

DISCUSSION PAPER: FIRE PROTECTION OPTIONS & ALTERNATIVES

➤ Introduction

In the fall of 2017, a petition signed by 42 Forbidden Plateau Road area residents was submitted to the Comox Valley Regional District (CVRD) requesting a study to explore options for fire protection, primarily beyond the current Courtenay Fire Protection District (CFPD) boundary (5200 Forbidden Plateau Road). The petition was received by the CVRD's Electoral Areas Services Committee in October 2017, and funds for a feasibility study were approved. The petition specifically requested the CVRD's assistance with reviewing the feasibility of a range of options, including (but not limited to) potential expansion of existing CFPD fire protection boundaries, a first responder vehicle located on Forbidden Plateau Road or a volunteer fire department. Fire protection in rural and remote areas can be logistically challenging and very expensive; however, there are other measures that a community can take to mitigate

the risk of damage due to fire. This *Discussion Paper* presents a high-level overview of a range of options in keeping with the petition request, as well as some alternatives for the community's consideration.

➤ Fulltime, Recognized Volunteer Fire Department

Establishing a full-time volunteer fire department in the Forbidden Plateau Road area is the only option that would qualify all upper Forbidden Plateau Road area residents for insurance reductions. Though the legislative mechanism exists through which the CVRD could create an area specific service for such a service, there are some significant challenges that erode the feasibility of this option.

Cost - the start-up capital and ongoing operational costs associated with this option are very expensive. Using the cost estimates from a 2003 FUS study for Mount Washington and applying a cost escalation multiplier, the annual cost for establishing and operating a similarly modest-sized/serviced firehall in the Forbidden Plateau Road area could easily exceed \$750,000 per year. These costs do not include land acquisition for a firehall, or construction of a waterworks system that meets FUS requirements, which would add hundreds of thousands to the capital cost. Further, the lower Forbidden Plateau Road properties already receive fire protection through the CFPD and City of Courtenay Fire Department, and therefore may be reluctant to share in the cost of this service. In the future, if the CFPD were to convert to a regional district service, there would be an opportunity to review the service boundaries and level of fire protection provided. The feasibility of including the upper portion of Forbidden Plateau Road could be reassessed at that time.

Forbidden Plateau Road Area

based on data from the CVRD, BC Assessment and 2016 Census

Upper Forbidden Plateau Road

- # of properties – 70 (55 residential, of which 32 have improvements)
- Estimated population - 70
- Total assessed value - \$17,027,400
- Average assessed value - \$243,250 (\$327,000 for properties with improvements)
- # of properties represented on petition - 17

Lower Forbidden Plateau Road

- # of properties – 103 (102 residential, of which 97 have improvements)
- Estimated population - 213
- Total assessed value - \$54,464,989
- Average assessed value - \$528,800
- # of properties represented on petition – 8

Figure 1 – Study Area Statistical Information

Population density - an organizational structure consisting of fire chief, deputy chief, training officer and fire captains for a total of a minimum of 15 fully trained firefighters would also be required to meet the FUS fully protected status; additional firefighters are preferred. The upper portion of Forbidden Plateau Road currently has approximately 32 developed residential properties - using the average number of people per dwelling in the 2016 census profile for the CVRD, the population is approximately 70 people. At full development, in accordance with the current RGS and OCP, the population of the area is not likely to exceed 200 people in the foreseeable future. Sustaining a minimum 15-member, 24/7 volunteer fire department would be a significant, if not insurmountable, challenge for the community.

Inconsistency with CVRD community plans - The scale of infrastructure, services and population required to establish and operate a full-time volunteer fire department in the Forbidden Plateau Road area is, at present, inconsistent with the vision and policies outlined in the CVRD's Regional Growth Strategy (RGS) and Official Community Plan (OCP).

It is recommended that this option be excluded from the next phase (detailed research) of the study.

➤ **Expand CFPD Boundaries**

The CFPD has been approached on at least two occasions in the past decade with a request to consider expansion of its service area boundaries to include the upper portion of Forbidden Plateau Road - once by area residents, and once by the CVRD on behalf of area residents.

The CFPD most recently (2013) declined to consider an expansion based on the following reasons, as outlined in a written response to the CVRD:

- *The current boundary is approximately 13.9 km from the fire hall using the Comox Logging Road as a route. This route currently runs*

through private property and has been shut down for the Courtenay Fire Dept's use in the past.

