

Appendix D – HGM Worksheets and Mitigation Estimates

Riverine Forested HGM Interim Worksheet

WAA # W-1 (Loss)

Variable	Subindex
V _{dur}	0.25
V _{freq}	0.25
V _{topo}	0.70
V _{cwd}	0.50
V _{wood}	1.00
V _{tree}	1.00
V _{rich}	1.00
V _{basal}	1.00
V _{density}	0.40
V _{mid}	0.75
V _{herb}	0.30
V _{detritus}	0.30
V _{redox}	0.10
V _{sorpt}	0.50
V _{connect}	0.75

WAA # W-1 (Conversion)

Variable	Subindex
V _{dur}	0.25
V _{freq}	0.25
V _{topo}	0.70
V _{cwd}	0.10
V _{wood}	0.10
V _{tree}	0.10
V _{rich}	0.10
V _{basal}	0.10
V _{density}	0.10
V _{mid}	0.10
V _{herb}	0.10
V _{detritus}	0.30
V _{redox}	0.10
V _{sorpt}	0.50
V _{connect}	0.75

Riverine Forested HGM Interim Worksheet

WAA # W-5 (Loss)

Variable	Subindex
V _{dur}	0.25
V _{freq}	0.25
V _{topo}	0.10
V _{cwd}	0.30
V _{wood}	0.75
V _{tree}	0.30
V _{rich}	0.40
V _{basal}	0.40
V _{density}	0.40
V _{mid}	0.75
V _{herb}	0.30
V _{detritus}	0.30
V _{redox}	0.10
V _{sorpt}	0.50
V _{connect}	0.75

WAA # W-5 (Conversion)

Variable	Subindex
V _{dur}	0.25
V _{freq}	0.25
V _{topo}	0.10
V _{cwd}	0.10
V _{wood}	0.10
V _{tree}	0.10
V _{rich}	0.10
V _{basal}	0.10
V _{density}	0.10
V _{mid}	0.10
V _{herb}	0.10
V _{detritus}	0.30
V _{redox}	0.10
V _{sorpt}	0.50
V _{connect}	0.75

Riverine Forested HGM Interim Worksheet

WAA # W-6 (Loss)

Variable	Subindex
V _{dur}	0.25
V _{freq}	0.25
V _{topo}	0.40
V _{cwd}	0.30
V _{wood}	0.50
V _{tree}	0.30
V _{rich}	0.80
V _{basal}	0.40
V _{density}	0.40
V _{mid}	0.50
V _{herb}	0.30
V _{detritus}	0.30
V _{redox}	0.10
V _{sorpt}	1.00
V _{connect}	0.75

WAA # W-6 (Conversion)

Variable	Subindex
V _{dur}	0.25
V _{freq}	0.25
V _{topo}	0.40
V _{cwd}	0.10
V _{wood}	0.10
V _{tree}	0.10
V _{rich}	0.10
V _{basal}	0.10
V _{density}	0.10
V _{mid}	0.10
V _{herb}	0.10
V _{detritus}	0.30
V _{redox}	0.10
V _{sorpt}	1.00
V _{connect}	0.75

Riverine Herb/Shrub HGM (Interim) Worksheet

WAA # W-3 (Pre-impact)

Variable	Subindex
V _{dur}	0.25
V _{freq}	0.25
V _{topo}	0.40
V _{wood}	0.10
V _{mid}	0.10
V _{herb}	1.00
V _{detritus}	0.30
V _{redox}	0.10
V _{sort}	0.50
V _{connect}	0.75

Waters_Name	State	Cowardin_Code	HGM_Code	Meas_Type	Amount	Units	Waters_Type	NWPR_Determine_Code	Latitude	Longitude	Local_Waterway
W-1	Texas	PFO	RIVERINE	Area	1.46	ACRE	A4WETABUT		30.32909000	-95.13254700	San Jacinto River, East Fork
W-3	Texas	PEM	RIVERINE	Area	0.23	ACRE	A4WETFLOOD		30.32838200	-95.13303700	San Jacinto River, East Fork
W-5	Texas	PFO	RIVERINE	Area	0.26	ACRE	A4WETFLOOD		30.33001100	-95.13259200	San Jacinto River, East Fork
W-6	Texas	PFO	RIVERINE	Area	0.04	ACRE	A4WETFLOOD		30.32970100	-95.13101500	San Jacinto River, East Fork
Roadside Ditch (D-1)	Texas	R6	DEPRESS	Area	0.015	ACRE	B5DITCH	Yes - would NOT have been an (a)(1)-(4) water at	30.33005310	-95.13104050	San Jacinto River, East Fork
OW-2	Texas	R6	RIVERINE	Area	0.015	ACRE	B3EPHEMERAL	Yes - would have been an (a)(1)-(4) water absent	30.32983870	-95.13134430	San Jacinto River, East Fork

