Table 4.1-24. Marsh and Mangrove Analytical Porewater May 2014

		050514-PW-F1-1		050514-PW-F1-2		050814-PW-F2-1		050814-PW-F2-2		050814-PW-F2-3		050214-PW-F2-4		050214-PW-F3-1		050214-PW-F3-2		050214-PW-F3-3	
Parameter	**Units**	05/05/2014		05/05/2014		05/08/2014		05/08/2014		05/08/2014		05/02/2014		05/02/2014		05/02/2014		05/02/2014	
Temperature	°C	28.08		26.49		28.52		27.33		26.74		27.98		27.62		27.94		26.31	
pH	SU	6.99		6.86		7.36		7.17		6.91		6.17		6.86		6.77		6.7	
Dissolved Oxygen	mg/L																		
Specific Conductance	µS/cm	1508.19		1733.73		1163.22		1481.83		2414.26		887.41		1290.31		1502.9		1983.95	
Turbidity	NTU																		
Silica, dissolved	mg/L																		
Calcium	mg/L																		
Magnesium	mg/L																		
Potassium	mg/L																		
Sodium	mg/L	138		176		82.3		127.0		256		66		110		123		215.0	
Boron	mg/L																		
Strontium	mg/L																		
Bromide	mg/L																		
Chloride	mg/L	174		316		150		246		498		138		213		273		434	
Fluoride	mg/L																		
Sulfate	mg/L																		
Total Ammonia	mg/L as N	0.026	U	0.026	U	0.026	U	0.026	U	0.026	U	0.341		0.026	U	0.026	U	0.026	U
Ammonium ion (NH_4^+)	mg/L	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.438		0.05	U	0.05	U	0.05	U
Unionized NH_3	mg/L	0.000017	U	0.000017	U	0.000017	U	0.000017	U	0.000017	U	0.000429		0.000017	U	0.000017	U	0.000017	U
Nitrate/Nitrite	mg/L as N	0.0654		0.638		0.027	U	0.276		0.0294	I	0.0297	I	0.0349	I	0.027	U	0.0541	
TKN	mg/L	1.08		2.45		3.05		2.91		4.44		2.14		4.23		5.12		3.17	
TN	mg/L	1.1454		3.088		3.077		3.186		4.4694		2.1697		4.2649		5.147		3.2241	
ortho-Phosphate	mg/L	0.00171	I	0.0047	I	0.0014	I	0.0014	U	0.00159	I	0.0014	U	0.0014	U	0.0014	U	0.0014	U
Total Phosphorus (P)	mg/L	0.00292	I	0.00492	I	0.0022	U	0.00351	I	0.0116		0.013		0.0217		0.0022	U	0.00246	I
Alkalinity	mg/L																		
Bicarbonate Alkalinity	mg/L as $CaCO_3$																		
Sulfide	mg/L																		
Total Dissolved Solids	mg/L																		
Salinity	*	0.77		0.89		0.59		0.75		1.26		0.42		0.66		0.77		1.03	
Tritium	pCi/L (1σ)																		

NOTES:

Laboratory anion and cation results are reported with 3 digits although only the first 2 are significant figures.

* PSS-78 salinity is unitless.

KEY:

°C = Degrees Celsius.
µg/L = Microgram(s) per liter.
µS/cm = MicroSiemen(s) per centimeter.
σ = sigma (Standard Deviation
$CaCO_3$ = Calcium carbonate.
I = Value between the MDL and PQL.
MCL = Maximum Contaminant Levels.
MDL = Minimum detection limit.
mg/L = Milligram(s) per liter.
N = Nitrogen.
NH_3 = Ammonia.
NH_4 = Ammonium.
NTU = Nephelometric Turbidity Units(s).
pCi/L = PicoCuries per liter.
PQL - Practical quantitation limit.
PSS-78 = Practical Salinity Scale of 1978.
PW = Porewater.
TKN = Total Kjeldahl nitrogen.
TN = Total nitrogen.
U = Analyzed for but not detected at the reported value.

Table 4.1-24. Marsh and Mangrove Analytical Porewater May 2014

		050614-PW-F4-1		050614-PW-F4-2		050614-PW-F4-3		050214-PW-F4-4		051314-PW-F5-1		051314-PW-F5-2		050714-PW-F6-1		050714-PW-F6-2		050714-PW-F6-3	
Parameter	Units	05/06/2014		05/06/2014		05/06/2014		05/02/2014		05/13/2014		05/13/2014		05/07/2014		05/07/2014		05/07/2014	
Temperature	°C	26.8		26.55		26.72		28.34		28.69		28.05		26.39		26.82		26.08	
pH	SU	6.68		6.78		6.62		6.53		6.59		6.88		6.71		6.58		6.67	
Dissolved Oxygen	mg/L																		
Specific Conductance	µS/cm	1030.69		786.97		1053.64		1013.77		38982.43		67745.02		1039.19		1213.67		3621.23	
Turbidity	NTU																		
Silica, dissolved	mg/L																		
Calcium	mg/L																		
Magnesium	mg/L																		
Potassium	mg/L																		
Sodium	mg/L	60.7		48.3		65		68		7210.0		13600.0		55		80.600		442.000	
Boron	mg/L																		
Strontium	mg/L																		
Bromide	mg/L																		
Chloride	mg/L	132		94		123		125		14200		26400		111		167.000		870.000	
Fluoride	mg/L																		
Sulfate	mg/L																		
Total Ammonia	mg/L as N	0.026	U	0.026	U	0.026	U	0.026	U	0.515		0.152		0.026	U	1.07		0.026	U
Ammonium ion (NH_4^+)	mg/L	0.05	U	0.05	U	0.05	U	0.05	U	0.66		0.194		0.05	U	1.37		0.05	U
Unionized NH_3	mg/L	0.000017	U	0.000017	U	0.000017	U	0.000017	U	0.00179		0.000981		0.000017	U	0.00319		1.7E-05	U
Nitrate/Nitrite	mg/L as N	0.0288	I	0.027	U	0.027	U	0.0285	I	0.027	U	0.027	U	0.027	U	0.027	U	0.027	U
TKN	mg/L	4.65		6.02		6.13		3.49		2.96		2.64		5.46		3.87		2.16	
TN	mg/L	4.6788		6.047		6.157		3.5185		2.987		2.667		5.487		3.897		2.187	
ortho-Phosphate	mg/L	0.0014	U	0.0014	U	0.0014	U	0.00199	I	0.0014	U	0.0014	U	0.0014	U	0.0014	U	0.0014	U
Total Phosphorus (P)	mg/L	0.0147		0.0022	U	0.0022	U	0.00716	I	0.011	U	0.015	I	0.0022	U	0.0022	U	0.0414	
Alkalinity	mg/L																		
Bicarbonate Alkalinity	mg/L as $CaCO_3$																		
Sulfide	mg/L																		
Total Dissolved Solids	mg/L																		
Salinity	*	0.52		0.39		0.53		0.51		25.24		47.05		0.52		0.61		1.93	
Tritium	pCi/L (1σ)																		

NOTES:

Laboratory anion and cation results are reported with 3 digits although only the first 2 are significant figures.

* PSS-78 salinity is unitless.

KEY:

°C = Degrees Celsius.
µg/L = Microgram(s) per liter.
µS/cm = MicroSiemen(s) per centimeter.
σ = sigma (Standard Deviation
$CaCO_3$ = Calcium carbonate.
I = Value between the MDL and PQL.
MCL = Maximum Contaminant Levels.
MDL = Minimum detection limit.
mg/L = Milligram(s) per liter.
N = Nitrogen.
NH_3 = Ammonia.
NH_4 = Ammonium.
NTU = Nephelometric Turbidity Units(s).
pCi/L = PicoCuries per liter.
PQL - Practical quantitation limit.
PSS-78 = Practical Salinity Scale of 1978.
PW = Porewater.
TKN = Total Kjeldahl nitrogen.
TN = Total nitrogen.
U = Analyzed for but not detected at the reported value.

Table 4.1-24. Marsh and Mangrove Analytical Porewater May 2014

Parameter	Units	050514-PW-M1-1		051214-PW-M1-2		050114-PW-M2-1		050114-PW-M2-2		050114-PW-M3-1		050114-PW-M3-2		050114-PW-M4-1		051214-PW-M4-2		050114-PW-M5-1		051214-PW-M5-2	
		05/05/2014		05/12/2014		05/01/2014		05/01/2014		05/01/2014		05/01/2014		05/01/2014		05/12/2014		05/01/2014		05/12/2014	
Temperature	°C	28.61		27.88		28.41		28.59		29.71		29.27		29.08		29.19		30.09		27.84	
pH	SU	6.65		6.71		7.13		6.51		6.83		6.79		6.78		6.7		6.81		6.99	
Dissolved Oxygen	mg/L																				
Specific Conductance	µS/cm	47442.4		54083.4		54776		54022.1		54147		55514.8		67294.6		62224.8		63430.5		56922.3	
Turbidity	NTU																				
Silica, dissolved	mg/L																				
Calcium	mg/L																				
Magnesium	mg/L																				
Potassium	mg/L																				
Sodium	mg/L	9090		10300		9210		10800		7480		10700		12600		12600		12400		11400	
Boron	mg/L																				
Strontium	mg/L																				
Bromide	mg/L																				
Chloride	mg/L	16800		20000		20600		20500		20400		21100		27000		24200		24600		21900	
Fluoride	mg/L																				
Sulfate	mg/L																				
Total Ammonia	mg/L as N	0.0764		0.0611		0.026	U	0.026	U	0.283		0.283		0.309		0.814		0.144		0.394	
Ammonium ion (NH_4^+)	mg/L	0.0979		0.783		0.05	U	0.05	U	0.362		0.362		0.395		1.04		0.184		0.503	
Unionized NH_3	mg/L	0.0003		0.00264		1.7E-05	U	1.7E-05	U	0.00183		0.00162		0.0017		0.00376		0.00091		0.00322	
Nitrate/Nitrite	mg/L as N	0.027	U	0.027	U	0.027	U	0.0354	I	0.027	U	0.038	I	0.0303	I	0.027	U	0.0589		0.0477	I
TKN	mg/L	0.685		1.34		1.78		1.62		1.5		3.14		5.04		2.52		2.41		2.24	
TN	mg/L	0.712		1.367		1.807		1.6554		1.527		3.178		5.0703		2.547		2.4689		2.2877	
ortho-Phosphate	mg/L	0.0014	U	0.00203	I	0.0014	U	0.0014	U	0.0014	U	0.0014	U	0.0014	U	0.00489	I	0.0014	U	0.0028	I
Total Phosphorus (P)	mg/L	0.0022	U	0.011	U	0.0022	U	0.0128		0.0023	I	0.00478	I	0.0022	U	0.011	U	0.00432	I	0.0197	I
Alkalinity	mg/L																				
Bicarbonate Alkalinity	mg/L as $CaCO_3$																				
Sulfide	mg/L																				
Total Dissolved Solids	mg/L																				
Salinity	*	31.45		36.45		36.95		36.38		36.49		37.54		46.74		42.72		43.69		38.58	
Tritium	pCi/L (1σ)																				

NOTES:

Laboratory anion and cation results are reported with 3 digits although only the first 2 are significant figures.

* PSS-78 salinity is unitless.

KEY:

°C = Degrees Celsius.
µg/L = Microgram(s) per liter.
µS/cm = MicroSiemen(s) per centimeter.
σ = sigma (Standard Deviation
$CaCO_3$ = Calcium carbonate.
I = Value between the MDL and PQL.
MCL = Maximum Contaminant Levels.
MDL = Minimum detection limit.
mg/L = Milligram(s) per liter.
N = Nitrogen.
NH_3 = Ammonia.
NH_4 = Ammonium.
NTU = Nephelometric Turbidity Units(s).
pCi/L = PicoCuries per liter.
PQL - Practical quantitation limit.
PSS-78 = Practical Salinity Scale of 1978.
PW = Porewater.
TKN = Total Kjeldahl nitrogen.
TN = Total nitrogen.
U = Analyzed for but not detected at the reported value.

Table 4.1-24. Marsh and Mangrove Analytical Porewater May 2014

		051214-PW-M6-1		051214-PW-M6-2		050114-PW-EB1		051314-PW-FB-1		51114-BB1-a-1-NT		51114-BB1-b-1-NT		51114-BB2-a-3-NT		51114-BB2-b-2-NT		51114-BB3-a-2-NT		51114-BB3-b-7-NT	
Parameter	**Units**	05/12/2014		05/12/2014		05/01/2014		05/13/2014		05/11/2014		05/11/2014		05/11/2014		05/11/2014		05/11/2014		05/11/2014	
Temperature	°C	27.72		27.25						27.1		27.1		27.1		27.2		27.1		27.1	
pH	SU	6.8		6.82						7.24		7.52		7.5		7.31		7.41		7.41	
Dissolved Oxygen	mg/L																				
Specific Conductance	µS/cm	47797.3		45635.3						59.1		59.3		57.8		58		57.7		56.4	
Turbidity	NTU																				
Silica, dissolved	mg/L																				
Calcium	mg/L																				
Magnesium	mg/L																				
Potassium	mg/L																				
Sodium	mg/L	9200		8830		0.31	U	0.31	U												
Boron	mg/L																				
Strontium	mg/L																				
Bromide	mg/L																				
Chloride	mg/L	17900		16300		1.25		0.25	U	23300		23400		22000		22500		22500		21600	
Fluoride	mg/L																				
Sulfate	mg/L																				
Total Ammonia	mg/L as N	1.19		1.64		0.026	U	0.026	U	0.64		0.858		0.657		0.496		0.819		0.754	
Ammonium ion (NH_4^+)	mg/L	1.52		2.1						0.814		1.08		0.827		0.629		1.04		0.953	
Unionized NH_3	mg/L	0.00625		0.00873						0.0088		0.0223		0.0163		0.00806		0.0166		0.0153	
Nitrate/Nitrite	mg/L as N	0.0311	I	0.0316	I	0.027	U	0.027	U	0.084		0.027	U	0.049	I	0.027	U	0.034	I	0.027	U
TKN	mg/L	3.21		3.17		0.462		0.444		0.717		0.987		0.791		0.3	U	0.896		0.59	
TN	mg/L	3.2411		3.2016		0.489		0.471		0.801		1.014		0.84		0.327		0.93		0.617	
ortho-Phosphate	mg/L	0.0115		0.0409		0.0014	U	0.00303	I	0.0014	U	0.0014	U	0.0014	U	0.0014	U	0.0014	U	0.0014	U
Total Phosphorus (P)	mg/L	0.011	U	0.011	U	0.00231	I	0.011	U	0.0022	U	0.0022	U	0.0022	U	0.0022	U	0.0022	U	0.0022	U
Alkalinity	mg/L																				
Bicarbonate Alkalinity	mg/L as $CaCO_3$																				
Sulfide	mg/L																				
Total Dissolved Solids	mg/L																				
Salinity	*	31.68		30.08																	
Tritium	pCi/L (1σ)																				

NOTES:

Laboratory anion and cation results are reported with 3 digits although only the first 2 are significant figures.

