



Copper River, Prince William Sound Regional Marketing Association (CRPWSMA)

### Project Proposal Application Form

See <http://www.copperrivermarketing.org/project-proposals> for more information.

Project Proposal       Project Concept

Title: Imaging sonar deployment in the lower Copper River to enhance early season management

Submitted by Name: Robert W. Campbell

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I have reviewed the CRPWSMA By-Laws       Yes       No      (Yes response required for a complete application)

This Project Proposal will further the CRPWSMA Purpose (Article 1.2 of By-Laws) by meeting one or more of the following objectives. Check all boxes that apply.

- Develop regional seafood brands.
- Develop a marketing plan for the regional brands.
- Secure funds and to implement the marketing plan.
- Facilitate members' marketing programs through development of informational documents, market research & promotions.
- Promote, foster and encourage quality assurance standards to attain the highest industry standards.
- Promote improvements to the commercial fishing industry infrastructure in the region.

Proposed Project Start Date: 4/1/16 Proposed Project Completion Date: 6/30/16

#### Project Description:

The management of the Copper River salmon fishery is done in part with the results of the escapement estimate made at the ADF&G Miles Lake sonar weir, some 30 river miles north of the Gulf of Alaska. Transit times for the up-migrating salmon to reach the sonar site after entering the river are poorly constrained, but are estimated to be on order of one week. That lag between fish entering the river and their being counted confounds early season management and requires managers to be very conservative when choosing whether or not to open the fishery. Prince William Sound Science Center staff conducted a CRPWSMA-funded pilot study in 2015 to test the ability of imaging sonars to count fish in the lower Copper River. The study showed that fish could be effectively counted at a site near the inflow of the Clear Martin River (approximately 10 miles from the Gulf of Alaska). The goal of this project is to establish a temporary camp and sonar weir at the Clear Martin site surveyed in 2015, in order to produce operational counts of fish passage during the early portion of the 2016 Copper River salmon run (from approximately the first or second week of May until early June), and to make the sonar video available to ADF&G staff to use in their management decisions.

Project Description (continued):

Winter conditions at the Clear Martin site are likely extremely variable, and the camp and sonar will be established as soon as possible following spring breakup (most likely via airboat). The sonar (a DIDSON of the same type as used by ADF&G, rented from Florida International University) will be shore mounted from one of the cutbank sites identified during the 2015 surveys with an aluminum mount that will be fabricated for this project. Observations in 2015 suggest that ice is less of a concern at the Clear Martin than at Miles Lake, but woody debris may be an issue and the sonar will need to be tended. Video from the sonar will be broadcast out via the internet as it is collected. Preliminary tests of bandwidth done over the Cordova Wireless network in November 2015 suggest that full streaming video may not be possible with current data rates; some compression and/or abstracting may need to be done (e.g. recording for only part of every hour, as ADF&G does at their weir). Cordova Wireless will be improving their network in 2016 which could permit higher quality video, but that will lead to bandwidth becoming a significant cost (e.g. streaming 24/7 of low quality video will use ~100 gigabytes per month and will cost ~\$1000). The video stream will be made freely available through the internet to ADF&G staff (and any other interested parties) so that their staff will be able to do their own verification counts in near real-time.

Budget Requirement Summary (including description of other funding sources available):

Note: Budget information is only required for Project Proposals. Project Concepts may submit budget information if available.


Staff time is estimated as 3 weeks of Primary Investigator time to do the hiring, purchase/acquire and set up the equipment, and oversight of the project, and 2.5 person-months for a two person field crew at the sonar site (total cost: \$22125). Data telemetry is estimated at \$1000. Supplies include food and incidentals (\$20 per person per field day, \$1200 in total), miscellaneous camp supplies (\$1K) fuel and travel (\$4K; for vehicle/boat fuel and airboat charter, costs were estimated after a consultation with Jack Stevenson on charter rates). Equipment includes rigging and fabrication of the sonar mounts (\$2.5K), data logging laptops (\$1K), cellular modem (\$500) and network equipment (\$1K). Other costs include sonar rental (\$10K), permitting fees (\$1.6K) and a nominal charge to cover wear and tear on the camp equipment (\$1K). The PWS Science Center levies a 30% overhead fee on all direct costs, excluding equipment over \$5K. A full budget table broken out by cost categories is attached.

Cost sharing: PWSSC is a private nonprofit, and is entirely funded from external sources; it does not have internal funds to provide as match. A number of the operational supplies (vehicles, etc.) will be provided by PWSSC. Research into options to reduce the equipment costs of this project is ongoing.

Total Funds Required \$ 61,263.00

Amount Requested from CRPWSMA: \$ 61,263.00

Amount Available from Other Funding Sources \$ \_\_\_\_\_

Signature of Applicant:  Date Submitted: 1/27/16

CRPWSMA Board Use Only:

Proposal provided to Board for review (date): \_\_\_\_\_

Board Meeting to vote on Proposal (date): \_\_\_\_\_

Approved  Disapproved\*

Board President Signature: \_\_\_\_\_

Letter Sent to Applicant with Decision (date): \_\_\_\_\_

(\*An explanation will be provided in the letter for any proposals that are disapproved.)