



**Grassland Basin Drainage Steering Committee  
Regular Meeting of the Steering Committee**

**Friday, June 21, 2024 ~ 9:30 a.m.**

**San Luis & Delta-Mendota Water Authority Boardroom  
842 6<sup>th</sup> Street, Los Banos, California**

**Telephonic Participation**

Conference Call Dial-in: 1-623-600-3769

Conference Code: 518817

**AGENDA**

NOTE: Any member of the public may address the GBD Steering Committee concerning any item on the agenda before or during consideration of that item, as appropriate. For each item, public comment is limited to no more than three minutes per person. For good cause, the Committee Chair may waive this limitation. Committee Members/Alternates may discuss items listed on the agenda or add to the agenda as necessary, in accordance with Government Code section 54954.2, subd. (b)(2).

1. Call to Order/Roll Call
2. Corrections or Additions to the Agenda, as authorized by Government Code section 54950 et seq.
3. Opportunity for Public Comment

**Action Items**

4. **Committee to Consider Approving March 15, 2023 Regular Meeting Minutes**
5. **Committee to Consider Acceptance of the Financial Report**

**Report Items**

6. Committee to Receive Report on the Mud Slough Restoration Program
7. Committee to Receive Report on the Status of the Prop 84 Grant Program
8. Grassland Bypass Project Updates:
  - a. Operations Report
  - b. Monitoring Program and Toxicity Data Report - Committee to Review and Authorize Release of Information

9. Update on Waste Discharge Requirements for Discharge to Groundwater, Grassland Drainage Area Coalition
  - a. Nitrogen Management Zone Plan.
10. Reports from District Representatives
11. Reports on Other Items Pursuant to Government Code Section 54954.2(a)(3)
12. Date and Time of Next Meeting
13. CLOSED SESSION
  - Conference with Legal Counsel on Existing Litigation Pursuant to Paragraph (1) Subdivision (d) of Government Code Section 54956.9
    - a. Pacific Coast Federation of Fishermen's Associations, et al. v. Conant, et al. (formerly Glaser, et al.), U.S. District Court, E.D. Cal., Case No. 2:11-cv-02980; 9th Cir. Case No. 23-15599
    - b. Conference with Legal Counsel – Anticipated Litigation – Pursuant to Subdivision (a) and Paragraphs 2 or 3 of Subdivision (d) of Government Code Section 54956.9 (1 potential case) or Paragraph 4 of Subdivision (d) of Government Code Section 54956.9 (1 potential case)
14. Return to Open Session
15. Report from Closed Session, if Required by Government Code Section 54957.1
16. Adjournment

Persons with a disability may request disability-related modification or accommodation by contacting Cheri Worthy or Sandi Ginda at the San Luis & Delta-Mendota Water Authority Office, 842 6<sup>th</sup> Street, P.O. Box 2157, Los Banos, California, via telephone at (209) 826-9696, or via email at [cheri.worthy@sldmwa.org](mailto:cheri.worthy@sldmwa.org). Requests should be made as far in advance as possible before the meeting date, preferably 3 days in advance of regular meetings or 1 day in advance of special meetings/workshops.

This agenda has been prepared as required by the applicable laws of the State of California, including but not limited to, Government Code Section 54950 et seq. and has not been prepared with a view to informing an investment decision in any of the Authority's bonds, notes or other obligations. Any projections, plans or other forward-looking statements included in the information in this agenda are subject to a variety of uncertainties that could cause any actual plans or results to differ materially from any such statement. The information herein is not intended to be used by investors or potential investors in considering the purchase or sale of the Authority's bonds, notes or other obligations and investors and potential investors should rely only on information filed by the Authority on the Municipal Securities Rulemaking Board's Electronic Municipal Market Access System for municipal securities disclosures, maintained on the World Wide Web at <https://emma.msrb.org/>.

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SAN LUIS & DELTA – MENDOTA WATER AUTHORITY MINUTES-GRASSLAND BASIN  
STEERING COMMITTEE TELEPHONIC MEETING  
MARCH 15, 2024

The Board of Directors of the Grassland Basin Drainage Steering Committee (GBDSC) met at 9:38 a.m. at 842 6<sup>th</sup> Street, Los Banos, California with Chairman David Cory presiding.

**Directors and Alternate Directors in Attendance**

**Camp 13 Drainage District**

David Cory, Chairman

**Firebaugh Canal Water District**

Kevin Hurd, Member, Jeff Bryant, Alternate Member

**Pacheco Water District**

David Parreira, Member

**Panoche Drainage District**

Mike Linneman, Member

**SLDMWA Staff Present**

Rebeca Harms, Deputy Executive General Counsel– Via Telephonic

Chris Linneman, Drainage Coordinator

Lauren Viers, Staff Accountant III

**Others Present**

Palmer McCoy, Grassland Basin Authority

Patrick McGowan, Panoche Water District

**1. Call to Order / Roll Call**

Chairmen David Cory called the meeting to order and requested self-introductions.

**2. Corrections or Additions to the Agenda**

No corrections or additions were made to the agenda.

**3. Opportunity for Public Comment**

No public comments were made.

**4. Committee to Consider Acceptance of December 15, 2023 Meeting Minutes**

After review of the December 15, 2023 Grassland Basin Drainage Steering Committee (GBDSC) meeting minutes, Committee Member David Parreira moved to accept the December 15, 2023 minutes as presented, the motion was seconded by Committee Member Michael Linneman and

passed unanimously.

AYES: Cory, Hurd, Parreira and Linneman  
NAYS: None  
ABSTENTIONS: None

**5. Committee to Consider Acceptance of Financial Expenditures Report.**

Staff Accountant III Lauren Viers presented the Financial Report and explained 92 percent of the year complete and noted the budget was trending positive with 44 percent of the budget remaining. Committee Member Kevin Hurd moved for acceptance of the Financial Expenditures Report as presented, the motion was seconded by Committee Member David Parreira and passed unanimously.

AYES: Cory, Hurd, Parreira and Linneman  
NAYS: None  
ABSTENTIONS: None

**6. Committee to Receive Report on Mud Slough Restoration Project**

Drainage Coordinator Chris Linneman referred to a January 24, 2024 letter in today's meeting packet from California Department of Fish and Wildlife (CDFW) in reference to their concerns as to the Mud Slough Restoration Project. A short discussion ensued and Linneman responded to a few questions.

**7. Committee to Receive Report on the Status of the Prop 84 Grant Program**

Drainage Coordinator Chris Linneman reported the Prop 84 Grant is still moving forward on the San Joaquin River Water Quality Improvement Project. Linnemen noted most work by McElvany has paused due to weather. Linnemann continued by stating control building is complete and switch gear has arrived with and estimated operation time of 2 to 3 months. Pump station and conveyance facilities were discussed.

**8. Grassland Bypass Project Updates**

- a. Operations Report – Drainage Coordinator Chris Linneman referred to maps detailing all the discharge points for the project in today's meeting packet. A graph of Sites A and B discharge amounts and rainfall events through February 28, 2024 was reviewed. Mud Slough selenium, flow, goals and averages for November, 2023–March 2024 was reviewed. Next the Site D Mud Slough (North) Downstream San

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Luis Drain – selenium concentration on a daily, 7-day average and monthly average selenium concentrations and goals were presented with Mud Slough Selenium levels below 1 part per billion. Linneman concluded by reporting on Site B Monthly Salt Load and Site R Selenium concentrations. Linneman concluded by reviewing his March 4, 2024 Mud Slough Selenium Exceedance that occurred over the past two months. Following Linneman’s presentation, questions were addressed.

- b. **Monitoring Program and Toxicity Data Report** – Drainage Coordinator Chris Linneman presented and the Committee reviewed events 105 and 106; samples collected December 12, 2023 and January 26 2024 and noted no toxicity in the events. The Committee gave direction to release the Toxicity data.

