



**NOAA Teacher at Sea
JoAnne Kronberg
Onboard NOAA Ship RAINIER
July 12 – 22, 2005**

Log 6

Tuesday, July 19 on NOAA Ship RAINIER

Waves: 8ft during the day diminishing to 6 ft in the evening
Winds: NW 25-39 knots

We arrived at Mitrofanía Island at about 5:00 am and anchored in Cushing Bay. Our mission today was to do a Tide Station Installment. The National Water Level Observation Network operates 175 continuous observatory stations in the U.S. coastal zone and the Great Lakes. All are equipped with satellite radios. Of course, a Tide Station would only be placed in the coastal areas that are affected by tides. Water Level Stations operate in the Great Lakes.

We had to replace the Tide Station in Cushing Bay. The sensor that is installed is called a Bubbler Orifice. It is anchoring to the bottom of the bay and is powered by a long tube that is filled with Nitrogen gas. Two divers went down to anchor the Bubbler and attach the tube. Meanwhile, other people in another launch were setting up a Tide Staff. A Tide Staff is just a long stick that is marked with levels like a yardstick. The Tide Staff has to be set up to correspond with the Bench Marks that have been already determined. The Bench Marks may be located at different sea levels. Both the Bubbler Orifice and the Tide Staff have to be at the same sea level to be accurate.

After the Bubbler Orifice is established and the Tide Staff is set up, we started taking the readings from these two sources. Readings were taken every 6 minutes for a period of one hour. If the readings after an hour are not the same, then the Bubbler Orifice has to be adjusted.

The data collected by the Bubbler Orifice is transmitted to the Data Collection Platform. In turn, this information is transmitted to no less than four satellites and to the National Geodetic Survey.

The work today has taken most of the day. We will stay anchored in Cushing Bay tonight. Early tomorrow morning, Wednesday, we will start cruising toward Chiniak Bay.

It was a very educational day and the weather was fantastic. Thank you for this opportunity.

JoAnne Kronberg Teacher-at-Sea