

INDUSTRY AND WILDFIRE  
MANAGEMENT

Government  
of Alberta ■

**Dave Schroeder, Alberta SRD**

## **Oil and Gas (all of Alberta)**

- 15, 500 operating production facilities
- 85,760 Active well sites (oil/gas/water)
- 2009-2010 – 26,000 planned flaring events
- 135, 973 km pipelines (note some corridors have multi-lines)
  
- Power Transmission (within Forest Protection area)
  - 6,305 km (does not include distribution)
  
- Rail lines
  - 2,170 km

Layers Legend Zoom To Refresh Map Help About FireWeb Home

- Fire Control Zone
- Mutual Aid Contact Zone Anno
- Weather Forecast Zone
- Wildfire Management Area Anno
- Wildfire Management Areas
- Non-Permit Areas
- Forest Recreation Areas
- Forest Management Agreement
- Forest Management Units
- Ecological Wildfire Management
- Fish & Wildlife
- Provincial Parks & Protected Areas
- Federal Lands
- Counties & Urban Areas
- Counties
- Improvement Districts
- Special Areas
- Cities
- Fort McMurray boundary
- Urban Service Areas
- Towns
- Villages
- Summer Villages
- Hamlets
- Localities & Townsites
- Settlements
- First Nation Lands
- Reference Indices
- Cadastral
- Hydrography
- Access
- Transportation
- Primary Highway
- Secondary Highway
- Paved Roads
- Gravel Roads
- Other Roads
- Cutlines & Trails
- Railways
- Runways
- Point events
- Bridges
- Heliports
- Utilities
- Powerlines
- Pipelines
- Raw Pipelines
- Point Features
- FireNet Communication Sites
- Wildfire Management Area Offices
- Weather Station
- Precipitation Stations
- Lookout Towers

Map Builder Site - Windows Internet Explorer provided by SRD Citrix

http://inf.env.gov.ab.ca/inf/jsp/site=fi\_mapbuilder

Layers Legend Zoom To Refresh Map Help About FireWeb Home

Scale: 1:450,000

Active Map Tool: Zoom Out

Map Legend

- Alberta Province
- Wildfire Management Areas
- Primary Highway
- Secondary Highway
- Pipelines
- Powerlines
- Well Sites - Active
- Active Oil or Gas
- Active Water
- Open Pits or Mines
- Industrial Sites
- Industrial Sites
- Fire Boundary 2002
- Complete burned area
- Partial burned area
- Capital or Major City
- Capital City
- Major City
- Road
- Major Road
- Ferry Route
- Water
- Boundaries
- Ocean

Scale: 1:432,707

Active Map Tool: Zoom In

Government of Alberta

Information as depicted is subject to change, therefore the Government of Alberta assumes no responsibility for discrepancies at time of use.

