

Ontario's Wildland Fire Management Strategy



*Lake States Fire
Science Consortium*

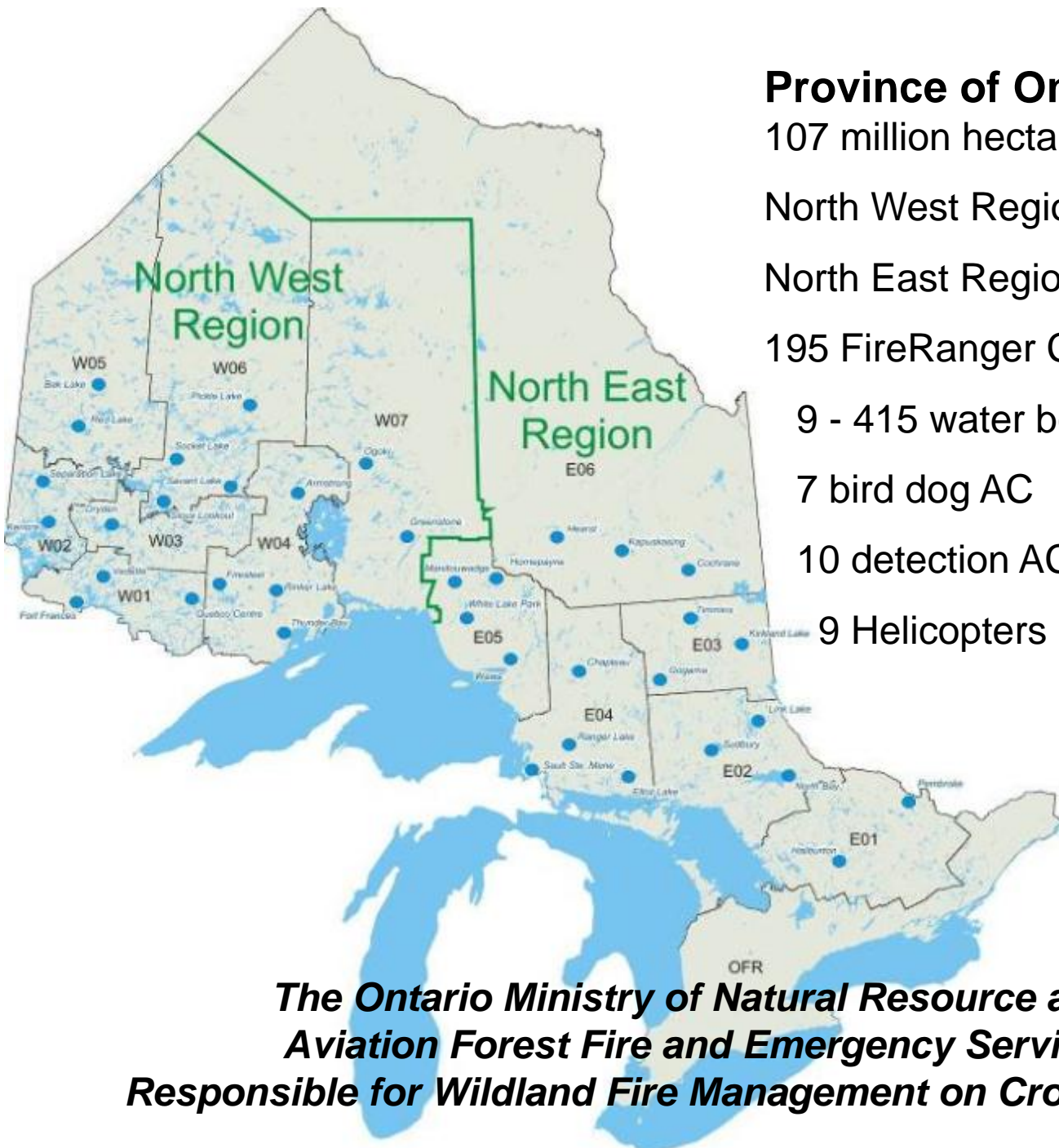
April 21, 2016



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Planning Specialist*

Ontario and Lake States





Province of Ontario

107 million hectares (264 million acres)

