

The FREP Vision:

Sustainability of Forest and Range Resources through Science and Stewardship

The FREP Mission:

To be a world leader in resource stewardship monitoring and effectiveness evaluations; communicating science-based information to enhance the knowledge of resource professionals and inform balanced decision making and continuous improvement of British Columbia's forest and range practices, policies, and legislation.

FREP

NEWSLETTER

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2012/2013 Year In Review

INTRODUCTION

The British Columbia Ministry of Forests, Lands and Natural Resource Operations' Forest and Range Evaluation Program (FREP) actively continued its foundational role of assessing the effectiveness of forest and range practices under the *Forest and Range Practices Act (FRPA)* during the 2012/2013 fiscal year. Through evaluation and monitoring activities, the program determines whether practices are achieving the provincial government's stewardship objectives for 11 *FRPA* resource values, with a focus on ecological function and social considerations. An important goal of FREP is to produce current, high-quality information that supports the continuous improvement of policy and management practices, in the interest of all British Columbians, and strengthens professional reliance.

As part of FREP's commitment to public accountability, this annual review summarizes FREP activities and expenditures for the last fiscal year, providing details for those interested in the program's return on investment. During 2012/2013, resource stewardship monitoring took place in 22 of the province's 24 districts. Results are now available for this monitoring, including biodiversity, riparian (fish), water quality, visual quality, cultural heritage, timber resources, and forage (range). With over 7 years of province-wide implementation, FREP monitoring results have successfully informed policy development, timber supply reviews, certification requirements, and on-the-ground practices.

Highlights for 2012/2013 include:

- Completing 998 resource stewardship monitoring assessments
- Publishing three FREP reports and three extension notes, as well as the *Assistant Deputy Minister Resource Stewardship Report* (formerly Chief Forester's Report) and three FREP regional posters
- Holding the ninth annual FREP Continuous Improvement Workshop, this year using Live Meeting Conference Services
- Integrating work between the Ministry of Forests, Lands and Natural Resource Operations and the Ministry of Environment, as well as across Forests, Lands and Natural Resource Operations branches, programs, regions, and districts
- Training and mentoring for visual quality, riparian, water quality, biodiversity, stand development monitoring, and cultural heritage resource stewardship monitoring assessments
- Designing and developing district stand development monitoring summaries
- Conducting three Resource Value Team Leader "road shows" across the province that connected with over 100 people

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- Producing 14 district-authored reports and extension notes
- Completing Multiple Resource Value Assessment pilots and reports for the Lakes and the Merritt timber supply areas
- Implementing the tailed frog monitoring protocol in the Cascades and Chilliwack natural resource districts
- Pilot-testing FREP protocols to assess industrial and development impacts, such as those from hydro transmission lines, pipelines, mining roads, placer mines, and highways
- Working with cumulative effects teams in several areas, including data collection and landscape-level biodiversity

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: www.for.gov.bc.ca/hfp/frep. A more detailed summary of FREP monitoring results and associated recommendations for continuous improvement opportunities is presented in the *Assistant Deputy Minister Resource Stewardship Report: Results and Recommendations of the Forest and Range Evaluation Program*.

KEY ACCOMPLISHMENTS IN 2012/2013

Resource Stewardship Monitoring Implementation

Stand-level Biodiversity

Stand-level biodiversity monitoring during the 2012 field season took place on 132 cutblocks. These blocks were harvested between 2009 and 2011, predominantly governed under legislative requirements set out under the *FRPA*. Over the last several years of biodiversity monitoring, approximately 2000 sites have been assessed and five extension notes plus other extension products have been produced.

Landscape-level Biodiversity

Three indicators are currently used to report on the status of landscape-level biodiversity: (1) leading tree species by site index (a surrogate for site quality), (2) age class, and (3) interior old forest. A Landscape-level Biodiversity model has been developed to analyze provincial data and produce both spatial and tabular output for these indicators. Significant progress during 2012/2013 saw the rebuilding, troubleshooting, and updating of a second version of this model.

Fish/Riparian

In 2012, an additional 131 streams were sampled, bringing the total number of streams assessed province-wide to approximately 2000. Streams (all classes S1–S6) were randomly sampled from a population of cutblocks harvested under the legislative requirements set out in the *FRPA* (predominantly) and the *Forest Practices Code*. The majority of streams sampled fell into the smaller stream classes (S4 and S6), which is consistent with the proportional abundance of these streams found in nature. The Riparian Management Monitoring Protocol provides a description of stream classes and the assessment procedures. Results are available on the FREP website.

