REGIONAL DISTRICT
NORTH OKANAGAN

Electoral Area B – Swan Lake / Commonage

Community Wildfire Resiliency Plan 2025

Registered Professional Signature and Seal

This Community Wildfire Resiliency Plan has been prepared for the Regional District of North Okanagan Electoral Area B (Swan Lake/Commonage)

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I certify that I have reviewed this document and, while I did not personally supervise the work described, I have determined that this work has been done to the standards expected of a member of the Forest Professionals of British Columbia.	
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Acknowledgments

The Regional District of North Okanagan (RDNO) is located in the southern interior of British Columbia and spans a diverse landscape that includes lakes, valleys, grasslands, and forested hills. The region covers approximately 7,500 km² and is home to over 90,000 residents. Within its boundaries exist six self-governing municipalities, the City of Vernon, the City of Armstrong, the Village of Lumby, the District of Coldstream, the Township of Spallumcheen, and the City of Enderby. The RDNO governs five unincorporated electoral areas: Electoral Areas B, C, D, E, and F.

We acknowledge that Electoral Area B – Swan Lake/Commonage of the Regional District of North Okanagan lies within the traditional, ancestral, and unceded territories of the Splatsin, a member of the Secwépemc Nation, and the Okanagan Indian Band, within the Syilx Okanagan Nation. We recognize and respect the deep connections that these Nations have to the land, water, and natural systems that sustain life in this region.

As we plan for greater wildfire resiliency, we honour the long-standing stewardship practices and cultural knowledge of Indigenous Peoples, whose relationship with fire and the land has shaped these ecosystems for generations. We are committed to collaboration, learning, and building relationships that support shared resilience and respect for Indigenous rights and traditional knowledge.

Forsite would like to acknowledge the contributions of many individuals during the building of this CWRP, including:

- Nathan Bretz, FireSmart Coordinator, Regional District of North Okanagan
- Alastair Crick, Protective Services Manager, Regional District of North Okanagan
- Andrew Hunsberger, RPF, Rural Services Manager, Regional District of North Okanagan
- Tom Lenarcic, GIS Coordinator, Regional District of North Okanagan
- Marc Szarek, FireSmart Coordinator, Township of Spallumcheen
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- Shari McDowell, FireSmart Coordinator, City of Armstrong
- Warren Smith, Manager of Community Services, City of Armstrong
- Elia Nicoloyannis, FireSmart Coordinator, City of Vernon
- Brent Lipinski, Land and Resource Specialist, Ministry of Forests – Okanagan Shuswap Natural Resource District
- Vanessa Purves, RPF, Senior Wildfire Officer – Prevention, BCWS Kamloops Fire Centre
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This report was completed with the support of the following staff from Forsite Consultants Ltd.:

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This report would not be possible without the Community Resiliency Investment (CRI) Program through the FireSmart Community Funding and Supports (FCFS) stream, which is provided from the Province of British Columbia, administered by the Union of British Columbia Municipalities (UBCM) for the Regional District of North Okanagan.

Frequently Used Acronyms

AOI	Area of Interest
BC	British Columbia
BCWS	British Columbia Wildfire Service
BEC	Biogeoclimatic Ecosystem Classification
CFFDRS	Canadian Forest Fire Danger Rating System
CFRC	Community FireSmart Resiliency Collaborative
CI	Critical Infrastructure
CLWRR	Crown Land Wildfire Risk Reduction
CIFFC	Canadian Interagency Forest Fire Centre
CRI	Community Resiliency Investment
CWRP	Community Wildfire Resiliency Plans
DPA	Development Permit Area
FBP	Fire Behaviour Prediction System
FCFS	FireSmart Community Funding and Supports
HIZ	Home Ignition Zone
HVRA	Hazard, Risk, and Vulnerability Analysis
LRMP	Land and Resource Management Plan
MOF	Ministry of Forests
PSTA	Provincial Strategic Threat Assessment
OCP	Official Community Plan
SARA	Species at Risk Act
SPU	Structure Protection Units
UBCM	Union of British Columbia Municipalities
VAR	Values at Risk
WRR	Wildfire Risk Reduction
WUI	Wildland-Urban Interface

Executive Summary

Wildfire is a natural and recurring process across British Columbia's landscapes. However, with warming temperatures, prolonged drought, and changing precipitation patterns due to climate change, the province is experiencing more frequent, larger, and more intense wildfires—particularly in the wildland-urban interface (WUI) where communities and natural areas meet. The devastating wildfire seasons of 2017, 2018, 2021, and 2023 illustrate the growing threat wildfires pose to people, infrastructure, and ecosystems throughout the province.

In response to recent fire events across the province, the Regional District of North Okanagan (RDNO) engaged Forsite Consultants Ltd. (Forsite) to develop a Community Wildfire Resiliency Plan (CWRP) for each of the electoral areas within the Regional District.

Electoral Area B is located in the western portion of the Regional District of North Okanagan and encompasses approximately 642 sq kms of diverse landscape. The area includes the north end of Okanagan Lake, Swan Lake, the northern portion of Kalamalka Lake, and sections of Kalamalka Lake Provincial Park. It is primarily composed of Crown land and First Nations land, with the remainder consisting of large agricultural holdings and rural open space. While there are no major urban centres within Electoral Area B, scattered residences, farms, and recreational properties are found throughout the area. The wildland-urban interface is prominent due to the proximity of flammable forest fuels and rural developments, and the region experiences some seasonal population fluctuation associated with lake-based recreation. The area's geography and land use patterns—combined with limited access routes and a dispersed population—pose unique challenges for wildfire preparedness, emergency response, and vegetation management planning.

The purpose of this CWRP for Electoral Area B is to:

i. Identify and assess wildfire hazards within and surrounding the areas of Okanagan, Swan, and Kalamalka Lakes.
ii. Assess potential risks and impacts to the community and infrastructure from wildfires.
iii. Provide effective and feasible mitigation strategies to reduce identified hazards and risk.

This CWRP is structured around the seven FireSmart disciplines, providing a comprehensive framework for addressing wildfire mitigation and risk reduction. The seven FireSmart disciplines are:

1. Education
2. Legislation and Planning
3. Development Considerations
4. Interagency Cooperation
5. Cross-training
6. Emergency Planning
7. Vegetation Management

The development of this CWRP followed a multi-phase approach, including:

- analysis of background data,
- engagement with the public, Member Municipalities, First Nations, and other partnerships,
- local wildfire threat assessment through collection of field data, and
- development of a risk mitigation strategy based on the unique attributes of Electoral Area B.

Table 1 summarizes the recommended action items for Electoral Area B as identified by the CWRP. This table includes rationale, funding source, and metric(s) for success on completing the recommended FireSmart and wildfire risk reduction action items. These measures will require coordinated efforts by Electoral Area B in partnership with other agencies and partners, including but not limited to, Indigenous governments, provincial government agencies, adjacent municipal governments, and community members/private landowners.

Summary of CWRP Actions

Table 1. Electoral Area B CWRP Risk and Action Plan Summary.

Risk Summary
The purpose of the risk summary is to identify the specific risks to a community and its assets. An ongoing review of the risks should occur annually.
This CWRP highlights identified risks and recommended actions to enhance wildfire resiliency within Electoral Area B. The risks listed below were identified based on background research, field work data collection, RDNO CWRP public community survey, conversations with RDNO, the North Okanagan Member Municipalities, local First Nations, and community members during Electoral Area open houses. The identified risks below are listed in no particular order: 1. ***Majority of the Land within the Wildland Urban Interface is Ineligible for Threat Analysis*** Only 38.5% of the area within the Electoral Area B Wildland Urban interface falls into either Crown or Regional District land. All other forms of land including Private, First Nations owned, and Federal are ineligible for threat analysis through the CWRP, fuel treatments, or FireSmart Community Funding and Supports program funding. This emphasizes the need for private landowners to work collaboratively as a community and commit to FireSmart to reduce wildfire risk. 2. ***Concerns with Single Egress Communities*** Electoral Area B contains several communities which are either single egress or have egress concerns that would hinder effective evacuation in the event of an emergency. This includes the Westside Road Communities, Cosens Bay, and Six-Mile & Siwash Creek Roads. 3. ***Unexploded Ordinates*** The former military training grounds have documented unexploded ordnance (UXO). These areas are no-entry for wildfire suppression operations until cleared by explosives experts. This adds an additional layer of complications for wildland firefighter and hinders quick and efficient suppression for a large area. RDNO must work to coordinate emergency procedures for this area with the BC Wildfire Service (BCWS), Vernon Fire Rescue, and the Department of National Defense. 4. ***Limited Area for Fuel Treatments*** Due to the limitations presented in identified risk 1, there is a limited area that is eligible for fuel treatment. This hinders the ability for RDNO, BCWS, and the Ministry of Forests to conduct wildfire risk reduction treatments across the landscape.

Electoral Area B – Swan Lake/Commonage CWRP Action Plan						
Action	**Lead(s)**	**Priority**	**Timeframe**	**Resources Required**	**Metric for Success**	**Rationale/Notes**
Education						
Objective						
Read and understand this CWRP's identified risks and recommended actions and make this CWRP publicly available to community members on the RDNO FireSmart website	FireSmart Coordinator	Very High	Immediately	Regional District of North Okanagan Area B CWRP	Read and understood CWRP identified risks and recommended actions. This CWRP is made available to community members on the respective websites	Making this CWRP publicly available is important for community education and engagement. Community understanding and buy-in is critical for the successful implementation of recommendations within this CWRP.

Electoral Area B – Swan Lake/Commonage CWRP Action Plan						
Action	Lead(s)	Priority	Timeframe	Resources Required	Metric for Success	Rationale/Notes
Partner with local newspapers, radio, and community outlets to run a short monthly FireSmart column with seasonal tips, upcoming chipper/assessment dates, and Neighbourhood Recognition Program spotlights. Cross-post the same content on RDNO channels with a QR link to book assessments and sign up for alters to keep messaging consistent across the RDNO	FireSmart Coordinator, RDNO Communications Department	High	Work to establish a continual schedule for disseminating information	Connections with local newspapers, radio, and community outlets. Pre-developed news releases and information to be shared	During fire season, monthly information for the RDNO FireSmart Program is shared in some capacity	Funding is available per the FireSmart Community Funding and Supports program and application guide.

Electoral Area B – Swan Lake/Commonage CWRP Action Plan						
Action	Lead(s)	Priority	Timeframe	Resources Required	Metric for Success	Rationale/Notes
Host events to introduce FireSmart concepts to the community and educate members on actions they can take	FireSmart Coordinator	High	2026-2030	Participation and in-kind support from community, other agencies, location to hold events, FCFS funding	Hold events annually in the spring and fall	Hosting an event is an excellent opportunity to solicit participation from local community and for the Fire Department to engage and provide education for the community. Look to solicit help from other agencies such the Member Municipalities, and local First Nations communities. See Wildfire Community Preparedness Day and a Neighbourhood Champion Workshop for resources. Funding is available per the FireSmart Community Funding and Supports program and application guide.

Electoral Area B – Swan Lake/Commonage CWRP Action Plan						
Action	Lead(s)	Priority	Timeframe	Resources Required	Metric for Success	Rationale/Notes
Support FireSmart BC Education program through the local schools or education groups and offer short classroom/club sessions and take-home checklists	FireSmart Coordinator	Moderate	2027-2031	Relationship with School District No. 22, FCFS funding.	The program is adopted for the 2027/2028 calendar school year.	This program includes wildfire resiliency literacy kits, Ember activity packages, coloring contest materials and access to Storytime videos with Ember. For more information refer to the FireSmart BC Education Program website. Funding is available per the FireSmart Community Funding and Supports program and application guide.

Electoral Area B – Swan Lake/Commonage CWRP Action Plan						
Action	Lead(s)	Priority	Timeframe	Resources Required	Metric for Success	Rationale/Notes
Work with local garden centers to label low-flammability species, display FireSmart planting/signage at point-of-sale and include QR codes to RDNO Guidance and Assessment bookings. Coordinate seasonal promos on non-combustible mulch and "right plant, right place" kits to nudge adoption	FireSmart Coordinator	Moderate	2026-2030	FCFS funding, relationship with local business owners	Local garden centers or nurseries continue to support the program	The FireSmart Plant Program includes plant tags, banners, staff buttons and in-store FireSmart advertising. Funding is available per the FireSmart Community Funding and Supports program and application guide.
Install educational/interpretive signage regarding wildfire ignition prevention and the role of wildfire in ecosystems in regional parks, recreation sites, campground, etc. where appropriate within the electoral area	FireSmart Coordinator, RDNO Parks, Recreation & Culture Department	Moderate	2026-2030	FCFS funding	Educational/ interpretive signage regarding wildfire ignition prevention and FireSmart are strategically placed in high-use RDNO recreation locations	Signage for wildfire and FireSmart educational purposes can be placed in RDNO parks. Funding is available per the FireSmart Community Funding and Supports program and application guide.

Electoral Area B – Swan Lake/Commonage CWRP Action Plan						
Action	Lead(s)	Priority	Timeframe	Resources Required	Metric for Success	Rationale/Notes
Host a short FireSmart briefing for local landscapers/roofers and publish a "trained vendors" list to streamline homeowner upgrades	FireSmart Coordinator	Moderate	2026-2030	FCFS funding, the want from contractors to participate in this type of training	A short FireSmart briefing/ workshop is conducted for contractors in the RDNO	There is currently not a contractor specific FireSmart Course. RDNO could utilize information from various FireSmart courses, such as the FireSmart 101, Local FireSmart Representative (LFR), and FireSmart Landscaping courses to create a workshop for contractors. Funding is available per the FireSmart Community Funding and Supports program and application guide.

Electoral Area B – Swan Lake/Commonage CWRP Action Plan						
Action	Lead(s)	Priority	Timeframe	Resources Required	Metric for Success	Rationale/Notes
Share a seasonal-resident arrival kit in summer residential areas. This can include a one-page checklist, chipping program information, and Home Assessment sign-up link timed to common arrival weekends. Consider distribution through targeted mailouts, email to program subscribers, and handouts at transfer stations, and local retailers	FireSmart Coordinator	Moderate	2026-2030	Communication channels, shareable information	RDNO develops a package of FireSmart and Wildfire Preparedness information to disseminate amongst summer residential properties	Funding is available per the FireSmart Community Funding and Supports program and application guide.
Schedule pre-season and high-risk day reminders (website, email, alerts) with quick links to book assessments and chippers	FireSmart Coordinator, RDNO Communications Department	High	By Spring 2026, then on-going	Pre-developed communications and contact list for RDNO residents interested in reminder emails	Communications are sent pre-season in April/May, and again during high and extreme fire danger days to remind residents about FireSmart practices	Funding is available per the FireSmart Community Funding and Supports program and application guide.

Electoral Area B – Swan Lake/Commonage CWRP Action Plan						
Action	Lead(s)	Priority	Timeframe	Resources Required	Metric for Success	Rationale/Notes
Add additional hires or volunteer LFR's or Wildfire Mitigation Specialists to assist in conducting community outreach, Wildfire Mitigation Program Assessments, Farm and Ranch Assessments, etc.	FireSmart Coordinator	High	For 2026 Fire Season	FCFS funding, training for individuals in LFR and/or Wildfire Mitigation Specialist	Additional individuals (start with 1 per electoral area) are hired on to support the FireSmart Coordinator with various assessments and FireSmart tasks	As the RDNO FireSmart Program develops, the FireSmart Coordinator will not have time to be the sole individual conducting assessments. Additional individuals, one per electoral area, will assist with this work and will act as the local FireSmart knowledge for the area. Funding is available per the FireSmart Community Funding and Supports program and application guide.

Electoral Area B – Swan Lake/Commonage CWRP Action Plan						
Action	**Lead(s)**	**Priority**	**Timeframe**	**Resources Required**	**Metric for Success**	**Rationale/Notes**
Recruit and coach blocks/strata to achieve and renew FireSmart Canada Neighbourhood Recognition Program status; seed efforts with small "Neighbourhood Champion" micro-grants	FireSmart Coordinator	High	2026-2030	FCFS funding, Neighbourhood Champion and Local FireSmart Representative (LFR).	Have a minimum of three neighbourhoods recognized across RDNO by the end of 2027.	The program focuses on bringing neighbours together to address threats on their respective properties. For more details regarding the FireSmart Canada Neighbourhood Recognition Program and steps towards recognition status, please see here. Funding is available per the FireSmart Community Funding and Supports program and application guide.
Legislation and Planning						
Objective						

Electoral Area B – Swan Lake/Commonage CWRP Action Plan						
Action	Lead(s)	Priority	Timeframe	Resources Required	Metric for Success	Rationale/Notes
Amend the current Open Burning Bylaw or develop a new Open Burning Bylaw that matches the language used by BCWS and neighbouring Member Municipalities	FireSmart Coordinator, RDNO Protective Services Department	Very High	2027	FCFS Funding, Open Burning Bylaws of Member Municipalities, coordination with BCWS Representative	The Open Burning Bylaw for RDNO Electoral Area B & C is amended to match language used by BCWS and Member Municipalities or removed.	To allow for easy interpretation of the bylaw and consistent messaging around open burning throughout the region, this Bylaw should be amended or removed. The RDNO has available funding under the FCFS Funding within the year of 2027. This action item cannot be completed until the funding becomes available.
Develop drought water regulations to be applied to a current bylaw or developed as a stand-alone bylaw. This will ensure adequate water resources during emergency events	FireSmart Coordinator, RDNO Protective Services Department	Moderate	2026-2030	FCFS Funding, examples of drought water regulations from other municipalities	Drought water regulations are considered and applied to RDNO if applicable	Funding is available per the FireSmart Community Funding and Supports program and application. An example of Drought Water Regulations is provided in Appendix H.

Electoral Area B – Swan Lake/Commonage CWRP Action Plan						
Action	**Lead(s)**	**Priority**	**Timeframe**	**Resources Required**	**Metric for Success**	**Rationale/Notes**
Establish guiding principles for wildfire protection for the RDNO	FireSmart Coordinator	Moderate	2026-2030	FCFS Funding	Guiding principles for wildfire risk reduction and FireSmart for RDNO are established.	Funding is available per the FireSmart Community Funding and Supports program and application. An example of Guiding Principles for Wildfire Risk Reduction is provided in Appendix H.
Development Considerations						
Objective						

Electoral Area B – Swan Lake/Commonage CWRP Action Plan						
Action	**Lead(s)**	**Priority**	**Timeframe**	**Resources Required**	**Metric for Success**	**Rationale/Notes**
Amend the RDNO Electoral Area B & C Official Community Plan (Bylaw 2626) with the recommendations listed within this CWRP	FireSmart Coordinator, RDNO Protective Services Department	Very High	Immediately	RDNO Area B&C Official Community Plan, FCFS Funding	Recommended actions for the Official Community Plan are considered and amended in the plan	RDNO is currently undergoing a revision of the Area B & C Official Community Plan. The recommendations from this CWRP should be considered and amended in the plan where applicable. Funding is available per the FireSmart Community Funding and Supports program and application. The recommended action items were developed with information from BC FireSmart Wildfire Development Permit Areas Guide, NFPA 114 Standards, and the Fire Underwriters Survey.

Electoral Area B – Swan Lake/Commonage CWRP Action Plan						
Action	**Lead(s)**	**Priority**	**Timeframe**	**Resources Required**	**Metric for Success**	**Rationale/Notes**
Amend the RDNO Subdivision Servicing Bylaw, 2013 (Bylaw 2600) with the recommendations listed within this CWRP	FireSmart Coordinator, RDNO Protective Services Department	Moderate	2026-2030	RDNO Subdivision Servicing Bylaw, FCFS Funding	Recommended actions for the Subdivision Servicing Bylaw are considered and amended in the plan	When RDNO amends the Subdivision Servicing Bylaw, the recommendations from this CWRP should be considered and amended in the plan where applicable. Funding is available per the FireSmart Community Funding and Supports program and application.
Amend the RDNO Zoning Bylaw (Bylaw 3000) with the recommendations listed within this CWRP	FireSmart Coordinator, RDNO Protective Services Department	Moderate	2026-2030	RDNO Zoning Bylaw, FCFS Funding	Recommended actions for the Zoning Bylaw are considered and amended in the plan	When RDNO amends the Zoning Bylaw, the recommendations from this CWRP should be considered and amended in the plan where applicable. Funding is available per the FireSmart Community Funding and Supports program and application.
Interagency Cooperation						

Electoral Area B – Swan Lake/Commonage CWRP Action Plan						
Action	**Lead(s)**	**Priority**	**Timeframe**	**Resources Required**	**Metric for Success**	**Rationale/Notes**
Objective						
Annually attend the Wildfire Resiliency and Training Summit	FireSmart Coordinator, RDNO Fire Department Staff, RDNO municipal staff	Very High	Annually	FCFS funding	A minimum of two people attend annually from the Regional District.	The intention of having multiple people attend the event from RDNO is to foster awareness and education regarding wildfire resiliency across various RDNO departments. Funding for attendance is available through the FireSmart Community Funding and Supports program.

Electoral Area B – Swan Lake/Commonage CWRP Action Plan						
Action	Lead(s)	Priority	Timeframe	Resources Required	Metric for Success	Rationale/Notes
Continue to participate in the North Okanagan Community FireSmart and Resiliency Collaborative (CFRC) and share findings of CWRP with partners	FireSmart Coordinator	Very High	Ongoing	FCFS funding	Continued participation in committees	The committee meets quarterly to discuss FireSmart and emergency management. Share high priority action items with other agencies/partners and identify synergies and opportunities to collaborate. Participation in a FireSmart Resiliency Committee is a requirement for FCFS funding as of 2024.
Invite additional community partners to attend the CFRC when appropriate to share knowledge regarding ongoing wildfire risk reduction projects in the region, voice community concerns to other jurisdictions and strategize mid- to long-term planning	FireSmart Coordinator	Moderate	During appropriate CFRC Meetings	Contacts for additional community partners	Appropriate community partners are invited to the RDNO CFRC meetings to coordinate with the FireSmart Coordinators in the North Okanagan area on mid- to long-term planning	Communication between the members of the RDNO CFRC should determine which community partners are priority to invite to the CFRC.

Electoral Area B – Swan Lake/Commonage CWRP Action Plan						
Action	Lead(s)	Priority	Timeframe	Resources Required	Metric for Success	Rationale/Notes
Work collaboratively with woodlot owners with license areas adjacent/near to private residences to manage for wildfire risk in forest management planning and harvest operations	FireSmart Coordinator	High	On-going	Contact for Southern Interior Woodlot Representative, Wildfire Threat Assessments and proposed Fuel Treatment Units (FTU's) identified in this CWRP within woodlots	RDNO coordinates with Woodlot owners, the Woodlots Representative, and BCWS to manage wildfire risk	RDNO should utilize information sharing and interagency co-operation to help woodlot owners within the WUI to prioritize locations of forest management for the benefit of wildfire risk reduction. Identified FTU's and Wildfire Threat Assessments in this CWRP can be used to help guide the woodlot owners where applicable. Jurisdiction to carryout the fuel treatments on the woodlot land is on the Woodlot owners, who can apply for funding through the Forest Enhancement Society of BC, and the Forest Investment Program.

Electoral Area B – Swan Lake/Commonage CWRP Action Plan						
Action	Lead(s)	Priority	Timeframe	Resources Required	Metric for Success	Rationale/Notes
Collaborate with the Member Municipalities and local First Nation groups during conducted training, extending offerings to seats in courses or conduct collaborative training events	FireSmart Coordination	High	On-going, as training opportunities present themselves	Communication with Member Municipalities and local First Nation FireSmart Coordinators, training opportunities	When training or courses are established for RDNO, the opportunity for other individuals from the Member Municipalities and local First Nations to participate is offered when applicable	Opportunities to allow other jurisdiction into training and courses with RDNO builds relationships, and expands wildfire, emergency response, and safety knowledge across the region. Several Member Municipalities and the local First Nations have experienced interest in joint training and courses where applicable, but none have any immediate need.

Consider establishing a mechanism which allows sharing of resources (LFR's, Wildfire Mitigation Specialist (WMS) trained individuals, FireSmart materials, assistance from FireSmart Coordinators, etc.), when needed with the Member Municipalities and local First Nations	FireSmart Coordination	Moderate	Discuss at CFRC Meeting	CFRC meeting with all Member Municipalities and local First Nations	Shared resource agreement is considered and established if desired between all communities	A mutual aid like agreement would allow resources to be shared between RDNO, the Member Municipalities, and the local First Nation groups. This could be the use of additional LFR's or WMS training individuals for assessment needs, FireSmart materials and support during events, etc. This concept can be applied to the use of assistance during emergency events as most FireSmart trained individuals in these communities are on the local Fire Department and may be deployed. This gives communities the opportunity to bring in additional FireSmart knowledge when needed. Concepts of wage, payments, information sharing, support requests, training requirements

Electoral Area B – Swan Lake/Commonage CWRP Action Plan						
Action	Lead(s)	Priority	Timeframe	Resources Required	Metric for Success	Rationale/Notes
						etc., will need to be further discussed.
Have a discussion with UBCM on the concept of pooling FCFS funding between multiple jurisdictions (RDNO, Member Municipalities, local First Nations) to conduct FireSmart activities	FireSmart Coordinator	Very High	Immediately	Contact with UBCM representative	Conversation with UBCM representative on FCFS funding sharing	This conversation should happen immediately, prior to any collaborative FireSmart action items between the Member Municipalities, local First Nations, and RDNO. This will help determine how the communities should move forward in requesting funding and how to share FCFS funding for multi-jurisdiction FireSmart activities.

Consider developing a region wide chipping program to be utilized by RDNO, Member Municipalities, and the local First Nations	FireSmart Coordinator	Moderate	Discuss at CFRC Meeting	CFRC meeting with all Member Municipalities and local First Nations	Region wide chipping program is considered and established if desired between all communities	Member Municipalities, local First Nations, and RDNO have expressed interest in developing a region wide chipping program to streamline effectiveness for the entire region. Full concept needs to be discussed with all members of the CFRC. Potential ideas include: • Alert system between communities for when residents sign-up for chipping under the wrong jurisdictions program • Put out a request for proposal for regional chipping contractor. Allows the contractor to chip in the entire area (i.e. chip in Lumby and then

Electoral Area B – Swan Lake/Commonage CWRP Action Plan						
Action	Lead(s)	Priority	Timeframe	Resources Required	Metric for Success	Rationale/Notes
						• expand to Area D) • Establish joint pricing and list of contractors so each jurisdiction could bill separately Collaborate with Regional District owned land

Electoral Area B – Swan Lake/Commonage CWRP Action Plan						
Action	Lead(s)	Priority	Timeframe	Resources Required	Metric for Success	Rationale/Notes
Develop a group calendar or other format for members of the CFRC to share community events (not just FireSmart) for other members to participate in or provide additional support for that community's FireSmart program	FireSmart Coordinate	High	Discuss at CFRC Meeting	CFRC meeting with all Member Municipalities and local First Nations	A system is designed and used regularly by CFRC members to share community events	A collaborative continually updated calendar, or other system will allow individuals from all communities in the region to know when upcoming events are happening. This applies to more than just FireSmart events. This will allow RDNO or the other communities to participate in the events under FireSmart or provide support to the community's FireSmart Coordinator when needed.

Electoral Area B – Swan Lake/Commonage CWRP Action Plan						
Action	Lead(s)	Priority	Timeframe	Resources Required	Metric for Success	Rationale/Notes
Host a Cosens Bay specific community FireSmart meeting, inviting the Cosens Bay FireSmart Committee, BC Parks, and other key agencies to discuss safety and wildfire risk reduction. This may evolve into a sub CFRC specific to the Cosens Bay Community	FireSmart Coordinator, Cosens Bay FireSmart Committee	Moderate	2026	Contacts for external partners	A meeting is hosted with the Cosens Bay FireSmart Committee and other external partners	The Cosens Bay FireSmart Committee could establish a sub CFRC to focus on FireSmart efforts for the Cosens Bay area. This should entail hosting a community meeting with the FireSmart group and external agencies (BC Hydro, Ministry of Transportation and Transit, BC Parks, etc.).
Provide additional support to the Cosens Bay FireSmart Committee, such as providing signs, equipment, and resources for FireSmart events	FireSmart Coordinator, Cosens Bay FireSmart Committee	Moderate	2026-2030	FCFS funding	RDNO supports the Cosens Bay FireSmart Committee in various capacities	Funding is available per the FireSmart Community Funding and Supports program and application.
Cross-Training						
Objective						

Electoral Area B – Swan Lake/Commonage CWRP Action Plan						
Action	Lead(s)	Priority	Timeframe	Resources Required	Metric for Success	Rationale/Notes
Provide opportunities for additional training for the members of the BX-Swan Lake Fire Department	FireSmart Coordinator, BX-Swan Lake Fire Department	High	Ongoing	FCFS funding, qualified trainers	Additional courses are provided to all members of the BX-Swan Lake Fire Department	Interface wildfire training is essential for fire department members to successfully respond to interface wildfires. Currently the BX-Swan Lake Fire Department offers some of the FCFS funded courses and pays through the department budget. This action items allows for this training to also be funded through the FCFS program.
If any Cooperative Community Wildfire Response (CCWR) organizations are established throughout Electoral Area B, provide basic training courses in wildfire and safety to the personnel	FireSmart Coordinator	Moderate	2026-2030	FCFS funding	Training is provided to CCWR organizations if established	This action item is only applicable if a CCWR organization is established in Electoral Area B. Please see the FireSmart Community Funding and Supports program and application guide for funding details.

Electoral Area B – Swan Lake/Commonage CWRP Action Plan						
Action	Lead(s)	Priority	Timeframe	Resources Required	Metric for Success	Rationale/Notes
Provide opportunities to RDNO staff, FireSmart Coordinator, and committed community members for additional training related to FireSmart and wildfire risk reduction	FireSmart Coordinator	High	Ongoing	FCFS funding, qualified trainers	Regional District staff receive appropriate cross training in emergency management, FireSmart and Wildfire Risk Reduction	Participation in these courses will improve the District's ability to effectively respond to an emergency event. Please see the FireSmart Community Funding and Supports program and application guide for funding details.

Electoral Area B – Swan Lake/Commonage CWRP Action Plan						
Action	**Lead(s)**	**Priority**	**Timeframe**	**Resources Required**	**Metric for Success**	**Rationale/Notes**
Wildfire Mitigation Specialist training for RDNO staff to allow these individuals to conduct Wildfire Mitigation Program, Cultural Site and Green Space, and Critical Infrastructure Assessments	FireSmart Coordinator	Very High	Immediately	FCFS funding, qualified trainers	A minimum of one Wildfire Mitigation Specialists per Electoral Area are on staff by the end of 2026.	Wildfire Mitigation Specialist and Local FireSmart Representative training are essential qualifications for conducting various FireSmart assessments and activities. Having trained staff within the Regional District increases the municipality's capacity to implement wildfire mitigation measures and advance FireSmart initiatives effectively. Please see the FireSmart Community Funding and Supports program and application guide for a list of eligible courses.

Electoral Area B – Swan Lake/Commonage CWRP Action Plan						
Action	Lead(s)	Priority	Timeframe	Resources Required	Metric for Success	Rationale/Notes
Provide training opportunities to the FireSmart Coordinator, essential RDNO staff, and members of the BX-Swan Lake Fire Department to develop cultural and prescribed fire knowledge through eligible training courses	FireSmart Coordinator, BX-Swan Lake Fire Department	Moderate	On-going	FCFS funding, qualified trainers	At minimum the FireSmart Coordinator and top members of the BX-Swan Lake Fire Department are trained in prescribed fire	Funding is available through the FireSmart Community Funding and Supports program and application guide.

Electoral Area B – Swan Lake/Commonage CWRP Action Plan						
Action	**Lead(s)**	**Priority**	**Timeframe**	**Resources Required**	**Metric for Success**	**Rationale/Notes**
Provide opportunities for live wildland fire training exercises. Collaborative with RDNO Fire Departments, RDNO staff, BCWS, Member Municipalities, and the local First Nations to practice working under unified command in a wildland fire environment	FireSmart Coordinator	Moderate	Bi-annually in spring or fall	FCFS funding, relationship with BCWS Vernon Fire Zone	Have a minimum of one cross training/ live wildfire fire exercise annually	Established relationships between agencies will lead to increased efficiency and coordinated responses during a wildfire event. Identified prescribed fire FTU's in this CWRP may be used as the location for such training. Funding is available through the FireSmart Community Funding and Supports program and application guide.
Emergency Planning						
Objective						

Electoral Area B – Swan Lake/Commonage CWRP Action Plan						
Action	**Lead(s)**	**Priority**	**Timeframe**	**Resources Required**	**Metric for Success**	**Rationale/Notes**
Amend the Cosens Bay Evacuation Plan to add the recommendations listed within this CWRP	RDNO Protective Services Department	Moderate	2026-2030	RDNO Cosens Bay Evacuation Plan	Recommended actions for the Cosens Bay evacuation Plan are considered and amended in the plan	When RDNO amends the Cosens Bay Evacuation Plan, the recommendations from this CWRP should be considered and amended in the plan where applicable. Funding for amendments of plans coinciding with emergency response is not eligible for funding through the FCFS program. The Public Notification and Evacuation Route Funding through UBCM is an option for grant funding for this action item.

Complete a Hazard, Risk, & Vulnerability Assessment (HRVA).	RDNO Protective Services Department	Very High	Immediately	Commission for completion of HRVA for the entire North Okanagan Region, funding	Completed and up-to-date HRVA	Commission an HRVA for the region to identify top hazards, who/what is exposed (people, roads, utilities), vulnerable populations, and seasonal pinch points. Deliverables should include a simple risk map, priority actions, resource gaps, and a short improvement plan (alerts, evacuations, communication). Involve RDNO, BCWS, neighbouring jurisdictions, Emergency Support Services (ESS)/social services, and local champions; update the HRVA annually or after major events. Funding for amendments of plans coinciding with emergency response is not eligible for funding through the FCFS program.
Create an Emergency Management Plan and centralized regional	RDNO Protective	Very High	Immediately	Commission for a RDNO Emergency	Completed and up-to-date Emergency Management Plan	Hire a qualified planner to produce a right-sized, all-hazard plan: map risk and

Electoral Area B – Swan Lake/Commonage CWRP Action Plan						
Action	Lead(s)	Priority	Timeframe	Resources Required	Metric for Success	Rationale/Notes
Emergency Operations Centre.	Services Department			Management Plan, funding		routes; define clear roles and plain-language checklists; set up multi-channel alerts (email/landline/radio); outline Reception/ESS and basic re-entry; and establish a light training and annual update cycle – coordinated with RDNO, local fire/ESS, nearby jurisdictions, and Indigenous partners. Funding for amendments of plans coinciding with emergency response is not eligible for funding through the FCFS program.

Electoral Area B – Swan Lake/Commonage CWRP Action Plan						
Action	**Lead(s)**	**Priority**	**Timeframe**	**Resources Required**	**Metric for Success**	**Rationale/Notes**
Conduct an annual cross-training event with RDNO staff, BX-Swan Lake Fire Department, and interested external partners (Member Municipalities, local First Nations, BCWS, etc.) that simulates using the emergency response plan	RDNO Protective Services Department, FireSmart Coordinator	Moderate	Annually	FCFS funding, venue	Annual or biannual participation in a meeting and or tabletop exercise specific to reviewing the emergency management/ response/ evacuation plans	Funding for attendance is available per the FireSmart Community Funding and Supports program and application guide. Consider hiring an emergency management consultant to facilitate an annual tabletop exercise focused on a wildfire event impacting the RDNO, the Member Municipalities, and local First Nations areas.

Electoral Area B – Swan Lake/Commonage CWRP Action Plan						
Action	Lead(s)	Priority	Timeframe	Resources Required	Metric for Success	Rationale/Notes
Assess the number of residents that may be more vulnerable or at higher risk during an emergency evacuation and what specific support they may require	RDNO Protective Services Department	High	Complete in conjunction with creation of Emergency Management Plan and Evacuation Plan amendments	Funding	An in-depth analysis of vulnerable populations and specific required support is conducted in conjunction with the Emergency Management Plan, HRVA, and Evacuation Plan updates	Social support service groups and organizations will be a good resource for acquiring this information while keeping confidentiality.
Assess, inventory, and purchase FireSmart structural protection equipment	RDNO Protective Services Department	Moderate	Ongoing	FCFS Funding	FireSmart Structure Protection Trailer and required equipment are acquired	The FireSmart Structure Protection Trailer can be purchased through four phases. The District can apply annually for funding. For more information, please refer to the FireSmart Community Funding and Supports program and application guide.

Electoral Area B – Swan Lake/Commonage CWRP Action Plan						
Action	**Lead(s)**	**Priority**	**Timeframe**	**Resources Required**	**Metric for Success**	**Rationale/Notes**
Conduct pre-incident planning to create a community specific pre-incident checklist and wildfire response preparedness condition guidelines which should be reviewed prior to each fire season	RDNO Protective Services Department	Moderate	2026-2029	Professional expertise, *Wildfire Act*, *Wildfire Regulation*, funding.	Guide is created by the end of 2029.	A Wildfire Response Preparedness Condition Guide would include local daily action guidelines based on expected wildfire conditions. The RDNO would use these guidelines to guide decision-making and actions to best respond to wildfire. For example, during periods of High Fire Danger, Public Works personnel would not use equipment that may cause sparks, such as chainsaws.

