WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Fresh/Intermediate Marsh

Project.....Caernarvon Outfall Management (BS–3a)
Sub–area 1 (intermediate to remain intermediate, FWP and FWOP)
Condition: Future Without Project

Marsh type acres:
Fresh.....
Intermediate.. 3270

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	43	0.49	43	0.49	67	0.70
V2	% Aquatic	20	0.28	20	0.28	23	0.31
V3	Interspersion	%		%		%	
	Class 1		0.40		0.40		0.50
	Class 2	50		50		50	
	Class 3					50	
	Class 4	50		50			
	Class 5						
V4	Hydrology	%		%		%	
	Class 1		0.50		0.50		0.50
	Class 2	100		100		100	
	Class 3						
	Class 4						
V5	%OW <= 1.5ft	54	0.64	56	0.66	90	1.00
V6	Salinity (ppt)						
	fresh		1.00		1.00		1.00
	intermediate	4		4		2	
V7	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
		HSI =	0.51	HSI =	0.51	HSI =	0.62

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Fresh/Intermediate Marsh

Project..... Caernarvon Outfall Management (BS–3a)
Sub–area 1 (intermediate to remain intermediate, FWP and FWOP)
Condition: Future With Project

Marsh type acres:
Fresh.....
Intermediate.. 3270

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	43	0.49	44	0.50	73	0.76
V2	% Aquatic	20	0.28	20	0.28	16	0.24
V3	Interspersion	%		%		%	
	Class 1		0.40		0.40		0.60
	Class 2	50		50		100	
	Class 3						
	Class 4	50		50			
	Class 5						
V4	Hydrology	%		%		%	
	Class 1		0.50		0.50		1.00
	Class 2	100		100			
	Class 3					100	
	Class 4						
V5	%OW <= 1.5ft	54	0.64	56	0.66	95	0.70
V6	Salinity (ppt)						
	fresh		1.00		1.00		0.90
	intermediate	4		3		1	
V7	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
		HSI =	0.51	HSI =	0.51	HSI =	0.63

AAHU CALCULATION

Project: Caernarvon Outfall Management (BS–3a)
Sub–area 1 (intermediate to remain intermediate, FWP and FWOP)

Future With Project			Total	Cummulative
TY	Acres	x HSI	HU's	HU's
0	3270	0.51	1663.26	
1	3270	0.51	1677.57	1670.41
20	3270	0.63	2058.28	35490.56
			AAHU's =	1858.05

Future Without Project			Total	Cummulative
TY	Acres	x HSI	HU's	HU's
0	3270	0.51	1663.26	
1	3270	0.51	1668.38	1665.82
20	3270	0.62	2022.35	35061.94
			AAHU's	1836.39

NET CHANGE IN AAHU'S DUE TO PROJECT	
A. Future With Project AAHU's =	1858.05
B. Future Without Project AAHU's =	1836.39
Net Change (FWP – FWOP) =	**21.66**

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Brackish Marsh

Project..... Caernarvon Outfall Management (BS–3a) Marsh type acres..... 7778
Sub–area 2 (brackish to remain brackish, FWP and FWOP)
Condition: Future Without Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	84	0.86	84	0.86	84	0.86
V2	% Aquatic	40	0.58	40	0.58	40	0.58
V3	Interspersion	%		%		%	
	Class 1		0.50		0.50		0.50
	Class 2	50		50		50	
	Class 3	50		50		50	
	Class 4						
	Class 5						
V4	Hydrology	%		%		%	
	Class 1	50	0.75	50	0.75	50	0.75
	Class 2	50		50		50	
	Class 3						
V5	%OW <= 1.5ft	65	0.83	65	0.83	70	0.89
V6	Salinity (ppt)	5	0.77	5	0.77	5	0.77
V7	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
		HSI =	0.76	HSI =	0.76	HSI =	0.77

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Brackish Marsh

Project..... Caernarvon Outfall Management (BS–3a) Marsh type acres..... 7778
Sub–area 2 (brackish to remain brackish, FWP and FWOP)
Condition: Future With Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	84	0.86	84	0.86	88	0.89
V2	% Aquatic	40	0.58	41	0.59	60	0.72
V3	Interspersion	%		%		%	
	Class 1		0.50		0.50		0.55
	Class 2	50		50		75	
	Class 3	50		50		25	
	Class 4						
	Class 5						
V4	Hydrology	%		%		%	
	Class 1	50	0.75		1.00		1.00
	Class 2	50		100		100	
	Class 3						
V5	%OW <= 1.5ft	65	0.83	66	0.84	85	0.90
V6	Salinity (ppt)	5	0.77	5	0.77	4	0.53
V7	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
		HSI =	0.76	HSI =	0.78	HSI =	0.81

