

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

ORDER R5-2015-XXXX

WASTE DISCHARGE REQUIREMENTS  
FOR  
TULARE LAKE DRAINAGE DISTRICT MID EVAPORATION BASIN  
KINGS COUNTY

The California Regional Water Quality Control Board, Central Valley Region, (hereafter Central Valley Water Board), finds that:

1. In 1973, Tulare Lake Drainage District (District or Discharger) certified a Negative Declaration under the California Environmental Quality Act, Public Resources Code section 21000, et seq. (CEQA) for construction and operation of a North Evaporation Basin (North Basin) to receive sub-surface agricultural drainwater. Construction of the North Basin began in 1974. In 1979, the District prepared and submitted an Environmental Impact Report (EIR) for the construction of the South Evaporation Basin (South Basin) and the Hacienda Evaporation Basins (Hacienda Basin). Also in 1979, the Central Valley Water Board adopted Waste Discharge Requirements (WDRs) Order No. 79-252 for the regulation of the North, Hacienda, and South evaporation basins.
2. In 1983 high rates of water bird mortalities and deformities were discovered at Kesterson Reservoir. These discoveries led the Central Valley Water Board to notify (1989) all evaporation basin owners/operators within the Tulare Lake Basin that new WDRs would be prepared for their operations including those owners/operators who had previously received Orders or Waivers of WDRs from the Central Valley Water Board.
3. Also in 1989, the California State Department of Fish and Wildlife (DFW) identified a need to analyze the cumulative impacts of evaporation pond operations within the Tulare Lake Basin on wildlife in order to satisfy the requirements of CEQA. A Cumulative Impacts Report (Report) for the evaporation basins was developed for the Central Valley Water Board under contract for the State Department of Water Resources (DWR) by private consultants. The Report was completed in November 1992. Among other things, the Report (1993) concluded that the ponds have significant and cumulative adverse impacts on bird reproduction. The most significant risks posed by the ponds include exposure to high salinity and selenium levels. Evaporation basins provide significant water bird habitat for the area, and are used particularly by waterfowl and shorebirds that feed on invertebrates and plants found within the ponds.

4. On 6 August 1993, the Central Valley Water Board adopted Order 93-136 that regulates the Districts North, Hacienda, and South Evaporation Basins, which together receive sub-surface agricultural drainwater from 34,693 acres of farmland installed with subsurface tile drain lines.
5. On 31 January 2014, the District submitted a Report of Waste Discharge (RWD) and Form 200 to the Central Valley Water Board for construction and operation of a new evaporation basin, the proposed Mid Evaporation Basin (Middle Basin).
6. The RWD specified a need to install additional subsurface drainage systems on several thousand acres within the District and determined that although the District has participated in and supported a number of research projects on alternate means of agricultural drainage water disposal, a viable option to evaporation basins has yet to be discerned. Without a viable option, the RWD stated that the District's ability to dispose of additional drainage water beyond that received from its current 34,693 drained acres could only be achieved through construction of the Middle Basin.
7. The proposed Middle Basin property is owned by the District (purchased in 2007) and has been either continuously farmed or routinely disked to maintain it vegetation-free since it was acquired. The property is underlain by an existing tile drainage system that was installed by a prior landowner to control the level of shallow groundwater beneath the agricultural cropland.
8. The District and the proposed 1,800 acre ( $\pm$ ) Middle Basin is shown on Attachment A, which is attached hereto and made part of this Order by reference, and will be constructed on portions of three adjoining sections (three square miles) of agricultural land in the south central portion of the Tulare Lake Bed, Kings County (Township 23 South, Range 21 East, Sections 24, 25, and 36).
9. When operational, the Middle Basin will allow for an estimated 18,500 acres of agricultural lands within the Tulare Lake Bed to be drained of shallow saline drainage water.
10. The Middle Basin will consist of six (6) contiguous ponds constructed to a height of approximately seven feet utilizing native silt/clay soils excavated from within the ponds interior. Each pond will be approximately 310 acres in size. The Middle Basin will have a drainage water inlet capacity of between 50 to 75 cubic feet per second (cfs). When in full operation drainage water will be diverted into the Middle Basin to achieve a maximum evaporation surface area during peak evaporative periods while allowing pond water levels to be maintained above the minimum depth requirement. Interior levee side slopes will be constructed at 3:1 to minimize shallow foraging areas for water birds. All exterior levees will be constructed with a 4:1 side slope. All levees will be compacted to 90% of the American Society for Testing and Materials (ASTM) method D 1557 to reduce horizontal permeability. Two regulating structures will be positioned between each pond to facilitate the operator's ability to quickly fill or dewater a given pond and thus minimize the times when pond water depths would be less than 2 feet in depth.

11. The existing subsurface tile drainage system consisting of a series of perforated drainage lines set 7 to 9 feet below site grade and spaced on approximately 500 feet centers will be utilized to intercept vertical and horizontal seepage from the basin as shown on Attachment B, which is attached hereto and made part of this Order by reference. The subsurface tile drainage lines will discharge the existing sumps, one at the northwest corner of Section 24 and the other at the northwest corner of Section 36. Automated pumps will be installed in the sumps with their discharge directed back into the evaporation basin.
12. Drainage water will be pumped into the evaporation basin through one of two inlet structures that will be connected to the Main Pipeline. Inlet #1 will be the primary or normal delivery point that will discharge into Pond 1. Inlet #2, which discharges into Pond 4, will only be operated for short periods of time to allow the use of the northern half of the evaporation basin should Ponds 1, 2, or 3 need to be dewatered for maintenance purposes. Under normal operations, drainage water can be pumped into Pond 1 up to a height of approximately 5 feet above the pond bottom. At this height, drainage water will begin to spill from Pond 1 into Pond 2 through a regulating structure. To facilitate this flow, Pond 1 will have the highest water elevation with each successive pond having a slightly lower water level elevation at each regulating structure. This system will allow drainage water to flow at a very slow velocity through the various ponds within the basin until reaching the final or crystallization pond.
13. Each regulating structure will be fitted with a control gate that can be used to increase flows between ponds to facilitate the ability to quickly fill or dewater a given pond and thus minimize the times when pond water depths would be less than 2 feet in depth. The Discharger shall not take more than one week to fill or drain a pond. Except when filling or draining a pond, the evaporation basin water levels will be kept greater than or equal to 2 feet in depth to minimize the opportunity for waterfowl to wade and forage in the ponds. If dewatering occurs during the bird nesting season, the District shall conduct hazing activities
14. In order to discourage and prevent birds from seeking to nest on the evaporation basin areas, the District proposed to use propane cannons, wind-activated mylar tape set on lines between stakes, ground-disturbing activities by tractors dragging "floats", shotgun cracker-shells fired overhead (3-4 seasonal personnel depending on bird activity) and normal workday vehicle traffic (4 regular full-time employees). Hazing and maintenance activities shall not be conducted within 50 feet of any active nest, with the exception of those activities on top of the levees, which can be conducted within 15 feet of any active nest. During the winter months, monitoring and additional hazing activities together with an avoidance plan were proposed to be implemented to address potential salt encrustation issues related to wintering waterbirds.

