
Grassland Bypass Project Long-Term Storm Water Management Plan 2020–2045

Addendum to

Final Environmental Impact Statement and
Environmental Impact Report for the
Grassland Bypass Project, 2010-2019

SCH No. 2007121110

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Prepared for:

San Luis & Delta-Mendota Water Authority
P. O. Box 2157
842 6th Street
Los Banos, CA 93635-4214

Prepared by:

Summers Engineering, Inc.
P. O. Box 1122
887 N. Irwin Street
Hanford, CA 93232-1122

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A C R O N Y M S & A B B R E V I A T I O N S

| | |
|----------------|--|
| Authority | San Luis & Delta-Mendota Water Authority |
| CEQA | California Environmental Quality Act of 1970 |
| Drain | San Luis Drain |
| EIS/EIR | Environmental Impact Statement/Environmental Impact Report |
| GAF | Grassland Area Farmers |
| GBC | Grassland Bypass Channel |
| GBP | Grassland Bypass Project |
| GDA | Grassland Drainage Area |
| GWD | Grassland Water District |
| LTSWMP | Long-Term Storm Water Management Plan |
| NEPA | National Environmental Policy Act of 1969, as amended |
| ppb | parts per billion |
| Reclamation | U.S. Bureau of Reclamation, Mid-Pacific Region |
| Regional Board | Central Valley Regional Water Quality Control Board |
| SCADA | Supervisory Control and Data Acquisition |
| SJRIP | San Joaquin River Improvement Project (formerly the San Joaquin River Water Quality Improvement Project) |
| USFWS | U.S. Fish and Wildlife Service |
| WDR | Waste Discharge Requirement |
| Westside Plan | Westside Regional Drainage Plan |

P A R T 1

Background and Purpose

1.1 BACKGROUND

The Grassland Bypass Project (GBP) covered in the 2010 Use Agreement and 2009 Final Environmental Impact Statement/Environmental Impact Report (EIS/EIR) (Reclamation 2009a and 2009b) did not include a long-term storm water management plan. The 2010 Use Agreement requires “developing a long-term storm water management plan, which may include evaluation of utilizing the San Luis Drain (Drain) to bypass storm water flows around some wetland areas.” This Long-Term Storm Water Management Plan is a culmination of that process. It has been developed by, the Grassland Area Farmers (GAF), who are organized under the umbrella of the San Luis & Delta-Mendota Water Authority (Authority,) to provide a long-term plan for management of storm water after expiration of the current use agreement on December 31, 2019. Such water had previously been handled under the terms of the 2010 Use Agreement by conveyance through the Drain along with the GBP’s subsurface drainage from agricultural operations except in unusually high storm water conditions, when it had to be discharged back into its historic pathways through wetland supply channels. This section presents background information including existing storm water flow conditions and issues relating to storm water, previous compliance with the California Environmental Quality Act (CEQA), and the current need to manage storm water originating within the Grassland Drainage Area (GDA).

The location of the upcoming Long-Term Storm Water Management Plan (LTSWMP or Proposed Project) is the Grasslands Watershed in Fresno and Merced Counties as shown on Figure 1, Watershed Location Map, which ultimately discharges into the Lower San Joaquin River. The inclusion of the San Joaquin River to Crows Landing for compliance monitoring adds Stanislaus County to the Project Area. The GDA and project features including the channels containing drainage flows along with downstream wetland areas and wildlife refuges are shown on Figure 2, Grassland Bypass Project Location Map.

1.1.1 History of Storm Water Management

In the period prior to 1990, the historic discharge of storm runoff was into the wetlands area at Agatha and Camp 13 (see Figure 2). The natural slope of the land in the GDA is to the north and east, and the storm water followed this path. With the implementation of the GBP, there was a major shift in the routing of the storm water. Starting with the first discharges under the first Use Agreement in 1997 compliance with selenium and salinity objectives had to be met for all water discharged from the Drain, including subsurface drainage water and storm water commingled in the system. Along with this change came an assumption that the GAF were somehow responsible for and could manage the storm water. The GBP has been very successful in reducing the discharge of subsurface drainage water and, after 2019, all agricultural subsurface drain water will be managed within the GDA boundaries. The tools implemented to manage subsurface drainage from irrigation also help to manage storm-induced drain flows; however, they are insufficient to completely eliminate storm-related discharges. Once sufficient rainfall has occurred, storm water and accreted shallow groundwater from irrigated lands will accumulate in the regional drains and will flow north. Without the Proposed Project, this water will pond against canal levees or discharge into sensitive wetland channels, and to avoid these undesirable outcomes, this water will need to be discharged through the Drain.

Figure 1

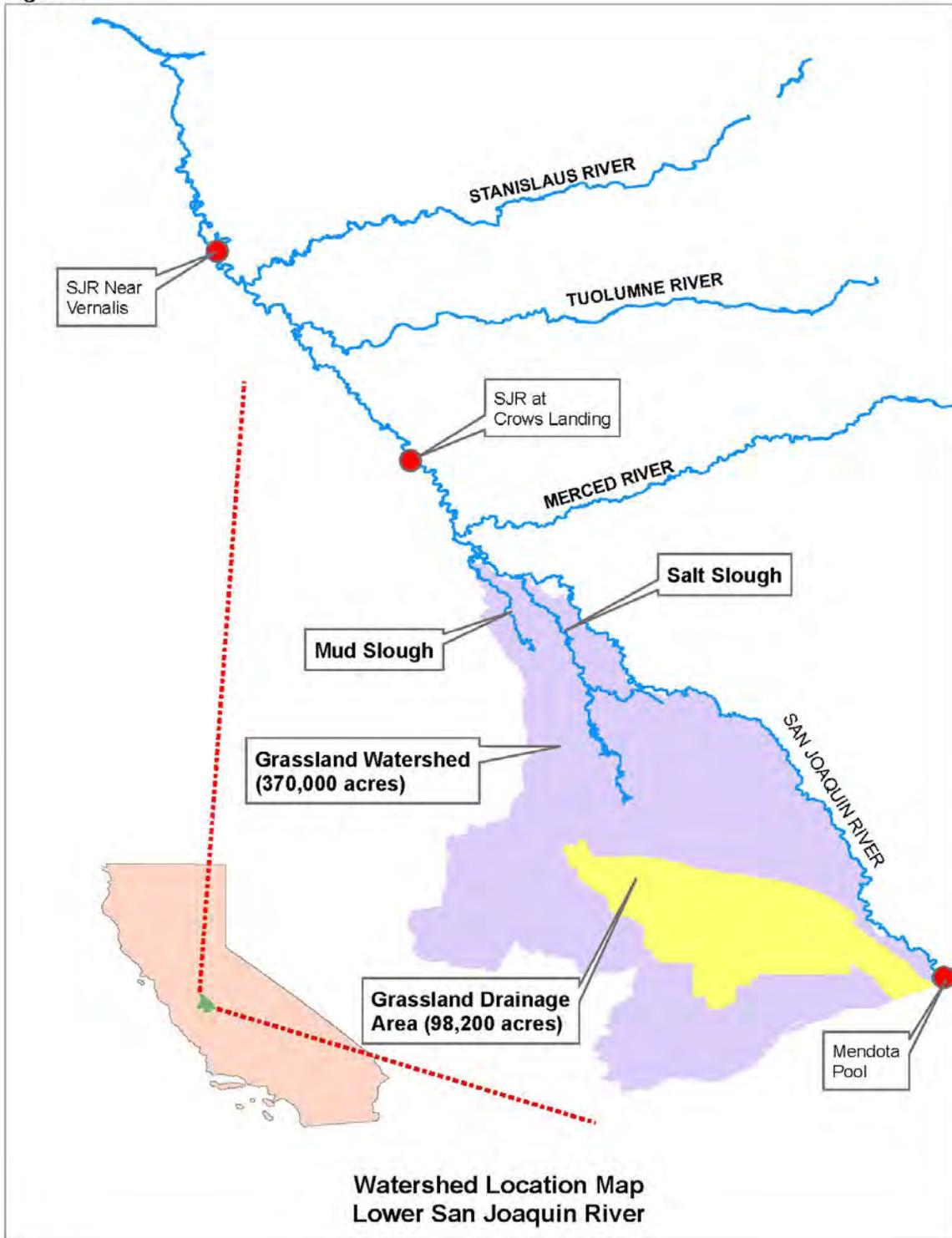
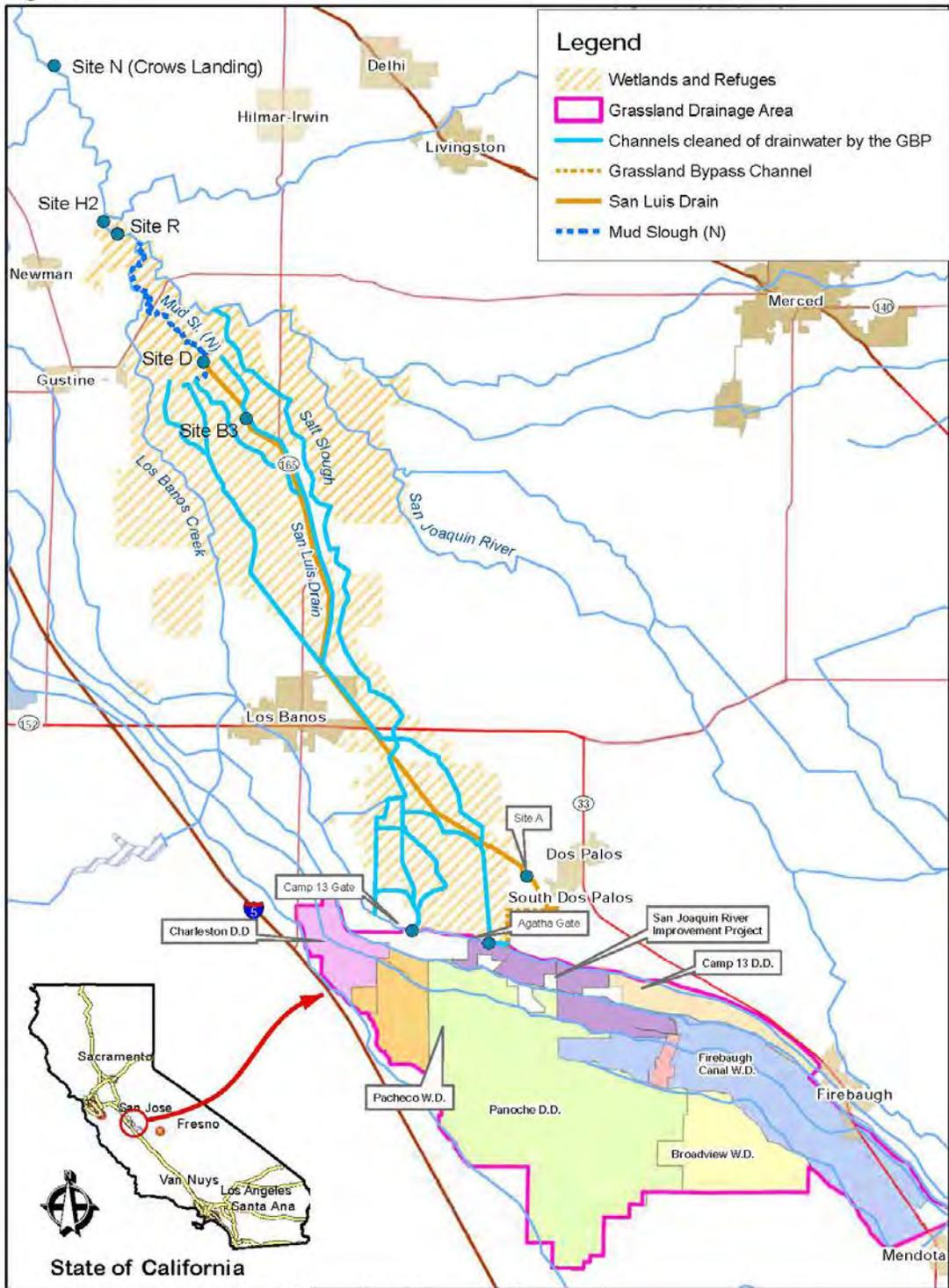


Figure 2



Grassland Bypass Project
Location Map

Prepared by:
Summers Engineering, Inc.
Consulting Engineers
Hanford California

The storm event problems described herein define the continuation of past problems/existing conditions (e.g., as in 2005 when storm flows could not be handled fully in the Drain) into the future if there is no project to resolve these problems. The GBP has faced high rainfall events since its inception. The first two years of the project, 1997 and 1998, were extremely wet years in which there was significant above normal rainfall within the GDA. During those years, flows through the GBP were projected to exceed the 150 cfs maximum permissible flow into the Drain as defined in the Use Agreement and discharges were made into the wetland channels. A subsequent wet year in 2005 also required discharge into the wetland channels. These discharges, although of short duration, brought selenium (Se) into the wetland channels at levels exceeding the 2 parts per billion (ppb) water quality objective for those channels, creating management issues for wetland managers and requiring prescribed post-event monitoring. These periodic discharge events would continue if the LTSWMP does not proceed. Table 1-1 (Maximum Storm Events of Record) shows storm event discharges from the GDA both through the GBP and into Grassland Water District (GWD) during storm event periods for 1997, 1998 and 2005. Recent storm periods are also shown for 2014/15 and 2015/16 even though no storm water was discharged into the wetland areas.

Table 1-1 Maximum Storm Events of Record

| Date | Maximum Flows (cfs) | | | | | |
|--------------|---------------------|---------------|----------------------|-----------------------|---------------|---------------|
| | Flows from GDA | To GWD | Drain Inlet (Site A) | Drain Outlet (Site B) | Site A + GWD | Site B + GWD |
| Jan-Feb 1997 | 185 | Not Available | 95 | 90 | Not available | Not available |
| Feb 1998 | 230 | 90 | 140 | 150 | 230 | 240 |
| Feb 2005 | Not available | 75 | 159 | 138 | 234 | 213 |
| Dec 2014 | Not available | 0 | 98 | 102 | 98 | 102 |
| March 2016 | Not available | 0 | 109 | 90 | 109 | 90 |

Source: Project records

The GAF have developed measures to manage irrigation-related drainage flows under the GBP. These practices have been a four-step process including: 1) source control and recirculation, 2) shallow groundwater pumping, 3) drainage water reuse, and 4) treatment and disposal. The final step remains in development; however, the combination of the first three items has led to the successful management of the region's subsurface drainage. The GAF have been very successful in reducing the selenium load to the San Joaquin River, having reduced the flow by more than 90% in 2015 from what it was before the GBP started. Furthermore, in 2015, there was no flow in the Drain from March through October, and similar no-flow conditions held true in 2016 and 2017, despite the wet year and increased available irrigation supplies. Table 1-1 shows the storm flows that nonetheless were discharged. The normal drainage reduction measures are not applicable to storm water events because a substantial amount of water comes outside of the growing season, and the ability to apply drainwater to the Reuse Area for irrigation of salt-tolerant crops during that time of year is limited. Regulations to protect shorebirds preclude ponding of flood water in the reuse area, further limiting the reuse capacity during winter months.

1.1.2 Previous CEQA Compliance

The original GBP was designed to improve water quality in the channels used to deliver water to wetland habitat areas. It was for a maximum 5-year interim use of a portion of the Drain for conveyance of drainwater through the GWD and adjacent area. The original project was implemented in November 1995 through an "Agreement for Use of the San Luis Drain" (Agreement No. 6-07-20-w1319) between U.S. Bureau of Reclamation, Mid-Pacific Region (Reclamation) and the Authority (1995 Use Agreement). The 1995 Use Agreement and its renewal in 1999 allowed for use of the Drain for a 5-year period that concluded September 30, 2001. Continued use of the Drain after the term of

the existing 1995 Use Agreement required a revised Use Agreement and additional environmental compliance with the National Environmental Policy Act (NEPA) and CEQA.

On March 7, 1996, the Authority and certain of its members entered into the Grassland Basin Drainage Management Activity Agreement. The activity agreement members, along with certain outside participants, known as the GAF formed a regional drainage entity under the umbrella of the Authority to implement the GBP and manage subsurface drainage within the GDA. Participants included Broadview Water District, Charleston Drainage District, Firebaugh Canal Water District, Pacheco Water District, Panoche Drainage District, Widren Water District, and Camp 13 Drainers (an association of landowners located in the Central California Irrigation District). GAF's drainage area currently consists of approximately 97,400 gross acres of irrigated farmland on the west side of San Joaquin Valley and is known as the GDA. Discharges of subsurface drainage from this area contain salt, selenium, and boron.

Following completion of a Final EIS/EIR (SCH No. 1999091025; URS Corporation 2001), a new Use Agreement (Agreement No. 01-WC-20-2075) was completed on September 28, 2001, for the period through December 31, 2009 (Reclamation 2001), between Reclamation and the Authority acting on behalf of the GAF. In September 1998, the GAF and the Authority developed a long-term drainage management strategy and plan of implementation. The *Long-Term Drainage Management Plan for the Grassland Drainage Area* (Drainage Management Plan) was submitted to the Central Valley Regional Water Quality Control Board (Regional Board), as required by Waste Discharge Requirements (WDR) Order 98-171, for public review on September 30, 1998 (GAF and Authority 1998), and updated July 1, 1999. The Drainage Management Plan outlined several steps and measures to achieve water quality objectives in the 1998 Basin Plan and included continuation of the GBP. The 1998 Drainage Management Plan was incorporated into the Westside Regional Drainage Plan (Westside Plan) (San Joaquin River Exchange Contractors Water Authority et al. 2003). The Westside Plan seeks to manage subsurface drainage and achieve a salt balance on productive lands through several mechanisms, including the use of subsurface drainage water to irrigated salt-tolerant crops grown on approximately 6,000 acres of land known as the San Joaquin River Improvement Project (SJRIP) to reduce the volume of water discharged into Mud Slough (North) and improve the water quality of that discharge.

The current Use Agreement for the continuation of the GBP, 2010–2019, (2010 Use Agreement) was signed December 31, 2009, following compliance with NEPA and CEQA (SCH# 2007121110; Reclamation 2009). Reclamation was the lead agency under NEPA, and the Authority was the lead agency under CEQA.

Features of the original GBP that continued under the 2010-2019 project included the following:

- The removal of agricultural drainwater from 93 miles of conveyance channels in the Grassland wetlands and wildlife refuges, except during high rainfall conditions. Any discharges to these conveyance channels would be in accordance with the existing Storm Water Plan as modified consistent with the Use Agreement.
- The use of the Grassland Bypass Channel (GBC), a 4-mile-long constructed earthen ditch and an existing drain that was modified to convey drainwater from the Panoche and Main drains to the Drain at Russell Avenue.
- The use of 28 miles in the Drain to its northern terminus (Site B – the Drain near Gustine, California). From that point, the drainwater would enter Mud Slough (North) for 6 miles before reaching the San Joaquin River at a location 3 miles upstream of its confluence with the Merced River.

- Continuing current land retirement policies listed in the 1998 *Long-Term Drainage Management Plan for the GDA* (GAF and Authority 1998) and subsequent Westside Plan. Key among these is that land retirement should be voluntary.
- Continuing the operation of a regional drainage management entity to perform management, monitoring, and funding of necessary control functions.

Features that were added to the 2010-2019 project included the following:

- An updated compliance monitoring plan, revised selenium and salinity load limits, an enhanced incentive performance fee, a new WDR from the Regional Board, and mitigation for continued discharge to Mud Slough (North).
- In-Valley drainage reuse at the San Joaquin River Water Quality Improvement Project (SJRIP) facility.
- Other drainage management actions to meet water quality objectives/load limits.
- Utilizing and installing drainage recycling systems to mix subsurface drainwater with irrigation supplies under strict limits.
- Implementing a compliance monitoring program with biological, water quality, and sediment components. Results of the monitoring program would be reviewed by an Oversight Committee (established in the three use agreements), with a potential for expansion.
- A single WDR for the GDA.
- An active land management program to utilize subsurface drainage on salt-tolerant crops.
- Low-interest loans for irrigation system improvements, such as gated pipe, sprinkler, and drip irrigation systems.
- An economic incentive program including tiered water pricing and tradable loads.
- A no-tailwater policy that would minimize silt from being discharged into the Drain and promote the secondary benefits of irrigation water management.
- Implementing drainwater displacement projects such as using subsurface drainage for dust control on roadways.
- Meeting with landowners as necessary to implement projects and policies cited above.

The GAF have developed a long-term plan for managing storm water that, since the beginning of the GBP in 1996, has been conveyed through the Drain along with the GBP's subsurface drainage from irrigation. The discharge of agricultural subsurface drainage will cease by the end of 2019 (unless water quality objectives are met), and agricultural subsurface drainage will be managed by the GAF participating districts and at the SJRIP. Going forward, the Proposed Project to be modified is referred to as a Long-Term Storm Water Management Plan (LTSWMP) for the period January 1, 2020 through December 31, 2045.

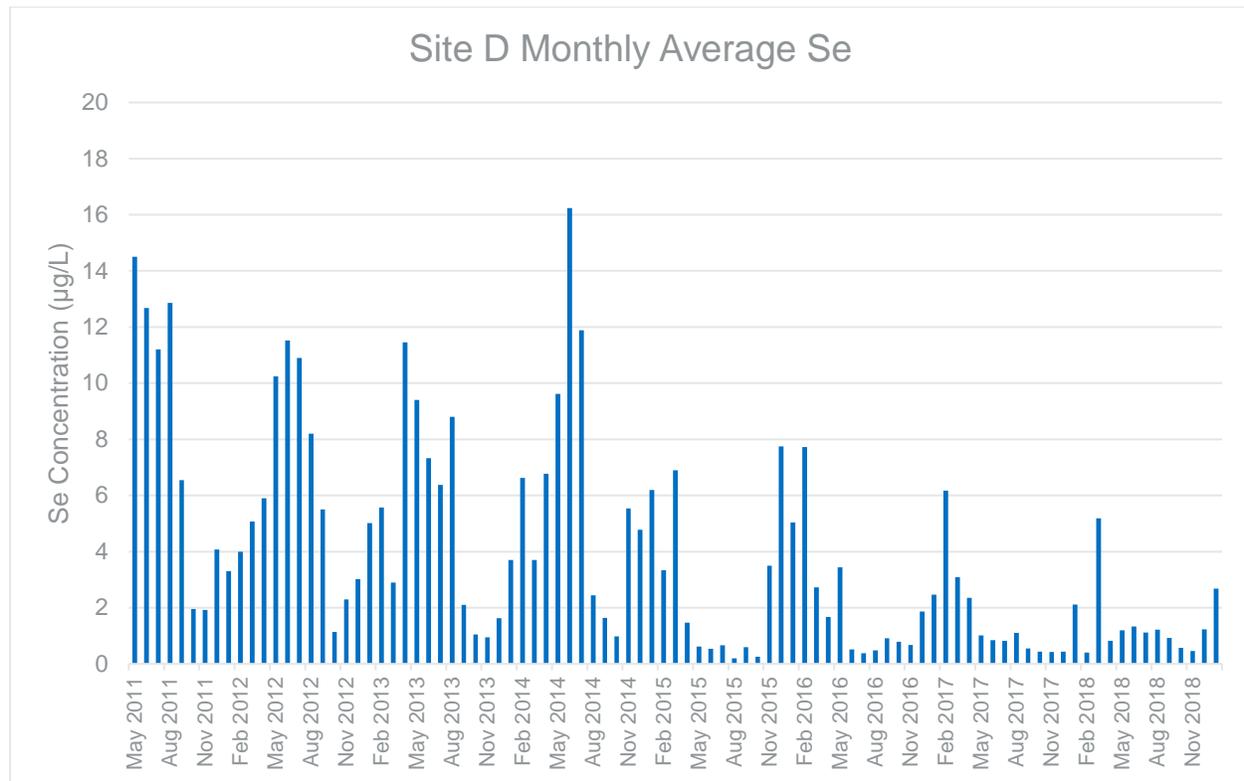
1.1.3 Current Need to Manage Storm Water

Early rain events tend to be absorbed in the soil profile. However, as the soil profile becomes saturated, there is excess storm water that cannot be controlled which equates to increased storm water flows as well as accretion flows of shallow groundwater from irrigated lands into drainage conveyance channels. During the February 1998 rainfall period, localized flooding occurred, which illustrates what happens if there is no outlet for the storm waters. Flooding that occurred along the Main Canal included lands on the downstream (left) side within GWD. Storm water may pond against the canal banks and

ultimately break through the banks. This would be a significant event and could jeopardize water deliveries to agricultural areas outside of the GDA and to private, state and federal wetland areas.

Discharges from the GDA enter the San Joaquin River at the mouth of Mud Slough (North). Recent historical conditions reflect the result of the past projects on water quality. Specifically, selenium levels in Mud Slough (North) have reduced gradually each year since the implementation of the GBP and Westside Plan. The transition to the Long-Term Storm Water Plan Management Plan would continue this trend, resulting in significantly reduced discharges into Mud Slough (North). Figure 3 below shows the average monthly selenium concentrations at Mud Slough (North) (Site D) from 2011 to the end of 2018, illustrating a reducing trend in selenium concentrations, with recent spikes in concentrations occurring in months with significant rainfall.

Figure 3. Average Monthly Selenium Concentrations in Mud Slough (North), 2011 to 2018



1.2 PURPOSE OF THE ADDENDUM TO 2009 FINAL EIS/EIR (SCH # 2007121110)

1.2.1 CEQA Guidelines

Under section 15164(a) of the CEQA Guidelines, the lead agency or a responsible agency shall prepare an addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in Section 15162 requiring preparation of a subsequent EIR have occurred. (See also Pub. Resources Code, § 21166.) Section 15162(a) of the Guidelines lists the conditions that would require the preparation of a subsequent EIR rather than an addendum.

- (a) When an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR shall be prepared for the project unless the agency determines, on the basis of substantial evidence in the light of the whole record, one or more of the following

- (1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
- (2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
- (3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time of the previous EIR was certified as complete or the negative declaration was adopted, shows any of the following:
 - The project will have one or more significant effects not discussed in the previous EIR or negative declaration;
 - Significant effects previously examined will be substantially more severe than shown in the previous EIR;
 - Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
 - Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

Accordingly, to comply with CEQA, the Authority prepared an Initial Study and accompanying technical reports to evaluate the proposed modifications to the GBP and evaluate whether the conditions described in CEQA Guidelines section 15162 and Public Resources Code section 21166 calling for further environmental review have occurred. Because substantial evidence demonstrates that the prior CEQA analyses retain their relevance; that the 2009 Final EIS/EIR fully analyzed and mitigated, where feasible, all potentially significant environmental impacts, if any, that would result from the modified Project; and that none of the conditions described in CEQA Guidelines section 15162 or Public Resources Code section 21166 have occurred as a result of the Proposed Project modifications, this Addendum has been prepared pursuant to section 15164 of the CEQA Guidelines.

1.2.2 Findings for this Addendum

This Addendum to the Grassland Bypass Project Final EIS/EIR (Reclamation 2009) is based on preparation of an Initial Study and accompanying technical reports under the CEQA Guidelines that covers all of the required environmental topics for an Initial Study (Authority 2019). The description of all of the project changes (Proposed Project) is provided in Section 2 of this Addendum, Description of Project Changes. The discussion of potential environmental impacts, mitigation measures, and determination that an addendum is appropriate are provided in Section 3. References cited are contained in Section 4.

The analysis in this Addendum supplements the Initial Study findings and confirms that the Proposed Project, including proposed improvements at the SJRIP, would not result in any new significant impacts (adverse effects) nor in an increase in the severity of significant impacts previously identified in the Final EIS/EIR (Reclamation 2009b). Furthermore, the Proposed Project would not require the adoption of any new or substantially different mitigation measures (or project alternatives). While the

current Proposed Project does propose changes to the SJRIP reuse facility not previously considered in 2009, including new short-term storage basins for 1,000 AF of temporary storm water containment and the SCADA system for tile sump control, these changes are considered to be minor technical changes given their size and the effectiveness of biological mitigation measures used since 2006. Additional surveys for cultural resources and construction monitoring are standard requirements for new construction.

This Addendum documents that the Proposed Project changes, since the GBP was evaluated in the 2009 Final EIS/EIR, do not trigger any of the conditions set forth in Public Resources Code section 21166 or CEQA Guidelines section 15162. Therefore, the preparation of an addendum for the LTSWMP as described in the CEQA Guidelines Section 15164 is appropriate.

P A R T 2

Description of Project Changes

2.1 PROJECT OVERVIEW

The GBP is proposed to continue after December 31, 2019 with local management of agricultural drainage and downstream coordination of rain-induced flows to the San Joaquin River utilizing the Drain as conveyance to avoid impacting wetland water delivery channels. The discharge of agricultural drainage to the Drain will cease by the end of 2019, and agricultural subsurface drainage will be managed by the GAF participating districts and by continued irrigation of salt-tolerant crops at the San Joaquin River Improvement Project (SJRIP). Going forward, the Project as proposed to be modified is referred to as a Long-Term Storm Water Management Plan (LTSWMP), for the period January 1, 2020 through December 31, 2045.

Therefore, the Proposed Project is continued use of the Drain at its current capacity (150 cfs) combined with the use of existing and new short-term storage basins to reduce storm-induced discharges to Mud Slough (North) in the San Luis National Wildlife Refuge and the California Fish and Wildlife Service China Island Refuge. The Proposed Project considers modifications to the previously analyzed project and includes measures to address the capacity limitations of the GBC and the Drain, storm event frequency and magnitude, and available storm water management tools to minimize discharges. It also considers some enhancements to existing facilities including securing ownership of land for purposes of the SJRIP, new pump/conveyance systems, additional storage basins, and a remote shut-off system for operation of tile sumps throughout the GDA.

The Project Area is primarily located in the northwestern portion of Fresno County and a portion of the south-central section of Merced County. This area consists of the GDA as well as adjacent land to the north through which subsurface drainage has historically flowed. The SJRIP is located in the north central section of the GDA on property containing approximately 6,000 acres with planned expansion of up to 1,500 additional acres of reuse area (including some acres already developed for salt-tolerant crops). See Figure 2, Grassland Bypass Project Location Map, contained in Section 1.

2.2 REVISED PROJECT DESCRIPTION

The 2010 Use Agreement has limited the permitted flow in the Drain to 150 cfs, because the connection facilities between the GDA and the Drain are limited to 150 cfs and to avoid the disturbance of sediments in the Drain. These facilities include a culvert underneath the Main Drain, Main Canal, and Helm Canal, the four-mile earth-lined GBC which connects the GDA drainage system to the Drain, the inlet to the Drain from the GBC and the outlet from the Drain to Mud Slough (North). The Proposed Project as modified would continue to use the existing GBC and related culvert, drain and canals to handle storm flows up to 150 cfs. Modifications to existing infrastructure would include a new automated system to turn off tile sumps within the GDA during storm events; improvements to the SJRIP delivery system to allow storm flows to be conveyed to more areas in order to make limited use of the SJRIP reuse area in the winter and of existing regulating ponds (with 500 acre feet [AF] capacity) that discharge to the reuse area; and new storage basins (approximately 200 acres) to handle up to 1,000 AF of storm water when storm flows are greater than 150 cfs (without ponding against canals or in the reuse area). The key project features are described in the following sections and shown on Figure 4, Drainage Reuse Expansion and Development.

control projects, shallow groundwater pumping, and stormwater use for irrigation on the SJRIP. The Proposed Project would add specific enhancements and new facilities specified herein. Features associated with these management tools are shown on Figure 4.

2.2.1.1 Turn Off Tile Sumps

Subsurface drainage from irrigation in the GDA is collected in tile drain systems under farmers' fields that collect at a sump. Most tile discharges are controlled through a pump on each such tile sump that discharges into deep collector drains through which it flows to the GBP. As part of a Storm Event Plan, tile sumps would be turned off. Turning off tile sumps will utilize a portion of the shallow soil profile for storage and slow the rate at which shallow groundwater is discharged into the regional drains. This action alone is insufficient to completely eliminate the discharge of shallow groundwater from irrigated lands since, as the soil profile saturates, this water will overtop sumps and flow into the drain or seep through the soil and accrete into the drains, and would be discharged with the storm water. However, controlling sump discharge is a significant tool in reducing peak storm-related flows and improving water quality in storm-related discharges.

Remote tile sump control is a modification to existing sump control that will be provided through the implementation of a Supervisory Control and Data Acquisition (SCADA) system that will allow all of the tile pumps to be shut off from the appropriate district office. This improvement involves installation of radio and shutoff relays at each discharging tile pump throughout the GDA. Communications and repeater towers will be erected as required (two to four towers expected) to send the control signal from the SCADA computer at the district office to each of the pumps. These towers will range in height from 20 to 80 feet and are consistent with power line and other communication towers within the GDA, i.e., shorter than existing cellular communication and high-wire towers but taller than regular power poles. This will allow all discharging tile sumps to be remotely disabled prior to storm events and then reactivated after the storm event has passed. This enhancement improves the control and efficiency available for the measure of shutting off tile sumps.

2.2.2 Short-Term Storage Basin Usage

2.2.2.1 Existing Storage Basins

A storage basin or pond is defined most often as a small storage reservoir constructed to regulate an irrigation water supply by collecting and storing water for a relatively short period. There are currently some minimal storage basins within the GDA, including those in Panoche Drainage District and Pacheco Water District. These existing facilities provide approximately 500 AF capacity; storm water stored in these basins can be either diverted and reused for irrigation on the SJRIP reuse area, used at other areas within the GDA, or discharged into the Drain.

A concern with the use of storage basins in the GDA is the potential for possible exposure of waterfowl to water with elevated selenium if basins cannot promptly be drained. The plan is to accumulate storm water in the basins as needed to reduce peak flows during high rainfall events, typically beginning in December, for subsequent release of the storm water through the Drain or to the reuse area to the extent they can be used, given capacity constraints, to irrigate salt tolerant crops without ponding. To avoid impacts to wildlife, appropriate mitigation measures will be implemented for as long as the basins contain water (see Section 3.2.2). The basins would collect drainage during storm events as a tool to reduce peak flows and the associated discharge to the Drain, and then distribute the storm water to the reuse area during the early irrigation season and to the GBC outside of the irrigation season. The storage basins would be managed to prevent the evapo-concentration of selenium and other constituents and aggressively hazed to discourage water bird nesting. Water in the basins would be distributed to the SJRIP to meet irrigation demand as soon as practical. In rare cases, captured water may be discharged to the GBC to the Drain to prevent evapo-concentration if there is not sufficient

reuse capacity to drain the basins. Depending on water quality, some of the water may be blended into regional irrigation systems as well. By late May, the basins would be emptied.

2.2.2.2 Proposed Short Term Storage Basins and Pump Stations

The Proposed Project also includes new, short-term storage basins that total approximately 200 acres in size with the ability to hold an additional 1,000± AF of storm-induced drainage from the GDA. They would be operated in a similar manner as the existing basins explained above, i.e., filling begins with the first significant storms (typically December), and basins are emptied by May. The increased capacity reduces the quantity that must flow during the storm event to the GBC, the Drain, and ultimately to Mud Slough (North). This guards against both flow in the GBC exceeding the channel capacity as well as selenium concentrations in Mud Slough (North) exceeding the water quality objective established in 2016 by the Regional Board (Regional Board 2016).

The storage basins will consist of approximately four miles of levees (interior and exterior) amounting to approximately 300,000 cubic yards of compacted embankment and rip-rap for levee protection. Levees will have a top width of 12 to 16 feet and a depth of approximately 6 feet. The storage basins will be designed with clean and steep slopes, and water will be kept deep or the basins will be empty, in order to minimize attractiveness of the basins for waterbirds. A new pump station will be constructed to divert water from a major regional drain into the basins and a second pump station and conveyance pipeline (estimated 24" diameter) will be constructed to divert water out of the basins for reuse within the SJRIP.

Current land use at the proposed basin site is salt tolerant cropland (Jose Tall Wheatgrass) within the existing SJRIP. The conversion of 200 acres of this land to storage basins would provide a tool to reduce the amount of water discharged to the GBC and Drain during large storm events in the non-irrigation season. This loss or irrigable crops will be offset by planned SJRIP expansion.

The estimated construction time for the basins is approximately 4 months. The estimated construction time for the 2 pump stations and associated pipeline is approximately 3 months, and may or may not be concurrent with the basin construction. Construction periods would typically be limited to May through November (7 months) when storm events and flooding are unlikely, and adjusted according to the protective requirements for special status species as necessary.

Operations: A variety of factors will determine when storm induced drainage flows would be diverted into the basins. Local staff will consider soil saturation levels, forecasted rainfall amounts, water levels in regional drains, available capacity in the GBC and the flow rate in Mud Slough (North) (Site D) as factors for determining when to divert flows into the temporary storage basins. The goals of any diversion into the short-term storage basins would be to avoid exceeding capacity to discharge through the GBC into the Drain (so as to avoid any release into the historic path of the wetland conveyance channels), to prevent selenium water quality exceedances at Site D, and to minimize the overall discharge from the GDA. Water would be drained out of the basins as soon as the water could be utilized within the SJRIP.

2.2.2.3 Reuse Area Expansion

The Grassland Bypass Project Final EIS/EIR stated that the SJRIP facility would be implemented on up to 6,900 acres of land within the GDA (Reclamation 2009b, p. 2-14). It included the following description:

“To continue to apply the salty water to the lands developed in Phase I, it will be necessary to install subsurface drainage systems. Installation of tile drainage systems will be required to maintain salt balance in the root zones and to maintain the

productivity of the reuse area on a long-term basis. Such installation would not be a prerequisite for commencement of reuse, would be prioritized based upon available funding and the needs of particular crops, and would be expected to proceed throughout Phase II. Currently (and for the foreseeable future) any tile water captured within the reuse areas is blended back with the reuse area irrigation supply and used on whatever crop is located downslope. Salt, Se, and other drainage constituents would be collected in the water coming out of the subsurface drainage systems, continue to be recirculated and utilized on site or, during any continuation of the Grassland Bypass Project, be discharged subject to load reduction obligations.” (p. 2-18)

The proposed expansion of 1,450 acres will take the existing reuse facility from 6,100 acres analyzed in the 2009 Final EIS/EIR to 7,550 acres of usable reuse area. This is an additional 650 acres over the maximum size anticipated in the 2009 Final EIS/EIR. This additional acreage would be managed in the same manner as the existing acreage with the same biological monitoring requirements established by the U.S. Fish and Wildlife Service (USFWS) in their Biological Opinion (see USFWS 2009). Therefore, this Addendum addresses the additional acreage. Much of this additional acreage is already planted to salt tolerant Jose Tall Wheatgrass, and only a change in ownership (private to district) would be needed for implementation.

Because the salt tolerant crops within the SJRIP have very little water demand in the winter, reuse capacity for storm-related flow is very limited in the period between November and February with greater reuse in the March to May period, depending on hydrologic conditions. Small existing storage basins in Pacheco and Panoche Water District provide limited water storage capacity within the GDA (up to 500 AF). In combination with storage basin usage, the maximum managed flow with facilities within the GDA is approximately 50 cfs for 15 days¹. Once this maximum is reached, discharge of some sort is required.

The primary environmental concern is an increased potential for ponding of seleniferous water within the fields of the SJRIP, which could be an attractive nuisance to wildlife, particularly birds. The amount of water that could be discharged to the SJRIP is less than what would be needed (i.e., only a partial solution), and other impacts would be created if the area is not enlarged to handle agricultural drainage. Therefore, an additional reuse area of approximately 1,450 acres is proposed on farmed land generally on the southwest side of the existing SJRIP facility. Mitigation contained in the Grassland Bypass Project Final EIS/EIR for the existing reuse facility would apply to this area also. This mitigation includes a contingency plan² in the event of inadvertent flooding in the reuse area due to breakage of a water supply canal or delivery facility.

2.2.3 Conveyance Activities

Additional conveyance activities are proposed for agricultural drainage and storm water conveyance within the GDA for the existing reuse area and its expansion and for storm water conveyance to the GBC during the winter months. These improvements, when combined with the proposed short-term storage basins and other conveyance activities, will increase the GBP’s capacity to manage storm-induced flows. These activities are listed below.

- **RP-1 Ditch Extension and Lining** The existing 3 miles of RP-1 Ditch will be replaced with a concrete lined channel and the ditch will be extended 1.8± miles to the eastern side of the SJRIP. The channel’s capacity will also be increased from approximately 25 cfs to 45 cfs.

