/14/2005 | 180 | 4600 | 16000 | 7.3 | 8900 | 5400 | ND | 430 | 770 | 640 | 20 | 1300 |
| | | | | 10/21/2015 | 150 | 6640 | 17700 | 7.4 | 13100 | 6300 | ND | 740 | 1030 | 990 | 31 | 1560 |
| 30S/10E-12J1 | MBO5 DWR Obs. | LA11 | E | 2/14/2005 | 350 | 370 | 1300 | 8.1 | 840 | 77 | ND | 190 | 51 | 58 | 6.1 | 110 |
| | | | | 11/20/2009 | 300 | 360 | 1150 | 7.5 | 732 | 83 | ND | 190 | 51 | 58 | 4.4 | 95 |
| | | | | 7/24/2014 | 360 | 489 | 1290 | 7.7 | 780 | 105 | ND | 212 | 69 | 77 | 5 | 88 |
| | | | | 4/22/2015 | 360 | 475 | 1290 | 7.8 | 810 | 112 | ND | 189 | 65 | 76 | 5 | 88 |
| | | | | 10/1/2015 | 250 | 486 | 1280 | 7.3 | 840 | 117 | ND | 188 | 68 | 77 | 4 | 85 |
| | | | | 4/20/2016 | 330 | 524 | 1370 | n/a | 840 | 151 | ND | 193 | 73 | 40 | 5 | 83 |
| | | | | 10/10/2016 | 350 | 497 | 1370 | 7.1 | 930 | 173 | ND | 189 | 69 | 79 | 4 | 81 |
| | | | | 4/11/2017 | 350 | 541 | 1380 | 7.5 | 880 | 167 | ND | 186 | 75 | 86 | 4 | 81 |
| | | | | 10/4/2017 | 300 | 543 | 1370 | 7 | 850 | 162 | ND | 191 | 76 | 86 | 5 | 90 |
| 30S/10E-13J1* | GSWC Rosina | LA10 | D | 12/20/2004 | 72 | 230 | 720 | 7.1 | 410 | 150 | 7 | 14 | 38 | 33 | 1.4 | 29 |
| | | | | 1/14/2010 | 35 | 260 | 778 | 6 | 435 | 200 | 7.1 | 13 | 41 | 38 | 1.5 | 33 |
| | | | | 7/24/2014 | 80 | 418 | 1200 | 7.3 | 910 | 303 | 7.6 | 16 | 67 | 61 | 2 | 39 |
| | | | | 4/22/2015 | 80 | 431 | 1230 | 7.1 | 750 | 331 | 8.3 | 20 | 69 | 63 | 2 | 39 |
| | | | | 10/5/2015 | 70 | 460 | 1280 | 7 | 950 | 329 | 7.3 | 19 | 74 | 67 | 2 | 41 |
| | | | | 4/26/2016 | 80 | 412 | 1170 | 7.1 | 840 | 299 | 8 | 18 | 66 | 60 | 2 | 37 |
| | | | | 10/12/2016 | 60 | 509 | 1430 | 6.8 | 1100 | 389 | 8 | 26.7 | 82 | 74 | 2 | 44 |
| | | | | 4/10/2017 | 80 | 327 | 957 | 6.9 | 720 | 231 | 11.7 | 14.7 | 52 | 48 | 2 | 35 |
| | | | | 10/12/2017 | 80 | 245 | 702 | 6.9 | 510 | 164 | 15 | 12.5 | 39 | 36 | 2 | 33 |
| 30S/10E-13M2 | Howard East | LA31 | C,D | 11/22/2004 | 51 | 810 | 2900 | 7.3 | 1500 | 810 | 2.4 | 140 | 60 | 120 | 4.7 | 210 |
| | | | | 12/9/2009 | 55 | 1100 | 3740 | 7.1 | 2170 | 1100 | 2.2 | 220 | 160 | 160 | 4.8 | 370 |
| | | | | 8/4/2014 | 60 | 757 | 3340 | 7.1 | 2450 | 990 | 2.5 | 178 | 117 | 113 | 5 | 382 |
| | | | | 4/21/2015 | 60 | 739 | 3430 | 7.3 | 1930 | 950 | 2.5 | 178 | 117 | 113 | 5 | 382 |
| | | | | 10/6/2015 | 30 | 756 | 3370 | 7.1 | 2140 | 960 | 2.4 | 185 | 115 | 114 | 5 | 342 |
| | | | | 4/20/2016 | 50 | 726 | 3520 | 7.2 | 2190 | 941 | 3.1 | 179 | 113 | 108 | 5 | 400 |
| | | | | 10/19/2016 | 70 | 722 | 3420 | 7.4 | 2190 | 943 | 2.8 | 182 | 113 | 107 | 4 | 398 |
| | | | | 4/17/2017 | 60 | 733 | 3380 | 6.8 | 2060 | 907 | 2.6 | 178 | 114 | 109 | 4 | 413 |
| | | | | 10/5/2017 | 60 | 738 | 3350 | 7.5 | 2190 | 960 | 3.1 | 160 | 116 | 109 | 5 | 411 |

