

Borrego Water District Board of Directors
Regular Meeting
August 23, 2022 @ 9:00 a.m.
806 Palm Canyon Drive
Borrego Springs, CA 92004

COVID-19 UPDATE: The Borrego Water District Board of Directors meeting as scheduled in an electronic format. BWD will be providing public access to the Meeting thru electronic means only to minimize the spread of the COVID-19 virus, based upon direction from the California Department of Public Health, the California Governor's Office and the County Public Health Office. Anyone who wants to listen to or participate in the meeting is encouraged to observe the GO TO MEETING at:

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I. OPENING PROCEDURES -

- A.** Call to Order
- B.** Pledge of Allegiance
- C.** Directors' Roll Call: President Dice, Vice President Baker, Directors Duncan, Johnson and Rosenboom
- D.** Approval of Agenda
- E.** Comments from the Public & Requests for Future Agenda Items (may be limited to 3 min)
- F.** Comments from Directors
- G.** Correspondence Received from the Public- None

II. ITEMS FOR BOARD CONSIDERATION AND POSSIBLE ACTION -

- A. CONSENT CALENDAR**
 - 1. Resolution No. 2022-08-01 Virtual Meetings
 - 2. Special Meeting Minutes
 - A. June 14, 2022
 - 3. Regular Meeting Minutes
 - A. June 28, 2022
- B.** Waste Water Treatment Plant Capacity and Expansion Analysis – G Poole/T Baker/P Roseboom/G Guillen - Dudek
- C.** Pipeline Replacement Program Recommendations – D Dale
- D.** Water Supply Program – G Poole/T Baker/D Duncan
- E.** Borrego Springs Subbasin Watermaster Board – VERBAL D Duncan/K Dice/T Driscoll
 - 1. Update on Board Activities
 - 2. Update on Technical Advisory Committee Activities
 - i. Borrego Valley Hydrologic Model Review Status – D Johnson request

AGENDA: August 23, 2022

All Documents for public review on file with the District's secretary located at 806 Palm Canyon Drive, Borrego Springs CA 92004. Any public record provided to a majority of the Board of Directors less than 72 hours prior to the meeting, regarding any item on the open session portion of this agenda, is available for public inspection during normal business hours at the Office of the Board Secretary, located at 806 Palm Canyon Drive, Borrego Springs CA 92004.

The Borrego Springs Water District complies with the Americans with Disabilities Act. Persons with special needs should call Geoff Poole – Board Secretary at (760) 767 – 5806 at least 48 hours in advance of the start of this meeting, in order to enable the District to make reasonable arrangements to ensure accessibility.

If you challenge any action of the Board of Directors in court, you may be limited to raising only those issues you or someone else raised at the public hearing, or in written correspondence delivered to the Board of Directors (c/o the Board Secretary) at, or prior to, the public hearing.

III. BOARD COMMITTEE REPORTS, IF NEEDED

STANDING:

- A. Operations and Infrastructure: Duncan/Rosenboom
- B. Budget and Audit: Dice/Rosenboom
- C. ACWA/JPIA Insurance: Dice/Johnson

AD HOC:

- A. Prop 68: Baker/Johnson
- B. Public Outreach: Dice/Johnson
- C. Grants: Dice/Johnson
- D. Cyber Security/Risk Management: Baker/Rosenboom
- E. Developer's Policy: Baker/Duncan
- F. Finance: Baker/Rosenboom
- G. WWTP Monitoring Wells: Baker/Rosenboom

IV. MONTHLY FINANCIAL & OPERATIONS REPORTS

- A. Financial Reports: June 2022
- B. Water and Wastewater Operations Report: June 2022
 - i. Wastewater Staff Report – Roy Martinez
- C. Water Production/Use Records: June 2022
 - i. Operations Staff Report - Alan Asche

V. STAFF REPORTS - VERBAL

- A. Administration – Diana Del Bono
- B. Finance – Jessica Clabaugh
 - i. Tier 3 Revenue Update
- C. Engineering - David Dale
- D. General Manager – Geoff Poole
 - i. Visit from Congressman Issa's Staff on 8-5-22
 - ii. Proposition 68 Status
 - iii. TSS Grant

AGENDA: August 23, 2022

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VI. CLOSED SESSION:

- A. Conference with Legal Counsel - Potential Initiation of litigation pursuant to paragraph (4) of subdivision (d) of Section 54956.9: (Four (4) potential case)
- B. Conference with Real Property Negotiators (Gov. Code §Section 54956.8)
Property Easement APN: 140-303-0900 & 140-303-1100
Agency Negotiator: Geoff Poole, BWD General Manager
Negotiating Parties: BWD and US Gypsum Corp as potential buyer
Price and Terms of Payment
- C. Conference with Real Property Negotiators (Gov. Code §Section 54956.8)
Property Easement APN: 198-020-58-00
Agency Negotiator: Geoff Poole, BWD General Manager
Negotiating Parties: BWD and Jim Wermers (the Mall) as potential seller
Price and Terms of Payment
- D. Conference with Real Property Negotiators (Gov. Code §Section 54956.8)
Property (BWD Wastewater Treatment Plant Monitoring Well Easements) APN: 200-120-42-00
Agency Negotiator: Geoff Poole, BWD General Manager
Negotiating Parties: BWD and T2 Borrego as potential seller
Price and Terms of Payment
- E. Conference with Real Property Negotiators (Gov. Code §Section 54956.8)
Property (BWD Twin Tanks Reservoir Pipeline and Access Road) APN: State Park Land
Agency Negotiator: Geoff Poole, BWD General Manager
Negotiating Parties: BWD and California State Parks as potential seller
Price and Terms of Payment

VII. CLOSING PROCEDURE: The next Board Meeting is scheduled for 9:00 AM September 13, 2022, to be available online. See Board Agenda at BorregoWD.org for details, Agenda information available at least 72 hours before the meeting.

AGENDA: August 23, 2022

All Documents for public review on file with the District's secretary located at 806 Palm Canyon Drive, Borrego Springs CA 92004. Any public record provided to a majority of the Board of Directors less than 72 hours prior to the meeting, regarding any item on the open session portion of this agenda, is available for public inspection during normal business hours at the Office of the Board Secretary, located at 806 Palm Canyon Drive, Borrego Springs CA 92004.

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BORREGO WATER DISTRICT
BOARD OF DIRECTORS MEETING
AUGUST 23, 2022
AGENDA ITEM II.A

August 16, 2022

TO: Board of Directors
FROM: Geoffrey Poole, General Manager
SUBJECT: Consent Calendar

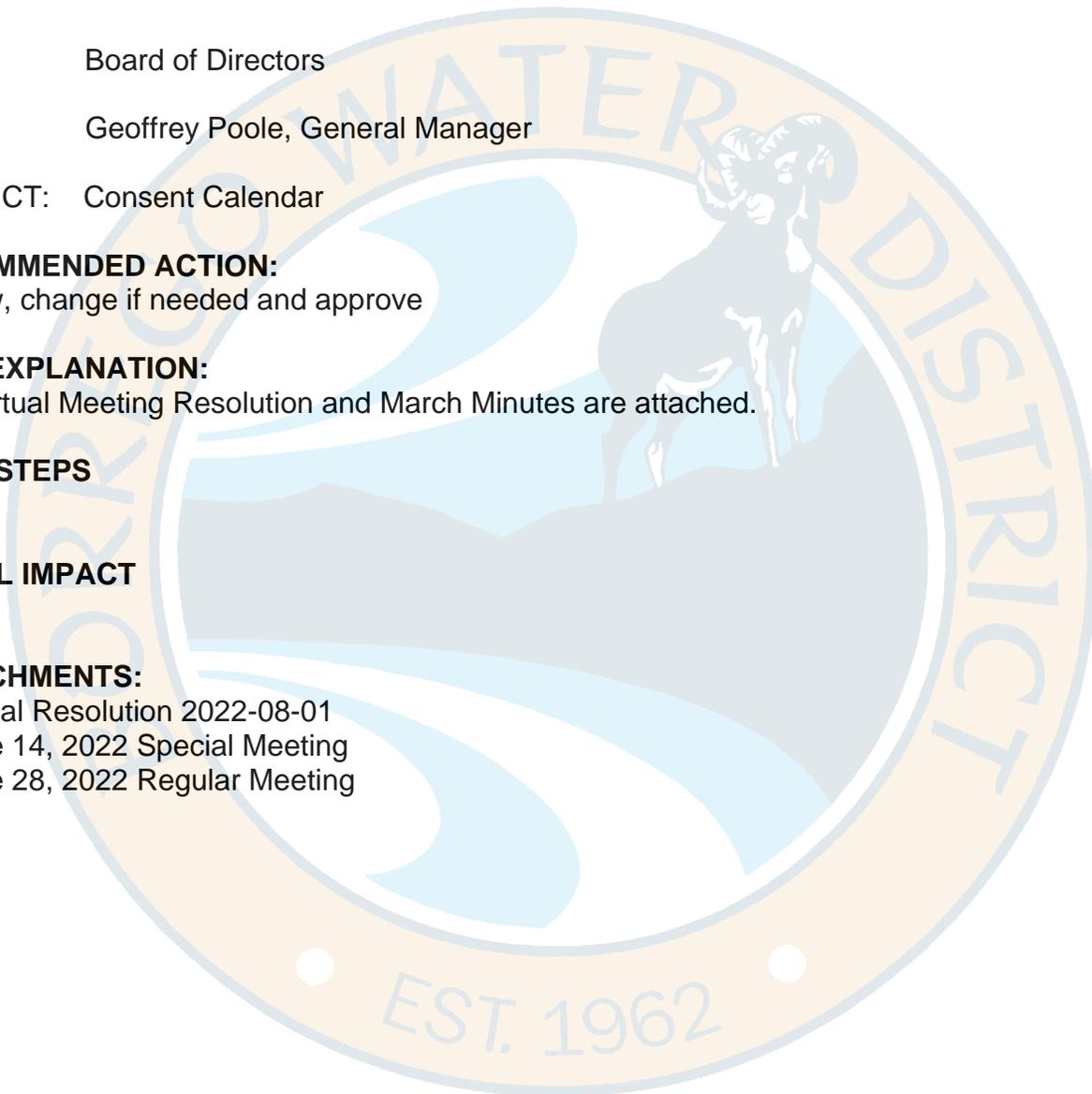
RECOMMENDED ACTION:
Review, change if needed and approve

ITEM EXPLANATION:
The Virtual Meeting Resolution and March Minutes are attached.

NEXT STEPS
TBD

FISCAL IMPACT
TBD

ATTACHMENTS:
1. Virtual Resolution 2022-08-01
2. June 14, 2022 Special Meeting
3. June 28, 2022 Regular Meeting



RESOLUTION NO. 2022-08-01

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE BORREGO WATER DISTRICT AUTHORIZING VIRTUAL BOARD AND COMMITTEE MEETINGS PURSUANT TO AB 361

WHEREAS, the Borrego Water District (“District”) is committed to preserving and nurturing public access and participation in meetings of the Board of Directors; and

WHEREAS, all meetings of the District’s legislative bodies 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 and participate in the District’s meetings; and

WHEREAS, starting in March 2020, in response to the spread of COVID-19 in the State of California, the Governor issued a number of executive orders aimed at containing the COVID-19 virus; and

WHEREAS, among other things, these orders waived certain requirements of the Brown Act to allow legislative bodies to meet virtually; and

WHEREAS, pursuant to the Governor’s executive orders, the District has been holding virtual meetings during the pandemic in the interest of protecting the health and safety of the public, District staff and Directors; and

WHEREAS, the Governor’s executive order related to the suspension of certain provisions of the Brown Act expires on September 30, 2021; and

WHEREAS, on September 16, 2021 the Governor signed AB 361 (in effect as of October 1, 2021 – Government Code Section 54953(e)), which allows legislative bodies to meet virtually provided there is a state of emergency, and either (1) state or local officials have imposed or recommended measures to promote social distancing; or (2) the legislative body determines by majority vote that meeting in person would present imminent risks to the health and safety of attendees; and

WHEREAS, such conditions now exist in the District, specifically, a state of emergency has been proclaimed related to COVID-19, state or local officials are recommending measures to promote social distancing, and because of the ongoing threat of COVID-19, meeting in person would present imminent risks to the health and safety of attendees;

NOW, THEREFORE, BE IT RESOLVED THE BOARD OF DIRECTORS OF THE BORREGO WATER DISTRICT 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.

Borrego Water District Board of Directors

MINUTES

Special Meeting

June 14, 2022 @ 9:00 a.m.

806 Palm Canyon Drive

Borrego Springs, CA 92004

I. OPENING PROCEDURES

- A. Call to Order: President Dice called the meeting to order at 9:00 a.m.
- B. Pledge of Allegiance: Those present stood for the Pledge of Allegiance.
- C. Roll Call: Directors: Present: President Dice, Vice President Baker,
Secretary/Treasurer Duncan,
Johnson, Rosenboom

Staff: Geoff Poole, General Manager
Jessica Clabaugh, Finance Officer
Steve Anderson, Best Best & Krieger
Diana Del Bono, Administration Manager
Esmeralda Garcia, Administrative Assistant
Wendy Quinn, Recording Secretary

Public: Cathy Milkey, T2 Trey Driscoll, Intera

- D. Approval of Agenda: **MSC: Johnson/Baker approving the Agenda as written.**
The roll call vote was unanimous.

- E. Approval of Minutes: None
- F. Comments from the Public and Requests for Future Agenda Items: None
- G. Comments from Directors: Director Johnson reported she had attended the

Groundwater Resources Association meeting last week and asked that a more detailed report be included on the next Agenda.

- H. Correspondence Received from the Public: None

II. ITEMS FOR BOARD CONSIDERATION AND POSSIBLE ACTION

A. Resolution No. 2022-06-02 Approving Fiscal Year 2022-23 Budget & Capital Improvement Plan: Geoff Poole invited the Board's attention to an updated version of the 2022-23 budget and CIP on the Board package. It incorporates suggestions made at the last meeting. Jessica Clabaugh noted that the accompanying letters are not yet in the package but will be next time. There was not much change in the budget figures. Merit increases total 18.9 percent, including benefits. Whatever is left in the bond fund will go to Wells 5-15 and 12 and pipelines. President Dice asked that the adopting Resolution and complete package be brought back at the next meeting.

B. Agreement with Intera for Engineering Service: Mr. Poole invited the Board's attention to Intera's scope of work in the Board package. The consultant agreement will be brought to the Board at a later date, after working with Trey Driscoll and Steve Anderson. Some projects will stay with Dudek, and some will go with Mr. Driscoll and Intera. Groundwater management and the wastewater treatment plant will stay with Dudek.

Mr. Driscoll noted that he had worked with BWD since 2013. He provided background information on Intera, an international firm with a local focus, including modeling and water supply development. He reviewed proposed tasks and budget, a little over \$100,000 per year, fixed for three years.

C. Response to State of California Drought Declaration and Restrictions: Mr. Poole summarized the State restrictions on non-functional turf, hours and days of irrigation. The requirements apply to urban water suppliers delivering over 3,000 AFY to over 3,000 customers, which doesn't include BWD. Discussion followed regarding "non-functional turf." Recreational

turf is exempt, as are trees. BWD doesn't have any other non-functional turf. The District will continue to pursue water conservation and encourage customers to do so. In the past, the District participated in an educational program with ABDNHA and held a training program for landscapers. President Dice asked the Outreach Committee to work with Mr. Poole on conservation issues. *MSC: Duncan/Baker directing the Outreach Committee to work with Mr. Poole on drought relief and communicate this to the State by letter from Mr. Poole. The roll call vote was unanimous.*

D. Resolution No. 2022-06-01 Resolution Of The Board Of Directors Of The Borrego Water District, Authorizing The Sale Of Real Property Owned By Borrego Water District To The Anza-Borrego Foundation: Mr. Poole introduced a proposed Resolution authorizing the sale of 160 acres of Wilcox property to ABF. The District had declared the property surplus, and the money is in escrow. *MSC: Rosenboom/Duncan adopting Resolution No. 2022-06-01, Resolution of the Board of Directors of the Borrego Water District Authorizing the sale of real property owned by Borrego Water District to the Anza-Borrego Foundation. The roll call vote was unanimous.*

E. Borrego Springs Subbasin Watermaster Board:

i. Update on Board Activities. Director Duncan reported that the WMB met yesterday and discussed three issues: a possible increase in pumping fees to fund the upfront costs of the Prop 68 projects, overproduction penalty assessments (capped at \$500 per AF), and the new Code of Conduct.

ii. Update on Technical Advisory Committee Activities. Mr. Driscoll reported that the TAC had not yet reached a consensus on the new de minimis well. He suggested that BWD send a letter to the WMB outlining their concerns. President Dice hoped the WMB would meter the de minimis wells or put a cap on the number that could be drilled. Mr. Poole noted that Andy Malone had told him that all new wells in the Basin would be metered. Mr. Driscoll had drafted an e-mail to the WM staff citing the Water Code and recommending that the strata be sealed in the new well due to nitrates in the upper aquifer and its proximity to a BWD potable water well. He suggested copying the County. Mr. Poole and Director Duncan will work with Mr. Driscoll on the letter. Director Johnson expressed concern regarding the fact that the TAC only meets quarterly. Well metering network and model updates will be on the next Agenda, and other TAC Agenda requests will be discussed at the next BWD meeting.

III. BOARD COMMITTEE REPORTS, IF NEEDED

AD HOC

D. Cyber Security/Risk Management: Director Rosenboom reported that a representative of the Department of Homeland Security visited the District. The did a site evaluation and suggested steps to increase security.

IV. STAFF REPORTS

A. Water and Sewer Revenue: Ms. Clabaugh presented the sales, consumption and aging reports for May. Water sales totaled just under \$360,000, and consumption was just under 50,000 units, a five percent increase from last year. The District received a relief check for sewer arrearages in the amount of \$65,000. Ms. Clabaugh will work with Esmeralda Garcia to apply it to the past due sewer accounts. After discussion, Mr. Poole requested that the one large past due sewer account be removed from the report of accounts receivable.

Mr. Poole reported that Director Rosenboom toured the District facilities with Alan Asche and him. The State inspected the wastewater treatment plant, and the only issue they found was two parts that weren't made in the USA. They had not yet been installed, so they were replaced. The State Park has agreed to lease the Twin Tanks property to the District. Hopefully the project can be bid next month. The Prop 68 grant documents have arrived, and Mr.

Anderson is reviewing them and working on the sub-grantee agreements. The District has submitted two pipeline projects for potential grant funding.

V. CLOSED SESSION:

A. Conference with Legal Counsel - Significant exposure to litigation pursuant to paragraph (3) of subdivision (d) of Section 54956.9: (Three (3) potential case):

B. Viking Ranch Land Acquisition – Property Negotiations – BWD and US Gypsum Corporation Property Negotiations – Conference with Real Property Negotiators (Gov. Code §Section 54956.8) Property APN: 140-303-0900 & 140-303-1100, 150 acres Negotiating Parties: Geoff Poole, BWD General Manager and USG as potential buyer: Price and Terms of Payment Property Negotiations: Viking Ranch:

C. GM Performance Review – Performance Evaluation of General Manager: GM Performance Review – Conference for Public Employee Performance Evaluation - Title: General Manager Employee Performance Review- pursuant to subdivision (d) (4) of Government Code Section (Government Code §54957):

D. Cybersecurity:

The Board adjourned to closed session at 11:25 a.m., and thereafter, the open session reconvened. There was no reportable action.

VI. CLOSING PROCEDURE

The next Board Meeting is scheduled for June 28, 2022, to be available online. See Board Agenda at BorregoWD.org for details, available at least 72 hours before the meeting. There being no further business, the Board adjourned.

Borrego Water District Board of Directors
MINUTES
Regular Meeting
June 28, 2022 @ 9:00 a.m.
806 Palm Canyon Drive
Borrego Springs, CA 92004

I. OPENING PROCEDURES

- A. Call to Order: President Dice called the meeting to order at 9:00 a.m.
- B. Pledge of Allegiance: Those present stood for the Pledge of Allegiance.
- C. Roll Call: Directors: Present: President Dice, Vice President Baker,
Secretary/Treasurer Duncan,
Johnson, Rosenboom

 Staff: Geoff Poole, General Manager
 David Dale, District Engineer
 Ward Simmons, Best Best & Krieger
 Diana Del Bono, Administration Manager
 Jessica Clabaugh, Finance Officer
 Alan Asche, Operations Manager
 Roy Martinez, WTP Operator III
 Esmeralda Garcia, Administrative Assistant
 Wendy Quinn, Recording Secretary

 Public: Andrea Roess, Taussig Trey Driscoll, Intera
- D. Approval of Agenda: **MSC: Johnson/Duncan approving the Agenda as written.**
The roll call vote was unanimous.
- E. Comments from the Public and Requests for Future Agenda Items: None
- F. Comments from Directors: None
- H. Correspondence Received from the Public: None

II. ITEMS FOR BOARD CONSIDERATION AND POSSIBLE ACTION

- A. Consent Calendar:
 - 1. Resolution No. 2022-06-01 Virtual Meetings
 - 2. April 12, 2022 Special Meeting Minutes
 - 3/ April 26, 2022 Regular Meeting Minutes

MSC: Johnson/Baker approving the Consent Calendar as corrected (4/12 Minutes, Item IV.C and 4/26 Minutes, Item V.A.1, replace information regarding BPAs with wording provided by Director Baker). The roll call vote was unanimous.
- B. Annual Tax Levies and Corresponding Resolutions – DTA to Provide Info:
 - 1. FISCAL YEAR 2022-2023 ADMINISTRATION REPORT Community Facilities District No. 2007-1. Andrea Roess reported that the annual tax levy resolutions presented today were similar to those adopted in the past.
 - 2. Summary of the preliminary Fiscal Year (“FY”) 2022-2023 fixed charge levies for Borrego Water District. Director Baker asked why some properties were taxed for pest control but not for water, and Ms. Roess agreed to look into it. Director Baker requested a map of CFD 2017-1, and Ms. Roess agreed to send it.
 - 3. RESOLUTION NO. 2022-06-03 RESOLUTION OF THE BOARD OF DIRECTORS OF THE BORREGO WATER DISTRICT RESTATING AND ADOPTING A STATEMENT OF INVESTMENT POLICY AGENDA. Director Baker asked why this Resolution was adopted each year. Ward Simmons explained that it was required by the

Government Code and agreed to provide additional details at the next meeting. Mr. Simmons noted that the first paragraph of the Resolution should refer to the policy to be rescinded as dated 2021, rather than 2012. **MSC: Baker/Johnson adopting RESOLUTION NO. 2022-06-03, RESOLUTION OF THE BOARD OF DIRECTORS OF THE BORREGO WATER DISTRICT RESTATING AND ADOPTING A STATEMENT OF INVESTMENT POLICY, as amended. The roll call vote was unanimous.**

4. RESOLUTION NO. 2022-06-04 RESOLUTION OF THE BOARD OF DIRECTORS OF THE BORREGO WATER DISTRICT, SAN DIEGO COUNTY, CALIFORNIA, LEVYING STANDBY CHARGES AND/OR ACREAGE ASSESSMENTS TO DEFRAY THE COST OF OPERATIONS AND MAINTENANCE OF THE DISTRICT AND REQUESTING THE LEVY AND COLLECTION OF SAID STANDBY CHARGES AND/OR ACREAGE ASSESSMENTS ON LAND WITHIN THE DISTRICT FOR THE FISCAL YEAR 2022-2023. **MSC: Duncan/Rosenboom adopting RESOLUTION NO. 2022-06-04, RESOLUTION OF THE BOARD OF DIRECTORS OF THE BORREGO WATER DISTRICT, SAN DIEGO COUNTY, CALIFORNIA, LEVYING STANDBY CHARGES AND/OR ACREAGE ASSESSMENTS TO DEFRAY THE COST OF OPERATIONS AND MAINTENANCE OF THE DISTRICT AND REQUESTING THE LEVY AND COLLECTION OF SAID STANDBY CHARGES AND/OR ACREAGE ASSESSMENTS ON LAND WITHIN THE DISTRICT FOR THE FISCAL YEAR 2022-2023. The roll call vote was unanimous.**

5. RESOLUTION NO. 2022-06-05 RESOLUTION OF THE BOARD OF DIRECTORS OF THE BORREGO WATER DISTRICT, SAN DIEGO COUNTY, CALIFORNIA, LEVYING STANDBY CHARGES AND/OR ACREAGE ASSESSMENTS TO DEFRAY THE COSTS OF OPERATIONS AND MAINTENANCE OF THE DISTRICT, AND TO PAY COSTS OF OPERATIONS AND MAINTENANCE FOR IMPROVEMENT DISTRICT NO. 1 AND REQUESTING THE LEVY AND COLLECTION OF SAID STANDBY CHARGES AND/OR ACREAGE ASSESSMENTS ON CERTAIN LAND IN IMPROVEMENT DISTRICT NO. 1 FOR THE FISCAL YEAR 2022-2023. **MSC: Duncan/Rosenboom adopting RESOLUTION NO. 2022-06-05, RESOLUTION OF THE BOARD OF DIRECTORS OF THE BORREGO WATER DISTRICT, SAN DIEGO COUNTY, CALIFORNIA, LEVYING STANDBY CHARGES AND/OR ACREAGE ASSESSMENTS TO DEFRAY THE COSTS OF OPERATIONS AND MAINTENANCE OF THE DISTRICT, AND TO PAY COSTS OF OPERATIONS AND MAINTENANCE FOR IMPROVEMENT DISTRICT NO. 1 AND REQUESTING THE LEVY AND COLLECTION OF SAID STANDBY CHARGES AND/OR ACREAGE ASSESSMENTS ON CERTAIN LAND IN IMPROVEMENT DISTRICT NO. 1 FOR THE FISCAL YEAR 2022-2023. The roll call vote was unanimous.**

6. RESOLUTION NO. 2022-06-06 RESOLUTION OF THE BOARD OF DIRECTORS OF THE BORREGO WATER DISTRICT, SAN DIEGO COUNTY, CALIFORNIA, LEVYING CHARGES AND/OR ACREAGE ASSESSMENTS TO DEFRAY THE COST OF PROVIDING PEST CONTROL SERVICES BY THE DISTRICT AND REQUESTING LEVY AND COLLECTION OF SAID CHARGES AND/OR ACREAGE ASSESSMENTS FOR THE FISCAL YEAR 2022-2023. **MSC: Duncan/Rosenboom adopting RESOLUTION NO. 2022-06-06, RESOLUTION OF THE BOARD OF DIRECTORS OF THE BORREGO WATER DISTRICT, SAN DIEGO COUNTY, CALIFORNIA, LEVYING CHARGES AND/OR ACREAGE ASSESSMENTS TO DEFRAY THE COST OF PROVIDING PEST CONTROL SERVICES BY THE DISTRICT AND REQUESTING LEVY AND COLLECTION OF SAID CHARGES AND/OR ACREAGE ASSESSMENTS FOR THE FISCAL YEAR 2022-2023. The roll call vote was unanimous.**

7. RESOLUTION NO. 2022-06-07 RESOLUTION OF THE BOARD OF DIRECTORS OF THE BORREGO WATER DISTRICT, SAN DIEGO COUNTY, CALIFORNIA, LEVYING STANDBY CHARGES AND/OR ACREAGE ASSESSMENTS TO DEFRAY THE COST OF OPERATING AND MAINTAINING THE WATER FACILITIES WITHIN IMPROVEMENT DISTRICT NO. 3 OF THE DISTRICT AND REQUESTING THE LEVY AND COLLECTION OF SAID STANDBY CHARGES AND/OR ACREAGE ASSESSMENTS FOR THE FISCAL YEAR 2022-2023. ***MSC: Duncan/Rosenboom adopting RESOLUTION NO. 2022-06-07, RESOLUTION OF THE BOARD OF DIRECTORS OF THE BORREGO WATER DISTRICT, SAN DIEGO COUNTY, CALIFORNIA, LEVYING STANDBY CHARGES AND/OR ACREAGE ASSESSMENTS TO DEFRAY THE COST OF OPERATING AND MAINTAINING THE WATER FACILITIES WITHIN IMPROVEMENT DISTRICT NO. 3 OF THE DISTRICT AND REQUESTING THE LEVY AND COLLECTION OF SAID STANDBY CHARGES AND/OR ACREAGE ASSESSMENTS FOR THE FISCAL YEAR 2022-2023. The roll call vote was unanimous.***

8. RESOLUTION NO. 2022-06-08 RESOLUTION OF THE BOARD OF DIRECTORS OF THE BORREGO WATER DISTRICT ACTING AS THE LEGISLATIVE BODY OF COMMUNITY FACILITIES DISTRICT NO. 2017-1 OF THE BORREGO WATER DISTRICT AUTHORIZING THE LEVY OF SPECIAL TAXES WITHIN COMMUNITY FACILITIES DISTRICT NO. 2017-1 FOR THE FISCAL YEAR 2022-2023. ***MSC: Duncan/Rosenboom adopting RESOLUTION NO. 2022-06-08, RESOLUTION OF THE BOARD OF DIRECTORS OF THE BORREGO WATER DISTRICT ACTING AS THE LEGISLATIVE BODY OF COMMUNITY FACILITIES DISTRICT NO. 2017-1 OF THE BORREGO WATER DISTRICT AUTHORIZING THE LEVY OF SPECIAL TAXES WITHIN COMMUNITY FACILITIES DISTRICT NO. 2017-1 FOR THE FISCAL YEAR 2022-2023. The roll call vote was unanimous.***

9. RESOLUTION NO. 2022-06-09 RESOLUTION OF THE BOARD OF DIRECTORS OF THE BORREGO WATER DISTRICT ACTING AS THE LEGISLATIVE BODY OF COMMUNITY FACILITIES DISTRICT NO. 2007-1 OF THE BORREGO WATER DISTRICT AUTHORIZING THE LEVY OF SPECIAL TAXES WITHIN COMMUNITY FACILITIES DISTRICT NO. 2007-1 FOR THE FISCAL YEAR 2022-2023. ***MSC: Duncan/Rosenboom adopting RESOLUTION NO. 2022-06-09, RESOLUTION OF THE BOARD OF DIRECTORS OF THE BORREGO WATER DISTRICT ACTING AS THE LEGISLATIVE BODY OF COMMUNITY FACILITIES DISTRICT NO. 2007-1 OF THE BORREGO WATER DISTRICT AUTHORIZING THE LEVY OF SPECIAL TAXES WITHIN COMMUNITY FACILITIES DISTRICT NO. 2007-1 FOR THE FISCAL YEAR 2022-2023. The roll call vote was unanimous.***

C. Resolution No. 2022-06-02 Approving 2022-23 Budget and Capital Improvement Plan: Jessica Clabaugh invited the Board's attention to the entire budget package in the Board package. She reviewed some minor clerical changes, and Director Baker made some suggestions. Ms. Clabaugh agreed to change a heading to indicate CIP projects funded from 2021 bonds and to clarify language concerning quarterly third party consultant reviews. President Dice suggested looking at previous language used to describe monitoring procedures. ***MSC: Baker/Johnson adopting Resolution No. 2022-06-02, approving the 2022-23 Budget and Capital Improvement Plan, subject to amendments made during discussion. The roll call vote was unanimous.***

D. Agreement for Engineering Services with Intera: Trey Driscoll reported that since the last meeting, he had updated his proposal to more closely match his prior rates. His rate will be \$255 per hour, and a three-year budget was provided, including service on the TAC and review of the WM annual report. BWD can request additional services, and there is a

contingency fund. Discussion followed regarding Task 11, and Mr. Driscoll explained that it is for WM activities. BWD activities are funded by the contingency. President Dice asked that this be clarified in the proposal.

1. Strategy for Future Water Quality Testing. Mr. Driscoll will put a proposal together on water quality testing for the Board's review. He showed slides highlighting contaminants that have been emerging during the last ten years in water and groundwater and can cause health effects. There are notification requirements, and State regulations are in work. They are found in industrial areas, farming areas and storm water runoff. Sampling of five BWD wells in 2019 showed no contamination. *MSC: Duncan/Rosenboom approving the contract with Intera and the scope of work, as amended (Task 11). The roll call vote was unanimous.*

E. Request from Jim Wermers for Assistance with Fire Service Replacement at The Mall: David Dale reported that he had met with Jim Wermers. In 2014 Mr. Wermers had installed a master meter at the Mall, and as part of that, there is a fire hydrant that is on the meter, which is unusual. He now wants to replace a pipeline and install a smaller meter. One line would serve the hydrant and the sprinkler system. Mr. Wermers wants BWD to share the cost. Director Duncan wondered whether this would be a gift of public funds, but Mr. Simmons did not think so because the existing setup was a mistake. Director Duncan asked Mr. Dale to come back to the Board with a cost estimate and a drawing of the site. Mr. Dale noted that Mr. Wermers would continue to own the system and maintain it according to code. Roy Martinez explained that the system was installed the way it was because of issues regarding backflow preventers.

F. Borrego Springs Subbasin Watermaster Board:

1. Update on Board Activities. Director Duncan announced the next WMB meeting, July 14. Mr. Driscoll reported that he had finished the exhibits for the Burnand parcel and was ready to submit it to DWR.

2. Update on Technical Advisory Committee Activities.

i. Request for future TAC agenda items. Proposed future TAC Agenda items included groundwater elevation and water quality monitoring, frequency of meetings, an update on the Borrego Valley hydro geologic model, de minimis wells, additional well monitoring with John Peterson, WM budget, and the Viking Ranch well conversion as part of Prop 68. Mr. Poole and President Dice will work on a letter to the WMB, asking that these issues be included in their Agenda.

III. BOARD COMMITTEE REPORTS

AD HOC:

B. Public Outreach: Director Baker pointed out that the presentation for realtors with the WM took a long time to arrange. She recommended early planning if BWD wants the WM to participate in the Town Hall Meeting. President Dice will schedule a Committee meeting.

IV. MONTHLY FINANCIAL & OPERATIONS REPORTS

A. Financial Reports: May 2022: Ms. Clabaugh reported that at the end of May the District had \$8.6 million in cash and bond funds. Water revenues were \$349,000, including \$30,000 from Ocotillo Wells solar. JPIA provided a \$12,000 rebate. The final payment to Dudek for assistance with the Prop 68 application was remitted. The second round of pumping fees was paid to the WM. Work is continuing on Production Wells 2 and 5-15, design of Twin Tanks and the wastewater treatment plant modifications.

B. Water and Wastewater Operations Report: May 2022:

1. Wastewater Staff Report. Mr. Martinez reported on the treatment plant improvements.

C. Water Production/Use Records: May 2022:

1. Operations Staff Report. Alan Asche explained recent projects, repairs and upgrades. He had been troubleshooting a problem at Well 9. Fifty panels are being tested, as required every three years. Mr. Asche explained the various State testing requirements.

V. DIRECTORS AND STAFF REPORTS

A. GRAC Conference Summary: Director Johnson reported on the two-day Groundwater Resources Association Conference she attended recently. Topics included legal and legislative information and groundwater resources. Watermasters were advised to work closely with the Legislature, and it was suggested that the legislative representatives be taken on a field trip. There is a sustainable groundwater management program at DWR, and it includes critically overdrafted basins.

B. Administration: Diana Del Bono reported that the Springbrook transition was going well. Wells Fargo installed a new tech scanner. The Consumer Confidence Report has been completed and posted around town. It will also be posted on the website and in the newspaper. Registered letters were sent to customers who defaulted on their payment plans, letting them know that the amount due will be added to the tax roll if they don't pay.

C. Engineering: Mr. Poole reported that that the State had inspected the wastewater treatment plant. The grant manager for the Twin Tanks had some questions, and Mr. Poole responded. The SDG&E pipeline extension should be complete in about a week. Staff is still waiting for SDG&E to connect power to Well 5-15. The County is repairing the road in front of the well.

D. General Manager:

1. Prop 68 Grant Agreement/Sub Grantee Agreements. DWR has follow up questions on all projects.

VI. CLOSED SESSION

A. Conference with Legal Counsel - Potential Initiation of litigation pursuant to paragraph (4) of subdivision (d) of Section 54956.9: (Three (3) potential cases):

B. Property Negotiations – BWD and US Gypsum Corporation Property Negotiations – Conference with Real Property Negotiators (Gov. Code §Section 54956.8) Property APN: 140-303-0900 & 140-303-1100, 150 acres Negotiating Parties: Geoff Poole, BWD General Manager and USG as potential buyer: Price and Terms of Payment Property Negotiations: Viking Ranch:

C. Performance Evaluation of General Manager: GM Performance Review – Conference for Public Employee Performance Evaluation - Title: General Manager Employee Performance Review pursuant to subdivision (d) (4) of Government Code Section (Government Code §54957):

The Board adjourned to closed session at 12:45 p.m., and thereafter, the open session reconvened. There was no reportable action.

VII. CLOSING PROCEDURE

The next Board Meeting is scheduled for 9:00 a.m., July 12, 2022, to be available on line. See Board Agenda at BorregoWD.org for details. Agenda information available at least 72 hours before the meeting. There being no further business, the meeting was adjourned.