¹ The maximum diversion rate could be as high as 70 cfs but this assumes that some pumps will be inaccessible due to wet conditions. 15 days comes from 3” over 6000 acres.

² This plan is presented in the *San Joaquin River Water Quality Improvement Project, Phase I Wildlife Monitoring Report*, 2005 (H.T. Harvey & Associates 2006).

Construction work will involve the placement of approximately 34,000 cubic yards of compacted embankment to build the canal pad, excavation of approximately 38,000 cubic yards of material to cut the design cross section, and placement of approximately 470,000 square feet of unreinforced concrete lining, along with miscellaneous appurtenances such as turnouts and road crossings. As a delivery channel, most of the ditch would be above grade with the invert extending approximately 24" below the existing top of ground. The alignment of the existing and proposed ditch is within an area historically farmed. Estimated construction time is 4 months.

The RP-1 Ditch extension and lining activities would significantly improve operational flexibility of the SJRIP by extending conveyance capacity to the far east section of the SJRIP (near Fairfax Avenue). Currently, there is only limited conveyance capacity to that portion of the reuse area, which underutilizes the overall reuse capacity of the SJRIP.

- **RP-1 Pump Station Enlargement and Pipeline.** A new electric pump station with a capacity of approximately 25 cfs will be installed in the Russell Avenue Drain near the existing RP-1 Pump Station. The pump station will consist of a pre-cast concrete sump, two low lift pumps, a manifold to connect to the new pipeline, electrical controls, and necessary appurtenances. A new pipeline will transmit the pumped water from the new pump station to the RP-1 Ditch, a distance of approximately 750 feet. The trench for the new pipeline would be approximately 6 feet deep and would run parallel to an existing pipeline installed for a similar purpose. The construction area for this activity has been extensively disturbed during previous construction activities. The pipe is expected to be 30" or 36" in diameter and likely to be reinforced concrete or PVC. Estimated on-site construction time is expected to be three weeks.

The proposed increase in the RP-1 pump-rate capacity would significantly improve operational flexibility of the SJRIP by increasing the conveyance capacity to the far east section of the SJRIP (near Fairfax Avenue). Currently, there is only limited conveyance capacity to that portion of the Reuse Area, which underutilizes the overall reuse capacity of the SJRIP.

- **West Pump Station and Pipeline.** A new pump station and pipeline will be installed on the westside of the SJRIP that will allow water to be pumped to the easterly SJRIP, where there is more crop water demand. The pump station will consist of a pre-cast concrete sump, 2 pumps (5± cfs each), a manifold, electrical controls and miscellaneous appurtenances. The pipeline is expected to be 21" diameter PVC pipe. Approximately 2.5 miles of pipe will be installed along existing field roads at a depth of 5 feet, discharging ultimately at the Russell Drain near the RP-1 pump station. An encroachment permit from Fresno County will be required to cross Russell Avenue. Estimated total on-site construction time is expected to be 3 months. The proposed pump station and pipeline would connect the westerly portion of the SJRIP (~1,800 acres) with the 4,000 acres of the SJRIP east of Russell Avenue and increase the rate of drawdown for the storage basins. The construction area for this activity has been extensively disturbed during previous construction activities that have been analyzed under CEQA.
- **SJRIP Return System.** A new electric pump station and pipeline will be installed on a major return drain within the SJRIP that will convey that water to the RP-1 Ditch. The pump station will have a capacity of 10 cfs and will consist of a pre-cast concrete pump sump, 2 pumps, manifold, electrical controls and other appurtenances. The pipeline is expected to be 21" diameter PVC, approximately $\frac{3}{4}$ of a mile in length, in a trench 5 feet deep, and will discharge into the RP-1 Ditch. Estimated on-site construction time for both the pipeline and the pump station is approximately 3 months. The construction area for this activity has been extensively disturbed during previous construction activities that have been analyzed under CEQA.

The proposed pump station and pipeline would improve the operation efficiency of the SJRIP by capturing internal return flows and returning them to the RP-1 ditch, which will allow for recirculation of this water over the largest possible area.

- **New Subsurface Drainage.** New subsurface drainage systems are proposed for up to 1,100 acres within the existing reuse area. Drains are to be placed approximately 8 feet below the ground surface with a spacing of approximately 400 feet. This area historically has been farmed and is currently planted to Jose Tall Wheatgrass. Construction would occur over a 3-month period, and the fields would be re-planted.

The proposed subsurface drainage systems would be located on a series of fields with a shallow water table that inhibits cultivation and operations. Subsurface drain water collected by these systems would be discharged into the SJRIP conveyance system for reuse.

Environmental Impact Discussion

3.1 INTRODUCTION

This section discusses whether the proposed modifications to the Grassland Bypass Project (GBP) analyzed in the 2009 Final EIS/EIR (SCH No. 2007121110) would result in any new or substantially more severe environmental effects than were previously identified. This section also includes a discussion of the original mitigation measures from 2009 and the need for implementation of those measures to continue (with or without refinements) to allow for the continuation of storm water management practices including use of the Drain. The discharge of subsurface agricultural drainage to the Drain will cease by the end of 2019, and agricultural subsurface drainage will be managed by the GAF participating districts and at the SJRIP. Going forward, the Project as proposed to be modified is called the Long-Term Storm Water Management Plan (LTSWMP) for the period January 1, 2020 through December 31, 2045. It would be implemented through a new use agreement with the U.S. Department of the Interior, Bureau of Reclamation for use of the Drain and with new WDRs from the Regional Board for discharge to Mud Slough (North). The proposed West Pipeline affects Russell Avenue; a permit will need to be obtained from Fresno County to cross the road. Other related improvements and practices at the SJRIP to implement the LTSWMP are included as well, such that the entirety of the Project is evaluated under CEQA.

The proposed changes to the 2009 project are called the Proposed Project. As the lead agency under CEQA, the Authority prepared an Initial Study using the CEQA Environmental Checklist supported by four technical reports on plan formulation, biological resources, sediment removal and surface water resources. An analysis of cultural resources was also made.

Sections discussing significant impacts to environmental resources identified in the 2009 Final EIS/EIR are titled Final EIS/EIR (2009) and sections describing the resulting impacts from the proposed changes to the 2009 project are titled Initial Study (2019).

3.2 IMPACTS RELATED TO PROJECT CHANGES

The environmental topics considered to have the greatest potential for new or more severe significant environmental impacts were surface water resources and biological resources. Differences in the potential impacts associated with the Proposed Project relative to those for the GBP described in the 2009 Final EIS/EIR (Proposed Action) are discussed below. For this CEQA discussion, the Proposed Project is compared to existing conditions for the 2015-2019 period, and the 2009 project was compared to existing conditions at the time of the issuance of the Notice of Preparation (December 20, 2007) for that project. The focus in this section is on impacts (adverse effects) identified as potentially significant in 2009 and mitigation to reduce those impacts to less than significant for surface water and biological resources. It also discusses the significant and unavoidable impacts to soils and groundwater resources identified in the 2009 Final EIS/EIR and how the Proposed Project does not increase the severity of those adverse effects.

3.2.1 Surface Water Resources

3.2.1.1 Final EIS/EIR (2009)

The 2009 Final EIS/EIR (Section 4, Surface Water Resources) identified significant and less-than-significant “beneficial” effects, although beneficial effects are not required to be identified under CEQA (only under NEPA). The beneficial effects were attributed to water quality for the following

parameters based on water quality objectives and modelling for reductions in drainage discharges over the 2010-2019 period:

- Selenium (Se), salinity, boron, and molybdenum in sloughs and San Joaquin River (SJR) upstream of the Merced River
- Se, salinity, boron, and molybdenum in the SJR downstream of the Merced River, salinity in sloughs/SJR

There was a determination of no impact for Se in wetlands during storm events and during dry weather, because Se concentrations were essentially unchanged from existing conditions.

The potentially significant impact (adverse effect) was for sediment accumulation in the Drain. Additional sediment may accumulate, but this impact could be mitigated by removal of all accumulated sediment (e.g., all sediments since completion of the 85-mile Drain in 1975) based on a Sediment Management Plan included in the 2009 Final EIS/EIR as Appendix B. The sediment would be removed in accordance with the proposed Use Agreement and applicable laws and regulations as well. This mitigation reduced the sediment accumulation impact to less than significant.

3.2.1.2 Initial Study (2019)

The projected storm water discharges for the Proposed Project were evaluated in Section 2.10 of the Initial Study. Discharges from the Project Area enter the San Joaquin River at the mouth of Mud Slough. Recent historical conditions reflect the result of the past projects on water quality. Specifically, selenium levels in Mud Slough (North) have reduced each year since the implementation of the GBP and Westside Plan. The transition to the Long-Term Storm Water Plan Management Plan would continue this trend, resulting in significantly reduced discharges into Mud Slough.

There is a general trend of decreasing flows between 2006 and 2014 and the elimination of summer flows to the Drain starting in 2015. Prior to 2015, the Drain flow appears to consist of a combination of year-round drainage and winter storm-induced drainage flows. From 2015, the flow appears to be mainly storm flows with a small component of post-storm drainage.

Hydrological conditions varied during Water Years 2015 to 2017, the period representing existing conditions. Water Year 2015 was critically dry, Water Year 2016 was below normal/dry, and Water Year 2017 was wet. Regardless of year type, flow in the Drain was maintained below 150 cfs.

One of the management tools for storm water runoff would be pumped diversions to the existing and proposed short-term storage basins. It is possible that these basins could completely contain the flows generated by such events. Once the rainfall subsides, the captured water would be drained for reuse as SJRIP irrigation water whenever practical. Depending on time of year, some water could be stored in the storage basins for a month or more.

Operationally, a variety of factors will determine when storm-induced drainage flows would be diverted into the basins. Local staff will consider soil saturation levels, forecasted rainfall amounts, water levels in regional drains, including the GBC, and the flow rate in Mud Slough North (Site D) as factors for determining when to divert flows into the temporary storage basins. The primary goal of any diversion into the short-term storage basins would be to avoid exceeding the 150 cfs capacity of the GBC and hence, required diversion into historic outlets through the wetlands; prevent selenium water quality exceedances at Mud Slough North (Site D); and minimize the overall discharge from the GDA. Water would be drained out of the basins as soon as there was reuse capacity for irrigation within the SJRIP.

The impacts to surface water resources are focused on water quality and are primarily based on changes in the Se, salt, and boron concentrations in the San Joaquin River and Mud Slough (North). The degree of water quality impact is based on the concentration in the receiving water relative to the water quality objectives (WQOs) contained in the Basin Plan for the San Joaquin River Basin (Regional Board 2016). An impact would be considered an adverse effect and significant if it resulted in an increase in the frequency of exceedances in the WQOs over what was measured under existing conditions (Water Years 2015 to 2017). An effect would be considered beneficial if it resulted in a decrease in the frequency of exceedances in the WQOs. Current Basin Plan WQOs and performance goals for Se, boron, and molybdenum for the lower San Joaquin watershed are summarized in the Initial Study. Total flow from the GDA to the Drain would not exceed 150 cfs due to capacity limitations in the siphon under the Main Canal and related facilities.

Under the Proposed Project, water quality in Mud Slough (North) downstream of the Drain is expected to improve relative to existing conditions due to the GAF modifying operation of the drainage system, including the integration of storage basins to reduce storm event discharge and turning off sumps prior to and during wet weather flows using the new SCADA system. The Se, boron, salt, and molybdenum concentrations are expected to decrease due to this discharge management of storm flows.

Under existing 2015-2019 conditions, Se concentrations in Mud Slough (North) downstream of the Drain were not above the current Se performance goal of 15 µg/L monthly mean. Based on 21 years of simulation, water quality in Mud Slough (North) downstream of the Drain is expected to improve under the Proposed Project relative to existing conditions due to the GAF modifying operation of the drainage system, including turning off sumps prior to and during wet weather flows using the new SCADA system and the integration of storage basins to reduce storm event discharge. However, on rare occasions Se concentrations are predicted to be above WQOs (5 µg/L 4-day average) in dry and critically dry years when dilution flows in Mud Slough upstream of the Drain are reduced (see Initial Study, Appendix D, Attachment A). When evaluated on an event basis (which could include one or more consecutive days), exceedances are expected to occur on average once every 3.5 years. These exceedances would occur less frequently than EPA guidelines which allow for a violation of water quality standards once every 3 years.

The Se concentrations are expected to be reduced under the Proposed Project, a beneficial effect. However, because the WQO would change from the monthly mean performance goal of 15 µg/L to a 4-day average of 5 µg/L WQO, the frequency of exceedances of the applicable water quality criteria would be increased (as noted above) as compared to existing conditions due to the reduced WQO (since the Final EIS/EIR was released in 2009). However, it is expected that the water quality in Mud Slough (North) as it relates to Se conditions would continue to be improved; the frequency of exceedances of the 2016 WQO is considered a less-than-significant impact.

Monthly average boron concentrations in Mud Slough downstream of the Drain are expected to be greater than 2 mg/L in some months during both the wet and dry season. When there is no flow from the Drain, concentrations would be the same as found in Mud Slough (North) upstream of the Drain (occasionally above a 2 mg/L monthly average), but storm water discharges from the Drain could occasionally contribute to exceedances of the 2 mg/L monthly average WQO downstream of the Drain in April. Because boron concentrations are expected to decrease during winter months due to turning off drainage sumps prior to and during wet weather flows, the frequency of exceedances above the WQO are expected to decrease as compared to existing conditions. Therefore, changes to boron concentrations would have a less-than-significant impact in comparison to existing conditions.

The Sediment Management Plan (2009) allowed for placement of removed sediments on agricultural, industrial and/or residential lands. Removal of the 40 years of accumulated sediment commenced in 2015, 2016, 2017 and 2018 using excavators to remove the sediment and trucks to haul it to the SJRIP.

As of August 2018, approximately 180,000 cubic yards of sediment has been removed from the Drain between the Drain Inlet (Site A) and Henry Miller Avenue (approximately 14 miles). All removed sediment was hauled to the SJRIP and used to fill in unneeded drains. Future sediment removal will be accomplished similar to the 2017-2018 removal, but the location of the placement area likely will change due to the logistics of hauling material that is further away from the SJRIP. Measured selenium levels in the Drain sediment are below the threshold for application on industrial and residential sites. A planned industrial site has been located adjacent to the Drain at Highway 152, and an estimated 100,000 cubic yards could be placed at this location. This would be sufficient to store all of the remaining sediment in the Drain. Due to the narrow time-window available each year for sediment removal and the logistics related to hauling distances, the removal is expected to take an additional year to accomplish, to December 31, 2020. Approximately 95,000 cy of sediment remain in the Drain and need to be removed. The nature and intensity of sedimentation and hauling activities associated with the Proposed Project modification are consistent with, and well within the scope of, the activities previously analyzed in detail in the Grassland Bypass Project Final EIS/EIR for the 2010-2019 timeframe. The capacity of the Drain would be restored to 300 cfs, while only 150 cfs capacity will be used for the Proposed Project. The amount of additional sediment accumulation for the period 2021-2045 would not interfere with use of the Drain for storm water conveyance, and the impact is less than significant.

The Se WQO would be met during most of the year, with only occasional exceedances of the 5 ppb 4-day average that would be short in duration, a less-than-significant impact as explained above. Refinements to the existing mitigation measures to further reduce the less-than-significant impacts from the expected periodic exceedances will be implemented for the Proposed Project, as follows:

- If the 5-ppb 4-day average not met with proposed management practices (shut off electric sumps), analyze operational data and develop adaptive management approach to implement additional corrective actions.
- Organize the Mitigation Sub-Committee comprised of local wildlife agencies as required in the 2010 Use Agreement to utilize funds deposited in the Supplemental Mitigation Project Fund to develop mitigation projects such as:
 - Refuge water supply augmentation (such as USFWS Blue Goose unit)
 - Increased water flows in Mud Slough after Drain flows cease
 - Habitat restoration projects
 - Species specific habitat establishment

The Long-Term Storm Water Management Plan includes selenium load targets for discharges to Mud Slough (North) and the San Joaquin River. Table 3-1 shows the Total Maximum Monthly Load (TMML) selenium load allocation as adopted in 2001 in the Basin Plan amendment for Selenium in the San Joaquin River along with proposed selenium load targets. The targets represent an approximately 75% reduction in selenium loading from the TMML Annual Load Allocations. A multi-year performance target requiring that the selenium load over a 3-year period at Site B be less than the sum of the 3-year target, based on water year type, would be used to determine if the load targets are being met. If the performance target is exceeded, the Dischargers will propose additional management practices to reduce the selenium loading to meet the performance goal. The selenium water quality objective will continue to be used to determine compliance with the Basin Plan.

Table 3-1. Selenium Annual Load Allocations for the Grassland Drainage Area³
(pounds of selenium)

| Selenium Load | Critical (Discharge Limit) | Dry/Below Normal (Discharge Limit) | Above Normal (Discharge Limit) | Wet (Discharge Limit) |
|-----------------------------|-------------------------------|---------------------------------------|-----------------------------------|--------------------------|
| TMML Annual Load Allocation | 1075 | 2496 | 4162 | 4480 |
| Annual Load Target | 300 | 600 | 900 | 1200 |
| Percent Reduction | 72% | 76% | 78% | 73% |

In summary, the Proposed Project would not result in new significant impacts not already considered and mitigated in the 2009 Final EIS/EIR and would not substantially increase the severity of the previously identified impact. Less-than-significant impacts to water quality would not be increased to significant, and the sediment accumulation impact would not be worsened. Sediment removal initiated during the 2009 project would be completed and subsequent accumulation would not interfere with operation of the Drain over the 2020-2045 timeframe.

3.2.2 Biological Resources

3.2.2.1 Final EIS/EIR (2009)

The three sections of the Project Area used in the 2009 analysis (in Section 6.1.1) are:

- **Area 1 (the GDA):** the 97,400-acre source zone known as the GDA, located in the Central Valley of California, specifically in Merced and Fresno Counties.
- **Area 2 (Area 2):** 93 miles of wetlands channels, Salt Slough, and the San Joaquin River from the confluence of Salt Slough downstream to Mud Slough. This area is located within the GWD and state/federal wildlife management areas, and under current conditions does not receive water directly from the source zone (Area 1).
- **Area 3 (Area 3):** the Drain from Russell Avenue on the south to its northern terminus at Mud Slough, 6 miles of Mud Slough upstream of its confluence with the San Joaquin River, and the San Joaquin River downstream from Mud Slough to Crows Landing. This area comprises the drainage pathway from the source zone through the San Joaquin River, and, under current conditions, includes those habitats affected by selenium (Se)- and salt-rich drainage water.

Compared to existing conditions, the expanded reuse area may cause significant adverse impacts in Area 1 as crop changes lead to foraging habitat loss or degradation for species in the expansion area, as well as increased Se and higher potential for Se bioaccumulation in that area. By removing drainage water from Area 1, ponding is less likely to occur and less habitat is expected to be degraded (than under the No Action Alternative in both Area 2 and Area 1 outside of the reuse area). Area 3 will experience beneficial effects, as discharges of Se and salinity to Mud Slough and the San Joaquin River habitats and species would be lower than under existing conditions.

The acreage acquired for the expanded reuse area would gradually be planted with salt-tolerant crops. The change in crop use could lead to decreases in habitat or habitat value. Changes in land use and crop patterns for the conversion of 2,900 acres to salt-tolerant crops could reduce the area of cultivated crops that provide foraging habitat for Swainson's hawk, northern harrier, burrowing owl, tricolored blackbird, pallid bat, and western red bat. Conversion of cultivated lands to salt-tolerant crops could reduce the abundance of prey utilized by these special-status species, a potentially significant adverse

³ The TMML annual load allocations in Table 3-1 are based on the sum of the monthly load allocation based on the water year calculation needed to meet the selenium water quality objectives at the San Joaquin River at Crows Landing.

impact compared to existing conditions. However, the Proposed Action does not include a reduction in the area of land cultivated for rice. (Section 6.2.2.2.1)

The 2009 Final EIS/EIR (Section 6.2.2.1.4) reported that drainage reuse at the SJRIP In-Valley Treatment/Drainage Reuse Facility, which involves application of subsurface drain water on the surface of fields to irrigate salt-tolerant crops, has the potential to result in highly seleniferous subsurface drainwater ponding in fields at the reuse facility, which can create a hazard to birds. Furthermore, the installation of subsurface drainage and collection systems would result in ground disturbance that may affect breeding success of burrowing species such as burrowing owls. The 2009 Final EIS/EIR concluded that all of these potentially significant impacts could be mitigated to less than significant through implementation of the measures described below:

“The following Measures 1 through 4 are required to mitigate for significant adverse impacts under CEQA associated with continued operation and expansion of the In-Valley Treatment/Drainage Reuse Facility. Mitigation 5 is required if Mitigations 1, 2, and 3 do not sufficiently reduce the exposure to Se” (Section 6.2.2.4):

- **MITIGATION 1: AVOIDING BURROWING OWLS**

In conformance with federal and state regulations regarding the protection of raptors, a pre-construction survey for burrowing owls will be completed in conformance with CDFG recommendations, no more than 30 days prior to the start of construction. If no burrowing owls are located during these surveys, no additional action would be warranted. However, if breeding or resident owls are located on, or within 250 feet of, the proposed construction site, the following mitigation measures will be implemented:

- A 250-foot buffer, within which no new activity would be permissible, will be maintained between project activities and nesting burrowing owls. This protected area will remain in effect until August 31, or may be terminated earlier at the CDFG’s discretion based upon monitoring evidence that indicate that young owls are foraging independently.

Owls may be evicted from the construction area to avoid take of individual owls via construction activities. However, CDFG does not permit the eviction of burrowing owls from burrows during the nesting season (February 1 through August 31). Eviction outside the nesting season may be permitted pending evaluation of eviction plans and receipt of formal written approval from the CDFG authorizing the eviction. If accidental take (disturbance, injury, or death of owls) occurs, the CDFG will be notified immediately.

- **MITIGATION 2: REDUCE EXPOSURE POTENTIAL BY REDUCING ATTRACTIVENESS OF IRRIGATION DITCHES FOR NESTING**

The majority of shorebird nesting on the existing reuse site consists of killdeer and recurvirostrids nesting within, or adjacent to, the irrigation ditches that deliver drainwater to the site. Adults nesting near irrigation ditches feed primarily in these ditches, though this is more typical of recurvirostrids than killdeer. Reducing the attractiveness of the ditches and their immediate surroundings as nesting and foraging habitat is necessary to minimize the level of shorebird exposure to Se.

Unused ditches have been filled in to prevent shallow ponded water from becoming an attractive nuisance. Sediment that has collected on the bottom of operational ditches will be removed to remove potential nest substrate when water levels are low. Smooth sides

and borders will be maintained along irrigation ditches to inhibit the common killdeer and recurvirostrid practice of using rough surfaces such as disked areas to conceal nests.

- **MITIGATION 3: REDUCE EXPOSURE POTENTIAL BY HAZING BIRDS FROM NESTING NEAR, AND FORAGING IN, IRRIGATION DITCHES**

Shorebird use of the existing project site is not homogenous (H.T. Harvey & Associates 2004, 2005). As noted above, shorebird nests at the existing project site are concentrated in the vicinity of irrigation ditches. Additionally, stilts and avocets are semicolonial, often nesting in close vicinity to each other. Hazing will be performed to reduce exposure by reducing the number of nesting birds. Methods of hazing may include firing noise making devices such as cracker shells, 15-mm bird bombs, and bird whistlers from a vehicle to discourage breeding birds from establishing nest sites. In addition, propane-operated cannons will be left operating on a 24-hour basis, if required. Cannon locations will be changed periodically to lessen acclimation.

- **MITIGATION 4: FLOODED FIELD CONTINGENCY PLAN**

In the spring of 2003, a pasture at the existing reuse area site attracted waterfowl when it was inadvertently flooded. This flooded area created ideal ecological conditions for shorebird foraging and nesting and thus, a number of pairs responded opportunistically and bred in the field. Recurvirostrid eggs collected near the pasture had highly elevated Se concentrations compared to other recurvirostrid eggs collected elsewhere on the site. The Panoche Drainage District has since developed a contingency plan for accidental flooding. This plan is presented in the *San Joaquin River Water Quality Improvement Project, Phase I Wildlife Monitoring Report*, 2005 (H.T. Harvey & Associates 2006). The plan includes provisions for immediate removal of unintended drain water as well as for increased monitoring near flooded sites. The provisions of this plan will be implemented in the event of ponding at the reuse area.

- **MITIGATION 5: PROVIDE COMPENSATION BREEDING HABITAT**

If after employing Mitigation Measures 1, 2, and 3, monitoring (described in Section 15) determines nesting shorebirds are exposed to elevated Se levels as a result of the Proposed Action, compensation habitat for residual impacts will be provided. (See compensation habitat protocols contained in the 2009 Final EIS/EIR, pages 6-49 through 6-52 which are incorporated by reference.)

3.2.2.2 Initial Study (2019)

The Proposed Project is making changes to existing infrastructure and farmed areas on existing agricultural land to accommodate storm water flows. No natural habitat is being modified for the new pump station, pipeline, reuse area, subsurface drains at the existing reuse area, communication towers, canal, and sediment removal activities. Sediments have been placed previously in the adjacent Drain right-of-way to dry and are then placed as fill material for unneeded drains at the reuse area or potentially on an area planned for commercial development. The proposed short-term storage basins (200 acres) would be located within the existing SJRIP on lands currently planted to Jose Tall Wheatgrass. The proposed expansion of 1,450 acres will take the existing reuse facility from 6,100 acres analyzed in the 2009 Final EIS/EIR to 7,550 acres of useable reuse area. This is an additional 650 acres over the maximum size anticipated in the 2009 Final EIS/EIR. This additional acreage would be managed in the same manner as the existing acreage with the same biological monitoring requirements established by the USFWS in their Biological Opinion (see USFWS 2009⁴). Therefore,

⁴ U.S. Fish and Wildlife Service. 2009. Final Biological Opinion, 2010-2019 Use Agreement for the Grassland Bypass Project, Merced and Fresno Counties, California. File No. 81420-2009-F-1036. Sacramento, CA. December 18.

the analysis in the Initial Study sufficiently addresses the additional acreage. Much of this acreage is already planted to salt tolerant Jose Tall Wheatgrass, and only a change in ownership (private to district) would be needed for implementation.

Because the Project site comprises fallowed and regularly disced land vegetated primarily by nonnative species, it does not provide high-quality habitat for migratory birds or bats. The habitat provides only limited food resources (primarily insects) for some migrant songbirds and migratory bats; therefore, it does not represent a unique or important resource for these animals. (Initial Study, Appendix B, Section 4.4.)

Waterbird use of the existing and proposed short term storage basins could negatively impact waterbirds through dietary selenium exposure. Increased water being stored in the existing basins and storm water temporarily stored in the proposed storage basins would potentially provide an attractive foraging habitat for waterbirds. The water is expected to contain high enough selenium concentrations that long-term exposure could result in reproductive impairment to sensitive waterbird species. If the duration of the exposure is long enough, reproductive impairment is possible even if the waterbirds forage on the Project site and nest elsewhere in the vicinity of the Project. Because of the conditions on the Project site and the avian species that may use the site for nesting, these impacts would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impeded the use of native wildlife nursery sites. However, if waterbirds nest on the Project site, impacts on nesting birds from selenium exposure would be significant. Incorporation of Mitigation Measures BIO-2a through BIO-2f into the conditions of approval would ensure that adverse effects of selenium exposure on nesting waterbirds are avoided or substantially lessened to a less-than-significant level. Note that Mitigation Measures BIO-2a, BIO-2c, BIO-2e, and BIO-2f have been implemented previously at the SJRIP reuse site (since 2006), where they have significantly reduced the number of nesting shorebirds exposed to selenium. (These mitigation measures are provided in their entirety below from the Initial Study, Appendix B.)

For the new short-term storage basins (up to 200 acres for 1,000 AF of storm water storage), the proposed site is an area previously planted with salt tolerant crops that does not affect nearby wetlands but could be characterized as an attractive nuisance to wildlife who would be discouraged from using the basins by their design, maintenance protocols, and during its operation from December to May, by hazing in order to minimize their exposure to Se, similar to hazing being conducted for irrigation ditches.

Refinements to the 2009 biological mitigation measures for the expanded reuse area, new storage basins, and related ground disturbance during construction and operation are proposed. The measures are similar to the 5 types of measures listed above (Section 3.2.2.1) with minor changes based on monitoring of the area since 2001 and expanding use of the measures to apply to construction and operation of new features such as the short-term storage basins. The revised biological mitigation measures are:

- **Mitigation Measure BIO-1: Conduct a Preconstruction Survey for Burrowing Owl and Implement Avoidance Measures.** No more than 15 days before the start of initial ground-disturbing activities for the Project, a qualified biologist(s) knowledgeable of the species will conduct a take avoidance survey for the presence of burrowing owls within 500 ft of the area scheduled for disturbance.
- **Mitigation Measure BIO-2a: Reduce Se Exposure Potential by Reducing Attractiveness of Irrigation Ditches for Nesting.** Sediment that has collected on the bottom of the ditches will be periodically removed and irrigation ditches within the

- proposed expansion areas will be maintained with smooth sides and borders to reduce nesting attractiveness in and near irrigation ditches.
- **Mitigation Measure BIO-2b: Reduce Se Exposure Potential by Reducing Attractiveness of Storage Basins for Nesting.** The attractiveness of the existing and proposed short term storage basins to nesting shorebirds will be reduced through active management practices, including removing sediment and vegetation that has collected on the bottom of the ponds and maintaining smooth bottoms, sides and borders of the basins.
 - **Mitigation Measure BIO-2c: Reduce Se Exposure Potential by Hazing Waterbirds from the Project Site During Nesting Season.** Waterbirds shall be hazed from the Project site during the waterbird nesting season (March 15 to July 15) to reduce exposure of waterbirds to selenium by discouraging waterbirds from feeding where they could be exposed to selenium.
 - **Mitigation Measure BIO-2d: Reduce Se Exposure Potential by Hazing Waterbirds from the Storage Basins When Water is Present.** Waterbirds shall be hazed from the existing and proposed short term storage basins to reduce exposure of waterbirds to selenium by discouraging waterbirds from feeding or nesting where they could be exposed to selenium.
 - **Mitigation Measure BIO-2e: Implement a Flooded-Field Contingency Plan.** A contingency plan for accidental or inadvertent flooding has been developed for the SJRIP. The plan includes provisions for immediate removal of unintentionally released drainwater as well as for increased monitoring and hazing near flooded sites.
 - **Mitigation Measure BIO-2f: Monitor Mitigation Success and Provide Compensation Breeding Habitat.** The above mitigation measures will be implemented to reduce the exposure of birds to selenium. To evaluate the success of these measures, monitoring will be implemented to determine whether nesting waterbirds are still exposed to elevated selenium levels as a result of the Project. If they are, compensation habitat for residual impacts will be provided, following the protocol outlined below that has been adapted from a protocol developed by USFWS (1995) for determining and mitigating impacts on nesting waterbirds at evaporation basins.
 - **Mitigation Measure BIO-2g: Conduct Preconstruction Nest Surveys for Infrastructure Installation Occurring During the Nesting Season.** Preconstruction nest surveys will be completed for all Project-related infrastructure installation activities that occur between February 1 and August 31 to comply with California Fish and Game Code Section 3503.5. A qualified wildlife biologist shall conduct preconstruction surveys of all potential nesting habitats (including for raptors) within 500 feet of construction activities for presence of breeding or nesting birds. Surveys shall be conducted no more than 5 days prior to construction activities with a second survey conducted no more than 24 hours prior to the onset of construction. If active nests are found, no-disturbance buffers shall be implemented around each nest. If a nest is found in an area where ground disturbance is scheduled to occur, the area will be avoided either by delaying ground disturbance in the area until a qualified wildlife biologist has determined that the young have fledged or by re-siting the proposed Project component(s) to avoid the area.

In summary, the potentially significant impacts and mitigation measures to be implemented are not substantially different from those identified in the 2009 Final EIS/EIR. There are no new significant impacts to biological resources. While these impacts would occur over a larger area due to the modifications, they are not substantially more severe than in the 2009 Final EIS/EIR given the proven effectiveness of the mitigation measures.

3.2.3 Groundwater and Soil Resources

3.2.3.1 Final EIS/EIR (2009)

For the Grassland Bypass Project, 2010–2019, the salinity modeling identified the following potential impacts to soils and groundwater, compared to existing conditions in 2008 (Section 5.2.3.2):

- At the end of 2019, projected drainflow under the Proposed Action is similar to existing conditions. It is considered, therefore, to have no impact relative to existing conditions on drainwater production.
- Minimal projected net increases in the area affected by a shallow water table (1 square mile) indicate that the Proposed Action has a less-than-significant adverse impact relative to existing conditions.
- A small increase in the bare-soil evaporation rate compared to existing conditions is considered to be a less-than-significant impact relative to current evaporation rates.
- Flow model results for the Proposed Action indicate an almost 75 percent decrease in seepage to unlined canals compared to existing conditions (2008), a significant beneficial effect relative to existing conditions.
- Simulated unsaturated-zone soil salinity for the GDA increases from 1.0 dS/m in 2008 (existing conditions) to 1.9 dS/m in 2019. The increase in unsaturated-zone soil salinity relative to existing conditions is considered to be a less-than-significant impact because the soil remains productive.
- In the GDA, estimated soil selenium increases from 11 µg/L in 2008 to 21 µg/L in 2019, and boron increases from 0.9 to 1.3 mg/L. In the SJRIP during the same time period, soil selenium concentrations increase from 73 to 124 µg/L, and boron concentrations increase from 3.4 to 5.5 mg/L. The increase in selenium and boron concentrations relative to existing conditions is considered to be a significant unavoidable impact of irrigating western San Joaquin Valley soils. The concentrations will not affect agricultural productivity, but may with time influence selenium concentrations in underlying shallow groundwater and agricultural drainwater.
- Groundwater salinity in the GDA decreases from 6 dS/m in 2008 to 4 dS/m in 2019, a significant beneficial effect relative to existing conditions because the groundwater salinity decreases over time.
- In the GDA, simulated groundwater selenium concentrations decrease from 47 to 22 µg/L, and boron concentrations decrease from 6.0 to 3.7 mg/L. The continuation of the GBP is, therefore, considered to have a significant beneficial effect on selenium and boron concentrations relative to existing conditions.
- In the SJRIP, the unsaturated-zone soil salinity increases from 6.6 dS/m in 2008 to 11.2 dS/m in 2019. Although the soil salinity increases under Proposed Action conditions represent significant changes, they are spatially limited to at most 6,900 acres (6 percent of the GDA). The soil salinity changes are also considered reversible; impacted soils could be reclaimed and saline shallow groundwater removed when an alternative means of salt disposal becomes available under Phase III. Therefore, the continuation of the GBP is considered to have a less-than-significant adverse impact on unsaturated zone soil salinity in the GDA relative to existing conditions.
- Under the Proposed Action, simulated groundwater salinity concentrations beneath the SJRIP decrease from 23 dS/m in 2008 to almost 17 dS/m by 2019. Simulated groundwater selenium

concentrations also decrease from 816 to 419 µg/L, and boron concentrations decrease from 38.9 to 25.2 mg/L. Compared to existing conditions, the continuation of the GBP is considered to have a significant beneficial effect on groundwater quality beneath the SJRIP. Fields would be planted with salt-tolerant crops and managed to limit soil salinity impacts so that the land remains productive. Therefore, the area-limited application of undiluted drainwater is a less-than-significant impact to the GDA. Soil and drainwater quality monitoring are being conducted to track salinity changes within the SJRIP. Therefore, the primary concern is the increase in selenium and boron concentrations in soils in the GDA relative to existing conditions that is considered to be a significant unavoidable impact of irrigating western San Joaquin Valley soils. The concentrations of these two elements will not affect agricultural productivity, but may with time influence selenium concentrations in underlying shallow groundwater and agricultural drainwater.

Section 5.2.4 Cumulative Effects noted that the area underlain by a water table within 10 feet of land surface increased by about 20,000 acres per year during the period 1991-1997 and that salt has been imported and deposited into western San Joaquin Valley soils and water. The water table rise and salinization of soil and groundwater is a significant regional problem.

3.2.3.2 Initial Study (2019)

The ongoing reuse of agricultural drainwater on-farm within the GDA is not proposed to change. Key assumptions in drainwater management include recirculation of drainwater collected in sumps and reuse of drainwater from sumps. The SJRIP reuse area would be used to manage excess drainwater from GDA sumps by reusing it to irrigate salt-tolerant crops. Sumps for tile drains would be turned off prior to storm events, and storm runoff up to an equivalent volume of 3 inches of rain on the SJRIP could be reused within the 7,550 acres of the SJRIP reuse area prior to discharge to the GBC and Drain (to Mud Slough).

The issue is the expansion of the reuse area by 650 acres (from 6,900 analyzed in the 2009 EIS/EIR and the proposed 7,550 acres) and the use of storm water collected in the short-term storage basins for irrigation of salt tolerant crops at the SJRIP. The modelling performed in 2008 was not repeated in 2019. However, the drainage that would be captured in the storage basins is storm water, not agricultural subsurface drainwater (because the tile sumps would be shut off). Agricultural subsurface drainwater is of lower quality than storm water runoff. This capture and reuse of storm water would not substantially worsen the Se, salt, and boron concentrations in the soil (described above) and in shallow groundwater at the SJRIP and within the GDA. Therefore, compared to existing conditions in 2019, there are no new significant impacts (adverse effects) to groundwater and soil resources. The one significant unavoidable impact to soils in the 2009 Final EIS/EIR would not be substantially more severe due to the Proposed Project. The regional cumulative impact of water table rise and salinization of soil and groundwater from long-term irrigation of agriculture (and water deliveries to the federal wildlife refuges) continues, and it is not substantially more severe due to the Proposed Project, especially with water conservation practices employed throughout the GDA.

3.3 OTHER RESOURCE AREAS

Other resource areas evaluated in the Final EIS/EIR (2009) and addressed as necessary in this Addendum and the Initial Study (2019) in order to evaluate potential impacts of the Proposed Project include Land Uses (including agriculture, wildlife habitat, and recreation), Cultural Resources, Indian Trust Assets, Energy Resources, and Greenhouse Gases. The 2009 EIS/EIR also covered socioeconomic and environmental justice issues to comply with NEPA, and these topics are not revisited for this CEQA document. The Initial Study covered the additional environmental topics (to the surface water, biology, and groundwater and soils resources discussed above) of aesthetics, agricultural and forest resources, air quality, geology, hazards and hazardous materials, land use and planning, mineral resources, noise, population and housing, public services, recreation,

transportation/traffic, tribal cultural resources, utilities and service systems, and wildfire. These resources are substantially unaffected by the Proposed Project for the reasons described in the Initial Study and summarized below. There are no new significant or substantially more severe impacts to these resources as a result of the Proposed Project.

3.3.1 Land Uses

3.3.1.1 Final EIS/EIR (2009)

The focus of the analysis in Section 7 was on three uses of land within the Project Area and vicinity: agriculture, wetland habitat, and recreation associated with the federal and state wildlife refuges.

Based on up to 6,900 acres of land in the SJRIP, GDA acreage in production is projected at 74,675 throughout the analysis period. The SJRIP lands would largely remain in agricultural production but would be planted with more salt-tolerant crops. Therefore, the Proposed Project would not be expected to result in any substantial land use changes, nor produce inconsistencies with Fresno or Merced County General Plan land use designations for the GDA. (p. 7-12)

Land uses within the Project Area would not be expected to change substantially over existing conditions, resulting in no adverse effect on wildlife habitat land uses within the Project Area. The Proposed Action would be consistent with General Plan policies pertaining to the preservation and protection of wildlife habitat and open space as well as water resources/habitat within the Project Area. No adverse impacts would be anticipated, and no mitigation required. (p. 7-18.)

The primary recreation activities in the Project Area include water-dependent activities. Fishing occurs directly in the rivers or sloughs, and recreation activities at the wildlife refuges or management areas are based on enjoying wildlife that use the wetland habitat. Under the Proposed Action, drainwater would continue to flow around the wetland habitats and into the Drain. After 28 miles, the water would enter Mud Slough where it would travel another 6 miles before reaching the San Joaquin River 3 miles upstream of its confluence with the Merced River. Recreational opportunities would not be expected to either increase or decrease compared to existing conditions. The Proposed Project would either be consistent with or have no bearing on the General Plan objectives and policies summarized in Section 7.1.1 and outlined in Appendix F relating to recreation and open space. (p. 7-20.)

