

EXHIBIT A

Executive Summary

Juvenile Chinook salmon emigrating from natal tributaries of the Sacramento River must negotiate the Sacramento-San Joaquin River Delta where they disperse among the Delta's complex channel network. Natural processes and water management actions affect the fraction of the population using different migration routes through the Delta and survival within those routes, but quantifying these relationships has proven difficult. Since 2006, acoustic telemetry techniques have been used to quantify both movement among migration routes and survival within routes, providing the first insights into how route-specific survival contributes to population-level survival in the Delta. In this project, we propose to use existing acoustic telemetry data from multiple sources to 1) Quantify factors affecting migration routing of juvenile salmon emigrating from the Sacramento River, 2) Quantify factors affecting survival of juvenile salmon within specific migration routes, and 3) Simulate population-level survival through the Delta under a limited number of historical and operational scenarios. Collating telemetry data from multiple sources over numerous years offers a unique opportunity to identify important relationships that might otherwise be difficult to detect for any particular study in a given year. Quantifying such relationships is critical to informing resource management that seeks to balance use of water resources with recovery of endangered salmon populations.