Comments received during the CEQA process from the DFW, questioned the effectiveness of the District's proposed hazing operations and plans for handling salt encrusted birds. Consequently, this Order requires that the Discharger, in conjunction with the DFW and the United States Fish and Wildlife Service, to prepare and agree to a protocol(s) for avoidance

(hazing) procedures and for assessing mitigation for unavoidable losses to breeding and non-breeding avian species that may result from the of operations of the Mid Evaporation Basin.

### Discharge of Wastewater

15. Subsurface agricultural drainage water is a combination of shallow groundwater and irrigation/rain water that has infiltrated through the croplands and is being collected into a sub-surface drainage system (tile drain).
16. The District conveys subsurface agricultural drainage water via a 14-mile long subsurface pipeline (Main Pipeline) and 17.7 miles of open ditch to its existing evaporation basins. Main Pipeline water represents the quality of the wastewater flowing from existing agricultural drained lands in the District and serves to provide an indication of the water quality that will be discharged into the new Middle Basin.
17. Two drainage water samples collected from the Main Pipeline in May 2013 were submitted to a State of California accredited laboratory for chemical analysis. The results of the chemical analysis are presented in Table 1.

**Table 1**  
**Source Water Chemical Analyses**

Constituent	Main Pipeline @ Outlet Structure	Main Pipeline @ Tule River	Units <sup>1</sup>
Electrical Conductivity	8,900	7,200	umhos/cm
Total Dissolved Solids	6,400	5,000	mg/L
Chloride	1,200	690	mg/L
Nitrate as NO3	110	100	mg/L
Sulfate as SO4	2,700	2,400	mg/L
Hexavalent Chromium	0.8	nd <sup>2</sup>	ug/L
Aluminum	0.88	1.9	mg/L
Arsenic	110	110	ug/L
Cadmium	1.7	nd <sup>2</sup>	ug/L
Calcium	200	150	mg/L
Copper	nd <sup>2</sup>	nd <sup>2</sup>	mg/L
Hardness CaCO3	1,200	920	mg/L
Lead	nd <sup>2</sup>	nd <sup>2</sup>	ug/L
Magnesium	170	130	mg/L
Manganese	0.22	0.27	mg/L
Potassium	18	12	mg/L
Selenium	37	15	ug/L
Silver	nd <sup>2</sup>	nd <sup>2</sup>	mg/L

Constituent	Main Pipeline @ Outlet Structure	Main Pipeline @ Tule River	Units <sup>1</sup>
Sodium	2,000	1,600	mg/L
Uranium	390	84	ug/L
Uranium, Radiological	260	57	pCi/L
Zinc	nd <sup>2</sup>	nd <sup>2</sup>	mg/L

<sup>1</sup> Units - umhos/cm = micromhos per centimeter; mg/L = Milligrams per liter; ug/L = micrograms per liter; pCi/L = picocuries per liter.

<sup>2</sup> nd = not detected by the laboratory above the practical quantitation limit.

18. The agricultural drainage water is not a hazardous waste within the meaning of California Health and Safety Code section 25117 or, California Code of Regulations (Cal. Code Regs.) title 22 section 66261.3. The drainage water does not meet any of the criteria used for the identification of hazardous wastes (Cal. Code Regs., title. 22, section 66261.20 and following). The drainage water, when managed properly pursuant to these requirements, will not pose a substantial present or potential hazard to the environment, including wildlife.

### Site-Specific Conditions

19. The proposed Middle Basin is to be located in the south central portion of the Tulare Lake Bed, a former fresh water lake that went dry in at the beginning of the 20 century in response to diversion of its tributary rivers (Kings, Kaweah, Tule, and Kern Rivers) for irrigation. Extending outward from beneath the margins of the former Tulare Lake Bed are lacustrine and marsh deposits that form a series of silt and clay-rich zones that interfinger with more permeable beds of the continental deposits. These lacustrine and marsh deposits include a series of clay units that were designated as the A through F clays (youngest to oldest) by Croft (1972). These clay zones are low permeability horizons that locally separate the alluvial sequence into several aquifers (Page, 1986). The most prominent of these clay zones is the E Clay of Pleistocene age, which is equivalent to the Corcoran Clay Member of the Tulare Formation (Croft, 1972).

20. Geotechnical investigations performed in 1979, 1988, 2006, and 2013 (a series of soil borings and backhoe excavations) established that the sediments encountered in the shallow subsurface beneath the proposed Middle Basin consisted primarily of fine-grained silts, clays, and silt-clay mixtures, with varying amounts of sand or silty sands. The subsurface geology varies rapidly in both a lateral and vertical sense in response to changes in the depositional environment.

21. Area soils at the Middle Basin are primarily the Gepford clay, sandy substratum, partially drained and the Westcamp loam, partially drained with lesser amounts of the Armona loam according to the USDA Natural Resources Conservation Service. These soils are all listed as having very slow permeability and are calcareous, saline-alkaline. The soils are known

to have high pH and are typically treated with soil amendments (gypsum, sulfur, and acid forming fertilizers) to improve drainage, salinity, and excess alkali conditions.

22. The Middle Basin is within a 100-year floodplain according to Federal Emergency Management Agency (FEMA) maps (Map No. 06031C0675C). However, inundation of the Middle Basin with storm water would not pose a threat to the underlying groundwater quality.
23. The San Andreas Fault that marks the divide between the North American and the Pacific Tectonic Plates is located approximately 35 miles southwest of the proposed site. Potential peak ground acceleration measured as percent gravity (% G) is estimated to be 30-40% G by the State of California, Department of Conservation's Ground Motion Interpolator.
24. Land use in the vicinity of the Middle Basin is agricultural. No water supply wells or domestic wells have been identified within 3 miles of the project site.
25. According to DWR land use data for Kings County published in 2003, the primary crops grown within five miles of the proposed facility are pasture crops such as alfalfa, grain, cotton, and hay crops.
26. Annual mean precipitation over the last 56 years based on the Corcoran Irrigation District weather station located in Corcoran approximately 15 miles to the northeast of the site is 7.35 inches.

#### **Surface Water Considerations**

27. There are no named streams or rivers within approximately five miles of the proposed Middle Basin. Surface water conveyance structures that are present within one mile of the proposed facility include: the Homeland Canal, the Liberty Farms South Canal, and the Kings County Canal Company, Lateral A.