* PSS-78 salinity is unitless.

KEY:

°C = Degrees Celsius.
µg/L = Microgram(s) per liter.
µS/cm = MicroSiemen(s) per centimeter.
σ = sigma (Standard Deviation
$CaCO_3$ = Calcium carbonate.
I = Value between the MDL and PQL.
MCL = Maximum Contaminant Levels.
MDL = Minimum detection limit.
mg/L = Milligram(s) per liter.
N = Nitrogen.
NH_3 = Ammonia.
NH_4 = Ammonium.
NTU = Nephelometric Turbidity Units(s).
pCi/L = PicoCuries per liter.
PQL - Practical quantitation limit.
PSS-78 = Practical Salinity Scale of 1978.
PW = Porewater.
TKN = Total Kjeldahl nitrogen.
TN = Total nitrogen.
U = Analyzed for but not detected at the reported value.

Table 4.1-24. Marsh and Mangrove Analytical Porewater May 2014

Parameter	Units	051114-BB4-a-1-NTP 05/11/2014		051114-BB4-b-4-NTP 05/11/2014		051114-PW-EB1 05/11/2014	
Temperature	°C	27		27			
pH	SU	7.44		7.47			
Dissolved Oxygen	mg/L						
Specific Conductance	µS/cm	50.2		50.6			
Turbidity	NTU						
Silica, dissolved	mg/L						
Calcium	mg/L						
Magnesium	mg/L						
Potassium	mg/L						
Sodium	mg/L						
Boron	mg/L						
Strontium	mg/L						
Bromide	mg/L						
Chloride	mg/L	19100		18500		0.25	U
Fluoride	mg/L						
Sulfate	mg/L						
Total Ammonia	mg/L as N	0.624		0.804		0.445	
Ammonium ion (NH_4^+)	mg/L	0.788		1.01			
Unionized NH_3	mg/L	0.0134		0.0185			
Nitrate/Nitrite	mg/L as N	0.027	U	0.027	U	0.027	U
TKN	mg/L	1.02		0.974		0.71	
TN	mg/L	1.047		1.001		0.737	
ortho-Phosphate	mg/L	0.0014	U	0.0014	U	0.0014	U
Total Phosphorus (P)	mg/L	0.0022	U	0.0022	U	0.0022	U
Alkalinity	mg/L						
Bicarbonate Alkalinity	mg/L as $CaCO_3$						
Sulfide	mg/L						
Total Dissolved Solids	mg/L						
Salinity	*						
Tritium	pCi/L (1σ)						

NOTES:

Laboratory anion and cation results are reported with 3 digits although only the first 2 are significant figures.

* PSS-78 salinity is unitless.

KEY:

°C = Degrees Celsius.
µg/L = Microgram(s) per liter.
µS/cm = MicroSiemen(s) per centimeter.
σ = sigma (Standard Deviation
$CaCO_3$ = Calcium carbonate.
I = Value between the MDL and PQL.
MCL = Maximum Contaminant Levels.
MDL = Minimum detection limit.
mg/L = Milligram(s) per liter.
N = Nitrogen.
NH_3 = Ammonia.
NH_4 = Ammonium.
NTU = Nephelometric Turbidity Units(s).
pCi/L = PicoCuries per liter.
PQL - Practical quantitation limit.
PSS-78 = Practical Salinity Scale of 1978.
PW = Porewater.
TKN = Total Kjeldahl nitrogen.
TN = Total nitrogen.
U = Analyzed for but not detected at the reported value.

4.1-25. Percent Cover of Red Mangroves per Plot and Transect for Post-Uprate Period with Pre-Uprate Average

Location		Percent (%) Cover							
		Pre-Uprate Average		August 2013		November 2013		February 2014	
Transect	Plot	Plot	Transect	Plot	Transect	Plot	Transect	Plot	Transect
F1	1	6 - 25	6 - 25	6 - 25	6 - 25	6 - 25	6 - 25	6 - 25	6 - 25
	2	2 - 5		2 - 5		2 - 5		2 - 5	
F2	1	N/A	0 - 1	N/A	0 - 1	N/A	0 - 1	N/A	0 - 1
	2	0 - 1		0 - 1		0 - 1		0 - 1	
	3	N/A		N/A		N/A		N/A	
F5	1	6 - 25	6 - 25	6 - 25	6 - 25	6 - 25	6 - 25	6 - 25	6 - 25
	2	6 - 25		6 - 25		6 - 25		6 - 25	
M1	1	26 - 50	26 - 50	N/A	N/A	26 - 50	26 - 50	N/A	N/A
	2	26 - 50		N/A		26 - 50		N/A	
M2	1	6 - 25	6 - 25	N/A	N/A	6 - 25	6 - 25	N/A	N/A
	2	26 - 50		N/A		26 - 50		N/A	
M3	1	26 - 50	6 - 25	N/A	N/A	6 - 25	6 - 25	N/A	N/A
	2	6 - 25		N/A		6 - 25		N/A	
M4	1	6 - 25	6 - 25	N/A	N/A	6 - 25	6 - 25	N/A	N/A
	2	6 - 25		N/A		6 - 25		N/A	
M5	1	6 - 25	6 - 25	N/A	N/A	6 - 25	6 - 25	N/A	N/A
	2	6 - 25		N/A		6 - 25		N/A	
M6	1	6 - 25	6 - 25	N/A	N/A	6 - 25	6 - 25	N/A	N/A
	2	6 - 25		N/A		6 - 25		N/A	

Table 4.1-26. Average Red Mangrove Height per Plot and Transect for Post-Uprate Period with Pre-Uprate Range

Location		Height ± Standard Error (cm)													
		Pre-Uprate Range		August 2013				November 2013				February 2014			
Transect	Plot	Plot	Transect	Plot	SE	Transect	SE	Plot	SE	Transect	SE	Plot	SE	Transect	SE
F1	1	112.3 - 114.6	83.7 - 114.6	112.3	6.2	101.5	4.4	113.8	6.3	104.0	4.3	113.7	5.9	104.1	4.1
	2	83.7 - 90.0		88.4	2.8			92.4	3.2			92.6	2.8		
F2	2	41.8 - 43.5	41.8 - 43.5	48.7	3.5	-	-	49.5	3.1	-	-	48.8	2.8	-	-
F5	1	77.1 - 83.2	57.8 - 83.2	85.8	19.2	68.0	7.4	83.8	19.7	72.7	7.1	90.4	17.5	72.5	7.0
	2	57.8 - 59.5		60.6	6.4			69.0	7.2			65.1	6.2		
M1	1	71.3 - 72.7	71.3 - 86.4	N/A	N/A	N/A	N/A	74.5	1.9	81.6	2.5	N/A	N/A	N/A	N/A
	2	84.6 - 86.4		N/A	N/A			88.7	3.6			N/A	N/A		
M2	1	87.3 - 88.8	67.0 - 88.8	N/A	N/A	N/A	N/A	90.3	4.1	80.1	3.1	N/A	N/A	N/A	N/A
	2	67.0 - 70.2		N/A	N/A			69.9	2.1			N/A	N/A		
M3	1	80.8 - 84.8	80.8 - 97.8	N/A	N/A	N/A	N/A	82.2	4.0	90.6	4.1	N/A	N/A	N/A	N/A
	2	96.4 - 97.8		N/A	N/A			99.1	6.5			N/A	N/A		
M4	1	78.6 - 83.0	78.6 - 83.7	N/A	N/A	N/A	N/A	86.4	4.7	86.2	3.6	N/A	N/A	N/A	N/A
	2	82.3 - 83.7		N/A	N/A			86.0	5.8			N/A	N/A		
M5	1	57.5 - 59.6	57.5 - 111.5	N/A	N/A	N/A	N/A	61.5	3.2	87.9	6.2	N/A	N/A	N/A	N/A
	2	110.3 - 111.5		N/A	N/A			112.0	5.3			N/A	N/A		
M6	1	100.0 - 103.7	88.5 - 103.7	N/A	N/A	N/A	N/A	105.4	5.6	101.8	4.2	N/A	N/A	N/A	N/A
	2	88.5 - 94.3		N/A	N/A			98.3	6.4			N/A	N/A		

Key:
cm = Centimeters.
N/A = Not applicable.
SE = Standard Error.

Table 4.1-27. Average Red Mangrove Biomass per Plot and Transect for Post-Uprate Events with Pre-Uprate Range

Location		Biomass (g/m^2)															
		Pre-Uprate								Post-Uprate							
		Pre-Uprate Range		October 2010		November 2011		February 2012		November 2013				February 2014			
Transect	Plot	Plot	Transect	Plot	Transect	Plot	Transect	Plot	Transect	Plot	SE	Transect	SE	Plot	SE	Transect	SE
F1	1	210.0 - 221.0	121.7 - 128.5	220.2	128.5	210.0	126.7	221.0	123.0	262.8	65.6	155.4	51.1	257.6	68.8	152.4	51.3
	2	25.0 - 36.8		36.7		33.5		25.0		48.1	14.2			47.3	14.1		
F2	1	0.0 - 0.0	0.8 - 3.3	0.0	3.1	0.0	3.3	0.0	3.3	0.0	0.0	4.6	2.4	0.0	0.0	4.5	2.4
	2	2.3 - 10.0		9.2		2.3		10.0		13.7	4.8			13.5	4.6		
	3	0.0 - 0.0		0.0		0.0		0.0		0.0	0.0			0.0	0.0		
F5	1	93.8 - 118.8	179.3 - 211.3	118.0	205.1	105.4	211.3	93.8	193.8	188.7	83.1	218.2	43.1	126.1	43.6	186.1	34.7
	2	253.2 - 303.9		292.3		253.2		293.7		247.6	34.2			246.0	36.4		
M1	1	660.5 - 849.7	649.1 - 766.9	849.7	766.9	660.5	719.2	688.7	654.5	757.6	43.5	690.8	33.7	N/A	N/A	N/A	N/A
	2	620.4 - 684.1		684.1		637.7		620.4		624.0	21.0			N/A	N/A		
M2	1	119.0 - 134.0	347.7 - 393.6	132.3	393.6	123.0	392.9	119.0	354.7	100.8	18.5	343.0	96.9	N/A	N/A	N/A	N/A
	2	572.5 - 654.8		654.8		572.5		590.4		585.1	66.5			N/A	N/A		
M3	1	360.1 - 399.2	282 - 322.4	392.0	322.4	360.1	318.3	362.2	282.0	393.4	43.1	292.6	45.0	N/A	N/A	N/A	N/A
	2	201.8 - 252.8		252.8		220.0		201.8		191.9	28.9			N/A	N/A		
M4	1	201.5 - 226.2	273.5 - 307	226.2	307.0	204.8	303.1	201.5	276.7	208.1	22.6	267.1	28.6	N/A	N/A	N/A	N/A
	2	342.2 - 387.9		387.9		342.2		351.9		326.1	31.2			N/A	N/A		
M5	1	256.5 - 319.9	288.6 - 366.3	308.1	359.6	280.4	366.3	256.5	288.6	271.0	39.1	271.7	23.5	N/A	N/A	N/A	N/A
	2	320.7 - 412.6		411.0		391.1		320.7		272.5	32.5			N/A	N/A		
M6	1	145.3 - 168.4	154.8 - 207.3	168.4	207.3	145.3	196.1	152.9	154.8	145.8	19.4	161.1	14.7	N/A	N/A	N/A	N/A
	2	156.7 - 246.3		246.3		227.1		156.7		176.4	21.8			N/A	N/A		

Key:
g/m^2 = Grams per square meter.
N/A = Not applicable.
SE = Standard Error.

Table 4.1-28. Red Mangrove Sclerophylly per Plot and Transect for Post-Uprate Period with Pre-Uprate Range

Location		Sclerophylly (g/m^2)					
		Pre-Uprate Range		November 2013			
Transect	Plot	Plot	Transect	Plot	Transect	Plot	Transect
F1	1	234.1 - 249.5	229.0 - 251.7	269.8	3.9	255.5	5.0
	2	223.9 - 253.9		241.2	7.1		
F2	2	228.8 - 291.0	228.8 - 291.0	250.9	6.9	250.9	6.9
F5	1	163.0 - 240.8	180.6 - 242.1	227.3	3.2	242.6	8.3
	2	206.9 - 265.5		257.9	15.3		
M1	1	216.8 - 259.6	217.5 - 257	253.1	9.9	261.3	10.1
	2	218.2 - 254.4		269.6	17.8		
M2	1	246.7 - 275.4	245.5 - 267.3	281.1	9.8	273.3	6.3
	2	244.3 - 259.1		265.5	7.5		
M3	1	233.5 - 298.9	235.7 - 275.7	255.8	6.2	252.2	4.7
	2	223.1 - 252.4		248.6	7.3		
M4	1	220.6 - 244.3	219.1 - 243.1	232.2	6.4	234.1	4.4
	2	214.6 - 242.0		236.0	6.2		
M5	1	222.3 - 267.9	219.3 - 260.7	249.1	4.5	258.1	4.5
	2	216.2 - 260.9		267.1	7.1		
M6	1	232.9 - 265.6	239.4 - 276.0	269.6	8.4	269.3	5.2
	2	245.8 - 286.3		268.9	6.6		

Key:
g = Grams.
m^2 = Square meters.

