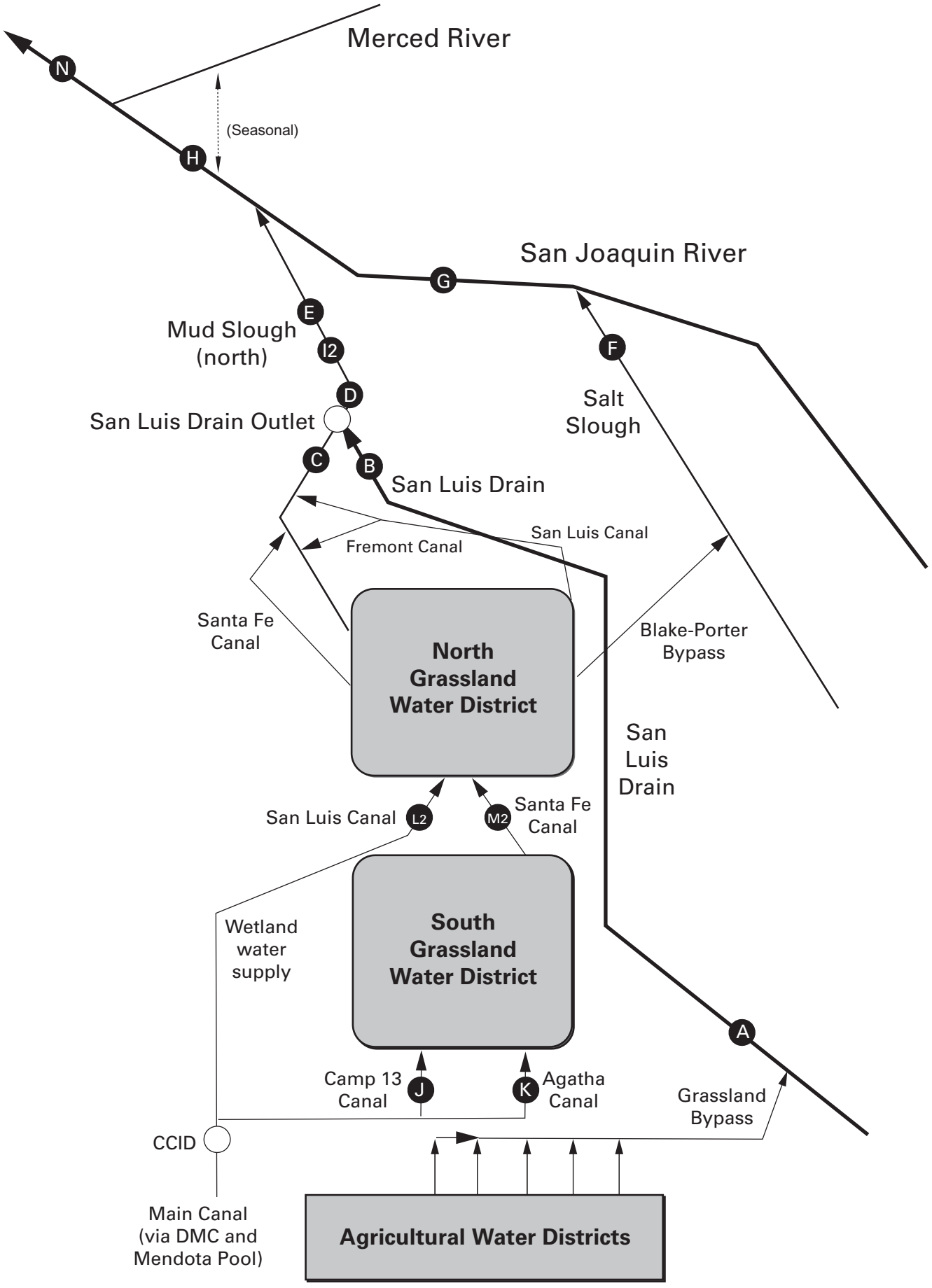
Merced River
N
(Seasonal)
H
San Joaquin River
G
E
Mud Slough
(north)
I2
F
D
San Luis Drain Outlet
Salt
Slough
C
B
San Luis Drain
San Luis Canal
Fremont Canal
Santa Fe
Canal
North
Grassland
Water District
Blake-Porter
Bypass
San
Luis
Drain
San Luis Canal
L2
M2
Santa Fe
Canal
Wetland
water
supply
South
Grassland
Water District
A
Camp 13
Canal
J
K
Agatha
Canal
Grassland
Bypass
CCID
Main Canal
(via DMC and
Mendota Pool)
Agricultural Water Districts

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

April 26, 2021

Chris:

I have enclosed our report "Evaluation of the Toxicity of Grasslands Bypass Project Ambient Water and Sediment Samples: Event 72" for the samples that were collected March 18, 2021. 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?			
	Selenastrum capricornutum	*Daphnia magna*	Fathead Minnow	*Hyalella azteca*
	Growth	Survival	Survival	Survival
Site D	No	No	No	No
Site B3	**Yes**	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 a significant effect in algal growth in the Site B3 ambient water sample. There were ***no*** significant reductions in algal growth in any of the remaining 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 were ***no*** significant reductions in survival in any of the Grasslands Bypass Project ambient water samples.

