Department of Natural Resources

Annual Report on Emergency Firefighting Expenditures

Executive Summary

Expenditures of state general funds for wildfire protection and emergency response by the Department of Natural Resources totaled $24,370,555 in Fiscal Year (FY) 2012. This represented a demand upon the Emergency Firefighting – Open Appropriation of $17,303,580. The FY12 expenditure of more than $24 million dollars is the highest required over the last 10 years. This compares to historical expenditures under similar fire conditions in FY 2007 when nearly $24 million was spent on wildfire operations. FY11 expenditures ($15.5 million) represented the lowest demand in the last 10 years, but wildfire conditions during that time period were radically different.

In FY12 the state experienced an extended fire season with an additional 88 days in which the threat of wildfire was rated as high to extreme. Wildfires burned 62,280 acres in FY12. This is twice the annual average acreage burned over the last 20 years. The serious drought conditions also reintroduced peat fires onto the landscape and into response demands. Several large wildfires ignited and burned within peat bogs due to low water tables. Ignited by surface fires, peat soils will continue to burn underground like charcoal. They are extremely difficult to control and pose a continued threat to reignite surface fuels unless fully extinguished. FY12 wildfire conditions were best characterized by the "Boxing Day" fire that occurred on the day after Christmas and burned 795 acres north of Gully, MN. More than 200 acres of peat soils were ignited during this fire and required suppression actions to be extended several days.

Minnesota experienced two significant natural disaster responses in FY12 in addition to the heightened wildfire threat. The first was the extensive wind damage experienced in Pine County, including the St. Croix State Park on July 1-3, 2011. The second was the flash flooding experienced in northeast Minnesota in June, 2012. Emergency response and search and rescue operations were supported by mobilization of wildfire program personnel and equipment and funded by the Emergency Firefighting Appropriations.

Minnesota exchanged mutual aid support with multiple states, and federal and provincial partners during the FY12 wildfire season. These reciprocal working relationships continue to be a critical response resource and opportunity for reducing response costs. Despite the challenging FY12 wildfire season, opportunities became available to deploy the Minnesota DNR owned CL-215 fire-fighting aircraft in support of other partners. This helped to reduce the state's direct costs of owning and operating these aircraft. Pursuing lend/lease opportunities for cost containment continues to be a priority in the management of the CL-215 aircraft.

The severe drought conditions experienced in 2011-2012 have and continue to impact wildfire activity within Minnesota and emergency response demands.

File #2350

Department of Natural Resources
Annual Report on Emergency Fire Expenditures

FY 2012

Purpose

The purpose of this Report is to address the requirements of Minnesota Laws of 2011, 1st Special Session, Chapter 2, Article 1, Section 4, subd. 4, which states in part:

> "By January 15, of each year, the commissioner of natural resources shall submit a report to the chairs and ranking minority members of the house and senate committees and divisions having jurisdiction over environment and natural resources finance, identifying all firefighting costs incurred and reimbursements received in the prior fiscal year."

State Funding for Emergency Firefighting

Emergency Fire Fighting - Direct Appropriation: Laws of 2011 appropriated $7,145,000 the first year and $7,145,000 the second year for prevention, presuppression and suppression costs of emergency firefighting, and other costs incurred under Minnesota Statutes, section 88.12.

Emergency Fire Fighting – Open Appropriation: Laws of 2011 further state in part that "The amount necessary to pay for presuppression and suppression costs during the biennium is appropriated from the general fund."

Under the authority of the Open Appropriation during FY 2012, $17,303,580 was expended.

Attachment 1 *shows state fire fighting costs by object of expenditure.*

(1) Actual expenditure as of November 14, 2012 is $7,066,975

Reimbursements to the General Fund

Payments and Collections: The DNR receives payments for certain fire related activities. These include payments 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 collections from responsible parties for starting illegal or negligent fires, (Fire Cost Collections – authorized under M.S. §88.75). These receipts are deposited directly to the general fund and not used by the DNR.
In FY 2012, receipts came from the following sources:

- Cache Sales - $ 162,518
- Fire Cost Collections- $ 192,295

Protection Services: School Trust Lands: The Permanent School Trust Fund forest suspense account makes an annual transfer to the general fund for services provided by the DNR. The FY 2012 transfer was based on the 2011 Forest Certification Report. Certified fire protection costs transferred to the general fund in FY 2012 were:

- Fire Protection Services - $1,169,059.

