WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Fresh/Intermediate Marsh

Project: **West Bay BUDMAT Chevron Alt. Sedimentation from Div. only**

Project Area:	18,850
% Fresh	100
% Intermediate	0

Condition: Future Without Project

Variable		TY Value	0 SI	TY Value	10 SI	TY Value	20 SI
V1	% Emergent	2	0.12	5	0.15	21	0.29
V2	% Aquatic	32	0.39	32	0.39	34	0.41
V3	Interspersion	%		%		%	
	Class 1	0	0.20	0	0.30	0	0.50
	Class 2	0		0		50	
	Class 3	0		50		50	
	Class 4	100		50		0	
	Class 5	0		0		0	
V4	%OW <= 1.5ft	10	0.21	15	0.27	25	0.38
V5	Salinity (ppt)						
	fresh	0.5	1.00	0.5	1.00	0.5	1.00
	intermediate						
V6	Access Value						
	fresh	1.0000	1.00	1.0000	1.00	1.0000	1.00
	intermediate						
	Emergent Marsh HSI =		**0.26**	**EM HSI =**	**0.30**	**EM HSI =**	**0.44**
	Open Water HSI =		**0.49**	**OW HSI =**	**0.50**	**OW HSI =**	**0.53**

Project: **West Bay BUDMAT Chevron Alt. Sedimentation from Div. only**

FWOP

Variable		TY Value	50 SI	TY Value	SI	TY Value	SI
V1	% Emergent	21	0.29				
V2	% Aquatic	34	0.41				
V3	Interspersion	%		%		%	
	Class 1	0	0.50				
	Class 2	50					
	Class 3	50					
	Class 4	0					
	Class 5	0					
V4	%OW <= 1.5ft	25	0.38				
V5	Salinity (ppt)						
	fresh	0.5	1.00				
	intermediate						
V6	Access Value						
	fresh	1.0000	1.00				
	intermediate						
		EM HSI =	**0.44**	**EM HSI =**		**EM HSI =**	
		OW HSI =	**0.53**	**OW HSI =**		**OW HSI =**	

Project: **West Bay BUDMAT Chevron Alt. Sedimentation from Div. only**

FWOP

Variable		TY		TY		TY	
		Value	SI	Value	SI	Value	SI
V1	% Emergent						
V2	% Aquatic						
V3	Interspersion	%		%		%	
	Class 1						
	Class 2						
	Class 3						
	Class 4						
	Class 5						

V4	%OW <= 1.5ft						
V5	Salinity (ppt)						
	fresh						
	intermediate						
V6	Access Value						
	fresh						
	intermediate						
		EM HSI =		EM HSI =		EM HSI =	
		OW HSI =		OW HSI =		OW HSI =	

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Fresh/Intermediate Marsh

Project: **West Bay BUDMAT Chevron Alt. Sedimentation from Div. only**

Condition: Future With Project

Project Area:	18,850
% Fresh	100
% Intermediate	

Variable		TY	0	TY	10	TY	20
		Value	SI	Value	SI	Value	SI
V1	% Emergent	2	0.12	10	0.19	22	0.30
V2	% Aquatic	32	0.39	32	0.39	33	0.40
V3	Interspersion	%		%		%	
	Class 1	0	0.20	0	0.30	0	0.50
	Class 2	0		0		50	
	Class 3	0		50		50	
	Class 4	100		50		0	
	Class 5	0		0		0	
V4	%OW <= 1.5ft	10	0.21	15	0.27	25	0.38

V5	Salinity (ppt)						
	fresh	0.5	1.00	0.5	1.00	0.5	1.00
	intermediate						
V6	Access Value						
	fresh	1.0000	1.00	1.0000	1.00	1.0000	1.00
	intermediate						
	Emergent Marsh HSI =		**0.26**	**EM HSI =**	**0.34**	**EM HSI =**	**0.45**
	Open Water HSI =		**0.49**	**OW HSI =**	**0.50**	**OW HSI =**	**0.53**

Project: **West Bay BUDMAT Chevron Alt. Sedimentation from Div. only**

FWP

		TY	50	TY		TY	
Variable		**Value**	**SI**	**Value**	**SI**	**Value**	**SI**
V1	% Emergent	22	0.30				
V2	% Aquatic	33	0.40				
V3	Interspersion	%		%		%	
	Class 1	0	0.50				
	Class 2	50					
	Class 3	50					
	Class 4	0					
	Class 5	0					
V4	%OW <= 1.5ft	25	0.38				
V5	Salinity (ppt)						
	fresh	0.5	1.00				
	intermediate						
V6	Access Value						
	fresh	1.0000	1.00				
	intermediate						
		EM HSI =	**0.45**	**EM HSI =**		**EM HSI =**	
		OW HSI =	**0.53**	**OW HSI =**		**OW HSI =**	

Project: **West Bay BUDMAT Chevron Alt. Sedimentation from Div. only**

FWP

		TY		TY		TY	
Variable		**Value**	**SI**	**Value**	**SI**	**Value**	**SI**
V1	% Emergent						
V2	% Aquatic						
V3	Interspersion	%		%		%	
	Class 1						
	Class 2						
	Class 3						
	Class 4						
	Class 5						
V4	%OW <= 1.5ft						
V5	Salinity (ppt)						
	fresh						
	intermediate						
V6	Access Value						
	fresh						
	intermediate						
		EM HSI =		**EM HSI =**		**EM HSI =**	
		OW HSI =		**OW HSI =**		**OW HSI =**	

AAHU CALCULATION - EMERGENT MARSH

Project: West Bay BUDMAT Chevron Alt. Sedimentation from Div. only

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	325	0.26	85.92	

10	600	0.30	180.02	1313.39
20	3952	0.44	1751.16	8856.66
50	3952	0.44	1751.16	52534.94
Max=	50		AAHUs =	1254.10

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	325	0.26	85.92	
10	625	0.34	212.09	1452.59
20	4131	0.45	1860.04	9712.54
50	4131	0.45	1860.04	55801.24
Max=	50		AAHUs	1339.33

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	1339.33
B. Future Without Project Emergent Marsh AAHUs =	1254.10
Net Change (FWP - FWOP) =	85.23

AAHU CALCULATION - OPEN WATER

Project: **West Bay BUDMAT Chevron Alt. Sedimentation from Div. only**

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	18525	0.49	9021.59	
10	18250	0.50	9098.90	90607.77
20	14898	0.53	7969.63	85545.85
50	14898	0.53	7969.63	239088.85
Max=	50		AAHUs =	8304.85

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	18525	0.49	9021.59	
10	18225	0.50	9086.43	90545.93
20	14719	0.53	7776.80	84490.17

50	14719	0.53	7776.80	233303.86
Max=	**50**		**AAHUs**	**8166.80**

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	8166.80
B. Future Without Project Open Water AAHUs =	8304.85
Net Change (FWP - FWOP) =	**-138.05**

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	85.23
B. Open Water Habitat Net AAHUs =	-138.05
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1	**13.20**

