Matsqui First Nation Environmental Management Plan

FINAL

August 8, 2012

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ABBREVIATIONS

Abbreviation	Definition
AANDC	Aboriginal Affairs and Northern Development Canada
BC	British Columbia
BMPs	Best Management Practice
CCME	Canadian Council of Ministers of the Environment
CEAA	*Canadian Environmental Assessment Act*
CEPA	*Canadian Environmental Protection Act*
CN	Canadian National Railway
CP	Canadian Pacific Railway
DFO	Fisheries and Oceans Canada
EA	Environmental Assessment
EMA	Environmental Management Agreement
EMP(s)	Environmental Management Plan(s)
ESA	Environmental Site Assessment
FNLAB	First Nations Land Advisory Board
FNLMA	*First Nations Land Management Act*
FVRD	Fraser Valley Regional District
INAC	Indian and Northern Affairs Canada
IR	Indian Reserve
JAMES	Joint Abbotsford Mission Environmental System
LEED	Leadership in Energy and Environmental Design
ND	Neighbourhood Development
NFCC	National Fire Code of Canada
PEP	Provincial Emergency Program
SARA	*Species at Risk Act*

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1.0 ENVIRONMENTAL MANAGEMENT PLAN INTRODUCTION AND PROCESS

1.1 Introduction

The Matsqui First Nation is an Operational First Nation under the Framework Agreement and the *First Nations Land Management Act*. As part of the function of exercising management authority over its reserves, the Matsqui First Nation has prepared this Environmental Management Plan (EMP) to protect and improve the quality and productivity of the natural and human environment of Matsqui lands.

The Matsqui First Nation has four reserves in the Fraser Valley (Figure 1). Two of Matsqui's reserves support housing and services for members and the other two are used for agriculture and forestry. Three Islands Indian Reserve (IR) #3 is mainly forested and subject to periodic timber harvesting, and agricultural leases are in place on Sahhacum IR #2. Matsqui IR #4, near Aldergrove, is used for housing. Matsqui Main IR #2 supports member housing, the band administration office, agriculture, and industrial leases for a sawmill and a firm that remanufactures shipping containers.

The environmental issues facing Matsqui lands were initially identified during Step 1 of the Environmental Management Agreement (EMA) process. Issue identification involved the Matsqui First Nation members, staff, and the Governing Body.

The preparation of this EMP began with a review and refinement of environmental issues facing the Matsqui First Nation. The community and the Lands Committee were involved in the review of issues and subsequent development of this EMP.

The environmental issues affecting Matsqui lands reflect the differing land uses and the activities conducted on surrounding property. The Fraser Valley supports many agricultural activities, but also faces rapid urbanization. Housing, transportation (roads and railways), utilities, and electricity transmission lines affect Matsqui lands and nearby parcels.

The EMP is intended to be an operation manual for use by the Matsqui First Nation Governing Body, Lands Manager, Environment Officer, other staff, and Lands Committee to manage activities that have a potential to affect the environment on Matsqui lands. The main body of the EMP describes goals, objectives, and actions associated with environmental issues. The appendices to the EMP contain detailed information to help respond to environmental issues. Excerpts from the EMP will be made available to Matsqui First Nation contractors or holders of leases of Matsqui lands as needed. The EMP is also a communication tool, explaining environmental goals and proposed actions to Matsqui First Nation community members, local municipalities, and provincial and federal governments. The purposes of the EMP are articulated in more detail in the "Objectives" section of this plan.

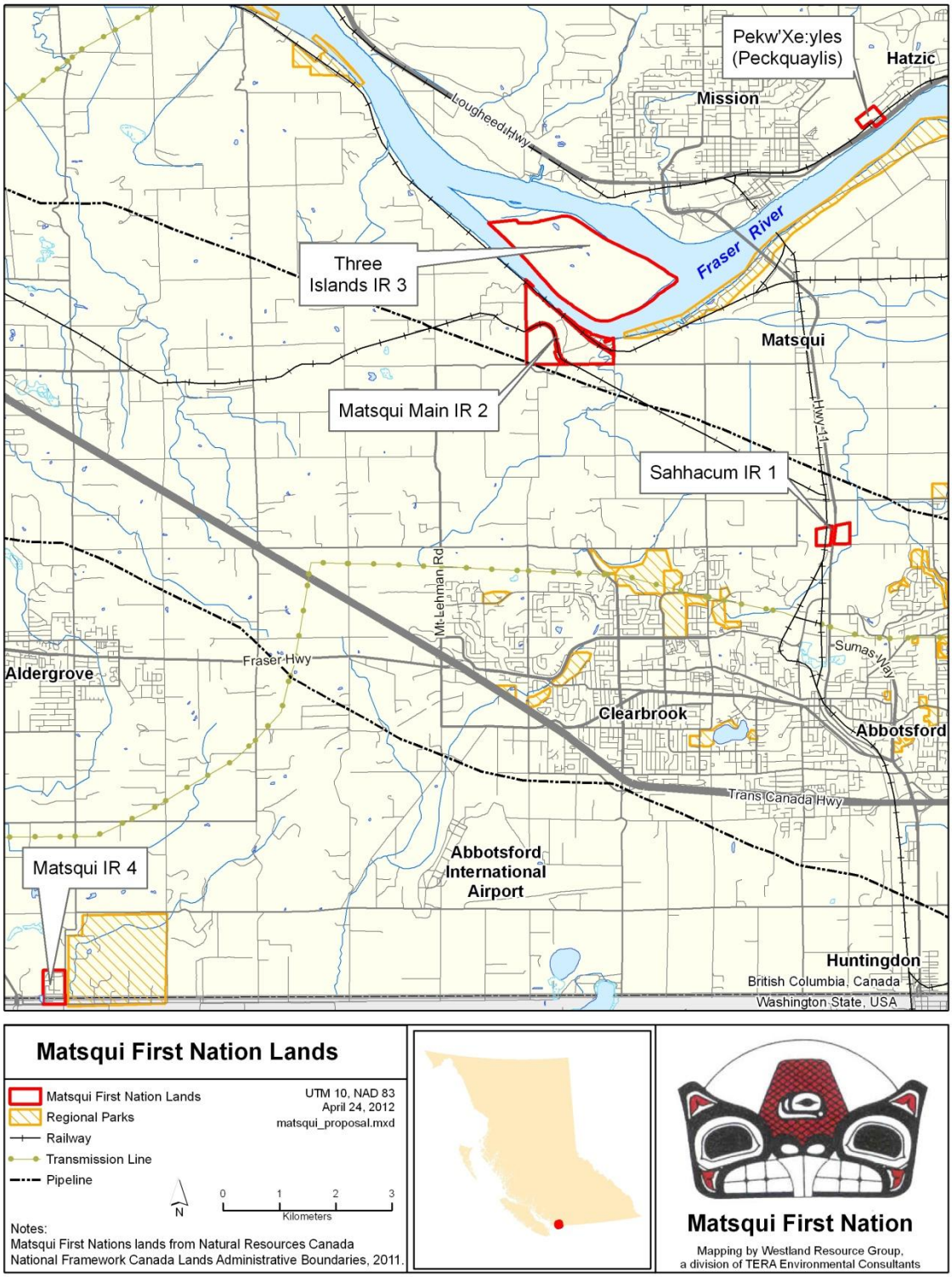


Figure 1. Location of Matsqui lands

1.2 Preparation of the Environmental Management Plan

The Matsqui EMP describes methods to develop, monitor, implement, and enforce environmental protection laws and other tools to manage their environment. As described in Figure 2, preparation of the EMP involved a combination of technical analysis, Lands Committee review, and input from the Matsqui First Nation membership.

