

Quantified Conservation Practices

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Over the past 30 years, there have been a wealth of successful restoration projects along with great leaps in the engineering and design of river restoration solutions. However, the restoration community is still struggling to develop and implement methods for economically and physically quantifying the effects of long-term restoration actions within a regulatory and economic framework. The Freshwater Trust uses peer-reviewed ecological/economic models to calculate outcomes of ecosystem improvement actions (including, but not limited to, flow restoration and riparian shade planting efforts) using baseline assessments and a functional quantification of the “ecosystem uplift” that occurs from the actions.

The Freshwater Trust compliments its predictive modeling work with in situ quantitative data collection and monitoring of pre- and post- restoration action implementation to calibrate the models and to fully capture the effects of the community’s restoration efforts. Data collection efforts encompass measuring nutrient concentrations at draining locations (in Idaho), riparian species composition and health (in Oregon), and photo point surveys to measure long-term effects of riparian plantings. These measurements enable adaptive management of current and future restoration activities, to inform what practices have the greatest effect on river temperature and nutrient concentrations in the long term.