

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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2011/2012 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 2011/2012 fiscal year. Through evaluation and monitoring activities, the program determines whether forest and range practices in the province are achieving the 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 supply current, high-quality information that supports the continuous improvement of policy and management practices in the interest of all British Columbians and provides a strong foundation for 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 2011/2012, resource stewardship monitoring took place in 23 of the province's 24 districts for one or more of three *FRPA* resource values—stand-level biodiversity, water quality, and fish/riparian. Results are now available for these and other resource values, including visual quality, cultural heritage, timber resources, and forage (range). With over 6 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 2011/2012 include:

- Completing 629 resource stewardship monitoring assessments, including resource stewardship monitoring for stand-level biodiversity (137 stand-level biodiversity checklists), water quality (133 water quality checklists), timber (123 stand development monitoring assessments), and fish/riparian (115 riparian checklists) resource values
- Implementing the monitoring for visual quality (approximately 92 evaluations in 15 districts) and cultural heritage (29 block assessments in 4 districts)
- Publishing 4 FREP reports and 7 extension notes, as well as the Chief Forester's 2010 FREP Annual Report, the FREP provincial poster, and 3 YouTube videos
- Holding the eighth annual FREP Continuous Improvement Workshop in Richmond, B.C., the first face-to-face provincial meeting for the program since 2008

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The following section describes FREP's resource stewardship monitoring and evaluation initiatives and provides some recent results. For detailed information about FREP, the status of each resource value, or to view the protocols and reports, go to: <http://www.for.gov.bc.ca/hfp/frep/indicators/table.htm>. A more detailed summary of FREP monitoring results and associated recommendations for continuous improvement opportunities is presented in the Chief Forester's 2010 FREP Annual Report.

KEY ACCOMPLISHMENTS IN 2011/2012

Resource Stewardship Monitoring Implementation

Stand-level Biodiversity

Stand-level biodiversity monitoring during the 2011 field season took place on 137 cutblocks. These blocks were harvested between 2008 and 2010, predominantly governed under legislative requirements set out under *FRPA*, though about 40% are still governed under the *Forest Practices Code of British Columbia Act*. Over the last several years of biodiversity monitoring, approximately 1868 sites have been assessed and five extension notes plus other extension products have been produced.

Fish/Riparian

Over 1900 streams have now been assessed province-wide. Streams (all classes S1–S6) were randomly sampled from a population of cutblocks harvested under the legislative requirements set out in *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.

Cultural Heritage Resources

During 2011, the first year of full implementation for cultural heritage resource monitoring, 45 sites and features were sampled within, or adjacent to, 29 forest cutblocks in four districts. To date, including the data from operational pilots, 127 cutblock assessments have been completed. Although the year-to-year findings show significant consistency, some variability is attributed to refinements in the field protocol, the number of assessments, and wider variety of cultural heritage resource values held by participating First Nations in 2009. The Protocol for Cultural Heritage Resource Stewardship Monitoring provides a detailed description for assessing this resource value.

Stand Development Monitoring (Timber Resource Value)

The 2011 field season was the first year of full implementation of stand development monitoring. Fourteen districts participated, collecting approximately 123 samples. This monitoring provides key information on the productivity and health of free-growing plantations, 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.

Water Quality

In 2011/2012, water quality monitoring was conducted for 133 cutblocks, resulting in 757 site assessments. Since this monitoring began in 2008, 653 cutblocks and associated road networks (3423 sites in total) have been assessed for water quality. Besides its use in the provincial FREP program, the Water Quality Protocol has been adopted by several British Columbia forest licensees that work in community watersheds for their sustainable forest management certification requirements.

Visual Quality

From 2006 to 2008, visual samples were collected from 249 *Forest Practices Code* cutblocks within scenic areas with Recommended Visual Quality Classes or Visual Quality Objectives. From 2008 to 2011, visual samples were collected from 216 cutblocks governed under *FRPA*. A report comparing performance under *FRPA* and the *Forest Practices Code* is planned for publication in 2012.

Forage/Range Health

In 2011, the Range Program completed forage analyses of three large range units/tenures in three forest districts. This information is used by district staff to direct and assess use of the resource. In 2012, forage analyses will be carried out on four more tenures/range units. In 2011, range program staff conducted 197 evaluations on 60 range tenures in 10 forest districts. This information is used to direct resource use at a district level. In 2012, a similar number and diversity of rangeland health inspections will be conducted.