#### **Groundwater Considerations**

28. Regional groundwater is contained within a series of aquifers separated by low permeability clay deposits. These aquifers are generally separated into a lower confined aquifer, a series of semi-confined aquifers, and an upper unconfined aquifer. The lower confined aquifer is situated beneath the E-Clay or Corcoran Clay of the Tulare Formation at a depth of approximately 1,000 feet below the proposed Middle Basin. Water quality in the deeper confined aquifer is described to be good with total dissolved solids (TDS) of approximately 500 milligrams per liter (mg/L).
29. Groundwater quality in the intermediate semiconfined aquifers is unknown beneath the proposed facility. Electrical Conductivity (EC) values have been measured in monitoring wells along the southern end of the Hacienda evaporation basin (2.5 to 3 miles southeast of the the southern end of the proposed Middle Basin). The groundwater EC at a depth of 35 feet was measured at 33,400 umhos/cm in a test hole 3 miles to the west in section 33,

T23S, R21E. EC values in monitoring well 18-1A (depth of 80-100 feet below site grade) averaged approximately 13,000 umhos/cm for the period 1979 to 2013.

30. Shallow unconfined groundwater varies beneath the site from a depth of 3 to 7.5 feet in 1979 to between 10.5 and 13 feet in 2014. The shallow groundwater quality was investigated in the area of the proposed facility by installing four groundwater monitoring wells along the northern and western sides of the proposed basin into first encountered groundwater (Attachment B). The analytical results from four monitoring events (September, December 2014 and March, June 2015) are presented in Table 2 below. The first value shown is the average and the range of the values is shown in the parentheses below. Also listed in Table 2 are the California Department of Public Health's (CDPH) Maximum Contaminant Levels (MCLs) for Drinking Water, CDPH's Secondary MCLs, and Cal/EPA's Office of Environmental Health Hazard Assessment, Public Health Goals.

**Table 2**  
**Middle Basin Groundwater Results**  
**2014 & 2015**

Well Number								
Constituent	24-1A	24-1B	25-1A	36-1A	Units <sup>1</sup>	Primary MCL	Secondary MCL <sup>2</sup>	PHG <sup>3</sup>
Electrical Conductivity	5075 (4500 - 5600)	5175 (2800 - 7500)	4825 (3800 - 6000)	18950 (8800 - 27000)	umhos/cm		2,200	
Total Dissolved Solids	3675 (3400 - 4100)	2300 (1700 - 3300)	3050 (2500 - 3700)	15600 (6400 - 25000)	mg/L		1,500	
Ammonia as N	0.26 (0.15 - 0.49)	0.28 (0.22 - 0.31)	0.28 (0.22 - 0.32)	0.16 (0.14 - 0.18)	mg/L			
Chloride	670 (560 - 790)	415 (250 - 740)	488 (290 - 720)	2850 (1300 - 4600)	mg/L		600	
Nitrate as N03	16 (1.0 - 26)	nd <sup>4</sup>	18 (1.0 - 67)	nd <sup>4</sup>	mg/L	45		45
Sulfate as S04	1775 (1600 - 2000)	805 (450 - 1500)	1205 (930 - 1600)	7525 (3300 - 11000)	mg/L		600	
Fluoride	1.0 (1.0 - 1.1)	5.0 (1.0 - 9.8)	3.0 (2.7 - 3.4)	1.0 (1.0 - 1.3)	mg/L			
Arsenic	27 (2.0 - 87)	184 (20 - 410)	107 (2.0 - 210)	40 (2.0 - 100)	ug/L	10		0.004
Alkalinity as CaCO3	313 (300 - 320)	615 (500 - 710)	658 (580 - 720)	505 (340 - 610)	mg/L			
Boron	1.1 (0.1 - 1.6)	3.0 (2.1 - 3.9)	3.6 (3.2 - 3.9)	9.2 (5.0 - 12)	mg/L			
Calcium	468 (410 - 500)	95 (43 - 130)	110 (59 - 160)	530 (490 - 590)	mg/L			
Magnesium	158 (120 - 200)	111 (25 - 200)	116 (34 - 200)	313 (220 - 390)	mg/L			
Molybdenum	63 (10 - 86)	285 (10 - 440)	465 (10 - 820)	1553 (10 - 4000)	ug/L			
Potassium	23 (nd <sup>4</sup> - 54)	48 (4.3 - 90)	53 (2.1 - 110)	40 (11 - 80)	mg/L			
Sodium	663 (580 - 750)	795 (750 - 890)	1078 (880 - 1230)	4000 (2000 - 5400)	mg/L			
Selenium	3.4 (2.7 - 4.1)	5.3 (2.2 - 9.1)	1.1 (0.4 - 2.5)	1.1 (0.4 - 1.6)	ug/L	50		30
Uranium	210 (1.0 - 310)	184 (66 - 270)	345 (70 - 620)	1400 (700 - 2000)	ug/L		0.5	

Well Number								
Constituent	24-1A	24-1B	25-1A	36-1A	Units <sup>1</sup>	Primary MCL	Secondary MCL <sup>2</sup>	PHG <sup>3</sup>
Uranium, Radiological	143 (1.0 – 210)	122 (44 – 180)	230 (47 – 410)	945 (470 – 1400)	pCi/L	20		0.43

1. Units - umhos/cm = micromhos per centimeter; mg/L = Milligrams per liter; ug/L = micrograms per liter; pCi/L = picocuries per liter.
2. The maximum contaminant level shown for EC, TDS, chloride, and sulfate are short term limits
3. PHG = Primary health goal. Action level only. Not a Maximum contaminant level.
4. nd = not detected.

31. Shallow groundwater samples were also collected from two existing tile drainage sumps along the western edge of the site in 2013. These sumps are part of a subsurface drainage system (tile drain) installed by a previous landowner. The chemical analyses of these samples are presented on Table 3.

**Table 3**  
**Middle Basin Tile Drainage Water Analyses**  
**Sampled May 2013**

Constituent	Tile Drainage System Groundwater		Units <sup>1</sup>	Primary MCL	Secondary MCL <sup>2</sup>
	Middle Basin North Sump NW Corner Section 24	Middle Basin South Sump NW Corner Section 36			
Electrical Conductivity	15,000	9,800	umhos/cm		2,200
Total Dissolved Solids	12,000	6,600	mg/L		1,500
Chloride	2,500	1,500	mg/L		600
Nitrate as N03	220	120	mg/L	45	
Sulfate as S04	5,300	3,000	mg/L		600
Hexavalent Chromium	1.2	0.8	ug/L	10	
Aluminum	0.98	0.2	mg/L		1.0
Arsenic	36	51	ug/L	10	
Cadmium	2.4	2.6	ug/L		
Calcium	390	290	mg/L		
Copper	0.27	0.086	mg/L		0.5
Hardness CaCO3	2,100	1,500	mg/L		
Lead	10	ND	ug/L		
Magnesium	270	180	mg/L		
Manganese	0.22	0.13	mg/L		
Potassium	24	17	mg/L		
Selenium	86	56	ug/L	50	
Silver	nd <sup>3</sup>	nd <sup>3</sup>	mg/L		
Sodium	3,200	2,100	mg/L		
Uranium	590	570	ug/L		0.5
Uranium, Radiological	390	380	pCi/L	20	
Zinc	0.11	ND	mg/L		5.0

1. Units - umhos/cm = micromhos per centimeter; mg/L = Milligrams per liter; ug/L = micrograms per liter; pCi/L = picocuries per liter.
2. The maximum contaminant level shown for EC, TDS, chloride and sulfate are the short term limits.
3. nd = not detected.

