

Public Hearing: Amendment to the Wildfire Hazard Development Permit Area Designation

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Presentation Outline

1. **Background**
2. **Existing Wildfire Hazard DPA**
3. **Lessons Learned**
4. **Proposed Bylaw Amendments**
 - Additional modifications (following first reading)
5. **Emerging Matter**
 - Early Wildfire Detection

1-3

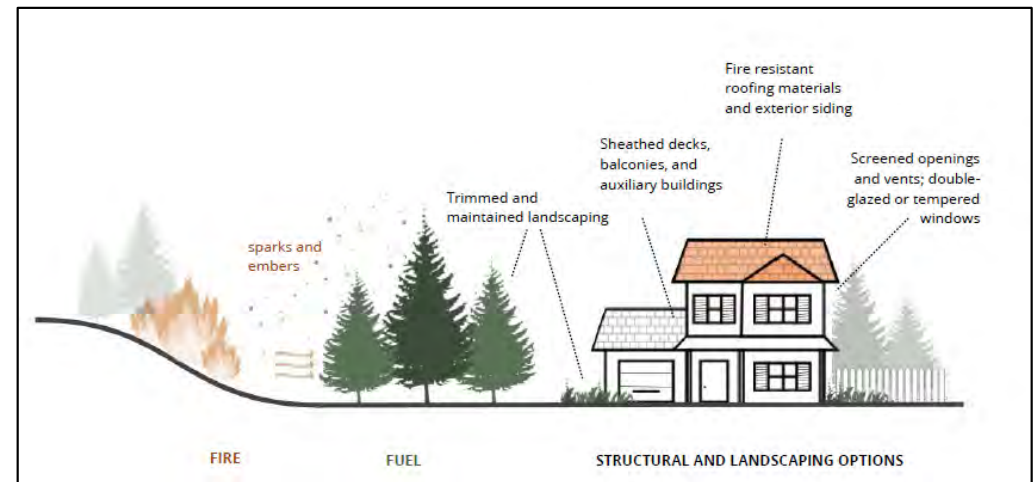
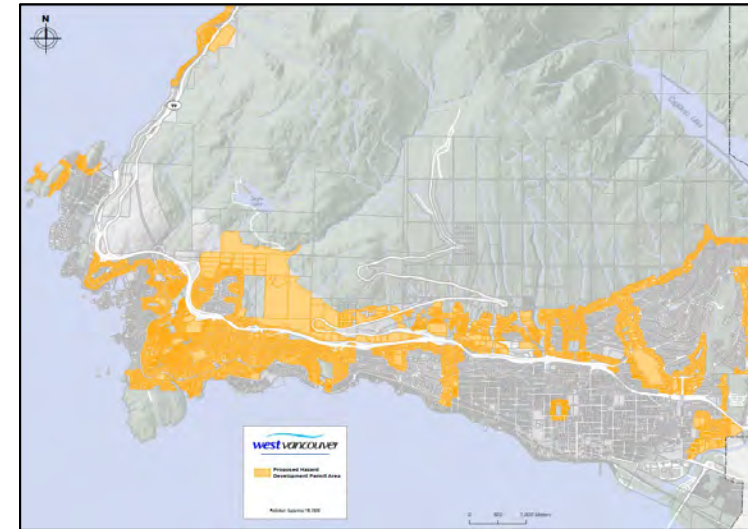
Background, Existing DPA, and Lessons Learned

Background

- Wildfire events in BC (and other countries) have been increasing in magnitude and frequency due to prolonged periods of dry conditions and wind.
- Recent wildfires in West Vancouver:
 - Whyte Lake (2018)
 - Lions Bay (2018)
 - Strip Creek (2019)
 - Cypress Falls (2022)
 - Horseshoe Bay (2023)
- Community Wildfire Protection Plan – approved in 2019.
- Wildfire Hazard DPA - adopted in 2020.