Special Revenue Fund: This is not a use of the state emergency fire appropriations, direct or open, but is included due to perennial interest. The DNR provides firefighters and CL-215 air tankers to assist federal partners in-state, to mobilize out-of-state on national wildfire emergencies, and assist Compact partners. These costs are initially charged to the Emergency Fire Special Revenue Fund. **During FY 2012 the DNR expended $4,913,097 in reimbursable costs for national mobilizations and Compact support.** The federal government reimburses federal costs and Compact partners (adjoining states and provinces) reimburse their costs.
The Special Revenue Fund 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 adds a portion of the fixed costs associated with this equipment, which have already been paid out of the emergency firefighting appropriation. This excess recovery is periodically transferred to the General Fund**.** In FY 2012, excess recovery transferred to the general fund was:

- Excess Recovery - $ 0.*

Total Reimbursement to the general fund in FY 2012 from all sources:

- Cache Sales - $ 162,518
- Fire Cost Collections- $ 192,295
- School Trust, Fire Protection Services $1,169,059
- Special Revenue, Excess Recovery $ 0*

Total **$1,524,022**

*A transfer of $124,243 from FY11 activity should have been processed, however, the transfer did not occur before fiscal year close due to difficulty recovering reports from the recently implemented SWIFT accounting system.. This plus the excess from FY12 of $185,986, totaling $310,229, will be transferred to the general fund in FY13.

Fire Suppression and Presuppression

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.

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 17% of the direct and open fire appropriations in FY 2012. Historically, presuppression has composed 25% or less of the fire account.**

The DNR cost coding structure provides accountability for fire expenditures. Costs are tracked by type of activity and location to the administrative area level.

Attachment 2 *shows the percentages of fire expenditures allocated to prevention, presuppression and suppression activities.*

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

Planning and Readiness

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. 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 3. Major fires also can and do occur at this level**. FY 2012 was notable for having 88 more days of possible wildfire danger than in FY 2011, with 57 days being at Planning Levels 4 and 5.** In FY 2012 there were 318 days of possible wildfire in one or more areas of the state**. This is over two months above the average fire danger period that the DNR normally covers.**

Fire Occurrence and Causes

General Activity: In FY 2012, 1273 fires occurred - burning 62,280 acres. Historically, the state has experienced a 20-year average of about 1374 fires burning about, 31,249 acres.

# Fires By Cause				
	FY 2012	**%**	**20 Yr. Ave.**	**%**
Lightning	14	1	21	2
Campfires	69	5	48	3
Smoking	22	2	38	3
Debris Burning	406	32	511	37
Incendiary/Arson	385	30	414	30
Equipment Use	147	12	125	9
Railroad	28	2	62	5
Misc./Unknown	202	16	155	11
Total	1273		1374	

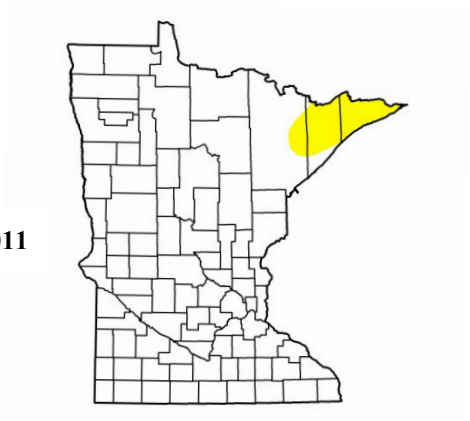
Overall, FY 2012 continued the trend toward a lower percentage of debris burning fires.

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

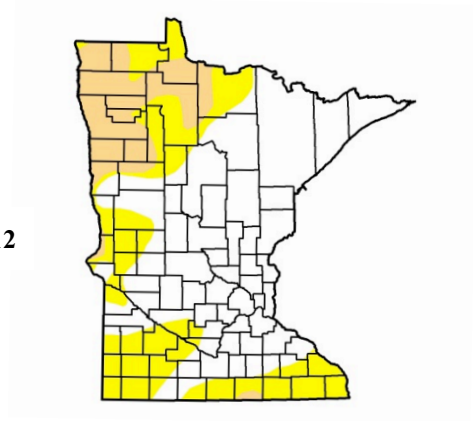
Fire Behavior and Climatology

Localized dry conditions in July 2011 became more expansive as fiscal year 2012 progressed. Abnormally dry conditions covered only about 5% of the state early in the period but expanded to almost 42% as the fiscal year came to a close. Following is a comparison of drought conditions in early July 2011 with that of early July 2012:

July 5, 2011



July 3, 2012



Week	Nothing	D0-D4	D1-D4	D2-D4	D3-D4	D4
July 5, 2011	95.08	4.92	0.00	0.00	0.00	0.00
July 3, 2012	58.16	41.84	14.86	0.00	0.00	0.00

In July 2011 precipitation was highly variable with 8 to 10 inches of rain commonly reported across central Minnesota while parts of the Arrowhead received less than 3 inches; 1 or 2 inches less than normal. Dry conditions ruled through August, especially over northeast Minnesota which again fell short by 1 to 3 inches for the month. Lightning ignitions began to occur over the Arrowhead in August; most significantly, the Pagami Creek fire was detected on August 18 in the BWCA not far from Lake One, east of Ely.

