



DISTRICT OF MAPLE RIDGE

TO: His Worship Mayor Ernie Daykin
and Members of Council

DATE: August 25, 2014
FILE NO: 2012-036-CP

FROM: Chief Administrative Officer

ATTN: CoW

SUBJECT: Wildfire Development Permit Area Guidelines
Official Community Plan Amending Bylaw No. 7101-2014
Development Procedures Amending Bylaw No. 7102-2014

EXECUTIVE SUMMARY:

On May 27, 2014 Council passed a resolution directing the preparation of a Wildfire Development Permit Area Guidelines Official Community Plan Amending Bylaw, along with an amendment to Development Procedures Bylaw No. 5879-1999 for Council consideration of First and Second Readings.

The purpose of this Council report is to bring forward the above Bylaws and also to provide the outcomes of a public open house held at Fire Hall No. 1 on June 25, 2014. The open house was held to ensure property owners living in the Whonnock Lake and Webster's Corners areas, which were added to the proposed Wildfire Development Permit Area in May 2014, were consulted prior to moving forward with the Bylaws.

RECOMMENDATIONS:

- 1) That in accordance with S. 879 of the *Local Government Act* opportunity for early and ongoing consultation has been provided by way of holding advertised public meetings, posting Official Community Plan Amending Bylaw No. 7101-2014 and related material on the municipal website and it is considered unnecessary to provide any further consultation opportunities, except by way of holding a Public Hearing on the Bylaw;
- 2) That Maple Ridge Official Community Plan Amending Bylaw No. 7101-2014 be considered in conjunction with the Capital Expenditure Plan and Waste Management Plan;
- 3) That it be confirmed that Maple Ridge Official Community Plan Amending Bylaw No. 7101-2014 is consistent with the Capital Expenditure Plan and Waste Management Plan;
- 4) That Official Community Plan Amending Bylaw No. 7101-2014 be given First and Second Reading and upon receipt of comments from the Agricultural Land Commission forwarded to Public Hearing; and

5) That Development Procedures Amending Bylaw No. 7102-2014 be given First and Second Reading.

BACKGROUND:

Shortly after the 2003 wildfire in Kelowna, BC, the Provincial Government undertook a four and half month review of “Firestorm 2003”, which resulted in a 100 page report with 42 recommendations. In this Provincial report there are a number of recommendations directed at all levels of government including:

- Fuel treatment projects;
- Adoption of FireSmart principles;
- Wildfire proofing through development;
- Maximizing firefighting expertise;
- Provision of local emergency plans;
- Adopting consistent standards;
- Educating the public on interface wildfires
- Utilizing sprinklers; and
- Preparing recovery plans.

In 2004, the Provincial Government recommended that all communities undertake a Community Wildfire Risk Assessment and funding was established to help municipalities pay for this work. However, it is worth noting that not all municipalities are at equal risk of a wildfire, particularly those in highly urbanized areas of the Lower Mainland, such as Vancouver, New Westminister, City of North Vancouver, and White Rock.

A Maple Ridge Wildfire Risk Assessment and a Wildfire Protection Plan were produced for the District in 2007, through a grant awarded from the Union of British Columbia Municipalities (UBCM) in 2006. These documents discuss the risk of wildfire in Maple Ridge in detail and the Plan provides this contextual snapshot in the executive summary:

The District of Maple Ridge is embedded within the forest; approximately 60% of the community is forested. This region of the Province is susceptible to both lightning and human caused fires. Overall, the community could be classified with a fire risk profile described by a low to moderate fire probability and high to extreme consequences based on the values at risk.

The Plan provides 21 recommendations on:

- Risk assessment;
- Education and communication;
- Structure protection;
- Emergency response;
- Training
- Fuel management; and
- Post fire rehabilitation.

On July 10, 2007, Council passed the following resolution:

That the recommendations contained in the Community Wildfire Protection Plan be adopted in principle pending the development of a detailed implementation plan with an associated financial plan which will be brought back to Council for their consideration and adoption; and

That staff be instructed to make application to the Union of British Columbia Municipalities for grant funding to develop an implementation plan for the Community Wildfire Protection Plan recommendations.

In the Fall of 2007, Maple Ridge was awarded a second grant from the Union of British Columbia Municipalities for the development of municipal wildfire legislation. At that time a staff working group was formed with representatives from Fire, Planning, Engineering, Operations, Building, and Parks & Leisure Services Departments to develop a draft Wildfire Development Permit. During that time, staff worked together to ensure the draft incorporated:

- Risk mitigation measures;
- A process that will work concurrently and in concert with existing related regulations; and
- Built-in flexibility to allow for alternative options that effectively mitigate risk.

