

# Forest and Range Evaluation Program Year in Review 2015-2016



Ministry of  
Forests, Lands and  
Natural Resource Operations

## INTRODUCTION

As part of the British Columbia Ministry of Forests, Lands and Natural Resource Operations' Forest and Range Evaluation Program's (FREP) commitment to public accountability, this annual review summarizes FREP activities and expenditures for the 2015-2016 fiscal year, providing details regarding the program's return on investment.

Highlights for 2015-2016 include:

- Completing 701 resource stewardship monitoring assessments, Google Earth assessments for soils across the province and wildlife habitat area assessments
- Publishing two extension notes and three reports
- Holding a two-day FREP continuous improvement workshop
- Training and mentoring for riparian, water quality, biodiversity, visual quality and cultural heritage resource stewardship monitoring assessments
- Integrating work between the Ministry of Forests, Lands and Natural Resource Operations and the Ministry of Environment, as well as across Ministry of Forests, Lands and Natural Resource Operations branches, programs, regions, and districts
- Development work on the stand-level Wildlife Monitoring Protocol and wildlife habitat areas assessment procedures and the landscape-level biodiversity assessment approach
- Provincewide engagement in the development of a new three-year program strategy, focused on achieving statistically sound, five-year rolling monitoring data that will directly support forest management and practice improvements
- Ongoing program focus on continually enhancing collaboration between Resource Practices Branch and natural resource regions and districts

The following sections describe FREP's resource stewardship monitoring and evaluation initiatives and provide some recent results. For detailed information about FREP, the status of each resource value, or to view the protocols and reports, go to:

<http://www2.gov.bc.ca/gov/content?id=F799814F5E004CA0A02A02D63CB69E55>.

## KEY ACCOMPLISHMENTS IN 2015-2016

### Resource Stewardship Monitoring Implementation

#### *Stand-level Biodiversity*

Stand-level biodiversity monitoring during the 2015 field season took place on 157 cutblocks. These blocks were harvested between 2012 and 2014. In addition, five blocks of baseline data were collected in the Robson Valley Timber Supply Area. Since 2006, a total of 2,496 sites have been assessed.

#### *Landscape-level Biodiversity*

Significant progress has been made on a methodology to assess landscape-level biodiversity. Seral stage (age class), with a focus on the mature and old seral stages, will be the primary measure (observed distribution of seral stage, theoretical natural distribution of seral stage and degree of protection from resource development). The seral stage definitions used in the database are based on the 1995 Biodiversity Guidebook to ensure consistency at a provincial scale. The reporting units include biogeoclimatic variant, natural disturbance type, landscape unit, watershed and management unit. The database will be posted to the FREP public website in 2016-17. Reporting out in multiple resource value assessment reports is planned to begin near the end of 2016.

### **Fish/Riparian**

In 2015, 138 streams were sampled, bringing the total number of streams assessed since 2006 provincewide to 2,192. The largest stream in or near randomly selected and recently harvested cutblocks is sampled. The majority of streams sampled were stream classes S3 (streams that are 1.5m-5m wide and either fish bearing and/or in a community watershed and S6 (streams three meters or less in width and non-fish bearing).

### **Cultural Heritage Resources**

During 2015, cultural features were assessed within, or adjacent to, 52 cutblocks in seven districts. To date, including the data from operational pilots, 316 cutblock assessments have been completed. A traditional ecological knowledge project was initiated with Lake Babine Nation and will be ongoing in 2016-17.

### **Stand Development Monitoring (Timber Resource Value)**

In the 2015 field season, 13 districts participated, collecting 95 samples. This monitoring provides key information on the productivity and health of free-growing forest stands, including stand density and stocking, levels of pest incidence, and current status of stand health. An update of the stand development monitoring protocol began in 2015-16 and will be completed in 2016-17.

### **Water Quality**

In 2015, water quality monitoring originated at 128 cutblocks, resulting in 604 site assessments. Since this monitoring began in 2008, water quality has been assessed for 1,205 cutblocks and associated road networks/stream crossings (6,040 sites in total). Additional water quality work included refining procedures for community watersheds.

### **Visual Quality**

In 2015, 96 visual quality samples were collected. These 2015 samples came from 10 natural resource districts. The 2015 samples are part of 606 samples collected for cutblocks in scenic areas regulated under the *Forest and Range Practices Act (FRPA)*. In comparison, 249 scenic areas were assessed from 2006 to 2008 on *Forest Practices Code* cutblocks within scenic areas with recommended visual quality classes or visual quality objectives.

### **Forage / Range Health**

In 2015, range program staff completed 292 upland, 52 stream, and 116 wetland assessments in 11 natural resource districts. Monitoring of areas affected by livestock allow the range program to qualify for funding to make necessary improvements.

