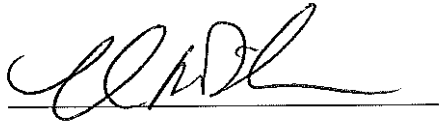




File: FOR 10285-30/TRD Research sites

**Order to identify a resource feature adjacent to Mayson Lake and in the Opax Mt. – Isobel Lake area within the Kamloops Forest District aka Thompson Rivers District**

Pursuant to section 5(1)(c) of the *Government Actions Regulation* under the *Forest and Range Practices Act*, I hereby identify the area specified on the attached map as a resource feature - Crown land used for research or experimental purposes.



---

Kevin Dickenson  
Region Executive Director  
Thompson Okanagan Region  
Ministry of Forests, Lands and Natural Resource Operations

DECEMBER 23, 2013

Date signed

## **Supporting Document for the Mayson Lk. and Opax-Isobel Research Areas**

**December 17, 2013**

The following information is provided as support to the order identifying the Mayson Lake and Opax-Isobel Research Areas as resource features. This information has been prepared by provincial agency staff responsible for the research project and is intended to provide an understanding of the goals and expected management for the area.

This document is not legal direction and is not part of the order.

### **The Mayson Lk. Research Area**

#### **Background**

The Mayson Lake project was originally established to quantify hydrologic recovery following the removal of mature forest canopy. The projects at the site were designed to provide a scientific basis for the evaluation of stand-level response to changes in forest cover in watershed assessments, and technical information for the development of rate of cut guidelines. Since being established in 1994, the focus has expanded to include summer water balances and the effects of fire and mountain pine beetle on snow accumulation and melt. The Mayson Lake facility is unique in the southern interior of BC as no other sites have been established that provide similar long-term information. In direct funding, approximately 0.5 million plus 10 publicly funded person years of staff time have been invested at the Mayson Lake site (see Figure 1).

#### **Purpose**

The Mayson Lake site provides long-term environmental monitoring and forest inventory data in an area representative of the Thompson Plateau with few other climate and snow monitoring stations. This data provides important background information for understanding stand-scale water balances and snow processes, the basis for evaluating the effects of forest cover loss and regrowth on water yield and spring runoff. Research at the site is critical to the calibration of watershed-scale hydrologic models that are being used to predict cumulative effects and watershed response to climate change, forest die-off, and forest regeneration. Ongoing research advises forest development planning and the development of criteria for sustainability. This site also provides opportunities for graduate student research and the extension of results to operational staff. The results of research at Mayson Lake have been presented during field workshops, in lectures, at scientific conferences and have been published in scientific journals and operational extension notes.

#### **Implementation**

Prior to conducting primary forest activities<sup>1</sup> within the Mayson Lake Research Area, agency research staff with the Ministry of Forests, Lands and Natural Resource Operations responsible for managing the Mayson Lake site should be consulted regarding planned activities to help ensure the objectives of the research area are not compromised by the planned activity. Plans that

are inconsistent with the objectives of the Research Area or that may otherwise impact its effectiveness would likely require an exemption under the FRPA to permit the activity. (Note: <sup>1</sup> “Primary forest activities” are defined in the FRPA *Forest and Range Practices Regulation* as: (a) timber harvesting; (b) silviculture treatments; (c) road construction, maintenance and deactivation).

Where natural disturbance events (e.g. windthrow, wildfire, insect outbreak, etc.) require management actions, it is recommended that provincial government research staff in the Thompson Okanagan Regional Office of MFLNRO be contacted to assist in designing actions that are more likely to be compatible with the objectives for the Research Area. Such communication will help maintain the long-term integrity and potential of the site.