- *Most insurance companies won't provide a discounted insurance rate when you exceed 13 km's from a fire station, so there would be no financial benefit to the homeowner.*
- *Taking in more forested land would also increase the potential financial risk to the CFPD. If a large forest fire were to occur in this forest area, the Courtenay Fire Department would have to bring in the Ministry of Forest and possibly contractors to assist with the extinguishment and overhaul. This cost would then be passed on to the CFPD.¹*

Preliminary discussions with the CFPD indicate that their position has not changed. Even if the CFPD were open to a possible boundary expansion, the Fire Chief for the City of Courtenay has indicated that the Department has no interest in sending its water tanker apparatus any further up Forbidden Plateau Road than the current boundary, which ends at 5200 Forbidden Plateau Road.

➤ **Where does this leave us? Fire Protection Alternatives**

There are several other fire protection alternatives that may interest the community, depending on the local reasons for wanting fire protection. These alternatives range from planning/prevention activities to basic fire extinguishment response. (See Figure 2) It is important to note that none of the alternatives discussed in this section fully meet FUS standards for insurance reductions, though individual companies may sometimes be willing to offer reduced insurance premiums for more basic levels of extinguishment response.

CVRD Service or Community Initiative?

Different implementation mechanisms exist for each of the alternatives along the fire protection continuum. Generally, implementation will either be achieved through the CVRD (established as a

¹ It appears this concern is related to Division 2 of the *Wildfire Act*, wherein the Minister may issue an order requiring a leaseholder/occupier of Crown land OR owner/leaseholder/occupier of private land to pay fire control costs incurred by the BC Forest Service, and the possibility that an

individual receiving such an order could potentially then make a claim against the Improvement District for failing to provide sufficient fire protection service.

new area specific service), or as a community-led initiative - perhaps through the Forbidden Plateau Road Association, a newly formed community non-profit organization, or simply a group of residents wishing to work together.

One of the key benefits of establishing an area specific service through the CVRD is that the service is clearly defined by bylaw (e.g. service area boundaries, participating properties, service levels, etc.), and funded on a sustained basis through taxation. Community-led programs and initiatives depend on voluntary participation and financial contributions; however, residents sometimes prefer the flexibility and lower costs of community-led programs over regional district services. The focus of this study is to determine the feasibility of an area specific regional district service for fire protection. Recognition of where other community-led options may apply (including examples, where applicable) has been included but not researched or costed in any detail.

➤ Along the Continuum: Planning & Prevention

FireSmart (Wildfire) Planning & Activities

FireSmart planning and prevention activities are intended to prevent/mitigate the impacts of wildfire to assets on community and private property. The CVRD is currently in the process of developing a region-wide wildfire protection plan as part of its emergency preparedness program, which will include the Forbidden

Plateau area. Once completed, the CVRD will become eligible to apply for grants to support FireSmart education initiatives and related activities (i.e. property risk assessments, vegetation management, etc.) through the Union of BC Municipalities' Community Wildfire Prevention Program. Regional Districts may submit up to three applications per funding intake, which is typically offered annually. Forbidden Plateau Road residents could approach the CVRD about a grant application to support FireSmart education and activities in the area. The project could involve just the upper portion, or all properties on Forbidden Plateau Road, as all properties pay into the regional emergency preparedness program. It would require some local coordination to work with the CVRD and undertake the project, which could possibly be overseen by the Residents Association. This option could be combined with any others in this Discussion Paper.

Implementation & Cost Considerations

Due to the current availability of provincial funding, FireSmart planning and prevention activities is the lowest cost alternative for incrementally increasing fire protection in the community. Communities can request up to 100% of eligible costs, to a maximum of \$10,000 per project. Communities can re-apply to the program for additional funding/projects; however, first-time applicants receive preference.

This option would be undertaken in partnership with the CVRD, through the existing regional emergency planning program. As such, there

