Annual Report on Emergency Fire Expenditures

08 - 0310

FY 2007

Purpose

The purpose of this Report is to address the requirements of Minnesota Laws of 2005, First Special Session, Chapter 1, Article 2, Section 3, subd. 4, which states in part:

> "By November 15, each year, the commissioner of natural resources shall submit a report to the chairs of the house of representatives Ways and Means Committee, the senate Finance Committee, the Environment and Agriculture Budget Division of the senate Finance Committee, and the house of representatives Agriculture, Environment and Natural Resources Finance Committee, identifying all firefighting costs incurred and reimbursements received in the prior fiscal year."

Funding Sources for Emergency Firefighting

Emergency Fire Fighting - Direct Appropriation: Laws of 2005 appropriated $7,217,000 [1] the second year for prevention, presuppression and suppression costs of emergency firefighting, and other costs incurred under Minnesota Statutes, section 88.12.
(Laws of 2005, First Special Session, Chapter 1, Article 2, Section 3, subd. 4)

Emergency Fire Fighting – Open Appropriation: Under the authority of this appropriation, during FY 2007, $16,518,294 was expended.
(Laws of 2005, First Special Session, Chapter 1, Article 2, Section 3, subd. 4, further states in part that "If the appropriation for either year is insufficient to cover all costs of presuppression and suppression, the amount necessary to pay for emergency firefighting expenses during the biennium is appropriated from the general fund.")

Attachment 1 *shows the costs from the fire appropriations by object of expenditure.*

[1] Actual expenditure in FY 2007 is $7,319,596 to date. ($121,459 was carried forward from FY 2006 and $2,000 was cancelled.) Some additional spending in both appropriations may occur as encumbrances are settled through December 1st, 2007.

Uses of the Emergency Firefighting Appropriations

Collections and Reimbursements to the General Fund: The DNR collects costs for certain fire related activities. These include reimbursement for supplies sold to local government units (e.g. fire departments) from the Inter-agency Fire Cache (Cache Sales – authorized under M.S.§ 88.065), and charges against responsible parties for starting illegal or negligent fires, (Fire Cost Collections – authorized under M.S.§ 88.75). These collections are deposited directly to the general fund and are not used by the DNR.

In FY 2007, collections came from the following sources:

- Cache Sales - $ 150,303
- Fire Cost Collections- $ 126,963
- **Total Collections - $ 277,266**

Additionally, the Special Revenue Fund (see below) may over-recover costs reimbursed from out-of-state deployments, mostly from use of the CL-215 airtankers, but also from other equipment such as wildland engines. This is because the state charges for a portion of the fixed costs associated with this equipment, but pays those fixed costs out of the emergency firefighting appropriation. As receipts to this account exceed anticipated charges, the excess is transferred to the General Fund. In FY 2007 no excess accumulated and there was no transfer to the general fund. This is because the state did not deploy the CL-215s outside of the Great Lakes Forest Fire Compact area. Within the Compact, the DNR does not charge "overhead" costs, nor did Compact partners add these costs when assisting the state, as they did in FY 2007.

National Mobilization: The DNR provides firefighters and the CL-215 airtankers to assist federal partners in-state, send resources out of state to respond to national wildfire emergencies, or assist Compact partners. The federal government reimburses federal costs and Compact partners (adjoining states and provinces) reimburse their costs. These costs are charged to the Emergency Fire Special Revenue Fund. During FY 2007 the DNR expended $4,317,572 in reimbursable costs incurred for national mobilizations and Compact support. Approximately $3.57mm is due to firefighter mobilizations and $0.75mm is due to CL-215 mobilizations. This is not a use of the state emergency fire appropriations, direct or open, but is included here due to perennial interest on this topic.

Suppression and Presuppression Costs

The success of the DNR's fire suppression strategy is largely due to aggressive initial attack. The goal is to keep fires small. Once a fire escapes initial attack, costs and damages increase exponentially.

The following discussion is offered to explain how preparedness and suppression activities work together to reduce wildfire damages. Presuppression levels move on a continuum that is proportional to fire danger. Presuppression costs include activities undertaken in advance of fire occurrence to ensure more effective suppression. These activities include overall planning, recruitment and training of personnel, procurement of firefighting equipment and contracts, and maintenance of equipment and supplies. Suppression costs include activities that directly support and enable the DNR to suppress wildfires during times when fires are likely to occur, including the pre-positioning of resources. As fire danger and fire occurrence increase, the resources that must be positioned for immediate response also increase.

Presuppression costs amounted to 16% of the direct and open fire appropriations in FY 2007. Historically, presuppression has composed 25% or less of the fire account.

The DNR uses a cost coding system to provide accountability for emergency fire account expenditures. This detailed system captures all fire account expenditures and enables managers to identify costs charged to individual fires. Local supervisors are held accountable for expenditures in their areas.

