

Ocean Carrying Capacity (OCC) GLOBEC fish and oceanography data - Auke Bay Laboratories

Understanding the processes that regulate early marine survival of salmon is a major goal of the Global Ocean Ecosystems Dynamics (GLOBEC) Northeast Pacific (NEP) program. Faster growth and larger body size are generally associated with higher marine survival for most species of juvenile salmon, which experience relatively high mortality rates during early marine life. The interaction between the temporal-spatial distribution of juvenile salmon, growth performance, environmental conditions, and stage-specific survival are critical to understanding how physical and biological factors contribute to production and survival, and influence the mechanisms, magnitude, location, and timing of marine mortality. The northern Coastal Gulf of Alaska (CGOA) is a highly productive, down-welling based system where freshwater runoff and winds dominate the physical processes on the shelf. The physical environment changes at different spatial and temporal scales, which is believed to influence inter-annual variability in distribution, feeding, growth, and survival of juvenile salmon. Pink salmon are the upper trophic level target species of GLOBEC, however, the overarching programmatic goal is to enhance our understanding of the processes driving the physical structure and biological productivity of the highly dynamic CGOA system.