Train LFR's and WMS trained individuals on the RDNO Emergency Management Plan and Evacuation Plans to deploy them as informational resources during evacuations or other emergencies	FireSmart Coordinator	High	Prior to 2027 fire season	Emergency Management Plan, Evacuation plan, Responsibility guidelines established	LFR's and WMS trained individuals are deployed when needed to assist with emergency operations	LFR's and WMS trained individuals have the possibility to be deployed during emergency scenarios as information holders and guidance for community members. Examples of tasks that could be conducted by these individuals include: • Emergency FireSmart assessments for properties on Evacuation Alert • Door-to-door information sharing of evacuation planning and preparedness • Provide guidance to evacuees at reception center or in neighbourhoods • Assist the Fire Department, RCMP, and RDNO with

Electoral Area B – Swan Lake/Commonage CWRP Action Plan						
Action	**Lead(s)**	**Priority**	**Timeframe**	**Resources Required**	**Metric for Success**	**Rationale/Notes**
						evacuation efforts • Preform simple tasks for the incident management team within the Emergency Operations Center (EOC)
Vegetation Management						
Objective						

Electoral Area B – Swan Lake/Commonage CWRP Action Plan						
Action	**Lead(s)**	**Priority**	**Timeframe**	**Resources Required**	**Metric for Success**	**Rationale/Notes**
Continue to conduct Wildfire Mitigation Program Assessments and/or Farm and Ranch Assessments for private landowners. Based on the Assessments, encourage property owners to implement as many mitigation activities as possible.	FireSmart Coordinator	Very High	Immediate and ongoing	FireSmart Coordinator, Local FireSmart Representative, or individuals with Wildfire Mitigation Specialist training, to complete the Wildfire Mitigation Program Assessment and/or Farm and Ranch Assessment	Residents within Electoral Area B request FireSmart Wildfire Mitigation Program Assessments be completed for their home/property	Funding is available through the UBCM's FCFS program to have LFRs and Wildfire Mitigation Specialists complete FireSmart Wildfire Mitigation Program Assessments and/or Farm and Ranch Assessments for property owners.

Electoral Area B – Swan Lake/Commonage CWRP Action Plan						
Action	**Lead(s)**	**Priority**	**Timeframe**	**Resources Required**	**Metric for Success**	**Rationale/Notes**
If residents prefer not to book a formal assessment, direct them to complete a private-self assessment using the FireSmart Begins at Home app. Update the RDNO FireSmart page by repairing the self-assessment link to point to the app landing page and add links to printable self-assessment materials (PDFs) for paper users	FireSmart Coordinator	High	Immediately	Links to FireSmart begins at home app, PDF self-assessment Materials	RDNO FireSmart website is updated with self-assessment information	Adding self-assessment information will allow additional community members to complete a FireSmart Assessment if they are waiting for a full assessment from an LFR or Wildfire Mitigation Specialist or are apprehensive to having a formal assessment.

Electoral Area B – Swan Lake/Commonage CWRP Action Plan						
Action	Lead(s)	Priority	Timeframe	Resources Required	Metric for Success	Rationale/Notes
Continue to conduct the RDNO FireSmart Chipping Program annually, starting the program in the spring during typical clean-up, through to the end of fall	FireSmart Coordinator	High	Annually, Spring – Fall	Funding, chipping contractors, communication to residents, sign-up link	RDNO continues to offer the chipping program to residents	Feedback from community engagement that the chipping program employed thus far has been well received and should continue to be implemented. Additionally, the Member Municipalities and local First Nations have voiced interest in collaborating for a region wide program, such as hiring the same contractor and conducting chipping for a given area (including Member Municipalities and First Nation areas) at the same time.
Promote Volunteer-supported yard-work events (priority to seniors/mobility limited) focused on immediate/Intermediate Zone tasks	FireSmart Coordinator	Moderate	2026 and beyond	FCFS funding	Target mitigation activities for five properties a year	Funding is available through the FireSmart Community Funding and Supports program and application guide.

Electoral Area B – Swan Lake/Commonage CWRP Action Plan						
Action	Lead(s)	Priority	Timeframe	Resources Required	Metric for Success	Rationale/Notes
Offer seasonal workshops on compliant pile-and-burn (permits, venting/ban conditions, safe pile sizing/setbacks), small-scale biochar (cone/retort kilns), community chipping/haul-out, green-waste drop-off, and compositing options. Provide a simple decision-tree handout ("chip, burn, biochar, or haul?") and align demos with community chipper days in coordination with RDNO and provincial guidance	FireSmart Coordinator	Moderate	Starting in 2026	Amendment to RDNO Open Burning Bylaw, Chipping Program, other information pertaining to vegetation management for private property owners	RDNO residents understand where to gather information for vegetation management on private properties, and are applying the correct procedures according to BCWS and the RDNO Bylaws	A workshop such as this can be completed in conjunction with other community events, workshops, or conducted during a chipping day for each major area.
Complete FireSmart Assessments on RDNO owned Critical Infrastructure and Community Assets within Electoral Area B	FireSmart Coordinator	Very High	Immediately	Qualified LFR or similar to complete the FireSmart Assessments	FireSmart CI Assessments have been completed by the end of 2028	Funding is available through the UBCM's FCFS program to complete FireSmart assessments for publicly owned buildings, and critical infrastructure.

Electoral Area B – Swan Lake/Commonage CWRP Action Plan						
Action	Lead(s)	Priority	Timeframe	Resources Required	Metric for Success	Rationale/Notes
Once Assessments on RDNO owned Critical Infrastructure and Community Assets within Electoral Area B are completed, implement FireSmart recommendations and mitigation activities resulting from the completed Assessments with the goal of reducing hazard scores as much as feasibly possible	FireSmart Coordinator, RDNO Protective Services Department	Very High	Within 4 years (2030)	Labour, machinery, construction materials	FireSmart recommendations have been implemented for the top 1-3 highest priority CI located within Electoral Area B by 2029	Funding is available through the UBCM's FCFS program to complete mitigation activities on assessed structures, including building materials and labour.

Electoral Area B – Swan Lake/Commonage CWRP Action Plan						
Action	**Lead(s)**	**Priority**	**Timeframe**	**Resources Required**	**Metric for Success**	**Rationale/Notes**
Apply for funding to complete an initial *FireSmart Cultural Sites and Green Spaces (CSGS) Assessment* for frequented green spaces in Electoral Area B. Once assessment is complete, apply for funding to complete the recommended eligible mitigation activities identified (limited to labour and material costs)	FireSmart Coordinator, RDNO Parks staff	Moderate	Within 2 years (2028)	Complete *Checklist for FCFS Requirements for Fuel Management Prescription* before CSGS Assessment is started, personnel qualified to complete a *FireSmart Cultural Sites and Green Spaces (CSGS) Assessment*	An initial FireSmart CSGS Assessment is completed for all identified and qualifying green spaces within Electoral Area B. Highest priority green spaces to receive any recommended mitigation activities	Funding is available through the UBCM's FCFS program to complete FireSmart mitigation activities on vegetation for cultural sites or green spaces. To be eligible for funding, all projects must have a completed *Checklist for FCFS Requirements for Fuel Management Prescription* and a completed *FireSmart Cultural Sites and Green Spaces (CSGS) Assessment* submitted to UBCM prior to commencing work. Assessments should eventually be conducted on all RDNO owned land, even if undeveloped for continual maintenance.

Electoral Area B – Swan Lake/Commonage CWRP Action Plan						
Action	**Lead(s)**	**Priority**	**Timeframe**	**Resources Required**	**Metric for Success**	**Rationale/Notes**
Create an inventory and monitoring system to track wildfire risk reduction and FireSmart vegetation management activities throughout the Regional District	FireSmart Coordinator, RDNO Protective Services Staff	Moderate	Within 4 years (2029), updated annually	Tracking system and geospatial database	Creation of a vegetation management tracking system	Establishing an inventory will streamline the process of tracking ongoing treatments and identifying the necessary maintenance tasks needed at different interval. RDNO should work collaborative with the Member Municipalities, First Nations, BCWS, Ministry of Forests, and other land managers to create a collective data base for all fuel management for the area. Funding for the creation of databases is not eligible through the FCFS program.

Electoral Area B – Swan Lake/Commonage CWRP Action Plan						
Action	Lead(s)	Priority	Timeframe	Resources Required	Metric for Success	Rationale/Notes
Work with the BC Wildfire Service and the Ministry of Forests Natural Resource District to determine opportunities for fuel treatment implementation through the CRI – Crown Land Wildfire Risk Reduction (CLWRR) program	FireSmart Coordinator	Very High	Ongoing	CLWRR funding, relationship with BCWS Kamloops Fire Centre Prevention Team and Okanagan Shuswap Natural Resource District.	Continued annual completion of fuel management projects.	Funding is available through the Crown Land Wildfire Risk Reduction program for the Ministry of Forests. RDNO must advocate for the proposed FTU's in this CWRP to be priority for CLWRR funding treatment.

Electoral Area B – Swan Lake/Commonage CWRP Action Plan						
Action	**Lead(s)**	**Priority**	**Timeframe**	**Resources Required**	**Metric for Success**	**Rationale/Notes**
Apply for funding to develop fuel management prescriptions for forested areas identified on land within the eligible WUIs. It is recommended to start with high priority proposed fuel treatment areas as identified within this CWRP.	FireSmart Coordinator	High	Annually, ongoing	A Registered Professional Forester is required to write all fuel management prescriptions.	Fuel management prescriptions are developed for an identified fuel treatment areas within the Regional District each year as required. This target is Regional District wide	Funding is available through UBCM's FCFS program for fuel management prescription development. Funding through the Forest Enhancement Society of BC may also be utilized. Proposed fuel treatments fall under both Regional District and Provincial jurisdiction. The RDNO should assist the Ministry of Forests, or other land managers where possible and advocate for priority treatment areas throughout the Electoral Areas. RDNO should prioritize the FCFS funding for prescriptions on Regional District land.

Electoral Area B – Swan Lake/Commonage CWRP Action Plan						
Action	**Lead(s)**	**Priority**	**Timeframe**	**Resources Required**	**Metric for Success**	**Rationale/Notes**
Apply for funding to undertake fuel management treatment operations on land within the eligible WUIs based on completed fuel management prescription units.	FireSmart Coordinator	High	Ongoing, as needed and funding available	Contracts must be acquired to complete treatment operations	After the prescription phase is completed, fuel management treatments are operationally completed for an identified area in the Regional District each year as required. This target is Regional District wide	Funding is available through UBCM's FCFS program for fuel management prescription development. Funding through the Forest Enhancement Society of BC may also be utilized. Proposed fuel treatments fall under both Regional District and Provincial jurisdiction. The RDNO should assist the Ministry of Forests, or other land managers where possible and advocate for priority treatment areas throughout the Electoral Areas. RDNO should prioritize the FCFS funding for treatment on Regional District land.

1.0 Introduction

Over the past two decades, the threat of wildfire in the North Okanagan has steadily increased due to a combination of climate change, fuel accumulation, and growing development within the wildland-urban interface. Longer fire seasons, higher average temperatures, and more frequent drought conditions have contributed to more intense and unpredictable wildfire behaviour across the region. The 2003 wildfire season served as a turning point in British Columbia's approach to community protection, with fires in nearby areas such as Kelowna drawing attention to the vulnerability of interface communities. More recently, the 2021 White Rock Lake Fire underscored the proximity and severity of wildfire impacts, destroying homes and disrupting life just south of the RDNO boundary. These events have increased awareness and urgency around wildfire risk reduction at both the local and regional levels.

Within Electoral Area B, the interface between forested Crown land, First Nations land, and rural development presents unique challenges for wildfire risk reduction. The area is largely composed of undeveloped Crown land and large agricultural holdings surrounding the north end of Okanagan Lake, Swan Lake, and parts of Kalamalka Lake. While it does not contain concentrated residential communities like other areas of the RDNO, Electoral Area B includes scattered rural residences, farms, and recreational properties that are increasingly exposed to wildfire threats due to fuel accumulation and changing climate conditions. Although the area has not experienced the same level of wildfire destruction as other parts of the Okanagan, recent fire activity in adjacent regions and limited access infrastructure highlight the vulnerability of these landscapes. In this context, proactive planning and meaningful community engagement through the CWRP process are essential for advancing long-term wildfire resilience.

In response to the increasing wildfire threat across the region and recent wildfire activity in adjacent areas, a Community Wildfire Resiliency Plan (CWRP) has been developed for Electoral Area B of the Regional District of North Okanagan (RDNO). Prepared by Forsite Consultants Ltd. (Forsite), this plan takes a holistic and proactive approach to wildfire risk reduction and community resilience. It applies the seven FireSmart Canada disciplines to address the full spectrum of wildfire management—from planning and prevention to response and recovery. The seven FireSmart disciplines include:

1. Education
2. Legislation and Planning
3. Development Considerations
4. Interagency Cooperation
5. Cross-training
6. Emergency Planning
7. Vegetation Management

1.1 PLAN GOALS

The purpose of Electoral Area B's Community Wildfire Resiliency Plan (CWRP) is to identify wildfire hazards within the areas surrounding Okanagan Lake, Swan Lake, and Kalamalka Lake; assess the potential risks and impacts to residents, properties, and community values; and provide strategies to reduce these threats, guided by FireSmart™ principles. In accordance with the *2024 Community Wildfire Resiliency Plan Instruction Guide*, the primary goals of the CWRP are to:

1. Enhance RDNO Electoral Area B's capacity and understanding of wildfire risk,
2. Promote collaboration within and across administrative boundaries,
3. Address diverse community needs, and
4. Develop actionable and accountable recommendations for effectively reducing wildfire risk.

1.2 PLAN DEVELOPMENT SUMMARY

Forsite Consultants Ltd. (Forsite) was retained to develop the 2025 RDNO Electoral Area B Community Wildfire Resiliency Plan (CWRP). The development of this plan included the following components:

1. **Gathering and analysis of background information**: A thorough review of existing local community plans, other relevant plans, and compilation of spatial data to help inform this CWRP. Multiple meetings were held with RDNO staff, community members, Member Municipalities, and First Nations, to provide insight and community specific information to the plan.
2. **Identification of human and natural values-at-risk**: Development of a values-at-risk spatial database for Electoral Area B through information provided by the RDNO, public engagement meetings and surveys.
3. **Public engagement**: Public engagement was conducted throughout the month of July, where a Community CWRP Survey was developed and shared to receive input. In addition, a community open house was held on July 21, 2025, which included a short formal presentation on the basics of the CWRP process and was followed by questions and discussion. This information was captured to be included in the plan. The results of all engagements can be found in Appendix F.
4. **Member Municipality and First Nations Engagement**: All Member Municipalities and First Nations groups that fall within the RDNO boundary were collaboratively engaged with to develop the FireSmart action items recommended in this CWRP. On September 3, 2025, a meeting was held with representatives from Forsite, RDNO, Enderby, Lumby, Coldstream, Vernon, Armstrong, Spallumcheen, and Splatsin. This meeting gave the opportunity for the neighbouring community partners to discuss collaborative FireSmart efforts and emergency management, and to provide insights for the RDNO CWRPs.
5. **Assessment of local wildfire hazard and risk**: On the ground wildfire threat assessments were completed in forested areas on Crown land within the Wildland Urban Interface adjacent to homes and other values. The results of these assessments were utilized to identify and delineate recommended areas for fuel management treatments.

6. **Development of a risk mitigation strategy with actionable recommendations**: The data and information collected in the above phases provided the necessary content to develop an actionable CWRP that is tailored to Electoral Area B. The Action Table provides a comprehensive list of recommendations utilizing FireSmart principles, for RDNO and Electoral Area B to implement and increase overall wildfire resiliency.

This plan is intended for use by RDNO, Electoral Area B, and its partners to guide efforts in wildfire risk reduction and resilience. Comprehensive data collection and engagement with the Member Municipalities, First Nations, and community members ensure a tailored approach specific to Electoral Area B and values.

1.3 COMMUNITY RESILIENCY INVESTMENT PROGRAM

The Community Resiliency Investment (CRI) Program was announced by the provincial government in 2018 with the goal of providing support and guidance to BC communities to reduce the risk and impacts of wildfire. For municipalities and regional districts, the program is administered by the Union of BC Municipalities (UBCM) on behalf of the Ministry of Forests. The CRI program is broken into two streams: FireSmart Community Funding and Supports (FCFS), and Crown Land Wildfire Risk Reduction (CLWRR). FCFS provides funding to local governments and First Nations to undertake FireSmart planning and activities within their community that help build and support overall wildfire resiliency.

As of 2024, the FCFS program requires each community to have an up-to-date **Community Wildfire Resiliency Plan**, a **FireSmart Coordinator position**, and participate in a **Community FireSmart Resiliency Committee** in order to be eligible to receive additional funding to undertake other FireSmart activities. This CWRP is designed to meet the requirements and expectations of the FCFS program at the time of development, and recommendations within the Action Plan are intentionally organized to facilitate future FCFS funding applications. However, it is important to note that government funding programs are subject to government budget availabilities and allotment. As such, the FCFS program and eligible activities are subject to change annually.

2.0 Relationship to Other Plans

Numerous plans offer valuable insights to inform the CWRP, providing essential background information and guiding its development. The plans listed in Table 2 were consulted during the CWRP development process to ensure alignment with existing community and land objectives.

Table 2: Key Plans and Relationship to CWRP

Key Plans and Relationships to CWRP		
Plan Type	**Description**	**Relationship to CWRP**
2019 RDNO Community Wildfire Protection Plan (CWPP)	Provided a regional overview of wildfire risk across the RDNO, identifying priority areas for fuel management and recommending high-level strategies for reducing wildfire threat to communities, infrastructure, and values at risk.	The current Community Wildfire Resiliency Plan (CWRP) builds on the 2019 CWPP by offering updated risk assessments, incorporating new provincial guidance, and providing more detailed, area-specific recommendations for proactive wildfire mitigation in Electoral Area B.
BX-Swan Lake Community Wildfire Structure Protection Plan (CWSPP)	Developed by the BX-Swan Lake Fire Department in coordination with the BC Wildfire Service, this plan identifies critical infrastructure, neighbourhoods, and structures at risk within the BX-Swan Lake Fire Protection Area. It outlines site-specific strategies to protect buildings during a wildfire event, including staging areas, water sources, access routes, and deployment plans for structural protection units (SPUs). The CWSPP is intended to support operational readiness and coordination in the event of a wildfire threatening the community.	While the CWSPP focuses on operational response—detailing how to protect specific structures and critical infrastructure during a wildfire—the CWRP takes a broader, proactive approach to wildfire risk reduction. The CWRP addresses long-term mitigation, preparedness, and community resilience through planning, vegetation management, public education, and interagency coordination. Together, the CWSPP and CWRP are complementary tools: the CWSPP supports tactical response readiness, while the CWRP guides strategic prevention and mitigation efforts.
Township of Spallumcheen CWRP	The 2023 CWRP aims to assess wildfire threats and risks to values within the municipal boundaries of the Township of Spallumcheen.	The area of interest for Spallumcheen borders the northeast portion of Electoral Area B. Action items and recommendations throughout this plan may be applicable to the Spallumcheen area and vice versa. Action items developed for the RDNO Electoral Area B CWRP should work in

Key Plans and Relationships to CWRP		
Plan Type	**Description**	**Relationship to CWRP**
		conjunction with the Spallumcheen CWRP to promote wildfire resiliency to the entire area.
City of Vernon CWRP	The 2023 CWRP aims to assess wildfire threats and risks to values within the municipal boundaries of the City of Vernon.	The AOI for Vernon borders the southeast potion of Electoral Area B. Action items and recommendations throughout this plan may be applicable to the Vernon area and vice versa. Action items developed for the RDNO Electoral Area B CWRP should work in conjunction with the Vernon CWRP to promote wildfire resiliency to the entire area.
Electoral Area B and C Official Community Plan (OCP)	The municipality's overarching land-use blueprint that sets long-term visions for growth, housing, transportation, infrastructure, environmental protection, and hazard management, guiding zoning and development decisions.	By embedding wildfire-hazard objectives and development-permit rules in the OCP, local governments give the Community Wildfire Resiliency Plan statutory backing, ensuring FireSmart standards, interface-risk mapping, and evacuation considerations are applied to every future subdivision and rezoning.
Operational Evacuation Route Plan – Cosens Bay	This plan focuses evacuation efforts for the single access transportation corridor of Cosens Bay. This plan helps to facilitate the rapid organization and implementation of an evacuation or shelter-in-place initiatives.	This plan will be reviewed for its impacts and implications of evacuations during wildfire emergencies. The evacuation route outlined in this plan will be assessed during the field work portion of the CWRP process to provide additional recommendations to reinforce the evacuation plan.
RDNO Regional Housing Needs Report	A statutory assessment that analyzes current and future housing demand, affordability gaps, population trends, and projected growth across tenure types, guiding local governments in land-use and infrastructure planning to meet diverse community housing requirements.	Its demographic and growth forecasts help the Community Wildfire Resiliency Plan target emerging neighbourhoods and vulnerable populations, align mitigation priorities with planned residential expansion, and integrate wildfire-safe design standards into future housing developments.
RDNO Annexation Impact Study	An analytical document that evaluates the fiscal, service-delivery,	Its findings on expanded boundaries, population shifts, and service

Key Plans and Relationships to CWRP		
Plan Type	**Description**	**Relationship to CWRP**
Phase 1 and Final Report (Reduced)	infrastructure, and land-use implications of incorporating adjacent unincorporated areas into a municipality, outlining costs, benefits, and governance changes for both existing and newly annexed territories.	responsibilities inform updates to the Community Wildfire Resiliency Plan, ensuring that newly annexed lands—and their wildland-urban interface risks—are integrated into hazard mapping, mitigation priorities, and fire-protection resource planning.
RDNO Regional Agricultural Plan	A strategic framework that inventories farmland, identifies crop and livestock priorities, and recommends policies to protect agricultural land, support farm viability, and guide sustainable land- and water-use practices across the region.	By mapping farm clusters, irrigation infrastructure, and fuel loads (e.g., field edges, shelterbelts), the plan supplies data that the Community Wildfire Resiliency Plan uses to tailor mitigation around working landscapes, coordinate burn-window policies, and safeguard critical food-production assets from wildfire threats.
RDNO Regional Employment Lands Action Plan	An economic-development strategy that inventories and designates industrial, commercial, and mixed-use parcels required to accommodate future jobs, establishes targets for land supply, and recommends infrastructure, zoning, and servicing actions to keep the regional employment base competitive and sustainable.	By pinpointing where new workplaces and worker concentrations will arise—often along transportation corridors and at the wildland edge—the plan provides essential inputs for the Community Wildfire Resiliency Plan to prioritize interface fuel mitigation, tailor evacuation and business-continuity measures, and embed FireSmart site standards in forthcoming employment nodes.
Swan Lake Commercial Area and Neighbourhood Plan	A localized blueprint that sets land-use mix, building form, streetscape design, and servicing upgrades for a defined retail or mixed-use node and its surrounding residential blocks, guiding phased redevelopment and public-realm improvements.	Its detailed siting, density, and infrastructure specs let the Community Wildfire Resiliency Plan weave FireSmart setbacks, defensible public spaces, and evacuation routes directly into block-level design, reducing wildfire exposure as the area grows.
Swan Lake Residential Infill Plan	A policy framework that directs small-scale, higher-density housing (e.g., secondary suites, laneway homes, duplexes) into existing neighbourhoods, detailing design guidelines, servicing upgrades, and lot-	By identifying where new dwellings will nestle amid mature vegetation, the plan equips the Community Wildfire Resiliency Plan to embed FireSmart construction standards, manage cumulative fuel loads in backyards and

Key Plans and Relationships to CWRP		
Plan Type	**Description**	**Relationship to CWRP**
	consolidation rules to optimize land use without expanding urban boundaries.	lanes, and refine evacuation modelling for denser, redeveloped blocks.
Electoral Area B & C Parks Master Plan	A long-range guide that inventories existing parks and trail corridors, sets priorities for new green space and facility investments, and outlines standards for habitat stewardship, vegetation maintenance, and public access.	Its mapping of open-space networks and maintenance practices enables the Community Wildfire Resiliency Plan to align fuel-breaks with trails, ensure defensible landscaping in parks, and leverage recreation routes for emergency access and evacuation.
RDNO Regional Growth Strategy	A high-level, multi-jurisdictional blueprint that sets long-term goals for population distribution, housing, employment, transportation, and environmental stewardship, guiding coordinated land-use and infrastructure decisions across the region.	The Regional Growth Strategy's settlement patterns and growth nodes inform where the Community Wildfire Resiliency Plan must focus interface-risk mitigation, ensuring FireSmart policies, fuel breaks, and evacuation capacity are embedded in areas slated for future expansion.
Okanagan - Shuswap Land and Resource Management Plan	A spatial blueprint that designates timber-harvest areas, old-growth reserves, wildlife corridors, and access routes within the forest district, setting operating rules and resource-management objectives for tenure holders.	Its zoning and harvest schedules give the Community Wildfire Resiliency Plan the data needed to align landscape-level fuel breaks, coordinate road access for suppression, and embed wildfire-risk reduction targets into ongoing forest-management prescriptions.
Kalamalka Lake Park Management Plan	The purpose of this BC Parks Plan for Kalamalka Lake Park is to guide Park management, protect key features and values, identify management strategies and appropriate use and development, establish long-term objectives, and respond to threats and opportunities.	Kalamalka Lake Park falls within an ecosystem that is fire maintained and subject to naturally occurring wildfire. This park management plan includes management strategies such as the use of prescribed fire and fuel reduction to maintain a wildfire environment. These management strategies should be utilized both within the park and the adjacent RDNO land, connecting any recommended fuel treatments or prescribed fire together.

In addition to existing plans, community bylaws were reviewed for their relevance to the CWRP, as outlined in Table 3.

Table 3. Key Bylaws and Relationship to CWRP

Key Bylaws and Relationships to CWRP		
Plan Type	**Description**	**Relationship to CWRP**
RDNO Zoning Bylaw	A land-use regulation that designates what types of development (residential, commercial, industrial, agricultural, etc.) are allowed on each parcel, along with density, building setbacks, and other site standards that shape how and where communities grow.	By steering new construction and subdivision layouts away from high-hazard areas and embedding wildfire-resilient requirements (e.g., interface development permits, defensible-space setbacks), the zoning bylaw becomes a key tool for implementing CWRP recommendations and reducing long-term wildfire exposure.
BX-Swan Lake Fire Rescue Bylaw	A local regulation that defines the fire-rescue service's mandate, response standards, staffing, apparatus requirements, and enforcement powers, plus cost-recovery and mutual-aid provisions.	By codifying service levels and authorities, the bylaw gives the Community Wildfire Resiliency Plan a dependable operational partner, ensuring the fire department is equipped to implement wildfire-prevention, preparedness, and suppression measures outlined in the plan.
Area B and C Open Burning Bylaw	A local regulation that sets clear limits on when, where, and how residents can conduct outdoor burning (e.g., yard debris, agricultural piles), typically defining permissible burn seasons, required permits, setback distances, and safety measures to reduce smoke impacts and prevent escaped fires.	The bylaw operationalizes the Community Wildfire Resiliency Plan by controlling one of the highest human-caused ignition sources; its enforcement directly supports CWRP objectives to lower wildfire starts near the wildland-urban interface and complements fuel-management and public-education actions outlined in the plan.
RDNO Subdivision Servicing Bylaw - Hydrants	A municipal bylaw that specifies minimum fire-hydrant spacing, flow rates, and installation standards required in new subdivisions to ensure adequate water supply for firefighting before lots are approved and registered.	By mandating hydrant coverage that meets wildfire-suppression needs, the bylaw translates CWRP goals into enforceable infrastructure requirements, strengthening community water capacity and improving firefighters' effectiveness during interface fire events.

3.0 Community Description

3.1 AREA OF INTEREST

The FCFS program provides guidance for defining the Area of Interest (AOI), which varies depending on the type of local government (e.g., municipality versus a regional district) and structure density. For the Electoral Area B Community Wildfire Resiliency Plan (CWRP), the AOI is delineated by the administrative boundary of the RDNO Electoral Area B. In total, the Electoral Area boundary covers approximately 64,286 hectares (Figure 1). Electoral Area B also encompasses Indigenous Reserve lands within the geographic boundaries for the Okanagan Indian Band, which are not apart of the RDNO AOI and covered in the CWRP produced by the band. Subtracting the Reserve and First Nations lands, the Electoral Area B AOI is 52,872 hectares.

Electoral Area B—also known as Swan Lake / Commonage—is a primarily rural, unincorporated region of the Regional District of North Okanagan (RDNO). AOI includes the northern portions of Okanagan Lake and Kalamalka Lake, Swan Lake, and surrounding Crown and First Nations lands. The area is characterized by large agricultural holdings, open rangeland, scattered rural residences, and significant tracts of undeveloped Crown land. Its varied terrain includes lakeshore lowlands, dry forested slopes, and grasslands.

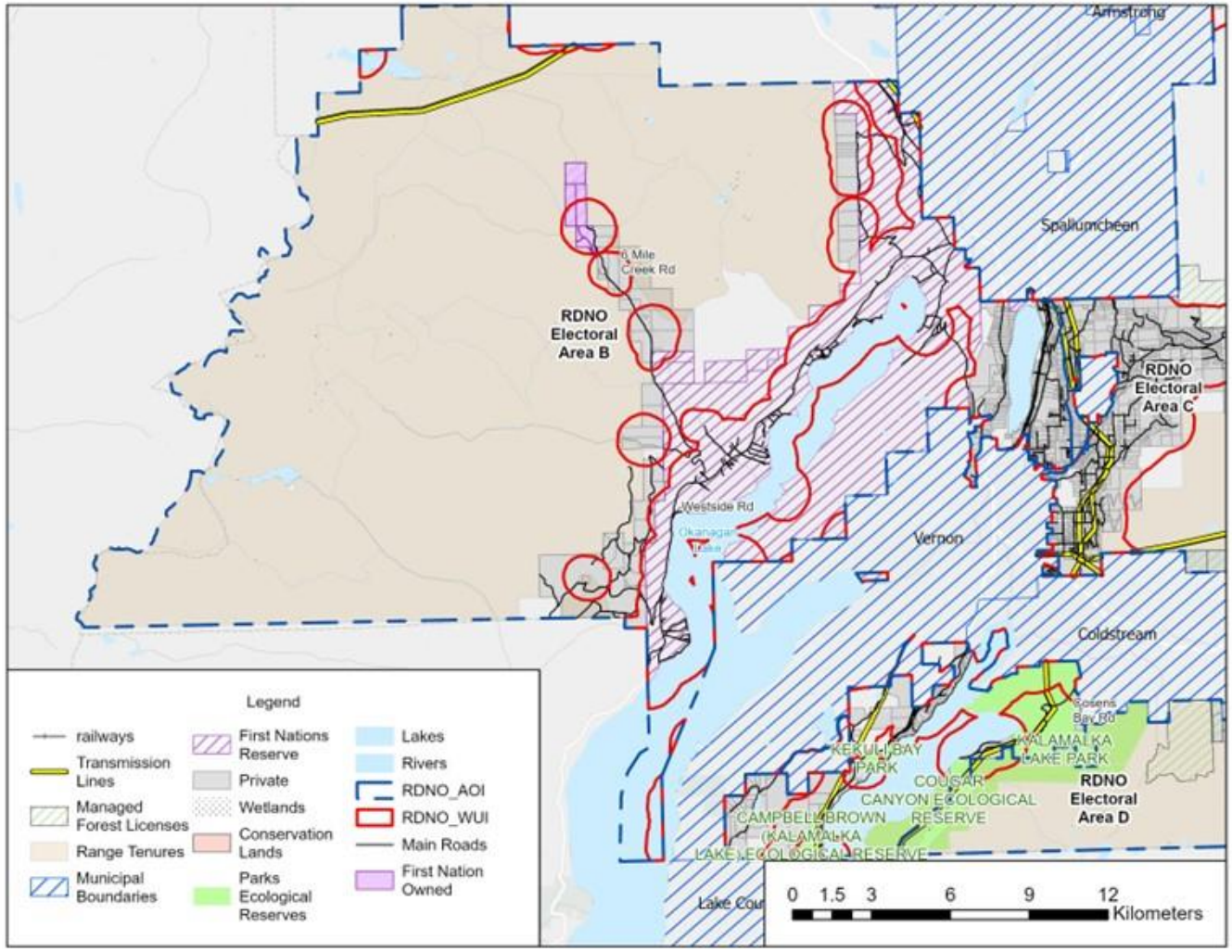


Figure 1. Overview map of RDNO Electoral Area B Area of Interest.

3.2 WILDLAND-URBAN INTERFACE

The Wildland Urban Interface (WUI) encompasses any area where combustible forest fuel is adjacent to homes, farm structures, or other outbuildings. This interface can occur at well-defined boundaries, known as the interface, or in areas where development and forest fuel intermingle with no clearly defined boundary, known as the intermix.

In this Community Wildfire Resiliency Plan (CWRP), the WUI differs from the AOI due to the criteria set forth by the provincial FireSmart Community Funding and Support (FCFS) program. For FCFS eligibility, **the WUI is defined as a one-kilometre buffer surrounding areas with a structured density greater than six structures per square kilometre.**[1] This buffer represents a reasonable distance within which embers from a wildfire can travel and ignite structures.

For the Electoral Area B CWRP, the total WUI land base encompasses 15,573 hectares (Figure 2). The land jurisdiction within the WUI zone is as follows:

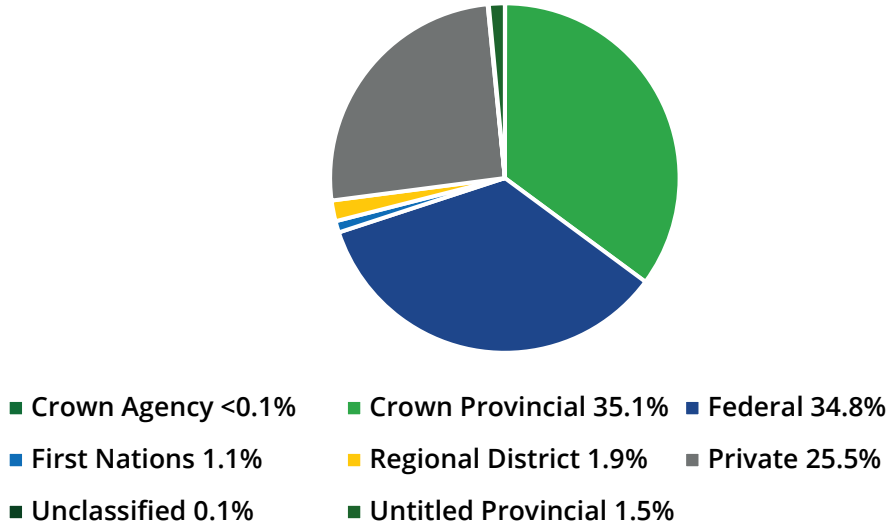


Figure 2. Land ownership within the Wildland Urban Interface of Electoral Area B.

Only areas which fall on Provincial (36.6%, 5698.7 ha) **and Regional District** (1.9%, 298.3 ha) **land is eligible for mitigation funding.** This is the funding through the FCFS funding which allows for wildfire risk analysis and mitigation fuel treatments to be conducted. The majority of the WUI is along Westside Road on the northern portion of Okanagan Lake (Figure 3). A majority of this area falls within the Okanagan Indian Band Reserve land. There are isolated pockets of WUI up the Six Mile Creek Road. The WUI also exists in the southeastern portion of Electoral Area B stretching around the northern portion of Kalamalka Lake.

[1] FireSmart Community Funding and Supports

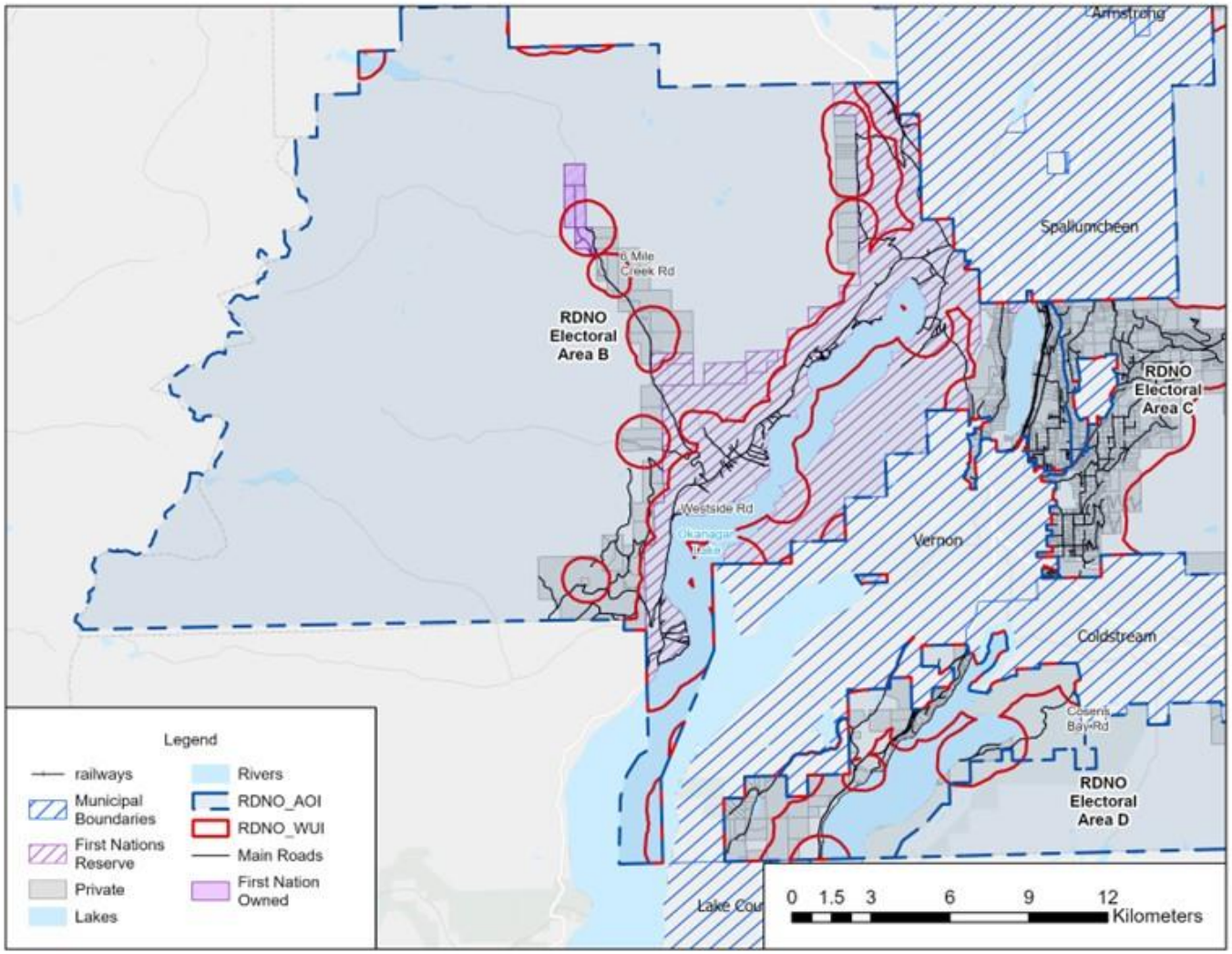


Figure 3. Map of Wildland Urban Interface for Electoral Area B.