3.3.1.2 Initial Study (2019)

The proposed SJRIP expansion of 1,450 acres will enlarge the existing reuse facility from 6,100 acres analyzed in the 2009 Final EIS/EIR to 7,550 acres of useable reuse area. This is an additional 650 acres over the maximum size (6,900 acres) anticipated in the 2009 Final EIS/EIR. Concerning agricultural land use, the proposed short-term storage basins would be constructed on land that has been used for drainage reuse as part of the SJRIP since 2001. Up to 200 acres of land would be converted from salt-tolerant crops to short-term storage basins, an insignificant amount of agricultural land taken out of production. However, no farmland would be permanently converted to other land uses. The majority of the new reuse area would remain planted to Jose Tall Wheatgrass and just have a change in ownership, with approximately 450 acres of conventional farmland converting to Jose Tall Wheatgrass. The facilitation of storm water management helps to maintain the viability of agriculture in the overall Project Area and protects water supply channels to the wetland management areas that drain to the San Joaquin River. (Sections 1.1.3.3 and 2.2.)

The Proposed Project does not modify land uses at any of the wildlife management areas/refuges. Furthermore, the reuse area and storage basins would be monitored and maintained to avoid use of the areas by waterfowl that would normally use the refuges for foraging and nesting. (Section 1.1.4.2.)

Hydrologic modeling indicates that the Proposed Project components, once fully implemented, will cause the Se water quality criteria to be met under most conditions, and water quality in Mud Slough (North) will be of better quality regarding Se than in the past. Under these future conditions, Mud Slough (North) could be opened to recreational fishing at the discretion of USFWS. (Section 2.16.)

3.3.2 Cultural Resources

3.3.2.1 Final EIS/EIR (2009)

Potential historic resources in the region of the GBP are largely related to agriculture, including farmsteads, labor camps, yards for distributing agricultural produce, feedlots, canneries, pumping stations, siphons, canals, drains, unpaved roads, bridges, and ferry crossings. Labor camps generally consist of at least one wooden bunkhouse or boarding house, a dining hall, a cookhouse, a washroom, and associated buildings. Due to the long history of agricultural use, it is unlikely that intact surface or shallow subsurface artifacts exist. Subsurface deposits may exist below the plow zone or capped beneath pavement or structures. Surface deposits may exist in areas relatively unaffected by development or agriculture. (Section 9.1.)

No impacts to historic properties are anticipated by the Proposed Action because it does not propose actions that may cause effects to historical properties. All actions are proposed to occur within the GDA and, in essence, continue similar operations to those conducted under the existing Use Agreement on lands previously disturbed by agricultural production. Future expansion of drainage water treatment facilities or management facilities at the San Joaquin River Water Quality Improvement Project (SJRIP) reuse facility that result from the implementation of this alternative would have no potential to affect historical properties. (Section 9.2.2.2.)

3.3.2.2 Initial Study (2019)

A confidential Cultural Resources Technical Report (AECOM 2019) was prepared to support the Initial Study, and report findings are provided primarily in Section 2.5. Direct and indirect CEQA Area of Potential Effects (C-APE) were developed in order to study the potential impacts of the Proposed Project. The Direct C-APE includes the footprints of all the areas that would be subject to ground disturbance by the project. The Indirect C-APE would account for indirect impacts to resources (i.e., visual effects to the setting of built environment resources) that would not be physically impacted by the project.

The records searches did not identify any archaeological resources in the 1.0-mile radius of the project footprint, only built environment resources. The previously recorded historic-age built environment resources in the Project Area include the Main Canal (P-27-000082 Merced County) and the Outside Canal (P-10-005796 Fresno County; P-24-000434 Merced County). The Delta-Mendota Canal (P-10-005166) is adjacent to the “Proposed Reuse Expansion” area.

The Proposed Project does not involve large-scale excavation, and most of the area has been disturbed by previous farming (primarily the top 12 inches of soil), conveyance construction, and road construction activities. The depth of disturbance involved in placing new facilities in an area that has been farmed or subject to earlier road and canal construction determines in part whether there is the potential to affect unknown surface and buried resources. Another issue is the potential for above ground facilities such as the SCADA communications towers and equipment boxes to affect historic resources, but there is some flexibility in siting the towers to consider proximity to historic canals. The storage basins would be on top of the ground surface and contained by raised levees that require limited excavation.

The Initial Study determined that impacts to historical and archaeological resources are less than significant for the following reasons, including commitments by the Project proponents to perform additional surveys and construction monitoring which is a common practice.

- **Historical Resources:** None of the Proposed Project activities, including constructing temporary storm water storage in storage basins, planting salt-tolerant crops in existing agricultural lands, improving existing water conveyances, installing subsurface drainage within existing reuse area, or installing adjacent new conveyances, would result in a substantial adverse change to known or potential historical resources in the Project Area (the four canals including the DMC and the Drain). The Proposed Project activities, including the installation of below grade (approximately 5 to 6 foot depth) pipelines, alteration of the non-historic age dirt-lined RP-1 Canal adjacent to the Outside Canal with a concrete lining, and installation of pump stations, would not result in demolition, destruction, relocation, or alteration such that the significance of an historical resource would be impaired.

The Proposed Project's expansion of the reuse area will be adjacent to portions of the Eagle Field Airport; however, there will be no physical changes to the airport itself or any associated features. A potential reuse expansion area in the vicinity of the Eagle Field Airport is currently planted to Jose Tall Wheatgrass, and no changes to the cropping pattern or irrigation methods are proposed.

The location of the proposed SCADA tower is dependent upon a radio survey that allows for some flexibility in siting to avoid resources if present. Once the tower location has been identified, an additional records search and survey would be required and conducted to determine if archaeological or built-environment resources are present. If resources are present and avoidance is not feasible for the required tower location, the resources would be recorded and evaluated prior to certification of the CEQA document in order to assess their historical significance as historical resources or unique archaeological resources, per Section 15064.5 of the CEQA Guidelines or Section 21083.2 of the PRC.

- **Archaeological Resources:** No archaeological resources were identified in the records searches performed for this project. However, conditions were not suitable for an archaeological survey of the Project Area and much of the C-APE has not been previously surveyed. Based on the soils types and alluvial deposition there is a low to moderate potential for resources to be present. Therefore, AECOM recommends that an archaeological survey be conducted in order to determine if there are archaeological sites (prehistoric or historic period) within the Project Area. If resources are present in the Project Area and avoidance is not feasible, the resources should be recorded and evaluated to assess their historical significance as historical resources or unique archaeological resources, per Section 15064.5 of the Guidelines or Section 21083.2 of the PRC.

Although no previously identified prehistoric resources have been identified in the C-APE, several isolated artifacts were discovered during a previous study just over 1.0-mile north of the proposed lined channel within the C-APE (Bureau of Reclamation 1983, cited in AECOM 2019). The presence of these artifacts warranted archaeological monitoring during ground disturbing activities. If the results of the archaeological survey of the current C-APE are positive, AECOM recommends mitigation in the form of preparation of an archaeological testing plan (including geoarchaeology) and/or an archaeological monitoring plan. All ground disturbing activities should be monitored by a qualified archaeologist. Due to the previously identified isolated artifacts, AECOM recommends mitigation in the form of construction worker training. Prior to construction, the construction contractor and subcontractors shall be informed of the legal and regulatory consequences of knowingly destroying cultural resources

or removing artifacts, human remains, bottles, and other significant cultural materials from the site. Significant cultural materials include but are not limited to aboriginal human remains; chipped stone; groundstone; shell and bone artifacts (both human and animal); concentrations of fire-cracked rock; bottle glass; ceramics; ash and charcoal; and historic features such as privies or building foundations/remains.

If cultural resources are uncovered during ground disturbing activities associated with the Proposed Project, work will stop within 50 feet of the initial find and a qualified professional archaeologist shall be notified regarding the discovery. The archaeologist shall determine whether the resource is potentially significant as per the CRHR and develop appropriate mitigation. The Authority shall comply with the mitigation requirements identified by the archaeologist.

- **Human Remains:** In the unlikely event that human remains are discovered during Project implementation, work in the immediate vicinity of the discovery will be suspended and the Authority will notify the Fresno or Merced County Coroner, depending on location of discovery. If the remains are deemed Native American in origin, the Coroner will contact the NAHC and identify a Most Likely Descendant pursuant to Public Resources Code Section 5097.98 and California Code of Regulations Section 15064.5. Work may be resumed at the landowner's discretion, but will only commence after consultation and treatment have been concluded. Work may continue on other parts of the Project while consultation and treatment are conducted.

3.3.3 Indian Trust Assets

3.3.3.1 Final EIS/EIR (2009)

As described in Chapter 11, Indian Trust Assets (ITAs) are legal interests in property held in trust by the U.S. for federally recognized Indian tribes or individual Indians. An Indian trust has three components: (1) the trustee, (2) the beneficiary, and (3) the trust asset. ITAs can include land, minerals, federally reserved hunting and fishing rights, federally reserved water rights, and in-stream flows associated with trust land. Beneficiaries of the Indian trust relationship are federally recognized Indian tribes with trust land; the U.S. is the trustee. By definition, ITAs cannot be sold, leased, or otherwise encumbered without approval of the U.S. The characterization and application of the U.S. trust relationship have been defined by case law that interprets Congressional acts, executive orders, and historic treaty provisions (Rivera, pers. comm., 2008a, cited in Reclamation 2009).

An examination of records held by the Bureau of Indian Affairs and Reclamation was conducted by the Regional ITA Coordinator. No reservations or rancherias are located within the Project Area. No known ITAs are found within the Project Area. The nearest ITA is a Public Domain Allotment, which is approximately 58 miles northeast of the Project location (Rivera, pers. comm., 2008b, cited in Reclamation 2009b). Therefore, no impacts would occur to ITAs caused by the Proposed Action.

3.3.3.2 Initial Study (2019)

As of July 1, 2015, California Assembly Bill 52 of 2014 (AB 52) was enacted and expands CEQA by defining a new resource category, "tribal cultural resources." Assembly Bill 52 establishes that "[a] project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment" (PRC Section 21084.2). It further states that the lead agency shall establish measures to avoid impacts that would alter the significant characteristics of a tribal cultural resource, when feasible (PRC Section 21084.3). PRC Section 21084.3 (b)(2) provides examples of mitigation measures that lead agencies may consider to avoid or minimize impacts to tribal cultural resources. PRC Section 21074 (a)(1)(A) and (B) defines

tribal cultural resources as “sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe” and meets either of the following criteria: a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

AB 52 also establishes a formal consultation process for California Native American tribes regarding those resources. The formal consultation process must be completed before a CEQA document can be released if a California Native American tribe traditionally and culturally affiliated with the geographic area of the proposed project requests consultation from the lead agency (PRC Section 21080.3.1). California Native American tribes to be included in the process are those that have requested notice of any proposed projects within the jurisdiction of the lead agency.

On August 23, 2017, the Dumna Wo Wah Tribal Government requested formal notice and information on proposed projects implemented in the Grassland Watershed under Public Resources Code section 21080.3.1. A description of this project was mailed to the tribal government on March 22, 2019, in advance of completion of Section 2.17 (Tribal Cultural Resources) of the Initial Study. Section 2.17 reports that the Authority has contacted the Amah Mutsun Tribal Band, the Dumna Wo Wah Tribal Government, the North Valley Yokuts Tribe, and the Southern Sierra Miwuk Nation and provided each tribal entity with a project description and a request for consultation. No responses were received, and no further consultation is required. Therefore, the Proposed Project is assumed to have no impact on tribal resources.

3.3.4 Energy Resources

3.3.4.1 Final EIS/EIR (2009)

The Proposed Action would increase energy consumption within the Project Area due to construction and operation of the San Joaquin River Water Quality Improvement Project (SJRIP). The power requirements associated with this facility would incrementally add to electricity consumption within the Project Area. Section 2.10.2.2 indicates that beginning in 2006, average annual power consumption within the GDA would be increased to approximately 21,735,630 kWh, resulting in a total power consumption for the entire GDA of approximately 23,415,880 kWh per year. The increase in power consumption is associated primarily with the implementation of the Phase III treatment facility which was estimated to consume 21,400,000 kWh, or 98 percent of the energy consumption at the SJRIP.

Some additional power would be consumed during the construction period for the treatment facility, although this amount would be small when compared to the power needs associated with facility operation. Additional power consumption would incrementally add to requirements for electricity usage within the Project Area, but would not be expected to exert a significant strain on electrical power supplies in the region. No significant adverse impacts are anticipated, and no mitigation is required.

3.3.4.2 Initial Study (2019)

The Proposed Project allows for deferral of the 2009 project’s Phase III treatment facility which was the major power consumption component of the 2009 project. Section 2.6 reports that modifications to the previously analyzed project in 2009 are proposed to include a number of components that would utilize electrical energy for operation. These components include:

- Up to four new pump stations to convey drain water throughout the SJRIP. These pump stations will improve operational flexibility throughout the SJRIP and increase the reuse capacity of the Project.
- Up to two new pump stations to divert storm-induced flows into the proposed short-term storage basins and an additional two new pump stations to convey water from those basins onto the SJRIP for reuse.
- SCADA transmitters and receivers for remote operation of existing tile sumps.
- Up to four new tile pumps for proposed subsurface drainage systems on the SJRIP.

All of the new pump stations will be driven with premium-efficiency, inverter-duty electrical motors. Most of the pump stations will also include variable frequency drives so that pump flow rate can be adjusted to match flow demand. The estimated total annual power consumption for the Proposed Project electrical components is 280,000 kwh/year, which is approximately equivalent to the power consumption of 40 California households. The use of high efficiency motors is consistent with California's energy conservation goals.

There is no local plan for renewable energy or energy efficiency. The incremental change in energy use would not be expected to exert a significant strain on electrical power supplies in the region. The Proposed Project modifications would not result in a new significant impact to energy resources or in significant impacts to utilities and infrastructure substantially more severe than the activities identified and analyzed in the previous environmental document.

3.3.5 Greenhouse Gases

3.3.5.1 Final EIS/EIR (2009)

Naturally occurring greenhouse gas emissions (GHGs) include water vapor (H₂O), carbon dioxide (CO₂), methane (CH₄), nitrous oxide (NO₂), and ozone (O₃). Several classes of halogenated substances that contain fluorine, chlorine, or bromine are also GHGs, but they are, for the most part, solely a product of industrial activities. Chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs) are halocarbons that contain chlorine, while halocarbons that contain bromine are referred to as bromofluorocarbons (i.e., halons). In the amended CEQA Guidelines Section 15364.5, GHGs include, but are not limited to, carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. In California, due to stringent air pollution control rules and regulations, natural gas is the only fossil fuel used to fire steam turbine, gas turbine, or combined cycle power plants. The primary concern here is for emissions that would be generated from equipment use (carbon dioxide and nitrous oxide through the burning of fossil fuels) rather than the emissions associated with ongoing agricultural practices (methane and nitrous oxide) and industrial activities (nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride). As stated in Section 12.2.1 (p. 12-11) of the 2009 Final EIS/EIR, the GHG of most concern is CO₂, since it is generated in extremely large quantities by the burning of fossil fuels and can last in the atmosphere for two centuries. In California, CO₂ is the major component of power plant GHG emissions, about 99.995 percent.

3.3.5.2 Initial Study (2019)

The Proposed Project would involve limited use of construction equipment (excavator, backhoe, graders, scrapers, trencher, sheep's foot compactor, and water trucks) for the pipeline installations, crossing Russell Avenue, installation of subsurface drains in a portion of the reuse area, 3 new electric pump stations and 1 expanded pump station with electric controls, communications towers, levees to create short term storage basins; and to extend a ditch and line a canal (approximately 8 hours per day

for up to 22 days/month, up to 7 months, May through November), and the completed removal of sediments from the Drain. All construction vehicles will be Tier 4 compliant and these activities are short-term and temporary in an agricultural area for the conveyance and reuse area improvements including the new storage basins and in wetland habitat area for the sediment removal. The tile sump control in the GDA would use electric power but not substantially (i.e., on or off events during the rainy season, not continuous operation). (Section 2.8.)

This equipment use involves the combustion of fossil fuels, a direct impact on the production of CO₂ and CH₄ with an indirect effect on CO₂ from the manufacturing of cement and from power production (generation of electricity from fossil fuels rather than hydropower) during project construction. This agricultural/storm water management type of use would not substantially introduce new sources or worsen existing sources of GHG emissions over project operation, and a full quantification of emissions and evaluation of GHG impacts was not deemed necessary for this non-development type of project. Operation of the new tile sump control system using electric power would result in minimal increased indirect GHG emissions from power generation by PG&E that are neither substantial nor significant (compared to existing conditions) and are more than offset by reductions in direct emissions from truck use for manual operation of the tile sumps. The SJRIP uses 8 workers and 4 trucks at present, and the proposed expansion would not increase this number of workers and trucks.

A CalTrans emissions model was used to estimate the impacts to air quality and emissions of GHGs for all of the construction and operational components of the Proposed Project. This modeling used a conservative approach, assuming that all of the construction work for the canal lining, pump stations, pipelines, subsurface drainage systems and ½ of the Drain sediment removal would occur in the same year. This construction schedule is unlikely, however, it would estimate a worst-case air quality and GHG emissions impact. Table 3-1 below shows the results of the construction emissions modeling.

Table 3-2 GHG Emissions from Project Construction

| | NO x | ROG | PM10 | PM2.5 |
|--------------------------------|-------|------|------|-------|
| <i>Threshold (lb per day)*</i> | 54 | 54 | 82 | 54 |
| Storage Basins | 6.05 | 3.04 | 30 | 6.5 |
| Sediment Removal (per year) | 4.88 | .94 | 0.2 | 4.3 |
| Pump Station (4 total) | 1.85 | .68 | 5 | 1.1 |
| Pipelines (all) | 4.51 | 1.51 | 20 | 4.3 |
| Lined Canal | 5.29 | 1.4 | 6 | 1.5 |
| Subsurface Drainage system | 2.63 | 1.32 | 9.8 | 2.1 |
| Total Emissions (lb per day) | 25.21 | 8.89 | 71 | 19.9 |

*Thresholds per Bay Area Air Quality Management District

In the absence of Valley Air District thresholds, the Bay Area Air Quality Management District (BAAQMD) thresholds were used. Even with this conservative modeling approach, the estimated construction emissions (short term, peak emissions) are well below the thresholds of significance.

Operation of the Proposed Project will not contribute to GHG emissions compared to existing conditions. All of the proposed pump stations will include electrically powered motors, and all of the proposed land for the reuse area expansion is already farmed. Operational emissions are substantially less than construction emissions. Operations at the expanded reuse area would be the same as for existing conditions, since generally the change is in ownership rather than type of crop.

According to the Valley Air District (SJVAPCD), GHG emission from development projects, primarily occur through energy consumption and vehicle miles traveled (VMT). For development projects, BPS includes project design elements, land use decisions, and technologies that reduce GHG emissions. Project proponents can reduce GHG emissions from energy consumption through building designs that increase energy efficiency, water conservation, and the use of energy efficient appliances. For development projects, BPS also includes project design elements, land use decisions, and technologies that reduce GHG emissions during project operation over time. Project proponents can reduce GHG emissions from energy consumption through building designs that increase energy efficiency, water conservation, and the use of energy efficient appliances.

The Valley Air District's CEQA guidelines are for land use agencies and apply to stationary sources and development projects (SJVAPCD 2009). The Proposed Project herein is not a stationary source of emissions associated with land development. Rather, it is a project comprised of Improvements to primarily agricultural land for management of storm water. Emissions are associated primarily with the use of equipment during construction, and some of this equipment is used for ongoing agricultural operations in the GDA. Ongoing activity involves the planting of an expanded reuse area with Jose Tall Wheatgrass and the use of pump stations operated with electric power instead of diesel and with manual operation that would require a person to drive to each pump station in a truck or other vehicle (1 new worker and 1 round trip per day to the SJRIP). The existing reuse area requires 8 workers and 4 trucks who can also handle the expansion, i.e., no increase. Because the GHG emissions are lower than the thresholds established by the BAAQMD, it would not result in sufficient emissions to be more than a less-than-significant impact. It would not result in a more severe environmental impact, i.e., would not trigger a significant impact, than what was identified in 2009 for the Proposed Action.

To the extent that the Proposed Project can increase energy efficiency, water conservation, and the use of energy efficient appliances (i.e., equipment) by reducing equipment use that relies on fossil fuels and improving operational efficiencies (primarily through better remote tile sump control using electronic controls rather than persons driving trucks into the area for manual operation), it would contribute to meeting future GHG emission reduction targets.

3.4 MITIGATION MEASURES

The proposed mitigation measures to reduce potentially significant impacts from the Proposed Project are not substantially different from the measures employed for the 2009 Grassland Bypass Project. They are discussed in the preceding resource sections:

- Section 3.2.1.2 Surface Water Resources
- Section 3.2.2.2 Biological Resources

No other mitigation measures are required, because all other impacts are either less than significant or no impact. However, to the extent that the Proposed Project can increase energy efficiency, water conservation, and the use of energy efficient equipment by reducing equipment use that relies on fossil fuels and improving operational efficiencies (primarily through better remote tile sump control using electronic controls rather than persons driving trucks into the area for manual operation) and by deferring the need for a treatment plant at the SJRIP, it would contribute to meeting future GHG emission reduction targets in the region and the state.

3.5 ENVIRONMENTAL DETERMINATION

The analysis in this Addendum supplements the Initial Study findings and confirms that the Proposed Project would not result in any new significant impacts (adverse effects) nor in an increase in the severity of significant impacts previously identified in the Final EIS/EIR (Reclamation 2009b). Furthermore, the Proposed Project would not require the adoption of any new or substantially different mitigation measures (or project alternatives). While the current Proposed Project does propose changes to the SJRIP reuse area not previously considered in 2009, e.g. the new storage basins for 1,000 AF of temporary storm water containment and the SCADA system for tile sump control, these changes are considered to be minor technical changes given their size and the effectiveness of biological mitigation measures used since 2006. Additional surveys for cultural resources and construction monitoring are standard requirements for new construction.

P A R T 4

References

4.1 REPORTS

- AECOM. 2019. Cultural Resources Technical Report. Confidential. May.
- Bureau of Reclamation. 2009a. Agreement for Use of the San Luis Drain for the Period January 1, 2010 through December 31, 2019. Agreement No. 10-WC-20-3975 Bureau of Reclamation and the San Luis & Delta-Mendota Water Authority. December 31.
- Bureau of Reclamation. 2009b. Final EIS/EIR for Continuation of the Grassland Bypass Project, 2010 – 2019. SCH #2007121110. August.
- Bureau of Reclamation. 2001. Agreement for Use of the San Luis Drain for the Period October 1, 2001 through December 31, 2009. Agreement No. 01-WC-20-2075. Bureau of Reclamation and the San Luis & Delta-Mendota Water Authority. September 28.
- California Resources Agency. 2018. California Code of Regulations, Title 14, Division 6. Chapter 3: Guidelines for the Implementation of the California Environmental Quality Act, Article 11. Types of EIRS. Sections 15162 and 15164. Reproduced by the Association of Environmental Professionals. January.
- Central Valley Regional Water Quality Control Board (Regional Board). 2016. Water Quality Control Plan (Basin Plan) for the Sacramento River and San Joaquin River Basins. Fourth Edition, Revised July 2016 (with Approved Amendments).
- Grassland Area Farmers and San Luis and Delta-Mendota Water Authority (GAF and Authority). 1998. Long-Term Drainage Management Plan for the Grassland Drainage Area. September 30.
- H.T. Harvey & Associates. 2006. San Joaquin River Water Quality Improvement Project, Phase I Wildlife Monitoring Report, 2005. Prepared for Panoche Drainage District, Firebaugh, CA. June 5.
- San Joaquin River Exchange Contractors Water Authority, Broadview Water District, Panoche Water District, and Westlands Water District. 2003. Westside Regional Drainage Plan. May.
- San Luis & Delta-Mendota Water Authority (SLDMWA). 2019. CEQA Initial Study for the Long-Term Storm Water Management Plan for the Grassland Drainage Area. Prepared for the Grassland Basin Drainers, Los Banos, California. Prepared by Summers Engineering, Inc. July 2019.
- URS Corporation (URS). 2001. Final Grassland Bypass Project EIS/EIR. Prepared for Bureau of Reclamation, Sacramento and Fresno, CA, and San Luis & Delta-Mendota Water Authority, Los Banos, CA. May 21.
- United States Environmental Protection Agency (USEPA). 2008b. Environmental justice homepage. Available at <http://www.epa.gov/compliance/basics/ejbackground.html>. Cited in Reclamation 2009b.

U.S. Fish and Wildlife Service (USFWS). 2009. Final Biological Opinion, 2010-2019 Use Agreement for the Grassland Bypass Project, Merced and Fresno Counties, California. File No. 81420-2009-F-1036. Sacramento, CA. December 18.

4.2 PERSONAL COMMUNICATION

Dumna Wo Wah Tribal Government. 2017. Letter from Robert Ledget, Tribal Chairman, to Panoche Water District. Request for formal notification of proposed projects within the Dumna Wo Wah Tribal Government Tribe's geographic area of traditional and cultural affiliation under CEQA, Public Resources Code Section 21080.3.1, subd. (b). August 23.

Appendix A – Public Comments & Responses

Public Comments and Responses

INTRODUCTION

This document provides the public comments received on the *Grassland Bypass Project Long-Term Storm Water Management Plan, 2020-2045, an Addendum to the Final Environmental Impact Statement/Environmental Impact Report (Final EIS/EIR) for the Grassland Bypass Project, 2010-2019* and responses to those comments by the CEQA lead agency, the San Luis and Delta-Mendota Water Authority (Authority). Although a formal public review process is not required for an addendum, the Authority conducted a 30-day public review period from August 14 to September 13, 2019. A Notice of Availability was mailed electronically to 65 agencies, organizations, and interested parties who previously expressed interest in the 2009 Grassland Bypass Project and/or participated in a public information meeting on June 18, 2019 in Sacramento, California and was distributed on the Regional Board Lyrus list. The Addendum was not sent to the State Clearinghouse (SCH) because no formal review (i.e., distribution by the SCH to all state responsible and trustee agencies) was required. Written comments were received from 10 agencies, organizations, and individuals during the review period. This Appendix A together with the revised text comprise the *Final Addendum to the Final EIS/EIR for the Grassland Bypass Project, 2010-2019*, State Clearinghouse No. 2007121110.

Based upon material contained in the responses to comments, recirculation of the Addendum is not required under the CEQA Guidelines Section 15088.5 which addresses the process for an EIR that has not been certified. The intent here is to provide Authority decision-makers and regulatory agencies with further information on how concerns raised by the public have been addressed in a coherent and comprehensive manner. This Appendix A, Public Comments and Responses, contains the following information:

Text Revisions. In responding to comments, changes were made to the text of the Addendum. The revisions do not change any of the conclusions reached.

Key Topics in the Comment Letters (Key Comments). Key topics are those that were identified in one or more letters and pose questions or opinions on project operations, environmental impacts, project alternatives, and/or the type of CEQA document appropriate for the Proposed Project for 2020-2045. These topics are listed in a table showing the source (comment letter) of the key comment.

Master Responses to the Key Comments. The same issue or question was raised by multiple commenters or a single comment was raised of particular importance. Responses to these comments that were determined to be most instructive to decision-makers prior to making findings on the Addendum and approving the Proposed Project are provided independently from the letters. A list of the master responses is provided first, followed by the text of the responses. These responses help to clarify project information and technical analyses. They provide a comprehensive response to many of the comments received rather than an argumentative, statement by statement discourse to each letter.

Comment Letters. All letters and written comments on the Addendum received from 10 agencies, organizations, and interested individuals during the review period are listed in the following Table of Contents and in Section A2. They are provided in their entirety following the Master Responses.

All comments are important to not only the environmental assessment process but also future decision-making by the agencies with authority to implement the Long-Term Storm Water Management Plan and to responsible agencies involved in future permitting and oversight. The brevity of the response does not suggest that the comment topic is less important than one that warrants a lengthy explanation.

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A1. TEXT REVISIONS

The proposed selenium water quality goal of 3 ppb, 4-day average at Site D will be eliminated from the LTSWMP in favor of the existing adaptive management approach. Therefore, the following text from the Addendum is eliminated (p. 3-4):

The Se WQO would be met during most of the year, with only occasional exceedances of the 5 ppb 4-day average that would be short in duration, a less-than-significant impact as explained above. Refinements to the existing mitigation measures to further reduce the less-than-significant impacts from the expected periodic exceedances will be implemented for the Proposed Project, as follows:

- ~~Establish a Mud Slough (North) water quality goal of 3 ppb Se, 4-day average. For every 3 months that meet this 3 ppb performance goal, 1 exceedance of 5 ppb 4-day average is allowed.~~
- If the 5-ppb 4-day average not met with proposed management practices (shut off electric sumps), analyze operational data and develop adaptive management approach to implement additional corrective actions.

The following wording was added to the Addendum at page 3-4 and will be included in proposed Waste Discharge Requirements to provide selenium load targets to the discharge from the San Luis Drain into Mud Slough (North):

The Long-Term Storm Water Management Plan includes selenium load targets for discharges to Mud Slough (North) and the San Joaquin River. Table 3-1 shows the Total Maximum Monthly Load (TMML) selenium load allocation as adopted in 2001 in the Basin Plan amendment for Selenium in the San Joaquin River along with proposed selenium load targets. The targets represent an approximately 75% reduction in selenium loading from the TMML Annual Load Allocations. A multi-year performance target requiring that the selenium load over a 3-year period at Site B be less than the sum of the 3-year target, based on water year type, would be used to determine if the load targets are being met. If the performance target is exceeded, the Dischargers will propose additional management practices to reduce the selenium loading to meet the performance goal. The selenium water quality objective will continue to be used to determine compliance with the Basin Plan.

Table 3-1. Selenium Annual Load Allocations for the Grassland Drainage Area¹
(pounds of selenium)

| Selenium Load | Critical (Discharge Limit) | Dry/Below Normal (Discharge Limit) | Above Normal (Discharge Limit) | Wet (Discharge Limit) |
|-----------------------------|----------------------------|------------------------------------|--------------------------------|-----------------------|
| TMML Annual Load Allocation | 1075 | 2496 | 4162 | 4480 |
| Annual Load Target | 300 | 600 | 900 | 1200 |
| Percent Reduction | 72% | 76% | 78% | 73% |

A2. KEY COMMENTS

Key comments cover topics that were identified in one or more letters and pose questions or opinions on project operations, environmental impacts, project alternatives, and/or the type of CEQA document appropriate for the Proposed Project for 2020-2045. They include the following:

- Project Operations
 - A. Storm Event and Agriculture Drainage
 - B. Monitoring Program
 - C. Short-Term Storage Basin Operation
 - D. SJRIP Expansion/Drainage Management
 - E. Need Use Agreement
- Biological Impacts
 - F. Wildlife Entrapment, Movement, and Health
 - G. Swainson's Hawk
- Hydrology Impacts
 - H. Se-Salt Load limits/Adaptive Management
 - I. Remove 3 ppb Se Mitigation
 - J. 5 ppb Se Objective Not Protective
 - K. Salt Discharge Increase Since 2014
 - L. Detailed Mud Slough Modeling

¹ The TMML annual load allocations in Table 3-1 are based on the sum of the monthly load allocation based on the water year calculation needed to meet the selenium water quality objectives at the San Joaquin River at Crows Landing.

- M. NPDES Permit and Clean Water Act
- CEQA Compliance
 - N. Need for New EIR/EIS
 - O. Cumulative Effects Analysis
 - P. Land Retirement Alternative

These topics are listed in Table 1. Correspondence of Comments to Key Issues, showing the source (comment letter) of the key comment and topics covered by the subsequent master responses. The comment letters were received from the following interested parties:

Federal

U. S. Fish and Wildlife Service (USFWS), San Luis National Wildlife Refuge, Kim Forrest, Refuge Manager

State

California Department of Fish and Wildlife (CDFW), Ms. Julie A. Vance, Regional Director,

Central Valley Regional Water Quality Control Board (CVRWQCB or Regional Board), Ashley Peters, P.E., Water Resource Control Engineer

Public Agencies

Contra Costa County (CCCo),

Contra Costa Water District (CCWD), Ms. Leah Orloff, Water Resources Manager

Grassland Water District (GWD), Ricardo Ortega, General Manager

Organizations

Coalition of 10 Organizations (PCL Coalition): Planning and Conservation League (PCL), Pacific Coast Fishermen's Association, Center for Biological Diversity, Restore the Delta, California Water Impact Network, Environmental Justice Coalition for Water, Southern California Watershed Alliance, Save California Salmon, California Sportfishing Protection Alliance, AquAlliance

Law Offices of Stephan C. Volker (Law Offices), representing Pacific Coast Federation of Fishermen, California Sportfishing Protection Alliance, Friends of the River, San Francisco Crab Boat Owners Association, Inc., Institute for Fisheries Resources, and Felix Smith

The Bay Institute (TBI), Mr. Gary Bobker, Program Director

Individuals

Patricia Schifferle (PS)

Table 1. Correspondence of Comments to Key Issues

| | USFWS | CDFW | CVRWQCB | CCCo | CCWD | GWD | PCL et al | Law Offices | TBI | PS |
|---------------------------|-------|------|---------|------|------|-----|--------------|----------------|-----|----|
| Project Operations | | | | | | | | | | |
| A – Storm/ag Discharge | | | | | X | | X | X | X | |
| B - Monitoring | | | | X | X | | X | | | |
| C – Basins | | | | | X | X | X | X | | X |
| D – Drainage Management | | | | X | | | X | X | | |
| E – New UA | | | | X | X | | | | | |
| Biological Impacts | | | | | | | | | | |
| F – Wildlife | X | X | | | | | | | | |
| G – Swainson’s Hawk | | X | | | | | | | | |
| Hydrology Impacts | | | | | | | | | | |
| H – Load Limits | | | | X | X | | | X | X | X |
| I – 3ppb Goal | | | X | | | | | | | |
| J – Se WQO | | | | | | | X | | | |
| K – Salt Discharge | | | | X | X | | | | | |
| L – Mud Sl. Modeling | | | | X | X | | | | | |
| M – NPDES Permit | | | | | | | X | X | | X |
| CEQA Compliance | | | | | | | | | | |
| N – EIS/EIR Need | | | | | | | X | X | | X |
| O – Cumulative Effects | | | | | | | X | | | X |
| P – Land Retirement | | | | | | | X | | | |

A3. MASTER RESPONSES

The master responses follow the list of key comments in Section A2. To see the details of each comment, refer to the letters provided in Section A3 in the order listed above in Section A2.

RESPONSE A. STORM EVENT AND AGRICULTURE DRAINAGE

The Grassland Bypass Project, implemented beginning in 1997, has successfully reduced to zero the discharge of agriculturally produced, subsurface drain water from the Grassland Drainage Area (GDA) during the irrigation season. Overall discharges from the GDA into the San Luis Drain have been reduced from 37,800 acre feet (AF) at the start of the Grassland Bypass Project (measured at Site A) to less than 3,800 acre feet in 2018 – a 90% reduction in discharge. Selenium, salt, and boron loads have all been reduced by similar ratios, and discharges from the GDA after 2014 have been comprised entirely of storm-induced drainage flows. Selenium concentrations in Mud Slough at Site D have been reduced from monthly averages above 20 ppb in the late 1990s to less than 3 ppb by 2018. Monthly average selenium concentration in the San Joaquin River at Crows Landing (Site N) have not exceeded 2 ppb since 2009, and they are now frequently below detection limits. Weekly selenium samples from the San Joaquin River at China Island (Site R) – within the only segment of the San Joaquin River still listed on the 303d

list for Selenium – have never exceeded the 5 ppb water quality objective in the entire six year record of sampling at that site. And 115 of the 219 samples (November 2013 to July 2019) collected at Site R have resulted in no detection of selenium. All of these water quality improvements are a direct result of the implementation of the Grassland Bypass Project since 1997.

The current Proposed Project does not continue to discharge agricultural drain water during the irrigation season. Furthermore, the new SCADA system will allow for the shut off of 100% of the surface drains during storm events and will keep much of this type of storm-induced drainage out of the San Luis Drain. A critical goal of the Long-Term Storm Water Management Plan (LTSWMP) is to meet the future selenium water quality objective in Mud Slough (North), and the project modifications proposed in the Addendum are intended to meet that objective.

It is important to understand the type of water being managed under the Long-Term Storm Water Management Plan. As explained in the Addendum, the water managed by this Plan is storm-induced drainage and is not a result of agricultural irrigation, and will occur regardless of any activities engaged within the GDA. Because these events occur outside of the irrigation season, there are very few tools available to reuse or otherwise divert this drainage. The storm-induced drain water can either be held back, resulting in a number of negative environmental affects, or discharged in a controlled fashion. This condition is very different from the “High Rainfall Exemption” of the previous Use Agreement, which is not an appropriate guidance criteria to meet the objectives of the LTSWMP.

The Addendum includes six objectives for the LTSWMP:

1. To eliminate, to the extent feasible, storm water drainage discharged from the GDA into wetland water supply conveyance channels.
2. To facilitate storm water management that maintains the viability of agriculture in the Project Area and protects water quality in the San Joaquin River.
3. To keep storm water drainage from breaking into irrigation and wetland water supply channels and causing damage.
4. To avoid ponding of storm water that could impact the integrity of water supply channels and impact soil and water quality.
5. To avoid unplanned/inadvertent/unmanaged ponded water containing selenium (Se) that could impact birds within the GDA as well as downstream habitat and water quality in the wetland areas and wildlife refuges.
6. To provide an outlet for storm water to flow to the San Joaquin River from the GDA (similar to what occurred historically and before the Use Agreement for use of the SLD), that also protects the integrity and quality of wetlands and wildlife refuges.

These objectives will be the guiding principles for the management of storm-induced drain water. Discharges from the Grassland Drainage Area will occur when storm runoff have accumulated in the regional drains beyond their capacity to contain them. At this point, the risk of unmanageable ponding and flooding, as well as the risk to canal levees due to oversaturation,

becomes substantial; and discharge to the San Luis Drain is necessary. As indicated in the Addendum, all tile sumps would be shut off prior to storm events and would remain off for the duration of discharge. The chaotic and unpredictable nature of rainfall events, as well as the large number of other variables that affect storm runoff, prevent the establishment of a hard “trigger”, such as accumulated precipitation, that would cause discharge.

In their comments on the Addendum to the 2009 Final EIR for the Grassland Bypass Project, the PCL Coalition asserts that cessation of agricultural activities and fallowing of the nearly 100,000-acre GDA will stop the flow of storm water and the associated contaminants. Their comment letter misconstrues existing conditions and fails to recognize that the Project modifications addressed by the Addendum result entirely from the facts that (1) storm events generate rain-induced flows, which include mineralized discharges and (2) water flows downhill. These two conditions are physical realities that can neither be caused nor prevented by any action implemented by the Grassland Area Farmers. The Project modifications presented in the Addendum describe the tools available to help manage these inevitable discharges, which if left unmanaged, would pond up against natural barriers (like the Outside Canal levees), cause widespread flooding of mineralized water during the peak periods of migratory bird nesting, and then concentrate as the ponded water evaporates.

RESPONSE B. MONITORING PROGRAM

The comment is that the Addendum must describe in detail a Monitoring Plan to monitor key selenium, salinity, boron concentrations and flow discharges into the Bypass and at downstream locations.

The Authority agrees that an aggressive and thorough monitoring program, similar to what is currently in place, is necessary for the successful operation of the Long-Term Storm Water Management Plan; and this type of document is not an appropriate part of the Addendum. A number of state and federal agencies (including the Regional Water Quality Control Board and the U.S. Bureau of Reclamation) will issue permits and requirements for monitoring the Project, and these documents have not yet been developed. In particular, the Waste Discharge Requirements issued by the Regional Water Quality Control Board, will include robust monitoring requirements and be available for public review prior to adoption. However, it is not part of the CEQA process.

In short, the PCL Coalition commented that proposed and existing Monitoring and Reporting Program for the GBP are not sufficient to address environmental impacts and protect beneficial uses. This comment contains substantial errors related to the level of monitoring occurring downstream of the Grassland Bypass Project. The comment states “Station A, B, C, I2, F, J, K, L/L2, M/M2, G and H have all been eliminated from required monitoring”. No, the current Monitoring Program effectively monitors all of the discharges from the Grassland Bypass project. The proposed Addendum does not plan to substantially alter the robust Monitoring Program from its current form (explained below). Final monitoring protocols will be established by the Regional Board.

