

Name _____

Glacier Bay is located near the north end of the Alexander Archipelago. The Bay opens into Cross Sound and Icy Strait of the Inside Passage of southeast Alaska. When Vancouver discovered the area in 1780, glacial ice filled the Bay to its mouth. In 1891, when the Bay was first mapped, Muir Inlet was still filled with ice. Today the ice has retreated up the right (Muir Inlet) arm of the "Y" shaped Bay to tide-water levels. Recently, glacial ice has started to re-advance in the upper reaches of the west inlets of the Bay.

The Bay is defined by shallow sills at its entrance and the entrance to Muir Inlet. Constricted channels in which tidal currents are locally strong occur between sediment covered shores in the lower end of the Bay and the east (Muir) inlet. Deep, unconstricted bedrock channels and basins with weak currents occur in mid-Bay and the west inlet. These features and the configuration of the bay produce a tidal range of 8 meters. There is reduced mixing of waters within the Bay and between the Bay and Cross Sound/Icy Strait. Annual precipitation up to 4 meters, coupled with glacial melt water, create a surface layer and flow of cold fresh water out of the Bay. Strong flood tides push sea water into the Bay over the sills. The dynamics of the flow may affect the behavior and timing of the movement of whales into (on flood tides) and out of (on ebb tides) the Bay.

During the winter, an increase in sea water flow and mixing occur. Increased nutrient levels and sunlight in spring/summer provide sufficient nutrients and energy for phytoplankton "blooms" to occur. In turn, zooplankters appear, especially in the open areas of mid and lower Bay and along glacial ice faces. By autumn, plankton concentrations diminish as light and nutrient levels decrease. Small schooling fish feed on the plankton when it becomes available. Both fish and plankton are consumed by humpback whales as well as by other predators. Other marine mammal species reported in the Bay are harbor seals, harbor porpoise, killer whales, and minke whales.

From Humpback Whales in Glacier Bay National Monument, Alaska by the United States Department of Commerce, Marine Mammal Commission

1. What kind of organization does the author use for this text?
2. Discuss how the author develops the text from one paragraph to the next. Is there a particular kind of progression? What is it?

ANSWERS

1. spatial/descriptive
2. In the first paragraph the author describes the bay as though looking down on it from up above; in the second paragraph the look is closer, almost as if it is a “street level” view than an ariel view. The third paragraph looks even more closely concentrating primarily on the tiny organisms in the water itself.