Attachment 2 *shows the percentages of fire expenditures spent on prevention, presuppression and suppression.*

Planning

Base costs for wildfire response are affected by general weather and precipitation patterns, in addition to actual fire occurrence. A system for determining potential wildfire risks and establishing fire planning levels is used to guide the level of readiness week to week.

Attachment 3 *shows the criteria and planning levels currently in use.*

These planning level guidelines are reviewed and implemented at weekly conference calls with fire managers from all of the agencies that cooperate in Minnesota wildfire suppression efforts. Planning levels are set for each region of the state, and for the state as a whole. The planning level, combined with daily fire danger indices, establish the preparedness level needed to effectively respond to wildfires. Historically, about 80% of wildfires in the state occur during planning level 2. Major fires also can and do occur at this level.

In FY 2007 there were 280 days of possible wildfire danger, which is two months longer than in FY 2006. (i.e. at least one region at planning level 1 or higher). Of the possible wildfire days, 119 were at Planning Level 1, 83 were at Planning Level 2, 45 were at Planning Level 3 and 29 were at Planning Level 4. On 21days, at least one area was at Planning Level 2 while the rest of the state was at Planning Level 1. This year a severe drought throughout the forested part of the state resulted in many more days at Planning Levels 2 and 3 and 4, which required more personnel and equipment to be positioned for response throughout much of the season.

Attachment 4 *shows the ten-year fire expenditure history.*

FY 2007 Fire Season

General Activity: In FY 2007, 1545 fires occurred burning 82,933 acres. Historically, the state experienced a 20-year average of about 1685 fires burning just less than 43,000 acres.

# Fires By Cause				
	FY 2007	**%**	**20 Yr. Ave.**	**%**
Lightning	78	5	31	2
Campfires	73	5	47	3
Smoking	30	2	55	3
Debris Burning	446	29	640	38
Incendiary/Arson	384	25	479	28
Equipment Use	224	14	138	8
Railroad	44	3	82	5
Misc./Unknown	266	17	213	13
Total	1545		1685	

Overall, FY 2007 turned out to have higher than average percentages of lightning, campfire, equipment and railroad causes, consistent with dry summer conditions.

Attachments 5a and 5b *graphically illustrate fire history and causes.*

Discussion of Fire Behavior and Fire Danger Levels

Moderate to severe drought conditions developed over central and northern Minnesota over the summer of 2006. Drought has been entrenched across much of northern and central Minnesota since June of 2006. Annual precipitation deficits of four to ten inches were common at the end 2006 and by late August 2007 the dryness was compounded by an additional three to seven inch shortfall over a large part of the State. Cooler weather and beneficial rains finally arrived late August and early September, but it will still take some time to alleviate the long-term dryness in many areas.

By late July of 2006 many fires were developing quickly in size and intensity but due to prompt action by ground and aerial forces, most were controlled during initial attack. . Peat fires became more numerous and time consuming by early September, with some persisting into the winter months. Burning peat is notoriously expensive to suppress. Additionally, lightning fires became more common in the late summer. Lightning fires are normally a rare occurrence in this state. They are also difficult to suppress because they often start in remote areas away from road and trail access, dictating a stronger suppression resource commitment.

Long-term fire danger indices were running at near record levels across much of northern Minnesota by late summer. For example, the Canadian Drought Code, a measure of long-term dryness in fuels, was at Very High to Extreme levels across all of northern Minnesota through the summer and fall months. Widespread dryness such as this had not been seen since 1976.

Dry conditions persisted until the end of February 2007 when snow finally began to fall over northern Minnesota. A short-lived warm spell in mid to late March resulted in a few fires, but winter quickly returned bringing cold and snowy weather that lasted into early April. The month of April started out much colder than normal; in fact it was the coldest early April in over 30 years. By mid-April, temperatures rebounded to above average and spring fire season was well underway. Fast moving grass fires became common across central and northern Minnesota. Peat fires again began to occur, and earlier than usual due to the fact that winter snowfall and spring rains were insufficient to recover the soil moisture deficit.

By early May a few short-lived crown fires were reported in conifer stands but due to quick response by suppression forces, most did not become large.

The extended drought in NE Minnesota also caused problems within the Federal fire protection areas (National Forests and the BWCA Wilderness). The Cavity Lake fire, which made a major run in blown-down timber on July 16th, covered 1½ miles on the mainland south of Seagull Lake and skipped 2 miles across islands in Seagull Lake in a four-hour period. The fire continued to burn and increase in size for the next 4 days. The Ham Lake fire in Cook County, which started on May 5th ran about 4 miles the first afternoon. Areas of the 1999 blowdown that had previously been burned by prescribed fire served as an effective firebreak during the Cavity Fire in July 2006 when vegetation was still green. This was not the case during the Ham Lake fire when vegetation was fully cured and green-up had not yet commenced. The Cavity Lake Fire burned about 34,000 acres. The Ham Lake fire burned over 36,000 acres in Minnesota, destroying a number of residences and burned approximately 38,000 additional acres in Ontario before being brought under control.