North West Region - 7 Response Sectors

North East Region - 6 Response Sectors

195 FireRanger Crews, (780 people)

9 - 415 water bombers 2 Twin Otters

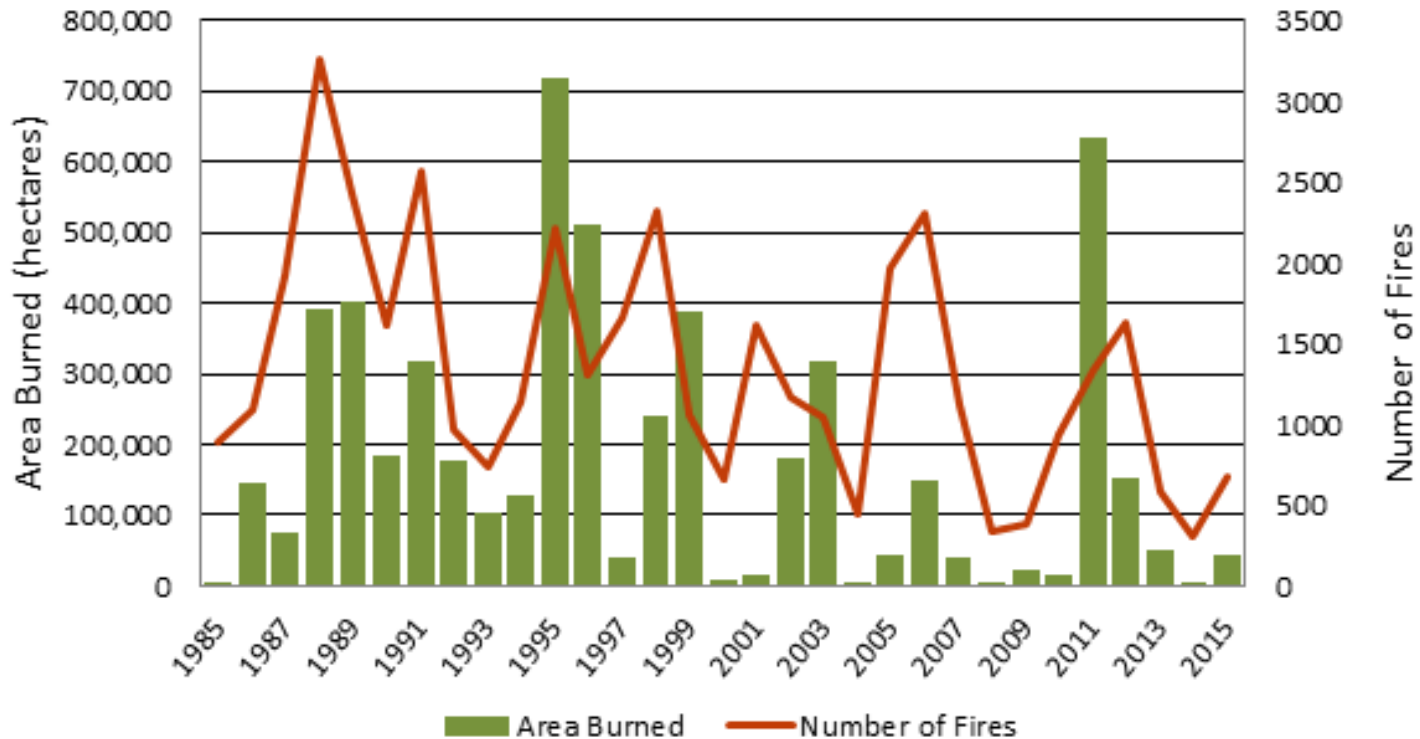
7 bird dog AC

10 detection AC

9 Helicopters

***The Ontario Ministry of Natural Resource and Forestry,
 Aviation Forest Fire and Emergency Services Branch.
 Responsible for Wildland Fire Management on Crown Lands in Ontario***

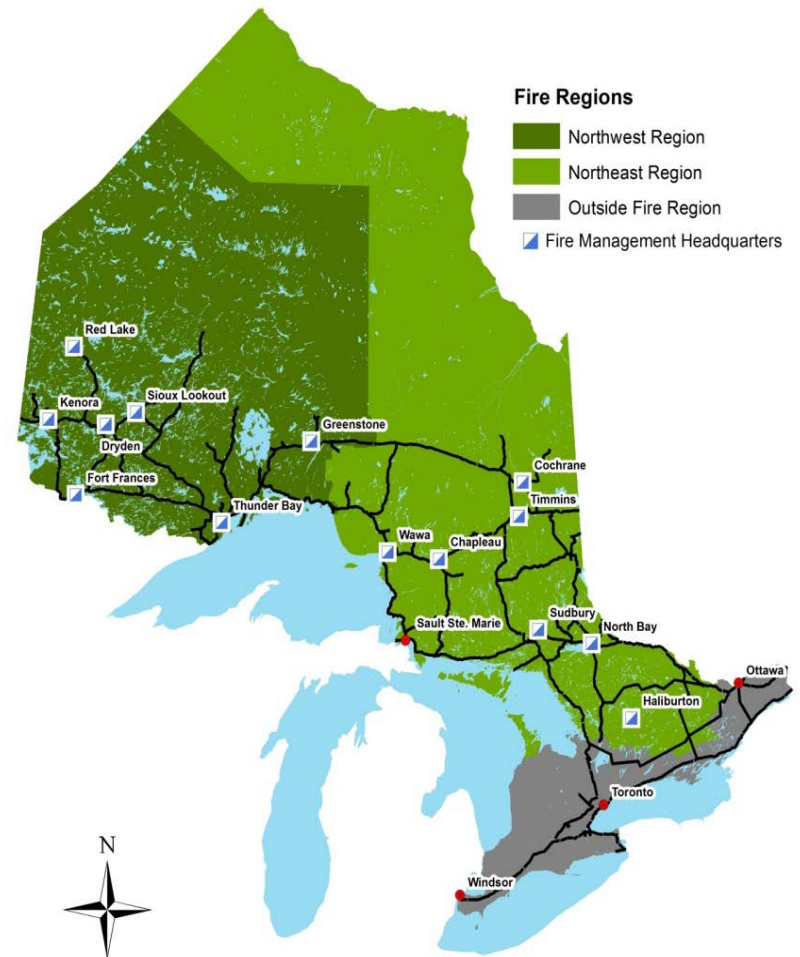
Fire History in Ontario 1985 to 2015



Fire load is highly variable over time (day-to-day & year-to-year & place-to-place)

Outline:

- Overview of Wildland Fire Management Strategy
- Implementation – the first steps in moving forward
 - Mitigation/Outreach
 - Regulation
 - Understand and Apply
- Response and Operations – changes now and into the future



Ontario's Wildland Fire Management Strategy

- In 2014 Ontario issued a new Fire Management Strategy
- Evolving from a zonal approach to fire management
- Each fire is responded to based on the conditions
- Every fire needs an assessment



Drivers for Change

- Increasing cost of fighting fires
- Climate change and changes in forest condition
- Increase in industrial activity in the Far North
- Changing land use demands and priorities
- Capacity in Ontario and with our partners
- Smoke management and air quality concerns

New Strategy - Updating Our Approach:

- Move from zone-based to “appropriate response”
- More emphasis on shared responsibility prevention and mitigation through:
 - FireSmart
 - Proposed regulation
- Enhance partnerships to apply and understand beneficial fire



Guiding Principles:

Safety, Efficiency, Responsibility

Goals:

- Prevent loss of human life and injury;
- Prevent and mitigate losses and economic/social disruption;
- Promote the understanding of the ecological role of fire, and use of fire to benefit resource management

Objectives:

Prevent: The threat to people and values is diminished by reducing the number of human-caused wildland fires

Mitigate: Property owners and land managers take action to mitigate the undesirable impacts of wildland fires on their property or other values

Respond: All fires are assessed and receive an appropriate response

Understand: The people of Ontario are aware of and support the ecological role of wildland fire

Apply: Wildland fires and prescribed burns are safely and effectively used to reduce wildland fire hazards and meet ecological and resource management objectives

TABLE 1. WILDLAND FIRE MANAGEMENT GOALS, OBJECTIVES AND ACTIONS

Wildland Fire Management Goals:

1. Prevent loss of human life and injury;
2. Prevent and mitigate losses, economic disruption and social disruption; and
3. Promote the understanding of the ecological role of fire and use fire to benefit resource management.

OBJECTIVE	ACTIONS
<p>Prevent</p> <p>The threat to people and values is diminished by reducing the number of human-caused wildland fires.</p>	<ul style="list-style-type: none"> • Increase awareness of the safe use of fire and wildland fire prevention practices through education programs directed at priority fire causes and responsible groups; • Continue to enforce wildland fire prevention regulations to ensure consistency in fire prevention rules so the number of wildland fires starting from industrial activities is minimized; • Continue to restrict use of open fires during periods of elevated wildland fire activity or high fire danger; • Continue to analyze trends in wildland fire causes to direct prevention activities.
<p>Mitigate</p> <p>Property owners and land managers take action to mitigate the undesirable impacts of wildland fires on their property or other values.</p>	<ul style="list-style-type: none"> • Develop and provide information on the risks of living in fire-prone environments and the benefits of mitigation activities; • Enhance promotion of and assist in the development of community FireSmart initiatives; • Renew commitment to work with industrial and commercial operations to develop and implement FireSmart strategies.
<p>Respond</p> <p>All fires are assessed and receive an appropriate response.</p>	<ul style="list-style-type: none"> • Maintain wildland fire management resources, including highly trained and capable staff and modern equipment; • Ensure that fire managers have the tools and knowledge to determine an appropriate response for each wildland fire by considering all the available information on the potential threat to values, ecological benefits, anticipated firefighting costs and the availability of firefighting resources; • Employ the best fire management tactics available to safely, effectively and efficiently manage wildland fires for value protection and ecological benefits; • Use standard procedures and tools to predict, detect, assess and respond to wildland fires; • Work with interested partners to identify values and improve wildland fire response planning; • Develop and maintain partnerships for mutual support.
<p>Understand</p> <p>The people of Ontario are aware of and support the ecological role of wildland fire.</p>	<ul style="list-style-type: none"> • Develop and distribute public education and information products about the benefits of wildland fire and how wildland fire is managed to ensure understanding of the ecological and historical role of fire in Ontario; • Partner with other government programs in public education; • Expand and maintain expertise related to fire ecology and fire science; • Support existing and explore new research partnerships related to the role of fire in Ontario's ecosystems; • Promote the sharing of information and knowledge about wildland fire.
<p>Apply</p> <p>Wildland fires and prescribed burns are safely and effectively used to reduce wildland fire hazards and meet ecological and resource management objectives.</p>	<ul style="list-style-type: none"> • Work with resource and land managers, stakeholders and the public to identify opportunities to use wildland fire and prescribed burning for ecological and resource management benefits; • Develop and maintain a knowledgeable workforce able to manage wildfires for ecological and resource management benefits; • Enable a workforce within APFES, Ontario Parks and partner organizations capable of safely and cost-effectively delivering prescribed burns; • Employ a flexible fire response system to manage fire for ecological and resource management benefits; • Ensure policy, standards and planning processes are in place for using fire.

Strategy Implementation:

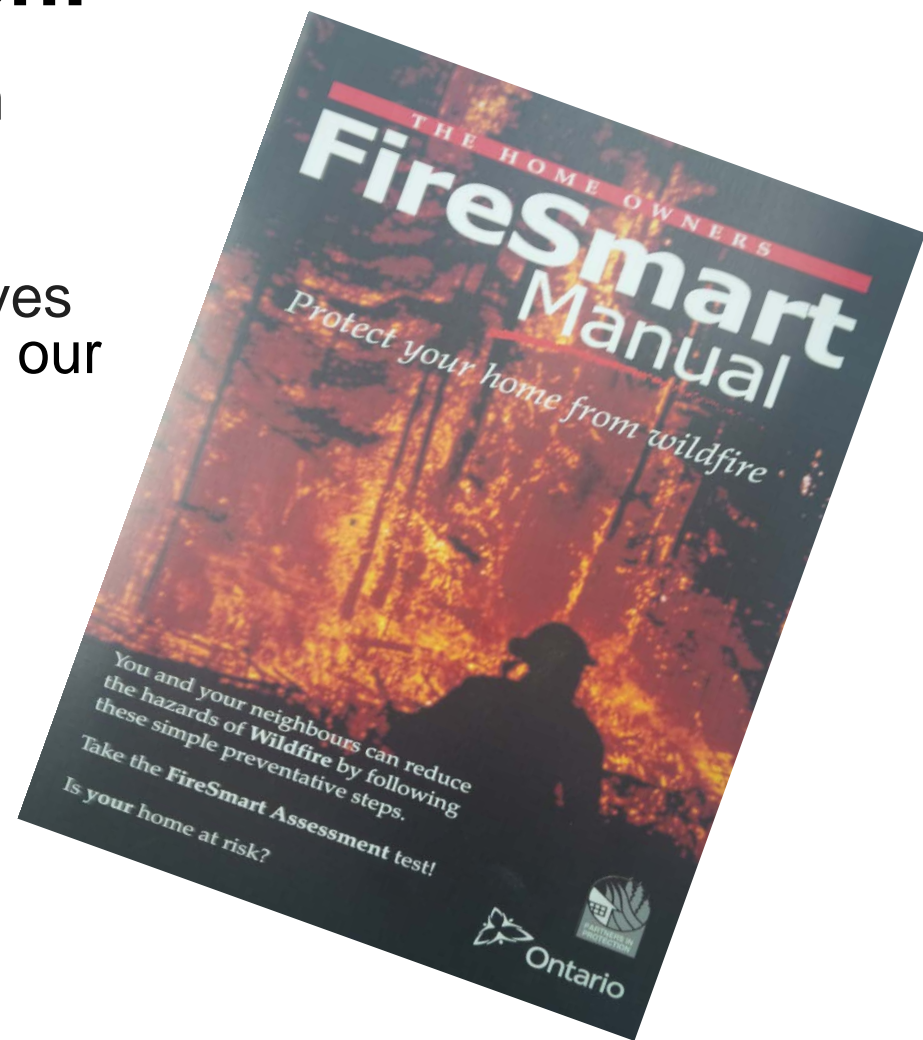
1. Communication of approved strategy
2. Mitigation and Outreach
 - Begin implementation of actions to promote mitigation actions by property owners and communities – FireSmart Implementation Plan
3. Regulation
 - Development and consultation of proposed regulation changes
4. Response and Operations
 - Develop decisions support tools (short and long-term)
 - Update fire management guides and policies to reflect new approach
5. Apply and Understand
 - Continue to advance



Mitigation and Outreach:

FireSmart Implementation Plan (FSIP)

- Education, outreach and incentives to improve program support with our partners to:
 - Encourage FireSmart Communities
 - Implement and maintain mitigation programs
 - Improve wildland fire suppression
 - Engage the public to use FireSmart



Regulation:

- Wildland Fire Management Strategy identifies MNRF's intention to consult on amendments to regulation for industrial activities
- Based on Industrial Operations Protocol
- Proposals may include
 - Requirement to plan for wildfire occurrence.
 - Controls on the type and / or timing of activities based on risk
 - Having plans in place to protect assets / infrastructure and reduce losses

Target Industries:

Primary focus:

- Railways
- Mining
- Power Producers
- Power Transmission
- Pipelines



Understand & Apply:

AFFES Fire Science Focus Group is being formed within Integrated Services Section

- Public information material will be reviewed and updated

Fire Management in Parks and Conservation Reserves Policy Review

- Continuation of fire response plans and fire management plan

Incorporating Fire Management Direction in Land Use and Resource Management Planning.

- Fire Opportunities Assessment process (Values and Opportunities Project)
- Interim direction for the use of managed fire response (new section 2.7 in the AFFES Fire and Emergency Response Operations Plan)

Fire Management Planning:

Under the new Strategy, we are seeking direct fire management direction from the land/resource manager

How we incorporate that direction will evolve over time. For now, we have Fire Response Plans



Response & Operations Implementation:



Changes with the New Strategy

- One impact to Operations is the change from default responses according to Fire Management Zone to individual responses according to each fire's circumstances.
- This requires a culture change, and defensible new decision support tools (*that will take some time to fully develop*).
- Requirements to Implement the Strategy 2015
 - Replace Fire Management Zone function
 - Landscape level valuation, Default response direction, Preparedness Direction
 - Support a concept of appropriate response
- Interim models of “response objective” and “response urgency” have been made that capture the important aspects of the complex decisions made in preparedness planning.
- Interim decision key to assess each fire's circumstances developed

Planning and Priority Setting

- ❑ Fire Managers need to know what values need protecting and where wildland fire can be used for benefits
- ❑ Currently done through preparing Response Plans, Fire Management Plans and priority setting processes
- ❑ Continue to work with resource managers, communities, industry etc. to improve processes or find better ways to identify values and opportunities ahead of wildland fire events

When fires are reported; making decisions that trade off competing desires to:

1. Protect values
2. Manage costs, and
3. Realize benefits



What's an “Appropriate Response”?

All decisions are made with this principle in mind.

An appropriate response to a wildland fire is the set of actions, over the life of the fire, intended to produce the best outcome given the competing desires to:

1. Realize the benefits of fire (e.g. reducing hazardous fuels, improving resource values, and contributing to ecological functioning),
2. Manage the detrimental impacts of fire (e.g. loss of property, infrastructure, and resource values, and economic and social disruptions), and
3. Manage the costs of wildland fire (e.g. monitoring, alternative suppression tactics, divisional suppression)

An appropriate response minimizes the expected total cost plus net loss from a wildland fire accounting for constraints such as public and worker safety, risk, available resources, and many other factors.

Results of the Decision Process

- Objectives:
 - “Limit area burned” or “Allow area burned”
- Strategic Direction:
 - Full Response or a Managed Response
 - At times very obvious and decisions made quickly
 - Other times decisions are not so obvious

ICs, SROs, and RDOs should be approaching the decision generally in the same manner.