9. **Update on Waste Discharge Requirements for Discharge to Groundwater Water for the Grassland Drainage Area Coalition** – David Cory updated the Committee on WDR’s to Ground Water, grower reports, program to discharges to ground water that extends compliance time. Drainage Coordinator Chris Linneman discussed the opportunity to join forced with other coalitions on an Interim Proposal Report.

10. **Reports from District Representatives** – Palmer McCoy discussed the possibilities of combining the Grassland Basin Drainers with the Grassland Basin Authority. Jeff Bryant reported the Silver Creek Drainage District has reassembled with a functioning Board of Directors, in order to address the constant flooding from the Panoche-Silver Creek watershed on low-lying agricultural lands.

11. **Reports on Other Items Pursuant to Government Code Section 54954.2 (a)(3)** – No other items were presented.

12. **Date and Time of Next Meeting**

The next regularly scheduled meeting is April 19, 2024 at 9:30 a.m.

13. **Closed Session**

The Committee convened to Closed Session at 10:25 a.m. to discuss items on the Closed Session Agenda.

14. **Return to Open Session**

The Committee returned to Open Session at 10:50 a.m.

**15. Report from Closed Session, if Required by Government Code Section 54957.1**

Chairman David Cory reported the Committee discussed items on the Closed Session Agenda but the Committee took no action.

**16. Adjournment**

Chairman David Cory adjourned the meeting of the Grassland Basin Drainers Steering Committee at 10:51 a.m.

**SAN LUIS & DELTA-MENDOTA WATER AUTHORITY**  
**MARCH 1, 2024 - FEBRUARY 28, 2025**  
**GRASSLAND BASIN DRAINAGE #3A (FUND 22)**  
**ACTIVITY AGREEMENTS BUDGET TO ACTUAL**

**Report Period 3/1/24 - 04/30/24**

**GBD Meeting 06/21/24**

<b>EXPENDITURES</b>	Annual Budget	Paid/ Expense	Amount Remaining	% of Amt Remaining	Expenses Through
<u>Legal:</u>					
Pioneer Law Group - CEQA Legal Consultant	\$ 25,000	\$ 665	\$ 24,335	97%	4/2/24
Cotchett, Pitre & McCarthy	\$ 20,000	\$ -	\$ 20,000	100%	
Kahn, Soares & Conway	\$ 15,000	\$ -	\$ 15,000	100%	
Misc. Legal Support	\$ 17,500	\$ -	\$ 17,500	100%	
<u>GBD Specific:</u>					
Drainage Coordinator (Summers)	\$ 145,000	\$ 12,392	\$ 132,608	91%	3/31/24
Quality Data Processing/Load Calc (Summers)	\$ 130,000	\$ 10,320	\$ 119,680	92%	3/31/24
Flow Calculation/Station Maint. (Summers)	\$ 90,000	\$ 7,630	\$ 82,370	92%	3/31/24
Field Coordinator (PDD)	\$ 35,000	\$ -	\$ 35,000	100%	
Real Time Monitoring Equip (PDD)	\$ 10,000	\$ -	\$ 10,000	100%	
Panoche Creek Gauging Station	\$ 9,480	\$ 9,480	\$ -	0%	
Water Quality Monitoring (Reg. Sites)	\$ 250,000	\$ 21,466	\$ 228,534	91%	4/19/24
Newman Water Costs	\$ 121,233	\$ -	\$ 121,233	100%	
Restoration of Mud Slough Channel (Newman Land)	\$ 75,000	\$ -	\$ 75,000	100%	
Waste Discharge Permit Fees	\$ 67,000	\$ -	\$ 67,000	100%	
SJRIP Monitor Wells	\$ 5,000	\$ -	\$ 5,000	100%	
Drainage Management Plan	\$ 20,000	\$ 6,933	\$ 13,067	65%	3/31/24
New UA Mud Slough Mitigation:					
Remove Sediment in SLD	\$ 50,000	\$ -	\$ 50,000	100%	
Use of Drain:					
Operation & Maintenance (PDD)	\$ 95,000	\$ -	\$ 95,000	100%	
Biological Monitoring:					
Pacific Eco Risk	\$ 100,000	\$ -	\$ 100,000	100%	
HT Harvey-SJRIP Egg Monitoring	\$ 100,000	\$ 21,965	\$ 78,035	78%	3/31/24
Fish Biologist - Splittail/Sturgeon	\$ 15,000	\$ 552	\$ 14,448	96%	
Groundwater WDR Specific:					
Membership Enrollment/List (Summers)	\$ 102,300	\$ 12,073	\$ 90,227	88%	4/10/24
Farm Evaluation Plan (Summers)	\$ 45,000	\$ 32	\$ 44,968	100%	3/31/24
NMP Summary Report	\$ 40,000	\$ 429	\$ 39,571	99%	4/10/24
MPEP Group Workplan	\$ 5,400	\$ 762	\$ 4,638	86%	4/4/24
Groundwater Protection Formula	\$ 10,000	\$ -	\$ 10,000	100%	
CVSalts Nitrate Compliance	\$ 50,000	\$ 32	\$ 49,968	100%	
Prioritization and Optimization Study-CVSalts	\$ 12,600	\$ -	\$ 12,600	100%	
Trend Monit Prgm	\$ 84,000	\$ 7,031	\$ 76,969	92%	4/15/24
Develop Web Portal	\$ 3,500	\$ 3,270	\$ 230	7%	4/10/24
Collect State Board Fee	\$ 132,000	\$ 38,801	\$ 93,199	71%	3/6/24
Annual Monitoring Report (Summers)	\$ 35,000	\$ 32	\$ 34,968	100%	3/31/24
CVGMC Data	\$ 3,000	\$ 918	\$ 2,082	69%	3/15/24
<u>Other:</u>					
General Counsel	\$ 35,000	\$ 800	\$ 34,200	98%	4/30/24
In-House Staff	\$ 3,250	\$ 416	\$ 2,834	87%	4/30/24
Dissolved Oxygen Aerator	\$ 6,250	\$ -	\$ 6,250	100%	
Other Services & Expenses	\$ -	\$ -	\$ -	0%	
Telephone	\$ -	\$ -	\$ -	0%	
<b>Total Expenditures</b>	<b>\$ 1,962,513</b>	<b>\$ 155,999</b>	<b>\$ 1,806,514</b>	<b>92%</b>	

**SAN LUIS & DELTA-MENDOTA WATER AUTHORITY**  
**GRASSLAND BASIN DRAINAGE**  
**ACCOUNTS RECEIVABLE REPORT**  
**FISCAL YEAR 03/01/24 - 02/28/25**

	<b>Grassland Basin</b>	
<b>Report Period: 1/31/24-5/31/24</b>	<b>Drainage</b>	
Report Date: 6/19/24	<b>Fund 22</b>	<b>Total</b>
<b>Receivable Balance at January 31, 2024</b>	<b>\$ 57,993.90</b>	<b>\$ 57,993.90</b>

**Billings:**

**1st Installment FY25 - GBD**

Camp 13 Drainage District	\$ 12,508.00	\$ 12,508.00
Charleston Drainage District	\$ 17,146.00	\$ 17,146.00
Firebaugh Canal Water District	\$ 93,548.50	\$ 93,548.50
Pacheco Water District	\$ 45,185.00	\$ 45,185.00
Panoche Drainage District	\$ 352,775.00	\$ 352,775.00

**1st Installment FY25 - GBD WDR Specific**

Camp 13 Drainage District	\$ 15,655.50	\$ 15,655.50
Charleston Drainage District	\$ 12,218.00	\$ 12,218.00
Firebaugh Canal Water District	\$ 69,218.50	\$ 69,218.50
Pacheco Water District	\$ 14,902.50	\$ 14,902.50
Panoche Drainage District	\$ 128,449.50	\$ 128,449.50
San Joaquin River Improvement Project	\$ 18,279.50	\$ 18,279.50
Widren LLC	\$ 2,676.50	\$ 2,676.50