On July 9, 2012, the District's Fire Chief provided an update at Council Workshop on the draft Wildfire Development Permit and presented the next steps in the process. At the July 10, 2012, Council meeting, the following resolution was passed:

That staff be directed to undertake the proposed public consultation process for the Wildfire Development Permit Area Process as part of the early and ongoing consultation requirements of the Local Government Act.

A report was presented at the January 7, 2013 Council workshop on the outcomes of the consultation process and recommended that staff be directed to prepare a Wildfire Development Permit Area Guidelines Official Community Plan Amending Bylaw, along with an amendment to Development Procedures Bylaw No. 5879-1999. Council raised concerns with the technical aspects of the proposed boundaries for the Wildfire Development Permit Area and the potential costs that will be incurred by the development community and referred the draft Wildfire Development Permit back to staff. Subsequently, the District Fire Chief had a peer review conducted of the proposed Wildfire Development Permit Area boundaries that were recommended by B.A. Blackwell & Associates. The peer review found that the methodology used by B.A. Blackwell & Associates was sound. The peer review report also recommended that additional areas be included within the proposed Wildfire Development Permit Area:

- The forests around Whonnock Lake; and
- The forest area of Webster's Corners.

On May 12, 2014, the peer review and outcomes were presented at Council Workshop. Council passed a resolution on May 27, 2014 directing the preparation of a Wildfire Development Permit

Area Guidelines Official Community Plan Amending Bylaw, along with an amendment to Development Procedures Bylaw No. 5879-1999 for Council consideration of First and Second Readings.

Implementation of the Protection Plan recommendations has been ongoing since Council endorsement in 2007. The table below outlines the activity since that date.

Table 1: Wildfire Protection Plan Recommendations and Implementation to Date

Communication & Education	✓
Structure Protection (i.e. Wildfire DP)	In Progress
Emergency Response	✓
Training	✓
Fuel Management	Future Implementation Item
Post Fire Rehabilitation	Future Implementation Item

DISCUSSION:

Outcome of Public Open House

A public open house was held on June 25, 2014 at Fire Hall No. 1 and 16 people signed-in. A total of 277 letters advising of the open house were mailed out to all property owners living in Webster’s Corners and Whonnock Lake, the two new proposed additions to the Wildfire Development Permit Area. Open house notifications were published in the Maple Ridge News on June 11th, 13th, 18th, and 20th. Additionally, information about the public open house was posted on the District website and the Fire Department webpage. A questionnaire was available at the open house for attendees to complete and was subsequently posted on the Fire Department webpage for three weeks from June 26th to July 10th. Only one questionnaire was completed and the comments are attached as Appendix C.

The information presented at the public open house included the two new areas proposed for the Wildfire Development Permit Area (Webster’s Corners and Whonnock Lake) as well as the background information and the highlights of the proposed Wildfire Development Permit. Comments from attendees at the event were mostly positive, although one developer expressed concern for the additional costs and stated that their company is not in support.

A summary of the consultation events prior to the above open house are listed below and more detailed information on the outcomes are discussed in the January 7, 2013 and May 12, 2014 Council workshop reports.

- Builders’ Focus Group Meeting held at Fire Hall No. 1 – May 8, 2012
- Builders’ Forum held at Fire Hall No. 1 – September 12, 2012
- Public Open House held at Fire Hall No. 1 – October 3, 2012
- 2nd Builders’ Forum held at Fire Hall No. 1 – November 27, 2012

Official Community Plan Amending Bylaw No. 7101-2014:

Section 919.1 of the *Local Government Act* permits the designation of Development Permit Guidelines for development areas at risk to hazardous conditions, such as wildfire. Development Permit Areas are designated by an Official Community Plan and as such, an amendment to the Official Community Plan is required. The proposed Amending Bylaw No. 7101-2014 is attached as Appendix A.

The intent of Wildfire Development Permit Area Guidelines is to minimize the risk to property and people. Further, the intent is for these Guidelines to work in concert with all related regulations, guidelines and bylaws. The Guidelines contain four “Key Guideline Concepts”, which will be applied to assess Wildfire Development Permit Area applications:

1. Locate development on individual sites so that when integrated with the use of mitigating construction techniques the risk of wildfire impacts is reduced;
2. Mitigate wildfire impacts, while respecting environmental conservation objectives and other hazards in the area;
3. Ensure identified wildfire interface risks are recognized and addressed within each stage of the land development process; and
4. Proactively manage potential fire behavior, thereby increasing the probability of successful fire suppression and containment and minimizing adverse impacts.

