SERNbc Strategic Plan - 2014

Final Report

March 31, 2014

Society for Ecosystem Restoration in North Central BC
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SERNbc recognizes the Habitat Conservation Trust Foundation and anglers, hunters, trappers and guides who contribute to the Trust, for making a significant financial contribution to support the development of the Strategic Plan. Without such support, this project would not have been possible.

Executive Summary

A grass-roots effort to complete ecosystem restoration (ER) work within BC's Vanderhoof Resource District was started in 2006. In support of expanding ER to the rest of the Omineca Region, the Society for Ecosystem Restoration in North-Central BC (SERNbc) was established in January, 2013. A strategic planning process was initiated in July of 2013 to provide guidance to the society overall, and in support of funding applications. The preliminary results of this strategic planning process are documented in this report.

Forest and land management, development and climate change will impact ecosystem structure and function. In many cases, effects are relatively short in duration, while other influences, individually or in concert, have more lasting effects. Where the impacts result in ecosystems that are no longer able to cope or respond effectively to disturbances, these ecosystems are vulnerable and could become degraded. Key to the continuing presence of healthy ecosystems is our ability to understand when ecosystems are vulnerable and to alter our management approach to foster resilience. Key to ecosystem restoration is our ability to identify degraded ecosystems and implement activities that will restore these ecosystems and their ability to provide ecological and socio-economic products and services.

The mission of SERNbc is to manage the structure and function of vulnerable and degraded ecosystems in the Omineca Region to achieve a desired future condition that will sustain ecological services and human socio-economic needs.

The purpose of the society is to:

- Identify, treat, and monitor vulnerable and degraded ecosystems in the Omineca Region to achieve a desired future condition that will sustain ecological services and human socio-economic needs.
- Coordinate ecosystem restoration activities in the Omineca Region and foster collaboration amongst stakeholders.
- Acquire technical information on ecosystem restoration and disseminate it to members and stakeholders.
- Inform public and land managers on current ecological vulnerabilities as understood through the implementation of ecosystem restoration.

As described in the mission and purpose of SERNbc above, it will focus on the restoration of vulnerable and degraded ecosystems. A broad range of potential ecosystems could meet this definition. Priority Ecosystem Types that SERNbc will focus on in the coming years include:

- ***Open Forests*** – generally impacted by the exclusion of fire as a disturbance factor
- ***Ecosystems at Risk or Ecosystems linked to Species at Risk*** – as identified by provincial and federal lists
- ***Aquatic Ecosystems*** – including wetlands and fish barriers/fish passage
- ***Berry Producing Areas*** – with specific attention to both wildlife and First Nations interests
- ***Forest Adaptation*** – supporting assisted migration of tree species in response to impacts of climate changes

Ecosystem restoration projects will be identified, shortlisted and prioritized based on a structured framework to ensure that investments are made in priority areas that represent the best fit with SERNbc objectives.

SERNbc will define values, objectives, indicators and targets for ER projects to support an effective understanding of the objectives of a given treatment and the monitoring of how well these objectives are being met.

As a vision for the next 5 years, SERNbc will:

- Support the implementation of ecosystem restoration activities throughout the Omineca Region, with projects in each of the Resource Districts (Prince George, Mackenzie, Ft St James and Vanderhoof).
- Implement enough projects to create economies of scale to sustain a full time coordinator
- Intentionally partner with First Nations, governments and NGOs to secure funds and plan and implement ecosystem restoration.
- Provide value to agencies and other stakeholders in coordinating ecosystem restoration activities so as to reduce overlap, improve efficacy, and ensure ecosystems in greatest need have the highest priority.
- Be a respected contributor to forest and land management in the Region, providing information to government and NGOs regarding ecosystem vulnerability and management.

In support of this vision, SERNbc will specifically address the key areas of governance and administration, partnerships, landscape level planning and a project development process in order to effectively increase the implementation of ecosystem restoration across the Omineca.

Acknowledgements

The SERNbc Strategic Intent is the result of a broad engagement with and input from SERNbc members and interested stakeholders throughout the Omineca Region and beyond. The report was developed by Randy Spyksma, MSc, RPF (Forsite Consultants Ltd) with significant support and contributions from John DeGagne, RPF (BC Ministry of Forests, Lands and Natural Resource Operations) and Larry McCulloch, RPF (LM Forest Resource Solutions Ltd.).

SERNbc recognizes the Habitat Conservation Trust Foundation and anglers, hunters, trappers and guides who contribute to the Trust, for making a significant financial contribution to support the development of the Strategic Plan. Without such support, this project would not have been possible.

We would also like to acknowledge funding contributions from the Ministry of Forests Lands and Natural Resource Operation's Ecosystem Restoration Program and the B.C. Cattleman's Association to the overall work of the society, in combination with in-kind support provided by many other government and non-government organizations.

SERNbc would also like to thank the many individuals who have contributed to the strategic planning discussion through the website, questionnaire and phone and in person conversations. We look forward to continuing to work with and support each contributor in the implementation of ecosystem restoration across the region.

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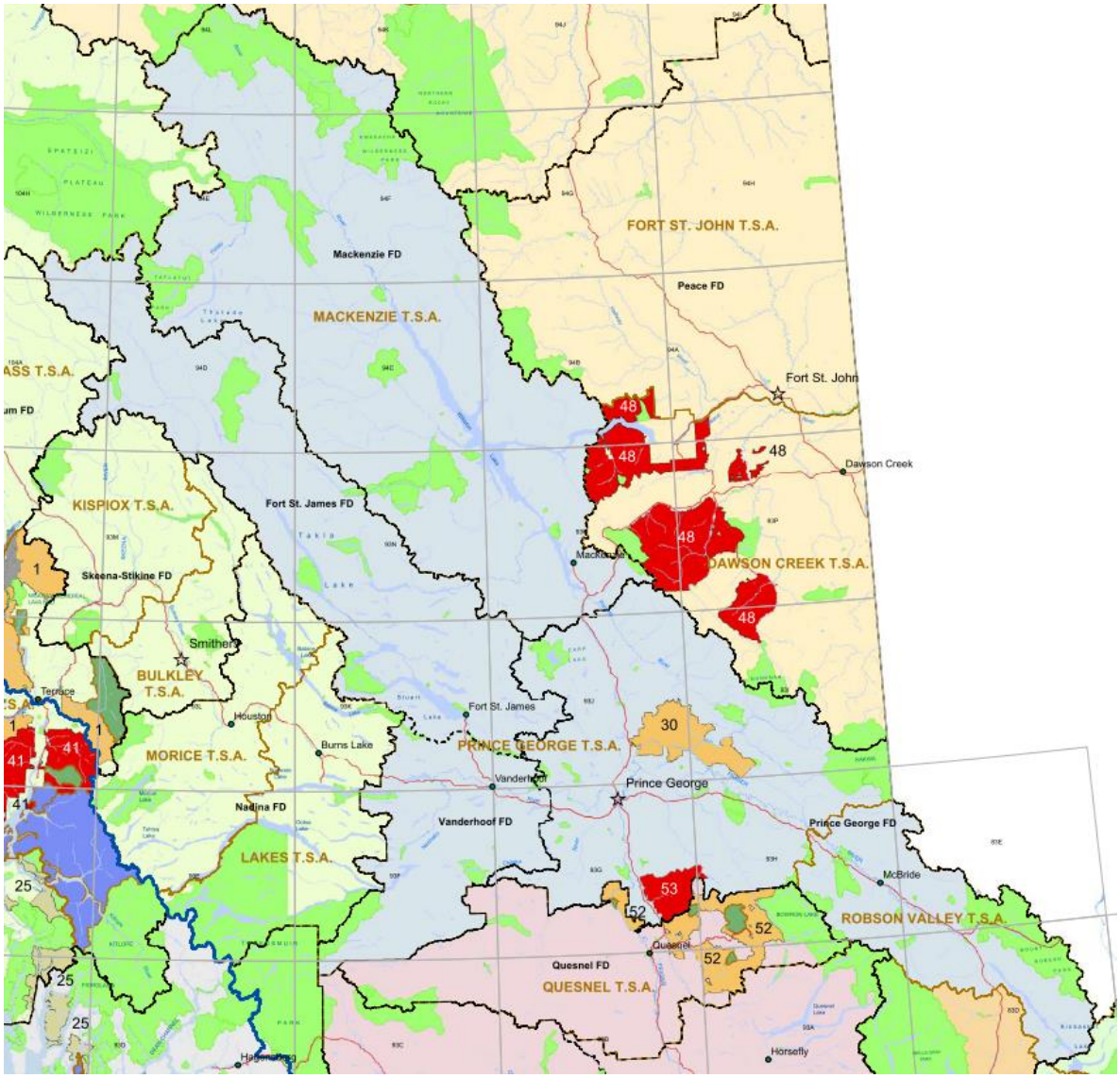
A grass-roots effort to complete ecosystem restoration (ER) work within BC's Vanderhoof Resource District was started in 2006. In support of expanding ER to the rest of the Omineca Region (Figure 1), the Society for Ecosystem Restoration in North Central BC (SERNbc) was established in January, 2013. A strategic planning process was initiated in July of 2013 to provide guidance to the society overall, and in support of funding applications. The Strategic Plan represents the results of a broad and detailed stakeholder-based engagement process that was combined with a strategic level planning workshop and on-going discussions with the board of directors. The *Strategic Intent* document represents the SERNbc board-approved strategic direction for the society for the next 5 years.