**Total Billings:** \$ 782,562.50      \$ 782,562.50

**Collections:**

Camp 13 Drainage District	\$ 57,995.90	\$ 57,995.90
Charleston Drainage District	\$ 29,364.00	\$ 29,364.00
Pacheco Water District	\$ 30,043.75	\$ 30,043.75
Panoche Drainage District	\$ 80,204.08	\$ 80,204.08
San Joaquin River Improvement Project	\$ 18,279.50	\$ 18,279.50

**Total Collections:** \$ 215,887.23      \$ 215,887.23

**Receivable Balance at April 30, 2024** \$ 624,669.17      \$ 624,669.17

**Outstanding Accounts: 1st Installment FY20/21 - GBD WDR Specific**

AMK Pereira	\$ (1.00)	\$ (1.00)
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**2nd Installment FY20/21 - GBD WDR Specific**

Madeline Pereira	\$ (1.00)	\$ (1.00)
	<b>\$ (2.00)</b>	<b>\$ (2.00)</b>

**1st Installment FY25**







Camp 13 Drainage District	\$ 28,163.50	\$ 28,163.50
Firebaugh Canal Water District	\$ 162,767.00	\$ 162,767.00
Pacheco Water District	\$ 30,043.75	\$ 30,043.75
Panoche Drainage District	\$ 401,020.42	\$ 401,020.42
Widren LLC	\$ 2,676.50	\$ 2,676.50

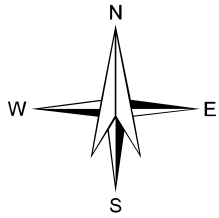
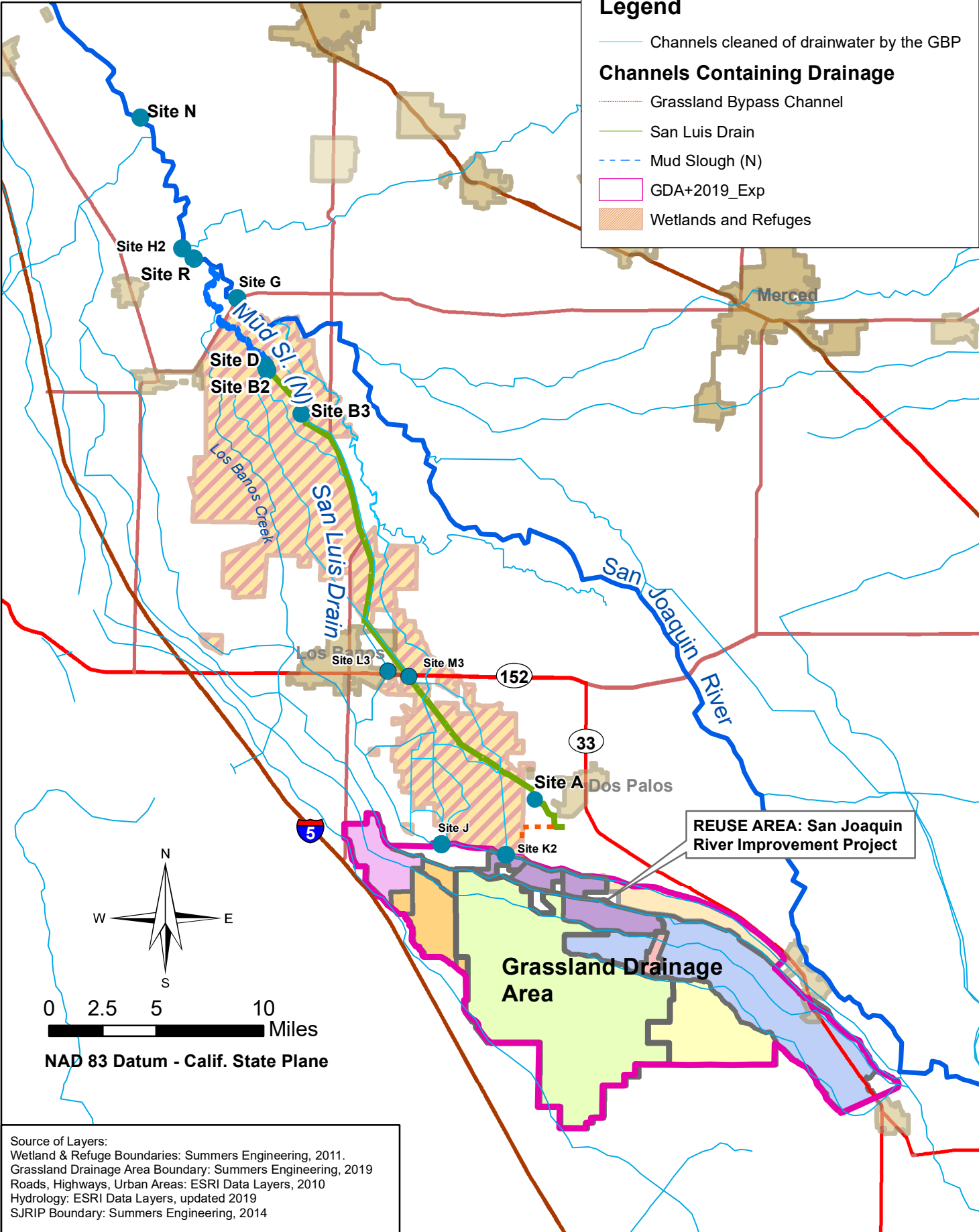
**\$ 624,671.17**      **\$ 624,671.17**

**Outstanding Grand Total** \$ 624,669.17      \$ 624,669.17



**Legend**

-  Channels cleaned of drainwater by the GBP
- Channels Containing Drainage**
  -  Grassland Bypass Channel
  -  San Luis Drain
  -  Mud Slough (N)
-  GDA+2019\_Exp
-  Wetlands and Refuges



