

Basic Information Sheet: Perennial Estuarine Wetlands

Assessment Area Name:					
Project Name:					
Assessment Area ID #:					
Project Site ID #:				Date:	
Assessment Team Members for This AA					
Center of AA:					
Latitude:			Longitude:		
Wetland Sub-type:					
<input type="checkbox"/> Perennial Saline		<input type="checkbox"/> Perennial Non-saline			
AA Category:					
<input type="checkbox"/> Restoration <input type="checkbox"/> Mitigation <input type="checkbox"/> Impacted <input type="checkbox"/> Ambient <input type="checkbox"/> Reference <input type="checkbox"/> Training					
<input type="checkbox"/> Other:					
What best describes the tidal stage over the course of the time spent in the field?					
Note: It is recommended that the assessment be conducted during low tide.					
<input type="checkbox"/> high tide		<input type="checkbox"/> low tide			
Photo Identification Numbers and Description:					
	Photo ID No.	Description	Latitude	Longitude	Datum
1		North			
2		South			
3		East			
4		West			
5					
6					
7					
8					
9					
10					

Site Location Description:

Comments:

Scoring Sheet: Perennial Estuarine Wetlands

AA Name:			Date:			
Attribute 1: Buffer and Landscape Context (pp. 8-14)			Comments			
Aquatic Area Abundance (D)	Alpha.	Numeric				
Buffer (based on sub-metrics A-C)						
<i>Buffer submetric A:</i> <i>Percent of AA with Buffer</i>			Alpha.	Numeric		
<i>Buffer submetric B:</i> <i>Average Buffer Width</i>						
<i>Buffer submetric C:</i> <i>Buffer Condition</i>						
Raw Attribute Score = $D + [C \times (A \times B)^{1/2}]^{1/2}$			Final Attribute Score = (Raw Score/24) x 100			
Attribute 2: Hydrology Attribute (pp. 15-19)						
Water Source	Alpha.	Numeric				
Hydroperiod						
Hydrologic Connectivity						
Raw Attribute Score = sum of numeric scores			Final Attribute Score = (Raw Score/36) x 100			
Attribute 3: Physical Structure Attribute (pp. 20-25)						
Structural Patch Richness	Alpha.	Numeric				
Topographic Complexity						
Raw Attribute Score = sum of numeric scores			Final Attribute Score = (Raw Score/24) x 100			
Attribute 4: Biotic Structure Attribute (pp. 26-34)						
Plant Community Composition (based on sub-metrics A-C)						
<i>Plant Community submetric A:</i> <i>Number of plant layers</i>	Alpha.	Numeric				
<i>Plant Community submetric B:</i> <i>Number of Co-dominant species</i>						
<i>Plant Community submetric C:</i> <i>Percent Invasion</i>						
Plant Community Composition <i>(numeric average of submetrics A-C)</i>						
Horizontal Interspersion						
Vertical Biotic Structure						
Raw Attribute Score = sum of numeric scores			Final Attribute Score = (Raw Score/36) x 100			
Overall AA Score (average of four final Attribute Scores)						

Worksheet for Aquatic Area Abundance Metric for Estuarine Wetlands

Percentage of Transect Lines that Contains an Aquatic Feature of Any Kind	
Segment Direction	Percentage of Transect Length That is an Aquatic Feature
North	
South	
East	
West	
Average Percentage of Transect Length that is an Aquatic Feature	

Percent of AA with Buffer Worksheet.

In the space provided below make a quick sketch of the AA, or perform the assessment directly on the aerial imagery; indicate where buffer is present, estimate the percentage of the AA perimeter providing buffer functions, and record the estimate amount in the space provided.

Percent of AA with Buffer: _____ %

Worksheet for calculating average buffer width of AA

Line	Buffer Width (m)
A	
B	
C	
D	
E	
F	
G	
H	
Average Buffer Width *Round to the nearest integer*	

Structural Patch Type Worksheet for Estuarine Wetlands

Circle each type of patch that is observed in the AA and enter the total number of observed patches in the worksheet below.

STRUCTURAL PATCH TYPE (circle for presence)	Estuarine
Minimum Patch Size	3 m²
Abundant wrackline or organic debris in channel, on floodplain, or across depressional wetland plain	1
Animal mounds and burrows	1
Bank slumps or undercut banks in channels or along shoreline	1
Debris jams	1
Filamentous macroalgae or algal mats	1
Large Woody Debris	1
Non-vegetated flats or bare ground (sandflats, mudflats, gravel flats, etc.)	1
Pannes or pools on floodplain	1
Plant hummocks and/or sediment mounds	1
Point bars and in-channel bars	1
Pools or depressions in channels (wet or dry channels)	1
Secondary channels	1
Shellfish beds (living)	1
Soil cracks	1
Standing snags (at least 3 m tall)	1
Submerged vegetation	1
Total Possible	16
No. Observed Patch Types (enter here and use in Table 14 below)	

Worksheet for AA Topographic Complexity

At two locations in the AA, make a sketch of the profile from the AA boundary to AA boundary. Try to capture the major channels, slopes and intervening micro-topographic relief. Based on these sketches and the profiles in Figure 8, choose a description in Table 16 that best describes the overall topographic complexity of the AA.