Figure 1. Omineca Region (in blue). Geographic extent of SERNbc. [1]



[1] Taken from the British Columbia Provincial Management Unit Map. October 2011. Ministry of Forests, Lands and Natural Resource Operations.

2 Context

First Nations peoples have been involved in land management activities within the Omineca for thousands of years. Forest and land development activities have been ongoing in the Omineca for over 100 years. In addition, and more recently, climate influences on ecosystems are changing. Recent or imminent management and development pressures within the Omineca Region include an increased harvest of MPB impacted stands throughout the region as well as an increase in the potential development of linear utility corridors (e.g. transmission lines and pipelines) crossing the region.

These changes will continue to have a variety of effects on ecosystem structure and function. In many cases, effects are relatively short in duration, while other influences, individually or in concert, have more lasting effects. Where the impacts result in ecosystems that are not able to cope or respond effectively to disturbance, they become vulnerable and could become degraded. Key to the continuing presence of healthy ecosystems is our ability to understand when ecosystems are vulnerable and to alter our management approach to foster resilience. Key to ecosystem restoration is our ability to identify degraded ecosystems and implement activities that will restore these ecosystems and their ability over time to provide ecological and socio-economic products and services.

SERNbc facilitates the understanding of vulnerable and degraded ecosystems and coordinates, enables or implements ecosystem restoration activities throughout the region. Through this activity, an improved understanding of current ecosystem vulnerability will develop and information can be shared with stakeholders and government in a mutual effort to foster sustainable management of the land and its resources.

3 History of ER in the Omineca

Caring for and maintaining biodiversity was not only essential for First Peoples' survival, they saw it as part of their cultural responsibility. Animals, fish, trees and other plants, all were regarded in traditional worldviews as generous relatives, willing to give themselves to people within a reciprocal system that demanded proper care and respect in return. (Tuner, 2007. pp. 3)

For thousands of years First Nations across North America have managed, stewarded, and sustained the natural resources and lands of their traditional territories. First Nations communities developed sophisticated environmental restoration strategies such as controlled burning, clearing, selective harvesting, thinning, tilling, and control of weeds and pests. (Turner, 2001; Lepofsky and Lertzman, 2008). Though there is little research documenting the practices of First Nations in the Omineca, these Nations likely engaged some of the same restoration practices as their neighbours. Fire, for example, was used to restore food plant habitat as well as to manage wildlife (Beck et al, 2005). This practice was based on an intimate knowledge of weather patterns and carefully timed burns. Likewise, selective harvesting of berries and plants was based on the principle of respect which recognized these natural resources as gifts from the creator.[2]

Settlement of the area, followed by early industrial forest management meant that many of these pre-contact restoration practices were suppressed through legislation such as the *Bush Fire Act* of 1874. While the *Act* was initially unenforceable (the province lacked the human resources to ensure compliance) the ensuing decades saw an increase in fire suppression resources (Parminter 1995, pp. 8). By the early 1930's "BC Forest Service put a stop to most traditional landscape burning" (Parminter, 1995. pp. 5). Nevertheless, traditional restoration and land management practices persisted within the First Nations communities, despite the regulations. The value of these restoration practices is starting to be recognized and utilized in joint management projects throughout BC and across Canada.

[2] The concept of respect informs harvesting practices to this day. As Tl'azt'enne Elder, Helen Johnnie, notes, "If you are picking for medicine it has to be away from people, where they don't walk around or use the area" (Shaw and Young, 2012. pp. 4). While not explicitly identified as selective harvesting, this basic principle ensures that community members practice sustainable harvesting. In this way important medicine harvesting sites are protected from overuse.

Since settlement, ecosystem restoration activities were generally focused on specific sites and treatments that provide specific benefits to the people initiating the treatments. Treatments would be generally implemented independent of a formal plan or approval process and represent grassroots consideration of the ecosystem and the values or benefits it provides.

In addition to the ongoing implementation of ecosystem restoration by First Nations and private land owners, more formal consideration of ecosystem vulnerability and restoration has occurred in the last twenty years. A range of groups have been involved in varied restoration efforts in the Omineca, including but not limited to the following:

BC Parks – Parks has conducted prescribed burns on a periodic basis within a number of parks to improve wildlife habitat in the Omineca area.

Ministry of Forests, Lands and Natural Resource Operations (FLNRO) – Ministry staff assisted BC Parks in their wildlife management initiatives and also conduct wildlife habitat improvement or livestock forage burns outside parks within the Omineca. FLNRO also supports and coordinates a fish passage restoration program through an inter-ministry working group.

The Habitat Conservation Trust Foundation – Makes investments to maintain and enhance fish and wildlife habitats to provide benefit for the people of BC from these resources.

The BC Hydro Fish and Wildlife Habitat Compensation Program – Within the Williston Lake drainage, a number of projects have been carried out including: fish and wildlife habitat enhancement, habitat and species monitoring, planning, inventory, and research.

The Cattlemen's Association – Have supported range burns for livestock and associated monitoring.

Ducks Unlimited – Have undertaken dozens of projects in the Omineca region, often in conjunction with private land owners or other partners, to restore wetlands and upland terrestrial vegetation.

The Invasive Species Council of BC – In addition to research and outreach, the council employs crews to help manage (control, remove or in some cases, contain) invasive plants.

The Union of BC Municipalities – Through its community wildfire prevention program, interface fuel hazards are reduced through treatments, some of which may also support other ecosystem restoration goals.

Within the context of this breadth of activity, an ecosystem restoration committee was formed in the Vanderhoof Forest District in 2007. That committee (Stuart Nechako Ecosystem Restoration Committee or SNERC) involved a broad stakeholder group, and through a planning process identified an interest and need to expand ecosystem restoration to the rest of the Omineca Region. SERNbc was initiated in early 2013. The society initiated a strategic planning process soon after establishment; the results of which are reported in this plan.

4 Mission and Purpose

The mission of the Society for Ecosystem Restoration in North Central BC is to manage the structure and function of vulnerable and degraded ecosystems in the Omineca Region to achieve a desired future condition that will sustain ecological services and human socio-economic needs.

The purpose of the society is to:

1) Identify, treat, and monitor vulnerable and degraded ecosystems in the Omineca Region to achieve a desired future condition that will sustain ecological services and human socio-economic needs.
2) Coordinate ecosystem restoration activities in the Omineca Region and foster collaboration amongst stakeholders.
3) Acquire technical information on ecosystem restoration and disseminate it to members and stakeholders.

4) Inform the public and land managers on current ecological vulnerabilities as understood through the implementation of ecosystem restoration[3].

The benefits generated by the activities of the society will be specific to the ecosystem type and objectives of the treatments, but will generally include the following:

- Reduced vulnerability of treated ecosystems, for example:
  - Increased deployment of Douglas-fir or Larch that might be better suited to future climate
  - Development of complex stand structures that are more resilient
- Maintained or improved ability of the ecosystem to generate values of importance, for example:
  - Improved wildlife habitat, reduced vulnerability of wildlife populations
  - Maintenance or improvement of water flows, water quality, etc.
  - Increase in range or increased productivity of range land

The benefits generated by the activities of the society are both environmental/ecological (e.g. reduction in the vulnerability of rare and endangered ecosystems) and socio economic (e.g. improved wildlife populations supporting harvesting or hunting opportunities).

5 Operating Principles

The following principles or factors will provide guidance to SERNbc in the planning and implementation of ER in the Omineca. These principles also provide clarity on the types of activities and approaches that will be used by SERNbc in the implementation of its mission.