Station A – Inlet to the San Luis Drain includes real-time monitoring for flow and EC and is sampled for selenium and boron. Although this data is not required as part of Order R5-2015-0094, the data is collected and is publicly available.

Station B – Discharge from the San Luis Drain to Mud Slough (North) has been continuously monitored and reported to the Regional Board since the project began in 1997. Because the location of flow measurement is downstream of the water quality sample collection point, the site was divided into Station B2 for flow and B3 for water quality in the 2015 Order, however they remain the same sampling locations.

Station C – Mud Slough (North) upstream of the San Luis Drain. This site continues to be monitored for EC, boron and selenium and this data is publicly available on the CEDEN website.

Station I2 – A backwater site on Mud Slough (North). This site has never been part of the Regional Board’s monitoring order and was voluntarily monitored by the Grassland Basin Drainers through 2015. This site did not provide useful information compared to other sites already monitored and was eliminated for that reason.

Station F – Salt Slough at Lander Avenue continues to be monitored for EC, boron, and selenium and this data is publicly available on the CEDEN website.

Stations J and K – The headworks of the Camp 13 Ditch and Agatha Canal. These two canals are water supply channels for the Grassland Water District. The gates that connect drainage channels to these canals are sealed except for during extreme storm events, at which point they may be opened. Under these circumstances, which have not happened since 2005, comprehensive monitoring would occur at Stations J and K, and this monitoring requirement is included in the 2015 order. Outside of these extreme conditions, no discharge from the GDA into either the Camp 13 Ditch or the Agatha Canal would occur, and there is no reason for the Grassland Area Farmers to take responsibility for monitoring of those sites.

Stations L/L2 and M/M2 – The Santa Fe and San Luis Canals. These are monitored weekly for selenium, boron, and EC and the associated data is available on the CEDEN website. Additional monitoring would be implemented by the Grassland Area Farmers under extreme storm conditions if discharges to the Camp 13 or the Agatha canals occurred.

Station G – The San Joaquin River at Fremont Ford. This site is upstream of the Mud Slough discharge to the San Joaquin River and historic data has demonstrated that the discharges from Mud Slough have no impact on this segment of the San Joaquin River and there is no reason to include it in the monitoring program.

Station H – The San Joaquin River at Hills Ferry Road. This site was abandoned and replaced by Site R in 2013 for two primary reasons: 1) The site was located too close to the Merced River and the interaction between Merced River flows with the San Joaquin River at this location during high flow periods is poorly understood and 2) because site access became a problem, preventing regular access for sample collection.

Station R – The San Joaquin River at the China Island Unit. This site is a replacement for Station H and is located approximately 1.4 river miles (0.9 linear miles) upstream of Station H. It is located approximately 1.5 miles downstream from Mud Slough (North) discharge to the San Joaquin River. Sampling at this site began in 2013.

RESPONSE C. REGULATING RESERVOIRS OPERATION

Biological Impacts

CDFW recommends that the Authority conduct water analyses for selenium concentration for the short-term storage basins to determine the potential impact to wildlife. While the Authority plans to implement a water quality monitoring program for the proposed reservoirs whenever there is water present within them, the proposed location and operating criteria are such that the selenium concentration within the ponds is somewhat predictable. Continuation of ongoing mitigation and monitoring measures with enhancements (design measures) will reduce adverse impacts to less than significant levels. These measures include:

- Levee design to discourage nesting. This will include steep levee slope kept clean and denuded similar to existing practices for drains.
- Aggressive bird hazing efforts during nesting season, as currently conducted, when water is present within the ponds.
- Reservoir cell designed to facilitate hazing and cleaning efforts.
- Annual nest monitoring and reporting.

These measures are based on the last 13 years of successful habitat modification and hazing efforts implemented on the San Joaquin River Improvement Project to discourage waterbird nesting as documented in monitoring reports prepared by HT Harvey since 2006. These monitoring efforts demonstrate that an aggressive and planned hazing program at the reuse area involving observation by trained employees, directed maintenance efforts and targeted noise-making devices have minimized nesting activity by waterbirds within the reuse area. Therefore, similar results are expected with the new regulating reservoirs.

The Authority received a comment letter from the Grassland Water District. This letter included the following statement concerning the wetland habitats and regulating reservoirs.

“We believe the Project is essential to the continued protection of wildlife and wildlife habitat in the Grassland Ecological Area, the importance of which is recognized under international treaties and federal law. Continued use of the San Luis Drain is essential to manage and convey stormwater flows around these wetland habitats, and to prevent the ponding of stormwater on agricultural lands near the Grassland Ecological Area, which may cause an unwanted wildlife attraction. The implementation of short-term regulating basins will add needed flexibility to manage and prevent the introduction of flows into GWD’s wetland water conveyance system. We appreciate the design considerations and proposed management of these basins that will prevent wildlife attraction and use.”
(Grassland Water District 2019, included in Section A3.)

The PCL Coalition is concerned that the short-term storage basins could affect waterbirds similar to the historical Kesterson Reservoir back in 1982. There are many important differences between the SJRIP expansion and the GBP LTSWMP Project and what happened at Kesterson National Wildlife Area. The Kesterson National Wildlife Area was a mosaic of open water, freshwater marsh, seasonal wetland and upland habitats designed to attract birds. The SJRIP is actively and intensely farmed, and its interior roads and water conveyances are kept clean of vegetation. Water is not allowed to pond on the reuse area. Though over time, several avian

species have been observed on the existing reuse area, the observed densities of birds counted in censuses that have been part of the SJRIP monitoring program since 2003 have been less than one bird per project acre. For the short-term storage basins, see the above discussion of continuation of ongoing mitigation and monitoring measures with enhancements (design measures).

Concerning Mr. Stephen C. Volker's assertion that hazing displaces wildlife and would be ineffective, the following clarification is provided. The planned design measures to reduce the attractiveness of the short-term storage basins are indeed similar to those successfully utilized by the 2009 project in reducing the attractiveness of previously existing water conveyances within the project to birds. These measures include steep sided banks kept clean of vegetation, clean and level bottoms, and water management directed to minimize the presence of shallow water where shorebirds like to forage. While it will be easier to incorporate these design elements when starting from scratch, it is not accurate to say that it cannot be achieved at the previously existing storage ponds. Improvements have already been made at these ponds, and will continue, one pond cell at a time, until the design elements are in place.

The Authority disagrees that hazing birds in the context of our Project would result in new "significant impacts." Black-necked stilts and American avocets, the two principal species being hazed, are very mobile species accustomed to adjusting both foraging and nesting locales to find the most suitable conditions for both. Suitable foraging and nesting habitats are present near the Project in rice fields and the seasonal wetlands in the south grasslands area. Hazing discourages birds from both nesting and foraging where they could be exposed to project related selenium. The daily hazing of birds from the short-term storage ponds during the regular workweek when water is present will be sufficient to prevent long-term exposure and nesting.

The combination of hazing and measures to reduce habitat attractiveness to birds described above has reduced stilt and avocet nesting there to 2 nest attempts or fewer on an annual basis since 2009.

Substantial evidence to support the conclusion in the Addendum that there are no new potentially significant impacts to wildlife and their habitats that would require substantially new mitigation measures, just minor refinements. Management of the SJRIP adjacent to important wetland habitats since 2001 has demonstrated that the expanded Project will not be an attractive nuisance or disturbance to wildlife and, therefore, is unlikely to adversely affect waterfowl and other wildlife using these nearby habitats.

Hydrology Impacts

Contra Costa Water District stated that the "Draft Addendum and Initial Study should also include details of comprehensive monitoring plans as well as monitoring details for the new regulating reservoirs and the expanded reuse area if any." The monitoring plan details will be incorporated into the new use agreement with USBR and also into the WDRs for the Regional Board. See Response B. Substantial changes to existing monitoring plan are not expected for the discharges, but monitoring of the new regulating reservoirs and expanded reuse area will be incorporated into the ongoing water quality and biological monitoring programs. Also see Response D below for the reuse area.

Mr. Volker is concerned that "...the impounded wastewater will simply create additional saturated soils, ponds of contaminated water, and polluted run-off, all of which will continue to enter the Drain through seepage, and ultimately discharge into Mud Slough." This comment demonstrates a misunderstanding of the physical processes proposed in this Addendum. The stated intention of the proposed short-term storm water basins is to reduce the discharge of storm-induced runoff by diverting a large portion of these flows into the basins, where it will be reused on the SJRIP as soon as reuse capacity becomes available. This drainage management tool will reduce the volume of discharge from the GDA into the SLD by up to 1000 acre feet per year. Since no basin is fully water-tight, there will be some seepage from the basins into adjacent unlined drains. However, the proper design and construction of the basins, combined with the natural heavy clay soils of the site and region (of which the basin levees will be constructed), will reduce this seepage to small, likely insignificant, volumes. Any seepage that could occur would mingle with water already in the regional drains (from rainfall) and at the same water quality (since that seepage is already a source of water within the drains). During storm events, when discharge from the GDA is occurring, this drain water would be discharged to the San Luis Drain along with other storm-induced drainage. However, outside of those storm events, any seepage into the regional drains would be reused on the SJRIP. A common-sense review indicates that the volume of water captured by the basins will far exceed the small amount that would seep out. Furthermore, the SJRIP includes a comprehensive internal monitoring program that covers shallow groundwater quality.

RESPONSE D. SJRIP EXPANSION/DRAINAGE MANAGEMENT

Concerns with drain water reuse at the expanded facility are explained primarily in the Contra Costa County and PCL Coalition comment letters, and issues with size and wildlife management are raised also in the Stephen C. Volker letter.

The flooding contingency plan² has been implemented since its inception in 2006, and there has not been an instance where the contingency plan has had to be utilized. The Panoche Drainage District has been aggressively proactive in preventing such events from occurring. The flooded field conditions that occurred in 2003, and prompted the development of the flooded field contingency plan in 2006, have not happened again in the 16 years since that event. Improved field management (including land leveling), staff training and additional water management infrastructure, as well as aggressive monitoring, have prevented the flooded conditions from occurring since the 2003 event. Annual biological monitoring has shown that these efforts, combined with the hazing program, have effectively reduced impacts to wildlife to less than significant levels. It is of note that the cessation of discharge demanded by Mr. Volker would, by physical necessity, create these very flooded conditions that the Proposed Project is designed to prevent.

As described above in Response C, the design of the new short-term basins include elements that will discourage both feeding in and nesting at the basins. Efforts to implement these design elements at the existing short-term basin have begun. The Authority disagrees that the water temporarily stored in the short-term basins, which are devoid of vegetation and have steep-sided slopes to reduce shallow water foraging areas for waterbirds and where bird hazing will occur

² This plan is presented in the *San Joaquin River Water Quality Improvement Project, Phase I Wildlife Monitoring Report*, 2005 (H.T. Harvey & Associates 2006). The plan includes provisions for immediate removal of unintended drain water as well as for increased monitoring near flooded sites.

when birds congregate there, will substantially increase bird use in the reuse area. In contrast, birds will be attracted to the nearby wetland habitat managed by the Grassland Water District for their benefit.

The Project exists in an area of above normal selenium exposure due to selenium rich soils, and that baseline exists without the operation of the SJRIP. As part of the SJRIP monitoring program, the Authority's biologists analyzed selenium content of eggs collected in the vicinity of the project, but more than a mile from the SJRIP as reference samples. The 149 black-necked stilt and American avocet reference eggs collected from 2003 to 2013 ranged from 1.7 to 44 ppm selenium (dry weight), and the geometric mean was 10.2 ppm selenium. Approximately a third of the reference eggs collected had selenium concentrations exceeding 15 ppm.

It is not surprising, therefore, that some of the stilt and avocet eggs collected from the mitigation sites the project has provided contained elevated levels of selenium. Stilt and avocets feeding in the surrounding areas likely move to the compensation habitats immediately prior to laying eggs. It does not follow, however, that the mitigation sites are not providing a compensation benefit for the SJRIP. Active management of the SJRIP has reduced stilt and avocet nesting there to 2 nest attempts or fewer on an annual basis since 2009. The compensation areas have provided attractive nesting habitats above what is normally available within rice fields where low-selenium irrigation water is provided to dilute the selenium exposure many shorebirds are exposed to in the vicinity. Table 9 in the Biological Resources Report for the Initial Study (Appendix B) supporting the Draft Addendum demonstrates that the compensation areas provided by the Grassland Bypass Project since 2009 have had more stilt and avocet nest attempts than have occurred on the SJRIP, and that many of those nests have successfully hatched young.

Mr. Volker asserts that significant new and increased impacts would occur on the surrounding environment from the reuse area expansion of 650 acres. The additional 650 acres of drainage reuse area proposed here represent a 9% increase over the 6,900 acres of reuse area permitted in the 2009 Final EIS/EIR. The crops grown and water management will be identical to the existing project. The potential impacts to wildlife from the proposed modest increase in project size are identical to the potential impacts the project has been successful at ameliorating. The proposed infrastructure additions to the project also have similar potential impacts as the existing project and the Project description describes how those potential impacts will be reduced to less-than-significant levels. The results of the biological and water quality monitoring noted in the Response C above, clearly show no significant impact and demonstrate that the hazing and mitigation measures implemented on the SJRIP are effective and sufficient to reduce impacts to less than significant.

The Proposed Project modifications described in the Addendum do not propose any changes to the concept of drainage treatment. Although it is accurate to state that the Authority has not yet found a viable treatment method to effectively treat subsurface drain water, this fact is not relevant to the management of storm water described in the Addendum. Even a fully functional treatment system would have no impact on the discharge of storm-induced drain water. Drainage treatment is not a relevant topic for the Long-Term Storm Water Management Plan, and a discussion of it is not needed in this Addendum. The U.S. Bureau of Reclamation and others (e.g., Reticle, Inc., UCLA) continue to evaluate treatment systems such as reverse osmosis

and electrostatic deionization. The option for treatment remains for future consideration and additional CEQA analysis as appropriate.

RESPONSE E. USE AGREEMENT NEEDED

Contra Costa County stated that the Addendum must include a copy of the proposed Use Agreement under which the Grassland Bypass would be operated after December 31, 2019 when the existing Use Agreement expires. The new Use Agreement is a separate document from the EIS/EIR Addendum and is still in development. This document will include many of the requirements and obligations of the previous Grassland Bypass Projects, and it will be available for public review prior to adoption by Reclamation and the Authority. However, it is not part of the current CEQA process.

RESPONSE F. WILDLIFE ENTRAPMENT, MOVEMENT, AND HEALTH

CDFW commented that the proposed concrete lined ditch, RP-1, should be designed to prevent wildlife entrapment and not impact wildlife movement.

The RP-1 ditch is surrounded on all sides by intensely manipulated farm habitats, thus wildlife densities in the Project Area are significantly lower than what occurs in natural habitats such as along the San Luis Drain north of Henry Miller Road where deer entrapment has been an issue. The purpose of the proposed concrete lining is to support hazing efforts and discourage nesting in waterways containing elevated levels of selenium. The RP-1 lined ditch will be located between the Delta-Mendota and Outside canals, which represent existing barriers, but RP-1 includes frequent road crossings unlike the two existing canals. The installation of RP-1 will, therefore, not have a significant effect on movement of wildlife in the project area.

CDFW commented that the San Luis Drain (Drain) is a significant part of the Proposed Project and that deer entrapment in the Drain is a serious issue that is not addressed by the Initial Study or the Addendum.

The San Luis Drain is owned and operated by the U.S. Bureau of Reclamation (USBR) who is responsible for making physical improvements to keep deer out. The Proposed Project amendment affects the quantity, and to a lesser extent, the quality of water discharged from the Grassland Drainage Area into the Drain. The Proposed Project, as described, has no physical impact on the San Luis Drain, beyond the introduction of sediment, or its surroundings. The San Luis Drain itself, is an existing part of the landscape, and the risk of deer entrapment exists at the same level regardless of the implementation of the Proposed Project. The risk to deer would exist even if discharges from the Grassland Drainage Area ceased entirely, and it is in the process of being addressed through the federal project under the USBR.

Concerning the issue that wildlife could be exposed to elevated levels of selenium in the regulating basins, see Response C above which concludes that management of the SJRIP adjacent to important wetland habitats since 2001 has demonstrated that the expanded Project will not be an attractive nuisance or disturbance to wildlife and, therefore, is unlikely to adversely affect waterfowl and other wildlife using these nearby habitats.

In summary, The Addendum analysis, supporting documents including an Initial Study and appendices, and the responses to comments contained herein support a finding that the potential

to impact biological resources is not more severe than identified in the 2009 EIS/EIR, including no new significant impacts. Furthermore, ongoing mitigation and design features discussed herein with biological and water quality monitoring studies that build on past monitoring requirements serve to protect biological resources from harm. The entrapment of deer into the San Luis Drain is the responsibility of the USBR who is addressing this issue. The existing measures for Swainson's hawk are sufficient and have avoided the need for take authorization. See Response G below.

RESPONSE G. SWAINSON'S HAWK

As CDFW correctly points out, Swainson's hawk are present throughout the Project Area. The existing mitigation measures and monitoring procedures have resulted in the annual identification and reporting on Swainson's hawk activity in the "Bird Censuses" section of the annual monitoring report, including a figure depicting the number and location of nests. Nesting substrate within, and in the vicinity of, the San Joaquin River Improvement Project (SJRIP) is patchily distributed and relatively unchanging and, as the Department states, Swainson's hawk exhibit high nest-site fidelity year after year. Ground disturbing construction activities will be performed outside of the Swainson's hawk nesting season in order to provide maximum protection of the species. Preconstruction surveys for nesting birds, including Swainson's hawks, and a plan to implement the appropriate buffers around detected nests are part of the Project description for construction events occurring during the nesting season (see Section 1.2, page 5 of the biology technical report which is Appendix B of the Initial Study) in the unlikely event that construction activities need to be conducted during the nesting season. The existing measures are sufficient and have avoided the need for take authorization since their adoption and implementation in 2001.

RESPONSE H. SELENIUM AND SALT LOAD LIMITS AND ADAPTIVE MANAGEMENT

A critical goal of the Long-Term Storm Water Management Plan is to meet the future selenium water quality objective in Mud Slough (North), and the Project modifications proposed in the Addendum are intended to meet that objective.

In 2001 the Regional Board adopted a Basin Plan Amendment for Selenium in the San Joaquin River. This Basin Plan Amendment calculated selenium loads on a monthly and annual basis as a Total Maximum Monthly Load (TMML). This TMML identifies the allowable loads to the San Joaquin River to meet water quality objectives.

The 2009 Use Agreement included a reduction in selenium loads from the TMML (adopted by the Regional Board and approved by the State Board) to very low numbers that would reflect the goals of reducing agricultural-related discharges to Mud Slough (North) and the San Joaquin River. For the last two years (2018 and 2019) of coverage under the 2009 Use Agreement, the annual selenium load limits were very low and intended to be equal to one month's discharge. The Use Agreement provided for annual incentive fee credits if selenium loads went above the allocated amounts and provided for a "termination" if load values reached a termination level. These termination levels are 24% to 28% compared to TMML levels and are shown in Table 2.

Table 2. Proposed Annual Selenium Load Target

| Water Year Type | TMML Value Annual (lbs Se) | Annual Target Value (lbs Se) | % Target Value to TMML |
|------------------------|-----------------------------------|-------------------------------------|-------------------------------|
| Critical Year | 1075 | 300 | 28% |
| Dry-Below Normal Year | 2496 | 600 | 24% |
| Above Normal Year | 4162 | 900 | 22% |
| Wet Year | 4480 | 1200 | 27% |

It is proposed that there be a selenium load target (load target) equal to the termination loads in the 2009 Use Agreement. These loads were vetted in the negotiations for the 2009 Use Agreement and are significantly less than the TMML loads. The Grassland Bypass Project met these target values in the years 2015-2018 and is expected to meet them in 2019. However, the amount of storm water that will occur in future years is unknown. It is difficult to predict what storm flows will be, as there can be local variations. Therefore, it is proposed that a multi-year performance goal be considered in determining if the load target has been met. The performance goal would state that the selenium load over a 3-year period at Site B would be equal to or less than the 3-year targets based on the water year type. If the performance goal was exceeded, the Grassland Basin Drainers would propose additional management practices with the goal of reducing loads to levels that meet the performance goal.

CCCo commented that the intent of the existing 2010-2019 Use Agreement was to reduce and eventually eliminate the contribution of the Grassland Drainage Area discharges to salinity in the San Joaquin River and Delta.

The 2009 Use Agreement included specific provisions regarding the necessity for a long-term storm water plan and envisioned the fact that, during rain events, discharges would continue to occur. The Long-Term Storm Water Management Plan, described in the Addendum, is that plan now developed. The focus of the Grassland Bypass Project and, by extension, the Long-Term Storm Water Management Plan is reducing the discharge of selenium to the San Joaquin River. As a result of that implementation, salt load to the San Joaquin River has been reduced by 80%.

Salinity in the San Joaquin River, along with its assimilative capacity, is a broad issue that encompasses far more than the Grassland Bypass Project. The CV-SALTS effort is working towards the development of a Salinity Management Plan for the Central Valley which will address issues for San Joaquin River salinity inputs upstream of the Delta. Delta salinity issues are being addressed through the Bay-Delta planning processes. Establishing separate load limits, in addition to these programs, is redundant and unnecessary.

An adaptive management plan is already an integral part of the Grassland Bypass Project, and will continue with the Long-Term Storm Water Plan. The Long-Term Storm Water Management Plan includes, as part of the new Use Agreement and the Waste Discharge Order, an aggressive monitoring program to monitor the flow and quality of discharges from the GDA as well as the receiving water bodies. Additionally, an internal monitoring program has been implemented by the Authority to manage, direct and control discharges to the extent possible. These monitoring procedures, combined with the existing drainage management tools, as well as

the new tools in the Proposed Project, provide the GDA with a de facto adaptive management program that has supported the successful operation of the GBP since its implementation in 1997.

The current Waste Discharge Order requires the submission of an annual monitoring report (AMR) which, among other requirements, requires an evaluation of water quality data, exceedances of water quality criteria, and “Actions taken to address water quality exceedances that have occurred, including but not limited to, revised or additional management practices implemented”. Implicit in these requirements is the fact that exceedances of water quality objectives will be addressed by new actions.

RESPONSE I. REMOVE 3 PPB SELENIUM MITIGATION MEASURE

The Regional Board commented that the 3 ppb value would not be acceptable in revised Waste Discharge Requirements (WDRs). Therefore, it has been removed from the Proposed Project. See Section A1 of this document.

RESPONSE J. 5 PPB SE WATER QUALITY OBJECTIVE NOT PROTECTIVE

The PCL Coalition commented that the 5 ppb Se water quality performance goal in Mud Slough and the SJR upstream of Merced is not protective of downstream beneficial uses and public trust resources. The Authority disagrees with this assertion. The Proposed Project does not modify the existing water quality objective for Mud Slough (North) or the San Joaquin River, which were established by the Central Valley Regional Water Quality Control Board (Regional Board), and the Authority expects to comply with that water quality objective with the Proposed Project. The proposed selenium water quality goal of 3 ppb, 4-day average at Site D will be eliminated from the LTSWMP. In short, the Proposed Project is designed to meet applicable water quality objectives which are designed to be protective of beneficial uses of water.

RESPONSE K. SALT DISCHARGE INCREASE SINCE 2014

This response addresses Contra Costa Water District’s concern with salt. Since 2014, when the discharges to the San Luis Drain were reduced to storm water discharges only, the discharged salinity from the Grassland Area has increased. This indicates a potential salt accumulation in the reuse area as the discharge flows decrease.

Discharge through Site A from the entire Grassland Drainage Area (GDA) has reduced dramatically since the project began in 1997. By 2014, discharge from the GDA was less than 20% of the 1st year’s discharge and had been reduced by 90% by 2018. By 2015, discharges from the GDA during the irrigation season were eliminated. This reduction in discharge has resulted in a similar reduction the load of salt discharged, however, the salinity concentration, measured at Site A, has increase somewhat since 2013.

Many factors could be influencing salt discharges from the area including regional salinity impacts associated with the recent sustained drought. However, the Authority has very little influence on these factors and has only one tool, tile sump shut-off, that will have any impact on the salinity levels of the storm-induced discharges. A system to remotely turn off tile sumps during storm events is included in the Proposed Project. The SJRIP includes a comprehensive

internal monitoring program that covers shallow groundwater quality, soil quality, and applied water quality, all of which are used to track trends in salinity and selenium for the Project.

RESPONSE L. DETAILED MUD SLOUGH MODELING

Contra Costa County requested detailed modeling of the future changes in salinity and selenium in Mud Slough and downstream, and the corresponding loads as a result of the proposed stormwater discharges.

Appendix D, Surface Water Resources Technical Report, of the Initial Study is a hydrologic analysis of the likely discharge conditions and resulting water quality for critically dry, below normal, and wet water year types. The model used historical hydrology for 21 years from 1997 through 2017, which covered 5 critical year types, 5 dry year types, 2 below normal year types, 3 above normal year types, and 6 wet year types, including the extremely wet year of 1997/98. This model included the impacts of the short-term storage basins on discharged volumes but did not include the impact of shutting off all of the tile sumps, which were difficult to simulate and analyze. As a result, the hydrologic model produced a conservative evaluation of the impacts of implementation of the Long-Term Storm Water Management Plan.

RESPONSE M. NPDES PERMIT AND CLEAN WATER ACT

The PCL Coalition commented that “A National Pollutant Discharge Elimination System (NPDES) permit must be required.” PCL cites the Clean Water Act as defining “pollutant” as including “agricultural waste discharged into water,” but fails to note key exemptions contained in that Act. First, NPDES permits apply to discharges from a point source, and section 33 U.S.C. Section 1362(14) exempts return flows from irrigated agriculture from the statutory definition of “Point Source:

“...any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include agricultural stormwater discharges and return flows from irrigated agriculture (33 U.S.C. Section 1362(14).”

Section 33 U.S.C. Section 1342(l)(1) specifically exempts “return flows from irrigated agriculture” from NPDES permitting:

“(l) Limitation on permit requirement

(1) Agricultural return flows

The Administrator shall not require a permit under this section for discharges composed entirely of return flows from irrigated agriculture, nor shall the Administrator directly or indirectly, require any State to require such a permit.”

Given those exemptions, California has chosen to regulate discharges from irrigated lands through the issuance of waste discharge permits. The same approach is applied to storm water runoff from irrigated lands. The current Grassland Bypass Project is permitted through Waste Discharge Requirements (Order R5-2015-0094), and discharges under the proposed Long-Term Storm Water Management Plan would also be permitted through Waste Discharge Requirements.

The PCL Coalition characterizes discharges occurring from the GBP as of “selenium-laden drainage and contaminated groundwater,” citing data during winter/spring of 2017 of water entering the Drain. The Authority notes that in the very wet winter and spring of 2017, storm flows entered the Drain with tests on four occasions exceeding the December 31, 2019 Mud Slough objective of 5 ppb selenium (4-day running average). These sporadic exceedances nonetheless indicate enormous reductions, with 3 of the exceedances less than 6 ppb and the balance of readings not only less than 5 ppb, but most in the 1-2 ppb levels. Actions are proposed in the Long-Term Storm Water Management Plan to eliminate the exceedances, including automating controls over drainage sumps so that they may be shut off around storm events, infrastructure improvements at SJRIP to assist in maximizing the ability to broadly direct stormwater away from discharges out of the Grassland Drainage Area, and temporary holding ponds to help control discharges of storm-related flows. Partial sump shut-offs during storm events were implemented in 2018 and 2019. In 2018, there were only two measurement of selenium above 5 ppb, and 41 of the 48 samples were less than 2 ppb. Only a partial record of 2019 is available; however, available data shows only two measurements above 5 ppb during storm events. In contrast, selenium measurements at Site D exceeded 5 ppb 22 times out of 44 tests during 2013, when none of the sumps were shut off. Finally, the Draft Addendum included a proposal for an interim target of 3 ppb in Mud Slough which is not being included in the final Addendum. However, an additional incentive to maintain not only the water quality objective but to address concerns about load is being added to the proposed action in response to this and other comments.

Concerning the comments from Stephen C. Volker that the discharge of water from the San Luis Drain under the permits for the Grassland Bypass Project violates the Clean Water Act, the Authority and its engineers disagree. That is the contention of Mr. Volker on behalf of PCFFA and his other clients in pending litigation. The San Luis & Delta-Mendota Water Authority expects to demonstrate in the litigation that no NPDES permit is required. Furthermore, the Authority has not admitted that the San Luis Drain is a point source or that discharges from the Drain as utilized for the Grassland Bypass Project require an NPDES permit. Mr. Volker contends that waters discharged through the Grassland Bypass Project and San Luis Drain are commingled agricultural return flows and non-agricultural “wastewater,” but it is the position of the Authority that all water discharged from the Drain fits within the definition of “Irrigated agriculture” described in the recent Ninth Circuit opinion. As a result of that opinion, these issues must be resolved in the District Court. They have not been decided. The Grassland Bypass Project is permitted under waste discharge requirements issued under California’s interpretation of the Clean Water Act and is consistent and appropriate for discharges of return flows from irrigated agriculture. Issuance of waste discharge requirements for proposed discharges of storm water runoff from irrigated lands would also be consistent, would continue to impose stringent limits to protect the environment, and would benefit adjoining wetlands by preventing flood-related flows from following their natural course through wetland water delivery channels or creating flood-generated ponds to attract waterfowl.

RESPONSE N. NEED A FULL EIS/EIR

The PCA Coalition and Stephen C. Volker comment letters assert that continuation of Proposed Project is a “substantial change” with “numerous impacts that are significant” and which “should

be analyzed in a full EIR/EIS.” These comments misconstrue existing conditions and mischaracterize the legal standards pertaining to the CEQA baseline (CEQA Guidelines section 15125(a)) and requirements for subsequent environmental review under Public Resources Code section 21166 and CEQA Guidelines section 15162.

Public Resources Code section 21166 and CEQA Guidelines section 15162 define the situations in which a supplemental or subsequent EIR is required. Public Resources Code Section 21166 lays out three broad situations:

- When there have been substantial changes to the project which will require major revisions of the EIR,
- When there have been substantial changes to the circumstances that will require major revisions to the EIR, and
- When there is new information that could not have been known in the EIR that is now available.

CEQA Guidelines section 15162 further defines each of those specific situations in which a supplemental or subsequent EIR is appropriate:

- (1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
- (2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
- (3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted, shows any of the following:
 - (A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;
 - (B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;
 - (C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
 - (D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

The operative question is “whether circumstances have changed enough to justify repeating a substantial portion of the process.” (*Committee for Green Foothills v. Santa Clara County Bd. of Supervisors* (2010) 48 Cal.4th 32, 54-55 citing *Bowman v. City of Petaluma* (1986) 185

Cal.App.3d 1065, 1073.) Case law is illustrative of this substantive statutory test over any arbitrary time or use limits. For example, addenda were properly used in cases where many years had elapsed between the original EIR and later project revisions (see *Mani Bros. Real Estate Grp. v. City of Los Angeles* (2007) 153 Cal.App.4th 1385, 1399 (“*Mani Bros.*”) [15 years between the original project EIR and addendum, and overall project size increased by approximately 18.5 percent]; addenda were used where the project's appearance had changed dramatically (see *Fund for Environmental Defense v. County of Orange* (1988) 204 Cal.App.3d 1538 [designs changed, square footage increased by 30 percent, number of buildings increased, and project site newly surrounded by wilderness park]; *River Valley Preservation Project v. Metropolitan Transit Development Bd.* (1995) 37 Cal.App.4th 154 [light rail project changed by raising the elevation of a segment of a berm by a factor of two to three times the original height and replacing a golf course with a wetland]); and addenda have also been properly used multiple times over the course of many years. (*Citizens Against Airport Pollution v. City of San Jose* (2014) 227 Cal.App.4th 788 [eighth addendum to an airport master plan, which included changes to the size and location of future air cargo facilities, replacement of facilities, and the modification of two taxiways, was held to be a proper addendum.])

The analysis in the Addendum confirms that the proposed Project changes would not result in any new significant adverse impacts, nor an increase in the severity of significant adverse impacts previously identified in the 2009 Final EIS/EIR. The Project modifications would not require the adoption of any considerably different mitigation measures or alternatives, and to the extent Project modifications have been identified, they further lessen or avoid previously identified environmental impacts and result in environmental benefits relative to existing conditions. Although there have been some changes in the circumstances surrounding the Project since the 2009 Final EIS/EIR was approved, the changes are considered minor technical changes and the analysis in this Addendum demonstrates that there would be no new or more severe impacts due to these changes than previously evaluated and disclosed.

Differences in potential impacts associated with the proposed Project modifications relative to those previously described in the 2009 Final EIS/EIR are discussed in the Initial Study, which explained that the ongoing reuse of agricultural drain water on-farm within the GDA is not proposed to change. Continuation of existing uses has no cognizable environmental impact under CEQA. (*North Coast Rivers Alliance v. Westlands Water District* (2014) 227 Cal.App.4th 832; see *Citizens for East Shore Parks v. California State Lands Commission* (2011) 202 Cal.App.4th 549 [current and operative conditions are properly included in the CEQA baseline]; *World Business Academy v. California State Lands Commission* (2018) 24 Cal.App.5th 476.)

The SJRIP reuse area would be used to manage excess drain water from GDA sumps by reusing it to irrigate salt-tolerant crops. Sumps for tile drains would be turned off prior to storm events, and storm runoff up to an equivalent volume of 3 inches of rain on the SJRIP could be reused within the 7,550 acres of the SJRIP reuse area prior to discharge to the GBC and Drain (to Mud Slough).

Expansion of the reuse area by 650 acres (from 6,900 analyzed in the 2009 Final EIS/EIR to the proposed 7,550 acres) and use of storm water collected in the short term storage basins for irrigation of salt tolerant crops at the SJRIP are Project modifications that do not result in new or more severe impacts than previously evaluated. Drainage that would be captured in the storage basins is storm water, not agricultural subsurface drainwater (because the tile sumps would be

shut off). Agricultural subsurface drainwater is of lower quality than storm water runoff. This capture and reuse of storm water would not substantially worsen the Se, salt, and boron concentrations in the soil (described above) and in shallow groundwater at the SJRIP and the GDA. Compared to existing conditions, analysis in the Addendum/Initial Study shows that there are no new significant adverse impacts to groundwater, soil, or other resources associated with the Project modifications. Other resource areas evaluated in the Final EIS/EIR (2009) were addressed as necessary in the Addendum/Initial Study, including aesthetics, agricultural and forest resources, air quality, geology, hazards and hazardous materials, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation/traffic, tribal cultural resources, utilities and service systems, and wildfire. These resources are substantially unaffected by the proposed Project modifications for the reasons described in the Initial Study and summarized in the Addendum. There are no new significant or substantially more severe impacts to these resources as a result of the proposed Project changes.

The analysis in the Addendum/Initial Study confirms that the proposed improvements at the SJRIP would not result in any new significant adverse impacts, nor in an increase in the severity of significant impacts previously identified in the 2009 Final EIS/EIR. Furthermore, the Project modifications would not require the adoption of any new or substantially different mitigation measures or project alternatives. While the Project does propose new storage basins for 1,000 AF of temporary storm water containment and the SCADA system for tile sump control, these changes are considered to be minor technical changes given their size and the effectiveness of biological mitigation measures used since 2006. Additional surveys for cultural resources and construction monitoring are standard requirements for new construction.

The significant unavoidable impact to soils described in the 2009 Final EIS/EIR would not be more severe due to the proposed project modifications. The regional cumulative impact of water table rise and salinization of soil and groundwater from long-term irrigation of agriculture (and water deliveries to the federal wildlife refuges) continues, and it is not substantially more severe due to the proposed Project modifications, especially with water conservation practices throughout the GDA. The evaluation in the Addendum/Initial Study further showed there would not be any new or substantially more severe cumulative impact of Project implementation. When there is no substantial evidence of an individual potentially significant effect, the lead agency may reasonably conclude a project's effects will not be cumulatively considerable and need not require an EIR on that basis. (*Hollywoodians Encouraging Rental Opportunities (HERO) v. City of Los Angeles et al.* (2019) 37 Cal.App.5th 768; *Sierra Club v. West Side Irrigation District* (2005) 128 Cal.App.4th 690, 701-702; *North Coast Rivers Alliance, supra*, 227 Cal.App.4th at p. 875.)

Because none of the conditions described in CEQA Guidelines section 15162 or Public Resources Code section 21166 have occurred as a result of the proposed Project modifications, the Addendum is appropriate to comply with CEQA pursuant to section 15164 of the CEQA Guidelines. (*Save Our Heritage Organisation v. City of San Diego* (2018) 28 Cal.App.5th 656 [upholding validity of CEQA Guidelines section 15164 and emphasizing that when an EIR has been prepared for a project, reopening the EIR process is only required under very limited circumstances].)

Furthermore, see Response A on the Grassland Bypass Project's success in reducing the discharge of agriculturally-produced subsurface drain water from the GDA resulting in water quality improvements.

RESPONSE O. CUMULATIVE EFFECTS ANALYSIS

As discussed in Response O above, the evaluation in the Addendum/Initial Study further showed there would not be any new or substantially more severe cumulative impact of Project implementation.

Section 4.2.3 in the 2009 Final EIS/EIR described the many regional plans underway in 2009 to improve water quality in the San Joaquin River (pp. 4-68 to 4-71). Cumulative effects are impacts associated with the action alternatives that are not significant on their own but, when combined with the impacts of other projects and plans in the region, can have incremental effects that would result in a significant effect. The implication is that numerous insignificant effects can create a significant effect. This section discussed seven other plans and programs in the Central Valley and Bay-Delta regions that could have significant cumulative effects and found that most of these plans contributed to beneficial effects on water quality.

The comments from PCA Coalition assume that additional pollutants are being discharged to the San Joaquin River system from the Proposed Project which is not correct. There has been a 90% reduction in agricultural discharge to the San Luis Drain from 1997 – 2018. (see Response A) The monitoring data show improvements to water quality, and there is no need for the Authority to do further analysis of downstream impacts in comparison to existing conditions in any CEQA analysis for improvements (positive effects) in water quality discharges. The PCL/AA Coalition can follow water quality trends in the Bay-Delta by consulting with the California Data Exchange Center (CDEC) and the California Environmental Data Exchange Network (CEDEN). By meeting water quality objectives established by the Regional Board, the Authority and the proposed LTSMWP to the GBP are consistent with their Basin Plan which is all that is required.

Also see Section 2.21 of the GBP Long-Term Storm Water Management Plan Initial Study (August 2019) that addresses cumulative impacts for the environmental issues of biology, greenhouse gas emissions, and hydrology. The conclusion is that any limited, incremental impacts to the identified resources are not triggering cumulatively considerable impacts nor are they contributing in a substantial manner to existing cumulative issues in the Project Area.

Concerning a comment to include “Los Banos discharges and CCID and other contaminated ground water discharges into the Delta-Mendota Canal and California Aqueduct,” the response is the following. The storm water discharges from Los Banos are outside of the Grassland Drainage Area and not part of the scope of the Proposed Project. Likewise, the Authority is not aware of any “contaminated ground water discharges” into the Delta-Mendota Canal (DMC) or the California Aqueduct. Sumps along the DMC from approximately Brannon Avenue to Washoe Avenue were disconnected from the DMC in 2014. These are water supply conveyance facilities, and they do not discharge into the San Joaquin River. The cumulative impact issue is for the San Joaquin River, since this is the Project's water body of concern due to discharges at Mud Slough.

RESPONSE P. LAND RETIREMENT ALTERNATIVE

As explained in Response A, cessation of agricultural activities and fallowing of the nearly 100,000-acre GDA will not stop the flow of storm water in the GDA. To abandon the project now and retire the entire Grassland Drainage Area, as is demanded by the PCL/AA Coalition, would result in widespread and uncontrolled flooding during virtually every storm event. The floodwater waters would pond up against the Outside Canal levees and create selenium contaminated habitat attractive to waterbirds. Implementation of the Long-Term Stormwater Plan, as described in the Addendum, is designed to prevent these events from occurring.

