

To: Forest & Fish Policy
From: Riparian Scientific Advisory Group (RSAG)
Date: August 6, 2015
Re: Policy approval of the Remote Sensing Literature Synthesis and Extensive Monitoring Matrix for Evaluating the Use of Remote Sensing for Extensive Monitoring

Purpose of Memorandum

The purpose of this memorandum is to seek Policy approval of:

- 1. the Remote Sensing Literature Synthesis and Extensive Monitoring Matrix for Evaluating the Use of Remote Sensing for Extensive Monitoring and*
- 2. authorization to begin development of a Riparian Forest Extensive Monitoring Pilot Project.*

Statement of the Problem

TFW Policy Committee does not currently have a scientific basis for characterizing the existing status of riparian forests (extensive monitoring) or understanding how the structure of these forests are changing over time in response to the Forest and Fish based regulations. This limits their ability to propose changes in riparian management that both improve and maintain riparian function (e.g. water quality, aquatic biota etc.) and protect these riparian ecosystems through adaptive management while maintaining a viable timber industry.

Introduction

The TFW Policy committee asked CMER (RSAG) to evaluate methods for providing a quantitative baseline inventory of riparian stand composition on FFR lands that is accurate and spatially representative. TFW Stakeholders have identified the need for a cost effective mechanism to measure baseline status as well as trends (Extensive Riparian Status and Trends Monitoring Program) of riparian forests at both a scale and level of detail that will inform adaptive management decision.

Specifically, this project seeks to understand the relative benefits of using remotely assessed riparian data to answer questions relating to status, trend, ecological function, resource risk, and extrapolation of findings (i.e., spatial context) from CMER effectiveness studies.

The purpose of the Extensive Riparian Status and Trends Monitoring Program is to provide data needed to evaluate landscape-scale effects of implementing forest practices riparian prescriptions

and to provide data needed by state and federal regulatory agencies to provide assurances that forest practices rules meet Clean Water Act requirements and achieve riparian resource objectives. Critical questions for the Extensive Riparian Status and Trends Monitoring Program pertaining to monitoring riparian vegetation are:

- What is the current status of riparian conditions and functions of streams on a statewide scale?
- What are current riparian stand attributes on FP HCP lands, and how are stand conditions changing over time as the forest practices prescriptions are implemented and riparian forests grow?

The projects of this program are envisioned to obtain an unbiased estimate of the distribution of riparian stand characteristics across FP HCP lands; and with resampling, the projects will identify trends in these indicators over time. *This project would address only the issue of assessing the status and trends of riparian vegetation.*

Recommended Study Approach

CMER (RSAG) recommends the extensive monitoring project would pursue:

- A pilot study to identify, compare, and validate stand classification methods and include an assessment of the relative costs and performance of different imagery sources against traditional field methods. The study will compare a variety of remote sensing methods as recommended in the Moskal and Cooke report (submitted with this memorandum) and approved by Policy. The specific methods to be evaluated were selected based on their capability of providing, ecologically meaningful vegetation strata. The pilot study would examine the relative benefits and limitations of these methods for both westside and eastside forest types at multiple scales.