The last week of May brought rainfall to much of the State which, along with the normal seasonal green-up gave a respite to firefighters for most of the month of June. June rainfall amounts were still not enough to alleviate the drought, and it continued throughout the summer of 2007.

Major Fire Incidents in FY 2007

The long-term drought outlined above resulted in several large fires since July of 2006. The three largest fires occurred in U.S. Forest Service protection areas along the Gunflint Trail and in the Boundary Waters Canoe Area Wilderness (BWCAW). Although in federal protection areas, fire suppression in the state is an interagency effort. Federal funds paid for these fires, but they are summarized here due to general interest and the involvement of state personnel and equipment.

Cavity Lake Fire – U.S. Forest Service protection area
The Cavity Lake Fire started on July 14th from a lightning strike in the BWCAW. A Minnesota Incident Command System Interagency Incident Management Team (MNICS) took over the fire on July 15th. At this point the fire had burned 1300 acres. The next day a severe thunderstorm passing to the south of the fire generated high winds and caused significant growth to the southwest and north. Due to the complex logistical support needs in the wilderness, the proximity of the Canadian border, and the threat to hundreds of homes nearby on the Gunflint Trail, a national Type 1 Incident Management Team was ordered on July 17th. By the time this team took over, the fire was 19,800 acres in size and was not contained.

The teams each worked closely with their counterparts in Ontario, Canada to coordinate suppression tactics and overall strategy. A unified command was established among the Cook County Sheriff, MN Department of Natural resources and the United States Forest Service.

Control efforts were able to steer the fire away from inhabited areas, but by July 20th the fire had grown to 28,500 acres. On July 30th - 31st approximately 1.25 inches of rain fell in the fire area and allowed firefighters to complete a controlled perimeter. The fire ultimately burned 31,830 acres in the BWCAW. Crews continued to mop-up isolated hot spots through mid-August

East Zone Complex – U.S. Forest Service protection area
A large lightning storm crossed far Northeast Minnesota in early September of 2006 sparking a series of fires in the BWCAW that emerged from September 8th -11th, again in an area under federal fire protection. Of these fires, the four most troublesome were grouped into the East Zone Complex. The Famine and Redeye fires had potential to threaten the Gunflint Trail area and were fought aggressively from the air and ground beginning on September 13th and 14th. A MNICS Incident Management Team took over the fire. On the 15th strong southerly winds pushed the Famine and Redeye Fires north, and a cautionary evacuation was ordered by the Cook County Sheriff for a portion of the Gunflint Trail. Over 130 residents and visitors chose to leave the area. By the end of the day on the 15th the Famine Fire was approximately 4,150 acres, Redeye Fire 1,850 acres, Sumpet Fire 60 acres and the Patriot 1 acre.

Light rain fell on the 16th allowing ground crews to make progress on the fires. Helicopters and Air Tankers were again utilized once the weather cleared and visibility improved. These suppression efforts halted the further spread of the fires, and mop-up and monitoring continued through the end of September.

Clementson Fire – State protection area
The Clementson Fire in northern Koochiching County (about 10 miles east of Baudette) occurred in the fall of 2006. The fire started appears to have resulted from farming operations and was reported on Labor Day Monday, September 4th. It grew to 120 acres on the first day, burning in lowland grass over peat soils. By the second day over 60 acres of peat was on fire. Due to the remote location and the long-term need to pump water and flood the burning peat, a MNICS Incident Management Team was called out for the third time this year, and took over firefighting

operations on September 5th.

Windy conditions on September 7th caused the fire to escape containment lines. Both MN DNR CL-215 water scooping air tankers were utilized along with ground forces, and were able to hold the advance of the fire to an additional 30 acres. The intense work of peat fire mop-up went on for another 7 to 10 days.

Northwest Minnesota Fires Spring 2007 – State protection areas
The lack of snowfall and continued drought conditions across the state brought an active spring fire season to NW MN. A series of fires in late April and early May burned several large areas of lowland and upland grasses. The majority of these fires were human caused from farming operations, although a few were determined to be arson sets. The fires ranged in size from 200 acres to over 3000 acres. Area and Regional fire fighting resources were stretched to limit. The State's CL-215's, contract helicopters and a Single Engine Air Tanker (SEAT) were invaluable in bringing these fires under control.

Ham Lake Fire – U.S. Forest Service protection area
On May 5th, 2007 a human caused wildfire was started near Ham Lake, in the Gunflint Trail Corridor, just outside the BWCAW. Strong east winds gusting to 35 miles per hour fanned the fire causing it to spread to the west-northwest and threaten resorts, cabins and homes south of the Gunflint Trail. By the end of the day over 1400 acres had burned. A MNICS Incident Management Team (IMT) was mobilized to oversee fire suppression efforts.