Table 4.1-29. Average Leaf Carbon for Red Mangrove per Plot and Transect during the Post-Uprate Period with Pre-Uprate Range

Location		*R. mangle* Total Carbon (mg/kg)					
		Pre-Uprate Ranges		November 2013			
Transect	Plot	Plot	Transect	Plot	SE	Transect	SE
F1	1	462675 - 490082	474612 - 490000	441750	854	445125	2349
	2	476030 - 490500		448500	4173		
F2	2	437350 - 488040	448467 - 488040	440000	4041	440000	4041
F5	1	456250 - 494134	460750 - 496441	463000	3873	454500	4351
	2	465250 - 498172		446000	5017		
M1	1	454750 - 492975	456125 - 496888	433750	2250	435875	3603
	2	457500 - 500800		438000	7246		
M2	1	459250 - 471325	431738 - 468300	430750	10028	429375	4847
	2	392150 - 468684		428000	2799		
M3	1	459059 - 476925	436025 - 464579	444000	4601	446000	3207
	2	395125 - 470100		448000	4916		
M4	1	460750 - 586650	456250 - 511975	457500	7053	455625	6050
	2	437300 - 474908		453750	10896		
M5	1	434450 - 477310	442575 - 479169	438250	3473	441000	3606
	2	450700 - 481027		443750	6600		
M6	1	441500 - 471298	442875 - 470251	430000	5292	433375	4464
	2	444250 - 469203		436750	7576		

Key:
mg/kg = Milligrams per kilogram.
SE = Standard Error.

Table 4.1-30. Average Leaf Total Nitrogen for Red Mangrove per Plot and Transect during the Post-Uprate Period with Pre-Uprate Range

Location		*R. mangle* Total Nitrogen (mg/kg)					
		Pre-Uprate Ranges		November 2013			
Transect	Plot	Plot	Transect	Plot	SE	Transect	SE
F1	1	12355.3 - 15975.0	12402.8 - 16450.0	10750.0	250.0	10750.0	163.7
	2	12450.3 - 16925.0		10750.0	250.0		
F2	2	10370.9 - 14500.0	10370.9 - 15400.0	10333.3	881.9	10333.3	881.9
F5	1	13250.0 - 19300.0	12750.0 - 16433.3	13750.0	250.0	13250.0	250.0
	2	12250.0 - 15000.0		12750.0	250.0		
M1	1	12721.3 - 15500.0	12939.1 - 15862.5	10250.0	478.7	10750.0	313.4
	2	13000.0 - 16275.0		11250.0	250.0		
M2	1	10250.0 - 14175.0	10500.0 - 13725	9500.0	500.0	10250.0	411.9
	2	10750.0 - 13275.0		11000.0	408.2		
M3	1	11500.0 - 13925.0	11875.0 - 13350.0	11750.0	250.0	11250.0	313.4
	2	12250.0 - 12775.0		10750.0	478.7		
M4	1	12250.0 - 20525.0	12625.0 - 17737.5	13000.0	577.4	13000.0	327.3
	2	13000.0 - 14950.0		13000.0	408.2		
M5	1	12000.0 - 18450.0	11814.5 - 16862.5	11750.0	478.7	11250.0	313.4
	2	11454.4 - 15275.0		10750.0	250.0		
M6	1	10278.6 - 11750.0	10392.8 - 11750.0	10500.0	500.0	10250.0	313.4
	2	10507.0 - 11750.0		10000.0	408.2		

Key:
mg/kg = Milligrams per kilogram.
SE = Standard Error.

Table 4.1-31. Average Leaf Total Phosphorus for Red Mangrove per Plot and Transect during the Post-Uprate Period with Pre-Uprate Range

Location		*R. mangle* Total Phosphorous (mg/kg)					
		Pre-uprate Ranges		November 2013			
Transect	Plot	Plot	Transect	Plot	SE	Transect	SE
F1	1	305.3 - 500.0	365.2 - 535.0	444.0	21.1	454.0	22.3
	2	425.0 - 570.0		464.0	42.4		
F2	2	305.5 - 560.0	360.0 - 560.0	526.7	67.3	526.7	67.3
F5	1	315.7 - 565.0	360.2 - 498.8	606.3	13.9	556.3	24.1
	2	382.5 - 432.5		506.3	29.0		
M1	1	380.0 - 485.0	417.5 - 486.3	474.5	25.5	514.1	22.9
	2	455.0 - 487.5		553.8	27.5		
M2	1	412.5 - 502.5	407.5 - 483.8	550.5	20.5	567.6	23.3
	2	402.5 - 465.0		584.8	43.9		
M3	1	233.1 - 497.5	344.0 - 517.5	639.8	19.5	633.0	17.5
	2	455.0 - 537.5		626.3	31.8		
M4	1	365.3 - 557.5	371.4 - 537.5	707.0	60.3	673.4	32.8
	2	377.5 - 517.5		639.8	25.1		
M5	1	345.0 - 480.0	401.4 - 433.8	546.3	30.9	497.6	24.3
	2	322.9 - 522.5		449.0	15.2		
M6	1	430.0 - 525.0	416.3 - 493.8	480.5	19.6	468.9	17.5
	2	402.5 - 462.5		457.3	30.8		

Key:
mg/kg = Milligrams per kilogram.
SE = Standard Error.

Table 4.1-32. Average Leaf Carbon Isotopes for Red Mangrove per Plot and Transect during the Post- Uprate Period with Pre-Uprate Range

Location		*R. mangle* Carbon Isotopes (‰)					
		Pre-Uprate Ranges		November 2013			
Transect	Plot	Plot	Transect	Plot	SE	Transect	SE
F1	1	-27.6 to -25.8	-27.2 to -25.7	-27.2	0.2	-27.2	0.2
	2	-27.1 to -25.7		-27.3	0.3		
F2	2	-28.4 to -26.1	-28.4 to -26.1	-28.0	0.3	-28.0	0.3
F5	1	-27.7 to -25.9	-26.9 to -25.8	-27.3	0.3	-26.5	0.3
	2	-26.4 to -25.7		-25.7	0.2		
M1	1	-26.1 to -24.4	-26.0 to -24.3	-25.9	0.1	-25.8	0.2
	2	-26.0 to -24.2		-25.8	0.4		
M2	1	-25.7 to -22.6	-25.6 to -23.4	-25.2	0.2	-25.3	0.2
	2	-25.6 to -24.3		-25.4	0.3		
M3	1	-25.7 to -24.1	-25.5 to -24.1	-24.8	0.4	-24.8	0.2
	2	-25.3 to -23.9		-24.8	0.2		
M4	1	-25.7 to -23.4	-25.9 to -24.3	-25.1	0.3	-25.1	0.1
	2	-26.0 to -24.9		-25.1	0.1		
M5	1	-25.3 to -22.8	-25.4 to -22.9	-25.4	0.1	-25.6	0.1
	2	-25.9 to -22.9		-25.8	0.2		
M6	1	-25.9 to -24.7	-25.8 to -24.9	-25.4	0.3	-25.5	0.2
	2	-25.6 to -25.1		-25.5	0.2		

Key:
‰ = Parts per mille.
SE =Standard Error.

Table 4.1-33. Average Leaf Nitrogen Isotopes for Red Mangrove per Plot and Transect during the Post-Uprate Period with Pre-Uprate Range

Location		*R. mangle* Nitrogen Isotopes (‰)					
		Pre-Uprate Ranges		November 2013			
Transect	Plot	Plot	Transect	Plot	SE	Transect	SE
F1	1	-2.4 to -0.3	-4.5 to -3.2	-0.10	0.54	-1.99	0.85
	2	-6.5 to -6.0		-3.88	0.84		
F2	2	-1.7 to -0.7	-1.9 to -0.7	-0.23	0.54	-0.23	0.54
F5	1	-2.7 to -0.8	-2.0 to -1.4	-0.55	0.72	-1.81	0.66
	2	-2.1 to -1.6		-3.08	0.66		
M1	1	-1.3 to -0.6	0.4 to 0.8	1.23	0.59	2.19	0.47
	2	1.4 to 2.5		3.15	0.23		
M2	1	-11.2 to -9.3	-6.8 to -6.0	-9.95	1.26	-5.70	1.77
	2	-2.6 to -1.2		-1.45	1.00		
M3	1	-9.0 to -4.1	-7.3 to -5.7	-5.60	1.44	-6.93	1.07
	2	-8.5 to -5.6		-8.25	1.47		
M4	1	-6.0 to -5.1	-5.8 to -4.6	-5.20	0.43	-5.86	0.43
	2	-6.4 to -4.0		-6.53	0.61		
M5	1	1.3 to 2.6	-3.0 to -1.1	2.05	0.99	-1.96	1.66
	2	-7.4 to -4.8		-5.98	1.11		
M6	1	-6.1 to -4.1	-6.6 to -5.6	-6.40	0.86	-7.40	0.55
	2	-7.2 to -7.1		-8.40	0.11		

Key:
‰ = Parts per mille.
SE =Standard Error.

Table 4.1-34. Red Mangrove Leaf C:N Molar Ratio per Plot and Transect in November 2013

Location		*R. mangle* C:N Molar Ratio November 2013	
Transect	Plot	Plot	Transect
F1	1	48:1	48:1
	2	49:1	
F2	2	50:1	-
F5	1	39:1	40:1
	2	41:1	
M1	1	49:1	47:1
	2	45:1	
M2	1	53:1	49:1
	2	45:1	
M3	1	44:1	46:1
	2	49:1	
M4	1	41:1	41:1
	2	41:1	
M5	1	44:1	46:1
	2	48:1	
M6	1	48:1	49:1
	2	51:1	

Key:
C = Carbon.
N = Nitrogen.

Table 4.1-35. Red Mangrove Leaf N:P Molar Ratio per Plot and Transect in November 2013

Transect Location	Plot Location	*C. jamaicense* N:P Ratio	
		November 2013	
		Plot	Transect
F1	1	54:1	52:1
	2	51:1	
F2	2	43:1	-
F5	1	50:1	53:1
	2	56:1	
M1	1	48:1	46:1
	2	45:1	
M2	1	38:1	40:1
	2	42:1	
M3	1	41:1	39:1
	2	38:1	
M4	1	41:1	43:1
	2	45:1	
M5	1	48:1	50:1
	2	53:1	
M6	1	48:1	48:1
	2	48:1	

Key:
N = Nitrogen.
P = Phosphorous.

Table-4.2-1. Latitude and Longitude of Biscayne Bay, Card Sound, and Barnes Sound Ecological Sampling Points

Point	Latitude	Longitude	Point	Latitude	Longitude
BB1-a-1	25.42632	80.32344	BB3-a-1	25.35211	80.32451
BB1-a-2	25.42355	80.32348	BB3-a-2	25.35034	80.32586
BB1-a-3	25.42296	80.32346	BB3-a-3	25.34834	80.32731
BB1-a-4	25.41888	80.32347	BB3-a-4	25.34671	80.32854
BB1-a-5	25.41664	80.32343	BB3-a-5	25.34400	80.33055
BB1-a-6	25.41644	80.32344	BB3-a-6	25.34172	80.33224
BB1-a-7	25.41217	80.32345	BB3-a-7	25.34089	80.33284
BB1-a-8	25.41074	80.32344	BB3-a-8	25.33927	80.33405
BB1-b-1	25.42769	80.32095	BB3-b-1	25.35051	80.32288
BB1-b-2	25.42335	80.32097	BB3-b-2	25.34832	80.32450
BB1-b-3	25.42116	80.32096	BB3-b-3	25.34663	80.32575
BB1-b-4	25.42049	80.32096	BB3-b-4	25.34426	80.32749
BB1-b-5	25.41750	80.32094	BB3-b-5	25.34346	80.32808
BB1-b-6	25.41514	80.32094	BB3-b-6	25.34202	80.32914
BB1-b-7	25.41306	80.32094	BB3-b-7	25.33996	80.33068
BB1-b-8	25.41130	80.32095	BB3-b-8	25.33817	80.33199
BB2-a-1	25.37277	80.30706	BB4-a-1	25.28361	80.38995
BB2-a-2	25.37171	80.30782	BB4-a-2	25.28203	80.39109
BB2-a-3	25.37021	80.30888	BB4-a-3	25.28096	80.39186
BB2-a-4	25.36822	80.31030	BB4-a-4	25.27843	80.39368
BB2-a-5	25.36692	80.31122	BB4-a-5	25.27762	80.39426
BB2-a-6	25.36490	80.31265	BB4-a-6	25.27576	80.39561
BB2-a-7	25.36334	80.31375	BB4-a-7	25.27357	80.39718
BB2-a-8	25.36009	80.31604	BB4-a-8	25.27135	80.39879
BB2-b-1	25.37296	80.30388	BB4-b-1	25.28255	80.38793
BB2-b-2	25.37088	80.30538	BB4-b-2	25.28035	80.38951
BB2-b-3	25.36808	80.30740	BB4-b-3	25.27996	80.38978
BB2-b-4	25.36702	80.30816	BB4-b-4	25.27821	80.39103
BB2-b-5	25.36481	80.30966	BB4-b-5	25.27587	80.39272
BB2-b-6	25.36344	80.31065	BB4-b-6	25.27476	80.39350
BB2-b-7	25.36159	80.31196	BB4-b-7	25.27293	80.39482
BB2-b-8	25.35886	80.31391	BB4-b-8	25.27068	80.39641

Note: Latitude and Longitude are in decimal degrees.

Table 4.2-2. Categories of Submerged Aquatic Vegetation Scored Using Braun-Blanquet Cover Abundance Index Method at Each Ecological Sampling Point

Totals	Algae	Seagrasses	Calcareous Algae	Fleshy Green Algae	Corals/ Sponges[1]
Total Macrophytes	Total Macroalgae	*Thalassia testudinum*	*Penicillus*	*Batophora/ Dasycladus*	Corals
Total Drift Red	Total Calcareous	*Halodule wrightii*	*Rhipocephalus*	*Anadyomene*	Gorgonians/ Soft Corals
Total Macrophytes Minus Drift Red	Total Green Other (Fleshy)	*Syringodium filiforme*	*Halimeda*		Sponges
Total Seagrass	Total Red Other	*Ruppia martima*	*Udotea*		
	Total Brown	*Halophila engelmannii*	*Acetabularia*		
		Halophila johnsonii			
		Halophila decipiens			

Note:
[1] Presence/absence only.

