



# Saskatchewan Wildfire Management: A Risk-Based Approach to Traditional Wildfire Suppression

Presented at the Wildland Fire Canada 2012 Conference  
Kananaskis, Alberta

October 2, 2012

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Saskatchewan  
Ministry of  
Environment

**goGreen**  
Government of Saskatchewan



## Forest Fire Suppression Priorities in Saskatchewan

Suppression Zone	Million Ha.
Modified Response Zone	11.94
Community Protection Zone	1.34
Full Response Zone	18.51
Fire Permit Zone	1.21
AWR	0.58
PANP	0.37
Non Forest Zone	28.96
Water body	3.47

### Legend

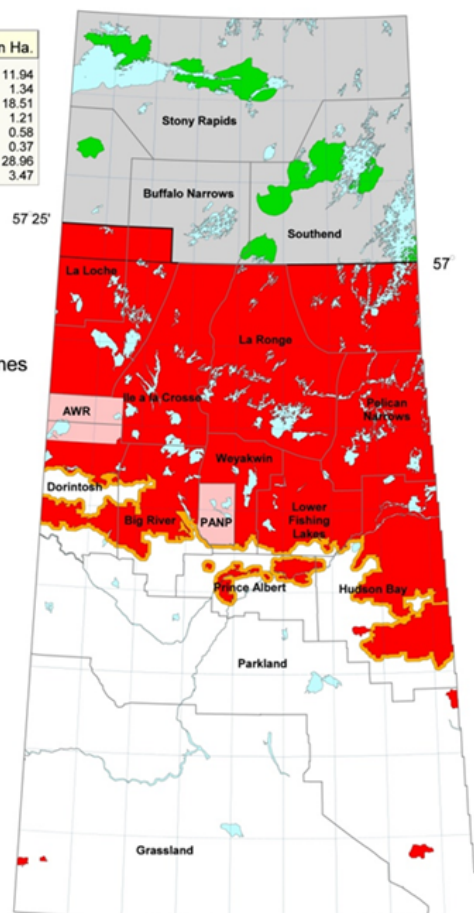
#### Suppression Priority Zones

- Forest Protection Areas
- Modified Response Zone
- Community protection zone
- Full Response Zone
- Fire Permit Zone
- AWR + PANP
- Non Forest Zone
- Water bodies

Prepared by:  
Fire Management  
and Forest Protection Branch,  
Saskatchewan Environment  
September 26, 2003



100 0 100 200 300 400 500 600 Kilometers



## Pre – 2004 Strategies

- Policy to protect communities
- Protect timber
- Modified Response Areas within Full Response Zone
- Far north – Modified Response Zone and Community Protection Zones



# Why Change?

- 1995, 1998, and 2002 wildfire seasons triggered a review of wildfire program
- Issues that needed to be addressed:
  - Forest use increasing
  - Escalating suppression costs
  - Risks to people and structures increasing
  - Wildfire's ecological benefits not recognized





# The Challenge

- To find a balance among the costs of suppression, the protection of values at risk and the ecological benefits of wildfire as a natural disturbance on the landscape





# Anchorpoints

- Fire and Forest Insect and Disease Management Policy Framework
- Performance Management Framework
- Accountability Framework

ALL PART OF A STRATEGIC  
FRAMEWORK



# Performance Management Framework

- Evaluate management and delivery
- Improve program performance
- Performance measures
- Fiscal management





# Accountability Framework

- Hold Wildfire Management accountable
- Objective and timely reporting
- Expenditures tied to performance





# Strategic Framework

- Provide link between strategy and objectives
- Focus on cost-effective delivery of objectives
- Measure and ensure accountability and performance



# Fire Program Budget

- Prior to 2004 the base budget often required special warrant funding
- Budget scenarios were developed and presented to the Treasury Board and Cabinet





# Results

- Increase in budget allocation
- Wildfire Management Strategies
- Reorganization of program delivery
- Altered accountability structure





# Guiding Principles

Risk-based approach for wildfire management strategies that include:

- Assessment before action
- Minimize negative impacts
- Capitalize on positive impacts



# Saskatchewan's Wildfire Management Strategy

Objectives are:

- Manage wildfire to maintain healthy and diverse ecosystems
- Mitigate the risk of extreme costs
- Protect high priority values





# Values @ Risk Framework

1. Human Life
2. Communities and major public infrastructure
3. Commercial Forest
4. Other Values





## Past

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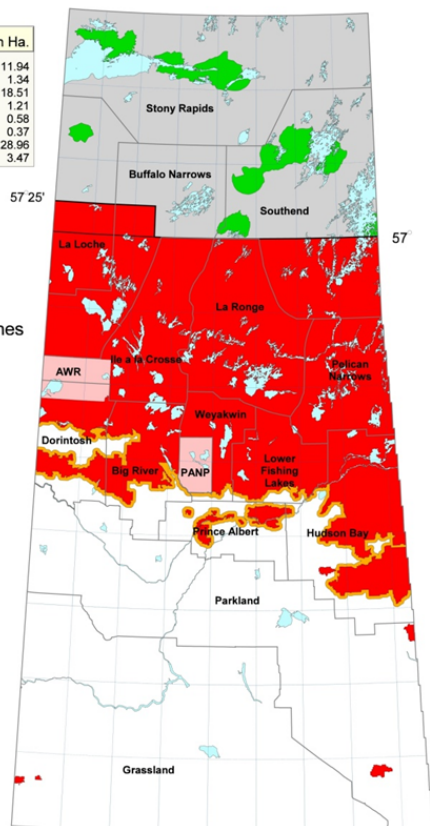
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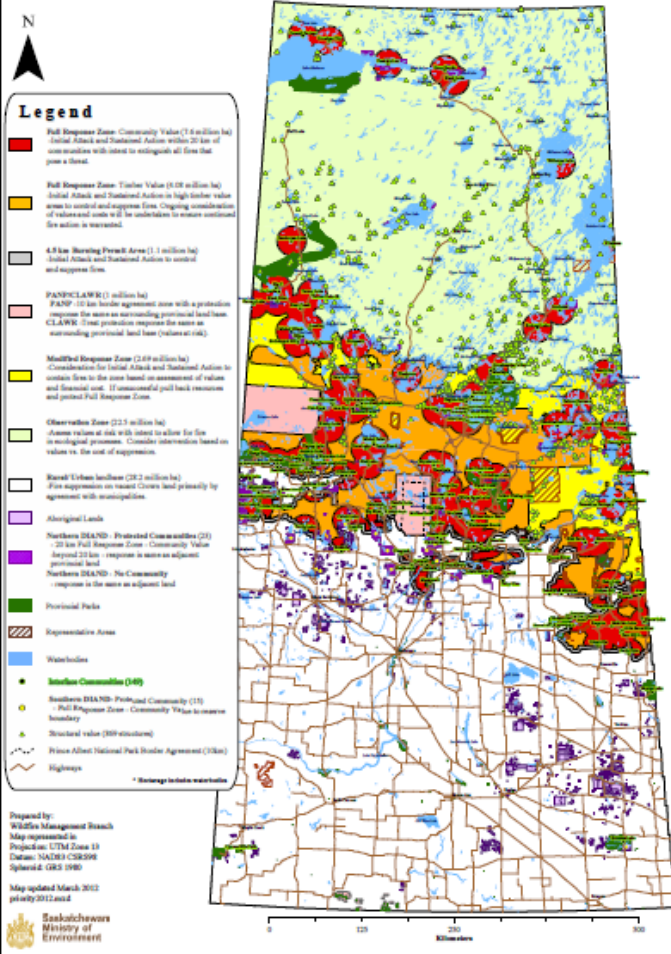


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## Present

### Wildfire Management Strategy Zones in Saskatchewan





# Implementation

## 2006 Wildfire Season

- Typical year in full response zone
  - 341 fire that burned 134,000 ha
- Busy in the observation zone
  - 160 fires - 1,069,000 ha
- Public concern about amount of wildfire on the landscape – triggered review