The dry pattern continued into the fall months, with less than 2 inches total rainfall recorded over many areas during the months of September and October. According to the State Climatology office, this was the driest September/October period in modern record for many locations. Fire activity increased dramatically in October as freezing temperatures killed the herbaceous vegetation and added to the effects of the dry weather. On October 5 the Juneberry 3 Fire started in Roseau County. Firefighters involved in initial attack observed fire spread rates up to 4 miles/hour at times, running through cured grass and decadent brush as well as through the tops of aspen with cured leaves in the crowns. Flames 30 to 50 feet high were common as the fire moved through the dry vegetation. Under these extreme conditions, control efforts using ground forces alone were impossible. Even aircraft dropping water and retardant were ineffective at the head of a fire burning with such intensity. But setting backfires in advance of the fire's head, firefighters were eventually able to stop the forward progression about one half mile south of the Manitoba border.

Overall, the winter of 2011-2012 continued drier than usual for most locations. Wildfires continued to occur through the winter with many igniting the dry peat soils. The Boxing Day fire on December 26 required extended suppression efforts in sub-freezing weather due to burning peat. By mid-March the state was snow free with the exception of the Arrowhead. Numerous fast moving grass and brush fires occurred as a result. In 2012, fire activity continued at a brisk pace through the first half of April but moderating weather reduced the April/May numbers to almost one-half of average.

June 2012 was a quiet month for wildfire, as is usually the case. In fact, response to flooding became the DNR's focus for parts of Minnesota. Two exceptional rain events, the first on June 14 in southeast Minnesota and another June 19 and 20 over northeast Minnesota caused widespread damage. However, dry June conditions over southwest, north central and northwest Minnesota set the stage for increasing wildfire occurrence later in the summer.

Cooperative Response Activity

A wet spring and early summer allowed MN DNR to send crews to other portions of the country and to Canada, where fire conditions were worse. Although fire activity in the western US was below average, DNR sent over 300 personnel to aid in wildland firefighting efforts throughout the summer, fall and spring. Also**,** 60 DNR firefighters were sent to aid Great Lakes Forest Fire Compact (GLFFC) partners in Ontario and Manitoba**,** along with aircraft and support personnel. **Cooperative response costs are reimbursed to the state by the partner agencies**.

The Minnesota Interagency Fire Center (MIFC) Dispatch office, which serves as the dispatch center for all state and federal agencies mobilized over 950 personnel (individuals and crews) to wildfire assignments within the state. These assignments were primarily in the northwest and northeast portions of MN.

All-Hazard Activity

Fiscal Year 2012 began with significant events in the east central portion of Minnesota. On **July 1, 2011 a severe thunderstorm in Pine County** produced violent, straight-line winds that caused severe damage in and around St Croix State Park. Over 161,000 acres of state and private lands were impacted, including 41,600 acres of state forest land and 31,600 acres of state park land. This was also the first day of a shutdown of state government agencies, including the MN DNR. DNR was allowed to call limited numbers of employees back to work in order to deal with the management of the emergency within the park, including assessment of damage to park facilities and historical buildings, opening of roads and trails, and emergency repairs to park infrastructure. This work continued throughout the 21 day government shutdown until early winter.
Over 69 miles of roads and trails were cleared of debris, and 75 buildings were assessed for damage. Repairs of these facilities are ongoing. Salvage timber sales were established within portions of the park and in nearby state and private forest land. Timber sale work continued throughout the winter and into the following spring. Over 262,000 thousand cords were salvaged on approximately 13,000 acres.

A second storm in the same general area on July 19th affected an additional 24,500 acres, almost all on State Forest land, adding to the need for the clearing roads and trails and performing salvage timber work.

The recovery efforts from both storms were managed by DNR Incident Management Team (IMT) personnel. Total impact from both storms was 185,500 acres within the perimeter of the affected areas. Of this, 97,150 acres or 52% were on state land. Salvage logging and final road and trail work continues as this report is written.

In mid-June of 2012 a series of **severe rain storms hit northeast Minnesota**. Some areas received over 10 inches of rain over a two day period. This **caused severe flooding in the NE, especially in the Duluth area.** MN DNR resources aided local emergency responders in the immediate response to the rising water. Several DNR facilities near Duluth and along the North Shore were also impacted by the ensuing flood. Of the DNR facilities impacted, possibly the hardest hit was Jay Cooke State Park. Access roads to the park were washed out, and flood waters destroyed several park facilities including a historic foot-bridge across the St. Louis River. Longer term impacts were felt along many rivers in NE MN including the Mississippi river, where high water near Aitkin and Brainerd forced roads to be closed for several weeks. DNR resources assisted many local cities and towns along the rivers supplying pumps and personnel to aid in removing flood water.

Wildfire Response Activity

The heavy rains in the spring of 2011 resulted in far lower than normal wildfire activity. However, drought through the late summer resulted in an active fall fire season that continued into the winter. An almost snowless winter also contributed to a much earlier than normal start to the 2012 spring fire season.