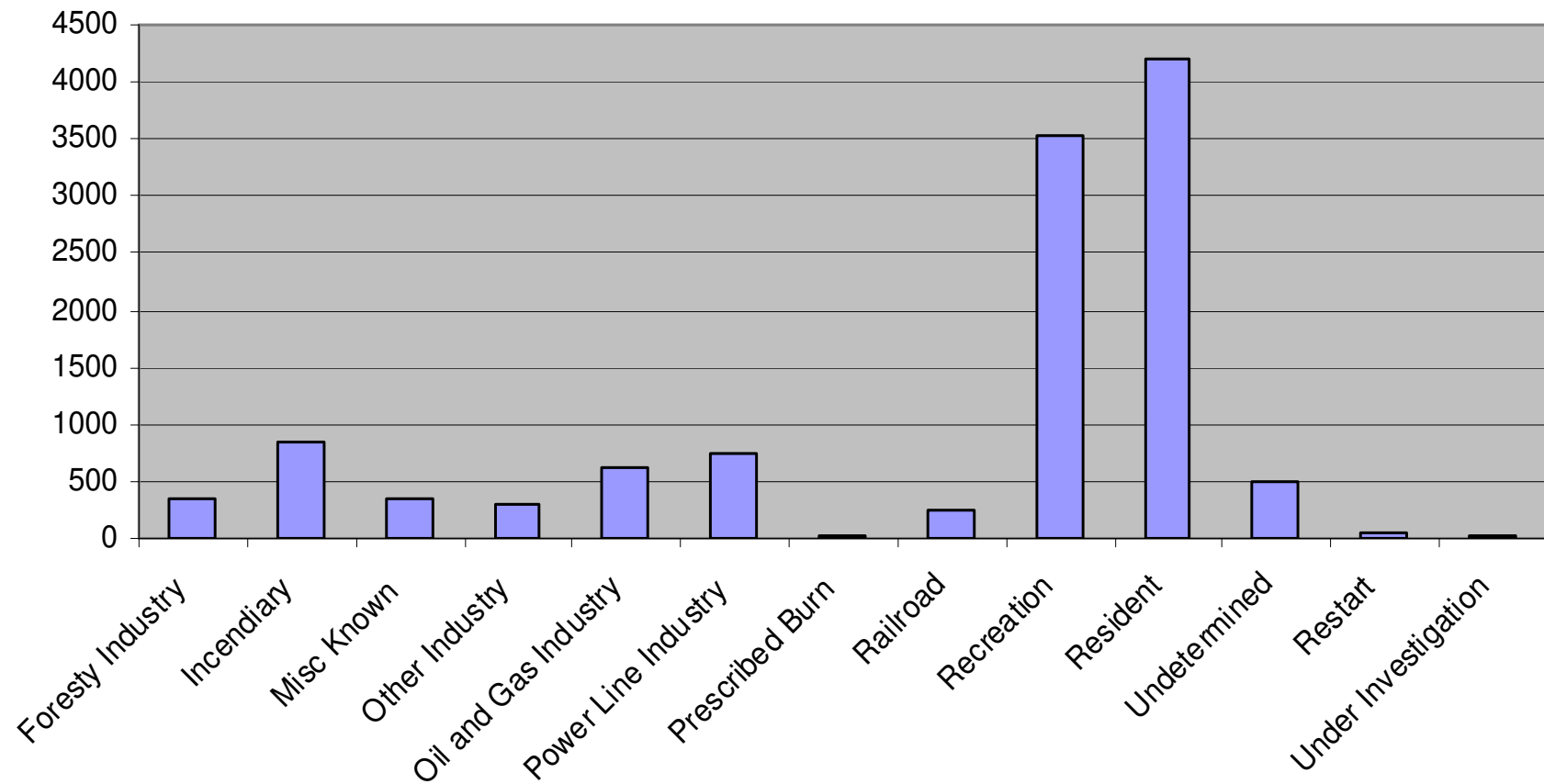
Done

Internet

# IGNITION SOURCE

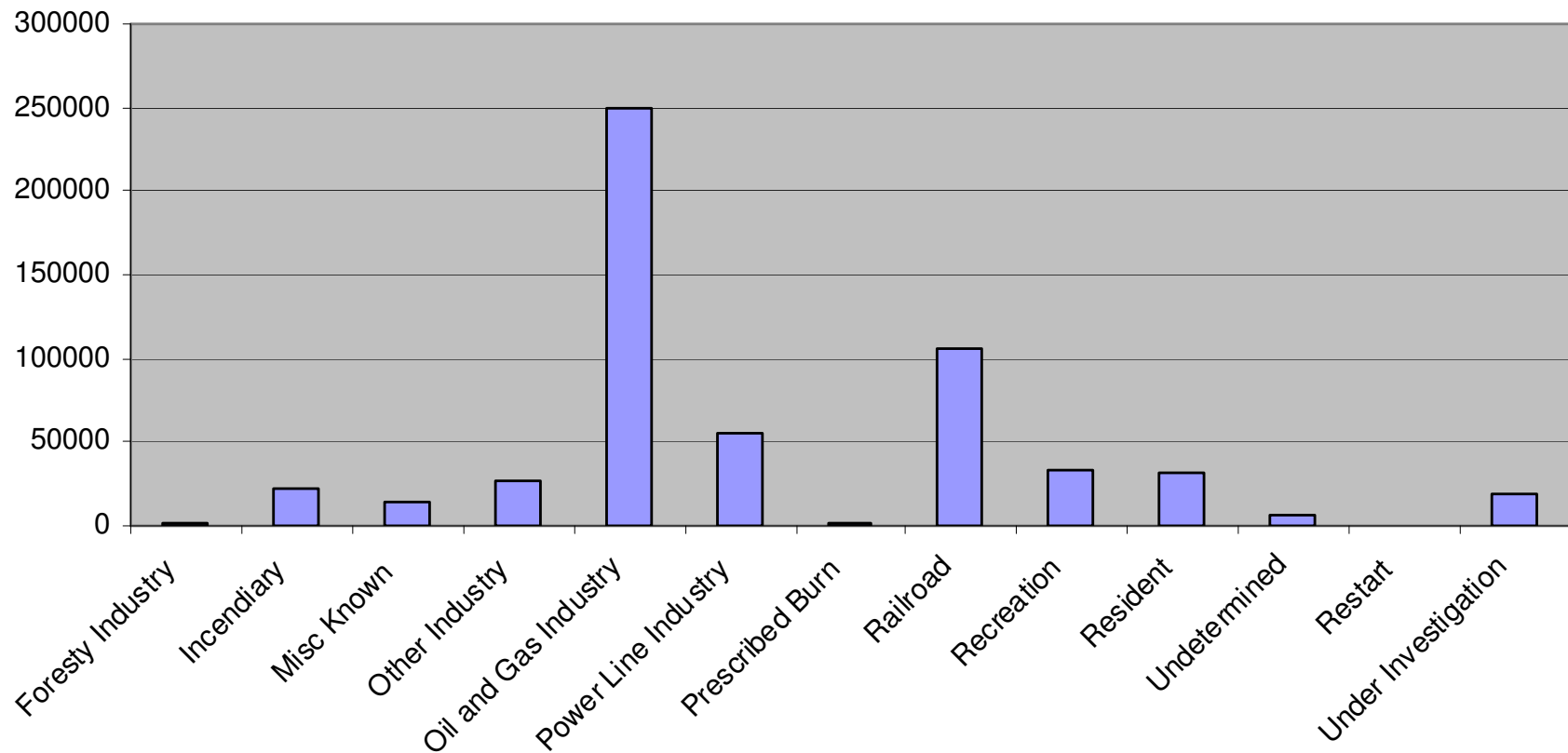
## Human Caused Wildfires by General Class (1990-2009)

