

SMOKE MANAGEMENT IN ONTARIO

Forest Fire Smoke and Your Health

*Aviation & Forest Fire Management
Ontario Ministry of Natural Resources
Northwest Region
2007*



Smoke Management in Ontario *Forest Fire Smoke and Your Health*

- Smoke Impacts
- Smoke Attributes
- Discussions/Questions
- Community Fire Officer's
- Case Study Review
- District Emergency Response Teams
- Discussions/Questions

SMOKE IMPACTS *Forest Fire Smoke and Your Health*

- Public Health Concerns
- Exposure to Forest Fire Smoke
- Visibility
- Problem and Nuisance Smoke

Smoke Impacts *Public Health Concerns*

- Forest Fire Smoke includes:
 - Air Toxins
 - Irritants
 - Small Particles
- Made up of:
 - Small Particles
 - Water Vapour
 - Gases
- Effects on Human Health:
 - Aggravate Existing Diseases
 - Heart and Respiratory
 - Increased Chance of Infection

Smoke Impacts *Exposure to Forest Fire Smoke*

- Inhaling Smoke is Bad for You
 - Avoid Breathing Smoke if You Can
- Most Susceptible to Exposure:
 - Very Young Children
 - Elderly
 - Individuals With
 - Chronic Lung Disease
 - Coronary Heart Disease

Smoke Impacts *Visibility*

- Stay Indoors
- Keep Doors and Windows Closed
- Avoid Indoor Burning (wood stoves, candles)
- Take Your Medications

Smoke Impacts
Problem and Nuisance Smoke

- Restricted Activity Days
- Lost Wages
- Flight Delays/Cancellations
- Odours
- Ash Fallout
- Safety Related Episodes
- Shut-in

Smoke Attributes

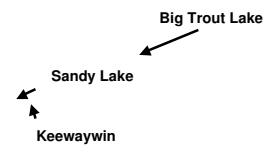
- Fire's Role on the Landscape
- Smoke Dispersion
- Influences on Smoke Dispersion
 - Weather Influences and Lingering Smoke
 - Variances in Forest Fire Smoke (what's Burning)

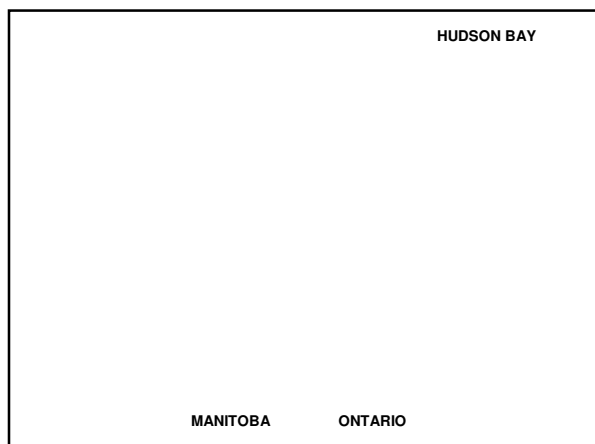
Smoke Attributes
Fire's Role on the Landscape

- Creates Natural Habitats
- Renews Forests
- Provides Diversity
- Hazard Reduction

Smoke Attributes
Smoke Dispersion

- Cannot be Controlled
- Considered in Prescribed Burning and Burnout Activities





Smoke Attributes ***Influences on Smoke Dispersion***

Weather Influences and Lingering Smoke

- Unstable Atmosphere
 - Winds gusty/turbulent
 - Rising Convection Column
 - Dissipate faster

Smoke Attributes ***Influences on Smoke Dispersion***

Stable Atmosphere

- Winds remain steady
- Smoke and haze will lay down
- Linger, limited dispersal

Smoke Attributes ***Influences on Smoke Dispersion***

Variances in Forest Fire Smoke *(what's Burning)*

Smoke Producer's

- Large Fuels
- Less Intense Fires
- Low Moisture Content

SMOKE MANAGEMENT IN ONTARIO ***Forest Fire Smoke and Your Health***

Discussion/Questions



Smoke Management in Ontario ***Forest Fire Smoke and Your Health***

- Community Fire Officer's
- Case Study Review
- District Emergency Response Teams
- Discussions/Questions

Ontario Ministry of Natural Resources *Community Fire Officer's*

- Employed with the MNR
- Provide Safe and Effective response to Forest Fires
- Liaison Between Chief and Council and MNR staff
- Participate in Fire Prevention and Emergency Response
- Maintain and Provide Fire equipment and Support Equipment



Clarence Meekis – Sandy Lake CFO

Red Lake District Evacuation Case Studies

Red Lake District 2006

- Red Lake District = 8 Communities
- CFO – Community Protection Officers
 - Number of Initial Attacks = 41
 - Second Crew Dispatches = 13
- Number of Fires in Northern Communities = 59

Date Evacuated	Evacuated From	# Evacuated	Evacuated To	Date Returned	Reason for Evacuation
Sept. 05/06	Deer Lake	523	Greenstone	Sept. 19/06	Smoke
Sept. 11/06	Sandy Lake	110	Greenstone	Sept. 18/06	Smoke
Sept. 12/06	Keewaywin	136	Greenstone	Sept. 18/06	Smoke
Sept. 13/06	North Spirit Lk	105	Greenstone	Sept. 17/06	Smoke

Red Lake District 2003

Red Lake District 2002

Date Evacuated	Evacuated From	# Evacuated	Evacuated To	Date Returned	Reason for Evacuation
July 16/02	Keewaywin	112	Sioux Lookout	July 25/02	Smoke
July 17/02	Deer Lake	332	Thunder Bay	July 27/02	Smoke
July 18/02	Sandy Lake	400	Greenstone	July 24/02	Smoke

District Emergency Response Teams (ERT)

Legislated Responsibilities

- Forest Fires
- Floods
- Dam Failures
- Drought / Low Water
- Crude Oil & Natural Gas Exploration and Production
- Erosion
- Soil & Bedrock Instability

**District Emergency Response Teams
(ERT)
*Declaration of Emergency***

- **Who Makes the Declaration?**
 - The Chief and Council of your Community
- **Why is the Call Made?**
 - Chief and Council acting on concerns from Community Members
 - Smoke impacts
 - Threat From Wildfire

**District Emergency Response Teams
(ERT)
*District Emergency Procedures***

- **Who Goes First/Second/Third**
 - Evacuation Phases
- **Partial Evacuation; young children, elderly heart or respiratory problems.**
- **Medical problems/disabilities**
- **Everybody else (if warranted)**
- **Check with neighbours, friends or family members for transport.**

**District Emergency Response Teams
(ERT)
*Arrangements – What to Bring***

- Shut off water and hydro (if possible)
- Secure your home
- Identification
- Money
- Blanket
- Warm clothing, footwear, raincoat
- Flashlight
- Luggage
- Matches, lighter
- Sundries
- Kleenex
- Book, magazine
- Children articles
- Prescription drugs

**District Emergency Response Teams
(ERT)
*Host/Reception Centres***

- **Advise during evacuation of any medical needs or disabilities that limit you from movement**
- **Also needs required at the host/reception centre**

- The decision to evacuate is yours
- Experience health problems seek medical attention
- For further information concerning the health effects of smoke from forest fires, please contact your local health unit.

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*Forest Fire Smoke and Your Health***

Discussion/Questions
Thank-you For Your Time

