

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION**

ORDER R5-2015-XXXX

**WASTE DISCHARGE REQUIREMENTS
FOR
SAN LUIS & DELTA-MENDOTA WATER AUTHORITY
AND
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
SURFACE WATER DISCHARGES FROM THE
GRASSLAND BYPASS PROJECT**

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Attachment A: Information Sheet

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GRASSLAND BYPASS PROJECT
FRESNO AND MERCED COUNTIES**

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

Findings

SCOPE AND COVERAGE OF THIS ORDER

1. The San Luis and Delta-Mendota Water Authority (Authority) submitted a Report of Waste Discharge dated 30 December 2008 for Phase III of the Grassland Bypass Project. This project, which started operations on 23 September 1996, transports subsurface agricultural drainage and storm water runoff via the Grassland Bypass Channel to a portion of the San Luis Drain (Drain) that discharges to Mud Slough (north), a tributary of the San Joaquin River. The Drain is owned by the United States Department of the Interior, Bureau of Reclamation (Bureau), and is operated by the Authority. Hereafter, the Authority and Bureau will be jointly referred to as the Dischargers.
2. This Order only addresses the portions of the Grassland Bypass Project that involve the collection, transport and discharge of agricultural subsurface drainage flows and storm water to surface waters. Discharges to groundwater and surface water from other than agricultural subsurface drainage will be addressed in one or more other Orders to be issued by the board.
3. This Order covers elements of Phase III of the Grassland Bypass Project. The Authority previously submitted Reports of Waste Discharge dated 25 August 1997 and 9 February 2001 for Phases I and II of the Grassland Bypass Project. Phase I was regulated by the board's waste discharge requirements Order No. 98-171 adopted on 24 July 1998. Phase II is regulated by waste discharge requirement Order No. 5-01-234 adopted on 7 September 2001.
4. The Grassland Bypass Project currently serves approximately 97,400 acres of farmland and is designed to route subsurface agricultural drainage containing high levels of selenium and other constituents around wetland supply channels in the Grassland Watershed. This drainage previously flowed through a variety of channels to wetland habitat before discharging to the San Joaquin River.

5. The Grassland Bypass Channel is a four-mile long earthen ditch that links the combined discharges from the Grassland Drainage Area¹ (Figure 1) to the Drain. The Drain is an 85-mile long, trapezoidal concrete canal that starts near Five Points in Fresno County and generally runs northwest to its terminus at the northern end of the former Kesterson Reservoir near Gustine in Merced County.

Only the lower 28 miles of the Drain, starting at the point where it intersects the Grassland Bypass Channel approximately one half mile west of Russell Avenue, are being used as part of the Grassland Bypass Project. The Drain has been blocked above this point and the Authority is operating the system to keep other drainage from entering the portion of the Drain being used by the Grassland Bypass Project.

6. The Grassland Bypass Project primarily transports and discharges subsurface agricultural drainage flows. Approximately 33,100 acres of the Grassland Drainage Area have subsurface drains that collect shallow groundwater that is generally characterized as being high in salts, boron, selenium and other constituents. Storm water runoff may also enter the drainage system. Tailwater returns are not allowed in the Drain.
7. Phase III of the Grassland Bypass Project will continue to implement the strategy of previous phases, including:
 - a. separating drainage discharged from the Grassland Drainage Area from wetland water supply conveyance channels for the period from 2010 to 2019;
 - b. facilitating the drainage management that maintains the viability of agriculture in the Grassland Drainage Area while maintaining water quality improvement achievements of the previous phases in the San Joaquin River; and
 - c. investigating the technical and economic feasibility of including agricultural subsurface drainage treatment as part of a complete tool set to achieve and maintain water quality objectives for selenium and salt in the San Joaquin River, Salt Slough, Mud Slough (north) and the wetland water supply channels identified in the Basin Plan's Appendix 40.
8. The Central Valley Water Board has adopted a *Water Quality Control Plan, Fourth Edition, for the Sacramento River and San Joaquin River Basins* (Basin Plan), which designates beneficial uses, establishes water quality objectives and contains implementation plans and policies for waters of the Sacramento and San Joaquin Basins. The requirements in the Order implement the Basin Plan.
9. The beneficial uses of Mud Slough (north), as identified in the Basin Plan, are: limited irrigation supply, stock watering, water contact recreation and noncontact water recreation, sports fishing, shellfish harvesting, warm water aquatic habitat, warm water spawning and wildlife habitat.
10. The Basin Plan contains the timetable for meeting performance goals and water quality objectives for selenium in Mud Slough (north) and the San Joaquin River. A prohibition of discharge and

¹ The areal extent of the regulatory coverage provided by the tentative Order is defined in the amended 2009 Agreement for Use of the San Luis Drain (Use Agreement) between the Bureau and the Authority. The 20 May 2015 amendment of the Use Agreement corrected the boundary of the area served by the Grassland Bypass Project (shown in hatch marks in Figure 1). The area removed has not discharged to the Drain. The area added is served by the Firebaugh Canal Water District and is appropriately covered as part of the Order. Concurrent with the tentative Order, the board will consider proposed changes of the area of coverage provided by the WDRs General Order for Growers in the Western San Joaquin River Watershed R5-2014-0002; all parcels will maintain coverage for waste discharges from irrigated lands.

waste discharge requirements will be used to control agricultural subsurface drainage discharges containing selenium unless water quality objectives for selenium are being met. Table 1 below lists the performance goal and water quality objective for selenium with the time schedule for compliance.