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Fresh/Intermediate Marsh

Project: **West Bay BUDMAT SRED Alt. Sedimentation from Div. only**

Condition: Future Without Project

Project Area:	18,850
% Fresh	100
% Intermediate	0

Variable		TY Value	0 SI	TY Value	10 SI	TY Value	20 SI
V1	% Emergent	2	0.12	5	0.15	21	0.29
V2	% Aquatic	32	0.39	32	0.39	34	0.41
V3	Interspersion	%		%		%	
	Class 1	0	0.20	0	0.30	0	0.50
	Class 2	0		0		50	
	Class 3	0		50		50	
	Class 4	100		50		0	
	Class 5	0		0		0	
V4	%OW <= 1.5ft	10	0.21	15	0.27	25	0.38
V5	Salinity (ppt)						
	fresh	0.5	1.00	0.5	1.00	0.5	1.00
	intermediate						
V6	Access Value						
	fresh	1.0000	1.00	1.0000	1.00	1.0000	1.00
	intermediate						
	Emergent Marsh HSI =		**0.26**	**EM HSI =**	**0.30**	**EM HSI =**	**0.44**
	Open Water HSI =		**0.49**	**OW HSI =**	**0.50**	**OW HSI =**	**0.53**

Project: **West Bay BUDMAT SRED Alt. Sedimentation from Div. only**

FWOP

Variable		TY Value	50 SI	TY Value	SI	TY Value	SI
V1	% Emergent	21	0.29				
V2	% Aquatic	34	0.41				
V3	Interspersion	%		%		%	
	Class 1	0	0.50				
	Class 2	50					
	Class 3	50					
	Class 4	0					
	Class 5	0					
V4	%OW <= 1.5ft	25	0.38				
V5	Salinity (ppt)						
	fresh	0.5	1.00				
	intermediate						
V6	Access Value						
	fresh	1.0000	1.00				
	intermediate						
		EM HSI =	**0.44**	**EM HSI =**		**EM HSI =**	
		OW HSI =	**0.53**	**OW HSI =**		**OW HSI =**	

Project: **West Bay BUDMAT SRED Alt. Sedimentation from Div. only**

FWOP

Variable		TY		TY		TY	
		Value	SI	Value	SI	Value	SI
V1	% Emergent						
V2	% Aquatic						
V3	Interspersion	%		%		%	
	Class 1						
	Class 2						
	Class 3						
	Class 4						
	Class 5						

V4	%OW <= 1.5ft						
V5	Salinity (ppt)						
	fresh						
	intermediate						
V6	Access Value						
	fresh						
	intermediate						
		EM HSI =		EM HSI =		EM HSI =	
		OW HSI =		OW HSI =		OW HSI =	

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Fresh/Intermediate Marsh

Project: **West Bay BUDMAT SRED Alt. Sedimentation from Div. only**

Condition: Future With Project

Project Area:	18,850
% Fresh	100
% Intermediate	

Variable		TY	0	TY	10	TY	20
		Value	SI	Value	SI	Value	SI
V1	% Emergent	2	0.12	10	0.19	22	0.30
V2	% Aquatic	32	0.39	32	0.39	32	0.39
V3	Interspersion	%		%		%	
	Class 1	0	0.20	0	0.30	0	0.50
	Class 2	0		0		50	
	Class 3	0		50		50	
	Class 4	100		50		0	
	Class 5	0		0		0	
V4	%OW <= 1.5ft	10	0.21	15	0.27	25	0.38

V5	Salinity (ppt)						
	fresh	0.5	1.00	0.5	1.00	0.5	1.00
	intermediate						
V6	Access Value						
	fresh	1.0000	1.00	1.0000	1.00	1.0000	1.00
	intermediate						
	Emergent Marsh HSI =		**0.26**	**EM HSI =**	**0.34**	**EM HSI =**	**0.45**
	Open Water HSI =		**0.49**	**OW HSI =**	**0.50**	**OW HSI =**	**0.52**

Project: **West Bay BUDMAT SRED Alt. Sedimentation from Div. only**

FWP

		TY	50	TY		TY	
Variable		**Value**	**SI**	**Value**	**SI**	**Value**	**SI**
V1	% Emergent	22	0.30				
V2	% Aquatic	32	0.39				
V3	Interspersion	%		%		%	
	Class 1	0	0.50				
	Class 2	50					
	Class 3	50					
	Class 4	0					
	Class 5	0					
V4	%OW <= 1.5ft	25	0.38				
V5	Salinity (ppt)						
	fresh	0.5	1.00				
	intermediate						
V6	Access Value						
	fresh	1.0000	1.00				
	intermediate						
		EM HSI =	**0.45**	**EM HSI =**		**EM HSI =**	
		OW HSI =	**0.52**	**OW HSI =**		**OW HSI =**	

Project: **West Bay BUDMAT SRED Alt. Sedimentation from Div. only**

FWP

		TY		TY		TY	
Variable		**Value**	**SI**	**Value**	**SI**	**Value**	**SI**
V1	% Emergent						
V2	% Aquatic						
V3	Interspersion	%		%		%	
	Class 1						
	Class 2						
	Class 3						
	Class 4						
	Class 5						
V4	%OW <= 1.5ft						
V5	Salinity (ppt)						
	fresh						
	intermediate						
V6	Access Value						
	fresh						
	intermediate						
		EM HSI =		**EM HSI =**		**EM HSI =**	
		OW HSI =		**OW HSI =**		**OW HSI =**	

AAHU CALCULATION - EMERGENT MARSH

Project: West Bay BUDMAT SRED Alt. Sedimentation from Div. only

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	325	0.26	85.92	

10	600	0.30	180.02	1313.39
20	3952	0.44	1751.16	8856.66
50	3952	0.44	1751.16	52534.94
Max=	50		AAHUs =	1254.10

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	325	0.26	85.92	
10	625	0.34	212.09	1452.59
20	4166	0.45	1875.80	9784.86
50	4166	0.45	1875.80	56274.02
Max=	50		AAHUs	1350.23

NET CHANGE IN AAHUs DUE TO PROJECT		
A. Future With Project Emergent Marsh AAHUs	=	1350.23
B. Future Without Project Emergent Marsh AAHUs	=	1254.10
Net Change (FWP - FWOP) =		96.13

AAHU CALCULATION - OPEN WATER

Project: **West Bay BUDMAT SRED Alt. Sedimentation from Div. only**

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	18525	0.49	9021.59	
10	18250	0.50	9098.90	90607.77
20	14898	0.53	7969.63	85545.85
50	14898	0.53	7969.63	239088.85
Max=	50		AAHUs =	8304.85

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	18525	0.49	9021.59	
10	18225	0.50	9086.43	90545.93
20	14684	0.52	7660.91	83873.31

50	14684	0.52	7660.91	229827.17
Max=	**50**		**AAHUs**	**8084.93**

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	8084.93
B. Future Without Project Open Water AAHUs =	8304.85
Net Change (FWP - FWOP) =	**-219.92**

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	96.13
B. Open Water Habitat Net AAHUs =	-219.92
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1	**-5.82**