Furthermore, land retirement is inconsistent with the Project objectives; therefore, it is not a viable alternative to the proposed modifications to the 2009 project. See Appendix A, Plan Formulation Report, attached to the GBP Long-Term Storm Water Management Plan Initial Study (August 2019), Section 2 for the Project objectives. This Appendix A, Section 3.1.2.2 addresses land retirement as follows:

- “What would be the impacts if the land is taken out of production and not irrigated?”

“Storm water is generated by rainfall and therefore would need to be dealt with regardless of agricultural activities. Agricultural districts manage the storm water by regulating the drainage conveyance facilities and routing the flows. If large portions of land were to be taken out of production (i.e., retired), the base of financial support from those productive lands would be lost, decreasing or ultimately eliminating available funding for infrastructure maintenance and storm water management activities so that some or all of the storm water would flow unmanaged. In this scenario, storm flows would saturate the soils, pond at the ends of fields and up against the major canals, where it would supersaturate the canal embankments and put the integrity of the canal at risk. The ponded water would accumulate selenium from accreted groundwater, which would concentrate as the ponds evaporated. In extremely wet years, levee breaches of the DMC or other major canals could occur, which would result in major impacts to the regional water conveyance system affecting the entire Central Valley.

“Appendix G in the 2009 Final EIS/EIR found that the total estimated value of crops grown in the GDA and the SJRIP reuse facility in 2007 was estimated to be \$237.8 million based on farm level prices (see Table G-5). This estimate is based on acreages in Table G-4 plus the 2007 acreage in the SJRIP reuse facility. (Value per acre is based on data from Fresno County and represent farm level rather than retail price.) Farm revenues were projected to rise to a peak of \$233.8 million in 2019. Large scale land retirement would substantially reduce farm revenues (and profits). As a result, regional economic activity will also be affected (reduced) because of the many linkages between production agriculture and myriad other sectors of the economy. “ (pp. 3-6, 3-7)

A4. COMMENT LETTERS

Insert Comment Letters Here



United States Department of the Interior



FISH AND WILDLIFE SERVICE

San Luis National Wildlife Refuge Complex
Post Office Box 2176
7376 South Wolfsen Road
Los Banos, California 93635

11 September 2019

Via mail and email

Mr. Joseph C. McGahan, Drainage Coordinator
San Luis & Delta-Mendota Water Authority
P.O. Box 2157
Los Banos, CA 93635
jmcgahan@summerseng.com

***Re: Grassland Bypass Project Long-Term Storm Water Management Plan 2020-2045
Addendum to Final EIS/EIR, 2010-2019 SCH No. 2007121110 - Draft August 2019
Additional Comments***

Dear Joe:

I submitted comments regarding this Plan on 10 May 2019, embedded in the document. I am now submitting additional comments on a single subject: deer entrapment in the San Luis Drain. There is absolutely no mention of deer entrapment in the Plan, despite the fact that it has repeatedly been brought to the attention of the Drain managing agencies by the California Department of Fish & Wildlife and the U.S. Fish & Wildlife Service for over a year. A supplemental EIR would be required if new significant environmental effects have been identified, which this problem may be.

There is no discussion of wildlife movement whatsoever. The *Administrative Draft – CEQA Initial Study – Long-Term Storm Water Management Plan for the Grassland Drainage Area*, under 2.4 Biological Resources, includes the question: “Would the project: d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?” “**No Impact**” is checked. That is profoundly incorrect. Please find attached a location map, “Deer Trapped in San Luis Drain”, prepared by CDFW.

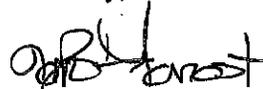
As stated in my 10 May 2019 comments, “The Drain bisects and creates a major barrier through high-quality habitat for many miles, negatively impacting many species. Deer get trapped and die in the San Luis Drain every year. Annually, about 5 dead deer and 2-3 live deer that often die from cruel injuries (hooves worn off) are removed from the Drain by USFWS. This is a waste of resources, incredibly cruel, hazardous for staff, and a burden -- distracting from normal, and urgent, duties. USFWS has pulled out 30 deer -- dead, dying, and alive -- between 2015 and 2018. Users of the San Luis Drain and USBR need to design -- with CDFW/USFWS approval -- and install 4 or 5 mechanisms along the Drain in high deer use areas, to allow deer to escape the Drain. All installation, maintenance, and removal (with CDFW/USFWS approval) should be the responsibility of USBR and San Luis Drain users. A map of locations where live and dead deer have been removed has been provided by USFWS. These locations are a starting point for considering where the mechanisms should be located. The escape mechanisms should be installed for a minimum of three years to determine efficacy. If they are

effective, they should remain in place -- and maintained -- permanently. This is a cooperative effort among the concerned agencies. Because the San Luis Drain is a USBR facility, primary responsibility lies with USBR; CDFW and USFWS have researched, consulted, and continually provides labor to remove live and dead deer. CDFW and USFWS have the expertise to provide technical or physical assistance with installation of the escape mechanisms. If the mechanisms are successful, maintenance should be overseen by USBR. Alternatives would include installing ramps made of different materials, such as soil or concrete, or tearing out some of the deteriorating lining of the canal to expose bare ground. However, if USBR intends to continue utilizing the Drain, these alternatives are likely to diminish the capacity of the Drain or reduce its functionality.”

This Addendum evaluates modifications to the Project and continued operation and management of the Drain for the next 25 years. The Addendum considers enhancements to existing facilities, including securing ownership of land, new pump/conveyance systems, additional temporary storage basins, and a remote shut-off system for control of tile sumps throughout the Grassland Drainage Area. Those are surely some very expensive options required for re-using the Drain. A compilation of numerous design options for ungulate escape from -- or avoidance of -- concrete canals was sent to the U.S. Bureau of Reclamation by CDFW and USFWS; some of which were designed, constructed, and utilized elsewhere by the USBR. These surely are less expensive than the many other enhancements being considered. Unfortunately, we have not received any response to these suggestions.

Please contact me (Kim_Forrest@fws.gov, 209/826-3508) if you have any questions.

Sincerely,



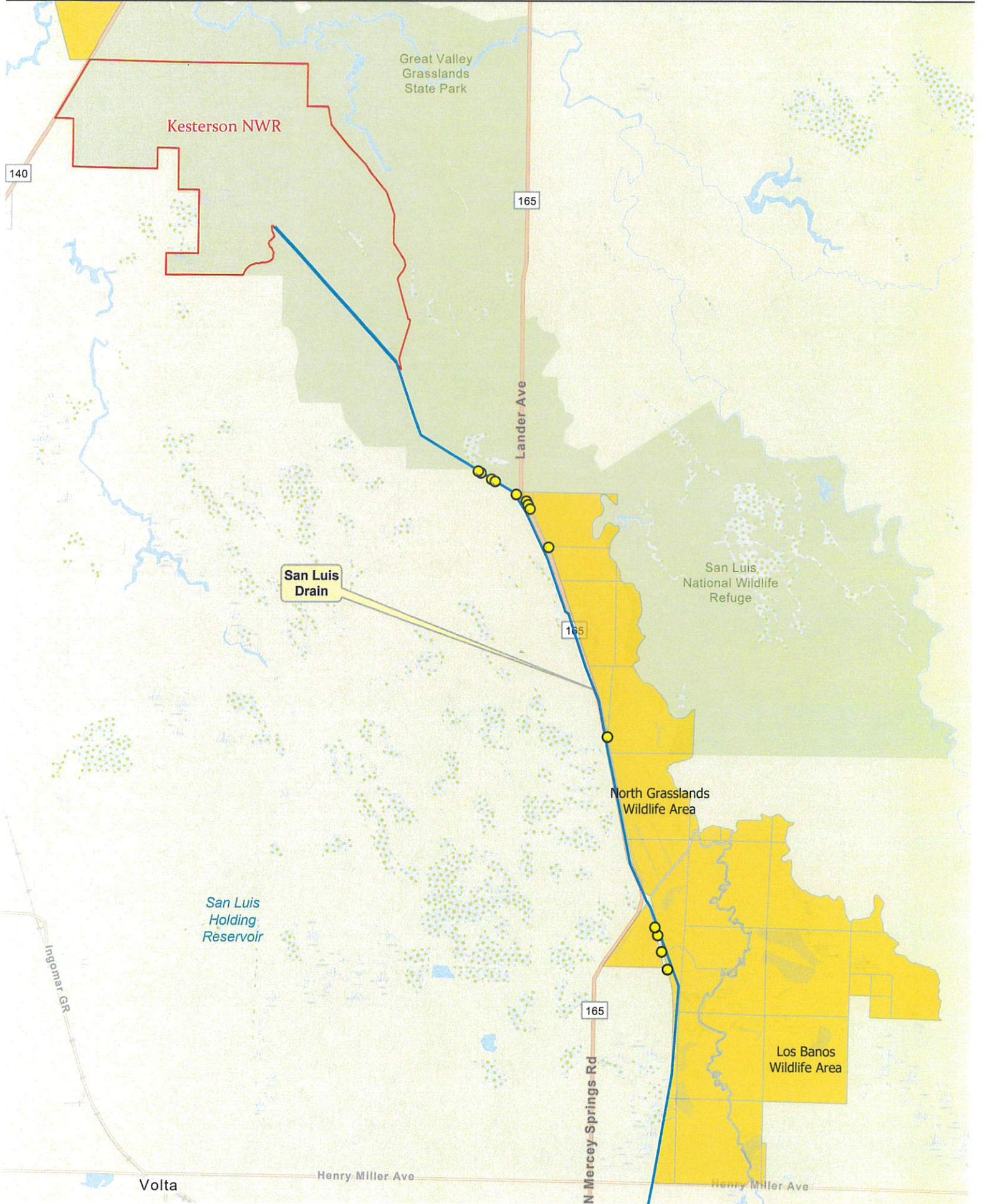
Kim Forrest
Refuge Manager

Enclosure

Cc: Polly Wheeler, Assistant Regional Director-NWRS; FWS
Stacy Armitage, Refuge Supervisor; FWS
Julie Vance, Regional Director; CDFW
Andy Gordus, Toxicologist; CDFW
Steve Miamoto, Wildlife Habitat Supervisor II; CDFW
Sean Allen, Wildlife Habitat Supervisor II; CDFW
Cristen Langer, Environmental Scientist; CDFW



Deer Trapped in San Luis Drain Locations - ●





State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Central Region
1234 East Shaw Avenue
Fresno, California 93710
(559) 243-4005
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director



September 13, 2019

Joseph C. McGahan, Drainage Coordinator
San Luis & Delta-Mendota Water Authority
Post Office Box 2157
Los Banos, California 93635

**Subject: Grassland Bypass Project, 2010-2019
Notice of Availability of an Addendum to the Final Environmental Impact
Statement/Environmental Impact Report (EIS/EIR)
State Clearinghouse (SCH) No. 2007121110**

Dear Mr. McGahan:

The California Department of Fish and Wildlife (CDFW) received a Notice of Availability of an Addendum to the Final Environmental Impact Statement/Environmental Impact Report for the Grassland Bypass Project, 2010-2019, from the San Luis & Delta-Mendota Water Authority for the above-referenced Project pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.¹

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, CDFW appreciates the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under Fish and Game Code.

CDFW ROLE

CDFW is California's **Trustee Agency** for fish and wildlife resources and holds those resources in trust by statute for all the people of the State (Fish and G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a)). CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species (*Id.*, § 1802). Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

¹ CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

CDFW is also submitting comments as a **Responsible Agency** under CEQA (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381). CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code. As proposed, for example, the Project may be subject to CDFW's lake and streambed alteration regulatory authority (Fish & G. Code, § 1600 et seq.). Likewise, to the extent implementation of the Project as proposed may result in "take" as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), related authorization as provided by the Fish and Game Code will be required.

Nesting Birds: CDFW has jurisdiction over actions with potential to result in the disturbance or destruction of active nest sites or the unauthorized take of birds. Fish and Game Code sections that protect birds, their eggs and nests include, sections 3503 (regarding unlawful take, possession or needless destruction of the nest or eggs of any bird), 3503.5 (regarding the take, possession or destruction of any birds-of-prey or their nests or eggs), and 3513 (regarding unlawful take of any migratory nongame bird).

Water Pollution: Pursuant to Fish and Game Code Section 5650, it is unlawful to deposit in, permit to pass into, or place where it can pass into "Waters of the State" any substance or material deleterious to fish, plant life, or bird life, including non-native species. It is possible that without mitigation measures, implementation of the Project could result in pollution of Waters of the State from storm water runoff or Project-related erosion. Potential impacts to the wildlife resources that utilize these watercourses include, but are not limited to, the following: increased sediment input from vegetation removal and ground disturbance causing increased erosion; toxic runoff associated with Project implementation; temporal loss of wildlife habitat; and/or impairment of wildlife movement along riparian corridors. The Regional Water Quality Control Board and United States Army Corps of Engineers also have jurisdiction regarding discharge and pollution to Waters of the State.

In this role, CDFW is responsible for providing, as available, biological expertise during public agency environmental review efforts (e.g., CEQA), focusing specifically on project activities that have the potential to adversely affect fish and wildlife resources. CDFW provides recommendations to identify potential impacts and possible measures to avoid or reduce those impacts.

PROJECT DESCRIPTION SUMMARY

Proponent: San Luis & Delta-Mendota Water Authority

Objective: The San Luis & Delta Mendota Water Authority has prepared an Addendum to the 2009 Final Environmental Impact Statement/Environmental Impact Report (EIS/EIR; SCH No. 2007121110) for consideration of the Grassland Bypass Project

(Project). The 2009 EIS/EIR addressed the potential environmental effects/impacts that would result from implementation of a new Use Agreement for the Project that allowed for continued use of the Federal San Luis Drain (Drain) for the period 2010 through 2019 for discharge of agricultural drainwater and storm water into Mud Slough and drainwater reuse at an expanded San Joaquin River Improvement Project (SJRIP). The Addendum to the Final EIS/EIR has been prepared to evaluate modifications to the Project and continued operation and management of the Drain and related improvements at the SJRIP for the next 25 years.

The original Project managed and discharged subsurface drainage flows from irrigation of the 97,000-acre Grassland Drainage Area (GDA). Participants in the Project applied multiple tools to reduce the amount of subsurface agricultural drainage being discharged, such as source control, recirculation and shallow groundwater pumping, along with use of collected drainage to irrigate salt tolerant crops at the SJRIP. The Project utilized the 4-mile Grassland Bypass Channel to convey drainage discharged from the GDA to the Drain at a point near Russell Avenue, used a 28-mile segment of the Drain to convey the remaining flows around wetland habitat areas, and ultimately discharged to Mud Slough and subsequently to the San Joaquin River. Over the last 32 years, the Project has reduced the volume of agricultural drainage water discharged from the GDA by over 90%, resulting in substantial environmental improvements to wetlands water supply channels and the San Joaquin River.

The Addendum evaluates continued use of the Drain at its current capacity (150 cubic feet per second) combined with the use of existing and new short-term storage basins to continue storm-induced discharges to Mud Slough in the San Luis National Wildlife Refuge and the CDFW China Island Wildlife Area. The Addendum considers modifications to the previously analyzed project and enhancements to existing facilities, including securing ownership of land for purposes of the SJRIP (i.e., irrigation of salt tolerant crops), new pump/conveyance systems, additional temporary storage basins, and a remote shut-off system for control of tile sumps throughout the GDA after 2019, for a period of 25 years to 2045.

Location: Grasslands watershed in Fresno and Merced Counties. The Project Area is the area that could be affected substantially by actions taken within the Grassland Drainage Area (GDA). It is located on the western side of the San Joaquin Valley, and the GDA and other Project features are located primarily in the counties of Merced and Fresno. The inclusion of the San Joaquin River to Crows Landing for compliance monitoring adds Stanislaus County to the Project Area.

Timeframe: Next 25 years.

COMMENTS AND RECOMMENDATIONS

CDFW offers the following comments and recommendations to assist the San Luis & Delta-Mendota Water Authority in adequately identifying and/or mitigating the Project's

significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources. Editorial comments or other suggestions may also be included to improve the document.

The Addendum to the 2009 EIS/EIR indicates that the Project's impacts would be less than significant with the implementation of mitigation measures described. The mitigation measures of the 2009 EIS/EIR appear to be insufficient in reducing impacts to a level that is less than significant. CDFW wants to emphasize the adequacy of mitigation measures for special-status species including, but not limited to, the State threatened Swainson's hawk (*Buteo swainsoni*).

I. Environmental Setting and Related Impact

Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by CDFW or the United States Fish and Wildlife Service (USFWS)?

COMMENT 1: Swainson's Hawk (SWHA)

Issue: SWHA have been observed to nest within and near the Project area. The California Natural Diversity Database (CNDDDB) shows SWHA occurrences throughout the Project area (CDFW 2019). The proposed Project will involve activities near large trees that may serve as potential nest sites.

Specific impacts: CDFW concurs with the mitigation measures as presented on page 2-14 Mitigation Measure BIO-2g: Conduct Pre-construction Nest Surveys for Infrastructure Installation Occurring During the Nesting Season and on page 46 of the H. T. Harvey & Associates Biological report. The document states that the construction of the infrastructure will occur outside the nesting season to reduce nesting bird impacts. CDFW further recommends the Project proponents consult with CDFW staff before construction begins. Should construction occur during the nesting season, CDFW recommends pre-construction nest surveys as presented on page 46 of the Biological Report and in consultation CDFW staff. CDFW wants to emphasize that without appropriate avoidance and minimization measures for SWHA, potential significant impacts could result from Project activities include nest abandonment, loss of nest trees, loss of foraging habitat that would reduce nesting success (loss or reduced health or vigor of eggs or young), and direct mortality. Any take of SWHA without appropriate incidental take authorization would be a violation of Fish and Game Code.

Evidence impact is potentially significant: SWHA exhibit high nest-site fidelity year after year and lack of suitable nesting habitat in the San Joaquin Valley limits their local distribution and abundance (CDFW 2016). The Project as proposed will

involve noise, groundwork, and movement of workers that could affect nests and has the potential to result in nest abandonment, significantly impacting local nesting SWHA.

Recommended Potentially Feasible Mitigation Measure(s)

Because suitable habitat for SWHA is present throughout the Project area, CDFW recommends conducting the following evaluation of the Project area, editing the MND to include the following measures specific to SWHA, and that these measures be made conditions of approval for the Project.

Mitigation Measure 1: SWHA Surveys

To evaluate potential impacts, CDFW recommends that a qualified wildlife biologist conduct surveys for nesting SWHA following the survey methods developed by the Swainson's Hawk Technical Advisory Committee (SWHA TAC, 2000) prior to project implementation. The survey protocol includes early season surveys to assist the Project proponent in implementing necessary avoidance and minimization measures, and in identifying active nest sites prior to initiating ground-disturbing activities as presented on page 2-14 Mitigation Measure BIO-2g: Conduct Pre-construction Nest Surveys for Infrastructure Installation Occurring During the Nesting Season and page 46 of the H. T. Harvey & Associates Biological report.

Mitigation Measure 2: No-disturbance Buffer

If ground-disturbing Project activities are to take place during the normal bird breeding season (March 1 through September 15), CDFW recommends that additional pre-activity surveys for active nests be conducted by a qualified biologist no more than 10 days prior to the start of Project implementation. CDFW recommends a minimum no-disturbance buffer of 0.5 mile be delineated around active nests until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival.

Mitigation Measure 3: SWHA Take Authorization

CDFW recommends that in the event that an active SWHA nest is detected during surveys, consultation with CDFW is warranted to discuss how to implement the project and avoid take. If take cannot be avoided, take authorization through the issuance of an Incidental Take Permit, pursuant to Fish and Game Code Section 2081(b) is necessary to comply with CESA.

II. Specific Comments

COMMENT 2: Grassland Bypass Project – Long-term Storm Water Management Plan, Initial Study. Page 1-9. Section 1.1.3.2 Regulating Ponds/Reservoirs Usage.

The Proposed Project includes an existing pond and the construction of a new pond to temporarily store storm water from approximately December through May. This period includes the migratory bird breeding season, which could result in impacts to avian embryos due to selenium levels. CDFW recommends the Project proponents conduct water analyses for selenium concentration for these storage ponds to determine potential impacts to waterfowl and other wildlife that utilize them.

COMMENT 3: Grassland Bypass Project – Long-term Storm Water Management Plan, Initial Study. Page 1-11. Section 1.1.3.4 Additional Conveyance Activities.

“The existing 3-mile PR-1 Ditch will be replaced with a concrete lined channel and the ditch will be extended 1.8± miles to the eastern side of the SJRIP.” CDFW recommends that the concrete lined ditch be designed to prevent wildlife entrapment and not impact wildlife movement, see comment below for Page 2-9.

COMMENT 4: Grassland Bypass Project – Long-term Storm Water Management Plan, Initial Study. Page 2-9. Section 2.4 Biological resources. d.

CDFW does not concur with the “No Impact” conclusion for “Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery.”

The Drain is a significant part of this Project and there was no evaluation for wildlife impacts as a result of continuing the use of the Drain. CDFW staff have previously informed the Project proponents that mule deer (*Odocoileus hemionus*) entrapment (Photographs 1 and 2) is a serious issue in the Drain, particularly north of Henry Miller Road. CDFW staff have also previously provided information for deer bridge crossings and escape ramps. See Figure 1 for deer entrapment locations for potential locations to install deer bridge crossing and escape ramps.

In addition to the impacts to deer, deer entrapment is a significant safety concern for state and federal employees as staff have to enter the Drain to retrieve dead or live deer (Photograph 3).

COMMENT 5: Grassland Bypass Project – Appendix A: Plan formulation report long term storm water management plan for the Grassland Drainage area Long-term Storm Water Management Plan. Page 3-6.

The first paragraph states that the tile systems can be shut off during storm events provided that they are accessible. This statement conflicts with other sections that state automated remote turn-off systems will be installed to shut off the sump pumps (see page 3-8). CDFW recommends this discrepancy be addressed.

COMMENT 6: Grassland Bypass Project – Appendix A: Plan formulation report long term storm water management plan for the Grassland Drainage area Long-term Storm Water Management Plan. Page 3-9.

This section indicates that wildlife could be exposed to elevated selenium in the regulating basins. CDFW recommends Project proponents analyze the water for selenium concentration for these regulating basins to determine potential impacts to waterfowl and other wildlife that may utilize them.

III. Editorial Comments and/or Suggestions

Nesting birds: CDFW concurs that Project implementation occur during the bird non-nesting season; however, if ground-disturbing or vegetation-disturbing activities must occur during the breeding season (February through mid-September), the Project applicant is responsible for ensuring that implementation of the Project does not result in violation of the Migratory Bird Treaty Act or relevant Fish and Game Codes as referenced above.

To evaluate Project-related impacts on nesting birds, CDFW recommends that a qualified wildlife biologist conduct pre-activity surveys for active nests no more than 10 days prior to the start of ground or vegetation disturbance to maximize the probability that nests that could potentially be impacted are detected. CDFW also recommends that surveys cover a sufficient area around the Project area to identify nests and determine their status. A sufficient area means any area potentially affected by the Project. Prior to initiation of Project activities, CDFW recommends that a qualified biologist conduct a survey to establish a behavioral baseline of all identified nests. Once Project activities begin, CDFW recommends having a qualified biologist continuously monitor nests to detect behavioral changes resulting from the Project. If behavioral changes occur, CDFW recommends halting the work causing that change and immediately consult with CDFW for additional avoidance and minimization measures.

If continuous monitoring of identified nests by a qualified wildlife biologist is not feasible, CDFW recommends a minimum no-disturbance buffer of 250 feet around active nests of non-listed bird species and a 500-foot no-disturbance buffer around active nests of non-listed raptors. These buffers are advised to remain in place until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or on-site parental care for survival. Variance from these no-disturbance buffers is possible when there is compelling biological or ecological reason to do so, such as when the Project area would be concealed from a nest site by topography. CDFW recommends that a qualified wildlife biologist advise and support any variance from these buffers and notify CDFW in advance of implementing a variance.

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database which may be used to make subsequent or supplemental environmental determinations (Pub. Resources Code, § 21003, subd. (e)). Accordingly, please report any special status species and natural communities detected during Project surveys to CNDDDB. The CNDDDB field survey form can be found at the following link: <https://www.wildlife.ca.gov/Data/CNDDDB/Submitting-Data>. The completed form can be mailed electronically to CNDDDB at the following email address: CNDDDB@wildlife.ca.gov. The types of information reported to CNDDDB can be found at the following link: <https://www.wildlife.ca.gov/Data/CNDDDB/Plants-and-Animals>.

FILING FEES

If it is determined that the Project has the potential to impact biological resources, an assessment of filing fees will be necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the fee is required in order for the underlying project approval to be operative, vested, and final (Cal. Code Regs, tit. 14, § 753.5; Fish & Game Code, § 711.4; Pub. Resources Code, § 21089).

CDFW appreciates the opportunity to comment on the Project to assist the San Luis & Delta-Mendota Water Authority in identifying and mitigating the Project's impacts on biological resources.

More information on survey and monitoring protocols for sensitive species can be found at CDFW's website (<https://www.wildlife.ca.gov/Conservation/Survey-Protocols>). If you have any questions, please contact Jim Vang, Environmental Scientist, at the address provided on this letterhead, by telephone at (559) 243-4014 extension 254, or by electronic mail at Jim.Vang@wildlife.ca.gov.

Sincerely,


for Julie A. Vance
Regional Manager

cc: See Page Nine

Joseph C. McGahan, Drainage Coordinator
San Luis & Delta-Mendota Water Authority
September 13, 2019
Page 9

cc: Regional Water Quality Control Board
Central Valley Region
1685 "E" Street
Fresno, California 93706-2020

United States Army Corps of Engineers
San Joaquin Valley Office
1325 "J" Street, Suite #1350
Sacramento, California 95814-2928

ec: Joseph C. McGahan, Drainage Coordinator
San Luis & Delta-Mendota Water Authority
jmcgahan@summerseng.com

Kim Forrest, Refuge Manager
San Luis NWR
Kim_Forrest@fws.gov

Literature Cited

CDFW. 2016. Five Year Status Review for Swainson's Hawk (*Buteo swainsoni*).
California Department of Fish and Wildlife. April 11, 2016.

CDFW. 2019. Biogeographic Information and Observation System (BIOS).
<https://www.wildlife.ca.gov/Data/BIOS>. Accessed August 23, 2019.

Swainson's Hawk Technical Advisory Committee (SWHA TAC). 2000. Recommended
Timing and Methodology for Swainson's Hawk Nesting Surveys in California's
Central Valley. Swainson's Hawk Technical Advisory Committee, May 31, 2000.

Appendix 1. Photographs and Figure.

Photograph 1. Mule deer trapped in the San Luis Drain.



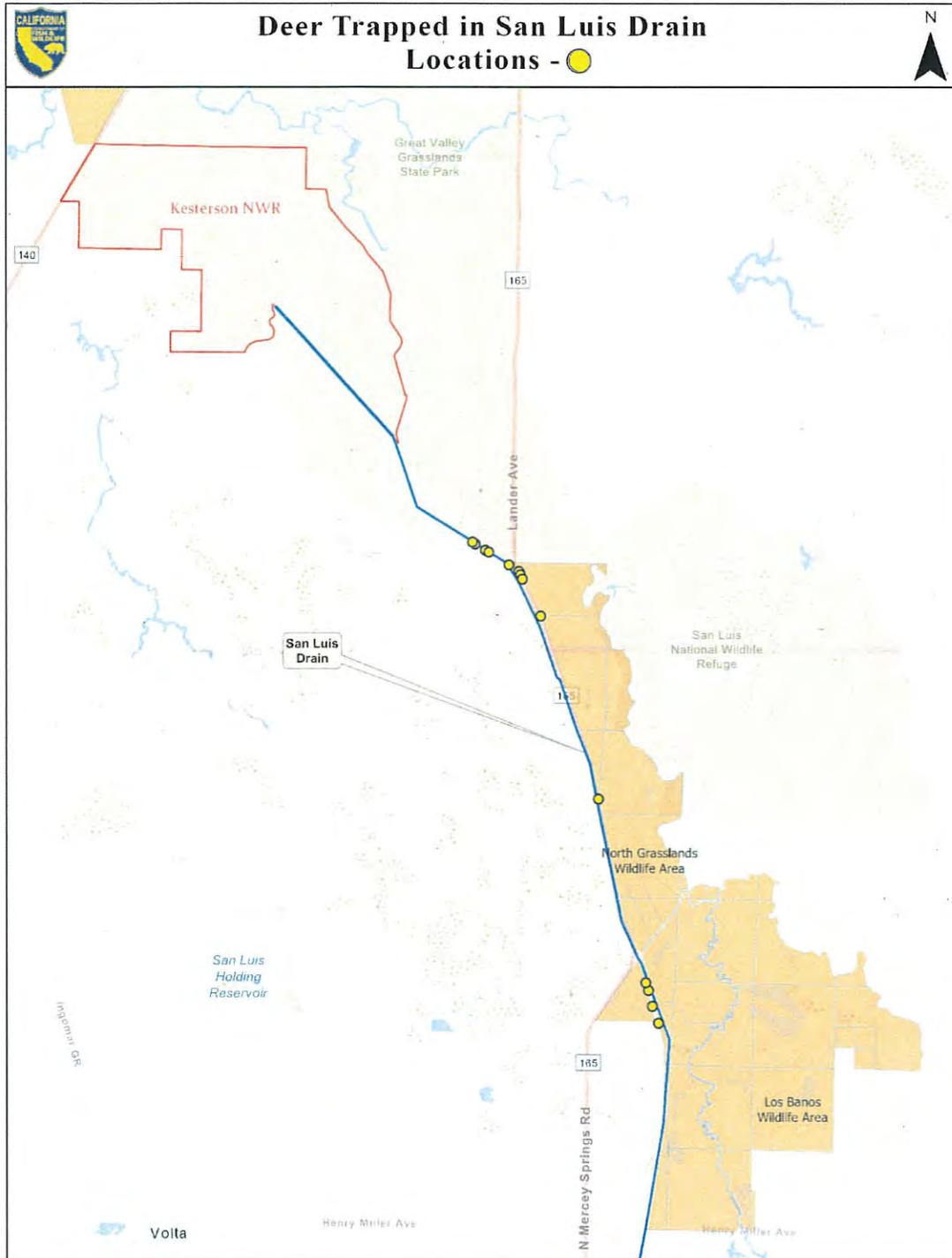
Photograph 2. Dead mule deer in San Luis Drain.



Photograph 3. State and Federal employees rescuing deer from the San Luis Drain.



Figure 1. Locations where mule deer have been trapped in the San Luis Drain and for further discussions as to recommended locations to install deer bridge crossings and escape ramps.





GAVIN NEWSOM
GOVERNOR



JARED BLUMENFELD
SECRETARY FOR
ENVIRONMENTAL PROTECTION

Central Valley Regional Water Quality Control Board

13 September 2019

Joseph C. McGahan, Drainage Coordinator
San Luis & Delta-Mendota Water Authority
Post Office Box 2157
Los Banos, CA 93635

COMMENTS TO NOTICE OF AVAILABILITY (NOA) OF AN ADDENDUM TO THE FINAL ENVIRONMENTAL IMPACT STATEMENT AND ENVIRONMENTAL IMPACT REPORT FOR THE GRASSLAND BYPASS PROJECT, SCH# 2007121110, MERCED COUNTY AND FRESNO COUNTY

Pursuant to the San Luis & Delta-Mendota Water Authority's 14 August 2019 request, the Central Valley Regional Water Quality Control Board (Central Valley Water Board) has reviewed the *Notice of Availability (NOA) of an Addendum to the Final Environmental Impact Statement and Environmental Impact Report* and associated documents for the Grassland Bypass Project, located in Merced County and Fresno County.

Our agency is delegated with the responsibility of protecting the quality of surface and groundwaters of the state; therefore, our comments will address concerns surrounding those issues.

The Central Valley Water Board is required to formulate and adopt Basin Plans for all areas within the Central Valley region under Section 13240 of the Porter-Cologne Water Quality Control Act. Each Basin Plan must contain water quality objectives to ensure the reasonable protection of beneficial uses, as well as a program of implementation for achieving water quality objectives with the Basin Plans. Federal regulations require each state to adopt water quality standards to protect the public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act. In California, the beneficial uses, water quality objectives, and the Antidegradation Policy are the State's water quality standards. Water quality standards are also contained in the National Toxics Rule, 40 CFR Section 131.36, and the California Toxics Rule, 40 CFR Section 131.38.

The Basin Plan is subject to modification as necessary, considering applicable laws, policies, technologies, water quality conditions and priorities. The original Basin Plans were adopted in 1975, and have been updated and revised periodically as required, using Basin Plan amendments. Once the Central Valley Water Board has adopted a Basin Plan amendment in noticed public hearings, it must be approved by the State Water Resources Control Board (State Water Board), Office of Administrative Law (OAL) and in some cases, the United States Environmental Protection Agency (USEPA). Basin Plan amendments only become effective after they have been approved by the OAL and in some cases, the USEPA. Every three (3)

KARL E. LONGLEY ScD, P.E., CHAIR | PATRICK PULUPA, ESQ., EXECUTIVE OFFICER

years, a review of the Basin Plan is completed that assesses the appropriateness of existing standards and evaluates and prioritizes Basin Planning issues.

Subsurface drainage from the Grassland Drainage Area is known to contain selenium concentrations at levels that have the potential to impact receiving waters. To address selenium impacts, the Basin Plan contains a water quality objective of 5 micrograms per liter ($\mu\text{g/L}$) (4-day average) for Mud Slough (north) and the San Joaquin River from the Mud Slough confluence to the Merced River. Prior to the year 2020, a performance goal of 15 $\mu\text{g/L}$ (monthly mean) for selenium applies. The Basin Plan also prohibits the discharge of agricultural subsurface drainage water to Mud Slough (north) and the San Joaquin River from the Mud Slough confluence to the Merced River after 31 December 2019 unless water quality objectives for selenium are being met.

In your Addendum to the Final Environmental Impact Statement and Environmental Impact Report for the Grassland Bypass Project, 2010-2019, you state that the selenium water quality objective would be met during most of the year with occasional exceedances and propose a modification to existing mitigation measures that would establish a water quality goal of 3 $\mu\text{g/L}$ (4-day average) for selenium, which for every three (3) months it is met one (1) exceedance of the 5 $\mu\text{g/L}$ (4-day average) water quality objective would be allowed.

This mitigation measure does not meet Basin Plan requirements and would not be allowed in revised Waste Discharge Requirements (WDRs). If discharges to Mud Slough (north) are to be permitted beyond 31 December 2019, WDRs for the Grassland Bypass Project must be revised or new WDRs issued. These WDRs cannot permit discharges that exceed criteria established by the Basin Plan. All monitoring results for selenium will be compared to the Basin Plan water quality objective and any exceedances of the objective will result in action by the Central Valley Water Board pursuant to the Basin Plan's requirements.

For more information on the *Water Quality Control Plan for the Sacramento and San Joaquin River Basins*, please visit our website:

http://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/.

If you have questions regarding these comments, please contact me at (916) 464-4857 or Ashley.Peters@waterboards.ca.gov.



Ashley Peters, P.E.
Water Resource Control Engineer

cc: State Clearinghouse unit, Governor's Office of Planning and Research, Sacramento

Department of
Conservation and
Development

**Contra
Costa
County**

John Kopchik
Director

Water Agency

30 Muir Road
Martinez, CA 94553

Phone: 925-674-7824



September 13, 2019

Joseph C. McGahan
Drainage Coordinator
San Luis & Delta-Mendota Water Authority
P.O. Box 2157
Los Banos, CA 93635
Email: jmcgahan@summerseng.com

Re: Contra Costa County comments on Addendum to the Final EIS/EIR for Grassland Bypass Project

Dear Mr. McGahan,

Contra Costa County appreciates this opportunity to formally review the draft Addendum to the Final Environmental Impact Statement/Environmental Impact Report (Final EIS/EIR) for consideration of the Grassland Bypass Project (GBP) prepared by the San Luis & Delta Mendota Water Authority (SLDMWA) and released on August 14, 2019.

The Final EIS/EIR was certified by the SLDMWA on October 8, 2009 (SCH #2007121110). The 2009 Final EIS/EIR addressed the potential environmental effects/impacts that would result from implementation of a new Use Agreement for the GBP that allowed for continued use of the Federal San Luis Drain (Drain) for the period 2010 through 2019 for discharge of agricultural drainwater and storm water into Mud Slough (North) and of drainwater reuse at an expanded San Joaquin River Improvement Project (SJRIP). The Addendum evaluates modifications to the GBP and continued operation and management of the Drain and related improvements at the SJRIP for the next 25 years.

The U.S. Bureau of Reclamation (Reclamation) is apparently managing compliance with the National Environmental Policy Act (NEPA) for continued use of the Drain separate from this California Environmental Quality Act (CEQA) Addendum.

Contra Costa County covers a large area within the Delta. The County borders on Old River to the east and Suisun and San Pablo Bays in the north. The County is the ninth most populous county in California, with more than one million residents. Many of our residents rely on the Delta for their municipal, industrial and irrigation water supplies, for their livelihood, and

recreation. The quality of Delta water, health of the Delta ecosystem, Delta recreation and water supply are, therefore, of major importance to the County and its residents.

Discharges from the Grassland area into the San Joaquin River will reach the Sacramento-San Joaquin Delta (Delta) and affect salinity and selenium concentrations there. They have the potential to adversely impact the health and safety of the residents of Contra Costa County and the 23 million other people that rely on the Delta as their source for drinking water. High selenium loads into the San Joaquin River and Delta will also impact key fish species. This can lead, through biological opinions and Delta operations criteria, to more stringent restrictions on the ability of urban agencies to divert water from the Delta to meet their water supply needed.

The County appreciates the efforts of the Grassland area farmers, since 1996, to significantly reduce their discharges of selenium and salinity to the San Joaquin River. Over the last 32 years, the Grassland Bypass Project has succeeded in reducing the volume of agricultural drainage water discharged from the Grassland Drainage Area by over 90%, resulting in substantial environmental improvements to wetlands water supply channels and the San Joaquin River. The GBP is now highly likely to achieve its goal of eliminating all discharges of agricultural drainage by December 31, 2019. The GBP is a nationally-recognized model for how to address contaminated drainage and protect environmental resources.

The adequacy of the Draft Addendum may be addressed by taking action on the following comments.

- 1. The Addendum must include a copy of the proposed Use Agreement under which the Grassland Bypass would be operated after December 31, 2019 when the existing Use Agreement expires.**

The Draft Addendum, on page 3-1, acknowledges that the proposed project would be implemented through a new Use Agreement with the Bureau of Reclamation for use of the Drain and with new Waste Discharge Requirements (WDR) from the Central Valley RWQCB for discharge to Mud Slough (North).

The previous Use Agreements for the Grassland Bypass Project provided detailed requirements regarding selenium and salt load limits and monitoring. Any extension of use of the San Luis Drain beyond December 31, 2019 should require similar definitions, environmental commitments, and restrictions to protect the water quality for fish and wildlife in Mud Slough and the San Joaquin River and users of water from the Sacramento-San Joaquin Delta.

Since the new Use Agreement will be a federal document, the CEQA lead agency may consider that the Use Agreement be controlled by Reclamation through a separate NEPA process. However, the Use Agreement is needed to memorialize how the GBP will be operated by the Grassland area farmers and should be included in this CEQA Addendum.

2. The Addendum must describe in detail a Monitoring Plan to monitor key selenium, salinity, boron concentrations and flow discharges into the Bypass and at downstream locations.

The previous Use Agreements for the GBP included comprehensive multiagency monitoring programs to ensure that environmental commitments were being met, selenium and salinity loads are not excessive, and allow problem areas to be identified. A detailed monitoring plan should be incorporated in to the new Use Agreement and Addendum.

3. The Addendum must provide a definition of a stormwater-driven event.

Appendix F (High Rainfall Exemption) of the January 2010 – December 2019 Agreement for Continued Use of the San Luis Drain (Agreement No. 10-WC-20-3975) on page 36 specifies the high rainfall conditions under which the Grassland area drainers would be given an exemption for their selenium discharges.

The Addendum evaluates continued use of the San Luis Drain at its current capacity (150 cfs) combined with the use of existing and new short-term storage basins to reduce storm-induced discharges to Mud Slough (North) in the San Luis National Wildlife Refuge and the California Fish and Wildlife Service China Island Refuge.

The same concept needs to be used for the proposed continued use of the Bypass for excess stormwater discharge. The Addendum and new Use Agreement must include well-defined limits on when discharges can be made through the Drain to ensure that selenium-laden water is only discharged into Mud Slough and the San Joaquin River when there is a high rainfall event and there is more runoff than can be handled by short-term storage basins and the enlarged reuse area.

