

APPENDIX IX

OMITTED EXCEEDANCES RESULTS FOR DISSOLVED OXYGEN AND SEDIMENT TOXICITY

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INTRODUCTION

On January 11, 2016, the Regional Board staff sent an email indicating sediment toxicity data should be evaluated based on Surface Water Ambient Monitoring Program (SWAMP) protocol as outlined in the August 27, 2014 SWAMP Toxicity Workgroup Recommendation letter. The Coalition sent a letter to the Regional Board confirming the SWAMP protocol on February 12, 2016. The SWAMP protocol indicates, 1) sediment samples resulting in 80% survival compared to the control or above should not be considered toxic, and 2) samples that result in 79% survival compared to the control or below should be considered toxic if they are statistically significant.

The SJCDWQC reviewed all past reported sediment toxicity results. Table IX-1 includes all past reported sediment toxicity results that are no longer considered toxic.

Historically, the Coalition applied the most limiting trigger limits for DO and SC. On July 1, 2014, the Coalition submitted an amendment to the SQMP (approved November 24, 2015) that proposed to apply the applicable Basin Plan DO and SC objectives. The Basin Plan states that the lower DO trigger limit of 5 mg/L should be utilized for waterways that are 'warm' and/or not considered a resource for fisheries. The Basin Plan also states the trigger limit for SC should be based on the seasonal criteria of 700 $\mu\text{S}/\text{cm}$ from April through August, and 1,000 $\mu\text{S}/\text{cm}$ from September through March.

Based on the approved SQMP, the Coalition applied the lower DO trigger limit of 5 mg/L to 10 monitoring sites within the SJCDWQC boundary. The Coalition applied the seasonal criteria of 700 $\mu\text{S}/\text{cm}$ from April through August, and 1,000 $\mu\text{S}/\text{cm}$ from September through March to all monitoring sites within the SJCDWQC boundary. The original exceedances for DO and SC that were removed due to the changes in WQTLs can be found in Table IX-2 and Table IX-3, respectively, organized by site.

Table IX-1. SJCDWQC sediment toxicity testing exceedance results omitted due to the SWAMP protocol.

Samples are sorted by station name and sample date.

STATION NAME	SAMPLE DATE	SPECIES	PCT CONTROL (%)	TOXICITY SIGNIFICANCE	SUMMARY COMMENTS
Lone Tree Creek @ Jack Tone Rd	5/17/2005	<i>Hyalella azteca</i>	95		
Grant Line Canal near Calpack Rd	9/20/2005	<i>Hyalella azteca</i>	91	SG	
Terminus Tract @ Glascock Rd	9/20/2005	<i>Hyalella azteca</i>	90	SG	
Mormon Slough @ Jack Tone Rd	3/6/2007	<i>Hyalella azteca</i>	91.139	SG	Toxicity not ecologically significant; Resampled on 3/29/07, toxicity not persistent.
Littlejohns Creek @ Jack Tone Rd-RS	3/29/2007	<i>Hyalella azteca</i>	88.157	SG	
Marsh Creek @ Concord Ave-RS	3/29/2007	<i>Hyalella azteca</i>	86.84	SG	Toxicity not ecologically significant.
French Camp Slough @ Airport Way	3/18/2008	<i>Hyalella azteca</i>	94	SG	RPD 5.5; Resampled on 4/9/08; toxicity was not persistent.
Roberts Island Drain along House Rd-GR2	8/13/2008	<i>Hyalella azteca</i>	83	SG	FD RPD 17.5; Resampled on 9/18/08, toxicity was persistent.
Unnamed Drain to Lone Tree Creek @ Jack Tone Rd	8/13/2008	<i>Hyalella azteca</i>	87.2	SG	Resampled on 9/18/08; toxicity was not persistent.
Roberts Island Drain along House Rd-RS	9/18/2008	<i>Hyalella azteca</i>	84.9	SG	Resampling event due to <i>H. azteca</i> toxicity on 8/13/08; toxicity was persistent.
Walthall Slough @ Woodward Ave-IN2	4/14/2009	<i>Hyalella azteca</i>	81	SG	FD RPD 23
Drain @ Woodbridge Rd	9/7/2010	<i>Hyalella azteca</i>	88	SG	
Grant Line Canal near Calpack Rd	9/7/2010	<i>Hyalella azteca</i>	91	SG	
Grant Line Canal @ Clifton Court Rd	3/8/2011	<i>Hyalella azteca</i>	80	SG	
French Camp Slough @ Airport Way	10/14/2011	<i>Hyalella azteca</i>	81	SG	FD RPD 6.9
French Camp Slough @ Airport Way	10/14/2011	<i>Hyalella azteca</i>	86	SG	
Grant Line Canal near Calpack Rd	10/14/2011	<i>Hyalella azteca</i>	86	SG	
Duck Creek @ Hwy 4-IN2	3/15/2012	<i>Hyalella azteca</i>	92	SG	FD RPD 30.6 . Additional sediment chemistry was conducted on the environmental grab.
Unnamed Drain to Lone Tree Creek @ Jack Tone Rd	3/19/2013	<i>Hyalella azteca</i>	94	SG	
Sand Creek @ Hwy 4 Bypass	3/19/2013	<i>Hyalella azteca</i>	90	SG	
Duck Creek @ Hwy 4	3/19/2013	<i>Hyalella azteca</i>	91	SG	
Upper Roberts Island Drain	9/15/2015	<i>Hyalella azteca</i>	80	SG	