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Fresh/Intermediate Marsh

Project: **West Bay BUDMAT TWIAlt.2 Sedimentation from Div. only**

Condition: Future Without Project

Project Area:	18,850
% Fresh	100
% Intermediate	0

Variable		TY Value	0 SI	TY Value	10 SI	TY Value	20 SI
V1	% Emergent	2	0.12	5	0.15	21	0.29
V2	% Aquatic	32	0.39	32	0.39	34	0.41
V3	Interspersion	%		%		%	
	Class 1	0	0.20	0	0.30	0	0.50
	Class 2	0		0		50	
	Class 3	0		50		50	
	Class 4	100		50		0	
	Class 5	0		0		0	
V4	%OW <= 1.5ft	10	0.21	15	0.27	25	0.38
V5	Salinity (ppt)						
	fresh	0.5	1.00	0.5	1.00	0.5	1.00
	intermediate						
V6	Access Value						
	fresh	1.0000	1.00	1.0000	1.00	1.0000	1.00
	intermediate						
	Emergent Marsh HSI =		**0.26**	**EM HSI =**	**0.30**	**EM HSI =**	**0.44**
	Open Water HSI =		**0.49**	**OW HSI =**	**0.50**	**OW HSI =**	**0.53**

Project: **West Bay BUDMAT TWIAlt.2 Sedimentation from Div. only**

FWOP

Variable		TY Value	50 SI	TY Value	SI	TY Value	SI
V1	% Emergent	21	0.29				
V2	% Aquatic	34	0.41				
V3	Interspersion	%		%		%	
	Class 1	0	0.50				
	Class 2	50					
	Class 3	50					
	Class 4	0					
	Class 5	0					
V4	%OW <= 1.5ft	25	0.38				
V5	Salinity (ppt)						
	fresh	0.5	1.00				
	intermediate						
V6	Access Value						
	fresh	1.0000	1.00				
	intermediate						
		EM HSI =	**0.44**	**EM HSI =**		**EM HSI =**	
		OW HSI =	**0.53**	**OW HSI =**		**OW HSI =**	

Project: **West Bay BUDMAT TWIAlt.2 Sedimentation from Div. only**

FWOP

Variable		TY		TY		TY	
		Value	SI	Value	SI	Value	SI
V1	% Emergent						
V2	% Aquatic						
V3	Interspersion	%		%		%	
	Class 1						
	Class 2						
	Class 3						
	Class 4						
	Class 5						

V4	%OW <= 1.5ft						
V5	Salinity (ppt)						
	fresh						
	intermediate						
V6	Access Value						
	fresh						
	intermediate						
		EM HSI =		EM HSI =		EM HSI =	
		OW HSI =		OW HSI =		OW HSI =	

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Fresh/Intermediate Marsh

Project: **West Bay BUDMAT TWIAlt.2 Sedimentation from Div. only**

Condition: Future With Project

Project Area:	18,850
% Fresh	100
% Intermediate	

Variable		TY	0	TY	10	TY	20
		Value	SI	Value	SI	Value	SI
V1	% Emergent	2	0.12	10	0.19	22	0.30
V2	% Aquatic	32	0.39	33	0.40	36	0.42
V3	Interspersion	%		%		%	
	Class 1	0	0.20	0	0.30	0	0.50
	Class 2	0		0		50	
	Class 3	0		50		50	
	Class 4	100		50		0	
	Class 5	0		0		0	
V4	%OW <= 1.5ft	10	0.21	15	0.27	26	0.39

V5	Salinity (ppt)						
	fresh	0.5	1.00	0.5	1.00	0.5	1.00
	intermediate						
V6	Access Value						
	fresh	1.0000	1.00	1.0000	1.00	1.0000	1.00
	intermediate						
	Emergent Marsh HSI =		**0.26**	**EM HSI =**	**0.34**	**EM HSI =**	**0.45**
	Open Water HSI =		**0.49**	**OW HSI =**	**0.51**	**OW HSI =**	**0.55**

Project: **West Bay BUDMAT TWIAlt.2 Sedimentation from Div. only**

FWP

Variable		TY	50	TY		TY	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	22	0.30				
V2	% Aquatic	36	0.42				
V3	Interspersion	%		%		%	
	Class 1	0	0.50				
	Class 2	50					
	Class 3	50					
	Class 4	0					
	Class 5	0					
V4	%OW <= 1.5ft	26	0.39				
V5	Salinity (ppt)						
	fresh	0.5	1.00				
	intermediate						
V6	Access Value						
	fresh	1.0000	1.00				
	intermediate						
		EM HSI =	**0.45**	**EM HSI =**		**EM HSI =**	
		OW HSI =	**0.55**	**OW HSI =**		**OW HSI =**	

Project: **West Bay BUDMAT TWIAlt.2 Sedimentation from Div. only**

FWP

Variable		TY		TY		TY	
		Value	SI	Value	SI	Value	SI
V1	% Emergent						
V2	% Aquatic						
V3	Interspersion	%		%		%	
	Class 1						
	Class 2						
	Class 3						
	Class 4						
	Class 5						
V4	%OW <= 1.5ft						
V5	Salinity (ppt)						
	fresh						
	intermediate						
V6	Access Value						
	fresh						
	intermediate						
		EM HSI =		**EM HSI =**		**EM HSI =**	
		OW HSI =		**OW HSI =**		**OW HSI =**	

AAHU CALCULATION - EMERGENT MARSH

Project: West Bay BUDMAT TWIAlt.2 Sedimentation from Div. only

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	325	0.26	85.92	

10	600	0.30	180.02	1313.39
20	3952	0.44	1751.16	8856.66
50	3952	0.44	1751.16	52534.94
Max=	50		AAHUs =	1254.10

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	325	0.26	85.92	
10	630	0.34	213.79	1460.45
20	4198	0.45	1890.21	9860.40
50	4198	0.45	1890.21	56706.27
Max=	50		AAHUs	1360.54

NET CHANGE IN AAHUs DUE TO PROJECT		
A. Future With Project Emergent Marsh AAHUs	=	1360.54
B. Future Without Project Emergent Marsh AAHUs	=	1254.10
Net Change (FWP - FWOP) =		106.44

AAHU CALCULATION - OPEN WATER

Project: **West Bay BUDMAT TWIAlt.2 Sedimentation from Div. only**

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	18525	0.49	9021.59	
10	18250	0.50	9098.90	90607.77
20	14898	0.53	7969.63	85545.85
50	14898	0.53	7969.63	239088.85
Max=	50		AAHUs =	8304.85

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	18525	0.49	9021.59	
10	18220	0.51	9204.79	91141.19
20	14652	0.55	8041.92	86493.21

50	14652	0.55	8041.92	241257.75
Max=	**50**		**AAHUs**	**8377.84**

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	8377.84
B. Future Without Project Open Water AAHUs =	8304.85
Net Change (FWP - FWOP) =	**72.99**

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	106.44
B. Open Water Habitat Net AAHUs =	72.99
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1	**95.65**

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Fresh/Intermediate Marsh

Project: **West Bay BUDMAT Chevron Alt. No retention**

Project Area:	37
% Fresh	100
% Intermediate	0

Condition: Future Without Project

Variable		TY Value	0 SI	TY Value	10 SI	TY Value	20 SI
V1	% Emergent	0	0.10	0	0.10	0	0.10
V2	% Aquatic	0	0.10	0	0.10	13	0.22
V3	Interspersion	%		%		%	
	Class 1	0	0.10	0	0.10	0	0.10
	Class 2	0		0		0	
	Class 3	0		0		0	
	Class 4	0		0		0	
	Class 5	100		100		100	
V4	%OW <= 1.5ft	0	0.10	0	0.10	4	0.15
V5	Salinity (ppt)						
	fresh	0.5	1.00	0.5	1.00	0.5	1.00
	intermediate						
V6	Access Value						
	fresh	1.0000	1.00	1.0000	1.00	1.0000	1.00
	intermediate						
	Emergent Marsh HSI =		**0.24**	**EM HSI =**	**0.24**	**EM HSI =**	**0.24**
	Open Water HSI =		**0.23**	**OW HSI =**	**0.23**	**OW HSI =**	**0.34**