Table 4.2-3. Water Depth (m), Standard Error (SE), and Minimum and Maximum Depth by Transect and Sampling Area, Fall 2013 and Spring 2014

Area	Transect	Fall 2013	Spring 2014	Fall 2013 and Spring 2014 Combined	
		Mean ± SE	Mean ± SE	Min	Max
BB1	a	1.7 ± 0.0	1.5 ± 0.0	1.3	1.9
	b	1.6 ± 0.0	1.5 ± 0.0	1.5	1.8
	Total	**1.7 ± 0.0**	**1.5 ± 0.0**	**1.3**	**1.9**
BB2	a	2.2 ± 0.1	2.2 ± 0.1	1.9	2.6
	b	2.6 ± 0.1	2.4 ± 0.1	2.0	3.0
	Total	**2.4 ± 0.1**	**2.3 ± 0.1**	**1.9**	**3.0**
BB3	a	2.7 ± 0.1	2.8 ± 0.0	2.5	3.0
	b	3.0 ± 0.1	2.8 ± 0.0	2.6	3.2
	Total	**2.8 ± 0.1**	**2.8 ± 0.0**	**2.5**	**3.2**
BB4	a	2.0 ± 0.0	2.1 ± 0.0	2.0	2.2
	b	2.1 ± 0.0	2.1 ± 0.0	2.0	2.2
	Total	**2.1 ± 0.0**	**2.1 ± 0.0**	**2.0**	**2.2**
All Areas		**2.2 ± 0.1**	**2.2 ± 0.1**	**1.3**	**3.2**

Key:
m = meter(s).
SE = Standard Error.

Table 4.2-4. Light Readings (µmols/m^2/sec) Taken Simultaneously in Air and at Each of Three Water Depths at One Point Along Each Transect by Area, Fall 2013 and Spring 2014

Area	Transect	Sub-Surface									
		Fall 2013					Spring 2014				
		Depth (m)	Air	Water Column	ATN[1]	% ATN[2]	Depth (m)	Air	Water Column*	ATN	% ATN
BB1	a	0.3	2263	1825	439	19%	0.3	2065	1772	293	14%
	b	0.3	2256	1872	385	17%	0.3	2061	1627	434	21%
	Area	**0.3**	**2260**	**1848**	**412**	**18%**	**0.3**	**2063**	**1700**	**363**	**18%**
BB2	a	0.3	1965	1478	487	25%	0.3	2177	1790	387	18%
	b	0.3	1352	1062	290	21%	0.3	2293	1935	358	16%
	Area	**0.3**	**1658**	**1270**	**388**	**23%**	**0.3**	**2235**	**1862**	**372**	**17%**
BB3	a	0.3	2066	1044	1023	49%	0.3	2045	1760	285	14%
	b	0.3	2432	1462	971	40%	0.3	2151	1674	478	22%
	Area	**0.3**	**2249**	**1253**	**997**	**44%**	**0.3**	**2098**	**1717**	**381**	**18%**
BB4	a	0.3	408	301	107	26%	0.3	1371	1155	216	16%
	b	0.3	424	268	156	37%	0.3	1819	1582	237	13%
	Area	**0.3**	**416**	**284**	**131**	**32%**	**0.3**	**1595**	**1369**	**226**	**14%**

Table 4.2-4. Light Readings (µmols/m^2/sec) Taken Simultaneously in Air and at Each of Three Water Depths at One Point Along Each Transect by Area, Fall 2013 and Spring 2014

Area	Transect	Mid-Depth									
		Fall 2013					Spring 2014				
		Depth (m)	Air	Water Column	ATN[1]	% ATN[2]	Depth (m)	Air	Water Column*	ATN	% ATN
BB1	a	0.9	2268	1293	976	43%	0.7	2062	1425	637	31%
	b	0.9	2261	1451	810	36%	0.6	2060	1439	622	30%
	Area	**0.9**	**2264**	**1372**	**893**	**39%**	**0.7**	**2061**	**1432**	**629**	**31%**
BB2	a	1.0	1065	520	545	51%	1.0	2180	1486	694	32%
	b	1.2	1594	688	906	57%	1.2	2292	1564	728	32%
	Area	**1.1**	**1330**	**604**	**726**	**55%**	**1.1**	**2236**	**1525**	**711**	**32%**
BB3	a	1.3	2621	1190	1432	55%	1.3	2028	1381	648	32%
	b	1.5	2438	840	1598	66%	1.5	2204	1432	772	35%
	Area	**1.4**	**2530**	**1015**	**1515**	**60%**	**1.4**	**2116**	**1406**	**710**	**34%**
BB4	a	0.9	419	200	219	52%	0.9	681	356	325	48%
	b	1.0	407	205	202	50%	1.0	2060	1460	601	29%
	Area	**0.9**	**413**	**202**	**211**	**51%**	**0.9**	**1370**	**908**	**463**	**34%**

Table 4.2-4. Light Readings (μmols/m²/sec) Taken Simultaneously in Air and at Each of Three Water Depths at One Point Along Each Transect by Area, Fall 2013 and Spring 2014

Area	Transect	Off-Bottom									
		Fall 2013					Spring 2014				
		Depth (m)	Air	Water Column	ATN[1]	% ATN[2]	Depth (m)	Air	Water Column*	ATN	% ATN
BB1	a	1.5	2266	1043	1224	54%	1.0	2055	1304	751	37%
	b	1.4	2264	1296	968	43%	1.5	2057	1293	765	37%
	Area	**1.5**	**2265**	**1169**	**1096**	**48%**	**1.3**	**2056**	**1298**	**758**	**37%**
BB2	a	1.7	803	253	550	69%	1.7	2176	1419	757	35%
	b	2.0	2559	727	1833	72%	2.0	2289	1289	1000	44%
	Area	**1.9**	**1681**	**490**	**1191**	**71%**	**1.9**	**2232**	**1354**	**879**	**39%**
BB3	a	2.2	1615	538	1077	67%	2.2	2028	1055	974	48%
	b	2.7	2424	242	2183	90%	2.7	2210	1126	1084	49%
	Area	**2.5**	**2020**	**390**	**1630**	**81%**	**2.5**	**2119**	**1090**	**1029**	**49%**
BB4	a	1.5	413	179	234	57%	1.5	608	275	333	55%
	b	1.7	413	166	247	60%	1.7	393	163	230	59%
	Area	**1.6**	**413**	**172**	**241**	**58%**	**1.6**	**500**	**219**	**282**	**56%**

Notes:
[1] Attenuation (ATN) is the difference between the air and water readings.
[2] Percent Attenuation (% ATN) is the percentage of attenuation from the air reading.

Key:
μmols/m²/sec = Micromoles per second per square meter.
m = Meter(s).
ATN = Attenuation.

Table 4.2-5. Number of Points Within Each Study Area (n=16) Containing Each of Six Substrate Types, Fall 2013 and Spring 2014

Sample Period	Area	Sandy and Shell Hash	Sandy, Shell Hash, Rubble	Sandy, Shell Hash, Silty, and Rubble	Silty	Sandy and Silty	Sandy, Shell Hash, and Silty
Fall 2013	**BB1**	7	1			2	6
	BB2	16					
	BB3	15					1
	BB4	7		7	1		1
	Total	**45**	**1**	**7**	**1**	**2**	**8**
Spring 2014	**BB1**	13	1				2
	BB2	15				1	
	BB3	14					2
	BB4	6	5	4		1	
	Total	**48**	**6**	**4**		**2**	**4**

Table 4.2-6. Mean and Standard Error (SE) Values for Surface and Bottom Water Temperature (°C) by Transect and Sampling Area, Fall 2013 and Spring 2014

Area	Transect	Surface				Bottom			
		Fall 2013		Spring 2014		Fall 2013		Spring 2014	
		Mean	±SE	Mean	±SE	Mean	±SE	Mean	±SE
BB1	**a**	29.6	± 0.1	26.0	± 0.0	29.6	± 0.15	26.0	± 0.0
	b	30.1	± 0.2	27.0	± 0.1	30.2	± 0.1	27.1	± 0.1
	Area	**29.8**	**± 0.1**	**26.5**	**± 0.1**	**29.9**	**± 0.1**	**26.5**	**± 0.1**
BB2	**a**	29.3	± 0.1	26.7	± 0.1	29.2	± 0.1	26.7	± 0.1
	b	29.6	± 0.2	27.5	± 0.1	29.6	± 0.1	27.5	± 0.1
	Area	**29.4**	**± 0.1**	**27.1**	**± 0.1**	**29.4**	**± 0.1**	**27.1**	**± 0.1**
BB3	**a**	29.1	± 0.0	26.8	± 0.0	29.2	± 0.0	26.8	± 0.1
	b	29.4	± 0.0	27.3	± 0.1	29.4	± 0.0	27.4	± 0.2
	Area	**29.2**	**± 0.0**	**27.0**	**± 0.1**	**29.2**	**± 0.0**	**27.1**	**± 0.1**
BB4	**a**	29.0	± 0.1	27.1	± 0.0	29.1	± 0.1	27.1	± 0.0
	b	29.7	± 0.1	28.0	± 0.1	29.7	± 0.1	28.0	± 0.1
	Area	**29.4**	**± 0.1**	**27.5**	**± 0.1**	**29.4**	**± 0.1**	**27.5**	**± 0.1**

Key: SE = Standard Error °C = Degrees Celsius

Table 4.2-7. Results of Statistical Comparisons of Bottom Water Temperature and Conductivity, Porewater Temperature and Conductivity, Total Macrophytes Cover, Total Seagrass Cover, Total Macroalgae Cover, and Porewater Nutrients between Pre- (Fall 2010 to Fall 2011) and Post-Uprate (Fall 2013 and Spring 2014) Sampling Events for All Areas Combined and for Each Area Analyzed Separately

Bottom Water Temperature						
Sampling Area	Mean Temperature (°C) ± SE		df	n	H	p
	Pre-Uprate	Post-Uprate				
All	27.86 ±0.10	28.27 ±0.12	1	256	8.8281	**0.0030**
BB1	27.83 ±0.24	28.22 ±0.32	1	64	1.4443	0.2294
BB2	27.46 ±0.17	28.24 ±0.22	1	64	6.3723	**0.0116**
BB3	27.62 ±0.20	28.17 ±0.20	1	64	6.0400	**0.0140**
BB4	28.53 ±0.08	28.46 ±0.18	1	64	0.0065	0.9358

Bottom Water Specific Conductance						
Sampling Area	Mean Specific Conductance (µS/cm) ± SE		df	n	H	p
	Pre-Uprate	Post-Uprate				
All	52,000 ±0.51	52,400 ±0.53	1	256	0.5481	0.4591
BB1	50,980 ±1.24	50,700 ±1.54	1	64	0.0218	0.8826
BB2	52,740 ±0.92	54,980 ±0.47	1	64	7.8337	**0.0051**
BB3	53,070 ±0.90	55,430 ±0.50	1	64	4.2827	**0.0385**
BB4	51,200 ±0.93	48,510 ±0.82	1	64	10.6089	**0.0011**

Table 4.2-7. Results of Statistical Comparisons of Bottom Water Temperature and Conductivity, Porewater Temperature and Conductivity, Total Macrophytes Cover, Total Seagrass Cover, Total Macroalgae Cover, and Porewater Nutrients between Pre- (Fall 2010 to Fall 2011) and Post-Uprate (Fall 2013 and Spring 2014) Sampling Events for All Areas Combined and for Each Area Analyzed Separately.

Porewater Temperature						
Sampling Area	Mean Temperature (°C) ± SE		df	n	H	p
	Pre-Uprate	Post-Uprate				
All	28.02 ±0.07	28.39 ±0.12	1	251	6.0439	**0.0140**
BB1	28.18 ±0.20	28.23 ±0.18	1	64	0.0724	0.7879
BB2	27.65 ±0.12	28.24 ±0.18	1	64	5.6524	**0.0174**
BB3	27.88 ±0.13	28.22 ±0.18	1	64	4.6915	**0.0303**
BB4	28.38 ±0.04	28.97 ±0.41	1	59	1.4908	0.2221

Porewater Specific Conductance						
Sampling Area	Mean Specific Conductance (µS/cm) ± SE		df	n	H	p
	Pre-Uprate	Post-Uprate				
All	52,180 ±0.32	52,300 ±0.36	1	256	0.0667	0.7962
BB1	52,790 ±0.77	51,700 ±0.92	1	64	0.8963	0.3438
BB2	53,660 ±0.52	54,660 ±0.46	1	64	0.8218	0.3647
BB3	53,380 ±0.41	54,420 ±0.43	1	64	1.8587	0.1728
BB4	48,900 ±0.45	48,440 ±0.35	1	64	0.2959	0.5865

Table 4.2-7. Results of Statistical Comparisons of Bottom Water Temperature and Conductivity, Porewater Temperature and Conductivity, Total Macrophytes Cover, Total Seagrass Cover, Total Macroalgae Cover, and Porewater Nutrients between Pre- (Fall 2010 to Fall 2011) and Post-Uprate (Fall 2013 and Spring 2014) Sampling Events for All Areas Combined and for Each Area Analyzed Separately.

Total Macrophyte Coverage						
Sampling Area	Mean BBCA Score ± SE		df	n	H	p
	Pre-Uprate	Post-Uprate				
All	2.24 ±0.06	2.36 ±0.08	1	256	0.4833	0.4869
BB1	2.23 ±0.10	2.39 ±0.13	1	64	1.0026	0.3167
BB2	2.27 ±0.16	2.31 ±0.21	1	64	0.0657	0.7978
BB3	2.44 ±0.13	2.11 ±0.15	1	64	4.7610	**0.0291**
BB4	2.02 ±0.1	2.62 ±0.11	1	64	12.8865	**0.0003**
Total Seagrass Coverage						
Sampling Area	Mean BBCA Score ± SE		df	n	H	p
	Pre-Uprate	Post-Uprate				
All	1.12 ±0.05	1.08 ±0.06	1	256	0.2022	0.6529
BB1	1.41 ±0.13	1.39 ±0.12	1	64	0.0315	0.8591
BB2	0.86 ±0.11	0.72 ±0.12	1	64	0.7289	0.3932
BB3	1.16 ±0.10	1.17 ±0.11	1	64	0.0037	0.9516
BB4	1.05 ±0.04	1.03 ±0.06	1	64	0.0068	0.9341

Table 4.2-7. Results of Statistical Comparisons of Bottom Water Temperature and Conductivity, Porewater Temperature and Conductivity, Total Macrophytes Cover, Total Seagrass Cover, Total Macroalgae Cover, and Porewater Nutrients between Pre- (Fall 2010 to Fall 2011) and Post-Uprate (Fall 2013 and Spring 2014) Sampling Events for All Areas Combined and for Each Area Analyzed Separately.