Pre-Fire Planning Decisions:

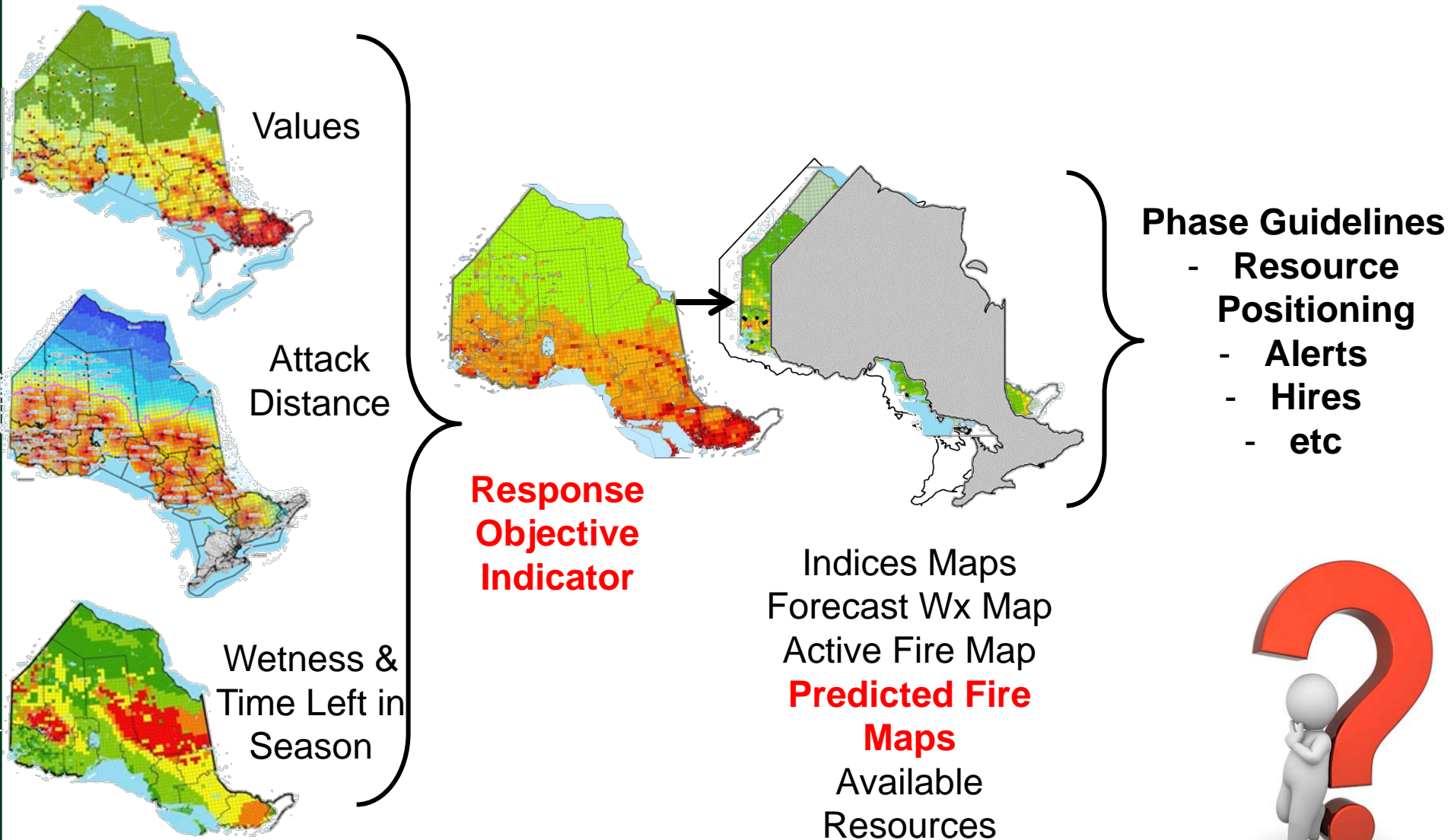
Decisions to make:

- How many resources of each type, where are they positioned, and alerts
- Apply the Preparedness Guidelines

Factors considered:

- Fire Behavior & Fire Occurrence
- Resource Availability
- Active Fires
- Response Objective

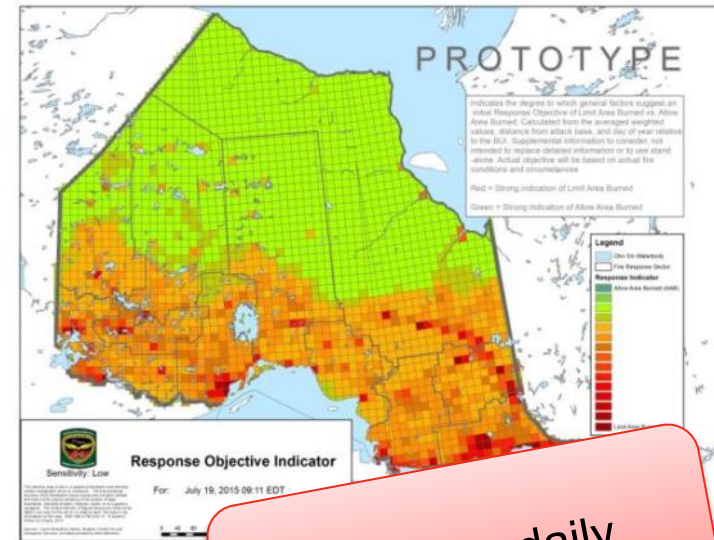
Preparedness Planning – 2015:



Response Objective Indicator

- What will our likely objective be response (AAB/LAB); and where?
 - Very obvious because of values;
 - However in some cases other opportunities
- Degree that some general factors suggest an initial response objective of:
 - Limit Area Burned (LAB)
 - Allow Area Burned (AAB)