Cultural Heritage Resources

During 2012, the second year of full implementation for cultural heritage resource monitoring, 106 sites and features were sampled within, or adjacent to, 41 forest cutblocks in seven districts. To date, including the data from operational pilots, 149 cutblock assessments have been completed. The protocol for cultural heritage resource stewardship monitoring provides a detailed description for assessing this resource value. Several cultural heritage extension products are available on the FREP website.

Stand Development Monitoring (Timber Resource Value)

Full implementation of stand development monitoring took place for a second year during the 2012 field season. Fifteen districts participated, collecting approximately 165 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. This information has been used to make silviculture decisions (e.g., refining species, species mixes, and planting densities), update site productivity estimates and inventory labels, and provide forest health status data for several timber supply reviews. Results are available on the FREP website.

Water Quality

In 2012/2013, water quality monitoring was conducted for 131 cutblocks, resulting in 643 site assessments. Since this monitoring began in 2008, water quality has been assessed for 784 cutblocks and associated road networks (4066 sites in total). The FREP Water Quality Protocol has also been adopted by several British Columbia forest licensees working in community watersheds to meet their sustainable forest management certification requirements. Water quality extension, including results to date, are available on the FREP website.

Visual Quality

From 2006 to 2008, visual samples were collected for 249 Forest Practices Code cutblocks within scenic areas with recommended Visual Quality Classes or Visual Quality Objectives. The first visual quality extension note on *Forest Practices Code*-related results was produced in 2010. From 2008 to 2012, visual samples were collected for 343 cutblocks regulated under the *FRPA* (127 cutblocks in 2012). A visual quality extension note on *FRPA* results is planned for publication in 2013.

Forage/Range Health

In 2012, range program staff completed inspections at 45 stream, 141 upland, and 52 wetland sites in 10 natural resource districts.¹ This information is used to direct resource use at a district level. The Range Branch also completed several intensive carrying capacity surveys concerned with forage objectives. This information will be reported out at a later date.

Soils

In 2012, soils experts from across the province used an “expert elicitation” process to assess high-resolution photos of harvested areas focussed on soil disturbance, including roads, roadside work areas, and skid trails. The results of this analysis were incorporated in the Multiple Resource Value Assessment pilots.

Wildlife

In 2012, an extension note was published summarizing results of a range-wide spatial analysis of habitat protection for mountain caribou. The note documents mountain caribou occupancy of designated and protected areas and the amount of protected high-suitability winter habitat in designated areas. In addition, publications reporting on the results of a grassland bird study in the Cariboo–Chilcotin will be released in 2013. This study measured cover at nest sites as well as nest productivity and success in different grassland types exposed to different levels of grazing. A monitoring protocol for tailed frog wildlife habitat areas was also implemented in the Chilliwack and Cascades districts, with 46 sample sites completed, while research on terrestrial habitat requirements and indicators continues.

Resource Features

During 2012/2013, five karst samples were completed in one natural resource district. Field staff continued testing and refining field procedures to assess the impacts of resource management on karst features, such as sink holes, cave entrances, and sinking streams.

¹ Two other districts completed inspections but did not report in time for this publication.

Recreation

FREP did not conduct any recreation monitoring during 2012/2013.

Multiple Resource Value Assessment Reports

Multiple resource value assessment reports are a new way of presenting FREP results. This reporting method involves assigning a stewardship rating (good, fair, borderline, or poor) to each *FRPA* resource value, along with causal factors, trends, and opportunities for continued improvement. In 2012/2013, two pilot projects were completed in the Lakes and Merritt timber supply areas. This included successful testing of methods for sampling non-forestry sectors, such as mines, pipelines, hydro lines, and highways. Results of these pilots will be available on the FREP website in 2013.

Continuous Improvement Workshop

In March 2013, FREP held its ninth annual Continuous Improvement Workshop. The 1-day conference call and Live Meeting Session attracted approximately 75 participants including Forests, Lands and Natural Resource Operations staff from Victoria, the regions and districts, as well as representatives from the Ministry of Environment, the Association of BC Forest Professionals, and the Forest Practices Board.

This year’s workshop emphasized important initiatives that will keep FREP relevant, as well as quality assurance topics and district reporting and communication. In addition, deliberations also highlighted FREP’s role within the larger Ministry context and the new Multiple Resource Value Assessment pilots. This annual session

For further information on FREP monitoring of the above resource values, please see the following web links:

- FREP Homepage – <http://www.for.gov.bc.ca/hfp/frep/index.htm>
- FREP YouTube Videos (monitoring overviews and results) – <http://www.youtube.com/user/frep101>
- FREP extension notes and reports (results and recommendations) – http://www.for.gov.bc.ca/hfp/frep/publications/extension_notes.htm
- FREP indicators and protocols (monitoring tools) – <http://www.for.gov.bc.ca/hfp/frep/indicators/table.htm>

provides an important opportunity for all participants to contribute their voice to the program's continued development and improvement. Workshop feedback will help inform the update of the Strategic Plan, the annual Work/Improvement Plan, quality management, and FREP communications.