Table 1. Selenium Water Quality Objective, Performance Goal, and Compliance Time Schedule as specified in the Basin Plan

Selenium Water Quality Objectives (in **bold**) and Performance Goal (in *italics*)

Water Body	31 December 2015	31 December 2019
Mud Slough (north) and the San Joaquin River from the Mud Slough Confluence to the Merced River	<i>15 µg/L monthly mean</i>	5 µg/L 4-day average

11. The first cap on selenium loading from the Grassland Watershed to the San Joaquin River was set before the initiation of the Grassland Bypass Project as a prohibition of discharge in the Basin Plan: “The discharge of selenium from agricultural subsurface drainage systems in the Grassland Watershed to the San Joaquin River is prohibited in amounts exceeding 8,000 lbs/year for all water year types beginning 10 January 1997.” The San Luis Drain carries all of the subsurface agricultural drainage discharged from the Grassland Drainage Area.
12. The Central Valley Water Board has identified the San Joaquin River as a water quality limited segment with respect to selenium. Section 303(d) of the Federal Clean Water Act requires the development of a Total Maximum Daily Load (TMDL) where existing discharge limits are not stringent enough to meet water quality standards. The August 2001 Staff Report titled *Selenium Total Maximum Daily Load for the Lower San Joaquin River* contains a TMDL designed to meet the Clean Water Act requirements, and set more stringent load limits for selenium compared to the 8,000-pound annual limit. The TMDL establishes monthly load limits (TMML values) that represent the total load that the San Joaquin River can assimilate without exceeding the applicable water quality objective at a specified frequency.

The U.S. Environmental Protection Agency (US EPA) allows violations of standards at a frequency no greater than once every three years. The TMML is apportioned among background sources of selenium (wetlands, the Merced River, and the San Joaquin River upstream of Salt Slough), a margin of safety (established as 10% of the TMML), and a load allocation (discharges from the Grassland Drainage Area). Table 2 shows the calculated monthly load allocation for selenium from the Grassland Drainage Area that is currently in effect, and is designed to meet the 5 µg/L selenium objective in the San Joaquin River at Crows Landing.

The water year classification will be established using the best available estimate of the 60-20-20 San Joaquin Valley water year hydrologic classification² at the 75% exceedance level using data from the Department of Water Resources Bulletin 120 series. The previous year’s classification will apply until an estimate is made of the current water year.

² As defined in Footnote 17 for Table 3 in the State Water Resources Control Board’s *Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary*, May 1995.

Table 2. Selenium Monthly Load Allocations for the Grassland Drainage Area³
 (pounds of selenium)

Month	Discharge Limits			
	Critical	Dry/Below Normal	Above Normal	Wet
October	55	233	260	328
November	55	233	260	328
December	152	319	398	211
January	151	319	398	211
February	93	185	472	488
March	92	184	472	488
April	101	193	490	506
May	105	197	497	512
June	69	130	212	354
July	70	131	214	356
August	75	137	225	366
September	57	235	264	332
Annual Load	1075	2496	4162	4480

13. The *Agreement for Use of the San Luis Drain* (Use Agreement) between the Bureau and Authority contains terms and conditions that address Grassland Bypass Project longevity and water quality. Monthly and annual limits were placed on the loads of selenium that could be discharged and an extensive, multi-agency monitoring program was established. An updated Use Agreement⁴ (2009 Use Agreement) was signed in 2009, extending the Grassland Bypass Project through 31 December 2019. In the event the Grassland Bypass Project is extended, this Order may be reopened and extended only upon a showing that all significant environmental impacts associated with the continued operation of the GBP have been analyzed pursuant to any applicable provisions of CEQA and only after the Dischargers demonstrate to the satisfaction of the Board that the continued operation of the GBP is in compliance with the ESA.
14. The Use Agreement also designates the Authority to be responsible for implementing a comprehensive monitoring program to provide water quality data for purposes of determining compliance with selenium load values and salinity load values.⁵
15. The Use Agreement contains calculated selenium load limits for the Grassland Bypass Project. The load limits are designed to meet the Total Maximum Monthly Load (TMML) limits. Load limit reductions below TMML levels start in 2015 as agreed to by the Dischargers under the terms of the 2009 Use Agreement. The reductions between current load limits and the TMML load limits result in a gradual reduction in loading. In the event that the board and U.S. EPA adopt revised

³ The discharge limits in Table 2 are based on the calculated load allocation needed to meet the selenium water quality objectives at the San Joaquin River at Crows Landing. The monthly load allocation is based on the water year classification.

⁴ *Agreement for Continued Use of the San Luis Drain for the Period January 1, 2010 through December 31, 2019*. Agreement No. 10-WC-20-3975.

⁵ U.S. Bureau of Reclamation, U.S. Environmental Protection Agency (U.S. EPA), U.S. Fish and Wildlife Service, U.S. Geological Survey, Central Valley Water Board, California Department of Fish and Wildlife (CDFW), and the San Luis & Delta-Mendota Authority. *2013 Revised Monitoring Program for the Continued Operation of the Grassland Bypass Project*. August 2009

TMML values, the Use Agreement selenium load values may be revised as described in the Use Agreement to meet the new TMML values.