There are four subsequent sections of the Guidelines document that provide guidance on achieving the above “Key Guidelines Concepts” and these are:

1. Design and Construction;
2. Building Design and Siting;
3. Wildfire Impact Mitigation through Design;
4. Landscaping and Open Spaces.

Generally, the highlights of the draft Wildfire Development Permit Area Guidelines are as follows:

- **Buffer from Forest Edge:**
Where buildings are adjacent to a forest edge, the guidelines propose a 10 metre buffer, which may include a rear yard setback, public trail and/or public road. Additionally, FireSmart landscaping standards are proposed for application within rear yards to ensure minimal fuel loading within the buffer area.
- **Forest Edge Mitigation Measures:**
A Wildfire Mitigation Assessment report, prepared by a Registered Professional Forester is required and recommendations implemented.
- **Construction Materials:**
Appropriate construction materials and details are prescribed in the NFPA 1144 document, which is the National Fire Protection Association’s standards for reducing structure ignitions from wildland fire and/or equivalencies meeting the intent as acceptable to the District’s Fire Chief.

- **Exemptions:**

Public works and services and maintenance activities carried out by or on behalf of the District are exempt. Interior renovations within an existing legally constructed building are also exempt. Partial exemptions permitted for:

- a) small renovations;
- b) subdivisions resulting in no more than two residential lots;
- c) properties being actively farmed.

Clause 8.12.2(A)(2) of the Development Permit document states:

The District of Maple Ridge Fire Chief may consider alternative design and construction solutions to the NFPA 1144 and 1141 standards if the alternate solution adheres to the intent of the Guidelines. See Wildfire Development Permit Application Checklist for details.

The District's solicitor has provided input into the drafting of the Development Permit.

Development Procedures Amending Bylaw No. 7102-2014:

The Development Procedures Bylaw sets the requirements for all forms of development applications and includes specific requirements for each. The proposed amendment to the Development Procedures Bylaw (attached as Appendix B) is intended to provide more detailed information about what kind of information will be required for a Wildfire Development Permit Application and will generally serve as a submission checklist for applicants. For example, the checklist informs applicants on:

- Items to be included with an application;
- When the assessment of fire interface risks and mitigation report is required;
- What information is to be included in the report and the professional qualifications required for undertaking the study; and
- Additional information on risk mitigation during development and a recommendation to coordinate all relevant consultants of record on the project.

The District's solicitor has provided input into the drafting of the Development Permit checklist.

Concerns Regarding Additional Costs to Development Community

The development community was made aware early in the process that there would be some costs associated with developments located directly adjacent to a forest area. In these locations, forest edges need to be assessed for wildfire hazard risk and mitigation requirements to comply with FireSmart standards. An assessment report for a development of minimal complexity proposed adjacent to a forest edge would be a minimum of \$700 for a small one or two lot development and a minimum of \$5,000 for a large subdivision. Size and complexity of the development site will increase the cost of the assessment report to an upward end of approximately \$12,000 for a very

large and complicated development site. In most development situations risk mitigation work along the forest edge will coincide with work that would also be required for trail construction and/or riparian area enhancement, so additional costs for this work will typically be minimal if any.

Additionally, the sides of buildings directly facing a forest edge will need to be considered if using flammable materials, such as vinyl siding, which melts under extreme heat exposing a highly flammable paper underneath. Non-flammable materials, such as hardy board, stone, or brick, may be used, but are more costly. Other options are currently available that are much less costly than high end non-flammable materials.

One option that was discussed with developers back in 2012 was to install exterior sprinkler heads if using vinyl siding on the building faces exposed to the forest edge. External sprinkler heads cost between \$120 to \$250 per head. The number of external sprinklers that would be needed for a building face directly adjacent to the forest edge would vary, but on average with a sundeck included it is anticipated approximately five external sprinkler heads would provide appropriate coverage. Based on this average and using the higher estimate per head, the total cost per forest exposed building face would be a maximum of \$1,250 (excluding tax). Since then, new technologies have continued to come onto the market, such as a non-flammable wrap for use under vinyl siding, thereby preventing the need for external sprinklers. Using this non-flammable wrap would be marginally higher in cost to the conventional flammable paper building wrap, but less than external sprinklers.