BORREGO WATER DISTRICT
BOARD OF DIRECTORS MEETING
AUGUST 23, 2022
AGENDA ITEM II.B

August 16, 2022

TO: Board of Directors

FROM: Geoffrey Poole, General Manager

SUBJECT: Waste Water Treatment Plant Capacity and Expansion Analysis

RECOMMENDED ACTION:

Receive Report and Presentation from Dudek. Staff intends to take any Board questions and comments from this meeting and return in Sept with a Final Draft.

ITEM EXPLANATION:

BWD Staff, Ad Hoc Committee and Dudek Engineering have worked on an Analysis of two key issues at the existing Waste Water Treatment Plant:

How much capacity exists in each component/process of the WWTP? Does each component have the capability to treat 250 kgpd?

What is the cost for future WWTP expansion in 250 kgpd components?

The attached Analysis answers these fundamental questions.

NEXT STEPS

Develop Implementation Plan, including funding sources, to expand the WWTP processes to ensure 250 kgpd capacity.

Use future WWTP expansion estimates in discussions with developers and in future rate setting.

FISCAL IMPACTS

See Analysis

ATTACHMENTS

Dudek Analysis

TECHNICAL MEMORANDUM - DRAFT

To: Geoff Poole, General Manager
From: Greg Guillen PhD, PE (Dudek)
Subject: Rams Hill WWTF Capacity Analysis and Cost Estimates for Facility Replacement and Expansion Alternatives
Date: August 23, 2022
cc: Kayvan Ilkhanipour PG, CHG, Dudek; Agata Bugala EIT, Dudek
Attachments: **Attachment A** - Wastewater Discharge Permit, **Attachment B** – Historical Flow Assumptions, **Attachment C** - Design Criteria, **Attachment D** - Cost Tables

Executive Summary

Borrego Water District (District) contracted Dudek to prepare a capacity analysis and an engineer's estimate of probable cost (cost opinion) for multiple expansion alternatives for the Rams Hill Wastewater Treatment Facility (WWTF or Facility). Additionally, as part of capacity evaluation, Dudek and the District have compiled historical flow data from sewersheds contributing flow to the WWTF since its commissioning in 1983.



Rams Hill WWTF

Summary of Findings

The WWTF was originally designed for an average day design capacity of 250,000 gpd but did not include dedicated nitrogen removal capabilities. The oxidation ditch and equalization basin were found to have capacities below 250,000 gpd. Therefore, these units need to be upgraded to bring their individual capacities to 250,000 gpd to serve a total of 2,594 Equivalent Dwelling Unit (EDU). The following summarize the findings of this technical memorandum:

- The 811 EDUs currently contributing flow to the WWTF result in an average day flow generation factor of 96.4 gpd/EDU.
- The WWTF was found to have a current treatment capacity of 915 EDU (88,200 gpd average day flow). Existing WWTF capacity bottlenecks include nitrogen removal and flow equalization.
- Modifying the oxidation ditch to provide dedicated nitrogen removal is estimated to increase the WWTF capacity to 1,261 EDU (121,500 gpd average day flow) and cost \$624,000.
- Modifying the oxidation ditch for nitrogen removal and expanding the equalization basin volume will bring the WWTF capacity to 2,594 EDU (250,000 gpd). This project is estimated to cost \$1,125,000.
- Expanding the WWTF to 500,000 gpd, serving a total capacity of 5,187 EDU is estimated to cost \$5,499,000.

- Expanding the WWTF to 750,000 gpd, serving a total capacity of 7,781 EDU is estimated to cost \$10,763,000.
- Expanding the WWTF to 500,000 gpd, serving a total capacity of 5,187 EDU, and producing recycled water is estimated to cost \$14,585,000.
- Expanding the WWTF to 750,000 gpd, serving a total capacity of 7,781 EDU, and producing recycled water is estimated to cost \$19,625,000.
- Annual O&M costs were not included in the life cycle analyses.

Summary of Recommendations

- Based on the available data and the performed analyses, it appears that the District can maintain reliable WWTF performance while providing wastewater services to the current 811 connected EDU.
- Assuming no changes in the flow and BOD load per EDU, there is existing capacity to add an additional 104 EDU without plant expansion. A nitrogen removal design criterion was assumed for this exercise because the District does not currently have a nitrogen effluent discharge limit. The assumed design criterion results in nitrogen (TKN) removal capacity in the oxidation ditch being the first plant bottleneck. It is recommended that the plant's nitrogen removal capacity and future discharge limit be further evaluated.
- Percolation ponds are a permitting bottleneck. While the percolation ponds may be able to discharge treated effluent at a much higher rate, the District's current discharge permit limits the maximum monthly average discharge rate to 250,000 gpd. Expanding the percolation ponds while under the existing permit would not allow the District to increase discharge capacity. For planning purposes and more accurate estimates, it is recommended to perform a percolation/study test to assess infiltration rates of the existing ponds to determine a theoretical maximum discharge capacity.
- The 3-inch Parshall flume flow meter combined with a level indicator at the maximum water depth of 18 inches is capable of measuring a maximum flow rate of 835 gpm (1.2 million gallons per day (MGD)). Currently, the flow meter is set up to measure flow rates between 0 gpm and 143 gpm based on its mounting height and calibration. It is recommended to recalibrate the flow meter to measure higher flow rates projected under future expansion without adding/expanding the actual flume.

1 Project Background

The Ram Hills WWTF is owned and operated by BWD and its discharge is regulated by the Colorado River Basin Regional Water Quality Control Board (Colorado River Basin Water Board). The District has operated the WWTF since 1983. This plant, originally designed to treat effluent to tertiary levels with a capacity of 250,000 gpd, has never had sufficient flow to justify the increased expense of operating the tertiary portion of the original plant design.

In 2014, Dudek updated the Preliminary Evaluation of Water Supply Options for the Rams Hill Golf Course Study which contemplated the use of disinfected, tertiary recycled water to offset groundwater pumping to meet irrigation demand (Dudek 2014). This previous study indicated that at a minimum, filters and disinfection facilities would be required to meet Title 22 regulations, and a pump station and flow equalization/storage basin may be required for distribution of recycled water to the golf course. In the previous study, economic viability was assumed when the Rams Hill WWTF could produce at least 100 acre-feet per year (90,000 gpd) of recycled water, which would meet approximately 15% of the irrigation water demand of the golf course. The cost opinion to replace the existing WWTF includes four alternatives detailed in the sections below.

This project's overarching goals are to perform the following:

- Determine historical and current flows as well as mass load of biological oxygen demand (BOD) and nitrogen generated by the Borrego Springs collection system.
- Evaluate individual process unit capacity based on existing WWTF design criteria.
- Determine the overall WWTF available capacity based on the individual process with the lowest available capacity.
- Provide an engineer's estimate of probable cost for the following alternatives:
 - **Alternative 0:** Expand oxidation ditch by adding anoxic zone to provide capacity for removing nitrogen.
 - **Alternative 1:** Identify and upgrade any unit processes which do not meet current design capacity requirements (250,000 gpd) for WWTF.
 - **Alternative 2:** Maintain existing WWTF equipment and provide similar, new equipment to increase capacity by 250,000 gpd for a total treatment capacity of 500,000 gpd.
 - **Alternative 3:** Maintain existing WWTF equipment and provide similar, new equipment to increase capacity by 500,000 gpd for a total treatment capacity of 750,000 gpd.
 - **Alternative 4:** Replace existing WWTF equipment with similar, new equipment in order to meet Title 22 regulations for disinfected, tertiary recycled water at a total capacity of 500,000 gpd.
 - **Alternative 5:** Replace existing WWTF equipment with similar, new equipment in order to meet Title 22 regulations for disinfected, tertiary recycled water at a total capacity of 750,000 gpd.

1.1 Wastewater Treatment Plant Facility Overview

The WWTF is a 250,000 gpd facility consisting of preliminary, secondary, final effluent, and solids removal treatment. The WWTF operates a single-duty oxidation ditch, extended aeration activated sludge (EAAS) biological treatment process, as shown in **Figure 1**. Influent wastewater flows through a Parshall flume flow meter, mechanical

bar screen for screenings removal, grinder¹, and a vortex grit chamber for grit removal prior to entering the oxidation ditch. The oxidation ditch is designed to achieve biochemical oxygen demand (BOD₅) reduction and also some nitrogen removal via nitrification/denitrification. Mixed liquor from the oxidation ditch flows to the secondary clarifiers. Clarified effluent is discharged to percolation ponds without being disinfected. Sludge wasted from the secondary clarifiers flows to sludge holding tanks and is then stabilized using sludge drying beds. The sludge is removed every 2-3 years for off-site disposal. The WWTF process flow diagram and site layout are shown in **Figures 1** and **2**, respectively. Background description, function, and major assets in each area of the WWTF are summarized in **Table 1**.

Table 1: Treatment Plant Process Summary

Unit Process	Description	Major Assets
Headworks	Functions to remove rags, grit, and other large materials from the influent wastewater before entering downstream processes.	<ul style="list-style-type: none"> Parshall Flume Meter Bar Screen Comminutor (Grinder) Aerated Grit Chamber
Biological Treatment (Secondary Treatment)	Functions to reduce BOD and TSS from the wastewater utilizing a single-duty oxidation ditch. The process is intended to operate with a low solids retention time (SRT). Important parameters which control biomass growth rates and microbial communities are the Return Activated Sludge (RAS) and Waste Activated Sludge (WAS).	<ul style="list-style-type: none"> Oxidation Ditch Secondary Clarifiers
Final Effluent	Functions to provide consistent flow by retaining high flow fluctuations and final effluent disposal to evaporation/percolation ponds.	<ul style="list-style-type: none"> Equalization Basin Evaporation/Percolation Ponds Emergency Basin
Solids Treatment	Functions to reduce quantity and stabilize biosolids through evaporation.	<ul style="list-style-type: none"> Sludge Holding Tank Sludge Drying Beds

1.2 WWTF Status and Avoided Replacement Cost

A complete renovation of the WWTF is underway with replacement of equipment and repair/replacement of exposed concrete and metal surfaces. Cost estimates to replace the WWTF as-is are shown in **Table 2**. Major assumptions made in the development of this cost estimate include:

- General Requirements are estimated to be 5% of total construction cost.
- Sitework includes earthwork and it is estimated to be 10% of total construction cost.
- All concrete structures are replaced in kind.
- Installation of mechanical equipment for a new oxidation ditch.
- Installation of new bar screen.
- Installation of mechanical equipment for a new grit chamber and grit classifier.

¹ A machine that cuts up solids in raw sewage in preparation for treatment and safe pumping.

- Installation of mechanical equipment for a new secondary clarifier.
- New miscellaneous pumps are estimated to be 10% of total equipment cost.
- Installation of civil piping are estimated to be 8% of total construction cost.
- Installation of new electrical capital costs are estimated to be 10% of total construction cost.
- Installation of instrumentation cost are estimated to be 3% of total construction cost.

Table 2: WWTF Replacement Capital Cost Estimate

CAPITAL COST ITEM DESCRIPTION	ENGINEERING ESTIMATE	
	TOTAL	
	\$/UNIT	NET COST
Division 1 - General Requirements		\$ 150,000
General Requirements (5% of overall construction cost)	\$ 150,000	\$ 150,000
Division 2 - Sitework/Earthwork		\$ 340,000
Existing Structures (10% of overall construction cost)	\$ 340,000	\$ 340,000
Division 3 - Concrete		\$ 773,000
Grit Chamber Concrete Structure	\$ 1,000	\$ 28,000
Ox Ditch Concrete Structure	\$ 1,000	\$ 307,000
EQ Basin Concrete Structure	\$ 1,000	\$ 211,000
Secondary Clarifier Concrete Structure (1+1)	\$ 1,000	\$ 180,000
Sludge Holding Tank Concrete Structure	\$ 1,000	\$ 47,000
Division 11 - Equipment		\$ 1,349,000
Bar Screen	\$ 104,000	\$ 104,000
Grinder	\$ 10,000	\$ 10,000
Grit Chamber + Grit Classifier	\$ 299,000	\$ 299,000
Oxidation Ditch Mechanism	\$ 208,000	\$ 208,000
Secondary Clarifier Mechanism	\$ 304,000	\$ 608,000
Miscellaneous Pumps (10% of equipment)	\$ 120,000	\$ 120,000
Division 15 - Mechanical		\$ 280,000
Civil Piping (8%)	\$ 280,000	\$ 280,000
Division 16 - Electrical		\$ 320,000
Electrical (10% of overall construction cost)	\$ 320,000	\$ 320,000
Division 17 - Instrumentation		\$ 100,000
Sensors and Alarms (3% of overall construction cost)	\$ 100,000	\$ 100,000
	Construction Subtotal	\$ 3,312,000
	Escalation to Midpoint (5%/yr x 1 years)	\$ 165,600
	Construction Contingency (20%)	\$ 663,000
	Total Construction Cost	\$ 4,140,600
	Engineering Design (15% of Construction)	\$ 621,090
	Construction Management (10% of Construction)	\$ 414,060

CAPITAL COST ITEM DESCRIPTION	ENGINEERING ESTIMATE	
	TOTAL	
	\$/UNIT	NET COST
	Total	\$ 5,176,000

A 30-year life-cycle cost model was prepared to estimate the useful life of the existing infrastructure. It is assumed that the existing 250,000 gpd infrastructure will need to be replaced by 2051. The life-cycle cost model parameters are shown in **Table 3**. Capital costs (e.g., construction costs) are estimated based on vendor equipment quotations and third-party vendor service and installation fees.

Table 3: Life-cycle Cost Model Inputs

Parameter	Units	Value
Starting Year	-	2022
Ending Year	-	2051
Discount Rate	%/yr	2%
Inflation Rate	%/yr	3%

Table 4 lists the present worth capital costs associated with replacing the existing 250,000 gpd infrastructure in year 2051.

Table 4: Projected Construction Cost Estimate

Cost	30-year Total Capital Cost
General (mobilization, demobilization)	\$ 199,052
Civil	\$ 451,184
Structural	\$ 1,025,780
Equipment	\$ 1,790,138
Mechanical	\$ 371,563
Electrical	\$ 557,345
Subtotal	\$ 4,395,061
Construction Contingency (20%)	\$ 880,000
Total Construction Cost	\$ 5,275,061
Engineering Design (15% of Construction)	\$ 791,259
Construction Management (10% of Construction)	\$ 527,506
Total	\$ 6,594,000

1.3 Discharge Requirements

The discharge of the final effluent from the WWTF is regulated by Colorado River Basin Water Board Order No. R7-2019-0015, which describes the Waste Discharge Requirements (WDRs) and other terms and conditions of operation for the WWTF. Discharge requirements are summarized in **Table 5**. Refer to **Attachment A** for a detailed description of the permit.

Table 5: Rams Hill WWTF Waste Discharge Requirements

Constituent	Units	Monthly Average	Weekly Average
20 °C BOD ₅	mg/l	30	45
Total Suspended Solids (TSS)	mg/l	30	45
Settleable Solids	ml/l	0.3	0.5

Notes:

1. 30-day average daily dry weather discharge from WWTF into the evaporation/percolation ponds shall not exceed 0.250 MGD.
2. TDS concentration of the effluent shall not exceed 700 mg/l.
3. Effluent from the WWTF into the evaporation/percolation ponds shall not have a pH below 6.0 or above 9.0.

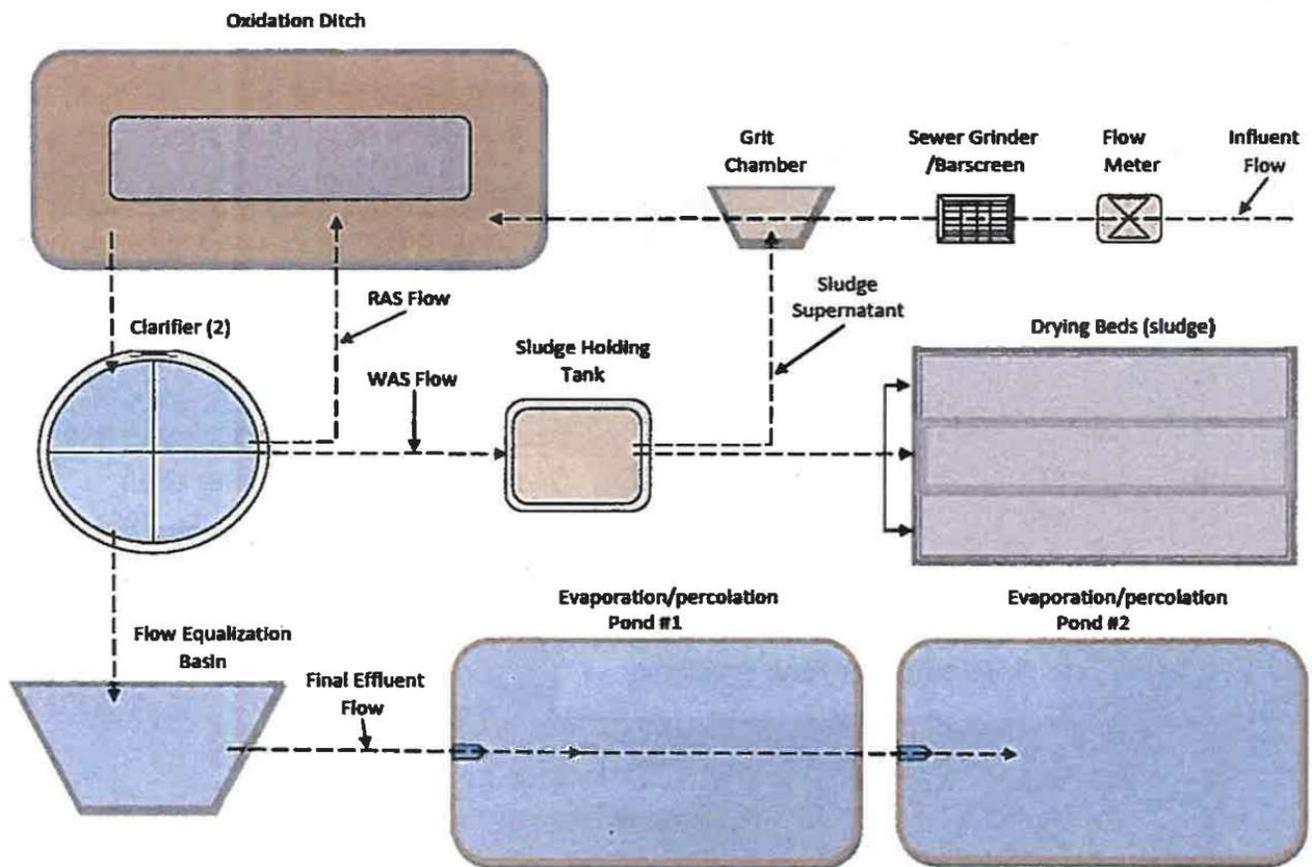


Figure 1: Rams Hill WWTF Process Flow Diagram



Figure 2: Rams Hill WWTF

2 Historical Flow Contributions at the WWTF

The WWTF originally accepted a small volume of flow from the Rams Hill sewershed. The Town Center sewershed was connected to the WWTF in 1987. The Borrego Springs Resort-Club Circle sewershed was not connected to the WWTF until 2011. Total daily and annual WWTF flows are reported to the State of California. Unfortunately, due to inoperable meters/equipment, computer failure leading to lost data and other factors, actual flows are not available for the three service areas of Rams Hill, Borrego Springs Resort-Club Circle, and Town Center. Based on available data and extrapolation, the historical flow contributions were estimated as shown in **Table 6**. Assumed annual flows are shown in **Attachment B**.

Table 6: Estimated Historical Sewershed Flow Contributions

Sewershed	Flow Contribution (Mgal)	Percent Contribution
Rams Hill	202	36%
Town Center	310	55%
Borrego Springs Resort-Club Circle	48	9%
Total Flow	560	100%

3 Current Flow and Load Generation

A high-level WWTF treatment process evaluation was performed with a focus on recent (2020) WWTF treatment capacity. Individual unit process capacities were evaluated under current loading conditions and current EDU connections. Results from the evaluation are intended to assist the District in determining potential expansion requirements for the WWTF.

Flow, BOD, and TKN concentration and loading values were developed from WWTF influent data from January 2020 to December 2020. The Rams Hill WWTF flow and loads incorporate such peaking factors to maintain required treatment process integrity, as presented in **Table 7**.

Table 7: Rams Hill WWTF Current Influent Flows, Loads, and Connections

Parameter	Units	Value
Connected EDU	no.	811
Average Day Flow (ADF) ¹	gpd (gpm)	63,350 (44)
Maximum Month Dry Weather Flow (MMDF) ²	gpd (gpm)	128,800 (89)
Peak Hour Flow (PHF) ³	gpd (gpm)	253,400 (176)
Average Day BOD ₅ Concentration	mg/l	84
Average Day BOD ₅ Load	lb/d	47
Maximum Month BOD ₅ Load ²	lb/d	188
Average Day TKN Concentration	mg/l	52
Average Day TKN Load	lb/d	28
Maximum Month TKN Load	lb/d	55
WAS Sludge Production @ ADF ⁴	lb/d	33

Notes:

¹ADF and MMDF values derived from monthly flow data (Jan 2020 – December 2020)

²March 2017 average flow and BOD load during “superbloom” period

³PHF assumes a peaking factor of 4 relative to ADF

⁴Assumed 0.5% solids

Individual unit processes at the WWTF are required to treat flow and loads over different time scales. Processes at the head of the plant must treat instantaneous flows or the facility risks flooding. This instantaneous flow capacity is approximated by Peak Hour Flow (PHF). The biological treatment process (oxidation ditch) is required to handle BOD and TKN loads over month-long periods (Maximum Month Load, MML) while like the equalization basins are designed to handle average day flows (ADF). Process flow and load treatment requirements are listed in **Table 9**.

3.1 Flow and Load Generation Factors

Generation factors were calculated to determine flows and loads produced by each EDU connected to the WWTF collection system. The ADF generation factor was increased by one standard deviation to compensate for the limited flow data. The measured ADF for 2020 was 63,350 gpd with a standard deviation of 14,820 gpd. The ADF used to determine the generation factor was 63,350 gpd + 14,820 gpd = 78,170 gpd. Normalizing by the 811 EDU results in an ADF flow generation factor of 96.4 gpd/EDU. Flow and strength factors are used to determine potential available capacity within the WWTF. A summary of wastewater flow and load generation factors is provided in **Table 8**.

Table 8: Flow and Load Generation Factors

Parameter	Units	Value
Average Day Flow (ADF)	gpd/EDU	96.4 ¹
Maximum Month Dry Weather Flow (MMDF)	gpd/EDU	159
Peak Hour Flow (PHF)	gpd/EDU	385.5
Maximum Month BOD ₅ Load (MML)	lb/d/EDU	0.23
Maximum Month TKN Load (MML)	lb/d/EDU	0.07
Sludge Production @ ADF	wet-lb/d/EDU	0.04 ²

Notes:

¹Flow generation factors for residential wastewater collection systems derived using average flow data and 1 standard deviation to account for data uncertainty.

²Assumed 0.5% solids

The flow generation factor of 96.4 gpd/EDU is still lower than the typical 150 to 200 gpd/EDU, which is explained by the transient nature of the Borrego Springs community.

4 WWTF Unit Process Capacities

This section summarizes individual unit process design and available capacities.

4.1 Determination of Available Process Capacities

Unit process performance is evaluated by analyzing process flow rates and water quality data between January 2020 and December 2020 unless otherwise noted. Design criteria were taken from WWTF design drawings from 1981 and the 2016 Wastewater Treatment Plant Upgrade Report. Refer to **Attachment C** for the WWTF design criteria.

The WWTF is composed of several unit processes. Each unit process has its own capacity. The overall WWTF capacity is equal to that of the unit process with the lowest individual capacity. The available capacity of a unit process is defined here as the difference between the full design capacity and the in-use capacity. In this analysis it was assumed the equipment is performing adequately compared to its design criteria without any deficiencies and, therefore, available capacity only considers current load versus design load and does not consider actual process performance.

Table 9 lists individual unit processes at the WWTF and their associated design flow or load capacities. The listed design flow and load scenarios must be accommodated by the corresponding unit process. For example, the biological treatment system must have enough capacity to treat the maximum month BOD and TKN load that enters the WWTF. Likewise, the headworks must have enough capacity to process peak hourly flow.

Table 9: Unit Process Design Flow and Load Summary

Unit Process	Design Flow/Load
Headworks	Peak Hour Flow (PHF)
Biological Treatment (Oxidation Ditch)	Max Month Load (MML)
Secondary Clarifiers	Average Day Flow (ADF)
Equalization/Stabilization Basin	Average Day Flow (ADF)
Percolation Ponds	Max Month Dry Weather Flow (MMDF)
Solids Treatment	Max Month Load (MML)
	Average Day Flow (ADF)

4.2 Headworks

WWTF influent flow enters the headworks through a 15-inch diameter polyvinyl chloride (PVC) gravity sewer main. The headworks consists of a Parshall flume flow meter, grinder with a bypass bar screening unit. Screened wastewater enters an aerated grit chamber for grit removal. Grit accumulated in the chamber is scooped out and disposed of in a dumpster along with screenings. Individual headworks unit processes must handle peak hour flow (PHF) as there is no upstream flow equalization. WWTF preliminary treatment design and available capacity parameters are given in **Table 10**.

A Parshall flume flow meter measures the depth of flow through an engineered throat of known width. The measured depth of flow is used to calculate flow rate. The flume has a 6-inch throat with a 3-inch insert. The 6-inch Parshall flume flow meter can measure a maximum flow of 1,750 gpm (2.5 MGD) at a depth of 18 inches. The 3-inch insert reduces

the maximum measurable flow to 834 gpm (1.2 MGD) at a water depth of 18 inches but increases the measurement accuracy over the lower range. However, the ultrasonic level sensor is currently calibrated to measure flow between 0 and 143 gpm (205,000 gpd). The full design capacity for the Parshall flume is listed as 834 gpm, which assumes the 3-inch insert remains in place and the ultrasonic level sensor is recalibrated to measure up to the maximum flow rate.

Table 10: Headworks Available Capacity

Unit Process	Full Design Capacity	In-Use Capacity	Available Capacity
Parshall flume flow meter	834 gpm @ PHF	217 gpm @ PHF	+617 gpm (+2,304 EDU)
Bar screen + Grinder	1,201 gpm @ PHF		+984 gpm (+3,676 EDU)
Grit chamber	2,778 gpm @ PHF		+2,561 gpm (+9,564 EDU)

Key Notes/Findings

- The headworks can accommodate an additional 2,304 EDU.
- Parshall flume flow meter is currently configured to measure up to 205,000 gpd. However, the measurable flow rate can be increased up to 1.2 MGD by recalibrating the ultrasonic level sensor.
- The influent bar screen and grit chamber are projected to have the capacity to screen influent flow from an additional 3,676 EDU and 9,564 EDU, respectively.

4.3 Secondary Treatment

Secondary treatment consists of a single-duty oxidation ditch and two secondary clarifiers which typically operate with one unit in a duty/standby configuration, allowing for the inspection, maintenance, and rehabilitation of each basin independently. Secondary treated effluent is discharged to the evaporation/percolation ponds.

The mass of BOD and TKN that can be removed via the oxidation ditch is limited by the basin volume and oxidation ditch loading rate capacity. The oxidation ditch is designed to remove BOD and TKN loads under maximum monthly loading rate conditions. The capacities of the oxidation ditch, with respect to BOD and TKN removal, as well as secondary clarifiers are presented in **Table 11**.

Table 11: Secondary Treatment Available Capacity

Unit Process	Design Capacity	In-Use Capacity	Available Capacity
Oxidation Ditch (BOD Load)	573 lb/d BOD @ MML	188 lb/d BOD @ MML	+385 lb/d BOD (+1,663 EDU)
Oxidation Ditch (TKN Load) ¹	63lb/d TKN @ MML	55 lb/d TKN @ MML	+7 lb/d TKN (+104 EDU)¹
Secondary Clarifiers (SOR) ²	249,995 gpd @ ADF	78,169 gpd	171,827 gpd (+1,783 EDU)
Secondary Clarifiers (SLR) ^{3,4}	983,213 gpd @ ADF	128,802 gpd	854,411 gpd (+5,380 EDU)

Notes:

¹No TKN design criterion available. Assumed a design influent TKN of 30 mg/l @ 250,000 gpd which is typical for WWTFs of this vintage.

²Solids Overflow Rate (SOR)

³Solids Loading Rate (SLR)

⁴Assumed a design MLSS of 1,500 mg/l

There were no influent nitrogen (TKN) loading or removal design criteria associated with the original oxidation ditch design. An influent design TKN concentration of 30 mg/l at 250,000 gpd was assumed for the purposes of this analysis. Under this assumption, the oxidation ditch is projected to have capacity to treat nitrogen generated from an additional 104 EDUs. Actual oxidation ditch removal capacity should be evaluated to accurately determine available oxidation ditch capacity.

Key Notes/Findings

- The secondary treatment process capacity is limited by nitrogen removal in the oxidation ditch and is projected to accommodate an additional 104 EDU. However, this conclusion is based on an assumed design criterion and no explicit permitted nitrogen discharge limit.
- The oxidation ditch is projected to have capacity to treat BOD generated from an additional 1,663 EDU.
- The secondary clarifiers are projected to have capacity to handle flow from an additional 1,783 EDU.
- Assuming that the designed MLSS is 1,500 mg/l, then the secondary clarifiers are projected to have capacity to separate solids from an additional 5,380 EDU.

4.4 Flow Equalization Basin

Secondary clarified effluent is conveyed by gravity to a flow equalization (EQ) basin. One equalization basin is currently operated. The EQ basin is aerated to keep treated effluent mixed and to avoid odor production. The equalization basin is designed to provide 24 hours of storage. The capacity analysis of the equalization basin is presented in **Table 12**.

Table 12: Stabilization Basin Available Capacity

Unit Process	Design Capacity	In-Use Capacity	Available Capacity
Equalization Basin	121,500 gpd @ ADF	78,169 gpd @ ADF	+43,331 gpd (+450 EDU)

Key Notes/Findings

- The EQ basin is projected to have capacity to treat an additional 450 EDU.

4.5 Final Effluent Disposal

Final effluent is disposed to percolation ponds where treated wastewater infiltrates into the local groundwater basin. The capacity analysis of the percolation ponds is presented in **Table 13**.

Table 13: Final Effluent Available Capacity

Unit Process	Design Capacity	In-Use Capacity	Available Capacity
Percolation Pond	250,000 gpd @ MMDF	128,802 gpd @ MMDF	+121,198 gpd (+763 EDU)

Key Notes/Findings

- The effluent percolation ponds are projected to have capacity for an additional 763 EDU.
- The design capacity is a permitted limit. The percolation ponds may in fact be able to discharge a larger volume of treated effluent.

4.6 Sludge Treatment

There are two sludge drying beds which are used to stabilize the sludge. In addition, there is a single sludge holding tank with an operational detention time of 72 hours to help maintain constant sludge application rates. The sludge is removed every 4-5 years from the sludge drying beds and disposed of off-site at a disposal waste management facility approved by the Regional Board. Sludge treatment available capacity is presented in **Table 14**.

Table 14: Sludge Treatment Available Capacity

Unit Process	Design Capacity	In-Use Capacity	Available Capacity
Sludge Holding Tank	10,000 gpd WAS @ MML	3,156 gpd @ MML	+6,844 gpd (+1,759 EDU)
Sludge Drying Bed	385 lb/d WAS @ ADF	33 lb/d WAS @ ADF	+352 lb/d WAS (+8,776 EDU)

Key Notes/Findings

- Sludge holding tank is projected to have capacity for an additional 1,759 EDU.
- Sludge drying beds are projected to have capacity for an additional 8,776 EDU.

4.6 Unit Process Capacity Summary

Individual unit process in-use and available capacities are summarized in **Table 15**.

Table 15: Summary of Unit Process Available Capacities

Unit Process	Design Criteria	In-Use Capacity	Available Capacity
Parshall Flume	834 gpm @ PHF	217 gpm @ PHF	+617 gpm (+2,304 EDU)
Bar Screen + Grinder	1,201 gpm @ PHF		+984 gpm (+3,676 EDU)
Grit Chamber	2,778 gpm @ PHF		+2,561 gpm (+9,564 EDU)
Oxidation Ditch (BOD)	573 lb/d @ MML	188 lb/d @ MML	+385 lb/d BOD (+1,663 EDU)
Oxidation Ditch (TKN)	63 lb/d @ MML	55 lb/d @ MML	+7 lb/d TKN (+104 EDU)¹
Secondary Clarifiers (SOR)	249,995 gpd @ ADF	78,169 gpd	171,827 gpd (+1,783 EDU)
Secondary Clarifiers (SLR)	983,213 gpd @ MMDF	128,802 gpd	854,411 gpd (+5,380 EDU)
Equalization Basin	121,500 gpd @ ADF	78,169 gpd @ ADF	+43,331 gpd (+450 EDU)
Percolation Pond	250,000 gpd @ MMDF	128,802 gpd @ MMDF	+121,198 gpd (+763 EDU)
Sludge Holding Tank	10,000 gpd WAS @ MML	3,156 gpd @ MML	+6,844 gpd (+1,759 EDU)
Sludge Drying Bed	385 lb/d WAS @ ADF	33 lb/d WAS @ ADF	+352 lb/d WAS (+8,776 EDU)

5 Plant Upgrades Cost Estimates

The following opinion of probable cost serves to establish the order of magnitude cost for the identified preferred project alternative. The cost opinion is based on the quantities and unit price estimates of treatment process upgrades developed from planning level concepts, vendor quotes, and existing site conditions. In addition, a project complexity factor is incorporated into the unit price to adjust for projected difficulties based on the construction site and work conditions. Refer to **Attachment D** for detailed cost tables.

5.1 Cost Opinion Methodology and Assumptions

For the purposes of this analysis, the cost opinion is a **Class 5** AACE Construction Cost Opinion, based on the feasibility level analysis completed. The cost opinion makes use of quantity takeoffs, vendor/supplier/manufacturer quotations, and recent data in the development of projected costs. Other general assumptions in construction cost analysis include:

- Cost Index – Engineering News Record Cost Index for Los Angeles, CA
- Escalation to Midpoint of 5% of construction subtotal per year
- Construction Contingency of 20% of construction subtotal
- Engineering Design is 35% of total construction cost for alternative 0
- Engineering Design is 30% of total construction cost for alternative 0
- Engineering Design is 15% of total construction cost for alternatives 3-5
- Construction Management is 25% of total construction cost for alternative 0
- Construction Management is 20% of total construction cost for alternative 1
- Construction Management is 10% of total construction cost

5.2 Alternative 0 – Addition of Nitrogen Removal Capacity

Alternative 0 includes the addition of dedicated nitrogen removal capacity at the WWTF. There are many different processes that can provide nitrogen removal at the WWTF, including denitrification filters, simultaneous nitrification-denitrification, and the addition of an anoxic zone for denitrification. For this analysis, we have chosen the addition of an anoxic zone to the existing oxidation ditch to provide nitrogen removal. This concept includes the addition of tankage to the end of the oxidation ditch. This additional tankage will be approximately 40% of the existing oxidation ditch volume and will be mixed but unaerated. The anoxic zone is intended to remove (denitrify) the nitrate that is formed in the aerated zone of the oxidation ditch thereby increasing nitrogen removal at the WWTF. Oxidation ditches with anoxic zones typically produce effluent with total nitrogen concentrations below 10 mg/l. This analysis assumes the addition of an anoxic zone will remove the existing nitrogen removal capacity bottleneck and provide the District with nitrogen removal capacity up to a total of 2,594 EDU (250,000 gpd). Because denitrification requires a carbon source (e.g. BOD), it is assumed that the additional nitrogen removal will also increase BOD removal up to a capacity of 2,594 EDU. Nitrogen removal capacity and removal technologies will be further evaluated in a future project.

The major cost estimate assumptions for the identified process deficiencies are listed below and estimated construction costs are shown in **Table 16**.

The major assumptions include:

- Existing unit processes and equipment that do not need an upgrade remain in place. It is assumed that they perform adequately and there is no need to replace them.
- General requirements are estimated to be 5% of total construction cost.
- Sitework accounts only for excavation.
- Sitework and concrete work includes the addition of (1) anoxic zone.
- The anoxic zone for the oxidation ditch is estimated to be expanded by 40% of the total oxidation ditch volume to accommodate BOD and TKN loading rates.
- Installation of civil piping is estimated to be 8% of total construction cost.
- Installation of electrical equipment is estimated to be 10% of total construction cost.
- Installation of instrumentation is estimated to be 3% of total construction cost.

5.2.1 Alternative 0 Capital Cost Estimate

The capital cost estimate for Alternative 0 is summarized in **Table 16**.