Soils

In 2011, the soils resource value team produced an extension note on whether current forest practices protected productivity and natural drainage of soils during a 5-year period (2005–2009). The combined approach of field-based evaluations by staff and expert high-resolution

image interpretation proved to be an effective method for assessing soil conservation. In 2012, the combined use of high-resolution imagery and on-the-ground soil surveys will be implemented in a number of districts.

Wildlife

In 2011, conceptual models were developed for mountain goat and caribou (northern, boreal, and mountain) in support of the draft provincial Ungulate Winter Range monitoring protocol, and field methods were tested in one winter range. A strategic-level assessment of mountain caribou use of FRPA-designated areas (i.e., all mountain caribou winter ranges and wildlife habitat areas) was completed and reported. The monitoring protocol for tailed frog wildlife habitat areas were finalized in preparation for implementation; research on terrestrial habitat requirements and indicators continues. The last year of field work was completed for the grassland bird study in the Cariboo-Chilcotin, including measuring cover at nest sites, and nest productivity and success, in different grassland types exposed to different levels of grazing. Five FREP reports on these topics are currently in the development stage.

Resource Features

During 2011/2012, field staff continued developing and testing field procedures to assess the impacts of resource management on karst features, such as sink holes, cave entrances, and sinking streams.

Recreation

FREP did not conduct any recreation resource stewardship monitoring during 2011/2012.

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>

Continuous Improvement Workshop

In March 2012, FREP held its eighth annual Continuous Improvement Workshop in Richmond, B.C. This was the first face-to-face provincial meeting for the program since 2008. The 1-day workshop attracted approximately 70 participants and included Forest, 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.

The workshop focused on improving communication to different audiences with presentations, group exercises, and discussions that reflected the communication theme. The workshop provided a valuable venue for the FREP team to improve all aspects of the program: relationships were built or strengthened, successes and challenges were discussed, new applications of FREP monitoring results were presented and discussed, and FREP communications tools reviewed and updated. Most important was the opportunity for all participants to contribute their voice to the program's continued development and improvement. The feedback received during this session 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

FREP owes much of its success to dedicated staff in districts around the province. Chief Forester (since retired) Jim Snetsinger, the program's executive sponsor, awarded the 2010 Chief Forester Award for Excellence in Resource Stewardship Monitoring to the **North Island–Central Coast District** on November 23, 2011. This annual honour is awarded to the district that demonstrates the highest level of contribution and excellence during FREP's RSM field season. After the award presentation at Victoria, B.C., Jim hosted a small luncheon celebrating the success of district staff. For more information on this award, go to: <http://www.for.gov.bc.ca/hfp/frep/recognition/chief.htm>.

During 2011/2012, a new award was created in memory of Stephanie Wilkie, who passed away in July 2011 of natural causes, leaving behind her young family. Stephanie, a Fort Nelson District employee who was heavily involved in FREP monitoring and field work, was a positive and inspiring influence on her fellow workers. This award is intended to recognize an individual who exhibits similar values while carrying out FREP field work and assisting in the fulfillment of the FREP mission. The inaugural winner of the Stephanie Wilkie FREP Peer Award was **Barb Wadey** from the Selkirk District. Barb was honoured at the Continuous Improvement Workshop on March 7th, 2012.

The winners of the 2011 FREP Field Season Photography Contest were also announced during the March 2012

Workshop. Recognition for best overall photograph went to **Lloyd Davies**, Visual Landscape Forester for the West Coast Region, with a photo entitled "Port McNeill Sunset". View all the photo entries for the 2011 field season at: <https://picasaweb.google.com/114225080317896935849?authkey=Gv1sRgCKr0hKzenouPjwE>.

Quality Management and Data Integrity

FREP continues to embrace quality management (culture, principles, and best practices) using Excellence Canada's (formerly the National Quality Institute) criteria. Since 2006, the program has achieved all four levels of organizational certification for quality through the NQI's Progressive Excellence Program. In November 2011, the program received the Gold Trophy of the Canada Award for Excellence (see <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 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/index.htm>.

Information Management System

Due to a lack of system development funding, no further information management system (IMS) development occurred in 2011. The IMS Working Group continues to track issues and receive improvement suggestions; however, in 2011 only the most critical system repairs were made.

For more information on the FREP IMS, go to: <http://www.for.gov.bc.ca/hfp/frep/ims/index.htm>.

Training

In 2011, FREP delivered full training and mentor sessions for the following resource values: stand development monitoring, fish/riparian, stand-level biodiversity, water quality, cultural heritage, and visual quality. Twelve Stand Development Monitoring training sessions were conducted around the province. In total, 65 district field staff received formal training. A further 70 people were provided an update at the Northern Silviculture Committee (NSC) summer workshop.