Project: **West Bay BUDMAT Chevron Alt. No retention**

FWOP

Variable		TY Value	50 SI	TY Value	SI	TY Value	SI
V1	% Emergent	0	0.10				
V2	% Aquatic	13	0.22				
V3	Interspersion	%		%		%	
	Class 1	0	0.10				
	Class 2	0					
	Class 3	0					
	Class 4	0					
	Class 5	100					
V4	%OW <= 1.5ft	4	0.15				
V5	Salinity (ppt)						
	fresh	0.5	1.00				
	intermediate						
V6	Access Value						
	fresh	1.0000	1.00				
	intermediate						
		EM HSI =	**0.24**	**EM HSI =**		**EM HSI =**	
		OW HSI =	**0.34**	**OW HSI =**		**OW HSI =**	

Project: **West Bay BUDMAT Chevron Alt. No retention**

FWOP

Variable		TY		TY		TY	
		Value	SI	Value	SI	Value	SI
V1	% Emergent						
V2	% Aquatic						
V3	Interspersion	%		%		%	
	Class 1						
	Class 2						
	Class 3						
	Class 4						
	Class 5						

V4	%OW <= 1.5ft						
V5	Salinity (ppt)						
	fresh						
	intermediate						
V6	Access Value						
	fresh						
	intermediate						
		EM HSI =		EM HSI =		EM HSI =	
		OW HSI =		OW HSI =		OW HSI =	

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Fresh/Intermediate Marsh

Project: **West Bay BUDMAT Chevron Alt. No retention**

Condition: Future With Project

Project Area:	37
% Fresh	100
% Intermediate	

Variable		TY	0	TY	1	TY	3
		Value	SI	Value	SI	Value	SI
V1	% Emergent	0	0.10	10	0.19	50	0.55
V2	% Aquatic	0	0.10	0	0.10	0	0.10
V3	Interspersion	%		%		%	
	Class 1	0	0.10	0	0.10	0	0.40
	Class 2	0		0		0	
	Class 3	0		0		100	
	Class 4	0		0		0	
	Class 5	100		100		0	
V4	%OW <= 1.5ft	0	0.10	100	0.60	100	0.60

V5	Salinity (ppt)						
	fresh	0.5	1.00	0.5	1.00	0.5	1.00
	intermediate						
V6	Access Value						
	fresh	1.0000	1.00	0.0000	0.30	0.9000	0.93
	intermediate						
	Emergent Marsh HSI =		**0.24**	**EM HSI =**	**0.28**	**EM HSI =**	**0.62**
	Open Water HSI =		**0.23**	**OW HSI =**	**0.23**	**OW HSI =**	**0.28**

Project: **West Bay BUDMAT Chevron Alt. No retention**

FWP

Variable		TY Value	5 SI	TY Value	6 SI	TY Value	20 SI
V1	% Emergent	100	1.00	100	1.00	100	1.00
V2	% Aquatic	50	0.55	60	0.64	100	1.00
V3	Interspersion	%		%		%	
	Class 1	100	1.00	100	1.00	100	1.00
	Class 2	0		0		0	
	Class 3	0		0		0	
	Class 4	0		0		0	
	Class 5	0		0		0	
V4	%OW <= 1.5ft	100	0.60	100	0.60	100	0.60
V5	Salinity (ppt)						
	fresh	0.5	1.00	0.5	1.00	0.5	1.00
	intermediate						
V6	Access Value						
	fresh	0.9000	0.93	1.0000	1.00	1.0000	1.00
	intermediate						
		EM HSI =	**0.99**	**EM HSI =**	**1.00**	**EM HSI =**	**1.00**
		OW HSI =	**0.68**	**OW HSI =**	**0.75**	**OW HSI =**	**0.97**

Project: **West Bay BUDMAT Chevron Alt. No retention**

FWP

Variable		TY Value	25 SI	TY Value	50 SI	TY Value	SI
V1	% Emergent	100	1.00	100	1.00		
V2	% Aquatic	100	1.00	100	1.00		
V3	Interspersion	%		%		%	
	Class 1	100	1.00	100	1.00		
	Class 2	0		0			
	Class 3	0		0			
	Class 4	0		0			
	Class 5	0		0			
V4	%OW <= 1.5ft	100	0.60	100	0.60		
V5	Salinity (ppt)						
	fresh	0.5	1.00	0.5	1.00		
	intermediate						
V6	Access Value						
	fresh	1.0000	1.00	1.0000	1.00		
	intermediate						
		EM HSI =	**1.00**	**EM HSI =**	**1.00**	**EM HSI =**	
		OW HSI =	**0.97**	**OW HSI =**	**0.97**	**OW HSI =**	

AAHU CALCULATION - EMERGENT MARSH

Project: West Bay BUDMAT Chevron Alt. No retention

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	0	0.24	0.00	

10	0	0.24	0.00	0.00
20	0	0.24	0.00	0.00
50	0	0.24	0.00	0.00
Max=	50		AAHUs =	0.00

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	0	0.24	0.00	
1	4	0.28	1.13	0.53
3	18.6	0.62	11.58	11.05
5	37.2	0.99	36.85	46.15
6	37.2	1.00	37.20	37.03
20	37.2	1.00	37.20	520.80
25	37.2	1.00	37.20	186.00
50	37.2	1.00	37.20	930.00
Max=	50		AAHUs	34.63

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	34.63
B. Future Without Project Emergent Marsh AAHUs =	0.00
Net Change (FWP - FWOP) =	34.63

AAHU CALCULATION - OPEN WATER

Project: **West Bay BUDMAT Chevron Alt. No retention**

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	37.2	0.23	8.45	
10	37.2	0.23	8.45	84.52
20	37.2	0.34	12.63	105.41
50	37.2	0.34	12.63	378.89
Max=	50		AAHUs =	11.38

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	37.2	0.23	8.45	
1	0	0.23	0.00	4.23
3	0	0.28	0.00	0.00

5	0	0.68	0.00	0.00
6	0	0.75	0.00	0.00
20	0	0.97	0.00	0.00
25	0	0.97	0.00	0.00
50	0	0.97	0.00	0.00
Max=	**50**		**AAHUs**	**0.08**

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	0.08
B. Future Without Project Open Water AAHUs =	11.38
Net Change (FWP - FWOP) =	**-11.29**

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	34.63
B. Open Water Habitat Net AAHUs =	-11.29
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1	**19.82**

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Fresh/Intermediate Marsh

Project: **West Bay BUDMAT SRED Alt. No retention**

Project Area:	28
% Fresh	100
% Intermediate	0

Condition: Future Without Project

Variable		TY Value	0 SI	TY Value	10 SI	TY Value	20 SI
V1	% Emergent	0	0.10	0	0.10	25	0.33
V2	% Aquatic	0	0.10	0	0.10	25	0.33
V3	Interspersion	%		%		%	
	Class 1	0	0.10	0	0.10	0	0.15
	Class 2	0		0		0	
	Class 3	0		0		0	
	Class 4	0		0		50	
	Class 5	100		100		50	
V4	%OW <= 1.5ft	0	0.10	0	0.10	7	0.18
V5	Salinity (ppt)						
	fresh	0.5	1.00	0.5	1.00	0.5	1.00
	intermediate						
V6	Access Value						
	fresh	1.0000	1.00	1.0000	1.00	1.0000	1.00
	intermediate						
	Emergent Marsh HSI =		**0.24**	**EM HSI =**	**0.24**	**EM HSI =**	**0.43**
	Open Water HSI =		**0.23**	**OW HSI =**	**0.23**	**OW HSI =**	**0.43**

