



Forest & Range Evaluation Program

FREP 101

February 16, 2023

Jill Werk, FREP Team Lead





Forest & Range Evaluation Program

Program Overview

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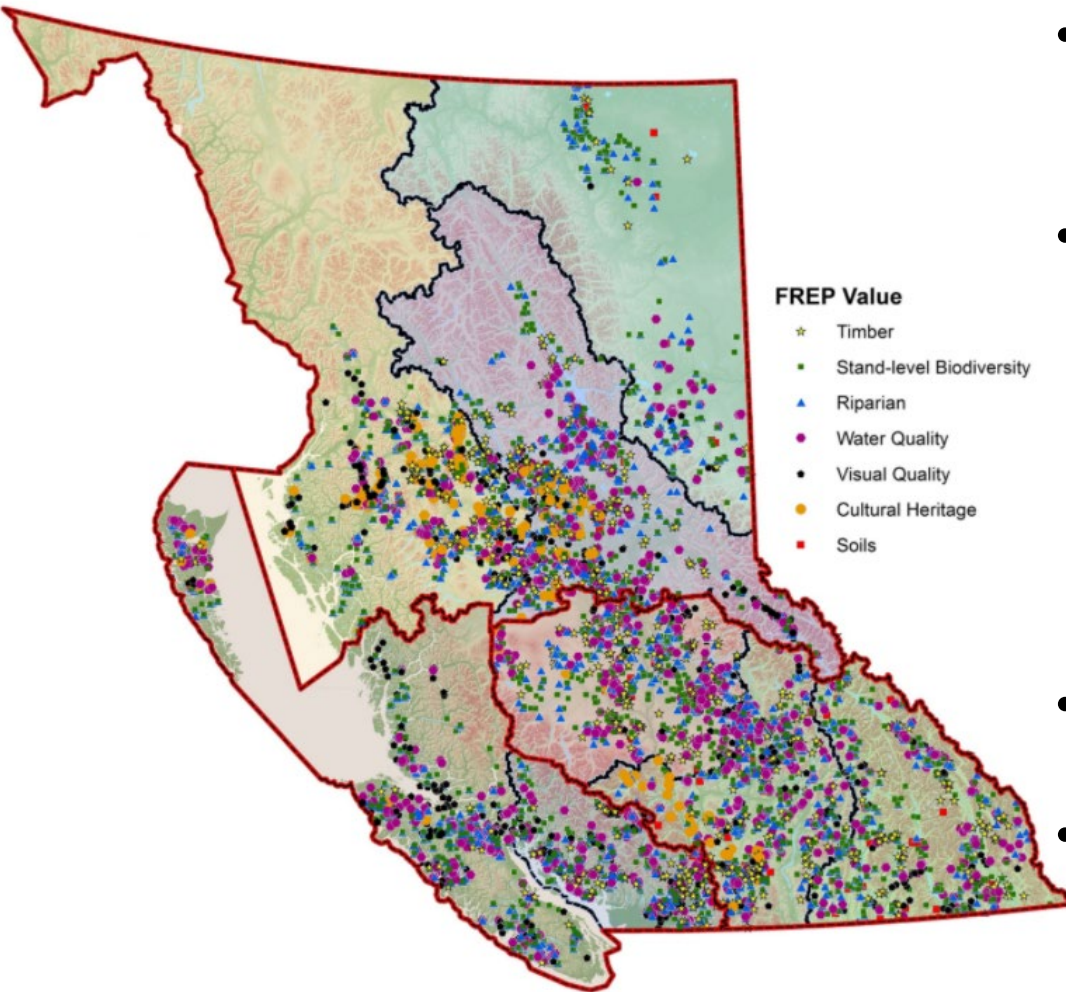