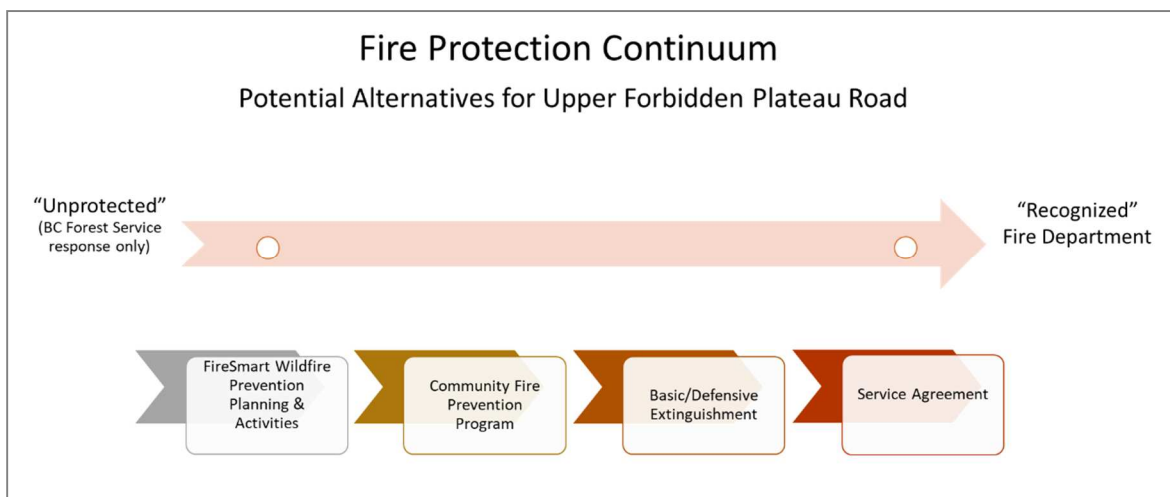


Figure 2 – Fire Protection Continuum

would be no need to create a new area specific service. The main benefit of this alternative is that it is an economical, pro-active approach to mitigating risk to life and property from fire. This option could be implemented relatively quickly, depending on the granting schedule and interest/availability of local residents in working with the CVRD on a FireSmart funding application and community project.

Community Fire Prevention Program

A community fire prevention program could engage the services of a fire prevention officer to focus on designing and implementing a localized program for the upper portion of the Forbidden Plateau Road area. It is unlikely that properties in the lower portion would participate in this option as they already receive fire prevention programming through the CFPD / Courtenay Fire Department.

The program could include development of a fire protection plan that prioritizes fire prevention and life safety based on local needs. Given the area's rural, forested surroundings, the program could focus on reducing the risk of both **wildfire and structural** fires through education, inspections (on a volunteer basis) and fire safety initiatives. The fire prevention officer could be engaged on a term contract simply to develop a fire prevention plan, which could then be turned over to residents for implementation on an individual/community basis, or on a longer-term contract, or an ongoing part-time basis to develop and implement the plan in collaboration with residents.

Implementation & Cost Considerations

This service could be established as a CVRD area specific service, or as a community-led initiative. An example of a community-led initiative that utilized this type of approach was at Mount Washington, where Strata 799 worked with a local Comox Valley fire chief to implement a fire protection strategy and various fire prevention measures.

For an ongoing program, preliminary research indicates that this option would cost approximately \$60,000 to \$70,000 per year, including a part-time fire prevention officer salary, a program budget to support fire safety initiatives for community benefit, and a used 4x4

vehicle for use/storage by the officer. If established as a local area service through the CVRD, a residential property valued at \$327,000 (average 2017 assessed value for the upper portion of the Forbidden Plateau Road area), could expect to pay approximately \$1,175/year for this option, plus a 5.25% provincial Surveyor of Taxes fee. Elector assent would need to be obtained through a referendum or petition. The program could potentially utilize grants, such as the FireSmart program, to support various aspects of the program.

➤ Along the Continuum: Fire Extinguishment

Basic, Defensive Extinguishment

This alternative includes establishment of a basic, defensive (exterior operations only) fire extinguishment response service aimed at preventing the spread of fire to adjacent properties/buildings/forest. As the lower portion of Forbidden Plateau Road already receives full fire protection, this alternative would again focus on the upper portion of the Forbidden Plateau Road area. The intent would be to provide an initial defensive response while waiting for the BC Forest Service to initiate operations (if applicable, though BCFS does not fight structural fires) and/or emergency responders if there is an immediate threat to life due to fire. Ideally, this option includes preparation of a community fire protection plan as a starting-point to the service.

Implementation & Cost Considerations

This service could be established as a CVRD area specific service, or as a community-led initiative. **If established as a CVRD service**, certain minimum requirements would need to be met to fulfil various legal and administrative obligations, which unavoidably increases the cost of the service. The fire protection service recently approved for Mount Washington proposed a similar type of first-line defensive service. Key elements of that service that could apply to a similar service in the upper Forbidden Plateau Road area include:

- Construction of a double garage-style building, to post disaster standards and withstand snow load (estimate \$500,000)

- Two response vehicles appropriate for the mountain terrain (estimate \$70,000)
- Selection of start-up equipment (estimate \$60,000)
- Training for local volunteers to Level 1 Firefighter (estimate \$25,000 annually for CVRD-required minimum of 15 volunteers)
- Program administration (estimate \$10,000 annually)

Mount Washington benefited significantly from having dedicated land available (at no additional cost) for construction of the storage building, along with an existing Resort-owned water system and hydrants that met fire flow requirements. Underground fiberglass water storage tanks (see Figure 3) may be a possibility for the upper Forbidden Plateau Road area, but land would need to be acquired (or alternative arrangements made with willing property owners) for equipment/vehicle storage and installation of water tanks.