16. The Drain contains sediment that was deposited before the start of the Grassland Bypass Project. This sediment contains trace elements at concentrations that are higher than those found in average California soils and, if flushed from the Drain, would pose a threat to receiving waters. The discharge limits apply to selenium from the sediment as well as selenium in drainage water from the Grassland Drainage Area.⁶
17. The Basin Plan also contains numerical objectives for boron and molybdenum that apply to the San Joaquin River from the mouth of the Merced River to Vernalis and to Mud Slough (north) as shown in Table 3 below:

Table 3. Boron and Molybdenum Water Quality Objectives

Constituent	Time Period	Monthly Mean	Maximum Concentration	Applicable Water Bodies
Boron (mg/L)	15 March through 15 September	0.8	2.0	San Joaquin River, mouth of the Merced River to Vernalis
	16 September through 14 March	1.0	2.6	
	Critical Year	1.3		
	15 March through 15 September	2.0		Mud Slough (north), San Joaquin River from Sack Dam to the mouth of Merced River
			5.8	
Molybdenum (µg/L)		19	50	Mud Slough (north), San Joaquin River from Sack Dam to mouth of Merced River
		10	15	San Joaquin River, mouth of the Merced River to Vernalis

18. Subsurface agricultural drainage from the Grassland Drainage Area is high in boron and molybdenum and discharges from the Drain have resulted in violations of these objectives. This drainage has historically flowed to Mud Slough (north) via other channels and the steps taken to meet the load limits in this Order for selenium discharges are expected to result in reductions in boron and molybdenum discharges.
19. The Basin Plan contains objectives for toxicity and other water quality parameters that apply to this discharge.
20. The Grassland Bypass Project is part of a long-term effort to improve the management of agricultural subsurface drainage discharges in the Grassland Watershed. The primary focus of

⁶ In 2012, sampling results for sediments within the San Luis Drain ranged from 3 mg/kg to 28 mg/kg (dry weight). Converting to wet weight (moisture content 63.3%), the 28 mg/kg is approximately 10 mg/kg. Sediments would be classified as hazardous waste at 100 mg/kg (wet weight) under Total Threshold Limit Concentration defined for selenium in California Code of Regulations, Title 22, Division 4.5, Chapter 11, Article 3, §66261.24 (a)(2)(A), Table (II).

the Grassland Bypass Project has been on the control of the selenium, but the discharge may be causing or has the potential to cause or contributing to the violations of water quality objectives for other constituents in Mud Slough (north) and the San Joaquin River. Since the Grassland Bypass Project involves consolidation and rerouting of drainage rather than a new discharge, this Order will address this situation through the development and implementation of drainage management plans that will reduce constituent loads.

21. The Basin Plan's selenium control program states that all those discharging or contributing to the generation of agricultural subsurface drainage will be required to submit for approval a Long Term Drainage Management Plan (LTDMP) designed to meet final water quality objectives. Order No. 98-171 required the Dischargers to prepare a LTDMP and to update it annually. This Order requires the Dischargers to continue to update the plan annually as the "Drainage Management Plan".

REASON FOR THE CENTRAL VALLEY WATER BOARD ISSUING THIS ORDER

22. The Central Valley Water Board's authority to regulate waste discharges that could affect the quality of the waters of the state, which includes both surface water and groundwater, is found in the Porter-Cologne Water Quality Control Act (California Water Code Division 7).

- 24 Water Code section 13267(b)(1) states, in relevant part:

[T]he regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region ... shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.

- 25 The technical reports required by this Order are necessary to evaluate Dischargers' compliance with the terms and conditions of this Order and to ensure protection of waters of the state. Consistent with Water Code section 13267, this Order requires the implementation of a monitoring and reporting program (MRP) that is intended to determine the effects of waste discharges on water quality, to verify the adequacy and effectiveness of the Order's conditions, and to evaluate the Dischargers' compliance with the terms and conditions of the Order. The Dischargers must comply with MRP Order R5-2015-XXXX which is part of this Order, and future revisions thereto made by the Executive Officer or Board.
- 26 In May 2004, the State Water Board adopted the *Policy for Implementation and Enforcement of the Nonpoint Source Pollution Control Program* (NPS Policy). The purpose of the NPS Policy is to improve the state's ability to effectively manage NPS pollution and conform to the requirements of the Federal Clean Water Act and the Federal Coastal Zone Act Reauthorization Amendments of 1990. The NPS Policy requires, among other key elements, an NPS control implementation program's ultimate purpose to be explicitly stated. It also requires implementation programs, to at a minimum, address NPS pollution in a manner that achieves and maintains water quality objectives and beneficial uses, including any applicable antidegradation requirements.
- 27 This Order constitutes an NPS Implementation Program for the discharges regulated by the Order. Attachment A, Information Sheet, describes the five key elements required by the NPS

Policy and provides justification that the requirements of this Order meet the requirements of the NPS Policy. This Order is consistent with the NPS Policy.

- 28 The United States Environmental Protection Agency adopted the National Toxics Rule (NTR) on 5 February 1993 and the California Toxics Rule (CTR) on 18 May 2000, which was modified on 13 February 2001. The NTR and CTR contain water quality criteria which, when combined with beneficial use designations in the Basin Plans, constitute enforceable water quality standards for priority toxic pollutants in California surface waters.