Local Government Act Referral Requirements

Section 879 of the *Local Government Act* sets the requirements for referrals to other agencies who may be affected by the proposed amendments to the Official Community Plan. As such, the Wildfire Development Permit Area Guidelines have been forwarded to the Agricultural Land Commission and School District 42 for formal comments to be received within 30 days. After First and Second Reading, the Wildfire Development Permit Guidelines will be forwarded to the Department of Fisheries & Oceans and the provincial Ministries of Environment, Transportation, and Wildfire Management with an invitation for comment.

The Wildfire Development Permit Area Guidelines will be sent to the following organizations for information:

- City of Pitt Meadows
- District of Mission
- UBC Malcolm Knapp Research Forest
- Metro Vancouver Parks
- Katzie First Nation
- Kwantlen First Nation

INTERDEPARTMENTAL IMPLICATIONS:

The technical working group will continue to work on implementation of the Wildfire Development Permit Area Guidelines as the internal processing of development applications will involve continued participation amongst Fire, Planning, Engineering, Building, Operations, and Parks & Leisure Services Departments. It is anticipated that assistance will be required from Information Services to update the internal and online mapping programs.

FINANCIAL IMPLICATIONS:

The Fire Department has submitted confirmation of the WFDP project work to UBCM, as required for payment of the \$23,000 in grant funds. To date, UBCM has reported that they have received the information, but it has not yet been processed.

NEXT STEPS:

The Wildfire Development Permit Guidelines have been forwarded to the Agricultural Land Commission and School District 42 for formal comments with a request that they be received within 30 days. Comments from the Agricultural Land Commission will be required prior to the public hearing for the Official Community Plan Amending Bylaw No. 7101-2014, which is scheduled for October 21, 2014.

CONCLUSION:

The drafting of the proposed Wildfire Development Permit has resulted in much discussion and considerable review. The Guidelines have been written to be as flexible as possible with built-in exemptions and options if requirements are not feasible. The costs associated with a wildfire risk mitigation report and construction techniques are nominal in comparison to the overall cost of a project or house construction.

Like all Development Permits, the Wildfire Development Permit establishes guidelines to meet the intent of the regulation – in this case, “for the protection of life and property in designated areas that could be at risk for wildland fire”. Specific circumstances are always considered when Development Permits are being applied and alternative solutions are often identified. Ultimately, each Wildfire Development Permit will be approved and issued by Council.

The application of the draft Wildfire Development Permit is intended to mitigate the risks associated with forest interface development. Mitigation measures are currently in place for risks associated with earthquakes, floods, and geotechnical issues and the impacts of a wildfire can be as devastating as any one of these other events.

Serious wildfire events have the potential to devastate a community and the economic, social, and environmental effects may be felt for decades. As discussed in the report, the Maple Ridge Fire Department has already taken the recommended steps in communication and education, emergency response and training. Taking steps to reduce the risk to new development is another important step towards fulfilling the recommendations of the Maple Ridge Wildfire Protection Plan.

“Original signed by Lisa Zosiak”

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Approved by: Frank Quinn, MBA. P.Eng
GM: Public Works & Development Services

“Original signed by J.L. (Jim) Rule”

Concurrence: J. L. (Jim) Rule
Chief Administrative Officer

The following appendices are attached hereto:

- Appendix A – Wildfire Development Permit Official Community Plan Amending Bylaw No. 7101-2014
- Appendix B – Maple Ridge Development Procedures Amending Bylaw No. 7102-2014
- Appendix C - Open House Questionnaire – Comments Received

CORPORATION OF THE DISTRICT OF MAPLE RIDGE
BYLAW NO. 7101-2014

A Bylaw to amend the Maple Ridge Official Community Plan
Bylaw No. 7060-2014

WHEREAS, it is deemed expedient to amend the Maple Ridge Official Community Plan Bylaw No. 7060-2014 as amended:

NOW THEREFORE, the Municipal Council of the Corporation of the District of Maple Ridge enacts as follows:

1. This bylaw may be cited as “Maple Ridge Official Community Plan Amending Bylaw. No. 7101-2014”.
2. **Table of Contents** is amended as follows:
 - i. Add the following under **Chapter 8 Development Permit Area Guidelines**:

“8.12 Wildfire Development Permit Area Guidelines
8.12.1 Key Guideline Concepts
8.12.2 Guidelines”
3. **Chapter 8 Development Permit Area Guidelines** is amended as follows:
 - a. Sub-section **8.2 Application and Intent** be amended by adding the following after item number 6:

“7. Wildfire Development Permit pursuant to Section 919.1(1)(b) of the *Local Government Act* for the protection of development from hazardous conditions on designated lands as identified on **Map 1: Wildfire Development Permit Area.**”
 - b. Sub-section **8.4 Development Permit Area Exemptions** be amended by adding the following after item number 3:

“4. A Wildfire Development Permit is not required for the following and will be confirmed in writing by the District:
 - a) Where an exterior renovation or addition to an existing structure is less than 50% of the market value of the current structure a Wildfire Development Permit will not be required.