Figure 3 – Example of an underground, fiberglass water storage tanks for fire protection in rural areas

Allowing for another \$125,000 for purchase, engineering and installation of a 25,000-gallon tank (or series of smaller tanks) and \$275,000 for land acquisition (which would require rezoning), the annual cost of a defensive service established through the CVRD could be roughly estimated at \$155,000 per year.²

If established as a local area service through the CVRD, a residential property valued at \$327,000 (average 2017 assessed value for the upper portion of the Forbidden Plateau Road area),

could expect to pay in the range of \$2,435/year for this option, plus a provincial 5.25% Surveyor of Taxes fee.

Elector assent would need to be obtained through a referendum or petition. There are currently no major government grants available for capital costs related to fire protection, including firehalls, apparatus and/or equipment. This level of service would not meet FUS standards, meaning it is anticipated that no insurance premium reductions would apply. As well, a minimum of 15 volunteers would be required for a sanctioned regional district service. As outlined in the previous section, it would be very difficult for the area to support the 15-volunteer requirement, even at full development potential in accordance with the current RGS and OCP.

A **community-led approach** to this alternative would not be subject to the same legal requirements as a regional district service and could most likely achieve cost reductions through the use of private land, donations and/or in-kind contributions towards shared equipment and water-equipped apparatus (for example, water tenders with pumps), along with basic training of available local volunteers. While this is possible on an informal, neighbour-helping-neighbour basis, some communities (including Apex Mountain Resort) have opted to form not-for-profit societies to provide an organizational structure and fundraising capability. It is important to note, however, that not-for-profit status does not exempt organizations from the need to be compliant with WorkSafe BC regulations, insurance obligations and proper administration related to Society organization, training, maintenance and documentation. As well, with a not-for-profit organization, there may be a need to further investigate the possible financial risk referenced by the CFPD, related to cost recovery claims under the *Wildfire Act*.

If residents in the upper portion of the Forbidden Plateau Road area want to set up a community-led service - whether informally as neighbours or as a not-for-profit Society - Regional district staff and/or local Comox Valley fire departments may

² Capital costs financed over 10 years at 3.0% per annum; allocated to a capital reserve following debt pay down for equipment and apparatus renewal, replacement or upgrade.

be able to provide recommendations and guidance with regards to selection of fire service apparatus.

Service Agreement

As outlined, the new fire protection service at Mount Washington was designed to have on-site infrastructure, storage of equipment and apparatus, along with trained volunteers for initial response. In addition to that, the service includes an agreement with the Oyster River Fire Department through which it was anticipated that a crew of approximately four trained firefighters would arrive in a four-wheel drive vehicle as soon as safely possible to assume responsibility at the scene, using the local apparatus and equipment.

In that instance, a service agreement was only feasible in combination with the on-mountain water system, storage building, apparatus and equipment to standards specified by the Fire Chief. It is reasonable to assume that similar requirements would apply if a Comox Valley fire department were willing to consider a comparable agreement with the upper Forbidden Plateau Road area residents. Their interest, however, is not guaranteed and must be balanced with the need to maintain service levels in their home communities. If there is any perceived risk in terms of insufficient infrastructure, availability of firefighter personnel and/or any other related service concerns, then an agreement would not be feasible.

Implementation & Cost Considerations

Though it would require further research and consultation with CVRD staff and local fire chiefs, it is not anticipated that a service agreement would be possible at this time – lack of a local water supply system would undoubtedly be a significant concern for local fire departments, along with ensuring sufficient firefighter coverage in their home communities. At a minimum, it could be expected that the cost of an agreement could significantly exceed other areas due to the level of risk. For reference, the service cost is budgeted at \$90,000 annually for Mount Washington, which has a full water system and hydrants. The cost of a service agreement for Forbidden Plateau would be in addition to the costs outlined in the previous

section to establish on-site storage for firefighting equipment and apparatus, training for local volunteers, water storage tank(s) and land procurement. It still would not satisfy the published FUS standards and requirements for insurance reductions.

➤ Community Conversation – questions for consideration

We need your input! Please plan to attend the **Community Conversation meeting on Sunday, March 11th from 2pm – 4pm at the Dove Creek Hall** (3400 Burns Road) where the consultants will work with residents to determine which alternatives are best aligned with community goals/expectations and require more detailed research. Questions that we hope to cover with residents include the following:

- What do you think about the recommendation to exclude a “fully recognized” volunteer fire department (to FUS standards) from the study?
- Preliminary conversations with the CFPD and City of Courtenay Fire Department indicate that there is not likely to be any consideration given to a boundary expansion – do residents have any follow-up questions or require any further information on this option? Should it be excluded moving forward?
- Which of the alternative(s) presented do you think best meet the goals and expectations of the community and warrant further research?
- Do you think your preferred alternative(s) is best pursued as a regional district service, or a community-led approach? Or perhaps a combination?
- Do you have any other ideas or information you would like to see included as part of the next stage (detailed research) of the study?