Table IX-2. SJCDWQC DO exceedance results omitted due to the 5 mg/L WQTL update.

Results are sorted by station name and sample date.

STATION NAME	SAMPLE DATE	DISSOLVED OXYGEN, MG/L
Duck Creek @ Hwy 4	5/16/2006	5.60
Duck Creek @ Hwy 4	7/18/2006	5.50
Duck Creek @ Hwy 4	3/6/2007	5.80
Duck Creek @ Hwy 4	7/10/2007	6.67
Duck Creek @ Hwy 4	8/9/2007	6.54
Duck Creek @ Hwy 4	9/4/2007	6.99
Duck Creek @ Hwy 4	9/25/2007	5.83
Duck Creek @ Hwy 4	5/13/2008	6.95
Duck Creek @ Hwy 4	6/10/2008	6.89
Duck Creek @ Hwy 4	7/15/2008	5.87
Duck Creek @ Hwy 4	8/12/2008	6.00
Duck Creek @ Hwy 4	8/13/2008	5.34
Duck Creek @ Hwy 4	9/16/2008	5.92
Duck Creek @ Hwy 4	11/4/2008	5.38
Duck Creek @ Hwy 4	3/10/2009	5.40
Duck Creek @ Hwy 4	5/12/2009	6.43
Duck Creek @ Hwy 4	6/9/2009	6.74
Duck Creek @ Hwy 4	9/15/2009	5.62
Duck Creek @ Hwy 4	4/13/2010	6.60
Duck Creek @ Hwy 4	7/13/2010	6.48
Duck Creek @ Hwy 4	8/10/2010	5.07
Duck Creek @ Hwy 4	9/7/2010	6.11
Duck Creek @ Hwy 4	10/12/2010	5.60
Duck Creek @ Hwy 4	11/9/2010	6.01
Duck Creek @ Hwy 4	6/28/2011	5.57