Project: **West Bay BUDMAT SRED Alt. No retention**

FWOP

Variable		TY Value	50 SI	TY Value	SI	TY Value	SI
V1	% Emergent	25	0.33				
V2	% Aquatic	25	0.33				
V3	Interspersion	%		%		%	
	Class 1	0	0.15				
	Class 2	0					
	Class 3	0					
	Class 4	50					
	Class 5	50					
V4	%OW <= 1.5ft	7	0.18				
V5	Salinity (ppt)						
	fresh	0.5	1.00				
	intermediate						
V6	Access Value						
	fresh	1.0000	1.00				
	intermediate						
		EM HSI =	**0.43**	**EM HSI =**		**EM HSI =**	
		OW HSI =	**0.43**	**OW HSI =**		**OW HSI =**	

Project: **West Bay BUDMAT SRED Alt. No retention**

FWOP

Variable		TY		TY		TY	
		Value	SI	Value	SI	Value	SI
V1	% Emergent						
V2	% Aquatic						
V3	Interspersion	%		%		%	
	Class 1						
	Class 2						
	Class 3						
	Class 4						
	Class 5						

V4	%OW <= 1.5ft						
V5	Salinity (ppt)						
	fresh						
	intermediate						
V6	Access Value						
	fresh						
	intermediate						
		EM HSI =		EM HSI =		EM HSI =	
		OW HSI =		OW HSI =		OW HSI =	

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Fresh/Intermediate Marsh

Project: **West Bay BUDMAT SRED Alt. No retention**

Condition: Future With Project

Project Area:	28
% Fresh	100
% Intermediate	

Variable		TY	0	TY	1	TY	3
		Value	SI	Value	SI	Value	SI
V1	% Emergent	0	0.10	10	0.19	50	0.55
V2	% Aquatic	0	0.10	0	0.10	0	0.10
V3	Interspersion	%		%		%	
	Class 1	0	0.10	0	0.10	0	0.40
	Class 2	0		0		0	
	Class 3	0		0		100	
	Class 4	0		0		0	
	Class 5	100		100		0	
V4	%OW <= 1.5ft	0	0.10	100	0.60	100	0.60

V5	Salinity (ppt)						
	fresh	0.5	1.00	0.5	1.00	0.5	1.00
	intermediate						
V6	Access Value						
	fresh	1.0000	1.00	0.0000	0.30	0.9000	0.93
	intermediate						
	Emergent Marsh HSI =		0.24	EM HSI =	0.28	EM HSI =	0.62
	Open Water HSI =		0.23	OW HSI =	0.23	OW HSI =	0.28

Project: **West Bay BUDMAT SRED Alt. No retention**

FWP

Variable		TY Value	5 SI	TY Value	6 SI	TY Value	20 SI
V1	% Emergent	100	1.00	100	1.00	100	1.00
V2	% Aquatic	50	0.55	60	0.64	100	1.00
V3	Interspersion	%		%		%	
	Class 1	100	1.00	100	1.00	100	1.00
	Class 2	0		0		0	
	Class 3	0		0		0	
	Class 4	0		0		0	
	Class 5	0		0		0	
V4	%OW <= 1.5ft	100	0.60	100	0.60	100	0.60
V5	Salinity (ppt)						
	fresh	0.5	1.00	0.5	1.00	0.5	1.00
	intermediate						
V6	Access Value						
	fresh	0.9000	0.93	1.0000	1.00	1.0000	1.00
	intermediate						
		EM HSI =	0.99	EM HSI =	1.00	EM HSI =	1.00
		OW HSI =	0.68	OW HSI =	0.75	OW HSI =	0.97

Project: **West Bay BUDMAT SRED Alt. No retention**

FWP

Variable		TY Value	25 SI	TY Value	50 SI	TY Value	SI
V1	% Emergent	100	1.00	100	1.00		
V2	% Aquatic	100	1.00	100	1.00		
V3	Interspersion	%		%		%	
	Class 1	100	1.00	100	1.00		
	Class 2	0		0			
	Class 3	0		0			
	Class 4	0		0			
	Class 5	0		0			
V4	%OW <= 1.5ft	100	0.60	100	0.60		
V5	Salinity (ppt)						
	fresh	0.5	1.00	0.5	1.00		
	intermediate						
V6	Access Value						
	fresh	1.0000	1.00	1.0000	1.00		
	intermediate						
		EM HSI =	1.00	EM HSI =	1.00	EM HSI =	
		OW HSI =	0.97	OW HSI =	0.97	OW HSI =	

AAHU CALCULATION - EMERGENT MARSH

Project: West Bay BUDMAT SRED Alt. No retention

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	0	0.24	0.00	

10	0	0.24	0.00	0.00
20	7	0.43	3.03	12.85
50	7	0.43	3.03	90.85
Max=	50		AAHUs =	2.07

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	0	0.24	0.00	
1	2.75	0.28	0.77	0.37
3	13.75	0.62	8.56	8.08
5	27.5	0.99	27.24	34.11
6	27.5	1.00	27.50	27.37
20	27.5	1.00	27.50	385.00
25	27.5	1.00	27.50	137.50
50	27.5	1.00	27.50	687.50
Max=	50		AAHUs	25.60

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	25.60
B. Future Without Project Emergent Marsh AAHUs =	2.07
Net Change (FWP - FWOP) =	23.52

AAHU CALCULATION - OPEN WATER

Project: **West Bay BUDMAT SRED Alt. No retention**

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	27.5	0.23	6.25	
10	27.5	0.23	6.25	62.48
20	20.5	0.43	8.88	78.05
50	20.5	0.43	8.88	266.43
Max=	50		AAHUs =	8.14

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	27.5	0.23	6.25	
1	0	0.23	0.00	3.13
3	0	0.28	0.00	0.00

5	0	0.68	0.00	0.00
6	0	0.75	0.00	0.00
20	0	0.97	0.00	0.00
25	0	0.97	0.00	0.00
50	0	0.97	0.00	0.00
Max=	**50**		**AAHUs**	**0.06**

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	0.06
B. Future Without Project Open Water AAHUs =	8.14
Net Change (FWP - FWOP) =	**-8.08**

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	23.52
B. Open Water Habitat Net AAHUs =	-8.08
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1	**13.33**