# Water Quality Results - Lower Aquifer Monitoring

| Station ID | Well Name | Basin Plan Well ID | Aquifer Zone | Date | HCO3 | Total Hardness | Cond | pH | TDS | Cl | NO3 | SO4 | Ca | Mg | K | Na |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | mg/l | mg/l | umhos/cm | | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l |
| **30S/10E-13N** | S&T #5 | LA8 | D | 11/23/2004 | 42 | 80 | 390 | 6.9 | 200 | 67 | 26 | 9.2 | 13 | 12 | 1.7 | 38 |
| | | | | 11/19/2009 | 41 | 89 | 386 | 6.8 | 267 | 73 | 27 | 11 | 15 | 13 | 1.4 | 38 |
| | | | | 7/24/2014 | 50 | 100 | 438 | 7.4 | 270 | 76 | 31 | 10 | 17 | 14 | 2 | 38 |
| | | | | 4/21/2015 | 50 | 98 | 445 | 6.9 | 280 | 77 | 33.9 | 11 | 16 | 14 | 2 | 38 |
| | | | | 10/6/2015 | 40 | 98 | 422 | 7.2 | 310 | 75 | 30 | 10 | 16 | 14 | 1 | 38 |
| | | | | 4/20/2016 | 20 | 97.5 | 446 | 7 | 320 | 76 | 32 | 12 | 16 | 14 | 1 | 38 |
| | | | | 10/13/2016 | 50 | 104 | 470 | 8 | 320 | 79 | 31.9 | 12 | 17 | 15 | 1 | 40 |
| | | | | 4/11/2017 | 50 | 100 | 434 | 7.4 | 270 | 77 | 32.4 | 12.4 | 17 | 14 | 1 | 38 |
| | | | | 10/2/2017 | 30 | 95 | 438 | 7.2 | 290 | **78** | 33.5 | 13.2 | 15 | 14 | 1 | 36 |
| 30S/10E-14B2** | Sand Spit #3 Deep | LA3 | D | 3/15/2005 | 100 | 3600 | 30000 | 8 | 17000 | 8500 | ND | 960 | 1200 | 130 | 34 | 4300 |
| | | | | 10/21/2015 | ND | 7140 | 29500 | 11 | 24700 | 10000 | ND | 530 | 2830 | 20 | 80 | 4040 |
| 30S/10E-24C1 | GSWC Cabrillo | LA9 | D | 12/20/2004 | 64 | 130 | 610 | 7 | 310 | 110 | 20 | 19 | 22 | 19 | 1.6 | 50 |