4. The Addendum must set salinity load limits for the proposed stormwater discharge project.

The current 2010-2019 Use Agreement includes salinity load targets. These were intended to avoid a situation where actions taken by the drainers successfully removed selenium from the agricultural drainage but were less successful in removing salinity. Selenium goals could be met and still result in an increase in salinity concentrations and loads in the Bypass.

The Central Valley RWQCB adopted WDR that set salinity targets at Crows Landing in the San Joaquin below the Merced and at Vernalis. However, the intent of the existing 2010-2019 Use Agreement was to reduce and eventually eliminate the contribution of the Grassland area discharges to salinity in the San Joaquin River and Delta. Any “assimilative capacity” available under the RWQCB’s WDR should not be used as an opportunity to increase salinity discharges from the Grassland drainage area.

At the very least, EC limits should be set for discharges from the Bypass that are equivalent to the proposed objective of 3 ppb Selenium (LTSWMP Initial Study, page 1-14) so that the discharge of salinity is also limited.

The Central Valley RWQCB recently adopted Salt and Nitrate amendments to the Basin Plan that allow upstream San Joaquin River salinity discharges at concentrations that are higher (1,600 and 2,200 $\mu\text{S}/\text{cm}$) than the State Water Resources Control Board's (SWRCB) south Delta agricultural water quality standards (1,000 $\mu\text{S}/\text{cm}$ and formerly 700 $\mu\text{S}/\text{cm}$ for April-August) and the recommended Secondary Maximum Contaminant Level (SMCL) for the protection of a municipal beneficial use of 900 $\mu\text{S}/\text{cm}$ (as an annual average).

On December 12, 2018, the SWRCB adopted Resolution No. 2018-0059 and relaxed the Water Rights Decision 1641 south Delta agriculture standard for April-August from 700 $\mu\text{S}/\text{cm}$ to 1,000 $\mu\text{S}/\text{cm}$. This allows degradation of water quality in the south Delta in direct conflict with the state Antidegradation Policy (SWRCB Resolution No. 68-16) and the federal Antidegradation Policy (40 C.F.R. §131.12), as well as California Water Code §85020(e) which states that:

The policy of the State of California is to achieve the following objectives that the Legislature declares are inherent in the coequal goals for management of the Delta: ...

*(e) **Improve water quality** to protect human health and the environment consistent with achieving water quality objectives in the Delta.*

The County requests that the Addendum and new Use Agreement establish specific seasonal and annual selenium, salinity and boron load and concentration goals for Mud Slough as part of the continued use of the Grassland Bypass rather relying the Central Valley RWQCB (through CV-SALTS) or the SWRCB to establish protective objectives for this area.

5. The Addendum must provide detailed modeling of the future changes in salinity and selenium in Mud Slough and downstream, and the corresponding loads, as a result of the proposed stormwater discharges.

The Initial Study appears to rely on the analysis in Section 2.10 (Hydrology and Water Quality) to determine that the proposed project will have a less-than-significant impact to Mud Slough, and, therefore, states that no new mitigation measures are required. However, the Initial Study appears to rely on historical data with no computer simulations, and assumed future impacts will be less than historical.

A simulation of the amount of excess stormwater remaining after filling the existing and new storage basins and releasing stormwater to the SJRIP when soils are not completely saturated should be completed. The discharge of excess stormwater from the Grassland area through the Bypass should also be modeled over a range of historical rainfall events. This would disclose more specifically whether there will be any adverse environmental effects on Mud Slough, the San Joaquin River and the Delta.

Contra Costa County comments on Addendum to the Final EIS/EIR for the Grassland Bypass Project

September 13, 2019

Page 5

Thank you for considering Contra Costa County's comments on the Draft EIS. County staff and consultants are available to answer any questions you may have and to provide further input on this project. Please contact me at (925) 674-7824.

Sincerely,



Ryan Hernandez, Manager
Contra Costa County Water Agency

cc: John Kopchik, Director Conservation and Development
Leah Orloff, Contra Costa Water District
Gary Bobker, The Bay Institute
Rachel Zwillinger, Defenders of Wildlife



September 13, 2019

Joseph C. McGahan
Drainage Coordinator
San Luis & Delta-Mendota Water Authority
P.O. Box 2157
Los Banos, CA 93635
jmcgahan@summerseng.com

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Subject: Long-Term Storm Water Management Plan for the Grassland Bypass Project 2020–2045

Dear Mr. McGahan:

Contra Costa Water District (CCWD) appreciates the opportunity to comment on the Draft Long-Term Storm Water Management Plan 2020–2045 – Addendum to the Final Environmental Impact Statement/Environmental Impact Report (Final EIS/EIR) for consideration of the Grassland Bypass Project (Draft Addendum) and the associated Initial Study. CCWD has engaged in the stakeholder process that negotiated the previous Agreements for Use of San Luis Drain for the Grassland Bypass Project between the Bureau of Reclamation and the San Luis & Delta Mendota Water Authority (Use Agreements) over the past several decades, and we look forward to continuing our good relationship with the Grassland Area Farmers as we work towards a sustainable storm water management plan.

First, we would like to applaud the Grassland Area Farmers for successfully implementing the Grassland Bypass Project over the past 30 years, which has kept selenium-rich drainage out of the adjacent wildlife area and reduced the discharged selenium load by 96% and salt load by 80%. The significant reduction in discharged contaminants and salt helps protect our precious shared water resources and downstream beneficial uses. The Grassland Bypass Project has proved to be a feasible in-valley solution for agricultural drainage issues and should be used as a model for the entire Central Valley as it is seeking sustainable valley-wide salinity alternatives.

The Final Addendum should include quantifiable constraints to ensure that the trend of selenium and salt discharge reduction is not reversed and loopholes are not created by storm water discharge permits. CCWD also would like to encourage continued efforts towards reaching the goal of “zero discharge” in both selenium and salt as new technologies become available. Addressing the following specific comments in the Final Addendum will ensure that it is adequate under the California Environmental Quality Act.

1. The impacts of storm water discharges with the proposed management plan should be quantified.

The remaining element of drainage management from the Grassland Area, that of storm water management, will be challenging. Due to the uncertainties associated with storm water events, the Initial Study for the Long-Term Storm Water Management Plan did not provide quantitative

evaluation of discharges and water quality impacts with full implementation of the proposed mitigation measures. Instead, the Initial Study used historical data from 2015 to 2018 as a surrogate and assumed the actual impacts in the future would be less. CCWD agrees with the assessment that storm water events are inherently uncertain, but historical precipitation levels over a longer period should be used to estimate discharges in order to analyze likely impacts for a range of flows over different water year types.

2. A storm-driven event should be clearly defined.

The Addendum and the new agreement to use the San Luis Drain beyond 2019 (Storm Water Use Agreement) are only intended to address storm water discharge. The Draft Addendum should include a clear and quantifiable definition of a storm-driven event under which the San Luis Drain would be used. Without a clear definition, it is possible that storm water discharge permits could provide a loophole for discharging agricultural drainage and might create unintended environmental consequences.

3. Seasonal and annual load and concentration limits for selenium and salt should be specified.

The current Agreement for Continued Use of San Luis Drain (Use Agreement) clearly defines milestones to guide continuous reductions in selenium and salt discharges from the Grassland Area. In the Draft Addendum, seasonal and annual load and concentration limits, no greater than the limits for Year 2019 in the current Use Agreement, should be applied. These limits would also provide checkpoints for storm water management in the long term – if the limits are exceeded, the environmental impacts should be re-evaluated, and new actions to keep discharges within the limits should be explored.

4. Details of comprehensive monitoring plans should be added.

The current Use Agreement is implemented with a comprehensive water quality monitoring plan to ensure that the selenium and salt loads are not exceeded and a comprehensive biological monitoring plan to track of the contaminant levels in bird eggs in the area. These monitoring plans are key to measuring the progress of the Grassland Bypass Project and identifying effective drainage management actions and should continue to be implemented under the future Storm Water Use Agreement. Therefore, the Draft Addendum and Initial Study should also include details of comprehensive monitoring plans, as well as monitoring details for the new regulating reservoirs and the expanded reuse area if any.

5. The sustainability of the Reuse Area for the San Joaquin River Improvement Project should be evaluated more closely.

Figure 1 below shows the daily and monthly average salinity of the discharge from the Grassland Bypass Project as electrical conductivity (EC) values for 2000 to 2019. Since 2014, when the discharges to the San Luis Drain were reduced to storm water discharges only, the discharged salinity from the Grassland Area has increased. Although some freshening was observed after wet seasons, the overall salinity was higher post-2014 than pre-2014, when discharges occurred throughout the year. This indicates potential salt accumulation in the

Reuse Area as the discharge flows decrease. If salt keeps accumulating, the discharged salt loads and impacts on downstream water quality could increase, even with the same or lesser discharge flows. It is also possible that salt accumulation in the Reuse Area would impact the continued use of the Grassland Area in the long term, which is key to success of the Grassland Bypass Project. These potential outcomes and impacts need to be more closely evaluated. If needed, more aggressive actions, such as land retirement and desalination, should be considered to achieve salt balance and to obtain sustainability of the Reuse Area without discharging more drainage into the San Luis Drain.

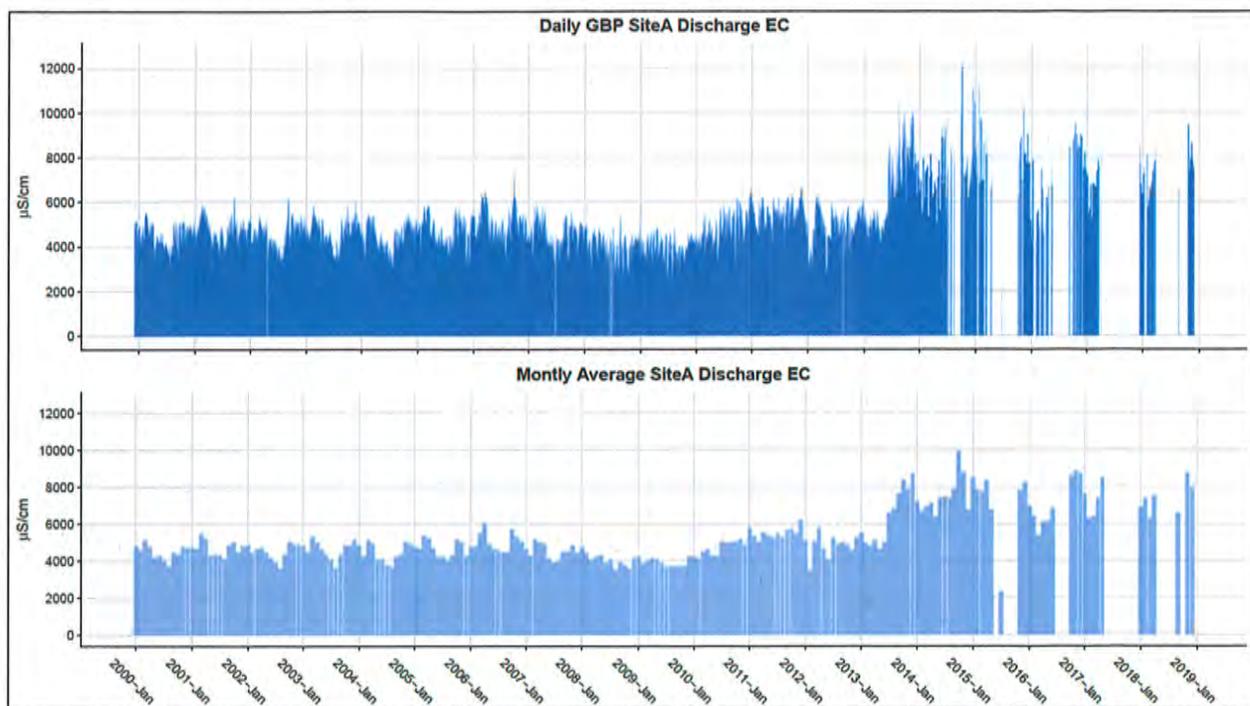


Figure 1 Electrical conductivity (EC) of discharges from Grassland Bypass Project (GBP) (2000 – 2019)

6. The Storm Water Use Agreement must be consistent with the Draft Addendum, and should also reflect the above comments.

It is our understanding that the Storm Water Use Agreement will be negotiated with, and a separate NEPA (National Environmental Policy Act) document prepared by, the Bureau of Reclamation later this year. CCWD appreciates being included in this stakeholder process. However, without the publication of a draft Storm Water Use Agreement, we are not able to review the details of the actual long-term storm water management plan at this time. The Storm Water Use Agreement must be consistent with the Draft Addendum, and both documents should also incorporate our comments in this letter.

Joseph C. McGahan, San Luis & Delta-Mendota Water Authority
Long-Term Storm Water Management Plan for the Grassland Bypass Project 2020–2045
September 13, 2019
Page 4

If you have any questions, please do not hesitate to get in touch with Lucinda Shih at (925) 688-8168 or lshih@ccwater.com, or with Yuan Liu at (925) 688-8282 or yliu@ccwater.com. We look forward to continuing to work with you on this important project.

Sincerely,



Leah Orloff
Water Resources Manager

LHS/YL:wec

cc: Ryan Hernandez, Contra Costa County
Gary Bobker, The Bay Institute
Rachel Zwillinger, Defenders of Wildlife



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General Counsel

September 13, 2019

VIA E-MAIL

Joseph C. McGahan, Drainage Coordinator
San Luis & Delta-Mendota Water Authority
P.O. Box 2157
Los Banos, CA 93635
jmcgahan@summerseng.com

**Re: Addendum to EIS/EIR for Grassland Bypass Project, 2010-2019,
SCH No. 2007121110**

Dear Mr. McGahan,

Grassland Water District and Grassland Resource Conservation District (collectively, GWD) submit these comments on the Addendum to the Final Environmental Impact Statement/Environmental Impact Report (EIS/EIR) for the Grassland Bypass Project, prepared by the San Luis & Delta-Mendota Water Authority. The Addendum addresses the continued operation and management of the Grassland Bypass Project, including the operation and management of the San Luis Drain, and related improvements at the San Joaquin River Improvement Project, for the next 25 years.

GWD is directly affected by the management of agricultural tail water and storm-induced flows that are contained and conveyed by the Grassland Bypass Project. The Project, as designed, has successfully diverted these flows around the sensitive wetlands within GWD and adjacent wildlife refuges, preventing the degradation of wetland habitat and the impermissible co-mingling of flows with higher-quality water that is delivered to wetlands under federal law.

We believe the Project is essential to the continued protection of wildlife and wildlife habitat in the Grassland Ecological Area, the importance of which is recognized under international treaties and federal law. Continued use of the San

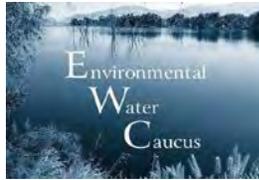
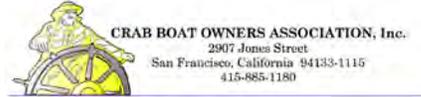
Luis Drain is essential to manage and convey stormwater flows around these wetland habitats, and to prevent the ponding of stormwater on agricultural lands near the Grassland Ecological Area, which may cause an unwanted wildlife attraction. The implementation of short-term regulating basins will add needed flexibility to manage and prevent the introduction of flows into GWD's wetland water conveyance system. We appreciate the design considerations and proposed management of these basins that will prevent wildlife attraction and use.

Thank you for providing us the opportunity to submit these comments.

Sincerely,

A handwritten signature in blue ink, appearing to read "Ricardo Ortega", with a stylized flourish at the end.

Ricardo Ortega
General Manager



CA Save Our Streams Council



September 9, 2019

Joseph C. McGahan, Drainage Coordinator
San Luis & Delta-Mendota Water Authority
P.O. Box 2157
Los Banos, CA 93635

Sue McConnell, PG
Irrigated Lands Regulatory Program
Central Valley Water Board
11020 Sun Center Dr #200
Rancho Cordova, CA 95670-6114

Rain L. Emerson, M.S.
Environmental Compliance Branch Chief
Bureau of Reclamation, South-Central California Area Office
1243 N Street, Fresno, CA 93721

Via Email

Re: Coalition Comments on Grassland Bypass Project Long-Term Storm Water Management Plan EIR Addendum and Initial Study--A Full EIR-EIS is Required.

Thank you for the opportunity to provide public input concerning the proposed Grasslands

Bypass Project Long-Term Storm Water Management Plan, 2020 – 2035 (GBP Stormwater Plan) as described in Notice of Availability (SCH No. 2007121110), draft Addendum to the 2009 GBP EIR/EIS and CEQA Initial Study.¹

The GBP began in 1995 as a two-year program, and its Federal use agreements for the San Luis Drain have been extended now through Three Use Agreements. All of these permits and environmental reviews and findings were predicated on zero discharge at the end of each period. First for 5 years, then 10 more and then 10 more. All that time--25 years--the polluted discharge was exempted from meeting protective water quality standards or only required to meet relaxed standards. Furthermore, over that 25 years the project steadily reduced both monitoring of the discharge and compliance with water quality standards. The Grassland Drainers under the GBP Storm Water Plan are now proposing a 4th Federal Use Agreement starting in January 2020. Enough is enough. Too much time has already passed without adequate progress on meeting water quality standards. Species are hanging by a thread and migratory bird deformities continue. If the 4th Federal Use Agreement is not approved by December 31, 2019, all discharges (including stormwater) into the San Luis Drain from the GBP are required to cease, and this is what should happen. The cessation of these selenium laden pollutants has been promised for the last 25 years and must stop. Further, providing an addendum rather than a full EIR/EIS to accurately inform decision makers does not comply with CEQA and NEPA requirements.

The First Use agreement² (1995) for the San Luis Drain authorized use of a 28-mile portion of the Drain by the San Luis Delta Mendota Water Authority (SLDMWA) to carry agricultural drainage water to Mud Slough. There was no stipulation to discharge stormwater. In fact, in a 1997 report titled, “A Storm Event Plan for Operating the Grassland Bypass Project”³ by the Grassland Area Farmers and the SLDMWA, several issues were identified regarding major storm events in the GBP including:

1. *Storm water runoff carries sediment that should not be transported in the Grassland Bypass, or deposited in the San Luis Drain;*
2. *It is not possible during major storm events to separate agricultural drainage water from surface runoff and storm water flows;*
3. *It will not be possible to divert all of the commingled surface runoff, storm water flows, and agricultural drainage water through the Grassland Bypass Channel during major storm events.*
4. *During some storm events, the instantaneous flow rate in Panoche Creek, which carries water from hills adjacent to the agricultural area can exceed 12,000 cubic feet per second, while the average daily flow rate during such events can exceed 2,000 cubic feet*

¹ Available at these links: http://sldmwa.org/grasslandbypass/NOA_CEQA_GBP%20Addendum%2008-14-19.pdf
<http://sldmwa.org/grasslandbypass/LTSWMP%20Initial%20Study%20080519.pdf>
<http://www.sldmwa.org/grasslandbypass/LTSWMP%20Addendum%20080519.pdf>

² See <http://calsport.org/news/wp-content/uploads/GBP-First-Use-Agreement-1995.pdf>

³ See pages 2-3: “A Storm Event Plan for Operating the Grassland Bypass Project” by the Grassland Area Farmers and the SLDMWA, 1997.

per second. These flows can generate more than 40,0000 acre-feet of water during a two-week period that includes a storm event.

Further, both the purpose of the project and use agreement confirm the use only for agricultural drainage. For example, the Grassland drainers stated explicitly in 1997, "*The Grassland Bypass Channel and the San Luis Drain were designed and constructed explicitly for the purpose of conveying agricultural drainage water. Neither facility can accommodate storm water flows nor surface runoff from major storm events.*"⁴ The 1995 First Use Agreement stated clearly, "*The AUTHORITY has requested that the UNITED STATES permit it to use a portion of the San Luis Drain consisting of approximately 28 miles from the terminus (Kesterson Reservoir) to Milepost 105.72, Check 19 (near Russell Avenue) for the discharge and transportation of a maximum flow of 150 cubic feet per second (cfs) of drainage water to Mud Slough (said portion hereinafter referred to as the Drain)*" highlight added.⁵ Finally the NEPA documents all stated the purpose of the project was for "*a field experiment designed to evaluate approaches to agricultural drainage management. There is no commitment, at this time, to approve long-term use of the Drain.*"⁶

These issues of permitting continued discharge of pollutants from the Federal San Luis Drain are significant and should not be handled by an Addendum to the 2009 GBP EIR/EIS that planned on zero discharge to the San Luis Drain after 2019.

We, the signatory organizations on these comments, recommend that the proposed 15-year extension to use the San Luis Drain to discharge stormwater into Mud Slough (North) and the San Joaquin River from Sack Dam to the Merced River be denied and that no permit or use agreement be granted. At a minimum a full Environmental Impact Report/Statement (EIR/EIS) must be completed. The CEQA addendum process being proposed would allow storm water and agricultural drain water laced with selenium (and other toxic drainwater constituents such as salt, sulfates, boron, and mercury) through the federal San Luis Drain to Mud Slough and the San Joaquin River and the Delta Estuary. Below, we detail our concerns in several areas and recommend what we believe is the only reliable and cost effective public solution--order the cessation of this polluted discharge and retire these drainage impaired lands as determined in federal study after study.⁷

⁴ Ibid. page 12.

⁵ Op. cit. First Use Agreement 1995 pages 1-2.

⁶ USBR,SLDMWA,EPA& USFWS letter to Karl Longly, CVRWQCB 11-3-95 pg 2 <http://calsport.org/news/wp-content/uploads/USBR-SLDMWA-EPA-USFWS-11-3-95-Ltr-to-CRWQCB.pdf> and Supplemental Environmental Assessment April 1991 and the FONSI dated October 18,1991.

⁷ The San Joaquin Valley Drainage Program (SJVDP) *A Management Plan for Agricultural Subsurface Drainage and Related Problems on the Westside San Joaquin Valley*, also known as the "Rainbow Report" (September 1990) Also see USGS *Technical Analysis of In-Valley Drainage Management Strategies for the Western San Joaquin Valley, California* Open-File Report 2008-1210 By: Theresa S. Presser and Steven E. Schwarzbach

The CEQA/NEPA analysis in the 2009 GBP EIR/EIS does not support an “Addendum”

Under CEQA Guidelines section 15164, an Addendum presents changes to an EIR that are not significant enough to require a supplemental EIR. A supplemental EIR is required if, as defined in Section 15162(a)(1), (a) there have been substantial changes to the Project; (b) new significant environmental effects have been identified; or (c) there has been a substantial increase in the severity of previously identified significant effects. The GBP Stormwater Plan is a substantial change from the 2009 GBP EIR/EIS. In the 2009 EIR/EIS it was assumed that all drainage discharges into the San Luis Drain would cease by the end of 2019.

Under the proposed GBP Stormwater Plan selenium contaminated discharges would continue adding additional stormwater commingled with subsurface agricultural drainage into the San Luis Drain for an additional 15 years. This is a substantial change and should be analyzed in a full EIR/EIS. Further, there are numerous impacts that are significant and need to be disclosed, including: 1) cumulative impacts to downstream beneficial uses 2) the failure to meet protective water quality standards 3) impacts to endangered and listed species and 4) migratory bird impacts. All of these impacts warrant a full EIR/EIS analysis to adequately inform decision makers of the risks posed by continuing these discharges without proper permits and compliance with the Clean Water Act, including state and federal non-degradation policies.

The undersigned organizations, have a long-standing interest in the GBP because contaminants in agricultural drainage discharges have profound effects to the environment, including effects to downstream waterways, aquatic life, and migratory birds. We include our previous comments on the GBP EIR/EIS and Basin Plan Amendment by reference.⁸

<https://pubs.er.usgs.gov/publication/ofr20081210> Also see USBR Final Environmental Impact Statement in May 2006 and signed the Record of Decision (ROD) for the *San Luis Drainage Feature Re-evaluation EIS* in March 2007, selecting the “In-Valley/ Water Needs/ Land Retirement Alternative.”

⁸ Coalition comments of environmental, fishing and environmental justice organizations opposed U.S. EPA's proposed federal water quality criteria for selenium applicable to California. March 28, 2019.

<http://calsport.org/news/wp-content/uploads/PCL-et.-al-Cmt-Letter-EPA-Ca-Selenium-Criteria-Doc-No.-EPA-HQ-OW-2018-00....pdf>

Comments of the Pacific Coast Federation of Fishermen's Associations Requesting Denial of Proposed Waste Discharge Requirements for Surface Water Discharges from the Grassland Bypass Project, Stephan C. Volker, June 22, 2015

https://www.waterboards.ca.gov/centralvalley/water_issues/grassland_bypass/wdrs_development_archive/2015may/2015_05_gbp_com_pcffa.pdf

Re: Land Retirement Benefits to Grasslands Bypass Project and Draft Waste Discharge Requirements, Coalition Letter to CVRWQCB Follow-up on Grasslands WDR, September 8, 2014

<http://calsport.org/news/wp-content/uploads/Coalition-response-letter-to-Longley-re-gbp-land-retirement.pdf>

Coalition Comments Re Draft Waste Discharge Requirements for the Grassland Bypass Project, June 30, 2014. <http://calsport.org/news/wp-content/uploads/Final-coalition-comments-on-Draft-GBP-WDR-6.30.14.pdf>

The proposed drainers' GBP Stormwater Plan effectively sanctions continued excessive pollution, especially during stormwater events, of Mud Slough (North), the San Joaquin River, and ultimately the Sacramento-San Joaquin Delta, by failing to enforce science-based protective water quality standards for selenium and allowing the continued contamination of these water bodies. Excess selenium in streams kills or deforms fish and other aquatic life and is a human-health concern in drinking-water supplies. Under the proposed Stormwater Plan, selenium (and other drainwater constituents, such as salt, sulfates, boron, and mercury) will continue to be discharged from the federally owned San Luis Drain directly into the waters of the state and nation. The failure to enforce protective selenium water quality objectives transfers pollution from these Grassland drainers through this federal drain to the waters of the state, harming beneficial uses of these waters for our members' commercial beneficial use, the domestic water supply, public health, and other public trust values. In addition, impacts of climate change which were not considered in previous environmental assessments in concert with implementation of the GBP Stormwater Plan must be disclosed in a full EIR/EIS review.

The GBP Drainers propose to continue to use the federally owned San Luis Drain from 2020 to 2035 to convey stormwater commingled with contaminated agricultural drainage water to the San Joaquin River via Mud Slough (North). The GBP Stormwater Plan includes a number of management actions and commitments that will not be sufficient to protect downstream beneficial uses..

Coalition Comments: Grasslands Bypass Project -- Violations of the Endangered Species Act and Reduced Monitoring Threaten Endangered Species and Public Health, November 27, 2013 <http://calsport.org/news/wp-content/uploads/2013/12/Coalition-Letter-on-GBP-ESA-Violations-Monitoring-Reductions-LTR.Corrected-.pdf>

Coalition Comments: Opposition to the Proposal to Curtail Monitoring at the Grassland Bypass Project. August 11, 2011 <http://calsport.org/news/wp-content/uploads/2011/09/Opposition-To-Grassland-Bypass-Monitoring-Reductions.pdf>

CSPA, CWIN and AquAlliance submit Comments to State Water Board Regarding Grassland Bypass Project and Basin Plan Amendment. September 22, 2010. <http://calsport.org/news/cspa-cwin-and-aqualliance-submit-comments-to-state-water-board-regarding-grassland-bypass-project-and-basin-plan-amendment/>

Sierra Club et. al. Comments: Grassland Bypass Project & San Joaquin River Selenium Basin Plan Amendments September 22, 2010. https://www.waterboards.ca.gov/water_issues/programs/tmdl/docs/sjr_selenium/comments092210/jim_metropulos.pdf

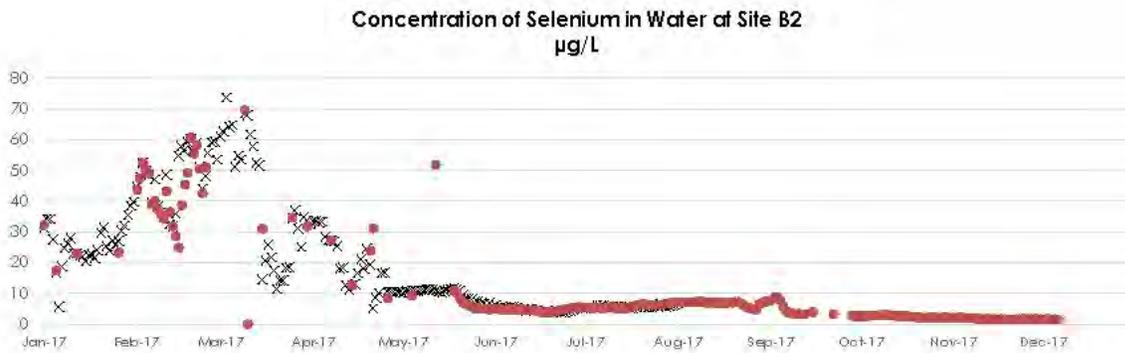
Comments of California Sportfishing Protection Alliance and California Water Impact Network on the draft environmental impact report for the Irrigated Lands Regulatory Program and related documents. Also attached are several comments prepared by three expert consultants September 27, 2010 <http://calsport.org/doc-library/pdfs/207.pdf>

Environmental Coalition Comments on Draft Staff Report for Grasslands Bypass Project Basin Plan Selenium Amendments to The Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, April 26, 2010 https://www.waterboards.ca.gov/centralvalley/water_issues/grassland_bypass/grasslands_bpa_coalition_ltr.pdf

A National Pollutant Discharge Elimination System (NPDES) permit must be required.

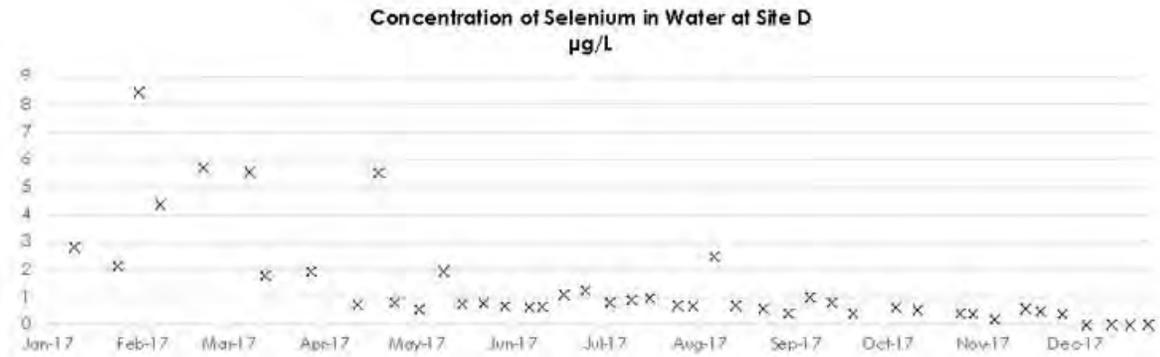
The US EPA and by delegation California State and Regional Boards have the authority to regulate agricultural drainage under the Clean Water Act (CWA), having comprehensive federal statutory authority for regulating pollutant discharges to the nation’s navigable waters. The term “pollutant” includes “agricultural waste discharged into water” and the term “navigable waters” encompasses the San Joaquin River, its principal tributaries, and arguably inflowing ditches and drains. Thus, discharges of agricultural drainage water to the San Joaquin River and its tributaries is subject to regulation under the CWA (Thomas and Leighton-Schwartz, 1990). The GBP Stormwater Plan should be required to obtain a NPDES permit to discharge pollution to navigable waters or to discharge commingled groundwater, surface water and agricultural drainage containing pollutants such as selenium, boron, salt, sulfate and mercury.⁹

Significant discharges of selenium-laden drainage and contaminated groundwater still is occurring from the GBP. For example, during the winter/spring of 2017, water quality monitoring data clearly show high selenium concentrations (e.g., 20-40 µg/L) associated with high flow conditions in water entering the San Luis Drain from the GBP. The figure below shows selenium concentrations at Site B2 in the San Luis Drain during 2017.



Although the San Luis Drain flow adds a relatively small percentage of flow to Mud Slough, it nevertheless substantially increased the selenium concentrations in Mud Slough in 2017 to unacceptably high levels of 5-10 µg/L. Dilution is not the solution to pollution—especially in the case of selenium, which bioaccumulates in the food chain and magnifies impacts on fish, wildlife, migratory birds and terrestrial species (Lemly and Skorupa, 2007; Skorupa 1998; USDI 1998).

⁹ <https://www.epa.gov/cwa-404/clean-water-act-section-402-national-pollutant-discharge-elimination-system>



A comprehensive cumulative effects analysis on downstream impacts of the GBP Stormwater Plan in an EIR/EIS is needed.

The GBP Stormwater Plan will allow continued discharges of a blend of stormwater, polluted groundwater and drainage to Mud Slough (North) and the San Joaquin River. This plan should be analyzed in a full EIR/EIS and the cumulative impacts to downstream anadromous fish, wildlife, and terrestrial species should be included in that analysis. Impacts to the Delta Estuary and its species from the proposed action, as well as other actions, are profound. Continued operation of the CVP and SWP is likely to jeopardize the continued existence of endangered species in the Delta, and stormwater runoff and subsurface agricultural drainage from GBP and nearby CVP-irrigated lands contaminates the San Joaquin River and hence the Delta with selenium and other toxic constituents. See testimony from Restore the Delta on Salinity and Selenium Science and Modeling for the Bay/Delta Estuary.¹⁰

Further, in a letter from National Marine Fisheries Service (NMFS) to the SWRCB on the San Joaquin River Selenium Control Plan Basin Plan Amendment (dated September 22, 2010), NMFS states that selenium contamination in the San Joaquin River is problematic in restoring spring and fall-run Chinook salmon to the upper reach of the San Joaquin River. The NMFS letter further noted that selenium in the San Joaquin River could negatively affect Central Valley steelhead and the Southern distinct population segment of the North American green sturgeon¹¹.

Studies by the US Geological Survey have documented elevated levels of selenium in the food chain and green sturgeon. Since these impacts are potentially significant, an EIS must be prepared¹² along with a complete CEQA analysis to accurately inform decision-makers before allowing these pollutants to be spread downstream.

¹⁰ Testimony on Recent Salinity and Selenium Science and Modeling for the Bay/Delta Estuary Submitted by Tim Strohshane Senior Research Associate California Water Impact Network (CWIN) August 17, 2012
https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/california_waterfix/exhibits/docs/RestoretheDelta/part2/RTD_161.pdf

¹¹https://www.waterboards.ca.gov/water_issues/programs/tmdl/docs/sjr_selenium/comments092210/howard_brown.pdf

¹² See 40 C.F.R. § 1508.27(b)(9)

Greater outflow of the San Joaquin River associated with CVP and SWP operations in the Delta could result in even further transport of selenium and sulfate from agricultural drainage discharges in the San Joaquin River and into the Delta (Lucas and Stewart 2007). Also, note the Lucas and Stewart (2007) discussion on seasonal trends of bivalve selenium concentrations in the North Delta and its relationship to the San Joaquin River, “*Several explanations for the temporal trends in bivalve Se concentrations (which did not exist in the 1980’s) are possible. One possibility is that refinery inputs of selenium have been replaced by San Joaquin River inputs. Models indicate that if SJR inflows to the Bay increase, as they may have in recent years with barrier management, particulate Se concentrations in the Bay could double, even with no increase in irrigation drainage inputs to the SJR. The fall increase in Se in C. amurensis also occurs during the time period when the ratio of SJR/Sac River inflow is highest. Further changes in water management could exacerbate these trends...*”.

Stormwater runoff from GBP and its upstream watershed can also contain elevated concentrations of mercury. Results from the CalFed Mercury study found elevated levels of mercury in fish from the lower San Joaquin River and Mud Slough (Davis et al. 2000; Slotton et al. 2000). A significant finding of the CalFed Mercury Study in the San Joaquin Basin was that Mud Slough contributes about 50% of the methylated mercury at Vernalis (legal boundary of the Delta), but only 10% of the water volume during the non-irrigation season (September to March) (Stephenson et. al., 2005).

Sulfate loading in the San Joaquin River from the GBP discharges in concert with Delta operations could result in downstream environmental impacts that should be considered in a full EIR/EIS. Sulfate reducing bacteria are the primary agents responsible for the methylation of mercury in aquatic ecosystems. Wood et al. (2006) found that sulfate concentrations are about seven times higher in the San Joaquin River than in the Sacramento River, and that addition of sulfate is predicted to stimulate methylmercury production when it is limiting. Two factors influencing sulfate concentrations in the Bay-Delta are the electrical conductivity (EC) and the ratio of San Joaquin River to Sacramento River water.

The 5 ppb Se water quality performance goal in Mud Slough and San Joaquin River upstream of Merced is not protective of downstream beneficial uses and public trust resources.

Pursuant to the Endangered Species Act (ESA) of 1973 (as amended), and prior to the USEPA promulgating water quality objectives (including selenium) for the State of California in the California Toxics Rule (CTR), the USEPA was required to consult with the US Fish and Wildlife Service and the National Marine Fisheries Service (Services) and obtain the Services’ concurrence that none of the proposed criteria would jeopardize any ESA-listed species. Upon that review, the Services found that the 5 µg/L chronic criterion for selenium proposed by USEPA in the CTR would likely jeopardize 15 ESA-listed species (Emphasis added). To avoid a final “Jeopardy Opinion” from the Services, and the associated legal ramifications, the USEPA agreed to reevaluate their CWA criteria guidance for selenium by 2002 (FWS and NMFS 2000).¹³

¹³ <https://www.regulations.gov/contentStreamer?documentId=EPA-HQ-OW-2018-0056-0009&contentType=pdf>

To comply with the Service's 2000 Biological Opinion on the CTR, USEPA in November 2018 proposed new water quality objectives for California (lentic and lotic water, and fish tissue) that would be protective of listed species: Federal Selenium Criteria for Aquatic Life and Aquatic-Dependent Wildlife Applicable to California Docket RIN, 2040-AF79 EPA-HQ-OW-2018-0056 FRL-9989-46-OW. The USEPA's proposed rule did not include waters within known selenium-contaminated geographical areas, including tributary flows into the San Francisco Bay Delta system such as, the San Joaquin River from Sack Dam to Vernalis, Mud Slough, Salt Slough, along with the water supply channels in the Grassland watershed, and the Grasslands Ecological Area in Fresno and Merced Counties. Instead, the USEPA proposed rule defers to existing State established water quality objectives for Mud Slough (North) and the San Joaquin River upstream of the Merced River of 5 µg/L 4-day average (as defined in the Regional Board's June 2010 Basin Plan Amendment to address Selenium Control in the San Joaquin River Basin¹⁴).

Supporting documentation for this USEPA Docket for Selenium in California includes 2 reports by USFWS: Species at Risk from Selenium Exposure in California Inland Surface Waters, Enclosed Bays and Estuaries, for a list of species considered most at risk for selenium exposure in CA¹⁵ and Species at Risk from Selenium Exposure in the San Francisco Estuary¹⁶. The species identified at most risk for selenium exposure in the San Joaquin Valley and San Francisco Estuary were denoted as:

- Mammals: Buena Vista Lake Ornate Shrew;
- Birds: Bald Eagle, California Black Rail, California Clapper Rail, California Least Tern, Greater Scaup, Lesser Scaup, White-winged Scoter, Surf Scoter, Black Scoter;
- Reptiles: Giant Garter Snake;
- Fish: Chinook Salmon, Steelhead, Green Sturgeon, White Sturgeon, Delta Smelt, and Sacramento Splittail.

The proposed GBP Stormwater Plan is seeking to comply with the selenium water quality objectives specified in the 2010 Basin Plan Amendment (5 µg/L, 4-day average), but the proposal is lax, allowing for high spikes of selenium contaminants that will bio-accumulate throughout the ecosystem. The Stormwater plan includes mitigation measures that establish a Mud Slough (North) water quality "goal" of 3 µg/L Se, 4-day average. For every 3 months that meet this 3 µg/L performance goal, one exceedance of 5 µg/L 4-day average is allowed. These goals and objectives would likely result in harm to aquatic fish and wildlife as denoted in the Service's 2000 Biological Opinion on the CTR. We recommend that State and Federal Fish and Wildlife agencies be consulted on the effects of implementation of the GBP Stormwater Plan and relaxed standards that are not protective of migratory birds and endangered anadromous fish populations.

