

**To:** Policy

**From:** Eastside Type N Riparian Effectiveness Project TWIG

**RE:** Budget and recommendations for implementation of Eastside Type N Riparian Effectiveness Study

**Date:** March 28, 2018

According to the revised LEAN guidelines, at the completion of the study design process, the TWIG is to provide CMER with recommendations for implementation of the project, and a budget to implement the study design. This document provides the recommendations and budget for the Eastside Type N Riparian Effectiveness Study.

### Recommendations

- **SAG oversight:** We recommend that this project be implemented under the guidance of SAGE, because it is the most relevant SAG for a study of Type N riparian prescription effectiveness in eastern Washington. We recommend that RSAG and ISAG be kept abreast of project decisions and milestones.
- **Project team:** We recommend inclusion of the TWIG members (Bill Ehinger, Chuck Hawkins, Tim Link, Greg Stewart, and Mark Teply) on the Project Team. We recommend that the University of Idaho lead the biophysical components (under Tim Link's direction) and Utah State University lead the ecological components of the study (under Chuck Hawkins's direction).
- **Data collection:** We have identified six study sites on private ownership in the Northern Rockies ecoregion (Spokane) area and are expecting to find 6 more in the Eastern Cascades Slopes and Foothills ecoregion (Ellensburg) area. Given the location of sites with respect to available staff or consultants, we recommend that field work for additional site selection be coordinated through the University of Idaho in Moscow with support from CMER staff. We recommend that equipment installation be coordinated through Tim Link's Watershed Science and Management Laboratory at the University of Idaho with support of the entire TWIG and WDOE staff (as needed). We recommend that ongoing data collection continue to be coordinated by University of Idaho personnel, with Chuck Hawkins providing additional support for summer data collection out of Utah State University. We recommend that Bill Ehinger and WDOE provide data storage, management, and QA support for all temperature, turbidity, and stream discharge data; Mark Teply and Cramer Fish Sciences provide QA/QC of all watershed, riparian, channel, wood, and shade field data collection and management; and that Greg Stewart provide GIS and survey support (including ground based LiDAR) to the project.
- **CMER staff role:** We recommend that Greg Stewart (CMER staff) act as the scientific liaison between CMER/SAGS and the Project team, and continue to act as a point of contact with landowners. In addition, Greg would be responsible for providing GIS and survey support to the project, providing oversight and QA of data, and contributing to statistical analysis and report writing.

### Budget

The following budget is our best estimate of funds needed to implement the study. It includes the following assumptions:

- 12 sites composed of 6 pairs, with three pairs in the Spokane area (already obtained) and three pairs in the Ellensburg/Yakima area (currently being sought).

- The budget assumes that monitoring Ellensberg area sites begins later than the Ellensberg area sites which allows ~ \$130,000 in equipment costs to be deferred from FY2018 into FY2019.
- CMER staff will be available at no direct charge to the project budget.

ENREP Budget by fiscal year and task

	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Equipment</b>	\$229,035	\$204,648	-	-	-	-	-	-
<b>University of Idaho</b>	\$56,645	\$339,871	\$353,466	\$367,605	\$382,309	\$397,601	\$154,195	\$83,767
<b>Utah State University</b>		\$218,477	\$285,545	\$289,173	\$292,962	\$216,711	\$150,000	\$75,000
<b>Washington Dept. of Ecology</b>	\$12,000	\$91,000	\$40,800	\$41,616	\$42,448	\$43,297	\$87,500	\$43,750
<b>Cramer Fish Sciences</b>		\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$87,500	\$43,750
<b>Total</b>	\$297,680	\$863,996	\$689,811	\$708,394	\$727,719	\$667,609	\$479,195	\$246,267

Total Project Cost

\$4,680,671