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

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

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

April 7, 2021

Chris:

I have enclosed our report "Evaluation of the Toxicity of Grasslands Bypass Project Ambient Water: Event 73" for the sample that was collected April 14, 2021. The results of this testing are summarized below.

Toxicity summary for the Grasslands Bypass Project ambient water sample.			
Sample Station	Toxicity relative to the Lab Water Control treatment?		
	Selenastrum capricornutum	*Daphnia magna*	Fathead Minnow
	Growth	Survival	Survival
GBP-73-D-TE	No	No	No

Chronic Toxicity of Grasslands Bypass Project Ambient Water to *Selenastrum capricornutum*
There was ***no*** significant reduction in growth in the Site D ambient water sample.

Acute Toxicity of Grasslands Bypass Project Ambient Water to *Daphnia magna*
There was ***no*** significant reduction in survival in the Site D ambient water sample.

Acute Toxicity of Grasslands Bypass Project Ambient Water to Fathead Minnows
There was ***no*** significant reduction in survival in the Site D ambient water sample.

If you have any questions regarding the performance and interpretation of these tests, feel free to contact us at (707) 207-7760.

Sincerely,

Stevi Vasquez
Project Manager

Pacific EcoRisk is accredited in accordance with NELAP (ORELAP ID 4043). Pacific EcoRisk certifies that the test results reported herein conform to the most current NELAP requirements for parameters for which accreditation is required and available. Any exceptions to NELAP requirements are noted, where applicable, in the body of the report. This report shall not be reproduced, except in full, without the written consent of Pacific EcoRisk. This testing was performed under Lab Order 22166.

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

June 14, 2021

Chris:

I have enclosed our report "Evaluation of the Toxicity of Grasslands Bypass Project Ambient Water: Event 74" for the sample that was collected May 20, 2021. The results of this testing are summarized below.

Toxicity summary for the Grasslands Bypass Project ambient water sample.			
Sample Station	Toxicity relative to the Lab Water Control treatment?		
	Selenastrum capricornutum	*Daphnia magna*	Fathead Minnow
	Growth	Survival	Survival
GBP-74-D-TE	No	No	No

Chronic Toxicity of Grasslands Bypass Project Ambient Water to *Selenastrum capricornutum*
There was ***no*** significant reduction in growth in the Site D ambient water sample.

Acute Toxicity of Grasslands Bypass Project Ambient Water to *Daphnia magna*
There was ***no*** significant reduction in survival in the Site D ambient water sample.

Acute Toxicity of Grasslands Bypass Project Ambient Water to Fathead Minnows
There was ***no*** significant reduction in survival in the Site D ambient water sample.

If you have any questions regarding the performance and interpretation of these tests, feel free to contact us at (707) 207-7760.

Sincerely,

Stevi Vasquez
Project Manager

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

August 2, 2021

Chris:

I have enclosed our report "Evaluation of the Toxicity of Grasslands Bypass Project Ambient Water: Event 75" for the sample that was collected June 30, 2021. The results of this testing are summarized below.

Toxicity summary for the Grasslands Bypass Project ambient water samples.

Sample Station	Toxicity relative to the Lab Water Control treatment?		
	Selenastrum capricornutum	*Daphnia magna*	Fathead Minnow
	Growth	Survival	Survival
GBP-75-D-TE	No	No	No
GBP-75-F-TE	No	No	No
GBP-75-R-TE	No	No	No

Chronic Toxicity of Grasslands Bypass Project Ambient Water to *Selenastrum capricornutum*
There were ***no*** significant reductions in algal growth in any of the 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 ambient water samples.

Acute Toxicity of Grasslands Bypass Project Ambient Water to Fathead Minnows
There were ***no*** significant reductions in survival in any of the ambient water samples.

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

August 19, 2021

Chris:

I have enclosed our report "Evaluation of the Toxicity of Grasslands Bypass Project Ambient Water: Event 76" for the sample that was collected July 22, 2021. The results of this testing are summarized below.

Toxicity summary for the Grasslands Bypass Project ambient water sample.			
Sample Station	Toxicity relative to the Lab Water Control treatment?		
	Selenastrum capricornutum	*Daphnia magna*	Fathead Minnow
	Growth	Survival	Survival
GBP-76-D-TE	No	No	No

Chronic Toxicity of Grasslands Bypass Project Ambient Water to *Selenastrum capricornutum*
There was ***no*** significant reduction in growth in the Site D ambient water sample.

Acute Toxicity of Grasslands Bypass Project Ambient Water to *Daphnia magna*
There was ***no*** significant reduction in survival in the Site D ambient water sample.

Acute Toxicity of Grasslands Bypass Project Ambient Water to Fathead Minnows
There was ***no*** significant reduction in survival in the Site D ambient water sample.

If you have any questions regarding the performance and interpretation of these tests, feel free to contact us at (707) 207-7760.

Sincerely,

Stephen Clark for:
Stevi Vasquez
Project Manager

Pacific EcoRisk is accredited in accordance with NELAP (ORELAP ID 4043). Pacific EcoRisk certifies that the test results reported herein conform to the most current NELAP requirements for parameters for which accreditation is required and available. Any exceptions to NELAP requirements are noted, where applicable, in the body of the report. This report shall not be reproduced, except in full, without the written consent of Pacific EcoRisk. This testing was performed under Lab Order 22166.