- ***Incremental Activities*** – SERNbc will not generally get involved where activities are a current obligation or license requirement. Where SERNbc is approached with funds, to partner in these situations, involvement will be considered based on consistency with the society mission, purpose and protocols.
- ***Additional Activities*** – SERNbc is looking to expand ecosystem restoration activities across the Region. Where programs are already in place that adequately address a certain vulnerable or degraded ecosystem, SERNbc will not likely get involved, or will look for ways to augment or support the current initiative
- ***Land Status*** – Generally, SERNbc will be operating on crown land where multiple values are recognized and entrenched in legislation and policy. Where non-crown proponents approach SERNbc, involvement will be based on alignment with the SERNbc mission, purpose and protocols as well as the longevity of the ecological benefit that is anticipated. Covenants could be used on private land, for example, to help ensure the longevity of restoration efforts.
- ***Partnerships*** – SERNbc will look to partner with government, First Nations, NGOs, academia and private or individual proponents in the implementation of ER in the Omineca.
- ***External Funding*** – In general, SERNbc will apply for and use external funding to implement ecosystem restoration activities. It is anticipated that a diversity of funding sources will be needed to implement a wide range of ecosystem restoration activities. Opportunities for revenue generation within a project (e.g. removal of merchantable timber through a thinning treatment) will be used where possible to offset project specific costs.
- ***Landscape Driven Priorities*** – activities will be supported by a regional or landscape level

[3] SERNbc does not have an advocacy role beyond that which is outlined here. Advocating for change in land and resource management legislation, policy and management is not a role that SERNbc has identified. Membership in the society and on the board of directors includes individuals that are also involved in provincial level associations (Cattleman, Guide Outfitters, Trappers, Wildlife Federation, etc.), groups where this advocacy role is better suited. SERNbc will strive to provide information to government and NGOs to foster an improved understanding of ecosystem dynamics and vulnerabilities across the region.

understanding of ecological conditions and resulting identification of priority areas for treatment.

- ***Authority for Restoration*** – authority to undertake restoration activities is effectively through stakeholder agreement, however, legal authority to implement activities must be given by the landowner/manager (in most cases, the provincial government).
- ***Ecosystems vs Species –*** SERNbc will focus on an ecosystem-based approach - ecological processes, structure and function in support of restoration planning. Despite this, it is expected that benefits may be realized by focusing on individual keystone species. Monitoring of the efficacy of treatments may also focus on specific species or values.
- ***Tension Between Values*** – SERNbc recognizes the need to consider and balance ecological, social and economic values when considering involvement in restoration activities. These values may or may not be in conflict. SERNbc will engage in a collaborative stakeholder-focused process to ensure benefits to multiple values.

6 Key Definitions

The following key definitions are provided to further explain the mission, purpose and principles of SERNbc, and promote a common understanding of the activities of the society:

- ***Ecosystem Restoration (ER)*** is the management of the structure and function of vulnerable and/or degraded ecosystems to achieve a desired future condition that will sustain ecological services and human socio-economic needs.
- ***Vulnerable ecosystems*** are those that are less likely to cope with, resist and/or recover from disturbance. The vulnerability extends to the ecological or socio-economic values associated with that ecosystem. The vulnerability of an ecosystem could be influenced by management practices, natural processes and/or climate change.
- ***Degraded ecosystems*** are those that have been impacted to the degree that they no longer provide and are not likely to provide ecological or socio-economic values inherently associated with that ecosystem or associated ecological processes.
- ***Desired future condition*** generally refers to a target set of structural and functional attributes necessary to maintain ecosystem function and provide the ecological services and "products" considered to be important by stakeholders. A desired future condition must incorporate an understanding of climate change, ecological systems, wildlife habitat requirements, and forest management, and reference a specific time frame. *Desired future condition* may also incorporate the concept of resilience or the ability of self-renewal, and will normally aim to ensure that an ecosystem is able to adapt to change and yet still provide desired attributes or values.
- ***Resilience*** – Capacity of an ecosystem for self-renewal. It is important to note that 'resilience' as used here, does not allude to the ability to return to the same state, but the ability to respond to change or stressors and yet still exhibit desired attributes and provide desired values.
- ***Climate Change*** - Given the high potential for climate-induced change to ecosystems it may be inappropriate for land managers to attempt to restore ecosystems to a pre-existing state. Management practices should be based on fundamental ecological principles and expected future conditions, to create new conditions that provide reasonable assurance of resource availability and ecosystem function and the ability of the ecosystems to provide services, now and in the future.
- ***Values or Benefits*** – Ecosystem restoration is carried out to ensure that ecosystems can provide services that are deemed important to stakeholders. These values or benefits may be ecological (e.g. longevity of a species at risk or increased habitat for wildlife) or socio-economic (e.g. cattle forage production or maintenance of hunting or fishing opportunities).

7 Priority Ecosystem Types

SERNbc will focus on the restoration of vulnerable and degraded ecosystems. A broad range of potential ecosystems meets this definition but those that will be a priority for SERNbc are detailed in this section. The identification and prioritization of individual sites is a more operational process and is discussed in Section 8.

Factors considered in the development of a list of priority ecosystem categories include the following factors:

- SERNbc experience and expertise with an ecosystem type and/or associated treatment regime;
- Ecosystem types and associated restoration activities that result in products and services that meet a wide range of values, interests or stakeholder needs;
- Lack of current significant programs or activity to address a specific vulnerable or degraded ecosystem type.

The following priority ecosystems types will be the focus of planning and implementation for SERNbc in the coming 1-5 years:

7.1 Open Forests

- Open forest conditions that have been and are changing due to changes in the disturbance regime (including land management activities). This category includes the transition from grassland/brushland ecosystems to open forest conditions. Fire was at one time the most common type of disturbance in these areas. A few examples of these ecosystems include grasslands, shrub complexes, berry producing areas, Douglas-fir forests on steep south facing slopes and low site/low crown closure pine forests.
- Wildlife, range and traditional use (First Nations) values are common in these ecosystems. Other site specific values may also be present.

7.2 Ecosystems at Risk or Ecosystems Supporting Species at Risk

- Red-listed (endangered or threatened) or blue-listed (of special concern or vulnerable) ecosystems, or ecosystems supporting species at risk.[4]
- Restoration activities to be focused on restoration of ecosystem structure and function that will support the long-term viability of these species and ecosystems.
- Values are associated with the long-term persistence of wildlife and plant species and ecological communities that are considered at risk. Other site specific values may also be present.

7.3 Aquatic Ecosystems - Wetlands

- Wetland restoration can be used to address a range of wetland impacts, such as hydrology/water levels and vegetative structure and composition.
- Values associated with this category could be directly related to water itself (e.g. water quality) as well as processes directly linked to water (e.g. longevity of fish species, fish production, sustainability of watering source).

[4] Rare and endangered ecosystems and species as captured by the Conservation Data Centre (CDC). http://www.env.gov.bc.ca/cdc/.

7.4 Aquatic Ecosystems – Fish Passage

- Significant gains in available fish habitat can be made by restoring fish passage where it has been blocked by development (generally by culverts associated by roads or rail).[5]
- The BC provincial government has a working group focused on fish passage (barrier removal), with which SERNbc can partner to further the implementation of restoration activities within the Omineca.

7.5 Berry Producing Ecosystems

- Berry producing areas that are generally being influenced or impacted by changing disturbance regimes.
- Values are associated with wildlife as well as First Nations traditional use and public use. Other site specific values may also be present. A few examples of these ecosystems include blueberries for human consumption or berry producing areas for grizzly bear.

7.6 Forest Ecosystems Vulnerable to Climate Change (Forest Adaptation)

- Where forested ecosystems are expected to be vulnerable or stressed under anticipated future climates, adaptation practices aimed at improving the resiliency of these ecosystems will be important.
- An example would be the assisted migration of Douglas-fir or Western Larch or Whitebark Pine into areas that have traditionally not had these species present, but where it will likely perform well given the expected impacts of climate change.

- Assisted migration or other forest adaptation strategies are not a typical response to ecosystem vulnerability as is discussed above, but are strategies to help respond to and reduce ecosystem vulnerability over the long-term. Policy change may be required in order to facilitate potential treatments.
- Values are broad and could be related to wildlife or traditional use.

It is important to note that although the ecosystem types outlined above are the focus for SERNbc in the next 5 years, additional opportunities will also be considered where they align with mission, purpose and protocols of SERNbc.

8 Prioritization of ER Projects

It is expected that the need for ecosystem restoration will exceed available funds. Given this, a process is needed that will allow SERNbc to make clear, consistent and transparent decisions about what ecosystems restoration projects or sites are prioritized over others. A two-tiered approach will be implemented that first involves a preliminary screening process to shortlist projects, followed by the prioritization of resulting projects.

[5] Fish passage restoration, where implemented in an appropriate location, is a relatively cost effective means to improve fish habitat, when compared to stream channel construction or restoration activities. Administrative challenges associated with road status, licensee responsibilities and access management considerations make many of these projects extremely complex. The more challenging these issues are, the more planning is required. SERNbc will have to ensure that clear conditions exist that point to an effective fish passage solution prior to engaging in these projects.

