

## Minnesota Department of Natural Resources

500 Lafayette Road · Saint Paul, Minnesota · 55155-4037

Office of the Commissioner

651-259-5555



January 27, 2015

The Honorable Richard Cohen, Chair  
Senate Finance Committee  
301 Capitol Building  
75 Rev. Dr. Martin Luther King Jr. Blvd.  
St. Paul, MN 55155-1606

The Honorable David Tomassoni, Chair  
Senate Environment, Economic Development &  
Agriculture Budget Division  
G-9 Capitol Building  
75 Rev. Dr. Martin Luther King Jr. Blvd.  
St. Paul, MN 55155-1606

The Honorable Denny McNamara, Chair  
House Environment and Natural Resources  
Policy and Finance Committee  
365 State Office Building  
100 Rev. Dr. Martin Luther King Jr. Blvd.  
St. Paul MN 55155-1206

The Honorable Jim Knoblach, Chair  
House Ways and Means Committee  
453 State Office Building  
100 Rev. Dr. Martin Luther King Jr. Blvd.  
St. Paul, MN 55155-1206

The Honorable Michelle Fischbach  
Ranking Minority Member  
Senate Finance Committee  
15 State Office Building  
100 Rev. Dr. Martin Luther King Jr. Blvd.  
St. Paul, MN 55155-1206

The Honorable Bill Ingebrigtsen  
Ranking Minority Member  
Senate Environment, Economic Development  
& Agriculture Budget Division  
143 State Office Building  
100 Rev. Dr. Martin Luther King Jr. Blvd.  
St. Paul, MN 55155-1206

The Honorable Rick Hansen, DFL Lead  
House Environment and Natural Resources Policy  
and Finance Committee  
247 State Office Building  
100 Rev. Dr. Martin Luther King Jr. Blvd.  
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The Honorable Lyndon Carlson, Sr., DFL Lead  
House Ways and Means Committee  
283 State Office Building  
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St. Paul, MN 55155-1206

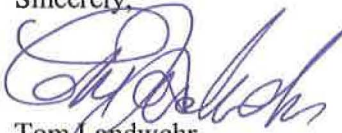
Dear Senators and Representatives:

Attached is the "Annual Report on Emergency Fire Account Expenditures" directed by Minnesota Laws 2011, First Special Session chapter 2, article 1, section 4, subdivision 4. This report provides information that helps the state's administration and Legislature review and evaluate expenditures from the Emergency Fire Account Direct and Open appropriations.

The report describes firefighting expenditures and provides information related to the fire danger and fire occurrences that made these expenditures necessary during Fiscal Year 2014.

Please contact Ed Potter, manager, Business and Administrative Services Section in the Division of Forestry at 651-259-5254 or Emily Engel, the department's budget director at 651-259-5548 with any questions or concerns regarding this report.

Sincerely,



Tom Landwehr  
Commissioner

c: Dan Mueller, Senate Fiscal Analyst  
Brad Hagemeyer, House Fiscal Analyst  
Michelle Mitchell, Minnesota Management and Budget  
Legislative Reference Library (two hard copies, one electronic copy)  
DNR Library

Attachment

# Minnesota Department of Natural Resources Fiscal Year 2014

## Annual Report on Emergency Firefighting Expenditures



*County Road 13 Wildfire in Koochiching County – May 2014*



# **Department of Natural Resources Fiscal Year 2014 Report on Emergency Firefighting Expenditures**

## **Executive Summary**

Expenditures of state general funds for wildfire protection and emergency response by the Department of Natural Resources (DNR) totaled \$21,927,704 in Fiscal Year 2014 (FY14). This represented a demand on the Emergency Firefighting Open Appropriation of \$15,008,912.

In FY14, the state experienced an average fire season, with 103 days at planning levels III and IV. The severe drought conditions experienced in 2012 and 2013 lessened and the increased moisture helped to moderate fire potential throughout most of Minnesota. The 500 wildfires that occurred in FY14 burned 2,983 acres, well below the 20-year average of about 32,051 acres burned.

