



USING HYDROACOUSTICS AND ACOUSTIC TELEMETRY TECHNIQUES FOR FISHERIES ASSESSMENT

AGENDA

Wednesday-Friday March 14-16 2018

Day 1 (Wednesday, March 14)

The first day will include a contextual overview and introduction of hydroacoustics and the evolution from “passive” hydroacoustic to “active” acoustic telemetry techniques. We will present a synopsis of basic acoustic theory to help guide your understanding of how underwater sound principles are applied to monitor aquatic species movement, distribution and behavior.

The course will then shift primary attention to acoustic telemetry techniques providing specifics about system components, operation, set-up and testing, and individual project needs assessment. The day will conclude with a hands-on demonstration at our calibration facility (on-site only) where we will set up a tag system and collect data on moving tags in the freshwater environment of Seattle’s Salmon Bay.

Day 2 (Thursday, March 15)

The day will begin with a presentation of acoustic tag surgical techniques and procedures. Topics will include selection of surgical materials, anesthesia, surgical and recovery techniques. Then we will launch into analysis of tag data collected at the calibration facility on Day 1 completing the progression from acoustic telemetry system set-up to data collection and finishing up with data analysis and results including compiling of tag detection histories and presentation of 2-D/3-D positioning.

Hydroacoustic techniques will then be discussed in presentations providing specifics about system components, operation, set-up and testing, and individual project needs assessment. The day will conclude with a nighttime boat cruise (on-site only) to collect a small hydroacoustic dataset on the fish population in Seattle’s Lake Washington.

Day 3 (Friday, March 16)

The day will begin with analysis of hydroacoustic data collected on Day 2. Presentations will include use of data analysis applications and interpretation of results. The remaining time will be used to present real-world examples and “lessons learned” using hydroacoustic and acoustic telemetry techniques, highlighting both the advantages and limitations of these techniques.