STATION NAME	SAMPLE DATE	DISSOLVED OXYGEN, MG/L
Duck Creek @ Hwy 4	7/26/2011	6.3
Duck Creek @ Hwy 4	8/23/2011	6.15
Duck Creek @ Hwy 4	9/20/2011	6.54
Duck Creek @ Hwy 4	2/14/2012	6.4
Duck Creek @ Hwy 4	5/16/2012	6.78
Duck Creek @ Hwy 4	4/2/2013	6.68
Duck Creek @ Hwy 4	6/18/2013	5.39
Kellogg Creek along Hoffman Ln	7/18/2006	6.80
Kellogg Creek along Hoffman Ln	8/15/2006	6.40
Kellogg Creek along Hoffman Ln	9/25/2007	6.87
Kellogg Creek along Hoffman Ln	7/8/2008	6.54
Kellogg Creek along Hoffman Ln	7/15/2008	6.59
Kellogg Creek along Hoffman Ln	8/13/2008	6.89
Kellogg Creek along Hoffman Ln	8/21/2012	6.99
Kellogg Creek along Hoffman Ln	9/16/2014	6.71
Littlejohns Creek @ Jack Tone Rd	9/23/2004	6.70
Littlejohns Creek @ Jack Tone Rd	7/19/2005	6.60
Littlejohns Creek @ Jack Tone Rd	9/20/2005	5.40
Littlejohns Creek @ Jack Tone Rd	6/20/2006	6.70
Littlejohns Creek @ Jack Tone Rd	9/19/2006	5.40
Littlejohns Creek @ Jack Tone Rd	7/10/2007	6.85
Littlejohns Creek @ Jack Tone Rd	7/17/2007	6.60
Littlejohns Creek @ Jack Tone Rd	8/28/2007	5.85
Littlejohns Creek @ Jack Tone Rd	9/4/2007	5.72
Littlejohns Creek @ Jack Tone Rd	5/13/2008	6.70
Littlejohns Creek @ Jack Tone Rd	8/13/2008	6.19
Littlejohns Creek @ Jack Tone Rd	9/16/2008	6.34
Littlejohns Creek @ Jack Tone Rd	7/13/2010	6.53

STATION NAME	SAMPLE DATE	DISSOLVED OXYGEN, MG/L
Littlejohns Creek @ Jack Tone Rd	8/10/2010	6.25
Littlejohns Creek @ Jack Tone Rd	9/7/2010	5.50
Littlejohns Creek @ Jack Tone Rd	10/12/2010	6.00
Littlejohns Creek @ Jack Tone Rd	7/26/2011	6.78
Littlejohns Creek @ Jack Tone Rd	8/23/2011	5.20
Littlejohns Creek @ Jack Tone Rd	9/20/2011	6.17
Littlejohns Creek @ Jack Tone Rd	5/16/2012	6.02
Littlejohns Creek @ Jack Tone Rd	7/17/2012	6.80
Littlejohns Creek @ Jack Tone Rd	8/21/2012	5.67
Littlejohns Creek @ Jack Tone Rd	11/6/2012	5.55
Littlejohns Creek @ Jack Tone Rd	5/21/2013	5.77
Littlejohns Creek @ Jack Tone Rd	4/15/2014	6.25
Littlejohns Creek @ Jack Tone Rd	5/20/2014	5.31
Littlejohns Creek @ Jack Tone Rd	11/18/2014	6.64
Littlejohns Creek @ Jack Tone Rd	12/4/2014	6.15
Littlejohns Creek @ Jack Tone Rd	2/9/2015	6.41
Littlejohns Creek @ Jack Tone Rd	4/21/2015	6.61
Lone Tree Creek @ Jack Tone Rd	8/24/2004	6.30
Lone Tree Creek @ Jack Tone Rd	2/16/2005	6.00
Lone Tree Creek @ Jack Tone Rd	7/19/2005	6.10
Lone Tree Creek @ Jack Tone Rd	8/16/2005	6.90
Lone Tree Creek @ Jack Tone Rd	3/15/2006	6.30
Lone Tree Creek @ Jack Tone Rd	3/24/2006	6.70
Lone Tree Creek @ Jack Tone Rd	5/16/2006	6.70
Lone Tree Creek @ Jack Tone Rd	7/18/2006	5.60
Lone Tree Creek @ Jack Tone Rd	8/15/2006	6.62
Lone Tree Creek @ Jack Tone Rd	2/11/2007	5.54
Lone Tree Creek @ Jack Tone Rd	4/15/2008	5.85

