

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD COLORADO RIVER BASIN REGION

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ORDER R7-2020-0003



Order Information

Discharger(s): United States Marine Corps
Facility: Mainside Wastewater Treatment Facility
Address: P.O. Box 788110, Twentynine Palms, CA 92278-8110
County: San Bernardino County
WDID: 7A360702011
GeoTracker ID: WDR100037408
Prior Order(s): R7-2016-0032

I, PAULA RASMUSSEN, Executive Officer, hereby certify that the following is a full, true, and correct copy of the order adopted by the California Regional Water Quality Control Board, Colorado River Basin Region, on March 5, 2020.

Original signed by

PAULA RASMUSSEN
Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

ORDER R7-2020-0003

AMENDMENT TO WASTE DISCHARGE REQUIREMENTS ORDER R7-2016-0032
FOR
UNITED STATES MARINE CORPS, OWNER/OPERATOR
MAINSIDE WASTEWATER TREATMENT FACILITY
SAN BERNARDINO COUNTY

The California Regional Water Quality Control Board, Colorado River Basin Region (Regional Water Board) hereby makes the following Findings:

1. On September 15, 2016, the Regional Water Board adopted Order R7-2016-0032, issuing Waste Discharge Requirements (WDRs) to the United States Marine Corps (Discharger) for the Mainside Wastewater Treatment Facility at the Twentynine Palms Marine Corps Air Ground Combat Center (MCAGCC). The wastewater collection, treatment and disposal system provides sewerage service to the Main Camp area, Camp Wilson area, and the Expeditionary Air Field located at the MCAGCC. The WDRs permit the discharge of 2.5 million gallons per day (MGD) of secondary treated wastewater used for golf course irrigation and infiltration and evaporation in holding and disposal ponds.
2. On September 10, 2019, the Discharger submitted a Report of Waste Discharge (ROWD) applying for a revision to WDRs Order R7-2016-0032 to discharge and store secondary treated wastewater from the wastewater treatment plant to Ponds G and H, shown in Attachment B of this Order.
3. Order R7-2016-0032 does not specifically authorize discharges to or storage at Ponds G and H, which were not actively in use at the time of issuance of that Order. In August 2019, the Discharger discovered the one-million-gallon process tank needed immediate structural repairs. While the tank is out of service for repairs, the Discharger cannot produce recycled water and has requested to use Ponds G and H to prevent overflows or unpermitted discharges. Ponds G and H will be utilized to provide additional storage capacity, additional biological stabilization, and additional disposal capacity for secondary treated effluent.

Wastewater Treatment Facility and Discharge

4. The Facility presently receives approximately 0.742 MGD of domestic wastewater. Approximately 0.558 MGD of disinfected secondary-treated recycled water (as defined in the California Code of Regulations, title 22, section 60301.225) is used for golf course irrigation. The balance of about 0.184 MGD of untreated domestic wastewater is stored in ponds for reuse or disposal by evaporation.

5. Wastewater from the fermentation pit is spread across the width of Pond 1 via a flow distribution pipe and then flows longitudinally through the pond. Four mechanical aerators provide oxygen to the top layer of the pond. The remainder of Pond 1 outside the fermentation pit provides secondary biological treatment. The pond is designed to remove approximately 75 percent of the influent Biochemical Oxygen Demand (BOD) by rapid growth of algae and concurrent production of oxygen, oxidation of organics, ammonia removal, and heavy metals removal. The remaining ponds provide extended oxidation and ultraviolet treatment by solar radiation and act as effluent polishing ponds.

6. Pond A is approximately 5 feet deep with a surface area of approximately 20 acres and contains nine (9) aerator/mixers. The design detention time is approximately 18 days. Pond A (and Pond B when used) provides only limited treatment; its primary purpose is settlement of algae. When there is a need to store more water than Ponds 1, A, and B can accommodate, water can be sent to Pond C via gravity overflow pipe and then to Pond D via gravity overflow pipe. Ponds C and D are used as additional storage when wastewater influent exceeds recycled water demand. Ponds C and D are approximately 8 feet depth with surface areas of 29.4 and 30.5 acres, respectively. The water from these ponds can be pumped back via overland diesel pump from Pond D to Pond C, then to Pond B for inclusion in the treatment process. In the event that additional storage is required, due to plant repair, maintenance, and/or in periods of unusually high flows, former wetlands Pond 2 and Pond 3, as well as auxiliary storage Pond G and Pond H can be utilized. Ponds 2 and 3 both have a surface area of approximately 8 acres with variable depth of 2 feet to 5 feet due to benching of the former wetland configuration. Water can be transferred to Ponds 2 and 3 from Pond A via manually operated flow structure, but to transfer water back to Pond A from Ponds 2 or 3 requires an overland diesel transfer pump. Pond G and Pond H both have a depth of approximately 7 feet and surface areas of 21.1 acres and 9 acres, respectively. Water can only be transferred to or from Ponds G and H via overland diesel transfer pump to or from Pond A.

