

U.S. Fish and Wildlife Service Adopts New Criteria for Injury to Marbled Murrelets from Underwater Sound Resulting from Impact Pile Driving of Steel Piles



Photo: Aaron Barna



Photo: WDOT

The Navy, in collaboration with the U.S. Fish and Wildlife Service (Service), convened a panel of experts on July 27-29, 2011, at the Service's office in Lacey, Washington, to refine the criteria used in Section 7 consultations to evaluate whether marbled murrelets are injured by underwater sound from impact pile driving. The panel, consisting of scientists with expertise in bird hearing, marbled murrelet biology, marine mammal hearing, underwater acoustics, and risk assessment, reviewed existing analytical approaches and best available information to develop their recommendations. They recommended that a sound exposure level (SEL) of 202 dB be used to identify the onset of injury (as indicated by hair cell loss in the inner ear). As a further refinement, they recommended that an SEL of 208 dB could be used to identify the point at which those injuries would likely include more severe injuries referred to as barotraumas. The recommendations of the panel were adopted by the U.S. Fish and Wildlife Service for use in Section 7 consultation on projects with impact pile driving of steel piles. These criteria do not address temporary hearing effects that occur without actual damage to the inner ear nor do they address effects to behavior.

For the complete report and list of panel members, see "[Final Summary Report-Environmental Science Panel for Marbled Murrelet Underwater Noise Injury Threshold](#)".