Periodic reporting on activities and research results conducted within the Research Area is achieved through technical extension notes and scientific publications. An overview of the Mayson Lake research site and the research being conducted there can be found at the following website:

[http://www.forrex.org/sites/default/files/publications/articles/Streamline\\_Vol14\\_No1\\_Art7.pdf](http://www.forrex.org/sites/default/files/publications/articles/Streamline_Vol14_No1_Art7.pdf)

## **The Opax – Isobel Research Area**

### **Background**

The Opax Mt. project was initiated in 1992 and the Isobel project in 2001 to address concerns relating to the management of dry forest ecosystems in the Southern Interior of BC. The two sites are complementary and located within 2 km of each other, representing a comprehensive series of treatment options for dry interior Douglas-fir ecosystems (see Figure 2). The impetus for these studies came from concerns about timber quality and value, establishing conifer regeneration following harvest and the need to maintain some dry forests in an open canopy condition to facilitate urban-wildland interface fuel management and a vigorous understory for livestock and wildlife. In direct funding, approximately 2.6 million dollars plus 26 publicly funded person years of staff time have been invested at the two project sites.

### **Purpose**

The Opax Mt. project was designed to evaluate the consequences of harvest intensity (from 14 to 62% of stand volume removal) and pattern (uniform individual tree selection to patch cuts ranging in size from 0.1 to 1.6 ha.) on the residual stand and regeneration. The initial key objective of the project was to evaluate management options for diminishing the severity of western (*Choristoneura occidentalis*) spruce budworm attack in these forests and related tree survival, growth and deformity. In addition to monitoring damage to conifers by budworm in relation to treatments, the Opax project addresses a broader range of forest management issues including conifer regeneration, understory response to harvest, the effects of livestock grazing on regeneration and understory vegetation, windthrow, wildlife habitat and biodiversity. The Isobel project (initiated in 2001) extends the harvest-regeneration treatments at the Opax site to include lower post-harvest merchantable retention (down to 20%), multiple conifer species response to site preparation and prescriptions to create and maintain prolonged open canopy conditions in

dry Douglas-fir (e.g., IDFxh) forests. The site provides unique opportunities for long-term environmental monitoring of a diverse set of indicators reflecting forest and ecosystem health to provide forest managers with a better understanding of the costs, benefits and consequences of harvest and reforestation treatments. FLNRO staff continue to monitor the response to treatments at the site and to provide training and extension opportunities to operational staff from government, industry and NGO groups. The site requires periodic operational harvest entries to remain pertinent and viable. Preparation for the second pass harvest of some treatments is underway and expected to occur in the next 3-5 years.

*Future opportunities.* An important aspect of the Opax and Isobel research trials is the ongoing implementation of results into management practices in a surrounding “demonstration area” adjacent to the experimental treatments. Results from the first 20 years of study have been incorporated into the development of a “variable patch retention” harvest planned for blocks near the main research/monitoring area to be developed by BCTS in 2014. Implementing treatments consistent with research results from the experimental trials provides an extension opportunity to illustrate the viability of integrating results from the research installations into operational practices.

The results of research at the Opax - Isobel site have been presented during field workshops, in lectures, at scientific conferences and have been published in scientific journals and extension notes intended for an operational audience.

## **Implementation**

Prior to conducting primary forest activities<sup>1</sup> within the Opax - Isobel Research Area, agency research staff with the Ministry of Forests, Lands and Natural Resource Operations responsible for managing the Opax – Isobel research site should be consulted regarding planned activities to help ensure the objectives of the research area are not compromised by the planned activity. Plans that are inconsistent with the objectives of the Research Area or that may otherwise impact its effectiveness would likely require an exemption under the FRPA to permit the activity. (Note: <sup>1</sup> “Primary forest activities” are defined in the FRPA *Forest and Range Practices Regulation* as: (a) timber harvesting; (b) silviculture treatments; (c) road construction, maintenance and deactivation).

Where natural disturbance events (e.g. windthrow, wildfire, insect outbreak, etc.) require management actions, it is recommended that provincial government research staff in the Thompson Okanagan Regional Office of MFLNRO be contacted to assist in designing actions that are more likely to be compatible with the objectives for the Research Area. Such communication will help maintain the long-term integrity and potential of the site

Periodic reporting on activities and research results conducted within the Opax – Isobel Research Area is achieved through technical extension notes and scientific publications. An overview of the Opax – Isobel research site and the research being conducted there can be found at the following website: <http://www.for.gov.bc.ca/rsi/research/opax/index.htm>

NOTE: There is no intent to alter or add fencing in either research installation as a result of the GAR order.