8.1 Preliminary Screen[6]

The following factors will be considered in completing a preliminary screen of projects being considered by SERNbc as well as those that are presented by other proponents to SERNbc for support, endorsement or involvement. Additional questions may also be used for specific projects.

- ***Does the project involve vulnerable or degraded ecosystems?***
    - ***What makes the ecosystem vulnerable or degraded? What ecosystem process or structural feature is missing, damaged, or degraded?***
    - ***Will the vulnerability change over time without intervention? How long will this take?***
    - ***If vulnerable, what resource values are at risk? What is the likelihood of impact?***
- ***Is someone else obligated to undertake the treatment?*** (Ensure it is incremental. If not, additional rationale would need to be provided).
- ***Is there currently an effective program in place to address this need?*** (Ensure it is additional or complimentary).
- ***Would treatment be carried out on crown land?*** (Ensure benefits will persist. If not, additional rationale would need to be provided).
- ***Will development or industrial activity impact the longevity of the benefit?*** (To avoid treatments where current or future industrial activities may interfere with project objectives).
- ***Who or what will benefit from the restoration?*** (Understand values and focus on projects that provide multiple benefits).
- ***Is funding in place or likely? Will the project require ongoing funding?***
- ***Are the objectives or benefits of the project understood?*** (Clear goal and outcomes for the project. May not be detailed at this stage of planning, but should be clear and logical).
- ***What geographic location is the work proposed in?*** (SERNbc is interested in completing works across the Omineca region, including specifically in each of the Prince George, Mackenzie, Ft St James and Vanderhoof Districts).
- ***Chances of Success?*** (What are the chances of the treatment meeting the projects objectives?).

Projects that may not make it past the preliminary screening step may be considered in the future if unresolved issues are addressed or as priorities change.

[6] It is important to note that preliminary screening may not generate a simple yes/no answer, but may be used to guide decision makers in the selection of sites that require further consideration.

8.2 Prioritization Criteria

A multi-criteria approach to project prioritization is outlined in Table 1. This ranking process should be implemented by 3 or more informed individuals with knowledge of the proposed ecosystem types and treatment types.

Table 1. Multi-criteria analysis framework used to prioritize sites for treatment.

Criteria	Measure	Rank			
		No *(0)*	***Low*** *(1)*	***Moderate*** *(2)*	***High*** *(3)*
Multiple Values	Number of interests or values likely to benefit	Up to 1 interest/values	2-3 specific interests/values	4-5 specific interests/values	More than 5 interests/values
Value Significance	Significance of the values likely to benefit, based on current programs, recognition or documented concern.	N/A	Low level of concern, attention or programming.	Moderate level	Significant level of concern, attention or programming.
Stakeholder use of Benefit.	Significance of the level of use.	N/A	Low level of utilization expected	Moderate utilization	Significant utilization expected
Rare or at Risk	Presence of species at risk or rare	Not at risk or rare.	←	→	Regionally and sub-regionally rare and/or at risk.
Longevity of Benefit	How long the benefits of the treatment will last.	Less than 2 years	2-5 years	5-10 years	More than 10 years
Chance of Success	Likelihood of successfully meeting objectives of the treatment based on past experience or perceived odds.	N/A	Low likelihood	Moderate Likelihood	High likelihood
Cost/Multiple Entries	Project cost and need for follow-up treatments.	Higher cost and multiple treatments likely required.	←	→	Lower cost and only single treatment likely required.
Difficulty/Logistics	Complexity of the treatment and its implementation.	Complex, unknown or challenging implementation	←	→	Known, previously completed and/or relatively simple treatment.
Partnerships	Involves collaboration and partnering with other organizations.	No partnerships other than funding organization.	1-2 partners or organizations contributing.	3-4 partners or organizations contributing.	5 or more organizations involved, or new partnerships being formed.

It is important to note that projects will come to SERNbc for consideration through a range of different processes, from individual projects brought forward by a certain group, to projects that are generated through landscape or regional level analysis that flag and identify priorities or projects. In either case, the above factors can be valuable tools to shortlist a project and then understand its priority when compared to others. In addition to this ranking and comparative approach, the same

criteria can be used to affirm or endorse a single project that is being considered by SERNbc. Regardless, having the potential project documented in advance of implementation also allows for a post treatment comparison to confirm if the project aligned with the earlier perception of its importance.

The prioritization criteria and associated values are not intended to be a specific numeric formula that generates a value that, if it is above a threshold level, the project is deemed worthy. Despite this, the criteria can be used to

1) Compare projects relative to one another and
2) Confirm that a single project generally aligns with the intent and priorities of the society.

The priority or relative ranking of a project may be trumped by factors that include but are not limited to funding availability, funding requirements, stakeholder or partner interest or support, etc.

9 Monitoring

A key component to ensuring the success of ecosystem restoration is 1) setting of objectives and 2) monitoring to see if the objectives are being met.

9.1 VOITs

SERNbc will use a standard approach based on Values, Objectives, Indicators and Targets (VOITs) in order to design and monitor the success of restoration treatments.

Values – ecosystem restoration is proposed in an area because there are values of importance that are at risk given the vulnerability of ecosystems. Specific values of focus will be defined during the planning and prescription phases of the projects. Examples of these values could be healthy ungulate populations, sustainable fish populations or infrastructure that is safe from wildfire.

Objectives – objectives associated with the value are then defined. The objectives need to be specific and measurable in order to support meaningful measurement and conclusions on the success of treatments. General examples of objectives could include increasing the winter range, removing barriers to fish habitat or reducing fire hazards in the given area.

Indicators – an indicator is a specific feature or metric that is going to be measured to determine if the objective is being met and the value protected/created. In order to be effective, an indicator needs to be directly related to a value/objective and influenced by a treatment.

Targets – either a minimum/maximum threshold or specific target level that the indicator should achieve to meet a specific objective. Not all indicators will benefit from a specific target. In some cases, an indicator falling within a certain range may be considered desirable.

9.2 Variable Monitoring Intensity

Following the definition of VOITS for each project, SERNbc will also determine if there is:

1) Significant uncertainty in the outcomes expected from treatments,
2) Specific stakeholder interest in securing additional information related to the impacts of treatments on specific indicators, or
3) Program/funding specific requirements for monitoring.

Where past experience or understanding determines that there is relatively low uncertainty in the outcomes, limited, or even no monitoring, may be appropriate. Stakeholder interest and/or program/funding requirements may also influence monitoring intensity.

Where either significant uncertainty exists or where stakeholder or program specific requirements dictate, SERNbc will consider a range of monitoring approaches to confirm and/or further understand impacts of ecosystem restoration treatments

on the identified values. Although more formal monitoring programs may not be possible in all situations (cost constraints, lack of available control sites) it is understood that investment in monitoring is a key tool to

- Furthering an understanding of the ecological dynamics at play within and adjacent to the project area
- Improved understanding of the indicators of ecological health in the area
- Supporting adaptive management both with regards to ecosystem restoration treatments but also regarding effective monitoring regimes

SERNbc will partner with academic institutions and researchers whenever possible to support the monitoring and adaptive management of ecosystem restoration efforts.

9.3 Development of Monitoring Protocols

SERNbc has identified a broad range of key ecosystems that they will be considering for treatment. Given this breadth of ecosystem types and treatment types, a broad range of monitoring protocols will need to be developed. These monitoring protocols will be generated based on the over-arching principles and process outlined above. The monitoring protocols specific to a given project will also be aligned with the requirements of the funding organization and/or program within with SERNbc is operating.

A project specific approach will be used to generate clear monitoring protocols as the society expands its activities across the Omineca. The following process or factors will be considered:

- Identify the VOITs associated with a given project
- Confirm uncertainty in outcomes as well as stakeholder or funding specific requirements for monitoring
- Develop Preliminary Monitoring Design that aligns with the VOIT criteria
- Review past projects completed by SERNbc for similar or relevant monitoring approaches or tools
- Review similar or relevant monitoring approaches or tools used by other organizations
- Develop Detailed Monitoring Design in light of options
- Implement monitoring as a part of project implementation
- Document success and challenges in the monitoring approach
- Develop monitoring protocol document for future SERNbc use

Over time, specific monitoring protocols will be documented that will be based on

- **Uncertainty in Treatment Outcomes** – e.g. base protocol for basic monitoring if outcomes are quite certain
- **Ecosystem Type** – e.g. base protocol for the monitoring of fish passage following barrier removal
- **Treatment Types** – e.g. base protocol for monitoring the impacts of a broadcast burn treatment
- **VOITs** – e.g. base protocol when the goal is to create more winter foraging habitat for mule deer

10 Society Vision and Strategies

10.1 Vision Statements

The following statements capture the five-year vision of SERNbc (2013-2018).

