Managing Interface Fire Risk
Council Workshop June 2016
BY 2050, IN NORTH VANCOUVER

1. Warmer & drier summers

2. Increased rainfall in winter, decreased snowfall

3. Sea Level Rise

4. More frequent & severe extreme weather events

>> Although these changes are predicted to occur by 2050s, some are already happening
2014 - 2015

RECENT IMPACTS

- Record-setting summer temperatures
- Drought
- Forest fires
- Limited snowpack
CLIMATE CHANGE IMPACTS

• Personal health and safety concerns

• Water systems affected

• Property and public amenities damaged

• Recreation areas damaged

• Quality of life reduced

RESIDENTS

>> What we value is vulnerable to a changing climate
CLIMATE CHANGE IMPACTS

- Natural hazards more challenging to manage
- Increased spending to maintain public assets
- Staff priorities redirected to emergency response & recovery
- Reduced capacity to maintain current operations

THE DISTRICT

>> Municipal services and public infrastructure will be affected by climate change
CLIMATE CHANGE IMPACTS

Loss or reduction of:

• Native biodiversity

• Ecosystem services

• Foreshore areas

THE ENVIRONMENT

>> The environment is invaluable and irreplaceable, and climate change is a major threat
PRIORITY CLIMATE CHANGE IMPACTS

- Structural damage
- Displaced residents
- Reduced access to recreational areas
- Psychosocial impacts to staff
- Reduced air quality
- Increased landslide and debris flow risk

- More vulnerable forests

- Increased number of days in high & extreme fire danger

- Forest & ecosystem health degradation
WILDLAND-URBAN INTERFACE

Climate Adaptation Strategy  Spring 2016
Community Wildfire Protection Plan

38 recommendations:
- Hazard & risk mapping
- Communication & education
- Policy & planning tools to improve structure protection
- Training
- Fuel management
- Post-fire rehabilitation
COMMUNITY WILDFIRE PROTECTION PLAN

Wildland Urban Interface Continuum
CREATE DEFENSIBLE SPACE
REDUCE CONNECTIVITY
• spread from home to adjacent continuous mature stand of trees

• cedar siding construction
EVIDENCE
WILDFIRE PROTECTION EQUIPMENT

DNVFRS:
- Sprinkler Protection Unit
- Compressed Air Foam
- Wildland trailer
- Fire boats

DNV Engineering/Parks:
- Water tanks mounted on trucks
- Vactor/flusher
- Parks fire suppression/mop up equipment

Ski resorts, Metro, BC Wildfire, BC Parks
Objectives:

- Manage development to reduce wildfire risk using Firesmart principles
- Reduce likelihood of structural fire spreading to neighbouring properties and the adjacent forest
- Minimize associated post-fire landslides, debris flows, flooding and erosion
- Protect people, property and environmental values

Since adoption, 113 new homes developed meeting Wildfire DPA guidelines
FUEL & VEGETATION MANAGEMENT STRATEGY

- **Retain:**
  - Coarse woody debris
  - High-value wildlife trees
  - Deciduous trees
  - Healthy, mature trees

- **Reduce:**
  - Overall density
  - Ladder fuels

- **Remove:**
  - Surface fuel accumulations
  - Understorey conifers
  - Hazard trees
DEBRIS & VEGETATION MANAGEMENT STRATEGY
PROTECTING COMMUNITY INTERESTS

- Hazard tree identification and removal
- Protect trail systems
- Protect aquatic & bird habitat
- Protect surface run-off patterns
- Sustainable forest management
- Remove invasives
HYANNIS RE-PLANTING

Pre-planting
Nov 2013

Post – planting
Oct 2014

Post-planting May 2016
OPERATION DRY LIGHTNING 2

- Field tested evacuation methodologies
- Multi-agency participation
- Experiential learning opportunity for staff & volunteers
- Testing of new technologies
- Cost savings by design & delivery by NSEM
- Great media coverage showcasing North Shore municipalities
COMMUNICATION & EDUCATION

FireSmart® your property
If you wait, you may be too late

Priority Zone 1  HOME / 10 metres
This should be a fire-resistant zone, free of all materials that could easily ignite from a wildfire.