The fire burned actively throughout the night, an indicator of the extreme drought conditions, and grew to 3600 acres by morning. It was apparent that hundreds of homes and cabins near the end of the Gunflint Trail were in immediate danger. Firefighters rushed to activate as many private home sprinkler systems as possible to protect structures and evacuate residents and visitors. The Cook County Sheriff ordered a mandatory evacuation of all citzens. The Gunflint Trail Volunteer Fire Department systematically activated their evacuation plan, which was established in response to the July 4, 1999 Blowdown Storm. Although the fire grew to 14,000 acres in size on May 7th and consumed 45 structures, no lives were lost. This was largely due to the efforts of the Cook County Sheriff, the Gunflint Trail Volunteer Fire Department, Cook County emergency planners and other local Fire Departments, Federal and State Wildfire Firefighters.

Meanwhile, the IMT concentrated on strategies to slow the fire's growth. A large burnout operation was planned to remove fuel from the east flank of the fire and to protect the resorts, cabins and residences near Gunflint Lake. The burnout, 3000 acres in size, was highly successful and was a contributing factor in saving many properties on the eastern flank of the fire.

The IMT soon realized that this fire would require a larger organization with more resources. A National Type 1 IMT was ordered from the National Interagency Fire Center in Boise, ID. Fire operations were turned over to this team on May 8th the day of the burnout described above.

The fire crossed the border into Canada on May 9th. The MNICS team had established contact with our partners in Canada early on in the incident. Liaisons were established on both sides to allow for a free flow of aerial and ground resources across the international border. On May 10th a Canadian Type 1 IMT was put in place to manage the Canadian portion of the fire. This team worked in close coordination with the US team throughout the rest of the fire, sharing air and ground resources across the border as much as possible.

The fire crossed back into the US on May 11th on the eastern side of Gunflint Lake where it again crossed the Gunflint Trail and burned into the BWCAW. This was the last major run the fire made as the weather finally turned in the firefighters' favor bringing rain and cooler temperatures to the area. Ultimately, the fire burned 75,443 aces in the US and Canada. Of this 35,443 burned on the US side. Over 140 structures were lost on the US side

Coordination with Federal Customs and Immigration officials on both sides of the border were excellent and allowed for a free flow of resources across the border. This relationship has been developed over the past several years through informational meeting and exercises since the blowdown storm of July 1999.

Cherry Fire – State protection area

On May 10th, 2007, in the midst of the response to the Ham Lake Fire, a wildfire started near the town of Cherry, east of Hibbing. This fire was human caused and was burning around several residences and open areas that surround several rural developments and small farms. Although the fire only reached 150 acres in size, access problems and a number of threatened residences caused the DNR Incident Commander along with the County Sheriff to order an evacuation of some of the areas threatened by the fire. The local DNR office ordered a MNICS IMT to manage the fire. The team assumed responsibility for the fire on the morning of the 11th.

Despite extreme fire conditions, aggressive initial attack and strategic actions saved several residences and other structures. Only two outbuildings and a 30-foot travel trailer were destroyed. Six residences were saved along with several more outbuildings.

CL - 215 Water Scooping Airtankers

Two state-owned CL-215 water scooping air tankers are each capable of dropping 1,400 gallons of water per pass over a wildland fire. Scoopable water is abundant in the lakes of northern Minnesota; aircraft turnaround times between a water source and the wildfire can be as short as three minutes, enabling each aircraft to deliver up to 28,000 gallons of water every hour.

In FY 2007 these aircraft made 2462 water drops, delivering 3,446,800 gallons of water on 60 wildfires in Minnesota. During times of low fire danger the tankers may be temporarily sent to other states under cooperative contracts. In FY 2007, the aircraft were not relocated outside of Minnesota due to fire activity in the state. In addition to working on state fires, the air tankers are dispatched under cooperative agreements to MNICS partners such as the U.S. Forest Service, B.I.A., U.S. Fish and Wildlife Service, and on day flights to neighboring states and provinces such as Wisconsin and Ontario. Cooperative flights, for which the state is reimbursed, amounted to 228 hours of flight time.

Attachment 6 *summarizes the ownership costs for the CL-215's*

Land-based airtankers continue to be used in-state, with large retardant aircraft and single engine airtankers (SEATs) supplementing Minnesota's CL-215 fleet. In the spring of 2007, the DNR utilized a "Fire Boss" water-scooping SEAT, two land-based SEATs, and shared the cost of a third SEAT with MNICS partners. Additionally, MNICS partners utilized state air tanker bases when they brought in two heavy retardant air tankers for early spring use prior to ice-out. After ice is out of the lakes water scoopers can operate.

Attachment *7 illustrates where CL-215's fought fire in FY 2006.*

Attachments

Attachment 1 - Fire Expenditures by Object Category for Emergency Fire Appropriations

Attachment 2 – Percentage of fire costs in prevention, presuppression and suppression

Attachment 3 - Guideline for Statewide Planning Level Determination

Attachment 4 - Ten Year Expenditure History of Fire Fighting Costs.

Attachments 5a and 5b – Graphical Representation of Wildfire History and Causes.