Table 16: Alternative 0 - Capital Cost Estimate

CAPITAL COST ITEM DESCRIPTION	ENGINEERING ESTIMATE	
	TOTAL	
	\$/UNIT	NET COST
Division 1 - General Requirements		\$ 15,000
General Requirements	\$ 15,000	\$ 15,000
Division 2 - Sitework/Earthwork		\$ 12,000
Expansion Structures	\$ 15	\$ 12,000
Division 3 - Concrete		\$ 133,000
Ox Ditch Anoxic Zone Concrete Structure	\$ 1,000	\$ 133,000
Division 11 - Equipment		\$ 88,000
Ox. Ditch Anoxic Zone Mixer (5 HP)	\$ 70,000	\$ 70,000
Division 15 - Mechanical		\$ 25,000
Civil Piping	\$ 25,000	\$ 25,000
Division 16 - Electrical		\$ 30,000
Electrical (10% of overall construction cost)	\$ 30,000	\$ 30,000
Division 17 - Instrumentation		\$ 8,000
Sensors and Alarms (3% of overall construction cost)	\$ 8,000	\$ 8,000
	Construction Subtotal	\$ 311,000
	Escalation to Midpoint (5%/yr x 1 years)	\$ 15,550
	Construction Contingency (20%)	\$ 63,000
	Total Construction Cost	\$ 389,550
	Engineering Design (35% of Construction)	\$ 136,343
	Construction Management (25% of Construction)	\$ 97,388
	Total	\$ 624,000

5.3 Alternative 1 – EDU-Based Cost Analysis

Alternative 1 evaluates the capacity of the existing WWTF infrastructure. **Table 17** lists the WWTF total hydraulic capacity, BOD load capacity, and TKN load capacity. The WWTF has a total hydraulic capacity of 250,000 gpd that can accommodate flow from 2,594 EDU. **Figure 3** shows a capacity “timeline” expressed in number of connected EDU. The capacity of each process is listed and the point at which each process needs to be expanded coincides when the number of connected EDU exceeds the process capacity in terms of EDU. Alternative 1 identifies those processes that do not provide up to 2,594 EDU capacity and provides a cost estimate for the expansion of those processes to meet that EDU capacity.

Table 17: Summary of Unit Process Total Capacities

Capacity	Scenarios	EDUs
Total Hydraulic Capacity	250,000 gpd @ ADF	2,594 EDU
BOD Load Capacity	573 lb BOD/d @ MML	2,474 EDU
TKN Load Capacity	62.6 lb TKN/d @ MML	915 EDU

The WWTF is deficient in its BOD and TKN treatment capacities. To address this deficiency, additional BOD and TKN treatment are assumed to be provided by adding an anoxic zone to the existing oxidation ditch.² The anoxic zone is a mixed, unaerated zone in which nitrate is removed. Removal of nitrate requires approximately 4 lbs of BOD per lb of nitrate-nitrogen removed. For the purposes of this high-level estimate, it is assumed an anoxic zone on the order of 40% of the oxidation ditch volume will provide BOD and TKN treatment capacity to serve 2,594 EDU.

² Each alternative includes the construction of an anoxic zone on the existing oxidation ditch as well as anoxic zones on new oxidation ditches. This measure is included to increase both BOD and TKN treatment capacities to match hydraulic capacity.

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Unit Process	Design Capacity (EDU)	Available Unit Process EDUs (EDU)
Parshall Flume	3,115	2,304
Bar Screen + Grinder	4,487	3,676
Grit Chamber	10,375	9,564
Oxidation Ditch (BOD Load)	2,474	1,663
Oxidation Ditch (TKN Load)	915	104
Secondary Clarifiers (SOR)	2,594	1,783
Secondary Clarifiers (SLR)	6,191	5,380
Equalization Basin	1,261	450
Percolation Pond	1,574	763
Sludge Holding Tank	2,570	1,759
Sludge Drying Bed	9,587	8,776

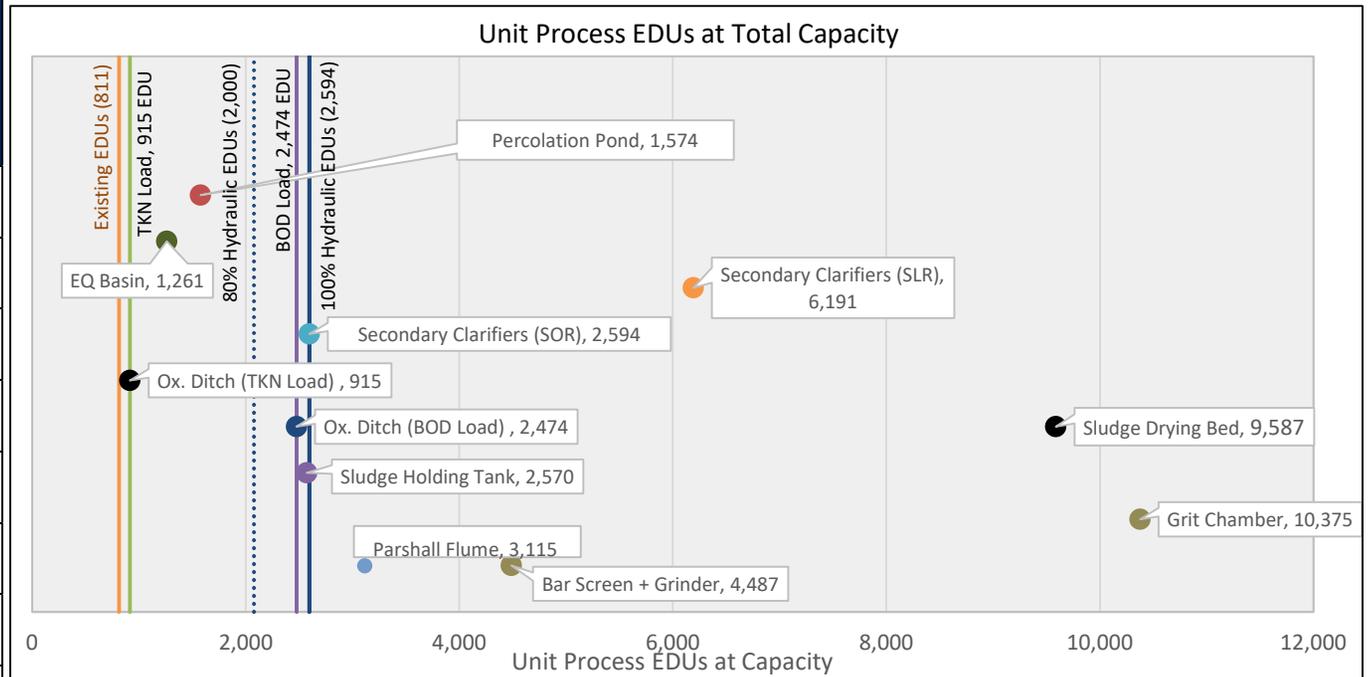


Figure 3. Unit Process EDUs at Total Capacity

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As shown in **Figure 3**, the following unit processes require expansion to meet the 2,594 EDU capacity:

- Oxidation ditch (Total BOD = 2,474 EDU; Total TKN capacity = 915 EDU)
- Equalization basin (Total capacity = 1,261 EDU)
- Percolation pond (Total (permitted) capacity = 1,574 EDU)
- Sludge holding tank (Total capacity = 2,570 EDU)

An anoxic zone will be added to the oxidation ditch to bring its total BOD and TKN removal capacities to 2,594 EDU. The equalization basin currently has 1,261 EDU capacity, so an additional identical basin will be added to bring the total equalization capacity near 2,594 EDU. The sludge holding tank is not proposed to be expanded as its current capacity is only 24 EDU shy of 2,594 EDU. The percolation pond capacity is limited by the WWTF permit rather than by performance. A permit amendment would be required to expand the percolation pond capacity. Construction of additional percolation ponds would not be required for Alternative 1.

The major cost estimate assumptions for the identified process deficiencies are listed below and estimated construction costs are shown in **Table 18**.

The major assumptions include:

- Existing unit processes and equipment that do not need an upgrade remain in place. It is assumed that they perform adequately and there is no need to replace them.
- General requirements are estimated to be 5% of total construction cost.
- Sitework accounts only for excavation.
- Sitework and concrete work includes the addition of (1) anoxic zone and one (1) EQ basin.
- The anoxic zone for the oxidation ditch is estimated to be expanded by 40% of the total oxidation ditch volume to accommodate BOD and TKN loading rates.
- Installation of civil piping is estimated to be 8% of total construction cost.
- Installation of electrical equipment is estimated to be 10% of total construction cost.
- Installation of instrumentation is estimated to be 3% of total construction cost.

5.3.1 Alternative 1 Capital Cost Estimate

The capital cost estimate for Alternative 1 is summarized in **Table 18**.

Table 18: Alternative 1 - Capital Cost Estimate

CAPITAL COST ITEM DESCRIPTION	ENGINEERING ESTIMATE	
	TOTAL	
	\$/UNIT	NET COST
Division 1 - General Requirements		\$ 30,000
General Requirements	\$ 30,000	\$ 30,000
Division 2 - Sitework		\$ 22,000
Expansion Structures	\$ 15	\$ 22,000
Division 3 - Concrete		\$ 344,000
Ox Ditch Anoxic Zone Concrete Structure	\$ 1,000	\$ 133,000
EQ Basin Concrete Structure	\$ 1,000	\$ 211,000
Division 11 - Equipment		\$ 84,000
Ox. Ditch Anoxic Zone Mixer (5 HP)	\$ 70,000	\$ 70,000
Miscellaneous Equipment (20% of equipment)	\$ 14,000	\$ 14,000
Division 15 - Mechanical		\$ 45,000
Civil Piping	\$ 45,000	\$ 45,000
Division 16 - Electrical		\$ 60,000
Electrical (10% of overall construction cost)	\$ 60,000	\$ 60,000
Division 17 - Instrumentation		\$ 15,000
Sensors and Alarms (3% of overall construction cost)	\$ 15,000	\$ 15,000
	Construction Subtotal	\$ 600,000
	Escalation to Midpoint (5%/yr x 1 years)	\$ 30,000
	Construction Contingency (20%)	\$ 120,000
	Total Construction Cost	\$ 750,000
	Engineering Design (30% of Construction)	\$ 225,000
	Construction Management (20% of Construction)	\$ 150,000
	Total	\$ 1,125,000

5.4 Alternative 2 - WWTF 250,000 GPD Expansion without Replacing Existing Equipment

Alternative 2 includes upsizing the WWTF by adding an additional 250,000 gallons per day of treatment capacity. The WWTF will have capacity to produce 500,000 gpd of secondary treated effluent. Other major assumptions include:

- All existing unit processes and equipment remain in place. It is assumed that they perform adequately and there is no need to replace them.
- General requirements are estimated to be 5% of total construction cost.
- Sitework, concrete and mechanical equipment estimates are developed for one (1) bar screen, one (1) grinder, two (2) anoxic zones, one (1) oxidation ditch, one (1) secondary clarifier, three (3) EQ basins, two (2) percolation ponds, and one (1) sludge holding tanks if applicable.
- Sitework accounts only for excavation.
- New miscellaneous pumps are estimated to be 10% of total equipment cost.
- Installation of civil piping is estimated to be 8% of total construction cost.
- Installation of new electrical equipment is estimated to be 10% of total construction cost.
- Installation of new instrumentation is estimated to be 3% of total construction cost.

5.4.1 Alternative 2 Capital Cost Estimate

The capital cost estimate for Alternative 2 is summarized in **Table 19**.

Table 19: Alternative 2 - Capital Cost Estimate

CAPITAL COST ITEM DESCRIPTION	ENGINEERING ESTIMATE	
	TOTAL	
	\$/UNIT	NET COST
Division 1 - General Requirements		\$ 180,000
General Requirements	\$ 180,000	\$ 180,000
Division 2 - Sitework		\$ 359,000
Expansion Structures	\$ 15	\$ 359,000
Division 3 - Concrete		\$ 1,365,000
Ox Ditch Concrete Structure	\$ 1,000	\$ 331,000
Ox Ditch Anoxic Zone Concrete Structure	\$ 1,000	\$ 265,000
EQ Basin Concrete Structure	\$ 1,000	\$ 632,000
Secondary Clarifier Concrete Structure	\$ 1,000	\$ 90,000
Sludge Holding Tank Concrete Structure	\$ 1,000	\$ 47,000
Division 11 - Equipment		\$ 880,000
Bar Screen	\$ 112,000	\$ 112,000
Grinder	\$ 14,000	\$ 14,000
Oxidation Ditch Mechanism	\$ 224,000	\$ 224,000
Anoxic Zone Mixer (5 HP)	\$ 90,000	\$ 180,000
Secondary Clarifier Mechanism	\$ 266,000	\$ 266,000
Miscellaneous Equipment (10% of equipment)	\$ 79,600	\$ 80,000
Division 15 - Mechanical		\$ 275,000
Civil Piping	\$ 275,000	\$ 275,000
Division 16 - Electrical		\$ 350,000
Electrical (10% of overall construction cost)	\$ 350,000	\$ 350,000
Division 17 - Instrumentation		\$ 110,000
Sensors and Alarms (3% of overall construction cost)	\$ 110,000	\$ 110,000
	Construction Subtotal	\$ 3,519,000
	Escalation to Midpoint (5%/yr x 1 years)	\$ 175,950
	Construction Contingency (20%)	\$ 704,000
	Total Construction Cost	\$ 4,398,950
	Engineering Design (15% of Construction)	\$ 659,843
	Construction Management (10% of Construction)	\$ 439,895
	Total	\$ 5,499,000

5.5 Alternative 3 - WWTF 500,000 GPD Expansion without Replacing Existing Equipment

Alternative 3 includes upsizing the WWTF by adding an additional 500,000 gallons per day of treatment capacity. The WWTF will have capacity to produce 750,000 gpd of secondary treated effluent. Major assumptions include:

- Existing unit processes and equipment remain in place. It is assumed that they perform adequately and there is no need to replace them.
- General Requirements are estimated to be 5% of total construction cost.
- Sitework accounts only for excavation.
- Sitework, concrete and mechanical equipment (if applicable) are developed for one (1) bar screen, one (1) grinder, three (3) anoxic zones, two (2) oxidation ditches, two (2) secondary clarifiers, five (5) EQ basins, four (4) percolation ponds, and two (2) sludge holding tanks.
- Installation of civil piping is estimated to be 8% of total construction cost.
- Installation of new electrical equipment is estimated to be 10% of total construction cost.
- Installation of new instrumentation is estimated to be 3% of total construction cost.

5.5.1 Alternative 3 Capital Cost Estimate

Capital cost estimates for Alternative 2 are summarized in **Table 20**.

Table 20: Alternative 3 - Capital Cost Estimate

CAPITAL COST ITEM DESCRIPTION	ENGINEERING ESTIMATE	
	TOTAL	
	\$/UNIT	NET COST
Division 1 - General Requirements		\$ 335,000
General Requirements	\$ 335,000	\$ 335,000
Division 2 - Sitework		\$ 729,000
Expansion Structures	\$ 15	\$ 729,000
Division 3 - Concrete		\$ 2,486,000
Ox Ditch Concrete Structure	\$ 1,000	\$ 614,000
Ox Ditch Anoxic Zone Concrete Structure	\$ 1,000	\$ 500,000
EQ Basin Concrete Structure	\$ 1,000	\$ 1,053,000
Secondary Clarifier Concrete Structure	\$ 1,000	\$ 180,000
Sludge Holding Tank Concrete Structure	\$ 1,000	\$ 139,000
Division 11 - Equipment		\$ 1,888,000
Bar Screen	\$ 112,000	\$ 112,000
Grinder	\$ 14,000	\$ 14,000
Oxidation Ditch Mechanism	\$ 288,000	\$ 576,000
Anoxic Zone Mixer (5 HP)	\$ 110,000	\$ 330,000
Secondary Clarifier Mechanism	\$ 342,000	\$ 684,000

CAPITAL COST ITEM DESCRIPTION	ENGINEERING ESTIMATE	
	TOTAL	
	\$/UNIT	NET COST
Miscellaneous Equipment (10% of equipment)	\$ 171,600	\$ 172,000
Division 15 - Mechanical		\$ 550,000
Civil Piping	\$ 550,000	\$ 550,000
Division 16 - Electrical		\$ 700,000
Electrical (10% of overall construction cost)	\$ 700,000	\$ 700,000
Division 17 - Instrumentation		\$ 200,000
Sensors and Alarms (3% of overall construction cost)	\$ 200,000	\$ 200,000
	Construction Subtotal	\$ 6,888,000
	Escalation to Midpoint (5%/yr x 1 years)	\$ 344,400
	Construction Contingency (20%)	\$ 1,378,000
	Total Construction Cost	\$ 8,610,400
	Engineering Design (15% of Construction)	\$ 1,291,560
	Construction Management (10% of Construction)	\$ 861,040
	Total	\$ 10,763,000

5.6 Alternative 4 - WWTF Expansion and Recycled Water Production

The fourth alternative is to upgrade the WWTF to tertiary level treatment to meet Title 22 regulations for disinfected, tertiary recycled water production with a total capacity of 500,000 gpd. Historically, the tertiary and disinfection facilities of the WWTF have never been operated or maintained and the system has not been capable of producing recycled water. The existing sand filters do not meet current Title 22 requirements, there are no flocculation facilities, and the chlorine contact basin is not anticipated to have sufficient modal contact time. The upgraded tertiary facilities would be sized and constructed to handle maximum monthly flow rates.

The anticipated improvements required for expanding the existing capacity by 250,000 gpd and producing recycled water at the WWTF include:

- Existing unit processes and equipment remain in place. It is assumed that they perform adequately and there is no need to replace them.
- General requirements are estimated to be 5% of total construction cost.
- Sitework, concrete and mechanical equipment estimates are developed for one (1) bar screen, one (1) grinder, two (2) anoxic zones, one (1) oxidation ditch, one (1) secondary clarifier, three (3) EQ basins, two (2) percolation ponds, and one (1) sludge holding tanks if applicable.
- Sitework accounts only for excavation.
- New miscellaneous pumps are estimated to be 10% of total equipment cost.
- Installation of coagulant dosing system and mixer.
- Construction of flocculation chamber.

- Installation of new above grade filter system skids (e.g. disk filters) and piping.
- Construction of an additional pass in chlorine contact chamber and piping modifications.
- Installation of new sodium hypochlorite storage tanks and dosing equipment.
- Installation of new recycled water pumps.
- Installation of new electrical and instrumentation system for tertiary and disinfection facilities.
- Installation of civil piping is estimated to be 8% of total construction cost.
- Installation of new electrical equipment is estimated to be 10% of total construction cost.
- Installation of instrumentation is estimated to be 3% of total construction cost.

5.6.1 Alternative 4 Capital Cost Estimate

The capital cost estimate for Alternative 4 is summarized in **Table 21**.

Table 21: Alternative 4 - Capital Cost Estimate

CAPITAL COST ITEM DESCRIPTION	ENGINEERING ESTIMATE	
	TOTAL	
	\$/UNIT	NET COST
Division 1 - General Requirements		\$ 400,000
General Requirements	\$ 400,000	\$ 400,000
Division 2 - Sitework		\$ 359,000
Expansion Structures	\$ 15	\$ 359,000
Division 3 - Concrete		\$ 1,465,000
Ox Ditch Concrete Structure	\$ 1,000	\$ 331,000
Ox Ditch Anoxic Zone Concrete Structure	\$ 1,000	\$ 265,000
EQ Basin Concrete Structure	\$ 1,000	\$ 632,000
Secondary Clarifier Concrete Structure	\$ 1,000	\$ 90,000
Sludge Holding Tank Concrete Structure	\$ 1,000	\$ 47,000
Extend CCT	\$ 100,000	\$ 100,000
Division 11 - Equipment		\$ 5,510,000
Bar Screen	\$ 112,000	\$ 112,000
Grinder	\$ 14,000	\$ 14,000
Oxidation Ditch Mechanism	\$ 224,000	\$ 224,000
Anoxic Zone Mixer (5 HP)	\$ 90,000	\$ 180,000
Secondary Clarifier Mechanism	\$ 266,000	\$ 266,000
RW pumps	\$ 270,000	\$ 540,000
Disk filter (x2), floc/coag, and piping	\$ 1,440,000	\$ 2,880,000
NaOCl tank, pumps, & piping	\$ 135,000	\$ 270,000
NaOCl mix vault and static mixer	\$ 105,000	\$ 105,000
Miscellaneous Equipment (20% of equipment)	\$ 918,200	\$ 919,000
Division 15 - Mechanical		\$ 600,000
Civil Piping	\$ 600,000	\$ 600,000
Division 16 - Electrical		\$ 750,000
Electrical (10% of overall construction cost)	\$ 750,000	\$ 750,000
Division 17 - Instrumentation		\$ 250,000
Sensors and Alarms (3% of overall construction cost)	\$ 250,000	\$ 250,000
	Construction Subtotal	\$ 9,334,000
	Escalation to Midpoint (5%/yr x 1 years)	\$ 466,700
	Construction Contingency (20%)	\$ 1,867,000
	Total Construction Cost	\$ 11,667,700

CAPITAL COST ITEM DESCRIPTION	ENGINEERING ESTIMATE	
	TOTAL	
	\$/UNIT	NET COST
Engineering Design (15% of Construction)	\$	1,750,155
Construction Management (10% of Construction)	\$	1,166,770
Total	\$	14,585,000

5.7 Alternative 5 - WWTF Expansion and Recycled Water Production

The fifth alternative is to upgrade the WWTF to tertiary level treatment to meet Title 22 regulations for disinfected, tertiary recycled water production with a total capacity of 750,000 gpd. Major assumptions include:

- Existing unit processes and equipment remain in place. It is assumed that they perform adequately and there is no need to replace them.
- General Requirements are estimated to be 5% of total construction cost.
- Sitework accounts only for excavation.
- Sitework, concrete and mechanical equipment (if applicable) are developed for one (1) bar screen, one (1) grinder, three (3) anoxic zones, two (2) oxidation ditches, two (2) secondary clarifiers, five (5) EQ basins, four (4) percolation ponds, and two (2) sludge holding tanks.
- New miscellaneous pumps are estimated based on 10% of total equipment cost.
- Installation of coagulant dosing system and mixer to accommodate proposed flow.
- Construction of flocculation chambers.
- Installation of new above grade filter system skids (e.g. disk filters) and piping.
- Construction of an additional pass in chlorine contact chamber and piping modifications.
- Installation of new sodium hypochlorite storage tanks and dosing equipment.
- Installation of new recycled water pumps.
- Installation of new electrical and instrumentation system for tertiary and disinfection facilities.
- Installation of civil piping is estimated to be 8% of total construction cost.
- Installation of new electrical equipment is estimated to be 10% of total construction cost.
- Installation of instrumentation is estimated to be 3% of total construction cost.

5.7.1 Alternative 5 Capital Cost Estimate

The capital cost estimate for Alternative 5 is summarized in **Table 22**.

Table 22: Alternative 5 - Capital Cost Estimate

CAPITAL COST ITEM DESCRIPTION	ENGINEERING ESTIMATE	
	TOTAL	
	\$/UNIT	NET COST
Division 1 - General Requirements		\$ 575,000
General Requirements	\$ 575,000	\$ 575,000
Division 2 - Sitework		\$ 729,000
Expansion Structures	\$ 15	\$ 729,000
Division 3 - Concrete		\$ 2,636,000
Ox Ditch Concrete Structure	\$ 1,000	\$ 614,000
Ox Ditch Anoxic Zone Concrete Structure	\$ 1,000	\$ 500,000
EQ Basin Concrete Structure	\$ 1,000	\$ 1,053,000
Sludge Holding Tank Concrete Structure	\$ 1,000	\$ 139,000
Extend CCT	\$ 150,000	\$ 150,000
Division 11 - Equipment		\$ 6,020,000
Bar Screen	\$ 144,000	\$ 144,000
Grinder	\$ 18,000	\$ 18,000
Oxidation Ditch Mechanism	\$ 288,000	\$ 576,000
Anoxic Zone Mixer (5 HP)	\$ 110,000	\$ 330,000
Secondary Clarifier Mechanism	\$ 342,000	\$ 684,000
RW pumps	\$ 150,000	\$ 450,000
NaOCl tank, pumps, & piping	\$ 75,000	\$ 225,000
Disk filter (x2), floc/coag, and piping	\$ 800,000	\$ 2,400,000
NaOCl mix vault and static mixer	\$ 75,000	\$ 225,000
Miscellaneous Equipment (20% of equipment)	\$ 1,042,800	\$ 1,043,000
Division 15 - Mechanical		\$ 1,000,000
Civil Piping	\$ 1,000,000	\$ 1,000,000
Division 16 - Electrical		\$ 1,250,000
Electrical (10% of overall construction cost)	\$ 1,250,000	\$ 1,250,000
Division 17 - Instrumentation		\$ 350,000
Sensors and Alarms (3% of overall construction cost)	\$ 350,000	\$ 350,000
	Construction Subtotal	\$ 12,560,000
	Escalation to Midpoint (5%/yr x 1 years)	\$ 628,000
	Construction Contingency (20%)	\$ 2,512,000
	Total Construction Cost	\$ 15,700,000
	Engineering Design (15% of Construction)	\$ 2,355,000

CAPITAL COST ITEM DESCRIPTION	ENGINEERING ESTIMATE	
	TOTAL	
	\$/UNIT	NET COST
Construction Management (10% of Construction)	\$	1,570,000
Total	\$	19,625,000

5.8 Cost Summary

Table 23 provides a comparison of the engineer’s opinion of probable construction costs for each alternative scenario. The construction costs do not include soft costs.

Table 23. Comparison of construction cost items between proposed alternatives

Cost Item	Alt. 0	Alt. 1	Alt. 2	Alt. 3	Alt 4	Alt. 5
Total Capital Cost	\$311,000	\$600,000	\$3,519,000	\$6,888,000	\$9,334,000	\$12,560,000
AACE Class 5 Estimate, Low (-50% to -20%)	\$155,500 to \$248,800	\$300,000 to \$480,000	\$1,759,500 to \$2,815,200	\$3,444,000 to \$5,510,400	\$4,667,000 to \$7,467,200	\$6,280,000 to \$10,048,000
AACE Class 5 Estimate, High (+30% to +100%)	\$404,300 to \$622,000	\$780,000 to \$1,200,000	\$4,574,700 to \$7,038,000	\$8,954,400 to \$13,776,000	\$12,134,200 to \$18,668,000	\$16,328,000 to \$25,120,000

6 Conclusions

The following conclusions are based on the above evaluation of process treatment capacities. Key takeaways include:

- It appears that the District can maintain reliable WWTF performance while providing wastewater services to the current 811 connected EDU.
- Assuming no changes in the flow and BOD load per EDU, there is existing capacity to add an additional 104 EDU without plant expansion. A nitrogen removal design criterion was assumed for this exercise because the District does not currently have a nitrogen discharge limit. The assumed design criterion results in nitrogen (TKN) removal capacity in the oxidation ditch being the plant bottleneck. It is recommended that the plant’s nitrogen removal capacity and future discharge limit be further evaluated.
- Percolation ponds are a permitting bottleneck. Based on the current permit, the WWTF is required to have redundancy in percolation ponds. For planning purposes and more accurate estimates, it is recommended to perform a percolation/study test to assess infiltration rates of the existing ponds to determine actual percolation capacity.
- The 3-inch Parshall flume flow meter combined with a level indicator at the maximum water depth of 18 inches is capable of measuring a maximum flow rate of 835 gpm (1.2 MGD). Currently, the flow meter is

set up to measure flow rates between 0 gpm and 143 gpm based on its mounting height and calibration. It is recommended to recalibrate the flow meter to measure higher flow rates projected under future expansion without adding/expanding the actual flume.

ATTACHMENT A

Wastewater Discharge Permit



Colorado River Basin Regional Water Quality Control Board

January 25, 2019

Geoff Poole
General Manager
Borrego Water District
P.O. Box 1870
Borrego Springs, CA 92004

Dear Mr. Poole,

SUBJECT: TENTATIVE WASTE DISCHARGE REQUIREMENTS (WDRs) R7-2019-0015 FOR BORREGO WATER DISTRICT, RAM'S HILL WASTEWATER TREATMENT FACILITY, BORREGO SPRINGS, SAN DIEGO COUNTY

Enclosed are copies of the Tentative WDRs for the subject facility and the Notice of Public Hearing. As explained in the Notice, the Colorado River Basin Regional Water Quality Control Board will consider adoption of the tentative WDRs at its next regularly scheduled public meeting, which will take place at 10:00 a.m., Thursday, March 7th, 2019, at the City of Blythe, Council Chambers, 235 N Broadway, CA 92225. The Notice provides a 30-day public comment period during which interested persons may submit comments on the tentative WDRs. The Colorado River Basin Water Board will consider any comments received when determining whether to adopt the tentative WDRs.

If you have any questions, please do not hesitate to call me at (760) 776-8960.

Sincerely,



Doug Wylie, P.E.
Senior Water Resources Control Engineer
Colorado River Basin
Regional Water Quality Control Board

AG/mc

Enclosures: 1) Tentative Waste Discharge Requirements Order R7-2019-0015
2) Notice of Public Hearing 7-19-11

File: 7A370125001, CW-210088, Borrego Water District, Ram's Hill Wastewater Treatment Facility, R7-2019-0015

NANCY WRIGHT, CHAIR | PAULA RASMUSSEN, EXECUTIVE OFFICER

73-720 Fred Waring Drive, Suite 100, Palm Desert, CA 92260 | www.waterboards.ca.gov/coloradoriver



cc: Joseph Cornejo (jclabs72@gmail.com)
Roy Martinez, Plant Operator (roy@borregowd.org)

Via Email (Public Notice only):

San Diego Co. Land Use & Environment Group
South Coast Air Quality Management District
CA Department of Fish and Wildlife
CA SWRCB – DDW
CA SWRCB – DWR
CA SWRCB – DWQ
CA SWRCB – OCC

Communications Officer
Regional Contact
Regional Manager
District Engineer
Supervisor
Supervisor
Staff Council

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION**

73-720 Fred Waring Drive, Suite 100
Palm Desert, CA 92260
Phone: (760) 346-7491

Public Notice 7-19-11
January 25, 2019

**NOTICE OF PUBLIC HEARING
FOR
TENTATIVE WASTE DISCHARGE REQUIREMENTS
ORDER R7-2019-0015**

The California Regional Water Quality Control Board, Colorado River Basin Region (Colorado River Basin Water Board) has prepared tentative Order R7-2019-0015 for Borrego Water District's Rams Hill Wastewater Treatment Facility in the unincorporated community of Borrego Springs, California, San Diego County. The Colorado River Basin Water Board intends to consider adopting the tentative Order during a public hearing that will commence at the time and place indicated:

Date: March 7, 2019
Time: 10:00 a.m.
Location: City of Blythe
Council Chambers
235 N. Broadway
Blythe, CA 92225

The Colorado River Basin Water Board will accept written comments regarding this tentative Order during the thirty-day public comment period, which begins **January 25, 2019** and ends **February 25, 2019**. Persons wishing to submit written comments on the tentative Order are requested to do so as soon as possible, but no later than **February 25, 2019**.

The Colorado River Basin Water Board has implemented an electronic records management system to reduce paper consumption and improve overall accessibility to records and documents. To submit comments electronically, please convert the signed original documents to Portable Document Format (PDF) and submit via email to Doug Wylie at doug.wylie@waterboards.ca.gov. Documents that are 50 MB or larger should be transferred to a disk or USB and mailed to:

California Regional Water Quality Control Board
Colorado River Basin Region
73-720 Fred Waring Drive, Suite 100
Palm Desert, CA 92260

Mailed written comments may be sent to the address above. Written comments may also be faxed to the Colorado River Basin Water Board office at (760) 341-6820.

Interested persons are invited to attend and express their views orally on this matter at the public hearing. The Colorado River Basin Water Board requests that those persons wishing to speak at the hearing provide a copy of their oral comments in writing before or during the hearing to ensure accuracy of the record.

Copies of the tentative Order are available on the Colorado River Basin Water Board's website at:

http://www.waterboards.ca.gov/coloradriver/board_decisions/

Interested persons requiring a hard copy of the tentative Order should contact Mary Castañeda at (760) 776-8945.

Please bring the foregoing to the attention of any persons known to you who would be interested in this matter.

Any person who is disabled and requires special accommodations to participate in this public hearing, please contact Hilda Vasquez at (760) 776-8950 no later than ten (10) days before the scheduled public hearing.

If you have questions concerning this matter, please contact Doug Wylie at (760) 776-8960.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

ORDER R7-2019-0015

WASTE DISCHARGE REQUIREMENTS
FOR
BORREGO WATER DISTRICT, OWNER/OPERATOR
RAMS HILL WASTEWATER TREATMENT FACILITY
Borrego Springs – San Diego County

The California Regional Water Quality Control Board, Colorado River Basin Region (Colorado River Basin Water Board) finds that:

1. Borrego Water District (District or Discharger) owns and operates a wastewater collection, treatment, and disposal system known as the Rams Hill Wastewater Treatment Facility (WWTF or Facility), which provides sewerage service to portions of the unincorporated community of Borrego Springs. The Facility has a design treatment capacity of 0.250 million gallons-per-day (mgd) and currently discharges approximately 0.073 mgd.
2. The Facility is located about four miles southeast of Borrego Springs at Assessor's Parcel Nos. 200-120-42 and 200-120-41, in the East ½ of Section 23, Township 11 South, Range 6 East, San Bernardino Baseline and Meridian. The Facility's location is shown in **Attachment A - Vicinity Map**, which is incorporated herein and made part of this Order by reference. The Facility is assigned California Integrated Water Quality System (CIWQS) No. CW-210088, Waste Discharger Identification (WDID) No. 7A370125001, and GeoTracker Global Identification No. WDR100027526.
3. The Facility is currently regulated under Waste Discharge Requirements (WDRs) prescribed under Order R7-2007-0053, adopted on September 19, 2007.
4. On September 10, 2017, the Discharger submitted a Report of Waste Discharge (ROWD) to the Colorado River Basin Water Board for the Facility.
5. This Order updates the WDRs to reflect changes in the Facility's operation and to implement the most current laws and regulations applicable to the discharge. For example, this Order reflects that the collection system now includes portions of Borrego Springs Park Community Services District's former Wastewater Reclamation Facility (regulated by Order 96-009, rescinded June 23, 2011). Additionally, the Order eliminates the prior seasonal monitoring and reporting schedule and implements a constant schedule throughout the year.
6. Accordingly, this Order supersedes WDRs Order R7-2007-0053 upon the effective date of this Order, except for enforcement purposes.

Wastewater Treatment Facility and Discharge

7. The WWTF services approximately 20 percent of the community of Borrego Springs—specifically, the Rams Hill residential community and the Town Center area, which includes hotels, a motel, and small business along Palm Canyon Drive. The remaining 80 percent of Borrego Springs is serviced by individual septic tank-subsurface disposal systems.
8. The WWTF now includes the wastewater collection system from Borrego Springs Park

Community Services District's (PCSD) former Wastewater Reclamation Facility. PCSD's facility, which was previously regulated by Order 96-009, closed in April 2011. The Colorado River Basin Water Board rescinded Order 96-009 on June 23, 2011. The wastewater collection system that once delivered domestic wastewater to the PCSD facility has been extended to the WWTF's collection system. PCSD previously treated approximately 0.013 mgd of domestic wastewater, all of which is now treated at the WWTF.

9. The WWTF includes a parshall flume, flow meter, bar screen, communitor, grit chamber, an oxidation ditch, two secondary clarifiers, a flow equalization basin, two evaporation/percolation ponds, a sludge holding tank, two sludge drying beds, and one emergency basin.
10. Wastewater influent enters the WWTF and flows through the flow meter, bar screen and a communitor that grinds solids prior to treatment, then flows to the grit chamber, where sand and grit are removed from the waste stream. Wastewater then flows to the oxidation ditch, which provides primary and secondary biological treatment. From the oxidation ditch, wastewater then goes to the secondary clarifiers, where heavier solids settle to the bottom and are collected by a skimming arm and floatable solids are skimmed from the surface. Sludge is collected at the secondary clarifiers. Wastewater then flows to the equalization basin for further oxidation and storage. The treated effluent is discharged into one of three evaporation/percolation ponds for disposal. Sludge from the Facility is discharged to on-site drying beds for stabilization. The sludge is removed every five to ten years for off-site disposal at a waste management facility approved by the Colorado River Basin Water Board.
11. The wastewater flow treatment process is shown in **Attachment B – Schematic Flow Diagram**, incorporated herein and made part of this Order by reference. The current location of the groundwater monitoring well for the percolation ponds is shown in **Attachment C – Site Map with Location of Groundwater Monitoring Well**, which is also incorporated herein by reference and made part of this Order.
12. The Discharger's Self-Monitoring Reports (SMRs) from January 2013 through November 2018 characterize the WWTF influent as follows:

<u>Constituent</u>	<u>Units</u>	<u>Average</u>	<u>Maximum</u>	<u>Minimum</u>
Flow	mgd	0.074	0.136	0.041
20° C BOD ₅ ¹	mg/L ²	90.2	660	0.0
TSS ³	mg/L	85.6	308	0.0

13. The Discharger's SMRs from January 2013 through November 2018 characterize the WWTF effluent as follows:

<u>Constituent</u>	<u>Units</u>	<u>Average</u>	<u>Maximum</u>	<u>Minimum</u>
20° C BOD ₅	mg/L	4.35	49.5	0.0

¹ 5-day biochemical oxygen demand at 20 degrees Celsius

² milligrams per Liter

³ Total Suspended Solids

<u>Constituent</u>	<u>Units</u>	<u>Average</u>	<u>Maximum</u>	<u>Minimum</u>
TSS	mg/L	7	58	0.0
Settleable Solids	ml/L ⁴	0.02	0.3	0.0
pH	s.u. ⁵	7.4	8.2	6.58
TDS ⁶	mg/L	593	735	480
Dissolved Oxygen	mg/L	7.75	10.25	5
Total Nitrogen	mg/L	29.5	48	0.0

14. Monitoring and Reporting Program (MRP) R7-2007-0053 included a seasonal monitoring and reporting schedule since historically, domestic wastewater influent flows were significantly greater during the winter months by comparison to the summer months. In 2007, the Facility received about 0.060 mgd during the high season and dropped to about 0.020 mgd in the summer. Current flows into the Facility average approximately 0.089 mgd in the winter months and 0.061 mgd during the summer. Thus, the influent flows to the Facility have increased overall and the seasonable variability is no longer as great as in the past. This Order eliminates the seasonal monitoring and reporting schedule and implements a constant schedule throughout the year.