7. The Facility's ponds are designed with the following characteristics:

Table 1. Characteristics of the Facility's Ponds

	Fermentation Pit	Integrated Pond System (Pond 1)	Oxidation Pond A	Pond G	Pond H
Function	Primary Treatment	Primary/Secondary Treatment	Secondary Treatment	Additional Storage	Additional Storage
Surface Area (acres)	2.5	13.1	20	21.1	9
Typical Depth (ft)	13	5	5	7	7

	Fermentation Pit	Integrated Pond System (Pond 1)	Oxidation Pond A	Pond G	Pond H
Volume (MG)	5.7	20.3	31.2	48.1	20.5
Detention Time (days)	3.25	11.6	18	N/A ¹	N/A
Interior Slope (H ft : V ft)	3:1	3:1	3:1	3:1	3:1
Berm Materials	Earthen	Earthen/Concrete	Earthen/Concrete	Earthen	Earthen

CEQA and Public Participation

8. Pursuant to California Code of Regulations, title 14, section 15301, the issuance of this Order amending 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 (Public Resources Code, section 21000 et seq.).
9. The Regional Water Board has notified the Discharger and all known interested agencies and persons of its intent to amend the WDRs for this discharge and has provided them with an opportunity for a public meeting and to submit comments.
10. The Regional Water Board, in a public meeting, heard and considered all comments pertaining to this discharge.

IT IS HEREBY ORDERED, pursuant to Water Code sections 13263 and 13267, that Order R7-2016-0032 is amended upon adoption of this Order, as follows:

1. Attachment B – WWTF Site Layout of Order R7-2016-0032 shall be replaced with Attachment B of this Order.
2. Attachment C – Flow Schematic Diagram of Order R7-2016-0032 shall be replaced with Attachment C of this Order.
3. Order R7-2016-0032 shall be modified to update Effluent Limitation B.3, as follows:

¹ N/A - Not Applicable. The detention time for Ponds G and H will depend on their utilization as storage ponds.

B. Effluent Limitations

3. All basins shall be maintained so they will be kept in aerobic conditions. The dissolved oxygen content in the upper zone (one foot) of all basins shall not be less than 1.0 mg/L. If there is little or no water in the percolation ponds (less than one foot), the monitoring report shall state, "No standing water in ponds and/or not sufficient water in the ponds to sample safely" in place of reporting dissolved oxygen concentration.
4. Order R7-2016-0032 shall be modified to add a new Discharge Specification D.17, as follows:

D. Discharge Specifications

17. Ponds G and H may be used for additional storage and disposal capacity, and shall be operated and maintained in accordance with Discharge Specifications D.1 through D.7.
5. Monitoring and Reporting Program R7-2016-0032 shall be modified to add new Monitoring Provisions A.19 and A.20, as follows:

A. Monitoring

Ponds 1 and A Monitoring

19. Ponds 1 and A shall be monitored according to the following schedule:

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Dissolved Oxygen	mg/L	Grab	Weekly	Monthly
Freeboard	ft	Measurement	Monthly	Monthly

Storage Ponds Monitoring

20. All storage ponds (Ponds B, C, D, G, and H) shall be monitored according to the following schedule:

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Dissolved Oxygen	mg/L	Grab	Monthly	Monthly
Freeboard	ft	Measurement	Monthly	Monthly