Attachment 6 - Summary of costs for CL-215 Air Tankers

Attachment 7 – CL-215 dispatches in FY 2007

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Emergency Fire Direct and Open Appropriations
Expenditures by Category
FY 2007

Direct Appropriation		7,319,596
Open Appropriation		16,518,294
	Total	23,837,890

Salary Costs	10,917,652
Operating Costs	12,920,238
Total	23,837,890

FY 2007 Fire Cost Summary

By Type of Activity and Appropriation

	Emergency Firefighting Direct	Emergency Firefighting Open	Total
Fire Prevention	2%	0%	**1%**
Fire Presuppression	19%	15%	**16%**
Fire Suppression	80%	85%	**83%**
Total			**100%**

ATTACHMENT 3 A GUIDELINE FOR STATEWIDE WILDFIRE PLANNING LEVEL DETERMININATION

	PLANNING LEVEL 0	PLANNING LEVEL I	PLANNING LEVEL II	PLANNING LEVEL III	PLANNING LEVEL IV
BI (Q) spring, pre-green, floating 5 day average	Not applicable	0-45	46-70	71-95	96+
BUI (after June 1, floating 5 day average)	Not applicable	0-25	26-50	51-67	68+
ERC (Q) (alternate summer/fall indicator, after June 1, floating 5 day average)	Not applicable	0-15	16-29	30-36	37+
8-14 day Weather Forecast	Winter conditions, most of State snow covered, temps below freezing.	Normal conditions for season, adequate precip. expected	Less than normal precip. and RH, higher than normal temps forecast	Dry weather patterns persisting, no change forecast	Dry pattern intensifying. Unstable weather forecast leading to extreme fire behavior conditions.
MN Regional Planning Levels	All Regions/Agencies at P.L. 0	One or more Regions/Agencies at P.L. I	Two or more Regions/Agencies at P.L. II	Two or more Regions/Agencies at P.L. III	Two or more Regions/Agencies at P.L. IV
Eastern Area Planning Level	0-I	0-II	0-III	0-IV	0-IV
National Planning Level	0-II	0-III	0-IV	0-IV	0-IV
Fire Occurrence (Initial Attack)	Rare, infrequent fire occurrence	Fires reported in scattered Areas. Generally less than 10 fires/day Statewide.	Multiple Areas/Agencies reporting fires. 10 to 20 fires/day Statewide	Multiple Areas/Agencies reporting fires. 20 to 30 fires/day Statewide	Multiple Areas/Agencies reporting fires. 30+ fires/day Statewide.
Fire Occurrence (Escaped fires)	None	None	1-2 fires requiring extended attack Statewide (more than mop-up)	3-5 fires requiring extended attack Statewide	5+ fires requiring extended attack Statewide
Sociopolitical Considerations	Statewide or Regional events such as fishing opener or the Fourth of July; natural events such as floods or windstorms; other unexpected or unusual events that may have large scale impacts should be considered.				
Resource Availability	Normal complement of personnel.	No shortages expected.	Moderate demand for some in-state resource types expected	Shortage of certain in-state resource types	Most in-state resources committed. Out of State assistance necessary.
In-State Mobilization	None	Less than 5% of statewide resources assigned out of home unit.	Some short term movement occurring , 5-10% of statewide resources assigned out of home unit.	10-20% of statewide resources assigned out of home unit.	20%+ of statewide resources assigned out of home unit.
Out of State Mobilization	If out of State mobilization is occurring or anticipated to occur, an 'A' designator will be applied at the current Planning Level.				

- Once Planning Level has reached level II in spring, preparedness will not drop below P.L. II until May 31 or later.
- Terms used above, which are calculated daily from weather and fuel measurements:
  - BI (Q) = **Burning Index**, fuel model Q: A measure of fire danger based on the probability of ignition and fire spread in a specified forest type.
  - BUI = **Build Up Index**: An indication of the dryness of larger sized woody fuels, which becomes a significant factor during a drought.
  - ERC (Q) = **Energy Release Component**, fuel model Q: A measure of the expected heat release from a fire, which will be experienced by firefighters on the fireline.

Attachment 4

Nominal Dollars By Source of Funds	FY 1998	FY 1999	FY 2000(b)	FY 2001(c)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	10 Year Average
Forestry General	$2,325,257	$2,559,669	$2,658,615	$2,640,289	$2,748,183	$2,884,809	$0 (e)	$0	$0	$0	$1,581,682 (f)
Emergency Fire-Direct	$3,470,065	$3,522,870	$2,822,957	$4,412,245	$5,998,430	$5,983,070	$7,650,000	$7,136,680	$7,084,432	$7,319,596	$5,540,035
Cost Recovery(a)	$269,728	$486,253	$777,690	$952,255	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	$12,876,664
Emergency Fire-Open	$4,554,168	$2,945,915	$7,768,174	$9,435,941	$8,870,452	$9,084,514	$9,560,026	$6,934,419	$8,424,271	$16,518,294	$8,409,617
Fire Program Total	$10,619,219	$9,514,707	$14,027,436	$17,440,730	$17,617,065	$17,952,393	$17,210,026	$14,071,099	$15,508,703	$23,837,890	$15,779,927
Cost Recovery(a)	$269,728	$486,253	$777,690	$952,255	$391,698 (d)	$448,568	$634,163	$955,343	$976,131	$277,226	$616,906
Net Cost to State	$10,349,490	$9,028,454	$13,249,746	$16,488,475	$17,225,367	$17,503,825	$16,575,863	$13,115,756	$14,532,572	$23,560,664	$15,163,021
Mobilization Fire Costs Reimbursable(g)	$302,889	$299,106	$1,028,550	$2,604,290	$2,876,747	$2,962,300	$4,440,968	$3,384,226	$3,997,899	$4,317,572	$2,621,455