CALIFORNIA ENVIRONMENTAL QUALITY ACT

- 29 An Environmental Impact Statement and Environmental Impact Report (EIS/EIR) (State Clearinghouse No. 2007121110) dated August 2009, was prepared for the Grassland Bypass Project for the period 1 October 2010 through 31 December 2019⁷. The U.S. Bureau of Reclamation is the lead agency and issued a Record of Decision.⁸ The lead agency pursuant to CEQA (Pub. Resources Code § 21100 et seq.) was the San Luis & Delta-Mendota Water Authority. A Notice of Determination (NOD) was filed on 12 October 2009.⁹
- 30 The environmental analysis for the Grassland Bypass Project finds that water quality and biota in the last six miles of Mud Slough (north) may be adversely impacted by the project. Without the Grassland Bypass Project, agricultural subsurface drainage is intermittently discharged to Mud Slough (north), while with the Grassland Bypass Project it will be continuously discharged to Mud Slough (north). The Grassland Bypass Project has demonstrated significant water and habitat quality improvements in wetland water supply channels, and further mitigation actions are incorporated into the Use Agreement specifically to offset the impacts to Mud Slough (north). The Board may invoke the prohibition of discharge before 31 December 2019 if agreed upon mitigation actions in the Use Agreement are not being carried out in a timely or effective manner. Water quality-related mitigation measures identified in the EIS/EIR documents are listed below.
- a) The proposed project is limited in duration. A biological, water quality, and sediment monitoring program will be implemented during the life of the project to evaluate the impact of the project. If unacceptable problems or impacts are identified, appropriate actions will be developed. Attachment A to this Order summarizes the mitigation measures and demonstrates how this Order complies with CEQA.
 - b) Drainage from the Grassland Drainage Area will be removed from 6.6 miles of the San Joaquin River [between Salt Slough and Mud Slough (north) confluence] and 93 miles of wetland water supply channels as defined in Appendix 40 of the Basin Plan.
 - c) The amount of drainage water discharged to the San Joaquin River system will be reduced to meet Basin Plan water quality objectives. A plan will be submitted by the drainage entities to the Central Valley Water Board, which outlines drainage reduction efforts and the use of the Drain as a drain water conveyance facility as part of the overall

⁷ Entrix, 2009. *Final Grassland Bypass Project Environmental Impact Statement/Environmental Impact Report*. Prepared for the Bureau of Reclamation, Sacramento and Fresno, CA, and the San Luis Delta-Mendota Water Authority. August 2009.

⁸ ROD-07-141 dated 18 December 2009. The ROD implements the GBP plus the terms and conditions specified in the 9 December 2009 Biological Opinion (available from Bureau upon request).

⁹ NOD filed for the Grassland Bypass Project, 2010-2019, State Clearinghouse Number 2007121110.

program to effectively manage and monitor agricultural drainage discharges. These plans will be submitted on an annual basis.

- d) Drainage will be maintained within the Drain north of Check 19, MP 105.72. Any stormwater and groundwater that has seeped into the San Luis Drain south of Check 19 will be discharged downstream as necessary to prevent overtopping.
- e) The fish barrier maintained by California of Fish and Wildlife (CDFW) will be used during certain periods of the year on the San Joaquin River just upstream of the Merced River. This barrier prevents the straying of salmon to Mud Slough (north) due to the attractive flows caused by the discharge.
- f) The discharge from the Drain to Mud Slough (north) will be operated so as to minimize hydraulic turbulence and erosion within Mud Slough (north). If necessary, bank stabilization shall be undertaken and an energy dissipation structure operated and maintained.
- g) Control structures will be maintained to prevent inflow of drainage from Mud Slough (north) to the CDFW China Island Unit.
- h) The Drain will be operated such that sediments in the Drain are not mobilized. A flow rate not to exceed 1 foot per second has been determined to be the appropriate velocity to achieve this goal. Sediments in the drain will be monitored and will be removed before they exceed hazardous waste levels.
- i) The San Joaquin River Water Quality Improvement Project, created by the Grassland Area Farmers, sets aside more than 6,000 acres to plant salt tolerant crops for drainage reuse. In 2013, approximately 26,000 acre-feet of drain water produced in the Grassland Drainage Area were used to irrigate salt-tolerant crops.
- j) The Grassland Area Farmers are working with the Bureau to develop an In-Valley Treatment/Drainage Reuse plan involving irrigation improvements, seepage reduction, land retirement, recirculation, drainage reuse, and drainage treatment. A demonstration level treatment plant will be used to test treatment methods utilizing subsurface agricultural drainage
- k) The Grassland Bypass Project will supply year-round water to a series of ponds between Mud Slough and the San Joaquin River through existing pipeline to create natural swales for wetland habitat.

The Central Valley Water Board has considered the above CEQA documents in preparing this Order. Attachment A of this Order summarizes the mitigation measures and demonstrates how this Order complies with CEQA.

STATE WATER RESOURCES CONTROL BOARD RESOLUTION 68-16

- 31 State Water Resources Control Board (State Water Board) Resolution 68-16 *Statement of Policy with Respect to Maintaining High Quality of Waters in California* (Resolution 68-16 or “antidegradation policy”) requires that a regional water quality control board maintain high quality waters of the state unless the board determines that any authorized degradation is consistent with maximum benefit to the people of the state, will not unreasonably affect beneficial uses, and will not result in water quality less than that described in a regional water quality control board’s

policies (e.g., quality that exceeds applicable water quality objectives). The board must also assure that any authorized degradation of existing high quality waters is subject to waste discharge requirements which will result in the best practicable treatment or control (BPTC) of the discharge necessary to assure that pollution, or nuisance will not occur and the highest water quality consistent with the maximum benefit to the people of the state will be maintained.

Attachment A to this Order summarizes applicable antidegradation requirements and provides detailed rationale demonstrating how this Order is consistent with Resolution 68-16. As indicated in the summary, this Order authorizes degradation of high quality surface waters, not to exceed water quality performance goals and objectives stated in the Basin Plan, threaten beneficial uses, or cause a condition of pollution or nuisance. The Order will also result in the implementation of best efforts to non-high quality waters and assure that any change in water quality will be consistent with maximum benefit to the people of the state.