Resource Value Team Leads delivered three Fish/Riparian training sessions to 27 staff in three districts. A 1-day refresher session was also delivered in the Vanderhoof District. Riparian mentoring sessions were delivered in an additional seven forest districts.

No formal Stand-level Biodiversity training sessions were scheduled in 2011 due to budget pressures. One informal training session occurred in the South Island District and mentoring training was conducted in several other districts around the province. One "Live Meeting" session was held to address stand-level biodiversity questions from field staff.

In 2011, the Water Quality Resource Value Team delivered 11 Water Quality sessions (1-day mentor and 2-day full training sessions) to 75 district staff.

Cultural Heritage Resource value training was primarily field-based. Twelve district staff attended a session in Vanderhoof that focused on the practical implementation of monitoring, and involved a mix of classroom instruction and field visits. Training sessions were also held in Smithers (15 attendees) and Merritt with 12 attendees including First Nations, industry and local field staff.

For 2011, the Visual Quality Resource Value Team trained 36 field staff at three locations (Kamloops, Smithers, and Vanderhoof).

Most Range Program staff have received training on evaluating rangeland health. Each spring, groups of staff spend a day reacquainting themselves with the evaluation techniques. Forage analysis is initiated upon request by districts and typically led by Range Branch staff.

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

Communications

FREP continued to enhance its communication efforts throughout the 2011/2012 fiscal year. In addition to FREP communications led by Resource Practices Branch staff, district staff were encouraged to use the communication methods that best suited their situation and needs. Some examples of communication events included:

- District-led presentations, discussions, and field trips with individual forest licensees and BC Timber Sales
- 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 2011/2012, FREP published the Chief Forester's Annual Report, four reports, seven extension notes, and some new communications tools, including YouTube videos and a provincial poster.

Chief Forester's 2010 Annual Report on FREP

The *Chief Forester's 2010 Annual Report on the Forest and Range Evaluation Program* summarizes the program's findings to date along with some related perspectives and recommendations for the consideration of resource managers. See: http://www.for.gov.bc.ca/ftp/hfp/external!/publish/frep/reports/FREP_Chief%20Forester's%20Report_Feb2011.pdf

Reports

Report No. 28 – *Northern Interior Forest Region: Analysis of Stand-level Biodiversity Sampling Results in Six Predominant Biogeoclimatic Subzones*. http://www.for.gov.bc.ca/ftp/hfp/external!/publish/FREP/reports/FREP_Report_28.pdf

Report No. 29 – *Southern Interior Forest Region: Analysis of Stand-level Biodiversity Sampling Results in Six Predominant Biogeoclimatic Subzones*. http://www.for.gov.bc.ca/ftp/hfp/external!/publish/FREP/reports/FREP_Report_29.pdf

Report No. 30 – *Coast Forest Region: Analysis of Stand-level Biodiversity Sampling Results in Six Predominant Biogeoclimatic Subzones*. http://www.for.gov.bc.ca/ftp/hfp/external!/publish/FREP/reports/FREP_Report_30.pdf

Report No. 31 – *Evaluating Soil Conservation Using High Resolution Air Photos and Expert Elicitation*. http://www.for.gov.bc.ca/ftp/hfp/external!/publish/FREP/reports/FREP_Report_31.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. 17 – *State of Stream Channels, Fish Habitats, and Adjacent Riparian Areas: Resource Stewardship Monitoring to Evaluate the Effectiveness of Riparian Management, 2005–2008*. http://www.for.gov.bc.ca/ftp/hfp/external!/publish/FREP/extension/FREP_Extension_Note_17.pdf

Extension Note No. 18 – *Monitoring Post-free-growing Stand Conditions in Five Timber Supply Areas Throughout British Columbia: What Are We Seeing So Far?* http://www.for.gov.bc.ca/ftp/hfp/external!/publish/FREP/extension/FREP_Extension_Note_18.pdf

Extension Note No. 19 – *Northern Interior Region: Summary of Stand-level Biodiversity Sampling*. http://www.for.gov.bc.ca/ftp/hfp/external!/publish/FREP/extension/FREP_Extension_Note_19.pdf

Extension Note No. 20 – *Southern Interior Region: Summary of Stand-level Biodiversity Sampling*. http://www.for.gov.bc.ca/ftp/hfp/external!/publish/FREP/extension/FREP_Extension_Note_20.pdf

Extension Note No. 21 – *Coast Forest Region: Summary of Stand-level Biodiversity Sampling*. http://www.for.gov.bc.ca/ftp/hfp/external!/publish/FREP/extension/FREP_Extension_Note_21.pdf