Source: Sustainable Resource Development



# IGNITION SOURCE

Hectares Burned by Human Caused Wildfires, General Class (1990-2009)  
Source: Sustainable Resource Development



# NEED FOR PROTECTION

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# NEED FOR PROTECTION

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- More people/infrastructure to protect = more resource requirements
- Evacuations
  - Site access constraints
  - 1000's workers
  - Workers spread across landscape
  - Staff turnover is high – difficult in maintaining contacts



# INDUSTRY IS COOPERATIVE:

- Highly trained workers – especially if equipment being used
- Lot of fuel breaks (pipeline etc.) = good, that can turn into fuel wicks = bad
- Lots of people and flights = good for detection
- Potential to use new air strips for tankers
- More road access and heavy equipment available!
- Lot more fuel breaks or not....ask Colleen Mooney!

# WILDFIRE SUPPRESSION

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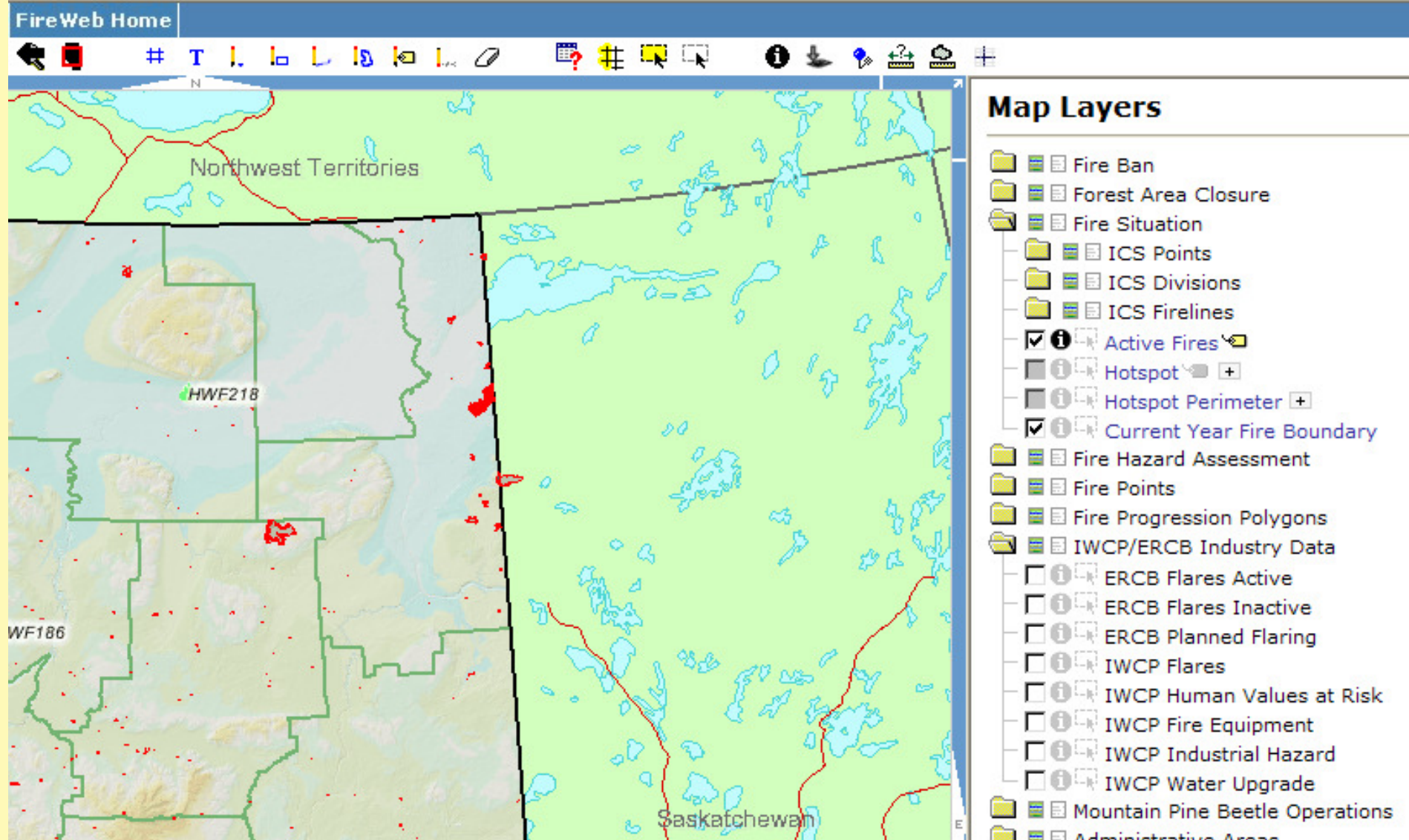
# WILDFIRE SUPPRESSION