By September, 2011 much of northern MN was experiencing moderate to severe drought conditions. On September 12th the **Pagami Creek Fire** in the BWCAW blew out of containment and burned over 80,000 acres in one day. MN DNR air and ground resources took action on this fire in support of the U.S Forest Service, and assisted well into the month of October. Pagami Creek was the largest fire in Minnesota in over 80 years. This was a Federal fire, with all costs borne by the U.S. Forest Service.

On October 5 the **Juneberry 3 Fire** started in Roseau County. Extreme fire behavior and burning peat signaled that this would be a very difficult season unless relieved by heavy rain or snow, neither of which arrived.

Wildfire conditions continued to build throughout the fall in much of the state, especially in northwest MN. Very little or no snow cover was present statewide through Christmas of 2011. On the day after Christmas, the **Boxing Day Fire** burned 795 acres 3.5 miles north of Gully, MN. Over 200 acres of peat were ignited, which caused a prolonged suppression effort. The fact that peat was dry enough to burn in the middle of winter confirmed the severe drought conditions.

Sparse snow cover gave DNR firefighters a reprieve in January and some of February. However, fire activity was still higher than normal for these months. On average, DNR firefighters respond to a total of nine fires in the winter months. In early 2012 DNR responded to 35 wildfires.

By March, wildfire activity began to intensify. DNR responded to 262 fires in March, well over twice the average of 107. By late March into early April DNR offices imposed tight restrictions on open burning which, along with some timely rains, slowed wildfire activity in April - normally the busiest wildfire month of the year. One April fire of note was the **Jeep Fire** near Nimrod, which on April 8th burned 1,520 acres and destroyed one residence and 7 outbuildings. A Type 2 Incident Management Team was deployed to manage this fire. It was under containment the following day and mop-up was completed by April 12th.

In early May, fire danger was again on the rise. On May 17th a downed power line just south of Ely started a fire that threatened the city a short time later. The **Highway 1 Fire** was reported at 4:00 PM and grew quickly due to strong winds from the south. Although this fire was in a USFS protection area, DNR was involved with the initial attack and subsequent mop-up through our partnership under the MNICS (Minnesota Incident Command System) agreement. Suppression was further aided by two CL-215 waterscooping aircraft from Manitoba, Canada, which were obtained through the Great Lakes Forest Fire Compact. These aircraft along with 2 USFS helicopters stationed in Ely kept the fire from reaching the city. Quick and effective suppression

saved city of Ely. This was a Federal fire, with all costs borne by the U.S. Forest Service. By late May most of the state had received adequate rainfall to put an end to a long and fairly active fire season.

In Fiscal Year 2012 DNR responded to 1273 fires (somewhat less than the 20 year average). However, these fires burned over 62,000 acres, which is almost twice the annual average.

A Word About Peat Fire

A significant contributing factor to the cost of fire suppression in FY 2012 was the high cost of peat fire. Several large fires occurred over dry peat-bog soils. When ignited by a surface fire, these soils burn like charcoal. Peat fires can burn for years unless extinguished. Smoke from burning peat is a health hazard for nearby residents, a safety hazard when the smoke blows over a road, and a fire hazard when winds fan smoldering peat into flame – re-igniting surrounding grass and brush time and time again. The only way to suppress peat fire is to flood the area by hauling or pumping water to saturate dry soils then turning the soils with heavy tractors. Usually, peat fires are extinguished by heavy rains or deep snow cover. In the current drought situation, precipitation could not be relied upon.

CL - 215 Water Scooping Air Tankers

CL-215's are twin engine, amphibious water scooping air-tankers purposely built for the suppression of wildfires. Minnesota owns two CL-215's. These are managed by the DNR under a contract with an experienced air-tanker base owner/operator.

The 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 lakes are plentiful in 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.

Minnesota CL-215's have also assisted the states of Alaska, California, Michigan, Montana, North Carolina, Washington and Wisconsin, as well as the provinces of Manitoba and Ontario.

In FY 2012 these aircraft made 658 water drops, delivering approximately 921,200 gallons of water on 46 missions flown in Minnesota. During times of low fire danger in this state the air tankers are often sent to other states under cooperative agreements. During July of 2011, one aircraft spent 3 days in Alaska to complete a two week detail before being released. During that same period thru August, the other CL-215 spent 54 days in North Carolina, flew 76.82 hours on numerous fires. Fall of 2011, 13 days of availability was utilized by the Forest Service in support of the Pagami Creek Fire, aircraft flew 35.3 hours. Spring of 2012, both CL-215s spent 9 days supporting Michigan (DNR/USFS) on two different fires, flying 77 hours. Costs incurred as a result of assisting cooperating agencies are reimbursed to the state.