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 annually to the district demonstrating the highest level of contribution during the program's monitoring field seasons. The Cascades Natural Resource District received the award for the 2012 field season. For more information on this award, go to: <http://www.for.gov.bc.ca/hfp/frep/recognition/adm.htm>.

Kathleen Hebb from the Vanderhoof Natural Resource District was the second winner of the Stephanie Wilkie FREP Peer Award. Created in 2011/2012, this award honours the memory of Stephanie Wilkie, who passed away in 2011, leaving behind her young family. A Fort Nelson District employee who was heavily involved in FREP monitoring and field work, Stephanie was a positive and inspiring influence on her fellow workers. This award recognizes an individual who exhibits similar values while carrying out FREP field work and assisting in the fulfillment of the FREP mission. Kathleen was presented with the award on June 17, 2013. For more information about this award, go to: <http://www.for.gov.bc.ca/hfp/frep/recognition/wilkie.htm>.

The winners of the 2013 FREP Photography Contest were announced during the 2013 Continuous Improvement Workshop. Recognition for best overall photograph went to **Kari Doyle**, Stewardship Technician for the Headwaters Natural Resource District, with a wildlife photo entitled "Mom and Baby Hanging on the Side of the Road." View all the photo entries at: picasaweb.google.com/103683886685839758222?authkey=Gv1sRgCJHY3M_F-LK7Jw#.

Quality Management and Data Integrity

FREP continues to embrace quality management (culture, principles, and best practices) through Excellence Canada's Progressive Excellence Program. Since 2006, FREP has achieved all four levels of organizational quality certification, and in 2011 received the Gold Award for Excellence (<http://www.newsroom.gov.bc.ca/2011/09/forest-range-evaluation-program-wins-award-for-excellence.html>).

FREP also continues the focus on ensuring superior data quality. Processes such as data logic validation and data entry verification are performed at the district level, as

well as at the resource value team lead level (subject matter experts). Because of these processes and due diligence, FREP maintains a high level of data integrity.

For more information on FREP's quality management activities, go to: <http://www.for.gov.bc.ca/hfp/frep/qmgmt/>.

Information Management System

Due to a lack of system development funding, no further information management system development occurred in 2012. The Working Group continues to track issues and receive improvement suggestions; however, in 2012 only the most critical system repairs/additions were made, including the creation of non-tenured (shell) openings, and some water quality checklist fixes.

For more information on the FREP Information Management System, go to: <http://www.for.gov.bc.ca/hfp/frep/ims/>

Training

In 2012, FREP delivered full training and (or) mentor training for the following resource values: stand development monitoring, fish/riparian, stand-level biodiversity, water quality, cultural heritage, and visual quality. Nine training sessions for Stand Development Monitoring were conducted around the province. In total, 66 district field staff received formal training. Resource value team leads delivered 13 Fish/Riparian training sessions, with 42 staff receiving full training and 12 receiving refresher training. Ten Stand-Level Biodiversity training sessions were scheduled in 2012, with 33 district staff receiving full training and 8 receiving mentor training. The Water Quality Resource Value Team delivered 13 sessions (1-day mentor and 2-day full training sessions) to 69 district staff.

Eighteen district staff attended a Cultural Heritage Resource training session in Burns Lake that focussed on the practical implementation of monitoring, and involved a mix of classroom instruction and field visits. A second training session scheduled in the fall was cancelled due to spending cuts. For 2012, the Visual Quality Resource Value Team trained 10 field staff in Smithers. A second training session was cancelled due to enrollment cancellations resulting from budget cuts. Most range program staff have received training on evaluating rangeland health. Each spring, groups spend 1 day re-acquainting themselves with the evaluation techniques. Forage analysis is initiated at the request of districts. Typically, Range Branch members lead the efforts and train district range staff.