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# WILDFIRE MANAGEMENT – FIREWEB

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## Fire Danger Forecasts



### Today's Fire Danger

- [Build-Up Index](#)
- [Drought Code](#)
- [Duff Moisture Code](#)
- [Fine Fuel Moisture Code](#)
- [Fire Danger](#)
- [Head Fire Intensity](#)
- [Initial Spread Index](#)
- [Wildfire Ignition Probability](#)

### Forecasted Fire Danger

- [Build-Up Index](#)
- [Drought Code](#)
- [Duff Moisture Code](#)
- [Fine Fuel Moisture Code](#)
- [Fire Danger](#)
- [Head Fire Intensity](#)
- [Initial Spread Index](#)
- [Crown Fraction Burned](#)
- [Precipitation](#)
- [Rate of Spread](#)
- [Time to 2.0 Hectares](#)
- [Wildfire Ignition Probability](#)

### Related Information

- [Alberta Firebans](#)

# WILDFIRE THREAT ASSESSMENT MODEL

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Potential fire behaviour

Fire occurrence

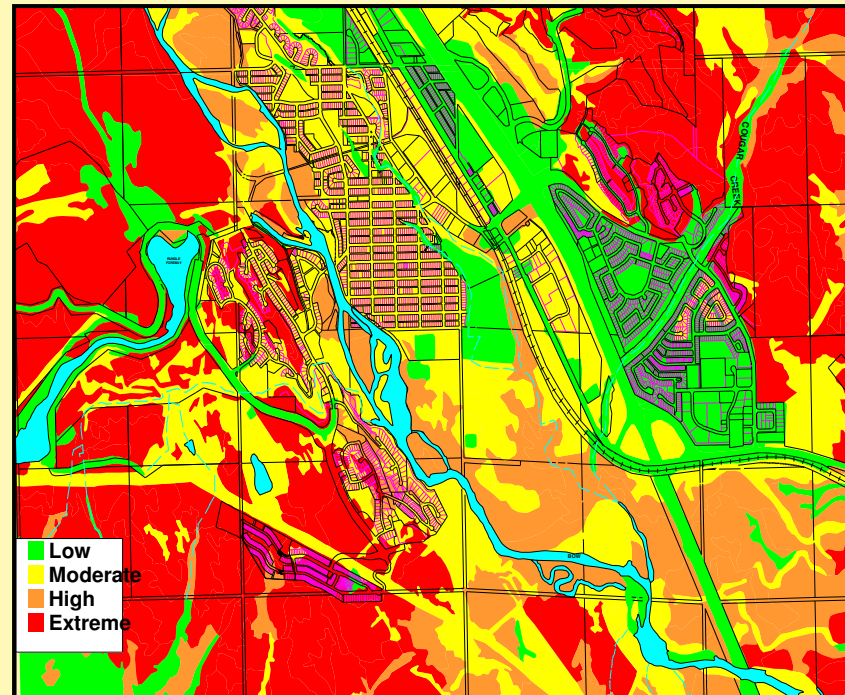
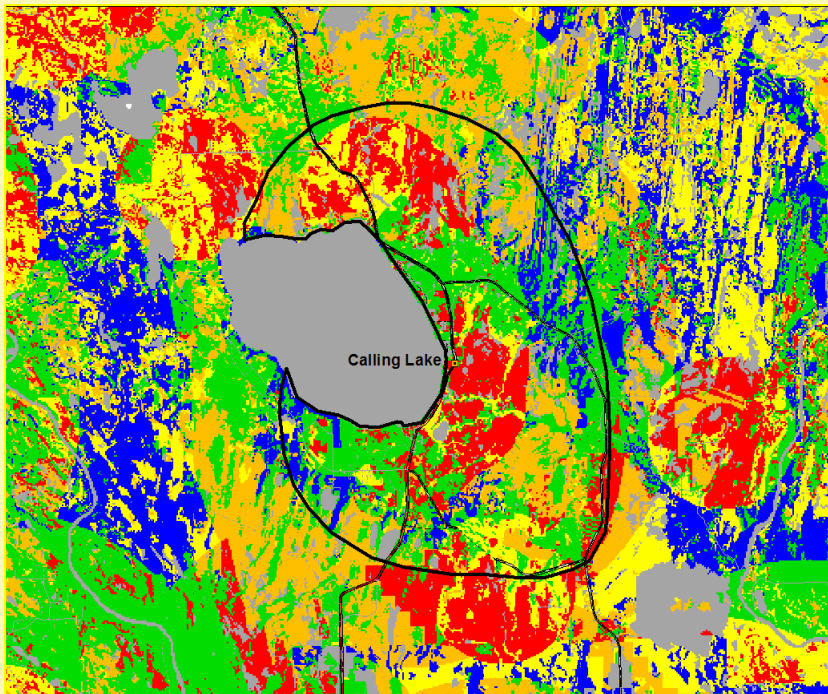
Spring Summer Fall