FREP 101 – Overview of FREP Purpose, Approach and Key Findings to Date

Timing	Topic	Presenter
8:45 – 9:30	FREP Program Overview, Mandate & Strategic Directions	Jill Werk, Chair Team Lead, Monitoring & Assessment FREP Program
9:30-9:45	Overview of FREP Results Dashboard	Lianne Scott
9:45 – 10:30	Water Quality Effectiveness Evaluation <i>Assessing the potential contribution of fine sediment to streams at road crossings.</i>	Dave Maloney, Water Quality Evaluation Lead
10:30 – 10:45	Break	
10:45 – 12:00	Fish / Riparian Effectiveness Evaluation <i>Evaluating the Functioning Condition of Streams Wetlands, and Watersheds</i>	Lisa Nordin, Aquatic Resources Evaluation Lead
Lunch Break		
1:00 – 1:45	Visual Quality Effectiveness Evaluation <i>Evaluating forest practices to determine if harvested units are achieving established Visual Quality Objectives.</i>	Jason Yates, Visual Quality Lead
1:45 – 2:30	Cultural Heritage Effectiveness Evaluation <i>Evaluating practices to determine if cultural heritage resources are being conserved and/or protected for continued Indigenous cultural and traditional activities.</i>	Christine Galliazzo, Cultural Heritage Evaluation Lead
2:30 – 2:45	Break	
2:45 – 3:30	Stand Level Retention Evaluation <i>Evaluating how likely retention practices provide the range of habitat with the structural attributes understood as necessary for maintaining the species dependent on wildlife trees and CWD?"</i>	Doug Lewis
3:30 – 4:00	Open Questions & Answers	Chair

Please Note: Today's sessions will be recorded for future reference.

Program Overview



- Established in 2004 with the *Forest and Range Practices Act*
- Multi-agency program
 - **Branches:** FREP value expertise, monitoring protocols, reporting, data management, provincial engagement
 - **Districts:** sampling, engagement with Indigenous Peoples and licensees
 - **Regions:** sampling, special projects
- > **15,000 samples** collected
- > **125 publications** on results, findings, best practices

FREP Reports & Publications

- Sustainable Forest Management Practices
- Timber Supply Review & Allowable Annual Cut
- Forest Inventory
- Forest Health
 - Soil Conservation
- Forest Stewardship Plans
- Silviculture
 - Wildfire Management
- Tree Seed
- Visual Resource Management
- ▾ Integrated Resource Monitoring
 - Integrated Monitoring Reports
- ▾ Forest & Range Evaluation Program
 - FREP Monitoring Protocols
 - FREP Multiple Resource Value Assessments
 - [FREP Reports & Publications](#)**
- Managed Resource Features

FREP Reports & Publications

The Forest & Range Evaluation Program (FREP) produces a variety of publications such as scientific reports, annual reports and newsletters. Click on the drop-down arrows below for more information and to view the individual publications.

Expand All | Collapse All

- FREP Assistant Deputy Minister's Reports** ▼
- FREP Multiple Resource Value Assessment (MRVA) Reports** ▼
- FREP Reports** ▼
- FREP Extension Notes** ▼
- FREP Technical Guidance** ▼
- Watershed Status Evaluation Reports** ▼
- FREP Newsletters** ▼
- Strategic Plans** ▼
- Annual Reports** ▼