¹⁴ https://www.waterboards.ca.gov/centralvalley/water_issues/grassland_bypass/sac_sj_basins_salinity_staffrpt.pdf

¹⁵ <https://www.regulations.gov/contentStreamer?documentId=EPA-HQ-OW-2018-0056-0144&contentType=pdf>

¹⁶ <https://www.regulations.gov/contentStreamer?documentId=EPA-HQ-OW-2018-0056-0265&contentType=pdf>

Our organizations have submitted several comment letters on protective selenium objectives in California.¹⁷ In March 2019, PCFFA and others provided comments to the USEPA on their proposed selenium criteria for California.¹⁸ We recommended that a chronic, legally binding selenium objective of no greater than 2 µg/L (4-day average) be included in the GBP Stormwater Plan for receiving waters of stormwater/drainage discharges. That comports with the recommendations of several experts that the criterion should be 2 µg/L or less (DuBowy 1989; Lemly and Skorupa 2007; Peterson and Nebeker 1992; Swift 2002). Exceeding the water criterion should trigger additional biological monitoring to determine if the tissue criteria for selenium proposed by USEPA has also been exceeded.

The Proposed and Existing Monitoring and Reporting Program for GBP are not sufficient to assess environmental impacts and protect beneficial uses.

The monitoring and reporting program that was revised by the Regional Board in 2015¹⁹ is inadequate to determine the level of pollution being discharged by the GBP and adjacent agricultural lands, and the harm it is causing to the environment. We have provided comments three times on the inadequacies of the Revised Monitoring and Reporting Program for the GBP. We hereby incorporate by reference our coalition letters of August 11, 2011, April 22, 2013, and November 26, 2013, and June 22, 2015. We also refer to comments submitted to the Regional Board by USFWS on the Revised Monitoring and Reporting Program for the GBP dated June 22, 2015 and June 25, 2015.²⁰ The USFWS recommended that the Regional Board reinstate weekly water quality monitoring for selenium at GBP Stations J, K, and L2 as exceedences of 2 µg/L are still occurring in those wetland channels, those channels are listed on the State's 303(d) list as impaired for selenium, and elevated selenium in those channels could be resulting in harm to federally listed species.

As part of Regional Board **ORDER R5-2015-0094**, Waste Discharge Requirements for the GBP (2015 WDR), sampling frequencies for Mud Slough, Grasslands wetland channels, and Salt Slough were reduced or completely eliminated. Stations A, B, C, I2, F, J, K, L/L2, M/M2, G and H have all been eliminated from required monitoring. We can see no technical justification or rationale for this reduction in monitoring for a project that has exceeded water quality objectives

¹⁷ <http://calsport.org/news/wp-content/uploads/EPA-Selenium-Cmt-LTR-Re-Docket-No.-EPA-HQ-OW-2004-0019.pdf> and <http://calsport.org/news/wp-content/uploads/Technical-Review-2004-EPAs-Draft-Tissue-Based-Selenium-Criterion.pdf>

¹⁸ Coalition comments of environmental, fishing and environmental justice organizations oppose U.S. EPA's proposed federal water quality criteria for selenium applicable to California. March 28, 2019. <http://calsport.org/news/wp-content/uploads/PCL-et.-al-Cmt-Letter-EPA-Ca-Selenium-Criteria-Doc-No.-EPA-HQ-OW-2018-00....pdf>

¹⁹ https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/fresno/r5-2015-0094.pdf

²⁰ https://www.waterboards.ca.gov/centralvalley/water_issues/grassland_bypass/wdrs_development_archive/2015may/2015_05_gbp_com_usfws.pdf See this link for a copy of the USFWS letter to Ms. Margaret Wong Regional Water Quality Control Board, Central Valley Region: USFWS Comments on the May 2015 Draft Waste Discharge Requirements for the Surface Water Discharges from the Grassland Bypass Project and the Discharges to Groundwater from the Growers in the Grassland Drainage Area @ <http://calsport.org/news/wp-content/uploads/Exhibit-5.pdf>

and standards for more than 20 years. Significant spikes of selenium and other drain water pollutants are not being monitored under the existing monitoring and reporting requirements.

In addition, we specifically protested the change in the Hills Ferry monitoring site (Site H) to China Island (Site R). There is a comprehensive database with documented selenium water quality violations at Hills Ferry. Site R appears closer to the mouth of the Merced River than Site H, allowing for greater dilution and underrepresenting the contaminant threat in the San Joaquin River upstream of the Merced River.

We also opposed adoption of the monitoring and reporting program in the 2015 WDR and recommended a more robust monitoring plan similar to the 2001 GBP monitoring requirements. The reduction in monitoring frequency and locations will prevent the collection of necessary data sufficient to protect public trust values, endangered species and evaluate compliance with water quality standards. Here we reference and reiterate our previous comments and recommend a vigorous monitoring program that does not hide or understate the discharge of selenium and other toxins through stormwater discharges into Mud Slough and the San Joaquin River.

We further recommend that monitoring and reporting for total mercury and methyl-mercury concentrations in water and biotic tissue be required at all sampling locations of the GBP to establish a mass-balance of sources of mercury in this watershed.

The Stormwater Detention Basins - Another Kesterson in the Making - Effects to Wildlife Are Not Disclosed.

The proposed GBP Stormwater Plan includes use of an unspecified acreage of existing ponds and the addition of up to 200 acres of stormwater detention basins (regulating reservoirs) to store and regulate disposal or distribution of stormwater. How is such a basin different from an evaporation pond? Proposed use of regulating ponds to help control flow as a part of the engineered reuse system and ponding during flood events in the GBP area also may create a potential wildlife exposure risk similar to those originally realized at Kesterson National Wildlife Refuge (Presser and Ohlendorf, 1987). Ponding of stormwater and agricultural drainage will support an aquatic food chain and be attractive hazard to birds within a short period of time.

Selenium poses a hazard to fish and wildlife because of its toxicity at environmentally relevant concentrations and its tendency to accumulate in food chains (Skorupa, 1998). The San Joaquin Valley provides critically important habitat for wintering waterfowl of the Pacific Flyway. Eight to twelve million ducks and geese, along with hundreds of thousands of shorebirds and other marsh birds annually winter or pass through the valley. The history of the ecological impacts of disposal of selenium at Kesterson National Wildlife Refuge within the valley is well documented (e.g., Presser and Ohlendorf, 1987; SJVDP, 1990a, b). Additionally, from 1986 to 1993, the National Irrigation Water-Quality Program (NIWQP) of the U.S. Department of the Interior (USDOI) studied whether contamination was induced by irrigation drainage in 26 areas of the western United States. This program developed guidelines to interpret effects on biota of selenium (USDOI, 1998). These guidelines, along with revisions based on more recent studies and modeling, can be used to interpret and guide management and mitigation of the risk of

selenium in food chains and wildlife.²¹ The GBP reuse areas present opportunities for wildlife use and selenium exposure. Proposed use of regulating ponds to help control flow as a part of the engineered reuse system and ponding during stormwater events in the GBP area also may create a potential wildlife exposure risk similar to those originally realized at Kesterson National Wildlife Refuge²² (Presser and Ohlendorf, 1987).

The GBP has been monitoring and reporting annual bird use from April thru June at the SJRIP drainage reuse area since 2008. Many of those reports are posted on the SFEI website, however, no reports have been posted since the 2015 report. We note that additional reports were made available during the public comment period at this website.²³

The 2017 wildlife monitoring report for the GBP drainage reuse area (SJRIP) documented 50 avian species were observed at the drainage reuse area between April 13 and June 21, 2017. Eighteen species either were observed nesting or were suspected of nesting, including Swainson's hawk, a species listed by the State of California as a threatened. Twelve of the species observed—spotted sandpiper, least sandpiper, whimbrel, western wood-peewee, willow flycatcher, American pipit, savannah sparrow, White-crowned sparrow, common yellowthroat, yellow warbler, Wilson's warbler, and western tanager—were present only as spring Migrants.²⁴

The draft Addendum notes that the filling of these stormwater detention basins will begin with the first significant storm (typically December), and basins will be emptied by May. So, the potential is that stormwater commingled with drainage water will be stored in basins for up to 6 months! If these basins will hold water longer than 30 days, a state water permit is required (CCR, Title 23, Sec, 657-658). As described in Skorupa et al (2004), low winter temperatures substantively increase the toxicity of dietary selenium to birds, fish, and mammals. And the SJRIP wildlife monitoring reports do document use of the drainage reuse area by a large number of avian species (50 in 2017), including twelve species that are spring migrants. We recommend, therefore, that effects of disposal of selenium in the SJRIP and stormwater detention basins consider the effects of winter stress to birds in an EIR/EIS analysis.

Expansion of the SJRIP Drainage Reuse Area--An Unpermitted Selenium Disposal Site Masquerading as a Treatment Facility.

The GBP Stormwater Plan Addendum includes a proposed expansion of the existing drainage reuse area from 6,100 acres analyzed in the 2009 EIR/EIS to 7,550 acres of reuse area and increase in acreage of 1,450 acres. A significant environmental concern at the SJRIP is ponding of seleniferous drainage water within the fields of the reuse area. The addendum includes mention of a contingency plan in the event of inadvertent flooding, but only a reference to the

²¹ <https://pubs.usgs.gov/pp/p1646/>

²² <https://pubs.usgs.gov/of/2008/1210/>

²³ <http://www.summerseng.com/grasslandbypassproject.htm>

²⁴ <https://drive.google.com/file/d/1mudCtShFmoQ-RW0YJaVF2-oia2TIXqn5/view>

plan is included in the Addendum. It should be noted that bird use could increase in the vicinity of the SJRIP with the addition of drainwater detention basins.

Further, the 2017 SJRIP Wildlife Monitoring Report noted that the mitigation site for the SJRIP, which was supposed to provide compensation for avian exposure at the SJRIP, documented extremely elevated selenium concentrations in some bird eggs collected there. This suggests that the mitigation site is not providing compensation benefit for the SJRIP and also highlights the breadth of selenium contamination and wildlife exposure in this area.²⁵

Table 5. Selenium Concentrations in Recurvirostrid Eggs from the Mitigation Site in 2017

| ID Number | Field Number ¹ | Date | Embryo ² | | Embryo Age (days) | Selenium (ppm, dry wt) ³ | Log | |
|--|---------------------------|--------|---------------------|--------|-------------------|-------------------------------------|---------|-------------|
| | | | Condition | Status | | | Base 10 | Anti-Log |
| Black-Necked Stilt | | | | | | | | |
| PM-01 | MS-01 | June 9 | U | U | 1 | 3.74 | 0.5729 | |
| PM-02 | MS-02 | June 9 | L | N | 13 | 4.52 | 0.6551 | |
| PM-03 | MS-03 | June 9 | U | U | 1 | 5.54 | 0.7435 | |
| American Avocet | | | | | | | | |
| PM-04 | MA-01 | June 9 | L | N | 9 | 51.1 | 1.7081 | |
| PM-05 | MA-02 | June 9 | U | U | 1 | 8.7 | 0.9395 | |
| Arithmetic/geometric mean | | | | | | 14.7 | 0.9238 | 8.4 |
| Standard deviation | | | | | | 20.4 | 0.4591 | 2.9 |
| Standard error | | | | | | | 0.2053 | 1.6 |
| Lower limit of 95% confidence interval | | | | | | | 0.5214 | 3.3 |
| Upper limit of 95% confidence interval | | | | | | | 1.3263 | 21.2 |

¹ See Appendix H.

² L = live; N = normal; U = unknown.

³ ppm, dry wt = parts per million dry weight.

Treatment Methods Have Not Operated Effectively.

The 2009 EIR/EIS for the GBP included treatment as a significant component of the plan to reduce selenium in discharges to the San Luis Drain. What is the status of the treatment plant? The 2009 GBP EIR/EIS included a bio-treatment plant to reduce the selenium load being discharged, and to achieve the zero discharge of subsurface agricultural drainage after 2019. There is no mention of treatment in the GBP Stormwater Plan. More than thirty million dollars has been invested in a demonstration treatment plant that still is not functioning and where a federal audit found questionable expenditures.²⁶

²⁵ *Ibid.* page 20.

²⁶ <https://www.doioig.gov/reports/bureau-reclamation%E2%80%99s-cooperative-agreement-no-r16ac00087-panoche-drainage-district>

Long term viability and legality of GBP Drainers' Proposed Actions.

Given that the latest plan for adding the discharge polluted storm water is a 15-year program, it raises questions regarding the long-term viability of the actions proposed in the GBP Stormwater Plan. The 2009 EIR/EIS relied on unproven treatment technologies to treat and reduce the volume of drainage from the GBP that would need to be disposed of. These treatment technologies have yet to prove reliable or cost effective. Without treatment, how will drainage volumes and selenium loads be managed at the SJRIP? Can the SJRIP remain viable after 15 additional years of irrigation with selenium and salt-laden drainage? What is the life of the reuse area before too much salt accumulation prevents future agricultural use? Where is the selenium and salt that is accumulated in the SJRIP ultimately disposed of? All of these questions need to be evaluated in a full EIR/EIS. Dubbed a treatment area, the SJRIP is looking more and more like an unpermitted selenium and salt disposal facility.

Reuse of polluted drainage in the GBP's SJRIP drainage reuse area won't eliminate the loading of wastes. It is simply stockpiling wastes on land. The continued recycling of agricultural drainage will ultimately turn vast areas of the Central Valley into wastelands. The practice of drainage reuse is not sustainable and will inevitably lead to having to permanently fallow more and more land.

Land Retirement should be considered as a viable alternative.

Our organizations have previously submitted comments to the Regional Water Board about the success of land retirement in relation to the GBP's drainage volume load reductions.²⁷ The USBR's 2004 Broadview Water Contract Assignment Draft Environmental Assessment cites Summer's Engineering as predicting a load reduction of 17,000 tons of salt, 1,500 pounds of selenium, and 52,000 pounds of boron to the San Joaquin River each year from the cessation of irrigation on 9,200 acres of agricultural land in Broadview Water District as per Table 4-1 below (USBR 2004). This amounts to a per acre reduction of 0.28 AF of drainage, 1.85 tons of salt, 0.16 pounds of selenium and 5.65 pounds of boron.

²⁷ See Coalition letter to CVRWQCB on Selenium Basin Plan Amendment, April 26, 2010, p 15-16; http://www.waterboards.ca.gov/centralvalley/water_issues/grassland_bypass/grasslands_bpa_coalition_ltr.pdf and Coalition letter to Karl Longley on Land Retirement Benefits to Grasslands Bypass Project and Draft Waste Discharge Requirements: <http://calsport.org/news/wp-content/uploads/Coalition-response-letter-to-Longley-re-gbp-land-retirement.pdf>

**TABLE 4-1
DRAINAGE AND WATER QUALITY EFFECTS OF PROPOSED ACTION ON THE
SAN JOAQUIN RIVER**

| | Existing Conditions | Under Proposed Action Conditions | Estimated Reduction Attributable to Proposed Action |
|--|------------------------|--|---|
| BWD Drainage to San Joaquin River (afy) | 3,700 | 1,100 | 2,600 |
| BWD Estimated Salt Production (tons/yr) | 24,300 | 7,300 | 17,000 |
| BWD Estimated Selenium Production (lbs/yr) | 2,140 | 640 | 1,500 |
| BWD Estimated Boron Production (lbs/yr) | 74,000 | 22,000 | 52,000 |

Source: Summers Engineering, 2003

Land retirement likely accounted for most of the reductions in selenium, and the majority of reductions in drainage volume, boron and salt claimed by the Grasslands Bypass Project in the 2009 EIR/EIS.

The US EPA, in a letter regarding the Bay Delta Conservation Plan,²⁸ strongly recommended the USBR’s Land Retirement Program be revived to save water and prevent further selenium contamination and impacts to endangered species (page 13):

***Recommendations:** To mitigate for the project’s impacts to selenium levels in the estuary as a result of the BDCP operations, consider reviving and funding the Bureau of Reclamation’s Land Retirement Program¹⁷ to remove from cultivation and irrigation large areas of selenium laden lands on the West side of the San Joaquin Valley. This would save irrigation water, reduce discharges of selenium into the San Joaquin River basin, and advance attainment of selenium reduction targets¹⁸ set by EPA and the Central Valley Regional Water Quality Control Board. Evaluate the extent to which restoration of these “retired” lands to the native plant community could also contribute to the recovery of threatened and endangered plants and animals listed by FWS. Consider analyzing the cost/benefit of implementing treatment technologies vs. land retirement. Although cost/benefit analyses are not required under NEPA, such an analysis may be useful to decision makers and the public in this case.”*

Further, the USBR’s the San Luis Drainage Feature Re-Evaluation (SLDFRE) Final EIS in 2006 found that land retirement was the most cost-effective solution to managing drainage in the San Luis Unit. Three land alternatives were evaluated in the SLDFRE EIS, 306,000 acres, 194,000 acres and 100,000 acres respectively. The Final EIS found that the only environmentally and economically preferred alternative was to retire 306,000 acres (In-Valley/Drainage Impaired Area Land Retirement).²⁹ It’s clear from the NED findings in Table N-10 below that additional land retirement would provide increased net economic benefits.

²⁸ <http://calsport.org/news/wp-content/uploads/bay-delta-conservation-plan-deis.pdf>

²⁹ SLDFRE Final EIS, Appendix N, Table N-10, page N-17, accessed at https://www.usbr.gov/mp/nepa/includes/documentShow.php?Doc_ID=2240

Table N-10
Benefit/Cost Summary
Changes Relative to the No Action Alternative (\$/year in 2050)

| Subarea | In-Valley Disposal | Out-of-Valley Disposal | In-Valley/ Groundwater Quality Land Retirement | In-Valley/ Water Needs Land Retirement | In-Valley/ Drainage-Impaired Area Land Retirement |
|------------------------|----------------------|------------------------|--|--|---|
| Total NED Benefit | \$37,962,000 | \$38,430,000 | \$31,164,000 | \$20,629,000 | \$9,931,000 |
| Total NED Cost | 51,225,000 | 51,370,000 | 46,767,000 | 30,778,000 | 6,288,000 |
| Net NED Benefit | -\$13,263,000 | -\$12,940,000 | -\$15,603,000 | -\$10,149,000 | \$3,643,000 |

Notes:

Values represent net NED benefits relative to No Action.

Values rounded to nearest \$1,000. Totals may not add due to rounding.

Moreover, the US Fish and Wildlife Service, in their Fish and Wildlife Coordination Act Report (FWCAR) for SLDFRE, recommended that all of the northerly area within the San Luis Unit (GBP Drainage Area) be retired as well,³⁰ but USBR did not consider that alternative. The Service concluded on page 67 of the FWCAR, *“To avoid and minimize risks and effects to fish and wildlife resources in the San Joaquin Valley and Pacific Flyway, the Service recommends land retirement on all drainage impaired lands in the SLU. This approach would maximize the elimination of drainage at its source, and therefore avoidance of adverse fish and wildlife effects.”*

By ignoring permanent land retirement, the GBP Stormwater Plan Addendum will continue to kick the can down the road and concentrate and store salt, selenium, boron and other toxic substances in the shallow aquifers of the Grasslands area. This creates an ongoing risk of toxic selenium discharges to wetland water supply channels, Mud Slough, the San Joaquin River and the Bay-Delta estuary, especially in wetter years.

Conclusion

We urge all polluted discharges of agricultural drainwater and stormwater cease as required under the current federal Use Agreement and Water Board WDR. We recommend land retirement and curtailing the importation of additional water supplies that mobilizes these contaminants on the west side of the Southern San Joaquin Valley. Despite repeated promises, no viable treatment has been developed in the more than two decades of myriad attempts. Before proceeding to load even more contaminants on downstream beneficial uses, we recommend no new use agreement be granted and before any further discharges of either stormwater, agricultural drainage or contaminated groundwater are permitted, that a full EIS/EIR be completed. Before the proposed drainers' GBP Stormwater Plan is considered, a complete environmental analysis is needed. The EIS/EIR should include:

³⁰ SLDFRE Final EIS, Appendix M, USFWS FWCAR accessed at https://www.usbr.gov/mp/nepa/includes/documentShow.php?Doc_ID=2236

- A National Pollutant Discharge System Permit prior to any additional use of the federal San Luis drain for discharge of contaminants from the west side into the San Joaquin River and Delta Estuary;
- A comprehensive cumulative effects analysis of stormwater and drainage disposal into Mud Slough and the San Joaquin River and Delta Estuary;
- A chronic, legally binding selenium objective of no greater than 2 µg/L (4-day average) is established for receiving waters of stormwater/drainage discharges;
- No exceedance of the 2 µg/L selenium water criterion which if exceeded should trigger all discharges to cease and additional biological monitoring to determine if the tissue criteria for selenium proposed by USEPA in November 2018 has also been exceeded;
- An analysis of effects of disposal of selenium in the SJRIP and stormwater detention basins to wildlife including factors such as winter stress;
- A description of the status and viability of drainage treatment at the SJRIP;
- A description and evaluation of the long-term viability of drainage disposal strategies at the SJRIP and describe where is the salt, selenium and other contaminants that accumulate are ultimately disposed. This should not become an unregulated dumping ground for west side contaminants.

Finally, Congress in its authorization of the San Luis Unit in 1960, never envisioned use of the San Luis Drain for stormwater discharge. As stated Congress provided a under specified conditions including approval by the State of California³¹ for “...*provision for constructing the San Luis interceptor drain to the Delta designed to meet the drainage requirements of the San Luis unit...*”, *Senate Report No 154, page 2, San Luis Unit, Central Valley Project, California, April 8, 1959.*³² This brings into question whether the "Drain" can be legally used for storm water discharge without Congressional approval.

The use of the federal San Luis Drain for stormwater also raises consistency questions with existing State Board orders. The California State Water Resources Control Board (SWRCB), following the Kesterson debacle, issued its Order WQ 85-1 in February 1985. The SWRCB found that agricultural drainage and wastewater reaching Kesterson Reservoir “is creating and threatening to create conditions of pollution and nuisance” (Emphasis added). The Order then warned “If the Bureau closes Kesterson Reservoir and continues to supply irrigation water to Westlands Water District without implementing an adequate disposal option, continued irrigation in the affected area of Westlands Water District could constitute an unreasonable use of water”

³¹ See PL86-488 San Luis Act June 3, 1960: Proviso: (2) *received satisfactory assurance from the State of California that it will make provision for a master drainage outlet and disposal channel for the San Joaquin Valley,which will adequately serve, by connection therewith, the drainage system for the San Luis unit or has made provision for constructing the San Luis interceptor drain to the delta designed to meet the drainage requirements of the San Luis unit as generally outlined in the report of the Department of the Interior, entitled "San Luis Unit, Central Valley Project," dated December 17, 1956.* The State of California has not made such a provision and Congress never consider the use of the drain for stormwater.

³² See H. Rpt 399...<http://calsport.org/news/wp-content/uploads/Exhibit-3.pdf>
S. Rpt 154...<http://calsport.org/news/wp-content/uploads/Exhibit-4.pdf>

(Emphasis added). We urge the project proponents and State and Federal permitting agencies to not repeat the mistakes made at Kesterson Reservoir in the 1980's. The continued irrigation of these toxic soils constitutes an unreasonable use of water and continued and future disposal of agricultural drainage in ponds, land, and in surface waters will cause significant harm to public trust resources and violates non-degradation policies.

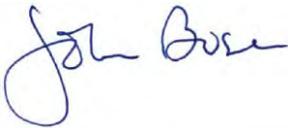
Thank you for your consideration,



Jonas Minton
Senior Water Policy Advisor
[Planning and Conservation League](#)
jminton@pcl.org



Noah Oppenheim
Executive Director
[Pacific Coast Federation of Fishermen's Asso.](#)
noah@ifrfish.org



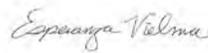
John Buse
Senior Counsel, Legal Director
Center for Biological Diversity
jbuse@biologicaldiversity.org



Barbara Barrigan-Parrilla
Director
Restore the Delta
Barbara@restorethedelta.org



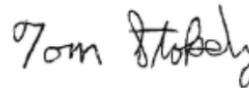
Carolee Krieger
Executive Director
California Water Impact Network
caroleekrieger7@gmail.com



Espe Vielma
Executive Director
Environmental Justice Coalition for Water
espe@ejcw.org



Conner Everts
Executive Director
Environmental Water Caucus
Southern California Watershed Alliance
[Environmental Water Caucus](#)
connere@gmail.com



Tom Stokely
Director
Save California Salmon
tgstoked@gmail.com



Bill Jennings
Chairman Executive Director
California Sportfishing Protection Alliance
deltakeep@me.com



Barbara Vlamis,
Executive Director
AquAlliance
barbarav@aqualliance.net



Stephen Green
President
Save the American River Association
gsg444@sbcglobal.net



Lloyd G. Carter
President, Board of Directors
California Save Our Streams Council
lcarter0i@comcast.net



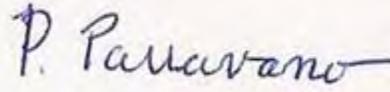
Eric Wesselman
Executive Director
Friends of the River
Eric@friendsoftheriver.org



Larry Collins
President
Crab Boat Owners Association
papaduck8@gmail.com



Kathryn Phillips
Director
Sierra Club California
kathryn.phillips@sierraclub.org



Pietro Parravano
President
Institute for Fisheries Resources
pietro15@comcast.net



Dr. C. Mark Rockwell, D.C.
President & Conservation VP,
Northern California Council, Fly Fishers International
mrockwell1945@gmail.com

Frank Egger
President
North Coast Rivers Alliance
fegger@pacbell.net



Caleen Sisk
Chief and Spiritual Leader of the
[Winnemem Wintu Tribe](http://WinnememWintuTribe.com)
caleenwintu@gmail.com



Adam Keats
Senior Attorney
Center for Food Safety
AKeats@CenterforFoodSafety.org

References Cited

Davis, J. A., M.D. May, G. Ichikawa, and D. Crane. 2000. Contaminant concentrations in fish from the Sacramento-San Joaquin Delta and Lower San Joaquin River, 1998. San Francisco Estuary Institute, Richmond, CA.

DuBowy P. 1989. Effects of diet on selenium bioaccumulation in marsh birds. *J Wildl Manag* 53:776–781.

[FWS and NMFS] US Fish and Wildlife Service and US National Marine Fisheries Service. 2000. Final biological opinion on the effects of the U.S. Environmental Protection Agency's "Final rule for the promulgation of water quality standards: establishment of numeric criteria for priority toxic pollutants for the State of California." Washington DC: US Department of the Interior, Fish and Wildlife Service.

Lemly, A. D., & Skorupa, J. P. 2007. Technical Issues Affecting the Implementation of US Environmental Protection Agency's Proposed Fish Tissue-Based Aquatic Criterion for Selenium. *Integrated Environmental Assessment and Management*, 3(4), 552-558.

Lucas, L., and Stewart, A.R. 2007. Transport, transformation, and effects of selenium and carbon in the Delta of the Sacramento-San Joaquin Rivers: Implications for ecosystem restoration: CALFED Ecosystem Restoration Program, Agreement No. 4600001955, Project No. ERP-01-C07, 515 p.

Peterson JA, Nebeker AV. 1992. Estimation of waterborne selenium concentrations that are toxicity thresholds for wildlife. *Arch Environ Contam Toxicol*. 23:154–162.

Presser, T.S. and S. N. Luoma. 2006. Forecasting Selenium Discharges to the San Francisco Bay-Delta Estuary: Ecological Effects of a Proposed San Luis Drain Extension. U.S. Geological Survey Open-File Report 00-416, 196 pp.

Presser, T.S. and S.E. Schwarzbach. 2008. Technical Analysis of In-Valley Drainage Management Strategies for the Western San Joaquin Valley, California. U.S. Geological Survey Open-File Report 2008-1210, 37 pp.

Presser, T.S., and Ohlendorf, H.M., 1987, Biogeochemical cycling of selenium in the San Joaquin Valley, California, USA: *Environmental Management*, v. 11, p. 805-821.

San Joaquin Valley Drainage Program, 1990a, A management plan for agricultural subsurface drainage and related problems on the westside San Joaquin Valley: San Joaquin Valley Drainage Program, Sacramento, California, 183 p.

San Joaquin Valley Drainage Program, 1990b, Fish and wildlife resources and agricultural drainage in the San Joaquin Valley, California, volumes I and II: San Joaquin Valley Drainage Program, Sacramento, California, 878 p. and 2 appendices.

Skorupa, J.P., 1998, Selenium poisoning of fish and wildlife in nature: lessons from twelve real-world examples, *in* Frankenberger, W.T., Jr., and Engberg, R.A., eds., *Environmental Chemistry of Selenium*: New York, New York, Marcel Dekker Inc., p. 315-354.

Slotton, D. G., T.H. Suchanek, and S.M. Ayers. 2000. CALFED-UC Davis Delta Mercury Study: Year 2 Findings. In CALFED Bay-Delta Program Science Conference 2000. Data presented at the CALFED Science Conference in October 2000.

Stephenson, M., C. Foe, G.A. Gill, and K.H. Coale. 2005. Transport, Cycling, and Fate of Mercury and Methylmercury in the San Francisco Delta and Tributaries: An Integrated Mass Balance Assessment Approach. Project Highlight Report, Submitted to: C. Kelly, and D. Podger, California Bay Delta Authority, Sacramento, CA. 12 pp.

Swift MC. 2002. Stream ecosystem response to, and recovery from, experimental exposure to selenium. *J Aquat Ecosys Stress Recov* 9:159–184.

Thomas, G.A. and M. Leighton-Schwartz. 1990. Legal and Institutional Structures for Managing Agricultural Drainage in the San Joaquin Valley: Designing a Future. Prepared for the San Joaquin Valley Drainage Program, Sacramento, CA. 10 chapters and 8 appendices.

(USDI) U.S. Department of the Interior, 1998, Constituents of concern: selenium, *in* Guidelines for interpretation of the biological effects of selected constituents in biota, water, and sediment, National Irrigation Water Quality Program Information Report No. 3: National Irrigation Water Quality Program, U.S. Department of the Interior, Washington, DC, p. 139-184.

Wood, M.L., C. Foe, and J. Cooke. 2006. Sacramento – San Joaquin Delta Estuary TMDL for Methylmercury. Draft Staff Report for Scientific Peer Review. Central Valley Regional Water Quality Control Board, Rancho Cordova, CA, 177 pp.

(SWRCB) California State Water Resources Control Board. February 1985. In the Matter of the Petition of Robert James Claus for Review of Inaction of California Regional Water Quality Control Board, Central Valley Region. SWRCB, File No A-354, Order No. W.Q. 85-1, Sacramento, CA. 65 pp. and appendix.

(USBR) U.S. Bureau of Reclamation. 2004. Broadview Water Contract Assignment Project Environmental Assessment/Finding of No Significant Impact. USBR, Fresno CA. 7 chapters and 3 appendices.

Stephan C. Volker
Alexis E. Krieg
Stephanie L. Clarke
Jamey M.B. Volker (Of Counsel)

Law Offices of
Stephan C. Volker
1633 University Avenue
Berkeley, California 94703
Tel: (510) 496-0600 ❖ Fax: (510) 845-1255
svolker@volkerlaw.com

10.497.01

September 13, 2019

via U.S. Mail and email

Joseph C. McGahan, Drainage Coordinator
San Luis & Delta-Mendota Water Authority
P.O. Box 2157
Los Banos, CA 93635
jmcgahan@summerseng.com

Re: Comments of Pacific Coast Federation of Fishermen's Associations, California Sportfishing Protection Alliance, Friends of the River, San Francisco Crab Boat Owners Association, Inc., Institute for Fisheries Resources, and Felix Smith on the Addendum to the Final Environmental Impact Statement / Environmental Impact Report for the Grassland Bypass Project, 2010-2019, SCH No. 2007121110

Dear Mr. McGahan:

We submit the following comments on the San Luis & Delta Mendota Water Authority's ("SLDMWA's") Addendum to the Final Environmental Impact Statement / Environmental Impact Report for the Grassland Bypass Project ("Addendum") on behalf of Pacific Coast Federation of Fishermen's Associations, California Sportfishing Protection Alliance, Friends of the River, San Francisco Crab Boat Owners Association, Inc., Institute for Fisheries Resources, and Felix Smith (collectively, "PCFFA").

Since 1995, the Grassland Bypass Project ("GBP") has conveyed water contaminated with pollutants, including selenium, through the San Luis Drain ("Drain") to Mud Slough, a water of the United States. After the original five-year term, use of the GBP was extended through 2009, and again through 2019. And now, despite being made fully aware of the detrimental consequences of the GBP's discharge of pollutants, SLDMWA proposes to extend the term of the Drain Use Agreement once again. But any extension must be denied because the negative impacts to the environment from the GBP's unlawful discharge of pollutants to Mud Slough and the San Joaquin River are unacceptable.

As you are aware, the Drain's discharge of pollutants into Mud Slough, a water of the United States, without a National Pollutant Discharge Elimination System ("NPDES") permit

violates the Clean Water Act, 33 U.S.C. section 1251, et seq. (“CWA”). Any extension of the GBP Use Agreement would be in furtherance of that CWA violation. Therefore SLDMWA is barred by law from seeking an extension of the Use Agreement. Instead, it must apply for the NPDES permit that is required for the Drain’s discharge of pollutants.

Additionally, SLDMWA and its co-operator the U.S. Bureau of Reclamation must complete a Subsequent Environmental Impact Report (“SEIR”) and Supplemental Environmental Impact Statement (“SEIS”) to comply with the California Environmental Quality Act, Public Resources Code section 21000 et seq. (“CEQA”) and the National Environmental Policy Act, 42 U.S.C. section 4321 et seq. (“NEPA”).¹ Under CEQA Guidelines section 15162, a subsequent EIR must be prepared when:

- “(1) Substantial changes are proposed in the project which will require major revisions of the previous EIR . . . due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;

- (2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR . . . due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

- (3) New information of substantial importance, . . . shows any of the following:
 - The project will have one or more significant effects not discussed in the previous EIR or negative declaration;
 - Significant effects previously examined will be substantially more severe than shown in the previous EIR;
 - Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
 - Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.”

14 C.C.R. (“CEQA Guidelines”) § 15162(a).

¹ United States Fish and Wildlife Service must also comply with NEPA in evaluating whether to approve the modifications contemplated by the Addendum. Initial Study 1-1.

Similarly under NEPA, an SEIS is required wherever “[t]he agency makes substantial changes in the proposed action that are relevant to environmental concerns; or [t]here are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.” 40 C.F.R. § 1502.9(c). And where, as is the case here, an EIS is “more than 5 years old,” it should be “carefully re-examined” to determine if a supplement is required. 46 Fed.Reg. 18026 (Mar. 23, 1981), as amended 51 Fed.Reg. 15618 (Apr. 25, 1986), Question 32. “[I]f there remains ‘major Federal actio[n]’ to occur, and if the new information is sufficient to show that the remaining action will ‘affect the quality of the human environment’ in a significant manner or to a significant extent not already considered, a Supplemental EIS *must* be prepared.” *Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 374 (1989), quoting from 42 U.S.C. § 4332(2)(C) (emphasis added).

Both the test under CEQA for an SEIR, and the test under NEPA for an SEIS, are easily met here. The GBP has significant adverse impacts due to its discharge of substantial quantities of selenium and other pollutants whose cumulative effects are severe and growing – and unstudied. Contrary to the Addendum’s claim that “the prior CEQA analyses retain their relevance,” the evidence in the Addendum shows otherwise. The project proposed in the Addendum makes substantial changes to the GBP that were *not* previously considered and that substantially *increase* the impacts evaluated in the 2009 FEIS/FEIR. Therefore, SLDMWA’s reliance on an addendum – rather than a Subsequent EIR and a Supplemental EIS – fails to provide decisionmakers and the public with the information needed to make an accurate and informed decision, in violation of CEQA and NEPA.

I. SLDMWA MUST NOT GRANT A USE AGREEMENT EXTENSION WITHOUT FIRST OBTAINING AN NPDES PERMIT

By allowing an extension of the GBP Use Agreement, SLDMWA is authorizing the continued discharge of pollutants, including selenium, from the Drain into Mud Slough, a water of the United States. SLDMWA has admitted that the Drain, a point source under the CWA, discharges pollutants into waters of the United States. That discharge requires an NPDES permit under the CWA. SLDMWA cannot lawfully authorize the continuance of this ongoing violation of the CWA. Therefore the extension should be denied in its entirety. SLDMWA’s attempted end-run around this legal mandate – by claiming that the Drain is exempt from the CWA NPDES permit requirement – was forcefully rejected by the Ninth Circuit in its recent ruling, *PCFFA v. Glaser*, ___ F.3d ___, 2019 WL 4230097 (Sept. 6, 2019), Slip Op. at 8-19.²

On September 6, 2019, the Ninth Circuit ruled that PCFFA’s lawsuit challenging SLDMWA’s and the Bureau of Reclamation’s failure to secure an NPDES permit for the GBP as required by the CWA was wrongfully dismissed by the district court. The Ninth Circuit held that

² The Ninth Circuit’s Slip Opinion in *PCFFA v. Glaser* is attached as Exhibit 1.

“Congress intended for discharges that include return flows from activities unrelated to crop production to be excluded from the statutory exception, thus requiring an NPDES permit for such discharges.” *PCFFA v. Glaser*, Slip Op. at 15. The wastewaters discharged through the GBP, and specifically through the Drain, are comingled and include both agricultural return flows and non-agriculture wastewater. Therefore, an NPDES permit is required for operation of the Drain.

The Court correctly ruled that “the defendant carries the burden to demonstrate the applicability of a statutory exception to the CWA” and that neither SLDMWA nor Reclamation had presented such evidence. *Id.*, at 10. Indeed, they could not carry that burden because there is overwhelming evidence to the contrary that the flows through the Drain are not composed “entirely” of irrigated agricultural return flows. As PCFFA properly alleged, “discharges from highways, residences, seepage into the [Drain] from adjacent [unfarmed] lands, and sediments from within the [Drain]” comingle with the irrigated agriculture return flows. *Id.*, at 17. Because the polluted waters that discharge from the Drain are comingled flows, the Drain cannot lawfully operate without an NPDES permit. Therefore, SLDMWA cannot authorize an extension of the GBP Use Agreement unless and until such a permit has been lawfully obtained.

II. Extension of the Use Agreement Will Cause New Significant Environmental Effects and Will Substantially Increase the Severity of Previously Identified Effects Necessitating Preparation of an SEIR/SEIS.

The Addendum studies the impacts of the Long-Term Storm Water Management Program (“LTSWMP”). If approved, the LTSWMP will add approximately 200 acres of “storage basins,” expand the Project’s reuse area and otherwise modify the operation of the Project. These changes will have significant impacts that require preparation of an SEIR and SEIS. SLDMWA’s contrary claims are meritless.

A. Surface Water, Groundwater, and Soils

The Addendum states that the LTSWMP’s use of 200 acres of storage basins to collect storm water for subsequent release will not significantly impact water quality. Addendum 3-4. The Addendum claims that, by impounding storm flows, and metering their release onto the reuse area, contaminated discharges would be reduced or avoided. *Id.* This assertion is based on the assumption that storm water that would be collected in these storage basins from December to May would not discharge pollutants such as selenium, boron, salt, and molybdenum to Mud Slough and thence the San Joaquin River. Addendum 3-3. That premise is false. An NPDES permit is therefore required for any such discharge. Unless and until an NPDES permit is secured, this project may not proceed further.

In an attempt to reduce the contaminated groundwater in these discharges, the LTSWMP calls for wastewater sumps to be turned off “prior to and during wet weather flows.” *Id.* But as the impounded storm water collects in these storage basins, it will interact with the already

impaired groundwater and soils underlying and surrounding the basins, and collect and mobilize these contaminants. Hence, the impounded wastewater will simply create additional saturated soils, ponds of contaminated water, and polluted run-off, all of which will continue to enter the Drain through seepage, and ultimately discharge into Mud Slough.

Further, the approximately 180,000 cubic yards – so far – of contaminated sediment SLDMWA claims it has removed from the Drain will leach additional contaminants back into the system. Much of this sediment was apparently relocated – but never treated – to old drains, and placed in other parts of the reuse area. Water will continue to infiltrate this contaminated sediment, and remobilize these contaminants – including high levels of selenium and other pollutants – into the water table, and the San Luis Drain.

