

Fish Communities ca. 2010

Technical Details

Two measures of fish communities are reported for 1KM slices: percent native and salmonid abundance. The percent native is reported in the GIS attribute field *PCNAT2010* and in the Excel spreadsheet column *2010 Percent Native*. The number reported is the percentage of native fish captured in the 1KM slice (i.e. the value 93 represents 93 percent). Salmonid abundance is reported in the GIS attribute field *SABUN2010* and in the Excel spreadsheet column *2010 Salmonid Abundance*. The number reported is the number of salmonids captured in the 1KM slice. The attribute table and spreadsheet contain entries (rows) for each 100m slice; percent native and salmonid abundance are reported in the first 100m slice (lowest number, ending in 01) for the entire associated 1KM slice. For example, salmonid abundance in 100m slice number 21601 is 51; the value of 51 reports the number of salmonids captured in 1KM slice 216 (100m slices 21601 - 21610).

The Data and Sampling Protocol

Data on native and non-native fish communities were collected by Stan Gregory, Randy Wildman (Professor Emeritus and retired respectively, Department of Fisheries and Wildlife, Oregon State University) and their field crews from 2011 through 2013 using a standard sampling protocol. The mainstem Willamette River was divided into three sections based on river geomorphology. The Northern section extends from the mouth of Willamette River upstream to Newberg, Oregon (Slice KM 0 – 72). The Middle section is located between Newberg and Albany, Oregon (Slice KM 73 – 150), and the Southern section runs from Albany to the confluence of the Coast and Middle Fork Willamette (Slice KM 151 – 229). Sites were randomly chosen within the three reaches. In 2011, 33 sites were sampled (18 mainstem and 15 sloughs), in 2012 a total of 58 sites were sampled (36 mainstem and 22 sloughs), and in 2013 a total of 76 sites were sampled (42 mainstem and 34 sloughs). Within each 1KM slice, fish were captured with a boat and backpack electrofisher by two netters. Each boat electrofishing run was 200-m in length and sampled in a downstream direction approximately 4 to 10 m from shore and in depths of 1 to 4 m when possible. The crew sampled shallow microhabitats along the shore in each sampling site with a backpack electrofisher. The microhabitats represent the variety of nearshore habitats at each site. Mainstem sites were sampled with four boat electrofishing runs and four microhabitats runs. Sloughs were sampled by three boat runs and four microhabitat runs because they were too small to accommodate more than three 200-m boat electrofishing runs. At the end of each sampling effort, fish ≥ 30 mm were identified to species and fork length was measured.