To understand the food web

The foundation of the food web in estuaries is plants, specifically phytoplankton, or plant plankton.

Phytoplankton are small, single celled plants that cannot swim against the current, and float to where the current takes them.

Plants need nutrients from ocean and river water and sunlight to grow, so it is important to know the amount of nutrients in the water and how clear the water is to understand the phytoplankton growth patterns.

In some way, all the other animals depend on these small plants for their survival, and without phytoplankton, there would far fewer animals in the Bay.

To understand the habitat

The surrounding water is habitat to the plants and animals living in Yaquina Bay.

Just like how we expect heat in our house during the winter and air conditioning during the summer, these plants and animals are used to predictable seasonal conditions.

Change in the normal heat and air conditioning pattern would cause a stressful environment, and this is also true for the Bay dwellers.

The Bay is used by many important plants and animals for food, habitat, and breeding, so knowing any variations that could cause stress is highly valuable in managing our coastal resources.

To understand long-term changes

Information about the water of Yaquina Bay is lacking.

Some scientists have collected data by hand at a few locations, but the data is not consistent.

LOBO collects hourly data from one location, every day, all year, which cannot be feasibly accomplished by even a team of scientists.

Continuous data, like from LOBO, makes tracking both short and long term changes in the water easier.

This data will help us understand normal variations, as well as discover any changes due to human influence.

Residential, commercial, and science communities need to know what is happening in the water so that management decisions can be made.