For more information on FREP's training activities, go to the resource stewardship monitoring training website (<http://www.for.gov.bc.ca/hfp/frep/rsm/training.htm>)

Communications

FREP continued to enhance its communication efforts throughout the 2012/2013 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 examples of communication events included:

- District-led presentations, discussions, and field trips with individual forest licensees and BC Timber Sales
- Three Resource Value Team Leader “road show” presentations carried out at Prince George, Kamloops, and Campbell River
- Resource Practices Branch presentations and discussions with individual licensees and BC Timber Sales on the data and findings specifically related to their operations
- Resource Practices Branch conference calls to District Managers and Regional Management Teams
- Presentations to the Southern Interior Silviculture Committee, Northern Silviculture Committee, Coast Region Implementation Team, and Minister’s Practices Advisory Committee
- “Live Meetings” of FREP soils monitoring approach and findings
- FREP protocol training and monitoring awareness involving Forests, Lands and Natural Resource Operations staff, Ministry of Environment staff, forest licensees, BC Timber Sales, and First Nations

During 2012/2013, FREP published the *Assistant Deputy Minister Resource Stewardship Report*, three reports, three extension notes, three regional posters, and new communications approaches, including the multiple resource value assessment reports.

Assistant Deputy Minister Resource Stewardship Report: Results and Recommendations of the Forest and Range Evaluation Program

This annual report, which replaces the previous Chief Forester’s reports, summarizes FREP findings to date and provides recommendations to improve on-the-ground resource management practices and decision making. Its purpose is to encourage dialogue and inform balanced decision making among those who manage British Columbia’s natural resource values on behalf of the public. See: http://www.for.gov.bc.ca/hfp/frep/publications/chief_forester.htm

Reports

Report No. 32 – *Pilot Testing Indicators and Methods for Monitoring the Effectiveness of Mountain Goat Winter Ranges*. http://www.for.gov.bc.ca/ftp/hfp/external!/publish/FREP/reports/FREP_Report_32.pdf

Report No. 33 – *Natural Resource Monitoring in British Columbia: A Compilation of Provincial Government Initiatives*. http://www.for.gov.bc.ca/ftp/hfp/external!/publish/FREP/reports/FREP_Report_33.pdf

Report No. 34 – *Effects of Livestock Grazing on Forage Production, Forage Quality, and Soils Properties at Six Sites in the Southern Interior*. http://www.for.gov.bc.ca/ftp/hfp/external!/publish/FREP/reports/FREP_Report_34.pdf

For more information about these and other FREP Reports, please visit: <http://www.for.gov.bc.ca/hfp/frep/publications/reports.htm>.

Extension Notes

Extension Note No. 24 – *Monitoring Mountain Caribou Wildlife Habitat Areas and Ungulate Winter Ranges*. http://www.for.gov.bc.ca/ftp/hfp/external!/publish/FREP/extension/FREP_Extension_Note_24.pdf

Extension Note No. 26 – *How FREP is Influencing the Continuous Improvement of Resource Management in British Columbia*. http://www.for.gov.bc.ca/ftp/hfp/external!/publish/FREP/extension/FREP_Extension_Note_26.pdf

Extension Note No. 27 – *Effects of Livestock Grazing on Forage Production, Forage Quality, and Soils Properties at Six Sites in the Southern Interior*. http://www.for.gov.bc.ca/ftp/hfp/external!/publish/FREP/extension/FREP_Extension_Note_27.pdf

For more information about these and other FREP extension notes, please visit: http://www.for.gov.bc.ca/hfp/frep/publications/extension_notes.htm.

FREP Regional Posters

These posters present a pictorial summary of findings and continuous improvement opportunities to date.

- Cariboo Region: Quesnel, Central Cariboo, Chilcotin, and 100 Mile House natural resource districts.
- Omineca Region: Fort St. James, Prince George, and Vanderhoof natural resource districts.
- Skeena Region: Skeena-Stikine, Kalum, and Nadina natural resource districts.

To view these posters, please visit: <http://www.for.gov.bc.ca/hfp/frep/publications/posters.htm>.

FREP YouTube Videos

FREP produced no videos in 2012/2013. Several videos produced in previous years can be viewed at <http://www.youtube.com/frep101>.

For more information on FREP communications, please visit: <http://www.for.gov.bc.ca/hfp/frep/pmgmt/> or contact Peter Bradford at Peter.Bradford@gov.bc.ca

Program Development

In 2012, FREP continued the process of reviewing its Strategic Plan and updating its annual Work and Improvement Plan based on the results of the quality survey, communication survey, FREP Continuous Improvement Workshop, and business plan of the Ministry of Forests, Lands and Natural Resource Operations. No changes will be made to the Strategic Plan until the results of the Natural Resource Sector Monitoring Needs Assessment are reported later in 2013. For more information on FREP's Strategic Plan, go to: <http://www.for.gov.bc.ca/ftp/hfp/external!/publish/frep/library/FREP-Strategic-Plan-2011.pdf>.