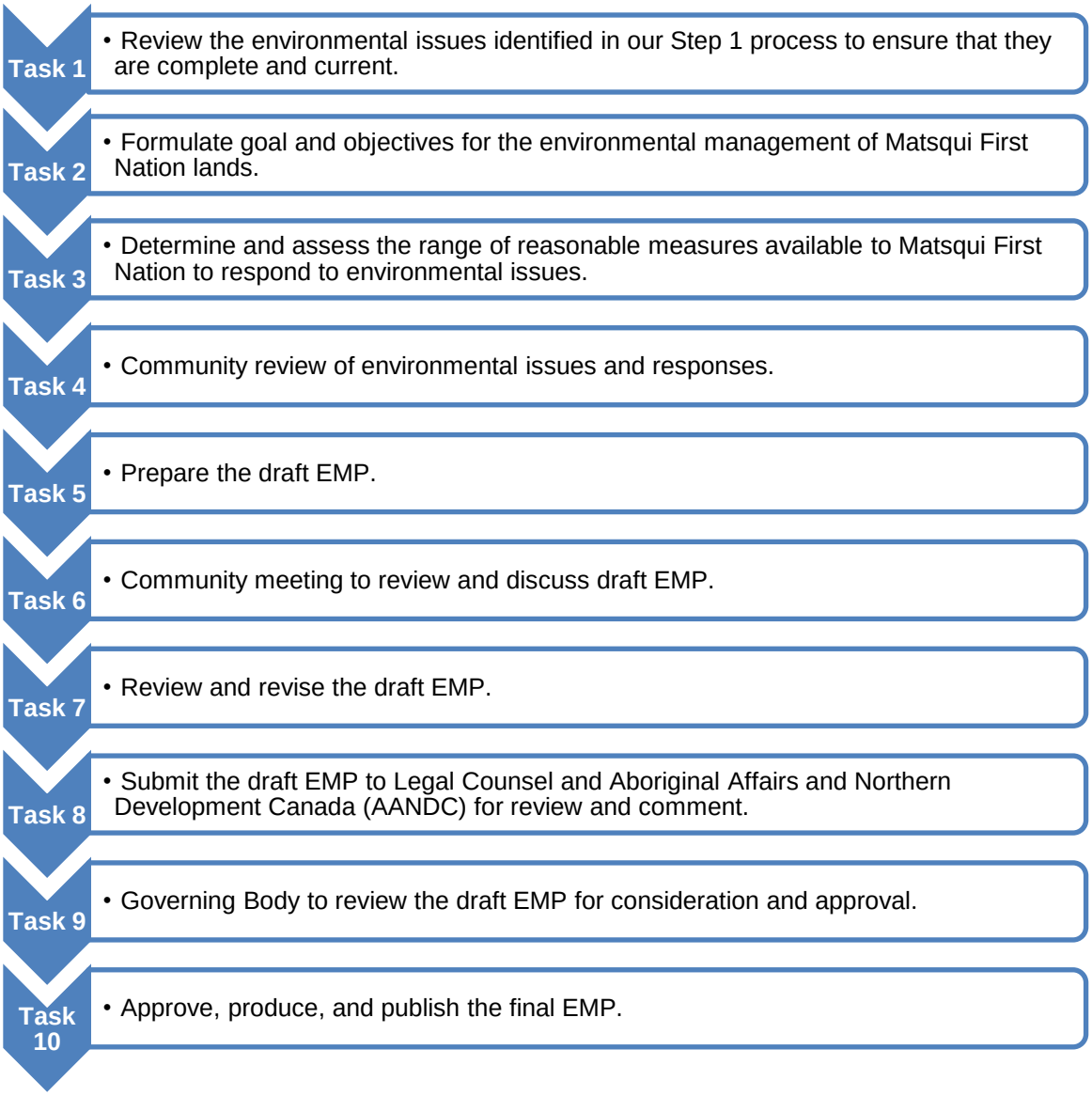


Figure 2. Steps followed in preparing the Environmental Management Plan

1.3 Meetings and community consultation

Engagement of the Lands Committee and Matsqui First Nation membership was a high priority in preparing the EMP. In preparing the plan, information was gathered and analyzed to obtain clear direction on environmental issues, potential responses, and next steps. At each meeting with the community or the Lands Committee, a presentation was made, followed by substantial time dedicated to discussion, questions and answers, and outlines of next steps. Table 1 summarizes meetings and consultation activities conducted during EMP preparation.

Table 1. Summary of meetings and consultation activities

Date	Type	Location	Attendees	Purpose of the meeting
December 14, 2011	Lands Committee meeting	Matsqui Band Office	• Lands Committee • Westland Resource Group	• Examine the use of an EMP, role of Lands Committee, and schedule. • Review Step 1 issues.
February 1, 2012	Lands Committee meeting	Matsqui Band Office	• Lands Committee • Westland Resource Group	• Discuss an updated list of EMP issues, a draft goal, and revised list of EMP objectives. • Review potential responses to environmental issues. • Discuss community involvement.
February 16, 2012	Lands Committee meeting	Matsqui Band Office	• Lands Committee • Westland Resource Group	• Finalize the EMP goal statement. • Confirm the revised list of EMP issues. • Recommend responses to environmental issues. • Identify content and process for the community meeting.
February 16, 2012	City of Abbotsford staff meeting	Abbotsford City Hall	• Matsqui First Nation staff • Abbotsford City staff • Westland Resource Group	• Discuss potentially relevant Abbotsford bylaws. • Obtain information on bylaw effectiveness and implications of applying bylaws to Matsqui lands.
March 7, 2012	Membership meeting	Matsqui Church Hall	• Lands Committee • Community Members • Westland Resource Group	• Discuss the purpose of EMPs, steps in EMP preparation, and EMP objectives and goals. • Discuss Matsqui environmental issues, potential responses to issues, and next steps.
March 7, 2012	City of Abbotsford staff meeting	Abbotsford City Hall	• Abbotsford City staff • Westland Resource Group	• Discuss Abbotsford Petroleum Products Storage Tank Bylaw. • Discuss emergency response potentials on Matsqui lands.
April 11, 2012	Lands Committee meeting	Matsqui Band Office	• Lands Committee • Westland Resource Group	• Review EMP content and format. • Discuss draft policies.

Date	Type	Location	Attendees	Purpose of the meeting
April 26, 2012	Lands Committee meeting	Matsqui Band Office	• Lands Committee • Westland Resource Group	• Review the revised EMP draft. • Confirm next steps.
June 26, 2012	Lands Committee meeting	Matsqui Band Office	• Lands Committee • Westland Resource Group	• Discuss revisions to the EMP.
August 8, 2012	Membership meeting	Community Hall	• Lands Committee • Community Members • Westland Resource Group	• Present and discuss the revised EMP.
August 2012	Governing Body meeting	Matsqui Band Office	• Governing Body members	• Adopt the EMP.

2.0 ENVIRONMENTAL MANAGEMENT PLAN GOALS, OBJECTIVES, AND ISSUES

2.1 Goal of environmental management

The purpose of the EMP is to aid Matsqui First Nation in achieving the following environmental management goal:

> **Balance human activities and economic development with the need to protect and improve the environmental quality of Matsqui First Nation lands, air, water, and habitat.**

To achieve this goal, Matsqui First Nation commits to:

- seek resources needed to implement the policies and actions identified in the EMP;
- manage community services and business practices with an emphasis on pollution prevention and minimizing impacts on the environment;
- periodically monitor environmental conditions on Matsqui lands to improve environmental quality and to refine the EMP's policies; and
- promote the environmental management goal to the membership, employees, contractors, and the public.

2.2 Objectives

The EMP is an important tool in managing Matsqui lands. The Matsqui First Nation seeks to achieve the following objectives through the EMP:

- minimize environmental impact of future human activity on Matsqui lands, repair past damage, and enhance the quality and productivity of the land, air, and waters;
- improve the ecological functioning and resource productivity of Matsqui lands and waters;
- comply with environmental management components of the Framework Agreement signed by the Matsqui First Nation and Canada,
- review other jurisdictions' environmental protection laws and processes related to preventing risks to the environment or human health, and assess the suitability of those laws for achieving the Matsqui First Nation environmental management goals;
- formulate policies to be implemented by the Matsqui Governing Body that advance us toward the goal of sustainable use of Matsqui lands;
- identify alternative environmental management approaches, including laws, regulations, policies, guidelines, and Best Management Practices (BMPs), that could be used to address the issues identified in the Step 1 process;

- ensure that the goals of environmental management and sustainability are reflected in land use plans, development and servicing plans, and other decisions affecting the environment or the community;
- work with adjacent local governments and the provincial and Canadian governments in regarding the environmental measures we deemed most suitable for Matsqui lands, including cooperation in the implementation and enforcement of Matsqui First Nation environmental regulations and standards;
- develop procedures for preventing future contamination or recontamination of Matsqui lands;
- identify Matsqui First Nation opportunities for, and limits to authority over, environmental management;
- specify Matsqui First Nation government organizational structures and administrative procedures to implement the EMP policies and directions;
- determine training, equipment, infrastructure, and information management required to implement the EMP, including potential sources of funding or other resources; and
- continue to communicate with Matsqui First Nation members, employees, tenants, and those who undertake construction or other projects on Matsqui lands of the importance of complying with the EMP policies and associated laws, regulations, and guidelines.

2.3 Matsqui First Nation environmental issues

The Matsqui First Nation has identified a variety of environmental issues associated with Matsqui lands and resources. The following priority environmental issues were raised during discussions with the Lands Committee and Matsqui First Nation membership. Individual issues are listed under main topic headings.

Environmental emergencies

- Potential spills from vehicle accidents on highways crossing reserves
- Emergency response regarding railroads (Canadian National Railway (CN), Canadian Pacific (CP), and Southern Rail) crossing reserves
- Wildfire risk on all reserves
- Flood and earthquake risk on all reserves

Fuel storage and management

- Potential spills from:
  - Fuel storage and boat fueling operations at G&R Cedar, IR #2

- Fuels and lubricants at ModPro, IR #2
- Fueling facility at band office
- Kruger Inc. forestry operations, IR #3

- The potential for natural gas leaks in distribution systems and gas appliances present on IR #2 and IR #4.

Sewage disposal

- Effects of high water table on waste disposal fields, IR #4
- Potential cross contamination of water supply by leaking sewer lines
- Potentially harmful waste being introduced into sanitary sewers

Solid waste management

- Hog fuel storage at G&R Cedar and past gate on Cemetery Road
- Garbage dump at former sand pit
- Illegal dumping of garbage on reserves
- Litter and construction debris dumped by Matsqui members
- Failure of some Matsqui First Nation members to practice traditional methods of disposing of fish waste, instead of dumping the waste in garbage bins, creating odour problems

Fish and fish habitat protection

- Bilge discharges into the river from boom boats and other fuel spill risks
- Drainage from agricultural operations affecting water quality
- Lack of respect of fish including waste of fish resources
- River bank treatment (rip rap) that harms fish habitat
- Damage to fish habitat caused by development
- Culverts that are obstacles to fish passage (*e.g.*, Coligny Creek)

Protection of valued and at-risk species

- Protect valued, threatened, or endangered species on Matsqui lands

- Avoid potential development proposals or designs that could harm valued or at-risk species

Land contamination issues

- Dumping fill of unknown quality on farmland and other parts of Matsqui lands
- Grease and metals from rail operations contaminate reserves
  - Soil and plants are contaminated near railways
  - Grease on rails and rail switches
  - Creosote railroad ties (in use and stored)

Agricultural practices

- Pesticide use, fertilizer runoff, noise, odour, and soil management
- Need for improved agricultural practices for gardens and permit-based farming on IR #2
- Nuisance fly infestations associated with manure spreading on adjacent farms

Water management

- Poor drainage management in low portions of Matsqui lands
- Stagnant water in drainage ditches creating mosquito and odour problems
- Effects on Matsqui lands of runoff from adjacent farmlands (pesticides, fertilizers, and organic material in water)

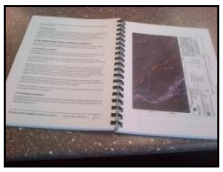
Air quality

- Odours on IR #2 from:
  - the Joint Abbotsford Mission Environmental System (JAMES) sewage treatment plant,
  - manure spreading on adjacent land, and
  - fetid drainage ditches.
- Odours on IR #4 from:
  - livestock manure processing facility in United States, and

- mink and mushroom farms in Langley.
- Particulate air pollution on IR #2 from:
  - coal being transported by train,
  - diesel engines, and
  - CN track cleaning.