Hydrogeologic Conditions

15. Average annual precipitation for the area is 6.8 inches, and average annual evaporation is 50 inches. Temperatures in the Borrego Springs area can reach 120° F in summer.
16. The WWTF is about 520 feet above mean sea level. Surface water runs off as sheet flow, draining to the east.
17. Soils at the WWTF from the ground surface to approximately 35 feet below ground surface (bgs) consist of fine to coarse sands, and silty clays.
18. The Discharger owns and operates a network of eleven groundwater wells that provide domestic water for the community. Groundwater quality in Borrego Springs varies from good to excellent. Depth to first encountered groundwater is approximately 60 feet bgs.
19. The Discharger reports that domestic water for the sewered portion of the community is supplied by four wells. The wells are reportedly upgradient of the WWTF and show the following constituent concentrations in milligrams per Liter for 2016:

Constituent	ID1-Well 12	ID1-Well 16	ID4-Well 3	ID4-Well 11
Total Dissolved Solids	300	300	Out of Service	320
Chloride	42	58	Out of Service	44
Nitrate-Nitrogen	0.38	0.95	Out of Service	0.66
Sulfate	90	56	Out of Service	85
Fluoride	0.4	0.5	Out of Service	0.3

⁴ milliliters per Liter

⁵ Standard pH Units

⁶ Total Dissolved Solids

Basin Plan, Beneficial Uses, and Regulatory Considerations

20. The Water Quality Control Plan for the Colorado River Basin (Basin Plan), which was adopted on November 17, 1993 and amended on March 7, 2017, designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. Pursuant to Water Code section 13263, subdivision (a), waste discharge requirements must implement the Basin Plan and take into consideration the beneficial uses to be protected, the water quality objectives reasonably required for that purpose, other waste discharges, the need to prevent nuisance, and the provisions of Water Code section 13241.
21. The discharge is located within the Anza-Borrego Hydrological Unit. The beneficial uses of groundwater in the Anza-Borrego Hydrological Unit are:
 - a. Municipal supply (MUN),
 - b. Industrial supply (IND), and
 - c. Agricultural supply (AGR).
22. This Order establishes WDRs pursuant to division 7, chapter 4, article 4 of the Water Code for discharges that are not subject to regulation under Clean Water Act section 402 (33 U.S.C. § 1342).
23. These WDRs implement numeric and narrative water quality objectives for groundwater and surface waters established by the Basin Plan. The numeric objectives for groundwater designated for municipal and domestic supply are the maximum contaminant levels (MCLs) specified in California Code of Regulations, title 22, section 64421 et seq. and bacteriological limits set in section 64426.1 of title 22 of the California Code of Regulations. Groundwater for use as domestic or municipal water supply (MUN) must not contain taste or odor-producing substances in concentrations that adversely affect beneficial uses as a result of human activity.
24. It is the policy of the State of California that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes. This Order promotes that policy by requiring discharges to meet the MCLs designed to protect human health and ensure that water is safe for domestic use.
25. The discharge as authorized by this Order, and treatment and storage facilities associated with discharges of treated municipal wastewater, except for discharges of residual sludge and solid waste, are exempt from the requirements of the Consolidated Regulations for Treatment, Storage, Processing, or Disposal of Solid Waste, as set forth in California Code of Regulations, title 27, division 2, subdivision 1, commencing with section 20005. This exemption is based on title 27, section 20090, subdivision (a), which states in relevant part that discharges of domestic sewage or treated effluent, and treatment or storage facilities associated with municipal wastewater treatment plants, are exempt provided that such discharges are regulated by WDRs consistent with applicable water quality objectives, and that residual sludges or solid waste from wastewater treatment facilities are discharged only in accordance with the applicable title 27 provisions. This Order regulates the discharge of domestic wastewater and associated treatment and storage facilities in a manner consistent with applicable surface water and groundwater quality objectives, and residual sludges or solid waste from the Facility will be managed pursuant to title 27.

26. Section 13267 of the Water Code authorizes the Colorado River Basin Water Board to require technical and monitoring reports. The monitoring and reporting requirements in Monitoring and Reporting Program (MRP) R7-2019-0015 are necessary to determine compliance with this Order. The State Water Board's electronic database, GeoTracker Information Systems, facilitates the submittal and review of Facility documents. The burden, including costs, of this MRP bears a reasonable relationship to the need for that information and the benefits to be obtained from that information.
27. Pursuant to Water Code section 13263, subdivision (g), the discharge of waste is a privilege, not a right, and adoption of this Order does not create a vested right to continue the discharge.

State Antidegradation Policy

28. State Water Board Resolution 68-16, entitled *Statement of Policy with Respect to Maintaining High Quality Waters in California* (Resolution 68-16), generally prohibits the Colorado River Basin Water Board from authorizing discharges that will result in the degradation of high quality waters, unless it is demonstrated that any change in water quality will (a) be consistent with maximum benefit to the people of the state, (b) not unreasonably affect beneficial uses, and (c) not result in water quality less than that prescribed in state and regional policies (e.g., the violation of one or more water quality objectives). The discharger must also employ best practicable treatment or control (BPTC) to minimize the degradation of high quality waters.
29. Some degradation of groundwater from the discharge to the evaporation/percolation ponds is consistent with Resolution 68-16, provided that the degradation:
- Is confined to a reasonable area;
 - Is minimized by means of full implementation, regular maintenance, and optimal operation of BPTC measures by the Discharger;
 - Is limited to waste constituents typically encountered in domestic wastewater;
 - Does not unreasonably affect any beneficial uses of groundwater prescribed in the Basin Plan, and will not result in the violation of any water quality objective; and
 - Is consistent with the maximum benefit to the people of the state.
30. Constituents in the WWTP effluent that have the potential to degrade groundwater include: nitrogen, coliforms (pathogen-indicator organisms), and TDS. The WWTF provides substantial removal of soluble organic matter, solids, and some nitrogen treatment. Each of these constituents is discussed below:
- Nitrogen.** The Primary Maximum Contaminant Level (MCL) found in California Code of Regulations, title 22, section 64431 for nitrate plus nitrite as nitrogen is 10 mg/L. To account for the fate of transport for the various components of total nitrogen, as a conservative value, it is assumed that all nitrogen present converts to nitrate/nitrite. The Discharger's SMRs from January 2013 through November 2018 show a range of 0 to 48 mg/L with an average 29.5 mg/L for total nitrogen in the effluent. The effluent total nitrogen data indicates that the discharge of treated wastewater may be impacting groundwater at a rate or in concentrations causing groundwater to exceed the Primary MCL, which is the applicable water quality objective. However, given the relatively low volume of the discharge, the degradation of groundwater is believed to be limited to the area near the evaporation percolation ponds. This Order requires that the Discharger

conduct a nitrogen removal analysis and provide its findings in a technical report that provides a workplan and time schedule for the installation and implementation of nitrogen removal alternatives. The study may be used in the future establishment of an appropriate nitrogen effluent limitation.

- b. **Coliforms.** Secondary treatment reduces fecal coliform densities by 90 to 99%; the remaining organisms in effluent are still 10^5 to 10^6 most probable number (MPN)/100 ml. (U.S. Environmental Protection Agency, *Design Manual: Municipal Wastewater Disinfection*, EPA/625/1-86/021, October 1986.) Given the depth to groundwater, which is approximately 60 feet, it is not likely that pathogen-indicator bacteria will reach groundwater in excess of that prescribed in California Code of Regulations, title 22, 64426.1. However, given the location of the discharge, and the distance to the nearest domestic water supply well, the degradation of groundwater it is believed to be limited to the area near the evaporation percolation ponds and will not impact any domestic supply basin. To verify no degradation due to pathogen-indicator organisms is occurring, this Order adds quarterly total coliform and *E. coli* monitoring in the groundwater monitoring wells.
 - c. **TDS.** The typical incremental addition of dissolved salts from domestic water usage is 150 to 380 mg/L. Domestic water supply to the community has an average of about 315 mg/L. From January 2013 through November 2018, treated wastewater discharged by the Discharger had an average TDS concentration of approximately 593 mg/L. The average TDS increase over the domestic water supply for this Facility for the same time period was about 270 mg/L. An interim regulatory limit of 700 mg/L has been set by the Colorado River Basin Water Board, which reasonably protects present and anticipated beneficial uses of groundwater in the area; it is not likely that groundwater will exhibit significant degradation by TDS. This Order requires that the Discharger conduct a TDS study to assess the water quality conditions for the future establishment of an effluent limitation for TDS that takes into account site-specific conditions.
31. The discharge of wastewater from the WWTF, as permitted herein, reflects BPTC. The WWTF incorporates:
- a. Controls to monitor the concentrations of waste constituents;
 - b. Structural controls to dispose of waste constituents in a designated area;
 - c. Sludge handling facilities;
 - d. An operation and maintenance manual;
 - e. Staffing to ensure proper operation and maintenance; and
 - f. A standby emergency power generator of sufficient size to operate the treatment plant and ancillary equipment during periods of loss of commercial power.
32. Degradation of groundwater by some of the typical waste constituents associated with discharges from a facility treating domestic wastewater, after effective source control, treatment, and control measures are implemented, is consistent with the maximum benefit to the people of the state. The technology, energy, water recycling, and waste management advantages of municipal utility service far exceed any benefits derived from reliance on numerous, concentrated individual wastewater systems, and the impact on water quality will be substantially less. The economic prosperity of surrounding communities and associated

industries is of maximum benefit to the people of the state, and provides sufficient justification for allowing the limited groundwater degradation that may occur pursuant to this Order.

Stormwater

33. Federal regulations for stormwater discharges were promulgated by the U.S. Environmental Protection Agency on November 16, 1990 (40 C.F.R. parts 122, 123, and 124) to implement the Clean Water Act's stormwater program set forth in Clean Water Act section 402, subdivision (p) (33 U.S.C. § 1342(p)). In relevant part, the regulations require specific categories of facilities that discharge stormwater associated with industrial activity to "waters of the United States" to obtain National Pollutant Discharge Elimination System (NPDES) permits and to require control of such pollutant discharges using Best Available Technology Economically Achievable (BAT) and Best Conventional Pollutant Control Technology (BCT) to prevent and reduce pollutants and any more stringent controls necessary to meet water quality standards.
34. The State Water Board adopted Order 2014-0057-DWQ (NPDES No. CAS000001), *General Permit for Storm Water Discharges Associated with Industrial Activities* (Industrial General Permit) on July 1, 2015. Facilities (1) used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage—including land dedicated to the disposal of sewage sludge that are within the confines of such a facility—with a design flow of one million gallons per day or more, or (2) that are required to have an approved pretreatment program under 40 Code of Federal Regulations part 403, are required to enroll under the Industrial General Permit, unless there is no discharge of industrial stormwater to waters of the United States.
35. The Facility has a design treatment capacity of 0.250 mgd and is not required to have an approved pretreatment program under 40 Code of Federal Regulations part 403. Therefore, the Facility is not required to enroll under the Industrial General Permit.

CEQA and Public Participation

36. Pursuant to California Code of Regulations, title 14, chapter 3, section 15301, the issuance of these WDRs, which govern the operation of an existing facility involving negligible or no expansion of use beyond that previously existing, is exempt from the provisions of the California Environmental Quality Act (CEQA), Public Resources Code section 21000 et seq.
37. The Colorado River Basin Water Board has notified the Discharger and all known interested agencies and persons of its intent to update WDRs for this discharge, and has provided them with an opportunity for a public meeting and to submit comments.
38. The Colorado River Basin Water Board, in a public meeting, heard and considered all comments pertaining to this discharge.

IT IS HEREBY ORDERED, that Order R7-2007-0053 is rescinded upon the effective date of this Order, except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code, and regulations adopted thereunder, the Discharger shall comply with the following:

A. Discharge Prohibitions

1. Discharge of waste classified as "hazardous," as defined in California Code of Regulations, title 27, section 20164, or "designated," as defined in Water Code section 13173 and California Code of Regulations, title 27, section 20164, is prohibited.
2. Discharge of treated wastewater at a location other than the designated disposal areas is prohibited.
3. The discharge of any wastewater from the Facility to any surface waters or surface drainage courses is prohibited.
4. The Discharger shall not accept waste in excess of the design treatment capacity of the Facility's disposal system.
5. Surfacing or ponding of wastewater outside of the designated disposal locations is prohibited.
6. Bypass or overflow of untreated or partially-treated waste is prohibited, except as permitted in Standard Condition G.13.
7. The discharge of treated wastewater to land not owned or authorized for such use by the Discharger is prohibited.
8. The storage, treatment, or disposal of wastes from the Facility shall not cause contamination, pollution, or nuisance as defined in Water Code section 13050, subdivisions (k), (l), and (m).

B. Effluent Limitations

1. Effluent discharged into the evaporation/percolation ponds for disposal shall not exceed the following effluent limits:

<u>Constituent</u>	<u>Units</u>	<u>Monthly Average</u>	<u>Weekly Average</u>
20° C BOD ₅ ⁷	mg/L ⁸	30	45
Total Suspended Solids (TSS)	mg/L	30	45
Settleable Solids	ml/L ⁹	0.3	0.5

2. The 30-day average daily dry weather discharge from the WWTF into the evaporation/percolation ponds shall not exceed 0.250 mgd.
3. As an interim effluent limit, the TDS concentration of the effluent shall not exceed 700 mg/L.
4. Effluent from the WWTF into the evaporation/percolation ponds shall not have a pH below 6.0 or above 9.0.

⁷ 5-day biochemical oxygen demand at 20 °C

⁸ milligrams per Liter

⁹ milliliters per Liter

C. Groundwater Limitations

Discharge from the Facility shall not: cause groundwater to exceed water quality objectives; acquire taste, odor, toxicity, or color that create nuisance conditions; impair beneficial uses; or contain constituents in excess of California Maximum Contaminant Levels (MCLs), as set forth in title 22 of the California Code of Regulations (section 64426.1 for bacteriological constituents; section 64431 for inorganic chemicals (including nitrate); and section 64444 for organic chemicals; and section 64678 for lead and copper action levels).

D. Discharge Specifications

1. The evaporation/percolation ponds shall be maintained so they will continuously operate in aerobic conditions. The dissolved oxygen content in the upper zone (one foot) of the evaporation/percolation ponds shall not be less than 1.0 mg/L.
2. A minimum depth of freeboard of two (2) feet shall be maintained at all times in each evaporation/percolation pond.
3. All treatment, storage, and disposal areas shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.
4. Evaporation/percolation ponds shall have sufficient capacity to accommodate allowable wastewater flow, design seasonal precipitation, ancillary inflow, and infiltration. Design seasonal precipitation shall be based on total annual precipitation using a return period of 100 years, distributed monthly in accordance with historical rainfall patterns.
5. The evaporation/percolation ponds shall be managed to prevent breeding of mosquitoes, in particular:
 - a. An erosion control program should ensure that small coves and irregularities are not created around the perimeter of the water surface;
 - b. Weeds shall be minimized through control of water depth, harvesting, or herbicides;
 - c. Dead algae, vegetation, and debris shall not accumulate on the water surface.
6. Public contact with non-disinfected wastewater shall be precluded through such means as fences, signs, and other acceptable alternatives.
7. Objectionable odors originating at the Facility shall not be perceivable beyond the limits of the wastewater treatment and disposal area.
8. The evaporation/percolation ponds shall be maintained and operated so as to maximize infiltration and minimize the increase of salinity in the groundwater.
9. There shall be no surface flow of wastewater away from the designated disposal areas.
10. The Discharger shall not accept wastewater in excess of the treatment capacity of the Facility.

E. Sludge and Solids Limitations

1. Disposal of oil and grease, biosolids, screenings, and other solids collected from liquid wastes shall be pursuant to title 27 of the California Code of Regulations.

2. Sludge use and disposal shall comply with federal and state laws and regulations, including permitting requirements, and technical standards in 40 Code of Federal Regulations part 503.
3. Any proposed change in use or disposal of biosolids requires the approval of the Colorado River Basin Water Board's Executive Officer, and U.S. Environmental Protection Agency Regional Administrator, who must be notified at least **90 days** in advance of the change.
4. The Discharger shall maintain a permanent log of all solids hauled away from the treatment facility for use/disposal elsewhere and shall provide a summary of the volume, type (screenings, grit, raw sludge, digested sludge), use (agricultural, composting, etc.), and the destination in accordance with the MRP of this Order. Sludge that is stockpiled at the treatment facility shall be sampled and analyzed for those constituents listed in the sludge monitoring section of the MRP of this Order and as required by 40 Code of Federal Regulations part 503. The results of the analyses shall be submitted to the Colorado River Basin Water Board as part of the MRP.

F. Special Provisions

1. Groundwater Monitoring Network Technical Report and Work Plan

- a. Within **six (6) months** of the adoption of this Order, the Discharger shall submit to the Colorado River Basin Water Board's Executive Officer for review and approval a technical report on the adequacy of the existing groundwater monitoring network. The technical report shall:
 - i. Describe the current condition of the groundwater monitoring network;
 - ii. Evaluate whether this network adequately monitors the effects of the discharge from the disposal ponds on groundwater; and
 - iii. Analyze the groundwater data collected from the existing groundwater monitoring wells. The analysis shall include:
 1. Maps (e.g., equipotential maps) showing the direction of flow and identification of upgradient and downgradient monitoring wells.
 2. An appropriate statistical analysis for constituents of concern (COCs) for the upgradient and downgradient wells, based on the groundwater data collected to date. COCs in this case are TDS and its major ions: sulfate, chloride, nitrogen (total nitrogen, nitrite, and nitrate), and fluoride.
- b. If the technical report indicates that repair or addition of monitoring wells is necessary, the Discharger shall submit a work plan to the Colorado River Basin Water Board's Executive Officer for review and approval **within four (4) months** of technical report approval. The work plan shall include:
 - i. A description proposed changes to the groundwater monitoring network (e.g., monitoring locations, monitoring frequency, sampling protocol, or quality assurance/quality control); and
 - ii. A time schedule for the implementation of these changes, which shall not be longer than **18 months**.
- c. **Within 30 days** of approval of the work plan by the Executive Officer, the Discharger shall begin implementation of the work plan in accordance with the time schedule.

2. Nitrogen Control Strategy Technical Report: Fate and Transport Investigation, and Effluent Limit Feasibility Study

- a. Within **six (6) months** of determining sufficient adequacy of the groundwater network, the Discharger shall submit to the Colorado River Basin Water Board's Executive Officer for review and approval a technical report that includes a work plan and time schedule to: (1) determine if wastewater discharged to the evaporation/percolation ponds is causing nitrogen impairment to groundwater; (2) determine the feasibility of achieving a 10 mg/L total nitrogen effluent limit; and (3) ensure that any proposed effluent limit for nitrogen does not cause exceedance of the nitrogen receiving water limitation.
- b. The fate and transport investigation section of the work plan shall include, but not be limited to, the following:
 - i. An evaluation of nitrogen removal technology provided by the Discharger.
 - ii. Characterization for total nitrogen and nitrates of the wastewater discharged to the evaporation/percolation ponds and in the receiving groundwater.
 - iii. Evaluation of the impact of the wastewater discharged on the groundwater in the vicinity of the percolation ponds with respect to nitrogen concentrations.
- c. The feasibility study section of the work plan shall include, but need not be limited to, discussion of the practicability of achieving a 10 mg/L total nitrogen effluent limit, including projected costs and sewer rate increases. The Discharger shall evaluate alternative methods of treatment that are available and may be implemented to achieve a 10 mg/L total nitrogen effluent limit. The alternative analysis should include the costs of the alternatives, expressed in dollars per ton, of nitrogen removed from the discharge.
- d. **Within 30 days** of approval by the Executive Officer, the Discharger shall begin implementation of the work plan in accordance with the time schedule. The time schedule for implementation shall not be longer than **24 months**. The Discharger shall submit progress reports in the quarterly SMR to the Colorado River Basin Water Board.
- e. **Within 2 months** of completion of the nitrogen control strategy: fate and transport investigation, and effluent limitation feasibility study, the Discharger shall submit a final technical report that includes the Discharger's findings, recommendations and conclusions. The final technical report may provide recommendations on an appropriate nitrogen effluent limitation. The report shall include a tentative work plan and time schedule for facility plant improvements required to accomplish nitrogen removal and comply with groundwater water quality objectives and receiving water limitations.

3. TDS Source Control Program Technical Report

- a. Within **nine (9) months** of adoption of this Order, the Discharger shall submit to the Colorado River Basin Water Board's Executive Officer for review and approval a technical report that includes a work plan and time schedule to develop and implement a TDS Source Control Program. The objective of the Source Control Program is to evaluate source control and methods to reduce TDS concentrations in

- the discharge to the evaporation/percolation ponds. A public outreach program component may be included as part of the work plan. The technical report must identify the major sources of salinity into the WWTP collection system, including but not limited to, contributions from domestic sources, commercial and industrial sources, and water softener regeneration brines.
- b. Evaluation by the Discharger shall include, but is not limited to, information on the following factors relating to the discharge:
 - i. Description of the municipal entity and facilities, including local ordinances, and rules and regulations that address the topic of controlling salinity in wastewater.
 - ii. Identification and description of entities responsible for controlling each source, if available.
 - iii. Overall TDS mass balance for the influent into the WWTP.
 - iv. Description of wastewater treatment strategies available and employed at the Facility to remove identified pollutants.
 - v. Characterization of the concentrations of TDS in the wastewater discharged to the evaporation/percolation ponds and in the receiving groundwater.
 - c. **Within 30 days** of approval by the Executive Officer, the Discharger shall begin implementation of the work plan in accordance with the time schedule. The time schedule for implementation shall not be longer than **three (3) years**.
 - d. The Discharger shall monitor and analyze the effectiveness of the source control program by means of trend monitoring and report the analytical results with the quarterly SMRs to the Colorado River Basin Water Board.
 - e. **Within 2 months** of completion of implementation, the Discharger shall submit a final technical report that summarizes the Discharger's findings, recommendations, and conclusions addressing the effectiveness of the source control program. The final report shall evaluate the incremental increase of TDS above the source water (community water supply) and the impact the discharge has on the beneficial uses of the receiving groundwater. The final technical report may also provide recommendations on the final TDS effluent limitation.
5. **Requests for Extension.** If the Discharger is unable to comply with any of the above Special Provisions in compliance with the applicable schedule, the Discharger may request an extension with written approval of the Colorado River Basin Water Board Executive Officer. The extension request must be in writing and submitted as soon as a delay is recognized and prior to the compliance date. The extension request should include justification for the delay.

G. Standard Provisions

1. **Noncompliance.** The Discharger shall comply with all of the terms, requirements, and conditions of this Order and Monitoring and Reporting Program R7-2019-0015. Noncompliance is a violation of the Porter-Cologne Water Quality Control Act (Water Code, § 13000 et seq.) and grounds for: (1) an enforcement action; (2) termination, revocation and reissuance, or modification of these waste discharge requirements; or (3) denial of an Order renewal application.
2. **Enforcement.** The Colorado River Basin Water Board reserves the right to take any

enforcement action authorized by law. Accordingly, failure to timely comply with any provisions of this Order may subject the Discharger to enforcement action. Such actions include, but are not limited to, the assessment of administrative civil liability pursuant to Water Code sections 13323, 13268, and 13350, a Time Schedule Order (TSO) issued pursuant to Water Code section 13308, or referral to the California Attorney General for recovery of judicial civil liability.

3. **Proper Operation and Maintenance.** The Discharger shall at all times properly operate and maintain all systems and components of collection, treatment, and control, installed or used by the Discharger to achieve compliance with this Order. Proper operation and maintenance includes, but is not limited to, effective performance, adequate process controls, and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities/systems when necessary to achieve compliance with this Order. All systems in service or reserved shall be inspected and maintained on a regular basis. Records of inspections and maintenance shall be retained, and made available to the Colorado River Basin Water Board on request.
4. **Reporting of Noncompliance.** The Discharger shall report any noncompliance that may endanger human health or the environment. Information shall be provided orally to the Colorado River Basin Water Board office and the Office of Emergency Services within twenty-four (24) hours of when the Discharger becomes aware of the incident. If noncompliance occurs outside of business hours, the Discharger shall leave a message on the Colorado River Basin Water Board's office voicemail. A written report shall also be provided within five (5) business days of the time the Discharger becomes aware of the incident. The written report shall contain a description of the noncompliance and its cause, the period of noncompliance, the anticipated time to achieve full compliance, and the steps taken or planned, to reduce, eliminate, and prevent recurrence of the noncompliance. All other forms of noncompliance shall be reported with the Discharger's next scheduled SMRs, or earlier if requested by the Executive Officer or if required by an applicable standard for sludge use and disposal.
5. **Duty to Mitigate.** The Discharger shall take all reasonable steps to minimize or prevent any discharge in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment.
6. **Material Changes.** Prior to any modifications which would result in any material change in the quality or quantity of wastewater treated or discharged, or any material change in the location of discharge, the Discharger shall report all pertinent information in writing to the Colorado River Basin Water Board, and if required by the Colorado River Basin Water Board, obtain revised requirements before any modifications are implemented.
7. **Design Capacity Report.** The Discharger shall provide a report to the Colorado River Basin Water Board when it determines that the plant's average dry-weather flow rate for any month exceeds 80 percent of the design capacity. The report should indicate what steps, if any, the Discharger intends to take to provide for the expected wastewater treatment capacity necessary when the plant reaches design capacity.
8. **Operational Personnel.** The Facility shall be supervised and operated by persons possessing certification of appropriate grade pursuant to section 3680, chapter 26, division 3, title 23 of the California Code of Regulations.

9. **Familiarity with Order.** The Discharger shall ensure that all site-operating personnel are familiar with the content of this Order, and shall maintain a copy of this Order at the site.
10. **Inspection and Entry.** The Discharger shall allow the Colorado River Basin Water Board, or an authorized representative, upon presentation of credentials and other documents as may be required by law, to:
 - a. Enter the premises regulated by this Order, or the place where records are kept under the conditions of this Order;
 - b. Have access to and copy, at reasonable times, records kept under the conditions of this Order;
 - c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and
 - d. Sample or monitor at reasonable times, for the purpose of assuring compliance with this Order or as otherwise authorized by the Water Code, any substances or parameters at this location.
11. **Records Retention.** The Discharger shall retain copies of all reports required by this Order and the associated MRP. Records shall be maintained for a minimum of five years from the date of the sample, measurement, report, or application. Records may be maintained electronically.
12. **Change in Ownership.** This Order is not transferable to any person without written approval by the Colorado River Basin Water Board's Executive Officer. Prior to any change in ownership of this operation, the Discharger shall notify the Colorado River Basin Water Board's Executive Officer in writing at least 30 days in advance. The notice must include a written transfer agreement between the existing owner and the new owner. At a minimum, the transfer agreement must contain a specific date for transfer of responsibility for compliance with this Order and an acknowledgment that the new owner or operator is liable for compliance with this Order from the date of transfer. The Colorado River Basin Water Board may require modification or revocation and reissuance of this Order to change the name of the Discharger and incorporate other requirements as may be necessary under the Water Code.
13. **Bypass.** Bypass (i.e., the intentional diversion of waste streams from any portion of the treatment facilities, except diversions designed to meet variable effluent limits) is prohibited. The Colorado River Basin Water Board may take enforcement action against the Discharger for bypass unless:
 - a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage. Severe property damage means substantial physical damage to property, damage to the treatment facilities that causes them to be inoperable, or substantial and permanent loss of natural resources reasonably expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production; and
 - b. There were no feasible alternatives to bypass, such as the use of auxiliary treatment facilities or retention of untreated waste. This condition is not satisfied if adequate back-up equipment was not installed to prevent bypass occurring during equipment downtime, or preventive maintenance; or

- c. Bypass is (1) required for essential maintenance to ensure efficient operation; (2) neither effluent nor receiving water limitations are exceeded; and (3) the Discharger notifies the Colorado River Basin Water Board ten (10) days in advance.

In the event of an unanticipated bypass, the Discharger shall immediately report the incident to the Colorado River Basin Water Board. During non-business hours, the Discharger shall leave a message on the Colorado River Basin Water Board's office voicemail. A written report shall be provided within five (5) business days after the Discharger is aware of the incident. The written report shall include a description of the bypass, any noncompliance, the cause, period of noncompliance, anticipated time to achieve full compliance, and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

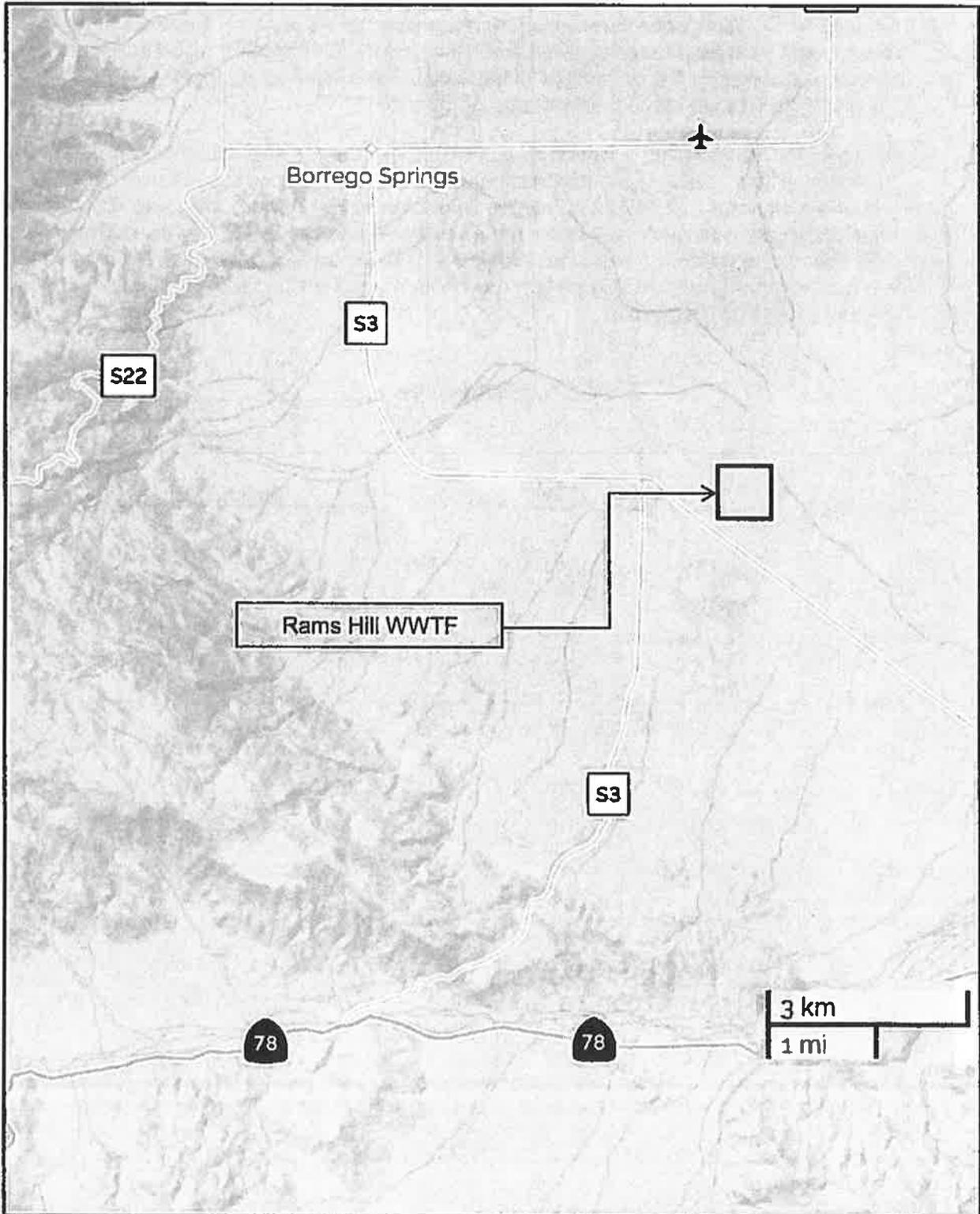
14. **Backup Generators.** Standby, power generating facilities shall be available to operate the Facility during a commercial power failure.
15. **Format of Technical Reports.** The Discharger shall furnish, under penalty of perjury, technical monitoring program reports, and such reports shall be submitted in accordance with chapter 30, division 3, title 23 of the California Code of Regulations, as groundwater raw data uploads electronically over the internet into the State Water Board's GeoTracker database, found at: <https://geotracker.waterboards.ca.gov/>. Documents that are normally mailed by the Discharger, such as regulatory documents, narrative technical monitoring program reports, and such reports submissions, materials, data, and correspondence, to the Colorado River Basin Water Board shall also be uploaded into GeoTracker in the appropriate Microsoft software application, such as word, excel, or an Adobe Portable Document Format (PDF) file. Large documents are to be split into manageable file sizes appropriately labelled and uploaded into GeoTracker. The Facility is assigned GeoTracker Global Identification No. WDR100027526.
16. **Qualified Professionals.** In accordance with Business and Professions Code sections 6735, 7835, and 7835.1, engineering and geologic evaluations and judgments shall be performed by or under the direction of California registered professionals (i.e., civil engineer, engineering geologist, geologist, etc.) competent and proficient in the fields pertinent to the required activities. All technical reports required under this Order that contain work plans, that describe the conduct of investigations and studies, or that contain technical conclusions and recommendations concerning engineering and geology shall be prepared by or under the direction of appropriately qualified professional(s), even if not explicitly stated. Each technical report submitted by the Discharger shall contain a statement of qualifications of the responsible licensed professional(s) as well as the professional's signature and/or stamp of the seal. Additionally, all field activities are to be conducted under the direct supervision of one or more of these professionals.
17. **Certification Under Penalty of Perjury.** All technical reports required in conjunction with this Order shall include a statement by the Discharger, or an authorized representative of the Discharger, certifying under penalty of perjury under the laws of the State of California, that the reports were prepared under his or her supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluated the information submitted, and that based on his or her inquiry of the person or persons who manage the system, the information submitted is, to the best of his or her knowledge and belief, true, complete, and accurate.

18. **Violation of Law.** This Order does not authorize violation of any federal, state, or local laws or regulations.
19. **Modification, Revocation, Termination.** This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for an Order modification, rescission, or reissuance, or the Discharger's notification of planned changes or anticipated noncompliance, does not stay any Order condition. Causes for modification include, but are not limited to, the violation of any term or condition contained in this Order, a material change in the character, location, or volume of discharge, a change in land application plans or sludge use/disposal practices, or the adoption of new regulations by the State Water Board, Colorado River Basin Water Board (including revisions to the Basin Plan), or federal government.
20. **Severability.** The provisions of this Order are severable. If any provision of this Order is found invalid, the remainder of these requirements shall not be affected.

I, Paula Rasmussen, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Colorado River Basin Region, on March 7, 2019.

