## **Telemetry Study Summary Framework**

This summary sheet will facilitate coordination for telemetry studies that will be implemented within the geographic extent of the Core Array. The Core Array consists of key receiver locations for meeting salmon and sturgeon management objectives identified by the Interagency Ecological Program (IEP). Detection data collected by the Array will be available on an open database. Coordination of tag ID codes will ensure that each study uses unique ID codes and that study codes will not be identified as false positives and removed during the initial processing phase. ITAG plans to share completed summary sheets with IEP to identify opportunities for cooperation and collaboration.

Primary Investigator:	
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<b>Study objective(s):</b> Estimate survival of acoustically tagged Livingston stone winter-run Chinook salmon juveniles to the USFWS trawl sampling stations at Sacramento and Chipps Island. These estimates will be used in the CWT-Acoustic Tag paired release hybrid design to determine trawl capture efficiency and abundance estimates for other runs of salmon. Tag life tests on a 5% sample of tags and tag retention trials in 50 fish will be done each year.	
State hypothesis (if applicable):	
Study Type:	Study Timing:
⊠ Reach-specific survival estimate	Study Duration (years): 3 Years
☐ Route selection	Release Dates (range; if applicable): February or March of
☐ Habitat use/preference	2018, 2019, and 2020
☐ Entrainment/fish passage evaluation	Study site(s): (If applicable)
☐ Technology testing	Collection site(s): LSNFH
☑ Other: Methodology development	Release location(s): Caldwell Park on Sacramento R.
Fish/Species of Interest	
Species-race: Winter-run Chinook salmon Length (range): 87-110mm FL Life stage: Juvenile, pre-smolts	Source/quantity: LSNFH 600 fish Status of fish request (if applicable): approved
Tagging Information (if applicable)	
Transmitter Information Type/model: ATS SS300 (2018, 2019) and SS400 (2020) Weight (gm): 0.30/0.42 amd 0.22 PRI/life of tag: 10 Second PRI. JSATS 60-80 day life.	Implant procedure  ⊠ Surgical □ Gastric □ Injected  Has staff completed a standard tagging training? (Y/N).  If yes, when? Yes. 2013, 2015.
Telemetry Receivers:  • Non-Core Receivers Deployed/Duration: November to July each year  Light of the control	
• Identify mission critical Core receiver locations (general description): SacTrawl – dual array, 2 lines of 3 receivers, Chipps Island – dual array, 2 lines of 5 receivers	
• Desired frequency of download (If Real-time data is required, indicate management directive): every 3 months	
Environmental/operating conditions (if applicable)	
Relevant discharge indices: varying flow	• TDG:
• Temperature: 8-20 deg C	• Treatment(s): year and CWT group
<b>Unique study characteristics</b> : Use of acoustic telemetry survival estimates to improve abundance estimates derived from another sampling methods.	