Community quality

- Encourage environmentally-sound development that makes efficient use of land, energy, and other resources
- Matsqui communities are not pedestrian-oriented; they need to become mixed-use neighbourhoods that reduce dependency on motor vehicles
- Improve the appearance of structures and streetscapes



Environmental Assessment

- An Environmental Assessment (EA) should be completed for reviewable projects before decisions are made to approve a project
- The Matsqui Nation does not comply with Sections 23.2 and 23.4 of the Framework Agreement, which specify that an EA regime and laws will be adopted

2.4 Matsqui First Nation potential responses

Potential responses available for managing the environment on Matsqui lands include:

- laws and regulations,
- policies,
- guidelines and Best Management Practices (BMPs),
- education and outreach, and
- monitoring and reporting.

Definitions, benefits, and limitations of these tools are outlined in Figure 3. Laws and regulations are enforceable directions designed to achieve uniform compliance. Although they can be enforced and are authorized by the Framework Agreement, laws are inflexible, costly to draft, implement, and enforce. In preparing appropriate and effective laws, the Matsqui First Nation will review examples of laws and regulations from other Aboriginal and non-Aboriginal jurisdictions.

Policies typically describe a specific method or course of action to guide government or individuals' actions. Policies are advisory, signaling the direction to be taken by the Matsqui

First Nation and providing direction to Matsqui members, staff, and others. Each policy needs to be consistent with other policies. Although policies cannot be enforced, they have the advantages of being flexible, simple to draft, and easily amended.

Guidelines and BMPs are sets of instructions offering clear direction to achieve a desired outcome. Although they are not legally binding and may be complex, guidelines and BMPs describe the proper conduct of tasks.

Education and outreach programs communicate knowledge to improve awareness of environmental issues and potential responses. Outreach programs can create positive change in attitudes and actions, and are adaptable to different audiences and programs. Because they are not enforceable, policies, guidelines, and BMPs rely for their success on effective outreach programs.

Monitoring and reporting may be used to collect information on environmental quality on Matsqui lands. The commitment to monitoring and reporting is long-term and results may be difficult to interpret, but the data establishes a baseline and can be used to track change. All environmental issues on Matsqui lands will be subject to a policy and education and outreach initiatives implemented by Matsqui First Nation.

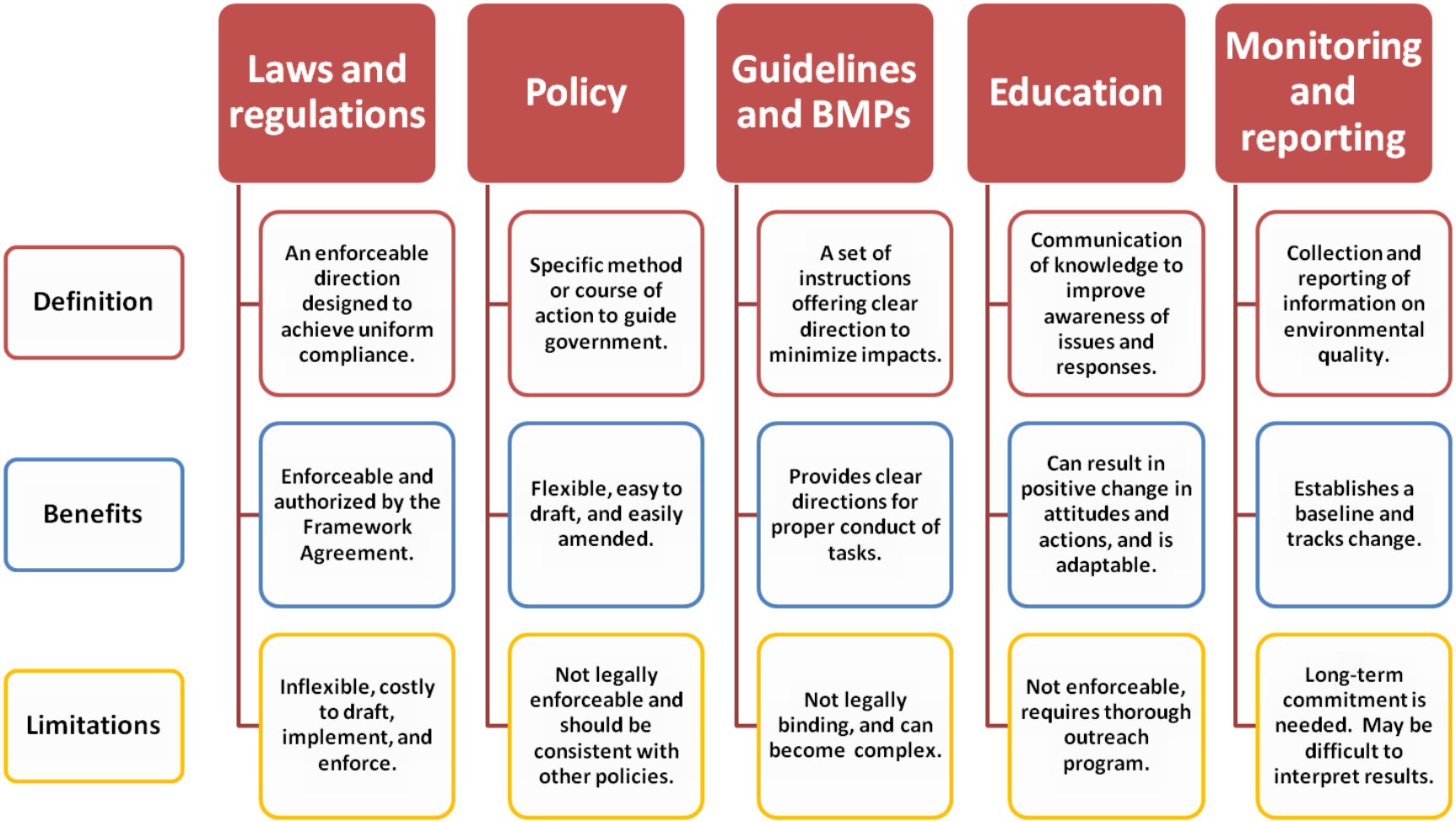


Figure 3. Potential responses to environmental issues

2.5 Education and outreach

2.5.1 Purpose

Efforts to manage identified environmental issues will include education and outreach programs to reach Matsqui First Nation members and businesses active on Matsqui lands. To ensure effective environmental governance, it is important to educate community members regarding environmental matters and provide ongoing community engagement during and after planning processes. On-going community engagement will:

- ensure that members' knowledge about Matsqui lands, resources, traditional use sites, and history is part of the environmental management process,
- let members know that their suggestions and comments are being heard and recorded,
- strengthen community spirit,
- ensure that consistent information is conveyed to increase the understanding of meaningful involvement through decision-making processes,
- assure that decisions reflect the community's values and visions, and
- build community support for laws, policies, guidelines, and BMPs (FNLAB, 2012).

2.5.2 Communication plan

Before initiating an education and outreach initiative and deciding which tools and techniques will be used, it is important to establish a plan that will include, but is not limited to, the following components:

- Overall Strategy
  - Which environmental issue will this initiative support?
- Goals and objectives
  - Choose goals and objectives that are simple and measurable.
  - Describe what the outreach initiative intends to achieve.
  - What should people do following the initiative?
  - How will staff determine if the initiative has had an impact?
- Target audience(s)
  - Types of audiences could include youth, elders, mothers, dads, or business people.
  - How does each group relate to the environmental issue to be discussed?
  - What type of communication method would recipients prefer?
  - What should recipients do after they receive the message?

- Key messages
  - What does the target audience need to focus on and understand?
- Communication methods
  - Is there a preferred method for reaching each target group?
  - Has this method been used in the past?
  - If not, what other methods should be used? Communication methods are listed Table 2. Appendix A3 provides other potentially relevant tools available to Matsqui First Nation.
- Timeline
  - When should each group be engaged?
  - Does the schedule allow each group enough time to participate and provide comments?
- Roles and responsibilities
  - Who will be responsible and involved in each communication step (planning, message development, preparing materials, delivering the program, *etc.*)?
  - Who needs to approve budgets, messaging, and other outreach components?
- Budget
  - How much is the initiative estimated to cost (*e.g.*, for printing, mailing, catering, *etc.*)?
  - What outside funding opportunities exist?
- Evaluation
  - How will meeting and event feedback be gathered to evaluate the program?
  - Can we maintain a record of who attended events and relevant comments?
  - How can staff keep track of methods that worked and what needs to change for future initiatives with different target audiences (INAC, 2007)?