Although favorable weather conditions were a major factor in the lower number of wildfires in FY14, the department also implemented an extensive Wildfire Prevention Campaign. Primarily funded through a grant from the United States Forest Service, this campaign focused on expanding public awareness of the damages and costs associated with wildfires. In addition to the campaign, the DNR also implemented some key strategies to reduce the number of arson fires, including increasing the presence of firefighting resources in problem areas and improving detection of fire starts via aerial detection and the newly installed ForestWatch system. The DNR's outreach efforts, coupled with communities' own experiences with wildfires, have increased public awareness of, and sentiment against, arson and careless burning. It should be noted that in areas where high profile arson investigations occurred, reduced numbers of fires followed.

Minnesota exchanged mutual aid support with multiple states and federal and provincial partners during the FY14 wildfire season. These reciprocal working relationships continue to be a critical response resource and opportunity for reducing response costs. Despite the below-average number of wildfires in Minnesota in FY14, there were no opportunities to deploy the Minnesota DNR-owned CL-215 firefighting aircraft with other partners. In the past, deployments outside of Minnesota helped reduce the state's direct costs of owning and operating these aircraft. Minnesota's CL-215s have radial engine technology from the 1950s. Recent changes in national policy related to this technology have made future out-of-state deployments of Minnesota's CL-215s unlikely. (Note: After the close of FY14, the DNR decided to sell its CL-215s and lease more modern aircraft to meet its firefighting needs.)

## Department of Natural Resources Annual Report on Emergency Fire Expenditures

### Fiscal Year 2014

#### Purpose

The purpose of this report is to address the requirements of Minnesota Laws 2011, First Special Session chapter 2, article 1, section 4, subdivision 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 Firefighting Direct Appropriation: Laws of 2013 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 Firefighting Open Appropriation: Laws of 2013 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 Fiscal Year 2014 (FY14), \$15,183,182 was expended.

*Attachment 1 shows state firefighting expenditures broken down between salary and operating costs.*

#### **Reimbursements to the General Fund**

Payments and Collections: The Department of Natural Resources (DNR) receives payments for certain fire-related activities. These include payments for supplies sold to local government units (e.g., fire departments) from the Interagency Fire Cache (Cache Sales authorized under *Minnesota Statutes*, section 88.065) and collections from responsible parties for starting illegal or negligent fires (Fire Cost Collections authorized under *Minnesota Statutes*, section 88.75). These receipts are deposited directly to the General Fund and not used by the DNR.

In FY14, receipts came from the following sources:

- Cache Sales \$188,377
- Fire Cost Collections \$165,162

Special Revenue Fund: This is not a use of the state emergency fire appropriations, direct or open, but is included in this report due to perennial interest. The DNR provides firefighters and aircraft to assist federal partners instate, mobilizes firefighters for out-of-state assistance with national wildfire emergencies, and helps Great Lakes Forest Fire Compact partners. These costs

are initially charged to the Emergency Fire Special Revenue Fund. **During FY14 the DNR expended \$1,806,396 reimbursable costs for national mobilizations and Compact support.** The federal government reimburses federal costs and Compact partners (adjoining states and Canadian provinces) reimburse their costs as well.

The Special Revenue Fund may be reimbursed above actual costs from out-of-state deployments. This occurs primarily from use of the CL-215 air tankers, but also from other equipment such as wildland fire engines. It occurs because the state includes a portion of the fixed costs associated with this equipment, which have already been paid out of the emergency firefighting appropriation. This excess recovery revenue is periodically transferred to the General Fund. In FY14, excess recovery revenue transferred to the General Fund was \$249,083.

**Total Reimbursement to the General Fund in FY14 From All Sources\***

• Cache Sales	\$ 188,377
• Fire Cost Collections	\$ 165,162
• Special Revenue, Excess Recovery	<u>\$ 249,083</u>
<b>Total</b>	<b>\$ 602,622</b>

\*Note: Beginning in FY13, certified fire protection costs for School Trust lands are no longer transferred to the General Fund. This change reflects a significant decrease in general-fund reimbursements shown for FY14 when compared to previous years.