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Fresh/Intermediate Marsh

Project: **West Bay BUDMAT TWIalt2 Alt. No retention**

Condition: Future Without Project

Project Area:	44
% Fresh	100
% Intermediate	0

Variable		TY Value	0 SI	TY Value	10 SI	TY Value	20 SI
V1	% Emergent	0	0.10	0	0.10	0	0.10
V2	% Aquatic	0	0.10	0	0.10	0	0.10
V3	Interspersion	%		%		%	
	Class 1	0	0.10	0	0.10	0	0.10
	Class 2	0		0		0	
	Class 3	0		0		0	
	Class 4	0		0		0	
	Class 5	100		100		100	
V4	%OW <= 1.5ft	0	0.10	0	0.10	0	0.10
V5	Salinity (ppt)						
	fresh	0.5	1.00	0.5	1.00	0.5	1.00
	intermediate						
V6	Access Value						
	fresh	1.0000	1.00	1.0000	1.00	1.0000	1.00
	intermediate						
	Emergent Marsh HSI =		**0.24**	**EM HSI =**	**0.24**	**EM HSI =**	**0.24**
	Open Water HSI =		**0.23**	**OW HSI =**	**0.23**	**OW HSI =**	**0.23**

Project: **West Bay BUDMAT TWIalt2 Alt. No retention**

FWOP

Variable		TY Value	50 SI	TY Value	SI	TY Value	SI
V1	% Emergent	0	0.10				
V2	% Aquatic	0	0.10				
V3	Interspersion	%		%		%	
	Class 1	0	0.10				
	Class 2	0					
	Class 3	0					
	Class 4	0					
	Class 5	100					
V4	%OW <= 1.5ft	0	0.10				
V5	Salinity (ppt)						
	fresh	0.5	1.00				
	intermediate						
V6	Access Value						
	fresh	1.0000	1.00				
	intermediate						
		EM HSI =	**0.24**	**EM HSI =**		**EM HSI =**	
		OW HSI =	**0.23**	**OW HSI =**		**OW HSI =**	

Project: **West Bay BUDMAT TWIalt2 Alt. No retention**

FWOP

Variable		TY		TY		TY	
		Value	SI	Value	SI	Value	SI
V1	% Emergent						
V2	% Aquatic						
V3	Interspersion	%		%		%	
	Class 1						
	Class 2						
	Class 3						
	Class 4						
	Class 5						

V4	%OW <= 1.5ft						
V5	Salinity (ppt)						
	fresh						
	intermediate						
V6	Access Value						
	fresh						
	intermediate						
		EM HSI =		EM HSI =		EM HSI =	
		OW HSI =		OW HSI =		OW HSI =	

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Fresh/Intermediate Marsh

Project: **West Bay BUDMAT TWIalt2 Alt. No retention**

Condition: Future With Project

Project Area:	44
% Fresh	100
% Intermediate	

Variable		TY	0	TY	1	TY	3
		Value	SI	Value	SI	Value	SI
V1	% Emergent	0	0.10	10	0.19	50	0.55
V2	% Aquatic	0	0.10	0	0.10	0	0.10
V3	Interspersion	%		%		%	
	Class 1	0	0.10	0	0.10	0	0.40
	Class 2	0		0		0	
	Class 3	0		0		100	
	Class 4	0		0		0	
	Class 5	100		100		0	
V4	%OW <= 1.5ft	0	0.10	100	0.60	100	0.60

V5	Salinity (ppt)						
	fresh	0.5	1.00	0.5	1.00	0.5	1.00
	intermediate						
V6	Access Value						
	fresh	1.0000	1.00	0.0000	0.30	0.9000	0.93
	intermediate						
	Emergent Marsh HSI =		0.24	EM HSI =	0.28	EM HSI =	0.62
	Open Water HSI =		0.23	OW HSI =	0.23	OW HSI =	0.28

Project: **West Bay BUDMAT TWIalt2 Alt. No retention**

FWP

Variable		TY Value	5 SI	TY Value	6 SI	TY Value	20 SI
V1	% Emergent	100	1.00	100	1.00	100	1.00
V2	% Aquatic	50	0.55	60	0.64	100	1.00
V3	Interspersion	%		%		%	
	Class 1	100	1.00	100	1.00	100	1.00
	Class 2	0		0		0	
	Class 3	0		0		0	
	Class 4	0		0		0	
	Class 5	0		0		0	
V4	%OW <= 1.5ft	100	0.60	100	0.60	100	0.60
V5	Salinity (ppt)						
	fresh	0.5	1.00	0.5	1.00	0.5	1.00
	intermediate						
V6	Access Value						
	fresh	0.9000	0.93	1.0000	1.00	1.0000	1.00
	intermediate						
		EM HSI =	0.99	EM HSI =	1.00	EM HSI =	1.00
		OW HSI =	0.68	OW HSI =	0.75	OW HSI =	0.97

Project: **West Bay BUDMAT TWIalt2 Alt. No retention**

FWP

Variable		TY Value	25 SI	TY Value	50 SI	TY Value	SI
V1	% Emergent	100	1.00	100	1.00		
V2	% Aquatic	100	1.00	100	1.00		
V3	Interspersion	%		%		%	
	Class 1	100	1.00	100	1.00		
	Class 2	0		0			
	Class 3	0		0			
	Class 4	0		0			
	Class 5	0		0			
V4	%OW <= 1.5ft	100	0.60	100	0.60		
V5	Salinity (ppt)						
	fresh	0.5	1.00	0.5	1.00		
	intermediate						
V6	Access Value						
	fresh	1.0000	1.00	1.0000	1.00		
	intermediate						
		EM HSI =	1.00	EM HSI =	1.00	EM HSI =	
		OW HSI =	0.97	OW HSI =	0.97	OW HSI =	

AAHU CALCULATION - EMERGENT MARSH

Project: West Bay BUDMAT TWIalt2 Alt. No retention

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	0	0.24	0.00	

10	0	0.24	0.00	0.00
20	0	0.24	0.00	0.00
50	0	0.24	0.00	0.00
Max=	50		AAHUs =	0.00

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	0	0.24	0.00	
1	4.4	0.28	1.24	0.59
3	22	0.62	13.69	12.93
5	44	0.99	43.59	54.58
6	44	1.00	44.00	43.79
20	44	1.00	44.00	616.00
25	44	1.00	44.00	220.00
50	44	1.00	44.00	1100.00
Max=	50		AAHUs	40.96

NET CHANGE IN AAHUs DUE TO PROJECT		
A. Future With Project Emergent Marsh AAHUs	=	40.96
B. Future Without Project Emergent Marsh AAHUs	=	0.00
Net Change (FWP - FWOP) =		40.96

AAHU CALCULATION - OPEN WATER

Project: **West Bay BUDMAT TWIalt2 Alt. No retention**

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	44	0.23	10.00	
10	44	0.23	10.00	99.97
20	44	0.23	10.00	99.97
50	44	0.23	10.00	299.90
Max=	50		AAHUs =	10.00

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	44	0.23	10.00	
1	0	0.23	0.00	5.01
3	0	0.28	0.00	0.00

5	0	0.68	0.00	0.00
6	0	0.75	0.00	0.00
20	0	0.97	0.00	0.00
25	0	0.97	0.00	0.00
50	0	0.97	0.00	0.00
Max=	**50**		**AAHUs**	**0.10**

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	0.10
B. Future Without Project Open Water AAHUs =	10.00
Net Change (FWP - FWOP) =	**-9.90**

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	40.96
B. Open Water Habitat Net AAHUs =	-9.90
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1	**24.55**