The Work and Improvement Plan is developed on the basis of the Strategic Plan, as well as on staff and stakeholder input (Continuous Improvement Workshop, communication and quality surveys, etc.). This plan details the major tasks and focus areas for program improvement. For a copy of the 2012/2013 plan, go to: [http://www.for.gov.bc.ca/ftp/hfp/external!/publish/frep/library/FREP Work Plan & Improvement Plan 2012-13.docx](http://www.for.gov.bc.ca/ftp/hfp/external!/publish/frep/library/FREP%20Work%20Plan%20&%20Improvement%20Plan%202012-13.docx).

Detailed tasks for each work area are outlined in the quality control protocols (<http://www.for.gov.bc.ca/hfp/frep/qmgmt/index.htm#control>). Major updates and improvements to these quality control protocols are planned for 2013.

FREP FUNDING AND EXPENDITURES FOR 2012/2013

The table below shows an approximate breakdown of FREP expenditures for 2012/2013.

Expenditure Category	\$
Monitoring Checklist Development, Pilot Testing, and Implementation	187 000
Intensive Evaluation Projects	0
Training	132 000
Program Support, Planning, Development, and Extension	45 000
Quality Management (including data validation, verification, and management)	30 000
Subtotal:	394 000
Field-based Operating Costs (e.g., helicopter, boat access costs) [estimated]	175 000
Annual Salaries Associated with FREP (estimate of combined operations and provincial staff)	820 000
Total	1 389 000

KEY FREP INITIATIVES FOR 2013/2014

- Achieving an internal ministry performance measure of 40 monitoring assessments per district
- Publishing the *Assistant Deputy Minister Resource Stewardship Report* with resource value status and trend information
- 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
- Sampling only recently harvested cutblocks (other than for stand development monitoring)
- Communicating results via reports, extension notes, and other communication products such as YouTube videos
- Reviewing and updating the FREP Strategic Plan and Work/Improvement Plan
- Enhancing communication efforts, including development of more FREP posters and conducting Resource Value Team Lead "road shows," focussing on the communication of local results
- Publishing a multiple resource value assessment report for every district and timber supply area, for which we have sufficient data (approximately 35 reports)
- Expanding multiple resource value assessments to acquire non-FREP monitoring data, including close links with cumulative effects initiatives
- Completing work on landscape-level biodiversity indicators and thresholds
- Continuing to embrace, embed, and enhance quality management activities within all aspects of FREP using Excellence Canada criteria
- Participating in the Natural Resource Sector Integrated Monitoring Initiative
- Field-testing electronic data entry on tablets

ACKNOWLEDGEMENTS

The FREP team sincerely appreciates the significant contributions to the program's achievements and successes in its nine years.

Special thanks are extended to:

- Our field staff for their hard work in achieving program implementation and innovations.

- Assistant Deputy Minister of the Resource Stewardship Division, Tom Ethier; and Deputy Chief Forester, Jim Sutherland.
- Ian Miller, Lorne Bedford, and Jim Sutherland for their guidance as the Resource Practices Branch Management Team.
- Resource value team leaders for their continued dedication in developing and continually improving indicators, protocols, and training:
 - Biodiversity – Nancy Densmore, Richard Thompson, and Barry Elliott
 - Cultural Heritage – Kathleen Hebb, Nicole Pressey, Carly Gilchrist and Peter Bradford
 - Fish/Riparian – Peter Tschaplinski
 - Forage and Associated Plant Communities – Doug Fraser
 - Recreation – Bill Marshall
 - Resource Features – Christina Mardell
 - Soils – Stéphane Dubé, Shannon Berch, and Chuck Bulmer
 - Timber – Frank Barber and Stephan Zeglen
 - Visual Quality – Jacques Marc
 - Water Quality – Dave Maloney
 - Wildlife – Kathy Paige and Laura Darling
- Our lead trainers and contractors (Derek Tripp, Dean McGeough, Brian Carson, Dennis Hamilton, Susan Bannerman, Amanda Nemec, Wendy Bergerud, Russell Klassen, and Frank Craig) for providing their expertise through field training, mentoring, analysis, and advice.

MORE INFORMATION

For additional information about FREP, please refer to our website at www.for.gov.bc.ca/hfp/frep, or view our YouTube videos at: www.youtube.com/user/frep101.

The FREP Year in Review is an annual publication of the Forest and Range Evaluation Program designed to inform stakeholders on program development and implementation, and report on the results of evaluation projects.

