

Basic Information: Individual Vernal Pool

Assessment Area Name:					
Project Name:					
Assessment Area ID #:					
Project ID #:				Date:	
Assessment Team Members for This AA					
AA Location:					
Latitude:		Longitude:		Datum:	
Wetland Category:					
<input type="checkbox"/> Natural <input type="checkbox"/> Constructed <input type="checkbox"/> Restoration (Rehabilitation OR Enhancement)					
If Created or Restored, does the action encompass:					
<input type="checkbox"/> entire wetland <input type="checkbox"/> portion of the wetland					
What best describes the hydrologic state of the wetland at the time of assessment?					
<input type="checkbox"/> ponded/inundated <input type="checkbox"/> saturated soil, but no surface water <input type="checkbox"/> dry					
What is the apparent hydrologic regime of the wetland?					
<input type="checkbox"/> long-duration <input type="checkbox"/> medium-duration <input type="checkbox"/> short-duration					
Does the vernal pool system connect with the floodplain of a nearby stream?					
<input type="checkbox"/> yes <input type="checkbox"/> no					
Photo Identification Numbers and Description:					
	Photo ID No.	Description	Latitude	Longitude	Datum
1		North			
2		South			
3		East			
4		West			
5					
6					
Comments:					

Scoring Sheet: Individual Vernal Pools

AA Name:			Date:		
Attributes and Metrics		Alpha.	Numeric	Comments	
Attribute 1: Buffer and Landscape Context (pg. 8-14)					
(A) Aquatic Area Abundance					
	Alpha.	Numeric			
(B): Percent of AA with Buffer					
(C): Average Buffer Width					
(D): Buffer Condition					
Initial Attribute Score = $A + [D \times (B \times C)^{1/2}]^{1/2}$			Final Attribute Score = (Initial Score/24) x 100		
Attribute 2: Hydrology (pg. 15-17)					
Water Source					
Hydroperiod					
Hydrologic Connectivity					
Initial Attribute Score = sum of metric scores			Final Attribute Score = (Initial Score/36) x 100		
Attribute 3: Physical Structure (pg. 18-21)					
Structural Patch Richness					
Topographic Complexity					
Initial Attribute Score = sum of metric scores			Final Attribute Score = (Initial Score/24) x 100		
Attribute 4: Biotic Structure (pg. 22-26)					
Horizontal Interspersion and Zonation					
	Alpha.	Numeric			
Plant Community submetric A: Number of Co-dominants					
Plant Community submetric B: Percent Non-native					
Plant Community submetric C: Endemic Species Richness					
Plant Community Composition Metric (numeric average of submetrics A-C)					
Initial Attribute Score = sum of metric scores			Final Attribute Score = (Initial Score/24) x 100		
Overall AA Score (Average of four Final Attribute Scores)					

Worksheet 1: Aquatic Area Abundance Metric for Individual Vernal Pools.

Percentage of Each Transect Line Crossing Wetland or Other Aquatic Habitat	
Transect	Percent Crossing Aquatic Area
North	
South	
East	
West	
Average Percent Crossing Aquatic Area for all Four Transects *Round to nearest integer*	

Worksheet 2: Percent of AA with Buffer

In the space provided below make a quick sketch of the AA, or on aerial the imagery, indicate where buffer is present, and record the total amount in the space provided.

Percent of AA with Buffer: %

Worksheet 3: Calculating average buffer width of AA.

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

Worksheet 4: Structural Patch Type for Individual Vernal Pools.

Identify each type of patch that is observed in the AA and use the total number of observed patch types in Table 15. Patch type definitions are provided on the next page.

Structural Patch Type	Check for Presence
Adjacent shrub or tree cover	
Animal mounds and burrows	
Bare soil (minimum 3 m ²)	
Cobble and boulders	
Islands	
Mima mounds	
Patches of dense vegetation	
Soil cracks	
Within Pool Mounds	
Total Possible	9
No. Observed Patch Types (use in Table 15)	

Worksheet 5: Sketches of Vernal Pool Profiles

Along each of the four cardinal compass directions, make a sketch of the profile of the pool from its outside edge (1-3m landward or away from the saturated zone of the pool) to its deepest areas and back out to the opposite edge. Try to capture the major breaks in slope and the intervening micro-topographic relief.

N to S	
E to W	

Worksheet 6: Sketches of Vernal Pool Plant Zones

Make a sketch-map of the vernal pool boundary plus the approximate locations of obvious plant zones. There are possibly three zones: an outermost saturation zone along the pool boundary, an interior “low” zone that represents the area that tends to stay wet longest, and a zone in between the saturation zone and the low zone. Compare the sketch-map to Figure 5 to score the pool with regard to horizontal Interspersion and zonation.



Table 22: 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	bar-built estuarine	
	perennial saline estuarine	perennial non-saline estuarine	wet meadow	
	lacustrine	seep or spring	playa	

Worksheet 8: Stressor Checklist.

HYDROLOGY ATTRIBUTE (WITHIN 50 M OF AA)	Present	Present and likely to have 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	Present and likely to have 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	Present and Likely to Have 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	Present and likely to have 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		