(a) Fire Cache Sales, Fire Cost Collections, excess recovery from Special Revenue Fund transferred to General Fund.

(b) $1.9mm Ne MN preparedness initiative (Blowdown)

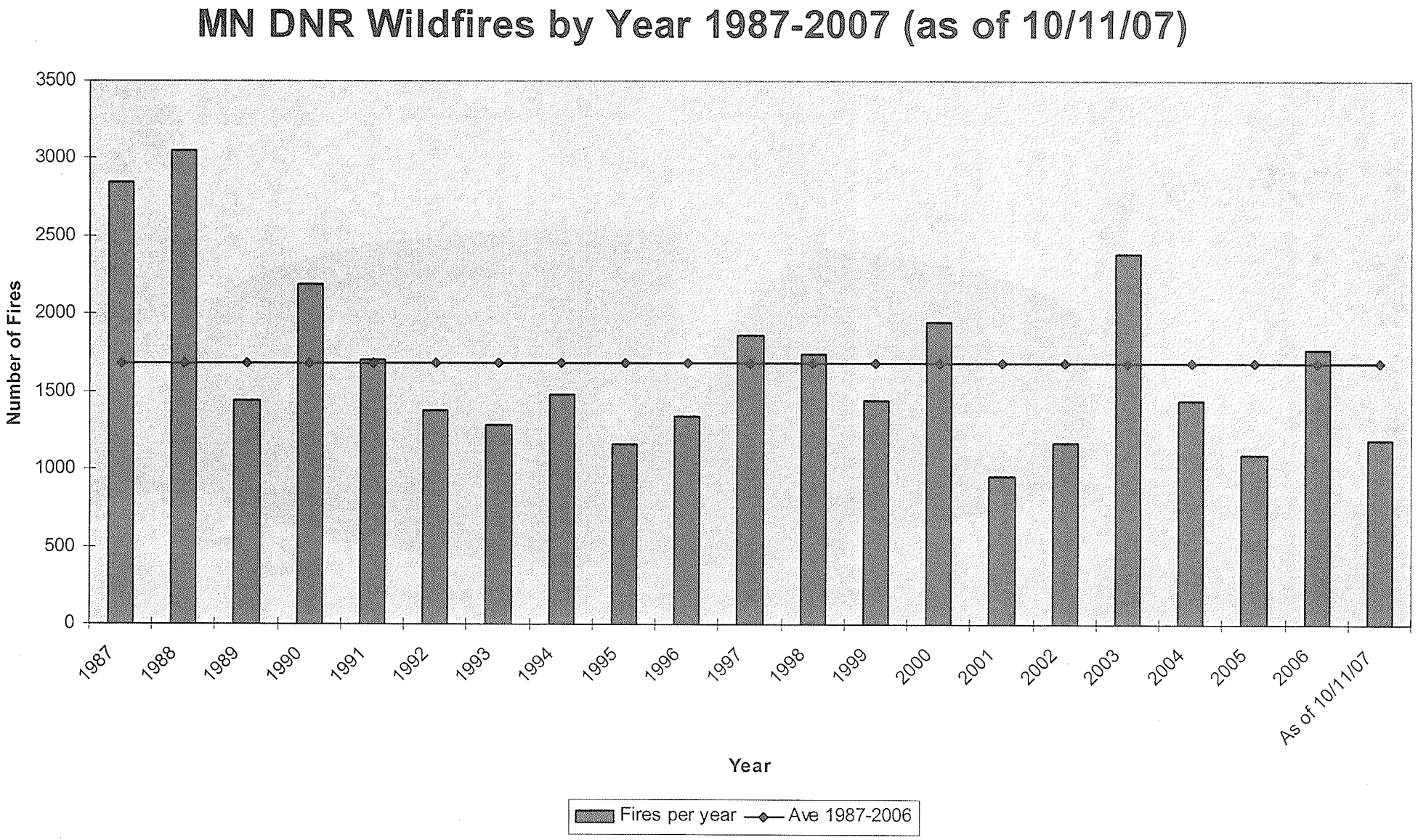
(c) Purchase of CL-215's

(d) Does not include a one-time Fed Disaster (FEMA) payment of $1.7mm for the Carlos Edge Fire of 1999

(e) Beginning in FY 2004, all firefighting costs are paid by the emergency fire appropriations.

