

Summary of Crissy Field Monitoring Elements

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<b>Major Subject</b>	<b>Strata?</b>	<b>Co-variates?</b>	<b>Things assessed</b>	<b>Things measured</b>	<b>Timing</b>
Hydro- Geomorphology	Ebb shoal Flood shoal East Beach Breach channel		Channel geometry  Shoal volumes  Tide curves re. NGVD 29	Thalweg survey  Channel sections  DTM's  Tide stage  Field photos  Aerial photomaps	DTMs spring and fall  Channel sections every 6-8 weeks  Tide stage every 10 sec. or 10 min.
Water Quality	Stormdrain outfalls  Tidal inlet breach  Low marsh/shallow subtidal  Upper water column  Lower water column	Stormdrain discharge  Rainfall  Inlet closure  Substrate type  Attached algae	Stormdrain effects  Habitat quality  Human health hazards  Inlet closure effects	DO, Salinity, Conductivity, Temperature, pH, ammonium, nitrates, nitrites, OPs, fecal coliform, PAHs	Monthly plus first upland flushes and inlet closures
Soil Condition	Low marsh, Mid-marsh High marsh 0-10 cm depth 10-20 cm depth	Plant community	Habitat quality	Percent sand, silt, clay  TKN, Organic content  Soil salinity	Summer

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Sedimentation-Erosion	Low marsh, Mid-marsh High marsh	Plant community Soil condition	Net change in substrate elevation	Depth to marked horizon  Distance to sediment surface	Fall
Vegetation Condition	Low marsh, Mid-marsh High marsh Upland dunes	Slope Aspect Swale Foredune zone Transition zone Soil condition Wave action Rainfall	Plant community development  Non-native invasions and control	Species richness  Species relative abundance as cover  Total percent cover by species	Fall for marsh  Spring for dunes
Macrobenthos	Low marsh, Mid-marsh High marsh Subtidal inlet 0-10 cm depth 10-20 cm depth	Sediment texture Water quality	Benthic community composition and structure  Food resources for fish and birds	Density per taxon	Summer
Fish and Crustaceans	Low intertidal  Shallow subtidal	Water salinity Substrate type Water depth Substrate type Submerged vegetation	Fish community composition and structure	Relative abundance per species  Total size per individual	Quarterly
Birds	Tidal marsh Adjacent upland Dunes Dune swales Beach Nearshore	Habitat features and elements  Evidence of interference by people, pets, etc.  Evidence of dead or dying wildlife  Weather	Bird community composition and structure  Habitat values	Relative abundance per species  Activity patterns per species  Population size	Spring in dunes otherwise weekly or biweekly