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Fresh/Intermediate Marsh

Project: **MedSLR_West Bay BUDMAT MC North Polygon 100 ac**

Project Area:	100
% Fresh	100
% Intermediate	0

Condition: Future Without Project

Variable		TY	0	TY	10	TY	20
		Value	SI	Value	SI	Value	SI
V1	% Emergent	0	0.10	30	0.37	79	0.81
V2	% Aquatic	100	1.00	100	1.00	100	1.00
V3	Interspersion	%		%		%	
	Class 1	0	0.10	0	0.20	0	0.60
	Class 2	0		0		100	
	Class 3	0		0		0	
	Class 4	0		100		0	
	Class 5	100		0		0	
V4	%OW <= 1.5ft	18	0.30	20	0.33	40	0.55
V5	Salinity (ppt)						
	fresh	0.5	1.00	0.5	1.00	0.5	1.00
	intermediate						
V6	Access Value						
	fresh	1.0000	1.00	1.0000	1.00	1.0000	1.00
	intermediate						
	Emergent Marsh HSI =		**0.24**	**EM HSI =**	**0.47**	**EM HSI =**	**0.83**
	Open Water HSI =		**0.88**	**OW HSI =**	**0.89**	**OW HSI =**	**0.94**

Project: **MedSLR_West Bay BUDMAT MC North Polygon 100 ac**

FWOP

Variable		TY	50	TY		TY	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	79	0.81				
V2	% Aquatic	100	1.00				
V3	Interspersion	%		%		%	
	Class 1	0	0.60				
	Class 2	100					
	Class 3	0					
	Class 4	0					
	Class 5	0					
V4	%OW <= 1.5ft	40	0.55				
V5	Salinity (ppt)						
	fresh	0.5	1.00				
	intermediate						
V6	Access Value						
	fresh	1.0000	1.00				
	intermediate						
		EM HSI =	**0.83**	**EM HSI =**		**EM HSI =**	
		OW HSI =	**0.94**	**OW HSI =**		**OW HSI =**	

Project: **MedSLR_West Bay BUDMAT MC North Polygon 100 ac**

FWOP

Variable		TY		TY		TY	
		Value	SI	Value	SI	Value	SI
V1	% Emergent						
V2	% Aquatic						
V3	Interspersion	%		%		%	
	Class 1						
	Class 2						
	Class 3						
	Class 4						
	Class 5						

V4	%OW <= 1.5ft						
V5	Salinity (ppt)						
	fresh						
	intermediate						
V6	Access Value						
	fresh						
	intermediate						
		EM HSI =		EM HSI =		EM HSI =	
		OW HSI =		OW HSI =		OW HSI =	

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Fresh/Intermediate Marsh

Project: **MedSLR_West Bay BUDMAT MC North Polygon 100 ac**

Project Area:	100
% Fresh	100
% Intermediate	

Condition: Future With Project

Variable		TY	0	TY	1	TY	3
		Value	SI	Value	SI	Value	SI
V1	% Emergent	0	0.10	10	0.19	50	0.55
V2	% Aquatic	100	1.00	0	0.10	10	0.19
V3	Interspersion	%		%		%	
	Class 1	0	0.10	0	0.10	0	0.40
	Class 2	0		0		0	
	Class 3	0		0		100	
	Class 4	0		0		0	
	Class 5	100		100		0	
V4	%OW <= 1.5ft	18	0.30	100	0.60	100	0.60

V5	Salinity (ppt)						
	fresh	0.5	1.00	0.5	1.00	0.5	1.00
	intermediate						
V6	Access Value						
	fresh	1.0000	1.00	0.0000	0.30	0.0000	0.30
	intermediate						
	Emergent Marsh HSI =		0.24	EM HSI =	0.28	EM HSI =	0.54
	Open Water HSI =		0.88	OW HSI =	0.23	OW HSI =	0.31

Project: **MedSLR_West Bay BUDMAT MC North Polygon 100 ac**

FWP

Variable		TY Value	5 SI	TY Value	6 SI	TY Value	25 SI
V1	% Emergent	100	1.00	100	1.00	100	1.00
V2	% Aquatic	20	0.28	50	0.55	100	1.00
V3	Interspersion	%		%		%	
	Class 1	50	0.70	100	1.00	100	1.00
	Class 2	0		0		0	
	Class 3	50		0		0	
	Class 4	0		0		0	
	Class 5	0		0		0	
V4	%OW <= 1.5ft	0	0.10	100	0.60	100	0.60
V5	Salinity (ppt)						
	fresh	0.5	1.00	0.5	1.00	0.5	1.00
	intermediate						
V6	Access Value						
	fresh	0.8000	0.86	0.9000	0.93	1.0000	1.00
	intermediate						
		EM HSI =	0.95	EM HSI =	0.99	EM HSI =	1.00
		OW HSI =	0.42	OW HSI =	0.68	OW HSI =	0.97

Project: **MedSLR_West Bay BUDMAT MC North Polygon 100 ac**

FWP

Variable		TY Value	50 SI	TY Value	SI	TY Value	SI
V1	% Emergent	100	1.00				
V2	% Aquatic	100	1.00				
V3	Interspersion	%		%		%	
	Class 1	100	1.00				
	Class 2	0					
	Class 3	0					
	Class 4	0					
	Class 5	0					
V4	%OW <= 1.5ft	100	0.60				
V5	Salinity (ppt)						
	fresh	0.5	1.00				
	intermediate						
V6	Access Value						
	fresh	1.0000	1.00				
	intermediate						
		EM HSI =	1.00	EM HSI =		EM HSI =	
		OW HSI =	0.97	OW HSI =		OW HSI =	

AAHU CALCULATION - EMERGENT MARSH

Project: MedSLR_West Bay BUDMAT MC North Polygon 100 ac

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	0	0.24	0.00	

10	30	0.47	14.19	59.12
20	79	0.83	65.65	369.94
50	79	0.83	65.65	1969.39
Max=	50		AAHUs =	47.97

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	0	0.24	0.00	
1	10	0.28	2.82	1.33
3	50	0.54	27.11	26.45
5	100	0.95	94.74	115.10
6	100	0.99	99.06	96.90
25	100	1.00	100.00	1891.12
50	100	1.00	100.00	2500.00
Max=	50		AAHUs	92.62

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	92.62
B. Future Without Project Emergent Marsh AAHUs =	47.97
Net Change (FWP - FWOP) =	44.65

AAHU CALCULATION - OPEN WATER

Project: MedSLR_West Bay BUDMAT MC North Polygon 100 ac

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	100	0.88	88.17	
10	70	0.89	62.35	753.05
20	22	0.94	20.61	418.54
50	22	0.94	20.61	618.44
Max=	50		AAHUs =	35.80

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	100	0.88	88.17	
1	0	0.23	0.00	33.19
3	0	0.31	0.00	0.00

5	0	0.42	0.00	0.00
6	0	0.68	0.00	0.00
25	0	0.97	0.00	0.00
50	0	0.97	0.00	0.00
Max=	**50**		**AAHUs**	**0.66**

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	0.66
B. Future Without Project Open Water AAHUs =	35.80
Net Change (FWP - FWOP) =	**-35.14**

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	44.65
B. Open Water Habitat Net AAHUs =	-35.14
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1	**18.91**