STATION NAME	SAMPLE DATE	DISSOLVED OXYGEN, MG/L
Lone Tree Creek @ Jack Tone Rd	7/14/2009	6.61
Lone Tree Creek @ Jack Tone Rd	8/11/2009	5.95
Lone Tree Creek @ Jack Tone Rd	7/16/2013	5.82
Lone Tree Creek @ Jack Tone Rd	8/19/2014	6.61
Sand Creek @ Hwy 4 Bypass	5/16/2006	6.30
Sand Creek @ Hwy 4 Bypass	5/25/2006	6.30
Sand Creek @ Hwy 4 Bypass	6/28/2006	6.62
Sand Creek @ Hwy 4 Bypass	7/18/2006	5.30
Sand Creek @ Hwy 4 Bypass	7/26/2006	5.70
Sand Creek @ Hwy 4 Bypass	8/15/2006	6.20
Sand Creek @ Hwy 4 Bypass	9/19/2006	5.50
Sand Creek @ Hwy 4 Bypass	6/12/2007	6.35
Sand Creek @ Hwy 4 Bypass	7/30/2007	5.02
Sand Creek @ Hwy 4 Bypass	8/7/2007	6.82
Sand Creek @ Hwy 4 Bypass	8/31/2007	5.77
Sand Creek @ Hwy 4 Bypass	9/4/2007	5.27
Sand Creek @ Hwy 4 Bypass	4/15/2008	5.97
Sand Creek @ Hwy 4 Bypass	4/23/2008	5.97
Sand Creek @ Hwy 4 Bypass	5/7/2008	5.21
Sand Creek @ Hwy 4 Bypass	5/13/2008	5.77
Sand Creek @ Hwy 4 Bypass	6/3/2008	5.26
Sand Creek @ Hwy 4 Bypass	8/12/2008	5.36
Sand Creek @ Hwy 4 Bypass	8/13/2008	6.10
Sand Creek @ Hwy 4 Bypass	9/18/2008	6.73
Sand Creek @ Hwy 4 Bypass	5/24/2011	6.28
Sand Creek @ Hwy 4 Bypass	10/14/2011	5.40
Sand Creek @ Hwy 4 Bypass	7/17/2012	5.64
Sand Creek @ Hwy 4 Bypass	9/18/2012	5.92

STATION NAME	SAMPLE DATE	DISSOLVED OXYGEN, MG/L
Sand Creek @ Hwy 4 Bypass	3/19/2013	6.12
Sand Creek @ Hwy 4 Bypass	4/2/2013	6.07
Sand Creek @ Hwy 4 Bypass	8/20/2013	5.60
Sand Creek @ Hwy 4 Bypass	9/17/2013	5.98
Sand Creek @ Hwy 4 Bypass	3/5/2014	6.11
Sand Creek @ Hwy 4 Bypass	4/15/2014	6.14
Sand Creek @ Hwy 4 Bypass	5/20/2014	6.44
Sand Creek @ Hwy 4 Bypass	6/17/2014	6.17
Sand Creek @ Hwy 4 Bypass	8/19/2014	5.15
Sand Creek @ Hwy 4 Bypass	3/17/2015	5.34
Unnamed Drain to Lone Tree Creek @ Jack Tone Rd	7/18/2006	6.00
Unnamed Drain to Lone Tree Creek @ Jack Tone Rd	5/13/2008	5.61
Unnamed Drain to Lone Tree Creek @ Jack Tone Rd	9/16/2008	6.70
Unnamed Drain to Lone Tree Creek @ Jack Tone Rd	8/11/2009	6.28
Unnamed Drain to Lone Tree Creek @ Jack Tone Rd	5/16/2012	6.93
Unnamed Drain to Lone Tree Creek @ Jack Tone Rd	7/16/2013	6.85
Unnamed Drain to Lone Tree Creek @ Jack Tone Rd	8/20/2013	5.85
Walthall Slough @ Woodward Ave	1/13/2009	5.58
Walthall Slough @ Woodward Ave	5/11/2010	5.88
Walthall Slough @ Woodward Ave	7/13/2010	5.06
Walthall Slough @ Woodward Ave	9/7/2010	6.88
Walthall Slough @ Woodward Ave	11/15/2011	6.77
Walthall Slough @ Woodward Ave	7/17/2012	6.16
Walthall Slough @ Woodward Ave	12/3/2012	5.63
Walthall Slough @ Woodward Ave	6/18/2013	6.60
Walthall Slough @ Woodward Ave	8/20/2013	5.56
Walthall Slough @ Woodward Ave	8/21/2013	6.24
Walthall Slough @ Woodward Ave	9/17/2013	5.32