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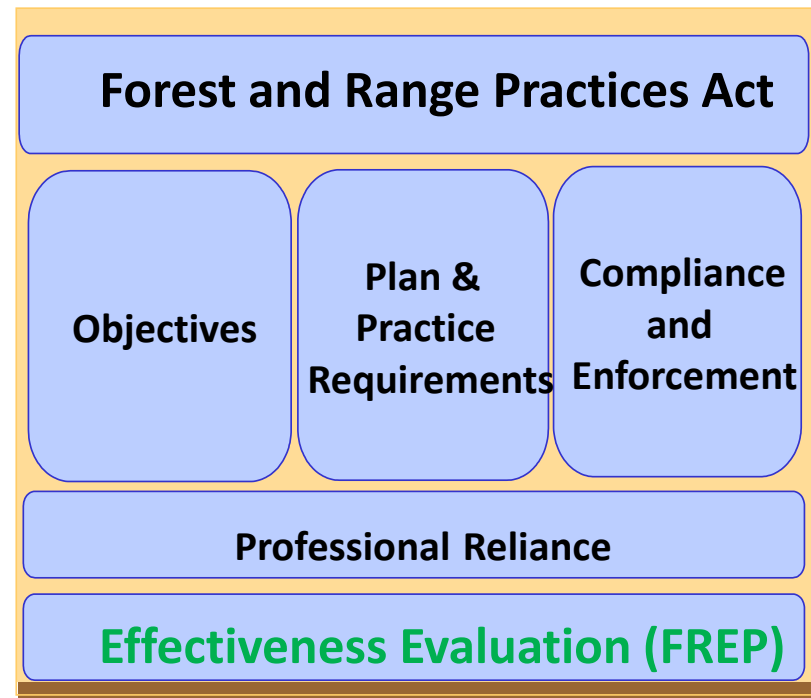
Contact Information

For more information about the program:

▪ FREP@gov.bc.ca

Program Mandate & Drivers

1. Evaluate the **effectiveness of FRPA practices** in achieving desired outcomes, and inform improvements to practices and regulation
2. Support Indigenous reconciliation
3. Contribute to integrated monitoring and assessment in support of land-use planning
4. Improve access to / reliability of data to support decision making



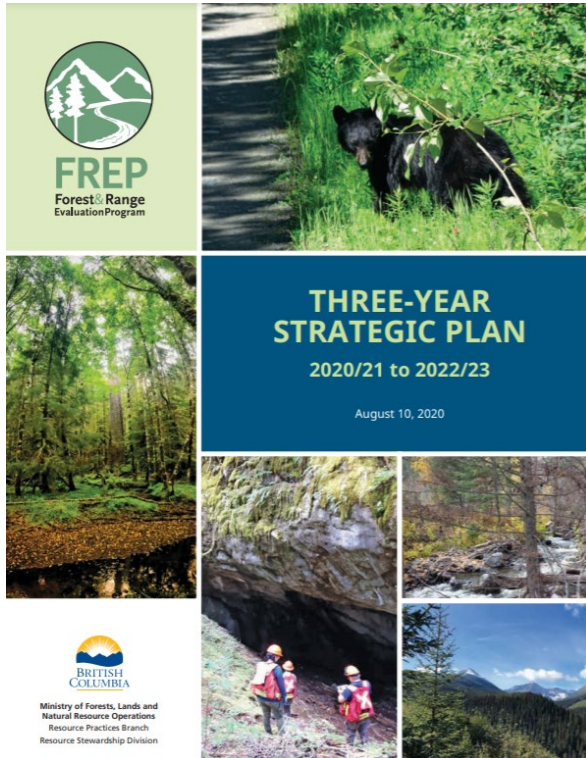
Vision and Mission

FREP VISION

- Collect and communicate trusted and scientifically robust natural resource monitoring information to inform decision making and improve resource management outcomes.*

FREP MISSION

- Assess the impacts of forest and range activities on the 11 FRPA resource values to determine if on-the-ground results are achieving government's desired outcomes for these values*
- Monitor and report on the condition of resource values, including trends and causal factors, and*
- Identify opportunities for continued improvement of practices, policies and legislation, and support their implementation*