Total Macroalgae Coverage						
Sampling Area	Mean BBCA Score ± SE		df	n	H	p
	Pre-Uprate	Post-Uprate				
All	1.65 ±0.05	1.82 ±0.07	1	256	1.5095	0.2192
BB1	1.64 ±0.10	1.87 ±0.10	1	64	2.3630	0.1242
BB2	1.67 ±0.10	1.87 ±0.19	1	64	0.0438	0.8342
BB3	1.73 ±0.10	1.38 ±0.07	1	64	6.6309	**0.0100**
BB4	1.56 ±0.07	2.17 ±0.12	1	64	14.6143	**0.0001**

Porewater Chloride						
Sampling Area	Mean Value Per Area ± SE		df	n	H	p
	Pre-Uprate	Post-Uprate				
All	20313 ±551	21194 ±417	1	32	2.0602	0.1512
BB1	21125 ±1663	21650 ±999	1	8	0.0000	1.0000
BB2	20750 ±1031	22250 ±119	1	8	1.0457	0.3065
BB3	20375 ±747	21975 ±225	1	8	3.0361	0.0814
BB4	19000 ±913	18900 ±135	1	8	0.0000	1.0000

Table 4.2-7. Results of Statistical Comparisons of Bottom Water Temperature and Conductivity, Porewater Temperature and Conductivity, Total Macrophytes Cover, Total Seagrass Cover, Total Macroalgae Cover, and Porewater Nutrients between Pre- (Fall 2010 to Fall 2011) and Post-Uprate (Fall 2013 and Spring 2014) Sampling Events for All Areas Combined and for Each Area Analyzed Separately.

Porewater Sodium						
Sampling Area	Mean Value Per Area ± SE		df	n	H	p
	Pre-uprate	Post-uprate				
All	10538 ±280	32982 ±6013	1	32	2.2773	0.1313
BB1	10875 ±961	34283 ±14387	1	8	0.3333	0.5637
BB2	10988 ±360	34175 ±13698	1	8	0.3333	0.5637
BB3	10488 ±205	33825 ±13412	1	8	3.0361	0.0814
BB4	9800 ±426	29645 ±11983	1	8	0.0000	1.0000

Notes:
Means are presented for each area plus or minus one Standard Error (SE). The black lines denote significant differences among Uprate.
P Values in bold font are statistically significant.

Key:
°C = Degrees Celsius.
μS/cm = Micro-Siemens per Centimeter.
ANOVA = Analysis of Variance.
BBCA = Braun-Blanquet Cover Abundance.
SE = Standard Error.

Table 4.2-8. Results of Statistical Comparisons of Bottom Water Temperature and Conductivity, Porewater Temperature and Conductivity, Total Macrophytes Cover, Total Seagrass Cover, Total Macroalgae Cover, and Porewater Nutrients Among Areas for All Events Combined and for Pre- (Fall 2010 to Fall 2011) and Post-Uprate (Fall 2013 and Spring 2014) Sampling Events Analyzed Separately.

Bottom Water Temperature								
Sampling Period	**Mean Temperature (°C) ± SE**				**df**	**n**	**H**	**p**
	BB1	**BB2**	**BB3**	**BB4**				
All Events	28.02 ±0.20	27.85 ±0.15	27.89 ±0.14	28.49 ±0.10	3	256	10.0500	**0.0181**
Pre-uprate	27.83 ±0.24	27.46 ±0.17	27.62 ±0.20	28.53 ±0.08	3	128	15.8217	**0.0012**
Post-uprate	28.22 ±0.32	28.24 ±0.22	28.17 ±0.20	28.46 ±0.18	3	128	1.1697	0.7603
Bottom Water Specific Conductance								
Sampling Period	**Mean Specific Conductance (μS/cm) ± SE**				**df**	**n**	**H**	**p**
	BB1	**BB2**	**BB3**	**BB4**				
All Events	50,840 ±0.98	53,860 ±0.53	54,250 ±0.53	49,850 ±0.64	3	256	27.9526	< **0.0001**
Pre-uprate	50,980 ±1.24	52,740 ±0.92	53,070 ±0.90	51,200 ±0.93	3	128	12.9623	**0.0047**
Post-uprate	50,700 ±1.54	54,980 ±0.47	55,430 ±0.50	48,510 ±0.82	3	128	17.6811	**0.0005**

Table 4.2-8. Results of Statistical Comparisons of Bottom Water Temperature and Conductivity, Porewater Temperature and Conductivity, Total Macrophytes Cover, Total Seagrass Cover, Total Macroalgae Cover, and Porewater Nutrients Among Areas for All Events Combined and for Pre- (Fall 2010 to Fall 2011) and Post-Uprate (Fall 2013 and Spring 2014) Sampling Events Analyzed Separately.

Porewater Temperature								
Sampling Period	**Mean Temperature (°C) ± SE**				**df**	**n**	**H**	**p**
	BB1	**BB2**	**BB3**	**BB4**				
All Events	28.20 ±0.13	27.94 ±0.11	28.05 ±0.11	28.65 ±0.19	3	251	11.0275	**0.0116**
Pre-uprate	28.18 ±0.20	27.65 ±0.12	27.88 ±0.13	28.38 ±0.04	3	128	13.6864	**0.0034**
Post-uprate	28.23 ±0.18	28.24 ±0.18	28.22 ±0.18	28.97 ±0.41	3	123	8.1112	**0.0438**
Porewater Specific Conductance								
Sampling Period	**Mean Specific Conductance (µS/cm) ± SE**				**df**	**n**	**H**	**p**
	BB1	**BB2**	**BB3**	**BB4**				
All Events	52,250 ±0.60	54,160 ±0.35	53,900 ±0.30	48,670 ±0.28	3	256	88.2148	**< 0.0001**
Pre-uprate	52,790 ±0.77	53,660 ±0.52	53,380 ±0.41	48,900 ±0.45	3	128	36.7862	**< 0.0001**
Post-uprate	51,700 ±0.92	54,660 ±0.46	54,420 ±0.43	48,440 ±0.35	3	128	53.8535	**< 0.0001**

Table 4.2-8. Results of Statistical Comparisons of Bottom Water Temperature and Conductivity, Porewater Temperature and Conductivity, Total Macrophytes Cover, Total Seagrass Cover, Total Macroalgae Cover, and Porewater Nutrients Among Areas for All Events Combined and for Pre- (Fall 2010 to Fall 2011) and Post-Uprate (Fall 2013 and Spring 2014) Sampling Events Analyzed Separately.

Total Macrophyte Coverage								
Sampling Period	**Mean BBCA Score ± SE**				**df**	**n**	**H**	**p**
	BB1	**BB2**	**BB3**	**BB4**				
All Events	2.31 ±0.08	2.29 ±0.13	2.28 ±0.10	2.32 ±0.08	3	256	0.7731	0.8559
Pre-uprate	2.23 ±0.10	2.27 ±0.16	2.45 ±0.13	2.02 ±0.10	3	128	6.1667	0.1038
Post-uprate	2.39 ±0.13	2.31 ±0.21	2.11 ±0.15	2.62 ±0.11	3	128	9.0548	**0.0286**

Total Seagrass Coverage								
Sampling Period	**Mean BBCA Score ± SE**				**df**	**n**	**H**	**p**
	BB1	**BB2**	**BB3**	**BB4**				
All Events	1.40 ±0.09	0.79 ±0.08	1.17 ±0.07	1.04 ±0.03	3	256	22.8571	**< 0.0001**
Pre-uprate	1.41 ±0.13	0.86 ±0.11	1.16 ±0.10	1.05 ±0.04	3	128	10.4596	**0.0150**
Post-uprate	1.39 ±0.12	0.72 ±0.12	1.17 ±0.11	1.03 ±0.06	3	128	12.6605	**0.0054**

Table 4.2-8. Results of Statistical Comparisons of Bottom Water Temperature and Conductivity, Porewater Temperature and Conductivity, Total Macrophytes Cover, Total Seagrass Cover, Total Macroalgae Cover, and Porewater Nutrients Among Areas for All Events Combined and for Pre- (Fall 2010 to Fall 2011) and Post-Uprate (Fall 2013 and Spring 2014) Sampling Events Analyzed Separately.

Total Macroalgae Coverage								
Sampling Period	**Mean BBCA Score ± SE**				**df**	**n**	**H**	**p**
	BB1	**BB2**	**BB3**	**BB4**				
All Events	1.76 ±0.07	1.77 ±0.10	1.56 ±0.06	1.87 ±0.08	3	256	8.4892	**0.0369**
Pre-uprate	1.65 ±0.10	1.67 ±0.10	1.73 ±0.10	1.56 ±0.07	3	128	1.1089	0.7749
Post-uprate	1.87 ±0.10	1.87 ±0.19	1.38 ±0.07	2.17 ±0.12	2	128	21.9025	**0.0001**

Porewater Chloride								
Sampling Period	**Mean Value Per Area ± SE**				**df**	**n**	**H**	**p**
	BB1	**BB2**	**BB3**	**BB4**				
All Events	21388 ±903	21500 ±558	21175 ±471	18950 ±428	3	32	8.4077	**0.0383**
Pre-uprate	21125 ±1663	20750 ±1031	20375 ±747	19000 ±913	3	16	2.0338	0.5654
Post-uprate	21650 ±999	22250 ±119	21975 ±225	18900 ±135	3	16	8.6466	**0.0344**

Table 4.2-8. Results of Statistical Comparisons of Bottom Water Temperature and Conductivity, Porewater Temperature and Conductivity, Total Macrophytes Cover, Total Seagrass Cover, Total Macroalgae Cover, and Porewater Nutrients Among Areas for All Events Combined and for Pre- (Fall 2010 to Fall 2011) and Post-Uprate (Fall 2013 and Spring 2014) Sampling Events Analyzed Separately.

Porewater Sodium								
Sampling Period	Mean Value Per Area ± SE				df	n	H	p
	BB1	BB2	BB3	BB4				
All Events	22579 ±8007	22581 ±7710	22156 ±7616	19723 ±6699	3	32	3.2986	0.3478
Pre-uprate	10875 ±961	10988 ±360	10488 ±205	9800 ±426	3	16	2.9699	0.3963
Post-uprate	34283 ±14387	34175 ±13697	33825 ±13411	29645 ±11983	3	16	2.1524	0.5414

Notes:
Means are presented for each area plus or minus one Standard Error (SE). The black lines denote significant differences among Uprate.
P Values in bold font are statistically significant.

Key:
°C = Degrees Celsius.
μS/cm = Micro-Siemens per Centimeter.
ANOVA = Analysis of Variance.
BBCA = Braun-Blanquet Cover Abundance.
SE = Standard Error.

Table 4.2-9. Mean and Standard Error (SE) Values for Surface and Bottom Water Specific Conductance (µS/cm) by Transect and Sampling Area, Fall 2013 and Spring 2014

Area	Transect	Surface		Bottom	
		Fall 2013	Spring 2014	Fall 2013	Spring 2014
		Mean ± SE	Mean ± SE	Mean ± SE	Mean ± SE
BB1	a	39,988 ± 373	59,613 ± 190	40,313 ± 358	59,538 ± 180
	b	42,925 ± 111	58,775 ± 190	44,238 ± 243	58,700 ± 210
	Area	**41,456 ± 423**	**59,194 ± 170**	**42,275 ± 548**	**59,119 ± 170**
BB2	a	51,863 ± 311	57,638 ± 30	52,138 ± 184	57,575 ± 30
	b	51,625 ± 518	57,600 ± 50	52,663 ± 134	57,525 ± 40
	Area	**51,744 ± 293**	**57,619 ± 30**	**52,400 ± 129**	**57,550 ± 30**
BB3	a	52,400 ± 204	58,013 ± 180	52,438 ± 189	57,975 ± 200
	b	52,800 ± 105	58,413 ± 170	52,900 ± 63	58,400 ± 170
	Area	**52,600 ± 123**	**58,213 ± 130**	**52,669 ± 113**	**58,188 ± 140**
BB4	a	43,413 ± 348	53,175 ± 100	43,775 ± 524	53,088 ± 80
	b	44,238 ± 273	52,900 ± 60	44,300 ± 296	52,863 ± 60
	Area	**43,825 ± 239**	**53,038 ± 60**	**44,038 ± 299**	**52,975 ± 60**

Key:
µS/cm = MicroSiemens per centimeter(s).
SE = Standard Error.

Table 4.2-10. Mean and Standard Error (SE) Values for Surface and Bottom Water Salinity (PSU) by Transect and Sampling Area, Fall 2013 and Spring 2014

Area	Transect	Surface				Bottom			
		Fall 2013		Spring 2014		Fall 2013		Spring 2014	
		Mean		Mean		Mean		Mean	
BB1	a	25.7	± 0.3	39.9	± 0.1	25.9	± 0.24	39.9	± 0.1
	b	27.8	± 0.1	39.3	± 0.1	28.7	± 0.16	39.3	± 0.1
	Area	**26.8**	± 0.3	**39.6**	± 0.1	**27.3**	± 0.4	**39.6**	± 0.1
BB2	a	34.3	± 0.2	38.5	± 0.0	34.5	± 0.1	38.5	± 0.0
	b	34.2	± 0.4	38.5	± 0.0	34.9	± 0.1	38.5	± 0.0
	Area	**34.3**	± 0.2	**38.5**	± 0.0	**34.7**	± 0.1	**38.5**	± 0.0
BB3	a	34.7	± 0.2	38.8	± 0.1	34.7	± 0.1	38.8	± 0.1
	b	35.0	± 0.1	39.1	± 0.1	35.1	± 0.0	39.1	± 0.1
	Area	**34.9**	± 0.1	**39.0**	± 0.1	**34.9**	± 0.1	**38.9**	± 0.1
BB4	a	28.1	± 0.2	35.2	± 0.1	28.3	± 0.4	35.1	± 0.1
	b	28.7	± 0.2	35.0	± 0.0	28.8	± 0.2	35.0	± 0.0
	Area	**28.4**	± 0.2	**35.1**	± 0.0	**28.6**	± 0.2	**35.1**	± 0.0

Key:
PSU = Practical Salinity Unit(s).
SE = Standard Error.