As authorized by Water Code section 13263(c), achievement of these requirements is in accordance with the Order's time schedules. Time schedules are necessary because immediate compliance with limitations for all constituents governed by the Order is not practicable. Using time schedules to implement antidegradation requirements was explicitly recognized and endorsed by the California Court of Appeal, who wrote with respect to the Central Valley Water Board's Dairy Waste Discharge Requirements that "[a] phased approach... is reasonable, and is authorized by section 13263, which allows the requirements of a regional water quality control board to contain a time schedule." *AGUA v. Central Valley Water Board*, 210 Cal.App.4th 1255, 1277.

WATER CODE SECTION 13241

- 32 Water Code section 13263 requires that the Central Valley Water Board consider the following factors, found in section 13241, when considering adoption of waste discharge requirements.
- (a) Past, present, and probable future beneficial uses of water.
 - (b) Environmental characteristics of the hydrographic unit under consideration, including the quality of water available thereto.
 - (c) Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area.
 - (d) Economic considerations.
 - (e) The need for developing housing within the region.
 - (f) The need to develop and use recycled water.

These factors have been considered in the development of this Order. Attachment A, Information Sheet, provides further discussion on the consideration of section 13241 factors.

RELATIONSHIP TO OTHER ONGOING WATER QUALITY EFFORTS

- 33 Other water quality efforts conducted pursuant to state and federal law directly or indirectly serve to reduce waste discharges from irrigated lands to waters of the state. Those efforts will continue, and will be supported by implementation of this Order.
- 34 The Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) initiative has the goal of developing sustainable solutions to the increasing salt and nitrate concentrations that threaten the achievement of water quality objectives in Central Valley surface water. This Order

requires actions that will reduce salt discharges in surface water and should result in practices that reduce nitrate loading. The board intends to coordinate all such actions with the CV-SALTS initiative. CV-SALTS may identify additional actions that need to be taken by irrigated agriculture and others to address these constituents. This Order can be amended in the future to implement any policies or requirements established by the Central Valley Water Board resulting from the CV-SALTS process. This Order includes provisions to promote coordination with CV-SALTS and to support the development of information needed for the CV-SALTS process.

- 35 Total Maximum Daily Loads (TMDLs) are established for surface waters that have been placed on the State Water Board's 303(d) list of Water Quality Limited Segments for failure to meet applicable water quality standards. A TMDL, which may be adopted by the Central Valley Water Board as Basin Plan amendments, is the sum of allowable loads of a single pollutant from all contributing point sources and nonpoint sources. The Central Valley Water Board is currently developing pyrethroid and diuron pesticide TMDLs, among others in development. This Order will implement these and other future TMDLs to the extent there are established requirements that pertain to irrigated agriculture, as well as the following approved TMDLs: San Joaquin River Deep Water Ship Channel dissolved oxygen; San Joaquin River salt, boron, selenium, diazinon, and chlorpyrifos.
- 36 The General Order for Existing Milk Cow Dairies (R5-2013-0122) and NPDES Dairy General Permit CAG015001 (Dairy General Orders) regulates discharges of waste to surface waters and groundwater from existing milk cow dairies in the Central Valley. Discharges from irrigated agricultural parcels are regulated by the Dairy General Orders if the owner or operator of the parcel applies dairy waste from its dairy operation.
- 37 Water quality monitoring is conducted in water bodies surrounding the Grassland Bypass Project by the Westside San Joaquin River Watershed Coalition of the Irrigated Lands Regulatory Program and the San Joaquin River Restoration Program. This monitoring was considered when designing the updated monitoring and reporting program and data developed through these efforts will be used to help evaluate the impacts of the GBP. The San Joaquin River below the Merced River and Salt Slough has been de-listed for selenium on the 303(d) list.

ENFORCEMENT FOR NONCOMPLIANCE WITH THIS ORDER

- 38 Water Code section 13350 provides that any person who violates waste discharge requirements may be: 1) subject to administrative civil liability imposed by the Central Valley Water Board or State Water Board in an amount of up to \$5,000 per day of violation, or \$10 per gallon if the discharge involves a discharge of pollutants; or 2) be subject to civil liability imposed by a court in an amount of up to \$15,000 per day of violation, or \$20 per gallon. The actual calculation and determination of administrative civil penalties must be set forth in a manner that is consistent with the State Water Board's Water Quality Enforcement Policy (Enforcement Policy).
- 39 The Enforcement Policy endorses progressive enforcement action for violations of waste discharge requirements when appropriate, but recommends formal enforcement as a first response to more significant violations. Progressive enforcement is an escalating series of actions that allows for the efficient and effective use of enforcement resources to: 1) assist cooperative dischargers in achieving compliance; 2) compel compliance for repeat violations and recalcitrant violators; and 3) provide a disincentive for noncompliance. Progressive enforcement actions may begin with informal enforcement actions such as a verbal, written, or electronic communication between the Central Valley Water Board and a discharger. The purpose of an informal enforcement action is to quickly bring the violation to the discharger's attention and to

give the discharger an opportunity to return to compliance as soon as possible. The highest level of informal enforcement is a Notice of Violation.