0 2.5 5 10 Miles

NAD 83 Datum - Calif. State Plane

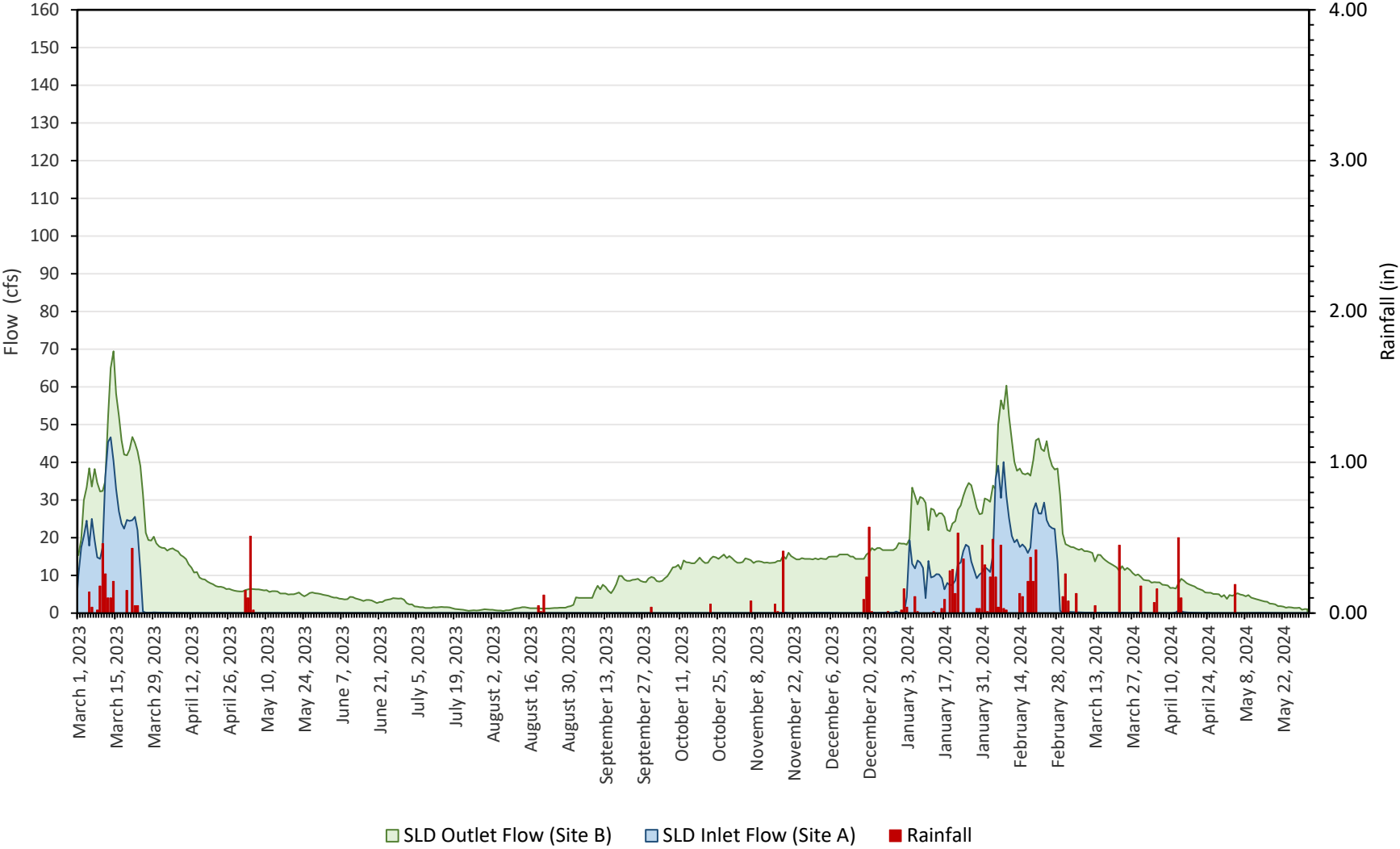
Source of Layers:  
 Wetland & Refuge Boundaries: Summers Engineering, 2011.  
 Grassland Drainage Area Boundary: Summers Engineering, 2019  
 Roads, Highways, Urban Areas: ESRI Data Layers, 2010  
 Hydrology: ESRI Data Layers, updated 2019  
 SJRIP Boundary: Summers Engineering, 2014

