

Integrated Waterbird Management and Monitoring Approach

Waterbird & Unit Condition Survey

Individual Survey Unit Recording Form

Site name		Site code*					
Unit name		Unit code*					
Observer		Observer codes*					
Date (e.g. 08/21/2015)	--/--/----	Start time (24 hr clock)	Finish time (24 hr clock)				
Start Temp (°F)	Survey Type: whole area <input type="checkbox"/> flush <input type="checkbox"/> aerial <input type="checkbox"/>	Wind (Beaufort) ^a	% Visibility (≥ 70%)				
Local Tide Conditions ^b	Salinity	Water Gauge (units =) ^c					
Water Depth: % of unit in each category (sum to 100)	Dry	Saturated/ mud	0 to 5 cm ≈ 0-2"	5 to 15 cm ≈ 2-6"	15 to 25 cm ≈ 6-10"	>25 cm ≈ >10"	
Percent Ice Cover	Flood Duration ^d						
Habitat Cover % of unit in each category (sum to 100)	Water (Include SAV ^d & Floating – Leaved)		Scrub-shrub	Forest	Emergent	Bare Ground	
Interspersion ^e	Disturbance Severity ^f		Disturbance Sources ^g		Chronic Disturbance ^h		
Height % of unit in each category (sum to 100)	<2.5c m ≈ <1"	2.5 to 15 cm ≈ 1-6"	15 to 30 cm ≈ 6-12"	30 to 60 cm ≈ 1-2'	60 cm to 3 m ≈ 2-10'	3 to 6 m ≈ 10-20'	>6 m ≈ >20'
Species	Count	Species	Count	Species	Count		

a, Beaufort Scale

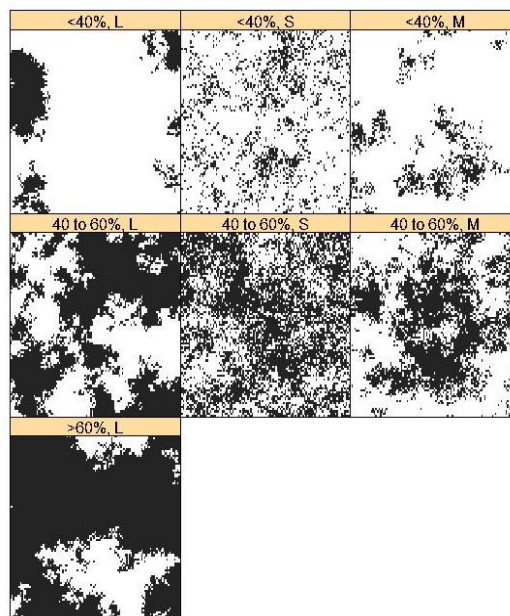
<1	0	Calm	Calm, smoke rises vertically
1-3	1	Light Air	Smoke drift indicates wind direction, still wind vanes
4-7	2	Light Breeze	Wind felt on face, leaves rustle, vanes begin to move
8-12	3	Gentle Breeze	Leaves and small twigs constantly moving, light flags extended
13-18	4	Moderate Breeze	Raises dust and loose paper; small branches are moved
19-24	5	Fresh Breeze	Small trees in leaf begin to sway
25-31	6	Strong Breeze	Large branches in motion; umbrellas used with difficulty

b, tide conditions: 1 = high; 2 = almost high, rising; 3 = almost high, falling; 4 = half tide, rising; 5 = half tide, falling; 6 = almost low, rising; 7 = almost low, falling; 8 = low; 9 = not observed, not applicable, or observations made during more than one period

c, gauge units: 1=feet/tenths, 2=feet/inches, 3=meters

d, flood duration: 1 = surface water present for > 90 days; 2 = surface water present 30-90 days, 3 = surface water present < 30 days; 4 = permanent inundation; 5 = no information

e, interspersion: class "L" = includes large water/bare ground features with connected patches and linear edge; Class "S" = contains small, disconnected patches of water/bare ground with increased random distribution and fewer instances of connection; Class "M" = consists of patterns that contain discernible regions of both configuration classes L and S



f, disturbance severity: 1 = no effect on waterbirds; 2 = some waterbirds move but stay within unit; 3 = some waterbirds leave unit; 4 = most/all waterbirds leave unit

g: disturbance codes (may be more than one): 1=Pedestrian, 2=Loose dog, 3=Hunting, 4= Fishing, 5=Boats, 6=Motor Vehicles, 7=Aircraft, 8=Raptor

h, chronic human disturbance: 1 = no entry into the unit for any reason; 2 = Closed to all use with entry into unit by resource managers or designees for management activities, surveys, or other controlled non-hunting activities; 3 = Managed access for all activities including firearms hunting. May include effort to control use levels and temporal closures; 4 = open access via trail, viewing platforms etc. No firearms hunting allowed; 5 = Open access, including firearms hunting, often with routine restrictions but without a site specific management program to control the level of authorized use; 6 = unknown