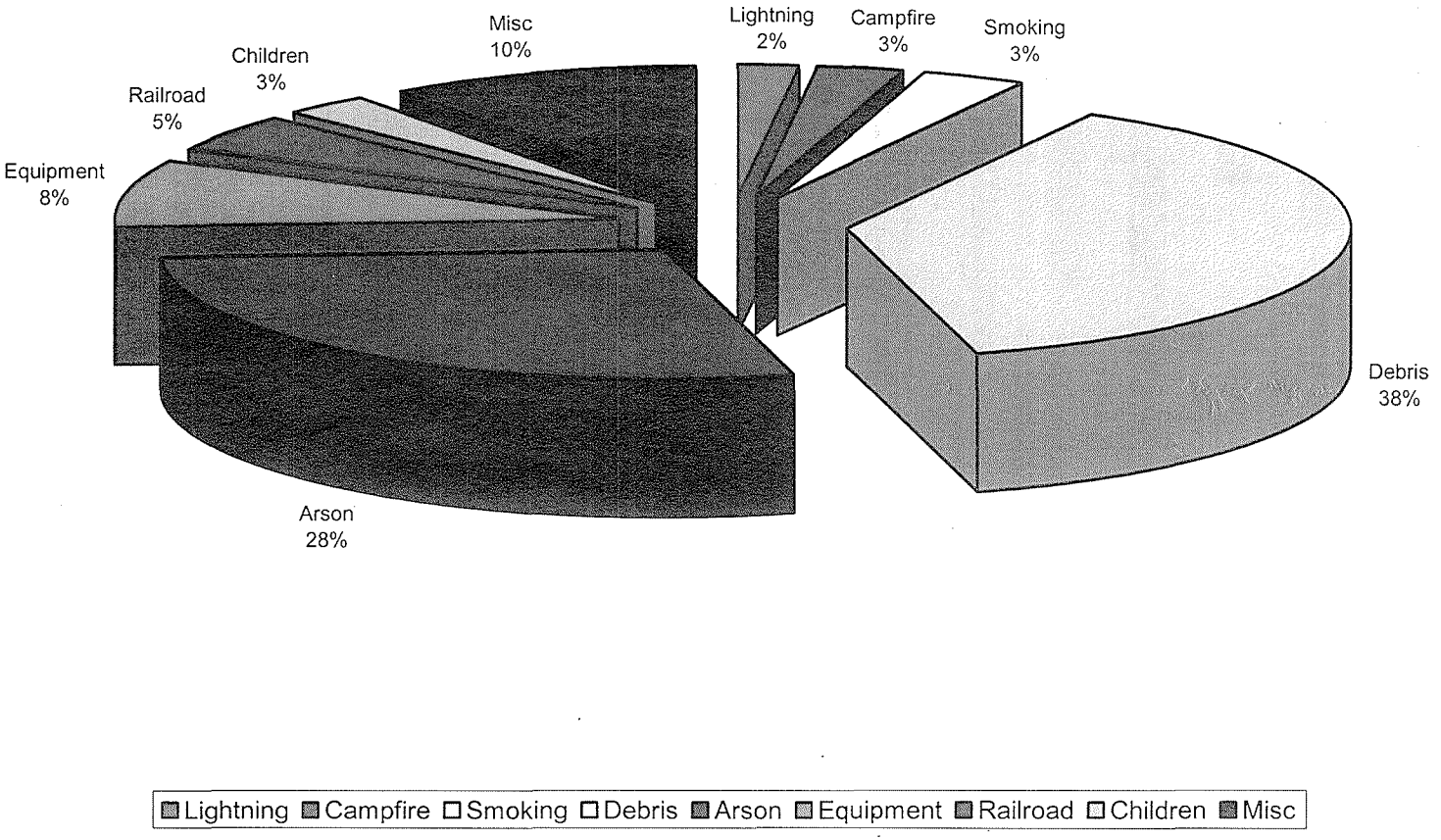
(g) Fire assistance to federal partners and other states that is reimbursed to the state

Attachment 5a



Attachment 5b

MN DNR Average Wildfires by Cause 1987 - 2006



Attachment 6

CL – 215 AIR TANKER OWNERSHIP and OPERATION COSTS
FY 2007

State Owned (2 aircraft):

Availability Cost: 232 days @ $5,586	=	$1,295,952
Availability Cost:* 168 days @ $5,782	=	$ 971,376
(200 days availability each)	Total Availability Cost =	$2,267,328

Flight time cost: 7.11hrs	@ $3,461 =	$ 24,608
Flight time cost:** 51.40 hrs	@ $3,500 =	$179,900
Flight time cost:** 150.09 hrs	@ $3,538 =	$531,018
Flight time cost:** 19.07 hrs	@ $3,565 =	$ 67,985
Flight time cost:** 90.55 hrs	@ $3,597 =	$325,708
Flight time cost:** .73 hrs	@ $3,695 =	$ 2,697
Total Flight Time:318.95 hrs		
	Total flight time cost =	$1,131,916

Reimbursed flight time via MNICS and Great Lakes partners =	($ 801,495)
Annual liability insurance policy	$ 32,250
Automatic Flight Following System upgrade	$ 13,683
Ownership Cost:	**$2,643,682**

Discussion:

Components of ownership costs include liability insurance and a contract to operate, maintain, and repair the aircraft. Contract costs comprise flight time and availability amounts paid to the contractor.