Table 4.2-11. Mean and Standard Error (SE) Values for Surface and Bottom Water DO (mg/L) by Transect and Sampling Area, Fall 2013 and Spring 2014

Area	Transect	Surface		Bottom	
		Fall 2013	Spring 2014	Fall 2013	Spring 2014
		Mean ± SE	Mean ± SE	Mean ± SE	Mean ± SE
BB1	**a**	6.1 ± 0.3	5.3 ± 0.1	6.2 ± 0.2	5.3 ± 0.1
	b	5.0 ± 0.9	6.2 ± 0.1	5.3 ± 0.2	6.1 ± 0.1
	Area	**5.6 ± 0.3**	**5.7 ± 0.1**	**5.8 ± 0.4**	**5.7 ± 0.1**
BB2	**a**	5.4 ± 0.2	5.7 ± 0.0	5.3 ± 0.1	5.7 ± 0.1
	b	4.9 ± 0.4	6.1 ± 0.0	5.3 ± 0.1	6.1 ± 0.0
	Area	**5.2 ± 0.2**	**5.9 ± 0.0**	**5.3 ± 0.1**	**5.9 ± 0.0**
BB3	**a**	5.3 ± 0.2	5.7 ± 0.1	5.2 ± 0.1	5.7 ± 0.1
	b	5.6 ± 0.1	6.0 ± 0.1	5.6 ± 0.0	6.1 ± 0.1
	Area	**5.5 ± 0.1**	**5.9 ± 0.1**	**5.4 ± 0.1**	**5.9 ± 0.1**
BB4	**a**	5.1 ± 0.2	5.6 ± 0.1	5.0 ± 0.4	5.6 ± 0.1
	b	5.7 ± 0.2	6.3 ± 0.0	5.7 ± 0.2	6.3 ± 0.0
	Area	**5.4 ± 0.2**	**6.0 ± 0.0**	**5.3 ± 0.2**	**6.0 ± 0.0**

Key:
mg/L = Milligram per liter.
SE = Standard Error.

Table 4.2-12. Mean and Standard Error (SE) Values for Surface and Bottom Water pH by Transect and Sampling Area, Fall 2013 and Spring 2014

Area	Transect	Surface		Bottom	
		Fall 2013	Spring 2014	Fall 2013	Spring 2014
		Mean ± SE	Mean ± SE	Mean ± SE	Mean ± SE
BB1	a	8.0 ± 0.0	8.2 ± 0.0	8.0 ± 0.0	8.2 ± 0.0
	b	8.1 ± 0.0	8.3 ± 0.0	8.1 ± 0.0	8.3 ± 0.0
	Area	**8.0 ± 0.0**	**8.3 ± 0.0**	**8.1 ± 0.0**	**8.3 ± 0.0**
BB2	a	8.1 ± 0.0	8.2 ± 0.0	8.1 ± 0.0	8.2 ± 0.0
	b	8.0 ± 0.0	8.2 ± 0.0	8.0 ± 0.0	8.3 ± 0.0
	Area	**8.1 ± 0.0**	**8.2 ± 0.0**	**8.1 ± 0.0**	**8.2 ± 0.0**
BB3	a	8.1 ± 0.0	8.2 ± 0.0	8.1 ± 0.0	8.3 ± 0.0
	b	8.1 ± 0.0	8.3 ± 0.0	8.1 ± 0.0	8.3 ± 0.0
	Area	**8.1 ± 0.0**	**8.2 ± 0.0**	**8.1 ± 0.0**	**8.3 ± 0.0**
BB4	a	7.9 ± 0.0	8.2 ± 0.0	7.9 ± 0.0	8.2 ± 0.0
	b	8.0 ± 0.0	8.2 ± 0.0	8.0 ± 0.0	8.2 ± 0.0
	Area	**7.9 ± 0.0**	**8.2 ± 0.0**	**7.9 ± 0.0**	**8.2 ± 0.0**

Key: SE = Standard Error.

Table 4.2-13. Mean and Standard Error (SE) Values for Surface and Bottom Water ORP (mV) by Transect and Sampling Area, Fall 2013 and Spring 2014

Area	Transect	Surface		Bottom	
		Fall 2013	Spring 2014	Fall 2013	Spring 2014
		Mean ± SE	Mean ± SE	Mean ± SE	Mean ± SE
BB1	a	113.8 ± 15.6	25.5 ± 23.8	107.8 ± 13.5	21.6 ± 22.5
	b	49.1 ± 7.2	29.8 ± 7.8	40.3 ± 5.9	23.8 ± 7.2
	Area	**81.4 ± 11.7**	**27.6 ± 12.1**	**74.0 ± 11.2**	**22.7 ± 11.4**
BB2	a	78.6 ± 8.7	52.1 ± 13.9	72.5 ± 9.6	41.8 ± 15.2
	b	71.1 ± 11.4	20.8 ± 9.0	65.0 ± 11.6	13.1 ± 7.0
	Area	**74.9 ± 7.0**	**36.4 ± 9.0**	**68.8 ± 7.3**	**27.4 ± 8.9**
BB3	a	89.6 ± 6.5	54.9 ± 11.8	71.8 ± 8.8	46.5 ± 13.1
	b	75.8 ± 6.6	44.1 ± 16.8	61.6 ± 7.5	33.8 ± 16.8
	Area	**82.7 ± 4.8**	**49.5 ± 10.0**	**66.7 ± 5.7**	**40.1 ± 10.4**
BB4	a	98.0 ± 8.4	85.5 ± 16.2	90.1 ± 8.8	79.4 ± 17.0
	b	74.4 ± 6.3	65.5 ± 10.6	72.1 ± 5.3	59.4 ± 10.3
	Area	**86.2 ± 5.9**	**75.5 ± 9.7**	**81.1 ± 5.5**	**69.4 ± 10.0**

Key:
mV = Millivolt(s).
SE = Standard Error.

Table 4.2-14. Mean and Standard Error (SE) for Surface and Bottom Water Turbidity (NTU) by Transect and Sampling Area, Fall 2013 and Spring 2014

Area	Transect	Surface		Bottom	
		Fall 2013	Spring 2014	Fall 2013	Spring 2014
		Mean ± SE	Mean ± SE	Mean ± SE	Mean ± SE
BB1	a	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0
	b	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0
	Area	**0.0 ± 0.0**	**0.0 ± 0.0**	**0.0 ± 0.0**	**0.0 ± 0.0**
BB2	a	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0
	b	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0
	Area	**0.0 ± 0.0**	**0.0 ± 0.0**	**0.0 ± 0.0**	**0.0 ± 0.0**
BB3	a	0.0 ± 0.0	0.9 ± 0.6	0.0 ± 0.0	1.4 ± 0.6
	b	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0
	Area	**0.0 ± 0.0**	**0.4 ± 0.5**	**0.0 ± 0.0**	**0.7 ± 0.4**
BB4	a	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0
	b	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0
	Area	**0.0 ± 0.0**	**0.0 ± 0.0**	**0.0 ± 0.0**	**0.0 ± 0.0**

Key:
NTU = Nephelometric Turbidity Unit(s).
SE = Standard Error.

Table 4.2-15. Mean and Standard Error (SE) Values for Porewater Temperature (°C) by Transect and Sampling Area, Fall 2013 and Spring 2014

Area	Transect	Fall 2013		Spring 2014	
		Mean	±SE	Mean	±SE
BB1	a	29.2	± 0.2	27.4	± 0.0
	b	29.2	± 0.0	27.2	± 0.0
	Area	**29.2**	**± 0.1**	**27.3**	**± 0.0**
BB2	a	29.2	± 0.0	27.3	± 0.0
	b	29.3	± 0.1	27.2	± 0.0
	Area	**29.2**	**± 0.0**	**27.2**	**± 0.0**
BB3	a	29.2	± 0.0	27.3	± 0.0
	b	29.2	± 0.0	27.2	± 0.0
	Area	**29.2**	**± 0.0**	**27.2**	**± 0.0**
BB4	a	30.8	± 0.6	27.6	± 0.0
	b[1]	32.3	± 0.5	27.4	± 0.1
	Area	**31.5**	**± 0.5**	**27.5**	**± 0.1**

Notes:

[1] During the Fall 2013 sampling event, porewater temperatures were collected at only three sampling points along Transect *b* in area BB4 due to instrument malfunction

Key:

°C = Degrees Celsius.
SE = Standard Error.

Table 4.2-16. Average Values for Porewater and Bottom Water Temperature (°C) by Transect and Sampling Area, Fall 2013 and Spring 2014

Area	Transect	Fall 2013			Spring 2014		
		Mean		Difference[1]	Mean		Difference[1]
		Porewater	Bottom		Porewater	Bottom	
BB1	**a**	29.2	29.6	0.4	27.4	26.0	-1.4
	b	29.2	30.2	1.0	27.2	27.0	-0.2
	Area	**29.2**	**29.9**	**0.7**	**27.3**	**26.5**	**-0.8**
BB2	**a**	29.2	29.2	0.0	27.3	26.7	-0.6
	b	29.3	29.6	0.3	27.2	27.5	0.3
	Area	**29.2**	**29.4**	**0.2**	**27.2**	**27.1**	**-0.1**
BB3	**a**	29.2	29.1	-0.1	27.3	26.8	-0.5
	b	29.2	29.4	0.2	27.2	27.4	0.2
	Area	**29.2**	**29.2**	**0.0**	**27.2**	**27.1**	**-0.1**
BB4	**a**	30.8	29.1	-1.7	27.6	27.1	-0.5
	b[2]	32.3	29.7	-2.6	27.4	28.0	0.6
	Area	**31.5**	**29.4**	**-2.1**	**27.5**	**27.5**	**0.0**

Notes:
[1] Positive values indicate the porewater temperature is lower than the ambient water temperature.
[2] During the Fall 2013 sampling event, porewater temperatures were collected at only three sampling points due to instrument malfunction.

Key:
°C = Degrees Celsius.

Table 4.2-17. Comparison of Mean Porewater to Mean Bottom Water Column Temperatures (°C) by Transect and Sampling Area, Pre- and Post- Uprate Sampling Events

Area	Transect	Fall events						Spring Events					
		Pre-Uprate Fall[1]			Post-Uprate Fall			Pre-Uprate Spring			Post-Uprate Spring		
		PW Temp	Bott. Temp	Difference[2]	PW Temp	Bott. Temp	Difference	PW Temp	Bott. Temp	Difference	PW Temp	Bott. Temp	Difference
BB1	a	29.3	29.4	0.1	29.2	29.6	0.4	27.3	26.6	-0.7	27.4	26.0	-1.4
	b	29.1	28.1	-1.0	29.2	30.1	1.0	27.0	27.3	0.3	27.2	27.0	-0.2
	Area	**29.2**	**28.8**	**-0.4**	**29.2**	**29.9**	**0.7**	**27.2**	**26.9**	**-0.3**	**27.3**	**26.5**	**-0.8**
BB2	a	28.3	27.9	-0.4	29.2	29.2	0.0	27.3	27.2	-0.1	27.3	26.7	-0.6
	b	28.2	28.2	0.0	29.3	29.6	0.3	26.8	26.5	-0.3	27.2	27.5	0.3
	Area	**28.2**	**28.1**	**0.1**	**29.2**	**29.4**	**0.2**	**27.1**	**26.8**	**-0.3**	**27.2**	**27.1**	**-0.1**
BB3	a	28.6	28.6	0.0	29.2	29.1	-0.1	27.3	26.6	-0.7	27.3	26.8	-0.5
	b	28.5	28.5	0.0	29.2	29.4	0.2	27.1	26.7	-0.4	27.2	27.4	0.2
	Area	**28.6**	**28.6**	**0.0**	**29.2**	**29.2**	**0.0**	**27.2**	**26.6**	**-0.6**	**27.2**	**27.1**	**-0.1**
BB4	a	28.6	28.2	-0.4	30.8	29.1	-1.7	28.2	28.6	0.4	27.6	27.1	-0.5
	b	28.5	28.5	0.0	32.3	29.7	-2.6	28.2	28.8	0.6	27.4	28.0	-0.6
	Area	**28.5**	**28.3**	**-0.2**	**31.5**	**29.4**	**-2.1**	**28.2**	**28.7**	**0.5**	**27.5**	**27.5**	**-0.1**

Notes:
[1] Mean calculated from the two pre-uprate fall events (Fall 2010 and Fall 2011) to get a single mean value for comparison to post-uprate fall values.
[2] Positive values indicate the porewater temperature is lower than the ambient water temperature.
[3] During the Fall 2013 sampling event, porewater temperatures were collected at only three sampling points due to instrument malfunction.

Key:
°C = Degrees Celsius.
Bott. Temp = Bottom Temperature.

Table 4.2-18. Results of Statistical Comparisons (Spearman Rank Order Correlations) of Bottom Water to Porewater Temperature (°C), Bottom Water to Porewater Specific Conductivity (µS/cm), and Seagrass Abundance (BBCA) to Depth to Hard Bottom (cm) for All Areas Combined, among Pre- and Post-Uprate Sampling Events[1]

Sampling Area	n	R	p
Temperature (°C): Bottom Water to Porewater			
All	256	0.77	**< 0.0001**
Specific Conductivity (µS/cm): Bottom Water to Porewater			
All	251	0.84	**< 0.0001**
Seagrass Abundance (BBCA) with Depth to Hard Bottom (cm)			
All	128	0.79	**< 0.0001**

Note:
[1] Fall 2010 and Fall 2011events combined for a single pre-uprate fall mean for analysis.
P Values in bold font are statistically significant.

Key:
µS/cm = Micro-Siemens per centimeter.
°C = Degrees Celsius.
BBCA = Braun-Blanquet Cover Abundance.
cm = Centimeter(s).

Table 4.2-19. Mean Values for Porewater and Bottom Water Column Specific Conductance (µS/cm) by Transect and Sampling Area, Fall 2013 and Spring 2014

Area	Transect	Fall 2013		Difference[1]	Spring 2014		Difference
		Mean			Mean		
		Porewater	Bottom		Porewater	Bottom	
BB1	**a**	46,963	40,313	-6,650	56,163	59,538	3,375
	b	47,425	44,238	-3,188	56,263	58,700	2,438
	Area	**47,194**	**42,275**	**-4,919**	**56,213**	**59,119**	**2,906**
BB2	**a**	52,275	52,138	-138	57,825	57,575	-250
	b	52,550	52,663	112	55,975	57,525	1,550
	Area	**52,413**	**52,400**	**-13**	**56,900**	**57,550**	**650**
BB3	**a**	52,113	52,438	325	56,688	57,975	1,287
	b	52,513	52,900	388	56,363	58,400	2,038
	Area	**52,313**	**52,669**	**356**	**56,525**	**58,188**	**1,663**
BB4	**a**	46,463	43,775	-2,688	49,550	53,088	3,538
	b	47,700	44,300	-3,400	50,038	52,863	2,825
	Area	**47,081**	**44,038**	**-3,044**	**49,794**	**52,975**	**3,181**

Note:
[1] Positive values indicate the porewater specific conductance is lower than the bottom water column specific conductance.