Existing Wildfire Hazard DPA

- OCP Policy NE1 - DPA designation includes properties within a 100-metre buffer of the forest interface (~5,000 homes).
- What does this mean?
 - New homes need to be built with fire-resistant materials and landscaping and trees need to be maintained in accordance with FireSmart principles.



Existing Wildfire Hazard DPA - Landscaping



WILDFIRE HAZARD DEVELOPMENT PERMIT AREA

Lessons Learned

- Recent fires in BC, AB (Fort McMurray), and LA provided an understanding of how fires spread and how weather conditions contribute to rapid spread of fire, specifically as it relates to West Vancouver:
 - Embers can spread over 2 km ahead of a fire front and still ignite material.
 - Fires can spread quickly from forested to urban areas via embers and then move from structure to structure with strong winds and dry conditions.
 - Residential structure fires also produce embers that can travel long distances.
- Homes across a community are vulnerable to embers even if not directly adjacent to a forest interface.
- Proposed amendment is to reduce spread of fire across the community by ensuring all homes and structures become fire resistant over time.



4 Proposed Bylaw Amendments

Proposed OCP Bylaw Amendments

- Expanding the Wildfire Hazard DPA to include all properties within West Vancouver and not just ones within 100 m of a forest interface:
 - Requirements would apply to new dwellings only.

Additional Housekeeping Amendments:

- Updating the Development Permit exemption requirement to include lands where area-specific DPA guidelines address wildfire hazards (e.g., Cypress Village).
- Aligning building material requirements for the Lower Caulfeild Heritage Conservation Area with the Wildfire Hazard DPA guidelines.

Urban Forest Management Plan Alignment

- Concerns regarding conflict between wildfire risk reduction and tree retention.
- Need to determine a balance between wildfire risk reduction and maintaining benefits provided by trees (stormwater management, shade, slope stability, carbon sequestration).
- Existing actions to maintain trees and maximize co-benefits:
 - Plant deciduous trees to support FireSmart objectives AND provide energy conservation benefits (summer cooling and winter passive heating).
 - Maintain conifers (highly flammable) using FireSmart principles:
 - Near homes - Avoid planting coniferous trees and prune existing conifers to create space.
 - In outer zones but on property - tree pruning, debris removal.
 - Consider alternative approaches to tree maintenance other than full removal.
 - Avoid removal of boulevard trees, trees on adjacent park and neighbour properties, bylaw-protected trees, and environmentally-sensitive area trees.
 - Site structures to minimize tree removals (i.e., locate structures far from trees).
- And one additional consideration to further align with the UFMP...

Additional Modifications to Bylaw

Proposed additional modifications to the bylaw:

1. To address concerns related to tree retention – Requirement to minimize removal of any trees >20 cm DBH and for wildfire risk assessors to provide alternative options to reduce wildfire risk from existing trees.
2. Exemption – A wildfire development permit is not required for projects under another development permit area designation if:
 - For an existing approved DPA, a building permit is applied for within six months of this bylaw adoption.
 - For a DP with an existing submitted and complete application, a building permit is applied for within one year of this bylaw adoption.

5 Early Wildfire Detection

Early Wildfire Detection

- To put a fire out as quickly as possible, “early effective response” is required, which is one that reduces heat, reduces available fuel, and reduces available oxygen.



- Fires are reported by - general public (most common in populated areas), air patrols, satellites, lookout towers, infrared technology, computer technology and predictive software.

Early Wildfire Detection – New Technology

- Sensors:
 - Various sensor options exist.
 - Relatively short detection range.
 - Good option for remote areas of high risk (e.g., power transmission lines).
 - Not affected by low cloud/fog (relies on solar panel to charge battery).
- Cameras:
 - Wide range of cameras are available.
 - Good for monitoring large areas (e.g., North Shore mountains).
 - Usually detects visible smoke but can detect heat (IR).
 - Low cloud cover/fog considerations.
 - Needs line of sight.