Values at risk

Fire suppression capability

# WILDFIRE THREAT ASSESSMENT MODEL

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# BANS AND CLOSURES

- Fire bans are common, not closures
- 2007 - Forest closure in Southern Rockies
  - BUI > 160
  - Aug 01 – Sept 12
  - Industry directly impacted
- Requires Ministerial Order and minimum 2 days to implement

*“It was a lot simpler then, there were fewer people and less agencies involved. We made the decision and there was not a lot of stakeholder consultation. I got a call from Calgary to close the gate, so I did.”*

Dennis York, Assistant Ranger  
Highwood Ranger Station, 1970



## Industry impacted by:

- Shut downs/evacuation of individual sites
- Access loss through road closure
- Power interruption
- Pipeline interruption
- Air quality due to smoke
- Loss of production ... **CRITICAL**

# PREVENTION

**Fires are irregular!**



**Infrequent loss of  
production**

*What, Me Worry?*



# PREVENTION

## On – line data:

- Flaring Notification
- Powerline Hazard Assessment Plan
- Industrial Wildfire Control Plans

- Dedicated staff within SRD prevention section
- Industry Wildfire Prevention Group

The screenshot displays the Government of Alberta website's 'FireSmart for Industry' page. The header includes the Government of Alberta logo and 'Sustainable Resource Development'. A navigation menu lists various programs, with 'Managing Programs' highlighted. The main content area is titled 'FireSmart for Industry' and features a sidebar with a tree view of navigation options. The main text includes sections for 'Industrial Wildfire Control Plan', 'Alberta Wildfire System (AWS)', 'Powerline Hazard Assessment Plan (PHAP)', and 'FireWeb', each with descriptive text and links to related documents or services. A 'Resources' section at the bottom provides additional links for industry-specific guidance.

Government of Alberta  
Sustainable Resource Development

Contact Us Site Map

Alberta.ca > SRD Home > Managing Programs > Preventing & Fighting Wildfire > FireSmart for Industry

About Us Biodiversity & Stewardship Fishing, Hunting & Trapping Recreation & Public Use **Managing Programs** Maps, Forms & Publications Newsroom Updates & Fire Alerts

Enhanced Approval Process  
Fish & Wildlife Management  
Fish & Wildlife Officers  
Forest Management  
Forest Pests  
Integrated Land Management  
Lands  
Oil Sands

**Preventing & Fighting Wildfire**  
Education  
Engineering  
FireSmart  
FireSmart Communities

**FireSmart for Industry**  
FireSmart Landscapes  
Prescribed Fires  
Science & Technology  
Warehousing  
Wildfire Behaviour  
Wildfire Detection  
Wildfire Prevention & Enforcement  
Wildfire Suppression  
Provincial Grazing Reserves (PGRs)  
Timber Damage Assessment  
Training

Feedback  
Questions & Comments to GOA  
SRD Website Feedback  
SRD Website Survey

### FireSmart for Industry

Industrial Wildfire Control Plan

The Industrial Wildfire Control Plan (IWCP) is a mandatory requirement under the [Forest and Prairie Protection Act](#).