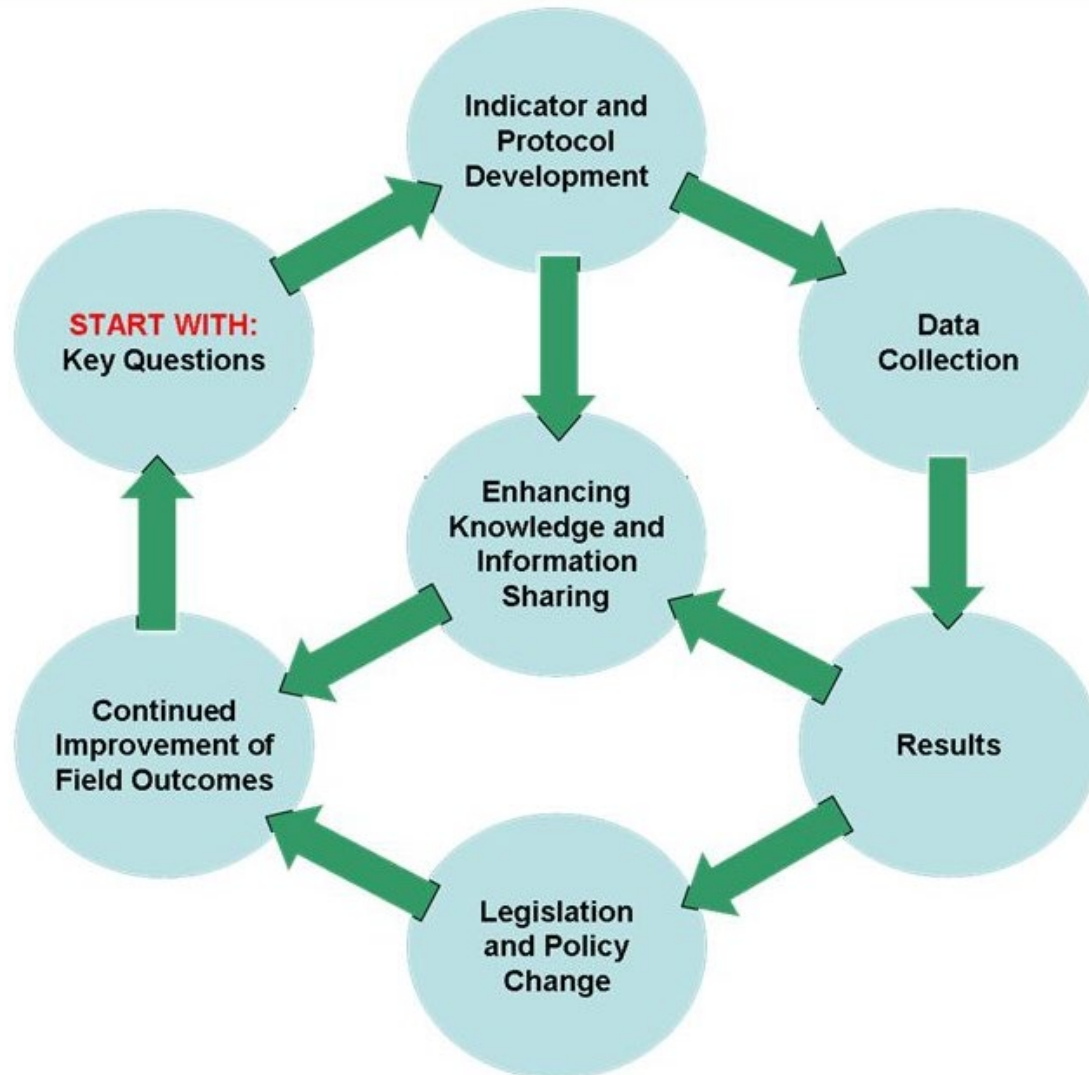


FRPA Values Assessed by FREP

1. **Fish/Riparian**
streams, wetlands, watersheds
2. **Water Quality**
3. **Forest Biodiversity**
stand & landscape level
4. **Cultural Heritage**
5. **Visual Quality**
6. **Timber** - *stand development*
7. **Plants/Forage** –*Range program*
8. **Karst (Resource Features)**
9. **Wildlife**
10. **Soils**
11. **Recreation**



Continuous Improvement Model





FREP Evaluation Questions

Riparian

- *Are riparian forest and range practices effective in maintaining the structural integrity and functions of stream and wetland ecosystems and other aquatic resource features over both short and long terms?*