Factors: values, distance to AFFES base, time of year, wetness



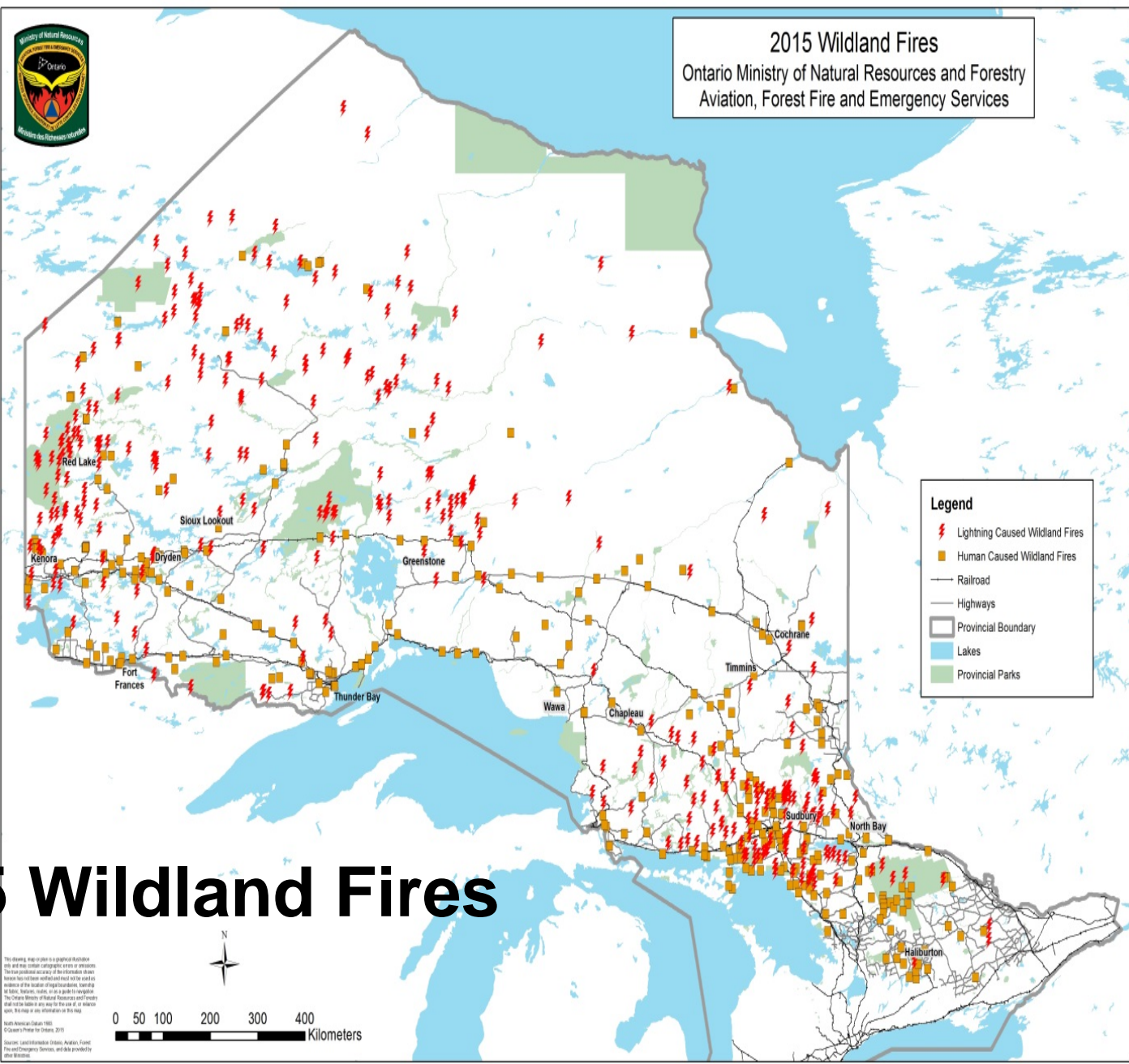
Responding to Fire:

- Flexibility where/when appropriate
- There will continue to be priority setting at times of high wildland fire activity
- Land/Resource Managers continue to play their role in approving response options