[Industrial Wildfire Control Plan Submission Requirements](#) (Jan 2010) (8 pages)

- Supporting Documents
  - [Sustainable Resource Development Letter](#)
  - [CAPP/SEPAC Letter](#)

Alberta Wildfire System (AWS)

The Alberta Wildfire System is a web-based application for industry to submit Industrial Wildfire Control Plan (IWCP) information and complete their Powerline Hazard Assessment Plans (PHAP).

- [Alberta Wildfire System Access](#)
- [AWS Service Support](#)

Powerline Hazard Assessment Plan (PHAP)

As of May 2010, the PHAP process has changed. Please read the following to ensure your EFR submission is correctly completed.

The Powerline Hazard Assessment Plan is applicable to all powerlines within the province of Alberta and is a requirement in the Environmental Field Report (EFR) for powerlines that fall within the Forest Protection Area (FPA). This also applies to Vegetation Control Easements (VCE), but not to underground lines.

The purpose of the PHAP is to reduce wildfires cause by powerline contacts and the threat of infrastructure damage from an encroaching wildfire.

For instructions of how to access the PHAP application and complete the assessment:

- [Powerline Hazard Assessment Plan](#)

FireWeb

FireWeb can be used to spatially view a variety of data available to our external clients. Of particular interest is the Wildfire Threat Assessment Model which assists users in better understanding, evaluating assessing wildfire threat around their values.

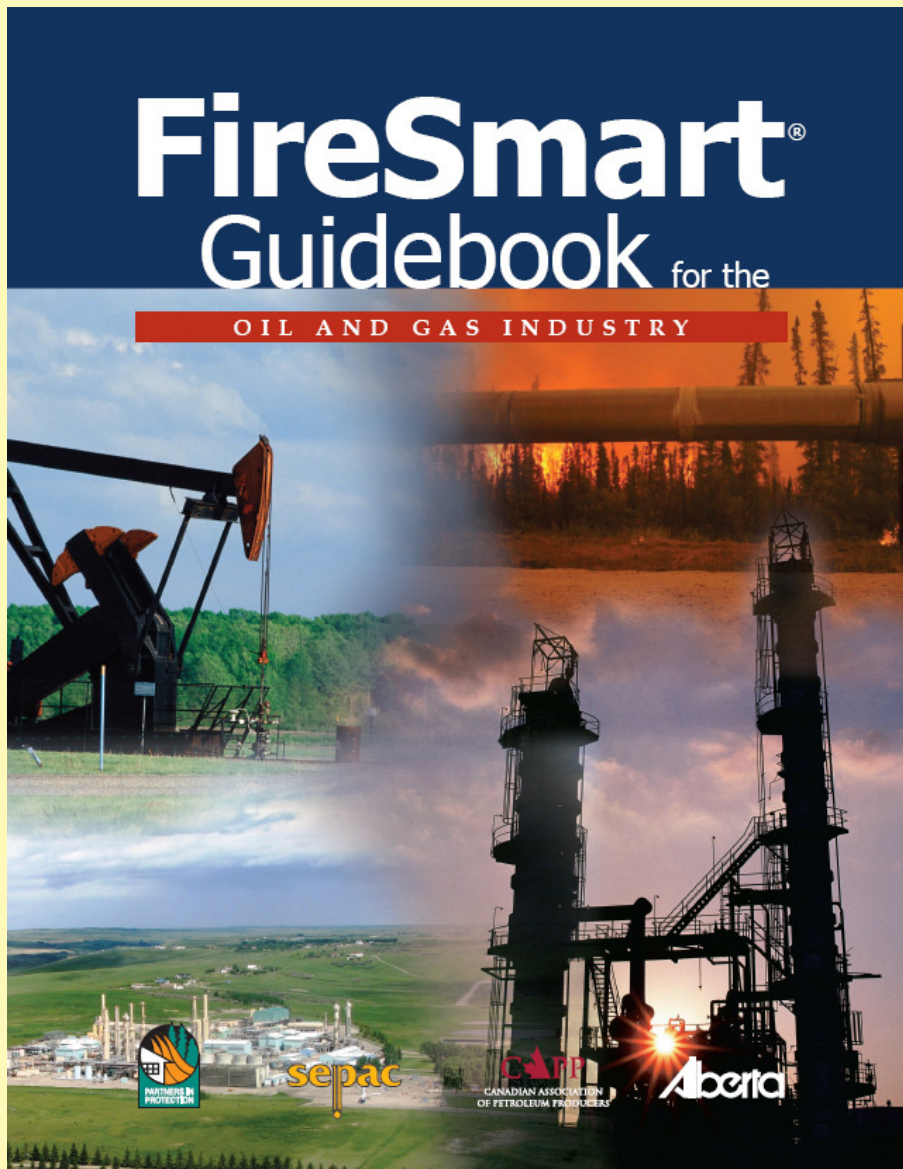
- [External FireWeb Access and Quick Start](#)
- [FireWeb Login](#)