# Pros and Cons

## Pros

- Focus on priorities
- Financially responsible
- Values protection

## Cons

- Internal and external struggles
- “Let it Burn” issues





## Comparison of Wildfire Costs (2008)

Wildfire Name	Size (ha)	Protection Zone & Containment Action	Start Date	Out Date	Values Burned	Cost (December 31, 2008)
ZBAR	70903	Observation Values Protection	June 2	August 17	None	<b>\$300,097.16</b>
THORESON	10480	Observation Values Protection	June 21	August 3	None	<b>\$224,156.36</b>
RUSSELL	10000	Observation Values Protection	June 3	July 11	None	<b>\$195,856.07</b>
BOB	55000	Observation Values Protection	June 21	August 6	None	<b>\$133,354.61</b>
LINE	1508	Timber Full Suppression	June 30	July 23	None	<b>\$601,196.06</b>
CELESTE	116	Community Full Suppression	June 5	June 17	None	<b>\$517,783.69</b>



# 2010 Wildfire Season

- 571 wildfires (10 yr average – 558 fires)
- 330 wildfires in FRZ – burned 13,657 ha
- 241 wildfires in MRZ/OBS – burned 1,721,140 ha
- 403 values protected with >200 VPU
  - 20 structures and 8 other values burned





## 2010 Wildfires >100 ha

	# of Wildfires	Area Burned (ha)	Expenditures (\$)
Full Response Zone	12	13,178.3	3,847,640.55
Modified and Observation Zones	107	1,718,761.1	5,630,871.27
Totals	119	1,731,939.4	9,478,511.82



# Then to Now

- VP performance measure
- SKDispatch
- Wildfire Integrated Information System (WIIN)
- Changes to wildfire status classification
- Complete shift in culture





# Using a new system also meant some new terminology/classifications:

## Old

-  Not Yet Under Control
-  Initial Attack
-  Values Protection
-  Being Observed
-  Patrolled
-  Under Control
-  Being Held
-  Mop Up
-  Out

## New

-  Not Contained
-  Ongoing Assessment
-  Protecting Values
-  Contained
-  Out

*Also “Request for Assistance”  
and “Finalized” categories*



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# THANK YOU!





FMFP EXPENDITURES 2004-2010

Year		Base	Prep	Small	Large	Total
2004	Allocation	26,150,000	13,000,000	8,005,000	15,387,000	\$62,542,000
	Actual	24,751,700	6,107,600	897,300	639,400	\$32,396,000
2005	Allocation	27,206,000	12,797,000	7,295,000	16,770,000	\$64,068,000
	Actual	26,633,800	5,641,556	1,406,149	3,718,612	\$37,400,117
2006	Allocation	31,526,800	12,129,200	7,000,000	16,251,000	\$66,907,000
	Actual	31,192,966	10,474,092	3,628,192	18,618,370	\$63,913,620
2007	Allocation	33,928,000	12,570,000	7,673,600	17,060,400	\$71,232,000
	Actual	32,287,526	8,667,177	2,390,813	1,197,632	\$44,543,148
2008	Allocation	35,516,000	12,545,000	6,830,600	15,008,400	\$69,900,000
	Actual	30,386,100	12,697,131	4,353,587	20,492,208	\$67,929,026
2009	Allocation	36,114,000	12,715,100	6,800,700	15,235,200	\$70,865,000
	Actual	30,029,646	8,434,120	2,722,242	4,745,639	\$45,931,647
2010	Allocation	35,326,700	12,530,600	4,430,700	6,400,000	\$58,688,000
	Actual	31,514,626	8,992,460	4,459,009	11,088,535	\$56,054,630
5 Year Average	Allocation	\$34,482,300	\$12,497,980	\$6,547,120	\$13,991,000	\$67,518,400
	Actual	\$31,082,173	\$9,852,996	\$3,510,769	\$11,228,477	\$55,674,414