- b) Interior renovations to an existing lawfully constructed or legally non-conforming building or structure wholly contained within and not project beyond the foundation.
- c) If a subdivision results in the creation of no more than two residential lots, and all the guidelines contained in 8.12 Wildfire Development Permit are adhered to by the developer and/or builder, a Wildfire Development Permit will not be required.
- d) On lands where a farm use, as defined by the Agricultural Land Commission, is being practiced and where the building design for residential buildings comply with the NFPA 1144 (latest edition) building guidelines, a Wildfire Development Permit will not be required. Non-residential farm buildings are exempt from all Wildfire Development Permit requirements, as long as they are sited at least 10 metres away from all residential buildings.
- e) Public works and services and maintenance activities carried out by, or on behalf of, the District of Maple Ridge.
- f) Any construction of a building or structure or any alteration of land that does not require a permit from the District.”

c. Add the following as sub-section **8.12 Wildfire Development Permit Area Guidelines:**

“Intent

The Wildfire Development Permit Area Guidelines are intended for the protection of life and property in designated areas that could be at risk for wildland fire and where this risk, in some cases, may be reasonably abated through implementation of appropriate precautionary measures.

A Development Permit is required for all development and subdivision activity or building permits for areas identified as wildfire risk areas identified in attached Map 1: Wildfire Development Permit Area. A Development Permit may not be required under certain circumstances indicated in the Development Permit Exemptions, Section 8.4, Item 4. These Development Permit Guidelines are to work in concert with all other regulations, guidelines and bylaws in effect.

8.12.1 Key Guideline Concepts

The intent of the Key Guideline Concepts is to ensure that development within the Wildfire Development Permit Area is managed to minimize the risk to property and people from wildland-urban interface fire and to further reduce the risk of potential post-fire landslides and debris flows.

Applications for Wildfire Development Permits will be assessed against the following key guideline concepts:

1. Locate development on individual sites so that when integrated with the use of mitigating construction techniques the risk of wildfire impacts is reduced;
2. Mitigate wildfire impacts while respecting environmental conservation objectives and other hazards in the area;
3. Ensure identified wildfire interface risks are recognized and addressed within each stage of the land development process; and
4. Proactively manage potential fire behavior, thereby increasing the probability of successful fire suppression and containment and minimizing adverse impacts.

8.12.2 Guidelines

A. Design and Construction

1. The design and construction of buildings and structures located within the boundaries of the Wildfire Development Permit Area (see attached Map 1: Wildfire Development Permit Area) shall be in accordance with 8.12 Wildfire Development Permit Area Guidelines. Specific details can be found in the standards set forth in the latest editions of the NFPA 1144 (Standard for Reducing Structure Ignition Hazards from Wildland Fire) and NFPA 1141 (Standard for Fire Protection Infrastructure for Land Developments in Suburban and Rural Areas); and
2. The District of Maple Ridge Fire Chief may consider alternative design and construction solutions to the NFPA 1144 and 1141 standards if the alternate solution adheres to the intent of the Guidelines. See Wildfire Development Permit Application Checklist for details.

B. Building Design and Siting

1. NFPA 1144 (Standard for Reducing Structure Ignition Hazards from Wildland Fire) building guidelines are to be used for all new development;
2. Fire resistant building materials and methods;
 - a) Class A or B rated roofing material on new roofs and >50% roof replacements
 - b) All vents are screened with metal screens
 - c) Non combustible soffits
 - d) Overhanging projections protected
 - e) Overhanging buildings protected
 - f) Exterior vertical wall clad with ignition resistive material
 - g) Non combustible window screens
 - h) Non combustible 20 minute rated exterior doors
 - i) Spark arrestors on all wood burning appliances

j) Laminated or multi-paned windows

3. Buildings adjacent to the crest of a vegetated slope may require special mitigation measures determined by the Fire Department; and
4. Accessory buildings located within the Wildfire Development Permit Area buffer area, as identified in Item C(1) below, must meet the same building standards as the residential building(s).