- SERNbc will support the implementation of ecosystem restoration activities throughout the Omineca Region, with projects in each of the Resource Districts (Prince George, Mackenzie, Ft St James and Vanderhoof).
- SERNbc will implement enough projects to create economies of scale to sustain a full time coordinator.
- SERNbc will intentionally partner with First Nations, governments and NGOs to secure funds and plan / implement ecosystem restoration.
- SERNbc will provide value to agencies and other stakeholders in coordinating ecosystem restoration activities so as to reduce overlap, improve efficacy, and ensure ecosystems in greatest need have the highest priority.
- SERNbc will be a respected contributor to forest and land management in the Region, providing information to government and NGOs regarding ecosystem vulnerability and management.

10.2 Governance and Administration

***Context*:** SERNbc was established in January 2013, building from the organizational structure that had been established to support the Vanderhoof ER program. With an expansion to the Omineca Region, and a vision for a broader implementation of ER across the region and the planned growth of the program overall, the structure will need to continue to evolve in the coming years to ensure it is sustainable.

The current structure involves a Board of Directors (BoD) that includes individuals involved in both government and non-governmental organizations. The Ministry of Forests Lands and Natural Resource Operations currently chairs the board and addresses the day to day administrative requirements of the society. A Program Coordinator is also in place to support project level planning and implementation management.

Within the current environment, project specific teams are also developed to support the effective implementation of the project. These project teams may involve society or BoD members, First Nations and other interested stakeholders.

***Strategy*:** As the activities of the society grow, the structure will need to change to ensure adequate attention is given to all aspects of the society. Key to the governance and administration of the society is a Board of Directors, Implementation Committee and Project Implementation Teams. General descriptions of these groups can be found in subsequent sections.

10.2.1 Board of Directors

The BoD will consider expanding the board to include an individual with First Nations affiliations to provide an additional perspective to the Board.

The BoD will give further attention to a number of key policies[7] to ensure clear, transparent operation of the BoD:

- SERNbc Policy regarding board member nomination process in support of the Constitution and Bylaws
- Code of Conduct - expanding on the constitution and bylaws to speak to how BoD, members and others associated with the society should act when on society activities.
- Conflict of Interest – to ensure the management of any potential conflict of interest that may be present on the board. Key to this policy should be the need to declare the potential conflict of interest and have the board review and determine if the conflict of interest is acceptable.

Additional policies could also be considered as the program develops and efficiencies would be gained through documenting processes or requirements, i.e. project review process, internal and external communications protocol and information sharing and referral process.

10.2.2 Society Management and Coordination

As the size of the SERNbc program increases additional capacity should be allocated to the administration and management of the society. To this end, either base administration funding needs to be secured or an administrative allocation associated with each project should be used to support the management/administration of the society. A paid Society Coordinator (Coordinator) should be established as soon as possible, with clear roles and responsibilities defined. The Coordinator would report to the board and have specific approved authority as directed by the board, to deal with the day to day activities of the society. The Coordinator is a non-voting member of the Board of Directors. The Coordinator would also be an *ex officio* member of the Implementation Committee and Project Implementation Teams, with the understanding that their role should remain focused on more strategic and higher-level responsibilities, setting up adequate structure, process and teams the will drive implementation.

[7] Vanderhoof Ecosystem Restoration Scoping Report. LM Forest Resource Solutions Ltd. March 2011.

Table 2. Recommended management and administrative structure and responsibilities for SERNbc.

Operational Aspects	Groups			Individuals		
	Board of Directors	**Implementation Committee**	**Project Implementation Teams**	**Coordinator**	**Project Manager**	**Society Member**
Membership	Representatives from a broad spectrum of stakeholders with interests in ER. Strategic minded individuals. Appointed by current Board. Should include between 8 and 10 members. Executive positions including the Chair of the Board to be nominated by and elected by the Board.	Representatives from a broad spectrum of stakeholders with interests in ER. Nominated by Society Coordinator and approved/appointed by Board of Directors. Should include at least one member (government or otherwise) as a representative from each geography or region (Vanderhoof, Prince George, Ft St James and Mackenzie). Should include between 8 and 10 members. Committee will be chaired by the Coordinator.	Structured based on ecosystem/ treatment project type and geography. Members should include both technical/professional experts as well a government staff who would be involved in permit/approvals. Should include at least one member of the Implementation Committee to support reporting. Likely to include professionals/consultants with specific expertise or implementation roles. Size of team will be contingent on size and complexity of the project. A Project Team and the associated project will be managed by a Project Manager who will be identified/assigned by the Coordinator.	N/A	N/A	N/A
Compensation	Volunteer position.	Volunteer position with paid expenses.	Positions may be volunteer or paid. If paid positions, compensation is a part of the project plans and external funding. Paid positions associated with either project management role or technical/professional consulting support.	Paid position with compensation coming from base funding or a proportion of project budgets.	Position may be volunteer, government or paid. If paid, compensation is a part of the project plans and external funding.	Volunteer position.
Reporting Structure	Directors are accountable to the Board. Directors do not speak for the Board unless specifically authorized by the Board.	Coordinator reports to the Committee on project progress. Committee reports and makes recommendations to the board regarding overall program and direction decisions. Committee acts on behalf of the board.	Project Team activities are managed by the Project Manager. Project Manager reports to the Coordinator.	Hired by and reports to the Board.	Assigned by the Coordinator in meeting the needs of the society and supporting project success. Report to the Coordinator.	Individual membership is open to anyone that is interested in ER in the Omineca. Membership gained by application to the Board.
Meetings	Regular meetings two to four times a year. Special meetings called by the Chair as needed.	Regular meetings at least four times a year. Special meetings called by the Chair as needed.	As needed to plan, implement and complete follow-up on a project.	Coordinator to organize Board and Implementation Committee meetings. May attend project meetings as desired.	Project Manager to organize and chair project meetings as needed to implement projects.	Participate in the AGM of the society.
General Responsibilities	Strategic direction of the society (alignment of proposed activities with mission/vision of the society). Development/approval of policies and procedures to support efficient operation of the society and its activities. Initiate and support the development of new partnerships or collaboration. General approval of funding applications or partnerships being considered. Hire and supervise the Society Coordinator.	Identify and guide regional/landscape level analysis and planning projects or processes through which projects will be generated Complete 5 year implementation/operational plans. Review/provide input into funding applications and partnership agreements.	Overall project implementation and success. Meeting project outcomes including ER goals, financial goals/budgets, FN and/or stakeholder engagement, etc. Goals will specific to each project.	Coordinate the activities of the society. Manage financial resources of the society (supported by Project Managers). Increase the presence of the society across the Omineca. Ensure society meets requirements of legislation and regulation.	Responsible for overall project success, including budgets and planned outcomes. Uphold the interests of the society in the implementation of the project.	Participate in the AGM, receive and comment on general SERN communications and provide input into the program based on expertise or interest. Consider roles on Board, Implementation Committee or Project Implementation Teams as requested.

10.2.3 Implementation Committee

As the activities of the society expand (types of projects, volume of work, geographic distribution of projects) an Implementation Committee (Committee) should be established. This committee will provide guidance to the operations of the society. Acting on behalf of the board and reporting to the board, the committee will deal with annual activity planning, identification and selection of projects and in general, more operational planning of ER within the Omineca. The Committee would examine, implement and develop recommendations to the board related the following:

- Identification of funding opportunities and specific funding applications
- Undertaking analysis or assessment to generate ER opportunities
- Oversee the assessment and/or prioritization of ER project opportunities
- Generation of projects

A key role of the committee will be to report to the Board on the items identified above, allowing the board to review, comment and make key decisions on the direction of activities in general and the program overall. The Board is to ensure that the activities underway are, at a high level, consistent with the mission and vision of the society. This is supported by key communication from the Implementation Committee.

10.2.4 Project Implementation Teams

Project implementation teams are currently used by SERNbc and should continue to be used as an effective way to incorporate input and expertise by interested stakeholders and contractors. Project Teams focus on the operational delivery of projects including FN consultation, land manager authorization, permitting and delivery of treatments, pre and post treatment monitoring and reporting,

Project Teams will be set up once a project is identified and funding has been secured. Project Teams will be made up of a range of technical and management specialists with expertise and/or interest in the location (geography) of the project and the treatment that is being proposed. A Project Manager will be assigned to the project by the Coordinator, and the Project Manager will direct the activities of the Project Team and be responsible for the implementation of the Project. The Project Manager will report to the Coordinator regarding the project.

The society should consider the development of more detailed *roles and responsibilities* documentation for the Project Manager to ensure consistent administration of projects and processes implemented by the society, so as to manage the society's implementation of works, responsibilities to government, funding agencies and society members as well as the society's liabilities. This guidance document should also identify how the Project Manger should report back to the Coordinator in support of general monitoring of activities as well as regular reporting to the Board and Implementation Committee.

