



**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
**NATIONAL OCEAN SERVICE**

**Gulf of the Farallones National Marine Sanctuary**

991 Marine Dr., The Presidio  
San Francisco, CA 94129

**2009 RESEARCH PERMIT ISSUED**

**Permittee:** Dr. Barbara Block, Stanford University, Tagging of Pacific Predators (TOPP)

**Project Title:** Ecology and Population Dynamics of White Sharks in the North Eastern Pacific

**Project Description**

The Tagging of Pacific Predators (TOPP) research team led by Dr. Barbara Block of Stanford University received a sanctuary permit to use bait and a decoy to attract white sharks in order to install acoustic tags using a pole with a dart on up to 100 white sharks to track coastal movements of the tagged sharks in proximity to installed acoustic receivers. This data will provide estimates on the local white shark population in the sanctuary and local white shark movements in the sanctuary. This group has been installing a variety of electronic tags on white sharks in the sanctuary since 2000 and has tagged 179 white sharks. In future years, the data may be used to assess if the local white shark population is increasing or decreasing. TOPP is also permitted to install up to 20 external satellite tags and to feed a maximum of 10 sharks blubber embedded with internal stomach tags.