Table 2. When to use and not use education and outreach techniques

Technique	Audience	When to use	When not to use
Advertising and broadcast information			
Social media (facebook, twitter, *etc.*)	Youth and broad community	• For announcing events • In engaging youth	• For those who do not use social media
Website advertising	Broad community	• To reach businesses, industry, government, and many community members	• If the website cannot be updated regularly • For those with limited internet access • If information is not to be shared beyond the community

Technique	Audience	When to use	When not to use
Newsletter or bulletin	Broad community	• To announce events, provide contact information, and general inquiries	• If the deadline is passed • If a single target group needs to be reached
Notices, flyers, or poster	Broad community	• When an event is planned and member input is needed	• If they cannot be posted in public places or be handed out before the event
Brochures or pamphlets	Broad community	• When information is more complex and needs to be distributed through mail outs or emails	• If the information exceeds four pages
Targeted information and discussion			
Community meetings	Broad community	• Before, during, and after an initiative • To balance "information in" and "information out"	• If adequate funding is unavailable • If meeting topics do not interest the entire community
Elders meeting	Elders	• When information and ideas are needed on traditional practices	• When short meetings are planned, not allowing time for discussion
Advisory committee meeting	Advisory committees	• To track the progress of an initiative or event with a group of 5 – 10 people	• When community input or Council decisions are needed
Youth group	Youth	• For youth-only topics • For informal discussion • When visual and creative materials can be used (*e.g.*, art, maps, music, videos, *etc.*)	• If information shared will not interest youth
Small group, family meetings, or one-on-one discussions	Friends and families	• To facilitate personal discussion and address individual concerns • To obtain detailed information	• If too much information must be conveyed, inhibits discussion
PowerPoint presentations tailored to specific meetings	Broad community or groups	• If content is complex and benefits from visual reinforcement • To highlight key points, make connections between topics, and create a framework for presenting content	• When in-depth discussion is needed • In family or small-group settings • If lots of text needs to be reviewed
Displays and materials tailored to specific meetings	Broad community	• During community meetings • During other community events	• If the topic is not suitable for visual display or contains mainly written information • In large-group presentations

Technique	Audience	When to use	When not to use
Open house	Broad community	• Presenting information ("information out") • One-on-one discussions ("information in") • Distributing written summaries or surveys	• If group discussions are needed for detailed input • If specific groups are to be contacted
Surveys or questionnaires	Broad community	• For anonymous feedback • When quick feedback and comments are needed • To measure awareness and feelings	• If too many questions must be asked • If answers rely on in-depth knowledge of a topic and such information cannot be provided

Although communications programs increasingly rely on digital media (websites, Facebook *etc.*), paper documents continue to play an important role. In the case of the EMP, hard copies of the complete document will be available at the Administration Office. A brief summary brochure will be prepared, outlining the purpose of the EMP and listing its major policies and actions. This summary is intended for distribution to community members, government agencies, contractors, and others. The brochure also will describe how readers can access the full EMP, either online or in print.

3.0 RESPONSES TO ENVIRONMENTAL ISSUES

This section of the EMP describes how the Matsqui First Nation will respond to the environmental issues affecting Matsqui lands. The proposed policies represent actions that the Matsqui Governing Body, staff, membership, and consultants will take to achieve the Matsqui's environmental management goal and to rectify identified issues. Pursuit of the policies will encounter financial, technical, political obstacles that may require changes in direction, timing, and priorities. It may not be feasible to fully implement some policies. These challenges, however, will not prevent the Matsqui First Nation from making best efforts to implement the policies and other actions described in this EMP.

The guides, examples, and recommendations contained in Section 3 should be considered advisory. If better examples or methods are identified in the process of implementing the EMP, those superior approaches should be taken.

3.1 Environmental emergencies

3.1.1 Environmental emergency issues

Matsqui First Nation has identified issues related to environmental emergencies associated with the management of:

- potential spills from vehicle accidents on highways crossing reserves,
- emergency response regarding railroad operations (CN, CP, and Southern Rail) crossing reserves,
- wildfire risk on all reserves, and
- flood and earthquake risk on all reserves.

3.1.2 Responses

The Matsqui First Nation will take the following actions, subject to having adequate financial and other resources.

Policy

The Matsqui First Nation will:

- assign a staff member to be Emergency Response Coordinator for IR #1, 2, and 3, and another Coordinator for IR #4. The Coordinator will be the first point of contact in the event of an environmental emergency, and will have appropriate training to be able to take appropriate action as necessary;
- have up-to-date emergency response documents from major industrial operators on or near Matsqui lands readily available to the Coordinators;

- prepare and periodically update step-by-step guidelines for responding to environmental emergencies that could occur on Matsqui First Nation land;
- apply the guidelines in the British Columbia (BC) Fire Smart Manuals for home owners and communities when decisions are made about future construction and retrofitting of homes near forested land;
- negotiate agreements with the City of Abbotsford and Township of Langley for provision of emergency response, hazardous material response, and fire protection;
- ensure that the Coordinators report spills as required under applicable federal regulations (*Canadian Environmental Protection Act* and *Transportation of Dangerous Goods Act*);
- inform community members about Matsqui's emergency response procedures, and explain appropriate action to be taken by individuals or households if an environmental emergency occurs.

Laws and regulations

Matsqui First Nation will comply with the following federal laws:

- *Canadian Environmental Protection Act* (CEPA)
  - Release and Environmental Emergency Notification Regulation (Appendix B1)
  - Environmental Emergency Regulations (Appendix B2)
  - Part 8 of CEPA on Environmental Matters Related to Emergencies (Appendix B3)
- *Transportation of Dangerous Goods Act*
  - Part 8 of the Transportation of Dangerous Goods Regulations on Accidental release and imminent accidental release report requirements (Appendix B4)
- *Fisheries Act*

Guidelines and Best Management Practices

Matsqui First Nation will apply the following guidelines in the management of environmental emergencies:

- Emergency response regarding rail operations (CN, CP, and Southern Rail), and spills from vehicle accidents on highways crossing reserves
  - Spill response (Appendix B5)
- Wildfire risk on all reserves
  - Wildfire response (Appendix B6)
  - Fire Smart Manual: Protect Your Home from Wildfire (Appendix B7)
  - Fire Smart: Protecting Your Community from Wildfire
    http://www.partnersinprotection.ab.ca/downloads/
- Other environmental emergency risk on reserves

- Response to other environmental emergencies (Appendix B8)
- Emergency contact card (Appendix B9)
- Your Emergency Preparedness Guide
  http://www.getprepared.gc.ca/knw/plan/plan-eng.aspx
- Family emergency supplies detailed checklist (Appendix B10)
- Earthquakes: What to do? (Appendix B11)
- Floods: What to do? (Appendix B12)
- A First Nation's Guide to Environmental Emergencies
  http://www.env.gov.bc.ca/eemp/resources/index.htm

3.2 Fuel use and storage

3.2.1 Fuel use and storage issues

Fuel use and storage on Matsqui lands raise issues related to managing potential spills and risks associated with petroleum fuels and natural gas distribution. The identified fuel use and storage issues are:

- storage and boat fueling operations at G&R Cedar, IR #2,
- fuels and lubricants at Mod Pro, IR #2,
- fueling facility at Matsqui First Nation band office, IR #2,
- Kruger Inc. forestry operations (fueling of machinery and vehicles), IR #3, and
- the potential for natural gas leaks in distribution systems and gas appliances present on IR #2 and IR #4.

3.2.2 Responses

The Matsqui First Nation will take the following actions, subject to having adequate financial and other resources.

Policy

The Matsqui First Nation will:

- negotiate agreements with the City of Abbotsford and Langley Township to respond to fuel spills and cleanup services;
- ensure that fuel storage and use on reserves complies with the Environmental Code of Practice for Aboveground and Underground Storage Tank systems containing Petroleum and Allied Petroleum Products (Canadian Council of Ministers of the Environment), and the National Fire Code of Canada;
- prohibit placement of fuel storage tanks and dispensing facilities within 15 m of waterbodies;
- ensure that fuel tanks and dispensing facilities have spill containment and that spill kits are available nearby;
- ensure that staff of businesses on Matsqui lands and Matsqui First Nation personnel are trained in fuel spill response;
- require that all businesses on Matsqui lands prepare and submit a fuel and lubricant management plan for approval by Matsqui staff before they are allowed to operate;
- require commercial boats operating on Matsqui lands to be equipped with bilge filtration systems or well-maintained oil absorbent pads;
- request FortisBC to make presentations to residents and businesses on IR #2 and IR #4 regarding protection of natural gas distribution lines and safe use of natural gas appliances and equipment;

- empower FortisBC staff to enter Matsqui lands to inspect natural gas distribution lines and gas meters;
- apply the FortisBC guidelines for managing gas distribution lines and appliances before and after an emergency; and
- inform community members about the risks of fuel spills and bilge discharges, about environmentally sound use of fuel and lubricants, and about natural gas safety.

Laws and regulations

Matsqui First Nation will not develop its own fuel management law at this time, but will rely on application of Matsqui First Nation's policies, applicable guidelines, and compliance with the following federal regulations:

- *Canadian Environmental Protection Act* (CEPA)
  - Release and Environmental Emergency Notification Regulation (Appendix B1)
  - Environmental Emergency Regulations (Appendix B2)
  - Part 8 of CEPA on Environmental Matters Related to Emergencies (Appendix B3)
  - Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations (Appendix C1)
- *Transportation of Dangerous Goods Act*
  - Part 8 of the Transportation of Dangerous Goods Regulations on Accidental release and imminent accidental release report requirements (Appendix B4)

Should a fuel management law be required in the future, examples from other jurisdictions will be examined, including but not limited to Abbotsford's Petroleum Products Storage Tank Bylaw.

Guidelines and Best Management Practices

Matsqui First Nation will apply the following guidelines for identified fuel use and storage issues:

- Potential spills from fueling and facilities
  - Spill response (Appendix B5)
  - Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum Products from the Canadian Council of Ministers of the Environment (CCME)

    http://www.ec.gc.ca/lcpe-cepa/default.asp?lang=En&n=61B26EE8-1
    - National Fire Code of Canada (NFCC) referenced in the CCME Environmental Code of Practice
      http://www.nrc-cnrc.gc.ca/eng/ibp/irc/codes/2010-national-fire-code.html
  - Fuel and lubricant BMPs (Appendix C2)

- Natural gas leaks on IR #2 and IR #4
  - Gas leak response (Appendix C4)
  - Natural gas in emergency situations (Appendix C5)
  - Safe domestic use of natural gas (Appendix C6)

Monitoring

The Matsqui First Nation will comply with Part 6 Monitoring and Leak Detection of the Storage Tank Systems of the Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Products (Appendix C3).

In this Code of Practice, general requirements for storage tank systems and leak detection and monitoring methods for specific fuel containment systems are described in detail and must be followed. Depending of the type of fuel containment, Matsqui First Nation will have information on the type of leak detection method to use, the appropriate monitoring technique, the necessity for periodic leak detection, and the best method to use when a leak is suspected.

3.3 Sewage treatment and disposal

3.3.1 Sewage treatment and disposal issues

Matsqui First Nation has identified sewage treatment and disposal issues associated with:

- effects of high water table on waste disposal fields on IR #4,
- potential cross contamination of water supply by leaking sewer lines, and
- potentially harmful waste being introduced in sanitary sewers.

3.3.2 Responses

The Matsqui First Nation will take the following actions, subject to having adequate financial and other resources.