GENERAL FINDINGS

- 40 This Order does not authorize violation of any federal, state, or local law or regulation.
- 41 This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code sections 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. sections 1531 to 1544). If a "take" will result from any action authorized under this Order, the Dischargers shall obtain authorization for an incidental take prior to construction or operation of the project. The Dischargers shall be responsible for meeting all requirements of the applicable Endangered Species Act.
- 42 This Order does not supersede the Central Valley Water Board's Basin Plans and policies, including prohibitions (e.g., pesticides) and implementation plans (e.g., Total Maximum Daily Loads), or the State Water Board's plans and policies.
- 43 As stated in Water Code section 13263(g), the discharge of waste into waters of the state is a privilege, not a right, and regulatory coverage under 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.
- 44 This Order requires the Dischargers to provide the Central Valley Water Board with contact information of the person(s) authorized to provide access to property for inspections. This requirement provides a procedure to enable Board staff to contact representatives so that it may more efficiently monitor compliance with the provisions of this Order.
- 45 Any instance of noncompliance with this Order constitutes a violation of the Water Code and its implementing regulations. Such noncompliance is grounds for enforcement action, and/or termination of coverage for waste discharges under this Order, subjecting the discharger to enforcement under the Water Code for further discharges of waste to surface water.
- 46 All discharges from the Grasslands Bypass Project are expected to comply with the lawful requirements of municipalities, counties, drainage districts, and other local agencies regarding discharges to storm drain systems or to other courses under their jurisdiction.
- 47 The fact that it would have been necessary to halt or reduce the discharge in order to maintain compliance with this Order shall not be a defense for violations of the Order by the Dischargers.
- 48 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.
- 49 Water Code section 13260(d)(1)(A) requires persons subject to waste discharge requirements to pay an annual fee established by the State Water Board.
- 50 The Findings of this Order, supplemental information and details in the attached Information Sheet (Attachment A), and the administrative record of the Central Valley Water Board relevant to

the Grassland Bypass Project were considered in establishing these waste discharge requirements.

51 The Central Valley Water Board has notified interested agencies and persons of its intent to adopt this Order for discharges of waste from the Grassland Bypass Project, and has provided them with an opportunity for a public hearing and an opportunity to submit comments.

52 The Central Valley Water Board, in a public meeting, heard and considered all comments pertaining to this Order.

IT IS HEREBY ORDERED that Order No. 5-01-234 is rescinded and that pursuant to Water Code sections 13260, 13263, and 13267 and in order to meet the provisions contained in Division 7 of the Water Code and regulations and policies adopted there under; the San Luis and Delta-Mendota Water Authority and the U.S. Bureau of Reclamation, their agents, successors, and assigns shall comply with the following:

I. 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. The discharge of agricultural subsurface drainage water to Salt Slough and the wetland water supply channels identified in Appendix 40 of the Basin Plan is prohibited unless the provisions of the Storm Event Plan are being implemented, or the water quality objectives for selenium are being met.
3. The discharge of agricultural subsurface drainage water to Mud Slough (north) is prohibited after 31 December 2019 unless water quality objectives for selenium are being met.
4. The discharge of selenium from agricultural subsurface drainage systems in the Grassland Watershed to the San Joaquin River is prohibited in amounts exceeding 8,000 lbs/year.
5. The discharge of agricultural subsurface drainage is immediately prohibited upon determination by the Board that timely and adequate mitigation, as outlined in the 2010-2019 *Agreement for Continued Use of the San Luis Drain*¹⁰ has not been provided.

II. Limits that apply to the Grassland Bypass Project

A. Discharge Limits (Drain Terminus)

1. The rate of discharge at the terminus of the San Luis Drain shall not exceed 150 cfs.
2. The discharge of selenium from the San Luis Drain shall not exceed the monthly loads in Table 2.

B. Discharge Specifications

1. The discharge shall not cause a pollution or nuisance as defined by Water Code section 13050.
2. The San Luis Drain will be operated to prevent the mobilization of drain sediments. A maximum flow rate of 1 foot per second will be used to prevent scouring and mobilization of drain sediments.

¹⁰ Agreement No. 10-WC-20-3975.

3. The San Luis Drain will be operated to minimize erosion in Mud Slough (north). An energy dissipating structure will be operated and maintained at the discharge point to Mud Slough (north) to dissipate the energy caused by the hydraulic drop. Erosion within the stream, including stream bottom and sides will be prevented and bank stabilization will be undertaken, if necessary.
4. Sediment in the San Luis Drain used to convey agricultural subsurface drainage shall not exceed hazardous waste levels for any constituent.

C. Receiving Water Limitations

1. The discharge from the San Luis Drain shall not cause or contribute to the following in Mud Slough (north) or the San Joaquin River.
 - a. In surface water, an exceedance of applicable water quality objectives or a trend of degradation that may threaten applicable beneficial uses, or cause or contribute to a condition of pollution or nuisance.
 - b. Oils, greases, waxes, or other materials to form a visible film or coating on the water surface or objects in the water.
 - c. Oils, greases, waxes, floating material (liquids, solids, foams, and scums), or suspended materials to create a nuisance or adversely affect beneficial uses.
 - d. Aesthetically undesirable discoloration.
 - e. Fungi, slimes, or other objectionable growths.
 - f. Deposition of material that causes nuisance or adversely affects beneficial uses.
 - g. Toxic pollutants to be present in the water column, sediments or biota in concentrations that adversely affect beneficial uses; that produce detrimental physiological response in human, plant, animal, or aquatic life; or that bioaccumulate in aquatic resources at levels which are harmful to human health.
 - h. Chemical constituents, including pesticides, to be present in concentrations that cause nuisance or adversely affect beneficial uses.
2. If the discharge of wastes does not meet the receiving water limitations in II.C.1 (directly above), the Dischargers are in compliance with this Order relative to section II.C.1. for a specific waste parameter provided:
 - a. The Dischargers are preparing, or have submitted a Surface Water Quality Management Plan for that waste parameter in accordance with Section V.G. of this Order, and such plan is pending action by the Executive Officer or board; or
 - b. The Executive Officer or board has approved the applicable Surface Water Quality Management Plan for that waste parameter, and
 - i. The Dischargers are implementing or have a documented schedule to implement improved management practices consistent with the approved plan to achieve compliance with II.C.1. and
 - ii. The Dischargers are in compliance with the approved management plan's Time Schedules for Compliance.