Document Path: G:\data\ARCVIEW\MAPS\GBPI\LR\GBP Basemap+Monitoring.mxd

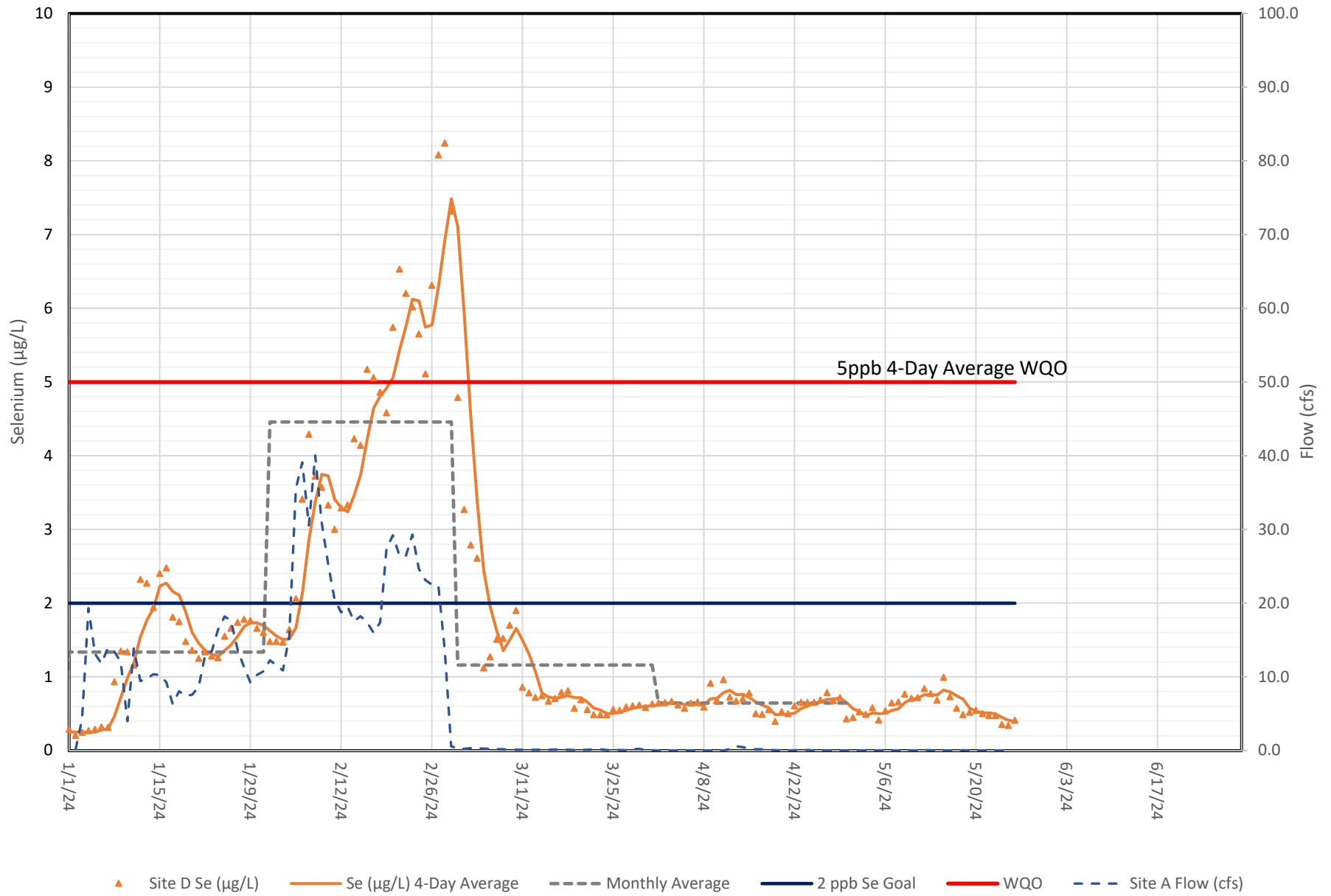
# Grassland Bypass Project Location Map

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

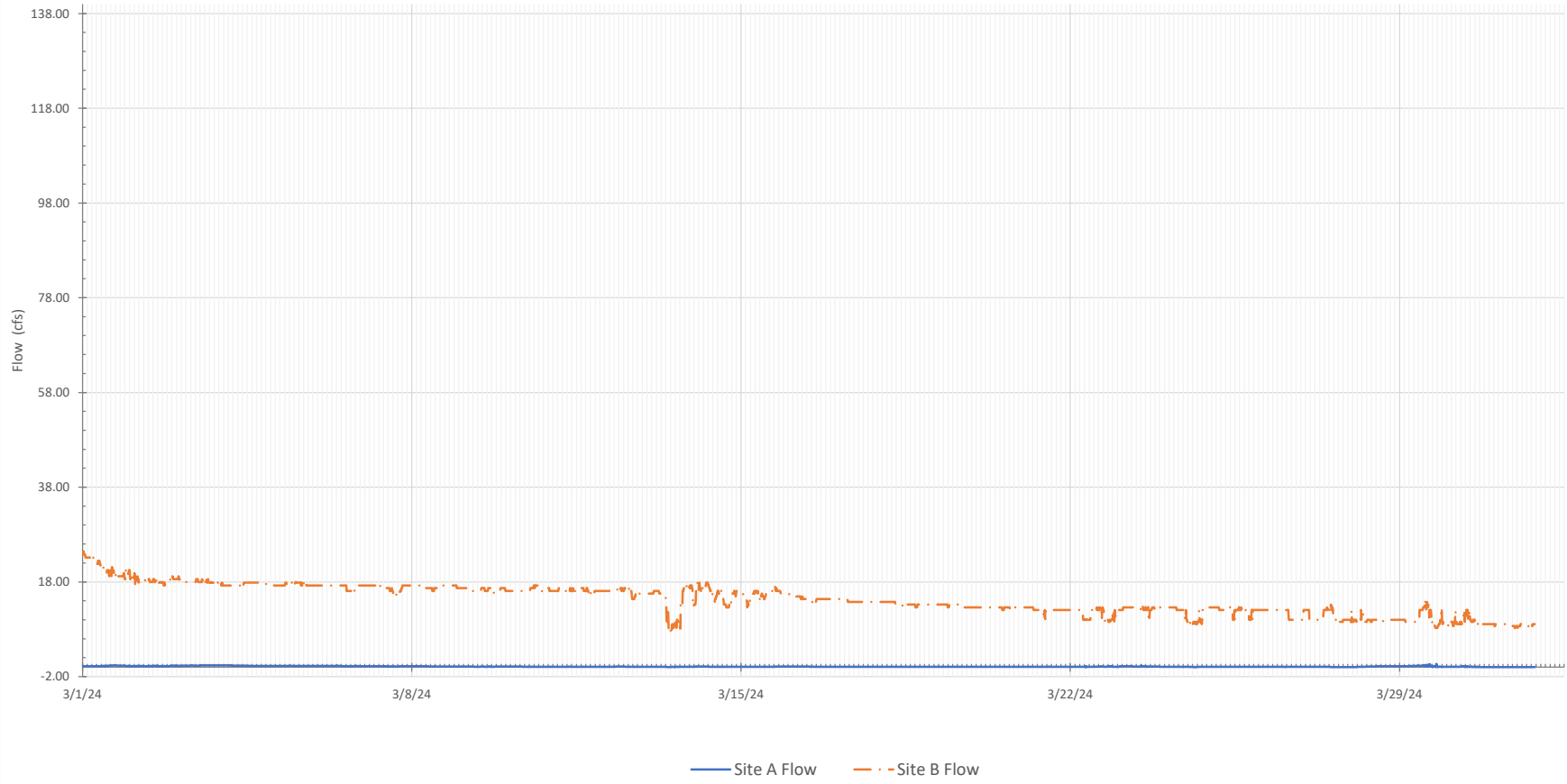
# Grassland Bypass Project - Site A & B Discharge & Rainfall