Policy

The Matsqui First Nation will:

- require periodic monitoring of groundwater quality at the perimeter of waste disposal fields at IR #4, and institute remedial actions if unacceptable results are obtained;
- ensure that operating authorities periodically monitor the integrity of sewer and water pipes on Matsqui lands;
- adopt a law to regulate materials introduced into the sewer system, specifically prohibited or restricted waste as defined in the City of Abbotsford Consolidated Sewer Rates and Regulations Bylaw;
- provide information to community members regarding the sewer use regulation.

Laws and regulations

A law will be developed stating that no person shall directly or indirectly discharge a prohibited waste or restricted waste in Matsqui First Nation's sanitary sewers. In defining prohibited and restricted wastes, the Matsqui First Nation will consider examples from other jurisdictions, for instance Schedule E "prohibited waste" and Schedule F "restricted waste" of Abbotsford's Bylaw No. 1862-2009 (Appendix D1).

Guidelines and Best Management Practices

Matsqui First Nation will make available household guidelines providing examples of prohibited and restricted waste as referenced in the Abbotsford Consolidated Sewer Rates and Regulations Bylaw (Appendix D1).

3.4 Solid waste management

3.4.1 Solid waste management issues

Matsqui First Nation has identified solid waste management issues associated with:

- hog fuel storage at G&R Cedar and past the gate on Cemetery Road,
- garbage dumping at the former sandpit,
- illegal dumping of garbage on Matsqui lands by unknown parties,
- litter and construction debris dumped by Matsqui members including motor vehicle maintenance, oil disposal, drywall dumping, paint, and batteries, and
- failure of some Matsqui First Nation members to practice traditional methods of disposing of fish waste in the Fraser River, instead of dumping the waste in garbage bins, creating odour problems.

3.4.2 Responses

The Matsqui First Nation will take the following actions, subject to having adequate financial and other resources.

Policy

The Matsqui First Nation will:

- adopt a law prohibiting dumping of garbage on reserve, including provisions to regulate dumping of construction waste and storage of derelict vehicles and appliances;
- actively enforce the law against illegal dumping, including providing a contact number where Matsqui members can report illegal dumping on Matsqui lands;
- meet with industrial operators on reserve to discuss environmentally sound methods for storing hog fuel and other solid waste;
- provide information to community members to encourage proper disposal of fish waste in a traditional manner, by returning the waste to the Fraser River;
- facilitate and regularly encourage solid waste reduction and increased recycling among Matsqui members, on-reserve businesses, and band administration.

Laws and regulations

Matsqui First Nation will prepare a solid waste management law prohibiting dumping of garbage on reserves. Regulations, guidelines, and BMPs will be prepared and used as needed. In drafting Matsqui First Nation's Solid Waste Management Law, examples from other jurisdictions will be reviewed, such as Section 15 of the City of Abbotsford's Soil Removal and Deposit Bylaw and Parts III (3.4) and V of the City of Abbotsford's Consolidated Good Neighbour Bylaw; (Appendix E1).

Guidelines and Best Management Practices

Matsqui First Nation will apply portions the following guidelines to manage their solid waste issues:

- Solid waste diversion guidelines (Appendix E2)
- BFI Organic waste solutions (Appendix E3)
- Biomass storage environmental practices guide (Appendix E4)
- Farm Practices: Wood waste (Appendix E5)

3.5 Fish and fish habitat protection

3.5.1 Fish and fish habitat issues

Matsqui First Nation has identified the following fish and fish habitat protection issues:

- fuel spills and boom boat bilge discharges into the Fraser River,
- drainage from agricultural operations affecting water quality,
- lack of respect for fish, including waste of fish resources,
- river bank treatment (rip rap) that harms fish habitat,
- damage to fish habitat caused by development, and
- culverts that are obstacles to fish passage (*e.g.*, Coligny Creek).

3.5.2 Responses

The Matsqui First Nation will take the following actions, subject to having adequate financial and other resources.

Policy

The Matsqui First Nation will:

- prepare guidelines and procedures for protecting fish habitat, emphasizing protection of riparian vegetation and improving quality of water runoff based on:
  - Fisheries and Oceans Canada information,
  - BC Ministry of the Environment and Agriculture information,
  - BC Stewardship guides, and
  - Abbotsford streamside protection guidelines and land development information package;
- review proposed development plans to ensure that they protect fish habitat and riparian areas;
- meet with the City of Abbotsford, Ministry of Transportation, and Fisheries and Oceans Canada, and other appropriate parties regarding ways of improving fish passage through culverts and pump stations;
- meet with Fisheries and Oceans Canada to identify more fish-friendly ways of reducing erosion of river banks;
- inform commercial boat operators of the need to reduce and manage bilge discharges in the Fraser River, and of ways to reduce risks of spillage during boat fueling;
- prohibit boats from docking on Matsqui lands unless they are equipped with bilge filtration systems or well-maintained oil absorbent pads. Boats observed discharging unfiltered bilge in waterbodies will not be allowed on reserves;

- prepare information for Matsqui First Nation members about respectful treatment of fish, annual fish harvesting guidelines, ways of protecting fish habitat, and managing bilge discharge.

Laws and regulations

Although no Matsqui First Nation law will be drafted, the following federal laws affecting fish and fish habitat still apply:

- *Fisheries Act*

  http://laws-lois.justice.gc.ca/eng/acts/F-14/
- *Species at Risk Act* (SARA)

  http://laws-lois.justice.gc.ca/eng/acts/S-15.3/

Guidelines and Best Management Practices

Matsqui First Nation will apply the following guidelines to each issue identified:

- Bilge discharges into the river from boom boats and other fuel spill risks
  - Discharge and spill response (Appendix F1)
  - Guide to Green Boating (Appendix F2)
- Drainage from agricultural operations affecting water quality
  - Drainage Management Guide: The Canada – BC Environmental Farm Plan Program

    http://www.al.gov.bc.ca/resmgmt/EnviroFarmPlanning/EFP_Drainage_Mgmt_Guide/Drainage_Mgmt_Guide_toc.htm
- Lack of respect for fish including waste of fish resources
  - Lil'wat Nation Chinook Salmon Harvest Plan (Appendix F3)
  - Home Tips for Healthy Streams (Appendix F4)
  - Abbotsford guidelines: Living near streams and ravines (Appendix F5)
- River bank treatment (rip rap), culverts, and development proposals potentially harming fish passage and habitat
  - Culvert Maintenance (Appendix F6)
  - BC Stewardship Guide: Land Development Guidelines

    http://www.stewardshipcentre.bc.ca/cdirs/st_series/index.php/11
  - BC Stewardship Guide: Stream Stewardship

    http://www.stewardshipcentre.bc.ca/cdirs/st_series/index.php/1
  - Develop with Care guides

    http://www.env.gov.bc.ca/wld/documents/bmp/devwithcare2006/develop_with_care_intro.html
    - Section 2: Community Planning

    - Section 3: Site Development and Management
    - Section 4: Environmentally Valuable Resources
- Standards and Best Practices for Instream Works (Appendix F7)
- Abbotsford information package for developing near streams and ravines (Appendix F8)

3.6 Protection of valued and at-risk species

3.6.1 Species at risk issues

To protect plant and animal species, Matsqui First Nation will ensure that:

- valued, threatened, or endangered species on Matsqui lands are protected, and
- potential development proposals or designs do not harm valued or at-risk species.

3.6.2 Responses

The Matsqui First Nation will take the following actions, subject to having adequate financial and other resources.

Policy

The Matsqui First Nation will:

- apply federal laws and Matsqui First Nation policies to minimize adverse effects of development and other human activities on native vegetation, plant communities, wildlife, wildlife habitat, and species at risk;
- require valued or at-risk species surveys to be conducted before proceeding with developments that have the potential of adversely affecting species at risk or other species valued by the Matsqui First Nation, using the approach provided in the City of Abbotsford's *Wildlife Assessment Report Guidelines* and the provincial *Develop With Care* guides;
- take appropriate action if a project has the potential to affect valued or at-risk species, such actions to be consistent with applicable federal legislation and Matsqui First Nation goals and objectives;
- seek opportunities to improve the ecological function of Matsqui lands, including enhancing habitat for valued and at-risk species and plant communities;
- inform community members about the protection of valued or at-risk species on Matsqui lands.

Laws and regulations

Although no law will be drafted for Matsqui First Nation, federal laws affecting species at risk still apply, including:

- *Fisheries Act*

  http://laws-lois.justice.gc.ca/eng/acts/F-14/
- *Species at Risk Act* (SARA)

  http://laws-lois.justice.gc.ca/eng/acts/S-15.3/

- *Migratory Bird Convention Act*
  - Migratory Birds Regulations

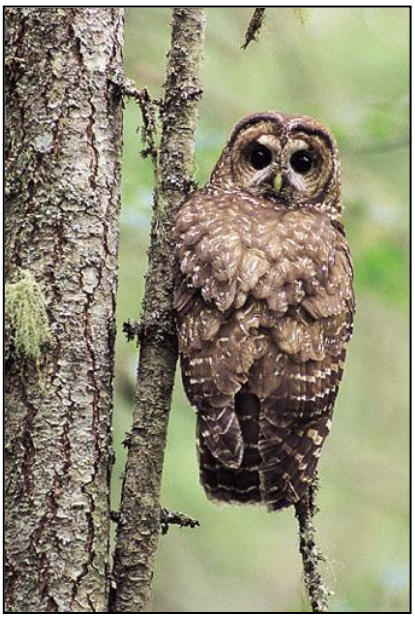
    http://laws-lois.justice.gc.ca/eng/regulations/C.R.C.%2C_c._1035/

Guidelines and Best Management Practices

Matsqui First Nation will apply the following guidelines to protect species at risk during review of potential development proposals or designs:

- Develop with Care guides

  http://www.env.gov.bc.ca/wld/documents/bmp/devwithcare2006/develop_with_care_intro.html
  - Section 2: Community Planning
  - Section 3: Site Development and Management
  - Section 4: Environmentally Valuable Resources
- City of Abbotsford Wildlife Assessment Report Guidelines (Appendix G1)



3.7 Land contamination

3.7.1 Land contamination issues

Land contamination issues on Matsqui lands are:

- dumping fill of unknown quality on farmland and other parts of Matsqui lands,
- grease and metals from rail operations contaminating reserves including:
  - soil and plants near railway right-of-way,
  - grease on rails and rail switches, and
  - creosote ties.