32. The six ambient groundwater samples analyzed (two in 2013, four in 2014, and two in 2015; see Tables 2 & 3) demonstrate that the proposed site's shallow groundwater quality exceeded the Primary MCL values for arsenic and uranium and the short term Secondary MCLs for EC, TDS, chloride, and sulfate. Additionally, both tile drainage sumps contained water that exceeded the Primary MCL value for selenium, arsenic, nitrate and uranium and the Secondary MCLs for EC, TDS, chloride and sulfate.

### **Basin Plan, Beneficial Uses, and Water Quality Objectives**

33. The Water Quality Control Plan for the Tulare Lake Basin, Second Edition (hereafter Basin Plan) designates beneficial uses, establishes water quality objectives, contains implementation plans and policies for protecting waters of the basin, and incorporates by reference plans and policies adopted by the State Water Board. Pursuant to Water Code section 13263(a), waste discharge requirements must implement the Basin Plan.
34. The proposed Middle Basin is situated within the South Valley Floor Hydrologic Unit, in the Lake Sump Hydrologic Area 558.30 as depicted on interagency hydrologic maps prepared by the Department of Water Resources in August 1986. Pursuant to Chapter II of the Basin Plan, the beneficial uses of surface water for the Lake Sump Hydrologic Area include: agricultural supply; industrial process supply; industrial service supply; water contact recreation; non-contact water recreation; warm freshwater habitat; wildlife habitat; rare, threatened, or endangered species; and groundwater recharge.
35. The Middle Basin is in Detailed Analysis Unit (DAU) 241 within the Tulare Lake Basin hydrologic unit. The Basin Plan designates the beneficial uses of underlying groundwater as municipal and domestic supply; agricultural supply; and industrial service supply.
36. The Basin Plan establishes narrative water quality objectives for chemical constituents, tastes and odors, and toxicity in groundwater. The toxicity objective requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life associated with designated beneficial uses. The Basin Plan states that when compliance with a narrative objective is required to protect specific beneficial uses, the Central Valley Water Board will, on a case-by-case basis, adopt numerical limitations in order to implement the narrative objective.
37. In the absence of specific numerical water quality limits, objectives for receiving waters must be considered case-by-case. General salt tolerance guidelines, such as Water Quality for

Agriculture by Ayers and Westcot (1985)<sup>1</sup> and similar references indicate that yield reductions in nearly all crops are not evident when irrigation water has an EC less than 700 umhos/cm. It is, however possible to achieve full yield potential for a large variety of crops with waters having EC up to 3,000 umhos/cm if the proper leaching fraction is provided to maintain soil salinity within the tolerance of the crop.

38. The Basin Plan's narrative water quality objectives for chemical constituents, at a minimum, require waters designated as domestic or municipal supply to meet the MCLs specified in Cal. Code Regs. title. 22. The Basin Plan recognizes that the Central Valley Water Board may apply limits more stringent than MCLs to ensure that waters do not contain chemical constituents in concentrations that adversely affect beneficial uses. The Basin Plan states that when compliance with a narrative objective is required to protect specific beneficial uses, the Central Valley Water Board will, on a case-by-case basis, adopt numerical limitations in order to implement the narrative objective.
39. The Basin Plan identifies the greatest long-term problem facing the Tulare Lake Basin as the increase in salinity in groundwater, which has accelerated due to the intensive use of soil and water resources by irrigated agriculture. The Tulare Lake Bed is unique with its highly elevated salts in the soils and shallow groundwater due to natural conditions,
40. The Basin Plan includes criteria for granting exceptions to municipal and domestic supply designations based on the Sources of Drinking Water Policy. The Basin Plan also includes criteria for granting exceptions to the designation of beneficial uses for agricultural supply and industrial supply. Exceptions to the Sources of Drinking Water Policy are not self-implementing, but must be established in an amendment to the Basin Plan.

### **Title 27 of the California Code of Regulations**

41. Cal. Code Regs. title 27 contains regulatory requirements for the treatment, storage, processing, and disposal of solid waste, which includes designated waste, as defined by Water Code section 13173. However, title 27 exempts certain activities from its provisions. Discharges regulated by this Order are exempt from title 27 pursuant to a provision that exempts wastewater under specific conditions. This exemption, found at title 27, section 20090, is described below:
  - (b) Wastewater – Discharges of wastewater to land, including but not limited to evaporation ponds, percolation ponds, or subsurface leachfields if the following conditions are met:
    - (1) The applicable regional water quality control board has issued WDRs, reclamation requirements, or waived such issuance;
    - (2) The discharge is in compliance with the applicable water quality control plan; and

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<sup>1</sup> Ayers, R.S., and Westcott, D.W., 1985, *Water Quality for Agriculture*: FAO Irrigation and Drainage Paper # 29 Rev 1, Food and Agricultural Organization of the United Nations. Available at: <http://www.fao.org/docrep/003/t0234e/t0234E00.htm>

(3) The wastewater does not need to be managed according to Chapter 11, Division 4.5, title 22 of this code as a hazardous waste.”

42. The discharge authorized by this Order are exempted from the requirements of title 27 as follows:

- a. The discharge is agricultural wastewater placed into an evaporation pond.
  - 1) The Central Valley Water Board is issuing WDRs via this Order;
  - 2) The discharge is in compliance with the Basin Plan; and
  - 3) The subsurface agricultural drain water does not need to be managed as hazardous waste.

43. Although the facility is exempt from title 27, the statistical data analysis methods of title 27, 20415(e) are appropriate for determining whether the discharge complies with Groundwater Limitations specified in this Order. Intrawell comparison is necessary given the wide range of water quality exhibited in the site monitoring wells and tile drainage sumps

**State Water Board Resolution 88-63 (The Sources of Drinking Water Policy)**

44. The Sources of Drinking Water Policy states that all surface waters and groundwaters of the state are considered to be suitable, or potentially suitable, for municipal or domestic water supply, except where the groundwater meets one or more of the criteria specified in the Basin Plan, including:

- a. The TDS exceeds 3,000 mg/L (5,000 micromhos per centimeter (umhos/cm) EC) and the aquifer cannot reasonably be expected by the Central Valley Water Board to supply a public water system;
- b. Both tile drainage sumps contained water that exceeded the Primary MCL value for selenium and the sump at the northwest corner of Section 24 exceeded Primary MCL values for aluminum and lead.
- c. The water source does not provide sufficient water to supply a single well capable of producing an average, sustained yield of 200 gallons per day; or.
- d. The aquifer is regulated as a geothermal energy producing source or has been exempted administratively pursuant to 40 CFR, section 146.4. for the purpose of underground injection of fluids associated with the production of hydrocarbon or geothermal energy, provided that these fluids do not constitute a hazardous waste under 40 CFR, section 261.3.