### **Soils**

In 2015, the Province of B.C. acquired access to Google Earth's high resolution air photos. With these, the soils program is able to perform an assessment of permanent and temporary access throughout the province using 4000 "Google Earth tiles" and high resolution imagery. This involved developing an algorithm for road classification and use of an expert elicitation process to refine road classification and to identify other issues with the road networks. Preliminary work was done in 2015-2016 and is expected to be reported out in winter 2016-17.

### **Wildlife**

Methodology for office-based assessment of condition and effectiveness of Wildlife Habitat Areas (WHAs) was developed and piloted in three areas. WHA field monitoring protocols for four bird species in the Okanagan were also developed. Development of a field-based protocol for monitoring stand-level wildlife habitat to complement the stand-level biodiversity protocol was initiated and will be completed in 2016-17.

### **Resource Features**

This value is specific to karst (limestone) features such as sink holes, cave entrances and sinking streams. The draft protocol was field tested in 2015. The karst protocol will be finalized in 2016-17.

## Recreation

FREP did not conduct any recreation monitoring in 2015.

## Continuous Improvement Workshop

A continuous improvement workshop was held Feb. 10 and 11 in Richmond. Approximately 85 people attended including ministry field staff, regional staff and branch staff and representation from industry, First Nations, the Forest Practices Board and the Association of BC Forest Professionals. Day one of the workshop focused on continuous improvement of communications with a focus on enhancing industry and First Nations engagement, finalization of a new, three-year strategic plan for FREP and advancing FREP results within the FRPA framework. Day two's focus was on professional development and included an update on the new wildlife monitoring approach, the use of Google Earth imagery for soils assessment, fish sensitive watershed assessment, range monitoring results, an update on electronic data capture (FileMaker Pro on iPads), the use of georeferenced PDFs on iPads and the use of drones for digital imager.

## People-Focus: Program and District Recognition

The Forest and Range Evaluation Program owes much of its success to dedicated staff in districts around the province.

The Assistant Deputy Minister's Award for Excellence in Resource Stewardship Monitoring is given to the district demonstrating the highest level of contribution during the program's monitoring field seasons. The award for the 2014 field season was given to the Okanagan Shuswap Natural Resource District.

The winners of the 2016 FREP photography contest were announced the continuous improvement workshop. Recognition for best overall photograph went to **Heather Rice and Keith Boyes** from the Okanagan Shuswap Natural Resource District, with a wildlife photo entitled "Feed Me!" **Leanne Puhallo** was the recipient of the Stephanie Wilkie peer award for her many years of dedicated and enthusiastic contributions to FREP.

## Training

In 2015, FREP delivered training and mentor training for the following resource values: cultural heritage, fish/riparian, stand-level biodiversity, visual quality, and water quality. Resource value team leads and trainers delivered fish/riparian training sessions, with 31 staff receiving full training and 56 receiving refresher/mentor training. For stand-level biodiversity training, 16 district staff received full training and 33 received refresher/mentor training. The water quality resource value team delivered full training sessions to 56 district staff and refresher/mentor training to 29 staff. Thirty district staff attended cultural heritage resource training. For 2015, 24 district staff received visual quality resource value training. In 2015, Range Branch stewardship staff completed formal and information training for monitoring as well as related training for FileMaker forms, calibration, rangeland health and forage supply methodology.

## Data and Information Management

During the 2015 field season, pilot digital data collection was conducted for water quality, stand development monitoring and visual quality. This begins the FREP five-year data management plan and the eventual phasing out of paper cards for data collection. The FREP information management system was moved to new infrastructure in 2015 and underwent minor maintenance.

## Communications

FREP continued to enhance its communication efforts throughout the 2015-2016 fiscal year. In addition to communications led by Resource Practices Branch staff, district staff used the communication methods that best suited their local client situation and needs. Some example of communication events included:

- District staff online licensee meetings
- Direct conversations with licensees discussing the data collected on their harvest areas
- Resource value team lead presentation to an annual meeting of Western Forest Products

- Resource Practices Branch presentations to district managers and regional management teams

In 2015, work continued on the enhancement of the multiple resource value assessments (MRVA) reports. Final drafts of two enhanced MRVA reports were completed and are in review process. The Lake Babine First Nation and Wet'suwet'en First Nation enhanced MRVA reports will be finalized in late 2016. A shorter version of an MRVA report was produced for a licensee as a communication tool.

## Strategic Planning

A new FREP three-year strategic plan was approved in fiscal 2015-16. This plan addresses how FREP will fully implement monitoring for all 11 FRPA resource values and fill existing data gaps. The plan was largely based on a scientific/statistical review of FREP sampling design, field staff, specialist and management input, and feedback received at the 2015-16 FREP continuous improvement meeting. The strategic plan is posted on the FREP website.