3.7.2 Responses

The Matsqui First Nation will take the following actions, subject to having adequate financial and other resources.

Policy

The Matsqui First Nation will:

- adopt a contaminant control law making it illegal to deposit soil or other material that exceeds applicable standards contained in the BC Contaminated Sites Regulation or the Canada Wide Standards (CCME, 2009, as amended);
- adopt a regulation under the contaminant reduction law that requires a permit before depositing soil on reserve and establishes conditions for issuing a permit, including:
  - providing evidence that the soil is not contaminated, either as determined by laboratory results or as certified by a registered professional,
  - ensuring that drainage is not affected by placement of fill,
  - maintaining a minimum 15 m separation between fill and waterbodies,
  - preventing erosion or sedimentation associated with the fill, and
  - identifying exceptions, such as excluding requirements for a permit if 7 cubic metres of soil or less is deposited on a property in a 12-month period (though other regulatory provisions still apply);
- if necessary and if financial resources are available, negotiate a contract with a private firm to provide technical and monitoring support associated with implementing the contaminant control law; and
- present information to Matsqui members about the contamination reduction law and associated soil deposit regulations.

Laws and regulations

Matsqui First Nation will prepare a law that prohibits dumping fill of unknown quality on reserves, and regulates the storage, use, or other release of potentially contaminating materials. Material will be prohibited that exceeds applicable standards contained in the British Columbia Contaminated Sites Regulation or the Canada Wide Standards (CCME, 2009, as amended). A regulation will be adopted to require permitting prior to depositing soil on reserves, or the storage or use of potentially contaminating materials.

Guidelines and Best Management Practices

Matsqui First Nation will apply the following regulations and standards as part of the Matsqui First Nation's contaminant control law and associated regulation:

- British Columbia Contaminated Sites Regulation
  http://www.env.gov.bc.ca/epd/remediation/leg_regs/csr.htm
- Canada Wide Standards
  http://www.ccme.ca (various links)

Procedures followed in administering the contaminant control law and issuing soil deposit permits will be similar to those contained in Abbotsford Soil Removal and Deposit Bylaw (Appendix H1).

Monitoring

Matsqui First Nation will negotiate a contract with a private firm to provide technical and monitoring support associated with implementing the contaminant reduction law and regulation. Such support could include sampling, laboratory testing, interpretation of test results in light of applicable regulatory standards, and developing remediation measures if necessary.

3.8 Agricultural practices

3.8.1 Agricultural practice issues

Matsqui First Nation has identified the following environmental issues related to agricultural practices:

- pesticide use, fertilizer runoff, noise, odour, and soil management,
- need for improved agricultural practices for gardens and permit-based farming on IR #1 and #2, and
- nuisance fly infestations associated with manure spreading on adjacent farms.

3.8.2 Responses

The Matsqui First Nation will take the following actions, subject to having adequate financial and other resources.

Policy

The Matsqui First Nation will:

- assemble a set of preferred agricultural practices intended to allow for productive farming, the protection of soils and water quality, and respect for neighbours and ecosystems;
- meet with representatives of the British Columbia Ministry of Agriculture and Lands and local farmers to discuss ways of controlling fly infestations caused by manure spreading;
- provide an agricultural practices guide to prospective farmers and gardeners on Matsqui lands;
- seek opportunities to encourage farmers on property adjacent to Matsqui lands to adopt Matsqui's recommended agricultural practices; and
- inform community members about Matsqui's agricultural practice policy.

Guidelines and Best Management Practices

Matsqui First Nation's guidelines for agriculture will include elements of the following documents, which encourage environmentally sound agricultural practices:

- Reference Guide: The Canada – BC Environmental Farm Plan Program and associated publications

  http://www.agf.gov.bc.ca/resmgmt/EnviroFarmPlanning/EFP_Refguide/Refguide_toc.htm
- On the Road to Sustainable Agriculture (Appendix I1)

3.9 Water management

3.9.1 Environmental issues

The following drainage and storm water management issues are environmental concerns for Matsqui First Nation:

- poor drainage in low-lying portions of Matsqui lands,
- stagnant water in drainage ditches creating mosquito and odour problems, and
- effects on Matsqui lands of runoff from adjacent farmlands (pesticides, fertilizers, and organic material in water).

3.9.2 Responses

The Matsqui First Nation will take the following actions, subject to having adequate financial and other resources.

Policy

The Matsqui First Nation will:

- encourage new development to employ environmentally and economically sound drainage management approaches;
- encourage retrofitting of existing structures to reduce offsite runoff;
- meet with the City of Abbotsford to discuss ways of improving the quality of runoff from surrounding properties on Matsqui lands, and ways to improve functioning of stormwater ditches on IR #2 to avoid stagnant water during low-flow periods; and
- inform community members about Matsqui's water management policies and ways that members can better manage runoff.

Guidelines and Best Management Practices

Matsqui First Nation's stormwater management guidelines will consider relevant and suitable elements of the following documents:

- Drainage Management Guide: The Canada – BC Environmental Farm Plan Program
  http://www.al.gov.bc.ca/resmgmt/EnviroFarmPlanning/EFP_Drainage_Mgmt_Guide/Drainage_Mgmt_Guide_toc.htm
- Low Impact Development Design Strategies: An Integrated Design Approach
  http://www.co.pg.md.us/Government/AgencyIndex/DER/ESG/manuals.asp
- Reference Guide: The Canada – BC Environmental Farm Plan Program
  http://www.agf.gov.bc.ca/resmgmt/EnviroFarmPlanning/EFP_Refguide/Refguide_toc.htm

3.10 Air quality

3.10.1 Air quality issues

Matsqui First Nation has determined that the air quality on Matsqui lands is affected by the following emissions:

- odours on IR #2 from
  - the JAMES sewage treatment plant,
  - manure spreading on adjacent land, and
  - fetid drainage ditches;
- odours on IR #4 from
  - livestock manure processing facility in United States, and
  - mink and mushroom farms in Langley; and
- particulate air pollution on IR #2 from
  - coal being transported by train,
  - diesel engines, and
  - CN track cleaning.

3.10.2 Responses

The Matsqui First Nation will take the following actions, subject to having adequate financial and other resources.

Policy

The Matsqui First Nation will:

- meet with the City of Abbotsford to discuss odour control at the JAMES sewage treatment plant and odours from drainage ditches;
- meet with representatives of CN and CP rail and provincial or regional district air quality staff to discuss ways of reducing air pollution from coal trains, diesel locomotives, and track cleaning;
- meet with local farmers and Ministry of Agriculture staff to discuss ways of reducing odour from manure spreading near IR #2 and operation of mink farms and mushroom farms near IR #4;
- contact representatives of the Northwest Clean Air Agency, Washington State in response to odours originating from manure processing facilities in the United States that affect IR #4;
- contact appropriate local government agencies, businesses, or other agencies if air quality problems become severe; and

- inform community members about Matsqui's efforts to improve air quality, and explain what members should do if they notice air pollution.

Guidelines and Best Management Practices

As part of its effects to improve air quality, Matsqui First Nation staff will be aware of the following guidelines for odour issues related to farm operations and agricultural drainage:

- Agriculture odours on IR #2 and IR #4
  - Farm Nuisance Guide (Appendix J1)
  - Reference Guide: The Canada – BC Environmental Farm Plan Program

    http://www.agf.gov.bc.ca/resmgmt/EnviroFarmPlanning/EFP_Refguide/Refguide_toc.htm
- Odour issues from improper drainage management
  - Drainage Management Guide: The Canada – BC Environmental Farm Plan Program

    http://www.al.gov.bc.ca/resmgmt/EnviroFarmPlanning/EFP_Drainage_Mgmt_Guide/Drainage_Mgmt_Guide_toc.htm

Monitoring and reporting

The odour issues identified on IR #4 can be monitored and reported by Matsqui First Nation members to Metro Vancouver, which handles air quality-related complaints, including odour, smoke, dust, and other emissions. Individuals concerned about air quality should call the Metro Vancouver Air Quality Complaints and Inquiries Line at **604-436-6777** or an online air quality form can be completed at:
http://www.metrovancouver.org/services/air/Pages/AirQualityComplaints.aspx.

On IR #2, air quality concerns should be conveyed to the FVRD. Although the FVRD does not have authority to respond to odour complaints or regulate and enforce air quality in its jurisdiction, contacts are available for general inquiries. Individuals concerned about sewage treatment odours should contact the wastewater treatment plant in Abbotsford at **604-853-2281** or by email at eng-info@abbotsford.ca. With respect to farm odours, the following mechanisms are available:

- Using the "informal concern resolution process", where an aggrieved party calls the local Ministry of Agriculture office in Abbotsford, at **604-556-3100**, to state their complaint, more information can be found online.
  http://www.al.gov.bc.ca/resmgmt/sf/factsheets/factsh3.htm
- Using the "formal complaint resolution process" to file a complaint in writing or online addressed to the Case Manager at the BC Farm Industry Review Board accompanied by a $100.00 filing fee.

  http://www.firb.gov.bc.ca/complaints/complaint_how_to.htm

- Make a formal complaint to the Northwest Clean Air Agency at **360-428-1617** for odours from the manure management facility (or other sources) in the United States.

3.11 Community quality

3.11.1 Community quality issues

The quality of Matsqui First Nation communities has been identified as an issue, particularly with regard to the need to:

- encourage environmentally-sound development that makes efficient use of land, energy, and other resources,
- Matsqui communities are not pedestrian-oriented; they need to become mixed-use neighbourhoods that reduce dependency on motor vehicles, and
- Improve the appearance of structures and streetscapes.

3.11.2 Responses

The Matsqui First Nation will take the following actions, subject to having adequate financial and other resources.