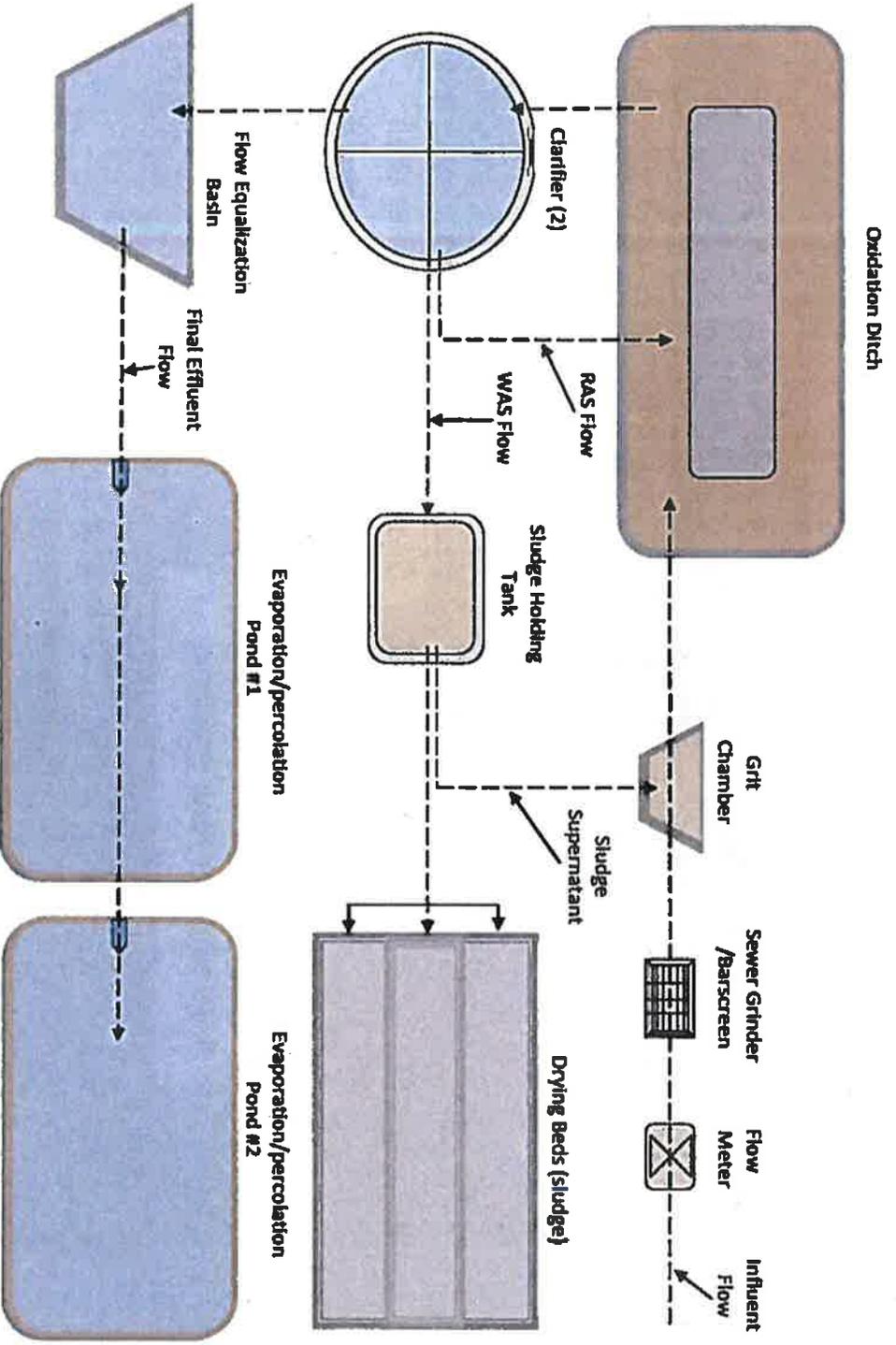
PAULA RASMUSSEN
Executive Officer

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION**

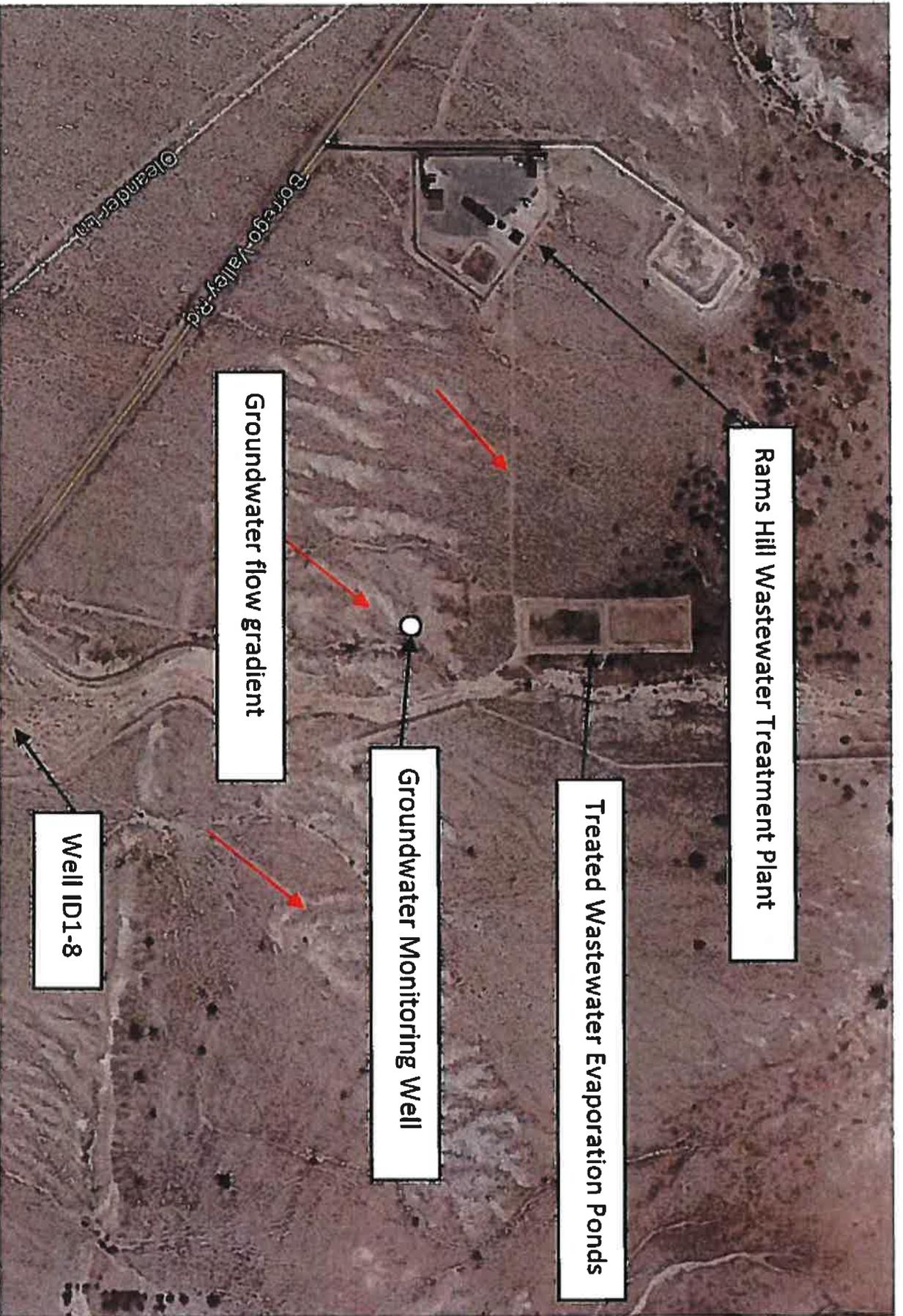


VICINITY MAP

**BORREGO WATER DISTRICT, OWNER/OPERATOR
RAMS HILL WASTEWATER TREATMENT FACILITY
Borrego Springs – San Diego County
E ½ of Section 23, T11S, R6E, SBB&M**



BORREGO WATER DISTRICT, OWNER/OPERATOR, RAMS HILL WASTEWATER TREATMENT FACILITY
 Borrego Springs – San Diego County



Site Map with Location of Groundwater Monitoring Well

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

MONITORING AND REPORTING PROGRAM R7-2019-0015
FOR
BORREGO WATER DISTRICT, OWNER/OPERATOR
RAMS HILL WASTEWATER TREATMENT FACILITY
Borrego Springs – San Diego County

Location of Discharge:
E ½ of Section 23, T11S, R6E, SBB&M

A. Monitoring

1. This Monitoring and Reporting Program (MRP) is issued pursuant to Water Code section 13267 and describes requirements for monitoring the relevant wastewater system and groundwater quality. The Discharger shall not implement any changes to this MRP unless and until a revised MRP is issued by the Colorado River Basin Water Board or its Executive Officer.
2. The Discharger owns and operates the wastewater system that is subject to Order R7-2019-0015. The reports are necessary to ensure that the Discharger complies with the Order. Pursuant to Water Code section 13267, the Discharger shall implement the MRP and shall submit the monitoring reports described herein.
3. The collection, preservation, and holding times of all samples shall be in accordance with U. S. Environmental Protection Agency (USEPA) approved procedures. Unless otherwise approved by the Colorado River Basin Water Board's Executive Officer, all analyses shall be conducted by a laboratory certified by the State Water Board, Division of Drinking Water's Environmental Laboratory Accreditation Program (ELAP). All analyses shall be conducted in accordance with the latest edition of the *Guidelines Establishing Test Procedures for Analysis of Pollutants* (40 C.F.R. part 136), promulgated by the USEPA.
4. Samples shall be collected at the location specified in the WDRs. If no location is specified, sampling shall be conducted at the most representative sampling point available.
5. All samples shall be representative of the volume and nature of the discharge or matrix of material sampled. The time, date, and location of each grab sample shall be recorded on the sample chain of custody form. If composite samples are collected, the basis for sampling (time or flow weighted) shall be approved by Colorado River Basin Water Board staff.
6. All monitoring instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. In the event that continuous monitoring equipment is out of service for a period greater than 24-hours, the Discharger shall obtain representative grab samples each day the equipment is out of service. The Discharger shall correct the cause(s) of failure of the continuous monitoring equipment as soon as practicable. The Discharger shall report the period(s) during which the equipment was out of service and if the problem has not been corrected, shall identify the steps which the Discharger is taking or proposes to take to bring the equipment back into service and the schedule for these actions.

7. Field test instruments (such as those used to test pH, dissolved oxygen, and electrical conductivity) may be used provided that:
 - a. The user is trained in proper use and maintenance of the instruments;
 - b. The instruments are field calibrated prior to monitoring events at the frequency recommended by the manufacturer;
 - c. Instruments are serviced and/or calibrated by the manufacturer at the recommended frequency; and
 - d. Field calibration reports are submitted as described in the "Reporting" section of this MRP.

8. The Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least five (5) years from the date of the sample, measurement, report or application. This period may be extended by request of the Colorado River Basin Water Board's Executive Officer at any time. Records of monitoring information shall include:
 - a. The date, exact place, and time of sampling or measurement(s);
 - b. The individual(s) who performed the sampling or measurement(s);
 - c. The date(s) analyses were performed;
 - d. The individual(s) who performed the analyses;
 - e. The analytical techniques or method used; and
 - f. The results of such analyses.

9. Given the monitoring frequency prescribed by MRP R7-2019-0015, if only one sample is available for a given reporting period, compliance with monthly average or weekly average effluent limitations or discharge specifications will be determined from that sample.

10. If the Facility is not in operation, or there is no discharge during a required reporting period, the Discharger shall forward a letter to the Colorado River Basin Water Board indicating that there has been no activity during the required reporting period.

Influent Monitoring

11. Influent to the WWTF shall be monitored according to the following schedule:

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Monitoring Frequency</u>	<u>Reporting Frequency</u>
Flow; Total Plant Influent	MGD ¹	Flow Measurement	Daily ²	Monthly

¹ Million Gallons per Day

² Reported for each day with average monthly flow

20°C BOD ₅ ³	mg/L ⁴	24-Hr. Composite	Monthly	Monthly
Total Suspended Solids	mg/L	24-Hr. Composite	Monthly	Monthly

Effluent Monitoring

12. Effluent from the WWTF into the Evaporation/Percolation Ponds shall be monitored according to the following schedule:

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Monitoring Frequency</u>	<u>Reporting Frequency</u>
20°C BOD ₅	mg/L	Grab	2x/Month	Monthly
Total Suspended Solids	mg/L	Grab	2x/Month	Monthly
Settleable Solids	mg/L	Grab	2x/Month	Monthly
Total Nitrogen	mg/L	Grab	2x/Month	Monthly
Total Dissolved Solids	mg/L	Grab	2x/Month	Monthly
VOCs ⁵	µg/L ⁶	Grab	Annually	Annually

Evaporation/Percolation Pond Monitoring

13. The Discharger shall monitor each of the evaporation/percolation ponds as specified:

<u>Constituent⁷</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
pH	pH units	Grab	Monthly	Monthly
Dissolved Oxygen	mg/L	Grab	Monthly	Monthly
Freeboard	0.1 feet	Measurement	Monthly	Monthly
Berm Condition	---	Observation	Monthly	Monthly
Odors	mg/L	Observation	Monthly	Monthly

³ 5-day Biochemical Oxygen Demand at 20 degrees Celsius.

⁴ milligrams per Liter

⁵ Analysis of Volatile Organic Compounds is to be accomplished using the USEPA test methods 601, 602 or 624.

⁶ micrograms per liter

⁷ Samples shall be collected from opposite the inlet at a depth of one foot and from each pond in use. If there is no water in the evaporation/percolation ponds, the monitoring report shall state "No standing water in ponds" in place of reporting pH and dissolved oxygen concentration.

Groundwater Monitoring

14. Groundwater monitoring wells shall be monitored according to the following schedule:

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Monitoring Frequency</u>	<u>Reporting Frequency</u>
Depth to Groundwater	ft (bgs) ⁸	measurement	Quarterly	Quarterly
TDS	mg/L	Grab	Quarterly	Quarterly
Total Nitrogen	mg/L	Grab	Quarterly	Quarterly
Nitrate as N	mg/L	Grab	Quarterly	Quarterly
Nitrite as N	mg/L	Grab	Quarterly	Quarterly
Standard Minerals ⁹	mg/L	Grab	Annually	Annually
Total Coliforms	MPN/100 mL	Grab	Quarterly	Quarterly
E. coli	MPN/100 mL	Grab	Quarterly	Quarterly
VOCs	µg/L	Grab	Annually	Annually

Domestic Water Supply Monitoring

15. The domestic water supply shall be monitored at the water supply production wells, include notations of which wells are non-operating for a reporting period and in accordance to the following schedule:

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Monitoring Frequency</u>	<u>Reporting Frequency</u>
Total Dissolved Solids	mg/L	Grab	Monthly	Monthly
pH	pH Units	Grab	Monthly	Monthly
Nitrate	mg/L	Grab	Quarterly	Quarterly

Sludge Monitoring

16. The Discharger shall report annually on the quantity, location and method of disposal of all sludge and similar solid materials being produced at the WWTP. If no sludge is disposed of during the year being reported, the Discharger shall state "No Sludge Removed" in the annual monitoring report. Sludge that is generated at the WWTP shall be sampled and analyzed for the following:

⁸ feet below ground surface

⁹ At a minimum, Standard Minerals shall include: total dissolved solids, calcium, chloride, fluoride, iron, magnesium, manganese, nitrate, potassium, sodium, sulfate, barium, total alkalinity (including alkalinity series), and hardness.

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Monitoring Frequency</u>	<u>Reporting Frequency</u>
Arsenic	mg/kg ¹⁰	Composite	Annually	Annually
Cadmium	mg/kg	Composite	Annually	Annually
Chromium	mg/kg	Composite	Annually	Annually
Copper	mg/kg	Composite	Annually	Annually
Lead	mg/kg	Composite	Annually	Annually
Mercury	mg/kg	Composite	Annually	Annually
Molybdenum	mg/kg	Composite	Annually	Annually
Nickel	mg/kg	Composite	Annually	Annually
Selenium	mg/kg	Composite	Annually	Annually
Zinc	mg/kg	Composite	Annually	Annually
Fecal Coliform	MPN/gram ¹¹	Composite	Prior to Disposal	Annually

Operation and Maintenance

1. The Discharger shall monitor and report the following:

Activity

The Discharger shall inspect and document any operation/maintenance problems by inspecting each unit process. Operation and Maintenance reports shall be submitted to the Colorado River Basin Water Board annually, containing documentation showing the calibration of flow meters and equipment as performed in a timely manner, modifications and updates to the Operation and Maintenance Manual, and modifications and updates to the Discharger's wastewater ordinance or rules and regulations. The Discharger shall also provide an operator certification status update including number of staff and grade certification.

Reporting

Annually

B. Reporting

1. Daily, weekly, and monthly monitoring shall be included in the monthly monitoring report. Monthly monitoring reports shall be submitted to the Colorado River Basin Water Board by the **15th day of the following month**. Quarterly monitoring reports shall be submitted by **January 15th, April 15th, July 15th and October 15th**. Annual monitoring reports shall be submitted by **January 31st** of the following year.

¹⁰ milligrams per kilogram

¹¹ Most Probable Number per gram

2. The Discharger shall attach a cover letter to the self-monitoring reports (SMRs). The information contained in the cover letter shall clearly identify violations of the WDRs, discuss corrective actions taken or planned, and the proposed time schedule of corrective actions. Identified violations should include a description of the requirement that was violated and a description of the violation.
3. In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, the constituents, and the concentrations are readily discernible. The data shall be summarized in such a manner as to clearly illustrate whether the Facility is operating in compliance with the WDRs. Where appropriate, the Discharger shall include supporting calculations (e.g., for monthly averages).
4. The results of any analysis taken more frequently than required at the locations specified in this MRP shall be reported to the Colorado River Basin Water Board.
5. SMRs shall be certified under penalty of perjury to be true and correct, and shall contain the required information at the frequency designated in this MRP.
6. Each report submitted to the Colorado River Basin Water Board shall contain the following completed declaration:

"I certify under the penalty of law that this document, including all attachments and supplemental information, was prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information submitted. I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment.

Executed on the _____ day of _____ at _____

(Signature)

(Title)"

7. The SMRs and any other information requested by the Colorado River Basin Water Board shall be signed by a principal executive officer or ranking elected official. A duly authorized representative of the Discharger may sign the documents if:
 - a. The authorization is made in writing by the person described above;
 - b. The authorization specified an individual or person having responsibility for the overall operation of the regulated disposal system; and
 - c. The written authorization is submitted to the Colorado River Basin Water Board's Executive Officer.
8. The Discharger shall report immediately any failure in the waste disposal system as specified in Standard Provisions G.4. Results of any sampling or other analysis performed as a result of a failure of the Facility shall be provided within fourteen days after receipt.

9. As specified in Standard Provisions G.16, technical reports shall be prepared by or under the direction of appropriately qualified professional(s). Each technical report submitted shall contain a statement of qualifications of the responsible licensed professional(s) as well as the professional's signature and/or stamp of the seal.
10. As specified in Standard Provisions G.15, the Discharger shall comply with Electronic Submittal of Information (ESI) requirements by submitting all correspondence and reports required under MRP R7-2019-0009 and future revisions thereto, including groundwater monitoring data and discharge location data (latitude and longitude), correspondence, and PDF monitoring reports to the State Water Board's Geotracker database. Documents that are 2.0 MB or larger should be broken down into smaller electronic files, labelled properly, and uploaded into Geotracker

Ordered by: _____
PAULA RASMUSSEN
Executive Officer
March 7, 2019
_____ Date

ATTACHMENT B

Historical Flow Assumptions

Historical Flow Contribution - Assumptions

Due to insufficient data, the following assumption were made:

No.	Assumptions
1	Historical flow contributions come from the three tributary sewersheds of the WWTF: Ram Hills, Town Center Sewer, and Borrego Springs Resort (BSR)/Club Circle.
2	Ram Hills was connected to the WWTF in 1983.
3	Town Center was connected to the WWTF in the mid of 1987.
4	BSR was connected to the WWTF in 2011.
5	Annual total flow rates are estimated based on monthly averages.
6	District provided Dudek with total monthly flow rates from 1983 to 2021.
7	District provided Dudek with Ram Hills average monthly flow rates from 1983 to 1986 and from 2008 to 2011.
8	There is no historical flowrate data for Ram Hills between 1987 and 2007. It was therefore assumed that Ram Hills flow rates increased by 8% per year.
9	In 2008, Ram Hills monthly flow rates from January to August were not available and total annual flows were computed from the remaining 4 months of data.
10	There is no information about the initial flows from the Town Center flows between 1987 and 2011, therefore they were estimated as the difference between total flow and Ram Hills flow.
11	BSR/Club Circle was connected to the WWTF in 2011. It is assumed that flow was not discharged to the WWTF until 2012.
12	Since 2012 flow contributions from all three (3) sewersheds were determined based on the current ratios provided by the District. These flows are the following: <ul style="list-style-type: none"> • Town Center contributes 63.7% of total flow. • Ram Hills contributes 17.7% of total flow. • BSR/Club Circle contributes 18.6% of total flow.
13	In 2017, total monthly flow rates from July to December were not available and total annual flows were computed from the remaining 6 months of data.
14	In 2019, total monthly flow rates from November to December were not available and total annual flows were computed from the remaining 10 months of data.
15	In 2021, total monthly flow rates from September to December were not available and total annual flows were computed from the remaining 8 months of data.
16	Total flow for 2022 is not included in the analysis due to insufficient data.

Year	Rams Hill			Town Center Sewer			BSR/Club Circle			WWTF Total	
	gpd	Mgal/yr	%	gpd	Mgal/yr	%	gpd	Mgal/y r	%	gpd	Mgal/yr
1983	250	0.1	100%	0	0.0	0%	0	0.0	0%	250	0.1
1984	2,050	0.7	100%	0	0.0	0%	0	0.0	0%	2,050	0.7
1985	3,375	1.2	100%	0	0.0	0%	0	0.0	0%	3,375	1.2
1986	4,667	1.7	100%	0	0.0	0%	0	0.0	0%	4,667	1.7
1987	5,040	1.8	28%	13,098	4.8	72%	0	0.0	0%	18,138	6.6
1988	5,443	2.0	26%	15,832	5.8	74%	0	0.0	0%	21,275	7.8
1989	5,879	2.1	19%	24,917	9.1	81%	0	0.0	0%	30,796	11.2
1990	6,349	2.3	19%	26,750	9.8	81%	0	0.0	0%	33,099	12.1
1991	6,857	2.5	27%	18,500	6.8	73%	0	0.0	0%	25,357	9.3
1992	7,405	2.7	17%	37,207	13.6	83%	0	0.0	0%	44,612	16.3
1993	7,998	2.9	22%	27,632	10.1	78%	0	0.0	0%	35,630	13.0
1994	8,638	3.2	26%	25,034	9.1	74%	0	0.0	0%	33,672	12.3
1995	9,329	3.4	24%	29,408	10.7	76%	0	0.0	0%	38,737	14.1
1996	10,075	3.7	34%	19,137	7.0	66%	0	0.0	0%	29,212	10.7
1997	10,881	4.0	37%	18,371	6.7	63%	0	0.0	0%	29,252	10.7
1998	11,751	4.3	53%	10,374	3.8	47%	0	0.0	0%	22,126	8.1
1999	12,692	4.6	45%	15,232	5.6	55%	0	0.0	0%	27,923	10.2
2000	13,707	5.0	46%	16,015	5.8	54%	0	0.0	0%	29,722	10.8
2001	14,803	5.4	57%	10,968	4.0	43%	0	0.0	0%	25,772	9.4
2002	15,988	5.8	56%	12,427	4.5	44%	0	0.0	0%	28,415	10.4
2003	17,267	6.3	60%	11,449	4.2	40%	0	0.0	0%	28,716	10.5
2004	18,648	6.8	69%	8,195	3.0	31%	0	0.0	0%	26,843	9.8
2005	20,140	7.4	61%	12,928	4.7	39%	0	0.0	0%	33,068	12.1
2006	21,751	7.9	73%	8,005	2.9	27%	0	0.0	0%	29,756	10.9
2007	23,491	8.6	86%	3,969	1.4	14%	0	0.0	0%	27,460	10.0
2008	26,691	9.7	77%	7,775	2.8	23%	0	0.0	0%	34,466	12.6
2009	26,204	9.6	62%	16,177	5.9	38%	0	0.0	0%	42,381	15.5
2010	42,590	15.5	88%	5,880	2.1	12%	0	0.0	0%	48,470	17.7
2011	65,632	24.0	99%	715	0.3	1%	0	0.0	0%	66,347	24.2
2012	10,941	4.0	18%	39,374	14.4	64%	11,497.03	4.2	19%	61,812	22.6
2013	12,709	4.6	18%	45,737	16.7	64%	13,354.99	4.9	19%	71,801	26.2
2014	12,449	4.5	18%	44,801	16.4	64%	13,081.48	4.8	19%	70,331	25.7
2015	11,740	4.3	18%	42,251	15.4	64%	12,336.96	4.5	19%	66,328	24.2
2016	12,687	4.6	18%	45,658	16.7	64%	13,331.92	4.9	19%	71,677	26.2
2017	17,475	6.4	18%	62,890	23.0	64%	18,363.54	6.7	19%	98,729	36.0
2018	13,979	5.1	18%	50,307	18.4	64%	14,689.38	5.4	19%	78,975	28.8
2019	11,842	4.3	18%	42,618	15.6	64%	12,444.29	4.5	19%	66,905	24.4
2020	11,213	4.1	18%	40,353	14.7	64%	11,782.91	4.3	19%	63,349	23.1
2021	11,008	4.0	18%	39,615	14.5	64%	11,567.34	4.2	19%	62,190	22.7
TOTAL	551,632	201.3	36%	849,600	310.1	55.4%	132,450	48.3	8.6%	1,533,682	559.8

ATTACHMENT C

Design Criteria

DESIGN CRITERIA

FLOW	
AVERAGE	= 0.25 MGD
PEAK	= 0.75 MGD
PLANT HYDRAULIC CAPACITY	= 2.00 MGD
ULTIMATE PLANT CAPACITY	= 0.50 MGD
WASTEWATER CONCENTRATION	
5-DAY BOD	= 275 mg/l
SUSPENDED SOLIDS	= 275 mg/l
INFLUENT SCREENING	
TYPE	= COMMINUTOR W/ BYPASS BAR SCREEN
CAPACITY	= 1.73 MGD
FLOW METER	
TYPE	= PARSHALL FLUME
SIZE	= 6" PERMANENT W/ 3" NESTED INSERT
GRIT CHAMBER	
TYPE	= AERATED
AIR REQUIREMENT	= 50 CFM
PEAK CAPACITY	= 4.0 MGD
GRIT WASHER	
NUMBER	= 1
GRIT PUMPS	
TYPE	= AIR LIFT
NUMBER	= 2
OXIDATION DITCH	
VOLUME	= 250,000 GAL. (MIN.)
AERATION	= BRUSH AERATORS (2)
BRUSH LENGHT	= 11'-0"
IMMERSION RANGE	= 3 INCHES - 12 INCHES
HORSEPOWER	= 20 HP EACH
DETENTION TIME (@ 0.25 MGD)	= 24 HOURS
SECONDARY CLARIFIERS	
NUMBER	= 2 (1 STANDBY)
DIAMETER	= 28'-0"
SIDE WATER DEPTH	= 12'-0"
OVERFLOW RATE (@ 0.25 MGD)	= 406 GPD/SF
WEIR LOADING (@ 0.25 MGD)	= 2842 GPD/LF
DETENTION TIME (@ 0.25 MGD)	= 5.3 HOURS
RETURN SLUDGE PUMPS	
PERCENT RETURN	= 25 - 150 PERCENT
TYPE	= ROTARY LOBE
NUMBER	= 2
CAPACITY	
1 CONSTANT SPEED	= 130 GPM
1 MANUALLY ADJUSTABLE	= 40 - 130 GPM
HORSEPOWER	= 15 HP EACH
FLOW EQUALIZATION BASIN	
VOLUME	= 121,500 GAL.
DEPTH RANGE	= 1'-6" - 10'-3"
AERATION	= FLOATING MECHANICAL (1)
HORSEPOWER	= 10 HP
FILTRATION AID FEED SYSTEM	
FEED PUMPS, NUMBER	= 3 (1 STANDBY)
ALUM	
NORMAL DOSAGE	= 0-20 mg/l
GPD (50% SOLUTION)	= 11.25
POLYMER	
NORMAL DOSAGE	= 0-1 mg/l
GPD (33% SOLUTION)	= 1.25
FILTER FEED PUMPS	
NUMBER	= 2 (1 STANDBY)
TYPE	= VERTICAL TURBINE
CAPACITY	= 200 GPM
PUMPING HEAD	= 77 FEET
HORSEPOWER	= 5 HP
DUAL MEDIA FILTERS	
NUMBER	= 2 (1 STANDBY)
TYPE	= VERTICAL PRESSURE
DIAMETER	= 7'-6"
MEDIA	= 24 INCH ANTHRACITE/12 INCH SAND
NOMINAL FILTER RATE	= 5 GPM/SF
BACKWASH SOURCE	= RECLAIMED WATER SYSTEM
BACKWASH RATE	= 20 GPM/SF (MAX.)
BACKWASH DURATION	= 10 MIN. (MAX.)

SPENT BACKWASH SYSTEM	
SURGE TANK VOLUME	= 18,000 GAL.
SPENT BACKWASH RECYCLE PUMP	
NUMBER	= 1
TYPE	= ROTARY LOBE
CAPACITY	= 25 GPM
CHLORINATORS	
NUMBER	= 2 (1 STANDBY)
TYPE	= COMPOUND LOOP CONTROL
MAXIMUM DOSAGE	= 20 mg/l
MAXIMUM FEED RATE	= 53 LBS/DAY
CHLORINE CONTACT TANK	
VOLUME	= 21,300 GAL.
DETENTION TIME	= 2 HOURS
LENGHT: WIDTH RATIO	= 42:1
PROCESS RELIABILITY POND	
VOLUME	= 500,000 GAL.
SEASONAL STORAGE PONDS	
VOLUME	= 3,600,000 GAL.
RECLAIMED WATER PUMPS	
NUMBER	= 2 (1 STANDBY)
TYPE	= VERTICAL TURBINE
CAPACITY	= 230 GPM
LIFT	= 483 FEET
HORSEPOWER	= 40 HP EACH
WASTE SLUDGE HANDLING	
QUANTITY WASTED (@ 0.25 MGD)	= 385 LBS/DAY 9250 GPD @ 0.5% CONC.
WASTE SLUDGE PUMP (PROVIDES STANDBY FOR RETURN SLUDGE PUMPS)	
TYPE	= ROTARY LOBE
CAPACITY	= 40 - 130 GPM (MANUALLY ADJUSTABLE)
HORSEPOWER	= 15 HP
AERATED SLUDGE HOLDING TANK	
VOLUME	= 30,000 GAL.
AIR REQUIREMENTS	= 150 CFM
SLUDGE DRYING BEDS	
NUMBER	= 2
AREA	= 2,600 SF EACH
SCUM/TANK DRAIN PUMP	
TYPE	= SUBMERSIBLE
CAPACITY	= 50 GPM
LIFT	= 33 FEET
HORSEPOWER	= 3 HP

ABBREVIATIONS & SYMBOLS

ACP	ASBESTOS CEMENT PIPE
BFV	BUTTERFLY VALVE
BSP	BLACK STEEL PIPE
CIP	CAST IRON PIPE
CISP	CAST IRON SOIL PIPE
CML & CSP	CEMENT MORTAR LINED & COATED STEEL PIPE
CMLSP	CEMENT MORTAR LINED STEEL PIPE
CO	CLEANOUT
CPLG	COUPLING
DIP	DUCTILE IRON PIPE
EL	ELEVATION
FL	FLANGED END
FD	FLOOR DRAIN
FLEX	FLEXIBLE
GE	GROOVED END
HB	HOSE BIBB
HWL	HIGH WATER LEVEL
INV	INVERT
MAX	MAXIMUM
MIN	MINIMUM
MJ	MECHANICAL JOINT
NTS	NOT TO SCALE
PE	PLAIN END
PVC	POLYVINYL CHLORIDE PIPE
RT	RING-TITE
VCP	VITRIFIED CLAY PIPE
VTR	VENT TO ROOF
WSP	WELDED STEEL PIPE

	BUTTERFLY VALVE
	PLUG VALVE
	CHECK VALVE
	FIRE HYDRANT
	UTILITY HYDRANT
	MANHOLE
	CLEANOUT
	GATE VALVE
	BALL VALVE
	FLOW CONTROL VALVE
	CENTERLINE
	DIAMETER
	ANGLE
	AT
	PLATE

	INDICATES PAGE WHICH DETAIL IS DRAWN
DETAIL	
	INDICATES SECTION NUMBER
	INDICATES PAGE WHICH SECTION IS DRAWN
SECTION	
	INDICATES THAT SECTION OR DETAIL IS ON SAME SHEET

DRAWING INDEX

SHT. NO.	DESCRIPTION
1.	COVER SHEET - VICINITY AND LOCATION MAPS
2.	INDEX, ABBREVIATIONS, SYMBOLS AND DESIGN CRITERIA
3.	PROCESS AND INSTRUMENTATION DIAGRAM
4.	HYDRAULIC PROFILE
5.	SITE PLAN AND GRADING PLAN
6.	ACCESS ROAD - PLAN AND PROFILE
7.	ACCESS ROAD - PLAN AND PROFILE
8.	SITE PIPING
9.	BURIED PIPE PROFILES
10.	TYPICAL DETAILS
11.	TYPICAL DETAILS
12.	TYPICAL DETAILS
13.	HEADWORKS-GRIT CHAMBER - PLAN AND SECTIONS
14.	HEADWORKS-GRIT CHAMBER - SECTIONS AND DETAILS
15.	HEADWORKS-GRIT CHAMBER - STRUCTURAL DETAILS
16.	OXIDATION DITCH - PLAN, SECTION AND DETAILS
17.	OXIDATION DITCH AND SPLITTER BOX - SECTIONS AND DETAILS
18.	OXIDATION DITCH - STRUCTURAL DETAILS
19.	SECONDARY CLARIFIERS - PLAN AND SECTION
20.	SECONDARY CLARIFIERS - SECTIONS
21.	SECONDARY CLARIFIERS - STRUCTURAL DETAILS
22.	FLOW EQUALIZATION BASIN - PLAN, SECTIONS AND DETAILS
23.	MISCELLANEOUS DETAILS
24.	FILTER PUMPS - PLAN, SECTIONS AND DETAILS
25.	CHLORINE CONTACT TANK AND PRESSURE FILTERS - PLAN AND DETAILS
26.	PRESSURE FILTERS - SECTIONS AND PIPING ISOMETRIC
27.	CHLORINE CONTACT TANK AND SPENT BACKWASH SURGE TANK - SECTIONS
28.	SPENT BACKWASH SURGE TANK - PLAN AND SECTIONS
29.	SLUDGE PUMPING STATION - PLAN AND SECTIONS
30.	SLUDGE HOLDING TANK - PLAN AND SECTIONS
31.	SLUDGE HOLDING TANK - STRUCTURAL DETAILS
32.	SLUDGE DRYING BEDS - PLAN AND SECTIONS
33.	SEASONAL STORAGE RESERVOIR - PLAN, SECTION AND DETAIL
34.	RECLAIMED WATER PUMPING STATION - PLAN AND SECTIONS
35.	OPERATIONS BUILDING - FLOOR, FOUNDATION AND PLUMBING PLANS
36.	OPERATIONS BUILDING - CEILING PLAN, SECTIONS AND DETAILS
37.	OPERATIONS BUILDING - ROOF PLAN AND SECTIONS
38.	OPERATIONS BUILDING - STRUCTURAL AND MECHANICAL DETAILS
39.	ELECTRICAL SYMBOLS AND ABBREVIATIONS
40.	SITE PLAN
41.	SINGLE LINE 1
42.	SINGLE LINE 2
43.	SWBD AND MCC ELEVATIONS
44.	CONDUIT SCHEDULES
45.	HEADWORKS - POWER PLAN
46.	OXIDATION DITCH - POWER PLAN
47.	CLARIFIERS AND SLUDGE PUMPING STATION - POWER PLAN
48.	FILTER PUMP STATION - POWER PLAN
49.	FILTERS AND SPENT BACKWASH PUMP STATION - POWER PLAN
50.	FILTER BACKWASH PUMP STATION - POWER PLAN
51.	RECLAIMED WATER PUMP STATION - POWER PLAN
52.	CONTROL BUILDING - POWER AND LIGHTING PLAN
53.	MISCELLANEOUS DEATILS
54.	CONTROL DIAGRAMS 1
55.	CONTROL DIAGRAMS 2
56.	INSTRUMENTATION LEGEND 1
57.	INSTRUMENTATION LEGEND 2
58.	PROCESS A - PRIMARY AND SECONDARY TREATMENT
59.	PROCESS B - FILTRATION
60.	PROCESS C - EFFLUENT DISTRIBUTION AND CHEMICAL SYSTEMS
61.	MAIN CONTROL BOARD ELEVATION

APPROVED BY:		
<i>John J. Boyell</i>		
Date: 7/27/81		
Title: General Manager		
REVISIONS		
Mark	Date	Description

BORREGO WATER DISTRICT
RAM'S HILL RECLAMATION PLANT

INDEX, ABBREVIATIONS, SYMBOLS AND DESIGN CRITERIA

<p>LOWRY & ASSOCIATES</p> <p>17748 SKY PARK BOULEVARD IRVINE, CALIFORNIA 92714</p> <p>3505 GAMINO DEL RIO SO. SUITE 334 SAN DIEGO, CALIFORNIA 92108</p>	<p>Drawing</p> <p>Sht 2 of 61</p>
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ATTACHMENT D