The structure outlined above is recommended for SERNbc. It is expected that it will develop over time as additional partnerships and funding is secured in support of ecosystem restoration within the Omineca.

Involvement of individuals on the Project Teams allows for a means to engage individuals in the activities of the society as a step to higher level involvement.

10.3 Partnerships

SERNbc is an organization that will rely on partnerships in order to implement ecosystem restoration in the Omineca. The society implements a collaborative approach and will look for partners to provide support across the full spectrum of activities, from planning and information gathering to funding to project implementation.

SERNbc greatest value within this partnership model is the ability to bring together a range of different interests in the implementation of ecosystem restoration. The society is well positioned to play both a coordinating and implementing role in the ecosystem projects that have multiple stakeholders and values.

The role of SERNbc in relation to other partners will vary, based on both the interests, abilities and capacity of the SERNbc and the partner, as well as the specific ecosystem restoration project being considered. A brief discussion of the potential roles of partners working with SERNbc is included below as an example. SERNbc is open to working innovatively with all partners in fulfilling the mission and vision of the society.

10.3.1 British Columbia Provincial Government

Context: The provincial government, and specifically FLNRO, is currently supporting SERNbc through membership on the board of directors (Vanderhoof District stewardship, Omineca Land-based stewardship, Prince George Fire Center and Northern Region of BC Parks are currently represented on the board). The society has received funding from the provincial government in the form of employee time to help coordinate the society activities in 2013, in kind support from the WMB as they coordinate and implement burning treatments on behalf of the society, as well as Land Based Investment funding through the Provincial ER body in order to support the establishment of the society and implementation of project work in 2013/14.

The provincial government also has a number of different programs that potentially align with the activities of SERNbc. Each of these programs has their own focused objectives, but through collaboration and innovation, have the potential to also support ER activities. These programs include:

- Wildfire management and wildfire hazard reduction (as managed by Wildfire Management Branch or individual municipal or regional governments),
- Small Scale Salvage (SSS),
- Landbase Investment Strategy(LBIS) - Fish Passage, *Forests for Tomorrow* and others,
- Landbase Stewardship – ecosystem assessment and conservation efforts, and
- BC Parks' ecosystem management activities.

The provincial government is the legal authority for most of the activities proposed by SERNbc.

Strategy: SERNbc will continue to work with the provincial government to further ecosystem restoration in the region. SERNbc will:

- develop a Memorandum of Understanding (MOU) with the Wildfire Management Branch in the implementation of burning treatments and will coordinate activities with them in order to identify project opportunities that meet both ER and wildfire hazard reduction goals;
- engage in discussions with the provincial government in order to obtain regular volume of projects and/or annual base funding as a continuing demonstration of support for the program;
- coordinate and collaborate with other provincial programs to ensure that mutually beneficial programming and activities are secured and that duplication of effort is avoided.

Roles: The society desires continued involvement of the provincial government in the society as it grows, gains increased exposure and greater support and involvement from stakeholders, individuals and groups across the region. A key role of the provincial government is the review and approval of activities that are planned in areas of provincial crown responsibility. In support of this, SERNbc would like to maintain an open relationship with the provincial government at provincial, regional and district levels, to help ensure they are aware of, have contributed to and are supportive of funding applications and planned ER activities.

10.3.2 First Nations

Context: Ecosystem Restoration activities within the Vanderhoof area, a precursor to the expanded geography of SERNbc, engaged First Nations at a project level. There is intent to expand the relationship between the society and First Nations, as it aligns with First Nations capacity and interest. To this end, SERNbc has initiated discussions with all First Nations with interests in the Omineca Region to understand interest and capacity for involvement with the ecosystem restoration activities supported by SERNbc.

Strategy: SERNbc will continue to engage with First Nations as a partner of the society. SERNbc will work to further their involvement in the activities of the society, including but not limited to, membership and involvement in the society at the board, committee and project levels. SERNbc will look for opportunities to align First Nations interests and capacity with the activities of the society.

Key to the meaningful involvement of First Nations will be open and proactive communication and dialogue regarding the society and its activities. This dialogue should include

- continued general communication regarding the society and potential ecosystems of focus
- ongoing understanding of First Nations interests in being involved (e.g. interest, capacity)
- improved understanding of First Nations priorities for ecosystem restoration across the region
- project specific discussions to ensure that First Nations interests, priorities and input is proactively incorporated into project planning and funding applications
- project specific information sharing and referrals

Working with First Nations in the completion of Traditional Use Studies (TUSs) could also support ecosystem restoration planning over the long-term. An improved understanding of traditional First Nations activities both regarding ecosystem restoration as well as harvesting patterns (i.e. berries, wildlife) would support further planning and prioritization of assessment and restoration treatments across the region.

Roles: SERNbc would like First Nations to speak into the planning and implementation of ER activities in the Omineca. Specific roles of First Nations or First Nation individuals in support of SERNbc ecosystem restoration activities will be driven by interest, capability and capacity. SERNbc will work with First Nations to support their increasing involvement or engagement in ecosystem restoration.

10.3.3 Research, Academia and Educational Institutions

Context: The activities of SERNbc rely on planning and implementation that is rooted in an understanding of past, current and expected ecosystem dynamics, vulnerability and the impact of restoration activities on ecosystem processes, structure, function and composition.

Strategy: SERNbc will develop relationships with interested academic institutions in B.C. to foster support for the program and identify synergies between the activities of the society and the research or monitoring interests of expert individuals or organizations. It is expected that these relationships will result in research design and sampling that will also support the project monitoring needs of SERNbc as well as foster an overall improved understanding of ecosystem dynamics, vulnerabilities and our ability to support the development of resilient ecosystems.

Relationships with education institutions will also provide opportunity for students to be engaged with the planning prescription or implementation of planned activities, including undergraduate or post-graduate students involved in research design or monitoring as well as high-school or university students being involved through volunteer or other alternatively funded education-based programs.

Roles: Research or educational institutions and individuals can play key roles in the identification of sites, design of treatments and design and implementation of monitoring activities. Opportunities exist where SERNbc activities may align with research interests and partnerships will facilitate external funding (or in-kind support) from these institutions in support of SERNbc ER. Educational institutions (secondary and post-secondary) may also be able to support ER treatments where students gain hands-on experience in ecosystem restoration.

10.3.4 Non-governmental Organizations

Context: The SERNbc board of directors currently includes members that are also involved with BC Cattleman's Association, BC Wildlife Federation, BC Trappers Association and the Guide Outfitters Association of BC. Membership in the society includes individuals within each of these groups and associations as well. NGOs such as these are also involved in or supporting ER activities on the ground.

Strategy: SERNbc will maintain relationships with NGOs with complimentary or aligned interests. These relationships will be fostered to:

- Ensure collaboration and a partnership model for ER;
- Improve efficiencies in the implementation of ER;

- Develop grass roots interest in, ownership of and support for ER;
- Secure funding for ER activities.

Roles: SERNbc relies on NGOs in key leadership and implementation roles in the society. Specific roles for NGOs or their members will be driven by interest, capability, and capacity.

10.3.5 Private Consultants or Contractors

Context: SERNbc currently utilizes private professional and technical consultants as well as contract crews to support planning, prescription development, treatments and monitoring. SERNbc does not have staff in place to complete these tasks and relies on other organizations to implement works. Some individuals and companies also provide in-kind support through time and resources. Some consultants or contracts are members of the society. In addition, it is important to note that forestry, land management and environmental consulting companies have historically supported and implemented non SERNbc ER activities in different parts of the Omineca.

Strategy: SERNbc will continue to rely on consulting and contracting service providers to implement much of the activity that the society is involved with. These relationships will continue to be fostered as open, collaborative and mutually supportive relationships that are based on financial arrangements that are fair and competitively priced and meet the requirements of funding partners. SERNbc will support and work proactively with private consultants who are interested in initiating ER activities in the Omineca that align with the society's mission and vision. Service consultants/contractors are expected to become members of the society in support of this relationship.

Roles: Private companies may initiate projects themselves or on behalf of other proponents. They could then approach SERNbc for support based on value that the society could bring to the ER projects. Private consultants and contracts will continue to be key implementers of ER on behalf of SERNbc.

10.3.6 Funding Partners

Context: SERNbc is an externally funded society, with the BC Provincial Government, Habitat Conservation Trust Fund, the BC Cattlemen's Association and the BC Hydro Peace Fish and Wildlife Compensation Program currently supporting activities of the society with direct funding.