3.3 COMMUNITY INFORMATION

Electoral Area B covers 640 km² yet had only 3,274 permanent residents in 2021, leaving a still-rural density of 5.1 people/km² after a modest 2.2 % population gain since 2016[2]. Despite this uptick, RDNO forecasts show a slight decline (-0.3 %) for 2016-26, largely because the area's population is aging and serviceable land is limited. The Housing Needs Assessment characterizes the locale as "country-estate rural living while still being in close proximity to the major urban centre (Vernon)," a draw that continues to attract commuters and retirees and gradually extends development into the forest-agriculture edge.

Home ownership dominates at 85% (1,095 owner households versus 190 renters), and 75% of dwellings are single detached, with another 8% classed as moveable or manufactured homes. Yet 65% of households contain only one or two people, while just 34% of the housing stock offers two bedrooms or fewer, leaving many large homes on treed acreages that require extensive defensible-space upkeep.

Median owner income sits at $75,000—on par with the regional figure—whereas the median renter earns $41,250. At the same time, the average 2016 home value reached $424,000 and typical rents hover around $873 per month, meaning the average renter can afford only the lowest 12% of Area B homes. High land values rather than building costs drive these prices, reinforcing the trend toward large-lot construction at the WUI fringe.

Core housing need affects just 7.2% of households overall, but rises to 22% among renters; some 80 households are affected, half of them in extreme need (paying more than 50% of income for shelter). Singles aged 45-64 and seniors 65-79 are the largest sub-groups in need, and the Assessment notes there is no permanent social or seniors housing within the electoral area—leaving vulnerable residents dependent on Vernon facilities during emergencies.

The labour force participation rate is 62.8%, with unemployment at 6.4%. Employment is clustered in retail, construction, health care, professional services, education, agriculture/forestry, and light manufacturing—sectors that can slow in winter and intensify in summer, potentially affecting volunteer availability for wildfire-mitigation projects. New construction averaged only six single-detached starts a year from 2016-19, so each additional house can shift the WUI line appreciably.

Taken together, Area B's dispersed country-estate pattern, older and largely fixed-income population, prevalence of oversized single-detached and manufactured homes, limited renter mobility, and slow but steady ex-urban in-migration all point to FireSmart priorities that (1) provide cost-effective yard-fuel treatments and chipping programs for large, lightly occupied properties; (2) deliver mobility-friendly mitigation assistance and neighbour-check systems for single seniors and near-retirees; (3) offer renter-targeted outreach for basement-suite and manufactured-home occupants; and (4) embed ignition-resistant design requirements in any new estate-lot or ALR-related construction before it adds fresh exposure at the wildland–urban interface.

[2] RDNO Housing Needs Assessment, RW Planning Advisory Services Ltd., June 2020

3.4 GREEN SPACES & CULTURAL SITES

Green spaces include parks, gardens, cemeteries, naturalized spaces, trails and pathways, linear parks and greenways, rights-of-way and boulevards. A list of identified RDNO Area B parks that could qualify as green spaces are listed below (Table 4, Figure 4).

Cultural Sites are areas of historical significance to Indigenous communities. These include, but are not limited to, culturally modified trees, traditional dwellings, burial sites, and ceremonial sites. Non-archaeological cultural heritage in BC is generally not protected under law, however their use and access are constitutionally protected Aboriginal right. *Cultural Sites and Green Spaces Assessments* assess site vulnerability and may replace the need for Fuel Management Prescription development on smaller sites that have levels of human impact and are not being maintained solely as natural spaces. Vegetation management activities in cultural sites and green spaces look to implement fire-resistant landscaping practices and removing or reducing flammable plants and vegetation.[3]

Table 4. Green Spaces within the Electoral Area B AOI.

Green Space	Type/Descriptor	Location
Cools Pond	Natural area with grass, deciduous trees and water. Wooden viewing platform and perimeter fencing. 1.5 ha	Access via Rimer Rd
Gibbs Rd	Plastic and metal playground with sand surface. 0.05 ha	Access via Gibbs Rd
N'Kwala Park	Maintained grass soccer fields, metal, plastic and rubber playground structures with wood fibre surface, basketball court. 3.03 ha	Access via MacDonald Rd
Stickle Road Boulevard	Landscaping area for commercial aesthetics. No amenities or access. 0.91 ha	Hwy 97 and Stickle Rd
Grey Canal Trail	Trail network through residential and natural spaces.	Throughout Area B, Area C, Vernon, and Coldstream

[3] FireSmart BC: Cultural Sites and Green Spaces Guide and Assessment Page

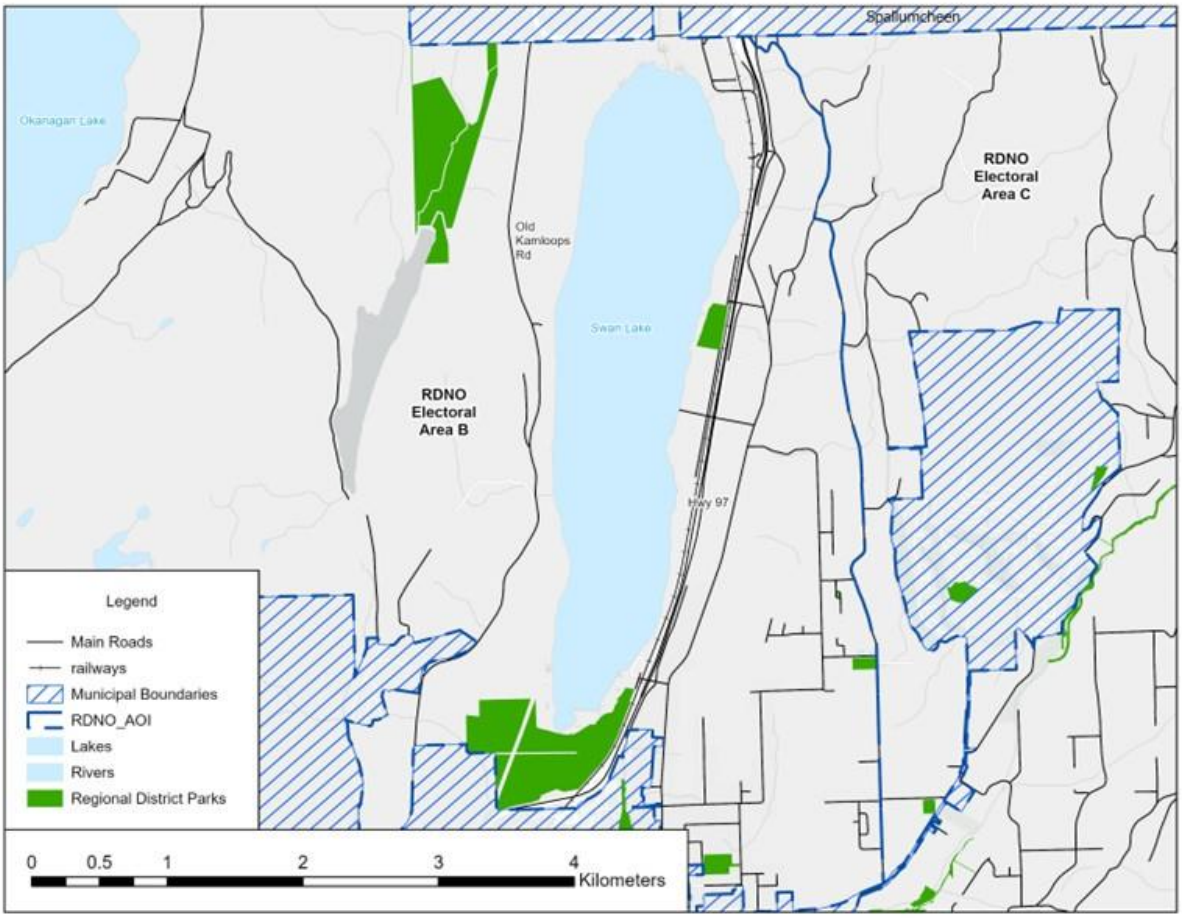


Figure 4. Map of RDNO Electoral Area B Parks.

3.5 VALUES AT RISK

The following section is a description of the extent to which wildfire has the potential to impact the values at risk (VAR) identified within the Area of Interest of Electoral Area B. Values at risk are the human or natural resource values that may be impacted by wildfire; this includes human life, property, critical infrastructure, high environmental and cultural values, and resource values.

3.5.1 Human Life and Safety

Human life and safety are the highest priority in the event of a wildfire. A key consideration is the evacuation and safe egress of threatened areas when necessary. Evacuations can be a complex and dynamic aspect of wildfire incidents. Orderly evacuation takes time and safe egress routes can be compromised by traffic congestion and accidents, or the rapid and unpredictable behaviour of wildfires.

3.5.1.1 Location & Relative Isolation

Electoral Area B stretches across a long north-south corridor on the west side of Greater Vernon. The valley floor is hemmed in by Okanagan, Kalamalka and Swan Lakes, while steep, forested bluffs and benchlands limit the road network to just a few corridors that thread through farmland, Okanagan Reserve #1 and scattered rural neighbourhoods. Large blocks of Crown land on the hillsides, combined with a very low settlement density, leave many homes embedded in continuous fuels and several kilometres from the nearest fire-rescue hall. Summer tourism swells the population around boat launches, waterfront resorts and the seasonal cabin colonies at Cosens Bay and Westside Road, heightening evacuation demand precisely when fire risk peaks.

Table 5: Regional Egress Network

Regional Egress Network			
Route	**Character**	**What it Serves**	**Redundancy / Issues**
Highway 97	Four-lane provincial highway	All traffic to Vernon (south) or Armstrong/Salmon Arm (north)	Only high-capacity route; pinch-points at Swan Lake and Vernon junctions may gridlock in a mass evacuation.
Old Kamloops Road	Two-lane rural collector paralleling Hwy 97 on east side of Swan Lake	Farms and acreages east of Swan Lake	Merges with Hwy 97 at both ends, offers detour if the highway is blocked but has narrow shoulders and steep cut-slopes.
Westside Road	Narrow, winding lakeshore road (≈80 km)	Okanagan Indian Band IR #1, Parker Cove, beach resorts, Six-Mile & Whiteman Creek areas	Single access for thousands of residents; prone to slides and closures (e.g., 50 m-wide debris slide, Apr 2 2025).
Cosens Bay Road	Single-lane gravel road through Kalamalka Lake Provincial Park	~100 seasonal dwellings at Cosens Bay	Only way in/out by land; official plan lists water evacuation via Kalavista / Kekuli Bay launches as contingency.

Table 6: Egress Concerns

Egress Concerns		
Area/Community Type	**Primary Egress**	**Specific Concern**
Westside Rd Communities (e.g., Parker Cove, Head-of-the-Lake)	Westside Road only	Road hugs steep, burn-affected slopes; slide/wildfire can sever route for 40+ km.
Cosens Bay	Cosens Bay Rd only	Road can be blocked by fire or debris; boat-based evacuation feasible only in calm weather.
Six-Mile & Siwash Creek roads	Spur roads climbing Westside bluffs	Steep grades, limited turn-arounds; saw Evacuation Orders during 2021 White Rock Lake fire.

Implications for Wildfire & Evacuation Planning

1. **Early-Trigger Evacuation Protocols** – One-road settlements should adopt lower wildfire "action thresholds" so residents can clear the corridor before it is compromised.
2. **Traffic-Control & Contra-Flow Plans** – Pre-identify choke points on Hwy 97/Swan Lake junctions and Westside Rd to enable one-way contra-flow or escorted convoys during peak demand.
3. **Hardening Alternate Links** – Explore upgrading Old Kamloops Road shoulders and sight-lines to function as a reliable parallel evacuation spine if Hwy 97 is closed.
4. **Water-Based Egress Readiness** – Draft mutual-aid MOUs with marina operators to activate boat shuttles for Cosens Bay and isolated lakeshore resorts.
5. **Tourism Stakeholder Readiness (parks, lakeside resorts, STRs):** Build a 24/7 contact roster/MOUs, define operator roles for alerts/evacuations (guest headcounts, property sweeps, posting notices, directing to muster points), and set simple comms (Alertable enrollment, shared group chat, pre-scripted messages). Run a short pre-season tabletop exercise. Provide one-page checklists and QR-code maps, and update after each season.
6. **Roads Risk—Coordinate with stakeholders –** BC Parks manages most of the crown land leading to Cosens Bay and most of Westside Rd is on IR Lands. Coordinate with these stakeholders to enable protection for these important evacuation routes.

By foregrounding these isolation factors and route vulnerabilities, Area B can pair FireSmart prescriptions with realistic, time-stamped evacuation tactics—ensuring that when the next interface wildfire threatens, limited road capacity will not translate into disproportionate life-safety risk.

3.5.2 Emergency Management

Provincial legislation and policies are in place to support local governments during disasters. On November 8, 2023, the new Emergency and Disaster Management Act (EDMA) came into force,

replacing the previous Emergency Program Act. The updated legislation reflects the changing nature of emergencies (e.g. global pandemics, climate change) and shifts from focusing on emergency response to the four phases of emergency management: mitigation, preparation, response, and recovery. To support the new legislation, the provincial government is updating and developing regulations in consultation and cooperation with First Nations, and is informed by engagement with Indigenous organizations, provincial ministries, municipalities, regional districts, critical infrastructure owners, public sector agencies, service providers, emergency management practitioners and the public.

The Cosens Bay Operational Evacuation Guide, the only emergency plan document for Area B, is a site-specific playbook meant to move people quickly and safely during an emergency. It defines the single primary road out, outlines when across-water evacuation may be needed, provides population/zone estimates, a decision timeline, and vendor/partner contacts—so life safety actions can start in the right order[4].

As it relates to Values at Risk, the plan is strongest on people (zone counts, vulnerable population touchpoints) and movement (road/boat options), but it does not inventory broader values—e.g., critical infrastructure, utilities dependencies, cultural/environmental sites, or economic/community functions—and several operational details remain placeholders without the specific details needed to act (muster/assembly points, traffic/perimeter control, reception centres). It is also a single-community guide that assumes one narrow egress and requires EOC capacity, training, and complementary RDNO frameworks to run well.

Because wildfire and other hazards can affect multiple neighbourhoods or shared routes at once, Area B needs larger-scale planning to set common roles, communications, evacuation zones and detours, reception/re-entry practices, and mutual-aid logistics across the electoral area. This large-scale planning will help ensure resources aren't duplicated, directions do not conflict at junctions, and at-risk residents outside Cosens Bay are considered.

3.5.3 Fire Suppression Capabilities

Area B is primarily served by BX-Swan Lake Fire Department (paid-on-call, ~34 members) with contracted City of Vernon (career) coverage in some locations. BX's fleet includes structural engines/tenders, a rescue with auto-extrication, a wildland/brush unit, a command pickup, and a towable Structure Protection Unit (SPU); weekly training and wildland cross-training are noted[5].

- **Staffing:** ~34 paid-on-call (BX-Swan Lake FD)
- **Engines/Tenders:** Type 1 engine (1250/1000/25F); Type 2 engine/tender (1050/1500/25F); Type 2 tender (1500 gal)
- **Wildland/Rescue:** Type 6 brush/rescue (mini-pump, 125 gal); heavy rescue (auto-extrication)
- **Command/Support:** Command pickup; F-250 utility with SPU (sprinklers/pumps/hoses)

The BX-Swan Lake Fire Department is located at 5764 SilverStar Road with the Fire Protection Area overlapping only the northeast edge of Electoral Area B, where development is densest. Hydrants and

[4] Operational Evacuation Route Plan, Cosens Bay, RDNO, 2022
[5] CWRP Community Questionnaire

water facilities are concentrated there, with very few elsewhere in Area B. Because most of Area B relies on non-hydranted water and faces longer response distances, planning should prioritize known water-draft sites.

RDNO maintains a mutual-aid agreement with Vernon Fire Rescue Services (VFRS), which operates three stations—3401 30 Street (Station 1), 7210 Okanagan Landing Road (Station 2), and 70 Predator Ridge Drive (Station 3). Through mutual aid (and any existing service contracts where applicable), VFRS can support incidents affecting parts of Electoral Area B, adding depth of staffing and apparatus and improving coverage during larger or concurrent events.

BC Wildfire Service (BCWS) provides the primary wildland fire response across most of Area B, operating through the Vernon Fire Zone within the Kamloops Fire Centre. In local incidents, BCWS typically leads suppression on forests/grasslands and works in unified command with RDNO and nearby fire departments; municipal partners focus on structure protection, while BCWS handles wildland tactics (crews, heavy equipment, and aircraft as available). Where no local fire department covers an area, BCWS is the main field agency for wildfire operations, with RDNO supporting evacuations, public information, and logistics.

3.5.4 Critical Infrastructure

Critical infrastructure assets are publicly or provincially owned structures or facilities that are essential to a community's health, safety, security, economic well-being, and effective government function. Protection of these assets during a wildfire event is crucial for emergency response preparedness and effectiveness, ensuring prompt restoration of essential services and coordinated evacuations.

Critical infrastructure includes emergency and medical services, electrical and gas utilities, transportation networks, water and wastewater systems, social support services, and communication infrastructure. Area B's critical infrastructure is sparse and spread out, with most services concentrated near the BX-Swan Lake Fire Protection Area and far fewer assets along Westside Road and the rural interior. Power to homes and pump sites depends on exposed distribution corridors and a small number of substations/switching points.

Wildfire can drop poles/lines and cut electricity to water and communications at the same time. Communications in the area rely on a handful of towers and backhaul routes, with patchy coverage in places—making backup power and radio/satellite options important. Water systems range from Greater Vernon–served pockets near BX to small community or private intakes, treatment, and reservoirs elsewhere. Hydrants are largely limited to the BX area, so non-hydranted neighbourhoods depend on mapped draft sites (lakes/standpipes/dry hydrants) and water-hauling, which are vulnerable during drought. Wastewater is a mix of septic and small community systems, at risk from power loss and access constraints.

Transportation hinges on Westside Road, key bridges, and a few boat launches; closures here affect evacuation, responder access, and supply chains. Hospitals, clinics, schools, fuel, and reception/ESS sites are mostly outside Area B, so outages or road closures can quickly cascade. Implementing FireSmart activities around critical infrastructure can significantly reduce impacts and losses to wildfire.

3.5.5 Community Watersheds and Water Supply

Wildfire in source watersheds can destabilize soils, drive ash/sediment pulses, and raise organics for months to years—degrading water quality, damaging intakes, and increasing landslide risk. In severe cases, surface-water supplies may need temporary or permanent replacement, with new infrastructure taking years and significant funding to deliver.

In Area B, potable water is a mix of private wells and pockets on Greater Vernon Water (GVW). GVW serves parts of Area B using Duteau Creek/Aberdeen Plateau and Kalamalka Lake sources treated at Duteau WTP or Mission Hill WTP. Only a few connected properties are gravity-fed; most higher-elevation zones depend on pumped reservoirs, and many pump stations lack backup generators. GVW also notes availability constraints tied to reservoir levels and algae at the Kal Lake source. Taken together, non-hydranted areas will rely on mapped draft sites and tender shuttles, while GVW pockets are sensitive to power outages and seasonal source quality. For communities drawing partly or fully from surface water or a designated community watershed, post-fire sediment/organic loading can overwhelm treatment, trigger advisories, and damage headworks. Confirming reservoir volumes, interties, and backup power coverage will indicate how long drinking-water service and firefighting flows can be sustained.

3.5.6 Electric Power

Area B is served primarily by overhead distribution. A BC Hydro transmission circuit skirts the northwest boundary, with overhead primary and secondary feeders running along Westside Road and the lakeshore benches to individual properties. Local service is provided via pole-mounted transformers—predominantly on wood poles—with limited underground segments in newer BX developments. These feeders interconnect with neighbouring systems, so a single corridor failure could have wider, regional effects. Critical facilities (water pumps/treatment, telecom) generally rely on on-site or portable generators for backup power.

3.5.7 Cultural Values

Indigenous cultural sites in BC are generally not shared with the public due to their sensitive and confidential nature. Local First Nations have the right to keep access to these resources private. Due to an extensive and uninterrupted First Nation presence throughout the region, wildfire and associated suppression operations have the potential to inadvertently impact or destroy cultural heritage resources. Any planned activities or treatments for the purpose of wildfire mitigation must be appropriately communicated to local First Nations.

3.5.8 Hazardous Values

Just outside Electoral Area B, the former military training lands near Predator Ridge have documented unexploded ordnance (UXO)[6]. While this zone lies beyond the Area B boundary, its proximity matters for wildfire operations: suspected/confirmed UXO areas are no-entry for ground crews until cleared by explosives experts, and tactics may shift to indirect control and air support[7]. Pre-incident planning

[6] https://www.canada.ca/en/department-national-defence/services/uxo/uxo-locations/practicing-uxo-safety-vernon.html
[7] https://globalnews.ca/news/2909402/firefighters-wildfire-mop-up-efforts-halted-after-uxo-discovered-near-vernon

should note potential road closures, public safety perimeters, and a simple notification flow (BCWS/Vernon Fire → Department of National Defence UXO program → Unified Command). Coordinate details with BCWS, Vernon Fire Rescue, RDNO, and DND to confirm boundaries and procedures.

3.5.9 High Environmental Values

Area B sits at the intersection of sensitive lakeshore ecosystems, working forests, farms, and dispersed rural neighbourhoods. The stewardship plans and conservation policies highlighted here—protecting habitat corridors, riparian areas, species at risk, and natural spaces—provide a foundation for land use and operations that lower ignition likelihood, reduce fuel continuity, and protect the environmental assets residents value.

The Greater Vernon Natural Spaces & Trails Master Plan (2022–2032) commits the region to protecting key ecosystems and ecological corridors, using science and Indigenous knowledge, and working with partners on stewardship direction that supports biodiversity and species-at-risk outcomes in and around Area B[8]. It also calls for identifying ecologically and culturally significant areas and integrating biodiversity into natural-area planning and design.

On Crown lands overlapping Area B, the Okanagan–Shuswap Land and Resource Management Plan (2001) provides legally endorsed direction to maintain biodiversity (e.g., old-growth management areas and biodiversity emphasis options), enhance riparian protection for fish and wildlife, and manage overlapping resource values—frameworks that inform habitat connectivity and conservation during wildfire resilience work[9]. It also recognizes a network of nearby protected areas relevant to Area B (e.g., Kalamalka Lake Park, Ellison Park, Fintry Park, and Cougar Canyon Ecological Reserve), which anchor regional biodiversity and recreation.

Adjacent to Area B, Campbell-Brown (Kalamalka Lake) Ecological Reserve protects the transition between Ponderosa Pine and Interior Douglas-fir and a blue-listed western rattlesnake den, with management direction to reduce human–wildlife conflict and control invasive weeds, which is useful context for species-at-risk considerations near the lakeshore corridor[10].

Finally, the RDNO Regional Agricultural Plan complements biodiversity goals by promoting sustainable agricultural practices, climate resilience, and clean, accessible water that are important at farm–wildland interfaces within Area B's ALR[11].

The BC Conservation Data Centre (CDC) provides information about species and ecosystems at risk through the BC Species and Ecosystems Explorer, and CDC iMap. Recorded occurrences of Red and Blue listed animals and ecological plant communities at risk within Electoral Area B AOI have been summarized in Table 7.

A taxon or ecological community on the Red List has been assessed as *Extirpated, Endangered* or *Threatened* in BC, or is a strong candidate for one of those designations. These species face the

[8] Greater Vernon Natural Space and Trails Master Plan, RDNO, 2022-2032
[9] The Okanagan–Shuswap Land and Resource Management Plan, Ministry of Forests, 2001
[10] Campbell Brown (Kalamalka Lake)Ecological Reserve, BC Parks, 2005
[11] Regional Agricultural Plan, RDNO, 2015

highest risk of disappearing from the province, so they are the first in line for habitat safeguards, recovery strategies and, where warranted, legal designation under provincial or federal legislation.

The Blue List flags native species and communities of *Special Concern* (the former term was *Vulnerable*). They are not yet classified as Endangered or Threatened, but their small numbers, limited range or sensitivity to disturbance make them more likely to slide toward the Red List if conditions worsen. Blue-listed elements receive extra monitoring, research and proactive management aimed at preventing further decline.

Table 7. Red and blue listed species found in the AOI

Common Name	Scientific Name	Element Type	BC List Status
Gophersnake, Deserticola Subspecies	Pituophis Catenifer Deserticola	Vertebrate Animal	Blue
Deep Marsh Hard-Stemmed Bulrush Deep Marsh	Schoenoplectus Acutus	Ecological Community	Blue
Vivid Dancer	Argia Vivida	Invertebrate Animal	Blue
Immaculate Green Hairstreak	Callophrys Affinis	Invertebrate Animal	Blue
Black Cottonwood / Common Snowberry - Roses	Populus Trichocarpa / Symphoricarpos Albus - Rosa spp.	Ecological Community	Red
Common Cattail Marsh	Typha Latifolia Marsh	Ecological Community	Blue
Great Basin Spadefoot	Spea Intermontana	Vertebrate Animal	Blue
Baltic Rush - Common Silverweed	Juncus Balticus - Potentilla Anserina	Ecological Community	Blue
Rocky Mountain Ridged Mussel	Gonidea Angulata	Invertebrate Animal	Red
Arrowleaf Balsamroot Big Sagebrush / Bluebunch Wheatgrass	Artemisia Tridentata / Pseudoroegneria Spicata - Balsamorhiza Sagittata	Ecological Community	Red
Okanagan Hammertail	Efferia Okanagana	Invertebrate Animal	Red
Painted Turtle - Intermountain - Rocky Mountain Population	Chrysemys Picta Pop. 2	Vertebrate Animal	Blue
Western Harvest Mouse	Reithrodontomys Megalotis	Vertebrate Animal	Blue
Trembling Aspen / Common Snowberry / Kentucky Bluegrass	Populus Tremuloides / Symphoricarpos Albus / Poa Pratensis	Ecological Community	Red

Common Name	Scientific Name	Element Type	BC List Status
Western Grebe	Aechmophorus Occidentalis	Vertebrate Animal	Red
Black Cottonwood - Douglas fir / Douglas Maple - Common Snowberry	Populus Trichocarpa - Pseudotsuga Menziesii / Acer Glabrum - Symphoricarpos Albus	Ecological Community	Red
Nuttall's alkaligrass - foxtail barley	Puccinellia Nuttalliana - Hordeum Jubatum	Ecological Community	Red
Black Cottonwood - Douglas-fir / Common Snowberry - Red-Osier Dogwood	Populus Trichocarpa - Pseudotsuga Menziesii / Symphoricarpos Albus - Cornus Sericea	Ecological Community	Red
Baltic Rush - Common Silverweed	Juncus Balticus - Potentilla Anserina	Ecological Community	Blue
Peach-Leaf Willow	Salix Amygdaloides	Vascular Plant	Blue

All site-level vegetation/fuel management activities and operational wildfire risk reduction treatment plans must follow any and all legal requirements set out in legislation, orders and high-level plans, or consider best management practices for identified environmental resources and species at risk and their habitats. Assistance and advice from a Registered Professional Biologist or other qualified professional may be required prior to the implementation of any wildfire risk reduction activities in the area to determine potential impacts and guide treatment activities.

4.0 Wildfire Risk Assessment

The wildfire risk assessment is a decision support tool intended to determine wildfire risk reduction activities and opportunities that will increase RDNO Electoral Area B's resiliency to wildfire.

It is important to understand the difference between **wildfire risk** and **wildfire threat**, and their context for the wildfire risk planning process. A wildfire risk-based framework considers the likelihood of an unwanted wildfire event, combined with the consequences to communities and high value resources and assets. Overall wildfire risk can be defined as a combination of the following:

- Likelihood (or probability) of an unwanted wildfire event occurring;
- Associated fire behaviour; and
- Consequence – the resulting impact or damage to values.

Wildfire risk is measured as the product of likelihood and consequence, but multiple inputs are also required to effectively quantify risk, including potential wildfire behaviour severity, value type, and value vulnerability. Identifying wildfire risk levels through the wildfire risk assessment results in a wildfire mitigation priority list, while presenting opportunities to enhance community resiliency.

Wildfire threat refers to the potential for a wildfire to ignite, spread, and consume organic material, such as trees, shrubs, and woody debris, across the landscape. Three main components are used to define wildfire threat, as follows:

- **Topography** – slope (affecting wildfire rate of spread), and aspect (affecting fuel dryness);
- **Fuel** – loading, size/shape, arrangement (horizontal/vertical), compactness, chemical properties, and fuel moisture; and
- **Weather** – temperature, relative humidity, wind speed and direction, and rainfall.

Together these three components interact to characterize the overall wildfire environment and influence wildfire behaviour (Figure 5.).

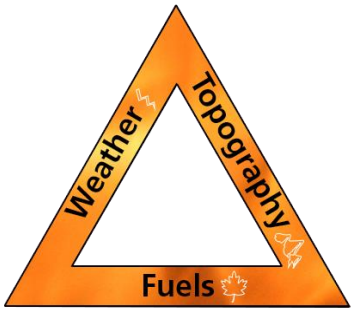


Figure 5. The fire behaviour triangle – interacting components that drive a wildfire

4.1 LOCAL WILDFIRE ENVIRONMENT

Spatial analysis of the wildfire environment factors, such as topography, fuels, and weather facilitate a deeper understanding of their combined effects on fire regimes, which includes frequency, intensity, size, severity, season, and ignition sources. By analyzing fire regime related data, we gain valuable insights into patterns and trends of wildfire activity within a specific area. This knowledge supports informed and effective decision-making for risk reduction and community resilience planning.

4.1.1 Topography

Topography describes the landscape that can influence fire behaviour including elevation, slope steepness, and slope direction (e.g., south-facing). Topography also includes prominent land features such as canyons and valleys. All these features can increase, or slow wildfire spread. Elevation influences weather conditions (like air temperature). The slope aspect influences vegetation growth and dryness (south-facing slopes in the northern hemisphere have more heat from the sun and are drier). Slope also influences how fast a fire moves: faster uphill due to pre-heating of vegetation from rising hot air and flame, and slower downhill. Additionally, features such as valleys influence wildfire spread by directing wind flow.

Electoral Area B's landscape is dominated by two long, finger-like lake basins—the north arms of Okanagan Lake and Kalamalka Lake—each sitting in a north-south-oriented valley corridor that acts as a natural wind tunnel (Figure 6). West of the lakes, the terrain rises abruptly onto a dissected highland plateau where 30–45% slopes, rocky bluffs, and narrow gullies concentrate heat and convective flow, creating "chimney" effects. South- and west-facing bluffs receive intense solar loading, curing grassy and shrub fuels weeks earlier than adjacent aspects. North and East facing draws are cooler and more humid but can also funnel winds. The broad lake surfaces and irrigated bottoms at valley floor elevations provide pockets of higher fuel moisture and natural breaks in fuel continuity. Together, the twin lake surfaces, steep lakeward escarpments, and broken plateau relief create a mosaic of natural accelerants and potential fire breaks that must be carefully integrated into suppression pre-plans and fuel-treatment priorities.

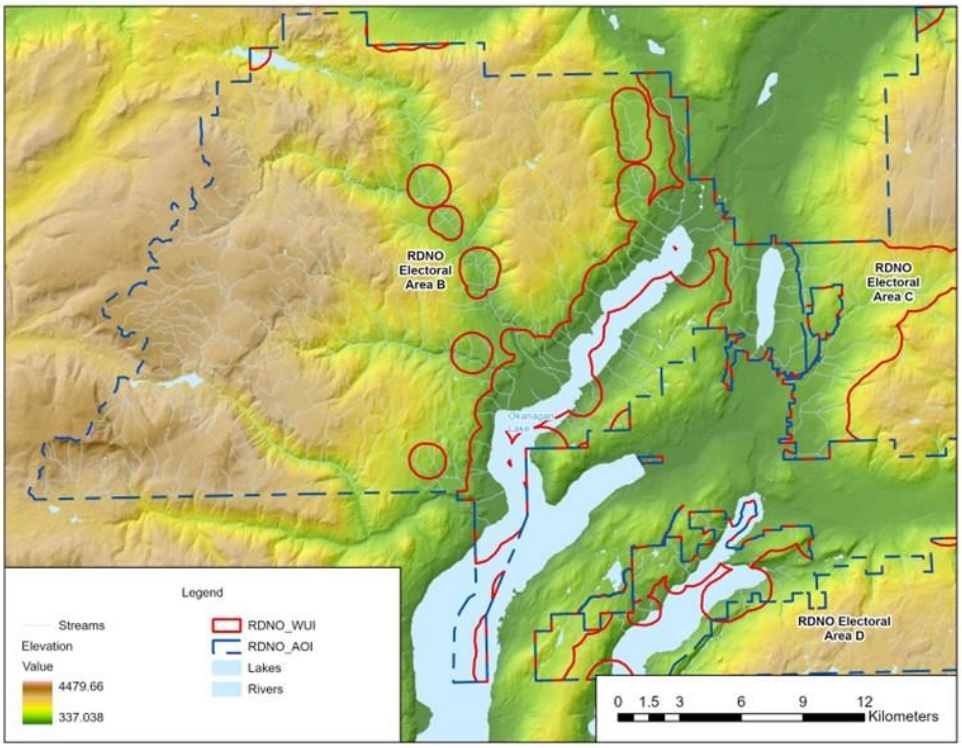


Figure 6. Digital Elevation Map of RDNO Electoral Area B.

4.1.2 Fuel, Ecosystems and Fire Regimes

The vegetation (fuels) within any given area of British Columbia can be summarized using the provincial Biogeoclimatic Ecosystem Classification (BEC) system. The BEC system in BC describes and categorizes ecological zones by vegetation, soils, and climate. Regional subzones are derived from relative precipitation and temperature. By understanding the vegetative communities of an area, predictions can be made for the natural disturbance regime of those ecosystems and the potential effects of wildfire.

4.1.2.1 Biogeoclimatic Zones

In total four BEC zones fall within the AOI of Electoral Area B, including the Engelmann Spruce – Subalpine Fir (ESSF), Interior Cedar – Hemlock (ICH), Interior Douglas-fir (IDF), and the Montane Spruce (MS) (Figure 7). A total of eight (8) subsequent subzones are found with varying temperature and moisture regimes.

The wildfire picture changes as you climb from the lake shores to the ridge-tops. In valley-bottom stands around the North Arm of Okanagan Lake, Swan Lake, and Kalamalka Lake, the IDF zone forms open, park-like woodlands of Douglas-fir and scattered Ponderosa pine over bunchgrass and pinegrass[12, 13]. Historic low-intensity surface fires move through every 10–20 years, pruning seedlings and refreshing the grass layer[14].

Mid-slope benches and moist draws host pockets of ICH. Here, western red-cedar and western hemlock dominate cooler aspects, while Douglas-fir and western larch edge onto drier knolls[15]. The natural fire regime is mixed in severity: light surface fires creep along shaded slopes every few decades, and larger stand-initiating burns return roughly once a century, creating a patchwork of age classes. Above the ICH, upland plateaus north of Swan Lake and east of Kalamalka Lake lie in the MS zone[16]. Lodgepole pine, Douglas-fir, and trembling aspen form extensive mosaics that were historically reset by mixed- or stand-initiating fires every 50–150 years, often following late-summer lightning storms[17].

Finally, the upper ridge-tops and divides carry fingers of the ESSF forest. Long winters, late-melting snow, and closed spruce–fir canopies mean large, stand-replacing fires are uncommon—typically once every 200-400 years—although smaller mixed-severity burns do occur on warm aspects.