Resources

- [FireSmart Guidebook for Oil and Gas Industry](#)
- [CAPP Best Management Practices for Wildfire Prevention](#)

# PREVENTION

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## OBJECTIVES:

- Increase personnel safety
- Improve emergency response
- Reduce economic loss
- Protect infrastructure
- Reduce liability

Available at:

[www.partnersinprotection.ab.ca](http://www.partnersinprotection.ab.ca)

Next Steps:

- 2010 – Field Manual
- Enform Training



BEST MANAGEMENT PRACTICES

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## Wildfire Prevention

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July 2007

Available at:

[www.partnersinprotection.ab.ca](http://www.partnersinprotection.ab.ca)

Publication Number

## CAPP Initiative

Assist upstream oil and gas industry in

- Preventing industry cause wildfires

- Mitigating the impact of wildfires on infrastructure, operations, liability, personnel safety and the environment.



Mulch 3m Grid

Wildlife Retention

2007/05/30

Photo credit: Engage



## Advantage

FPInnovations  
FERIC

**NOT** Restricted to Members and Partners of FPInnovations - FERIC

Vol. 11 No. 25 February 2010

### Contents

Introduction..... 1  
Characteristics of  
desirable species ..... 2

## Differences in species flammability: identifying less-flammable vegetation

<http://fire.feric.ca/2010001631/AD-11-25.pdf>

## Advantage

FPInnovations  
FERIC

**NOT** Restricted to Members and Partners of FPInnovations - FERIC Vol. 10 No. 3 May 2008

### Contents

Introduction..... 1  
Objectives..... 1  
Methods..... 2

## Effectiveness of mowing grass to reduce potential fire behaviour in corridors

[http://fire.feric.ca/36202003/AD\\_10\\_3.pdf](http://fire.feric.ca/36202003/AD_10_3.pdf)