| | | | | 11/20/2009 | 60 | 150 | 611 | 7.1 | 347 | 130 | 18 | 22 | 23 | 22 | 1.6 | 52 |
| | | | | 7/24/2014 | 40 | 69 | 339 | 7.6 | 240 | 46 | 37 | 6 | 11 | 10 | 1 | 32 |
| | | | | 4/22/2015 | 70 | 117 | 530 | 7.3 | 320 | 95 | 24.2 | 16 | 19 | 17 | 2 | 45 |
| | | | | 10/5/2015 | 50 | 75 | 349 | 7.6 | 270 | 50 | 33.4 | 7 | 12 | 11 | 1 | 34 |
| | | | | 4/26/2016 | 70 | 115 | 499 | 7 | 300 | 90 | 24.6 | 16 | 18 | 17 | 2 | 44 |
| | | | | 10/12/2016 | 70 | 111 | 506 | 7.1 | 320 | 93 | 24.4 | 15.1 | 18 | 16 | 1 | 44 |
| | | | | 4/10/2017 | 70 | 111 | 490 | 7 | 310 | 89 | 25.1 | 15.9 | 18 | 16 | 1 | 43 |
| | | | | 10/12/2017 | 70 | 117 | 484 | 7 | 270 | **89** | 26.7 | 16.3 | 19 | 17 | 2 | 46 |
| **30S/11E-7Q3** | LOCSD 8th St. | LA12 | D | 11/18/2004 | 250 | 270 | 790 | 7.5 | 410 | 73 | ND | 39 | 44 | 40 | 2.3 | 48 |
| | | | | 11/19/2009 | 220 | 290 | 782 | 7.4 | 465 | 92 | ND | 46 | 46 | 42 | 1.9 | 53 |
| | | | | 7/23/2014 | 290 | 303 | 876 | 7.6 | 460 | 91 | ND | 43 | 49 | 44 | 2 | 54 |
| | | | | 4/21/2015 | 290 | 305 | 897 | 7.7 | 500 | 101 | ND | 55 | 48 | 45 | 2 | 59 |
| | | | | 10/6/2015 | 280 | 298 | 828 | 7.4 | 490 | 91 | ND | 46 | 47 | 44 | 2 | 55 |
| | | | | 4/20/2016 | 190 | 307 | 907 | 7.7 | 520 | 91 | ND | 49 | 49 | 45 | 2 | 54 |
| | | | | 10/11/2016 | 280 | 278 | 827 | 4.9 | 490 | 93 | ND | 46.2 | 44 | 41 | 2 | 52 |
| | | | | 4/10/2017 | 300 | 294 | 839 | 7.3 | 480 | 91 | ND | 49.5 | 47 | 43 | 2 | 54 |
| | | | | 10/4/2017 | 220 | 305 | 826 | 6.5 | 470 | **92** | ND | 45 | 48 | 45 | 2 | 56 |