[12] Dry forests in the Southern Interior of British Columbia: Historic disturbances and implications for restoration and management, US Forest Servce, 20010
[13] https://www.env.gov.bc.ca/thompson/esd/hab/interior_douglas_fir.html
[14] INTERIOR-DRY FIRE WEATHER ZONE Best Management Practice Guide for Fuel Treatment, BCWS,
[15] https://www.env.gov.bc.ca/thompson/esd/hab/interior_cedar_hemlock.html
[16] https://www.env.gov.bc.ca/thompson/esd/hab/montane_spruce.html
[17] INTERIOR-SUBALPINE FIRE WEATHER ZONE Best Management Practice Guide for Fuel Treatment, BCWS

Across all three zones, a century of fire exclusion and dense post-logging replanting has filled once-open stands with shade-tolerant ingrowth, deep litter and coarse woody debris. Because fuels are continuous from the ground into the canopy, small fires—like spring grass fires or summer lightning starts—can move upward into the trees, which can make them spread faster and be harder to manage.

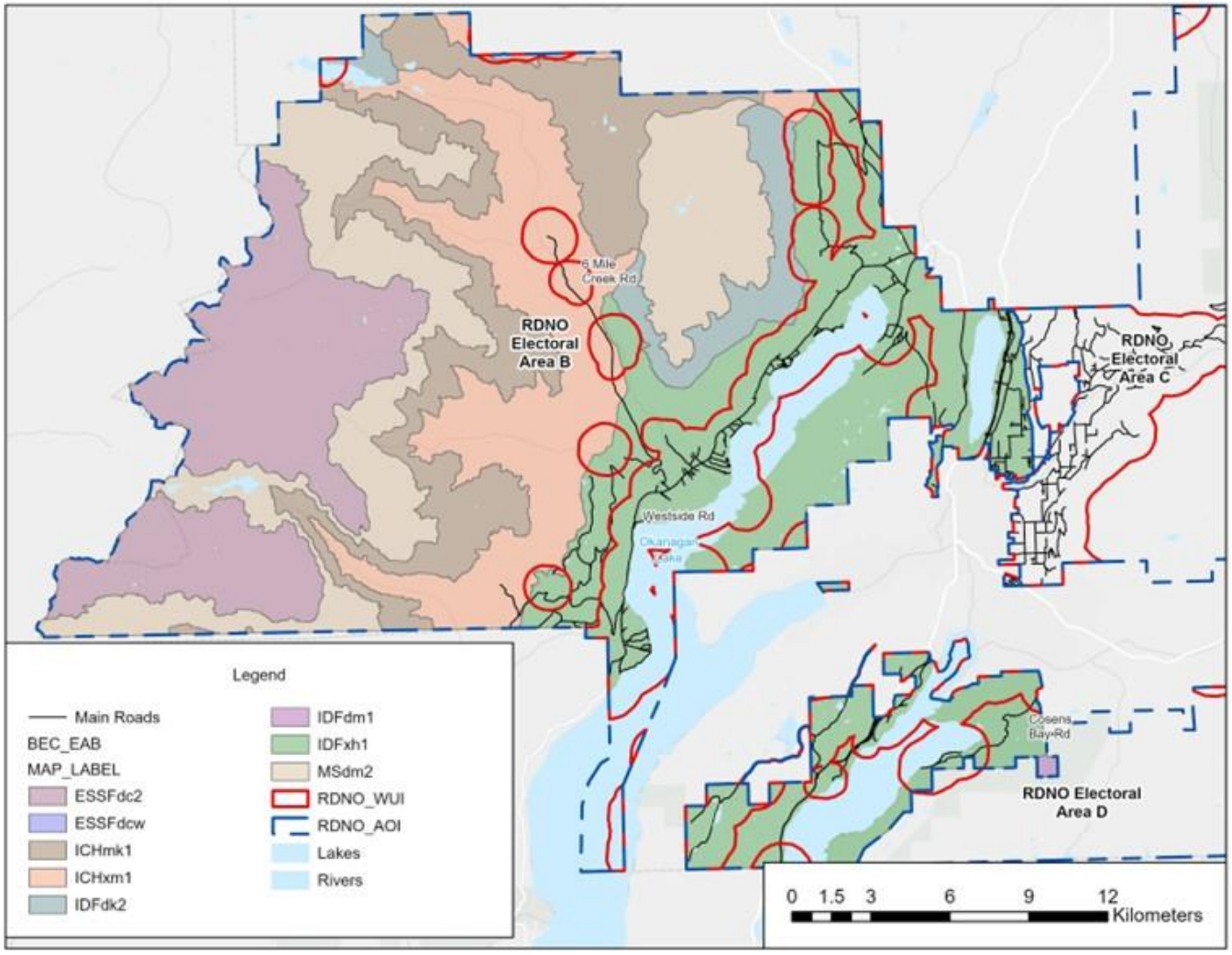


Figure 7. The Biogeoclimatic (BEC) zones within RDNO Electoral Area B.

Table 8 below describes each characteristic climate, species composition, and reaction to wildfire of each of the BEC zones that fall within Electoral Area B.

Table 8. Descriptions of the Biogeoclimatic (BEC) zones which fall within the RDNO Electoral Area B.

BEC Zone	Description
Engelmann Spruce – Subalpine Fir (ESSF) *dc2 (Cascade Dry Cold)* *dcw (Dry Cold Woodland)*	Uppermost forested ecosystem in most of interior British Columbia, often found bordering alpine/tundra, or above ICH zones. Characterized by cold, moist, and snowy continental climate. Long winters are followed by cool, short summers. Growing seasons are short. Terrain is often mountainous, steep, and rugged, with the exception of high plateaus in the Shuswap highlands. The ESSF includes continuous forests and subalpine parklands at high elevations. Engelmann spruce and Subalpine Fir are the dominant climax tree species. Lodgepole pine is a widespread seral species following wildfires.
Interior Cedar Hemlock (ICH) *mk1 (Okanagan Moist Cool)* *xm1 (Shuswap Very Dry Mild)*	The ICH occurs at lower to middle elevations of southeastern British Columbia between 400m to 1000m elevation. Distinguished by deep, heavy snowpacks (<6m) in winters, which are cool and wet. The growing season is short due to lingering snowpack. The summers are warm and dry, but the zone is known to be one of the wettest and most productive in the interior of the province. The ICH hosts the highest diversity of tree species with Western redcedar and Western hemlock as the dominant climax species. However, white spruce, Engelmann spruce, their hybrids, and subalpine fir are also common. Western larch, Douglas-as, and western white pine are common seral species. Most forests within the ICH are known to regenerate quickly following wildfires.
Interior Douglas-fir (IDF) *dk2 (Cascade Dry Cool)* *dm1 (Kettle Dry Mild)* *xh1 (Okanagan Very Dry Hot)*	The Interior Douglas-fir zone is located in southern BC, at mid-low elevations of the southern Rocky Mountain Trench, the southern portion of the interior plateau, and on leeward slopes of the Coast mountains. Although the dry IDF zone is typically found above the Ponderosa Pine zone, it experiences less severe soil moisture deficits. Forests are dominated by Douglas-fir, supplemented with lesser amounts of trembling aspen, ponderosa pine, lodgepole pine, and western redcedar, with other tree species in minor quantities. The stands are typically open, featuring large, mature Douglas-fir trees possessing fire-resistant bark. Although discrepancies in temperature and precipitation exist between subzones, the fire environment is relatively consistent across the entire zone.
Montane Spruce (MS) *dm2 (Cascade Dry Mild)*	The Montane Spruce zone occurs at middle elevations, specifically on the Southern Interior Plateau and on the lee side of the Cascade mountains. The MS has a cool continental climate with cold winters and short, warm summers where moisture deficits can occur during the growing season. The MS zone is often characterized as a transition zone between the IDF and ESSF, sharing stand composition similar to both zones. Climatic species include spruce and subalpine fir, similar to the ESSF, where understory species are similar to the IDF with Douglas-fir

BEC Zone	Description
	occurring in zonal ecosystems. One distinctive feature of the MS is young and maturing seral stands of Lodgepole Pine which have formed following stand initiating wildfires. This zone also contributes to spring runoff for the Okanagan Highland watershed flow.

4.1.2.2 Natural Disturbance Type

In British Columbia, fire regimes are broadly categorized according to Natural Disturbance Type (NDT) classifications, which consider the frequency and severity of disturbances. These classifications range from NDT1 to NDT5[18, 19]. Electoral Area B overlaps NDT3 and NDT 4 (Figure 8).

Natural Disturbance Type 3 (NDT 3) – Frequent, Stand-Initiating Fire Landscapes

NDT 3 applies to much of BC's Interior and northern plateaus and includes the Sub-Boreal Spruce (SBS), Sub-Boreal Pine–Spruce (SBPS), Boreal White & Black Spruce (BWBS), Montane Spruce (MS), and the drier, colder variants of the Engelmann Spruce–Subalpine Fir (ESSF) zone. In Electoral Area B, the mid- to upper-elevation forests west of Okanagan Lake are primarily within the Montane Spruce (MS) and Engelmann Spruce–Subalpine Fir (ESSF) zones. These forests experience long, cold winters and short summers—warmer in the MS, cooler in the ESSF. They fall within Natural Disturbance Type 3 (NDT3), which is shaped by infrequent, stand-initiating wildfires with an average return interval of about 150 years. Historically, these fires created large patches of even-aged lodgepole pine, trembling aspen, and young spruce–fir, while leaving unburned pockets of older timber on moist north slopes and along riparian areas. The result was a shifting patchwork of stands of different ages and sizes, interspersed with wetlands, stream corridors, and rocky outcrops that served as natural fire breaks and refugia.

Natural Disturbance Type 4 (NDT 4) – Fire-Maintained Forests and Grasslands

Natural Disturbance Type 4 (NDT4) covers BC's driest valley bottoms and low-elevation benches, most often associated with the Ponderosa Pine (PP), Interior Douglas-fir (IDF), and in the driest cases, the Bunchgrass (BG) zones. Around the North Arm of Okanagan Lake, Swan Lake, and Kalamalka Lake, these ecosystems historically experienced frequent, low-severity surface fires—often every 4–50 years—driven by lightning and Indigenous cultural burning[20]. These fires maintained open, widely spaced tree canopies, encouraged grasses and shrubs, and limited heavy fuel accumulation[21].

Infrequent, high-intensity, stand-initiating fires could still occur in NDT4, especially in the Interior Douglas-fir zone, with estimated return intervals of about 150–250 years. "Old forest" in this system

[18] Biodiversity Guidebook, Forest Practices Code of British Columbia, 1997
[19] Field Manual for Describing Terrestrial Ecosystems 2nd Edition, Land Management Handbook, 2010
[20] Keeley et al. 2011; Daniels & Gray 2006 – peer-reviewed studies on fire regimes and Indigenous burning in BC interior dry forests
[21] BC Ministry of Forests – *Fire Ecology of BC* / Fire suppression history

generally refers to stands older than 250 years. Much of the land has long served as rangeland, both forested and open.

Over the past century, fire suppression and the disruption of Indigenous burning practices have created a significant fire deficit. Forest stands in some areas have become denser and more uniform compared to the pre-suppression era. This shift has elevated the risk of large, high-intensity wildfires and altered the natural disturbance regime, underscoring the importance of proactive management strategies, including the reintroduction of cultural burning and prescribed fire.

How today's stand structure is reshaping fire behaviour, and why it no longer matches the "natural" NDT template[22] [23]

Contemporary forestry and fire-exclusion practices have shifted many of BC's interior forests away from the stand structures that shaped their historic Natural Disturbance Types (NDTs). Large clear-cuts are typically replanted at high densities—often 1,000 – 1,600 seedlings per hectare—with a narrow mix of commercially valuable conifers[24]. The resulting even-aged, single-species "wall-to-wall" plantations bear little resemblance to the open, multi-layered mosaics produced by frequent, low-severity surface fires in NDT 4 or the mixed-age patchworks created by 50- to 150-year stand-initiating fires in NDT 3. Dense juvenile canopies increase canopy bulk density and leave few gaps, while suppressed understory trees form continuous ladder fuels that can carry flames rapidly from the forest floor into the crowns. At the same time, decades of fire suppression allow litter, needles and coarse woody debris to accumulate on the ground, adding a deep blanket of readily available surface fuel. The combined effect is a landscape where fires ignite more easily, spread more quickly and burn with far greater intensity than the natural regime predicted by the NDT model—turning what once would have been small, low-flame surface fires or patchy crown runs into large, fast-moving, stand-replacing events that can leap valley to valley. In short, dense monocultures and accumulated fuels are promoting a contemporary fire regime characterised by higher severity, larger contiguous burn areas and shorter intervals between stand-replacing events—an outcome sharply at odds with the fire-maintained, fine-scale heterogeneity the NDT framework is meant to emulate.

[22] A Disrupted Historical Fire Regime in Central British Columbia, Wesley Brookes, Lori D. Daniels, Kelsey Copes-Gerbitz, Jennifer N. Baron, Allan L. Carroll, June 27, 2021
[23] Wildfire and climate change adaptation of western North American forests: a case for intentional management, Paul F. Hessburg, Susan J. Prichard, R. Keala Hagmann, Nicholas A. Povak, Frank K. Lake, 02 August, 2021
[24] Establishment to Free Growing Guidebook Nelson Forest Region, Forest Practices Code of British Columbia, May 2000

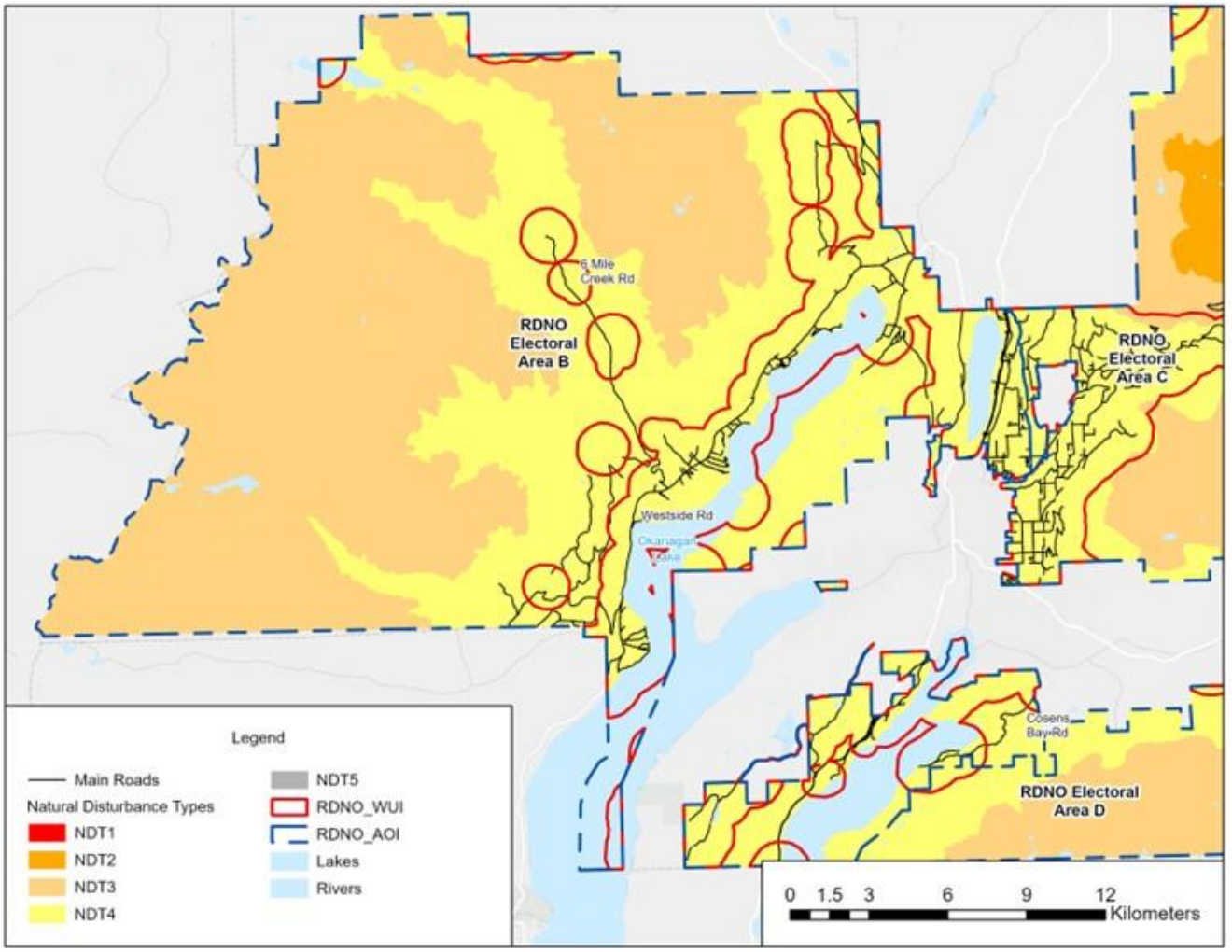


Figure 8. Natural Disturbance Types (NDT) within RDNO Electoral Area B.

4.1.2.3 Fuel Types

For fire behaviour prediction purposes, Canadian forests and grasslands are categorized into different Fire Behaviour Prediction (FBP) System fuel types. These fuel types have different vegetation species and structure (e.g. vegetation density). Because of this, fire will behave differently in each fuel type. Table 9 outlines which fuel types are present in Electoral Area B AOI and WUI. More detailed descriptions of these fuel types can be found on the Natural Resources Canada website. [25]

Fuel types are named to reflect fire behaviour in different vegetation groups. However, since fuel types are used to describe an expected fire behaviour, they may not actually reflect the tree species that are on the ground. For example, the C2 (Boreal Spruce) fuel type does not necessarily indicate there are upland and lowland black spruce and white spruce stands around Electoral Area B; rather, these fuel types correlate the forest fuel complex and the fire behaviour that could be expected in that fuel complex. Fuel types should be regarded as a 'best fit' rather than strictly based on tree species.

Table 9. Canadian Fire Behaviour Prediction (FPB) System Fuel Types present within the RDNO Electoral Area B.

Fuel Types				
Fuel Type		**Description**	**% AOI**	**% WUI**
C2	Boreal Spruce	A very volatile fuel type - C2 produce high intensity and fast-moving fires more easily than other fuel types. Fires can easily become crown fires.	0.5	<0.1
C3	Mature Jack or Lodgepole Pine	Fastest rate of spread overall; however, requires high wind speeds and low fuel moistures to reach this faster rate of spread than other fuel types.	9.0	0.5
C5	Red & White Pine	Mature stands with tall, mature, closed canopies with moderately dense understory and shrub layers. Has the highest fire weather threshold of all conifer fuel types and requires extreme fire conditions to achieve full canopy fire. Lower rate of spread than other conifer fuel types.	2.1	0.1
C6	Conifer Plantation	All conifer plantations with closed canopy crown canopy and no understory shrub layer. Moderate fire behaviour and spread rates compared to other coniferous fuel types due to its dependency on crown base height and moisture content of moderate to heavy surface fuels.	0.3	N/A
C7	Ponderosa Pine – Douglas Fir	Lowest rate of spread and lowest fire intensity of the conifer fuel types.	15.0	13.5

[25] FBP Fuel Type Descriptions. Natural Resources Canada.

Fuel Types				
Fuel Type		**Description**	**% AOI**	**% WUI**
D1/D2	Deciduous (D1 leafless aspen, D2 green aspen)	Lower rates of spread, lower ember production and lower fire intensity (than conifer) when trees have leaves. Often used in urban interface areas to reduce fire behaviour around values.	15.2	7.3
M1/M2	Mixedwood	The rate of spread and intensity of fire depends on the conifer/deciduous mix. Higher conifer mix will have faster rates of spread, higher fire intensity and more embers produced.	6.0	2.4
O1a/b	Grass	Fastest rate of spread potential.	34.7	26.8
S1/2/3	Slash (Jack and lodgepole Pine or White Spruce/Balsam)	Slash resulting from clearcut logging, slash is typically one to two seasons old. Low threshold required for high fire intensity.	0.7	0.1

**The remaining proportions that are not accounted for by the FBP fuel types include area of water and non-fuel.*

Across Electoral Area B as a whole there is a variety of different fuel types, with the O-1a/b, D-1/2 and C-7 fuel types making up the majority (Figure 9). It should be noted that 24.3% of the WUI area is covered with the classification of non-fuel. This area may be dominated by houses and residential areas, which does not support continuous vegetation to classify as an FBP fuel type but contains unknown fuels throughout.

As grasslands are a predominate fuel type within Electoral Area B, it should be noted about the ingress of the grass species, Cheatgrass (*Bromus tectorum*). Cheatgrass is a highly invasive species that has been introduced and has spread throughout the BC Southern Interior. Cheatgrass can grow and reproduce rapidly with an adaptation to frequent fire disturbances[26]. The species can alter fire regimes of areas to have shorter return intervals than historical intervals of the area by facilitating fire spread. Cheatgrass will drop its seeds early in the season, typically prior to peak fire season, which provides the plants with a competitive advantage post-fire. Cheatgrass creates a positive feedback loop of growth and increased fire return, in the species favour, producing an ecosystem with high frequency, easy ignition, and quick rate of spread.

[26] https://www2.gov.bc.ca/assets/gov/environment/plants-animals-and-ecosystems/invasive-species/publications/prescribed_fire_and_invasive_plants_manual.pdf

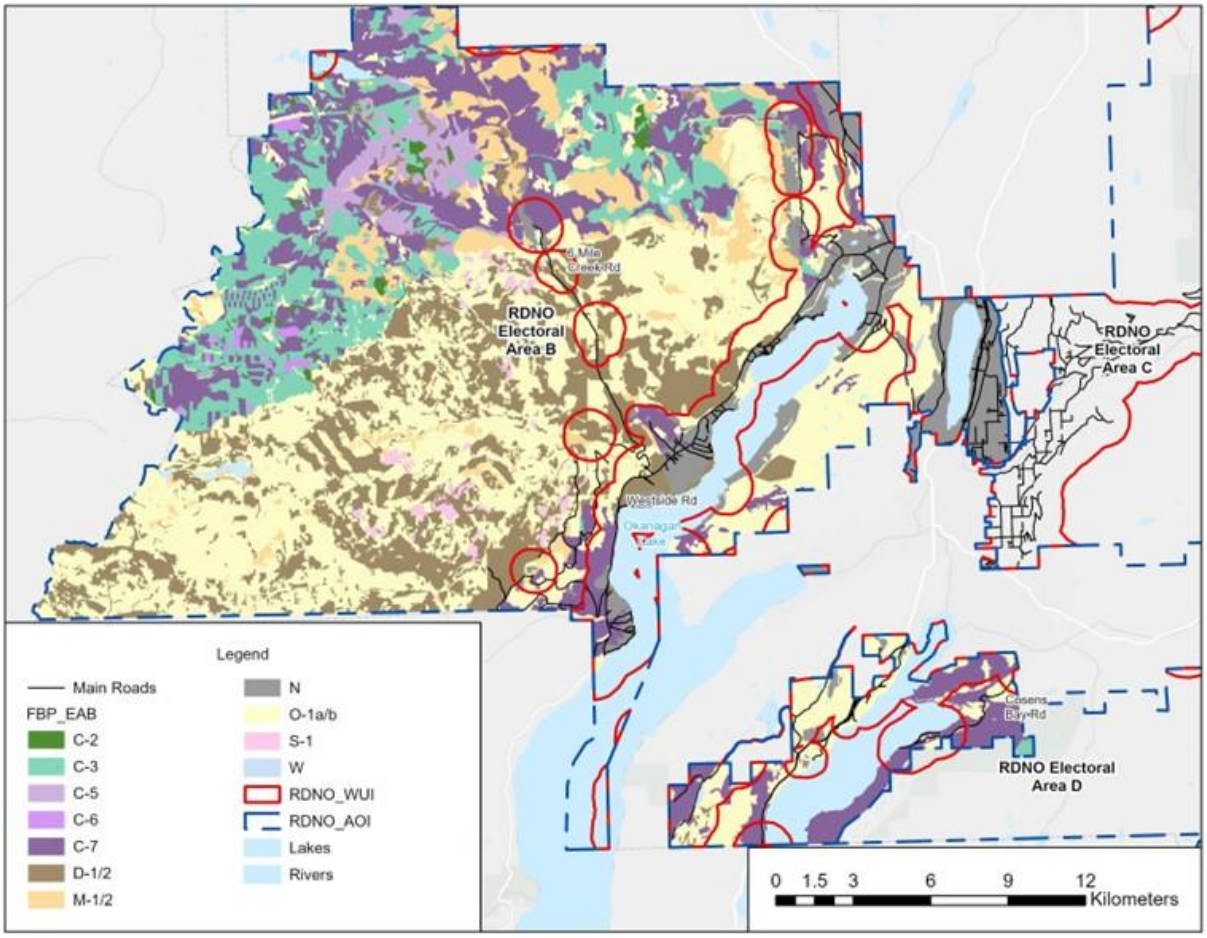


Figure 9. Canadian Fire Behaviour Prediction (FBP) System Fuel Types present within the RDNO Electoral Area B.

4.1.2.4 Fuel, Ecosystems and Fire Regimes Summary

Electoral Area B is an ecologically diverse area which spans four BEC zones (8 when including sub-variants) and two of the Natural Disturbance Types (Table 10). The biodiversity of the BEC variants hosts 14 of the 17 FBP fuel types used in the Canadian Forest Fire Danger Rating System.

Table 10. Summary of fuels within the RDNO Electoral Area B Area of Interest. This includes Biogeoclimatic Zone variants, Natural Disturbance Types, and FBP Fuel Types.

BEC Zone	BEC Sub-variant	NDT Type	Area (Ha)	Percentage (%)	FBP-Fuel Types
Engelmann Spruce -- Subalpine Fir (ESSF)	dc dcw	NDT2	9,829.5	15.3	C-2, C-3, C-6, C-7, D-1/2, M-1/2, O-1a/b
Interior Cedar – Hemlock (ICH)	mk xm	NDT3 NDT4	18,190.8	28.3	C-2, C-3, C-5, C-7, D-1/2, M-1/2, O-1a/b, S-1
Interior Douglas-fir (IDF)	dk dm xh	NDT4	25,388.6	39.5	C-3, C-5, C-7, D-1/2, M-1/2, O-1a/b, S-1
Montane Spruce (MS)	dm	NDT3	10,877.5	16.9	C-2, C-3, C-5, C-7, D-1/2, M-1/2, O-1a/b, S-1

4.1.2.5 Forest Health

Forest-health pressures already shape the composition and function of local forests, and climate change is amplifying those effects. Warmer, milder winters and longer growing seasons have fueled repeated bark-beetle outbreaks across BC, demonstrating how quickly insect populations can respond to shifting climate conditions.

Within the Okanagan Timber Supply Area (TSA), the principal forest health threats continue to be bark beetles—notably the mountain pine beetle, Douglas-fir beetle, and, to a lesser extent, spruce beetle. [27] [28] These threats are followed by drought-related and fire-related stressors, while western spruce budworm and other defoliating insects are also important but play a secondary role.

[27] Okanagan TSA Forest Health Strategy, Heather Rice, RFT, Janice Hodge, RPBio, 2012
[28] 2019 Summary of Forest Health Conditions in British Columbia, Joan Westfall, Tim Ebata, and Babita Bains

Following aggressive salvage harvesting during the 2006–2012 beetle season, mountain pine beetle mortality in the region was kept relatively moderate, however, scattered pine stands in the Regional District of North Okanagan (RDNO) remain vulnerable to future outbreaks.

The Douglas-fir beetle continues to expand, with 2,526 hectares mapped in the Okanagan TSA in 2019, concentrated largely along Highway 1, Highway 6, and the Vernon–Cherryville corridors. Drought, wildfire, and windthrow are further accelerating its spread.

While spruce beetle activity remains low, areas of concern that include moderate- to high-hazard stands exist on local plateaus and deserve continued monitoring.

Overall, infestations and other stressors contribute to tracts of stressed, declining or dead trees, and increasing dead and dry fuel loads, which in turn elevate wildfire hazard across the landscape.

4.1.3 Weather and Climate

Weather attributes including temperature, relative humidity, precipitation, wind speed and wind direction are critical factors in the ignition, spread, and duration of wildfires. Weather is the most variable component of the wildfire environment, and it has a direct relationship to fuel moisture, which is a crucial determinant of combustibility. Local difference in aspect, topography and vegetation will also influence fuel-moisture at the site level. All weather forecasting for the AOI is dependent on observations from active BCWS weather stations within and surrounding Electoral Area B.

Table 11. Weather station used for analysis for Electoral Area B.

Weather Station	Fintry
Network	BCWS
Coordinates	50.206212, 119.48044
Elevation	526

Weather analysis in the following sections utilizes observed data throughout the wildfire season months of April through October from 2016 to 2024, unless stated otherwise.[29]

4.1.3.1 Temperature

Fintry's 2016–2024 record shows a rapid spring warming from ~12 °C in April to >22 °C by June, with exceptional maxima such as the 41 °C "heat-dome" in June 2021 (Figure 10). Mean temperatures peak at ~27 °C in July and remain >25 °C through August, while nocturnal minima staying above 10 °C restrict overnight humidity recovery. The wide early-summer diurnal range (>30 °C) drives strong upslope winds and accelerates fuel pre-heating, sustaining high fire-spread potential. Although averages decline to ~19 °C in September, periodic maxima above 30 °C combined with cured fine fuels

[29] BC Wildfire Service. *Fire Weather Data Portal.* Government of British Columbia

extend the critical fire window until autumn, necessitating mitigation measures well before July and sustained readiness into early fall.

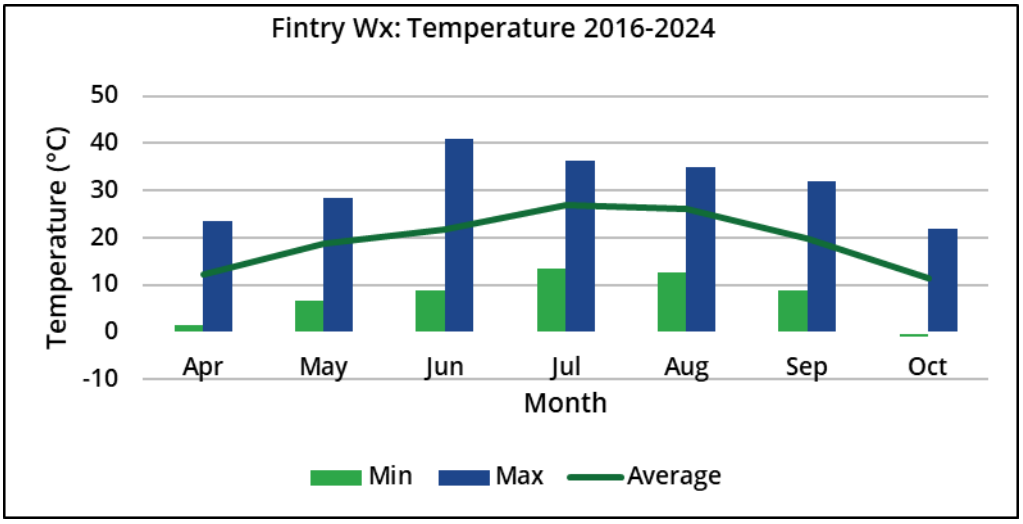


Figure 10. Average monthly temperature for RDNO Electoral Area B.

4.1.3.2 Precipitation

Fintry's warm-season precipitation regime is characterized by scant mean monthly totals—generally ≤2 mm from April through September—with minimum values effectively at or near 0 mm (Figure 11). Isolated convective events occasionally deliver 14–20 mm in a single day, as indicated by the monthly maxima, but these bursts are infrequent and decline from spring through late summer before recovering in October. The combination of negligible baseline rainfall, widening dry spells, and sporadic high-intensity storms promotes steady fuel desiccation while providing little sustained moisture, thereby heightening ignition potential and supporting rapid fire spread until more persistent autumn rains arrive.

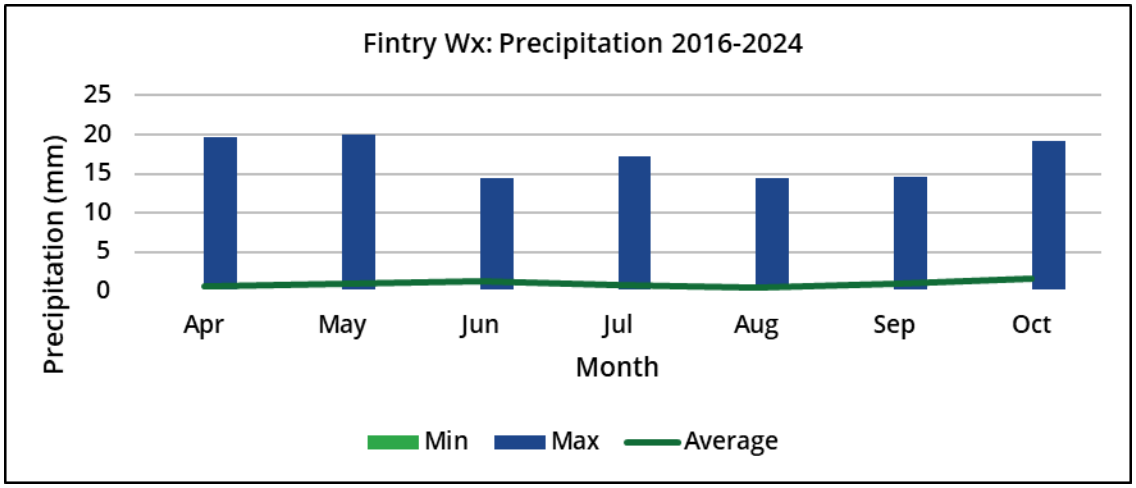


Figure 11. Average monthly precipitation for RDNO Electoral Area B.

4.1.3.3 Relative Humidity

Fintry's relative-humidity profile further amplifies wildfire risk. Average afternoon values fall from the low-40 % range in April–May to approximately 35 % in July–August before recovering to ~45 % in September and ~60 % by October (Figure 12). Critically, minimum daytime readings remain in the 10–20 % band throughout the warm season, indicating frequent periods of very dry surface air that accelerate fuel moisture loss and raise ignition probability. Although nightly maxima consistently reach near-saturation (≈100 %), warm overnight temperatures limit the duration of these moist intervals, so cured fine fuels seldom regain sufficient moisture. The combination of persistently low daytime minima and depressed midsummer averages sustains elevated fire-spread potential until the more enduring autumn humidity returns.

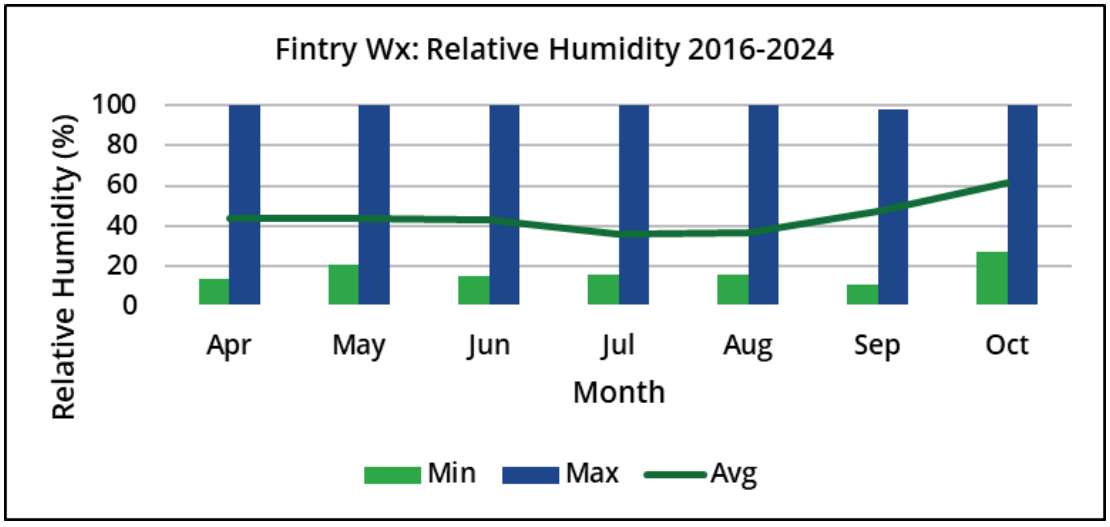


Figure 12. Average monthly relative humidity for RDNO Electoral Area B.

4.1.3.4 Wind

Wind speed and direction are the most variable factors influencing fire behaviour, contributing to the unpredictability of fire behaviour, intensity, and severity. Over the past decade, wind driven events and observations highlight the importance of considering high wind speeds in any direction, not just the predominant wind direction that characterizes an area. While historical data can aid in prioritizing treatment locations, communities must be prepared for wind-driven fires from any direction.

Along the north arm of Okanagan Lake, winds follow a pronounced diurnal cycle governed by the valley-lake-slope system. Shortly after sunrise, gentle southerly breezes form over the water as cool lake air drifts toward the warming slopes. By late morning the entire valley floor heats up, and a steady southerly to southeast "ups-valley" flow sets in, funnelling through the north–south trench and peaking in the early to mid-afternoon. After sunset the process reverses: chilled, dense air drains downslope and down-valley from the surrounding highlands, producing a north-north-westerly drainage wind that can strengthen in narrow side draws and accelerate over the open lake surface. Superimposed on this daily rhythm are occasional synoptic events—northerly outflow winds after cold fronts and the rare Foehn-like gap winds spilling east from the Monashee slopes—that can briefly override the local pattern. Grasping this predictable shift from daytime southerlies to nocturnal north-westerlies forms the baseline for interpreting fire-weather observations in the following ISI section.