## FREP Reports

### *2014-15 FREP Year in Review*

This annual review summarizes FREP activities and expenditures for the previous fiscal year.

### *ADM Resource Stewardship Report*

In 2015, the ADM Resource Stewardship Report was completed using the multiple resource value assessment methodology and reporting structure. This year's report summarized value results at the regional level where sufficient data was available.

### *Extension Notes*

Extension Note #33: Establishing a Commercial Crop of Trees on Temporary Access Roads in the BC Interior

This extension note outlines simple and direct ways for resource professionals, managers, and decision makers to address long-term difficulties associated with managing abandoned roads. It also provides managers and enforcement personnel with information regarding the meaning of "unsuitable for rehabilitation."

Extension Note #36: Livestock Grazing and Habitat Needs of Grassland-Nesting Birds

This extension note is a companion to FREP Report #36: Cover Requirements and Habitat Needs of Grassland-Nesting Birds in the Cariboo-Chilcotin. It is an overview of the habitat needs of grassland-nesting birds and how the changes to that habitat through forest encroachment, livestock grazing and introduction of domestic forage grasses are leading to significant changes. Continuous improvement opportunities are presented to improve the condition and health of grassland habitat and the benefits it provides for livestock producers.

## Reports

FREP Report #39: Watershed Status Evaluation: An Assessment of 71 Watersheds meeting BC's Fisheries Sensitive Watershed Criteria

This pilot project assessed the watershed indicator risk status of 71 watersheds across most of British Columbia's natural resource regions. Measured values for as many as nine habitat indicators within surveyed watersheds were compared to indicator benchmarks to assess risk status for each fisheries-sensitive watershed (i.e., GIS-derived watershed values relative to indicator benchmarks). The defined indicator benchmarks represent one of three potential risk levels associated with fish habitat impact: (1) low, (2) moderate, and (3) high.

FREP Report #40: Vegetation Response to Post-Wildfire Seeding: Bull Canyon Wildfire

This study examined the forage plant community response and level of weed invasion to test the appropriateness of seeding into high and moderate severity vegetation burn areas and moderate and low severity soil burn areas.

## FREP FUNDING AND EXPENDITURES FOR 2015-2016

*The table below shows an approximate breakdown of FREP expenditures for 2015-2016.*

| <b>Expenditure Category</b>   | <b>\$</b>        |
|---|------------------|
| Developing monitoring protocols, pilot testing, and implementation                          | 350,000          |
| Training  | 114,000          |
| Program support, planning, development, and extension                                       | 37,000           |
| Quality management (including data validation, verification, and management)                | 100,000          |
| <b>Subtotal:</b>  | <b>610,000</b>   |
| Field-based operating costs (e.g., helicopter, boat access costs) [estimated]               | 192,000          |
| Annual salaries associated with FREP (estimate of combined operations and provincial staff) | 768,000          |
| <b>Total</b>  | <b>1,561,000</b> |

## KEY FREP INITIATIVES FOR 2016-2017

- Continued focus on efficiency in the delivery of FREP activities, with a particular focus on supporting districts with achievable monitoring targets and adequate resourcing
- Completing district-based targets for monitoring assessments per district, these targets are dependent on past sampling within a particular district. The goal is to achieve 30 samples for each value over a rolling five-year window
- Leading the development and publication of the new Assistant Deputy Minister Stewardship Report (FREP and other stewardship data)
- Resource stewardship monitoring for biodiversity, fish/riparian, water quality, cultural heritage, timber (stand development monitoring), visual quality, forage, resource features, and soil resource values
- Continuing quality assurance activities, including training, mentoring, site checks (re-sampling of some sites to ensure accuracy of assessments), and data validation and verification
- Communicating results via reports, extension notes, and other communication products, such as training videos
- Reviewing and updating the FREP strategic plan, and work and improvement plan
- Ongoing updating of FREP multiple resource value assessment reports to support district needs
- Completion of the natural resource sector multiple resource value assessment pilots that will use the multiple resource value assessment concept and expand upon it with additional monitoring data
- Enhanced collaboration with cumulative effects initiatives
- Inclusion of FREP landscape-level biodiversity assessment in ongoing reporting
- Completion of the karst and wildlife cards and protocols
- Completion of digital data collection for water quality, cultural heritage, visual quality and riparian resource values
- Completion of phase one of the cultural heritage traditional ecological knowledge project

## MORE INFORMATION

For additional information about FREP, please refer to our website at:

<http://www2.gov.bc.ca/gov/content?id=F799814F5E004CA0A02A02D63CB69E55>