45. Current groundwater data show that the water quality in the site wells and in the two tile drainage sumps exceeds the Primary MCL values for arsenic, selenium, nitrate, and uranium and Secondary MCLs for conductivity, TDS, chloride and sulfate . There is contamination, either by natural processes or by human activity (unrelated to a specific pollution incident), that cannot reasonably be treated for domestic use using either Best

Management Practices or best economically achievable treatment practices. Based upon current and historic groundwater data, the quality of the shallow groundwater beneath the proposed facility is insufficient to support the Tulare Lake Basin Plan, Municipal and Domestic Supply (MUN) beneficial use (uses of water for community, military, or individual water supply systems, including, but not limited to, drinking water supply).

### **State Anti-Degradation Policy (Resolution 68-16)**

46. State Water Resources Control Board Resolution 68-16 (“Policy with Respect to Maintaining High Quality Waters of the State”) (hereafter Resolution 68-16 or “Anti-Degradation Policy”) prohibits degradation of groundwater unless it has been shown that:
  - a. The degradation does not result in water quality less than that prescribed in state and regional policies, including violation of one or more water quality objectives;
  - b. The degradation will not unreasonably affect present and anticipated future beneficial uses;
  - c. The discharger employs best practicable treatment or control (BPTC) to minimize degradation; and
  - d. The degradation is consistent with the maximum benefit of the people of the State.
47. This Order places restrictions on the discharge of sub-surface agricultural drainwater into the Middle Basin that are intended to prevent pollution and nuisance conditions from occurring or persisting. Though the Board recognizes that degradation of high-quality groundwater may still occur pursuant to this Order, the implementation of lateral and vertical seepage control measures (perimeter and sub-surface drains) will limit the amount of degradation that will occur under this Order. Degradation will be limited so that discharges from the Middle Basin will not cause long-term impacts to beneficial uses of groundwater.
48. Consistent with the State Anti-Degradation Policy, this Order establishes requirements and standards that will result in the implementation of BPTC measures to limit the degradation caused by discharges from the Middle Basin. The following is a general description of what the Board considers to be BPTC for the Middle Basin construction and operation:
  - a. Engineering drawings/plans must be prepared and signed by a California Registered Civil Engineer, or Engineering Geologist for the proposed ponds, control structures, and piping design. The submittal must include a seismic stability analysis of the final levee design.
  - b. The Discharger must submit and implement a construction quality assurance/quality control plan (QA/QC Plan). The QA/QC Plan will describe the process of additional field review to be conducted at locations within the proposed pond bottoms where visual observation, test borings, and/or excavation pits indicate a significant presence of shallow sandy soil layers. Location specific analysis of these areas dictate whether it is

- feasible to disk, regrade, and then compact the soil layer to reduce seepage losses versus removing and replacing it.
- c. Levee construction (both perimeter and internal) will be performed using acceptable silt/clay fill material (per the QA/QC Plan) that is excavated from within ponds and placed in compacted lifts to the required levee height. Similar to the pond bottoms investigations, areas below the Middle Basin levees where the scarifying process identifies significant sandy intervals will be investigated to determine if it is feasible to disk, regrade, and then compact the soil layer to reduce seepage losses versus removing and replacing it.
  - d. The existing subsurface tile drainage system will be utilized to intercept vertical and horizontal seepage from the basin. The subsurface tile drainage lines will discharge into two pump sumps fitted with automated pumps with their discharge being directed back into the evaporation basin.
  - e. The Middle Basin will be operated using two pump stations for delivery of drainage water to the ponds. Drain water will flow by gravity from the existing Main Pipeline into the pump sumps and the drainage water would then be pumped to the respective delivery points. Inlet #1 will be the primary or normal delivery point. Inlet #2 will provide operational flexibility to allow drainage water to continue to be diverted into the north half of the Middle Basin if for any reason there is a desire or need to dewater Ponds 1, 2, or 3 for operational purposes or necessary maintenance work. The use of Inlet #2 will only occur for short periods of time, as necessary, to accommodate maintenance operations. It will not be routinely used to fill the last three ponds.
  - f. Flow meters will be installed to measure the drainage water discharged into the Middle Basin at both inlets and discharges from the tile drainage system. Inlet pump flow rate will be controlled to insure the ponds are kept above a minimum water depth of 2 feet up to a depth of approximately 5 feet with a required 2-foot freeboard.
  - g. Daily review of pump operations and pond water level elevations (staff gauges will be set in each pond) will verify if acceptable water depths are being maintained. Water depths less than 2 feet can encourage certain avian species to wade and feed on the invertebrate organisms within the ponds. A minimum depth of 2 feet is required to minimize this possibility.
49. This Order also contains closure requirements that specify that the Discharger must maintain coverage under this Order or a subsequent revision to this Order until all waste and waste impacted soil (including soil within the pond(s)), is disposed of or utilized in a manner that does not pose a threat to surface water or groundwater quality or create a condition of nuisance.
50. To assess compliance with the State Anti-Degradation Policy, this Order requires groundwater monitoring of first encountered groundwater (the point in the aquifer where

typically detection of changes to groundwater quality, caused by the facility, would be first detected) and deeper groundwater (below first encountered) to monitor for the vertical migration of waste constituents. This Order also prohibits discharge of waste to surface waters and requires monitoring of any surface water discharge that does occur to ensure that it does not pose a threat to surface water or groundwater quality or create a condition of nuisance. The purpose of monitoring is to confirm that the discharges are effectively controlled by management practices and to evaluate compliance with this Order.

51. When a Regional Water Quality Control Board prescribes waste discharge requirements that will result in the degradation of high-quality waters, the State Anti-Degradation Policy requires that the Board first make a determination that the authorized degradation is consistent with the maximum benefit to the people of the State. Consistent with the evaluation contained in the Information Sheet and considering the economic significance of the Tulare Lake Bottom agricultural industry and the important role that the Tulare Lake Bottom agricultural industry plays in providing food and fiber supplies to the nation, the Central Valley Water Board finds that maintaining the Tulare Lake Bottom agricultural industry is consistent with the maximum benefit to the people of the state. To maintain the industry and to prevent the loss of jobs and the impacts to the local economy that might otherwise occur, some degradation to high quality waters must be allowed. However, this degradation will be limited by this Order so that there will not be long-term impacts to beneficial uses, thereby allowing the full utilization of the aquifer.