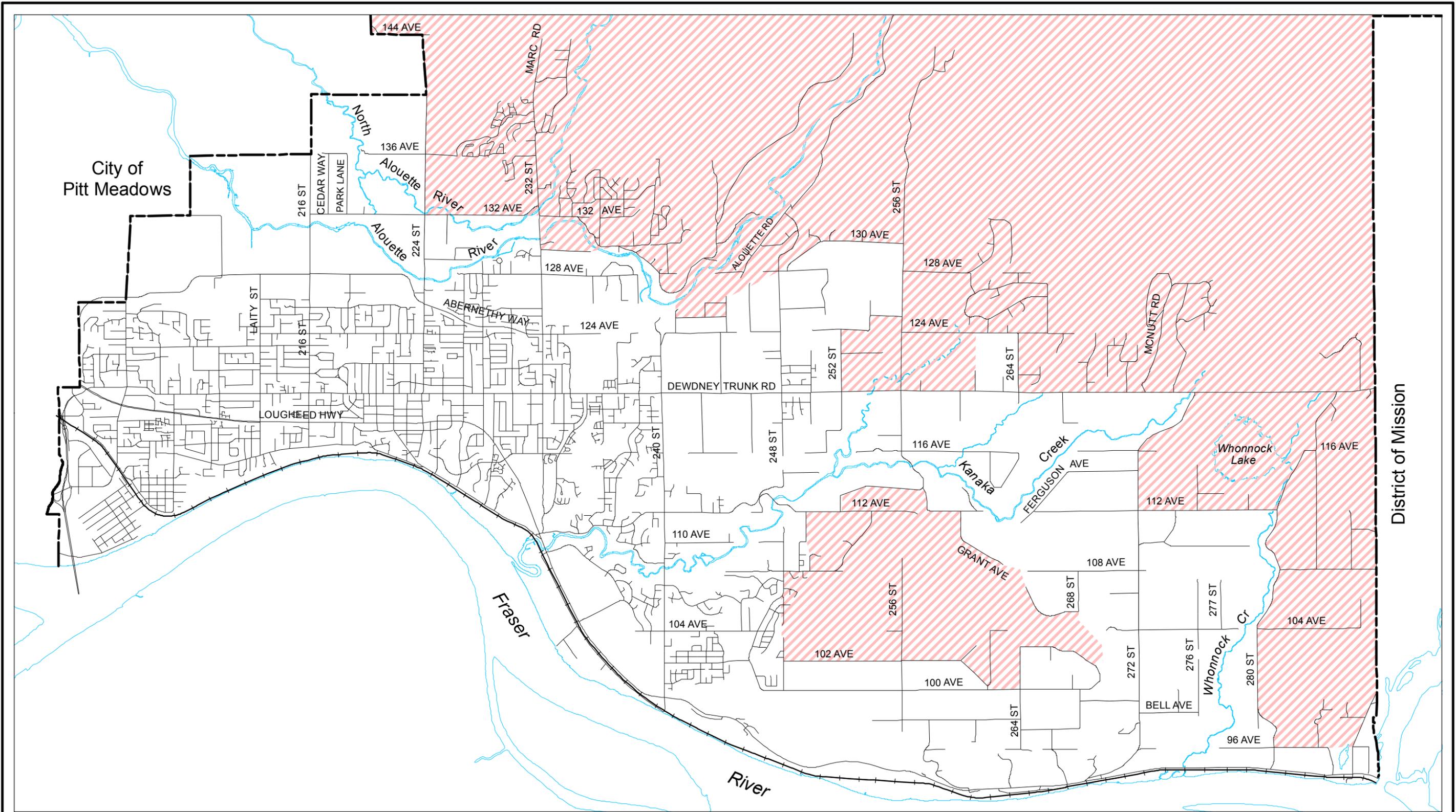
C. Wildfire Impact Mitigation through Design