Extension Note No. 22 – *Summary of Provincial Water Quality Effectiveness Evaluation Results (2008–2010)*. http://www.for.gov.bc.ca/ftp/hfp/external!/publish/FREP/extension/FREP_Extension_Note_22.pdf

Extension Note No. 23 – *Evaluating Soil Conservation Using High Resolution Air Photos and Expert Elicitation*. http://www.for.gov.bc.ca/ftp/hfp/external!/publish/FREP/extension/FREP_Extension_Note_23.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 Provincial Poster

This poster presents a pictorial summary of findings and continuous improvement opportunities to date (September 2011). http://www.for.gov.bc.ca/ftp/hfp/external!/publish/frep/reports/FREP_Poster_final_v5_webres.jpg

FREP YouTube Videos

FREP has produced several 3–4 minute videos summarizing the program's monitoring approach and key findings for certain values, including:

- Program Overview for National Quality Institute Gold Award of Excellence: <http://youtu.be/kmCyxzwoiD4>
- Cultural Heritage Resource Value Monitoring: http://youtu.be/JC_7GJEFCQM
- Water Quality Monitoring: <http://youtu.be/fx0arnhCD5g>

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

FREP Program Development

In 2011, FREP continued the process of reviewing and updating its strategic plan based on the results of the annual quality survey, the FREP Continuous Improvement Workshop, and the business plan of the Ministry of Forests, Lands and Natural Resource Operations. Because of the nature and extent of recent organizational change, FREP narrowed the time frame for the current strategic plan to 3 years (2011–2013).

Detailed tasks for each strategic area are outlined in the annual work and improvement plan (<http://www.for.gov.bc.ca/hfp/frep/pmgmt/index.htm>) and quality control protocols (<http://www.for.gov.bc.ca/hfp/frep/qmgmt/index.htm#control>).

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>.

Each year, an annual Program Improvement Plan is developed on the basis of the Strategic Plan, as well as on staff and stakeholder input. This document details the major tasks and focus areas for program improvement. For a copy of the most recent plan, go to: <http://www.for.gov.bc.ca/ftp/hfp/external!/publish/frep/library/Improvement-Plan-2011.docx>.

FREP FUNDING AND EXPENDITURES FOR 2011/2012

The table below shows an approximate breakdown of FREP expenditures for 2011/2012.

Expenditure Category(\$)	\$
Monitoring Checklist Development, Pilot Testing, and Implementation	25 000
Intensive Evaluation Projects	0
Training	78 000
Program Support, Planning, Development, and extension	91 000
Quality Management (including data validation, verification, and management)	45 000
Subtotal:	239 000
Field-based Operating Costs (e.g., helicopter, boat access costs)	175 000
Annual salaries associated with FREP (district and provincial)	560 000
Total	974 000

KEY FREP INITIATIVES FOR 2012/2013

- An internal ministry performance measure of 40 monitoring assessments per district
- Publication of the Assistant Deputy Minister, Resource Stewardship Report on FREP 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, 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
- Reviewing and updating the FREP Strategic Plan and Work/Improvement Plan
- Enhancing communication efforts, including development of FREP posters for eight regions and conducting Resource Value Team Lead “road shows” in three locations, focussing on the communication of local results
- Completing multiple resource value assessments in the Merritt and Lakes Timber Supply Areas, linking closely with cumulative effects initiatives
- Pilot testing landscape-level biodiversity indicators and thresholds in the Merritt and Lakes Timber Supply Areas
- Continuing to embrace and embed quality management activities within all aspects of FREP using Excellence Canada criteria
- Developing monitoring indicators for the assessment of recreation trails

ACKNOWLEDGEMENTS

The FREP team sincerely appreciates the significant contributions of everyone involved in helping attain the achievements and successes of the program in its eighth year of operations.

Special thanks are extended to:

- Our field staff for their hard work in achieving program implementation and innovations.
- Chief Forester Retired, Jim Snetsinger, 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 and Richard Thompson
 - Cultural Heritage – Kathleen Hebb, Steve Lehnert, 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
- Visual Quality – Jacques Marc
- Water Quality – Dave Maloney
- Wildlife – Laura Darling and Kathy Paige
- Our lead trainers and contractors (Derek Tripp, Dean McGeough, Brian Carson, Susan Bannerman, and Amanda Nemeč) for providing their expertise through field training, mentoring, analysis, and advice.

MORE INFORMATION

For additional information about FREP, please refer to our website at <http://www.for.gov.bc.ca/hfp/frep/index.htm>, or view our YouTube videos at <http://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.