Strategy: SERNbc will diversify and expand funding partnerships in the delivery of ecosystem restoration in the Omineca. Partnerships will be developed where SERNbc is able to further ecosystem restoration across the region while supporting our partners in meeting their goals:

Provincial Government – Opportunity exists for SERNbc to secure funding in support of related or aligned provincial programs, including but not limited to interface fire hazard reduction activities, fish passage restoration, BCParks, Ecosystem Restoration, etc. SERNbc is well positioned to support these programs and help facilitate matching funds or a great influence of these programs across the region. Opportunity may also exist to work with the provincial government to support a base level of funding and/or volume of work that would support the longer-term administration of ER across the Omineca.

Regional/Municipal Governments – opportunities exist to secure funds from regional or municipal governments where ER treatments align with wildfire hazard reduction activities.

Habitat Conservation Trust Fund – application for continued funding associated with planned projects.

BC Hydro – Peace Region Fish and Wildlife Compensation Program – application for funds to support the society in general and in the implementation of projects. Investigate the opportunity of SERNbc playing a coordinating role for some key ecosystems types or treatment types (e.g. burns, fish passage, etc.) in support of the FWCP objectives in the Williston drainage.

Private Development Companies – a series of oil and gas pipelines are currently proposed to cross the Omineca Region. New mines and mine expansion is also planned. Forest companies are active across the region. SERNbc will connect with and develop relationships with proponents to identify common interests in ecosystem restoration and delivery.

Non-governmental Organizations – licenced and non-licenced user groups or other associations or organizations may have funding or programs available to support ER.

First Nations – First Nations, as individual bands or tribal councils directly, or through federally or provincially funded programs, have access to funding that could be used to support the implementation of ER in the region, from assessments or traditional use studies through to prescription development and/or treatments.

Foundations –foundations or funds whose objectives may align with those of SERNbc. SERNbc will develop an understanding and relationships with key foundations in the implementation of the strategic plan.

Roles: Funding from third parties will be the driving force of activity completed by SERNbc. Funding partners will provide dollars to SERNbc to support ER. Funding partners may also become more involved in planning and implementation of ER activities, dependent on the nature and requirements of the partner's organization.

10.4 Landscape Level Planning

Context – Ecosystem restoration considers the need to understand and design landscapes that will contribute to desired future conditions. The understanding of these landscapes, as well as the identification of vulnerable ecosystems, is limited to our current toolbox of land, forest and ecosystem inventory. Despite this, landscape level assessment and planning can still provide context for ER activities and helps ensure that treatments are being carried out where they are the most effective. Investment in such analysis facilitates funding applications by identifying sites or areas that require focused assessment or treatment that will also align with specific funding programs.

Strategy – Over the short-term, potential projects will be reviewed and prioritized based on the expertise and experience of practitioners in the region. Over the long-term there is an intent to develop a broad understanding of ecological conditions and vulnerabilities across the region that will be used to both 1) prioritize projects that are brought to SERNbc for consideration and 2) drive the development of ER projects based on extent of ecosystem vulnerability and degradation across the region. Ultimately, landscape level indicators and targets should be developed in associated with the priority ecosystem types and overall objectives of ER in the Omineca.

Examples of landscape analysis projects are outlined below that reflect both strategic and formative analysis (i.e. Enduring Features Framework) and more operational modeling and analysis projects (i.e. review of species at risk habitat mapping and completion of a resource values matrix).

Enduring Features Framework – Under a changing climate, the Omineca Region can expect transformations in biodiversity on land and in water. As the climate changes, ecosystems will adjust, and existing land cover may not be a reliable basis for long-term conservation planning. Given this, SERNbc will identify important "enduring features" that will remain unchanged over time, supporting a focus for conservation and restoration activities. GIS modelling will be used to collect and use geophysical data to determine the variety, density, and productivity of the enduring features across the landscape. During this assessment, SERNbc will also acquire any existing regional or landscape-scale mapping of potential ecological and habitat. Following this base assessment, habitat assessments will be completed in relation to enduring features for focal species, including critical habitat for threatened species, and maintaining habitat connectivity. Interpretive mapping products (interpretations of the enduring features to support ecosystem or activity specific decision making) will also be created that identify ecosystem processes, important structural elements, and potential ecological change that will provide support to ER and land management decision making.

Species/Ecosystem Specific Ecological Modeling – The provincial government (FLNRO) has implemented a number of species and ecosystem specific ecological models that are being used to identify priority areas for legal protection or conservation (e.g. Wildlife Habitat Area designation). Although this analysis has been developed in support of a specific application, in response to specific legal tools that the ministry has in place to protect species or ecosystems at risk, the analysis represents a starting point for more landscape level planning in support of species or ecosystems at risk. SERNbc will consider use of the analysis to inform the selection of sites and priorities.

Vulnerable/Degraded Ecosystems – In some cases, vulnerable or degraded ecosystems can be spatially defined at a regional scale. Where these exist (e.g. blocked fish passage or ingrowth within open forest conditions), region-wide understanding of conditions can be used to prioritize sites or focus ER planning attention.

Resource Values Assessments– SERNbc will focus on areas where ER treatments will have benefits to multiple ecological and/or socio-economic resource values. Understanding where the resource values are spatially located will support project prioritization. SERNbc could develop a "values matrix" that will spatialize resource values on the landscape (e.g. map resource values across the region) to support project selection and prioritization. Understanding of resource values could dovetail with current investments in the cumulative effects framework (provincial government initiative).

Traditional Use Studies – Supporting Traditional Use Studies (TUS) can contribute to an improved understanding of past ecosystem restoration activities, current values of importance to First Nations, and opportunities for ecosystem

restoration treatments. Such projects support the development of relationships between the society and First Nations, relationships that will support collaboration in ER. See also Section 10.3.2.

10.5 Field Assessment/Surveys

Context – Currently it is more common to identify funding for treatments than it is to identify funding for field assessments or surveys through which new areas will be identified for treatment. SERNbc currently implements field assessments and surveys where that funding is available. The sites identified and treated to date have been sites identified based on local expertise and knowledge.

Strategy – It will be important for SERNbc to identify partners and funding sources for the completion of both 1) landscape level analysis to direct assessment and treatments as well as 2) field assessment and surveys to identify, confirm and develop prescriptions for ER treatments. With focused funding in the area of analysis and field assessment, sites will then be made available in support of a range of funding applications.[8]

10.6 Project Development Process

10.6.1 Project Flow

Context – Current ER activities take place across the region through a range of different mechanisms, from one-off individually driven initiatives to SERNbc coordinated activities. Since the inception of the society in January of 2013 to present, there has been a growing interest from individuals, government agencies and funding groups to have certain activities coordinated or endorsed by SERNbc. SERNbc implements ER through a multiple stake-holder, balanced decision making process that is generally supported by the provincial government and viewed as being beneficial by individuals and groups looking to implement or fund ecosystem restoration work. SERNbc partners with individuals or groups where grass-roots interest in ER is evident and then acts to secure funding to facilitate the implementation of ER.

Strategy – ER activities in which SERNbc is involved may be come in a variety of forms and from a variety of sources. To support common understanding among partners and stakeholders, SERNbc will document and communicate *project flow,* specifically outlining how SERNbc will either 1) support others in implementing ER or 2) generate, consider and implement ER activities themselves. A preliminary project flow chart that addresses the following issues is included in Appendix A. The process should specifically address expectation around the following processes:

- *Generation and evaluation of project opportunities*
- *Information sharing and engagement with First Nations and stakeholders*
- *Communications with permitting agencies*
- *Planning, implementation and reporting of projects*

10.6.2 SERNbc Support for ER Projects Implemented by Other Proponents

When SERNbc is approached by other proponents to consider implementing a specific project, the society will follow the process outlined in Appendix A (Figure 2). In some cases, proponents may approach SERNbc to approve or sanction a project for which the proponent is applying for funding and/or is planning on implementing themselves. In order to maintain the integrity of the mission, vision and intent of SERNbc there will be some expectations that will need to be met in order for this approval or support to be provided. The following requirements or expectations are recommended[9]:

- SERNbc completion of a *Preliminary Screen* of the project in order to determined how it aligns with SERNbc mission, vision and goals.
- Confirmation of proactive First Nations and stakeholder engagement and where possible, planned involvement in the ER activity
- Alignment of the proposed project with either SERNbc or other landscape, District, Region or Provincial ER or landbase investment initiatives

[8] The Peace Fish and Wildlife Compensation Program has a "seed funding" envelope that could be used for this purpose (See Section 10.3.6).

[9] The Board of Directors should finalize a list of expectations to ensure that outside proponents are aware of the expectations of them if they are interested in SERNbc support or sanctioning of proposed projects.