### **California Environmental Quality Act (CEQA)**

52. In 2012, the District prepared and circulated a Mitigated Negative Declaration (MND) entitled "Construction and Operation of the Mid Evaporation Basin for Management and Disposal of Sub-Surface Agricultural Drainwater". A Notice of Determination and Final Document were filed with the State Clearinghouse (SCH #20121057) and the County of Kings on 22 May 2013.
53. Comments were received from the CDF&W, Region 4, and the Native American Heritage Commission. Both the California DFW (23 January 2013) and the Central Valley Water Board (9 May 2013) submitted late comments. Fish and Wildlife's comments were addressed in the final MND that was received at the State Clearinghouse on 22 May 2013 and a Notice of Determination filed on the same day. Central Valley Water Board staff comments regarding the MND have been incorporated into this Order.

### **GENERAL FINDINGS**

54. This Order does not authorize violation of any federal, state, or local law or regulation.
55. As stated in Water Code section 13263(g), the discharge of waste into waters of the state is a privilege, not a right, and this Order does not create a vested right to continue the discharge of waste. Failure to prevent conditions that create or threaten to create pollution

or nuisance will be sufficient reason to modify, revoke, or enforce this Order, as well as prohibit further discharge.

56. In compliance with Water Code section 106.3, 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 maximum contaminant levels designed to protect human health and ensure that water is safe for domestic use.
57. This Order is not a National Pollutant Discharge Elimination System Permit issued pursuant to the Federal Clean Water Act. Coverage under this Order does not exempt a facility from the Clean Water Act. Any facility required to obtain such a permit must notify the Central Valley Water Board.
58. The Findings of this Order, supplemental information and details in the attached Information Sheet were considered in establishing the conditions of discharge.
59. In 2006, the Central Valley Water Board, the State Water Board, and Regional stakeholders began a joint effort to address salinity and nitrate problems in the region and adopt long-term solutions that will lead to enhanced water quality and economic sustainability. Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) is a collaborative basin planning effort aimed at developing and implementing a comprehensive salinity and nitrate management program. The Central Valley Water Board intends to coordinate all such actions with the CV-SALTS initiative.

The District and the Tulare Lake Basin Water Storage District are currently engaged in such an action with CV-SALTS (an evaluation of the MUN and AGR beneficial uses in the Tulare Lake Bottom area). The CEQA process is underway for the Basin Plan amendment for the de-designation of these beneficial uses from a segment of the groundwater beneath a portion of the Tulare Lake Bed. The de-designation of a beneficial use is a multipart process that involves a significant commitment of time and resources. Should such an effort prove successful, this Order can be amended in the future to reflect the de-designations and to implement any policies or requirements established by the Central Valley Water Board as a result of the CV-SALTS process.

#### **Public Notice**

60. All of the above and the supplemental information and details in the attached Information Sheet, which is incorporated herein, were considered in establishing the following conditions of discharge.
61. The Discharger and interested agencies and persons have been notified of the Central Valley Water Board's intent to issue this Order for discharges of wastes to the Middle Basin and the Board has provided them with an opportunity for a public hearing and an opportunity to submit written comments.

62. The Central Valley Water Board, in a public meeting, heard and considered all comments pertaining to the proposal to regulate discharges of wastes to the Middle Basin under this Order.

IT IS HEREBY ORDERED that, pursuant to Water Code section 13263, and 13267 and in order to meet the provisions contained in Division 7 of the California Water Code and regulations and policies adopted thereunder, the Tulare Lake Drainage District, its agents, successors, and assigns, in order to meet the provisions of the Water Code and regulations and policies adopted hereunder, shall comply with the following:

**A. Prohibitions**

1. The discharge of hazardous wastes, as that term is defined in California Code of Regulations, title 22, section 66261.1 et seq., is prohibited.
2. Discharge of wastewater in a manner or location other than that described herein or in the Report of Waste Discharge is prohibited.
3. The discharge of agricultural drainage water from the Middle Basin to surface waters or surface drainage courses is prohibited.
4. Except when authorized by a National Pollutant Discharge Elimination System (NPDES) permit, the direct or indirect discharge of storm water from the Middle Basin to surface waters is prohibited<sup>a</sup>.
  - a. Discharges of pollutants from the evaporation basin to waters of the United States may not lawfully occur except in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. NPDES permit coverage is not provided by this Order, but must be obtained separately.
5. Discharge of other than subsurface agricultural drainage water to the Middle Basin is prohibited.
6. Levees, earthen windbreaks or islands within any pond/cell that contains waste water are prohibited.
7. Tires, riprap, or other materials and artificial structures along any cell bank that could entrap young birds are prohibited.
8. Unless an emergency exists, construction, modification, and maintenance of levees and ponds and removal of vegetation is prohibited when active nesting is occurring. In event of emergency, the Discharger shall complete levee maintenance immediately and notify the Board and the CDF&W within 24 hours thereafter of the circumstances and action taken.
9. Soil borings or earthwork conducted in a manner that creates hydraulic continuity between the shallow aquifer and any underlying useable aquifer is prohibited.
10. Under this Order, the expansion of the Middle Basin beyond the design capacity identified in the 2012 ROWD for the Middle Basin (9,250 acre/foot) is prohibited<sup>b</sup>.

- b. Dischargers must submit a RWD, document compliance with CEQA, and be issued new or revised waste discharge requirements before any material facility expansion.

## **B. Discharge Specifications**

1. The Middle Basin and its component ponds or cells shall be constructed and operated to maintain a minimum freeboard of 2 feet as recorded by permanent depth markers to be located within each cell, unless levees are certified in writing by a registered civil engineer or geotechnical engineer as structurally sound and capable of preventing overtopping at a specific lesser freeboard.
2. The Discharger shall operate and maintain the subsurface tile drainage system, and the associated sumps, piping, and automated pumps to minimize lateral and vertical seepage from the basin. The subsurface tile drains are considered Best Practicable Treatment or Control Measures and are herein designated as part of the Middle Basin.
3. The Discharger shall install and maintain flowmeters on all discharges into the Middle Basin (inflow from the main drain pipeline, tile drainage inflow, and perimeter drain inflow) in order to facilitate water balance calculations for the Middle Basin. Flowmeters must be capable of providing accurate flow measurements and be periodically calibrated per the manufactures' recommendation (maximum period between calibrations is to be one year unless a longer period is specified by the manufacture).
4. The Discharger shall prepare a ground surface topography map showing property lines, ground surface contours, and locations of all existing canals, pipelines, levees, drainage sumps, and the District Main Pipeline Outlet Structure.
5. The waste shall be contained within the Middle Basin's designated disposal ponds (cells) at all times. No waste constituent shall be released, discharged, or placed where it will be released or discharged, in a concentration or in a mass that causes violation of the Groundwater Limitations of this Order.
6. The collection, treatment, storage, discharge or disposal of wastes at the Middle Basin shall not cause a violation of water quality objectives or result in the creation of a condition of pollution or nuisance as defined by Water Code section 13050.
7. The discharge shall not cause or contribute to a condition of pollution or result in the loss of existing beneficial uses.
8. The Middle Basin shall be operated and maintained to prevent inundation or washout due to floods with up to a 100-year return period.
9. Weeds and aquatic plants shall be minimized through the control of water depth, harvesting, and/or herbicides.
10. When filling a cell, the Discharger shall employ all feasible measures to attain the required 2-foot minimum depth as quickly as feasible. If the drainage flows diminish and the pond

cannot be maintained at a depth of 2 feet, then the pond will be pumped dry with portable pumps until increased drainage flows occur and additional storage is needed.