Water Quality

- *Are forest practices effective in protecting water quality?*

Stand Level Retention

- *Is stand level retention providing the range of habitat and attributes necessary for maintaining species dependent on wildlife trees and coarse woody debris?*

Cultural Heritage Resources

- *Are cultural heritage resources being conserved and protected for First Nations cultural and traditional activities?*

Visual Quality

- *Are forest practices achieving visual quality objectives?*



FREP Evaluation: Impact Ratings

Value	Impact Rating	Very Low	Low	Medium	High
Riparian	Level of functioning condition	Properly Functioning Condition	Functioning but at Risk	Functioning but at High Risk	Not Properly Functioning
Water Quality	Potential sediment to streams (m3)	<0.1	<1	1-5	>5

- Evaluates the condition of a value and the effectiveness of forest and range practices
- Does NOT evaluate compliance with legal requirements

FREP Monitoring Protocols

- Standard procedures for monitoring for each value are described in FREP monitoring protocol documents

Google 'FREP' or 'FREP protocols' to find the protocol documents

Forest & Range Evaluation Program Monitoring Protocols

There are 11 resource values currently identified under the [Forest & Range Practices Act](#). For each resource value protocol documents have been created to provide background information and instructions for data collection under the Forest & Range Evaluation Program mandate.

The resource values are:



[Biodiversity](#)



[Cultural Heritage](#)

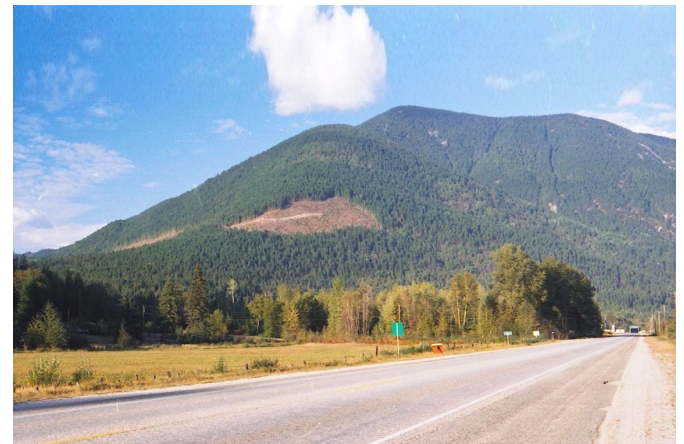


[Fish/Riparian](#)

Values Assessed by FREP

Routine, Random Sampling

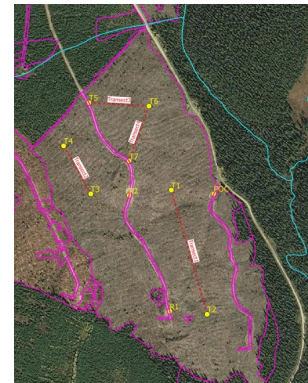
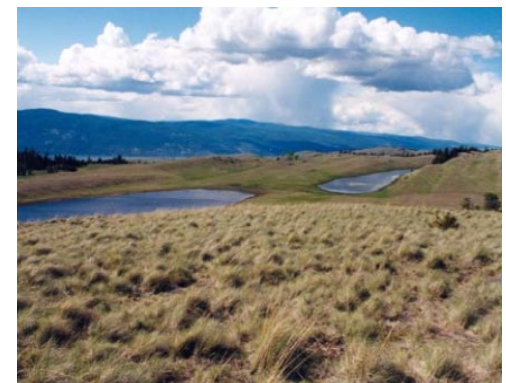
1. Fish/Riparian
 2. Water Quality
 3. Stand Level Retention
 4. Cultural Heritage Resources
-mix of random & targeted sampling
 5. Visual Quality
- stratified by visually sensitive areas
- 30 samples / value / District / 5 years
 - *What is the 'average' condition or effectiveness?*





