

SCIENTIFIC AND STATISTICAL COMMITTEE REPORT ON
EXEMPTED FISHING PERMIT (EFP) FOR AERIAL SARDINE SURVEY RESEARCH

The Scientific and Statistical Committee (SSC) was briefed on updates to the EFP application for the west coast sardine survey in 2010. Applicant responses to a list of five issues raised by the SSC and the Coastal Pelagic Species Management Team (CPSMT) in March were provided to the SSC (Agenda Item F.1.a, Supplemental Attachment 2). Mr. Tom Jagielo and Dr. Doyle Hanan were present to answer questions.

The size distribution of sardines varies latitudinally, with larger fish present in the north, and there may be spatial variation in the relationship between biomass and school surface area. In 2009, only point sets near the Columbia River plume were used to estimate this relationship. The primary issue raised by the SSC both in March and in the present meeting, was the lack of a spatially-stratified series of point-sets in previous work and the lack of a detailed protocol for sufficiently stratifying the sample in 2010.

The SSC concludes that the request for an explicit protocol for establishing spatial distribution of point sets in the summer survey was not met, although the application includes provisions for sampling both north and south of the Columbia River, as well as onshore and offshore. The SSC suggests that an adequate modification of the EFP application would be to require that aerial transects occur before the point sets, and that the point sets reflect the size distribution of schools identified in the transects. The SSC further suggests that adequate spatial stratification would divide the survey into four equally sized areas with no less than 15 percent of point sets allocated to each quadrant, subject to the presence of sardine schools in each quadrant. The SSC recognizes that such stratification may be logistically challenging. Alternative protocols may achieve the same objectives.

The revised EFP application included protocols for the fall pilot project in southern California. The pilot project will evaluate the use of LIDAR (light detection and ranging) as a supplement to photographic methods of aerial assessment of sardines, as well as the ability to detect sardine schools at night and schools at greater depth. The SSC recommends that both point sets and LIDAR detections be stratified across sardine schools of a large range of sizes, so that variation in the surface area/biomass relationship can be adequately evaluated. The SSC was encouraged by the likely involvement of Dr. Churnside in the project, since analysis of the data is dependent upon his involvement.

The SSC finds the EFP for the proposed sardine surveys to have a strong scientific basis, and recommends that it be approved, subject to the inclusion of a detailed study design to spatially stratify the point sets along the lines outlined above. The SSC notes the tight timeline necessary to provide the results from these surveys to the assessment reviews in the fall.