11. Should nests be identified below the high water level of a cell, water levels in that cell shall be managed to the extent practicable to minimize flooding of eggs.

### **C. Groundwater Limitations**

1. Discharge of waste at the Middle Basin shall not cause the underlying groundwater to exceed background levels or where specific constituents are below water quality objectives, to unreasonably affect beneficial uses, or cause a condition of pollution or nuisance. The appropriate water quality objectives are summarized in the Information Sheet, which is attached to and part of this Order, and can be found in the Central Valley Water Board's Water Quality Control Plan for the Tulare Lake Basin.
  - a. Release of waste constituents from any portion of the Middle Basin shall not cause groundwater in any monitoring well to contain waste constituents in concentrations statistically greater than current groundwater quality.

Compliance with these limitations shall be determined annually based on comparison of data for each well with the groundwater limitations using approved intra-well statistical methods.

### **D. Provisions**

1. The Discharger shall comply with the Standard Provisions and Reporting Requirements for Waste Discharge Requirements, dated 1 March 1991 (Standard Provisions), which are part of this Order.
2. Prior to construction, the Discharger shall submit for Central Valley Water Board's Executive Officer for approval:
  - a. Final engineering design drawings and construction details signed by a California Registered Civil Engineer or Registered Geotechnical Engineer for the pond levees, erosion control devices, pump stations, drainage sumps, regulating structures, inlet pipelines, and pipelines between basins.
  - b. The Engineering design drawings and construction details signed by a California Registered Civil Engineer or Registered Geotechnical Engineer for construction of a perimeter drain system drain (size of piping, necessary pumps, sump size, depth installed, etc.) installed into first encountered groundwater below site grade around the entire footprint of the Middle Basin. The perimeter drain will be connected to a concrete floored drainage sump(s) that is fitted with an automated pumping system that will discharge back into only those Middle Basin cells that contain 2 feet or greater water depths.

- c. A construction quality assurance/quality control plan (QA/QC Plan) that includes a description of the process for identifying and testing of soils to be used for levee construction (field identification, laboratory testing, or combination), the levee compaction testing method(s) and testing frequency, identification of barrow areas, and a description of the process used for certification of final grade, slope and elevations. The QA/QC Plan must also describe the process to be used for additional field review where visual observation, scarifying process, test borings, and/or excavation pits indicate a significant presence of shallow sandy soil layers and the testing methods used for determining whether it is feasible to disk, regrade, and then compact the suspect soil layer to reduce seepage losses versus removing and replacing it with acceptable silt/clay fill material.
3. Interior side slopes of all pond or cell levees at the Middle Basin shall be graded and maintained at slopes of 3:1 or steeper with sufficient top width to permit safe vehicular access around the perimeter of each pond or cell.
4. Prior to discharge of waste into the Middle Basin, the Discharger shall:
  - a. Submit a plan for approval by the Central Valley Water Board Executive Officer for a groundwater quality monitoring system. The system shall be capable of monitoring first encountered groundwater beneath the perimeter of the proposed Middle Basin (all four sides) and include a related monitoring well system capable of assessing vertical migration of waste below the base elevation of the wells that monitor first encountered groundwater. Additional discussion regarding the components of the groundwater monitoring plan are provided in the attached MRP. Requirements for groundwater monitoring well workplans and installation are included as Attachment C, which is attached hereto and made part of this Order by reference;
  - b. Install an approved groundwater quality monitoring system;
  - c. Establish background groundwater quality for the monitoring system wells through the collection of a minimum of eight sampling events (minimum number of samples required to develop statistical values for inorganic constituents of concern); and
  - d. Submit a report proposing background constituent levels to be used for the intra-well statistical evaluation.
5. The Discharger, in conjunction with the DFW and the United States Fish and Wildlife Service, prepared and agreed to protocols for avoidance (hazing) procedures and for assessing mitigation for unavoidable losses to breeding and non-breeding avian species (Wildlife Protocol) as a result of operations of the District's Middle Basin. The Wildlife Protocols are included as Attachment D, which is attached hereto and made part of this Order by reference. Additionally, the DFW has provided a Survey Methods document to provide guidance for biologists conducting waterbird usage surveys. The Survey Methods

are included as Attachment E, which is attached hereto and made part of this Order by reference.

6. The Discharger shall report promptly to the Central Valley Water Board any material change or proposed change in the character, location, or volume of the discharge and submit a ROWD to the Central Valley Water Board to address the change.
7. The Discharger must at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Discharger to achieve compliance with the conditions of this Order. This Provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by the Discharger only when the operation is necessary to achieve compliance with the conditions of this Order.
8. The Wildlife Protocol(s) shall utilize all of the District's available wildlife monitoring data for the South Evaporation Basin and the Hacienda Evaporation Basin to assess numbers of avian species and predation rates and to determine the amount of alternative/mitigation habitat necessary to offset impacts to avian species.
9. Based on results of monitoring at the Middle Basin and Compensation Habitat, the DFW may request a review and redrafting of the Compensation Habitat protocols at a frequency of approximately every five years. The District will work collaboratively with the Central Valley Water Board and DFW staff to incorporate any changes into the Monitoring and Reporting Program and/or WDR if needed.
10. This Order is conditional upon the implementation of the Wildlife Protocols included herein as Attachment D and the District maintaining sufficient habitat to satisfy the required mitigation under the protocols.
11. **By (one year from adoption of this Order)**, the Discharger shall submit an adequate written technical report prepared by a qualified wildlife biologist assessing whether mitigation measures have been fully implemented and whether the measures, as implemented and perhaps modified to improve effectiveness, fully compensate for all existing and potential impacts on target species. The report shall be sufficiently comprehensive and statistically sound to determine whether complete mitigation has been, and can continue to be, achieved. The Board, after review of this report, may amend this Order to prohibit further discharge or modify mitigations.
12. Bird carcasses shall be burned or buried unless an unusual number (more than 15) is found in a 24-hour period. Upon finding an unusual amount, the DFW shall be notified at the Fresno office at (559) 243-4005 within 24 hours and a bird carcass shall, at the DFW's discretion, be held for diagnosis.
13. If a significant fish population develops within a cell(s), the Discharger shall implement a fish control and removal program.