2015 Wildland Fires
 Ontario Ministry of Natural Resources and Forestry
 Aviation, Forest Fire and Emergency Services

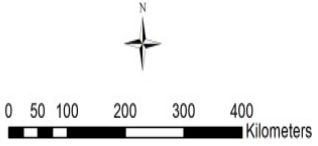


Legend

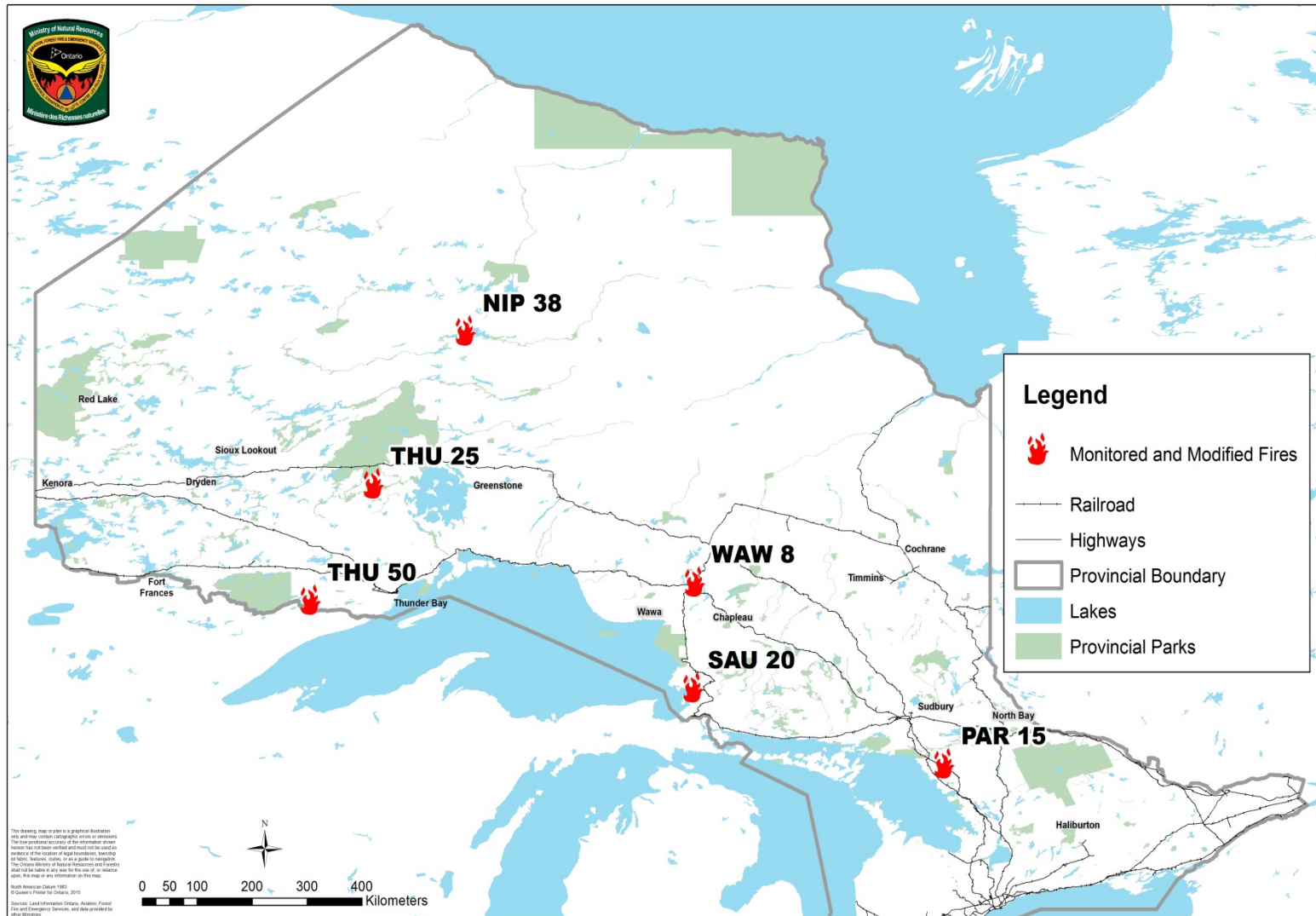
- Lightning Caused Wildland Fires
- Human Caused Wildland Fires
- Railroad
- Highways
- Provincial Boundary
- Lakes
- Provincial Parks

2015 Wildland Fires

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Fires of Note

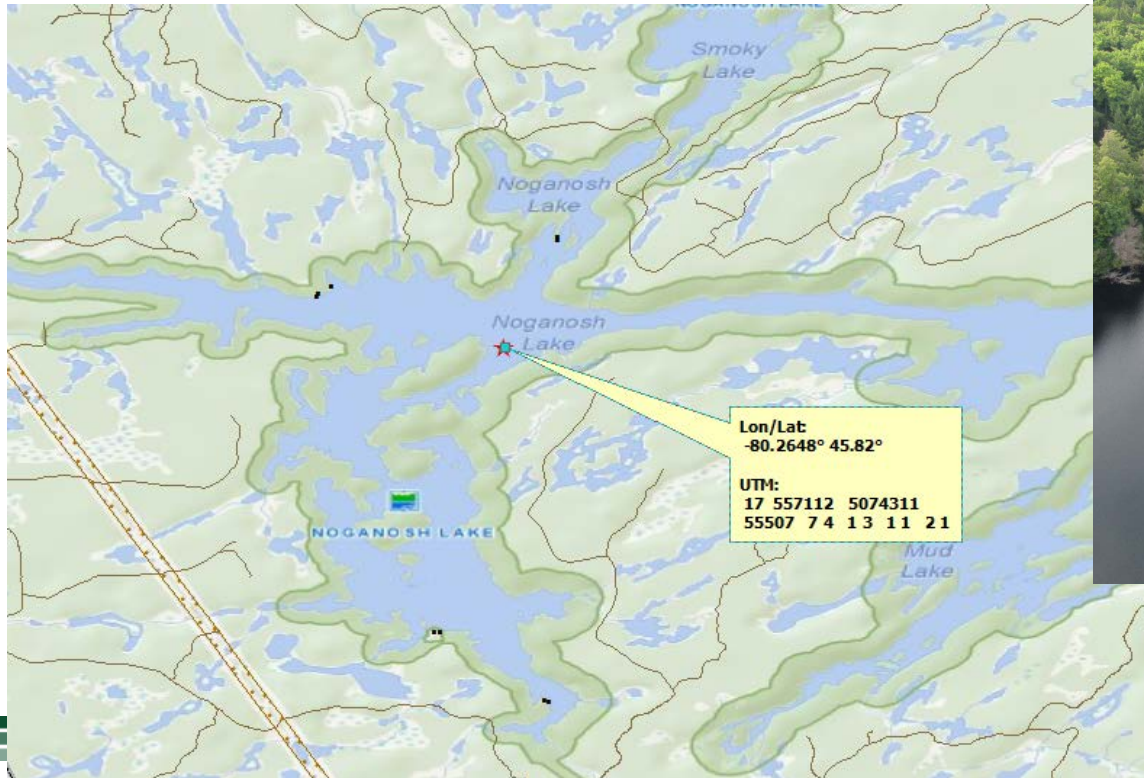


4/21/2016



Strategy Implementation in Action

PAR #15 – Aug 8th, 2015 – Noganosh Prov Pk, minimal chance of escape, FAR risk to values mitigated, trigger points identified, competing fires...