Values Assessed by FREP Periodic / Targeted Sampling

- **Timber** (young stand development)
TSA focused to evaluate specific concerns or questions with young stand development
- **Plants/Forage** (Range Program)
To support tenure allocation, planning or evaluate areas of concern
- **Soils** — periodic sampling
- **Recreation** — periodic sampling
- **Fisheries Sensitive Watersheds**
Watershed assessment with Tier 1 GIS assessment and Tier 2 field monitoring



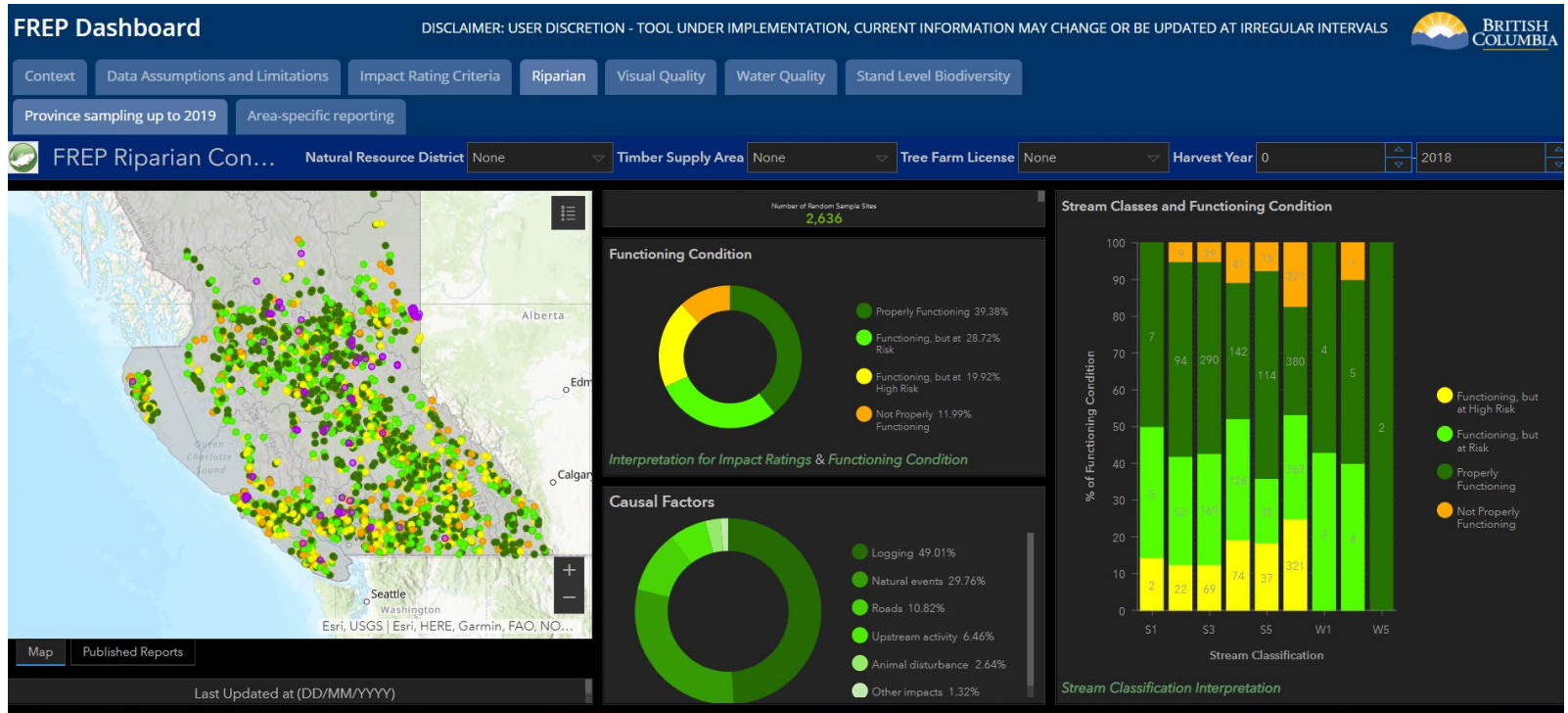
Values Assessed by FREP

– What's New

- **Karst** (Resource Features)
 - Draft protocol, pilot sampling in 2021
 - Ratings being developed
- **Stand Level Retention**
 - Updated in 2020, implemented in 2021
 - Considers landscape context and best management practices/ research
- **Wildlife**
 - Assessment of FRPA designations for wildlife – cumulative disturbances
 - More detailed evaluation planned
- **Routine Watershed Assessment**
 - New 'routine' protocol for assessing watershed condition



FREP Dashboard



FREP Website (or Google FREP dashboard)

<https://www2.gov.bc.ca/gov/content/industry/forestry/managing-our-forest-resources/integrated-resource-monitoring/forest-range-evaluation-program>



How FREP Data Supports Decision-Making

- FREP data supports forest planning and decision-making:
 - FSP results and strategies, operational plans and practices
 - Timber Supply Reviews
 - Legislation and policy development
 - FRPA improvements

- Protocols/Sampling for other uses:
 - Field verification for strategic office-based assessments
 - Collaborative stewardship monitoring
 - Oil and Gas effectiveness monitoring
 - Water authorizations

Strengthening Indigenous Engagement and Partnerships

Current Activities

- 43 indigenous communities engaged in sampling & training
- Collaborative project with Secwepemc communities to develop revised CHR protocol
- Indigenous co-trainers for CHR training
- Community led CHR sampling
- Exploring opportunities to align FREP sampling with Guardian programs





Strengthening Licensee Engagement & Continuous Improvement

- Licensee participation in training, sampling and/or review of results & causal factors
- Engage discussion through district/TSA committees
- Engage range agreement holders in monitoring or discussion of findings