* Please leave blank if unknown

SM 4: Waterbird Survey Form Multiple Units (2 sides)

This is the standard field recording form for weekly waterbird counts - **for up to six units surveyed on the same day. *Print double-sided.*** If printed single sided, be sure to add site, unit and date to the second sheet! Reference the IWMM Ning website for the most up-to-date data form: <http://iwmmprogram.ning.com/>

IWMM - Waterbird & Unit Condition Survey

Recording Form for Multiple Units

Site name		Site code	__-__-__	Start temp (°F)			
Observers (codes if known)		Date	__/__/__	Wind (Beaufort 0-6)			
		unit: <input type="text"/>	unit: <input type="text"/>	unit: <input type="text"/>	unit: <input type="text"/>	unit: <input type="text"/>	unit: <input type="text"/>
Survey start/end time (24 hr Clock)		/	/	/	/	/	/
Survey type (whole area, flush, aerial)							
% Visibility							
Local Tide Conditions ^a							
Salinity							
Water Gauge ^b (units=)							
Water Depth % of unit in each category (sum to 100)	Dry						
	Saturated/mud						
	0 to 5 cm(≈ 0-2")						
	5 to 15 cm(≈ 2-6")						
	15 to 25 cm(≈ 6-10")						
	>25 cm(≈ >10")						
Percent of ice cover							
Flood Duration ^c							
Habitat Cover % of unit in each category (sum to 100)	Water (Include SAV. ^d & Floating-Leaved						
	Scrub-shrub						
	Forest						
	Emergent						
	Bare Ground						
Interspersion ^e							
Height % of unit in each category (sum to 100)	<2.5 cm (≈<1")						
	2.5 to 15 cm (≈1-6")						
	15 to 30 cm (≈6-12")						
	30 to 60cm (≈1-2')						
	60 cm to 3 m (≈2-10')						
	3 to 6 m (≈10-20')						
	>6 m (≈>20')						
Disturbance severity ^f							
Disturbance sources ^g							
Chronic human disturbance ^h							

To be completed if not printed double-sided:		Site code	__-__-__	Date	__/__/__	
Species	unit:	unit:	unit:	unit:	unit:	unit:

a, tide conditions: 1 = high; 2 = almost high, rising; 3 = almost high, falling; 4 = half tide, rising; 5 = half tide, falling; 6 = almost low, rising; 7 = almost low, falling; 8 = low; 9 = not observed, not applicable, or observations made during more than one period

b, gauge units: 1=feet/tenths, 2=feet/inches, 3=meters

c, flood duration: 1 = surface water present for > 90 days; 2 = surface water present 30-90 days, 3 = surface water present < 30 days; 4 = permanent inundation; 5 = no information

d, submersed aquatic vegetation

e, interspersions: class “L” = includes large water/bare ground features with connected patches and linear edge; Class “S” = contains small, disconnected patches of water/bare ground with increased random distribution and fewer instances of connection; Class “M” = consists of patterns that contain discernible regions of both configuration classes L and S

f, disturbance severity: 1 = no effect on waterbirds; 2 = some waterbirds move but stay within unit; 3 = some waterbirds leave unit; 4 = most/all waterbirds leave unit

g: disturbance codes (may be more than one): 1=Pedestrian, 2=Loose dog, 3=Hunting, 4= Fishing, 5=Boats, 6=Motor Vehicles, 7=Aircraft, 8=Raptor

h, chronic human disturbance: 1 = no entry into the unit for any reason; 2 = Closed to all use with entry into unit by resource managers or designees for management activities, surveys, or other controlled non-hunting activities; 3 = Managed access for all activities including firearms hunting. May include effort to control use levels and temporal closures; 4 = open access via trail, viewing platforms etc. No firearms hunting allowed; 5 = Open access, including firearms hunting, often with routine restrictions but without a site specific management program to control the level of authorized use; 6 = unknown