4.1.3.5 Initial Spread Index (ISI)

The Initial Spread Index (ISI) is one of the six components of the Canadian Fire Weather Index (FWI) system. It combines the Fine Fuel Moisture Code (FFMC)—a measure of how quickly fine surface fuels will ignite—with the 10-metre open-wind speed observed at the weather station. The resulting number expresses the expected rate of forward fire spread at the ignition stage (higher values = faster spread), independent of fuel load or slope.

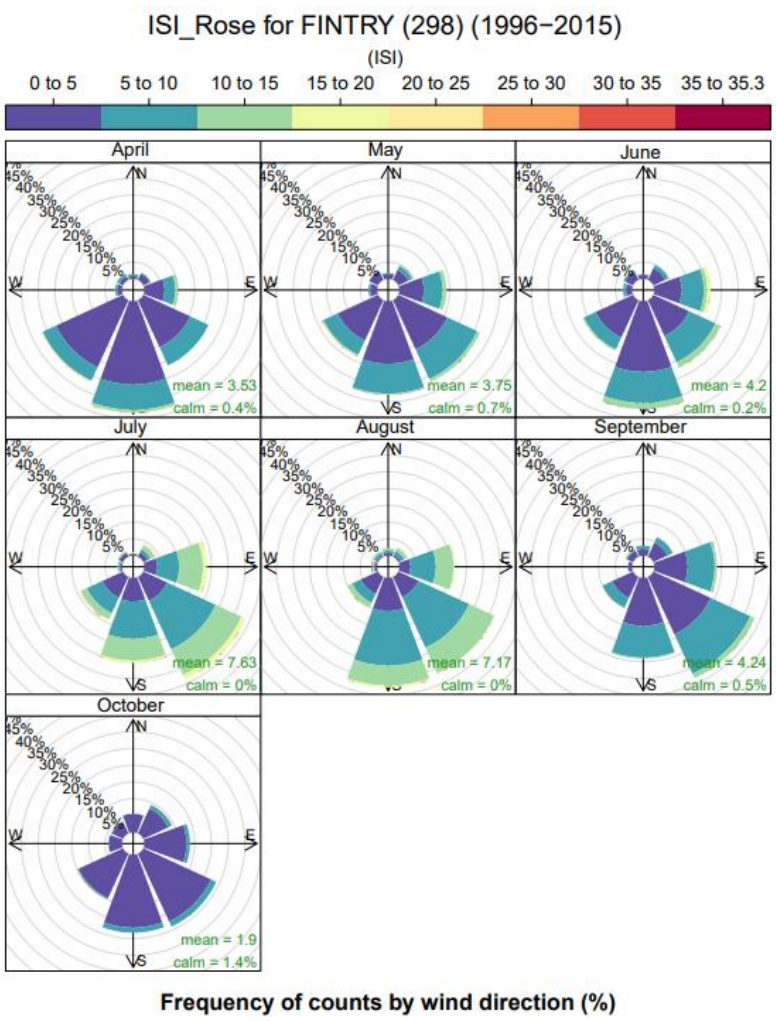
The BCWS weather stations logs ISI hourly, generating detailed roses that reveal how wind direction and spread potential shift through the day. It also aggregates the 1300 PST readings into monthly averages, producing a companion set of roses that highlight the prevailing wind–ISI combinations for each month of the fire season (Figure 13). BCWS constructed the ISI Roses from the weather station installation date to 2015 or 2016[30].

An ISI rose plots these values on a compass diagram: each "petal" points in the direction the wind was blowing from, and its radius (or colour intensity) represents the magnitude of the ISI recorded under that wind. Petal length shows how often winds arrived from each direction, while the colour—shifting from dark blue through pale yellow to deep red—depicts the corresponding ISI; thus, long red-tipped petals mark directions that are both frequent and prone to rapid fire spread, whereas short dark-blue petals indicate infrequent winds with low spread potential. By scanning which quadrants dominate a monthly or hourly rose, practitioners can quickly see which directions—and times of day—pose the greatest initial-spread risk and plan fuel treatments, detection patrols, or resource staging accordingly.

[30] https://www.for.gov.bc.ca/ftp/HPR/external/!publish/Website/ISI%20Roses/

The Fintry Weather Station is located on the west shore of the north-south-oriented Okanagan Valley, so its wind regime is strongly controlled by classic valley-lake breezes, which is representative for the communities located around the North Arm of Okanagan Lake and Kalamalka Lake. By early afternoon the sun has heated the valley floor and Okanagan Lake, drawing a vigorous upslope/ups-valley flow from the wider, lower basin to the south. Because the provincial Fire Weather Index system takes its daily observation exactly when that thermally driven southerly is near its maximum, the monthly 1300 PST roses highlight winds from the S–SE and, coupled with the hot, very dry fuels of July–August, produce the season-high mean Initial Spread Index (ISI). In other words, the 1300 snapshot captures the part of the day when fuels are driest, temperatures highest, and the prevailing south wind aligns with the steep slopes above the lake—conditions that favour rapid head-fire growth and therefore dominate the monthly ISI averages.

After sunset, the thermal gradient reverses: the valley floor cools faster than the surrounding uplands and the lake surface, and dense air begins to drain downslope and down-valley from the highlands from the west toward the lake. This nocturnal drainage typically arrives from the NW quadrant at the Fintry station and can be surprisingly brisk because it is channeled by narrow side draws. Although higher night-time humidity usually tempers fire spread, two factors can keep the hourly ISI elevated: (1) the fine-fuel moisture code does not rebound instantaneously, especially after a hot July–August day, so light fuels can remain moderately dry into the late evening; and (2) the ISI algorithm weights wind speed heavily, so the stronger downslope jets can offset some of the moisture recovery. These night-time NW winds are therefore operationally significant—they can turn a flank into a head fire, loft embers downslope toward beachfront developments, or sustain smoldering hot spots that re-ignite vigorously the next afternoon.



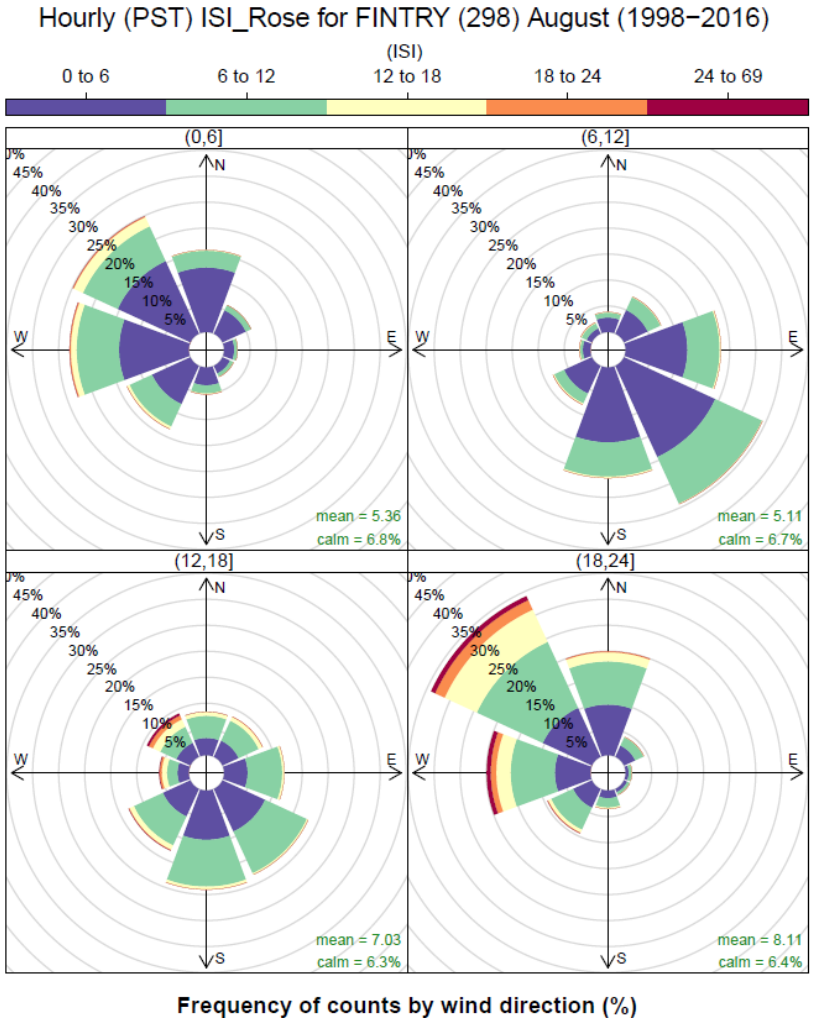


Figure 13. ISI wind roses for Fintry weather station in RDNO Electoral Area B.

Climate Change

The province of BC has witnessed its most severe wildfire seasons of the last half-century, occurring in 2017, 2018, 2021, and 2023, all characterized by extreme weather conditions. The recent surge in fire activity is not entirely unexpected, given recent weather extremes. However, what is surprising is the early emergence of increased wildfire activity around 2000 – decades earlier than anticipated from climate models – and the magnitude of fire-season severity. For instance, three of the past seven years saw more than 1 million hectares burned, or more than 1% of the land area, compared to only three wildfire seasons from 1919 to 2016 exceeding 0.5 million hectares. Additionally, the average length of the wildfire season, as inferred from weather records (measured by the number of frost-free days) and the onset of fire activity (defined as the date when 2% of the year's total area burned was reached), has increased by 26.7 and 27.1 days, respectively, since the early 20th century[31]. The observed effects of climate change on fuel, ignition, weather and their complex interactions and relationship to wildfire are summarized below in Figure 14.

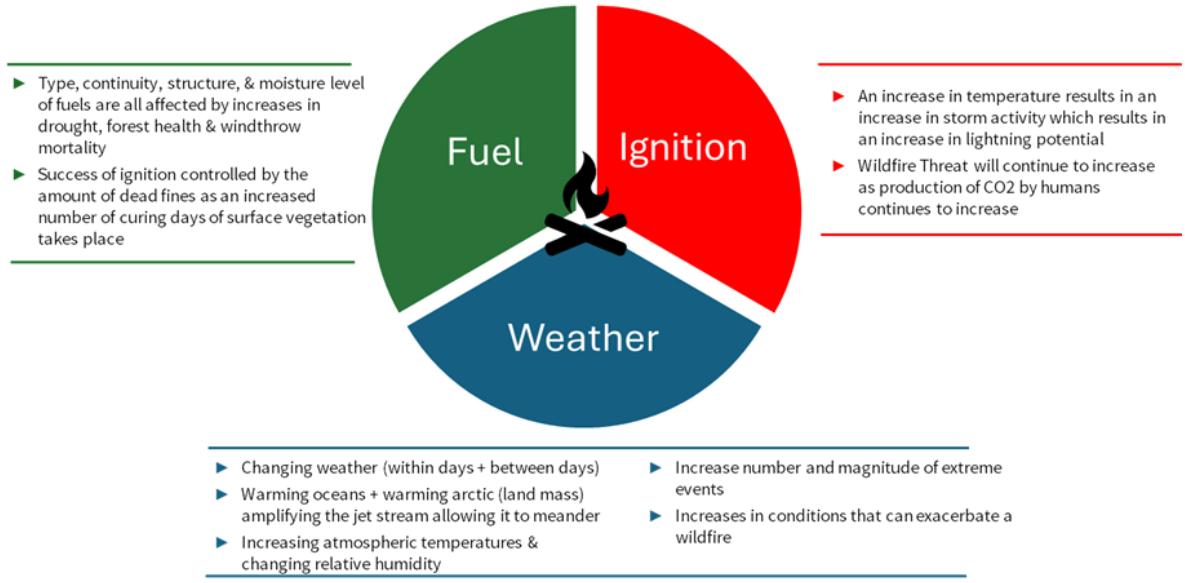


Figure 14. Effects of climate change graphic

The regional climate service center for the Pacific and Yukon Regions is called the Pacific Climate Impacts Consortium (PCIC). This non-profit corporation conducts quantitative studies on the impacts of climate change and climate variability[32]. Findings from these studies are incorporated into practical tools for end-user application. For example, the PCIC website offers a map-based data portal for downloading information, analysis tools for the various regions in BC (Plan2Adapt, Climate Explorer, and seasonal anomaly maps), downloadable publications, and software for climate data interpretation.

[31] Parisien, M. A., Barber, Q. E., Bourbonnais, M. L., Daniels, L. D., Flannigan, M. D., Gray, R. W., ... & Whitman, E. (2023). Abrupt, climate-induced increase in wildfires in British Columbia since the mid-2000s. *Communications Earth & Environment*, *4*(1), 309.

[32] Pacific Climate Impacts Consortium. 2024.

Climate projections from PCIC for the 2030s (2021-2050) (Table 12) show the North Okanagan warming by a median +1.7 °C (with most model results falling between +1.4 °C and +2.4 °C). Annual precipitation is expected to stay roughly unchanged overall, yet its seasonal distribution shifts: summers become markedly drier (-12 % on average, with possible declines of -22 %) while winters grow wetter (+13 %, up to +19 %).

For wildfire risk, this pattern is a "double hit." Higher temperatures accelerate snowmelt, lengthen the fire season, and raise evaporative demand, leaving fine and medium fuels drier for longer. Simultaneously, the projected summer precipitation deficit intensifies drought stress, making ignition more likely and sustaining higher initial-spread rates and flame lengths once fires start. The wetter winters may spur additional grass and shrub growth, adding fine fuels that dry out quickly each spring, further elevating the probability of fast-moving interface fires. Stressed forests are also more vulnerable to insects and disease, increasing tree mortality and ladder-fuel continuity, which can favour crown fire development. Altogether, the ensemble of warmer conditions, drier summers, and episodic fuel buildups points to more frequent and severe wildfire events, challenging suppression efforts and underscoring the need for proactive vegetation management, FireSmart treatments, and water-supply resilience across the North Okanagan landscape.

Strong trends in temperature and precipitation have been observed in BC over the past century. Annual area burned correlates significantly to the climatic moisture deficit; even when total precipitation levels remain high, rapid warming results in increased evaporation demand. It is estimated that for every degree of warming, a minimum increase of 15% in precipitation is required to compensate for increased biomass flammability[33].

Table 12: Summary of projected changes in median temperature and precipitation in the North Okanagan from the historical baseline (1981 – 2010) to the 2030s (2021 – 2050).

Climate Variable	Season	Ensemble Median*	Range^ (10th to 90th percentile)
Temperature (°C)	Annual	+1.7 °C	+1.4 °C to +2.4 °C
Precipitation (%)	Annual	+0%	-3% to +2%
	Summer	-12%	-22% to -2%
	Winter	+13%	+10% to +19%

***The ensemble median is a mid-point value, chosen from a PCIC standard set of Global Climate Model (GCM) projections.**

^The range values represent the lowest and highest results within the set.

[33] Parisien, M. A., Barber, Q. E., Bourbonnais, M. L., Daniels, L. D., Flannigan, M. D., Gray, R. W., ... & Whitman, E. (2023). Abrupt, climate-induced increase in wildfires in British Columbia since the mid-2000s. *Communications Earth & Environment*, *4*(1), 309.

4.2 WILDFIRE HISTORY

A historical wildfire analysis was conducted for the Electoral Area B. Using data from the *BC Wildfire Fire Perimeters - Historical database*, and the *BC Wildfire Fire Ignition Locations – Historical database*. Fire perimeter data is recorded from 1917–2024 but does not include location of all fires recorded on the landscape. Ignition location data is recorded from 1950–2024 and includes all BCWS recorded wildfire history in these date ranges, but does not include fire size or perimeter information. *BC Wildfire Fire Perimeters - Historical database* (1917–2024) is referenced when referring to area burnt. *BC Wildfire Fire Ignition Locations – Historical database* (1950–2024) is referenced when referring to number of fires. Table 13 examines the area burned by wildfires within the Electoral Area B.[34]

Table 13. Area burnt summarized by ignition source for the Electoral Area B AOI and WUI from 1917 to 2024.

	Lightning	Person	All
AOI			
Total Area Burnt (ha)	38,300	9,609	47,909
Percentage of Wildfires (%)	80	20	100
WUI			
Total Area Burnt (ha)	3,362	1,081	4,443
Percentage of Wildfires (%)	76	24	100

Electoral Area B's recorded wildfire history is punctuated: many low fire ignition seasons (<10 fire ignitions) separated by years with increased human-caused ignitions (Figure 15). Person-caused ignitions form the numerical majority (60%) but account for only 9,609 ha of burned area within the AOI. Lightning—30% of starts—has burned 38,300 ha, showing that low-frequency natural events drive landscape change. The remaining 10% of ignitions are unknown as to whether they were lightning or person caused. Early activity (1917–1947: 20,898 ha) reflects both settlement-related ignitions and large lightning fires that established much of today's seral structure. A prolonged mid-century lull (1960–1994: 212 ha) indicates effective initial attack and an absence of major lightning runs, enabling fuel accumulation. This dip in hectares burned for Area B does not correspond with ignition starts, as the top three years for most fire starts (1987, 1971, 1979) fall within this period. The modern period (2007–2024) is statistically reset by a single outlier—the White Rock Lake Fire, 2021, 26,588 ha burned within Area B)—illustrating how one lightning megafire can overwhelm decades of quiet despite most ignitions in that window being small human-caused starts. A map of fire perimeters and ignition locations is displayed below (Figure 16).

[34] Historical wildfire data sets are available from BC Data Catalogue

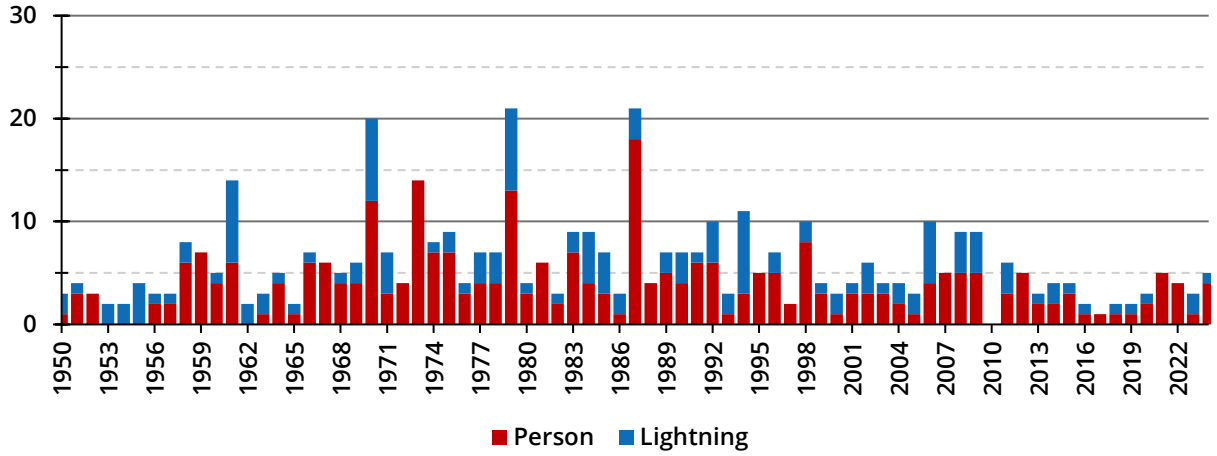


Figure 15. Wildfire ignition count summarized by ignition cause for RDNO Electoral Area B AOI from 1950 – 2024.

The 2021 White Rock Lake wildfire (K61884) was initiated by lightning on July 13, 2021, and burned across the Okanagan and Thompson regions until it was declared held in September 2021.[35] On July 27, the Regional District of North Okanagan (RDNO) issued a precautionary Evacuation Alert covering properties around Pinaus and Bouleau Lakes. The situation escalated to Evacuation Orders for properties south of Six Mile Creek Road above Westside Road.[36] By September, when the fire was being held, evacuation alerts and orders were being lifted—or rescinded—across multiple areas. While the fire burned extensive territory—over 83,000 hectares—the only confirmed structural losses in RDNO Area B were in the Bouleau Lake area; isolated reports mention some structures lost in that vicinity.[37] Westside Road was closed for an extended period, severing the main north–south route, and creating transportation challenges, widespread smoke severely affected air quality, and a Post-Wildfire Natural Hazard Assessment (PWNHRA) conducted in late 2021 flagged heightened debris-flow and flood risks in the Whiteman-Bouleau and Naswhito Creek catchments.

Collectively, these prolonged evacuations, structural threats, transport network disruption, utility and air-quality impacts, and new post-fire geomorphic risks highlight key priorities for RDNO Area B: enhancing evacuation route redundancy, strengthening infrastructure and water-supply resilience, strategic fuel and structure protection, and coordinated post-fire hazard monitoring and recovery planning.

[35] MINISTRY OF FORESTS, LANDS AND NATURAL RESOURCE OPERATIONS AND RURAL DEVELOPMENT POST-WILDFIRE NATURAL HAZARD RISK ASSESSMENT RECONNAISSANCE REPORT
[36] https://www.rdno.ca/sites/default/files/20210/210727_Evacuation_Order_Alert_Pinaus_Bouleau_Lakes_CorrectMap.pdf
[37] POST-WILDFIRE NATURAL HAZARD RISK ASSESSMENT OF THE WHITE ROCK LAKE FIRE Clarke Geoscience Ltd, Jan 2022

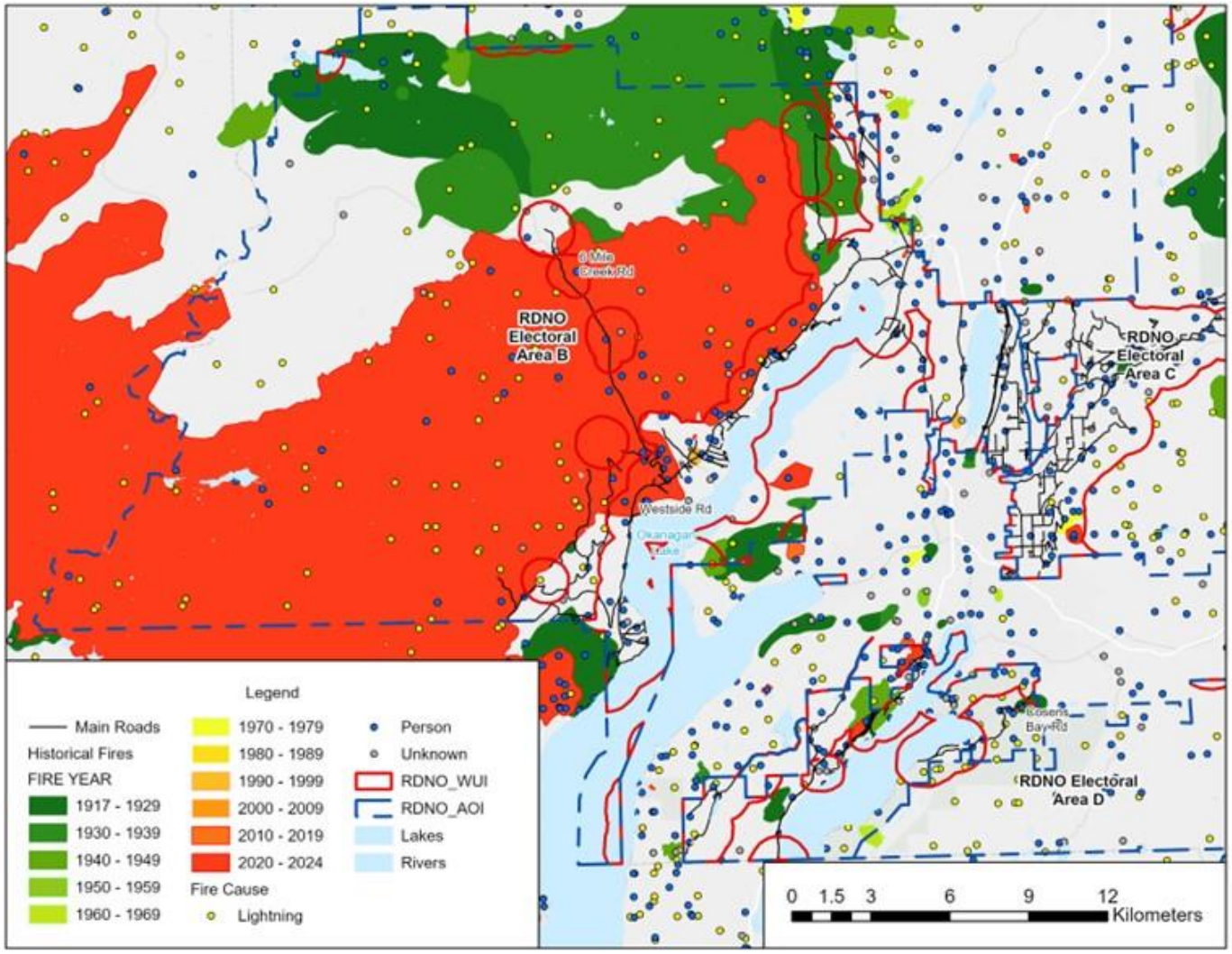


Figure 16. Wildfire history map for RDNO Electoral Area B.

4.3 CANADIAN FOREST FIRE DANGER RATING SYSTEM (CFFDRS)

A **Fire Danger Rating sign** informs the public about the likelihood of wildfire ignition and spread in a specific area. These signs are commonly displayed on fire boards outside local fire departments or at the Ministry of Forests office. The rating is determined using three key elements of the **Canadian Forest Fire Weather Index (FWI) System**, which evaluates fire potential and categorizes the danger level as **Low, Moderate, High**, **Very High** or **Extreme** (Table 14).[38]

For further details about how fire danger ratings are calculated, please refer to the FireSmart BC website**.**

Table 14. The five fire danger classes and general fire descriptions[39]

Fire Danger	Description
Low	Fires likely to be self-extinguishing and new ignitions unlikely. Any existing fires limited to smouldering in deep, drier layers.
Moderate	Creeping or gentle surface fires. Fires easily contained by ground crews with pumps and hand tools.
High	Moderate to vigorous surface fire with intermittent crown involvement. Challenging for ground crews to handle; heavy equipment (bulldozers, tanker trucks, aircraft) often required to contain fire.
Very High	High-intensity fire with partial to full crown involvement. Head fire conditions beyond the ability of ground crews; air attack with retardant required to effectively attack fire's head.
Extreme	Fast-spreading, high-intensity crown fire. Very difficult to control. Suppression actions limited to flanks, with only indirect actions possible against the fire's head.

Figure 17 presents a summary of the Fire Danger analysis, showing the frequency of High and Extreme Fire Danger days at the Fintry BCWS weather station. Fire Danger days are defined according to the Wildfire Act – Schedules 2. As outlined in Schedule 2, High Fire Danger days are defined for Danger Index Region 1 and require a Build-Up Index greater than 17 and a Fire Weather Index (FWI) greater than 8. The Fire Danger sign is utilized by many districts and municipalities to alert the public about the potential start and spread of a wildfire in each area.

[38] What we talk about when we talk about the fire danger rating system. FireSmart BC
[39] Fire Danger. BC Wildfire Service.

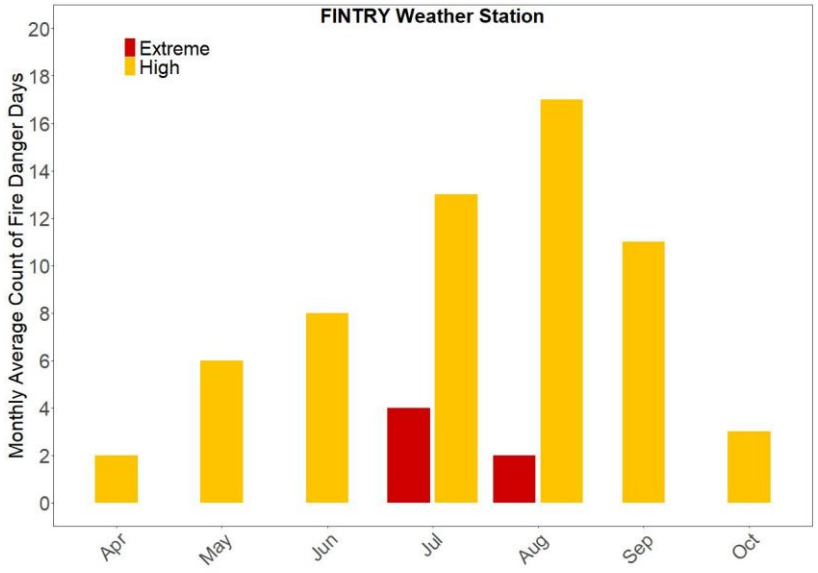


Figure 17. Monthly average fire danger days for Fintry Weather Station (2016 – 2024).

4.4 PROVINCIAL STRATEGIC THREAT ANALYSIS (PSTA)

The BC Wildfire Service developed the Provincial Strategic Threat Analysis (PSTA) and Risk Class framework as provincial spatial datasets to evaluate and forecast potential wildfire threats. Leveraging provincial fuel type mapping, historical fire occurrence data, topography, and historical weather station data, the PSTA generates a wildfire threat score. Outputs from the PSTA include information and maps delineating fuel types, historical fire density, the potential for embers to land in an area (spotting impact), head fire intensity, and wildfire threat. The threat ranking is assigned to 1 of 10 classes, with 1 being low, 10 being extreme, and 7 being the threshold of the potential for catastrophic losses. The 10 classes can also be ranked into low, moderate, high, and extreme. Water and no data are separate classes in which wildfire threat is not ranked. The 'no data' class represents all private land, meaning there is no way to identify the risk coming from each private parcel of land. The PSTA is a simple way of classifying the complex nature of wildfire threat which should be used to guide individuals who are preparing for what may happen on the landscape. Further details regarding the derivation of the PSTA dataset are available through the BC Wildfire Service.[40]

Table 15 below outlines the area that falls within each fire threat class for both the AOI and the WUI. Throughout the AOI, a majority of the area either falls into the high or extreme threat categories. Comparing the AOI to the WUI will see the amount of area with extreme threat decrease, but high fire threat still contributes to a quarter of the WUI area. Private land contributes to a large portion of the WUI in Electoral Area B, limiting the amount of area where wildfire threat can be analyzed.

[40] 2021 Update: Provincial Strategic Threat Analysis (PSTA). Accessed March 2024.

Table 15. PSTA Fire Threat class and associated areas for Electoral Area B AOI and WUI.

FIRE THREAT CLASS	AOI		WUI	
	AREA (HA)	PERCENTAGE (%)	AREA (HA)	PERCENTAGE (%)
No Data (Private Land)	5,961.3	9	4,132.6	27
Water	6,507.5	10	3,920.7	25
Low	1,675.9	3	972.9	6
Moderate	9,652.5	15	2,349.7	15
High	23,246.2	36	3,893.7	25
Extreme	17,242.9	27	303.2	2
Total	64,286	100	15,572.7	100

The PSTA fire threat scores for Electoral Area B are mapped below in Figure 18.

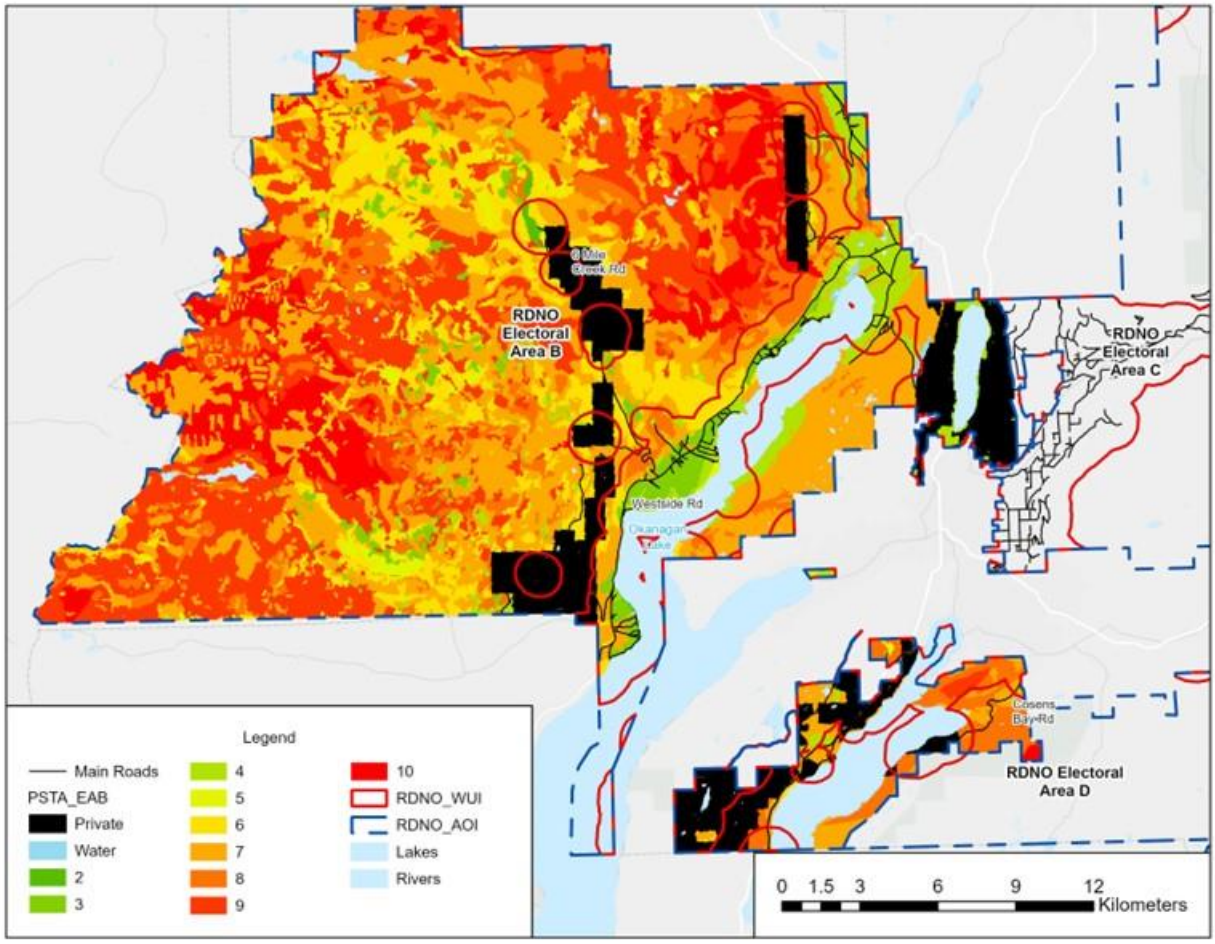


Figure 18. Map of the Provincial Strategic Threat Assessment for Electoral Area B.

4.5 HAZARD, RISK, AND VULNERABILITY ASSESSMENT

A Hazard Risk and Vulnerability Assessment (HRVA) is a systematic process used to identify potential hazards, assess their associated risks, and analyze the vulnerabilities of a community to those hazards. It helps communities understand the potential impacts of hazards and prioritize actions to mitigate risks and enhance resilience. HRVAs are developed by the local municipal authority. The RDNO does not yet have a completed HRVA, but regional staff are actively working on its development.

4.6 LOCAL WILDFIRE THREAT ASSESSMENT

Part of the process of developing this CWRP involves on-the-ground verification and assessment of local vegetation types and the inherent wildfire threat of forested areas within and around the WUI. Wildfire threat is assessed using the Wildfire Threat Assessment (WTA) tool developed by BC Wildfire

Service[41], which focuses on assessing forest stand attributes and fuel structure that contribute to wildfire intensity and spread, independent of fire weather. Wildfire threat differs from wildfire risk in that fire threat does not take into account proximity to values or the consequence of damage to those values in a wildfire event.

Field verification and wildfire threat analyses were completed on Regional District and provincial Crown land found within the 1 km WUI throughout Electoral Area B (Figure 19). A total of 10 WTAs were completed within the Electoral Area. Table 16 below outlines the results of the WTAs completed.

Table 16. Summary of Wildfire Threat Assessments within Electoral Area B WUI.

Wildfire Threat Assessment Rating	Number of WTAs	Percentage of all WTAs completed within the Electoral Area (%)
Low	3	30
Moderate	7	70
High	0	0
Extreme	0	0

Electoral Area B was limited to the number of WTA plots that could be conducted due to the large amount of private, reserve, or First Nations lands throughout the WUI. A majority of the area that was analysed with WTA plots received Moderate scores due to the open-forested stands characteristic of the C-7 fuel type which have scattered ladder fuels and typically lower density of understory trees. The WTA plots often validated what was presented in the PSTA.

The low threat plots were in areas associated with the grassland fuel type (O1a/b). The WTA does not accurately depict threat in these ecosystems as they bias higher threat towards forested ecosystems. From these plots fuel treatment units will be proposed to reduce the wildfire threat adjacent to values. See Section 5.7.3 for more information.