North to South

East to West

Plant Community Metric Worksheet: Co-dominant species richness
 (A dominant species represents $\geq 10\%$ *relative* cover)

Special Note:

* *Combine the counts of co-dominant species from all layers to identify the total species count. Each plant species is only counted once when calculating the Number of Co-dominant Species and Percent Invasion submetric scores, regardless of the numbers of layers in which it occurs.*

Floating or Canopy-forming	Invasive?	Short (<0.3 m)	Invasive?
Medium (0.3 – 0.75 m)	Invasive?	Tall (0.75 – 1.5 m)	Invasive?
Very Tall (>1.5 m)	Invasive?		
		Total number of co-dominant species for all layers combined (enter here and use in Table 18)	
		Percent Invasion *Round to the nearest whole number (integer)* (enter here and use in Table 18)	

Horizontal Interspersion Complexity Worksheet.

Use the spaces below to make a quick sketch of the AA in plan view, outlining the major plant zones (this should take no longer than 10 minutes). Assign the zones names and record them on the right. Each zone should comprise as least 5% of the AA. Based on the sketch, choose a single profile from Figure 10 that best represents the AA overall.

	<p>Assigned zones:</p> <p>1)</p> <p>2)</p> <p>3)</p> <p>4)</p> <p>5)</p> <p>6)</p>
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Table 21: Wetland disturbances and conversions.

Has a major disturbance occurred at this wetland?	Yes	No		
If yes, was it a flood, fire, landslide, or other?	flood	fire	landslide	other
If yes, then how severe is the disturbance?	likely to affect site next 5 or more years	likely to affect site next 3-5 years	likely to affect site next 1-2 years	
Has this wetland been converted from another type? If yes, then what was the previous type?	depressional	vernal pool	vernal pool system	
	non-confined riverine	confined riverine	seasonal estuarine	
	perennial saline estuarine	perennial non-saline estuarine	wet meadow	
	lacustrine	seep or spring	playa	

Stressor Checklist Worksheet

HYDROLOGY ATTRIBUTE (WITHIN 50 M OF AA)	Present	Significant negative effect on AA
Point Source (PS) discharges (POTW, other non-stormwater discharge)		
Non-point Source (Non-PS) discharges (urban runoff, farm drainage)		
Flow diversions or unnatural inflows		
Dams (reservoirs, detention basins, recharge basins)		
Flow obstructions (culverts, paved stream crossings)		
Weir/drop structure, tide gates		
Dredged inlet/channel		
Engineered channel (riprap, armored channel bank, bed)		
Dike/levees		
Groundwater extraction		
Ditches (borrow, agricultural drainage, mosquito control, etc.)		
Actively managed hydrology		
Comments		

PHYSICAL STRUCTURE ATTRIBUTE (WITHIN 50 M OF AA)	Present	Significant negative effect on AA
Filling or dumping of sediment or soils (N/A for restoration areas)		
Grading/ compaction (N/A for restoration areas)		
Plowing/Discing (N/A for restoration areas)		
Resource extraction (sediment, gravel, oil and/or gas)		
Vegetation management		
Excessive sediment or organic debris from watershed		
Excessive runoff from watershed		
Nutrient impaired (PS or Non-PS pollution)		
Heavy metal impaired (PS or Non-PS pollution)		
Pesticides or trace organics impaired (PS or Non-PS pollution)		
Bacteria and pathogens impaired (PS or Non-PS pollution)		
Trash or refuse		
Comments		

BIOTIC STRUCTURE ATTRIBUTE (WITHIN 50 M OF AA)	Present	Significant negative effect on AA
Mowing, grazing, excessive herbivory (within AA)		
Excessive human visitation		
Predation and habitat destruction by non-native vertebrates (e.g., <i>Virginia opossum</i> and domestic predators, such as feral pets)		
Tree cutting/sapling removal		
Removal of woody debris		
Treatment of non-native and nuisance plant species		
Pesticide application or vector control		
Biological resource extraction or stocking (fisheries, aquaculture)		
Excessive organic debris in matrix (for vernal pools)		
Lack of vegetation management to conserve natural resources		
Lack of treatment of invasive plants adjacent to AA or buffer		
Comments		

BUFFER AND LANDSCAPE CONTEXT ATTRIBUTE (WITHIN 500 M OF AA)	Present	Significant negative effect on AA
Urban residential		
Industrial/commercial		
Military training/Air traffic		
Dams (or other major flow regulation or disruption)		
Dryland farming		
Intensive row-crop agriculture		
Orchards/nurseries		
Commercial feedlots		
Dairies		
Ranching (enclosed livestock grazing or horse paddock or feedlot)		
Transportation corridor		
Rangeland (livestock rangeland also managed for native vegetation)		
Sports fields and urban parklands (golf courses, soccer fields, etc.)		
Passive recreation (bird-watching, hiking, etc.)		
Active recreation (off-road vehicles, mountain biking, hunting, fishing)		
Physical resource extraction (rock, sediment, oil/gas)		
Biological resource extraction (aquaculture, commercial fisheries)		
Comments		