# Water Quality Results - Lower Aquifer Monitoring

| Station ID | Well Name | Basin Plan Well ID | Aquifer Zone | Date | HCO3 | Total Hardness | Cond | pH | TDS | Cl | NO3 | SO4 | Ca | Mg | K | Na |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | mg/l | mg/l | umhos/cm | | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l |
| 30S/11E-17E8 | So. Bay Obs. Middle | LA22 | D | 1/14/2005 | 150 | 150 | 440 | 7.5 | 290 | 34 | 9.7 | 11 | 24 | 22 | 1.4 | 28 |
| | | | | 11/20/2009 | 120 | 160 | 455 | 7.3 | 255 | 42 | 19 | 12 | 25 | 23 | 1.3 | 29 |
| | | | | 7/23/2014 | 150 | 166 | 500 | 7.6 | 270 | 43 | 28 | 10 | 27 | 24 | 2 | 28 |
| | | | | 4/21/2015 | 150 | 157 | 481 | 7.6 | 270 | 49 | 31.4 | 13 | 25 | 23 | 1 | 28 |
| | | | | 10/1/2015 | 120 | 164 | 475 | 7.4 | 290 | 44 | 29.2 | 10 | 26 | 24 | 1 | 28 |
| | | | | 4/19/2016 | 150 | 164 | 476 | 6.9 | 290 | 45 | 30.5 | 12 | 26 | 24 | 1 | 29 |
| | | | | 10/13/2016 | 140 | 161 | 521 | 7.3 | 290 | 46 | 30.6 | 11.9 | 25 | 24 | 1 | 29 |
| | | | | 4/13/2017 | 150 | 164 | 466 | 7.3 | 300 | 46 | 29.7 | 13.2 | 26 | 24 | 1 | 29 |
| | | | | 10/11/2017 | 150 | 168 | 476 | 7.7 | 260 | **47** | 32 | 14 | 26 | 25 | 1 | 29 |
| 30S/11E-17N10 | GSWC So. Bay #1 | LA20 | C,D,E | Jan 2003 | 250 | -- | 510 | 7.1 | 290 | 37 | ND | 21 | 41 | 25 | 1.3 | 35 |
| | | | | 11/20/2009 | 230 | 220 | 638 | 7.3 | 357 | 41 | 2.4 | 30 | 35 | 33 | 1.7 | 37 |
| | | | | 7/24/2014 | 280 | 232 | 646 | 7.7 | 370 | 37 | 2.3 | 24 | 37 | 34 | 2 | 41 |
| | | | | 4/22/2015 | 290 | 234 | 653 | 7.4 | 360 | 43 | 2.5 | 27 | 36 | 35 | 2 | 42 |
| | | | | 10/5/2015 | 280 | 227 | 614 | 7.2 | 370 | 38 | 2.4 | 23 | 35 | 34 | 2 | 41 |
| | | | | 4/26/2016 | 230 | 227 | 629 | 7.1 | 360 | 39 | 2.6 | 27 | 35 | 34 | 2 | 40 |
| | | | | 10/12/2016 | 290 | 221 | 631 | 7 | 370 | 40 | 2.5 | 25.2 | 34 | 33 | 2 | 40 |
| | | | | 4/10/2017 | 280 | 227 | 624 | 7.2 | 380 | 39 | 2.7 | 26.7 | 35 | 34 | 2 | 40 |
| | | | | 10/12/2017 | 260 | 240 | 583 | 6.6 | 320 | **41** | 2.9 | 27.9 | 37 | 36 | 2 | 43 |
| 30S/11E-18K8 | 10th St. Obs. East (Deep) | LA18 | E | 1/19/2005 | 260 | 290 | 650 | 7.5 | 370 | 33 | ND | 38 | 62 | 33 | 2.5 | 28 |
| | | | | 11/20/2009 | 230 | 220 | 620 | 7.5 | 378 | 32 | ND | 40 | 51 | 24 | 1.8 | 23 |
| | | | | 7/24/2014 | 290 | 271 | 647 | 7.5 | 380 | 28 | ND | 34 | 56 | 32 | 2 | 27 |
| | | | | 4/21/2015 | 290 | 265 | 634 | 7.7 | 400 | 33 | ND | 39 | 55 | 31 | 2 | 27 |
| | | | | 10/19/2015 | 230 | 256 | 621 | 7.3 | 370 | 29 | ND | 33 | 53 | 30 | 2 | 26 |
| | | | | 4/20/2016 | 190 | 265 | 700 | 7.5 | 390 | 31 | ND | 38 | 55 | 31 | 2 | 26 |
| | | | | 10/18/2016 | 290 | 256 | 615 | 6.8 | 370 | 31 | ND | 35.9 | 53 | 30 | 2 | 26 |
| | | | | 4/12/2017 | 290 | 274 | 616 | 7.5 | 450 | 31 | ND | 38 | 57 | 32 | 2 | 27 |
| | | | | 10/9/2017 | 220 | 271 | 619 | 7.8 | 350 | **30** | ND | 35.5 | 56 | 32 | 2 | 27 |