Key:
µS/cm = Micro-Siemens per centimeter.

Table 4.2-20. Difference[1] Between Bottom Water Column and Porewater Specific Conductance (µS/cm) by Transect and Sampling Area, Pre- and Post-Uprate Sampling Events

Area	Transect	Pre-Uprate		Post-Uprate	
		Fall	Spring	Fall	Spring
BB1	a	-3,143.1	-6,812.5	-6,650.0	3,375.0
	b	-5,078.1	-3,843.8	-3,187.5	2,437.5
	Area	**-4,110.6**	**-5,328.1**	**-4,918.8**	**2,906.2**
BB2	a	-4,034.4	-275.0	-137.5	-250.0
	b	-3,993.8	-406.3	112.5	1,550.0
	Area	**-4,014.1**	**-340.6**	**-12.5**	**650.0**
BB3	a	-4,409.4	306.2	325.0	1,287.5
	b	-5,831.3	337.5	387.5	2,037.5
	Area	**-5,120.3**	**321.9**	**356.2**	**1,662.5**
BB4	a	-4,253.1	-2,868.8	-2,687.5	3,537.5
	b	-3,225.0	-3,431.2	-3,400.0	2,825.0
	Area	**-3,739.1**	**-3,150.0**	**-3,043.8**	**3,181.3**

Note:
[1] Positive values indicate the porewater specific conductance is lower than the bottom water column specific conductance.

Key:
µS/cm = Micro-Siemens per Centimeter.

Table 4.2-21. Results of Porewater Nutrient Sampling by Transect and Sampling Area, Fall 2013 and Spring 2014

Area	Transect	Sodium (mg/L)			
		Fall 2013		Spring 2014[1]	
		Value	Qual	Value	Qual
BB1	a	8,970		59,100.00	
	b	9,760		59,300.00	
	Area Mean	**9,365**		**59,200.00**	
BB2	a	10,300		57,800.00	
	b	10,600		58,000.00	
	Area Mean	**10,450**		**57,900.00**	
BB3	a	10,600		57,700.00	
	b	10,600		56,400.00	
	Area Mean	**10,600**		**57,050.00**	
BB4	a	8,870		50,200.00	
	b	8,910		50,600.00	
	Area Mean	**8,890**		**50,400.00**	
Area	**Transect**	**Chloride (mg/L)**			
		Fall 2013		**Spring 2014**	
		Value	**Qual**	**Value**	**Qual**
BB1	a	19,500		23,300	
	b	20,400		23,400	
	Area Mean	**19,950**		**23,350**	
BB2	a	22,100		22,000	
	b	22,400		22,500	
	Area Mean	**22,250**		**22,250**	
BB3	a	22,200		22,500	
	b	21,600		21,600	
	Area Mean	**21,900**		**22,050**	
BB4	a	19,000		19,100	
	b	19,000		18,500	
	Area Mean	**19,000**		**18,800**	

Table 4.2-21. Results of Porewater Nutrient Sampling by Transect and Sampling Area, Fall 2013 and Spring 2014

Area	Transect	Nitrate/Nitrite (mg/L)			
		Fall 2013		Spring 2014	
		Value	Qual	Value	Qual
BB1	a	0.0079	I J	0.0840	
	b	0.0090	I J	0.0270	U
	Area Mean	**0.0085**		**0.0555**	
BB2	a	0.0054	U	0.0490	I
	b	0.7860		0.0270	U
	Area Mean	**0.3957**		**0.0380**	
BB3	a	0.0054	U	0.0340	I
	b	0.0054	U	0.0270	U
	Area Mean	**0.0054**		**0.0305**	
BB4	a	0.0054	U	0.0270	U
	b	0.0067	I J	0.0270	U
	Area Mean	**0.0060**		**0.0270**	
Area	**Transect**	**Unionized Ammonia (mg/L)**			
		Fall 2013		**Spring 2014**	
		Value	**Qual**	**Value**	**Qual**
BB1	a	0.002	J	0.009	
	b	0.008	J	0.022	
	Area Mean	**0.005**		**0.016**	
BB2	a	0.024	J	0.016	
	b	0.003	J	0.008	
	Area Mean	**0.013**		**0.012**	
BB3	a	0.001	J	0.017	
	b	0.005	J	0.015	
	Area Mean	**0.003**		**0.016**	
BB4	a	0.002	J	0.013	
	b	0.002	J	0.019	
	Area Mean	**0.002**		**0.016**	

Table 4.2-21. Results of Porewater Nutrient Sampling by Transect and Sampling Area, Fall 2013 and Spring 2014

Area	Transect	Total Kjeldahl Nitrogen (mg/L)			
		Fall 2013		Spring 2014	
		Value	Qual	Value	Qual
BB1	a	0.6750	J	0.7170	
	b	0.7790	J	0.9870	
	Area Mean	**0.7270**		**0.8520**	
BB2	a	0.9670	J	0.7910	
	b	0.5980	J	0.3000	U
	Area Mean	**0.7825**		**0.5455**	
BB3	a	0.4990	J	0.8960	
	b	0.3710	I J	0.5900	
	Area Mean	**0.4350**		**0.7430**	
BB4	a	0.6330	J	1.0200	
	b	0.6020	J	0.9740	
	Area Mean	**0.6175**		**0.9970**	
Area	**Transect**	**Total Phosphorus (mg/L)**			
		Fall 2013		**Spring 2014**	
		Value	**Qual**	**Value**	**Qual**
BB1	a	0.0022	U J	0.0022	U
	b	0.0022	U J	0.0022	U
	Area Mean	**0.0022**		**0.0022**	
BB2	a	0.0022	U	0.0022	U
	b	0.0022	U J	0.0022	U
	Area Mean	**0.0022**		**0.0022**	
BB3	a	0.0022	U J	0.0022	U
	b	0.0022	U J	0.0022	U
	Area Mean	**0.0022**		**0.0022**	
BB4	a	0.0022	U J	0.0022	U
	b	0.0022	U	0.0022	U
	Area Mean	**0.0022**		**0.0022**	

Table 4.2-21. Results of Porewater Nutrient Sampling by Transect and Sampling Area, Fall 2013 and Spring 2014

Area	Transect	ortho-Phosphate (mg/L)			
		Fall 2013		Spring 2014	
		Value	Qual	Value	Qual
BB1	a	0.0181	J	0.0014	U
	b	0.0089	I J	0.0014	U
	Area Mean	**0.0135**		**0.0014**	
BB2	a	0.0016	I	0.0014	U
	b	0.0288	J	0.0014	U
	Area Mean	**0.0152**		**0.0014**	
BB3	a	0.0262	J	0.0014	U
	b	0.0171	J	0.0014	U
	Area Mean	**0.0217**		**0.0014**	
BB4	a	0.0052	I J	0.0014	U
	b	0.0023	I	0.0014	U
	Area Mean	**0.0038**		**0.0014**	

Notes:
[1] No values for sodium reported for the Spring 2014 sampling event.
[2] No values for tritium reported for the Fall 2013 sampling event.
[3] No values for tritium reported for the Spring 2014 sampling event.

Key:
I = Value between the MDL and PQL.
J = Estimated (+/- indicate bias).
Q = Holding time exceeded.
U = Analyzed for but not detected at the reported value.

Table 4.2-22. Comparison of Pre- (Fall 2010 to Fall 2011) and Post-Uprate (Fall 2013 and Spring 2014) Analytical Results for Porewater Nutrient Samples by Transect and Sampling Area

Area	Transect	Sodium (mg/L)			
		Pre-Uprate Fall	Pre-Uprate Spring	Post-Uprate Fall	Post-Uprate Spring[1]
BB1	a	9,150	13,000	8,970	59100
	b	9,350	12,000	9,760	59300
	Area Mean	**9,250**	**12,500**	**9,365**	**59200**
BB2	a	10,450	12,000	10,300	57800
	b	10,500	11,000	10,600	58000
	Area Mean	**10,475**	**11,500**	**10,450**	**57900**
BB3	a	10,500	10,000	10,600	57700
	b	10,450	11,000	10,600	56400
	Area Mean	**10,475**	**10,500**	**10,600**	**57050**
BB4	a	9,300	9,800	8,870	50200
	b	9,100	11,000	8,910	50600
	Area Mean	**9,200**	**10,400**	**8,890**	**50400**
Area	**Transect**	**Chloride (mg/L)**			
		Pre-Uprate Fall	**Pre-Uprate Spring**	**Post-Uprate Fall**	**Post-Uprate Spring**
BB1	a	18,000	24,000	19,500	23,300
	b	18,500	24,000	20,400	23,400
	Area Mean	**18,250**	**24,000**	**19,950**	**23,350**
BB2	a	19,000	23,000	22,100	22,000
	b	19,000	22,000	22,400	22,500
	Area Mean	**19,000**	**22,500**	**22,250**	**22,250**
BB3	a	20,000	22,000	22,200	22,500
	b	18,500	21,000	21,600	21,600
	Area Mean	**19,250**	**21,500**	**21,900**	**22,050**
BB4	a	18,000	20,000	19,000	19,100
	b	17,000	21,000	19,000	18,500
	Area Mean	**17,500**	**20,500**	**19,000**	**18,800**

Table 4.2-22. Comparison of Pre- (Fall 2010 to Fall 2011) and Post-Uprate (Fall 2013 and Spring 2014) Analytical Results for Porewater Nutrient Samples by Transect and Sampling Area

Area	Transect	Nitrate+Nitrite (mg/L)			
		Pre-Uprate Fall	Pre-Uprate Spring	Post-Uprate Fall	Post-Uprate Spring
BB1	a	0.0225	0.1100	0.0079	0.0840
	b	0.0289	0.2100	0.0090	0.0270
	Area Mean	**0.0257**	**0.1600**	**0.0085**	**0.0555**
BB2	a	0.0049	0.0260	0.0054	0.0490
	b	0.0051	0.0250	0.7860	0.0270
	Area Mean	**0.0050**	**0.0255**	**0.3957**	**0.0380**
BB3	a	0.0065	0.0360	0.0054	0.0340
	b	0.0070	0.0240	0.0054	0.0270
	Area Mean	**0.0067**	**0.0300**	**0.0054**	**0.0305**
BB4	a	0.0184	0.1300	0.0054	0.0270
	b	0.0124	0.1200	0.0067	0.0270
	Area Mean	**0.0154**	**0.1250**	**0.0060**	**0.0270**
Area	**Transect**	**Unionized Ammonia (mg/L)**			
		Pre-Uprate Fall	**Pre-Uprate Spring**	**Post-Uprate Fall**	**Post-Uprate Spring**
BB1	a	0.001	0.003	0.002	0.009
	b	0.002	0.000	0.008	0.022
	Area Mean	**0.001**	**0.002**	**0.005**	**0.016**
BB2	a	0.004	0.006	0.024	0.016
	b	0.001	0.010	0.003	0.008
	Area Mean	**0.002**	**0.008**	**0.013**	**0.012**
BB3	a	0.001	0.000	0.001	0.017
	b	0.002	0.002	0.005	0.015
	Area Mean	**0.001**	**0.001**	**0.003**	**0.016**
BB4	a	0.004	0.003	0.002	0.013
	b	0.004	0.009	0.002	0.019
	Area Mean	**0.004**	**0.006**	**0.002**	**0.016**

Table 4.2-22. Comparison of Pre- (Fall 2010 to Fall 2011) and Post-Uprate (Fall 2013 and Spring 2014) Analytical Results for Porewater Nutrient Samples by Transect and Sampling Area

Area	Transect	Total Kjedahl Nitrogen (mg/L)			
		Pre-Uprate Fall	Pre-Uprate Spring	Post-Uprate Fall	Post-Uprate Spring
BB1	a	0.6000	0.9000	0.6750	0.7170
	b	0.5950	1.2000	0.7790	0.9870
	Area Mean	**0.5975**	**1.0500**	**0.7270**	**0.8520**
BB2	a	0.6600	0.8100	0.9670	0.7910
	b	0.4750	0.4600	0.5980	0.3000
	Area Mean	**0.5675**	**0.6350**	**0.7825**	**0.5455**
BB3	a	0.5000	0.2300	0.4990	0.8960
	b	0.3900	0.3500	0.3710	0.5900
	Area Mean	**0.4450**	**0.2900**	**0.4350**	**0.7430**
BB4	a	1.1250	0.4600	0.6330	1.0200
	b	0.6850	1.0000	0.6020	0.9740
	Area Mean	**0.9050**	**0.7300**	**0.6175**	**0.9970**
Area	**Transect**	**Total Phosphorus (mg/L)**			
		Pre-Uprate Fall	**Pre-Uprate Spring**	**Post-Uprate Fall**	**Post-Uprate Spring**
BB1	a	0.0120	0.0230	0.0022	0.0022
	b	0.0135	0.0210	0.0022	0.0022
	Area Mean	**0.0128**	**0.0220**	**0.0022**	**0.0022**
BB2	a	0.0155	0.0200	0.0022	0.0022
	b	0.0160	0.0200	0.0022	0.0022
	Area Mean	**0.0158**	**0.0200**	**0.0022**	**0.0022**
BB3	a	0.0180	0.0190	0.0022	0.0022
	b	0.0135	0.0200	0.0022	0.0022
	Area Mean	**0.0158**	**0.0195**	**0.0022**	**0.0022**
BB4	a	0.0280	0.0260	0.0022	0.0022
	b	0.0195	0.0230	0.0022	0.0022
	Area Mean	**0.0238**	**0.0245**	**0.0022**	**0.0022**

Table 4.2-22. Comparison of Pre- (Fall 2010 to Fall 2011) and Post-Uprate (Fall 2013 and Spring 2014) Analytical Results for Porewater Nutrient Samples by Transect and Sampling Area

Area	Transect	Orthophosphate (mg/L)			
		Pre-Uprate Fall	Pre-Uprate Spring	Post-Uprate Fall	Post-Uprate Spring
BB1	a	0.0382	0.0400	0.0181	0.0014
	b	0.0387	0.0024	0.0089	0.0014
	Area Mean	**0.0385**	**0.0212**	**0.0135**	**0.0014**
BB2	a	0.0071	0.0044	0.0016	0.0014
	b	0.0241	0.0036	0.0288	0.0014
	Area Mean	**0.0156**	**0.0040**	**0.0152**	**0.0014**
BB3	a	0.0657	0.0038	0.0262	0.0014
	b	0.0510	0.0029	0.0171	0.0014
	Area Mean	**0.0584**	**0.0034**	**0.0217**	**0.0014**
BB4	a	0.0162	0.0015	0.0052	0.0014
	b	0.0162	0.0051	0.0023	0.0014
	Area Mean	**0.0162**	**0.0033**	**0.0038**	**0.0014**
Area	**Transect**	**Tritium (pCi/L)**			
		Pre-Uprate Fall	**Pre-Uprate Spring**	**Post-Uprate Fall[2]**	**Post-Uprate Spring[3]**
BB1	a	9.3	11.9	NA	NA
	b	9.5	16.3	NA	NA
	Area Mean	**9.4**	**14.10**	**NA**	**NA**
BB2	a	13.7	13.0	NA	NA
	b	9.0	5.8	NA	NA
	Area Mean	**11.3**	**9.40**	**NA**	**NA**
BB3	a	20.0	9.6	NA	NA
	b	23.2	15.2	NA	NA
	Area Mean	**21.6**	**12.40**	**NA**	**NA**
BB4	a	8.1	13.7	NA	NA
	b	9.6	19.5	NA	NA
	Area Mean	**8.8**	**16.60**	**NA**	**NA**

Notes:
[1] No values for sodium reported for the Spring Post-Uprate sampling event.
[2] No values for tritium reported for the Fall Post-Uprate sampling event.
[3] No values for tritium reported for the Spring Post-Uprate sampling event.

