

## CAPS/SLAM: Salt Marsh Assessment

### Border Marsh

*Version 1.0 June 2010*

#### Site Form

Site ID (Bin-Index):

Site Name/Town:

Lat/Long (ground condition; DD; WGS84):

Comments:

#### Plot Diagram

Sketch a diagram of the sample plot. Include the following sampling information: baseline length (in meters); transect IDs; transect lengths (in meters); and location of origin sample point. Also, sketch border marsh features, including creeks, marsh zones/dominant plant communities, and invasive species in and around the plot, as well as nearby upland features. In addition to the plot diagram, sketch the location of the sample point and all transects on the Site Map (aerial photo).

## CAPS/SLAM: Salt Marsh Assessment

### Inner Marsh

*Version 2.2 - May 2012*

#### Vegetation Site Form

Site ID (Bin-Index):

Site Name/Town:

Bank condition (for length of plot):

Bank vegetation (for length of plot):

Comments:

#### Plot Diagram

Sketch a diagram of the sample plot. Include the following sampling information: baseline length (in meters); transect IDs; transect lengths (in meters); location of origin sample point; and locations of macroinvertebrate sampling stations if they are flagged for future sampling. Also, sketch marsh features, including creeks, marsh zones/dominant plant communities, and invasive species in and around the plot. In addition to the plot diagram, sketch the location of the sample point and all transects on the Site Map (aerial photo).

Vegetation Form: Site ID \_\_\_\_\_ Transect ID \_\_\_\_\_

Record the transect number, lat/long, length, compass bearing (circle M for magnetic north or T for true north), distance from sample point, and point interval. Walk along the transect and record the presence of plants touching the bayonet at each interval. Use the table below to mark a tic in each cell for intervals 1 – 11 where a plant is present. Use the blank cells at the end of the table to record the genus and species for plants not listed. Additional plant species are listed on the next page.

<b>Date:</b>	<b>Time:</b>	<b>Evaluators:</b>
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**Lat/Long** (ground condition; DD; WGS84)

Transect 1	Transect 2	Transect 3
N	N	N
W	W	W

Transect length (m):	Distance from center Sample Point (m):
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Transect compass bearing (°):	M / T	Point interval (= length/10) (m):
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[illegible]

\* Formerly *Scirpus*



**Habitat Complexity Form: Site ID\_\_\_\_\_ Transect ID\_\_\_\_\_**

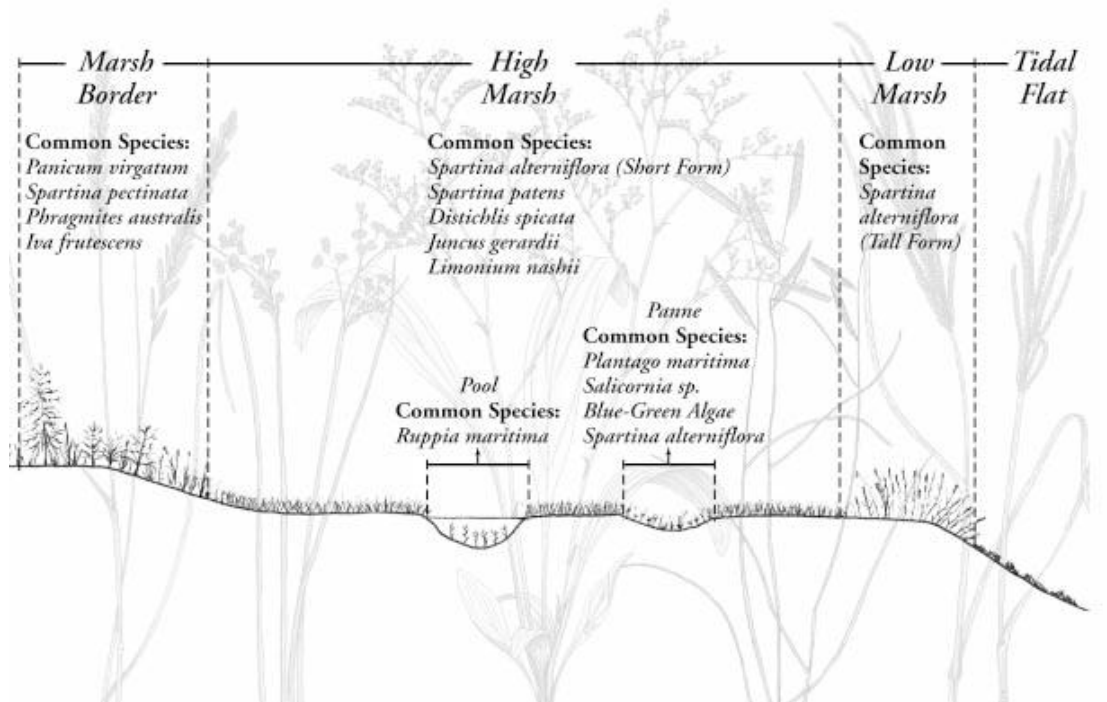
After completing the Vegetation Form, walk back along the transect towards the water feature. Use the tape measure to observe and record the “start” locations (distance in meters) and types of habitat transitions along the transect. Do not record transitions for habitats that measure less than one meter along the transect. Habitats are defined as heterogeneous plant communities (e.g. *Spartina patens* / *Distichlis spicata* mix) and hydrogeomorphic features (e.g., panne, pool, and creek, plus ditch) associated with the marsh. Both a plant community and hydrogeomorphic feature can be recorded at the same location (e.g. *Spartina alterniflora*-short and panne).