AAHU CALCULATION

Project: Caernarvon Outfall Management (BS–3a)
Sub–area 2 (brackish to remain brackish, FWP and FWOP)

Future With Project			Total	Cummulative
TY	Acres	x HSI	HU's	HU's
0	7778	0.76	5927.08	
1	7778	0.78	6104.88	6015.98
20	7778	0.81	6290.88	117759.67
			AAHU's =	6188.78

Future Without Project			Total	Cummulative
TY	Acres	x HSI	HU's	HU's
0	7778	0.76	5927.08	
1	7778	0.76	5927.08	5927.08
20	7778	0.77	5962.47	112950.70
			AAHU's	5943.89

NET CHANGE IN AAHU'S DUE TO PROJECT	
A. Future With Project AAHU's =	6188.78
B. Future Without Project AAHU's =	5943.89
Net Change (FWP – FWOP) =	**244.89**

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Brackish Marsh

Project..... Caernarvon Outfall Management (BS–3a) Marsh type acres..... 1397
Sub–area 3 (brackish to convert to intermediate, FWP and FWOP)
Condition: Future Without Project

Variable		TY 0		TY 1		(from intermediate model)	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	84	0.86	84	0.86		
V2	% Aquatic	40	0.58	40	0.58		
V3	Interspersion	%		%		%	
	Class 1		0.50		0.50		
	Class 2	50		50			
	Class 3	50		50			
	Class 4						
	Class 5						
V4	Hydrology	%		%		%	
	Class 1	50	0.75	50	0.75		
	Class 2	50		50			
	Class 3						
V5	%OW <= 1.5ft	65	0.83	65	0.83		
V6	Salinity (ppt)	5	0.77	5	0.77		
V7	Access Value	1.00	1.00	1.00	1.00		
		HSI =	0.76	HSI =	0.76	HSI =	

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Fresh/Intermediate Marsh

Project..... Caernarvon Outfall Management (BS–3a)
Sub–area 3 (brackish to convert to intermediate, FWP and FWOP)
Condition: Future Without Project

Marsh type acres:
Fresh.....
Intermediate.. 1397

Variable		(from brackish model) Value	SI	(from brackish model) Value	SI	TY 20 Value	SI
V1	% Emergent					84	0.86
V2	% Aquatic					60	0.64
V3	Interspersion	%		%		%	0.50
	Class 1						
	Class 2					50	
	Class 3					50	
	Class 4						
	Class 5						
V4	Hydrology	%		%		%	0.50
	Class 1						
	Class 2					100	
	Class 3						
	Class 4						
V5	%OW <= 1.5ft					90	1.00
V6	Salinity (ppt)						1.00
	fresh						
	intermediate					2	
V7	Access Value					1.00	1.00
		HSI =		HSI =		HSI =	0.76

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Brackish Marsh

Project..... Caernarvon Outfall Management (BS–3a) Marsh type acres..... 1397
Sub–area 3 (brackish to convert to intermediate, FWP and FWOP)
Condition: Future With Project

Variable		TY 0		TY 1		(from intermediate model)	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	84	0.86	84	0.86		
V2	% Aquatic	40	0.58	41	0.59		
V3	Interspersion	%		%		%	
	Class 1		0.50		0.50		
	Class 2	50		50			
	Class 3	50		50			
	Class 4						
	Class 5						
V4	Hydrology	%		%		%	
	Class 1	50	0.75		1.00		
	Class 2	50		100			
	Class 3						
V5	%OW <= 1.5ft	65	0.83	66	0.84		
V6	Salinity (ppt)	5	0.77	5	0.77		
V7	Access Value	1.00	1.00	1.00	1.00		
		HSI =	0.76	HSI =	0.78	HSI =	

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Fresh/Intermediate Marsh

Project..... Caernarvon Outfall Management (BS–3a)
Sub–area 3 (brackish to convert to intermediate, FWP and FWOP)
Condition: Future With Project

Marsh type acres:
Fresh.....
Intermediate.. 1397

Variable		(from brackish model) Value	SI	(from brackish model) Value	SI	TY 20 Value	SI
V1	% Emergent					90	0.91
V2	% Aquatic					80	0.82
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	%		%		% 100	0.60
V4	Hydrology Class 1 Class 2 Class 3 Class 4	%		%		% 100	1.00
V5	%OW <= 1.5ft					95	0.70
V6	Salinity (ppt) fresh intermediate					1	0.90
V7	Access Value					1.00	1.00
		HSI =		HSI =		HSI =	0.85