1. The residential building elevation facing the forest edge should be located a minimum of 10 metres away from the adjacent high risk wildfire areas. 10 metre fire breaks must be created between all sides of the foundation and the forest interface (vegetation shall be modified to mitigate potential wildfire impacts within 10 metres of the foundations prior to the start of construction). The fuel break may include treating fuel on the existing parcel or developing a trail as a part of the fuel break, or included in an environmental and geotechnical setback if such treatment is mutually beneficial to the intent of the setback areas and FireSmart principles.
2. 10 metre fire breaks may incorporate cleared parks, roads, or trails;
3. Locate building sites in the flattest areas on the property and avoid gullies or draws that accumulate fuel and funnel winds;
4. To minimize the potential impacts to residential buildings in the Wildfire Development Permit Area, FireSmart standards should be incorporated taking into account: (1) siting form; (2) exterior design; and (3) finish of buildings and structures;
5. Steep roofs, hidden gutters around roofs and screens to cover attic vent openings are preferred in order to prevent the collection of leaves or needles and to reduce the risk of ember shower accumulation;
6. Where the District requires fire hydrants within a development, these must be fully functional prior to construction above the foundation level;
7. Where appropriate, if a trail system is planned for a subdivision and a park it should be capable of emergency vehicle access with a 1.5 metre trail base and a minimum of 2 metre cleared vegetation and pullouts for passing and turnaround every 500 metre (in areas where a 30 metre environmental setback is required, the District may consider including the trail within the 30 metre setback); and
8. Two means of access are preferred for subdivisions in a Wildfire Development Permit Area. If two access points are not possible then the single access must have the capability of accommodating two fire trucks - each with a width of 2.9 metres - safely passing each other.

D. Landscaping and Open Spaces

1. Landscaping should be designed based on FireSmart landscaping standards so as to ensure minimal fuel loading within the landscaped areas and provide ongoing resistance to wildfire. The type and density of fire resistive plantings incorporated within landscaped areas should help mitigate the interface fire impacts; and
2. Removal of all debris (wood and vegetation) after land clearing for development must be completed prior to the registration of any new subdivision plan.
3. A landscaping security may be required for landscaping works in accordance with the Maple Ridge Landscape Security Policy No. 6.28.”

E. Map 1: Wildfire Development Permit Area



WILDFIRE DEVELOPMENT PERMIT AREA

MAP 1: WILDFIRE DEVELOPMENT PERMIT AREA



**CORPORATION OF
THE DISTRICT OF
MAPLE RIDGE**
PLANNING DEPARTMENT

AUG 12, 2014

Not To Scale

**DISTRICT OF MAPLE RIDGE
PLANNING DEPARTMENT**

Development Application Submission Checklist

Schedule J

WILDFIRE DEVELOPMENT PERMIT APPLICATION

A. INITIAL APPLICATION REQUIREMENTS

The District will provide the opportunity for applicants to meet with staff from the appropriate departments early in the application process. Applications for Wildfire Development Permits are to be made to the Planning Department and must include the first five items listed below as the initial step in the process:

- 1) Site information based on a survey plan prepared by a certified B.C. Land Surveyor;
- 2) Current state of title certificate and copies of all restrictive covenants registered on title, including relevant schedules and attachments;
- 3) Location map;
- 4) Map or plan of the property including topography, natural features, existing structures, infrastructure, surface drainage, parcel boundaries, adjacent streets and rights-of-way; and
- 5) Detailed site plan and/or air photo overlay indicating the intended location of all proposed new lots, structures, approved environmental protection setback areas for watercourses, wetlands, and steep slopes, sewage disposal systems, stormwater detention, drainage works, driveways, parking areas or impervious surfaces, and servicing infrastructure. Also include details on the extent of the proposed site clearing.

B. ASSESSMENT OF FIRE INTERFACE RISKS AND MITIGATION MEASURES

Subsequent to a meeting with Planning, Fire, and Engineering staff, the following will be required:

- 1) Assessment of fire interface risks and mitigation measures by a Registered Professional Forester, qualified by training or experience in fire protection engineering, with at least two years' experience in fire protection engineering and assessment and mitigation of wildfire risks in British Columbia; and
- 2) A description of the methodology, criteria and assumptions used to undertake the assessment.

C. ASSESSMENT REPORT REQUIREMENTS

The results of the assessment must include:

- 1) Identification of hazardous C2, C3 and C4 fuels at the wildland-urban interface edges of the planned subdivision and map these edges based on the drip-line of the trees at the wildland edge;
- 2) Recommendations for FireSmart fuel removal and fuel reduction zones to be completed for the entire development prior to Development Permit approval;
- 3) Recommendations for establishing defensive space around all buildings by spacing of all coniferous trees and maintaining and pruning of all remaining trees;
- 4) Recommendations for the type and placement of trees and other vegetation in proximity to the development;
- 5) Recommendations for the clean-up and proper disposal of combustible material remaining from construction as soon as construction is complete;
- 6) Recommendations for mitigation of wildfire risk on any wildland/green spaces to be handed over to the District;
- 7) Results of an assessment of "Wildland Fire Risk and Hazard Severity in the Structure Ignition Zone" as per NFPA 1144 (latest edition);
- 8) Recommendations for the removal and proper disposal of dead trees and continued efforts to keep the land free of accumulation of any dead trees;
- 9) Recommendations for removal and proper disposal of all tree limbs and shrubs that may overhang roofs or grow under building eaves and to continually maintain this condition;
- 10) Recommendations for the removal and disposal of all needles, dead twigs and branches, and to maintain the lands free of such accumulation;
- 11) A written synopsis demonstrating that the proposed development is consistent with the applicable Development Permit Guidelines as provided by the District, and NFPA 1144 (latest edition) (Standard for Reducing Structure Ignition Hazards from Wildland Fire) and NFPA 1141(latest edition) (Standard for Fire Protection Infrastructure for Land Developments in Suburban and Rural Areas) identifying any mitigation or compensation measures that may be specified as development permit or rezoning conditions;
 - a. if alternative solutions are being proposed for the consideration of the Maple Ridge Fire Chief, as noted in Section 8.12.2(A)(2) of the Development Permit Area Guidelines, the alternative solutions must be provided by either a Fire Protection Engineer and/or a Registered Professional Forester registered with the Association of

BC Forest Professionals and other professionals as deemed necessary by the District.
Note: The Registered Professional Forester must have at least two years' experience in fire protection engineering and with assessment and mitigation of wildfire hazards in British Columbia. The qualifications of the Registered Professional Forester must be acceptable to the District of Maple Ridge Fire Chief;

- 12) Conclusions of a qualified professional (as discussed in 11(a) above), accompanied by supporting rationale; and
- 13) The District may solicit a peer review by another qualified professional and/or ask for other additional information the District deems necessary.

D. FURTHER CONSIDERATIONS

- 1) All wood, vegetation and construction debris identified in the Registered Professional Forester's report should be removed within three months of Development Permit issuance, or immediately during high fire risk seasons, and the District may require security in connection with such removal.
- 2) Coordination amongst all relevant consultants of record is recommended for final wildfire interface mitigation measures. Mitigation measures for wildfire areas must take place outside of approved environmental protection areas and geotechnical setback areas where possible, unless approved by the Fire Chief, Chief Building Official, and/or the District's Approving Officer.
- 3) All reports and information shall be prepared in a digital format, compatible with municipal GIS mapping program, as well as three paper copies and provided at the applicant's cost. All reports, opinions and plans shall be signed and sealed by the appropriate qualified professional.

References:

- National Fire Protection Association 1144 (Standard for Reducing Structure Ignition Hazards from Wildland Fire);
- National Fire Protection Association 1141 (Standard for Fire Protection Infrastructure for Land Developments in Suburban and Rural Areas);
- The Home Owner's FireSmart Manual – Protecting Your Home From Wildfire;
- FireSmart – Protecting Your Community From Wildfire.

OnlineSurvey

(Completion rate: 100.0%)

Do you live in a wildfire interface area?

Response	Chart	Percentage	Count
Yes		100.0%	1
No		0.0%	0
		Total Responses	1

Do you think wildfire safety is an important issue in Maple Ridge? Please explain.

No. We live in a rain forest. We have modern fire equipment and professional fire fighters. We live in a rain forest. But I get that the agenda is set and pushed by bureacrats, not caring about the difficulty the everyday Joe has in paying bills, let along adding to the cost of housing.

For new development located within forest interface areas, do you think that taking measures to reduce the risk of wildfire hazard will help improve safety? Please explain.

You don't need an 'area' to add common sense building requirements. Less bureaucracy people, not more.

Are you interested in receiving public education and training on how to reduce wildfire hazard risk to your existing property? Please explain.

I pay attention and am taking care of my property. It would be HELPFUL if those of us east of 240th could burn debris more than twice a year. That way we could reduce the alleged fuel loads more regularly, rather than having to save it up for bigger burn piles twice a year.

What are your suggestions on how to increase the community's safety from wildfire? Please explain.

FIRE HYDRANTS would be helpful. It's scandalous that the consultants own reports HIGHLY RECOMMEND FIRE HYDRANTS in other communities, but our fire chief says fire hydrants are a red

herring?? Access to a fire hydrant is PRIMARY FIRE PROTECTION. Can someone please acknowledge the lie? What's going on here??

Other comments? Please explain.

IF wildfires were such a hazard, then boundaries wouldn't be needed. Look at the boundaries. They lack logic. Why are they in place? Why in those areas? It's so depressing watching government in action, fully choosing to avoid common sense. Where are our leaders??