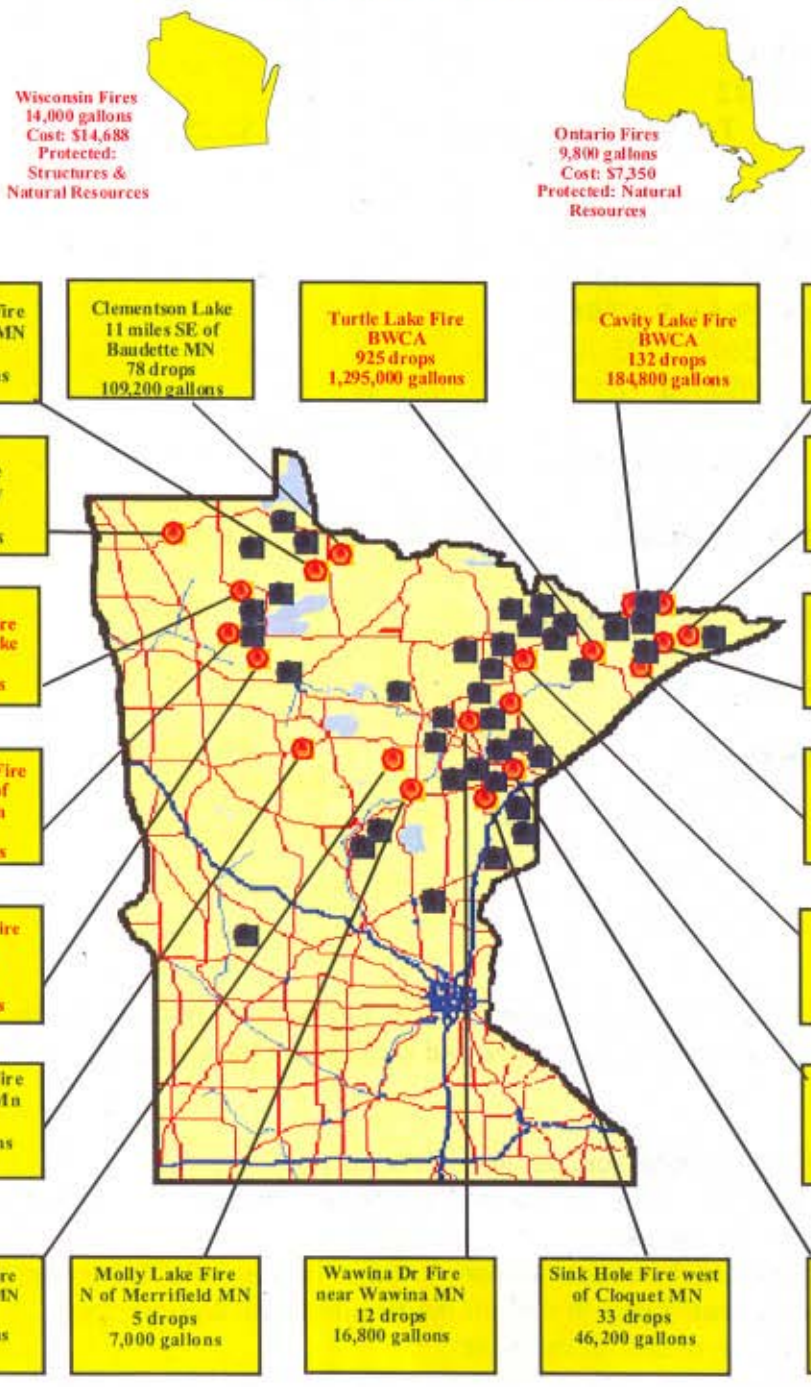
1) Liability Insurance - protects the state from the loss of the aircraft.
2) Flight time - is an hourly rate paid to the contractor that operates the aircraft for hours actually flown on firefighting missions.
3) Availability is a daily rate paid to the contractor that operates the aircraft. This covers the annual costs of having the aircraft "ready to fly" for the required 200 days per year (which is the anticipated season of need in this state).
4) In FY 2007 the aircraft were improved by adding automated flight tracking devices, which are a safety feature that is becoming necessary in current aviation practice.

***(contract rate change 4/14/2007)**
****(contract rate changes, both scheduled and fuel cost adjustments)**

Attachment 7

CL-215 Dispatches in FY 2007

Red text indicates reimbursable missions



Text boxes describe the 22 most significant of 60 fires responded to.