# Water Quality Results - Lower Aquifer Monitoring

| Station ID | Well Name | Basin Plan Well ID | Aquifer Zone | Date | HCO3 | Total Hardness | Cond | pH | TDS | Cl | NO3 | SO4 | Ca | Mg | K | Na |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | mg/l | mg/l | umhos/cm | | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l |
| 30S/11E-18K9 | LOCSD 10th St. | LA32 | C,D | May 2002 | 250 | -- | 550 | 6.9 | 320 | 37 | 1 | 26 | 31 | 32 | -- | 39 |
| | | | | 11/20/2009 | 180 | 160 | 539 | 7.2 | 307 | 36 | 4.6 | 27 | 27 | 24 | 1.3 | 32 |
| | | | | 7/23/2014 | 220 | 190 | 546 | 7.7 | 300 | 32 | 4.3 | 20 | 30 | 28 | 1 | 35 |
| | | | | 4/21/2015 | 190 | 108 | 504 | 7.6 | 270 | 38 | 7 | 20 | 17 | 16 | 1 | 27 |
| | | | | 10/6/2015 | 50 | 62 | 248 | 7.2 | 190 | 31 | 26.2 | 3 | 10 | 9 | ND | 21 |
| | | | | 4/20/2016 | 130 | 121 | 382 | 7.5 | 220 | 32 | 14.6 | 12 | 19 | 18 | 1 | 27 |
| | | | | 10/11/2016 | 200 | 168 | 511 | 6.6 | 270 | 36 | 5.3 | 21.5 | 26 | 25 | 1 | 34 |
| | | | | 4/10/2017 | 190 | 155 | 461 | 7.3 | 270 | 35 | 8.4 | 19.1 | 24 | 23 | 1 | 31 |
| | | | | 10/9/2017 | 200 | 168 | 493 | 7.6 | 270 | **36** | 6.3 | 23.1 | 26 | 25 | 1 | 33 |
| 30S/11E-18L2*** | LOCSD Palisades | LA15 | D,E | 11/18/2004 | 220 | 330 | 880 | 7.3 | 420 | 120 | ND | 31 | 54 | 48 | 2.2 | 40 |
| | | | D,E | 11/19/2009 | 200 | 590 | 1460 | 7.2 | 890 | 360 | 1.8 | 39 | 94 | 86 | 2 | 44 |
| | | | D | 7/23/2014 | 250 | 293 | 783 | 7.8 | 390 | 90 | 1.8 | 26 | 48 | 42 | 2 | 40 |
| | | | D | 4/29/2015 | 80 | 78 | 348 | 7.4 | 230 | 43 | 22 | 10 | 13 | 11 | ND | 30 |
| | | | D | 10/28/2015 | 230 | 288 | 782 | 7.4 | 420 | 104 | 2.8 | 29 | 46 | 42 | ND | 36 |
| | | | D | 4/27/2016 | 230 | 264 | 796 | 7.3 | 450 | 93 | 4.1 | 28 | 43 | 38 | 2 | 43 |
| | | | D | 10/11/2016 | 200 | 221 | 694 | 7 | 380 | 91 | 7.3 | 25.5 | 36 | 32 | 1 | 35 |
| | | | D | 10/5/2017 | 180 | 306 | 768 | 7.6 | 400 | **102** | 3.3 | 27 | 50 | 44 | 2 | 40 |

ND = Not Detected

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

*Chloride concentrations at 13J1 have varied seasonally by 100+ mg/l, and are affected by well production, so fluctuations are expected.

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

## Water Quality Table 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 |
| pH | pH in pH units | -- |
| TDS | Total Dissolved Solids in mg/L | 20.0 |
| Cl | Chloride concentration in mg/L | 1.0 |
| NO3 | Nitrate concentration in mg/L | 0.5 |
| 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

**TO:** **Los Osos Basin Management Committee**

**FROM:** **Rob Miller, Interim Executive Director**

**DATE:** **November 15, 2017**

**SUBJECT:** **Item 7d. Review and Discussion of Recycled Water Management**

**Recommendations**
Receive report and provide input to staff for future action.

**Discussion**
In September 2017 the BMC received a draft report on the estimate cost and process for accomplishing the Los Osos Creek Replenishment and Recharge Project. The next step that was discussed is the prudent allocation of limited recycled water volumes to combat seawater intrusion. Staff will provide a brief presentation during the meeting to summarize historical information, and then receive Committee input to inform future budgets and strategy. The information below provides historical context on the topic of recycled water management, including the following:

- 2010 Coastal Development Permit for the Los Osos Wastewater Project, which set initial standard and expectations for recycled water volumes and management.
- 2012 Recycled Water Management Plan, which refined the volumes and informed the Basin Plan (Chapter 9)
- 2015 Creek Discharge Memo and subsequent studies
- 2017 Flow data from the Wastewater Reclamation Facility (WWRF).