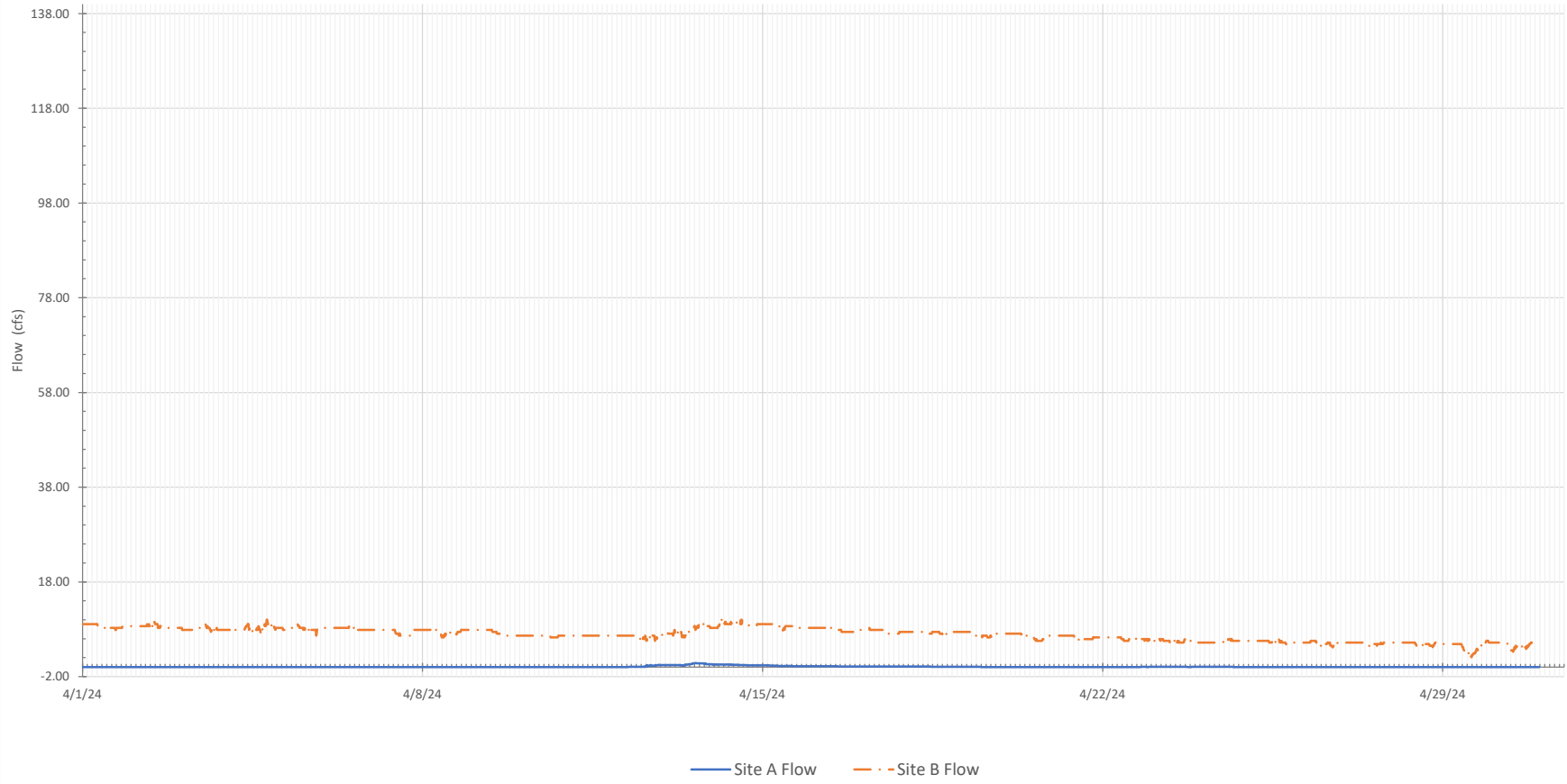
# Mud Slough Selenium



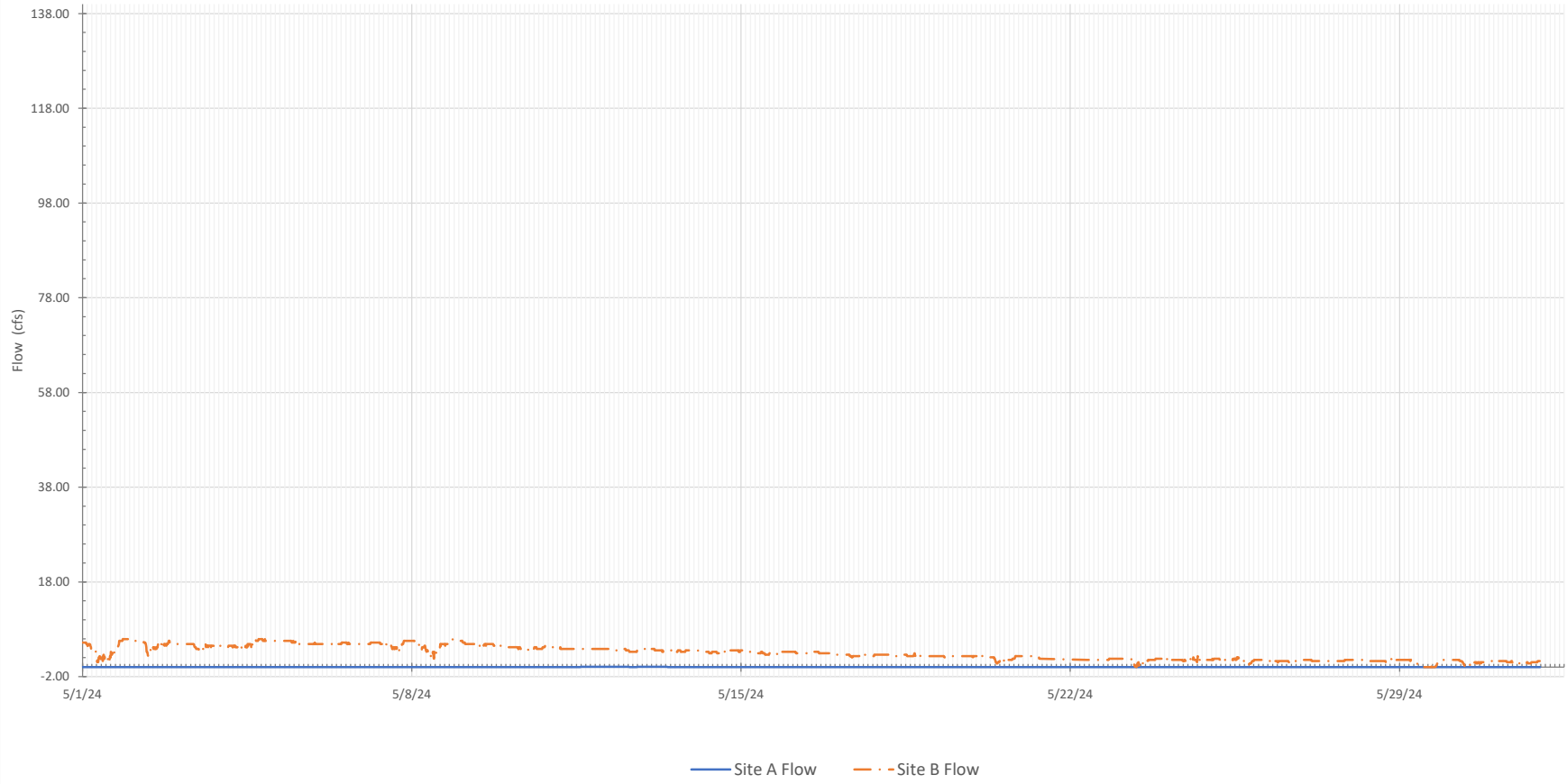
Site A & B Flow  
2024



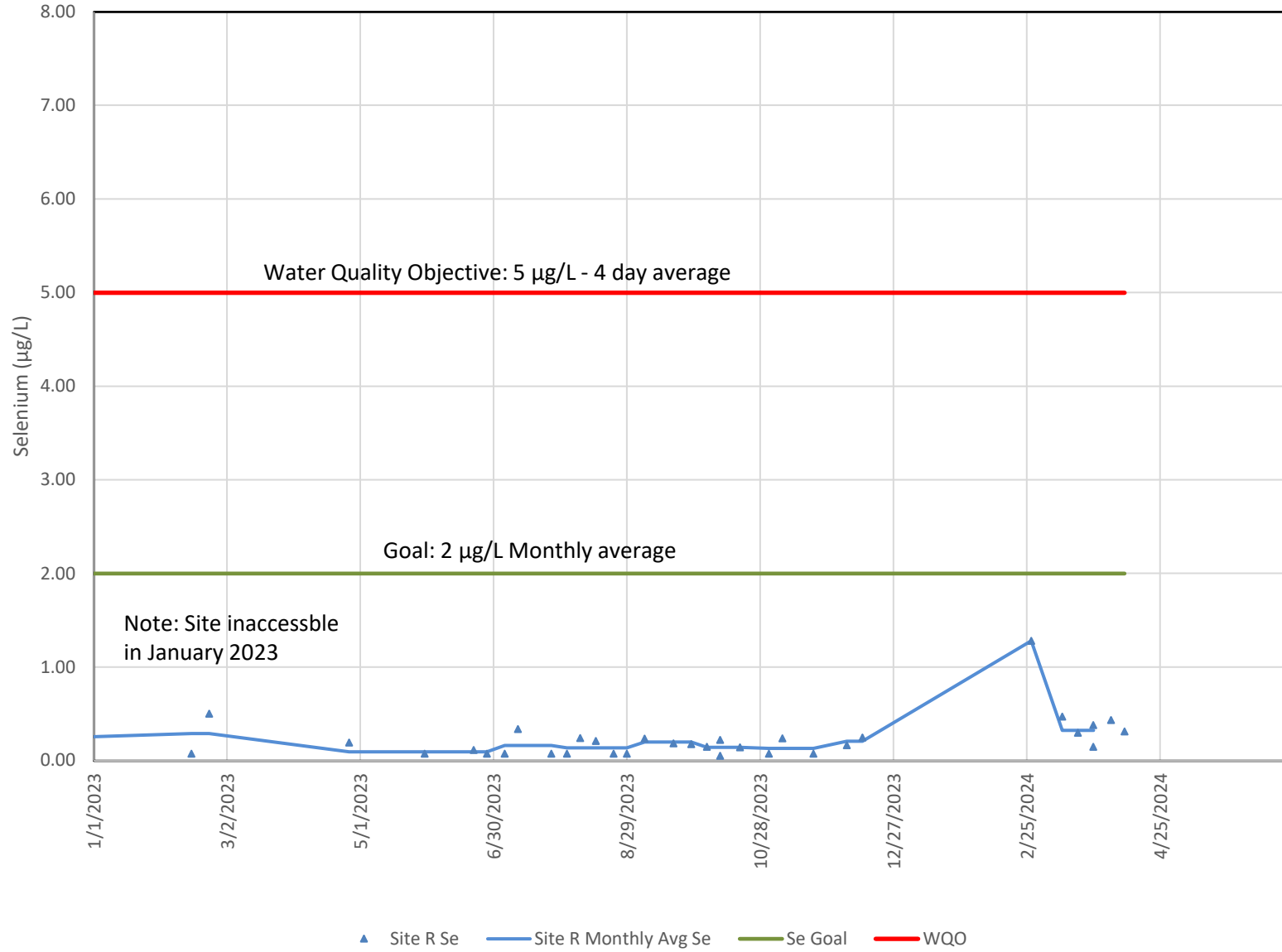
Site A & B Flow  
2024



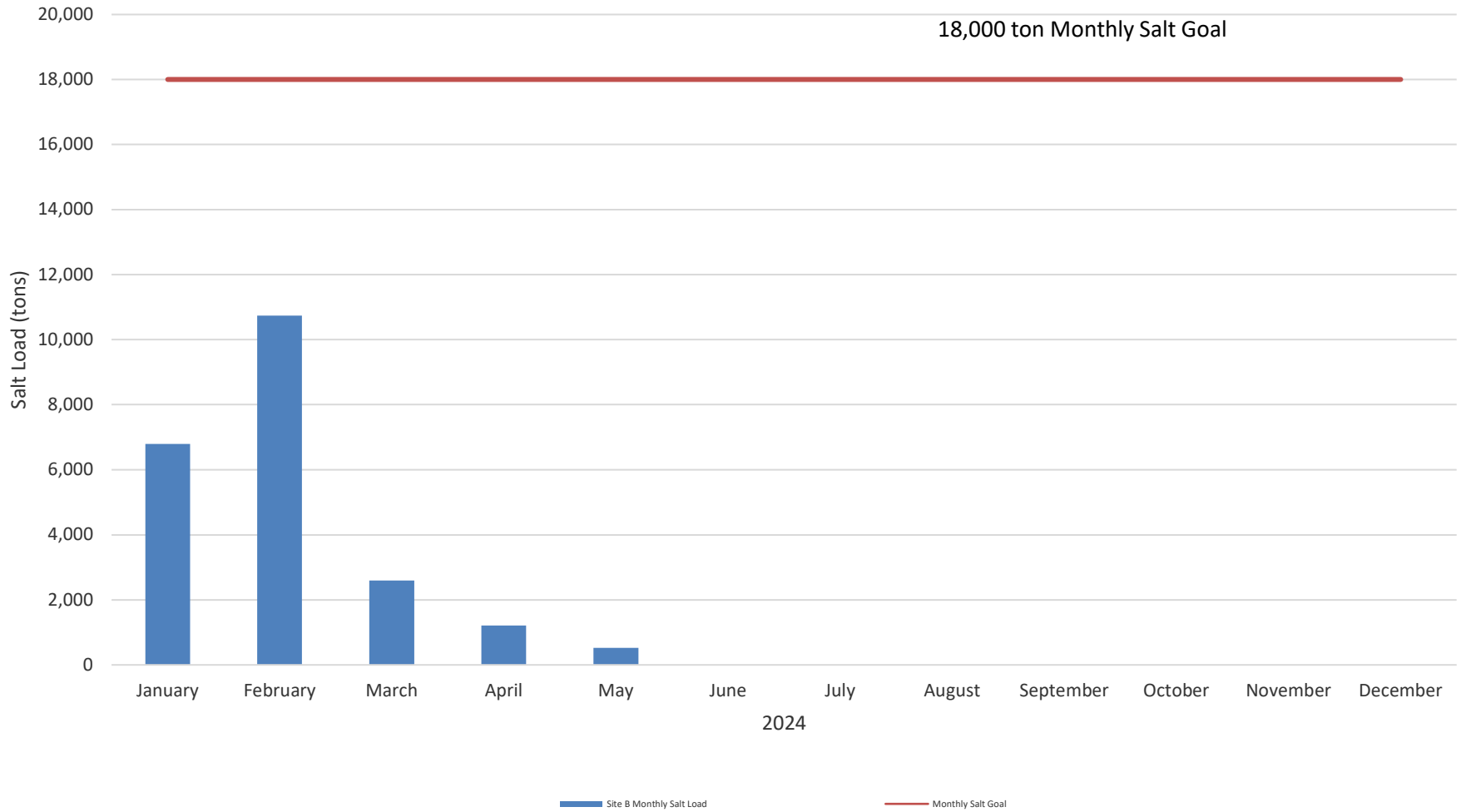
Site A & B Flow  
2024



# Site R - San Joaquin River downstream of Mud Slough - Selenium Concentrations



### San Luis Drain Site B Monthly Salt Load







Chris Linneman  
Summers Engineering, Inc.  
887 N. Irwin Street  
Hanford, CA 93230

April 3, 2024

Chris:

I have enclosed our report “Evaluation of the Toxicity of Grasslands Bypass Project Ambient Water Sample: Event 107” for the sample that was collected February 21, 2024. The results of this testing are summarized below.

Toxicity summary for Grasslands Bypass Project ambient water and sediment samples.			
Sample Station	Toxicity relative to the Lab Control treatment?		
	<i>Selenastrum capricornutum</i>	<i>Daphnia magna</i>	Fathead Minnow
	Growth	Survival	Survival
Site D	No	No	No

**Chronic Toxicity of Grasslands Bypass Project Ambient Water to *Selenastrum capricornutum***

There was **no** significant reduction in algal growth in the Grasslands Bypass Project ambient water sample.

**Acute Toxicity of Grasslands Bypass Project Ambient Water to *Daphnia magna***

There was **no** significant reduction in survival in the Grasslands Bypass Project ambient water sample.

**Acute Toxicity of Grasslands Bypass Project Ambient Water to Fathead Minnows**

There was **no** significant reduction in survival in the Grasslands Bypass Project ambient water sample.

### 3. RESULTS

#### 3.1 Effects of the Grasslands Bypass Project Ambient Water on *Selenastrum capricornutum*

The results for this test are summarized in Table 2. There was **no** significant reduction in algal growth in the Grasslands Bypass Project ambient water sample. The test data and summary of statistical analyses for this test are presented in Appendix B.

Table 2. Effects of Grasslands Bypass Project ambient water on <i>Selenastrum capricornutum</i>		
Test Initiation Date (Time)	Treatment/Sample ID	Mean Algal Cell Density (cells/mL x 10 <sup>6</sup> )
2/21/24 (1436)	Lab Water Control	1.08
	GBP-107-D-TE	6.52

#### 3.2 Effects of the Grasslands Bypass Project Ambient Water on *Daphnia magna*

The results for this test are summarized in Table 3. There was **no** significant reduction in survival in the Grasslands Bypass Project ambient water sample. The test data and summary of statistical analyses for this test are presented in Appendix C.