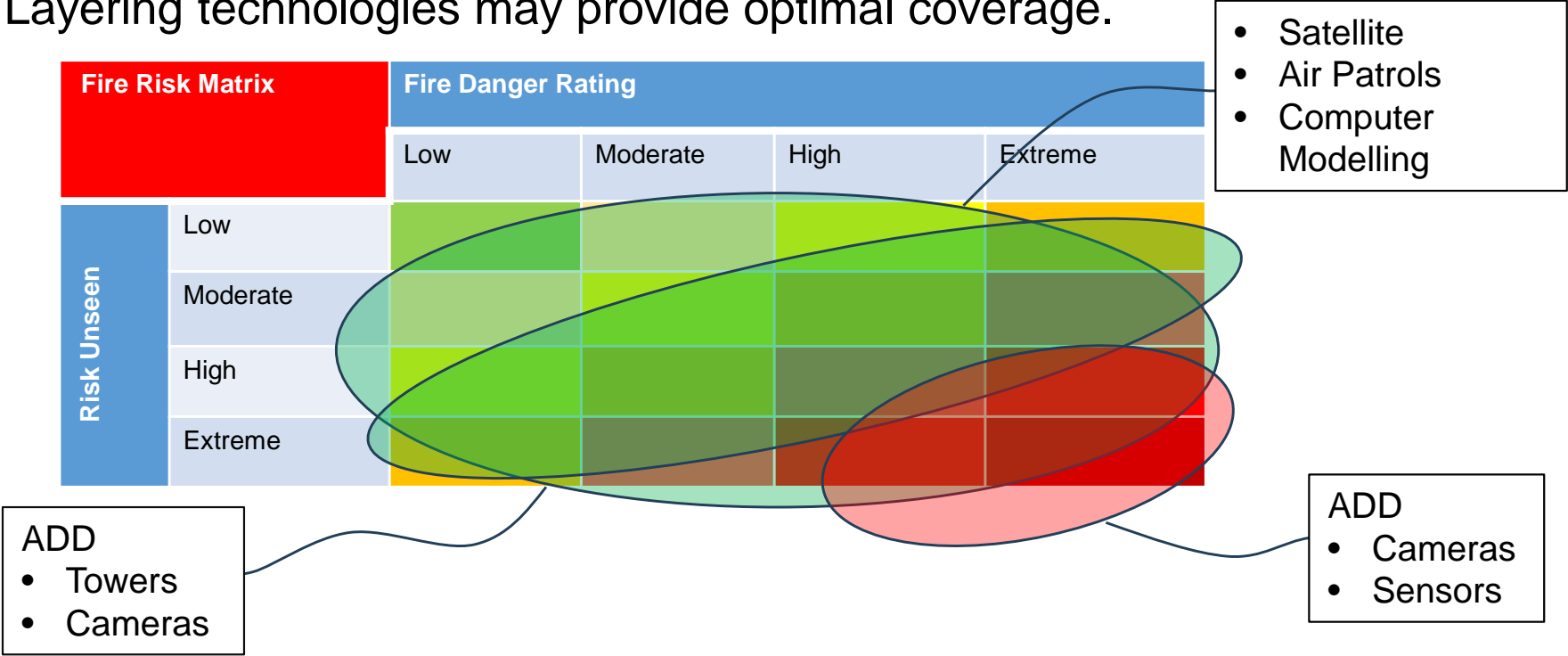
Early Versus “Timely” Detection

- When we talk about early detection, there is a tendency to think that ‘earliest’ detection is better.
- What we actually want is “timely” detection:
 - Detect wildfire in its incipient or early growth phase.
- In areas where fire danger ratings are high or extreme, early detection becomes more important (i.e., low populated areas).
- In areas where fires may go unseen for longer periods, a secondary method to detect fires may be advisable:
 - Air patrols, satellites, lookout towers, cameras (IR), computer technology & predictive software, sensors.



Risk Matrix – Decision Making

- What is best for West Vancouver and the North Shore...
 - Risk matrix can help identify where investments in detection technologies makes the most sense.
 - Layering technologies may provide optimal coverage.



Thank You!
Questions?

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