



Chris Linneman
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October 23, 2023

Chris:

I have enclosed our report “Evaluation of the Toxicity of Grasslands Bypass Project Ambient Water Samples: Event 102” for the samples that were collected September 28, 2023. 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
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 were **no** significant reductions 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 were **no** significant reductions in survival in the Grasslands Bypass Project ambient water samples.



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November 9, 2023

Chris:

I have enclosed our report “Evaluation of the Toxicity of Grasslands Bypass Project Ambient Water and Sediment Samples: Event 103” for the samples that were collected October 18, 2023. 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

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

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 sample.

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*.



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December 12, 2023

Chris:

I have enclosed our report “Evaluation of the Toxicity of Grasslands Bypass Project Ambient Water Samples: Event 104” for the samples that were collected November 14, 2023. 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
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 were no significant reductions 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 were no significant reductions in survival in the Grasslands Bypass Project ambient water samples.