[41] https://www2.gov.bc.ca/assets/gov/public-safety-and-emergency-services/wildfire-status/prevention/fire-fuel-management/fuels-management/2020-wildfire-threat-assesment-guide-final.pdf

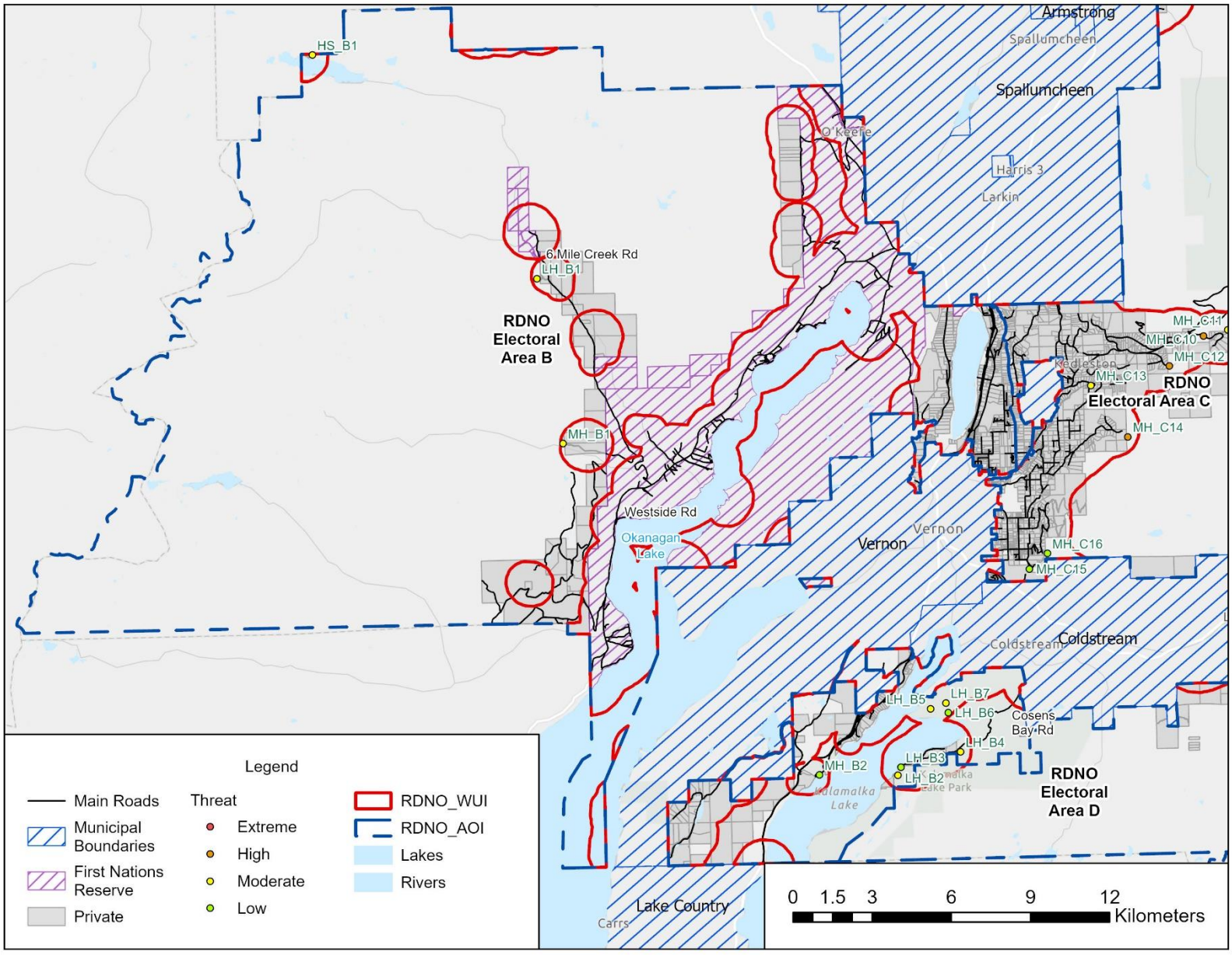


Figure 19. Wildfire Threat Assessment plot locations for Electoral Area B.

5.0 FireSmart Disciplines

This CWRP is designed to comprehensively plan for all aspects of community wildfire planning by structuring strategies based on the seven FireSmart disciplines:

1. Education
2. Legislation and Planning
3. Development Considerations
4. Interagency Cooperation
5. Cross–Training
6. Emergency Planning
7. Vegetation Management

Each FireSmart discipline and its role in resiliency planning for RDNO Electoral Area B is outlined in the subsequent sections.[42]

[42] For more information on the BC FireSmart program, visit: https://firesmartbc.ca/

5.1 EDUCATION

Public education and outreach efforts help community members learn about wildfire and its potential impacts to their communities. In addition, these efforts should be designed to help individuals understand their role in taking action to reduce risk. Education and outreach activities are designed for all groups to benefit, including elected officials, community planners, residents, visitors, businesses, land managers, first responders, and more.

Goal: This CWRP aims to establish effective FireSmart educational activities and strategies so community members within RDNO Electoral area B understand the potential risk of interface wildfire and can play an active role to reduce that risk.

Context:

This CWRP is only successful if community members and stakeholders are collectively engaged in taking action to reduce the wildfire risk at the individual and community level. This CWRP aims to establish effective communication and develop educational activities so that each member of the community understands the potential for interface wildfire in Electoral Area B and can play their role to reduce that risk.

Action: Read and understand this CWRP's identified risks and recommended actions and make this CWRP publicly available to community members on the RDNO FireSmart website.

Action: Partner with local newspapers, radio, and community outlets to run a short monthly FireSmart column with seasonal tips, upcoming chipper/assessment dates, and Neighbourhood Recognition Program spotlights. Cross-post the same content on RDNO channels with a QR link to book assessments and sign up for alerts to keep messaging consistent across RDNO.

Action: Host events, such as those listed below, to introduce FireSmart concepts to the community and educate members on actions they can take.

- ***Wildfire Community Preparedness Day:*** This event could be used to create a neighbourhood work bee, promoting people working on hands-on projects in the neighbourhood such as yard waste removal, pruning/limbing, and a FireSmart demonstration station. The RDNO can provide some basic equipment, information, and could be tied in with a chipping event.
- ***Farm and Ranch Wildfire Preparedness Workshop:*** This workshop would be focused for farm, ranch, and acreage owners. The event could provide information on preparing outbuildings, equipment yards, fuel storage, access/egress, water supply, livestock plans, and coordination with emergency services during an evacuation.
- ***Neighbourhood Champion Workshop:*** Training and support for local neighbourhood champions, who can assist the FireSmart Coordinator with coordinating neighbourhood-level

mitigation activities, events, and sharing FireSmart information. This is beneficial for RDNO to develop a working list of neighbourhood champion contact information and for these individuals to network and share ideas.

- **FireSmart booths and community events:** For easy dissemination of information, a FireSmart Booth can be set up at other events happening within and around the RDNO. This can include; the Vernon Farmers' Market, the Armstrong interior Provincial Exhibition & Stampede, Vernon Home Show, etc. These events can be coordinated with the FireSmart Coordinators of the Member Municipalities to identify events in surrounding areas and provide support, promoting regional wide FireSmart messaging.
- ***Wildfire season open houses at fire halls:*** This can be coordinated with a structural fire event at the fire halls promoting wildfire and house fire safety. This allows community members to meet the Fire Department, see equipment used for firefighting, and ask questions to the FireSmart Coordinator, Emergency Management team, or the Fire Department.
- ***Home ignition Zone Yard Tours:*** The FireSmart coordinator or LFR's can lead a short walking tour through a neighbourhood for community members, stopping at community houses (which permission from the land owner) to demonstrate real examples of applying FireSmart to the home ignition zone and can demonstrate the process of a Wildfire Mitigation Assessment to the group. This concept can also be applied to RDNO owned properties, recently fuel treated areas, and Green Spaces to demonstrate RDNO's FireSmart efforts.
- ***Wildfire Preparedness and Evacuation Night:*** This could be completed in several different formats but having 5-minute lightning talks with a question-and-answer period would allow for quick dissemination of information. Topics could include alerts and go-bags, neighbourhood check-in plans, evacuation route, livestock trailer readiness, pet and livestock implications, etc. This event can be tied into other events.
- ***FireSmart Home Ignition Zone Competition:*** Create a friendly FireSmart competition between community members, or neighbourhoods. Ask for before and after FireSmart photos to be used as community examples in future FireSmart content.

To help increase event turnout, it may be appropriate to combine a FireSmart event with another event to attract more people. Incentives, such as FireSmart related prizes my entice community members to attend. When discussing FireSmart examples, use real community examples to showcase neighbourhood wins. Add kid-friendly activities to the events to entrain and educate the whole family.

Action: Support FireSmart BC Education Program through the local schools or education groups and offer short classroom/club sessions and take-home checklists.

Action: Work with local garden centers to label low-flammability species, display FireSmart planting/signage at point-of-sale and include QR codes to RDNO Guidance and Assessment bookings. Coordinate seasonal promos on non-combustible mulch and "right plant, right place" kits to nudge adoption.

Action: Install educational/interpretive signage regarding wildfire ignition prevention and the role of wildfire in ecosystems in regional parks, recreation sites, campgrounds, etc. where appropriate

within the electoral area. This could be particularly useful along high-use recreational trails or campgrounds where starts are more likely to occur.

Action: Host a short FireSmart briefing for local landscapers/roofers and publish a "trained vendors" list to streamline homeowner upgrades.

Current Status:

Residents in Electoral Area B are already engaging with FireSmart. Local groups are active, the Fire Danger Class board is in place, and outreach has included events, website resources, chipper days, and Home Ignition Zone (HIZ)/ Wildfire Mitigation Program Assessments. The RDNO's current offerings—Home Assessments, the Chipping Program, and public-education requests—are solid touchpoints to keep building awareness and action. Common barriers remain cost, debris handling, and physical ability, so program design and messaging should stress low-cost steps, assisted debris removal, and volunteer help. Assessments and debris removal are discussed in Section 5.7 Vegetation Management.

Across the RDNO survey, residents generally recognize FireSmart and are acting on it—many describe regular yard clean-ups and debris removal—but they want simpler guidance and a clear "who to call" for next steps. Interest in individual assessments is mixed, while openness to community-level programs is stronger. Preparedness feels middling: evacuation planning is uneven and go-bags are less common. People rely on Alertable and check the RDNO website and social channels, while still appreciating email and mailed newsletters. Many ask for modest financial help, help with heavy work, and convenient chipping or green-waste options.

Action: Share a seasonal-resident arrival kit in summer residential areas. This can include a one-page checklist, chipping program information, and Home Assessment sign-up link timed to common arrival weekends. Consider distribution through targeted mailouts, email to program subscribers, and handouts at transfer stations, and local retailers.

The RDNO FireSmart webpages are easy to find and navigate, with plain-language summaries and straightforward registration for assessments, chipping, and education requests. Having details and sign-ups on a single page reduces friction and helps Area B residents quickly see what is offered and how to participate.

Action: Schedule pre-season and high-risk-day reminders (website, email, alerts) with quick links to book Assessments and chippers.

Having a Local FireSmart Representative (LFR) who is regularly present around Area B will give the program a familiar, trusted face. A consistent local presence helps reduce hesitancy about government-led home assessments, making it easier for residents to say yes. The LFRs can host a table at farmers' markets and community events, book Home Ignition Zone assessments on the spot, coordinate chipper-day participation, and coach neighbourhoods through the Neighbourhood Recognition Program. Because the same people return season after season, follow-up is smoother, momentum is easier to sustain, and quality stays consistent across neighbourhoods.

Action: Add additional hires or volunteer LFR's or Wildfire Mitigation Specialists to assist in conducting community outreach, Wildfire Mitigation Program Assessments, Farm and Ranch Assessments, etc.

The FireSmart Canada Neighbourhood Recognition Program (NRP) is a natural "level-up" for streets and strata areas that have already taken part in chipping or HIZ visits. It guides a small group of homes through a simple plan—neighbourhood hazard assessment, priority tasks, and an annual event—leading to official recognition. The benefits are practical: a clear, step-by-step path for action, shared labour (e.g., clean-up days), and a visible goal that keeps people engaged year over year. Currently no neighbourhoods are recognized within Electoral Area B. Neighbourhoods to focus on for NRP in Electoral Area B should include the Cosens Bay Community Strata.

Action: Recruit and coach blocks/strata to achieve and renew FireSmart Canada NRP status; seed efforts with small "Neighbourhood Champion" micro-grants.

Although it is the responsibility of the RDNO FireSmart coordinator and program to disseminate FireSmart and wildfire risk reduction information to the community, FireSmart is also the responsibility of landowners. Below includes a list of resources and tasks that can be used by private property owners to begin their FireSmart journey.

- Follow the "FireSmart starts at home" guide[43]
- Book a Wildfire Mitigation Assessment with the RDNO[44]
- Sign-up for the RDNO Chipping Program[45]
- Attend RDNO related FireSmart and Wildfire events in your community
- Remove combustible materials from property as outlines in the FireSmart manual
- Choose FireSmart materials when making repairs or upgrades around the home, outbuildings, or other structures
- Complete a FireSmart Home Ignition Zone self-assessment[46]
- Visit the BC Wildfire Service dashboard to understand the latest updates during the wildfire season[47]
- On larger properties and conduct mini fuel treatments and vegetation removal, focusing in the home ignition zone and expanding outward over time.

[43] FireSmart begins at home guide. BC FireSmart.
[44] RDNO Home Ignition Zone Assessment. RDNO.
[45] RDNO Chipping Program. RDNO.
[46] Home Ignition Zone Self Assessment. BC FireSmart
[47] Wildfire Dashboard. BC Wildfire Service.

5.2 LEGISLATION AND PLANNING

Legislation and Regulation can be a very effective tool for reducing wildfire risk on provincial crown lands and within the administrative boundaries of local government or First Nation communities. Provincial acts and regulations provide the means for local governments and First Nation communities to implement wildfire risk reduction actions through bylaws.

Goal: The goal is to facilitate an understanding of how local, provincial and federal legislation can either support or restrict the ability to implement local policies and bylaws and other wildfire risk reduction activities.

Context:

Regional districts often work with limited tax bases and lean staff, so enforcing broad bylaws can be costly and unpopular in rural areas. Even so, a light, well-targeted regulatory backbone is useful: clear baseline rules set consistent expectations for development, provide a legal backstop in higher-risk situations, and align local practice with provincial standards. Within this context, several provincial and federal acts and regulations support or influence the CWRP process. A concise index of senior-government regulations is provided in Appendix C.

The following local bylaws related to wildfire risk reduction currently apply in Electoral Area B:

B.X.-Swan Lake Fire Protection Specified Area Bylaw 1056 and SilverStar Fire Department Bylaw 1347: The Regional District is authorized to provide local fire-prevention and firefighting services within the applicable service area, including building a fire hall and purchasing equipment. A nearby hall, trained crews, and the right gear improve response times and help keep wildfires smaller and less damaging.

Open Burning Bylaw 2514: Regulates open burning in Electoral Areas B and C to reduce uncontrolled fires and smoke. It sets a burn season (Oct 31–Apr 30), requires permits (Class A/B/Special), limits burning to “good” ventilation and safe weather, and lets inspectors restrict or stop burns. These controls lower escape risk and enable safer fuel disposal in the WUI.

The RDNO has expressed concern with the Open Burning Bylaw 2514, as it is not consistent with the burning language used by BCWS and the neighbouring Member Municipalities. The most successful Open Burn equivalent bylaws in other municipalities use similar language to BCWS so there is no misinterpretation of the bylaw or BCWS regulations. The bylaw should be easily accessible to residents with a clear avenue to acquire any required burn permits.

Action: Amend the current Open Burning Bylaw or develop a new Open Burning Bylaw that matches the language used by BCWS and neighbouring Member Municipalities. This could include:

- Language around fire types (Category 1, 2, 3, and 4 – Instead of Class A/B/Special)[48]
- Following fire ban restrictions similar to BCWS, instead of a restricted burning season
- Align Venting Index thresholds with the provincial smoke regime
    - Similar to the Regional District of Central Okanagan which requires residence to meet all requirements of the Province of BC's Open Burning Smoke Control Regulations[49]
- Provide a Provincial enactments and local bylaw hierarchy to clarify residence must follow the bylaw and all applicable provincial burning bylaws
    - Similar to the Regional District of Okanagan Similkameen Bylaw 2898, part IV 1.b[50].
- Review Member Municipality open burning bylaws to find similarities that can be applied across the region for shared messaging.

Action: Develop drought water use regulations to be applied to a current bylaw or developed as a stand-alone bylaw. This will ensure adequate water resources during emergency events. (See example in Appendix H Examples of FireSmart/Wildfire Bylaws).

In addition to the existing bylaws pertaining to wildfire and emergency response, the RDNO should consider establishing guiding principles for wildfire protection throughout the region. These guiding principles will help to steer future legislation, planning, development, firefighter training, and the overall FireSmart Program.

Action: Establish guiding principles for wildfire protection for the RDNO. (See example in Appendix H Examples of FireSmart/Wildfire Bylaws).

[48] https://www2.gov.bc.ca/gov/content/safety/wildfire-status/prevention/fire-bans-and-restrictions/open-burning?utm_source=chatgpt.com
[49] https://www.rdco.com/environment/outdoor-burning/
[50] https://www.rdos.bc.ca/assets/bylaws/BL2898.pdf

5.3 DEVELOPMENT CONSIDERATIONS

Development decisions, such as land use types, structure density, road patterns, and other considerations, shape the built and natural environments. These decisions can bring lasting impacts to the WUI and wildfire risk by affecting public and first responder safety and survivability of homes, critical infrastructure, and other community features. Considering these factors early in the development process can reduce wildfire risk to life safety and property.

Goal: To implement a strategy for decreasing the chance of structural losses within the AOI due to a wildfire, by utilizing regulatory and administrative tools to reduce wildfire hazard and increase the number of homes and other infrastructure compliant with FireSmart guidelines (with low ignition potential).

Context: Planning tools carry most of the day-to-day load. Official Community Plans (OCPs) set objectives and policies that guide land use; bylaws then operationalize those policies at the site scale. A balanced approach embeds wildfire resilience into existing frameworks—for example, wildfire-hazard Development Permit Areas, FireSmart-aligned subdivision and servicing guidelines, and zoning that reflects local risk—while pairing those measures with non-regulatory tools such as education, voluntary assessments, rebates, and partnerships with local fire departments and provincial agencies. This tiered approach advances resilience within resource constraints and respects rural values.

The following local plans and bylaws related to wildfire risk reduction currently apply in Electoral Area B:

RDNO's Electoral Areas B & C Official Community Plan (Bylaw 2626): Sets long-term land-use policy to guide growth, environmental stewardship, and development decisions in Areas B and C. The OCP weaves wildfire considerations into land-use and development decisions—identifying interface areas and applying permit/policy tools to guide safer siting, design, and infrastructure. This framework reduces exposure, supports prevention, and improves response readiness across Areas B and C.

The RDNO Electoral Area B&C OCP outlines the following objectives and policies relating to wildfire/emergency management:

Wildfire Risk Context & Mapping

- 16.4.3 The Plan recognizes that "Electoral Area 'B' and 'C' fall within the community interface of large forested areas … wildfire will be an ever-present threat"

- Schedule "D" (Wildfire Interface Map) delineates all parcels subject to heightened hazard; those parcels trigger the Wildfire Interface Development Permit Area (WI-DPA).

Wildfire Interface Development Permit Area (WI-DPA)

- 16.1, 16.4 WI-DPA is designated under s.919.1 (1)(b) of the Local Government Act to "ensure that particular development and maintenance measures are implemented to protect persons and property from wildfire hazard" and applies to any subdivision or building permit inside Schedule D.
- 16.4.4 FireSmart Guidelines
    - Maintain a 10 m debris-free construction zone and limb trees to 2 m.
    - Thin crowns to ~3–6 m spacing within 30 m of buildings.
    - Require minimum Class C roof assemblies (BCBC) and screen eaves, decks & under-floors against embers.
    - Integrate roads, trails or parks as fire breaks and ensure reliable water supply & access for fire fighters.
    - Avoid building sites in areas that may accumulate fire fuel and funnel winds
- 16.4.5 Subdivisions ≥4 lots must submit a Registered Professional Forester (RPF) wildfire assessment. The RPF may require a Section 219 restrictive covenant to secure ongoing fuel-reduction and to save harmless the RDNO.
- 16.4.7 Every WI-DPA permit must note that additional best practice information is available in the "Home Owners FireSmart Manual."

FireSmart Practices & Policy Direction

- Policy 14.1.21 – "Support and encourage the application of FireSmart principles for existing and new development."
- WI-DPA guidelines embed core FireSmart concepts: defensible space, ember-resistant design, access and water for suppression.
- Rural Lands Policy 5.1.4 advises developers to consult BC Ministry of Forests on subdivision design "with regard to protection of the proposed development from wildfire hazard".

Interface Development Tools – Covenants & Maintenance

- 16.4.5 Section 219 Covenants required where an RPF identifies high hazard, locking in defensible-space prescriptions and ecological considerations, and indemnifying RDNO.

Fire-fighting Infrastructure & Water Supply

- Policy 14.1.20 - The Plan acknowledges service gaps: outside BX & Swan Lake, "fire protection services are **not provided** in the Westside, Commonage or Cosens Bay areas," but region-wide emergency response is maintained.
- 10.1 A new reservoir is proposed in the northeast portion to deliver "maximum fire flow for commercial and light-industrial developments" with developer cost-recovery requirements.

- 13.3.1 Growth-Area Subdivisions – All new residential projects inside the RGS growth boundary must connect to a community water system.
- 5.1.5 Rural Developments – Rezoning proposals must demonstrate a secure water source; hydro-geological studies can be required "because of the importance of water supplies for new development".

Evacuation & Transportation Links

- Transportation objectives seek to "provide safe travel routes for all modes of transport" and call on MoTI to widen shoulders and improve Pleasant Valley and L&A Road safety.

Related Development Permit Areas

- 16.4.1 Riparian & Swan Lake DPA and Environmentally-Sensitive Lands DPA intersect with WI-DPA. Coordinating fuel-management with ecological protection is explicitly encouraged so "ecosystem values are addressed in wildfire mitigation activities".

Recommendations to Consider for Improving RDNO's Electoral Areas B & C Official Community Plan (Bylaw 2626)

Action: WI-DPA Administration and Applicability

- *(16.4)* Publish or clearly link the referenced Schedule "D" Wildfire Interface Map so applicants and staff can verify applicability.
- *(16.4)* Add a one-page WI_DPA checklist (submitted with permits) to streamline reviews; audit a small sample annually) (See Appendix H for an example).
- *(16.4)* Use Registered Professional Forester sign-off for higher-risk files to reduce staff burden.

Action: Site Design and Building Standards

- *(16.4.4)* Require a minimum of Class A roofing instead of Class C*
- *(16.4.4)* Embed a 1.5 m non-combustible surface zone around structures*
- *(14.1.21)* Support and encourage the application of FireSmart principles for existing development, but make it mandatory for new development.

** Consider adopting FireSmart BC guidance by reference; updates apply without OCP amendment.*

Action: Covenants and Maintenance

- *(16.4.5)* Note intended maintenance outcomes when the covenant is triggered.
- *(16.4.5)* Re-affirm covenants at natural touchpoints (resale or new permit) instead of fixed inspection cycles to reduce burden on staff.
- *(16.4.5)* Provide a simple covenant template coupling wildfire and ecological objectives for consistency. (See example in Appendix H)

Action: Water Supply and Fire-Fighting Infrastructure

- *(13.3)* Where community water exists, cross-reference local standards for hydrant placement/flows in subdivision/servicing policies. In unserviced areas, accept simple alternatives (cisterns, drafting/dry hydrants) with basic upkeep notes rather than complex testing regimes.
- *(13.3, 5.1.5)* Require "as-built" GIS updates for public and private hydrants/water points so responders can find them quickly (low ongoing admin).
- *(13.3)* Acknowledge staged drought measures that prioritize firefighting reserves and cross-reference the drought/water-use bylaw.

Action: Evacuation and Transportation

- *(15.1.5)* Add consideration for emergency evacuation.
    - Require a secondary egress for new single-access subdivisions.
    - Ensure road geometry supports emergency apparatus (width, grade, turning radius) and all-season maintenance.

Action: Overlapping DPAs and Cultural Values

- *(16.4.1)* Add a line acknowledging cultural values alongside ecological ones when planning fuel work in overlapping DPAs.

Action: Delivery and Compliance Approach

- Prioritize risk-based auditing: Focus scarce inspections on highest-risk areas identified in the CWRP mapping.
- Prefer incentives over heavy enforcement: Pair guidance with rebates/recognition; reserve penalties for egregious cases given limited staff capacity.
- Adopt by reference: Point to current FireSmart BC materials so updates flow through without OCP amendments.

There are several examples of other municipalities and regional districts with strong examples of Wildfire Development Permit Areas. This includes:

- The City of Williams Lake[51] – Which incorporate the requirement of FireSmart Materials and FireSmart Landscaping within the Wildfire DPA.
- The District of North Vancouver[52] – Which includes an interactive map for property owners to easily interpret the location of the Wildfire DPA and quick visual reference guides and brochures for residence to easily review.

[51] https://www.williamslake.ca/DocumentCenter/View/291/CHAPTER-7DEVELOPMENT-PERMIT-AREAS?bidId=
[52] https://www.dnv.org/business-development/wildfire-hazard-development-permit-area-dpa

- Squamish – Lillooet Regional District[53] – Provides a 1-page reference guide of residence with reference to each Electoral Area OCP.

A list of additional community with example Wildfire Development Permit Areas is included in the FireSmart Development Permit Guide[54].

Subdivision Servicing Bylaw, 2013 Bylaw 2600: Sets servicing standards for new subdivisions in Electoral Areas B–F. *Section 410* requires fire hydrants in subdivisions that have both fire protection and a community water system, installed to the standards of the fire department or water system authority. Requiring hydrants ensures reliable firefighting water supply in the WUI, supporting faster knockdown and limiting fire spread and damage.

Action: Where community water is not feasible, require accredited alternatives (cisterns, dry hydrants/drafting sites) per FUS Alternative Water Supply protocol.

Action: Add requirements for year-round access/clearances, visible marking, and GIS as-built updates so crews can find and use public and private hydrants quickly (supports WUI readiness). *(General best-practice recommendation.)*

Zoning Bylaw #3000: Establishes zoning for Electoral Areas B–F (excluding the SilverStar area of Area C) and regulates how land, buildings, and structures may be used. By controlling building placement and development density—and mapping where different uses can occur—the bylaw provides the framework that other wildfire tools (e.g., DPAs, hydrant standards) rely on to improve separation between structures and maintain access for responders, which supports WUI risk reduction.

Existing Regulations Related to Fire, Wildfire, FireSmart, or Water Use:

Fire

- The only mentions of "fire" are indirect and mostly pertain to:
  - Compliance with the BC Building Code and BC Fire Code.
  - Restrictions on incineration of certain waste types in industrial zones.
  - No reference is made to wildfire-specific setbacks, building materials, or vegetation management.

Water Use

- Water-related sections include floodplain management, riparian area protection, and regulations for community water systems:
- Community water systems are defined but not linked to emergency water supply or wildfire suppression capability.

[53] https://www.slrd.bc.ca/planning-building/planning-development-services/development-application-forms-guides-fees/application-forms-guides
[54] https://firesmartbc.ca/wp-content/uploads/2024/10/2024.10.02_FSBC_Wildfire_DPA_Guidance.pdf

Vegetation and Landscaping

- There are landscaping regulations (Section 10), but these do not address flammable plants, defensible space, or FireSmart landscaping principles.

Recommendations to Consider for Improving RDNO's Zoning Bylaw (Bylaw 3000)

Action: Add Specific Wildfire-Resilient Development Regulations

- Include FireSmart Guidelines in Landscaping Requirements *(9.1, 10.1)*
    - Reference FireSmart BC Guidelines so updates apply without bylaw rewrite

Action: Static/alternative water where no pressurized system

- Add a cross-note in *Section 5 (Subdivision Regulations) (new clause after s.5.6)* pointing to Subdivision Servicing Bylaw 2600 for hydrants/cisterns/dry-hydrants; keep base definitions for "community water system" in *Section 2 (Definitions).*

Action: Improve Regulations for Outbuildings and Accessory Structures

- Add a minimum separation from the principal dwelling for combustible accessory buildings in *Section 4 (Development Regulations),* and tighten setback exceptions in *s.4.4* where needed.
- Include limits on plastic sheds, wood storage, and trellises in the Immediate and Intermediate Zones.

Action: Encourage Fire-Resistant Building Design

- Place exterior-material and ember-resistant venting requirements in *Section 4 (Development Regulations)* for designated wildfire hazard zones.

Action: Enhance Access and Egress Requirements

- Use *s.5.6 (Building Sites & Private Access Driveways)* to set driveway width/grade/turn-around standards for heavy apparatus.

Action: Add Reference to FireSmart in Definitions and General Use

- Insert definitions for FireSmart, wildfire resiliency, Immediate/Intermediate/Extended Zones in *Section 2 (Definitions)*; add a brief applicability note in *Section 3 (General Use Regulations)* that developments in mapped wildfire areas must meet the *Section 4 standards*.

5.4 INTERAGENCY COOPERATION

It takes the collaborative efforts of multiple stakeholders working together to achieve a fire resilient community. These people include the local fire departments, local government staff, elected officials, First Nations representatives, industry representatives and provincial government representatives in your area. Individually they are responsible to their own organizations, but all the stakeholder organizations are dependent upon each other to develop an effective Community Wildfire Resiliency Plan and undertake a successful wildfire response.

Goal: To establish and maintain collaborative relationships amongst the RDNO staff and key emergency response and management partners, including municipal Fire Departments and emergency preparedness staff, local First Nations, BC Wildfire Service, EMCR, Ministry of Forests, and other stakeholder groups to achieve a more wildfire resilient region.

Context:

As of 2024, the FCFS Program required all applicants to participate in a *Community FireSmart and Resiliency Collaborative* (CFRC) in order to receive additional funding through the program.[55] This requirement for funding was implemented upon recognition of the importance of collaboration in emergency preparedness and response between various partners, agencies, and stakeholders sharing the landbase. Understanding the roles and responsibilities different groups play helps streamline wildfire preparedness and emergency response efforts.

The Wildfire Resiliency and Training Summit is an annual conference hosted by FireSmart BC that brings together wildfire practitioners from across BC. Attendees range widely from fire department chiefs and local government emergency management staff to provincial government staff, BC Wildfire Service, First Nations representatives, and forestry consultants. Currently under the FCFS Program, funding is available for up to four local government staff (including fire departments) to attend the Wildfire Resiliency and Training Summit annually.

Action: Annually attend the Wildfire Resiliency Training Summit.

Current Status:

The RDNO has an active CFRC comprised of key internal local government staff, including the FireSmart Coordinator, Protective Services Manager, Rural Services Manager, and other RDNO staff when required. In addition to the RDNO staff, the CFRC extends to the FireSmart Coordinators and/or

[55] For more information regarding FireSmart Community Funding & Supports Program visit: https://www.ubcm.ca/cri/firesmart-community-funding-supports

a representative from each Member Municipality and the two First Nations groups (Splatsin First Nation, and the Okanagan Indian Band). The group meets quarterly to discuss wildfire preparedness and actions to cooperatively implement FireSmart programs throughout the entire region. Where applicable invite additional community partners to attend the CFRC meetings, such as BCWS, Ministry of Forests Wildfire Risk Reduction, BC Hydro, CN and/or CPKC Railway, etc.

Action: Continue to participate in the North Okanagan Community FireSmart and Resiliency Collaborative and share findings of CWRP with partners.

Action: Invite additional community partners to attend the CFRC when appropriate to share knowledge regarding ongoing wildfire risk reduction projects in the region, voice community concerns to other jurisdictions and strategize mid- to long-term planning.

Action: Work collaboratively with woodlot owners with license areas adjacent/near to private residences to manage for wildfire risk in forest management planning and harvest operations.

As part of this CWRP process, the RDNO held an engagement session with the Member Municipalities and local First Nations groups. These individuals already participate in the North Okanagan CFRC. Conversations focused around ideas developed in previous CFRC meetings, and how RDNO can help other communities better establish their FireSmart programs to coordinate a region wide program and share resources. The following are actions that arose from this engagement meeting, and may need to be further discussed at future CFRC meetings:

Action: Collaborate with the Member Municipalities and local First Nation groups during conducted training, extending offerings to seats in courses or conduct collaborative training events.

Action: Consider establishing a mechanism which allows to share resources (LFR's, WMS trained individuals, FireSmart materials, assistance from FireSmart Coordinators, etc), when needed with the Member Municipalities and Local First Nations.

Action: Have a discussion with UBCM on the concept of pooling FCFS funding between multiple jurisdictions (RDNO, Member Municipalities, local First Nations) to conduct FireSmart activities.

Action: Consider developing a region wide chipping program to be utilized by RDNO, Member Municipalities, and the local First Nations.

Action: Develop a group calendar or other format for members of the CFRC to share community events (not just FireSmart) for other members to participate in, or provide additional support for that community's FireSmart program.

In addition to the CFRC Meetings, interagency cooperation should expand to active FireSmart Committees and community members. The Cosens Bay area has recently established a FireSmart Committee, which should be encouraged by RDNO.

Action: Host a Cosens Bay specific community FireSmart meeting, inviting the Cosens Bay FireSmart Committee, BC Parks, and other key agencies to discuss safety and wildfire risk reduction. This may evolve into a sub CFRC specific to the Cosens Bay Community.

Action: Provide additional support to the Cosens Bay FireSmart Committee, such as providing signs, equipment, and resources for FireSmart events.

5.5 CROSS-TRAINING

Wildland-Urban Interface resiliency planning and incident response draw on many different professions who do not typically work in wildfire environment. Cross-training of fire fighters, public works staff, utility workers, local government and First Nations administration, planning and logistics staff, and other key positions will help support the development of comprehensive and effective wildfire risk reduction planning and activities, as well as a safe and effective response.

Goal: Develop a diverse skill set within local government, community members, Fire Departments, etc. to build redundancy and facilitate understanding across individuals/groups engaged in wildfire preparedness and response.

Context:

Cross training helps build relationships between different groups/agencies/organizations, identifies areas of strength and weakness in existing emergency operations and processes, and ultimately enhances emergency preparedness. Currently, a number of cross training courses are available to local government staff and fire department personnel.

Examples of available training courses for fire department members include:

- **Wildfire Risk Reduction Basics Course** - Free, online course for non-forest professionals that introduces the key concepts to minimize the negative impacts of wildfires in BC.
- **Fire Life and Safety Educator** - A public education course for fire safety education.
- **ICS-100 (Incident Command System)** - Introduction to an effective system for command, control, and coordination of response at an emergency site.
- **S-100** - Basic fire suppression and safety and S-100A (annual refresher).
- **S-185** - Fire entrapment avoidance and safety.
- **SPP-WFF1** - Wildland Firefighter Level 1 (includes S-100, S-185, and ICS-100).
- **Wildland Structure Protection Program (WSPP-115)** - training for structure protection unit crews and WSPP-FF1(train the trainer).
- **S-231** - Engine Boss (training for structure protection program in a WUI event).
- **Task force leader (TFL-1 & TFL-Advanced)** for structure defense only – course for structural fire personnel to monitor and assess specialty resources that work together to accomplish a common task
- **Structure Division/Group Supervisor (DivS/GrpS)** for structure defense only – course for structural fire personnel to implement assigned portion of the Incident Action Plan and be responsible for all operations conducted in the division/group)

Action: Provide opportunities for additional training for the members of the BX-Swan Lake Fire Department.

Cross-training opportunities for cooperative community wildfire response (CCWR) organizations now exist though the FCFS program. Although there are currently no CCWR organizations, if any do arise the following training courses are available to these personnel:

- **S-100** - Basic fire suppression and safety and S-100A (annual refresher).
- **S-185** - Fire entrapment avoidance and safety.
- **ICS-100 (Incident Command System)** - Introduction to an effective system for command, control, and coordination of response at an emergency site.
- **Wildfire Risk Reduction Basics Course** - Free, online course for non-forest professionals that introduces the key concepts to minimize the negative impacts of wildfires in BC.
- **SPP-115** – Structure Protection Program within the WUI.

Action: If any Cooperative Community Wildfire Response (CCWR) organizations are established throughout Electoral Area B, provide basic training courses in wildfire and safety to the personnel.

Cross-training opportunities also exist for local government emergency management personnel and the FireSmart Coordinator position. Eligible training courses available to these personnel include:

- **Local FireSmart Representative (LFR) training** – free online course to enhance understanding of current Wildland Urban Interface concepts and wildfire hazard assessments.
- **Wildfire Mitigation Program** – Wildfire Mitigation Specialist (WMS) training for new applicants to the WMP program.
- **Wildfire Mitigation Specialist 'Train the Trainer'** - This course is available for active WMS to become a certified WMS trainer that can instruct WMS training to staff within their community or neighbouring communities.
- **Introduction to Emergency Management in Canada (EMRG-1100)** - Basic concepts and structure of emergency management.
- **ICS-100 (Incident Command System)** - introduction to an effective system for command, control, and coordination of response at an emergency site.
- **FireSmart BC Landscaping Course** - free online course suitable for public works, lands, and/or parks staff.
- **FireSmart BC Farm and Ranch Training** – free online source suitable for FireSmart position

Action: Provide opportunities to RDNO staff, FireSmart Coordinator, and committed community members for additional training relating to FireSmart and wildfire risk reduction.

Action: Wildfire Mitigation Specialist training for RDNO staff to allow these individuals to conduct Wildfire Mitigation Program, Cultural Site and Green Spaces, and Critical Infrastructure Assessments.