Strategy Implementation in Action

WAW #08 – , July 25, 2015 and declared out Aug 14 The fire was monitored and burning most of the island.



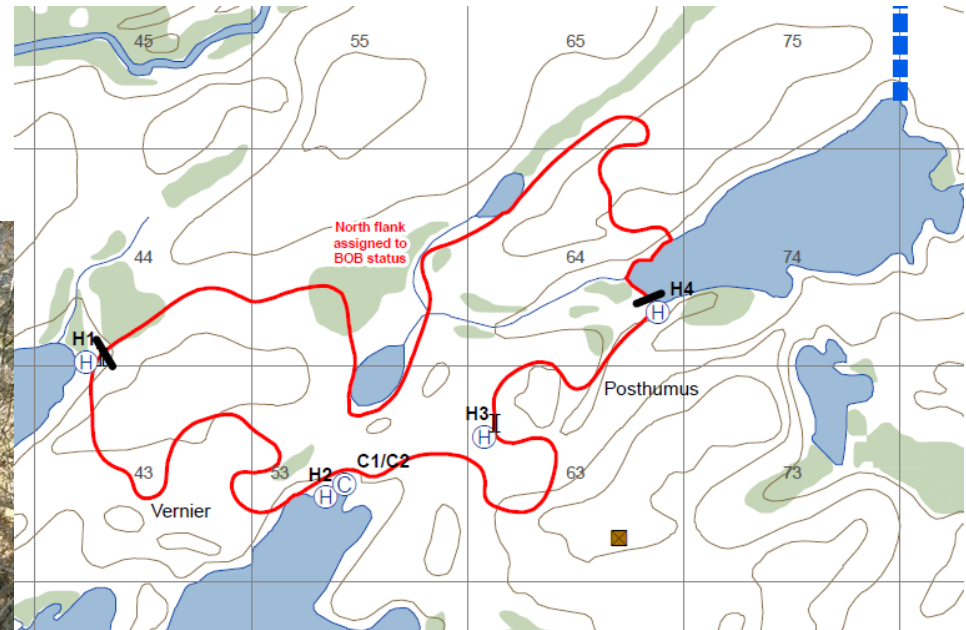
Strategy Implementation in Action

SAU #20 – Sept 4th, 2015 – Late Season, down trending wx, little threat to values...



Strategy Implementation in Action

NIP #38 – July, 2015 – Limited Suppression to prevent spread to community, tactics changed to reflect changing conditions, final size 203 Ha's.



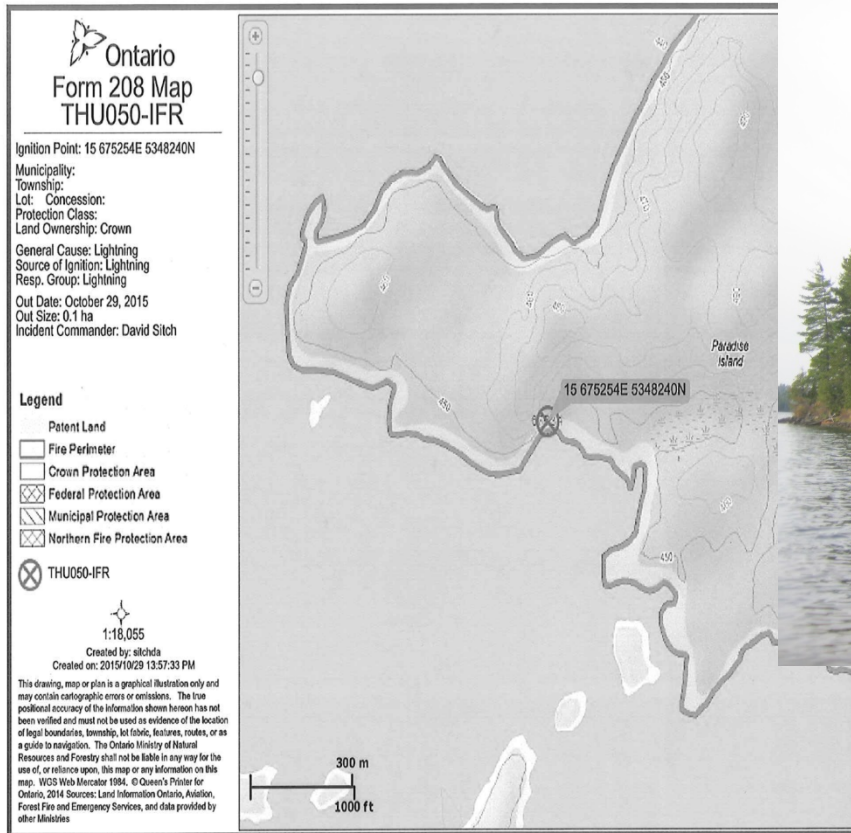
Strategy Implementation in Action

THU #25 – May 25th, 2015 – Storm damaged island, burning southwest of Armstrong, minimal chance of escape, favourable wx...



Strategy Implementation in Action

THU #50 – Oct 18th, 2015 – Northern Lights Lake, minimal chance of escape, poor forecast burning conditions...



In Conclusion

The Wildland Fire Management Strategy:

- Confirms Wildland fire management direction into the future
- Confirms FireSmart as Ontario's public fire awareness and mitigation program
- Established new industrial regulations under the FFPA
- Continues our commitment to advancing the understanding and application of fire
- Set new direction for response to wildland fires.
- Link: <https://www.ontario.ca/page/forest-fire-management>

THANK-YOU