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Fresh/Intermediate Marsh

Project: **Dec2_MedSLR_West Bay BUDMAT MC South Polygon 180 ac**

Condition: Future Without Project

Project Area:	180
% Fresh	100
% Intermediate	0

Variable		TY Value	0 SI	TY Value	10 SI	TY Value	20 SI
V1	% Emergent	0	0.10	22	0.30	54	0.59
V2	% Aquatic	100	1.00	100	1.00	100	1.00
V3	Interspersion	%		%		%	
	Class 1	0	0.10	0	0.20	0	0.40
	Class 2	0		0		0	
	Class 3	0		0		100	
	Class 4	0		100		0	
	Class 5	100		0		0	
V4	%OW <= 1.5ft	13	0.25	13	0.25	30	0.44
V5	Salinity (ppt)						
	fresh	0.5	1.00	0.5	1.00	0.5	1.00
	intermediate						
V6	Access Value						
	fresh	1.0000	1.00	1.0000	1.00	1.0000	1.00
	intermediate						
	Emergent Marsh HSI =		**0.24**	**EM HSI =**	**0.42**	**EM HSI =**	**0.65**
	Open Water HSI =		**0.88**	**OW HSI =**	**0.88**	**OW HSI =**	**0.91**

Project: **Dec2_MedSLR_West Bay BUDMAT MC South Polygon 180 ac**

FWOP

Variable		TY Value	50 SI	TY Value	SI	TY Value	SI
V1	% Emergent	54	0.59				
V2	% Aquatic	100	1.00				
V3	Interspersion	%		%		%	
	Class 1	0	0.40				
	Class 2	0					
	Class 3	100					
	Class 4	0					
	Class 5	0					
V4	%OW <= 1.5ft	25	0.38				
V5	Salinity (ppt)						
	fresh	0.5	1.00				
	intermediate						
V6	Access Value						
	fresh	1.0000	1.00				
	intermediate						
		EM HSI =	**0.65**	**EM HSI =**		**EM HSI =**	
		OW HSI =	**0.91**	**OW HSI =**		**OW HSI =**	

Project: **Dec2_MedSLR_West Bay BUDMAT MC South Polygon 180 ac**

FWOP

Variable		TY		TY		TY	
		Value	SI	Value	SI	Value	SI
V1	% Emergent						
V2	% Aquatic						
V3	Interspersion	%		%		%	
	Class 1						
	Class 2						
	Class 3						
	Class 4						
	Class 5						

V4	%OW <= 1.5ft						
V5	Salinity (ppt)						
	fresh						
	intermediate						
V6	Access Value						
	fresh						
	intermediate						
		EM HSI =		EM HSI =		EM HSI =	
		OW HSI =		OW HSI =		OW HSI =	

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Fresh/Intermediate Marsh

Project: **Dec2_MedSLR_West Bay BUDMAT MC South Polygon 180 ac**

Condition: Future With Project

Project Area:	180
% Fresh	100
% Intermediate	

Variable		TY	0	TY	1	TY	3
		Value	SI	Value	SI	Value	SI
V1	% Emergent	0	0.10	10	0.19	50	0.55
V2	% Aquatic	100	1.00	0	0.10	10	0.19
V3	Interspersion	%		%		%	
	Class 1	0	0.10	0	0.10	0	0.40
	Class 2	0		0		0	
	Class 3	0		0		100	
	Class 4	0		0		0	
	Class 5	100		100		0	
V4	%OW <= 1.5ft	13	0.25	100	0.60	100	0.60

V5	Salinity (ppt)						
	fresh	0.5	1.00	0.5	1.00	0.5	1.00
	intermediate						
V6	Access Value						
	fresh	1.0000	1.00	0.0000	0.30	0.0000	0.30
	intermediate						
	Emergent Marsh HSI =		0.24	EM HSI =	0.28	EM HSI =	0.54
	Open Water HSI =		0.88	OW HSI =	0.23	OW HSI =	0.31

Project: **Dec2_MedSLR_West Bay BUDMAT MC South Polygon 180 ac**

FWP

Variable		TY Value	5 SI	TY Value	6 SI	TY Value	25 SI
V1	% Emergent	100	1.00	100	1.00	100	1.00
V2	% Aquatic	20	0.28	50	0.55	100	1.00
V3	Interspersion	%		%		%	
	Class 1	50	0.70	100	1.00	100	1.00
	Class 2	0		0		0	
	Class 3	50		0		0	
	Class 4	0		0		0	
	Class 5	0		0		0	
V4	%OW <= 1.5ft	0	0.10	100	0.60	100	0.60
V5	Salinity (ppt)						
	fresh	0.5	1.00	0.5	1.00	0.5	1.00
	intermediate						
V6	Access Value						
	fresh	0.8000	0.86	0.9000	0.93	1.0000	1.00
	intermediate						
		EM HSI =	0.95	EM HSI =	0.99	EM HSI =	1.00
		OW HSI =	0.42	OW HSI =	0.68	OW HSI =	0.97

Project: **Dec2_MedSLR_West Bay BUDMAT MC South Polygon 180 ac**

FWP

Variable		TY Value	50 SI	TY Value	SI	TY Value	SI
V1	% Emergent	100	1.00				
V2	% Aquatic	100	1.00				
V3	Interspersion	%		%		%	
	Class 1	100	1.00				
	Class 2	0					
	Class 3	0					
	Class 4	0					
	Class 5	0					
V4	%OW <= 1.5ft	100	0.60				
V5	Salinity (ppt)						
	fresh	0.5	1.00				
	intermediate						
V6	Access Value						
	fresh	1.0000	1.00				
	intermediate						
		EM HSI =	1.00	EM HSI =		EM HSI =	
		OW HSI =	0.97	OW HSI =		OW HSI =	

AAHU CALCULATION - EMERGENT MARSH

Project: **Dec2_MedSLR_West Bay BUDMAT MC South Polygon 180 ac**

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	0	0.24	0.00	

10	40	0.42	16.68	71.35
20	97.11	0.65	63.49	378.29
50	97.11	0.65	63.49	1904.70
Max=	50		AAHUs =	47.09

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	0	0.24	0.00	
1	18	0.28	5.07	2.40
3	90	0.54	48.80	47.62
5	180	0.95	170.52	207.17
6	180	0.99	178.32	174.42
25	180	1.00	180.00	3404.01
50	180	1.00	180.00	4500.00
Max=	50		AAHUs	166.71

NET CHANGE IN AAHUs DUE TO PROJECT		
A. Future With Project Emergent Marsh AAHUs	=	166.71
B. Future Without Project Emergent Marsh AAHUs	=	47.09
Net Change (FWP - FWOP) =		119.63

AAHU CALCULATION - OPEN WATER

Project: Dec2_MedSLR_West Bay BUDMAT MC South Polygon 180 ac

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	180	0.88	157.95	
10	150	0.88	132.74	1453.80
20	82.89	0.91	75.75	1045.68
50	82.89	0.91	75.41	2267.39
Max=	50		AAHUs =	95.34

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	180	0.88	157.95	
1	0	0.23	0.00	59.50
3	0	0.31	0.00	0.00

5	0	0.42	0.00	0.00
6	0	0.68	0.00	0.00
25	0	0.97	0.00	0.00
50	0	0.97	0.00	0.00
Max=	**50**		**AAHUs**	**1.19**

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	1.19
B. Future Without Project Open Water AAHUs =	95.34
Net Change (FWP - FWOP) =	**-94.15**

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	119.63
B. Open Water Habitat Net AAHUs =	-94.15
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1	**50.67**