AAHU CALCULATION

Project: Caernarvon Outfall Management (BS–3a)
Sub–area 3 (brackish to convert to intermediate, FWP and FWOP)

Future With Project			Total	Cummulative	
TY	Acres	x HSI	HU's	HU's	
0	1397	0.76	1064.56		
1	1397	0.78	1096.49	1080.52	
20	1397	0.85	1184.19	21666.46	*
			AAHU's =	1137.35	

Future Without Project			Total	Cummulative	
TY	Acres	x HSI	HU's	HU's	
0	1397	0.76	1064.56		
1	1397	0.76	1064.56	1064.56	
20	1397	0.76	1061.62	20198.68	*
			AAHU's	1063.16	

NET CHANGE IN AAHU'S DUE TO PROJECT	
A. Future With Project AAHU's =	1137.35
B. Future Without Project AAHU's =	1063.16
Net Change (FWP – FWOP) =	**74.19**

* HSI calculated from Intermediate model

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Brackish Marsh

Project..... Caernarvon Outfall Management (BS–3a) Marsh type acres..... 3111
Sub–area 4 (brackish to convert to intermediate, FWP only)
Condition: Future Without Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	84	0.86	84	0.86	84	0.86
V2	% Aquatic	40	0.58	40	0.58	40	0.58
V3	Interspersion	%	0.50	%	0.50	%	0.50
	Class 1						
	Class 2	50		50		50	
	Class 3	50		50		50	
	Class 4						
	Class 5						
V4	Hydrology	%	0.75	%	0.75	%	0.75
	Class 1	50		50		50	
	Class 2	50		50		50	
	Class 3						
V5	%OW <= 1.5ft	65	0.83	65	0.83	70	0.89
V6	Salinity (ppt)	5	0.77	5	0.77	5	0.77
V7	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
		HSI =	0.76	HSI =	0.76	HSI =	0.77

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Brackish Marsh

Project..... Caernarvon Outfall Management (BS–3a) Marsh type acres..... 3111
Sub–area 4 (brackish to convert to intermediate, FWP only)
Condition: Future With Project

Variable		TY 0		TY 1		(from intermediate model)	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	84	0.86	84	0.86		
V2	% Aquatic	40	0.58	41	0.59		
V3	Interspersion	%		%		%	
	Class 1		0.50		0.50		
	Class 2	50		50			
	Class 3	50		50			
	Class 4						
	Class 5						
V4	Hydrology	%		%		%	
	Class 1	50	0.75		1.00		
	Class 2	50		100			
	Class 3						
V5	%OW <= 1.5ft	65	0.83	66	0.84		
V6	Salinity (ppt)	5	0.77	5	0.77		
V7	Access Value	1.00	1.00	1.00	1.00		
		HSI =	0.76	HSI =	0.78	HSI =	

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Fresh/Intermediate Marsh

Project..... Caernarvon Outfall Management (BS–3a)
Sub–area 4 (brackish to convert to intermediate, FWP only)
Condition: Future With Project

Marsh type acres:
Fresh.....
Intermediate.. 3111

Variable		(from brackish model) Value	SI	(from brackish model) Value	SI	TY 20 Value	SI
V1	% Emergent					92	0.93
V2	% Aquatic					80	0.82
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	%		%		% 100	0.60
V4	Hydrology Class 1 Class 2 Class 3 Class 4	%		%		% 100	1.00
V5	%OW <= 1.5ft					95	0.70
V6	Salinity (ppt) fresh intermediate					1	0.90
V7	Access Value					1.00	1.00
		HSI =		HSI =		HSI =	0.85

AAHU CALCULATION

Project: Caernarvon Outfall Management (BS–3a)
Sub–area 4 (brackish to convert to intermediate, FWP only)

Future With Project			Total	Cummulative	
TY	Acres	x HSI	HU's	HU's	
0	3111	0.76	2370.68		
1	3111	0.78	2441.79	2406.24	
20	3111	0.85	2652.63	48397.01	*
			AAHU's =	2540.16	

Future Without Project			Total	Cummulative
TY	Acres	x HSI	HU's	HU's
0	3111	0.76	2370.68	
1	3111	0.76	2370.68	2370.68
20	3111	0.77	2384.83	45177.37
			AAHU's	2377.40

NET CHANGE IN AAHU'S DUE TO PROJECT	
A. Future With Project AAHU's =	2540.16
B. Future Without Project AAHU's =	2377.40
Net Change (FWP – FWOP) =	162.76

* HSI calculated from Intermediate model