

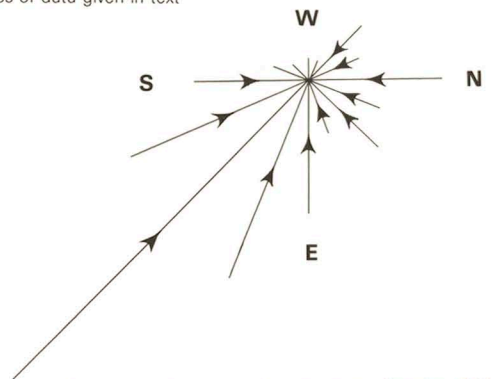
EXPLANATION

- Lower shoreface and shelf, under normal conditions a decrease in wave and current energy occurs below 8 feet, burrowing by marine organisms common, some longshore and onshore sand transport in shallow areas especially during storms, deposition of some fine suspended sediment
- Normal surf or breaker zone, high wave energy area, shifting subaqueous bars, zone extends to depth of about 8 feet, longshore and onshore transport of sand common
- Site of active or potential hurricane washover channel
- Shoreline, erosional, eolian processes active along Gulf side of barriers and along lagoon shoreline
- Shoreline, depositional, accretion, eolian processes active along Gulf side of barriers and along lagoon shoreline
- Shoreline in depositional-erosional equilibrium, eolian processes active along Gulf side of barriers and along lagoon margin
- Area of slow to moderate deposition within bay, predominantly suspension deposition in deeper bay, accretion in some marginal areas
- Area of active reworking and redistribution of subaqueous spoil by waves and currents within lagoon
- Area of moderate to high wave energy, shallow (1-3 feet), sand, locally oolites, dead serpulid reefs and beach rock, shoal areas
- Area of wind-tidal flooding, commonly generated by persistent north (winter) or southeast (summer) winds, alternating submergence and emergence, extensive wind-driven sand transport during exposure, algal mat development during submergence, fluvial sand locally deposited on flats at mouth of ephemeral streams entering Baffin Bay
- Area of intensive wind deflation, occasional wind-tidal flooding, and extensive clay-dune accretion along landside of lagoon, includes eolian accretion of ripples and poteros, zone of destruction of eolian sand sheet; also includes active clay-dune accretion on the margin of wind-tidal flats adjacent to Baffin Bay and on the margins of playas throughout sand sheet
- Eolian sand dunes, active, back-island longitudinal dune fields, barrier island blowouts, barchan dunes in large banner dune complexes within inland sand sheet, areas of active eolian sand transport and deposition, deflation on windward side of migrating dunes
- Area inundated by marine water, Hurricanes *Carla* and *Beulah* storm surge tide, *Carla* data incomplete and unavailable for most of area, flood area was similar to that of Hurricane *Beulah*
- Area inundated by marine water, Hurricane *Beulah* storm surge tide only
- Area inundated by river flooding and rainfall runoff, Hurricane *Beulah* rainfall and aftermath storms, extensive ponding in depressions and poorly drained areas
- 7.7 Hurricane *Beulah* recording tide or river gage, high water-mark elevation, datum mean sea level
- 5.6 Hurricane *Beulah* storm surge and river flooding debris or driftline elevation, datum mean sea level

* Map color patterns overlap where active processes occur in the same area, resulting in a unique color code as follows

- a Area of intensive wind-deflation covered by Hurricane *Beulah* river or rainfall flooding
- b Area of intensive wind-deflation covered by Hurricane *Beulah* storm surge tide
- c Eolian sand dunes covered by Hurricane *Carla* storm surge tide
- d Eolian sand dunes covered by Hurricane *Beulah* storm surge tide
- e Eolian sand dunes covered by Hurricane *Beulah* river or rainfall flooding

Sources of data given in text



Percentage frequency of surface wind direction, 1951 - 1960
Kingsville Naval Air Station

ACTIVE PROCESSES

Mapping and cartography by Bureau of Economic Geology
Geologic mapped on aerial mosaics, Edgar Tabin Aerial Surveys
Base adapted from U.S.G.S. topographic maps
Sources of data and credit for contributions to maps given in text