- Whether or not the proponent has engaged the Wildfire Management Branch in the development and planned implementation of the burn plans, if burning is a component of the work
- Proponent recognition of the costs associated with the review of the project and overall support from SERNbc
- Proponent commits to meet basic reporting requirements to SERNbc for project tracking purposes.

10.7 ER Information Management

Context – Information associated with SERNbc ER activities is managed on a project by project basis. A range of spatial and attribute information is gathered and used to support prescription development, monitoring and reporting.

Strategy – Over time, as the number of projects or overall amount of activity increases, a basic database should be used to track the activities of the society. This system should capture some base information associated with ER treatment areas. The following fields should be considered:

- ER Project ID
- Key Contact – project manager name, organization, phone and email
- Status – i.e. Potential, Active, Completed
- Priority Ecosystem Type – i.e. open forest, wetland, fish passage
- Values – values that will benefit from the treatment
- Objective – of the treatment, could be based on predetermined list or a general description
- Treatment – proposed or planned treatment type and area (ha) restored
- Treatment Date(s) – when completed
- Funding – organization or type
- Partners – organizations involved/contributing

A simple spatial layer (treatment polygons) can be associated with this database, in order to support mapping and general communications. More detailed spatial and attribute information can be tracked or managed at the project level, available if needed to support more detailed reporting or communications requirements.

10.8 Communication Strategy

Strategy - Following the completion of the Strategic Plan, SERNbc will engage in the following communication efforts in order to continue to make land and resource managers, users and the general public aware of the society, providing opportunity for further engagement and support for ER in the region.

Strategic Plan - Place Strategic Plan on the society website and complete follow-up email notification to all SERNbc contacts.

Society Membership - Follow-up with interested stakeholders (as identified during strategic planning process) and complete a membership drive to secure further interest in and exposure to the activities of the society.

First Nations - Further conversations with First Nations about potential involvement in the society with a preliminary focus on those who responded to communications during the strategic planning process.

Partners/Funding Groups - Communicate the strategic plan to potential partnership organizations including funding partners

In addition, the society should continue to implement a series of regular communications to further the interests of the society, including the following:

Website – the website should continue to be a key tool in the communication of the society mission, vision and activities as well as the solicitation for interest and involvement in the society.

Newsletters – a quarterly newsletter should be used to engage with stakeholders, partners and others interested in ER in the Omineca.

Contact List – the society should manage a contact list in support of all activities, building from ongoing communications that have been taking place through day to day activities and the strategic planning process. This list would support the distribution of regular communications as well as project specific inquires based on each contact's interests and/or affiliations.

The society should also consider establishing a forum or opportunity for discussions and debate about ecosystem resilience and ecosystem restoration within the context of land management within the Omineca. Consider partnering with or supporting UNBC in this initiative. Input secured through the strategic planning process clearly identified this as missing, and is

supported by Purpose #4 of SERNbc: *Inform public and land managers on current ecological vulnerabilities as understood through the implementation of ecosystem restoration*. Such a forum or opportunity for discussion would:

- Increase SERNbc exposure
- Support the identification of restoration opportunities and/or priorities
- Support the sharing of ideas that could lead to innovation in current land management and/or ecosystem restoration in support of ecosystem resilience.

11 Next Steps

The following key steps are taken from the strategies outlined above and represent key steps that should be the focus of SERNbc's strategic efforts. The key steps are not listed in any specific order of priority and represent activities beyond the current initiatives to secure funds for ecosystem restoration treatments.

- Present the Strategic Plan to the ER community across the Omineca Region and use the exercise to generate awareness and engagement in the society.
- Develop a Memorandum of Understanding with the Wildfire Management Branch regarding the implementation of burning related treatments across the Omineca.
- Secure commitments from current funding partners for a base level of funding to support a half to full-time coordinator. A goal of between $75,000 - 120,000 base funding should be used to facilitate the cost and expenses associated with contract or employee coordinator position and some of the activities they would undertake in order to implement key actions from the strategic plan.
- Deepen relationships with key funding partners in support of landscape analysis, field assessments/prescriptions and treatments, including but not necessarily limited to the following:
    - Provincial Government (specifically Wildfire Mgt Branch, Provincial ER Program, BCParks and Landbase Investment Program)
    - Habitat Conservation Trust Foundation
    - Peace Williston Fish and Wildlife Compensation Program
    - Private companies associated with current and proposed pipeline and mine projects
- Develop relationships with First Nations that have voiced an interest in the activities of the society.

Dependent on resources and capacity, SERNbc should consider proceeding with the other strategic initiatives outlined in Section 10. Evaluation of the associated strategies and actions should be carried out by the Board at least once a year to ensure that adequate attention is given to the strategic initiatives outlined in this plan. An update to this plan should be considered within 5 years, or as directed by the board, influenced by the ongoing growth of SERNbc and associated ecosystem restoration activities across the Omineca.

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Appendix A – Project Flow Chart

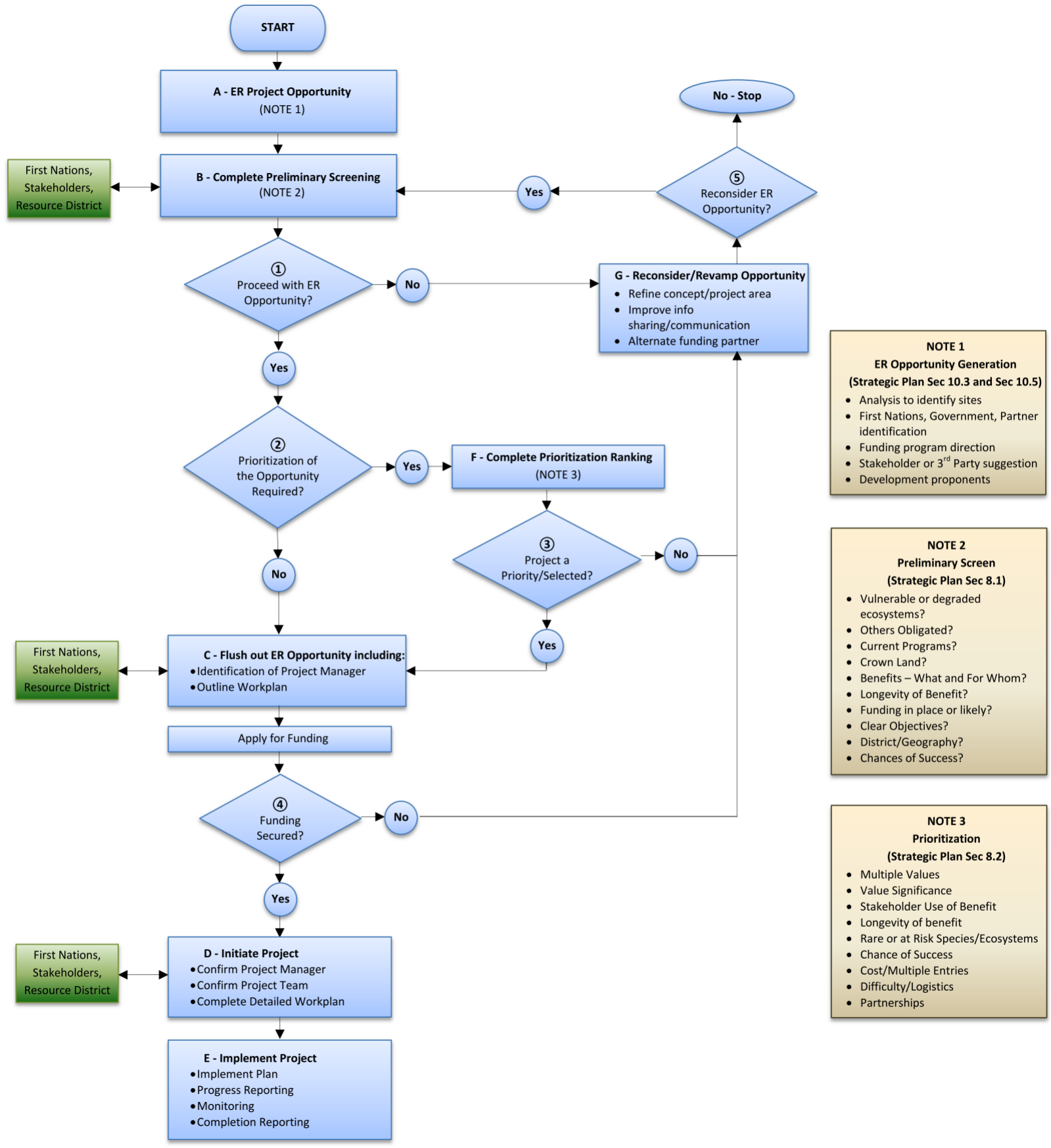

Figure 2. Draft SERNbc ecosystem restoration project flow chart