Protocol for tidal marsh vegetation transect - written by C. Field, February 2013

The purposes of this SOP are to quantify the extent to which high marsh vegetation is present in the upland to look for evidence of marine transgression and to create a baseline for future monitoring. The point of reference for this transect is the point that was marked and georeferenced and the bearing that was taken at the marsh edge according to the **Identifying/georeferencing the marsh edge SOP.**

The salt-marsh vegetation transect protocol is based on two types of measurements which require a compass, measuring tape, and 1 m x 1 m plot square.

Presence/absence in square plots
Using the compass as a guide, roll out the measuring tape from the marsh edge point to 20 m in the direction of the transect bearing. Record the presence or absence of each high marsh or border species in each of 20 1 m x 1 m plots along the first 20 m of the transect (the center of each point will be at the half-meter mark - e.g. 0.5, 1.5, 2.5, etc.). Tables 1 and 2 have a list of all high marsh and border species likely to be found in Long Island Sound. Also survey two plots in the direction of the marsh (180 degrees from the transect bearing), with plots centered on -0.5 m and -1.5 m from the edge point. These are denoted as V00a and V00b (Distance = -1 and -2, respectively) on the data sheet.

Record the presence of any high/low marsh or border species found within a 1 m x 1 m plot at every 10 m after the end of the original 20 m transect. Be sure to center the plot at each maker- e.g. centered on 30 m, 40 m, etc.

Table 1. High or low marsh species likely to be encountered in Long Island Sound.

Common name	**Scientific name**
Black grass	*Juncus gerardii*
Salt grass	*Distichlis spicata*
Salt hay grass	*Spartina patens*
Saltmarsh cord grass	*Spartina alterniflora*
	Salicornia spp.

Table 2. Marsh border species likely to be encountered in Long Island Sound

Common name	**Scientific name**
High-tide bush	*Iva frutescens*
Common reed	*Phragmites australis*
	Scirpus americanus
	Scirpus pungens
	Baccharis halimifolia
	Panicum virgatum
	Solidago sempervirens (or other Solidago spp.)
	Hibiscus moscheutos

	Typha augustifolia
Sea lavender	*Limonium sp.*
Salt marsh bulrush	*Bolboschoenus robustus*
	Puccinellia maritima
	Triglochin maritimum
	Atriplex spp.
	Eleocharis spp.