In the spring of 2012, the DNR utilized one Fire Boss, two Single engine air tankers and five aerial supervision contract airplanes in addition to the two CL-215 state-owned aircraft.

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

Attachments

Attachment 1 – State Fire Expenditures by Object Category for Emergency Fire Appropriations

Attachment 2 – Percentage of State Fire Costs in Prevention, Presuppression and Suppression

Attachment 3 - Guideline for Statewide Planning Level Determination

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

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

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

For further information, contact:
S. Olin Phillips, Forest Management and Protection Section Manager
DNR Division of Forestry
500 Lafayette Road, Box 44
St Paul, MN 55155
651-259-5281
sjs

Attachment 1

Emergency Fire Direct and Open Appropriations
State Expenditures by Category
FY 2012

Direct Appropriation		7,066,975
Open Appropriation		17,303,580
	Total	24,370,555
Salary Costs	10,830,778	
Operating Costs	13,539,777	
Total	24,370,555 *	

* Actual expenditure as of November 14, 2012.

FY 2012 State Fire Cost Summary

By Type of Activity and Appropriation

	Emergency Firefighting Direct	Emergency Firefighting Open	Total Open and Direct Combined
Fire Prevention*	5%	0%	**2%**
Fire Presuppression	24%	14%	**17%**
Fire Suppression	71%	86%	**81%**
Total	**100%**	**100%**	**100%**

*Fire prevention activities are supplemented by annual grants from the USDA Forest Service as follows:

- State Fire Assistance – approx. $550m (supports fire prevention and readiness).
- Volunteer Fire Assistance – approx. $300m (supports Rural Fire Department readiness).
- Cooperative Fire Assistance – approx.$300m (supports Firewise – Community Fire Protection activities)

ATTACHMENT 3 A GUIDELINE FOR STATEWIDE WILDFIRE PLANNING LEVEL DETERMININATION

	PLANNING LEVEL I	**PLANNING LEVEL II**	**PLANNING LEVEL III**	**PLANNING LEVEL IV**	**PLANNING LEVEL V**
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. I	One 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	Two or more Regions/Agencies at P.L. V
Eastern Area Planning Level	I	I-II	I-III	I-IV	I-IV
National Planning Level	I-II	I-III	I-IV	I-V	I-V
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 III in spring, preparedness will not drop below P.L. III 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.

12/14/2012

Attachment 4

Nominal Dollars By Source of Funds	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008 (g)	FY 2009 (h)	FY 2010	FY 2011	FY 2012	10 Year Average
Forestry General	$2,884,809	$0 (e)	$0	$0	$0	$0	$0	$0	$0	$0	$288,481 (f)
Emergency Fire-Direct	$5,983,070	$7,650,000	$7,136,680	$7,084,432	$7,319,596	$6,938,928	$7,388,440	$7,109,695	$6,928,432	$7,066,975	$7,060,625
Emergency Fire-Open	$9,084,514	$9,560,026	$6,934,419	$8,424,271	$16,518,294	$12,221,642	$11,695,791	$13,873,176	$8,558,008	$17,303,580	$11,417,372
Fire Activity Total	$17,952,393	$17,210,026	$14,071,099	$15,508,703	$23,837,890	$19,160,570	$19,084,231	$20,982,871	$15,486,440	$24,370,555	$18,766,478
Cost Recovery (a)	$2,380,108	$2,525,917	$2,538,675	$2,090,598	$1,893,112	$3,636,908	$3,058,986	$3,007,734	$2,610,699	$1,523,872	$2,526,661
Net Cost to General Fund	$15,572,285	$14,684,109	$11,532,424	$13,418,105	$21,944,778	$15,523,662	$16,025,245	$17,975,137	$12,875,741	$22,846,683	$16,239,817
Reimbursable Mobilization Fire Costs (i)	$2,962,300	$4,440,968	$3,384,226	$3,997,899	$4,317,572	$2,442,486	$2,014,520	$2,125,711	$2,204,635	$4,913,097	$3,280,341

(a)Fire Cache Sales, Fire Cost Collections, Permanent School Trust Fund - protection services reimbursement, excess recovery from Special Revenue Fund.

Beginning in FY 02, Cost Recoveries were deposited to the general fund. In FY 10, School Trust Fund protection services were included retroactive to FY 2001.