Cost Tables

Project: Alternative 0: Upgrade Oxidation Ditch with Anoxic Zone. 11958.06
 Client: Borrego Water District
 Date: August 23, 2022

Item	Item Description	Total \$/Unit	Total Net Cost \$
Division 1 - General Requirements			\$ 15,000
1	Mobilization/Demobilization	\$ 12,000	\$ 12,000
2	Start-Up & Testing	\$ 3,000	\$ 3,000
Division 2 - Site Work			\$ 12,000
1	Anoxic Zone	\$ 15	\$ 12,000
Division 3 - Concrete			\$ 133,000
1	Ox Ditch Anoxic Zone Concrete Structure	\$ 1,000	\$ 133,000
Division 11 - Equipment			\$ 88,000
1	Ox. Ditch Anoxic Zone Mixer (5 HP)	\$ 70,000	\$ 70,000
2	Miscellaneous Equipment (25% of equipment)	\$ 17,500	\$ 18,000
Division 15 - Mechanical			\$ 25,000
1	Civil Piping (8%)	\$ 25,000	\$ 25,000
Division 16 - Electrical			\$ 30,000
1	Electrical (10% of overall construction cost)	\$ 30,000	\$ 30,000
Division 17 - Process Instrumentation, Controls and Monitoring			\$ 8,000
1	Sensors and Alarms (3% of overall construction cost)	\$ 8,000	\$ 8,000
Total			\$ 311,000

Alternative 1: Identify and upgrade any unit processes which do not
 Project: meet current design capacity requirements 11958.06
 Client: Borrego Water District
 Date: August 23, 2022

Item	Item Description	Total \$/Unit	Total Net Cost \$
Division 1 - General Requirements			\$ 30,000
1	Mobilization/Demobilization	\$ 20,000	\$ 20,000
2	Start-Up & Testing	\$ 10,000	\$ 10,000
Division 2 - Site Work			\$ 22,000
1	Anoxic Zone	\$ 15	\$ 12,000
2	EQ Basin	\$ 15	\$ 10,000
Division 3 - Concrete			\$ 344,000
1	Ox Ditch Anoxic Zone Concrete Structure	\$ 1,000	\$ 133,000
2	EQ Basin Concrete Structure	\$ 1,000	\$ 211,000
Division 11 - Equipment			\$ 84,000
1	Ox. Ditch Anoxic Zone Mixer (5 HP)	\$ 70,000	\$ 70,000
2	Miscellaneous Equipment (20% of equipment)	\$ 14,000	\$ 14,000
Division 15 - Mechanical			\$ 45,000
1	Civil Piping (8%)	\$ 45,000	\$ 45,000
Division 16 - Electrical			\$ 60,000
1	Electrical (10% of overall construction cost)	\$ 60,000	\$ 60,000
Division 17 - Process Instrumentation, Controls and Monitoring			\$ 15,000
1	Sensors and Alarms (3% of overall construction cost)	\$ 15,000	\$ 15,000
Total			\$ 600,000

Project: Alternative 2 - Add additional 0.25 MGD without replacing existing equipment to upgrade the WWTF to 500,000 gpd. 11958.06
 Client: Borrego Water District
 Date: August 23, 2022

Item	Item Description	Total \$/Unit	Total Net Cost \$
Division 1 - General Requirements			\$ 180,000
1	Mobilization/Demobilization	\$ 130,000	\$ 130,000
2	Start-Up & Testing	\$ 50,000	\$ 50,000
Division 2 - Site Work			\$ 359,000
1	Oxidation Ditch	\$ 15	\$ 30,000
2	Anoxic Zone	\$ 15	\$ 24,000
3	Secondary Clarifier	\$ 15	\$ 6,000
4	EQ Basin	\$ 15	\$ 28,000
5	Sludge Holding Tank	\$ 15	\$ 3,000
6	Percolation Ponds	\$ 15	\$ 268,000
Division 3 - Concrete			\$ 1,365,000
1	Ox Ditch Concrete Structure	\$ 1,000	\$ 331,000
2	Ox Ditch Anoxic Zone Concrete Structure	\$ 1,000	\$ 265,000
3	EQ Basin Concrete Structure	\$ 1,000	\$ 632,000
4	Secondary Clarifier Concrete Structure	\$ 1,000	\$ 90,000
5	Sludge Holding Tank Concrete Structure	\$ 1,000	\$ 47,000
Division 11 - Equipment			\$ 880,000
1	Bar Screen	\$ 112,000	\$ 112,000
2	Grinder	\$ 14,000	\$ 14,000
3	Oxidation Ditch Mechanism	\$ 224,000	\$ 224,000
4	Anoxic Zone Mixer (5 HP)	\$ 90,000	\$ 180,000
5	Secondary Clarifier Mechanism	\$ 266,000	\$ 266,000
6	Miscellaneous Equipment (10% of equipment)	\$ 79,600	\$ 80,000
Division 15 - Mechanical			\$ 275,000
1	Civil Piping (8%)	\$ 275,000	\$ 275,000
Division 16 - Electrical			\$ 350,000
1	Electrical (10% of overall construction cost)	\$ 350,000	\$ 350,000
Division 17 - Process Instrumentation, Controls and Monitoring			\$ 110,000
1	Sensors and Alarms (3% of overall construction cost)	\$ 110,000	\$ 110,000
Total			\$ 3,519,000

Project:	Alternative 3: Add additional 0.5 MGD without replacing existing equipment to upgrade the WWTF to 750,000 gpd	11958.06
Client:	Borrego Water District	
Date:	August 23, 2022	

Item	Item Description	Total \$/Unit	Total Net Cost \$
Division 1 - General Requirements			\$ 335,000
1	Mobilization/Demobilization	\$ 300,000	\$ 300,000
2	Start-Up & Testing	\$ 35,000	\$ 35,000
Division 2 - Site Work			\$ 729,000
1	Oxidation Ditch	\$ 15	\$ 60,000
2	Anoxic Zone	\$ 15	\$ 72,000
3	Secondary Clarifier	\$ 15	\$ 11,000
4	EQ Basin	\$ 15	\$ 46,000
5	Sludge Holding Tank	\$ 15	\$ 5,000
6	Percolation Ponds	\$ 15	\$ 535,000
Division 3 - Concrete			\$ 2,486,000
1	Ox Ditch Concrete Structure	\$ 1,000	\$ 614,000
2	Ox Ditch Anoxic Zone Concrete Structure	\$ 1,000	\$ 500,000
3	EQ Basin Concrete Structure	\$ 1,000	\$ 1,053,000
4	Secondary Clarifier Concrete Structure	\$ 1,000	\$ 180,000
5	Sludge Holding Tank Concrete Structure	\$ 1,000	\$ 139,000
Division 11 - Equipment			\$ 1,888,000
1	Bar Screen	\$ 112,000	\$ 112,000
2	Grinder	\$ 14,000	\$ 14,000
3	Oxidation Ditch Mechanism	\$ 288,000	\$ 576,000
4	Anoxic Zone Mixer (5 HP)	\$ 110,000	\$ 330,000
5	Secondary Clarifier Mechanism	\$ 342,000	\$ 684,000
6	Miscellaneous Equipment (10% of equipment)	\$ 171,600	\$ 172,000
Division 15 - Mechanical			\$ 550,000
1	Civil Piping (8%)	\$ 550,000	\$ 550,000
Division 16 - Electrical			\$ 700,000
1	Electrical (10% of overall construction cost)	\$ 700,000	\$ 700,000
Division 17 - Process Instrumentation, Controls and Monitoring			\$ 200,000
1	Sensors and Alarms (3% of overall construction cost)	\$ 200,000	\$ 200,000
Total			\$ 6,888,000

Alternative 4: Upgrade of the WWTF to tertiary level to meet Title 22 regulations for disinfected, tertiary recycled water to total capacity of		
Project: 500,000 gpd.		11958.06
Client: Borrego Water District		
Date: August 23, 2022		

Item	Item Description	Total \$/Unit	Total Net Cost \$
Division 1 - General Requirements			\$ 400,000
1	Mobilization/Demobilization	\$ 250,000	\$ 250,000
2	Start-Up & Testing	\$ 50,000	\$ 50,000
3	Demo filter/CI system and RW pumps	\$ 100,000	\$ 100,000
Division 2 - Site Work			\$ 359,000
1	Oxidation Ditch	\$ 15	\$ 30,000
2	Anoxic Zone	\$ 15	\$ 24,000
3	Secondary Clarifier	\$ 15	\$ 6,000
4	EQ Basin	\$ 15	\$ 28,000
5	Sludge Holding Tank	\$ 15	\$ 3,000
6	Percolation Ponds	\$ 15	\$ 268,000
Division 3 - Concrete			\$ 1,465,000
1	Ox Ditch Concrete Structure	\$ 1,000	\$ 331,000
2	Ox Ditch Anoxic Zone Concrete Structure	\$ 1,000	\$ 265,000
3	EQ Basin Concrete Structure	\$ 1,000	\$ 632,000
4	Secondary Clarifier Concrete Structure	\$ 1,000	\$ 90,000
5	Sludge Holding Tank Concrete Structure	\$ 1,000	\$ 47,000
6	Extend CCT	\$ 100,000	\$ 100,000
Division 11 - Equipment			\$ 5,510,000
1	Bar Screen	\$ 112,000	\$ 112,000
2	Grinder	\$ 14,000	\$ 14,000
3	Oxidation Ditch Mechanism	\$ 224,000	\$ 224,000
4	Anoxic Zone Mixer (5 HP)	\$ 90,000	\$ 180,000
5	Secondary Clarifier Mechanism	\$ 266,000	\$ 266,000
6	Disk filter (x2), floc/coag, and piping	\$1,440,000	\$ 2,880,000
7	NaOCl tank, pumps, & piping	\$ 135,000	\$ 270,000
8	NaOCl mix vault and static mixer	\$ 105,000	\$ 105,000
9	RW pumps	\$ 270,000	\$ 540,000
10	Miscellaneous Equipment (20% of equipment)	\$ 918,200	\$ 919,000
Division 15 - Mechanical			\$ 600,000
1	Civil Piping (8%)	\$ 600,000	\$ 600,000

Alternative 4: Upgrade of the WWTF to tertiary level to meet Title 22 regulations for disinfected, tertiary recycled water to total capacity of Project: 500,000 gpd. Client: Borrego Water District Date: August 23, 2022	11958.06
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Item	Item Description	Total \$/Unit	Total Net Cost \$
	Division 16 - Electrical		\$ 750,000
1	Electrical (10% of overall construction cost)	\$ 750,000	\$ 750,000
	Division 17 - Process Instrumentation, Controls and Monitoring		\$ 250,000
1	Sensors and Alarms (3% of overall construction cost)	\$ 250,000	\$ 250,000
Total			\$ 9,334,000

Alternative 5: Upgrade of the WWTF to tertiary level to meet Title 22 regulations for disinfected, tertiary recycled water to total capacity of		
Project: 750,000 gpd.		11958.06
Client: Borrego Water District		
Date: August 23, 2022		

Item	Item Description	Total \$/Unit	Total Net Cost \$
Division 1 - General Requirements			\$ 575,000
1	Mobilization/Demobilization	\$ 400,000	\$ 400,000
2	Start-Up & Testing	\$ 75,000	\$ 75,000
3	Demo filter/CI system and RW pumps	\$ 100,000	\$ 100,000
Division 2 - Site Work			\$ 729,000
1	Oxidation Ditch	\$ 15	\$ 60,000
2	Anoxic Zone	\$ 15	\$ 72,000
3	Secondary Clarifier	\$ 15	\$ 11,000
4	EQ Basin	\$ 15	\$ 46,000
5	Sludge Holding Tank	\$ 15	\$ 5,000
6	Percolation Ponds	\$ 15	\$ 535,000
Division 3 - Concrete			\$ 2,636,000
2	Ox Ditch Concrete Structure	\$ 1,000	\$ 614,000
3	Ox Ditch Anoxic Zone Concrete Structure	\$ 1,000	\$ 500,000
4	EQ Basin Concrete Structure	\$ 1,000	\$ 1,053,000
4	Secondary Clarifier Concrete Structure	\$ 1,000	\$ 180,000
5	Sludge Holding Tank Concrete Structure	\$ 1,000	\$ 139,000
6	Extend CCT	\$ 150,000	\$ 150,000
Division 11 - Equipment			\$ 6,020,000
1	Bar Screen	\$ 112,000	\$ 112,000
2	Grinder	\$ 14,000	\$ 14,000
3	Oxidation Ditch Mechanism	\$ 288,000	\$ 576,000
4	Anoxic Zone Mixer (5 HP)	\$ 110,000	\$ 330,000
5	Secondary Clarifier Mechanism	\$ 342,000	\$ 684,000
6	Disk filter (x2), floc/coag, and piping	\$1,760,000	\$ 2,400,000
7	NaOCl tank, pumps, & piping	\$ 165,000	\$ 225,000
8	NaOCl mix vault and static mixer	\$ 165,000	\$ 225,000
9	RW pumps	\$ 330,000	\$ 450,000
10	Miscellaneous Equipment (20% of equipment)	\$1,003,200	\$ 1,004,000
Division 15 - Mechanical			\$ 1,000,000
1	Civil Piping (8%)	\$1,000,000	\$ 1,000,000

Alternative 5: Upgrade of the WWTF to tertiary level to meet Title 22 regulations for disinfected, tertiary recycled water to total capacity of Project: 750,000 gpd. Client: Borrego Water District Date: August 23, 2022	11958.06
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Item	Item Description	Total \$/Unit	Total Net Cost \$
	Division 16 - Electrical		\$ 1,250,000
1	Electrical (10% of overall construction cost)	\$1,250,000	\$ 1,250,000
	Division 17 - Process Instrumentation, Controls and Monitoring		\$ 350,000
1	Sensors and Alarms (3% of overall construction cost)	\$ 350,000	\$ 350,000
Total			\$ 12,560,000

BORREGO WATER DISTRICT
BOARD OF DIRECTORS MEETING
AUGUST 23, 2022
AGENDA ITEM II.C

August 16, 2022

TO: Board of Directors
FROM: Geoffrey Poole, General Manager
SUBJECT: Pipeline Replacement Program Recommendations – D Dale

RECOMMENDED ACTION:

Receive Analysis of pipeline replacement alternatives and direct staff as deemed appropriate

ITEM EXPLANATION:

David Dale and I have developed the attached evaluation of identifying the needs and construction contracting alternatives for BWD water pipeline replacement program. In summary, staff is recommending bidding one and two year contract alternates for installation of two miles of pipeline per year. The contractor will provide labor and equipment and BWD will provide the remaining services, see attachment for specifics.

NEXT STEPS

Create bid documents

FISCAL IMPACT

\$2M over 4 years

ATTACHMENTS

1. Staff Analysis

8/16/22

To: Board of Directors
From: Geoff Poole, General Manager Borrego Water District
David Dale, District Engineer
Re: Strategy for Future BWD Water Pipeline Replacement

Introduction:

As shown in the analysis below, BWD has a significant backlog of pipeline replacement work in its water system. BWD District Engineer, David Dave – RCE, conducted a system wide WaterCad pipeline analysis and determined there is approximately 90 miles of pipelines in the water system and approximately 47 miles in need of replacement as soon as possible. Criteria used to create the two prioritized lists included the areas that have the greatest likelihood of failure as well as the projects that benefit the largest number of customers.

Timelines for completion work and rate impacts needed to fund the estimated \$25-30 M (2022 dollars) is based on affordability and grant funding, which offsets the need for rate increases. The multimillion questions are: How soon can the pipelines be replaced without creating significant rate increases that impact affordability AND what is the most effective construction contracting method to complete the projects?

Affordability:

Approximately two years ago, BWD completed the Proposition 218 rate setting Process. As part of this Process, a complex 5-year Rate Study was created that includes a financial model of anticipated revenues and expenses. The Study is used to set rates to fund BWD activities. Following a Public Hearing in May 2021, the Board approved new rates that will last thru 2025-26. Once the new rates are set, they cannot be changed prior to 25-26 unless the Prop 218 process is followed again. Therefore, BWD has limitation on how dramatic the revenue and expenses changes can be during the 4 years remaining on the current Prop 218 rate cycle. If dramatic increases in expenses are created and rates cannot be increased, revenue shortfalls are created and reserve funds depleted greater than expected.

The current annual CIP for the 4 years remaining in the Prop 218 rate cycle totals \$1,568,500 with \$953,000 coming from cash reserves and \$615,500 from existing Bond proceeds. The annual average expense for the 4 years is \$392,125. At this time, Staff is comfortable defining affordability as \$2,000,000 total over the next 4 years or \$500,000/year. Translating affordability into feet of pipe, a \$2 M budget will yield an estimated one mile of pipe per year for 4 years or 2 miles of pipe for 2 years and none for the remaining 2 years or any combination thereof.

In 3 years from now, when planning for the next round of Prop 218 rates begins, special attention will be paid to the question of affordability and the subsequent rate increases starting in 2026. The goal will be to increase the amount of pipe being replaced every year.

Service Life of Water Pipelines

In terms of prioritizing projects, staff feels all 4-inch diameter and most of the 6-inch diameter pipe should be replaced for three reasons: (1) it was installed between 40 and 60 years ago; (2) it is made of an asbestos cement material; (3) in many cases is undersized to adequately convey proper fire flow to the fire hydrants.

In addition to “old age”, the approximately 90 miles of water pipeline in BWDs system sees higher than normal pressures (up to 150psi) in various areas, which can reduce the life expectancy of the pipe. With this criteria in mind, each Improvement District (ID) was analyzed to determine the total length of each section of pipeline. The following tables were derived using the WaterCAD model of the distribution system.

As shown in the following tables, at least 53% of the total pipeline infrastructure should be replaced, which represents about 48 miles. Additionally, there are about 8 miles of transmission mains that should be installed. The total then would be about 56 miles of pipe that need to be installed within the next 25 years and preferably sooner.

ID-1 and 3 comprise the Rams Hill development area. Some of the pipelines in this area were installed in the 80’s. They not considered high priority to be addressed within the next 35 years because the pipe is sized adequately and is of PVC construction and therefore has a longer useful life. However, it will need to be replaced if pipeline ruptures are noted, within the next 25-35 years.

ID 1, ID 3, ID 4, ID 5						
EXISTING BWD DISTRIBUTION PIPE			PIPE TO BE REPLACED IN THE NEXT 25 YEARS			
Size Pipe	LF	Miles	Size Pipe	LF	MILES	% OF TOTAL
4"	45,520	8.6	4"	45,520	8.6	100%
6"	190,898	36.2	6"	179,548	34.0	94%
8"	130,272	24.7	8"	25,687	4.9	20%
10"	102,510	19.4	10"	0.0	0.0	0%
12"	6,084	1.2	12"	0.0	0.0	
total	475,284	88.9		250,755	47.5	
Percentage of total pipe needing to be replaced as soon as possible:						53.4%

ID 1 AND ID 3						
EXISTING BWD DISTRIBUTION PIPE			PIPE TO BE REPLACED IN THE NEXT 25 YEARS			
Size Pipe	LF	Miles	Size Pipe	LF	MILES	% OF TOTAL
4"	12,784	2.4	4"	12,784	2.4	100%
6"	31,142	5.9	6"	31,142	5.9	100%
8"	42,138	8.0	8"	0	0.0	0%
10"	73,556	13.9	10"	0.0	0.0	0%
12"	6,084	1.2	12"	0.0	0.0	
total	165,704	30.2		43,926	8.3	
Percentage of total pipe to be Replaced:						27.5%

ID 4 AND ID 5						
EXISTING BWD DISTRIBUTION PIPE			PIPE TO BE REPLACED IN THE NEXT 25 YEARS			
Size Pipe	LF	Miles	Size Pipe	LF	MILES	% OF TOTAL
4"	32,736	6.2	4"	32,736	6.2	100%
6"	159,756	30.3	6"	148,406	28.1	93%
8"	88,134	16.7	8"	25,687	4.9	29%
10"	28,954	5.5	10"	0.0	0.0	0%
12"	6,084	1.2	12"	0.0	0.0	
total	315,664	58.6		206,829	39.2	
Percentage of total pipe to be Replaced:						66.8%

Approximately 3 miles of the 6-inch diameter pipeline has been replaced in recent projects. The new pipes to be installed will be at least 6-inches in diameter and made of PVC or HDPE materials that will bring a much longer lifespan (between 50 and 100 years) The new pipes will be sized to convey adequate fire flow.

Method of Construction: In House vs Contractor Hybrid Approach

For purposes of this memorandum, an in-house construction crew and hybrid approach was considered to begin the pipeline replacement program. An in-house crew would be comprised of two new BWD employees and two existing crew members would assist with pipeline replacement for six months out of the year. For the other six months, the pipeline crew would assist BWD Operations Dept with routine maintenance and other activities.

The Hybrid approach would employ the use of a contractor to obtain the permits and supply the labor and equipment. The district would supply the pipe/parts/appurtenances (valves, fittings, fire hydrants, etc.), assist with traffic control, paving the open trenches, and such services as supplying trench plates when needed. Bids will be accepted from interested contractors for labor and equipment.

The District received quotes from local contractors to complete one mile of pipe under an annual contract. The costs for in-house crew to complete one mile of pipe was calculated and compared to the costs on a hybrid approach, where the district assists a contractor to complete the work under an annual contract. All costs were included when comparing the in-house and contractor pipeline installation. Based on the cost estimate for labor and equipment, it appears that the hybrid approach may be the most beneficial to the district. To replace one mile of pipeline using the hybrid approach, the annual cost for the first year would be an estimated **\$435,598**, while the in-house crew would cost an estimated **\$550,014**. Cost estimates for the In House and Hybrid options follow:

COST ESTIMATE DETAILS

In-House Estimate: 2 Additional Employees						
In-House Crew		Materials	Est. Cost	Cost per	Quantity	Unit
Crew Leader	\$ 135,200	Pipe	\$ 158,400	\$ 30	5,280	FT
Operator II	\$ 102,274	Valves	\$ 30,000	\$ 1,500	20	EA
Equipment	\$ 70,000	Fittings	\$ 15,840	\$ 15,840	1	LS
		Service Laterals	\$ 11,000	\$ 1,100	10	EA
		Fire Hydrants	\$ 14,000	\$ 7,000	2	EA
		Asphalt Replace	\$ 13,300	\$ 19	700	SF
Subtotal Labor& Equip	\$ 307,474	Subtotal Parts	\$ 242,540			
1-Mile Cost In house Crew						
	\$		550,014			
Cost/ft In house						
	\$		104			

Hybrid Approach - Contractor Labor						
Contractor Hybrid		Materials	Est. Cost	Cost per	Quantity	Unit
Contractor Quote	\$ 160,882	Pipe	\$ 158,400	\$ 30	5,280	FT
District Expenses (20%)	\$ 32,176	Valves	\$ 30,000	\$ 1,500	20	EA
		Fittings	\$ 15,840	\$ 15,840	1	LS
		Service Laterals	\$ 11,000	\$ 1,100	10	EA
		Fire Hydrants	\$ 14,000	\$ 7,000	2	EA
		Asphalt Replace	\$ 13,300	\$ 19	700	SF
Subtotal Labor& Equip	\$ 193,058	Subtotal Parts	\$ 242,540			
1-Mile Cost Hybrid						
\$			435,598			
Cost/ft Hybrid Approach						
\$			82			

Findings/Recommendations

*There is a need for a systematic pipeline replacement program of the Districts 90 mile water system.

*Authorize staff to develop bid and related documents for the hybrid construction approach, to start with a one-year contract for two miles of pipeline with an additional year option. If the first year works out well for the district, it has the option to extend for the following year. If it does not work out - or there is not enough funding to budget pipeline replacements for a particular year - the district can put the project on hold. Conversely, with the in-house option, the District could be forced to terminate recent hires or be locked in on an annual basis, at least for the additional labor costs of approximately \$300,000 per annum.

BORREGO WATER DISTRICT
BOARD OF DIRECTORS MEETING
AUGUST 23, 2022
AGENDA ITEM II.D

August 16, 2022

TO: Board of Directors

FROM: Geoffrey Poole, General Manager

SUBJECT: Water Supply Program – G Poole/T Baker/D Duncan

RECOMMENDED ACTION:

Review recommended Water Supply Program and direct staff as deemed appropriate

ITEM EXPLANATION:

Staff and the Ad Hoc Committee (Duncan/Baker) have developed the attached proposed Policy.

NEXT STEPS

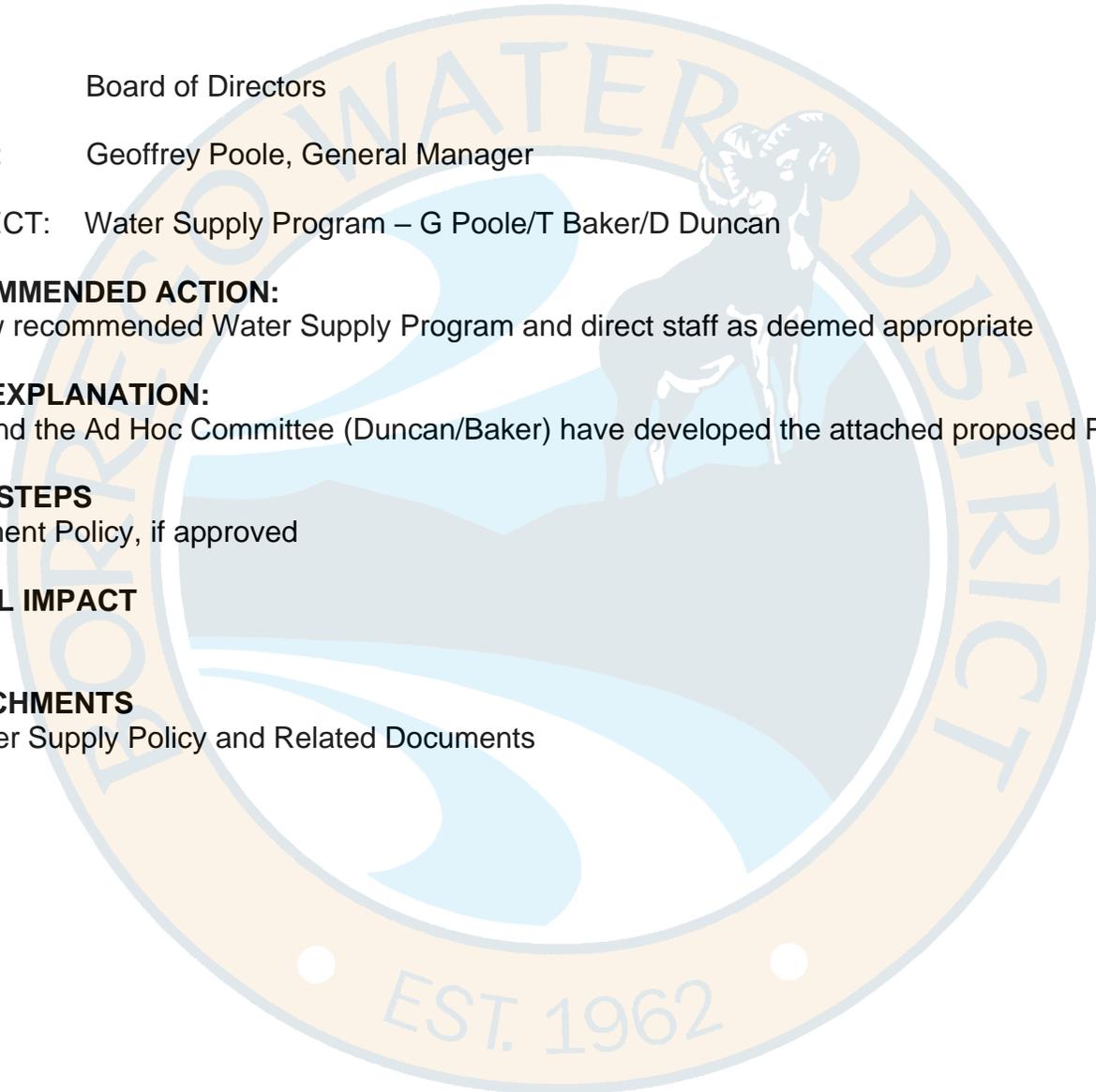
Implement Policy, if approved

FISCAL IMPACT

TBD

ATTACHMENTS

1. Water Supply Policy and Related Documents





Borrego Water District

Will Serve Letter for Water and/or Sewer Service

Applicant: _____ Address: _____

Date: _____

Following review of the Application for Water and/or Sewer Service on the subject property, the findings below have been made and conditions developed for your development ("Project") to receive water and/or sewer service from Borrego Water District ("BWD"). Subject to the conditions described herein, including but not limited to payment of all applicable fees and charges, water and or sewer service (if requested) for the Property is available from BWD as set forth herein.

WATER FINDINGS:

- 1. Annual Water Demands = 1.25 acre feet per year:** BWD has determined your proposed development is equivalent to the typical dwelling unit in Borrego Spring, which has been calculated at .5 acre feet per year (.5 afy = 162,925 gallons per year).
- 2. Meter Size = N/A:** The proposed Development will require at least this sized meter to meet projected potable, irrigation and fire flow demands.
- 3. Need for Backflow Prevention = Yes:** BWD must ensure the integrity of its water system by preventing water from flowing backwards from the proposed Development into the BWD system under certain conditions, known as Backflow. State law prescribes if and when Backflow Prevention is required and is the guiding factor in this finding.

WATER COST:

- 1. Water Supply Cost = .5 afy X \$9,650/AF = \$4,825.00:** The Borrego Springs Basin is ruled by a Stipulated Judgment agreed upon by the vast majority of basin pumpers and ruled favorably upon by the Orange County Superior Court in April 2021. The Basin is also critically overdrafted and pumping reductions of approximately 75% from 2020 to on or before 2040 are needed for Basin sustainability. Therefore, water rights must be purchased by BWD to provide the water to serve your development. To accommodate mandated annual pumping reductions, the BWD Board is requiring new connections to purchase 5X the annual water demands as an Overdraft Multiplier which is factored into the cost estimate above.
- 2. Capacity Fees = \$2530:** Capacity Fees are charged to offset the prior expenses incurred by BWD to construct and maintain the water system before the proposed Development is added to the system. Capacity Fees are also often described as a "Water System Buy-in" or a Connection Fee.
- 3. New Water Service (if needed) = \$5,360 or 4,000:** Various lots in Borrego Springs were constructed over the years that included a water service from the pipeline in the street to the

property line and other were not. For the Proposed Development, a water service was not installed. If applicable, this is the cost to install the service lateral.

4. Water Meter = \$930 : The meter is connected to the aforementioned water service. The cost identified for the meter reflects the actual cost including gaskets and installation by BWD.

5. TOTAL COST FOR WATER = \$0: This cost represents to total of the water related items identified above.

SEWER FINDINGS

1. Total Sewer Equivalent Dwelling Units for your proposed development is 0. The anticipated flow for your proposed development is consistent with similar projects in BWD and is equivalent to the typical dwelling unit in its service area. The following costs are based on the projected sewer capacity needs identified above.

SEWER COSTS

1. Sewer Treatment Plant Expansion Fee per EDU = \$: To provide sewer service to the proposed Development, a portion of the existing Plant Capacity will be dedicated and this fee covers the cost to expand the Plant in the future to offset the new demand.

2. Sewer Capacity Fee (System Buy in) = \$760: Capacity Fees are charged to offset the prior expenses incurred by BWD to construct and maintain the sewer system before the proposed Development is added to the system. Capacity Fees are also often described as a “sewer system buy-in.”

3. Sewer Connection and Inspection Fee = \$50: Fees are assessed to cover BWD costs.

4. TOTAL COST FOR SEWER = \$_____: The proposed development will be on a private septic system.

TOTAL COST ESTIMATE

1. Water \$0 + Sewer Costs \$_____ = \$0

If you desire to proceed under the terms outlined above and, in the attachments, please sign the Will Serve Terms and Conditions that follow.

Sincerely,

Geoffrey Poole, General Manager
W/ Attachments

Date

1. Will Serve Letter: Terms/Conditions & Will Serve Letter: General Conditions

2. RESOLUTION NO. 2021-08-02 ADOPTING BORREGO WATER DISTRICT PILOT PROGRAM REGARDING PROVISION OF WATER SUPPLY FOR SMALL DEVELOPMENT PROJECTS

3. Water Supply Pilot Program Conditions

WILL SERVE LETTER: TERMS AND CONDITIONS

1. Applicant represents and warrants that Applicant has read Resolution No. 2021-08-02 Adopting Borrego Water District Pilot Program Regarding Provision of Water Supply for Small Development Projects, attached hereto and incorporated herein as Exhibit "A" ("Exhibit A") and all exhibits and associated documents thereto, and Applicant represents and warrants that Applicant meets all requirements and conditions set forth therein. The Pilot Program provides for the lease of water supply from the District. Payment under such provisions constitutes a fee for the use, rental, or lease of local government property for purposes of article XIII C, section 1(e) of the California Constitution.
2. BWD service to the Property is conditioned upon receipt by BWD of all applicable payments for fees and charges, including but not limited to a \$200 Application Fee, all costs set forth herein, and all other costs identified by BWD or set by BWD policy.
3. BWD service to the Property is conditioned upon Applicant's compliance with all terms and conditions in the Pilot Program Conditions attached hereto and incorporated herein as Exhibit "B" ("Exhibit B") including but not limited to Applicant's use of native plant materials in landscape areas and water efficient appliances/equipment, Applicant's provision to BWD of County of San Diego and/or other regulatory agencies' interim and final approvals for the Project, and Applicant's provision to BWD of a valid Certificate of Occupancy or equivalent approval for the Project.
4. BWD service to the Property is conditioned upon Applicant's compliance with all terms and conditions in the Will Serve Letter: General Conditions attached hereto and incorporated herein as Exhibit "C" ("Exhibit C").
5. BWD service to the Property is conditioned upon Applicant's full satisfaction of all other BWD policies, standards, and requirements.
6. BWD service shall be undertaken in conformance with all BWD rules, regulations, ordinances, resolutions, policies and procedures for service.
7. This Will Serve Letter shall not constitute a vested right to receive water or sewer service at any particular level or any particular amount, nor does this letter impose, expand, or limit any duty concerning BWD's obligation to provide service to its existing customers or any future potential customers. Nothing herein prevents or otherwise interferes with BWD's discretionary authority to declare a water shortage emergency in accordance with Water Code section 350 *et seq.* and to take any and all related and other actions authorized by law. All service by BWD is provided in accordance with BWD's authority and discretion as a public agency.
8. If Applicant does not accept the conditions herein and execute this Will Serve Letter within 30 days of issuance, Applicant's application for the Project shall be withdrawn from BWD consideration.

9. If all conditions are timely accepted by Applicant and all fees and charges are paid, this Will Serve Letter shall be valid for twenty-four (24) months from issuance. This Will Serve Letter shall automatically terminate twenty-four (24) months from the date of issuance. The Project must be completed on the ground, a certificate of occupancy or equivalent approval must be issued for the Project, and BWD water service must commence before termination of this Will Serve Letter.

I, _____, ("Applicant") accept all projected costs and conditions outlined in the Will Serve Letter and all other conditions BWD may impose from time to time, and covenant to comply with all of the terms and conditions specified herein, including BWD's PILOT PROGRAM REGARDING PROVISION OF WATER SUPPLY FOR SMALL DEVELOPMENT PROJECTS.

I understand and acknowledge as Property Owner that BWD's water supply is the tangible property of BWD, and by making such tangible property available to Property Owner, Property Owner is using, renting, or leasing BWD's tangible property. As such, any fee paid for such water supply is a fee paid for use of local government property, or rental or lease of local government property, and the amount of such fee reasonably relates to the value of the local government property interest conveyed.

Property Owner/Representative

Date: _____

Will Serve Letter: General Conditions

The following provisions are from the Borrego Water District Administrative Code

1. If this is a new installation, the customer is required to clearly mark the property lines with a stake and mark the side of the lot where they prefer the new meter be installed (meter will be installed along one of the property lines within the street right-of-way). The District reserves the right to determine the final location of the meter.
2. Customer agrees to pay the monthly "Readiness to Serve Charge" from the "Water Rates" sheet and usage bill on or before the 24th of each month, or be subject to "late fees". An account delinquent for two (2) consecutive months or four (4) months within a twelve month period will be required to post a deposit equal to two months average bill for that account but not less than one hundred (\$100) dollars in order to continue or re-establish service.
3. Once a meter has been installed, the "Readiness to Serve Charge" will be billed monthly whether or not there is any usage. If the bill is not paid for any reason for a 3-month period of time, a lien will be placed on the property, the water meter will be subject to removal and new installation fees will apply.
4. Any payment by a check that is not honored will result in a penalty or a deposit being required.
5. It is the customer's responsibility to keep the meter box clear of landscaping, bees and debris, within 3 feet of the meter box. If the meter reader cannot read the meter due to any of the above, the District will estimate usage for that billing and the customer will be notified to clear the meter before the next reading. If a second notice is required, a fee determined by the Board from time to time, will be applied to the water bill.
6. Customer is responsible for all plumbing on their side of the water meter including functioning ball valve shut off.