STATION NAME	SAMPLE DATE	DISSOLVED OXYGEN, MG/L
Walthall Slough @ Woodward Ave	10/21/2014	5.45
Walthall Slough @ Woodward Ave	1/20/2015	5.75
Walthall Slough @ Woodward Ave	2/9/2015	5.70
Walthall Slough @ Woodward Ave	5/19/2015	5.67

Table IX-3. SJCDWQC SC exceedance results omitted due to the seasonal WQTL update of 700 $\mu\text{S}/\text{cm}$ from April through August and 1000 $\mu\text{S}/\text{cm}$ from September through March.

Results are sorted by station name and sample date.

STATION NAME	SAMPLE DATE	SPECIFIC CONDUCTIVITY, $\mu\text{S}/\text{CM}$
Bacon Island Pump @ Old River	3/3/2014	735
Bacon Island Pump @ Old River	12/4/2014	806
Bacon Island Pump @ Old River	2/9/2015	818
Drain @ Woodbridge Rd	10/14/2008	115
Drain @ Woodbridge Rd	11/4/2008	716
Drain @ Woodbridge Rd	1/13/2010	956
Drain @ Woodbridge Rd	10/12/2010	797
Drain @ Woodbridge Rd	11/9/2010	984
Drain to Bishop Cut @ North Rio Blanco Rd	1/15/2013	880
Drain to Bishop Cut @ North Rio Blanco Rd	2/21/2013	979
Drain to Bishop Cut @ North Rio Blanco Rd	3/19/2013	807
East Orwood Tract Drain	3/17/2015	796
Grant Line Canal @ Clifton Court Rd	9/19/2006	814
Grant Line Canal @ Clifton Court Rd	9/4/2007	838
Grant Line Canal @ Clifton Court Rd	9/7/2010	798
Grant Line Canal @ Clifton Court Rd	1/11/2011	844
Grant Line Canal @ Clifton Court Rd	9/18/2012	728
Grant Line Canal @ Clifton Court Rd	3/19/2013	903
Grant Line Canal near Calpack Rd	1/17/2012	877
Grant Line Canal near Calpack Rd	9/16/2014	975
Kellogg Creek @ Hwy 4	2/23/2005	990
Kellogg Creek along Hoffman Ln	3/8/2011	740
Kellogg Creek along Hoffman Ln	3/5/2014	804