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

(f) Fire costs are no longer paid from the Forestry division's general appropriation. In FY 03, just prior to this change, the 10 year average was $2,266,992

(g) $600m direct fire support that had been funded through the forest management account, moved to the emergency fire appropriation in FY 08

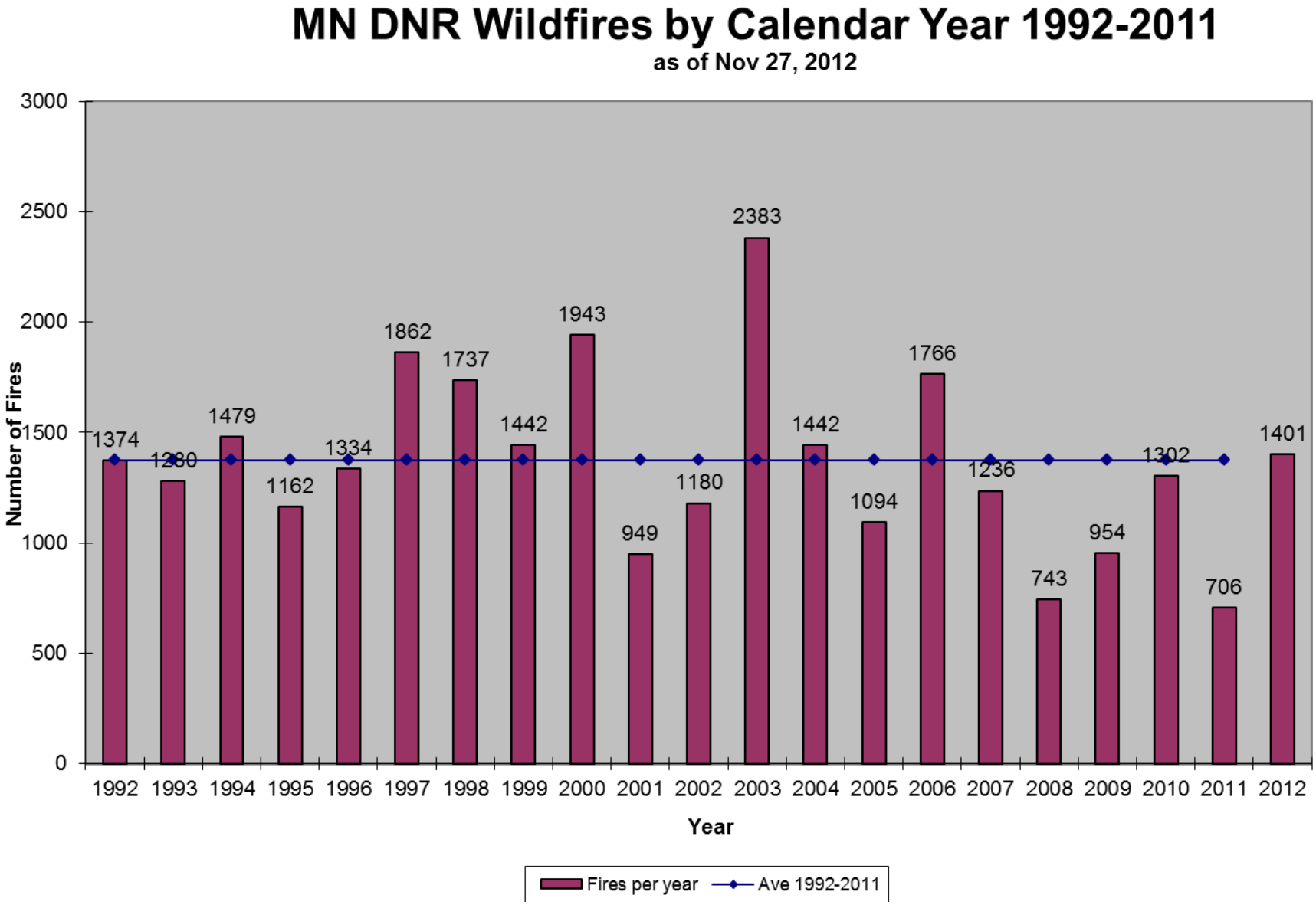
(h) $600m leave time (vacation, sick leave) attributable to fire activity that had been funded through the forest management account, moved to the emergency fire appropriation in FY 09.

(i) Fire assistance to federal partners and other states that is reimbursed to the state. (This is not a state expenditure)

