**Comparing DIDSON and ARIS cameras for use in southern California steelhead monitoring**

Sam Bankston and Kyle Evans

Pacific States Marine Fisheries Commission

1933 Cliff Drive, Suite 9

Santa Barbara, CA 93109

sbankston@psmfc.org

Dual Frequency Identification Sonar (DIDSON) is at the forefront of endangered southern California steelhead (*Oncorhynchus mykiss*) monitoring. Southern California sonar monitoring efforts are uniquely suited to face regional environmental challenges (e.g., low fish numbers, flashy flow regimes and high turbidity). Pacific States Marine Fisheries Commission (PSMFC) staff, working in cooperation with the California Department of Fish and Wildlife are using this specialized equipment in high priority watersheds located in Santa Barbara and Ventura counties. During the 2015-2016 season, PSMFC monitoring staff has assessed the merits of a next generation sonar camera, Adaptive Resolution Imaging Sonar (ARIS). Monitoring efforts on the Ventura River featured a paired deployment of DIDSON and ARIS cameras, which afforded unique opportunities for comparison of real world performance. Additionally, cameras were also tested side-by-side in more controlled environments to compare settings and performance. This presentation will provide a comparison of DIDSON and ARIS functionality under dynamic southern California field conditions.