

## ABSTRACT

The Dungeness crab, *Cancer magister*, fishery is co-managed by state and treaty tribe managers with annual quotas based off a running average of the most recent years catch and harvest allocations split evenly (i.e., 50/50) between co-managers. While tribal and state commercial harvest is recorded at the point of sale by weight, state recreational harvest uses mean crab weight to calculate the number of pounds harvested based on the number of crab taken. Currently, the mean crab weight used by the state, 816.5 g, is based off a Puget Sound-wide average. However, if mean crab weight differs by region, recreational harvest estimates should also, ideally, be adjusted by management region. Over 60% of the Swinomish Indian Tribal Community's harvest comes from Management Region 2 East (2E), where the mean weight of an individual crab has not been thoroughly quantified. In this pilot study, we targeted specific locations and hypothesized that mean weight of crab from two catch areas within 2E would be different from mean crab weight used by the state to estimate recreational harvest. Using test fishery data, we examined the mean weight of legal-sized male crab in Crescent Harbor and Similk Bay. Crab length-weight and length-width relationships were also quantified from these two areas. We found that the mean weight of legal-sized male crabs was 7.4 % heavier than the weight used by the state to estimate recreational harvest. These pilot study results demonstrate the need for a more comprehensive study on crab length-weight relationships throughout 2E and mean crab weight by management region; these data could be obtained through simple modifications to the current crab test fishing protocol.