Table 3. Effects of Grasslands Bypass Project ambient water on <i>Daphnia magna</i> .		
Test Initiation Date (Time)	Treatment/Sample ID	Mean % Survival
2/21/24 (1430)	Lab Water Control	100
	GBP-107-D-TE	100

#### 3.3 Effects of the Grasslands Bypass Project Ambient Water on Fathead Minnows

The results for this test are summarized in Table 4. There were **no** significant reductions in survival in the Grasslands Bypass Project ambient water sample. The test data and summary of statistical analyses for this test are presented in Appendix D.

Table 4. Effects of Grasslands Bypass Project ambient water on fathead minnows.		
Test Initiation Date (Time)	Treatment/Sample ID	Mean % Survival
2/21/24 (1541)	Lab Water Control	97.5
	GBP-107-D-TE	100



Chris Linneman  
 Summers Engineering, Inc.  
 887 N. Irwin Street  
 Hanford, CA 93230

May 9, 2024

Chris:

I have enclosed our report “Evaluation of the Toxicity of Grasslands Bypass Project Ambient Water and Sediment Samples: Event 108” for the samples that were collected March 25, 2024. The results of this testing are summarized below.

Toxicity summary for Grasslands Bypass Project ambient water and sediment samples.				
Sample Station	Toxicity relative to the Lab Control treatment?			
	<i>Selenastrum capricornutum</i>	<i>Daphnia magna</i>	Fathead Minnow	<i>Hyaella azteca</i>
	Growth	Survival	Survival	Survival
Site D	No	No	No	No
Site B3	No	No	No	
Site F	No	No	No	
Site R	No	No	No	

**Chronic Toxicity of Grasslands Bypass Project Ambient Water to *Selenastrum capricornutum***

There was **no** significant reduction in algal growth in the Grasslands Bypass Project ambient water samples.

**Acute Toxicity of Grasslands Bypass Project Ambient Water to *Daphnia magna***

There were **no** significant reductions in survival in any of the Grasslands Bypass Project ambient water samples.

**Acute Toxicity of Grasslands Bypass Project Ambient Water to Fathead Minnows**

There was **no** significant reductions in survival in the Grasslands Bypass Project ambient water samples.

**Acute Toxicity of Grasslands Bypass Ambient Sediment to *Hyaella azteca***

There was **no** significant reduction in survival in the Site D sediment tested with *H. azteca*.

### 3. RESULTS

#### 3.1 Effects of the Grasslands Bypass Project Ambient Water on *Selenastrum capricornutum*

The results for this testing are summarized in Table 2. There were ***no*** significant reductions in algal growth in the Grasslands Bypass Project ambient water samples. The test data and summary of statistical analyses for this testing are presented in Appendix B.