Record the tape measure reading for each habitat transition to the nearest tenth of a meter in the appropriate box(s) (e.g. 5.5 m). Separate recorded habitat transitions with a comma if that habitat occurs more than once on a transect. List no more than three plant species when describing a community. Record species in order of dominance, with the first species being the most dominant. For example, record a habitat patch that includes *S. patens* (75%), *J. gerardii* (25%), and *P. maritimum* (< 1%) as *S. patens* / *J. gerardii* mix. Record start and end distances (range) for all hydrogeomorphic features (e.g. Panne = 25-30 m). Include patches and features that are offset up to 1 m from the transect. Complete a Habitat Complexity Form for each transect. See the next page for a marsh zonation reference diagram (Figure 1).

[illegible]

## Comments

Figure 1. Plant zonation in northeastern salt marshes. This diagram shows the major plant zones and dominant species; see text for details and Tiner (1987), Mitsch and Gosselink (1993), or Bertness (1999) for a description of salt marsh vegetation patterns. (Adapted from Carlisle, et al, 2002).



**Human Disturbance Form: Site ID\_\_\_\_\_**

Walk the perimeter of the sample plot and describe in the table below the types, extents, and severity of disturbances within a 100 m buffer of the sample point (200 m diameter circle depicted on the site map). Disturbance types are listed below. Use the bracketed letters preceding each disturbance type to mark locations of disturbances on the provided site map. Also record any of these indicators of disturbance when encountered while implementing other elements of the SOP.

- [A] Water control structures (culvert, tide gate, dam, weir, storm water input, fill (road/railroad), ditching, channelization, and other human activity affecting the hydrology of the site
- [B] Soil disturbance (filling, sedimentation, haying)
- [C] Obvious spills
- [D] Direct point or non-point source discharge from agricultural operations, septic or sewage treatment systems, or storm water affecting water quality of the site
- [E] Walking trails, horse trails, and roads (excluding wildlife trails)
- [F] Small-craft boating (presence of docks, moorings, or observed boating) and boat storage
- [G] Presence of trash/litter
- [H] Presence of garbage dumping

Type	Presence	Description of type, areal extent, and severity of impact

**Macroinvertebrate Site Form**

Version 2.2 - 2012

Site ID (Bin-Index):

Site Name/Town:

Comments:

**Plot Parameters**

Bank condition (for length of plot):

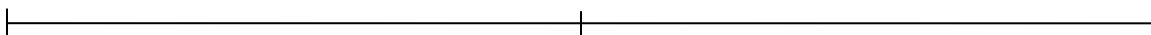
Bank vegetation (for length of plot):

**Station Parameters**

PARAMETER	STATION 1	STATION 2
Salinity (ppt):		
Bank height (m):		
Water height (m):		
Substrate composition (from auger)		
Composited sample collected? (Yes or No)		

**Plot Diagram**

Record the transect length below. Observe each sample's corresponding distance on the transect measuring tape. Mark the location (i.e. distance on the tape) and ID of each sample on the line below. Sample ID is defined as "type + station ID" (e.g. A1 = auger sample taken at Station 1; D2 = D-Net sample taken at Station 2). Record both the start and end locations for D-Net samples. Skip this section if a transect was previously laid out and marked with flagging. Locations will have been recorded at time of layout.



Transect length =



# Macroinvertebrate Quadrat Samples Record Form

Version 2.2 - Feb. 2012

Site ID (Bin-Index):

Evaluators:

Date:

Time:

