

Draft Individual Review Form

Proposal number: 2001-K206-1

Short Proposal Title: Salmon Age Determination

1a) Are the objectives and hypotheses clearly stated? Yes

The traditional method of determining adult salmon age, length, involves uncertainty. The uncertainty is due to variability in growth rates over their life span. Their goal is to use additional information, scale analysis, to at least define the variability, and potentially reduce the uncertainty in determining adult salmon age.

1b1) Does the conceptual model clearly explain the underlying basis for the proposed work? Yes

Conceptually, there are many environmental factors contributing to variability in salmon growth and length. Using length to determine adult salmon age includes this variability. Scale analysis, an independent measure of age, may reduce the variability in aging adult salmon, and improve our ability to determine the effects of environmental factors effecting salmon populations.

1b2) Is the approach well designed and appropriate for meeting the objectives of the project? Not sure

Task 1 of the proposal describes the validation of the scale analysis technique. They must assess scale resorption to develop protocol for the detection of annulus reabsorption. The method to do this was not described. If annulus reabsorption is not resolved, the scale analysis may not be useful. If the scale analysis technique successfully verified, the approach and design for processing the archived samples are appropriate.

1c1) Has the applicant justified the selection of research, pilot or demonstration project, or a full-scale implementation project? Yes

This is a targeted research project. There is uncertainty in the aging of adult salmon using length. This proposal is designed to evaluate the uncertainty using an independent technique, scale analysis, and reduce the uncertainty in aging adult salmon.

1c2) Is the project likely to generate information that can be used to inform future decision making? Yes.

More accurate and precise age determination in adult salmon may improve our understanding of the factors that effect salmon populations as they emigrate through the Delta and in the ocean.

2a) Are the monitoring and information assessment plans adequate to assess the outcome of the project? Not sure

Again, a large part of the success of this proposal is assessing scale resorption to develop protocol for the detection of annulus reabsorption. The monitoring and assessment of this task were not described. Once this task is successfully completed, the monitoring and assessment for tasks 2 and 3 are adequate. They described quality control routines, including within and between variability.

2b) Are data collection, data management, data analysis, and reporting plans well-described, scientifically sound and adequate to meet the proposed objectives? Not sure

Again, the assessment of scale resorption is an important task 1. They did not describe what data would be collected to assess scale resorption. The data collected for tasks 2 and 3 are adequate and sound.

3) Is the proposed work likely to be technically feasible? Most of it

The assessment of scale resorption is an important task. The technique was not described. Tasks 2 and 3 are technically feasible.

4) Is the proposed project team qualified to efficiently and effectively implement the proposed project? Yes

Scale analysis is a standard technique in fisheries management. Tim Heyne has adequate training and experience in fisheries management.

Miscellaneous comments

In the proposed scope of work, three tasks are described. Later, in the Work Schedule, Task 1 is described as being completed using prior funding. It is not clear whether the total amount includes Task 1. It is not clear what amount of money is provided by Cost Shared Partners, and what they are products or services they are providing.

**Overall Evaluation
Summary Rating**

- Excellent
- X Very Good
- Good
- Fair
- Poor

Provide a brief explanation of your summary rating

[Note: in the electronic version, this will be an expandable field] The goals and objectives in this proposal are worthwhile and the results may improve our understanding of salmon life history and the factors that effect salmon populations. The assessment of scale resorption and annuli reabsorption are an important component of this proposal and should be addressed in further detail.