Test Initiation Date (Time)	Treatment/Sample ID	Mean Algal Cell Density (cells/mL x 10 <sup>6</sup> )
3/26/24 (1452)	Lab Water Control	1.93
	GBP-108-D-TE	6.36
	GBP-108-B3-TE	1.90
	GBP-108-F-TE	6.40
	GBP-108-R-TE	6.50

#### 3.2 Effects of the Grasslands Bypass Project Ambient Water on *Daphnia magna*

The results for this testing are summarized in Table 3. There were ***no*** significant reductions in survival in any of the Grasslands Bypass Project ambient water samples. The test data and summary of statistical analyses for this testing are presented in Appendix C.

Test Initiation Date (Time)	Treatment/Sample ID	Mean % Survival
3/26/24 (1453)	Lab Water Control	100
	GBP-108-D-TE	100
	GBP-108-B3-TE	100
	GBP-108-F-TE	95.0
	GBP-108-R-TE	100



### 3.3 Effects of the Grasslands Bypass Project Ambient Water on Fathead Minnows

The results for this testing are summarized in Table 4. There were ***no*** significant reductions in survival in the Grasslands Bypass Project ambient water samples. The test data and summary of statistical analyses for this testing are presented in Appendix D.

Test Initiation Date (Time)	Treatment/Sample ID	Mean % Survival
3/26/24 (1645)	Lab Water Control	97.5
	GBP-108-D-TE	95.0
	GBP-108-B3-TE	100
	GBP-108-F-TE	100
	GBP-108-R-TE	97.7

### 3.4 Effects of the Grasslands Bypass Project Sediment on *Hyaella azteca*

The results of this test are summarized in Table 5. There was a 2.5% effect in survival in the Grasslands Bypass Project sediment sample; the TST analysis resulted in a pass. The test data and summary of statistical analyses for this test is present in Appendix E.

Test Initiation Date (Time)	Treatment/Sample ID	Mean % Survival	TST Analysis	% Effect
3/31/24 (1140)	Lab Control	98.8		
	GBP-108-D-SE	96.2	Pass	2.5%





Chris Linneman  
Summers Engineering, Inc.  
887 N. Irwin Street  
Hanford, CA 93230

May 16, 2024

Chris:

I have enclosed our report “Evaluation of the Toxicity of Grasslands Bypass Project Ambient Water Sample: Event 109” for the sample that was collected April 17, 2024. The results of this testing are summarized below.

Toxicity summary for Grasslands Bypass Project ambient water and sediment samples.			
Sample Station	Toxicity relative to the Lab Control treatment?		
	<i>Selenastrum capricornutum</i>	<i>Daphnia magna</i>	Fathead Minnow
	Growth	Survival	Survival
Site D	No	No	No

**Chronic Toxicity of Grasslands Bypass Project Ambient Water to *Selenastrum capricornutum***

There was **no** significant reduction in algal growth in the Grasslands Bypass Project ambient water sample.

**Acute Toxicity of Grasslands Bypass Project Ambient Water to *Daphnia magna***

There was **no** significant reduction in survival in the Grasslands Bypass Project ambient water sample.

**Acute Toxicity of Grasslands Bypass Project Ambient Water to Fathead Minnows**

There was **no** significant reduction in survival in the Grasslands Bypass Project ambient water sample.

### 3. RESULTS

#### 3.1 Effects of the Grasslands Bypass Project Ambient Water on *Selenastrum capricornutum*

The results for this testing are summarized in Table 2. There was **no** significant reduction in algal growth in the Grasslands Bypass Project ambient water sample. The test data and summary of statistical analyses for this testing are presented in Appendix B.

Table 2. Effects of Grasslands Bypass Project ambient water on <i>Selenastrum capricornutum</i>		
Test Initiation Date (Time)	Treatment/Sample ID	Mean Algal Cell Density (cells/mL x 10 <sup>6</sup> )
4/17/24 (1425)	Lab Water Control	1.09
	GBP-109-D-TE	5.46

#### 3.2 Effects of the Grasslands Bypass Project Ambient Water on *Daphnia magna*

The results for this testing are summarized in Table 3. There was **no** significant reduction in survival in the Grasslands Bypass Project ambient water sample. The test data and summary of statistical analyses for this testing are presented in Appendix C.

Table 3. Effects of Grasslands Bypass Project ambient water on <i>Daphnia magna</i> .		
Test Initiation Date (Time)	Treatment/Sample ID	Mean % Survival
4/17/24 (1512)	Lab Water Control	95.0
	GBP-109-D-TE	85.0

#### 3.3 Effects of the Grasslands Bypass Project Ambient Water on Fathead Minnows

The results for this testing are summarized in Table 4. There were **no** significant reductions in survival in the Grasslands Bypass Project ambient water sample. The test data and summary of statistical analyses for this testing are presented in Appendix D.

Table 4. Effects of Grasslands Bypass Project ambient water on fathead minnows.		
Test Initiation Date (Time)	Treatment/Sample ID	Mean % Survival
4/17/24 (1545)	Lab Water Control	90.0
	GBP-109-D-TE	95.0





Chris Linneman  
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June 6, 2024

Chris:

I have enclosed our report “Evaluation of the Toxicity of Grasslands Bypass Project Ambient Water Sample: Event 110” for the sample that was collected May 15, 2024. The results of this testing are summarized below.

Toxicity summary for Grasslands Bypass Project ambient water and sediment samples.			
Sample Station	Toxicity relative to the Lab Control treatment?		
	<i>Selenastrum capricornutum</i>	<i>Daphnia magna</i>	Fathead Minnow
	Growth	Survival	Survival
Site D	No	No	No

**Chronic Toxicity of Grasslands Bypass Project Ambient Water to *Selenastrum capricornutum***

There was **no** significant reduction in algal growth in the Grasslands Bypass Project ambient water sample.

**Acute Toxicity of Grasslands Bypass Project Ambient Water to *Daphnia magna***

There was **no** significant reduction in survival in the Grasslands Bypass Project ambient water sample.

**Acute Toxicity of Grasslands Bypass Project Ambient Water to Fathead Minnows**

There was **no** significant reduction in survival in the Grasslands Bypass Project ambient water sample.



### 3. RESULTS

#### 3.1 Effects of the Grasslands Bypass Project Ambient Water on *Selenastrum capricornutum*

The results for this testing are summarized in Table 2. There was **no** significant reduction in algal growth in the Grasslands Bypass Project ambient water sample. The test data and summary of statistical analyses for this testing are presented in Appendix B.

Table 2. Effects of Grasslands Bypass Project ambient water on <i>Selenastrum capricornutum</i>		
Test Initiation Date (Time)	Treatment/Sample ID	Mean Algal Cell Density (cells/mL x 10 <sup>6</sup> )
5/15/24 (1538)	Lab Water Control	1.34
	GBP-110-D-TE	4.65

#### 3.2 Effects of the Grasslands Bypass Project Ambient Water on *Daphnia magna*

The results for this testing are summarized in Table 3. There was **no** significant reduction in survival in the Grasslands Bypass Project ambient water sample. The test data and summary of statistical analyses for this testing are presented in Appendix C.

Table 3. Effects of Grasslands Bypass Project ambient water on <i>Daphnia magna</i> .		
Test Initiation Date (Time)	Treatment/Sample ID	Mean % Survival
5/15/24 (1558)	Lab Water Control	100
	GBP-110-D-TE	95.0

#### 3.3 Effects of the Grasslands Bypass Project Ambient Water on Fathead Minnows

The results for this testing are summarized in Table 4. There were **no** significant reductions in survival in the Grasslands Bypass Project ambient water sample. The test data and summary of statistical analyses for this testing are presented in Appendix D.

Table 4. Effects of Grasslands Bypass Project ambient water on fathead minnows.		
Test Initiation Date (Time)	Treatment/Sample ID	Mean % Survival
5/15/24 (1550)	Lab Water Control	97.5
	GBP-110-D-TE	97.5