**Coastal Development Permit Requirements**
The California Coastal Commission issued a Coastal Development Permit for the Los Osos Wastewater Project on September 7, 2010, to the County of San Luis Obispo. The Permit included the following requirements for Recycled Water Management:

- Prepare a Recycled Water Management Plan prior to construction
- Disposal shall be prioritized to reduce seawater intrusion and return/retain water to/in the Los Osos groundwater basin. Highest priority shall be given to replacing potable water uses with tertiary treated effluent consistent with Water Code Section 13550.
- Broderson leach field not to exceed 448 AFY on an an average annual basis
- Bayridge leach field to receive approximately 33 AFY or the amount shown to be necessary for maintaining Willow Creek and downstream resources. Condition 97 requires an environmental reservation of 10% of the total volume of treated effluent.
- Urban re-use within the urban reserve line shall be provided, including schools
- Agricultural re-use overlying the Los Osos Groundwater Basin shall not be less than 10% of the total treated effluent.

It should be noted that given the lower volumes currently reaching the WWRF, amendments to the CDP may be warranted to maximize basin benefits.

**Recycled Water Management Plan**

In May 2012, the County approved the Recycled Water Management Plan (RWMP). The RWMP was prepared in coordination with the overall Basin Plan and was a requirement of Special Condition No. 5 of the Coastal Development Permit (CDP). The purpose of the RWMP was to identify the quantity of recycled water available at start-up and at build-out. In addition, the RWMP outlined the intended uses.

Estimated quantities at the time of the development of the RWMP are as follows:

- With water conservation, the projected indoor water use was estimated to be 0.7 mgd (748 AFY) with all developed properties connected.
- At full build-out, the indoor water use within the Service Area was estimated to be less than 1.0 mgd (1,120 AFY).

Disposal volumes included:

- Broderson up to 448 AFY
- Bayridge Estates Leach Fields up to 33 AFY
- Offset largest consumers of potable irrigation water (schools) up to 56 AFY (total for all 4 schools)
- Offset community park up to 2 AFY
- Sea Pines Golf Course up to 40 AFY
- Cemetery up to 50 AFY
- Agriculture Irrigation of remaining available effluent

**Creek Discharge Memorandum**

In May 2015, Cleath-Harris Geologists, Inc. prepared a technical memorandum, Recycled Water Discharges to the Los Osos Creek that characterized the interaction between the Los Osos Creek and the underlying groundwater basin. The memorandum evaluated the discharge to the Los Osos Creek versus Broderson discharge and agriculture reuse. The conclusions stated that the greatest potential benefit to purveyor wells would occur when moving water from new crop agricultural reuse to creek discharge.

**Current Conditions**

As of November 1, 2017, 94.5% of the lateral connections have been tied over to the wastewater project. Water conservation efforts and drought restrictions over the past five years have resulted in significantly lower flows than what was anticipated in 2012. The October 2017 flows to the wastewater treatment plant were 43 AF or 1.39 AF per day, which equates to 506 AFY. It is anticipated that wastewater flows will vary throughout the year and an additional 5% of the system still needs to connect to the wastewater treatment plant. Therefore, it is estimated that the average annual volume will be between 500 and 550 AFY.

**Committee Discussion Topics**

Staff recommends that the Committee engage in the following topics during the meeting:

1. Establish priority order for recycled water options.
2. Discuss status and timing of agricultural contracts that have been executed, given limited volumes of recycled water that are available.
3. Discuss the benefits of the Los Osos Creek Replenishment and Recharge Project, particularly during prolonged periods of drought. Clarify next steps.
4. Briefly discuss methods of enhancing recycled water volumes. Other communities have recaptured storm water where collection capacity exists.
5. Discuss metrics and monitoring for assessing the effectiveness of the Broderson disposal site.
6. Discuss the impact of the 10% CDP reservations for agriculture and environmental needs.