Tide: (circle one)      Ebb      Flood      Slack

PARAMETER	STATION 1	STATION 2
Plant Community (description)		
Crab Burrows (count)		
<b>FAMILIES /GROUPS</b>		
Amphipods		
Talitridae		
Gammaridae		
unknown/other		
Isopods		
Oniscidae (sow bug)		
unknown/other		
Mussels (Mytilidae)		
<i>Geukensia demissa</i> (Ribbed)		
Barnacle		
Crabs		
Portunidae (green and blue crabs)		
Ocypodidae (Fiddler - <i>Uca</i> spp.)		
Varunidae ( <i>Hemigrapsus</i> )		
Panopeidae (Mud)		
Snails (Mollusca, Gastropoda)		
Mollusca		
Gastropoda		
Littorinidae		
Hydrobiidae		
Ellobiidae ( <i>Melampus</i> )		
Anemone ( <i>Diadumene lineata</i> )		
Insects		
Orthoptera (Grasshoppers, crickets)		
Hemiptera (true bugs)		
Aphididae (aphid)		
Miridae (plant bug)		
Auchenorrhyncha (hoppers)		
Delphacidae (planthopper)		
Cicadellidae (leafhopper)		
Collembola (springtails)		
Aranea (spiders)		
Acari (mites and ticks)		
Diptera (flies)		
Coleoptera (beetles)		
Hymenoptera		
Formicidae (Ants)		
Other		

## Macroinvertebrate Samples Record Check Form

[illegible]

# Macroinvertebrate Laboratory Bench Form

Version 2.2 - Feb. 2012

Site ID:			Station ID:		
Date:			Technician:		
D-Net Number:		Auger Number:		Quadrat Number:	
PHYLUM / CLASS	ORDER	FAMILY	FG	TALLY	TOTAL
Turbellaria	(Flat Worms)		DF		
Nemertea			DF/PR		
Annelida - Clitellata	Oligochaeta		DF		
Annelida	Oligo. or Capitellid type	Oligochaeta OR Capitellidae			
Annelida - Polychaeta	Scolecida (sub class)	Capitellidae	DF		
		Arenicolidae	DF		
		Maldanidae	DF		
		Opheliidae	DF		
		Orbiniidae	DF		
	Eunicida	Oenonidae (ex. Arabellidae)	DF		
		Dorvilleidae	DF		
		Lumbrineridae	DF/SF		
	Phyllodocida	Glyceridae	DF/PR		
		Nereididae	OM		
		Nephtyidae	PR		
		Phyllodocidae	DF/OM		
		Syllidae	OM		
	Sabellida	Sabellidae	SF		
	Spionida	Spionidae	DF		
	Terebellida	Cirratulidae	DF		
		Ampharetidae	DF		
		Terebellidae	DF		
Mollusca - Gastropoda	Neogastropoda *	Nassariidae	G		
	Caenogastropoda *	Cerithiidae	G		
	Littorinimorpha *	Calyptaeidae (slipper shells)	SF/SC		
		Hydrobiidae	G		
		Littorinidae (incl. <i>Lacuna</i> )	G		
	(no order at this time)*	Ellobiidae (ex. Melampinae)	G		
	(* clades in flux)				
Mollusca - Bivalvia	Veneroida	Tellinidae	SF/DF		
		Veneridae	SF		
	Myoida	Myidae	SF		
	Mytiloida	Mytilidae (mussel)	SF		
	Ostreoida	Ostreidae (oyster)	SF		
		Pectinidae (scallop)	SF		

PHYLUM / CLASS	ORDER/SUBORDER	FAMILY		TALLY	TOTAL
Arthro. - Collembola		( <i>Anurida maritima</i> , others)	DF		
Arthro. - Insecta	Diptera		DF/SF/PR		
	Hymenoptera		PR/G		
	Coleoptera				
	Hemiptera				
		Miridae (plant bug)			
	Auchenorrhyncha (sub)	Delphacidae (planthopper)			
	Auchenorrhyncha (sub)	Cicadellidae (leafhopper)			
	Sternorrhyncha (sub)	Aphididae (aphid)			
Arthro. - Arachnida	Araneae	(spiders)	PR		
	Acari (subclass)	(mites and ticks)	PR		
Arthro. - Maxillopoda	Copepoda		SF		
Arthro. - Maxillopoda	Sessilia	(barnacles)	SF		
Arthro. - Maxillopoda	Branchiura (sub class)				
Arthro. - Merostomata	Xiphosurida	Limulidae (L. polyphemus)			
Arthro. - Malacostraca	Cumacea		SF		
	Tanaidacea		DF		
	Amphipoda	Aoridae	DF		
		Corophiidae	DF/SF		
		Gammaridae	DF/G		
		Haustoriidae	DF		
		Hyalidae	DF		
		Ischyroceridae	DF		
		Talitridae	DF		
	Isopoda	Idoteidae	DF		
		Janiridae	DF		
		Limnoriidae	DF		
		Oniscidae (sow bug)	DF		
	Decapoda	Crangonidae (bay shrimp)	SF/SC/PR		
		Palaemonidae (grass shrimp)	DF/SC/PR		
		Ocypodidae (Fiddler crabs)			
		Varunidae ( <i>Hemigrapsus</i> )	OM		
		Cancridae ( <i>Cancer</i> )	OM		
		Majidae (spider crabs)	OM		
		Portunidae (green, blue crab)	OM		
		Panopeidae (mud crabs)	OM/G		
Others					

Total Taxonomic Groups:	Total Number of Individuals:
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