Key:
NA = Not available.

Table 4.2-23. Number of Quadrats Along Each Transect (n=32) with *Halodule wrightii* (HW) and/or *Thalassia testudinum* (TT) by Study Area (n=64), Fall 2013 and Spring 2014

Area	Transect	Fall 2013		Spring 2014	
		HW	TT	HW	TT
BB1	a	5	32	7	32
	b	12	30	9	30
	Total	**17**	**62**	**16**	**62**
BB2	a	16	11	15	3
	b	5	12	6	13
	Total	**21**	**23**	**21**	**16**
BB3	a	0	23	0	23
	b	5	24	3	23
	Total	**5**	**47**	**3**	**46**
BB4	a	2	32	2	32
	b	0	27	1	25
	Total	**2**	**59**	**3**	**57**
Total All Areas		**45**	**191**	**43**	**181**

Key: HW = *Halodule wrightii.* TT = *Thalassia testudinum.*

Table 4.2-24. Percent (%) of Points within Each Study Area (n=16) Having Different Bottom Conditions, Fall 2013 and Spring 2014

Category	Coverage / Presence	BB1		BB2		BB3		BB4	
		Fall 2013	Spring 2014	Fall 2013	Spring 2014	Fall 2013	Spring 2014	Fall 2013	Spring 2014
Overall	Open				18.8		12.5		
	Fairly Open	25.0	68.8	50.0	68.8	50.0	62.5	31.3	37.5
	Moderately Open	37.5	12.5	18.8	12.5	37.5	25.0	50.0	37.5
	Mostly Covered	37.5	18.8	25.0		12.5		18.8	25.0
	Uniform			6.3					
Seagrass	Sparse	25.0	62.5	87.5	87.5	75.0	81.3	93.8	68.8
	Sparse to Moderate	62.5	25.0	12.5	12.5	25.0	18.8	6.3	31.3
	Moderate to Dense	12.5	12.5						
Drift Algae	Sparse	93.8	62.5	43.8	68.8	25.0	93.8	18.8	43.8
	Sparse to Moderate	6.3	37.5	43.8	25.0	43.8	6.3	68.8	37.5
	Moderate to Dense			12.5	6.3	31.3		12.5	18.8
Batophora	Sparse	31.3	31.3	25.0	62.5	31.3	93.8	56.3	18.8
	Sparse to Moderate	25.0	56.3	37.5	25.0	68.8	6.3	43.8	68.8
	Moderate to Dense	43.8	12.5	37.5	12.5				12.5
Calcareous Algae	None								
	Few	31.3	62.5	12.5	12.5		18.8		
	Many	68.8	37.5	87.5	87.5	100.0	81.3	100.0	100.0
Sponges	None		6.3	6.3					6.3
	Few	87.5	87.5	25.0	18.8	56.3	25.0	25.0	68.8
	Many	12.5	6.3	68.8	81.3	43.8	75.0	75.0	25.0

Table 4.2-24. Percent (%) of Points within Each Study Area (n=16) Having Different Bottom Conditions, Fall 2013 and Spring 2014

Category	Coverage / Presence	BB1		BB2		BB3		BB4	
		Fall 2013	Spring 2014	Fall 2013	Spring 2014	Fall 2013	Spring 2014	Fall 2013	Spring 2014
Corals	None	43.8	37.5	6.3	18.8	6.3	18.8	6.3	6.3
	Few	56.3	62.5	31.3	12.5	56.3	31.3	25.0	62.5
	Many			62.5	68.8	37.5	50.0	68.8	31.3
Gorgonians	None	100.0	100.0	25.0	18.8	25.0	31.3	100.0	100.0
	Few			12.5		37.5	18.8		
	Many			62.5	81.3	37.5	50.0		

Table 4.2-25. Mean and Standard Error of Water Depth (m), Mean Braun-Blaunquet Coverage Abundance1 (BBCA) Scores for Total Macrophytes, Total Seagrass, and Total Macroalgae, and Depth to Hardbottom (cm) by Transect and Sampling Area, Fall 2013 and Spring 2014

Area	Tran-sect	Total Macrophytes		Total Seagrass		Total Macroalgae		Depth to Hardbottom (cm)	
		Fall 2013	Spring 2014	Fall 2013	Spring 2014	Fall 2013	Spring 2014	Fall 2013	Spring 2014
		Mean ±SE	Mean ±SE	Mean ±SE	Mean ±SE	Mean ±SE	Mean ±SE	Mean ±SE	Mean ±SE
BB1	a	2.1 ± 0.1	3.0 ± 0.2	1.5 ± 0.2	1.8 ± 0.2	1.5 ± 0.1	2.1 ± 0.1	24.3 ± 3.3	21.4 ± 2.2
	b	2.3 ± 0.1	2.1 ± 0.1	1.1 ± 0.1	1.1 ± 0.1	2.1 ± 0.1	1.7 ± 0.1	17.9 ± 2.0	12.1 ± 2.1
	Area	**2.2 ± 0.1**	**2.5 ± 0.1**	**1.3 ± 0.1**	**1.4 ± 0.1**	**1.8 ± 0.1**	**1.9 ± 0.1**	**21.1 ± 2.0**	**16.8 ± 1.6**
BB2	a	3.2 ± 0.3	1.7 ± 0.2	1.2 ± 0.1	0.5 ± 0.1	2.9 ± 0.3	1.3 ± 0.1	10.6 ± 1.6	4.3 ± 0.8
	b	2.6 ± 0.2	1.8 ± 0.2	1.5 ± 0.1	0.4 ± 0.1	1.8 ± 0.1	1.5 ± 0.2	12.2 ± 2.7	9.4 ± 2.2
	Area	**2.9 ± 0.2**	**1.7 ± 0.1**	**1.4 ± 0.1**	**0.5 ± 0.1**	**2.4 ± 0.2**	**1.4 ± 0.1**	**11.3 ± 1.5**	**6.8 ± 1.2**
BB3	a	3.0 ± 0.2	1.4 ± 0.1	1.5 ± 0.1	1.1 ± 0.1	1.4 ± 0.1	1.1 ± 0.1	12.7 ± 1.6	11.1 ± 1.3
	b	2.3 ± 0.2	1.8 ± 0.1	1.2 ± 0.1	0.9 ± 0.1	1.7 ± 0.1	1.3 ± 0.1	12.8 ± 1.5	10.7 ± 1.9
	Area	**2.6 ± 0.1**	**1.6 ± 0.1**	**1.3 ± 0.1**	**1.0 ± 0.1**	**1.6 ± 0.1**	**1.2 ± 0.0**	**12.7 ± 1.1**	**10.9 ± 1.1**
BB4	a	2.7 ± 0.1	2.5 ± 0.1	1.3 ± 0.1	1.0 ± 0.0	2.3 ± 0.2	2.1 ± 0.2	16.1 ± 1.4	15.0 ± 1.3
	b	2.4 ± 0.2	2.8 ± 0.2	1.0 ± 0.1	0.8 ± 0.1	1.8 ± 0.1	2.5 ± 0.2	12.7 ± 1.8	9.6 ± 1.0
	Area	**2.6 ± 0.1**	**2.7 ± 0.1**	**1.1 ± 0.1**	**0.9 ± 0.1**	**2.0 ± 0.1**	**2.3 ± 0.1**	**14.4 ± 1.1**	**12.3 ± 0.9**

Notes:
[1] BBCA scores: 1 (includes 0.1 and 0.5) - less than 5% coverage; 2 - 5% to 25% coverage; 3 - 25% to 50% coverage; 4 - 50% to 75% coverage; 5 - 75% to 100% coverage.

Key:

BBCA = Braun-Blaunquet Coverage Abundance.
m = Meter(s) cm = Centimeter(s).
SE = Standard Error.

Table 4.2-26. Comparison of Pre- and Post-Uprate[1] Mean Braun Blanquet Coverage Abundance (BBCA) Scores[2] for Total Macrophytes, Total Seagrass, and Total Macroalgae by Transect and Sampling Area, Pre- and Post- Uprate Sampling Events

Area	Transect	Total Macrophytes				Total Seagrass				Total Macroalgae			
		Pre-Uprate		Post-Uprate		Pre-Uprate		Post-Uprate		Pre-Uprate		Post-Uprate	
		Fall*	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring
BB1	a	2.1	2.3	2.1	3.0	1.5	1.4	1.5	1.8	1.4	1.6	1.5	2.1
	b	1.8	2.7	2.3	2.1	1.2	1.6	1.1	1.1	1.6	2.0	2.1	1.7
	Area	1.9	2.5	2.2	2.5	1.3	1.5	1.3	1.4	1.5	1.8	1.8	1.9
BB2	a	2.2	2.3	3.2	1.7	1.1	0.4	1.2	0.5	1.5	1.7	2.9	1.3
	b	2.3	2.3	2.6	1.8	0.9	1.1	1.5	0.4	1.7	1.8	1.8	1.5
	Area	2.2	2.3	2.9	1.7	1.0	0.7	1.3	0.5	1.6	1.7	2.4	1.4
BB3	a	2.3	2.8	3.0	1.4	1.5	1.3	1.5	1.1	1.3	1.9	1.4	1.1
	b	1.8	2.8	2.3	1.8	0.9	0.8	1.2	0.9	1.3	2.4	1.7	1.3
	Area	2.1	2.8	2.6	1.6	1.2	1.1	1.3	1.0	1.3	2.2	1.6	1.2
BB4	a	1.8	2.0	2.7	2.5	1.0	1.1	1.2	1.0	1.3	1.8	2.2	2.1
	b	1.9	2.4	2.4	2.8	1.0	1.1	1.0	0.8	1.4	1.8	1.8	2.5
	Area	1.9	2.2	2.6	2.7	1.0	1.1	1.1	0.9	1.4	1.8	2.0	2.3

Notes:
[1] Fall 2010 and 2011 averaged for Fall Pre-Uprate values.
[2] BBCA scores: 1 (includes 0.1 and 0.5) - less than 5% coverage; 2 - 5% to 25% coverage; 3 - 25% to 50% coverage; 4 - 50% to 75% coverage; 5 - 75% to 100% coverage.

Key:
BBCA = Braun-Blaunquet Coverage Abundance.

Table 4.2-27. Analytical Results for Seagrass Leaf Nutrient Samples Collected within Each of the Study Areas, Fall 2013

Method		353.2 & 351.2		365.4		U of M		U of M		U of M	
Parameter		Total Nitrogen		Total Phosphorus		Total Carbon		$\delta^{13}C$		$\delta^{15}N$	
Area	Transect	wt%	Qualifier	mg/Kg	Qualifier	wt%	Qualifier	‰	Qualifier	‰	Qualifier
BB1	a	2.35		548.50		41.25		-9.70		6.45	
	b	2.30		555.00		41.85		-9.60		4.55	
	Total	**2.33**		**551.75**		**41.55**		**-9.65**		**5.50**	
BB2	a	2.00		581.50		41.65		-9.00		2.95	
	b	2.05		607.50		40.60		-9.85		3.25	
	Total	**2.03**		**594.50**		**41.13**		**-9.43**		**3.10**	
BB3	a	2.00		628.50		41.25		-10.55		3.70	
	b	2.05		628.00		41.35		-10.50		3.65	
	Total	**2.03**		**628.25**		**41.30**		**-10.53**		**3.68**	
BB4	a	2.00		689.50		40.70		-10.75		4.85	
	b	2.10		706.00		40.55		-10.70		4.10	
	Total	**2.05**		**697.75**		**40.63**		**-10.73**		**4.48**	

Note:
Methods 353.2 and 351.2 refer to the corresponding EPA methods.

Key:
‰ = Parts per mille.
wt% = Weight percent.
mg/kg = Milligrams per kilogram.
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FIGURES

NS: Not Sampled. 7-2014

Quarterly ecological Sodium samples (mg/L) collected at 30 cm depth.
Ranges of data in periods of Pre-Uprate and quaterly values in the Post-Uprate period from June 2013 to March 2014.

Figure 4.1-1. Post-Uprate Quarterly Porewater Sodium (mg/L) Results with Pre-Uprate Ranges.

NS: Not Sampled. 7-2014

Quarterly ecological Chloride samples (mg/L) collected at 30 cm depth.
Ranges of data in periods of Pre-Uprate and quaterly values in the Post-Uprate period from June 2013 to March 2014.

Figure 4.1-2. Post-Uprate Quarterly Porewater Chloride (mg/L) Results with Pre-Uprate Ranges.