7. Under no circumstance is the customer to operate the District's meter shut-off located on the street-side of the water meter. Customer will only use the shut-off valve on their side of the meter; if inoperable, contact the District office for assistance.
8. Customers are forbidden to attach any ground wire to any plumbing, which may, or may not be, connected to the District's distribution system.
9. The District agrees to provide 24-hour notice, if possible, when water is to be shut-off for repairs.
10. Customer will install and maintain a water pressure regulator on their side of the meter service. The District is not responsible for damage of personal property due to the fluctuation of water pressure.
11. The District or its duly authorized agents shall at all reasonable times have the right to enter or leave the customer's premises for any purpose reasonably related to the service of water to the customer.
12. Any change in meter size or change in meter location, requested by the customer, will be charged time and materials and will be performed at the discretion of the District.
13. It is the responsibility of the customer to notify the District of any change of ownership or change of billing address. For your protection, in case of any emergency situation, please make sure we have phone numbers on file to reach you in your absence from Borrego.
14. The District reserves the right to meter any service and to make the final determination as to the size and location of each service connection and meter.
15. In lieu of providing a Certificate of Liability Insurance, I hereby declare that I will assume all responsibility for any damage done to the water meter or the water system as a result of my connection to the system.
16. Wasteful or negligent use of water on a customer's premises is expressly prohibited. Such use may result in discontinuance of service as provided by other applicable sections of the District's Administrative Code, or other applicable ordinance of the District.

RESOLUTION NO. 2021-08-02 ADOPTING BORREGO WATER DISTRICT PILOT PROGRAM REGARDING PROVISION OF WATER SUPPLY FOR SMALL DEVELOPMENT PROJECTS

WHEREAS, Borrego Water District (BWD) adopted its revised Policy For Water and Sewer Service for New Development (“Policy”) on April 27, 2021.

WHEREAS, Section 3(b) of the Policy states that a “Developer shall be responsible for acquiring and conveying to BWD the required BPA [Baseline Production Allocation] needed to serve the development with water, in amounts determined by BWD.”

WHEREAS, since entry of Judgment in the Borrego Springs Subbasin Groundwater Adjudication lawsuit (*Borrego Water District v. All Persons Who Claim a Right to Extract Groundwater, et al*, Orange County case no. 37-2020-00005776), concern has been expressed by landowners and other persons seeking to build or install new single family homes, other small residences, or small commercial and industrial projects meeting the definition of Small Public Construction, or to expand existing residences or projects (“Projects”) that BPA is not readily available for purchase for such Projects from private BPA holders within the Borrego Springs Subbasin.

WHEREAS, while water credits (as referenced in the Judgment) were formerly made available by BWD to assist in making water supplies available to such small Projects, under Section III(A) of the Judgment, “[a]ll water credits issued by BWD and/or the County pursuant to the BWD’s Demand Offset Mitigation Water Credits Policy (revised May 19, 2015) have been converted to BPA” and the BWD’s Demand Offset Mitigation Water Credits Policy has been terminated.

WHEREAS, BWD has determined, subject to the conditions described below, that it is willing on a pilot basis to make a limited amount of its current water supply available to allow Projects within BWD’s service area meeting the criteria described herein to become regular customers of BWD.

WHEREAS, BWD has also determined, subject to the conditions described below, that it is willing to make available water supply for new, small projects advanced for the public benefit and constructed by public agencies or public utilities (“Small Public Construction”) in need of up to one (1) acre-foot of water service (i.e., those Projects that require up to the equivalent of five (5) BPA),

provided that the proponents of such public projects will become regular BWD customers and are located within BWD's service area.

WHEREAS, the pilot program will operate for a limited period of time, as described below, with the goal and expectation that a private or other non-BWD sponsored market for the acquisition and sale of BPA may develop in the interim.

WATER SUPPLY PILOT PROGRAM CONDITIONS

1. Subject to the conditions outlined below, beginning on August 30, 2021, BWD intends to make BWD water service available to proponents of qualifying Projects, including Small Public Construction, within the BWD service area with an estimated water supply demand of up to one (1) acre foot per year or less. Such provision shall constitute use, rental, or lease of local government property.
2. Applications for such BWD water service from proponents of eligible Projects will be accepted by BWD from August 24, 2021 forward, on a first-come, first serve basis with the application date given by BWD upon submitting an application in person at BWD office. No more than one application will be accepted for any landowner, Project proponent, Small Public Construction proponent or parcel. Applications and any commitment for water service made available under the pilot program are not assignable to any other land, parcel, or Project. Applications and any commitment for water service may be assigned to a new owner of a Project for which an application has been submitted or a BWD commitment made only with the advance, express written permission of BWD.
3. For the totality of all Projects, including Small Public Construction, collectively, BWD will make water supply available in a total amount of up to six (6) acre feet of estimated demand under this pilot program. Once that total amount is exhausted, no further BWD-owned water supply or water service will be made available under the pilot program to existing or future applicants, except as may be determined by the BWD Board of Directors.
4. The pilot program described herein will terminate on the earlier of: (1) Will Serve Letters, as described below, being issued by BWD in favor of Projects, including Small Public Construction, in an amount of six (6) acre feet of water service, or (2) December 31, 2023, whichever occurs first.
5. Applicants will be required to submit a BWD Commitment to Secure Water Rights for Small Developments Acknowledgement Form ("Acknowledgement") and New Meter Application ("Application") to BWD substantially in the form of the attached Exhibit B. Applications must be completed in full and be submitted along with all required documentation to BWD at the BWD Office. The application form may be modified by BWD staff, as reasonably determined by the BWD General Manager.
6. The Application review fee will be \$200, non-refundable.
7. The cost to the Applicant of acquiring the BWD water supply made available under this pilot project (i.e., the "Water Supply Charges") will be calculated by multiplying the estimated annual water demand of the Project in acre feet (af), as verified by BWD staff, times \$8,725 . The

Water Supply Charge will be subject to change at the discretion of the BWD Board of Directors. Such amount is reasonably related to the value of the government property conveyed.

8. Applications will be reviewed by BWD in the order received, provided such applications are complete and the application fee is paid in full.
9. Incomplete applications will be returned to the applicant. For prioritization purposes, applications will retain their original filing dates, so long as complete applications are resubmitted to BWD within thirty (30) days after BWD's mailing out of incomplete applications back to the Applicant.
10. To qualify for BWD water service, Projects, including Small Public Construction, must use native plant materials in landscaped areas, and water efficient appliances/equipment.
11. Applicants shall meet all of the following conditions:
 - a. Applicants shall attest on the Acknowledgement form that they have searched for and been unable to locate BPA for sale for a reasonable price by any holders of BPA.
 - b. The applicant must provide BWD with evidence of County of San Diego interim and final approval of the Project, including Permit Number, Building Permit and Certificate of Occupancy—whether by written approval or waiver of County requirements by virtue of the Project's type or size—or a pending land use application for the Project, if any. If County of San Diego approval is not required (e.g., for Small Public Construction), the Applicant shall provide evidence to BWD of the status or formal approval by the regulatory agency, if any, required to approve such Project or Small Public Construction. See Procedures for details (Exhibit A).
12. If all of the above requirements and conditions are met after BWD's ministerial review of an application, and BWD water supply and service under this pilot program is still available at the time BWD's review of an application is complete, BWD will so notify the applicant of all conditions needed to be met to establish water service in a Will Serve Letter. The following additional steps will then occur:
 - a. BWD will produce a "Will Serve" Letter indicating the conditions under which BWD will provide water service to a qualifying Project, which will include a BWD-cost estimate for the Project (including Small Public Construction) to obtain water service.
 - b. Will Serve Letters will be valid for no more than twenty-four (24) months. All Projects must be completed on the ground, a certificate of occupancy or equivalent approval issued for the Project or Small Public Construction, and BWD water service commenced within such timeframe. If after 30 days, the Applicant does not accept Conditions, the Application is withdrawn from consideration. Once fees are paid, BWD will issue WSL valid for 24 months unless extended, for cause, as determined by BWD. Customer will receive refund of any charges paid to BWD upon termination of WSL, provided that BWD construction, design, processing and related fees accrued to date will be non-refundable.
13. Before BWD will commence water service to a Project:

- a. All applicable BWD fees and charges must be paid, including but not limited to the BWD Water Supply Charge, meter/service charge and other costs identified by BWD or set by BWD policy.
- b. For construction purposes only, water service may be temporarily provided by BWD through a newly installed meter at the qualifying Project site.
- c. The applicant will provide BWD with a valid Certificate of Occupancy or equivalent approval for the Project or Small Public Construction to establish water service.
- d. All other BWD policies, standards and requirements must have been satisfied in full.



Borrego Water District

Will Serve Letter for Water and/or Sewer Service

Applicant: _____ **Address:** address **APN:** _____

Date: date

Following review of the Application for Water and/or Sewer Service on the subject property, the findings below have been made and conditions developed for your development ("Project") to receive water and/or sewer service from Borrego Water District ("BWD"). Subject to the conditions described herein, including but not limited to payment of all applicable fees and charges, water and or sewer service (if requested) for the Property is available from BWD as set forth herein.

WATER FINDINGS:

- 1. Annual Water Demands = .5 acre feet per year:** BWD has determined your proposed development is equivalent to the typical dwelling unit in Borrego Springs, which has been calculated at .5 acre feet per year (.5 afy = 162,925 gallons per year).
- 2. Meter Size = 1":** The proposed Development will require at least this size meter to meet projected potable, irrigation and fire flow demands.
- 3. Need for Backflow Prevention = No:** BWD must ensure the integrity of its water system by preventing water from flowing backwards from the proposed Development into the BWD system under certain conditions, known as Backflow. State law prescribes if and when Backflow Prevention is required and is the guiding factor in this finding.

WATER COST:

- 1. Water Supply Cost = .5 afy X \$9,650/AF = \$4,825.00:** The Borrego Springs Basin is ruled by a Stipulated Judgment agreed upon by the vast majority of basin pumpers and ruled favorably upon by the Orange County Superior Court in April 2021. The Basin is also critically overdrafted and pumping reductions of approximately 75% from 2020 to on or before 2040 are needed for Basin sustainability. Therefore, water rights must be purchased by BWD to provide the water to serve your development. To accommodate mandated annual pumping reductions, the BWD Board is requiring new connections to purchase 5X the annual water demands as an Overdraft Multiplier, which is all factored into the cost estimate above.
- 2. Capacity Fees = \$2,530:** Capacity Fees are charged to offset the prior expenses incurred by BWD to construct and maintain the water system before the proposed Development is added. Capacity Fees are also often described as a "Water System Buy-in" or a Connection Fee.
- 3. New Water Service (if needed) = \$5,360 or 4,000_____** Various lots in Borrego Springs were constructed over the years that included a water service from the pipeline in the street to the

property line and others were not. For the Proposed Development, a water service was not installed. If applicable, this is the cost to install the service lateral.

4. Water Meter = \$930: The meter is connected to the aforementioned water service. The cost identified for the meter reflects the actual cost including gaskets and installation by BWD.

5. TOTAL COST FOR WATER = \$_____: This cost represents to total of the water related items identified above.

SEWER FINDINGS

- 1. Total sewer Equivalent Dwelling Units for your proposed development is 0 due to the fact a septic tank will be used.

SEWER COSTS

- 1. **TOTAL COST FOR SEWER = \$ 0:** The proposed development will be on a private septic system.

TOTAL COST ESTIMATE

- 1. **Water \$_____ + Sewer Costs \$0 = \$_____ TOTAL DUE.**

If you desire to proceed under the terms outlined above and, in the attachments, please sign the Will Serve Terms and Conditions that follow.

Sincerely,



Geoffrey Poole, General Manager

Date

W/ Attachments

- 1. Will Serve Letter: Terms/Conditions & Will Serve Letter: General Conditions
- 2. RESOLUTION NO. 2021-08-02 ADOPTING BORREGO WATER DISTRICT PILOT PROGRAM REGARDING PROVISION OF WATER SUPPLY FOR SMALL DEVELOPMENT PROJECTS
- 3. Water Supply Pilot Program Conditions

WILL SERVE LETTER: TERMS AND CONDITIONS

1. Applicant represents and warrants that Applicant has read Resolution No. 2021-08-02 Adopting Borrego Water District Pilot Program Regarding Provision of Water Supply for Small Development Projects, attached hereto and incorporated herein as Exhibit “A” (“Exhibit A”) and all exhibits and associated documents thereto, and Applicant represents and warrants that Applicant meets all requirements and conditions set forth therein. The Pilot Program provides for the lease of water supply from the District. Payment under such provisions constitutes a fee for the use, rental, or lease of local government property for purposes of article XIII C, section 1(e) of the California Constitution.
2. BWD service to the Property is conditioned upon receipt by BWD of all applicable payments for fees and charges, including but not limited to a \$200 Application Fee, all costs set forth herein, and all other costs identified by BWD or set by BWD policy.
3. BWD service to the Property is conditioned upon Applicant’s compliance with all terms and conditions in the Pilot Program Conditions attached hereto and incorporated herein as Exhibit “B” (“Exhibit B”) including but not limited to Applicant’s use of native plant materials in landscape areas and water efficient appliances/equipment, Applicant’s provision to BWD of County of San Diego and/or other regulatory agencies’ interim and final approvals for the Project, and Applicant’s provision to BWD of a valid Certificate of Occupancy or equivalent approval for the Project.
4. BWD service to the Property is conditioned upon Applicant’s compliance with all terms and conditions in the Will Serve Letter: General Conditions attached hereto and incorporated herein as Exhibit “C” (“Exhibit C”).
5. BWD service to the Property is conditioned upon Applicant’s full satisfaction of all other BWD policies, standards, and requirements.
6. BWD service shall be undertaken in conformance with all BWD rules, regulations, ordinances, resolutions, policies and procedures for service.
7. This Will Serve Letter shall not constitute a vested right to receive water or sewer service at any particular level or any particular amount, nor does this letter impose, expand, or limit any duty concerning BWD’s obligation to provide service to its existing customers or any future potential customers. Nothing herein prevents or otherwise interferes with BWD’s discretionary authority to declare a water shortage emergency in accordance with Water Code section 350 *et seq.* and to take any and all related and other actions authorized by law. All service by BWD is provided in accordance with BWD’s authority and discretion as a public agency.
8. If Applicant does not accept the conditions herein and execute this Will Serve Letter within 30 days of issuance, Applicant’s application for the Project shall be withdrawn from BWD consideration.

9. If all conditions are timely accepted by Applicant and all fees and charges are paid, this Will Serve Letter shall be valid for twenty-four (24) months from issuance. This Will Serve Letter shall automatically terminate twenty-four (24) months from the date of issuance. The Project must be completed on the ground, a certificate of occupancy or equivalent approval must be issued for the Project, and BWD water service must commence before termination of this Will Serve Letter.

I, _____, ("Applicant") accept all projected costs and conditions outlined in the Will Serve Letter and all other conditions BWD may impose from time to time, and covenant to comply with all of the terms and conditions specified herein, including BWD's PILOT PROGRAM REGARDING PROVISION OF WATER SUPPLY FOR SMALL DEVELOPMENT PROJECTS.

Property Owner/Representative

Date: _____

Will Serve Letter: General Conditions

Exhibit C

The following provisions are from the Borrego Water District Administrative Code

1. If this is a new installation, the customer is required to clearly mark the property lines with a stake and mark the side of the lot where they prefer the new meter be installed (meter will be installed along one of the property lines within the street right-of-way). The District reserves the right to determine the final location of the meter.
2. Customer agrees to pay the monthly "Readiness to Serve Charge" from the "Water Rates" sheet and usage bill on or before the 24th of each month, or be subject to "late fees". An account delinquent for two (2) consecutive months or four (4) months within a twelve month period will be required to post a deposit equal to two months average bill for that account but not less than one hundred (\$100) dollars in order to continue or re-establish service.
3. Once a meter has been installed, the "Readiness to Serve Charge" will be billed monthly whether or not there is any usage. If the bill is not paid for any reason for a 3-month period of time, a lien will be placed on the property, the water meter will be subject to removal and new installation fees will apply.
4. Any payment by a check that is not honored will result in a penalty or a deposit being required.
5. It is the customer's responsibility to keep the meter box clear of landscaping, bees and debris, within 3 feet of the meter box. If the meter reader cannot read the meter due to any of the above, the District will estimate usage for that billing and the customer will be notified to clear the meter before the next reading. If a second notice is required, a fee determined by the Board from time to time, will be applied to the water bill.
6. Customer is responsible for all plumbing on their side of the water meter including functioning ball valve shut off.
7. Under no circumstance is the customer to operate the District's meter shut-off located on the street-side of the water meter. Customer will only use the shut-off valve on their side of the meter; if inoperable, contact the District office for assistance.
8. Customers are forbidden to attach any ground wire to any plumbing, which may, or may not be, connected to the District's distribution system.
9. The District agrees to provide 24-hour notice, if possible, when water is to be shut-off for repairs.

10. Customer will install and maintain a water pressure regulator on their side of the meter service. The District is not responsible for damage of personal property due to the fluctuation of water pressure.
11. The District or its duly authorized agents shall at all reasonable times have the right to enter or leave the customer's premises for any purpose reasonably related to the service of water to the customer.
12. Any change in meter size or change in meter location, requested by the customer, will be charged time and materials and will be performed at the discretion of the District.
13. It is the responsibility of the customer to notify the District of any change of ownership or change of billing address. For your protection, in case of any emergency situation, please make sure we have phone numbers on file to reach you in your absence from Borrego.
14. The District reserves the right to meter any service and to make the final determination as to the size and location of each service connection and meter.
15. In lieu of providing a Certificate of Liability Insurance, I hereby declare that I will assume all responsibility for any damage done to the water meter or the water system as a result of my connection to the system.
16. Wasteful or negligent use of water on a customer's premises is expressly prohibited. Such use may result in discontinuance of service as provided by other applicable sections of the District's Administrative Code, or other applicable ordinance of the District.

WATER SUPPLY PILOT PROGRAM CONDITIONS

Exhibit B

1. Subject to the conditions outlined below, beginning on August 30, 2021, BWD intends to make BWD water service available to proponents of qualifying Projects, including Small Public Construction, within the BWD service area with an estimated water supply demand of up to one (1) acre foot per year or less. Such provision shall constitute use, rental, or lease of local government property.
2. Applications for such BWD water service from proponents of eligible Projects will be accepted by BWD from August 24, 2021 forward, on a first-come, first serve basis with the application date given by BWD upon submitting an application in person at BWD office. No more than one application will be accepted for any landowner, Project proponent, Small Public Construction proponent or parcel. Applications and any commitment for water service made available under the pilot program are not assignable to any other land, parcel, or Project. Applications and any commitment for water service may be assigned to a new owner of a Project for which an application has been submitted or a BWD commitment made only with the advance, express written permission of BWD.
3. For the totality of all Projects, including Small Public Construction, collectively, BWD will make water supply available in a total amount of up to six (6) acre feet of estimated demand under this pilot program. Once that total amount is exhausted, no further BWD-owned water supply or water service will be made available under the pilot program to existing or future applicants, except as may be determined by the BWD Board of Directors.
4. The pilot program described herein will terminate on the earlier of: (1) Will Serve Letters, as described below, being issued by BWD in favor of Projects, including Small Public Construction, in an amount of six (6) acre feet of water service, or (2) December 31, 2023, whichever occurs first.
5. Applicants will be required to submit a BWD Commitment to Secure Water Rights for Small Developments Acknowledgement Form ("Acknowledgement") and New Meter Application ("Application") to BWD. Applications must be completed in full and be submitted along with all required documentation to BWD at the BWD Office. The application form may be modified by BWD staff, as reasonably determined by the BWD General Manager.
6. The Application review fee will be \$200, non-refundable.
7. The cost to the Applicant of acquiring the BWD water supply made available under this pilot project (i.e., the "Water Supply Charges") will be calculated by multiplying the estimated annual water demand of the Project in acre feet (af), as verified by BWD staff, times \$8,725 . The Water Supply Charge will be subject to change at the discretion of the BWD Board of Directors. Such amount is reasonably related to the value of the government property conveyed.

8. Applications will be reviewed by BWD in the order received, provided such applications are complete and the application fee is paid in full.
9. Incomplete applications will be returned to the applicant. For prioritization purposes, applications will retain their original filing dates, so long as complete applications are resubmitted to BWD within thirty (30) days after BWD's mailing out of incomplete applications back to the Applicant.
10. To qualify for BWD water service, Projects, including Small Public Construction, must use native plant materials in landscaped areas, and water efficient appliances/equipment.
11. Applicants shall meet all of the following conditions:
 - a. Applicants shall attest on the Acknowledgement form that they have searched for and been unable to locate BPA for sale for a reasonable price by any holders of BPA.
 - b. The applicant must provide BWD with evidence of County of San Diego interim and final approval of the Project, including Permit Number, Building Permit and Certificate of Occupancy—whether by written approval or waiver of County requirements by virtue of the Project's type or size—or a pending land use application for the Project, if any. If County of San Diego approval is not required (e.g., for Small Public Construction), the Applicant shall provide evidence to BWD of the status or formal approval by the regulatory agency, if any, required to approve such Project or Small Public Construction.
12. If all of the above requirements and conditions are met after BWD's ministerial review of an application, and BWD water supply and service under this pilot program is still available at the time BWD's review of an application is complete, BWD will so notify the applicant of all conditions needed to be met to establish water service in a Will Serve Letter. The following additional steps will then occur:
 - a. BWD will produce a "Will Serve" Letter indicating the conditions under which BWD will provide water service to a qualifying Project, which will include a BWD-cost estimate for the Project (including Small Public Construction) to obtain water service.
 - b. Will Serve Letters will be valid for no more than twenty-four (24) months. All Projects must be completed on the ground, a certificate of occupancy or equivalent approval issued for the Project or Small Public Construction, and BWD water service commenced within such timeframe. If after 30 days, the Applicant does not accept Conditions, the Application is withdrawn from consideration. Once fees are paid, BWD will issue WSL valid for 24 months unless extended, for cause, as determined by BWD. Customer will receive refund of any charges paid to BWD upon termination of WSL, provided that BWD construction, design, processing and related fees accrued to date will be non-refundable.
13. Before BWD will commence water service to a Project:
 - a. All applicable BWD fees and charges must be paid, including but not limited to the BWD Water Supply Charge, meter/service charge and other costs identified by BWD or set by BWD policy.

- b. For construction purposes only, water service may be temporarily provided by BWD through a newly installed meter at the qualifying Project site.
- c. The applicant will provide BWD with a valid Certificate of Occupancy or equivalent approval for the Project or Small Public Construction to establish water service.
- d. All other BWD policies, standards and requirements must have been satisfied in full.

RESOLUTION NO. 2021-08-02 ADOPTING BORREGO WATER DISTRICT PILOT PROGRAM REGARDING PROVISION OF WATER SUPPLY FOR SMALL DEVELOPMENT PROJECTS

Exhibit A

WHEREAS, Borrego Water District (BWD) adopted its revised Policy For Water and Sewer Service for New Development (“Policy”) on April 27, 2021.

WHEREAS, Section 3(b) of the Policy states that a “Developer shall be responsible for acquiring and conveying to BWD the required BPA [Baseline Production Allocation] needed to serve the development with water, in amounts determined by BWD.”

WHEREAS, since entry of Judgment in the Borrego Springs Subbasin Groundwater Adjudication lawsuit (*Borrego Water District v. All Persons Who Claim a Right to Extract Groundwater, et al*, Orange County case no. 37-2020-00005776), concern has been expressed by landowners and other persons seeking to build or install new single family homes, other small residences, or small commercial and industrial projects meeting the definition of Small Public Construction, or to expand existing residences or projects (“Projects”) that BPA is not readily available for purchase for such Projects from private BPA holders within the Borrego Springs Subbasin.

WHEREAS, while water credits (as referenced in the Judgment) were formerly made available by BWD to assist in making water supplies available to such small Projects, under Section III(A) of the Judgment, “[a]ll water credits issued by BWD and/or the County pursuant to the BWD’s Demand Offset Mitigation Water Credits Policy (revised May 19, 2015) have been converted to BPA” and the BWD’s Demand Offset Mitigation Water Credits Policy has been terminated.

WHEREAS, BWD has determined, subject to the conditions described below, that it is willing on a pilot basis to make a limited amount of its current water supply available to allow Projects within BWD’s service area meeting the criteria described herein to become regular customers of BWD.

WHEREAS, BWD has also determined, subject to the conditions described below, that it is willing to make available water supply for new, small projects advanced for the public benefit and constructed by public agencies or public utilities (“Small Public Construction”) in need of up to one (1) acre-foot of water service (i.e., those Projects that require up to the equivalent of five (5) BPA), provided that the proponents of such public projects will become regular BWD customers and are located within BWD’s service area.

WHEREAS, the pilot program will operate for a limited period of time, as described below, with the goal and expectation that a private or other non-BWD sponsored market for the acquisition and sale of BPA may develop in the interim.

IV.A

JUNE 2022 FINANCIALS





TREASURER'S REPORT July 2022

	Bank Balance	Carrying Value	Fair Value	<u>% of Portfolio</u> Current Actual	Rate of Interest	Maturity	Valuation Source
Cash and Cash Equivalents:							
Demand Accounts at CVB/LAIF							
General Account/Petty Cash	\$ 5,020,693	\$ 5,069,987	\$ 5,069,987	58.11%	0.49%	N/A	CVB/WF
Payroll Account	\$ 28,989	\$ 29,711	\$ 29,711	0.34%	0.00%	N/A	WF
2021 Bond Funds	\$ 1,556,682	\$ 1,556,682	\$ 1,556,682	17.84%	0.00%	N/A	WF
LAIF	\$ 2,069,053	\$ 2,069,053	\$ 2,069,053	23.71%	0.22%	N/A	LAIF
Total Cash and Cash Equivalents	<u>\$ 8,675,417</u>	<u>\$ 8,725,434</u>	<u>\$ 8,725,434</u>	<u>100.00%</u>			
Facilities District No. 2017-1A-B		7,168,752					
Special Tax Bond- Rams Hill -US BANK	\$ 291,798	\$ 291,798	\$ 291,798				
Total Cash,Cash Equivalents & Investments	<u>\$ 8,967,215</u>	<u>\$ 9,017,232</u>	<u>\$ 9,017,232</u>				

Cash and investments conform to the District's Investment Policy statement filed with the Board of Directors on June 09, 2020
 Cash, investments and future cash flows are sufficient to meet the needs of the District for the next six months.
 Sources of valuations are CVB Bank, LAIF and US Trust Bank.

Jessica Clabaugh, Finance Officer



ASSETS

	BALANCE SHEET	BALANCE SHEET	MONTHLY
	July 31, 2022	June 30, 2022	CHANGE
	<u>(unaudited)</u>	<u>(unaudited)</u>	<u>(unaudited)</u>
CURRENT ASSETS			
Cash and cash equivalents	\$ 9,270,794.13	\$ 9,216,522.36	\$ 54,271.77
Accounts receivable from water sales and sewer charges	\$ 1,182,600.74	\$ 795,950.74	\$ 386,650.00
Inventory	\$ 169,482.77	\$ 159,524.88	\$ 9,957.89
TOTAL CURRENT ASSETS	\$ 10,792,360.41	\$ 10,331,522.86	\$ 460,837.55
RESTRICTED ASSETS			
Debt Service:			
Unamortized bond issue costs	\$ 125,185.22	\$ 125,185.22	\$ -
Viking Ranch Refinance issue costs	\$ (59,801.23)	\$ (59,801.23)	\$ -
Deferred Outflow of Resources-CalPERS	\$ 256,166.00	\$ 256,166.00	\$ -
Total Debt service	\$ 321,549.99	\$ 321,549.99	\$ -
Trust/Bond funds:			
Investments with fiscal agent -CFD 2017-1	\$ 678,425.53	\$ 678,425.53	\$ -
Total Trust/Bond funds	\$ 678,425.53	\$ 678,425.53	\$ -
TOTAL RESTRICTED ASSETS	\$ 999,975.52	\$ 999,975.52	
UTILITY PLANT IN SERVICE			
Land	\$ 2,316,233.53	\$ 2,316,233.53	\$ -
Flood Control Facilities	\$ 4,287,340.00	\$ 4,287,340.00	\$ -
Capital Improvement Projects	\$ 2,824,504.41	\$ 2,804,689.66	\$ 19,814.75
Bond funded CIP Expenses	\$ 2,285,038.92	\$ 2,267,182.37	\$ 17,856.55
Sewer Facilities	\$ 6,226,548.11	\$ 6,226,548.11	\$ -
Water facilities	\$ 15,309,185.96	\$ 15,309,185.96	\$ -
General facilities	\$ 1,006,881.07	\$ 1,006,881.07	\$ -
Equipment and furniture	\$ 716,046.50	\$ 716,046.50	\$ -
Vehicles	\$ 687,296.74	\$ 687,296.74	\$ -
Accumulated depreciation	\$ (13,904,350.07)	\$ (13,904,350.07)	\$ -
NET UTILITY PLANT IN SERVICE	\$ 21,754,725.17	\$ 21,717,053.87	\$ 37,671.30
OTHER ASSETS			
Water rights -ID4	\$ 185,000.00	\$ 185,000.00	\$ -
TOTAL OTHER ASSETS	\$ 185,000.00	\$ 185,000.00	
TOTAL ASSETS	\$ 33,732,061.10	\$ 33,233,552.25	\$ 498,508.85



Balance sheet continued

	BALANCE SHEET July 31, 2022 <i>(unaudited)</i>	BALANCE SHEET June 30, 2022 <i>(unaudited)</i>	MONTHLY CHANGE <i>(unaudited)</i>
LIABILITIES			
CURRENT LIABILITIES PAYABLE FROM CURRENT ASSETS			
Accounts Payable	\$ 9,798.91	\$ (307.17)	\$ 10,106.08
Accrued expenses	\$ 243,104.88	\$ 209,192.22	\$ 33,912.66
Deposits	\$ 352,095.50	\$ 352,095.50	\$ -
TOTAL CURRENT LIABILITIES PAYABLE FROM CURRENT ASSETS	\$ 604,999.29	\$ 560,980.55	\$ 44,018.74
CURRENT LIABILITIES PAYABLE FROM RESTRICTED ASSETS			
Debt Service:			
Accounts Payable to CFD 2017-1	\$ 678,425.53	\$ 678,425.53	\$ -
TOTAL CURRENT LIABILITIES PAYABLE FROM RESTRICTED ASSETS	\$ 678,425.53	\$ 678,425.53	\$ -
LONG TERM LIABILITIES			
2018A & 2018B Refinance ID4/Viking Ranch	\$ 1,928,800.28	\$ 1,928,800.28	\$ -
2021 Installment Purchase Agreement	\$ 7,508,930.00	\$ 7,508,930.00	\$ -
Net Pension Liability-CalPERS	\$ 935,284.00	\$ 935,284.00	\$ -
Deferred Inflow of Resources-CalPERS	\$ 18,973.00	\$ 18,973.00	\$ -
TOTAL LONG TERM LIABILITIES	\$ 10,391,987.28	\$ 10,391,987.28	\$ -
TOTAL LIABILITIES	\$ 11,675,412.10	\$ 11,631,393.36	\$ 44,018.74
FUND EQUITY			
Contributed equity	\$ 9,611,814.35	\$ 9,611,814.35	\$ -
Retained Earnings:	\$ 12,444,834.65	\$ 11,990,344.54	\$ 454,490.11
TOTAL FUND EQUITY	\$ 22,056,649.00	\$ 21,602,158.89	\$ 454,490.11
TOTAL LIABILITIES AND FUND EQUITY	\$ 33,732,061.10	\$ 33,233,552.25	\$ 498,508.85



**Borrego Water District
Operating Budget Analysis
07/01 to 07/31/2022**

	<i>Budgeted FY2023</i>	<i>Actual July FY2023</i>	<i>Projected July FY2023</i>	<i>Year to Date FY2023</i>
<u>INCOME</u>				
RATE REVENUE				
Water Rates Revenues				
Commodity Rates				
Residential	1,516,320	140,389	136,469	140,389
Commercial	740,154	54,670	61,680	54,670
Irrigation	338,140	28,481	28,178	28,481
Total Commodity	<u>2,594,614</u>	<u>223,540</u>	<u>226,327</u>	<u>223,540</u>
Non-Commodity Charges				
Base Meter Charges	1,398,665	112,802	116,555	112,802
Meter Install/Repair	35,000	25	2,917	25
New Connection BPA Fee	24,880	25,005	2,073	25,005
Backflow Testing/Install	5,700	50	475	50
Bulk Water Sales	82,500	20,118	21,500	20,118
Total Non-Commodity	<u>1,546,745</u>	<u>158,000</u>	<u>143,520</u>	<u>158,000</u>
				-
Total Water Rate Revenues	4,141,359	381,540	369,847	381,540
Sewer Rates				
TCS Holder Fees (SA2)	157,666	13,163	13,139	13,163
TCS User Fees (SA2)	125,419	10,781	10,452	10,781
RH Sewer User Fees (ID1)	158,448	13,185	13,204	13,185
Sewer Standby/Capacity Fees	-	-	-	-
Sewer User Fees (ID5)	179,354	14,868	14,946	14,868
Total Sewer Rates	<u>620,887</u>	<u>51,998</u>	<u>51,741</u>	<u>51,998</u>
Availability Charges Collected thru Tax Roll				
ID1 - Water/Sewer/Flood Standby	105,000	-	698	-
ID3/ID4 - Water Standby	117,000	254	903	254
Pest Control Standby	16,000	3,023	115	3,023
Total Availability (Tax Roll)	<u>238,000</u>	<u>3,277</u>	<u>1,716</u>	<u>3,277</u>
TOTAL RATE REVENUE	5,000,246	436,815	423,304	436,815
OTHER INCOME				
Penalties & Fees	40,000	9,118	3,333	9,118
BSUSD Well Agreement	35,000	-	-	-
1% Property Assessments	70,000	1,113	517	1,113
Interest Income	5,000	482	417	482
Other (Gain on Asset Sold/JPIA Rebate)	-	-	-	-
WM Meter Reading Income	3,500	1,243	1,200	1,243
TOTAL OTHER INCOME	<u>153,500</u>	<u>11,955</u>	<u>5,467</u>	<u>11,955</u>
<u>GROSS INCOME</u>	<u>5,153,746</u>	<u>448,770</u>	<u>428,772</u>	<u>448,770</u>



**Borrego Water District
Operating Budget Analysis
07/01 to 07/31/2022**

	Budgeted FY2022	Actual July FY2023	Projected July FY2023		Year to Date FY2022
EXPENSES					
OPERATING EXPENSES					
Operations & Maintenance Expense					
R&M Water	258,500	42,380	21,542	<i>Paving</i>	42,380
R&M WWTF	124,080	7,137	10,340		7,137
Telemetry	5,170	-	431		-
Trash Removal	6,204	335	517		335
Vehicle Expense	23,000	4,126	1,917	<i>dumptruck tires</i>	4,126
Fuel & Oil	51,000	5,139	4,250		5,139
Lab/Testing	31,020	3,720	2,585		3,720
Permit Fees	37,741	3,540	3,145		3,540
Pumping Electricity	440,000	39,608	39,600		39,608
Total Operations & Maintenance Expense	976,715	105,983	84,326		105,983
Professional Services					
Accounting (Tax & Debt Filings)	4,446	-	-		-
Air Quality Study	21,077	-	1,756		-
Payroll Services	3,205	374	267		374
Audit Fees	20,163	-	1,500		-
IT & Cyber Security	40,000	1,741	3,333		1,741
Financial Consulting	82,720	-	6,893		-
Engineering (Dudek)	23,265	-	1,939		-
Legal Services - General	74,540	13,943	6,212		13,943
Advocacy	62,040	5,000	5,170		5,000
Total Professional Services	331,456	21,058	27,071		21,058
Insurance Expense					
ACWA/JPIA Program Insurance	75,900	50,124	45,540		50,124
ACWA/JPIA Workers Comp	20,700	-	-		-
Total Insurance Expense	96,600	50,124	45,540		50,124
Personnel Expense					
Board Meeting Expense	23,782	1,650	1,982		1,650
Salaries & Wages	1,212,281	93,451	101,023		93,451
<i>Contra Account - Salaries & Wages</i>	<i>(60,000)</i>	<i>(4,777)</i>	<i>(5,000)</i>		<i>(4,777)</i>
Contract Labor/Consulting	10,340	-	862		-
Payroll Taxes	32,328	2,078	2,694		2,078
Benefits - Medical	263,670	20,122	21,973		20,122
Benefits - CalPERS	242,456	88,592	100,205	<i>UAL</i>	88,592
Trainings & Conferences	18,612	1,210	1,551		1,210
Uniforms	7,238	468	603		468
Safety Compliance & Emergency Prep	5,170	586	431		586
Total Personnel Expense	1,755,877	203,381	226,323		203,381