14. Operation of the basin shall not cause violation of the Migratory Bird Treaty Act and California Fish and Game Codes 3503, 3503.5 and 3511.
15. Subject to prior notice, employees of the DFW and USFWS shall be granted access to the Middle Basin and mitigation habitat to the extent necessary to monitor compliance with mitigation measures specified in this Order.
16. This Order requires the Discharger to report any noncompliance that endangers human health or the environment, or any noncompliance with the Prohibitions contained in the Order within 24 hours of becoming aware of its occurrence.
17. Solids removed from the basins shall be disposed of in a manner that is consistent with title 27 and approved by the Executive Officer.
18. The Discharger shall properly destroy all abandoned wells, boreholes, and other potential vertical conduits within the footprint of the Middle Basin in accordance with the Department of Water Resources' Bulletin 74, Water Well Standards: State of California or the appropriate Kings County ordinance, whichever is more stringent.
19. The Discharger shall maintain all devices or designed features, installed in accordance with this Order, such that they continue to operate as intended without interruption.
20. In the event of any change in ownership or responsibility for construction or operation of the evaporation basin, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to this office.
21. To assume operation under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of this Order a minimum of 120 days prior to the transfer. The request must contain the requesting entity's full legal name, the State of incorporation if a corporation, the name, address, and telephone number of the persons responsible for contact with the Board, and a statement. The statement shall comply with the signatory paragraph of Standard Provision B.3 and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge of waste without requirements on the part of the new owner, a violation of the California Water Code. Transfer shall be approved or disapproved by the Executive Officer.
22. The Discharger shall develop and submit a complete Financial Assurance and Closure Plan (Closure Plan) with a schedule for decommissioning the drainage system and closing the evaporation basin. The Closure Plan shall assure fiscal capability to properly close the basins, and relocate any wastes disposed in violation of these requirements. The Closure Plan must include proposed drainage plans, grading plans, and disposal plans for the sediments containing elevated levels of minerals and trace elements per the requirements of title 27.

23. The Discharger shall develop and submit annually a drainage operation plan (Drainage Plan) to minimize drainage for the calendar year. The Discharger shall also submit annually a summary of the previous calendar year's actual water use and produced drainage water.
24. If groundwater monitoring results show that the discharge of waste is causing groundwater to contain any waste constituents in concentrations statistically greater than the Groundwater Limitations of this Order, **within 120 days of the request of the Executive Officer**, the Dischargers shall submit a BPTC Evaluation Workplan that sets forth the scope and schedule for a systematic and comprehensive technical evaluation of each component of Middle Basin's waste containment system (berms, levees, perimeter drain, and subsurface drainage system) to determine best practicable treatment or control or best practices for each waste constituent that exceeds a Groundwater Limitation.
25. The Discharger shall comply with the attached Monitoring and Reporting Program R5-2015-XXXX, which is part of this Order, and any revisions thereto as ordered by the Central Valley Water Board or the Executive Officer.
26. Discharger shall comply with the "Standard Provisions and Reporting Requirements for Waste Discharge Requirements," dated 1 March 1991, which are attached hereto and by reference a part of this Order. This attachment and its individual paragraphs are commonly referenced as "Standard Provision(s)."
27. The Discharger must comply with all conditions of this Order, including timely submittal of technical and monitoring reports as directed by the Executive Officer. Violations may result in enforcement action, including Central Valley Water Board or court orders requiring corrective action or imposing civil monetary liability, or in revision or rescission of this Order.
28. All technical reports and work plans required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code sections 6735, 7835, and 7835.1. As required by these laws, completed technical reports and work plans must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work. All reports required herein are required pursuant to Water Code section 13267.
29. The discharger shall permit representatives of the Central Valley Water Board and the State Water Resources Control Board, upon presentations of credentials, to:
  - a. Enter premises where wastes are treated, stored, or disposed of and facilities in which any records are kept,
  - b. Copy any records required to be kept under terms and conditions of this Order,
  - c. Inspect at reasonable hours, monitoring equipment required by this Order, and

- d. Sample, photograph and video tape any discharge, waste, waste management unit, or monitoring device.

30. The Board will review this Order periodically and revise requirements when necessary.

#### **E. Permit Reopening, Revision, Revocation, And Re-Issuance**

1. If more stringent applicable water quality standards are adopted in the Basin Plan, the Central Valley Water Board may revise and modify this Order in accordance with such standards.
2. This Order may be reopened to address any changes in state plans, policies, or regulations that would affect the water quality requirements for the discharges and as authorized by state law. This includes regulatory changes that may be brought about by the CV-SALTS planning efforts.

#### **F. Required Reports And Notices**

1. By **(6 months from adoption of this Order)**, the Discharger shall submit a Groundwater Limitations Compliance Assessment Plan. The plan shall describe and justify the statistical methods used to demonstrate compliance with the Groundwater Limitations of the Order for the constituents listed in the Monitoring and Reporting Program. Compliance shall be determined annually based on an intra-well statistical analysis described in title. 27, section 20415(e)(10) to compare monitoring data collected at each compliance well.
2. The Discharger shall annually, by **1 February**, submit
  - a. A facility operations and maintenance plan,
  - b. Financial Assurance and Closure Plan
  - c. A Drainage Operation and Management Plan (Only if there have been significant changes in the operations or management).
  - d. Annual Monitoring Reports
3. The Discharger shall notify the Central Valley Water Board immediately of any failure that threatens the integrity of containment or control features or structures at the basin.

If, in the opinion of the Executive Officer, the Discharger fails to comply with the provisions of this Order, the Executive Officer may refer this matter to the Attorney General for judicial enforcement, may issue a complaint for administrative civil liability, or may take other enforcement actions. Failure to comply with this Order may result in the assessment of Administrative Civil Liability of up to \$10,000 per violation, per day, depending on the violation, pursuant to the Water Code, including sections 13268, 13350 and 13385. The Central Valley Water Board reserves its right to take any enforcement actions authorized by law.

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California

Code of Regulations, title 23, section 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order 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 law and regulations applicable to filing petitions may be found on the Internet at: [http://www.waterboards.ca.gov/public\\_notices/petitions/water\\_quality](http://www.waterboards.ca.gov/public_notices/petitions/water_quality) or will be provided upon request.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on XX XXXX 2014.

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PAMELA C. CREEDON, Executive Officer

Order Attachments:

- A Site Location Map
- B Existing Subsurface Drainage System
- C Requirements for Monitoring Well Installation Workplans and Monitoring Well Installation Reports
- D Protocol for Assessing Mitigation for Unavoidable Losses to Non-breeding Birds as a Result of Operations of the TLDD Mid Evaporation Basin
- E Survey Methods

Monitoring and Reporting Program R5-2015-XXXX  
Information Sheet  
Standard Provisions (1 March 1991)