The LTSWMP would also expand the size of the reuse area. The Addendum states that the expansion is necessary because the existing reuse area cannot successfully manage the seleniferous water without dangerous ponding. Addendum 1-11. In other words, the reuse area was unable to serve the purpose for which it was designed. Instead of reevaluating the wisdom of the system, SLDMWA is doubling-down on the Project by expanding its size. But the SLDMWA did not perform any new modeling of the water quality impacts associated with the LTSWMP, including impacts resulting from the increase in the size of the reuse area or the use of these storage basins. Addendum 3-11. By relying on out-of-date modeling that does not accurately reflect the LTSWMP's impacts or the conditions at the reuse area, SLDMWA has precluded informed decisionmaking and therefore failed to comply with CEQA and NEPA. Under CEQA Guidelines section 15162 and 40 C.F.R. section 1502.9(c), these new and substantially increased impacts must be thoroughly studied in an SEIR/SEIS.

B. Biology

The changes contemplated in the Addendum will substantially increase the severity of previously identified biological impacts and cause significant new biological impacts that were not considered in the 2009 FEIS/FEIR. For example, the Addendum proposes “to accumulate storm water in the [storage basins in the GDA] as needed to reduce peak flows during high rainfall events . . . for subsequent release of the storm water through the Drain or to the reuse area.” Addendum 2-3. As the Addendum acknowledges, use of storage basins in the GDA has the potential to expose waterfowl to water with elevated selenium levels if the basins cannot promptly be drained. Addendum 2-3. But nothing in the Addendum, 2009 FEIS/FEIR, or the Initial Study indicates that the basins will be promptly drained, or that these impacts will be otherwise mitigated to insignificance.

The Addendum claims that “[w]ater in the basins would be distributed to the SJRIP to meet irrigation demand as soon as practical,” but “as soon as practical” does not ensure that the basins will be “promptly drained” to protect wildlife. Addendum 2-3. In fact, SLDMWA will only deviate from its primary goal of distributing the water “as soon as practical” “[i]n rare cases

. . . to prevent evapo-concentration if there is not sufficient reuse capacity to drain the basins.” Addendum 2-3 to 2-4. The only guarantee the Addendum provides is that the basins would be emptied by late May. Addendum 2-4. Aside from a late May deadline, the Addendum fails to provide any guidelines or criteria for when the basins will be drained, nor does it even consider what actions and facilities would be needed to promptly drain the basins to protect wildlife.

The Addendum and Initial Study argue that mitigation measures designed to limit impacts of irrigation ditches in the 2009 FEIS/FEIR will help “avoid impacts to wildlife” from these storage basins, but the mitigations proposed are probably – if not demonstrably – ineffective and have their own impacts that must be considered in an SEIR/SEIS. Addendum 2-3; Initial Study 2-14 to 2-16. The 2009 FEIS/FEIR proposed mitigations to make irrigation ditches less attractive and to haze birds to limit nesting and foraging in those irrigation ditches. Addendum 3-6. The majority of the measures designed to make irrigation ditches less attractive are inapplicable to the storage basins, both because the physical structures are different and because the storage basins already exist, limiting the potential to incorporate mitigations. And hazing has significant impacts because it displaces wildlife from its foraging, breeding and nesting habitat. Those impacts must be examined in an SEIR/SEIS. CEQA Guidelines § 15162(a); 40 C.F.R. § 1502.9(c). In any event, hazing would be ineffective because it relies on observation to determine when it is necessary – a self-defeating requirement since these storage basins will not be monitored 24 hours a day, 7 days a week.

Furthermore, the project includes a 1,450-acre expansion of the existing reuse facility – the SJRIP – to 7,550 acres. The 2009 FEIS/FEIR analyzed a 6,100 acre reuse facility, and the proposed expansion “is an additional 650 acres over the maximum size anticipated in the 2009 Final EIS/EIR.” Addendum 2-5; 2009 FEIS/FEIR 2-2. While the “additional acreage would be managed in the same manner as the existing acreage with the same biological monitoring requirements established by the U.S. Fish and Wildlife Service (USFWS) in their Biological Opinion,” that does not negate the significant new and increased impacts that this substantial change will have on the surrounding environment. Addendum 2-5; CEQA Guidelines § 15162(a); 40 C.F.R. § 1502.9(c). As the Addendum admits, “[t]he primary environmental concern is an increased potential for ponding of seleniferous water within the fields of the SJRIP, which could be an attractive nuisance to wildlife, particularly birds.” Addendum 2-5.

Indeed, in “2003, a pasture at the existing reuse area site attracted waterfowl when it was inadvertently flooded. This flooded area created ideal ecological conditions for shorebird foraging and nesting and thus, a number of pairs responded opportunistically and bred in the field. *Recurvirostrid eggs collected near the pasture had highly elevated [selenium] concentrations.*” Addendum 3-6 to 3-7 (emphasis added). But the Addendum dismisses this concern, claiming that “other impacts would be created if the area is not enlarged to handle agricultural drainage.” Addendum 2-5. But deliberating exposing waterfowl to these poisonous waters is a crime under the takings prohibition of the Migratory Bird Treaty Act, 16 U.S.C. section 703. An SEIR/SEIS is needed both to assess the Project’s impacts on wildlife, and also

to determine what these “other” undisclosed impacts may be and to allow the public and decisionmakers to weigh them and make an informed decision.

The Addendum and Initial Study again rely on ineffective mitigation measures from the 2009 FEIS/FEIR in an ill-advised attempt to reduce these new significant and substantially increased impacts. Supposedly, “[m]itigation contained in the Grassland Bypass Project Final EIS/EIR for the existing reuse facility would apply to this area also. This mitigation includes a contingency plan in the event of inadvertent flooding in the reuse area due to breakage of a water supply canal or delivery facility.” Addendum 2-5; Initial Study 1-11. But this one-page contingency plan is vague and fails to provide any enforceable guidelines. The plan, if it can even be called that, recommends that “ponded water . . . be eliminated through the discharge of the water into a tail-water return system *or* by pumping the water into one of the supply channels in the project *or* a tail-water return system” within 24 hours. Initial Study, Appendix D, D-2 (emphasis added). But nothing in this contingency plan explains when or how to utilize any of the options presented. Nor does the plan enforce the 24-hour ponding elimination requirement. Instead, the contingency plan defers mitigation for ponding that occurs for more than 24 hours, stating that “an event-specific monitoring plan will be developed to monitor the impacts on bird species resulting from exposure to ponded water.” Initial Study, Appendix D, D-2. In other words, make it up as you go. That approach is the exact opposite of the searching examination and public review of a project’s impacts *before project approval* that CEQA and NEPA demand.

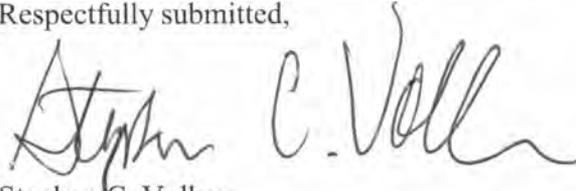
While acknowledging that the SJRIP field will be increased in size, that field flooding has occurred, and that the flooded field created “ideal ecological conditions for shorebird foraging and nesting, and thus, a number of pairs responded opportunistically and bred in the [contaminated] field,” the Addendum simultaneously dismisses this concern. Instead, SLDMWA claims that a vague and unenforceable mitigation measure that was never analyzed with regard to a reuse area of this size is sufficient. But it is not. An SEIR/SEIS is required to analyze the impacts of the proposed project. CEQA Guidelines § 15162; 40 C.F.R. § 1502.9(c).

For the foregoing reasons, particularly the Ninth Circuit’s recent ruling requiring an NPDES permit for commingled discharges of pollutants into a water of the United States, any extension of the GBP Use Agreement should be denied. SLDMWA must prepare an SEIR/SEIS to consider the impacts of the proposed Project, including the impacts to surface water, groundwater, soil, and biology. SLDMWA’s reliance on an Addendum to support this highly impactful extension violates the CWA, CEQA and NEPA.

Please make these comments part of the public record in this proceeding.

Joseph C. McGahan
September 13, 2019
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Respectfully submitted,

A handwritten signature in black ink, reading "Stephan C. Volker". The signature is written in a cursive style with a large, prominent "V" at the end.

Stephan C. Volker

Attorney for Pacific Coast Federation of Fishermen's
Associations, California Sportfishing Protection Alliance,
Friends of the River, San Francisco Crab Boat Owners
Association, Inc., Institute for Fisheries Resources, and
Felix Smith

Joseph C. McGahan
September 13, 2019
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Enclosures

LIST OF EXHIBITS

1. *Pacific Coast Federation of Fisherman's Associations, et al. v. Glaser, et al.*, Ninth Circuit Case No. 17-17130, September 6, 2019 (for publication)

EXHIBIT

1

FOR PUBLICATION

**UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT**

PACIFIC COAST FEDERATION OF
FISHERMEN'S ASSOCIATIONS;
CALIFORNIA SPORTFISHING
PROTECTION ALLIANCE; FRIENDS OF
THE RIVER; SAN FRANCISCO CRAB
BOAT OWNERS ASSOCIATION, INC.;
THE INSTITUTE FOR FISHERIES
RESOURCES; FELIX SMITH,
Plaintiffs-Appellants,

v.

DONALD R. GLASER, Regional
Director of the U.S. Bureau of
Reclamation; UNITED STATES
BUREAU OF RECLAMATION; SAN LUIS
& DELTA MENDOTA WATER
AUTHORITY,
Defendants-Appellees.

No. 17-17130

D.C. No.
2:11-cv-02980-
KJM-CKD

OPINION

Appeal from the United States District Court
for the Eastern District of California
Kimberly J. Mueller, District Judge, Presiding

Argued and Submitted June 10, 2019
San Francisco, California

Filed September 6, 2019

Before: MARY M. SCHROEDER and MILAN D. SMITH, JR., Circuit Judges, and DOUGLAS L. RAYES,* District Judge.

Opinion by Judge Milan D. Smith, Jr.

SUMMARY**

Clean Water Act

The panel reversed the district court's judgment in an action alleging that the drainage system managed by the U.S. Bureau of Reclamation and the San Luis & Delta Mendota Water Authority discharged pollutants into surrounding waters in violation of the Clean Water Act, 33 U.S.C. §§ 1251–1387.

The Central Valley Project is a federal water management project. The Grasslands Bypass Project, jointly administered by the defendants, is a tile drainage system that consists of a network of perforated drain laterals underlying farmlands in California's Central Valley that catch irrigated water and direct it to surrounding waters.

The Clean Water Act generally requires that government agencies obtain a National Pollutant Discharge Elimination System permit before discharging pollutants from any point

* The Honorable Douglas L. Rayes, United States District Judge for the District of Arizona, sitting by designation.

** This summary constitutes no part of the opinion of the court. It has been prepared by court staff for the convenience of the reader.

source into navigable waters of the United States. There is an exception to that permitting requirement “for discharges composed entirely of return flows from irrigated agriculture.” 33 U.S.C. § 1342(l)(1).

The panel held that the district court properly interpreted “discharges . . . from irrigated agriculture,” as used in § 1342(l)(1), to mean discharges from activities related to crop production. The panel held that the district court ought to have begun its analysis with the statutory text, but its reliance on legislative history to construe this portion of the statute was not erroneous. The panel further held, however, that the district court erred by interpreting “entirely” to mean “majority,” and by placing the burden on plaintiffs to demonstrate that the discharges were not covered under § 1342(l)(1), rather than placing the burden on defendants to demonstrate that the discharges were covered under § 1342(l)(1). The panel concluded that the district court’s erroneous interpretation of the word “entirely” was the but-for cause of the dismissal of plaintiffs’ Vega claim (concerning groundwater discharges from lands underlying a solar product), and the panel therefore reversed the district court’s dismissal of that claim. The panel further concluded that the district court’s dismissal of plaintiffs’ other claims was also erroneous, reversed the dismissal of those claims, and remanded for the district court to reconsider them under the correct interpretation of § 1342(l)(1).

The panel held that the district court erred by striking plaintiffs’ seepage and sediment theories of liability from plaintiffs’ motion for summary judgment because the first amended complaint encompassed those claims.

COUNSEL

Stephan C. Volker (argued), Alexis E. Krieg, Stephanie L. Clarke, and Jamey M.B. Volker, Law Offices of Stephan C. Volker, Berkeley, California, for Plaintiffs-Appellants.

Brian C. Toth (argued) and Martin F. McDermott, Attorneys; Eric Grant, Deputy Assistant Attorney General; Jeffrey H. Wood, Acting Assistant Attorney General; United States Department of Justice, Environment & Natural Resources Division, Washington, D.C.; Amy L. Aufdenberge, Office of the Solicitor, Department of the Interior, Washington, D.C., for Defendants-Appellees Donald R. Glaser and United States Bureau of Reclamation. Eric J. Buescher (argued), and Joseph W. Cotchett, Cotchett Pitre & McCarthy LLP, Burlingame, California; Diane V. Rathmann, Linneman Law LLP, Dos Palos, California; for Defendant-Appellee San Luis & Delta Mendota Water Authority.

OPINION

M. SMITH, Circuit Judge:

California's Central Valley features some of the most fertile agricultural land in the United States, but it typically receives less rainfall than necessary to cultivate the crops grown in the Valley. To help address this problem, the federal government has constructed and managed several irrigation and drainage projects.

Plaintiffs, a group of commercial fishermen, recreationists, biologists, and conservation organizations, sued Defendants Donald Glaser, the United States Bureau of

Reclamation, and the San Luis & Delta Mendota Water Authority, alleging that the drainage system managed by Defendants discharges pollutants into surrounding waters, in violation of the Clean Water Act (CWA), 33 U.S.C. §§ 1251–1387. Plaintiffs appeal several rulings by the district court in favor of Defendants that ultimately led to the stipulated dismissal of Plaintiffs’ single claim remaining for trial. We reverse and remand.

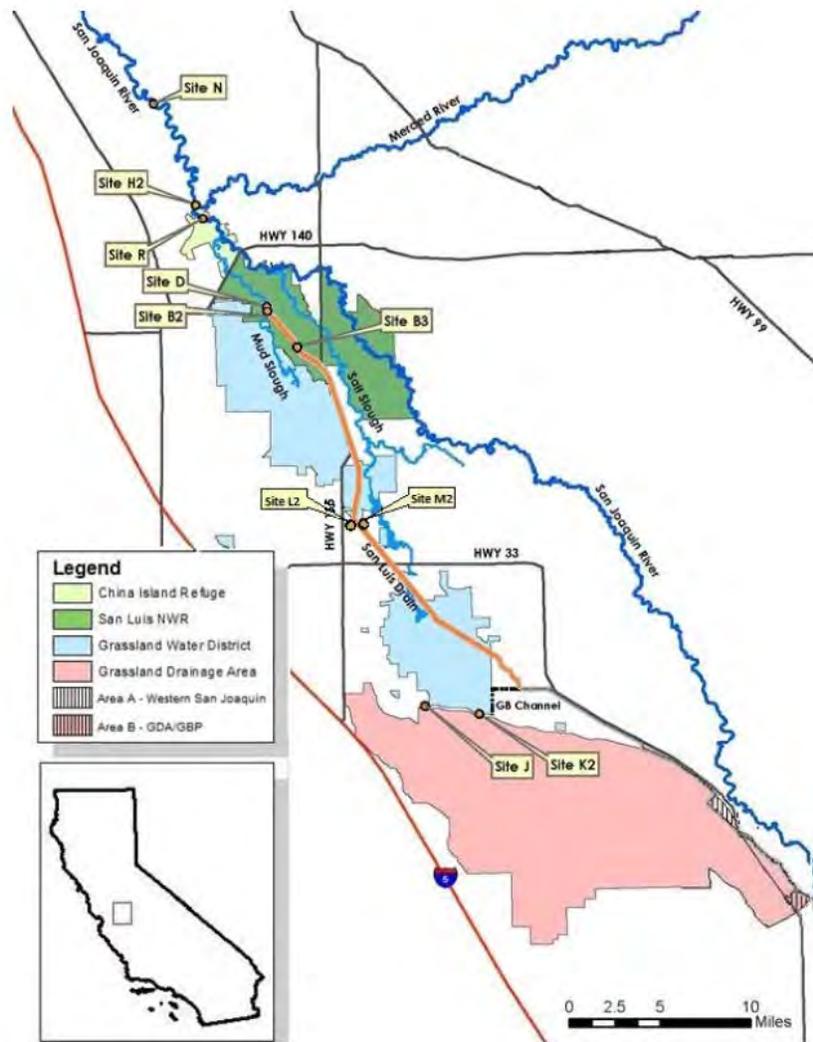
FACTUAL AND PROCEDURAL BACKGROUND

A. Factual Background

As “the largest federal water management project in the United States,” the Central Valley Project (CVP) “provides the water that is essential to [the California Central Valley’s] unparalleled productivity.” *Cent. Delta Water Agency v. United States*, 306 F.3d 938, 943 (9th Cir. 2002). Among other functions, the CVP “transfer[s] water from the Sacramento River to water-deficient areas in the San Joaquin Valley and from the San Joaquin River to the southern regions of the Central Valley.” *San Luis & Delta-Mendota Water Auth. v. Jewell*, 747 F.3d 581, 594 (9th Cir. 2014).

“Any water project that brings fresh water to an agricultural area must take the salty water remaining after the crops have been irrigated away from the service area.” *Firebaugh Canal Co. v. United States*, 203 F.3d 568, 571 (9th Cir. 2000). Otherwise, irrigating the selenium and salt-rich soils causes pollutants to leach into groundwater. The Grasslands Bypass Project (the Project), jointly administered by Defendants, was created for this purpose. The Project is “a tile drainage system that consists of a network of perforated drain laterals underlying farmlands in California’s Central Valley that catch irrigated water and

direct it to” surrounding waters. The map below depicts the Project’s location:



The Project includes the San Luis Drain (the Drain), labeled on the map above, which is designed to collect and convey contaminated groundwater from lands adjacent to and upstream of the Drain to Mud Slough. As both parties acknowledge, the Drain discharges substantial quantities of selenium and other pollutants into the Mud Slough, the San Joaquin River, and the Bay-Delta Estuary.

B. Procedural Background

Plaintiffs filed their initial complaint in November 2011, alleging that Defendants violated the CWA by discharging pollutants into the waters of the United States without a National Pollutant Discharge Elimination System (NPDES) permit, in violation of 33 U.S.C. § 1311(a). After the district court granted Defendants' motion to dismiss with leave to amend, Plaintiffs filed their First Amended Complaint (FAC).

Defendants then moved to dismiss the FAC. The court granted the motion as to all but one of Plaintiffs' claims. It determined that Plaintiffs had plausibly alleged facts "that, when accepted as true, suggest [that] at least some amount of the Project's discharges may be unrelated to crop production."

The parties then filed cross-motions for summary judgment. The court denied Plaintiffs' motion for summary judgment and granted in part Defendants' motion for summary judgment. The court held that three of Plaintiffs' theories of liability in their motion for summary judgment—arguments about discharges from "seepage into the [Drain] from adjacent lands, and sediments from within the [Drain]"—did not arise from the allegations in their FAC. Accordingly, the court struck those three theories of liability. The court also determined, however, that there was a

genuine dispute of material fact as to whether groundwater discharges from lands underlying a solar product violated the CWA (the Vega Claim). It therefore denied Defendants' motion for summary judgment as to that claim.

Plaintiffs moved to file a second amended complaint. The court denied that motion. The court also denied Plaintiffs' motion to reconsider its order ruling on the cross-motions for summary judgment. The parties then stipulated to the dismissal of Plaintiffs' lone remaining claim "because the discharges from the Vega Solar Project property do not make up a majority of discharges from the [Project]." The district court entered judgment for Defendants.

JURISDICTION AND STANDARD OF REVIEW

We have jurisdiction pursuant to 28 U.S.C. § 1291. We review *de novo* the district court's grant of summary judgment. *Nat. Res. Def. Council, Inc. v. County of Los Angeles*, 725 F.3d 1194, 1203 (9th Cir. 2013). We also review *de novo* "the district court's interpretation of the CWA and its implementing regulations." *Olympic Forrest Coal. v. Coast Seafoods Co.*, 884 F.3d 901, 905 (9th Cir. 2018).

ANALYSIS

I. The District Court's Interpretation of § 1342(l)(1)

The CWA generally requires that government agencies obtain an NPDES permit before discharging pollutants from any point source into navigable waters of the United States.¹

¹ The CWA defines "point source" as "any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock,

33 U.S.C. § 1323(a). There is an exception to that permitting requirement, however, “for discharges composed entirely of return flows from irrigated agriculture” *Id.* § 1342(l)(1).

The parties do not disagree that the Mud Slough, the San Joaquin River, and the Bay-Delta Estuary constitute navigable waters of the United States. They also do not dispute that the Drain “discharges substantial quantities of selenium and other pollutants.” At issue then is whether the Drain’s discharges required Defendants to obtain an NPDES permit, or whether the discharges were exempt from the permitting requirement pursuant to § 1342(l)(1).

Plaintiffs argue that the district court committed three errors in its interpretation of § 1342(l)(1). First, they contend that the district court erred by placing the burden of proving that the Drain’s discharges were not exempt on Plaintiffs instead of requiring that Defendants prove that the Drain’s discharges were exempt. Second, they argue that the court erred in interpreting what constitutes “discharges . . . from irrigated agriculture” when it held that all discharges from the Drain are exempted so long as they are not generated by activities unrelated to crop production. Third, they assert that the district court erred by interpreting the word “entirely” as meaning most. We address each argument in turn.

A. Burden of Proving the Statutory Exception

In its pretrial order, the district court stated that Plaintiffs bore the burden of demonstrating that the discharges at issue

concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged.” 33 U.S.C. § 1362(14).

were not exempt from the CWA's permitting requirement pursuant to § 1342(l)(1). Plaintiffs argue that such an interpretation of the statute was erroneous because the burden was on Defendants to prove that the discharges at issue were covered by § 1342(l)(1).

We agree. To establish a violation of the CWA, “a plaintiff must prove that defendants (1) discharged, i.e., added (2) a pollutant (3) to navigable waters (4) from (5) a point source.” *Comm. to Save Mokelumne River v. E. Bay Mun. Util. Dist.*, 13 F.3d 305, 308 (9th Cir. 1993). After a plaintiff establishes those elements, however, the defendant carries the burden to demonstrate the applicability of a statutory exception to the CWA. *See N. Cal. River Watch v. City of Healdsburg*, 496 F.3d 993, 1001 (9th Cir. 2007). Because § 1342(l)(1) contains an exception to the CWA's permitting requirement, Defendants had the burden of establishing that the Project's discharges were “composed entirely of return flows from irrigated agriculture.”

B. Interpretation of “Irrigated Agriculture”

The district court construed § 1342(l)(1) as exempting discharges that are related to crop production from the CWA's permitting requirement. The parties agree that, by focusing on the statute's legislative history *ab initio*, rather than commencing its analysis with the text, the district court's interpretive method was flawed.

“It is well settled that ‘the starting point for interpreting a statute is the language of the statute itself.’” *Gwaltney of Smithfield, Ltd. v. Chesapeake Bay Found., Inc.*, 484 U.S. 49, 56 (1987) (quoting *Consumer Prod. Safety Comm'n v. GTE Sylvania, Inc.*, 447 U.S. 102, 108 (1980)). Section 1342(l)(1) states that

“[t]he Administrator shall not require a permit under this section for discharges . . . from irrigated agriculture.” 33 U.S.C. § 1342(l)(1). Here, rather than starting its analysis with the text, the district court focused first on the Senate Committee Report accompanying the CWA to hold that the relevant statutory text—“discharges . . . from irrigated agriculture”—meant discharges that “do not contain additional discharges from activities unrelated to crop production.”

Although we agree that the district court ought to have begun its analysis with the statutory text, its reliance on legislative history to construe this portion of the statute was not erroneous. “It is a fundamental canon of statutory construction that the words of a statute must be read in their context and with a view to their place in the overall statutory scheme.” *Davis v. Michigan Dep’t. of Treasury*, 489 U.S. 803, 809 (1989). “The purpose of statutory construction is to discern the intent of Congress in enacting a particular statute.” *Robinson v. United States*, 586 F.3d 683, 686 (9th Cir. 2009) (quoting *United States v. Daas*, 198 F.3d 1167, 1174 (9th Cir. 1999)).

Section 1342(l)(1) does not define “irrigated agriculture.” In determining the plain meaning of a word, we may consult dictionary definitions in an attempt to capture the common contemporary understandings of a word. See *Transwestern Pipeline Co., LLC v. 17.19 Acres of Prop. Located in Maricopa Cnty.*, 627 F.3d 1268, 1270 (9th Cir. 2010). The definition of agriculture—“the science or art of cultivating the soil, harvesting crops, and raising livestock,” *Webster’s Third New International Dictionary* 44 (2002)—shows that the term has a broad meaning that

encompasses crop production. The “ordinary, contemporary, and common meaning” of agriculture likewise supports a broad interpretation of the term. *United States v. Iverson*, 162 F.3d 1015, 1022 (9th Cir. 1998).

Although the plain meaning of the statutory text demonstrates that agriculture has a broad meaning, it does not resolve whether the discharges at issue here are exempt from the CWA’s permitting requirement.² As a result, “we may [also] use canons of construction, legislative history, and the statute’s overall purpose to illuminate Congress’s intent” in enacting § 1342(l)(1). *Ileto v. Glock, Inc.*, 565 F.3d 1126, 1133 (9th Cir. 2009) (quoting *Jonah R. v. Carmona*, 446 F.3d 1000, 1005 (9th Cir. 2006)).

In this instance, we begin by considering the legislative history of § 1342(l)(1). In its original form, the CWA did not contain any exceptions to its permitting requirement. *See Nw. Env’tl. Def. Ctr. v. Brown*, 640 F.3d 1063, 1072 (9th Cir. 2011), *rev’d and remanded sub nom. Decker v. Nw. Env’tl. Def. Ctr.*, 568 U.S. 597 (2013). Five years after its enactment, however, Congress amended the CWA to include an exception for discharges composed entirely of return flows from irrigated agriculture. *Id.* at 1073. “Congress did so to alleviate EPA’s burden in having to issue permits for every agricultural point source.” *Id.* By passing § 1342(l)(1), Congress sought “to limit the exception to only those flows which do not contain additional discharges from activities unrelated to crop production.” S. Rep. No. 95-370, 35 (1977), *as reprinted in* 1977 U.S.C.C.A.N. 4326, 4360.

² One issue disputed by the parties, for example, is whether discharges from fallow and retired lands fall under § 1342(l)(1). The plain meaning of the statutory text does not definitively answer that question.

This history supports the district court's interpretation of "irrigated agriculture" as used in § 1342(l)(1).

The statute's legislative history also reveals that Congress passed § 1342(l)(1) to treat equally under the CWA's permitting requirement farmers relying on irrigation and those relying on rainfall. *See* 123 Cong. Rec. 39,210 (Dec. 15, 1977) (statement of Sen. Wallop: "This amendment corrects what has been a discrimination against irrigated agriculture. . . . Farmers in areas of the country which were blessed with adequate rainfall were not subject to permit requirements on their rainwater run-off, which in effect . . . contained the same pollutants."); 123 Cong. Rec. 26,702 (Aug. 4, 1977) (statement of Sen. Stafford: "This amendment promotes equity of treatment among farmers who depend on rainfall to irrigate their crops and those who depend on surface irrigation which is returned to a stream in discreet conveyances."). Indeed, one legislator said that an NPDES permit would not be required for "a vast irrigation basin that collects all of the waste resident of irrigation water in the Central Valley and places it in [the San Luis Drain] and transport[s] it . . . [to] the San Joaquin River." *Brown*, 640 F.3d at 1072. This history supports the view that Congress intended for "irrigated agriculture," as used in § 1342(l)(1), to be defined broadly and include discharges from all activities related to crop production.

Plaintiffs argue that such an interpretation of the statutory exception is erroneous because it would exempt fallow and retired lands from the CWA's permitting requirement. That result, however, complies with our prior case law addressing the Project. We have ordered Defendants, in separate litigation, to provide drainage "to lands receiving water through the San Luis Unit." *Firebaugh Canal Co.*, 203 F.3d at 572. The retirement of

farmlands was a component of that drainage plan. *Firebaugh Canal Water Dist. v. United States*, 712 F.3d 1296, 1300 (E.D. Cal. 2013). To hold that drainage from retired lands does not fall under the CWA’s statutory exception for discharges from irrigated agriculture would lead to contradictory and illogical results. *Cf. United States v. Fiorillo*, 186 F.3d 1136, 1153 (9th Cir. 1999). We decline to require Defendants to provide a drainage plan that includes the retirement of farmland, on the one hand, and hold that those activities violate the CWA absent a permit, on the other.

For these reasons, § 1342(l)(1)’s statutory text, as well as its context, its legislative history, and our prior case law on the Project, demonstrate that Congress intended to define the term “irrigated agriculture” broadly. Accordingly, we hold that the district court’s interpretation of the phrase was accurate.

C. Interpretation of “Entirely”

We next address Plaintiffs’ contention—which Defendants do not dispute—that the district court erred by holding that § 1342(l)(1) exempts discharges from the CWA’s permitting requirement unless a “majority of the total commingled discharge” is unrelated to crop production. They argue that such an interpretation of the statutory text was mistaken because the text states that the exception applies to “discharges composed *entirely* of return flows from irrigated agriculture.” 33 U.S.C. § 1342(l)(1).

We agree that the district court’s majority rule interpretation misconstrued the meaning of “entirely,” as used in § 1342(l)(1). Although “entirely” is not defined by the statute, we begin by considering its “ordinary, contemporary, common meaning.” *Iverson*, 162 F.3d

at 1022. “Entirely” is defined as “wholly, completely, fully.” *Webster’s Third New International Dictionary* 758 (2002). That definition differs significantly from “majority,” the meaning that the district court gave the term.

The district court rejected a literal interpretation of “entirely” because it reasoned that it “would lead to an absurd result.” We disagree. “Claims of exemption, from the jurisdiction or permitting requirements, of the CWA’s broad pollution prevention mandate must be narrowly construed to achieve the purposes of the CWA.” *N. Cal. River Watch*, 496 F.3d at 1001. Given the many activities related to crop production that fall under the definition of “irrigated agriculture,” Congress’s use of “entirely” to limit the scope of the statutory exception thus makes perfect sense. The text demonstrates that Congress intended for discharges that include return flows from activities unrelated to crop production to be excluded from the statutory exception, thus requiring an NPDES permit for such discharges.

D. Effect of Errors on Plaintiffs’ Claims

Having determined that the district court erred by placing the burden of demonstrating eligibility for the exception on Plaintiffs, rather than on Defendants, and by misinterpreting “entirely,” as used in § 1342(l)(1), we next consider the effect of those errors on Plaintiffs’ claims. Defendants argue that the district court’s errors were harmless because “the record contains no evidence of *any* discharge of pollutants unrelated to agricultural flows.”

We begin with Plaintiffs’ Vega Claim. The district court denied Defendants’ motion for summary judgment as to that claim because it determined that “Plaintiffs [] have provided sufficient evidence to raise an inference that discharges

underneath the Vega Project originate from the solar project itself, as opposed to [from] other nearby agricultural lands.” Plaintiffs stipulated to the dismissal of that claim because they were “unlikely to succeed [in demonstrating that] the discharges from the [Vega Claim] do not make up a majority of discharges from the [Project].” The district court’s interpretation of the word “entirely” to mean “majority”—which both parties now concede was erroneous—was thus the but-for cause of the dismissal of Plaintiffs’ Vega Claim. It is reasonable to believe that Plaintiffs would have proceeded to trial under the correct interpretation of § 1342(1)(1), which requires Defendants to prove that the discharges were composed entirely of return flows from irrigated agriculture. We therefore reverse the district court’s dismissal of that claim.

The district court’s dismissal of Plaintiffs’ other claims was also erroneous. In its order ruling on the parties’ cross-motions for summary judgment, the district court determined that, apart from the Vega Claim, Plaintiffs had failed to “provide any evidence” to show that discharges stemmed from activities unrelated to crop production. Because the burden of demonstrating the applicability of § 1342(1)(1) should have been on Defendants, rather than on Plaintiffs, however, Plaintiffs were not required to present any evidence. Instead, Defendants ought to have been required to demonstrate that the discharges at issue were composed entirely of return flows from irrigated agriculture. Accordingly, the lack of evidence demonstrating that the discharges stemmed from activities unrelated to crop production should not have been fatal to Plaintiffs. *Cf. Gilbrook v. City of Westminster*, 177 F.3d 839, 871 (9th Cir. 1999) (“Such an inference from lack of evidence would amount to no more than speculation.”). We therefore reverse the district court’s dismissal of Plaintiffs’ other claims and

remand for the district court to reconsider them under the correct interpretation of § 1342(l)(1).

II. The District Court's Striking of Plaintiffs' Claims

Plaintiffs argue that the district court also erred by striking their theories of liability “based on discharges from highways, residences, seepage into the [Drain] from adjacent lands, and sediments from within the [Drain]” from Plaintiffs’ motion for summary judgment. The court held that those claims were not encompassed by Plaintiffs’ FAC.

“Rule 8’s liberal notice pleading standard . . . requires that the allegations in the complaint ‘give the defendant fair notice of what the plaintiff’s claim is and the grounds upon which it rests.’” *Pickern v. Pier 1 Imports (U.S.), Inc.*, 457 F.3d 963, 968 (9th Cir. 2006) (quoting *Swierkiewicz v. Sorema N.A.*, 534 U.S. 506, 512 (2002)). “A party need not plead specific legal theories in the complaint, so long as the other side receives notice as to what is at issue in the case.” *Am. Timber & Trading Co. v. First Nat’l Bank of Oregon*, 690 F.2d 781, 786 (9th Cir. 1982). But if a “the complaint does not include the necessary factual allegations to state a claim, raising such claim in a summary judgment motion is insufficient to present the claim to the district court.” *Navajo Nation v. U.S. Forest Serv.*, 535 F.3d 1058, 1080 (9th Cir. 2008).

Here, Plaintiffs’ FAC alleged that the Drain discharged “polluted groundwater . . . originating from parcels where no farming occurs because, for instance, these parcels have been fallowed or retired from agricultural use.” The theories of liability struck by the district court argued that Defendants violated the CWA because the Drain picked up seepage from non-irrigated land on its way to the Mud Slough, and

because the Drain discharged pollutants from seepage and sediment within the Drain.

Although we agree with Defendants that Plaintiffs' complaint did not specifically allege their seepage and sediment theories of liability, we reject the contention that Defendants had not been given fair notice of those theories. Plaintiffs' essential allegation was that the Drain's discharges violated the CWA because of where the contaminants in the discharges originated from—"for instance, [] parcels [that] have been fallowed or retired from agricultural use." Plaintiffs' seepage and sediment claims, which alleged that contaminants from "highways, residences, seepage . . . and sediment" commingled with other discharges and thereby violated the CWA, alleged that contaminants originated from other locations, too. Those allegations were thus encompassed by the allegations in the FAC. Indeed, at oral argument, Defendants conceded that they "received [Plaintiffs'] expert witness reports," "were on notice as to what their expert was talking about," and "had enough information to respond" to the seepage and sediment theories of liability discussed in Plaintiffs' expert witness reports. These facts, when taken together, compel the conclusion that Plaintiffs' FAC provided Defendants with fair notice of their seepage and sediment theories of liability. Accordingly, we reverse the district court's striking of Plaintiffs' seepage and sediment claims from their motion for summary judgment.³

³ The district court held, in the alternative, that Plaintiffs' seepage and sediment claims were "unsupported by evidence." Because we hold that the district court erred in its interpretation of § 1342(l)(1), however, we remand Plaintiffs' seepage and sediment claims for the district court to determine whether they survive summary judgment under the correct interpretation of the statutory exemption.

CONCLUSION

The district court properly interpreted “discharges . . . from irrigated agriculture,” as used in § 1342(1)(1), to mean discharges from activities related to crop production. It erred, however, by interpreting “entirely” to mean “majority,” and by placing the burden on Plaintiffs to demonstrate that the discharges were not covered under § 1342(1)(1), rather than placing the burden on Defendants to demonstrate that the discharges were covered under § 1342(1)(1). The district court also erred by striking Plaintiffs’ seepage and sediment theories of liability from Plaintiffs’ motion for summary judgment because the FAC encompassed those claims.

REVERSED and REMANDED.



September 13, 2019

Joseph C. McGahan, Drainage Coordinator
San Luis & Delta-Mendota Water Authority
P.O. Box 2157
Los Banos, CA 93635
By email to: jmcgahan@summerseng.com

RE: GRASSLANDS BYPASS PROJECT STORMWATER MANAGEMENT PLAN

Dear Mr. McGahan,

This letter is submitted as the comments of the Bay Institute regarding the draft Addendum to the Final Environmental Impact Statement / Environmental Impact Report for the Grassland Bypass Project (GBP), 2010-2019, SCH No. 2007121110, regarding the Long-term Stormwater Management Plan. The Bay Institute has worked with Grassland Area growers for over twenty years to ensure that the GBP was effectively designed and implemented to virtually eliminate the discharge of selenium to local waters from anthropogenic sources. The success of this effort demonstrates how in-valley management approaches can solve the Central Valley's agricultural drainage problems.

In previous discussions with you and Grassland Area growers, we have identified three overarching issues that must be addressed in the final Addendum to ensure that use of the San Luis Drain starting on January 1, 2020, to convey stormwater discharge does not undo the success of the GBP.

First, it may be appropriate to permit use of the Drain to convey stormwater discharge. However, stormwater events that would result in uncontrollable discharge should be defined clearly and measurably so as to ensure that the Drain is only used to convey stormwater discharges and that baseline agricultural drainage discharges are not included.

Second, the limits on loading and concentrations of selenium identified for 2019 in the current agreement for use of the Drain should be retained in any future agreements and permits. Given the persistent and bioaccumulative properties of selenium in the environment, these limits are critical both to lock in the benefits of the current management regime and to ensure that stormwater discharges do not add significantly to selenium loading in local waters.

Third, the long-term Stormwater Management Plan should specifically identify the elements of an adaptive management plan for addressing the potential for elevated selenium levels in

Mr. Joseph McGahan

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stormwater discharge, including monitoring regimes and metrics that would trigger review and if necessary remedial action.

Thank you for the opportunity to comment on the draft Addendum. Please contact me at (415) 272-6616 or bobker@bay.org if you have any questions regarding these comments.

Sincerely,

A handwritten signature in black ink, appearing to read "Gary Bobker". The signature is fluid and cursive, with a prominent loop at the end.

Gary Bobker
Program Director

Joe McGahan

From: Patricia Schifferle <pacificadvocates@hotmail.com>
Sent: Wednesday, September 11, 2019 10:27 AM
To: Sue.McConnell@waterboards.ca.gov; Joe McGahan; remerson@usbr.gov
Subject: Comments on Grassland Bypass Project Long-Term Storm Water Management Plan EIR Addendum and Initial Study-

Categories: Red Category

Joe, Sue and Rain

Thank you for the opportunity to comment.

I adopt by reference the comments submitted by PCL and 20 other conservation, fishing and tribal NGOs calling for a full EIR/EIS, a NPDES permit as required pursuant to the Clean Water Act and Porter Cologne, and federal and state non-degradation policies.

In addition, the cumulative impacts from Los Banos storm water discharges along with CCID and other contaminated ground water discharges into the Delta Mendota canal and California aqueduct need to be analyzed, disclosed and assessed in any environmental review for the continued use of the federal San Luis Drain to be used for discharge to US waters of the state and Nation.

Further with the recent 9th circuit ruling, reported at, __F.3d__, 2019 WL [4230097](#) , and the previous GBP proposed storm water event plan (https://www.waterboards.ca.gov/centralvalley/water_issues/grassland_bypass/storm_event_plan.pdf August 1997) that indicated storm water and agricultural drain flows could not be separated, it is imperative that the proposed discharges are monitored for Selenium and other contaminants and that they do not exceed daily, weekly and monthly limits pursuant to the Clean Water Act.

Also the proposed plan and draft CEQA documents did not contain an extensive stormwater prevention plan other than discharging into some ponds without much if any detail. These “hot” ponds are likely to create a nuisance and hazards for migratory birds and need full monitoring and controls to ensure compliance with federal and state law.

Regards,

Patricia Schifferle

<PCL et. al Cmt Letter GBP Stormwater Plan CEQA _09-09-2019.pdf