- Invite input on monitoring protocols, program - karst protocol review in 2021
- FREP field tours
- Publish FREP results and findings
- Support licensee Water Quality monitoring
- Engage with FRPA policy program to review results and consider need for policy or regulation



FREP Training

- Sustainable Forest Management Practices
- Timber Supply Review and Allowable Annual Cut
- Forest Inventory
- Forest health
 - Soil Conservation
- Old Growth Forests
- Forest Stewardship Plans
 - Wildfire Management
- Forest Landscape Plans
- Visual Resource Management
- Silviculture
- Tree Seed
- ▾ Integrated Resource Monitoring
 - Integrated Monitoring Reports
- ▾ Forest and Range Evaluation Program
 - FREP monitoring protocols
 - FREP Multiple Resource Value Assessments
 - FREP Reports & Publications
 - ▾ FREP Training
 - ▾ [Riparian/Streams Protocol Self-Guided Training](#)
 - Lesson 1- Introduction
 - Lesson 2 - Training & Field

Riparian/Streams Protocol Self-Guided Training

Routine Riparian (Stream) Effectiveness Evaluation

The primary goal of this course is to help prepare you for field-oriented training in riparian/stream assessment. The field-training is rigorous and we have created this online course so that you will already have a basic knowledge of the Riparian Management Routine Effectiveness Evaluation (RREE) process and understand some of the terms, procedure and practices used as you undertake the field-based RREE training.

At the end of this training you will be familiar with the process of performing RREE assessments and thus be able to practice the assessment skills more confidently while attending a field training session.



Introduction

Forest & Range Evaluation Program



[Link to riparian/streams protocol documents](#)

For questions about wetland training, please contact FREP@gov.bc.ca

Why engage in FREP?

- **Indigenous Communities**
 - Opportunity for collaborative stewardship, influence practices, and sampling to address Indigenous interests & values
- **Forest Licensees**
 - Professional reliance / CI, provide insight on causal factors, other data/ evidence, demonstrate effective practices
- **District/ Regional staff**
 - Support good stewardship, get out in the field!





Questions?

FREP@gov.bc.ca