III. Provisions

A. General Specifications

1. The Dischargers subject to this Order shall implement water quality management practices as necessary, to protect water quality and to achieve compliance with applicable water quality objectives.
2. The provisions of this Order are severable. If any provision of the Order is held invalid, the remainder of the Order shall not be affected.

B. Requirements

1. The Dischargers shall comply with all applicable provisions of the California Water Code, the *Water Quality Control Plan for the Sacramento and San Joaquin River Basins*, and applicable State Water Board plans and policies.
2. The Dischargers shall comply with the attached Monitoring and Reporting Program (MRP) R5-2015-XXXX, and any future revisions thereto made by the board or Executive Officer.
3. The Dischargers shall follow the 1997 Grassland Bypass Project Storm Event Plan and any amendments thereto approved by the Executive Officer.
4. The Dischargers shall comply with the selenium load reduction strategy in section III.H.2.(a) of the Use Agreement.
5. The requirements prescribed in this Order do not authorize the commission of any act causing injury to the property of another, or protect the Dischargers from liabilities under other federal, state, county, or local laws. This Order does not convey any property rights or exclusive privileges.
6. This Order shall not create a vested right, and all such discharges of waste shall be considered a privilege, as provided for in Water Code section 13263.
7. The Dischargers understand that the Central Valley Water Board or its authorized representatives, may, at reasonable hours, inspect the facilities and lands of persons subject to this Order to ascertain whether the purposes of the Porter-Cologne Act are being met and whether the Dischargers are complying with the conditions of this Order. To the extent required by Water Code section 13267(c) or other applicable law, the inspection shall be made with the consent of the Dischargers or authorized representative, or if consent is withheld, with a duly issued warrant pursuant to the procedure set forth in Title 13 Code of Civil Procedure Part 3 (commencing with section 1822.50). In the event of an emergency affecting the public health and safety, an inspection may be performed without the consent or the issuance of a warrant.
8. The Dischargers shall properly operate and maintain in good working order any facility, unit, system, or monitoring device installed to achieve compliance with the Order.
9. The Dischargers shall maintain a copy of this Order at the primary place of business so as to be available at all times to operations personnel. The Dischargers shall be familiar with the content of this Order.

IV. Permit Reopening, Revision, Transfer, Revocation, Termination, and Reissuance

1. This Order may be reopened to address any changes in state statutes, regulations, plans, or policies that would affect the water quality requirements for the discharges, including, but not limited to, the Basin Plan.
2. The filing of a request for modification, revocation and re-issuance, or termination of the Order, or notification of planned changes or anticipated noncompliance, does not stay any condition of the Order.
3. The Dischargers, shall provide to the Executive Officer any information which the Executive Officer may request to determine whether cause exists for modifying, revoking and re-issuing, or terminating the Order, or to determine compliance with the requirements of this Order.
4. The Central Valley Water Board will review this Order periodically and may revise this Order when necessary.
5. In the event of any change in control or ownership of the Grassland Bypass Project, the Dischargers must notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to the Central Valley Water Board.
6. To assume operation as Dischargers under this Order, the succeeding owners or operators must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, the name and address and telephone number of the persons responsible for contact with the Central Valley Water Board, and a statement. The statement shall comply with the signatory paragraph in section VI.3 of this Order 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 without requirements, a violation of the Water Code. The Executive Officer will submit transfer requests to the Central Valley Water Board so that the Board may consider transferring the ownership of this Order at one of its regularly scheduled meetings.
7. In the event the Dischargers intend to discharge to the San Luis Drain after 31 December 2019, this Order may be reopened and extended only upon a showing that any significant environmental impacts associated with the continued operation of the GBP have been analyzed pursuant to any applicable provisions of CEQA and only after the Dischargers demonstrate to the satisfaction of the Board that the continued operation of the GBP is in compliance with the ESA.

V. Required Reports and Notices

Reports and notices shall be submitted in accordance with section III, Reporting Provisions, as well as MRP Order R5-2015-XXXX. The Dischargers must prepare and maintain the following reports as instructed below, and shall submit or make available such reports to the Central Valley Water Board as identified below.

A. Semi-annual Submittals of Surface Water Monitoring Results

The Dischargers shall submit the previous six months surface water monitoring results in accordance with the requirements in section III of the MRP.

B. Annual Monitoring Report

The Dischargers shall submit the Annual Monitoring Report to the Central Valley Water Board in accordance with the requirements in section III of the MRP.

C. Drainage Management Plan

The Dischargers shall submit the Drainage Management Plan to the Central Valley Water Board in accordance with the requirements in Section III of the MRP.

D. Technical Reports

Where monitoring required by this Order is not effective in allowing the board to determine the effects of discharge on state waters or the effectiveness of water quality management practices being implemented, the Executive Officer may require technical reports be provided to determine the effects of operations or implemented management practices on surface water.

E. Total Maximum Daily Load (TMDL) Requirements

Approved TMDLs in the Basin Plan that apply to surface water bodies downstream of the San Luis Drain discharge and have allocations for irrigated agriculture shall be implemented in accordance with the applicable Basin Plan provisions. Where applicable, SQMPs shall be developed or the Drainage Management Plan shall be updated to address TMDL requirements.