Training opportunities to develop cultural and prescribed fire practitioners. Eligible training available to these personnel includes:

- **BCTREX –** Prescribed Fire Training Exchange. This is a collaborative, hands-on training event designed to bring together firefighters, land managers, researchers, and other stakeholders to conduct prescribed burns while gaining experience and exchanging knowledge.
- **RX310 Introduction to Fire Effects** – An introduction to fire effects that offers an overview of the fundamental principles and ecological impacts of fire across diverse ecosystems.
- **2-11 The Fire Environment for Firefighters and Dispatchers** – An introduction to the influences of weather, topography, and fuels on wildland fire behaviour to support safe and effective fire management decisions.
- **S-290 Principles of Fire Behaviour** – An intermediate-level course on the factors that influence wildland fire behaviour to support predictive decision-making in fire operations.
- **S-291 Understanding the Fire Weather Index System** – Concepts and application of the Canadian Fire Weather Index (FWI) System for evaluating and predicting fire danger conditions

Wildland live fire training is an excellent opportunity for cross-training, interagency cooperation, and vegetation management for all parties involved. Potential prescribed fire areas are described in Section 5.7. The RDNO must work with the BCWS zone staff to further identify suitable locations for live fire training burns, obtain necessary authorizations, develop the burn plan, implement the live burn training, and debrief to inform future training and project planning. This training should extend to the FireSmart coordinator, RDNO fire department staff, other RDNO staff as suitable, Member Municipality representatives, and the local First Nations.

Action: Provide training opportunities to the FireSmart Coordinator, essential RDNO staff, and members of the BX-Swan Lake Fire Departments to develop cultural and prescribed fire knowledge through eligible training courses.

Action: Provide opportunities for live wildland fire training exercises. Collaborate with RDNO fire departments, RDNO staff, BCWS, Member Municipalities, and the local First Nations to practice working under unified command in a wildland environment.

5.6 EMERGENCY PLANNING

Community preparations for a wildfire emergency requires a multi-pronged approach. Individuals and agencies need to be ready to react by developing plans, mutual-aid agreements, resource inventories, training, and emergency communication systems. All of these make it possible for a community to respond effectively to the threat of wildfires.

Goal: The goal of emergency planning is to prepare the community to respond safely and effectively, in partnership with local first response agencies and local and regional authorities to wildfire events.

Context: Emergency management programs should focus on the four pillars of emergency management planning:

1. Prevention and mitigation,
2. Emergency preparedness,
3. Response activities, and
4. Recovery.

As observed in recent busy fire seasons, simultaneous wildfire emergencies across the province can strain resources, leading to shortages in heavy equipment, BCWS staff, and contractors. Resource availability may be severely limited or scarce during such times, necessitating the triage or prioritization of emergencies provincewide. Therefore, local governments, partners, and individuals must be prepared and proactive in their response efforts. Comprehensive and apt Emergency Response Plans are a critical first step for communities to prepare for a large emergency event.

Current Status:

In 2023, the new Emergency and Disaster Management Act (EDMA) came into force, replacing the previous Emergency Program Act. To support the new legislation, the provincial government is updating and developing regulations in consultation and cooperation with First Nations. The RDNO is currently awaiting finalization of the new EDMA Regulations to update their current Emergency Management Plan for the entire RDNO and ensure alignment with the most recent legislation.

Electoral Area B has an Evacuation Plan in place for Cosens Bay, an isolated community with limited ways in or out making emergency scenarios challenging. The plan is strong where it matters most. It clearly names the primary road out and lays out three likely scenarios—wildfire, a water evacuation if the road is blocked, and debris slide or flood. It also gives practical across-water direction, including destinations, distances, expected travel and turnaround times, and Transport Canada considerations. The contact lists are ready to go, with transport vendors (buses, taxis, boats) and key partners such as EMBC/PREOC, RCMP, OKIB, and BCWS. Finally, it includes placeholders for the on-the-ground pieces—

muster points, traffic and perimeter control points, reception centres, and a vulnerable-persons section—so operational details can be filled in quickly.

Emergency plans must be crystal clear and step-by-step, because the people filling these roles—staff, volunteers, or on-call managers—may have limited practical experience. Plain-language checklists, clear triggers, and "who does what, when" reduce hesitation, prevent errors, and keep actions moving.

The Cosens Bay Evacuation Plan would benefit from clearer role definitions and simple, role-based checklists for Alert, Order, and Rescind stages; explicit evacuation triggers tied to clearance times; completed details for muster points, traffic control, reception centres, and vulnerable populations; prewritten public-info messages; and a short section on training, exercises, and plan upkeep. Together, these upgrades make the plan faster to activate and more reliable when conditions change quickly.

Recommendations to Consider for Improving the Cosens Bay Evacuation Plan:

Action: Define authority, roles, and ICS structure**.** Add who can issue Alerts/Orders/Rescinds, when tactical vs. strategic evacuation is used, and the EOC/Evacuation Branch org. chart (with responsibilities). Develop a one-page org. chart and a "who signs what/when" box

Action: Add stage- and role-based checklists. The current evacuation plan has headings; turn them into actionable checklists for Alert, Order, Rescind by position (EOC Director, Info Officer, Ops, Planning, Logistics, Finance, Evacuation Branch).

Action: Document trigger calculations. Create a short method to decide "when to evacuate" based on time to notify, time to clear, route capacity, and fire spread—then link to your zone clearance table.

Action: Shelter-in-place criteria. Shelter in place vs. evacuation is mentioned conceptually; add explicit criteria and messaging as to when SIP is viable or when it is not for Cosens Bay.

Action: Finish the placeholders with specifics. Populate: muster/assembly points**,** traffic & perimeter control points (with staffing/lead), primary/secondary reception centres (addresses, hours, ESS contact), and the vulnerable-persons table**.**

Action: Reception/ESS operations & re-entry. Add a page on Reception Centre/Group-Lodging set-ups, liaison cadence, and re-entry planning steps (permits, safety checks).

Action: Security & access management. Include roadblock/barricade process, security checkpoints, and temporary access permits for essential re-entry (forms/logs).

Action: Add pre-approved Alert/Order/Rescind messages, SIP messaging, water-evac FAQs (trailers, one-vehicle rule, where to moor).

Action: Animal/livestock provisions. Cosens plan lists CDART but lacks procedures. Add small-animal and livestock relocation steps/timing and holding locations.

Action: Plan governance: maintenance, training, exercises, distribution. Create sections for confidentiality/version control, annual review & record of amendments, distribution list, exercise plan (at least annually), and staff training/socializing.

Action: Best-practices & resources appendix. Add a one-pager summarizing best practices and a hyperlinks list (EMCR guides, DriveBC, ESS).

Action: Water-evacuation compliance and contracts. Transport Canada considerations area already flagged; add a short compliance checklist, plus standby agreements with boat operators for Alerts (rates, capacities, muster/landing SOPs).

In addition to the Cosens Bay Evacuation Plan, a general RDNO Emergency Management Plan gives everyone the same playbook, so response is coordinated even when an incident starts outside a "vulnerable" pocket or jumps between communities. It sets common roles, routes, and communications, which reduces confusion at road junctions, reception centres, and detours shared by multiple areas. It also covers cross-cutting needs—at-risk residents who live outside priority zones, mutual-aid and contractor call-outs, public messaging, and re-entry—so nothing falls through the cracks. Region-wide planning improves resource prioritization during surges (tourism, smoke impacts, highway closures) and avoids conflicting directions between neighbouring spots. Finally, it helps with funding and training: one baseline plan supports consistent exercises and quick updates, while community-specific addenda handle the unique risks where they exist.

Action: Complete a Hazard, Risk & Vulnerability Assessment (HRVA). Commission an HRVA for the electoral area to identify top hazards, who/what is exposed (people, roads, utilities), vulnerable populations, and seasonal pinch points. Deliverables should include a simple risk map, priority actions, resource gaps, and a short improvement plan (alerts, evacuation, communications). Involve RDNO, BCWS, neighbouring jurisdictions, ESS/social services, and local champions; update the HRVA annually or after major events.

Action: Create an Emergency Management Plan and centralized regional Emergency Operations Centre. Hire a qualified planner to produce a right-sized, all-hazards plan: map risks and routes; define clear roles and plain-language checklists; set up multi-channel alerts (email/landline/radio); outline Reception/ESS and basic re-entry; and establish a light training and annual update cycle—coordinated with RDNO, local fire/ESS, nearby jurisdictions, and Indigenous partners.

It is important to not just have an Emergency Management Plan, but know the entirety of the plan, so when an emergency event happens, the RDNO is prepared to execute the procedures. This can be done in a variety of ways but should be conducted at least annually prior to fire season to ensure staff is ready for a wildfire emergency. Examples of training on the Emergency Management Plan could include mock scenarios, tabletop exercises, round table discussions of the plan, etc., and can include RDNO staff, Fire Department Members, and external partners. Topics can range from how to action wildfire, evacuations, or setting up the EOC. The following guides can be used as resources for establishing Emergency Management Plan Training:

1. US Federal Emergency Management Agency – Wildfire Evacuation Exercise Starter Kit[56]
2. Red Cross – Quick Drill Wildfire[57]
3. British Columbia Association of Emergency Managers – Emergency Operations Centre Wildfire Exercise Support Package[58]

Action: Conduct an annual cross-training event with RDNO staff, BX-Swan Lake Fire Department, and interested external partners (Member Municipalities, local First Nations, BCWS, etc.) that simulates using the emergency response plan.

5.6.1 Pre–Incident Wildfire Response Planning

Pre-incident wildfire response planning is recommended for Electoral Area B to guide wildfire suppression strategies and tactics. Also known as a pre-suppression plan, the pre-incident plan incorporates essential fire management knowledge and information into one place, which guides wildfire response tactics and increases fire suppression efficiencies. The plan may be developed with BCWS, and adjacent response partners to facilitate firefighting assistance. The plan should be reviewed before each fire season, and updates should be made if needed. *Canada's National Guide for WUI Fires* is a valuable resource for facilitating the planning process.[59] The guide includes a planning checklist, which is listed below (Table 17), to help develop the plan and accompanying maps. Evacuation route planning and testing are high priorities for incorporating into the pre-incident plan.

[56] https://preptoolkit.fema.gov/web/em-toolkits/wildfire-evacuation
[57] https://www.readyrating.org/resource-center/training-and-exercises/quick-drill-wildfire?utm_source=chatgpt.com
[58] https://bcaem.ca/wp-content/uploads/BCAEM-EOC-Exercise-Scenario-Wildfire.pdf?utm_source=chatgpt.com
[59] National guide for wildland – urban – interface fires https://nrc-publications.canada.ca/eng/view/object/?id=3a0b337f-f980-418f-8ad8-6045d1abc3b3

Table 17. Example of a pre–incident planning checklist

Command

- Escape Fire Situation Analysis (if appropriate)
- Pre-positioning needs
- Draft delegation of authority
- Management constraints
- Interagency agreements
- Evacuation protection needs
- Closure procedures

Operations

- Heli–spot, Heli–base locations, flight routes, restrictions, water sources
- Control line locations
- Natural barriers
- Safety zone options
- Staging area locations
- Fuel caches
- GPS locations for helicopter access

Logistics

- Base camp locations
- Roads, trails (including limitations)
- Utilities
- Medical facilities
- Stores, restaurants, service stations, accommodations
- Transport resource locations
- Rental equipment sources (by type)
- Construction contractors
- Sanitary facilities
- Police, fire departments, forest service, ambulance
- Power utility companies (gas and pipeline companies)
- Communications (radio and frequencies, telephone)
- Sanitary landfills
- Potable water sources
- Maintenance facilities

Planning

- Community base map
- Topographic maps
- Infrared imagery
- Vegetation/fuel maps
- Hazard locations (ground and aerial)
- Archeological and cultural base map
- Endangered species and critical habitat
- Sensitive plant populations
- Water Sources
- Land status
- Priority zoning
- Access and egress points and routes
- High risk facilities (e.g., schools, hospitals)
- Infrastructure

5.6.2 Wildfire Preparedness Planning

As part of pre-incident planning, the Regional District may consider developing local daily action guidelines based on expected wildfire conditions. The table below provides a template that can be tailored specifically to the locality, outlining actions that staff, fire department members, and other emergency staff can take as fire danger levels change throughout the year. Some of these actions are already undertaken annually, (e.g. during Extreme fire danger, EOC staffing availability information is updated, and natural area closures occur), while other actions have not yet been initiated. Year-round, fire danger signs posted throughout the region should be updated to reflect the current fire danger.

Table 18: Sample Wildfire Response Preparedness Condition Guide

Sample Wildfire Response Preparedness Condition Guide	
Prep-Con Level	**Action Guidelines**
I LOW	• All Community staff on normal shifts. • Staff will update fire danger signs.
II MODERATE	• All Community staff on normal shifts.
III HIGH	• All Community staff on normal shifts. • Regional fire situation evaluated. • Daily fire behaviour advisory issued. • Wildland fire-trained Community staff and EOC staff notified of Prep- Con level. • Establish weekly communications with local wildland fire agency contacts • Hourly rain profile for all weather stations after lightning storms. Update fire danger signs.
IV EXTREME	• Rain profile (see III). • Daily fire behaviour advisory issued. • Regional fire situation evaluated. • EOC staff considered for stand-by. • Wildfire Incident Command Team members considered for stand-by/extended shifts. • Designated Community staff: water tender and heavy machinery operators, arborists may be considered for stand-by/extended shifts. • Provide regular updates to media services members/community staff on fire situation. • Update public website with new information changes.
V FIRE(S) ONGOING	• All conditions apply as for Level IV (regardless of actual fire danger rating). • Provide regular updates to media/structural fire departments/park staff on fire situation. • Mobilize EOC support if evacuation is possible, or fire event requires additional support. • Mobilize Wildfire Incident Command Team under the direction of the Fire Chief. • Implement Evacuation Alerts and Orders based on fire behaviour prediction and under the direction of the Fire Chief.

Action: Assess the number of residents that may be more vulnerable or at higher risk during an emergency evacuation and what specific support they may require. Social support service groups and organizations will be a good resource for learning this general information while keeping confidentiality.

Action: Assess, inventory, and purchase FireSmart structural protection equipment.

Action: Conduct pre-incident planning to create (i) a community specific pre-incident checklist and, (ii) a set of wildfire response preparedness condition guidelines, which should both be reviewed prior to each fire season.

Action: Train LFR's and WMS trained individuals on the RDNO Emergency Management Plan and Evacuation Plans to deploy them as informational resources during evacuations or other emergencies.

5.7 VEGETATION MANAGEMENT

The general goal of vegetation management is to reduce the potential wildfire intensity and ember exposure to people, infrastructure, structures and other values through manipulation of both the natural and cultivated vegetation that is within or adjacent to a community. A well-planned vegetation management strategy that is coordinated with development, planning, legislation and emergency response wildfire risk reduction objectives can greatly increase fire suppression effectiveness and reduce damage and losses to structure and infrastructure.

Goal: Proactively manage vegetation at multiple scales such as the Home Ignition Zone, Community Zone, and Landscape Zone to reduce the potential wildfire intensity and ember exposure to people, infrastructure, and other values.

Context:

Fuel management, also referred to as vegetation management or fuel treatments, is an important element of wildfire risk reduction within the WUI. The primary objective of fuel management is to reduce the fuels available to burn and alter aspects of wildfire behaviour for safer and more effective suppression strategies.

61.5% of the one-kilometer WUI area throughout Electoral Area B is occupied by private land parcels, First Nations land, or Federal First Nations reserves. Fuel management treatments on any of these property types are ineligible for funding. Completing fuel management treatments on provincial Crown land without similar wildfire risk reduction activities and treatment on adjacent private land will ultimately reduce the effectiveness of these fuel treatments. This highlights the critical importance of private landowners implementing FireSmart activities on their homes/structures and extending out into the Immediate, Intermediate, and Extended Zones. This is particularly important for large, forested private land parcels often found in rural communities.

5.7.1 FireSmart Landscaping

FireSmart landscaping is the removal, reduction, or conversion of flammable plants (such as landscaping for residential properties, parks, open spaces, and critical infrastructure), in order to create more fire–resistant areas in the Home Ignition Zone around homes, structures, and infrastructure. The *FireSmart BC Landscaping Guide*[60] is an excellent tool to help residents and planners make informed choices about how to manage their lawns and gardens to increase resilience to

[60] https://firesmartbc.ca/wp-content/uploads/2021/04/FireSmartBC_LandscapingGuide_Web_v2.pdf

wildfire on their properties. The guide provides a diverse list of fire-resilient plants suitable for different areas of the Province based on cold-hardiness, drought tolerance, and avoidance of harmful invasive species. Additionally, it provides tips for spacing and pruning of vegetation, mulch considerations, and maintenance.

Vegetation management guidelines at the residential scale are further delineated by the FireSmart Home Ignition Zones (HIZ). Please refer to Appendix B for guidelines within each ignition zone. The HIZ are the basis for the Wildfire Mitigation Program Assessments, which are currently being conducted by the RDNO for private property owners when requested.

Action: Continue to conduct Wildfire Mitigation Program Assessments and/or Farm and Ranch Assessments for private landowners. Based on the Assessments, encourage property owners to implement as many mitigation activities as possible through local rebate programs for completed eligible FireSmart activities.

Action: If residents prefer not to book a formal assessment, direct them to complete a private self-assessment using the FireSmart Begins at Home app. Update the RDNO FireSmart page by repairing the self-assessment link to point to the app landing page and add links to printable self-assessment materials (PDFs) for paper users.

RDNO Chipping Program: The RDNO currently has an active chipping program that applies across the entire Regional District. This program is free to use for residents in RDNO, offering curbside pickup of chippable pruning materials from registered private property owners[61].

Action: Continue to conduct the RDNO FireSmart Chipping Program annually, starting the program in the spring during typical clean-up, through to the end of fall.

Action: Promote volunteer-supported yard-work events (priority to seniors/mobility-limited) focused on Immediate/Intermediate Zone tasks.

Action: Offer seasonal workshops on compliant pile-and-burn (permits, venting/ban conditions, safe pile sizing/setbacks), small-scale biochar (cone/retort kilns), community chipping/haul-out, green-waste drop-off, and composting options. Provide a simple decision-tree handout ("chip, burn, biochar, or haul?") and align demos with community chipper days in coordination with RDNO and provincial guidance.

Critical Infrastructure

FireSmart BC has developed a FireSmart Critical Infrastructure (CI) Hazard Assessment Form[62] for assessing the vulnerability of critical infrastructure to wildfire. Results of the assessment can help provide mitigation recommendations to enhance wildfire resiliency, including upgrades to structure components or vegetation management in the Ignition Zones surrounding the structure. In many

[61] https://www.rdno.ca/firesmart/chippingprogram
[62] https://firesmartbc.ca/wp-content/uploads/2020/09/FireSmart_FireSmartCriticalInfrastructureAssessment_Fillable_V1.pdf

cases, the assessment and subsequent mitigation may extend beyond the legal land parcels which the critical infrastructure occupies and may require collaboration with adjacent land managers or landowners. Completion of FireSmart Critical Infrastructure Hazard Assessments on CI identified for the RDNO was beyond the scope of this CWRP project; however, an important next step would be to complete FireSmart Assessments on the highest priority values throughout Electoral Area B.

Action: Complete FireSmart Assessments on RDNO-owned Critical Infrastructure and Community Assets within Electoral Area B.

Action: Once Assessments on RDNO owned Critical Infrastructure and Community Assets within Electoral Area B are completed, implement FireSmart recommendations and mitigation activities resulting from the completed Assessments with the goal of reducing hazard scores as much as feasibly possible.

Cultural Sites and Green Spaces

The FireSmart Cultural Sites and Green Spaces (CSGS)[63] assessment is a qualitative process that is intended for assessing vulnerability of Indigenous cultural sites and local government green spaces. These can include sacred or traditional use sites, cultural features, parks, cemeteries, trails, and greenways. Implementing FireSmart activities in cultural sites and green spaces involves managing vegetation and adopting fire-resistant landscaping practices to reduce wildfire risk and enhance resilience. FireSmart vegetation management focuses on intentionally removing or reducing flammable plants and vegetation, both natural and cultivated. This minimizes potential fuel sources, lowers wildfire intensity, and decreases overall risk in CSGS from embers and flames.

Completing FireSmart CSGS Assessments was beyond the scope of this CWRP. However, funding is currently available for FireSmart activities within these spaces should the Regional District be interested in implementing FireSmart landscaping in any of their regional or community parks, or other important green spaces. Green spaces mentioned in Section 3.4 may be good candidates for a FireSmart CSGS project, provided the area is less than 3 hectares in size. The following steps are currently required under the FCFS program for FireSmart CSGS projects:

1. *Checklist for FCFS Requirements for Fuel Management Prescription* is required to be completed before CSGS Assessment is started (completed checklist must be submitted at time of application but the cost is an eligible expense provided the assessment is completed within six months prior to the date of application submission).
2. Completion of *FireSmart CSGS Assessment* before mitigation work is started (completed assessment must be submitted at time of application but the cost is an eligible expense provided the assessment is completed within six months prior to the date of application submission).
3. Complete recommended mitigation activities identified in the *FireSmart CSGS Assessment.*

[63] https://firesmartbc.ca/resource/culturally-significant-sites-and-green-spaces-guide-assessment/

Action: Apply for funding to complete an initial FireSmart CSGS Assessment for frequented green spaces in Electoral Area B. Once assessment is complete, apply for funding to complete the recommended eligible mitigation activities identified (limited to labour and material costs).

5.7.2 Complete or Active Fuel Treatment Units

Fuel management has occurred throughout Electoral Area B in recent years, however, there is no single database which identifies all historical treatments conducted by RDNO, BCWS, Ministry of Forests, or other land managers. Known future treatment locations fall within Kalamalka Lake Provincial Park near Coldstream, where fuel management prescriptions are underway.

Action: Create an inventory and monitoring system/database to track wildfire risk reduction and FireSmart vegetation management activities throughout the Regional District including:

- Areas that have had fuel management prescriptions and treatment operations completed
- Monitoring and maintenance planning for completed fuel treatment areas
- All critical infrastructure and community asset locations and descriptions
- Critical infrastructure assessments and associated FireSmart treatments completed
- FireSmart Assessments completed for private property owners
- Locations of piles chipped through the chipping program
- Neighbourhood Recognition Program starts and locations
- Records of all interface fire callouts for BX-Swan Lake Fire Department

This information can be published as a seasonal dashboard to show progress and adjust tactics.

In addition to the FCFS program, UBCM administers the Crown Land Wildfire Risk Reduction (CLWRR) program through the Ministry of Forests for fuel management planning and treatments focusing on provincial Crown land around higher risk communities. For the Ministry of Forests to conduct any fuel treatments, the areas must be first identified within a Wildland Urban Interface Wildfire Risk Reduce (WUI WRR) plan. Once the treatment areas are identified, they can be treated. Although this process allows for a high-level landscape overview on strategic locations of fuel treatments, it adds time, administrative burden, and limits the capacity to conduct fuel treatments on the landscape. RDNO may work with the Ministry of Forests to utilize the Crown land FTU's identified in this CWRP to treat under the CLWRR program. This may speed up the administrative and identification process of conducting fuel treatments.

Action: Work with BCWS and the MoF natural Resource District to determine opportunities for fuel treatment implementation through the CRI – CLWRR program.

5.7.3 Proposed Fuel Treatment Units

The proposed FTUs for this CWRP were identified based on wildfire threat identified during field work, available provincial crown land located within the eligible WUI, proximity to values, accessibility, and forest fuel types. The areas identified for potential treatment within Electoral Area B are detailed in

Appendix G. All proposed FTUs have been identified for consideration include areas under the jurisdiction of both land managers and the RDNO.

The proposed FTUs in Proposed Fuel Treatment Units are listed in order of general priority ranking classification, which is defined as:

1 = High Priority
2 = Moderate Priority
3 = Lower Priority

Priority ranking assignment took into consideration a multitude of factors including both the Wildfire Threat Assessment Scores and Priority Setting Scores from the Wildfire Threat Assessment Worksheet completed in the field, as well as other local factors such as accessibility, anchoring features, overlapping values, and/or constraints to fuel management activities. Prioritization ranking did NOT consider political or public appetite for fuel treatment activity within specific communities/neighbourhoods.

As assigning priority levels and rankings can be a subjective process based on best available information and an imperfect science, the RDNO withholds the right to complete proposed fuel treatment activities in whatever order they see fit and are not required to complete FTUs in the order listed in Appendix G. The Priority Ranking of FTUs within this CWRP is intended to guide the Regional District in pursuing fuel treatment activities based on overall wildfire threat of a stand, risk to values, and efficacy of treatment. Furthermore, the FTUs identified as part of this CWRP are only proposed and require further refinement based on more intensive data collected during the fuel management prescription development phase.

Once an area is identified as a proposed fuel treatment unit, completing the vegetation/fuel management on the land base is a two-phase approach. The first phase involves the development of a Fuel Management Prescription (FMP) by a BC Registered Professional Forester (RPF). The FMP details the site-specific attributes and ecology of the identified forest area and prescribes appropriate strategies for fuel reduction that meet objectives for wildfire risk reduction, as well as other important overlapping values such as wildlife habitat, ecological restoration, or recreation. It is the responsibility of the prescribing forester during the FMP development phase to ensure the proposed fuel treatment activities are ecologically suitable for the existing forest stand and site conditions and promote long-term forest resilience. Additionally, it is during the FMP development phase where further information sharing is completed with Indigenous Governments and stakeholders to ensure all concerns are identified and addressed/incorporated. For context, FMP development has an approximate cost of $500/ha, which is reliant on several variables and can fluctuate greatly dependent on the complexity of the ecosystem.

The final phase is the implementation of the FMP where treatment operations occur on the ground. Operational contractors must be acquired to complete the treatment specifications as outlined in the FMP. Operational treatment costs average at $10,000/ha for standard hand treatments and increase greatly with increased complexity and variables as described by the FMP.

Additionally, for proposed treatments adjacent jurisdictions of other land managers, the Regional District should work in collaboration with the Ministry of Forests, First Nations, and other applicable

land managers at the fuel prescription development phase to determine suitability of treatment and funding options. Other land managers include but are not limited to:

- ***Woodlot owners*** – funding is available through Woodlots BC and the Forest Enhancement Society of BC (FESBC) for fuel treatments within woodlots.
- ***Community Forests*** – funding is available through FESBC for fuel treatments within community forests.
- ***Provincial Parks and Protected Areas*** – it is the jurisdiction of BC Parks to fund and implement fuel treatments within their parks and protected areas**.**

Proposed Fuel Treatment Units details the proposed FTUs and includes information on their priority ranking and level, general size, local wildfire threat, overlapping values, rationale for treatment, and overall status. As requested by RDNO, this information is located in a separate appendix. Maps outlining the location of the FTUs can be found below in Figure 20 and Figure 21.

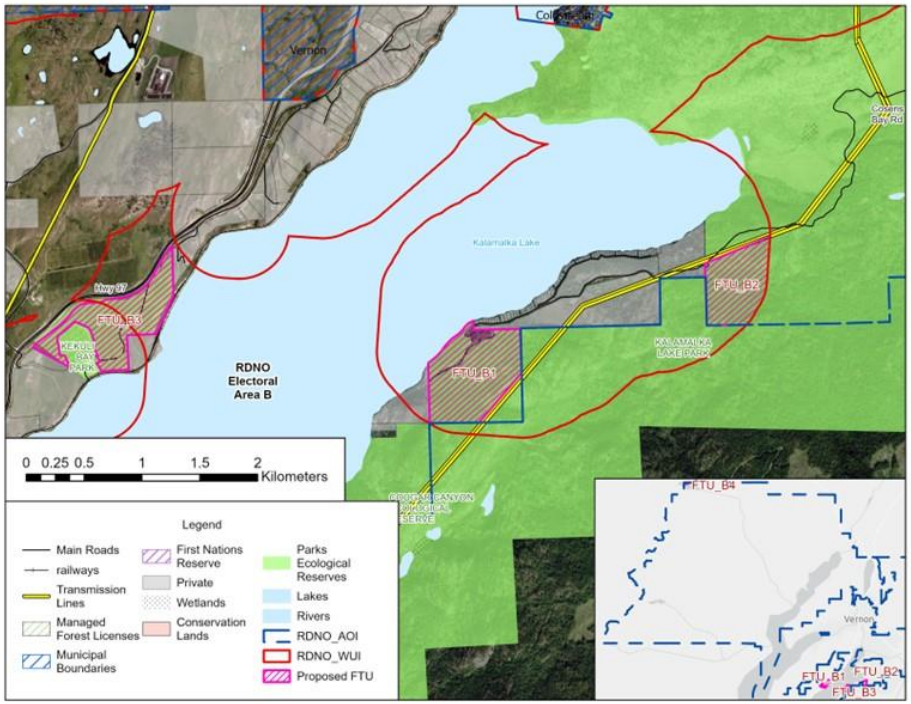


Figure 20. Proposed Fuel Treatments in Area B 1-3 surrounding Kalamalka Lake.

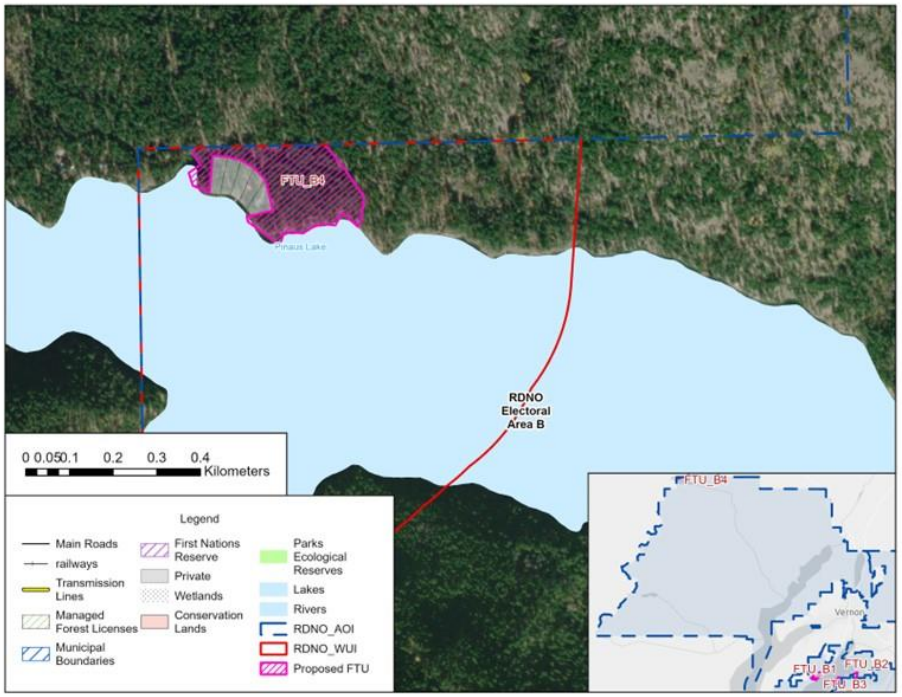


Figure 21. Proposed Fuel Treatments in Area B 4 on Pinaus Lake.

Action: Apply for funding to develop fuel management prescriptions for forested areas identified on land within the eligible WUIs. It is recommended to start with high priority proposed fuel treatment areas as identified within this CWRP.

Action: Apply for funding to undertake fuel management treatment operations on land within the eligible WUIs based on completed fuel management prescription units.

6.0 Implementation

6.1 FIRESMART ROAD MAP

No two FireSmart journeys are the same, however FireSmart has created a roadmap to help local governments understand where to start and general steps to take on the way to community wildfire resiliency[64]. The roadmap is broken into four different phases, and should be completed sequentially, but will depend on previous FireSmart activities and the recommended action items in this CWRP. There are three fundamental elements that should be completed prior to beginning the FireSmart roadmap.

1. Establish a FireSmart position
2. Complete a Community Wildfire Resiliency Plan
3. Implement or participate in a Community FireSmart Resiliency Committee

FireSmart Roadmap Phases

Engagement Phase
In this phase, the primary objective is awareness. The focus is on building an understanding of the risk of wildfire and the benefits of developing and growing a local FireSmart program.

Activities that should be completed in this phase are suggested below, but not limited to:

- **FireSmart Positions:** Training.
- **Education:** Develop/update signage, social media, community websites and/or newsletters; organize and host public information meetings and workshops; promote and distribute FireSmart educational materials and resources; host a Wildfire Community Preparedness Day.
- **Interagency Cooperation:** Participate in FireSmart and/or fuel management planning tables; attend the annual Wildfire Resiliency and Training Summit.
- **Residential Areas:** Undertake Home Ignition Zone Assessments; offer off-site debris removal programs.

Initiative Phase
In this phase, the primary objective is acting on and implementing local FireSmart activities. The focus is on building capacity in people and the community to withstand wildfire events.

Activities that should be completed in this phase are suggested below, but not limited to:

- **Education:** Support neighbourhoods to apply for FireSmart Canada Neighbourhood Recognition Program.
- **Community Planning:** Complete FireSmart assessments for critical infrastructure, community assets, culturally significant sites and/or green spaces.

[64] FireSmart. (2023). The FireSmart Roadmap. Referenced from: https://firesmartbc.ca/resource/the-firesmart-roadmap/

- **Emergency Planning:** Assess community water delivery ability, purchase or inventory and maintain FireSmart structure Protection Trailers and continually update the emergency plan with lessons learned from previous events.
- **Training:** Undertake training for other FireSmart positions (beyond initial FireSmart coordinator), fire departments, and emergency management staff; develop local Home Partners program.
- **FireSmart Projects:** Complete mitigation activities for **critical infrastructure, community assets, culturally significant sites and/or green spaces** following completed FireSmart assessments.

Expansion Phase

In this phase, the primary objective is FireSmart activities within the Eligible WUI. The focus is on broader community planning.

Activities that should be completed in this phase are suggested below, but are not limited to:

- **Education:** Support the organization of a Farm and Ranch Wildfire Preparedness workshop.
- **Community Planning:** Develop FireSmart policies and practices for the design and maintenance of publicly owned land and dwellings.
- **Fuels Management:** Develop prescriptions and/or burn plans and undertake treatments, including cultural and prescribed fire.

Integration Phase

In this phase, the primary objective is long-term and permanent changes to support community wildfire resiliency. The focus is on development considerations and collaboration with partners.

Activities that should be completed in this phase are suggested below, but are not limited to:

- **Education:** Support the FireSmart BC Library program at local/regional libraries.
- **Development Considerations:** Amend Official Community Plans, Comprehensive Community Plans and/or land use, engineering, and public works bylaws to incorporate FireSmart principles; revise landscaping requirements in zoning and development permit documents; establish Development Permit Areas for Wildfire Hazard; amend referral processes for new developments to ensure multiple departments, including the fire department and/or emergency management personnel, are included.
- **Interagency Cooperation:** Support the FireSmart BC Plant Program at local garden centres or nurseries; partnerships with local landscapers, developers, real-estate agents, insurance, etc.

6.2 PLAN MONITORING TRACKING AND REPORTING

The CWRP action plan should be reviewed annually to capture any significant changes that could affect implementation or priority levels, as well as to track which actions have been completed or are in progress. Completed actions should be summarized, including information on specific measurable

outcomes that demonstrate reduced wildfire risk in Electoral Area B. In addition, a comprehensive review/update should take place when there are local changes to community composition, forest health, wildfire risk, etc. Amendments to the existing plan can be conducted if the plan is less than five (5) years old. Specific updates should include:

- How wildfire risk has changed based on recent wildfires;
- Which vegetation management activities have been completed; and
- Any significant changes to the built environment due to growth and development, economic changes, or other factors.

Table 19 provides an example monitoring plan, tracking, and update summary for the Electoral Area B CWRP. Annual updates should consider renaming the plan version as 1.1, 1.2, 1.3, etc. Comprehensive updates should consider renaming the plan version as 2.0, 3.0, etc. Columns for actions in progress or completed actions may refer to the action numbers listed in Section 5.0. Annual tracking is useful for creating accountability, as well as reporting accomplishments and successes. Summaries of specific measurable outcomes are useful for reporting to decision makers and applying for future funding.

Table 19. Electoral Area B monitoring, tracking, and update summary.

Plan Version	Plan Year	Plan Name
1.1	2019	RDNO CWPP Phase 1
1.2	2020	RDNO CWPP Phase 2
2.0	2025	RDNO CWRP – Area B
		RDNO CWRP – Area C
		RDNO CWRP – Area D
		RDNO CWRP – Area E
		RDNO CWRP – Area F
3.0	TBD	RDNO CWRP Amendments

7.0 Appendices

Appendix A Glossary of Terms

Area of Interest: The Area of Interest (AOI) for a CWRP includes the area that lies within the municipal boundary, regional district boundary, or First Nations land, including First Nation reserve land, land owned by a Treaty First Nation (as defined by the *Interpretation Act*) within treaty settlement lands, or land under the authority of an Indigenous National Government boundary. The AOI should reflect how the community is organized and how it approaches other similar planning projects within its jurisdictional boundaries. When communities are located close together and are geographically aligned, a "regional" approach may be most effective.

Critical Infrastructure (CI): Critical infrastructure are assets owned by the provincial government, local government, public institution (such as health authority or school district), First Nation or Treaty First Nation that are essential to the health, safety, security or economic well-being of the community and the effective functioning of government, or assets identified in a Local Authority Emergency Plan Hazard, Risk and Vulnerability, and Critical Infrastructure assessment.

Fire Danger: Fire danger is a general term used to express an assessment of both fixed and changeable factors of the fire environment that determine the ease of ignition, rate of spread, difficulty of control, and fire impact.

