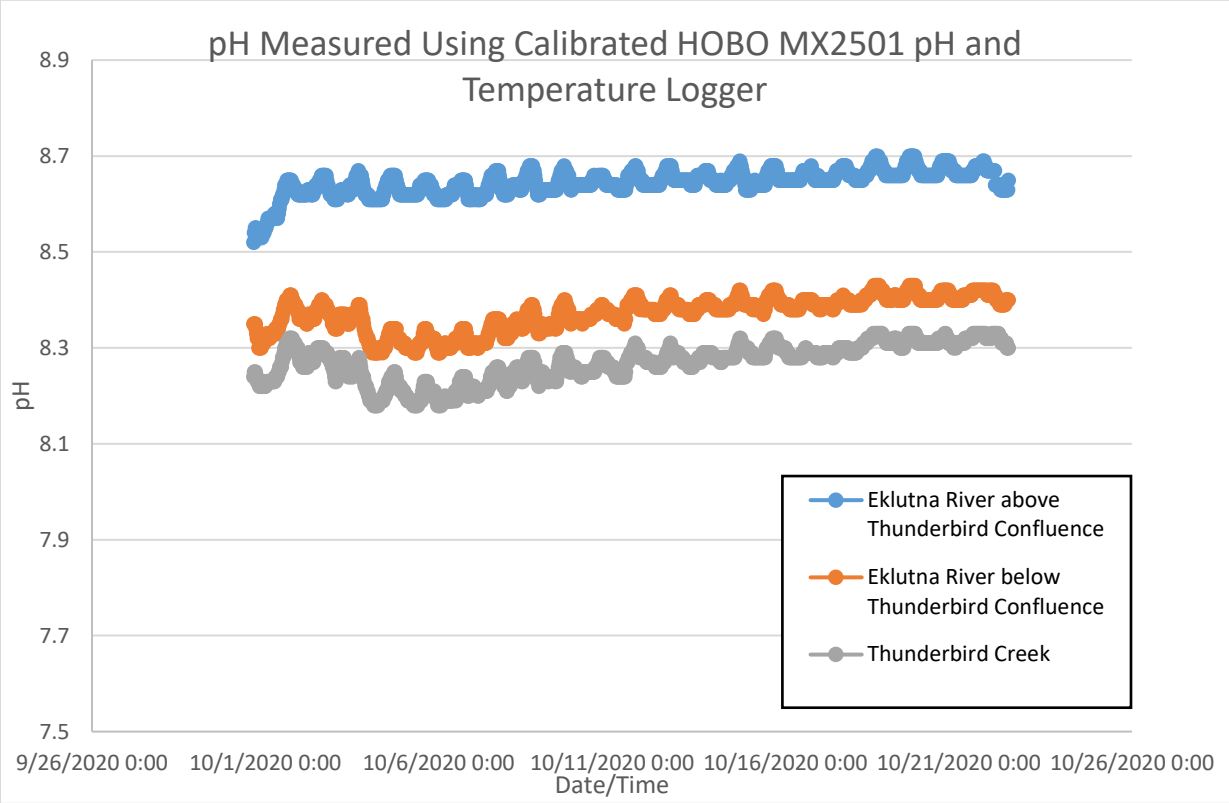
Eklutna Hydroelectric Project Draft Study Plan Comments – Erin Larson

1. Water Quality – importance of monitoring pH
    a. Currently we are only planning to monitor sediment, dissolved oxygen, and temperature, but pH is also an important measure of water quality for salmon. I've included a figure below from monitoring above and below the Thunderbird confluence that I conducted this fall. The stretch of the Eklutna River above the Thunderbird confluence consistently exceeds the Alaska DEC Water Quality standards for growth and propagation of fish, shellfish, other aquatic life, and wildlife, as per 18 AAC 70.



2. Macroinvertebrates – concerns about quantifying both diversity and abundance.
    a. Kicknet methods as proposed only allow quantification of relative abundance, and are not accurate for density estimates. I would recommend using additional Hess/Surber sampling to accurately capture densities.
    b. I'd also like to include language in the study plan indicating that the sampling areas will be chosen to reflect representative habitat.
3. Stream Gaging – include at least 3 gaging stations on Lower Eklutna River
    a. I'd like to be sure that we discuss the need for at least 3 (if not more) gaging stations on the Lower Eklutna River, particularly to identify gaining/losing reaches of the stream.
    b. I'm also concerned about identifying appropriate discharge cross-sections for gaging stations, given the braided nature of the river, and how much its morphology appears to change annually, both naturally, and with use of heavy machinery in the river.