



Summer Flounder Stock Assessment and Rebuilding

8 Things To Know

1. What is the new rebuilding goal for summer flounder? The June 2008 peer review (SAW/SARC 47) set the rebuilding goal as 132 million pounds of spawning stock biomass. The assessment also indicates that sustainable catches once this goal is achieved would be higher than catches at the current population size, that the current spawning stock size is about 72% of the biomass goal, and that rebuilding can occur on schedule (by Jan. 1, 2013), given continued success in staying at or below annual commercial quotas and recreational harvest limits.
2. Have rebuilding targets been set too high in the past? No, but since 1999 the targets have been declining. None, however, has ever been achieved. Targets often change over time as fishery scientists improve models and methods, and as new data are available on how the stock responds (grows, produces young, dies) to ecosystem conditions and fishing rules intended to end overfishing and rebuild the stock.
3. Have harvest quotas and limits been set too low in the past? No. The quotas and limits have been set consistent with the assessment advice, and have been exceeded in most years since 1982. In 2007, overfishing was not occurring for the first time since 1982. The 2008 assessment suggests that initial quotas and limits for 2009 may be set at the same level or even slightly higher than in 2008 without compromising rebuilding goals if 2008 quotas and limits are not exceeded.
4. Are we overfished or overfishing? No, but the stock is not yet rebuilt and fishing harvests need to stay within the annual limits to ensure that it will be.
5. How do we assess the population? The population is modeled, much as the U.S. Census Bureau models human populations using similar data—population size at age, growth rates, age at maturity, reproductive potential and success, life span, and removals by deaths. The summer flounder stock assessment model uses widely-accepted and commonly-used fishery science principles to analyze the population size. The data used have been collected annually since 1982 from fish caught (recreational and commercial) and fish sampled in the ocean (taken on research surveys.)
6. Why are the 2008 assessment results different from those in 2006? Primarily because of a more refined way of attributing natural mortality, the addition of data on stock performance in 2006 and 2007, and better success in 2007 in reducing mortality caused by fishing. The assessment also used a different model and included other data updates (to the average weights of fish in the population); however, these changes were less influential on the results.
7. How do we "check" the models? By conducting a benchmark assessment such as the June 2008 Stock Assessment Workshop (SAW/SARC 47) for summer flounder. A working group of fishery scientists conducts a thorough evaluation of available data, methods and models, and selects those that best represent the summer flounder population. This work is then “peer reviewed” by a group of independent experts. The summer flounder assessments have been peer-reviewed 17 times in the last 24 years. The peer reviews have validated assessment results and helped improve stock assessment methods and modeling.
8. What change in the assessment had the greatest effect? Revising the natural mortality rate from a constant 0.20 for all age groups to a rate that varies by age. Natural mortality is now figured as higher at younger ages, when fish are smaller and more vulnerable to natural mortality (e.g., predation and disease), and decreases at older ages. The average of this set of age-specific natural mortality rates is 0.25 and results in a lower rebuilding goal than in the last assessment.