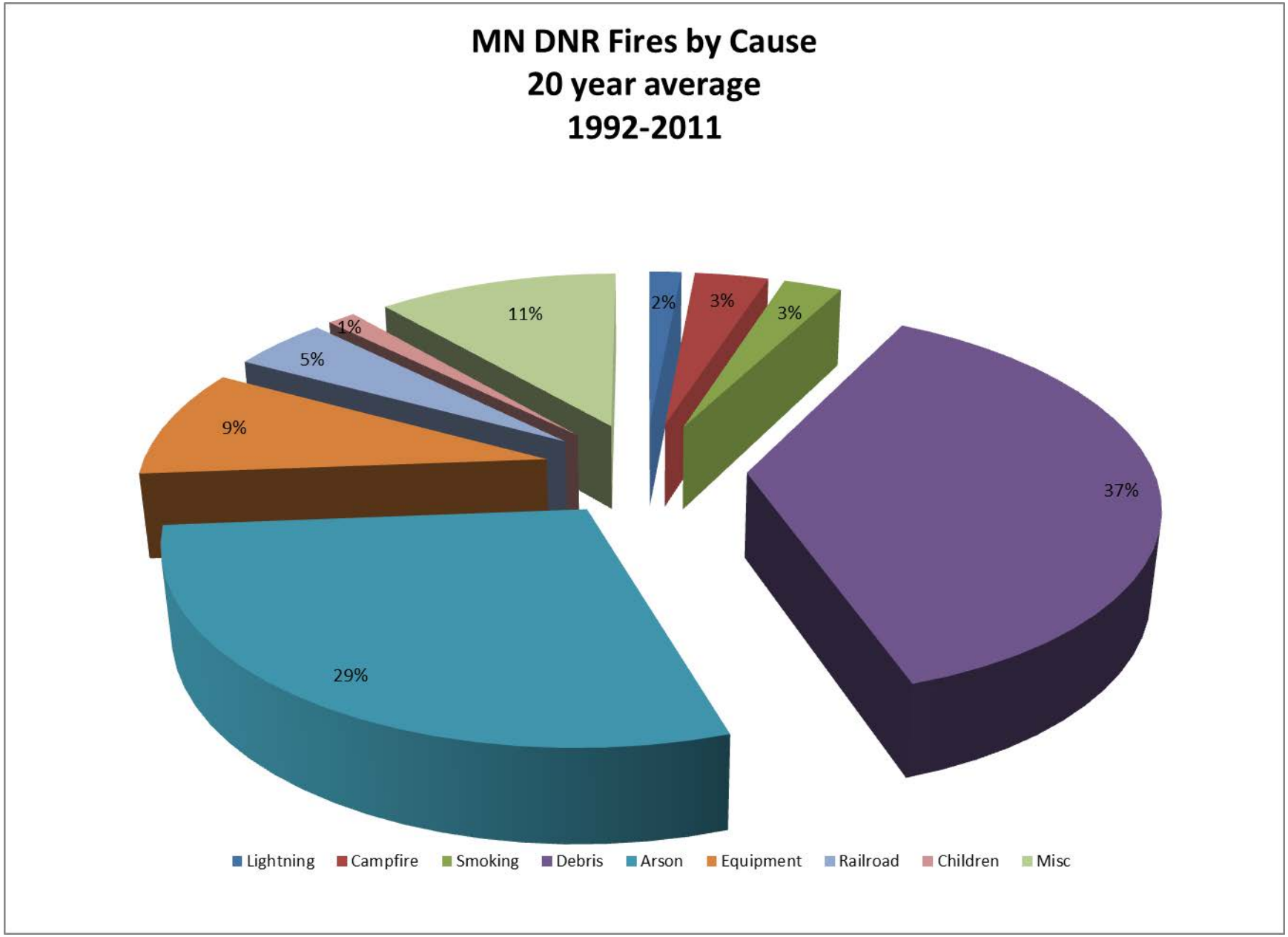
(a) Cost Recovery Breakout: 1,523,872

Fire Cost Collections -	$ 192,295
Fire Cache Sales -	$ 162,518
School Trust Fund -	$ 1,169,059
Excess Recovery, Sp. Rev.	$ 0

Attachment 5a



5b


MN DNR Fires by Cause
20 year average
1992-2011
2%
3%
3%
37%
29%
5%
9%
1%
11%
Lightning
Campfire
Smoking
Debris
Arson
Equipment
Railroad
Children
Misc

Attachment 6

CL – 215 AIR TANKER OPERATION COSTS
FY 2012

State Owned (2 aircraft):

Availability Cost: 400 days @ $6,208 (200 days per aircraft)	=	$2,483,200	
Total availability cost:			**= $2,483,200**
State flight time: 99.27 hrs @ $4,230.00	=	$419,912.10	
State flight time: 16.5 hrs @ $4,255.00*	=	$ 70,207.50	
Total state flight time for 115.77 hrs / cost:			**= $ 490,120**
Annual liability insurance policy			**= $ 32,250**
FY 2012 State Costs:			**= $3,005,570**
Availability savings from cooperative placements:			= -$ **607,656**
State Operation Costs (net):			**= $2,397,914**

*(Flight rate change due to fuel price adjustments)

Reimbursements for daily availability: N Carolina (60.5 days x1 aircraft)	= $375,584
Reimbursements for daily availability: Michigan (9 days x 2 aircraft)	= $129,744
Reimbursements for daily availability: USFS (13 days x 1 aircraft)	= $ 80,704
Reimbursements for daily availability: Alaska (3 days x 1 aircraft)	= $ 21,624
Total availability savings:	= $607,656

Additional flight time paid by others -	
Reimbursements via MNICS/GLFFC partners flight time (193.49 hrs)	= $ 821,720
Reimbursements for flight time to/from Alaska (14.61 hrs)	= $ 61,831
Reimbursements for flight time in North Carolina (91.57 hrs)	= $ 383,901
Total flight time paid by others:	= $1,267,452