Policy

The Matsqui First Nation will:

- prepare and adopt land use plans and development law(s) and regulations to create communities that:
  - are attractive and livable,
  - encourage walking and cycling,
  - accommodate all age and income groups,
  - offer a mix of land uses,
  - make efficient use of land and energy,
  - meet principles established by Smart Growth BC, and
  - meet rating criteria established by Leadership in Energy and Environmental Design (LEED) 2009 for Neighbourhood Development's (ND);
- review proposed developments to identify their environmental impacts and ability to create attractive communities;
- ensure that buildings and streetscapes on Matsqui lands are well designed, high quality, and aesthetically appealing;
- adopt a law and associated regulation that protects the quiet enjoyment of neighbourhoods from excessive noise;
- encourage retaining or planting trees near housing and commercial development for environmental, aesthetic, and property value benefits;
- to the extent feasible, protect trees during utility installation and road improvements;

- where trees must be cut the Matsqui First Nation may require planting replacement trees and maintaining those trees until they become established;
- if replacement trees are required, the species and location of the trees will be determined in discussion with Matsqui First Nation staff;
- adopt a Tree Protection Law that applies where five (5) or more trees are to be cut at one time on IRs #1, 2, or 4, in which case the Matsqui First Nation will issue a permit if specified environmental and replanting conditions are met; and
- create outreach and education materials to inform Matsqui members about the goals and actions associated with improving community quality through land use and development planning, tree protection, and noise control.

Laws and regulations

The Matsqui First Nation will adopt a law to control excessive noise in the community after reviewing noise regulations from other jurisdictions, such as selected sections of Part IV, the Noise Regulation, in the City of Abbotsford Good Neighbour Bylaw (Appendix E1).

The Matsqui First Nation will adopt a law to regulate tree cutting, requiring issuance of a permit if five (5) or more trees are to be cut in a one-year period on IRs #1, 2, or 4. Regulations associated with the tree protection law will specify that information is to be provided on the location and setting of trees to be cut, environmental effects of tree removal, and proposals to replant and maintain suitable replacement trees. Before drafting a tree protection law and permitting process, the Matsqui First Nation will review examples from other jurisdictions (e.g., City of Richmond, City of Abbotsford, and others).

Guidelines and Best Management Practices

Matsqui First Nation will apply the following guidelines for identified community quality issues:

- Development form and vehicle dependency
  - Smart Growth BC principles and guidelines
    http://smartgrowth.bc.ca/Default.aspx?tabid=133
  - Develop with Care guides
    http://www.env.gov.bc.ca/wld/documents/bmp/devwithcare2006/develop_with_care_intro.html
    - Section 2: Community Planning
    - Section 3: Site Development and Management
    - Section 4: Environmentally Valuable Resources
  - Relevant portions of the LEED 2009 for ND rating system
    http://www.usgbc.org/DisplayPage.aspx?CMSPageID=148
- Improve the appearance of structures and streetscapes

- Richmond Tree Protection Bylaw (Appendix K1)
- Richmond Tree Removal Permit Application (Appendix K2)
- Trees and Towns Guide (Appendix K3)
- Planting our future: A Tree Toolkit for our Communities
  http://www.treesfortomorrow.gov.bc.ca/resources/

3.12 Environmental assessment

3.12.1 Environmental assessment issues

An environmental assessment (EA) is an analysis of potential physical, biological, socioeconomic, and cultural effects of a proposed development project.[1] An EA also identifies mitigation measures that could avoid or reduce potential project effects. Results of an EA should be available before decisions are made to approve a project.

The Framework Agreement (Section 23) mandates a First Nation to adopt an EA regime after a Land Code is adopted. An EA is to be conducted for developments or other land-disturbing activities proposed to occur on First Nations lands. The Matsqui First Nation has not yet prepared an EA regime that complies with Section 23.2 and 23.4 of the Framework Agreement.

The Matsqui First Nation can achieve the following benefits through use of an appropriately-designed EA process:

- reinforce a land management authority over use of the Matsqui lands;
- identify components of proposed projects or plans that could adversely affect natural or human environments;
- propose ways of avoiding or minimizing adverse effects of development on environment, society and culture;
- improve project design, construction, and operation;
- engage the community in the process of reviewing developments;
- support better development decisions;
- comply with obligations under the Framework Agreement; and
- help Matsqui First Nation's Governing Body to exercise due diligence in the review of proposed projects (adapted from FNLAB, 2012).

3.12.2 Response

The Matsqui First Nation will take the following actions, subject to having adequate financial and other resources.

Policy

The Matsqui First Nation will adopt an EA regime that will

- meet the following goals:

[1] An EA is not the same as an Environmental Site Assessment (ESA), which is conducted after (rather than before) development has occurred. ESAs identify contamination that has already occurred and propose site remediation, whereas an EA forecasts potential future effects of a project on a variety of topics.

  - be **open** and **engage** community members and other potentially affected parties,
  - be **efficient** and **effective**, focusing on important issues and project impacts, and establishing firm deadlines for steps in the EA process,
  - be **technically rigorous** and **free of interference** from project proponents or other interests, and
  - be **affordable**, by ensuring proponents pay for the EA and by avoiding unnecessary data collection, meetings, or reporting;
- apply to projects that require approval by the Matsqui First Nation and that have the potential to affect land, resources, the community, or cultural activities;
- for specified projects, produce an assessment report covering the following main topics:
  - **project setting**: Physical, ecological, social, cultural, and economic setting of the area potentially affected by a project,
  - **project description**: Including design, construction, operation, and decommissioning,
  - **project effects and mitigation**: Identification of potential project effects, assessment of the impacts, and description of mitigation measures,
  - **cumulative effects assessment**: Environmental, cultural or socio-economic impacts of the proposed project combined with other past or likely future projects or human actions,
  - **commitments:** Clear statement of commitments by the project proponent to implement the mitigation measures described in the environmental assessment, and
  - **conclusion**: A summary and conclusion of the significance of identified adverse environmental effects;
- be coordinated by the Matsqui Environment Officer, with support from consultants or legal counsel as required;
- avoid duplication with EAs that federal agencies may be required to conduct on Matsqui lands, by coordinating data collection and reporting requirements of Matsqui and federal studies;
- include community involvement in the design of an EA and in review of its results; and
- not recommend whether or not a project should proceed, but rather provide information intended to support those decisions.

Laws and regulations

The Matsqui First Nation will draft and adopt a law requiring EAs to be prepared for specified projects occurring on Matsqui lands. The requirement to prepare EAs may be linked to the Matsqui development law. EA laws recently adopted by other First Nations will be considered as the Matsqui law is prepared.

The Matsqui's EA law will provide the overall framework for the EA process and will specify general information requirements and procedures. More detailed and technical aspects of the EA process will be included in regulations, policies, administrative processes, and guidelines.

The Matsqui EA law will comply with the following sections of the Framework Agreement:

- The environmental assessment regime will be implemented through a Matsqui First Nation law (Section 23.4);
- An EA will be prepared for projects carried out on First Nation Land that are approved, regulated, funded, or undertaken by the First Nation (Clause 25.4 of Framework Agreement, Section 21(3) of the *First Nations Land Management Act* (FNLMA));
- The EA process must be consistent with requirements of the *Canadian Environmental Assessment Act* (CEAA) (Clause 25.3 of Framework Agreement); and
- EAs must occur as early as possible in the planning stages of the project, before an irrevocable decision is made (Clause 25.4 of Framework Agreement).

4.0 PLAN IMPLEMENTATION

4.1 Environmental governance structure

Matsqui's Governing Body bears responsibility for decisions made by the Matsqui First Nation. The staff and project organization responsible for preparing and implementing the EMP are shown in Figure 4.

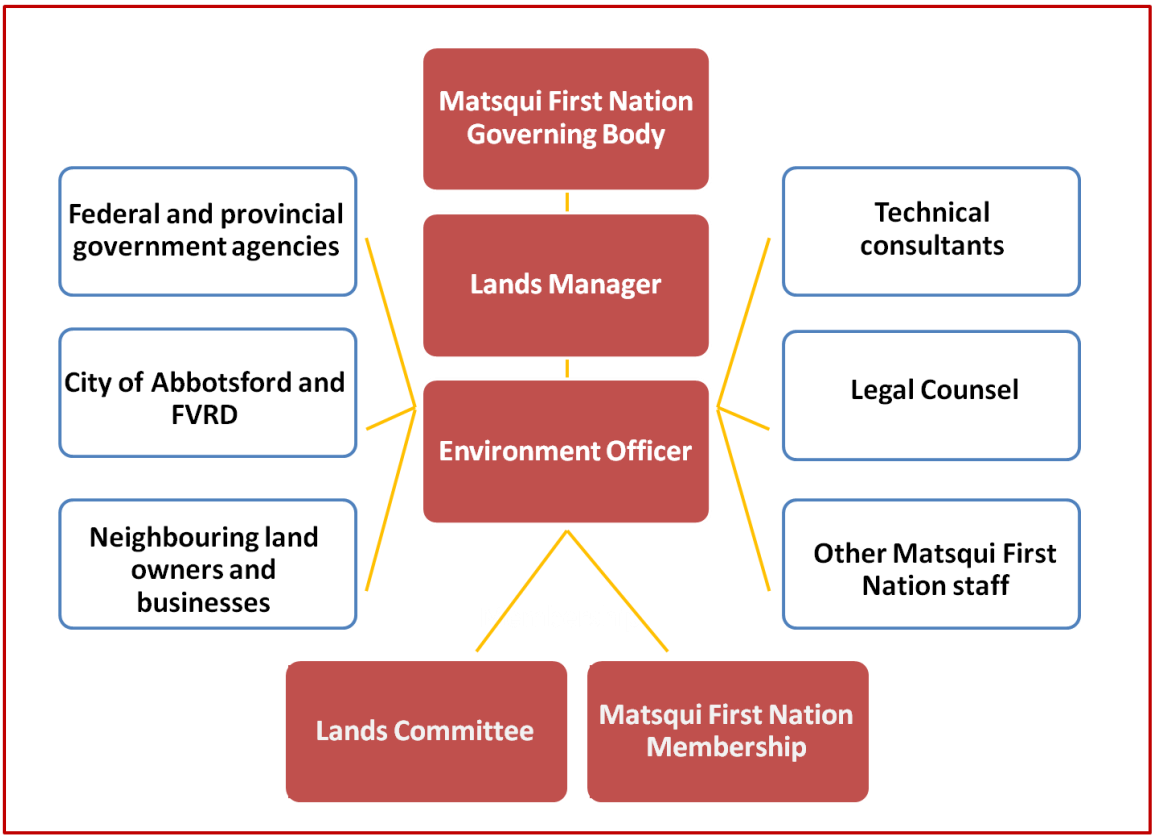


Figure 4. Environmental Management Plan Governance Structure

Matsqui First Nation participants in implementing the EMP have the following responsibilities:

Governing Body: authorize law development, coordinate the activities of Matsqui First Nation staff and other project participants, officially adopt the EMP, approve work programs and budgets, and manage financial and staff related decisions.