- **REGULAR MAINTENANCE:** Regularly clean your roof, gutters, etc. of debris.
- **FIRESMART RENOVATIONS:** As your budget allows, renovate your home with fire-resistant materials, mesh debris screens, a chimney spark arrestor, etc.
- **FIRESMART LANDSCAPING:** Keep woodpiles, propane tanks, outbuildings and combustibles at least 10 metres away from your home. Consult the FireSmart® Guide to Landscaping for more tips.

- **YARD MAINTENANCE:** Regularly mow your lawn. Remove dead, coniferous trees and other flammable vegetation. Sweep your decks and rake up tree needles, leaves and debris.

Priority Zone 2  10 - 30 metres
Reduce fuels in this area by thinning and pruning vegetation and trees. This will slow a fire's spread.

- **TREE SPACING:** Space trees at least three metres apart.
- **PRUNING TREES:** Prune all branches within two metres of the ground.

- **REMOVE SURFACE FUELS:** Regularly clean up accumulations of fallen branches, dry grass, needles and other flammable debris from the ground.

Priority Zone 3  30 - 100 metres
Try to thin out trees and other vegetation. This will help reduce a wildfire's intensity and slow its spread.

- **THIN AND REMOVE CONIFEROUS TREES:** Space dominant trees at least three metres apart, and remove any understory trees that are in close proximity that could act as a ladder for fire to move into the tree tops and spread. Retain deciduous trees which are resistant to wildfire.

- **NOT YOUR LAND?** If there's property within 100 metres of your home that is owned by your neighbours, get them engaged in the FireSmart® Community Recognition Program!

- **GET IN TOUCH:** Is your community at risk to wildfire? Contact your municipal councillor, planning department or fire service to express your concern.

LEARN MORE:
- **BC Wildfire Service:** www.bcwildfire.ca
- **FireSmart Canada:** www.firesmartcanada.ca

BRITISH COLUMBIA  Ministry of Forests, Lands and Natural Resource Operations
Fire Risk Reduction Works

This public safety work is to protect essential facilities and residential homes which are located in the wildland urban interface. The work is designed to be sensitive to our forest and streamside ecosystems.

Example pre-treatment
Grousewoods Park

Dense, small trees and fallen woody debris under a canopy of mature trees provide fuels for forest fires and prevent understory vegetation from growing.

DISTRICT of
NORTH VANCOUVER

More information about the program can be found on our website

Example post-treatment
Grousewoods Park

Retention of the large trees, snags and decaying logs creates structure similar to that found in old forests. It also reduces fire hazard and allows understory vegetation to re-establish.

Example Grousewoods Park 6 yrs post-treatment

Funding Provided by the Province of B.C. through the Union of BC Municipalities Strategic Wildfire Prevention Initiative

If you have any questions, please contact the District Forester at 604-990-2350
EMERGENCY PREPAREDNESS

- Staff & residents encouraged to be prepared at home and at work

- Register for Rapid Notify at www.nsemo.org to receive important emergency alerts and messages
More frequent and severe fires could:

- Damage public facilities and residential homes
- Reduce air quality
- Reduce access to outdoor recreational areas
- Impact forest ecosystems
- Increase landslide risk

The District is preparing:

- Community Wildfire Protection Plan
- Wildfire Development Permit Areas
- Fuel Management Program
- NS Interface fire working group
- Evacuation planning strategies

What we value is vulnerable. We must act now for a more resilient future.
NEXT STEPS

• Update CWPP (2017)
• Post fire rehabilitation plan (2017)
• Educate contractors (2017)
• Complete fuel treatment work (2019)
• Natural capital asset management (long term)