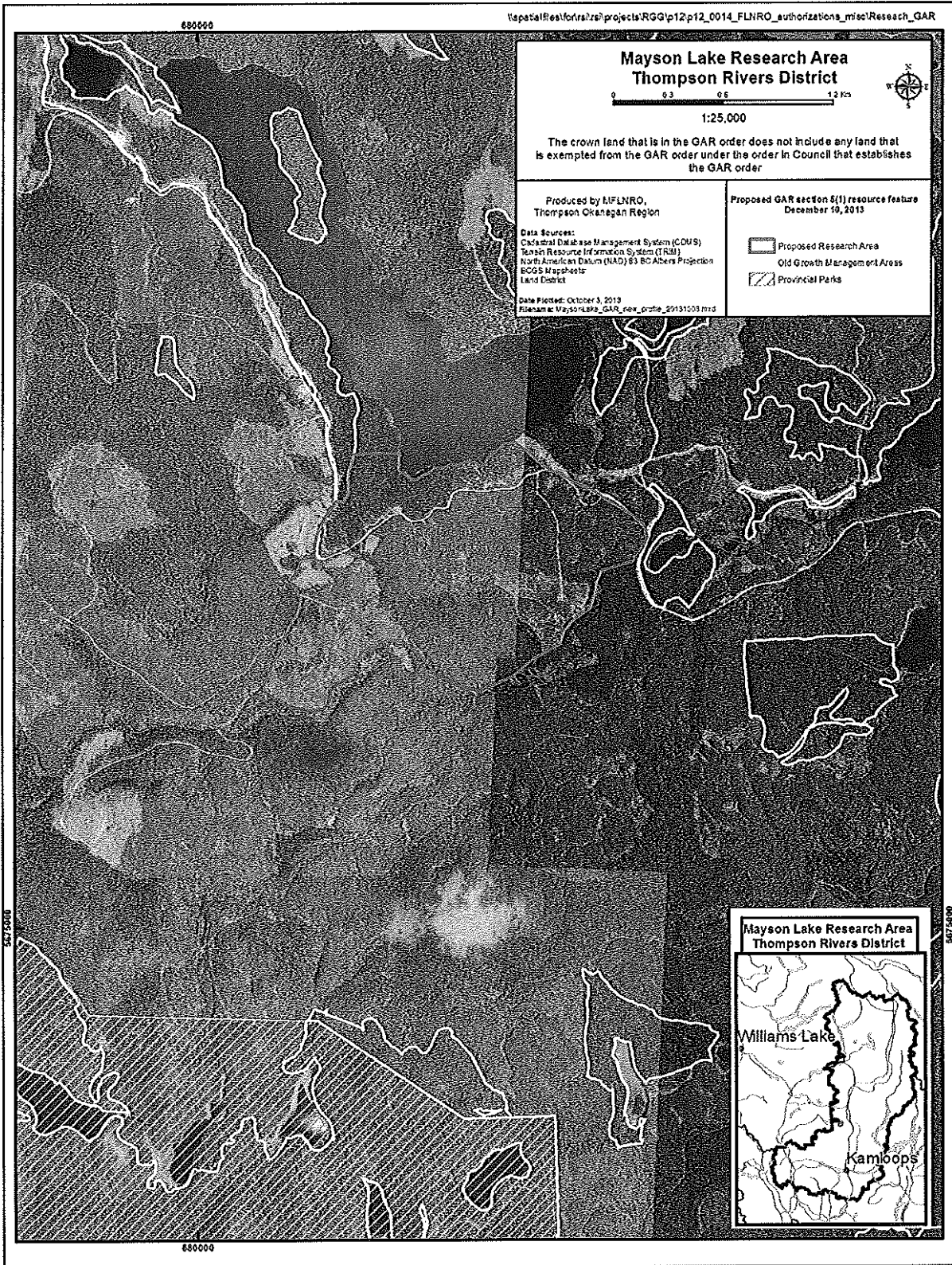


Figure 1. Outline of the Mayson Lake research site and location of the site within the Thompson Rivers District.