Waters_Name	Name	Activity	Resource_Type	Permanent_Loss	Impact_Duration	Amount_Type	Amount_Units	Initially_Propose	Initially_Propos	Initially_Proposed_Amount	Proposed_Length	Proposed_Width	Proposed_Amount	Authorized_Length	Authorized_Width	Authorized_Amount	Debits	Notes
W-1.1	PFO	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Acres			1.35			1.35					Loss of wetland functions (deposition of fill) within substation.
W-1.2	PFO	Conversion of waters type (forested wetland to emergent wetland, stream to lake)	Non-Tidal Wetland	NO	Temporary	Fill Area	Acres			0.11			0.11					Conversion impacts within construction clearing/grubbing limits
W-3.1	PEM	Discharge of fill material	Non-Tidal Wetland	NO	Temporary	Fill Area	Acres			0.23			0.23					Proposed temporary impacts within distribution line right of way
W-3.2	PEM	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Acres			0.004			0.004					Loss of wetland functions from pole installation (three poles)
W-5.1	PFO	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Acres			0.26			0.26					Loss of wetland functions (deposition of fill) within substation.
W-5.2	PFO	Conversion of waters type (forested wetland to emergent wetland, stream to lake)	Non-Tidal Wetland	NO	Temporary	Fill Area	Acres			0.00			0.00					Conversion impacts within construction clearing/grubbing limits
W-6.1	PFO	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Acres			0.02			0.02					Loss of wetland functions (deposition of fill) within substation.
W-6.2	PFO	Conversion of waters type (forested wetland to emergent wetland, stream to lake)	Non-Tidal Wetland	NO	Temporary	Fill Area	Acres			0.02			0.02					Conversion impacts within construction clearing/grubbing limits
Roadside Ditch (D-1)	R6	Discharge of fill material	Other	NO	Temporary	Fill Area	Acres			0.015			0.015					Proposed temporary impacts for installation of culvert for access road.
Other Waters (OW-2)	R6	Discharge of fill material	River/Stream	NO	Temporary	Fill Area	Acres			0.015			0.015					Proposed temporary impacts for installation of culvert for access road.

Southline Substation & Transmission Line Cut-In

Watershed	Wetland Identifier	Wet Type	Wet. Acres	Baseline FCI			Post-impact FCI			FCU			Total FCU	FCU Multiplier
				TSSW	MPAC	RSEC	TSSW	MPAC	RSEC	TSSW (phy)	MPAC (Bio)	RSEC (chem)		
Southline Substation & Transmission Line Cut-In														
12040103	W-1 (PFO) - Loss	PFO	1.35	0.428	0.746	0.507	0.000	0.000	0.000	0.578	1.007	0.684	2.269	1.0
12040103	W-1 (PFO) - Conversion	PFO	0.11	0.428	0.746	0.507	0.274	0.208	0.240	0.017	0.059	0.029	0.105	1.0
12040103	W-3 (PEM) - Loss	PEM	0.004	0.345	0.617	0.280	0.000	0.000	0.000	0.001	0.002	0.001	0.005	1.0
12040103	W-5 (PFO) - Loss	PFO	0.26	0.310	0.446	0.387	0.000	0.000	0.000	0.081	0.116	0.101	0.297	1.0
12040103	W-5 (PFO) - Conversion	PFO	0.004	0.310	0.446	0.387	0.158	0.208	0.200	0.001	0.001	0.001	0.002	1.0
12040103	W-6 (PFO) - Loss	PFO	0.02	0.316	0.492	0.373	0.000	0.000	0.000	0.006	0.010	0.007	0.024	1.0
12040103	W-6 (PFO) - Conversion	PFO	0.02	0.316	0.492	0.373	0.224	0.208	0.253	0.002	0.006	0.002	0.010	1.0