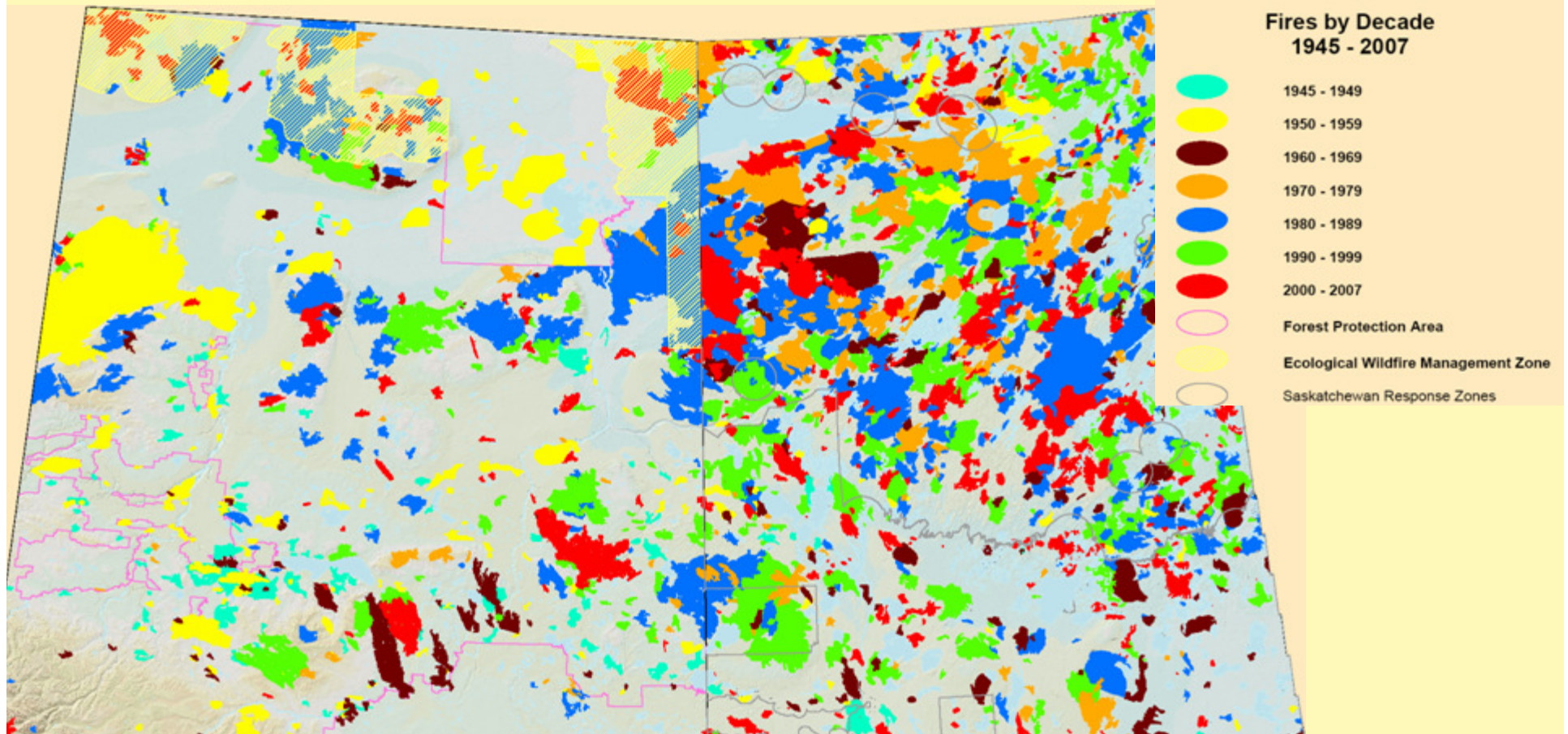


# RUMSFELD 101 ....

Are the unknowns:

Known – climate, insects, industry expansion?

Unknown – can we adapt? If not, reactor better?

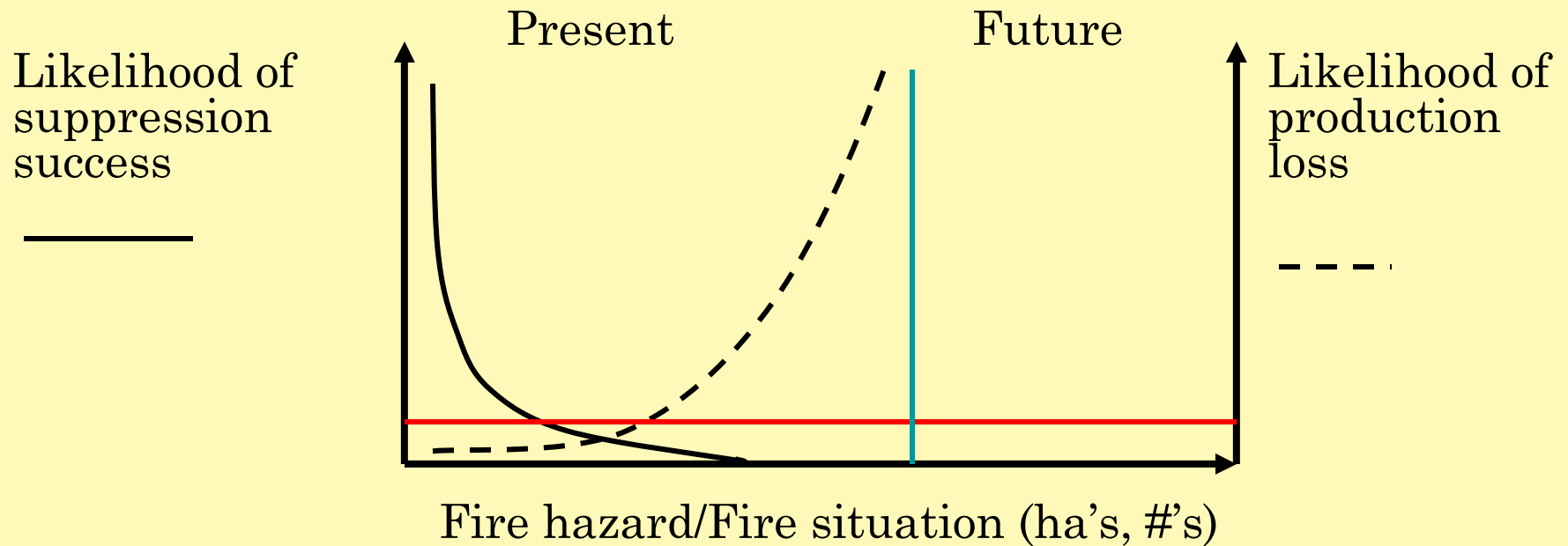




# PREVENTION (IF TIME)

## Threshold incompatibility

Ability to suppress fires (read: prevent industry stoppage)  
VS  
expectation



Red line won't move, blue line probably will