Lands Manager: responsible for administration of the EMP, including staffing decisions, budgeting, funding applications, and other oversight tasks; and for coordinating the EMP and other lands-related initiatives (land use plans, fisheries policy, *etc.*).

Environment Officer: responsible for implementing the EMP, preparing guidelines and outreach materials, coordinating technical consultants, managing involvement of legal counsel, involving the Lands Committee on environmental matters, and community outreach.

The Matsqui First Nation Lands Committee: helps to ensure that the EMP is consistent with community values and aspirations, and that environmental issues are properly identified and resolved.

Matsqui First Nation community members: will participate in outreach efforts intended to inform them about the EMP and will need to comply with applicable policies and laws. Community support for the EMP is essential if the document is to achieve its goal of improving environmental quality.

Technical consultants: will provide support to the Matsqui First Nation as needed and as authorized by the Environment Officer.

Legal Counsel: will draft environmental laws as specified in the EMP, and will provide support as needed in enforcing environmental laws.

Federal agencies: authorize, implement, and enforce federal laws and regulations on federal lands, and may provide funding for Matsqui First Nation environmental initiatives.

Provincial agencies: authorize, implement, and enforce provincial laws and regulations on provincial and private lands, and may collaborate in implementing relevant sections of the EMP, such as responding to environmental emergencies and managing agricultural activities.

Local government: the City of Abbotsford, Township of Langley, Fraser Valley Regional District, and Metro Vancouver will be encouraged to collaborate with Matsqui First Nation to conduct environmental and related planning activities, to deliver specified environmental services, and provide support in responding to environmental issues.

4.2 Drafting of environmental laws

In most Canadian jurisdictions, environmental protection is managed by the provincial, federal, and local governments. Under the Framework Agreement and the *First Nations Land Management Act* (FNLMA), signatory First Nations that adopt Land Codes can enact environmental protection laws. A First Nation's environmental protection laws do not replace federal environmental laws on First Nation land and are required to have a similar effect as provincial laws. Although provincial and municipal laws do not apply on First Nation lands, Matsqui First Nation recognizes that it may be advisable to enter into agreements with the provincial or local government to manage environmental issues.

It is presently unclear whether the provincial government is willing or able to deliver environmental management services on First Nations' lands, so the Matsqui First Nation will draft its own laws and regulations, and will be responsible for implementation of the EMP. The Matsqui First Nation has initiated discussions with the City of Abbotsford and the Township of Langley regarding the merits of collaborating in implementing the EMP, with goals of consistency in environmental management and augmenting the Matsqui First Nation's capacity to deliver environmental services.

When the Matsqui First Nation determines that an environmental law is required, such as for solid waste management, land contamination, community quality, and environmental assessment on Matsqui lands, a procedure will be followed as defined in Matsqui's First Nation Land Code that came into effect on October 17, 2007. Specifically, Part 2 of the Matsqui First Nation Land Code entitled "First Nation Legislation" provides detailed information on law-making powers, law-making procedures, and publication of laws (Appendix A4).

4.3 Capacity building and staff training

Environmental management on Matsqui lands will require the efforts of staff and skilled contractors, including scientists, engineers, technicians, and project managers. The Matsqui First Nation will create a staff position of Environment Officer to conduct and coordinate the various activities described in the EMP.

To ensure that environmental management proceeds effectively, it is important to inform the members of the community about the EMP and potential implications of inadequate environmental management on Matsqui lands, and how implementing the EMP will avoid those adverse outcomes. Matsqui First Nation staff will provide this information by implementing the education and outreach program described in Section 2.5 of this EMP.

The Matsqui First Nation recognizes that its staff will not possess all the technical skills required to manage existing and potential environmental issues, and that external technical assistance will be needed. The Matsqui First Nation will establish a roster of qualified consultants that can be relied on to provide environmental services as required and requested by the Matsqui Environment Officer. Over time, Matsqui First Nation staff and membership may assume more responsibility for these technical tasks as they complete relevant educational and training programs.

The Matsqui First Nation will require supplies and equipment for implementing the EMP. For example, the Environment Officer will require office space and equipment (computer, data storage, *etc.*). A suitable vehicle will be needed for transporting staff and material on Matsqui lands. Sampling equipment, spill response kits, or other environmental equipment and supplies also will be required. Funding for purchase, maintenance, and periodic replacement of these materials will be needed.

4.4 Implementation schedule

The implementation of the EMP will require the knowledge of applicable federal legislation and diligent use of Matsqui First Nation laws, policies, guidelines, BMPs, education, and outreach, monitoring and reporting. This work demands appropriate resources and trained staff. Figure 5 provides an action plan for implementing the EMP effectively. Funding for the next steps in the EMP process, such as for drafting laws and preparing outreach materials, will be required in the year following adoption of the EMP.

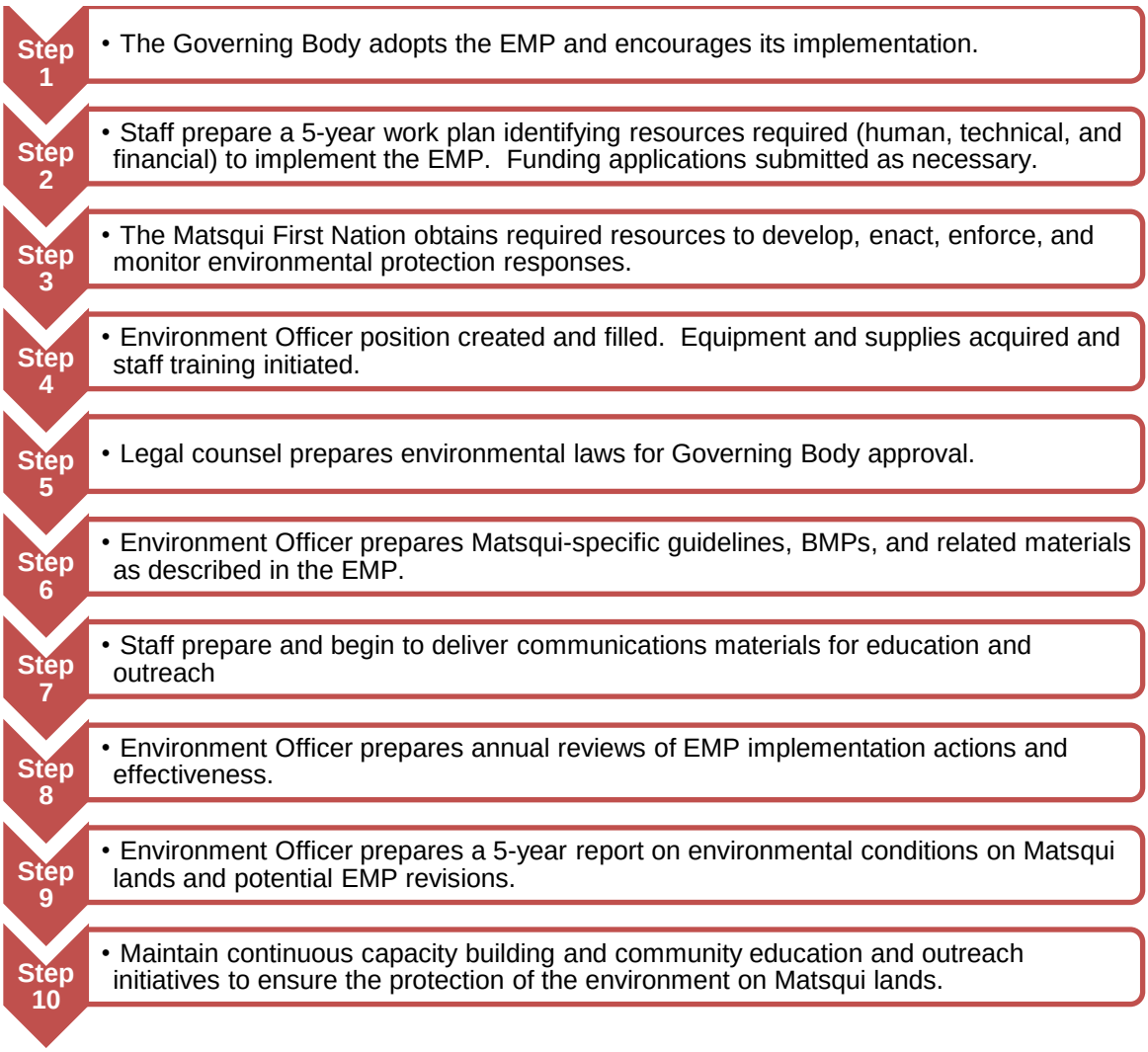


Figure 5. Major steps in implementing the Environmental Management Plan

As the EMP is implemented, priorities will need to be established and the sequence of activities determined. The responsibility for priority decisions will fall to the Governing Body.
The Matsqui EMP Committee will play an important role in considering technical and other matters that affect the implementation effort, and will provide recommendations to Council on matters associated with the EMP. The timing and sequence of implementing the various steps and specific activities may change, in response to funding opportunities that arise, or in response to other community or environmental priorities.

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