6. The Discharger shall continue to comply with all other terms and conditions of Order R7-2016-0032.

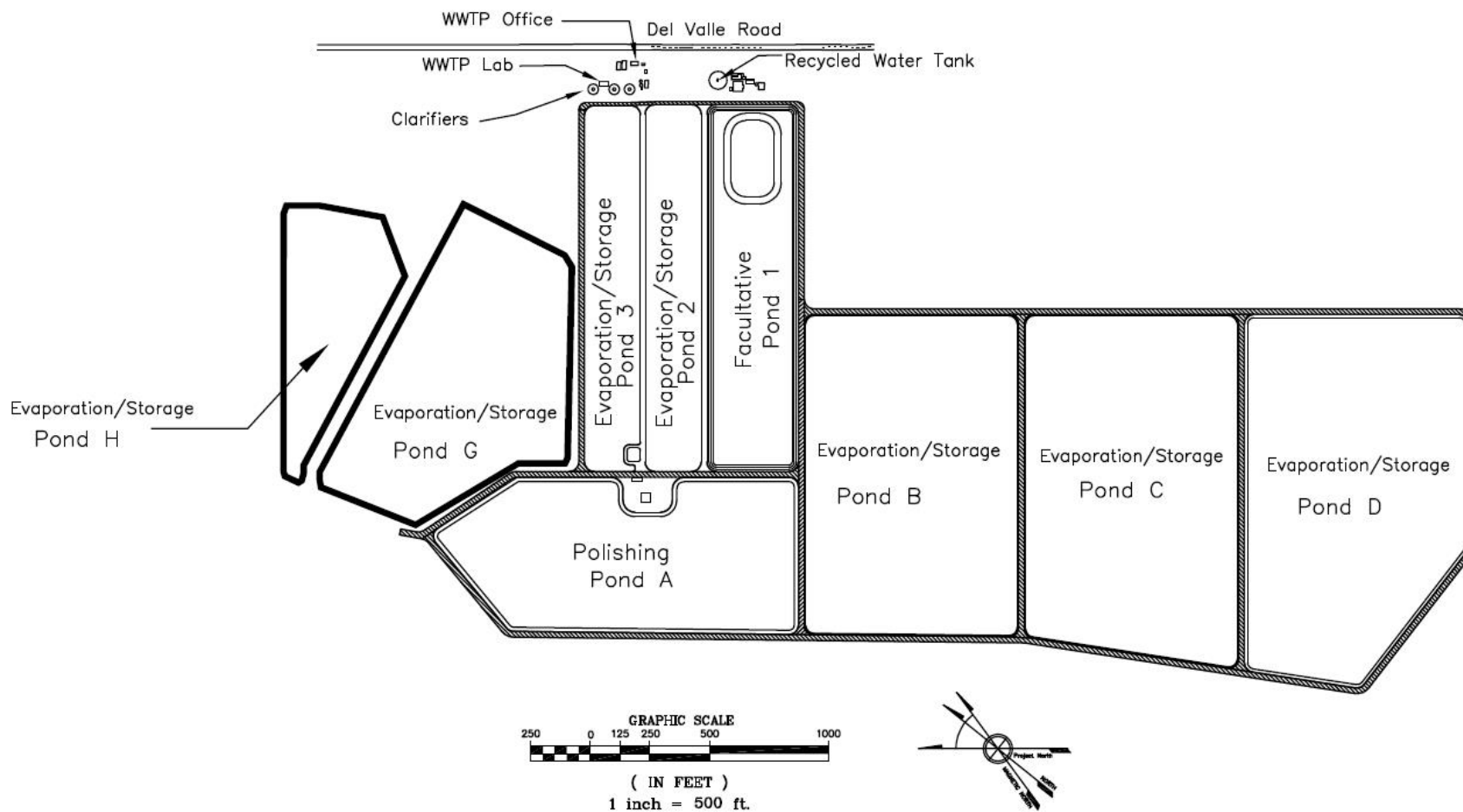
Any person aggrieved by this Regional Water Board action may petition the State Water Board for review in accordance with Water Code section 13320 and California Code of Regulations, title 23, section 2050 et seq. The State Water Board must receive the petition by 5:00 p.m. on the 30th day after the date of this Order; if the 30th day falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the statutes and regulations applicable to filing petitions are available on the State Water Board's website and can be provided upon request.

Order Attachments

Attachment B—Wastewater Treatment Facility Layout

Attachment C—Schematic Flow Diagram

ATTACHMENT B—WASTEWATER TREATMENT FACILITY LAYOUT



ATTACHMENT C—SCHEMATIC FLOW DIAGRAM