STATION NAME	SAMPLE DATE	SPECIFIC CONDUCTIVITY, $\mu\text{S}/\text{CM}$
Lone Tree Creek @ Jack Tone Rd	2/14/2012	796
Rindge Tract Drain	3/17/2015	810
Roberts Island @ Whiskey Slough Pump	1/17/2012	911
Roberts Island @ Whiskey Slough Pump	11/19/2013	984
Roberts Island @ Whiskey Slough Pump	12/17/2013	769
Roberts Island @ Whiskey Slough Pump	1/28/2014	912
Roberts Island @ Whiskey Slough Pump	11/18/2014	984
Roberts Island Drain @ Holt Rd	9/19/2006	764
Roberts Island Drain @ Holt Rd	3/6/2007	856
Roberts Island Drain @ Holt Rd	9/4/2007	966
Roberts Island Drain @ Holt Rd	9/16/2008	814
Roberts Island Drain @ Holt Rd	10/14/2008	896
Roberts Island Drain @ Holt Rd	11/4/2008	764
Roberts Island Drain @ Holt Rd	12/9/2008	894
Roberts Island Drain @ Holt Rd	10/6/2009	948
Roberts Island Drain @ Holt Rd	9/7/2010	824
Roberts Island Drain @ Holt Rd	10/12/2010	946
Roberts Island Drain @ Holt Rd	10/6/2011	746
Roberts Island Drain @ Holt Rd	11/15/2011	762
Roberts Island Drain along House Rd	9/19/2006	737
Roberts Island Drain along House Rd	9/18/2008	767
Roberts Island Drain along House Rd	9/23/2008	961
South McDonald Island Pump	11/18/2014	835
South McDonald Island Pump	1/20/2015	817
South Webb Tract Drain	1/14/2009	712
South Webb Tract Drain	2/10/2009	737

STATION NAME	SAMPLE DATE	SPECIFIC CONDUCTIVITY, $\mu\text{S}/\text{CM}$
Terminus Tract Drain @ Hwy 12	2/16/2005	950
Terminus Tract Drain @ Hwy 12	2/11/2007	873
Terminus Tract Drain @ Hwy 12	9/16/2008	858
Terminus Tract Drain @ Hwy 12	11/10/2009	753
Terminus Tract Drain @ Hwy 12	11/9/2010	991
Terminus Tract Drain @ Hwy 12	10/6/2011	854
Terminus Tract Drain @ Hwy 12	10/14/2011	757
Terminus Tract Drain @ Hwy 12	12/13/2011	705.5
Terminus Tract Drain @ Hwy 12	1/17/2012	767.7
Terminus Tract Drain @ Hwy 12	12/3/2012	824
Terminus Tract Drain @ Hwy 12	11/19/2013	780
Terminus Tract Drain @ Hwy 12	11/18/2014	891
Terminus Tract Drain @ Hwy 12	12/4/2014	977
Terminus Tract Drain @ Hwy 12	3/17/2015	781
Union Island Drain @ Bonetti Rd	11/18/2014	896
Unnamed Drain to Lone Tree Creek @ Jack Tone Rd	3/6/2007	841
Unnamed Drain to Lone Tree Creek @ Jack Tone Rd	3/8/2011	718
Walthall Slough @ Woodward Ave	1/13/2009	912
Walthall Slough @ Woodward Ave	2/10/2009	993
Walthall Slough @ Woodward Ave	12/8/2009	732
Walthall Slough @ Woodward Ave	1/13/2010	784
Walthall Slough @ Woodward Ave	2/9/2010	719
Walthall Slough @ Woodward Ave	12/7/2010	733
Walthall Slough @ Woodward Ave	1/11/2011	750
Walthall Slough @ Woodward Ave	3/8/2011	760
Walthall Slough @ Woodward Ave	11/15/2011	708

STATION NAME	SAMPLE DATE	SPECIFIC CONDUCTIVITY, $\mu\text{S}/\text{CM}$
Walthall Slough @ Woodward Ave	12/13/2011	712
Walthall Slough @ Woodward Ave	2/14/2012	763
Walthall Slough @ Woodward Ave	3/15/2012	767
Walthall Slough @ Woodward Ave	12/3/2012	701
Walthall Slough @ Woodward Ave	2/21/2013	770
Walthall Slough @ Woodward Ave	11/19/2013	725
Walthall Slough @ Woodward Ave	12/17/2013	807.4
Walthall Slough @ Woodward Ave	1/28/2014	830
Walthall Slough @ Woodward Ave	2/11/2014	824
Walthall Slough @ Woodward Ave	10/21/2014	708
Walthall Slough @ Woodward Ave	1/20/2015	851
Walthall Slough @ Woodward Ave	2/9/2015	784