Fire hazard: Fire hazard can be defined as the following:

- The risk of fire starting, and
- The hazard associated with an industrial activation; and
- If a fire were to start,
    - The volatility of the fire's behaviour
    - The difficulty of controlling the fire, and
    - The potential threat to values at risk

Fire Season: The fire season is the period(s) of the year during which fires are likely to start, spread, and damage values-at-risk sufficient to warrant organized fire suppression. It is a period of the year to set out and commonly referred to in fire prevention legislation.

FireSmart Landscaping: FireSmart landscaping is the removal, reduction, or conversion of flammable plants (such as landscaping for residential properties, parks, open spaces, and critical infrastructure) in order to create more fire-resistant areas in FireSmart Non-combustible Zone and Priority Zones 1 and 2 (refer to the FireSmart Guide to Landscaping).

Fuel Management Treatment: Fuel management treatment is the manipulation or reduction of living or dead forest and grassland fuels to reduce the rate of spread and fire intensity and enhance the likelihood of successful suppression, generally outside of FireSmart Non-combustible Zone and Priority Zones.

Values at Risk (VAR): Values at risk are the human or natural resources that may be impacted by wildfire. This includes human life, property, critical infrastructure, high environmental and cultural values, and resource values.

Wildfire Risk: Wildfire risk is a term that combines the probability of fire occurrence with the expected impacts from a fire and the associated fire behaviour during the burning.

Wildfire Threat: The ability of a wildfire to ignite, spread, and consume organic material (trees, shrubs, and other organic materials) in the forest. The major components used to define wildfire threat are fuel, weather, and topography.

Wildland Urban Interface (WUI): The WUI is defined in the FireSmart manual as any area where combustible forest fuel is found adjacent to homes, farm structures, or other outbuildings. This may occur at the interface, where development and forest fuel (vegetation) meet at a well-defined boundary, or in the intermix where development and forest fuel intermingle with no clearly defined boundary.

Appendix B Home Ignition Zone

FireSmart describes three Priority Zones around a building, collectively named the Home Ignition Zone (Figure 22) alongside descriptions of what these zones should look like, starting from the edge of a building and moving outwards.

- Immediate Zone (0 – 1.5 m) Non-combustible surface should extend around the entire home and any attachments, such as decks.
- Intermediate Zone (1.5 – 10 m) This should be a fire-resistant area, free of all materials that could easily ignite from a wildland fire.
- Extended Zone (10 – 30 m) Thinned and pruned coniferous trees, alongside routine dead surface fuel cleanup.

Figure 22. FireSmart Home Ignition Zone, which is comprised of four priority zones, as illustrated in the BC FireSmart Begins at Home Manual[65].

Of particular importance are neighbourhoods where homes and buildings are situated close together in a relatively higher density than in more rural areas. This means that FireSmart Priority Zones frequently overlap with one another (i.e., Immediate Zone or Intermediate Zone from one building may encroach into an adjacent building's Immediate or Intermediate Zones). This highlights the importance of community resilience towards wildfire though working together to reduce wildfire hazard, especially within the WUI.

[65] https://begins-at-home-guide.firesmartbc.ca/

Appendix C Additional Resources for FireSmart Disciplines

Education

- FireSmart BC website
- BC Wildfire Prevention website
- First Nations' Emergency Services Society
- Wildfire Preparedness Guide
- First Nations Forestry Council
- BC Wildfire Service
- BC Government - Wildfire
- Emergency Management in BC
- Destination BC - Emergency Preparedness
- Educational Messages Desk Reference (the National Fire Protection Association)
- BC Hydro - be prepared for emergencies

Provincial Acts and Regulations

- Emergency Management and Disaster Act (2024)
- BC Local Government Act (2015)
- BC Open Burning and Smoke Control Regulations (2023)
- BC Wildfire Act and Regulations (2005)
- Forest and Range Practices Act (2021)

Federal Acts

- Forestry Act (1985)
- Migratory Birds Convention Act (1994)
- Canadian Environmental Protection Act (1999)
- Species At Risk Act (2002)
- Fisheries Act (2024)

Development Considerations

- Additional guidance on land use planning tools and strategies for the Wildland-Urban Interface include the American Planning Association's PAS Report 594 Planning the Wildland-Urban Interface (2019), which is available at no charge through the association's website.
- The National Research Council (NRC) Wildland-Urban Interface Technical Committee has also published National Guide for Wildland-Urban Interface (WUI) Fires (2021); this guide provides

guidance to Canadian local governments and First Nations on WUI land use planning and regulation implementation.

Interagency Cooperation

- FireSmart BC
- Indigenous Services Canada
    - Emergency Management Assistance Program (EMAP), which supports communities in accessing emergency assistance services. Will provide funding for communities to build resiliency and prepare and respond to natural hazards.
- First Nation Health Authority
    - Emergency Management Branch – ensures FN communities are effectively incorporated into emergency preparedness, prevention, response and recovery initiatives.
- First Nation Emergency Services Society
    - Emergency Management department provides community-based emergency management guidance, support, and assistance to BC First Nation communities.
    - Fire Services Department assists communities to increase level of fire protection.
    - Forest Fuel Management Department liaises with governments and other agencies to assist with wildfire prevention activities.
- Emergency Management & Climate Readiness
    - BC Wildfire Service and Emergency Management & Climate Readiness BC (EMCR), along with several other Ministries and agencies, are working in close collaboration to provide First Nation training, equipment, and capacity support

Cross-Training

- OH&S (06) - Fire Safety Planning & Systems
- FireSmart training courses
- Recognized British Columbia S-100 instructors

Emergency Planning

The following resources are available for reference and to assist with emergency planning:

- National guide for wildland-urban-interface fires - which provides guidance to Canadian local governments and First Nations on WUI land use planning and regulation implementation, as well as guidance on wildfire response preparedness planning.
- Emergency management in BC – which contains several valuable resources including fire services, education and toolkits, and preparedness and recovery information.

Vegetation Management

- The BCWS Fire and Fuel Management web page offers a number of tools that support fuel management planning and implementation and can be accessed here.
- Contact your local BC Wildfire Service Fire Centre office to learn more about, engage and collaborate on Landscape Zone vegetation management planning.
- FireSmart Guide to Landscaping

Appendix D In-report Maps

See separate Appendix D CWRP In-report Maps document for more information.

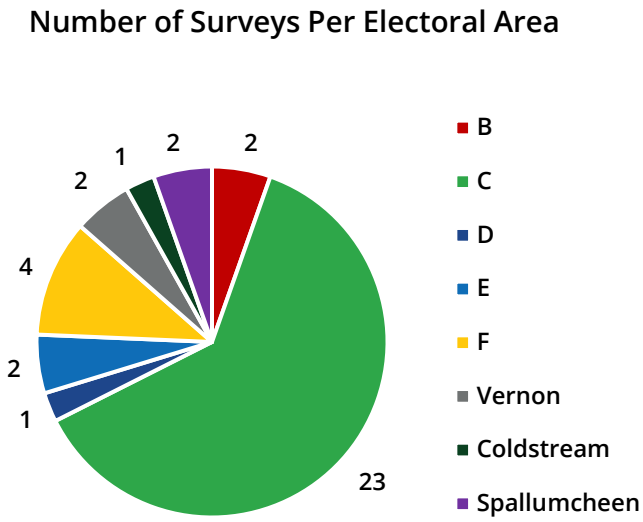
Appendix E Wildfire Threat Assessments

See separate Appendix E Wildfire Threat Assessment document for more information.

Appendix F Community Survey

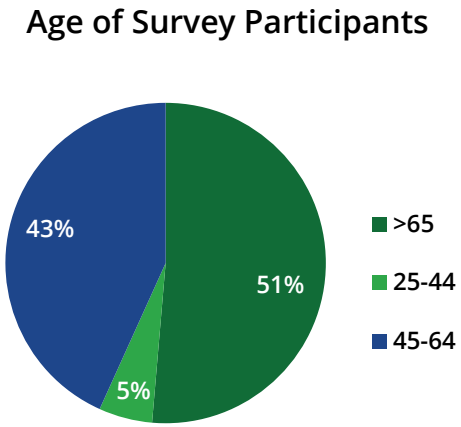
Survey Participation by Electoral Area

Responses came from across the Regional District, with the largest share from **Electoral Area C**. Smaller but meaningful participation came from Areas B, D, E, F, Spallumcheen, SilverStar, Vernon, and Coldstream. This distribution reflects both the population base of Area C and its high level of FireSmart engagement in recent years. It also highlights the need to continue outreach in smaller communities so that all parts of the region are represented in future wildfire planning efforts.



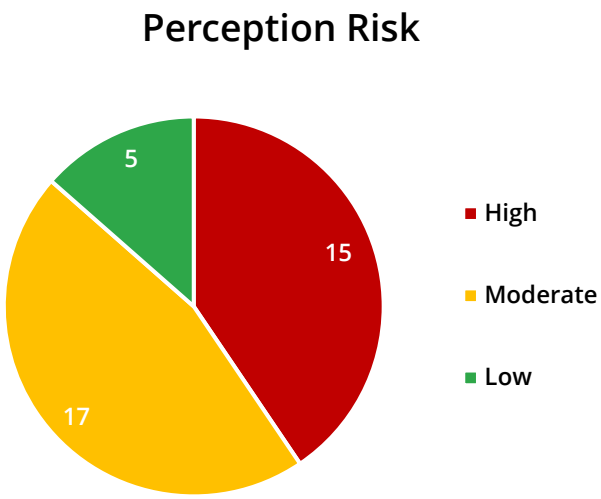
Age of Survey Participants

Most participants were **45 years and older**, with the majority being in the **65+** age group. Only a small number of respondents were between 25 and 44. This age distribution is consistent with other wildfire planning surveys, where older residents often have both the time and interest to participate. It also suggests an opportunity to increase engagement with younger households, who may have different needs and perspectives on wildfire preparedness.



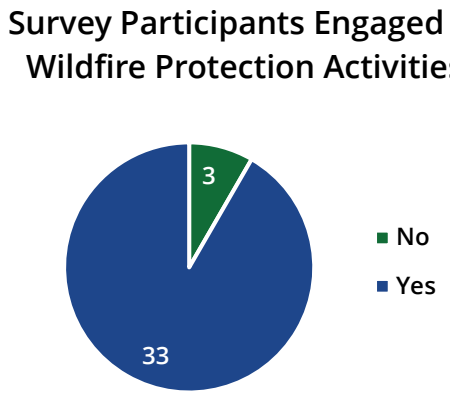
Perception of Wildfire Risk

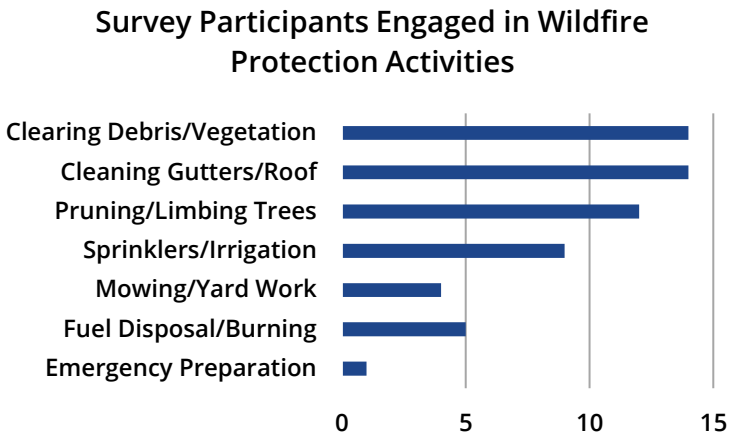
When asked about wildfire risk, most respondents rated it as **moderate or high**, with only a few considering it low. This indicates a general recognition across the community that wildfire is a serious concern. Comments from participants often linked this perception to recent fire seasons in the Interior, with some noting that proximity to forested areas or past local fire events shaped their view. These findings suggest that the majority of residents are already receptive to FireSmart messaging and understand the importance of continued mitigation.



Wildfire Protection Activities on Private Properties

The majority of survey participants reported undertaking FireSmart practices on their properties. The most common activities included clearing flammable debris, pruning lower branches, cleaning gutters and roofs, and irrigating or using sprinklers in summer. Several respondents highlighted seasonal clean-ups as part of their regular routine. Only a small number indicated they had not taken any wildfire protection measures. This demonstrates that residents recognize the value of proactive fuel reduction at the property level, though continued education and support may help those who have not yet participated.



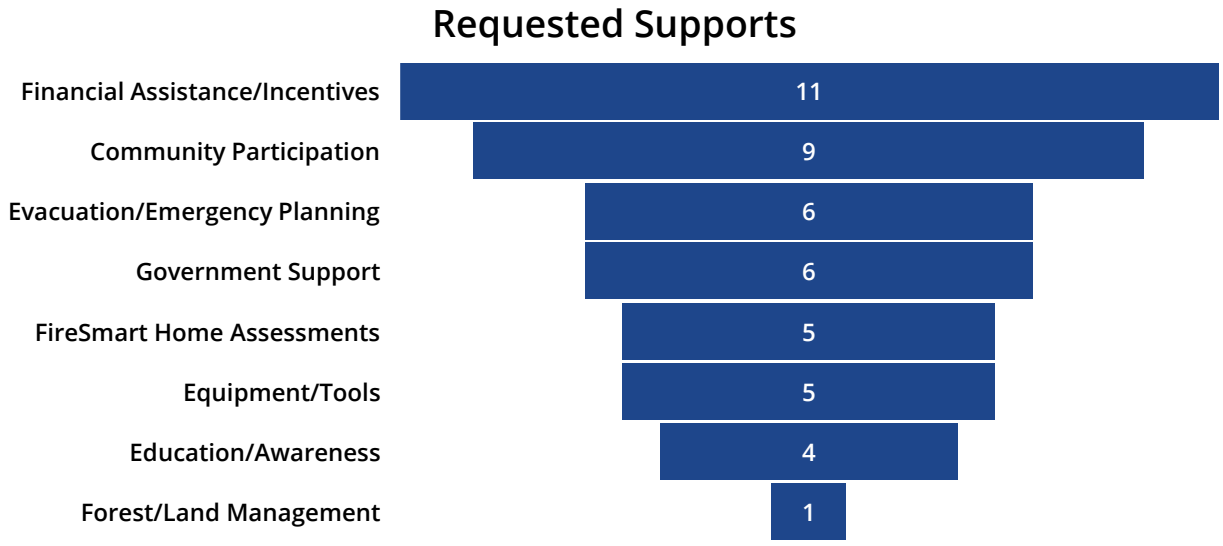


Actions Completed in the Last 12 Months

When asked about recent actions, the dominant activity was the removal of flammable debris from around homes. Many also reported yard work and vegetation management, such as mowing grass and removing brush. A notable number described conversations with neighbours about safety, reflecting a growing culture of community awareness. A smaller but important group emphasized preparing emergency kits and evacuation plans. These findings show that residents are not only maintaining their properties but also engaging in dialogue and preparedness that extends beyond individual parcels.

Supports Needed to Advance FireSmart

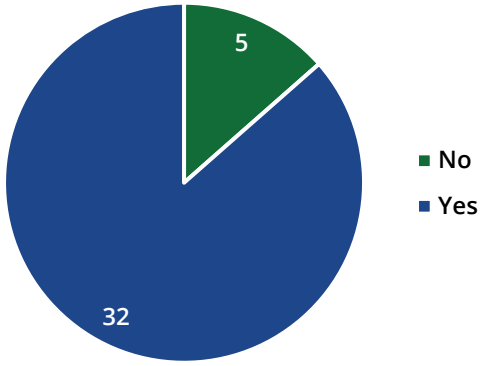
Residents identified a range of supports required to strengthen wildfire preparedness. The most common request was for financial assistance, rebates, or incentives to help with the costs of mitigation. Many also asked for equipment or disposal options, such as access to chippers or bins. Neighbourhood-level participation and stronger involvement from local agencies were frequently mentioned, alongside a need for clear evacuation planning and communication. Some comments stressed the role of forestry and land management in addressing risks adjacent to communities. Overall, residents want both individual assistance and broader structural support to ensure efforts are effective.



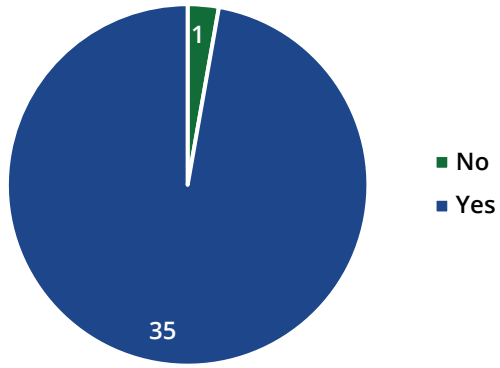
Awareness and Knowledge

Most participants felt adequately informed about wildfire risk, and a majority knew who to approach with questions. However, a sizeable minority answered "No" to both. Several comments highlighted a desire for more workshops, emotional support during fire season, and more consistent messaging from local government. This feedback suggests that while awareness levels are high, residents still see gaps in communication and would benefit from more proactive outreach.

Participants Familiar with FireSmart

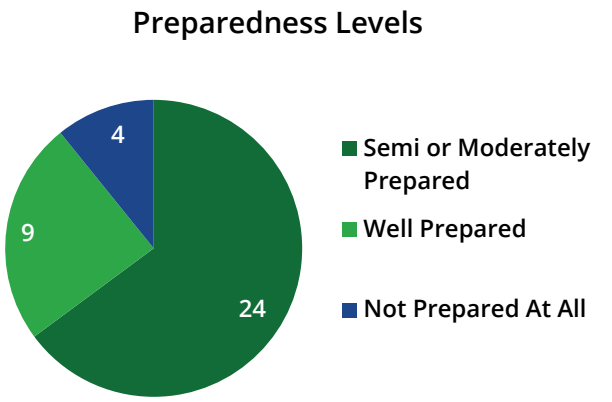


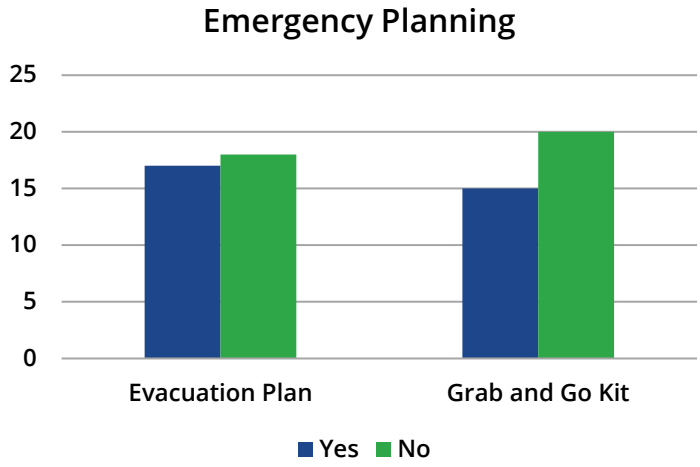
Participants that Understand the Role Wildfire Managament Plays

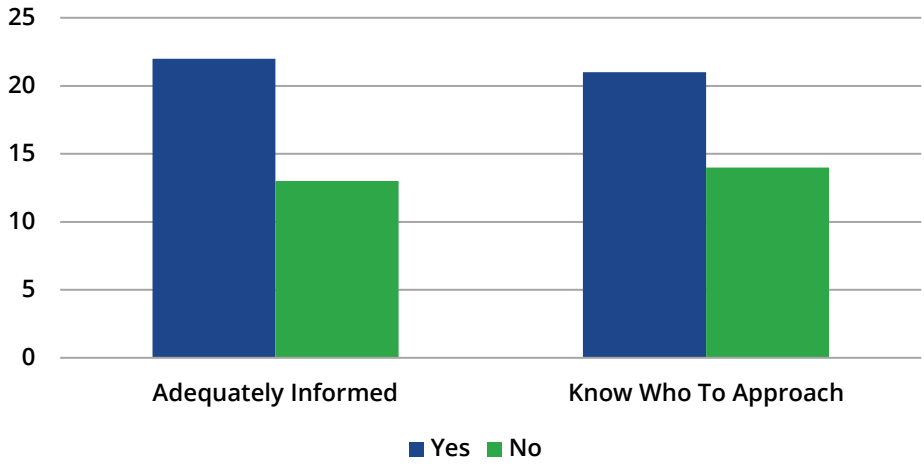


Preparedness Measures

Survey results show a near even split on emergency preparedness. About half of respondents have an emergency evacuation plan, and fewer than half have a grab-and-go kit. This indicates that while many residents are aware of FireSmart principles, personal preparedness remains inconsistent. Respondents requested clearer evacuation routes and more emphasis on emergency planning at the neighbourhood level. Strengthening preparedness through education, drills, and reminders could improve readiness across the region.

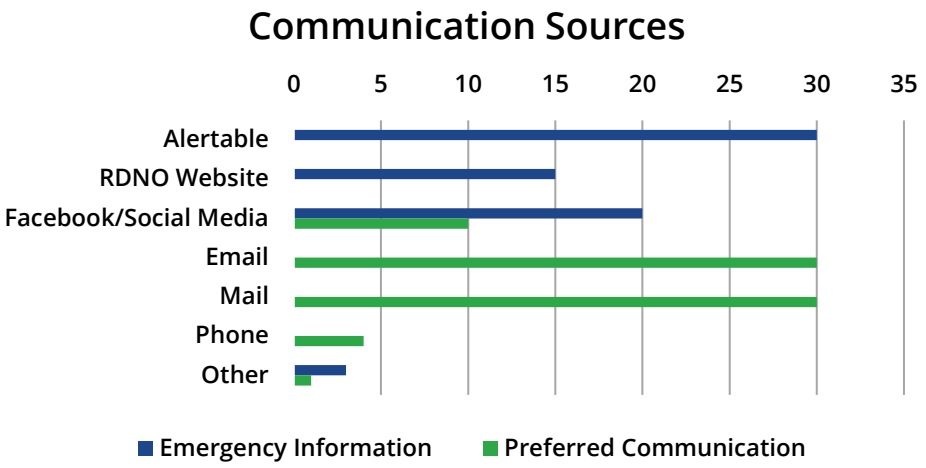






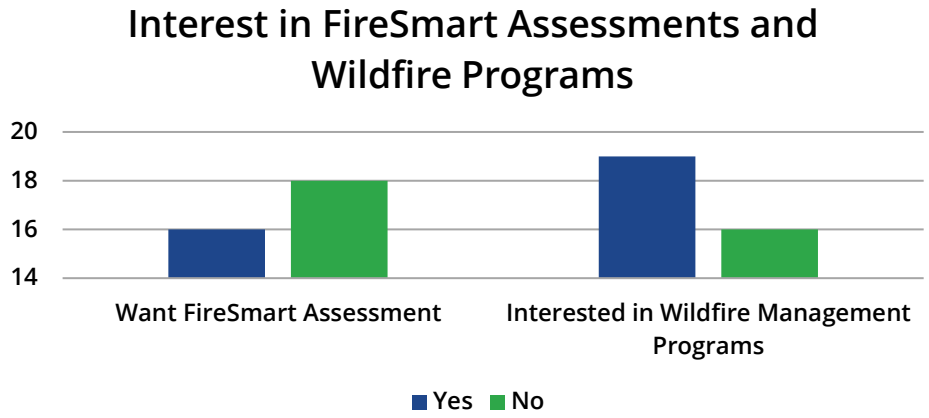
Emergency Communications

Residents overwhelmingly rely on the **Alertable app**, the RDNO website, and social media (particularly Facebook) to receive emergency information. When asked about preferred communication methods, most identified **email and mail**, followed by social media and phone calls. A small number selected "other." This shows that digital tools are well-used but should be paired with traditional communication methods to ensure all residents receive timely and accessible updates.



Interest in FireSmart Assessments and Programs

While many participants expressed interest in FireSmart assessments, nearly as many indicated they were not interested or had already participated. Several comments suggested follow-up on past assessments is needed. Interest in broader wildfire management programs was higher, with more respondents saying "Yes" than "No." These results suggest that while uptake of individual assessments may plateau, residents are open to engaging in larger-scale initiatives that address both private and community-wide resilience.



Appendix G Proposed Fuel Treatment Units

See separate Appendix G Proposed Fuel Treatment Unit document for more information.

Appendix H Examples of FireSmart/Wildfire Bylaws

The following is an example of Drought Use Water Regulations for emergency water preservation purposes.

Table 20. Example Drought Use Water Regulations.

Purpose and Scope	Protect firefighting reserves and essential domestic, livestock, and crop-survival needs during drought, while keeping admin light for rural areas.
Triggers (staged)	**Stage 1** – Advisory: BC Drought Level 2–3 or local indicator met (e.g., streamflow <25th percentile; monitored well drawdown >[X] m). **Stage 2** – Restrictions: Drought Level 3–4 or streamflow <10th percentile; drawdown >[Y] m. **Stage 3** – Severe: Drought Level 4; storage below target; tender refill reliability at risk. **Stage 4** – Critical: Drought Level 5; firefighting reserve at risk. *(CAO/water purveyor may declare a higher stage based on local conditions.)*
Priority of Use (always permitted)	• Indoor domestic and health/safety uses. • Fire suppression and emergency operations (exempt at all stages). • Livestock watering and critical crop-survival irrigation (see Agriculture & Livestock). • Essential public services (as authorized).
Outdoor & non-essential use (by stage)	**Stage 1:** No midday irrigation; no driveway/patio washing; vehicle washing only for safety. **Stage 2:** No lawn irrigation; garden/trees by hand or drip only (max [X] min/day). No filling of pools/hot tubs/pond features. **Stage 3**: Survival watering only (gardens/trees) ≤2 days/week, hand/drip; no pressure washing; community splash pads off. **Stage 4:** Survival watering 1 day/week for perennial food trees/vines only; all other outdoor uses off.
Agriculture & Livestock	**Livestock**: Allowed at all stages using efficient delivery; encourage trough floats, leak checks. **Crops**: • **Stages 1–2:** Efficient irrigation allowed; no spray guns between 10am–7pm.

	• **Stage 3:** Survival irrigation only (orchards/perennials) by drip/micro; annual field crops discouraged unless critical to prevent total loss. • **Stage 4**: Survival irrigation only by drip/micro at reduced frequency; prioritize perennial stock. Dust control limited to safety-critical roads with non-potable sources where available.
Sources & drafting sites	Hydrants/dry hydrants/drafting sites: Non-fire use prohibited Stages 2–4. Ponds used for drafting must retain a minimum fire reserve volume ([Z] m^3) marked with staff gauges; no withdrawals below reserve.
Private wells & small systems	Stage-based voluntary targets for private wells (e.g., 20% reduction at Stage 2; 35% at Stage 3; 50% at Stage 4). Encourage well-sharing for domestic/livestock emergencies via simple neighbour agreements.
Construction & commercial	New soft-starts/pressure settings that protect pump health during low water recommended (not mandated). Standpipe/construction fills allowed Stage 1 only, metered, with backflow prevention; suspended at Stage 2+.
New landscapes & pools	Equipment wash only where needed for invasive species control; use minimal volumes. At Stage 3–4: defer new lawn/sod approvals; allow drought-tolerant, non-spray plantings only; require a basic drought plan (valves/shutoffs/drip layout). Pool/hot-tub fills prohibited Stage 2+ (topping up for liner protection allowed Stage 2–3 if <[X]% volume).

The following is an example of established guiding principles for Wildfire Protection (City of Kamloops)

1. Wildfires occur regularly in the natural environment surrounding and within the Kamloops City limits and will continue to occur regardless of the most successful prevention program.
2. In some natural environments, planned prescribed fire (as opposed to wildfire) is desirable and effective in restoring ecological health and reducing the risk of wildfire losses.
3. Losses to wildfire cannot be eliminated; however, they can be significantly reduced with appropriate pre-planning and preparation.
4. Education, engineering, and enforcement are the pillars of wildfire risk reduction.
5. A comprehensive approach involving fuel management, infrastructure and structural design, pre-suppression preparedness, and emergency response must be taken to effectively reduce the risk of wildfire losses.
6. Mitigations must not only be planned for but carried out.
7. Due to the dynamic nature of wildland vegetation and community, ongoing maintenance must occur, and mitigations must be re-evaluated and adapted to changing situations.

The following is an example of a WI-DPA 1 Page Application Checklist.

WI-DPA Applicant Checklist (Example Template)

Use this one-pager with permit applications located in the Wildland–Urban Interface Development Permit Area (WI-DPA).

Project info

Civic address & PID/Roll #	
Applicant / owner name & contact	
Permit type	Building ☐ Subdivision ☐ Variance ☐ Other: _____
Within WI-DPA map (Schedule __)	Yes ☐ No ☐ Map ref: _____
If known: site wildfire hazard rating	Low ☐ Moderate ☐ High ☐ Extreme ☐

Submission package

☐ Site plan showing buildings, driveways/turn-around, water sources, slopes, and vegetation bands

☐ 6–10 photos (house, roof, vents/eaves, decks, immediate surroundings, driveway)

☐ Materials list (roof, siding, soffits, decking, skirting, fences/gates)

☐ Fuel-reduction sketch (what will be removed/retained)

☐ Water supply confirmation (hydrant, cistern, dry hydrant/drafting site, other)

☐ Professional report (if triggered) — RPF/RPBio/other: _____

Access for responders

☐ Driveway and turn-around meet local fire-department access standards (width/grade/turning)

☐ Address visible from road; gates unlockable by responders

☐ Overhead/roadside vegetation pruned to allow apparatus access

Water supply

☐ Community hydrant available (ID/location: _____)

☐ OR Alternative supply (cistern / dry hydrant / drafting site) with year-round access

☐ On-site outlets/standpipes (if applicable) noted on plan

Defensible space (around each principal building)

☐ Immediate non-combustible surface zone established (0–1.5 m) — mineral soil, gravel, pavers

☐ Near-home vegetation managed (1.5–10 m): limb-up trees, remove ladder fuels, separate shrubs from structures

☐ Extended zone treated (10–30+ m): thin/space trees and manage surface fuels

☐ Wooden fences/gates do not connect directly to the structure (use a non-combustible break at the wall)

Building design details

☐ Roofing fire-rated (preferred Class A when feasible)

☐ Eaves/soffits enclosed; gaps sealed

☐ Vents screened with metal ember-resistant mesh; attic/crawlspace openings protected

☐ Siding and skirting non-combustible or ignition-resistant; joints/flashing sealed

☐ Decks/porches: underside screened or sheathed; nothing combustible stored beneath

☐ Gutters/valleys clear of debris

Utilities & outbuildings

☐ Propane tanks, woodpiles, and outbuildings located away from the home (shown on plan)

☐ Overhead lines and service entries clear of vegetation

Construction / operations

☐ No burning or hot-works when provincial restrictions apply

☐ Spark arrestors and extinguishers available during works

☐ Waste and offcuts removed daily from around structures

Ongoing maintenance & conditions

☐ Owner commits to annual clean-up of immediate zone and gutters/eaves

☐ If required by approval: simple covenant / owner undertaking attached

Sign-off

Applicant declaration: "I confirm the above measures are shown on plans or will be completed before final."

Signature: _____ Date: _____

Reviewer notes / conditions of approval: _____

Tip: Keep this to 1 page. Use owner self-certification with photos and conduct spot audits for higher-risk files.

The following is an example of a Wildfire & ecological stewardship covenant.

EXAMPLE COVENANT – WILDFIRE & ECOLOGICAL STEWARDSHIP (SHORT FORM)

Note: Example template only. Adapt with local legal counsel and planning staff.

PARTIES AND LANDS

BETWEEN: REGIONAL DISTRICT OF NORTH OKANAGAN (the "Covenantee")

AND: _____ (the "Owner")

WHEREAS the Owner is the registered owner of lands legally described as: _____ (the "Lands"), commonly known as _____ [civic address], PID _____.

RECITALS

A. The Regional District seeks to reduce wildfire risk while conserving ecological values on the Lands;

B. Section 219 of the Land Title Act permits a covenant in favour of a local government respecting the use of land that runs with the land; and

C. The parties wish to set out wildfire-risk reduction measures and ecological stewardship practices applicable to the Lands.

1. DEFINITIONS

"Immediate Zone (Z0)" means the area from 0.0 m to approximately 1.5 m measured horizontally from the outermost projection of each principal building.

"Near-Home Zone (Z1)" means the area from approximately 1.5 m to 10 m from each principal building.

"Extended Zone (Z2)" means the area from approximately 10 m to 30 m (or to the property boundary, if closer).

"Ecologically Sensitive Feature" includes, without limitation, riparian areas, wetlands, rare plant communities, wildlife trees/snags, dens, rookeries, nests, and mapped environmentally sensitive areas.

"Qualified Professional (QP)" means a Registered Professional Forester (RPF), Registered Professional Biologist (RPBio), or other appropriately qualified professional acceptable to the Covenantee.

2. WILDFIRE RISK REDUCTION – USE AND MAINTENANCE

The Owner covenants and agrees, at the Owner's expense, to maintain the Lands in accordance with the following measures:

☐ Maintain Z0 as a continuous non-combustible surface (e.g., mineral soil, gravel, pavers) around all principal buildings, excluding required stairs/landings.

☐ Keep roofs, gutters, and eaves free of combustible debris during the local fire season.

☐ Enclose or screen under-deck areas; do not store combustibles under decks or within Z0.

☐ In Z1, prune lower branches (generally up to 2 m or 1/3 live crown, whichever is less), separate shrubs from structures, and remove ladder fuels.

☐ In Z2, thin and manage surface fuels to reduce continuity and ladder fuels; favour fire-resilient species where appropriate and permitted.

☐ Provide a non-combustible break where wooden fences or gates meet a building (e.g., metal gate or 1.5 m non-combustible section at the wall).

☐ Store firewood, propane tanks, and other combustible storage a minimum of ___ m from principal buildings (recommended 3 m or greater).

3. ECOLOGICAL STEWARDSHIP – USE AND MAINTENANCE

The Owner covenants and agrees, at the Owner's expense, to conserve ecological values on the Lands as follows:

☐ Respect applicable riparian/environmental bylaws and permits; fuel work in these areas must follow permit conditions or written QP guidance.

☐ Schedule fuel work outside the local primary bird-nesting period (e.g., April 1 to August 31) unless a QP confirms no active nests are present.

☐ Retain wildlife trees/snags and coarse woody debris where structurally safe and outside Z1; if removal is necessary for safety, replace with habitat features where feasible (e.g., wildlife poles, brush piles) away from buildings.

☐ Use low-impact methods (hand tools/mechanical) and avoid unnecessary soil disturbance; apply erosion/sediment controls where ground disturbance occurs.

☐ Control invasive species and re-vegetate disturbed areas promptly with regionally native species.

4. ADAPTIVE MANAGEMENT AND CONFLICT RESOLUTION

Where wildfire measures and ecological objectives appear to conflict, the Owner will engage a QP to propose a site-specific approach that achieves equivalent or better wildfire risk reduction while maintaining ecological protections. The Covenantee may approve such alternative measures in writing, and the approved approach will form part of this covenant.

5. PERMITS AND COMPLIANCE

The Owner must obtain and comply with all required permits and approvals and must comply with applicable laws, bylaws, and Development Permit conditions.

6. MONITORING AND REPORTING

☐ By June 1 of each year, the Owner will submit a short self-declaration (Schedule C) with date-stamped photos demonstrating compliance with Sections 2 and 3.

☐ The Covenantee may conduct spot inspections on reasonable notice, not more than once every five (5) years or upon a substantiated complaint.

☐ On transfer of the Lands, the Owner will provide this covenant to the purchaser and advise the Covenantee of the transfer.

7. REMEDIES, INDEMNITY, AND GENERAL

If the Owner defaults, the Covenantee may require reasonable remediation. The Owner will indemnify the Covenantee from claims arising from the Owner's breach of this covenant. This covenant runs with the Lands and binds successors. It does not grant public access.

8. PRIORITY AND REGISTRATION

The Owner will do all things necessary for registration in the Land Title Office and, where applicable, obtain priority agreements from chargeholders.

EXECUTION

Executed by the parties as of _____, 20___. Signatures and acknowledgements in Land Title Act form to be appended.

SCHEDULE A – PLAN OF LANDS

[Attach reference plan or legal description map.]

SCHEDULE B – WILDFIRE & ECOLOGICAL MANAGEMENT STANDARDS (CHECKLIST)

The following items must be maintained on an ongoing basis; check applicable measures and annotate site-specific notes.

☐ Z0 non-combustible surface continuous around structures (width: ___ m).

☐ Gutters/eaves clean during fire season (owner maintenance schedule: _____).

☐ Under-deck enclosed/screened; no combustible storage beneath.

☐ Z1: ladder fuels removed; shrubs separated from walls; lower limbs pruned (target height: ___ m).

☐ Z2: surface fuels reduced; tree spacing adjusted to break crown continuity where feasible.

☐ Fence breaks at structures provided (material/type: _____).

☐ Combustible storage (wood, propane) located ≥ ___ m from buildings.

☐ Riparian/ESAs: work per permits/QP guidance; no ground disturbance without erosion control.

☐ Nesting window respected or QP clearance obtained (date: _____).

☐ Invasive species controlled; disturbed areas re-vegetated with native species.

SCHEDULE C – ANNUAL OWNER SELF-DECLARATION

Property: _____ PID: _____

Owner name: _____ Email/Phone: _____

Date of inspection: _____ Fire season year: _____

I confirm the property complies with the measures in Sections 2 and 3 and Schedule B. Photos attached: ☐ Z0 ☐ Gutters/Eaves ☐ Deck Underside ☐ Z1 ☐ Z2 ☐ Ecological features ☐ Water supply.

Owner signature: _____ Date: _____

Reviewer (if applicable): _____ Notes: _____