TMDL requirements include, but are not limited to, Basin Plan provisions for the Control Program for Salt and Boron Discharges into the Lower San Joaquin River. To meet the requirements of the Control Program for Salt and Boron Discharges into the Lower San Joaquin River, the Discharger must, by the applicable compliance date 1) participate in a Central Valley Water Board approved real-time management program¹¹; or 2) submit a surface water quality management plan that includes the required elements identified in the Monitoring and Reporting Program, Appendix MRP-1 and is designed to meet the Base Salt Load Allocations identified in Table IV-4.4 *Summary of Allocations and Credits*¹² within the applicable compliance schedule for compliance in Table IV-4.3.¹³

F. Exceedance Report

The Dischargers shall provide exceedance reports if limits identified in section II are not met. Exceedance reports shall be submitted in accordance with the requirements described in section III.C of the MRP.

G. Surface Water Quality Management Plan

A Surface Water Quality Management Plan (SQMP) shall be developed by the Dischargers where: (1) an applicable water quality objective or applicable water quality trigger limit is exceeded (considering applicable averaging periods¹⁴) twice in a three year period for the same constituent at a monitoring location (trigger limits are described in section IV of the MRP) and discharge from the Grassland Bypass Project may cause or contribute to the exceedances; (2) the Basin Plan requires development of a surface water quality management plan for a constituent or constituents discharged by irrigated agriculture, or (3) the Executive Officer determines that the Grassland Bypass Project may be causing or contributing to a trend of degradation of surface water that may threaten applicable Basin Plan beneficial uses. A SQMP is not required if the constituent of concern is addressed by a Drainage Management Plan.

¹¹ Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, page IV-32.01

¹² *Ibid.*, page IV-32.04

¹³ *Ibid.*, page IV-32.03

¹⁴ Exceedances of water quality objectives or water quality triggers will be determined based on available data and application of the appropriate averaging period. The averaging period is typically defined in the Basin Plan, as part of the water quality standard established by the USEPA, or as part of the criteria being used to interpret narrative objectives. If averaging periods are not defined in the Basin Plan, USEPA standard, or criteria, or approved water quality trigger, the Central Valley Water Board will use the best available information to determine an appropriate averaging period.

A SQMP submitted by the Dischargers shall conform to the requirements provided in MRP, Appendix MRP-1.

The Dischargers shall ensure continued implementation of SQMPs until approved as completed by the Executive Officer pursuant to the provisions contained in the attached MRP, Appendix MRP-1, section III. The Dischargers shall submit a progress report in compliance with the provisions contained in the attached MRP, Appendix MRP-1, section I.F.

VI. Reporting Provisions

1. The Dischargers must submit required reports and notices in accordance with the requirements in this Order and attached Monitoring and Reporting Program Order R5-2015-XXXX, unless otherwise requested by the Executive Officer.
2. All reports shall be accompanied by a cover letter containing the certification specified in section VI.3. below. The cover letter shall be signed by a person duly authorized under California law to bind the party submitting the report.
3. Each person signing a report required by this Order or other information requested by the Central Valley Water Board shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for knowingly submitting false information, including the possibility of fine and imprisonment for violations."

4. All reports prepared and submitted to the Executive Officer in accordance with the terms of this Order will be made available for public inspection at the offices of the Central Valley Water Board, except for reports, or portions of such reports, subject to an exemption from public disclosure in accordance with California law and regulations, including the Public Records Act, Water Code section 13267(b)(2), and the California Food and Agriculture Code. If the Dischargers assert that all or a portion of a report is subject to an exemption from public disclosure, it must clearly indicate on the cover of the report that it asserts that all or a portion of the report is exempt from public disclosure. The complete report must be submitted with those portions that are asserted to be exempt in redacted form, along with separately-bound unredacted pages (to be maintained separately by staff). The Dischargers shall identify the basis for the exemption. If the Executive Officer cannot identify a reasonable basis for treating the information as exempt from disclosure, the Executive Officer will notify the Dischargers that the information will be placed in the public file unless the Central Valley Water Board receives, within 10 calendar days, a satisfactory explanation supporting the claimed exemption. Data on waste discharges, water quality, meteorology, geology, and hydrogeology shall not be considered confidential.
5. To the extent feasible, all reports submitted by the Dischargers shall be submitted electronically to irrlands@waterboards.ca.gov. and to the Central Valley Water Board-assigned staff liaison. Upon notification by the Central Valley Water Board, all reports shall be submitted directly into an online reporting system, to the extent feasible.

VII. Record-keeping Requirements

The Dischargers shall maintain any reports or records required by this Order for five years. The maintained reports or records, including electronic information, shall be made available to the Central Valley Water Board upon written request of the Executive Officer. This includes all monitoring information, calibration and maintenance records of sampling equipment, copies of reports required by this Order, and records of all data used to complete the reports. Records shall be maintained for a minimum of five years from the date of sample, measurement, report, or application. This five-year period shall be extended during the course of any unresolved litigation regarding the discharge or when requested in writing by the Executive Officer.

VIII. Annual Fees

1. Water Code section 13260(d)(1)(A) requires persons subject to waste discharge requirements to pay an annual fee established by the State Water Resources Control Board (State Water Board).
2. The Dischargers shall pay an annual fee to the State Water Board in compliance with the Waste Discharge Requirement fee schedule set forth at California Code of Regulations, title 23, section 2200 that is applicable to Agricultural and Irrigated Lands.

This Order becomes effective on --date-- and remains in effect unless rescinded or revised by the Central Valley Water Board.

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, sections 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

or will be provided upon request.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region on XX [Month] 2015.

PAMELA C. CREEDON, Executive Officer

Date

Figure 1: Map of Grassland Drainage Area (comprising lands served by the Grassland Bypass Project) and Grassland Bypass Project monitoring locations