**Borrego Water District
Operating Budget Analysis
07/01 to 07/31/2022**

	<i>Budgeted FY2022</i>	<i>Actual July FY2023</i>	<i>Projected July FY2023</i>	<i>Year to Date FY2022</i>
OPERATING EXPENSES (Con't)				
Office Expense				
Office Supplies	24,816	348	2,068	348
Office Equipment	51,700	2,903	4,308	2,903
Postage & Freight	15,510	802	1,293	802
Property Tax	3,102	-	-	-
Telephone Expense	23,000	4,408	5,517	4,408
Dues & Subscriptions (ACWA/AWWA)	23,782	505	1,982	505
Printing & Publication	5,170	290	431	290
Office/Shop utilities	7,500	1,515	625	1,515
Total Office Expense	<u>154,580</u>	<u>10,771</u>	<u>16,223</u>	<u>10,771</u>
TOTAL OPERATING EXPENSES	3,315,228	391,317	399,483	391,317
Debt Expense				
Compass Bank Note 2018A/B - Principal	305,000	-	-	-
Compass Bank Note 2018A/B - Interest	85,000	-	-	-
2021 Bond Cap One - Principal	427,960	-	-	-
2021 Bond Cap One - Interest	159,759	-	-	-
Total Debt Expense	<u>977,719</u>	<u>-</u>	<u>-</u>	<u>-</u>
GROUNDWATER MANAGEMENT EXPENSES (see GWM Detail)				
Pumping Fees	100,000	-	-	-
GWM Expense	72,561	761	6,047	761
Legal Expense	50,000	9,478	4,167	9,478
Engineering/TAC Expense	150,000	-	12,500	-
TOTAL GROUNDWATER MGMT EXPENSES	<u>372,561</u>	<u>10,239</u>	<u>22,713</u>	<u>10,239</u>
TOTAL EXPENSES	<u>4,665,508</u>	<u>401,556</u>	<u>422,197</u>	<u>401,556</u>
NET INCOME	<u><u>488,238</u></u>	<u><u>47,214</u></u>	<u><u>6,575</u></u>	<u><u>47,214</u></u>



**Borrego Water District
Cash CIP Budget Analysis
07/01 to 07/31/2022**

	Budgeted FY2022	Actual July FY2023	Year to Date FY2022
<u>CAPITAL IMPROVEMENT PROJECTS (CIP)</u>			
CASH FUNDED CIP			
Water Projects			
BVR Pipeline - <i>To be reimbursed from SDGE</i>	-	-	-
<i>Contra - Reimbursement from SDGE</i>		-	-
Office Improvements	50,000	-	-
Emergency System Repairs	60,000	-	-
Total Water Projects	<u>110,000</u>	<u>-</u>	<u>-</u>
Sewer Projects			
Manhole Refurbishments	47,408	-	-
Oxygen Injection System	-	-	-
Total Sewer Projects	<u>47,408</u>	<u>-</u>	<u>-</u>
Short Lived Asset Replacements			
Paddock Well	7,779	4,998	4,998
Backup Diesel Generator	15,000	-	-
Pickup Truck	60,000	-	-
Total Short Lived Assets	<u>82,779</u>	<u>4,998</u>	<u>4,998</u>
CASH FUNDED CIP TOTAL	240,187	4,998	4,998
2021 Bond Funded CIP			
Bond Funded Water Projects			
ID5-15 Well Completion	300,000	17,857	17,857
BVR Pipeline - <i>To be reimbursed from SDGE</i>	-	-	-
ID4-10 Inspection/Repairs	225,621	-	-
Pipeline Replacements	615,500	-	-
BOND FUNDED CIP TOTAL	<u>1,141,121</u>	<u>17,857</u>	<u>17,857</u>



Borrego Water District
Grant/Bond Funded CIP Budget Analysis
07/01 to 07/31/2022

	Budgeted FY2022	Actual July FY2023	Year to Date FY2022
GRANT FUNDED CIP			
Water Projects- DWR Grant Net \$2,048,362			
Twin Tanks	891,165	2,678	2,678
Wilcox Diesel Motor	83,333	-	-
Indian Head Reservoir Replacement	474,000	-	-
Recoat Rams Hill Tank #2	474,000	-	-
Total Water Projects - Water Reservoirs Grant	<u>1,922,498</u>	<u>2,678</u>	<u>2,678</u>
Sewer Projects - DWR Grant - \$788,912			
WWTP Upgrade/Rehabilitation	288,912	12,632	12,632
Total Sewer Grant Projects	<u>288,912</u>	<u>12,632</u>	<u>12,632</u>
Prop 68 Grant			
AMI	455,000	-	-
WWTP Monitoring Wells	141,000	-	-
Admin/Acquisition Costs	75,000	1,519	1,519
Total Prop 68 Grant Projects	<u>671,000</u>	<u>1,519</u>	<u>1,519</u>
TOTAL GRANT FUNDED CIP	2,882,410	16,829	15,310



Borrego Water District
Cash Flow Analysis
07/01 to 07/31/2022

	<u>Actual July FY2023</u>	
Cash and Reserves at Beginning of Period		\$ 6,932,736
Cash Flows from Operating Activities		
<i>Income Provided by Operating Activities</i>	45,498	
<i>Decrease in Accounts Receivable</i>	17,853	
<i>Increase in Accounts Payable</i>	192,739	
<i>Decrease in Inventory</i>	-	
<i>Customer Deposits Redeemed</i>	-	
Net Cash Provided by Operating Activities	\$ 256,091	
Cash Flows from Groundwater Management Activities		
Net Cash Paid for Groundwater Management Activities	\$ (8,996)	
Cash Flows from Non-Operating Activities		
Other Income Received	10,713	
Net Cash Provided by Other Income	\$ 10,713	
Cash Flows from Capital Improvement Activities		
<i>All CIP Activities (Cash + Grant)</i>	(21,827)	
<i>Grant Monies Received</i>	-	
Net Cash Paid for Capital Improvements	\$ (21,827)	
Net Change in Cash	\$ 235,980	
Cash and Reserves at End of Period		\$ 7,168,716
Restricted Reserves at End of Period	\$ 745,887	
Unrestricted Reserves at End of Period	\$ 6,422,828	
Water Reserves Portion	\$5,253,823	
Sewer Reserves Portion	\$719,955	
Non-218 Reserves Portion	\$449,051	
Fiscal Year Reserves Target		\$ 7,078,411
Fiscal Year Reserves Surplus/Shortfall to Date		\$ 90,305
2021 Bond Funds Balance at Beginning of Period		\$ 1,586,816
Net Change in Bond Funds	\$ (30,134)	
2021 Bond Funds Balance at End of Period		\$ 1,556,682

To: BWD Board of Directors
 From: Jessica Clabaugh
 Subject: Consideration of the Disbursements and Claims Paid
 Month Ending July 31, 2022



Vendor disbursements paid during this period: \$ 348,435.71

Significant items:

ACWA-JPIA	FY23 Property/DIC Policy Premiums	\$ 49,223.51
Babcock	Lab Services	\$ 3,719.82
Bentley Systems, Inc.	Annual Water CAD Subscription	\$ 2,415.60
CalPERS	Employee Retirement Benefits	\$ 7,788.00
CalPERS	FY22 GASB Report Fee	\$ 1,050.00
CalPERS	FY23 UAL Payment	\$ 79,754.00
Admin Staff	FY23 Cell Phone Allowance	\$ 3,600.00
Employee Health Benefits	Medical JPIA & AFLAC	\$ 20,122.36
Joe's Paving	Various system road repairs	\$ 33,452.93
Ramona Disposal	Garbage Collection - June	\$ 3,955.19
SC Fuels	Fuel For District Vehicles	\$ 5,139.09
SDGE	Payment on June Usage	\$ 41,123.04
UCI	Rate Adjustment	\$ 1,712.28

Capital Projects/Fixed Asset Outlays:

Automated Water Treatment	CIP ID5-15 - Chlorinator	\$ 17,628.98
Brax Company	CIP Paddock Well - Remove pump & column	\$ 4,998.25
Fredericks Services	Oxygen Injection CIP - Manhole lid and collar	\$ 3,373.00
Parkhouse Tire	Tires for F650 Dump Truck	\$ 2,959.04
Pacific Pipeline Supply, Inc.	Inventory	\$ 18,099.27
USA Bluebook	Liftstation Flow Meter	\$ 2,725.07
USA Bluebook	WWTP Rehab GRANT - Blower for Grit Unit	\$ 12,450.32

Total Professional Services for this Period:

Auditor/Controller SD County	FY23 LAFCO Dues	\$ 2,992.70
Travis Parker	IT Support	\$ 1,200.00

Payroll for this Period:

Gross Payroll	\$ 93,450.88
Employer Payroll Taxes and ADP Fee	\$ 2,452.43
Total	<u>\$ 95,903.31</u>

Accounts Payable

Checks by Date - Summary by Check Date

User: jessica
Printed: 8/19/2022 7:48 AM



Check No	Vendor No	Vendor Name	Check Date	Check Amount
35356	3035	ACWA / JPIA Finance Dept.	07/13/2022	49,223.51
35357	2	AUDITOR/CONTROLLER/SAN DIEGO	07/13/2022	2,992.70
35358	1037	BORREGO SUN	07/13/2022	125.50
35359	1222	DEBBIE MORETTI	07/13/2022	140.00
35360	11095	QUADIEN INC	07/13/2022	518.11
35361	9666	UC REGENTS	07/13/2022	1,712.28
35362	9439	USABLUEBOOK	07/13/2022	12,450.32
35365	9524	AIR POLLUTION CONTROL DISTRICT, SA	07/19/2022	547.00
35366	11066	BRAX COMPANY, INC.	07/19/2022	4,998.25
35367	10876	GEOFFREY POOLE	07/19/2022	400.00
35368	10888	HIGHWAY SAFTEY	07/19/2022	445.65
35369	9385	JOHNSON CONTROLS SECURITY SOLUTI	07/19/2022	341.32
35370	11114	OCEANUS BOTTLED WATER, INC	07/19/2022	21.85
35371	11067	SC FUELS	07/19/2022	2,003.64
35372	1109	ABILITY ANSWERING/PAGING SER	07/19/2022	239.50
35373	1000	MEDICAL ACWA-JPIA	07/19/2022	23,808.73
	5002 83	AUTOMATED WATER TREATMENT	07/21/2022	17,628.98
	5003 1208	PACIFIC PIPELINE SUPPLY INC	07/25/2022	227.57
35377	9529	AT&T-CALNET 3	07/25/2022	567.71
35378	1037	BORREGO SUN	07/25/2022	164.25
35379	1196	CASH	07/25/2022	400.00
35380	10888	HIGHWAY SAFTEY	07/25/2022	114.37
35381	11021	J & T Tire and Auto	07/25/2022	20.00
35382	1208	PACIFIC PIPELINE SUPPLY INC	07/25/2022	15,842.34
40000	1001	AMERICAN LINEN INC.	07/31/2022	467.70
40001	10900	BORREGO AUTO PARTS & SUPPLY CO	07/31/2022	647.53
40002	1201	BORREGO LANDFILL	07/31/2022	330.53
40003	11133	VAL BOWMAN	07/31/2022	600.00
40004	11111	JESSICA CLABAUGH	07/31/2022	1,200.00
40005	1022	JAMES HORMUTH DE ANZA TRUE VALU	07/31/2022	84.10
40006	11134	ESMERALDA GARCIA	07/31/2022	600.00
40007	54	JOE'S PAVING CO.INC.	07/31/2022	33,452.93
40008	11114	OCEANUS BOTTLED WATER, INC	07/31/2022	21.85
40009	1208	PACIFIC PIPELINE SUPPLY INC	07/31/2022	2,256.93
40010	11132	PARKHOUSE TIRE, INC	07/31/2022	2,959.04
40011	11083	QUADIEN FINANCE USA, INC.	07/31/2022	283.72
40012	9633	RAMONA DISPOSAL SERVICE	07/31/2022	3,955.19
40013	1065	SAN DIEGO GAS & ELECTRIC	07/31/2022	41,123.04
40014	11067	SC FUELS	07/31/2022	3,135.45
40015	9106	T.S. INDUSTRIAL SUPPLY	07/31/2022	390.59
40016	9581	TRAVIS PARKER	07/31/2022	1,200.00
40017	3000	U.S.BANK CORPORATE PAYMENT SYS	07/31/2022	2,687.75
40018	1023	UNDERGROUND SERVICE ALERT	07/31/2022	32.75
40019	9439	USABLUEBOOK	07/31/2022	3,131.70
40022	1455	DIANA DEL BONO	07/31/2022	1,200.00

Report Total (45 checks): 234,694.38

To: BWD Board of Directors
 From: Jessica Clabaugh
 Subject: Consideration of Watermaster related Income and Expenses for FY23
 Month Ending July 31, 2022



Net Expenses during this Period \$ 10,238.96

Date	Name	Description	Income	Expense	Year To Date
7/31/2022	BBK	Stipulation/Groundwater Rights		\$ 4,892.90	\$ (4,892.90)
7/31/2022	BBK	Watermaster Activities		\$ 4,584.90	\$ (9,477.80)
7/31/2022	BWD	Record Staff Time		\$ 761.16	\$ (10,238.96)
7/31/2022	Borrego Springs Watermaster	July Meter Reading Services	\$ 1,242.58		\$ (8,996.38)

To: BWD Board of Directors
 From: Jessica Clabaugh
 Subject: Final List of CIP Items from 2021 New Money



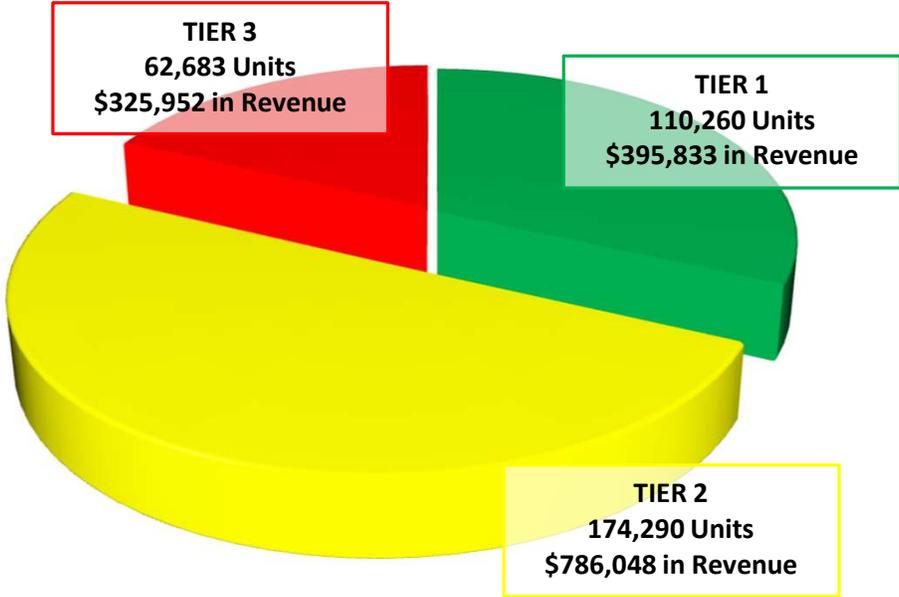
Date Paid	Check No	Vendor	GL	Project	Amount	Running Total
6/14/2021	34597	Rove Engineering	17220	Bending Elbow Pline	\$54,870.10	\$54,870.10
7/9/2021	34637	Rove Engineering	17220	Bending Elbow Pline	\$182,653.65	\$237,523.75
7/9/2021	34630	Brax Company	17260	Well 11 Rehab	\$140,936.88	\$378,460.63
7/20/2021	34655	McCall's Meters	17220	Bending Elbow Pline	\$3,241.12	\$381,701.75
7/20/2021	34666	Brax Company	17260	Well 11 Rehab	\$190,390.14	\$572,091.89
7/22/2021	34681	Empire Southwest, LLC	17130	Well 5-15	\$9,344.29	\$581,436.18
7/22/2021	34679	M&L Bunten	17216	Well 5 Cpanel Rebuild(1/2)	\$6,322.50	\$587,758.68
7/22/2021	34680	DeAnza Ready Mix	17260	Well 11 Rehab	\$2,126.06	\$589,884.74
8/3/2021	34702	Rove Engineering	17220	Bending Elbow Pline	\$202,304.59	\$792,189.33
8/11/2021	34724	Pacific Pipeline Supply	17220	Bending Elbow Pline	\$876.54	\$793,065.87
8/19/2021	34731	Empire Southwest, LLC	17130	Well 5-15	\$9,021.04	\$802,086.91
8/19/2021	34734	Southwest Pump & Drilling	17130	Well 5-15	\$124,046.25	\$926,133.16
8/24/2021	34745	Fredericks Services	17213	LCDZ Sewerline	\$67,727.73	\$993,860.89
8/24/2021	34744	DeAnza Ready Mix	17260	Well 11 Rehab	\$407.28	\$994,268.17
9/1/2021	34753	M&L Bunten	17216	Well 5 Cpanel Rebuild(2/2)	\$6,322.50	\$1,000,590.67
9/8/2021	34770	Empire Southwest, LLC	17130	Well 5-15	\$9,021.04	\$1,009,611.71
9/15/2021	34784	Southwest Pump & Drilling	17130	Well 5-15	\$39,963.75	\$1,049,575.46
9/15/2021	34791	Pacific Pipeline Supply	17220	Bending Elbow Pline	\$214.79	\$1,049,790.25
9/29/2021	34798	Dudek	17130	Well 5-15	\$3,511.25	\$1,053,301.50
9/29/2021	34800	Landmark Consultants	17220	Bending Elbow Pline	\$1,198.80	\$1,054,500.30
10/20/2021	34846	Dudek	17130	Well 5-15	\$2,400.00	\$1,056,900.30
10/25/2021	34868	Pacific Pipeline Supply	17120	Pipeline 1	\$2,084.58	\$1,058,984.88
12/7/2021	34941	Rove Engineering	17220	Bending Elbow Pline	\$1,596.11	\$1,060,580.99
12/15/2021	34953	Rove Engineering	17220	Bending Elbow Pline	\$27,906.25	\$1,088,487.24
12/22/2021	34976	Big J Fencing	17130	Well 5-15	\$33,150.00	\$1,121,637.24
12/30/2021	35008	Southwest Pump & Drilling	17130	Well 5-15	\$5,736.65	\$1,127,373.89
3/2/2022	1000	Brax Company	17130	Well 5-15	\$260,780.69	\$1,388,154.58
3/2/2022	1001	Rove Engineering	17220	Bending Elbow Pline	\$24,803.61	\$1,412,958.19
4/14/2022	1002	Pacific Pipeline Supply	17261	Booster 3 Upgrades	\$2,320.75	\$1,415,278.94
6/7/2022	5001	Pacific Pipeline Supply	17130	Well 5-15	\$9,956.48	\$1,425,235.42
7/21/2022	5002	Automated Water Treatment	17130	Well 5-15	\$17,628.98	\$1,442,864.40
7/25/2022	5003	Pacific Pipeline Supply	17130	Well 5-15	\$227.57	\$1,443,091.97

To: BWD Board of Directors
 From: Jessica Clabaugh
 Subject: Tracking of Water Sold for Ocotillo Wells Solar Project
 Thru 07/18/2022



		Contracted Amount	40 Acre Feet
DATE	READ FT CU	UNITS USED	AF USED
12/21/2022	0	0	0
1/18/2022	46620	466.2	1.07
2/17/2022	82260	356.4	0.82
3/18/2022	168800	865.4	1.99
4/19/2022	400340	2315.4	5.32
4/20/2022	426750	264.1	0.61
4/21/2022	431100	43.5	0.10
4/22/2022	443510	124.1	0.28
4/23/2022	443510	0	0.00
4/24/2022	443510	0	0.00
4/25/2022	443510	0	0.00
4/26/2022	456380	128.7	0.30
4/27/2022	469060	126.8	0.29
4/28/2022	481230	121.7	0.28
4/29/2022	493590	123.6	0.28
5/3/2022	508980	153.9	0.35
5/4/2022	525140	161.6	0.37
5/5/2022	538950	138.1	0.32
5/6/2022	549080	101.3	0.23
5/9/2022	567120	180.4	0.41
5/10/2022	588080	209.6	0.48
5/11/2022	603340	152.6	0.35
5/16/2022	618160	148.2	0.34
5/18/2022	685920	677.6	1.56
6/9/2022	830300	1443.8	3.31
6/20/2022	907800	775	1.78
7/18/2022	1107520	1997.2	4.58
		UNITS	ACRE FEET
	TOTAL USED TO DATE	9,078.0	25.42
	AMOUNT REMAINING	6,350.0	14.58

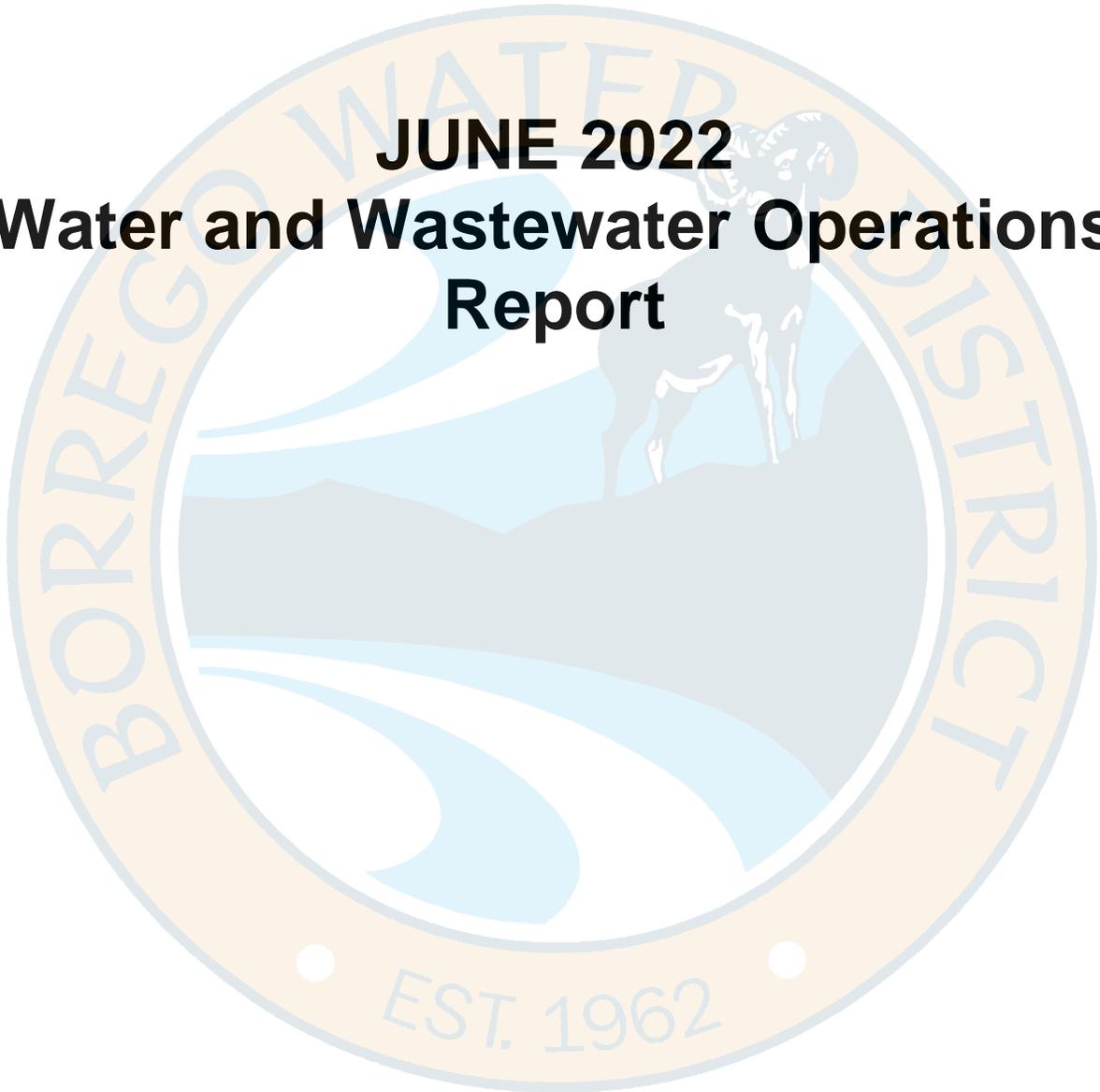
**Borrego Water District
Residential Tier Consumption Summary FY22**



IV.B

JUNE 2022

Water and Wastewater Operations Report





BORREGO WATER DISTRICT

JULY 2022

WASTEWATER OPERATIONS REPORT

There's no know problems with wastewater system at the moment:

Rams Hill Wastewater Treatment Facility serving ID-1, ID-2 and ID-5 Total Cap. 0.25 MGD (million gallons per day):

Average flow: 44387 (gallons per day)

Peak flow: 64000 gpd MONDAY, JULY 25- 2022



BORREGO WATER DISTRICT

RAMS HILL WASTEWATER TREATMENT FACILITY

4861 Borrego Springs Rd, BORREGO SPRINGS, CA 92004
(760) 767-5806 FAX (760) 767-5994

08/11/2022

CALIFORNIA REGIONAL WATER QUALITY
CONTROL BOARD – REGION 7
73-720 FRED WARING DR. SUITE 100
PALM DESERT, CA. 92260

Attn: Adriana Godinez/WRCE

RE: JULY 2022 Borrego Springs WWTP

Dear Adriana,

Please find attached the JULY 2022 monthly monitoring reports and Lab results for Borrego springs district WWTP.

We are pleased to inform you that there's no known violations for this month.

If you have any questions please contact ROGELIO MARTINEZ/WT-III. (760)419-2764.

Respectfully,

Rogelio Martinez/ water plant operator III

CC: Geoff Poole/GM

MONTHLY REPORT: R.H.W.T.F

MONTH: JULY

YEAR: 2022

BORREGO WATER DISTRICT,
RAMS HILL WASTEWATER TREATMENT FACILITY,
4861 BORREGO SPRINGS ROAD,
BORREGO SPRINGS, CA 92004
760-767-5806; phone
760-767-5994; fax

COMMENTS: THERE ARE NO SPILLS TO REPORT FOR JULY 2022; THE FLOW REPORT IS ATTACHED.

Submitted by: ROGELIO MARTINEZ/BWD TO: GEOFF POOLE/BWD:

08/11/2022

JUL 2022	INFLUENT DAILY FLOW GAL.	TOTAL FLOW GAL.
1	40000 GAL	78217000 GAL
2	49000 GAL	78266000 GAL
3	51000 GAL	78317000 GAL
4	51000 GAL	78368000 GAL
5	56000 GAL	78424000 GAL
6	46000 GAL	78470000 GAL
7	43000 GAL	78513000 GAL
8	36000 GAL	78549000 GAL
9	37000 GAL	78586000 GAL
10	38000 GAL	78624000 GAL
11	37000 GAL	78661000 GAL
12	33000 GAL	78694000 GAL
13	32000 GAL	78726000 GAL
14	46000 GAL	78772000 GAL
15	49000 GAL	78821000 GAL
16	55000 GAL	78876000 GAL
17	54000 GAL	78930000 GAL
18	41000 GAL	78971000 GAL
19	31000 GAL	79002000 GAL
20	30000 GAL	79032000 GAL
21	33000 GAL	79065000 GAL
22	31000 GAL	79096000 GAL
23	40000 GAL	79136000 GAL
24	45000 GAL	79181000 GAL
25	64000 GAL	79245000 GAL
26	57000 GAL	79302000 GAL
27	60000 GAL	79362000 GAL
28	48000 GAL	79410000 GAL
29	44000 GAL	79454000 GAL
30	50000 GAL	79504000 GAL
31	49000 GAL	79553000 GAL

P.H. / D.O. LOG ; R.H.W.T.F., BORREGO WATER DISTRICT

YEAR,2022

JULY

<u>DATE</u>	<u>LOCATION</u>	<u>P.H.</u>	<u>D.O.</u>	<u>FREE/BRD</u>
7/5/2022	EFFLUENT	7.56	4.99	
7/5/2022	POND	8.10	7.69	3.5ft
7/19/2022	EFFLUENT	7.65	4.16	
7/19/2022	POND	8.06	6.33	3.5ft

Berm Condition: Good and no Odors around the pond

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION**

WDID NO.: 7A 37 0125 001
ORDEF NO.: R7-2019-0015

**MONITORING AND REPORTING
BORREGO WATER DISTRICT - RAMS HILL WWTF**

MONTH: JULY
YEAR: 2022

REPORTING FREQUENCIES: MONTHLY

JULY

TYPE OF SAMPLE:	INFLUENT			PONDS		
	Flow	BOD	TSS	DO	pH	Freeboard
CONSTITUENTS:	Flow	BOD	TSS	DO	pH	Freeboard
FREQUENCY:	Daily	Monthly	Monthly	Twice Monthly	Twice Monthly	Twice Monthly
DESCRIPTION:	Measurement	Grab	Grab	Grab	Grab	Measurement
UNITS:	gpd	mg/L	mg/L	mg/L	s.u.	ft
REQUIREMENTS						
30-DAY MEAN:						
MAXIMUM:						
MINIMUM:						
DATE OF SAMPLE	JULY					
1	40000					
2	49000					
3	51000					
4	51000					
5	56000	0.0	20	7.69	8.10	3.5
6	46000					
7	43000					
8	36000					
9	37000					
10	38000					
11	37000					
12	33000					
13	32000					
14	46000					
15	49000					
16	55000					
17	54000					
18	41000					
19	31000			6.33	8.06	3.5
20	30000					
21	33000					
22	31000					
23	40000					
24	45000					
25	64000					
26	57000					
27	60000					
28	48000					
29	44000					
30	50000					
31	49000					
30-DAY MEAN	44387	0	20	7.01	8.08	3.5
MAXIMUM	64000	0	20	7.69	8.10	3.5
MINIMUM	30000	0	20	6.33	8.06	3.5

I declare under the penalty of law that I personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: Rogelio Mota
Date: J 8-11-22

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION**

WDID NO.: **7A 37 0125 001**
ORDER NO.: **R7- 2019-0015**

**MONITORING AND REPORTING
BORREGO WATER DISTRICT - RAMS HILL WWTF**

REPORTING FREQUENCY **MONTHLY**

MONTH: **JULY**

YEAR: **2022**

JULY

TYPE OF SAMPLE:	EFFLUENT					
CONSTITUENTS:	BOD	TSS	SS	T. Nitrogen	TDS	pH
FREQUENCY:	Twice Monthly					
DESCRIPTION:	Grab	Grab	Grab	Grab	Grab	Grab
UNITS:	mg/L	mg/L	ml/L	mg/L	ml/L	mg/L
REQUIREMENTS						
30-DAY MEAN:						
MAXIMUM:						
MINIMUM:						
DATE OF SAMPLE						
1						
2						
3						
4						
5	0.0	6	0.0	9.0	510	7.56
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19	0.0	4.0	0.0	2.4	470	7.65
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
30-DAY MEAN	0.0	5.0	0.0	5.7	490	7.61
MAXIMUM	0.0	6.0	0.0	9.0	510	7.65
MINIMUM	0.0	4.0	0.0	2.4	470	7.56

I declare under the penalty of law that I personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: *Rogelio M. H.*
Date: 08-11-22

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION**

WDID NO.: 7A 37 0125 001
ORDEF NO: R 7-2019-0015

**MONITORING AND REPORTING
BORREGO WATER DISTRICT - RAMS HILL WWTF**

Month JULY
YEAR 2022

REPORTING FREQUENCY: Monthly

TYPE OF SAMPLE:	Domestic Water Supply Well #11			Domestic Water Supply Well #12		
	TDS	PH		TDS	pH	
CONSTITUENTS:	Monthly	Monthly		Monthly	Monthly	
FREQUENCY:	Grab	Grab		Grab	Grab	
DESCRIPTION:	mg/l	mg/L				
UNITS:						
REQUIREMENTS						
30-DAY MEAN:						
MAXIMUM:						
MINIMUM:						
DATE OF SAMPLE						
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19	360	8.1		290	8.0	
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
30-DAY MEAN	360	8.1		290	8.0	
MAXIMUM	360	8.1		290	8.0	
MINIMUM	360	8.1		290	8.0	

I declare under the penalty of law that I personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: *[Handwritten Signature]*
Date: 8-11-22

IV.C

JUNE 2022

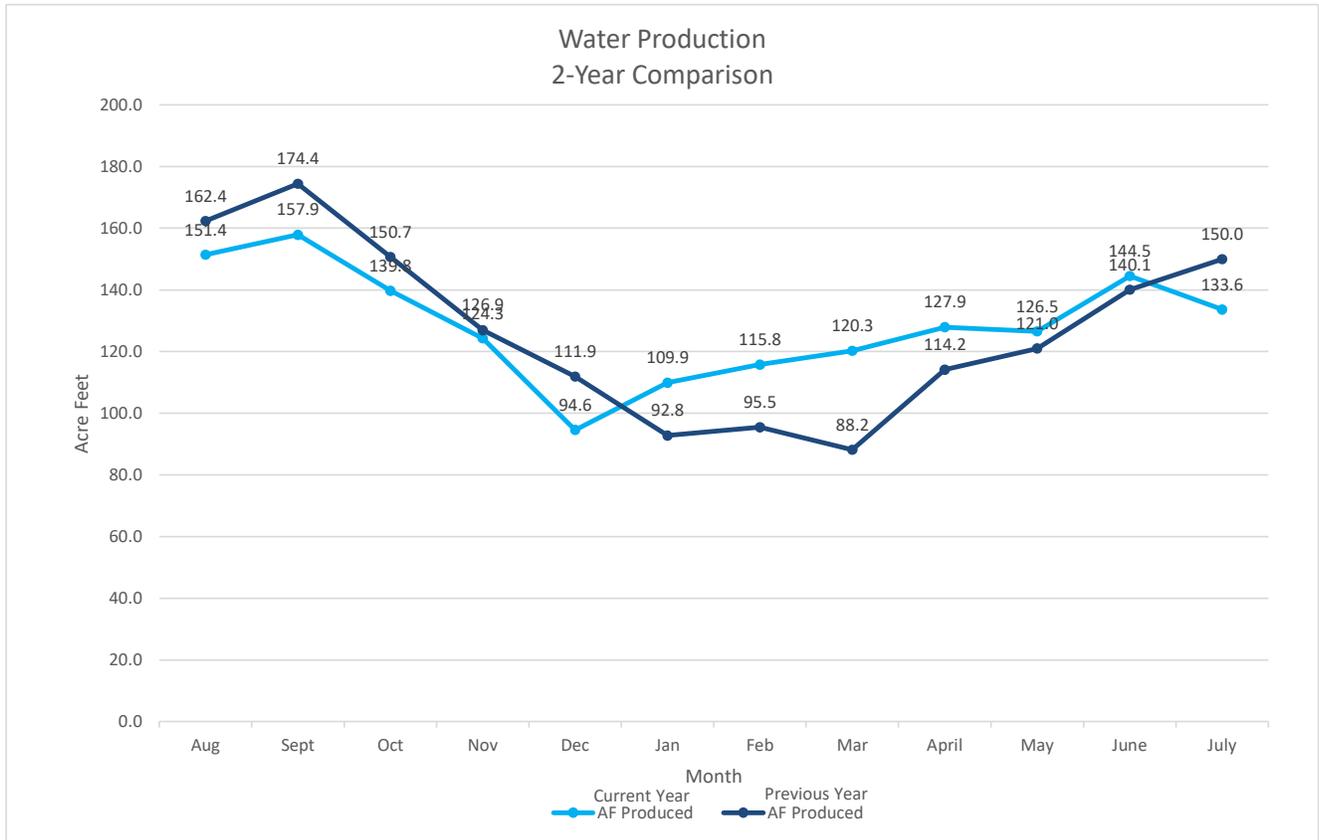
Water Production/Use Records





BORREGO WATER DISTRICT

WATER PRODUCTION SUMMARY JULY 2022



Past 12 months Production vs. Sales

	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22
AF Used	133.8	138.0	139.0	110.1	85.3	154.3	136.1	125.3	123.8	115.4	129.9	151.7
AF Produced	151.4	157.9	139.8	124.3	94.6	109.9	115.8	120.3	127.9	126.5	144.5	133.6
% Non Rev.	11.6%	12.6%	0.6%	11.4%	9.9%	-40.4%	-17.5%	-4.2%	3.2%	8.8%	10.1%	-13.6%

Previous 12 Months Production vs. Sales

	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21
AF Used	145.6	160.4	136.0	119.3	103.2	85.5	83.3	78.1	99.9	111.4	127.4	129.1
AF Produced	162.4	174.4	150.7	126.9	111.9	92.8	95.5	88.2	114.2	121.0	140.1	150.0
% Non Rev.	10.3%	8.1%	9.8%	6.0%	7.8%	7.9%	12.8%	11.5%	12.5%	8.0%	9.1%	13.9%

Non Revenue Water Summary

Jul-22	-13.6%
Avg. Past 12 Mos.	-0.6%
Avg. Past 24 Mos.	4.6%