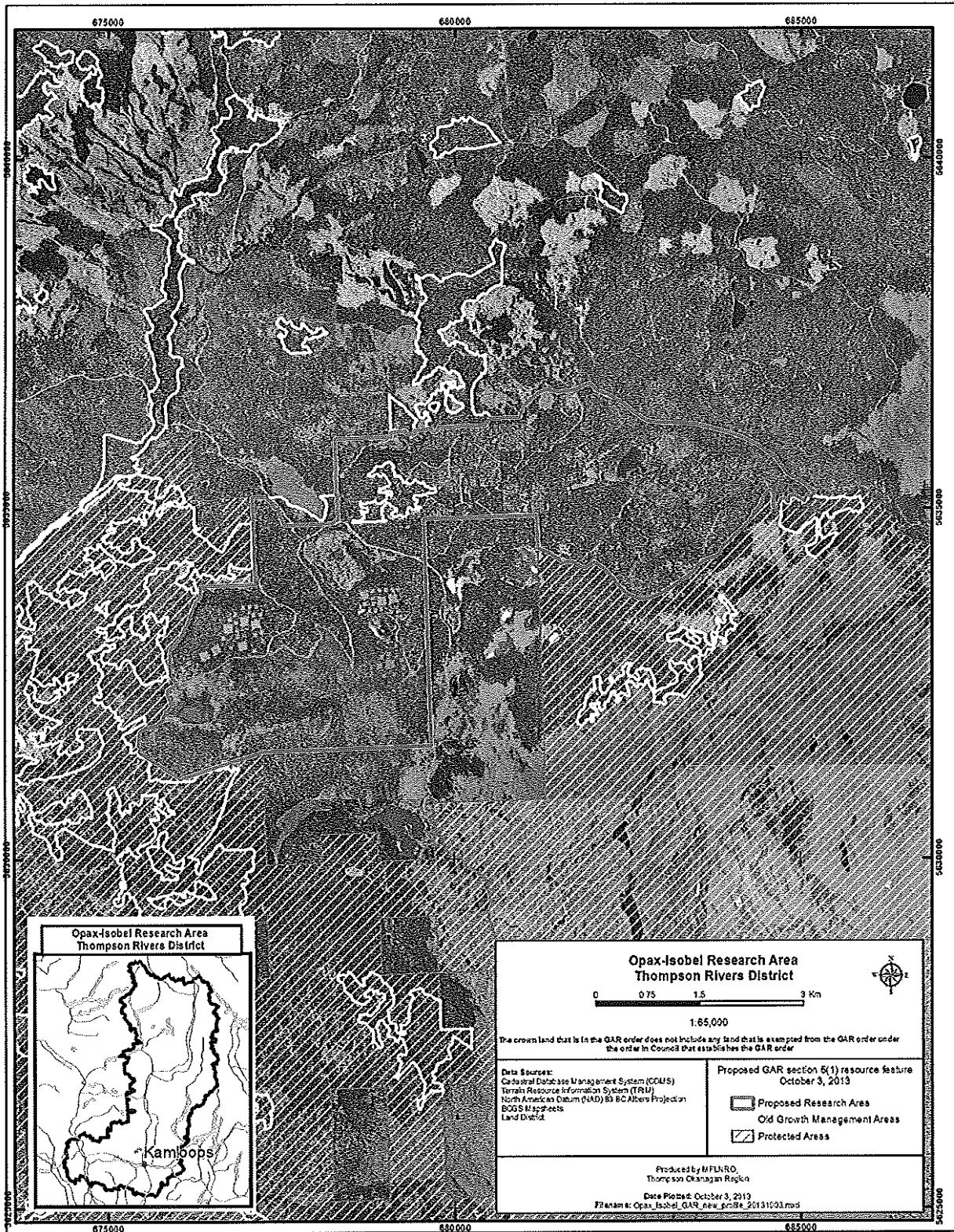


Figure 2. Outline of the Opax – Isobel research area and location of the site within the Thompson Rivers District.