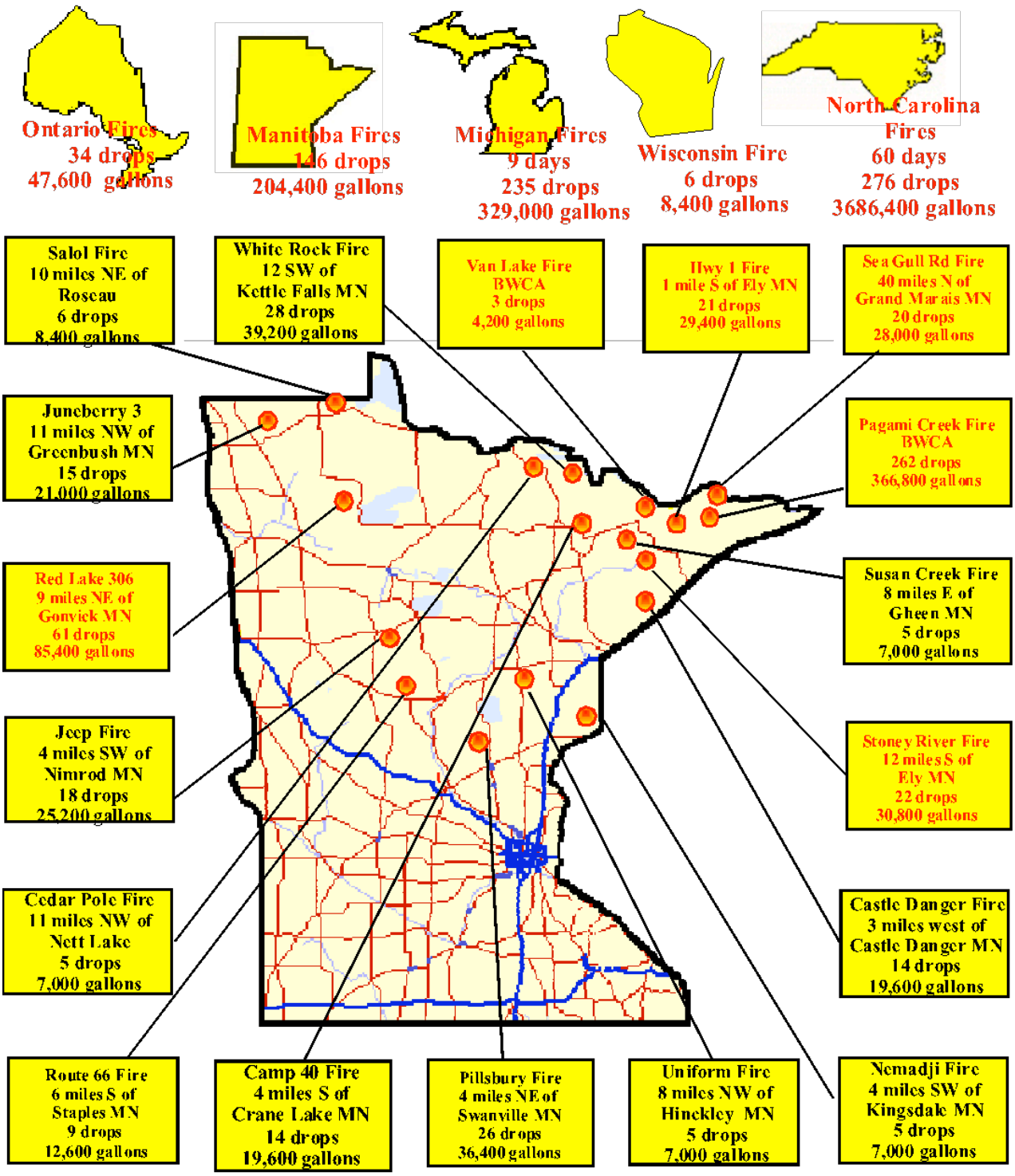
Discussion:

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 to perform required maintenance on 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).

FY 2012
CL-215 Dispatches

Red text indicates reimbursable missions



DATE: 1/10/13

LEGISLATIVE REPORT – Cost of Preparation

NAME OF LEGISLATIVE REPORT – Annual Fire Report
Based on: _____

Minnesota Statute Reference: MN Laws of 2011, Special Session 1, Chapter 2, Art.1, Sec. 4, Subd.4

Prepared by: _Steve Simmer_, Department of Natural Resources

Phone: _(651) 259-5288_____

E-Mail: _steve.simmer@state.mn.us_____

Description of Cost	Further explanation if necessary	Amount
Staff Time	70 hours @ $51/hr, incl fringe	$3,570
Duplication Cost (includes paper)	nominal	
Other:		
	TOTAL TO PREPARE REPORT (*Note: Right click on amount cell and choose update to complete*)	$3,570