

Abstract

Lake trout reproduction on two man-made spawning reefs in Presque Isle Harbor, Lake Superior in 1977-1980 was qualitatively and quantitative described. Lake trout spawned during a 15- to 26-day period between 12 October - 14 November from sundown to at least midnight. Most of the spawners were of hatchery origin but wild trout increased from 4% to 25% during the period. Lake trout rarely visited the reefs more than once and may have deposited sex products on more than one reef. Number of spawners in 1979 was estimated to be 1,600 males and 600 females on the intake reef and 2,100 males and 1,100 females on the discharge reef. Egg deposition and swim-up fry production on the two reefs during 1977-1980 ranged 122-518/m² and 8-46/m², respectively. Physical characteristics, water chemistry, and biota indicated that these man-made reefs were favorable habitat for lake trout reproduction.