**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 cover direct actions to suppress wildfires as well as activities that enable the DNR to suppress wildfires during times when fires are likely to occur, including the prepositioning of resources. As fire danger and fire occurrence increase, the resources that must be positioned for immediate response also increase. **Presuppression costs amounted to 28.5 percent of the direct and open fire appropriations in FY14.**

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 3 shows the 10-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 4 shows the criteria and planning levels currently in use.*

These planning level guidelines are reviewed and implemented at bi-weekly conference calls with fire managers from all agencies cooperating in Minnesota wildfire suppression efforts. The planning level, combined with daily fire danger indices, establishes the preparedness level needed to effectively respond to wildfires. Historically, about 80 percent of the state's wildfires occur during Planning Level III. Major fires also can and do occur at this level. FY14 had 236 days of possible wildfire danger, which is above average. Of the possible fire days, 103 were at Planning Level III or IV. The state did not reach Planning Level V in FY14.

On days having conditions conducive to potential wildfires, the DNR must be ready to respond to fire starts. This preparedness might include moving equipment (including aircraft) and personnel from one location in the state to another. Likewise, staffing levels may be increased to make sure they are commensurate with wildfire potential. The expense of this preparedness is necessary to ensure the department can respond quickly and effectively to fire starts so fires are kept small and lives and property are protected.

### **Fire Occurrence and Causes**

#### **General Activity**

In FY14, 500 fires occurred that burned 2,983 acres. Historically, the state has experienced a 20-year average of 1,291 fires burning about 32,051 acres annually.

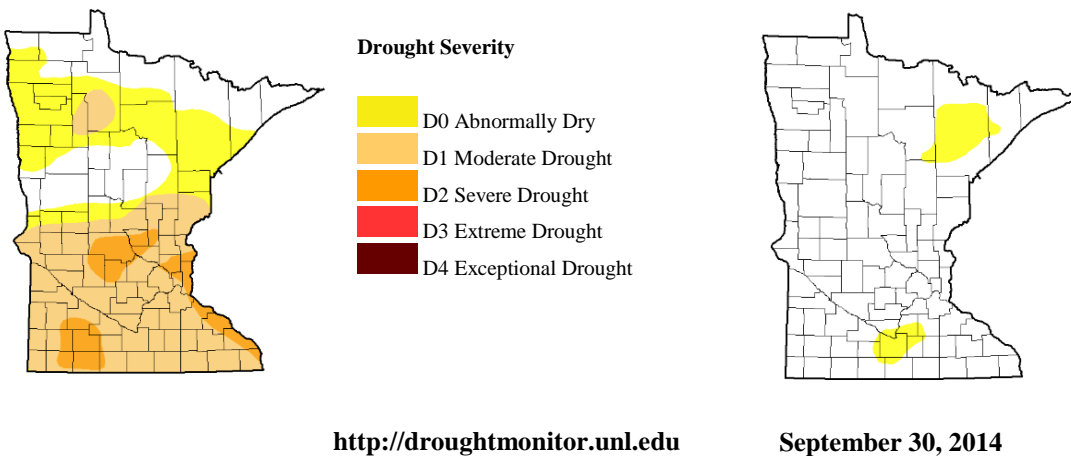
Number of Fires by Cause				
	FY 2014	%	20-Year Average	%
Debris Burning	190	38%	465	36%
Incendiary/Arson	103	21%	380	29%
Equipment Use	62	12%	128	10%
Campfires	29	5%	50	4%
Railroad	10	2%	56	4%
Smoking	10	2%	35	3%
Lightning	9	2%	21	2%
Miscellaneous/Unknown	87	18%	156	12%
Total	500	100%	1,291	100%

FY14 was notable for the low fire occurrence and the almost 9 percent drop in arson fires.

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

## Fire Behavior and Climatology

Following is a comparison of drought conditions in early October 2013 with that of late September 2014, taken from the national Drought Mitigation Center:

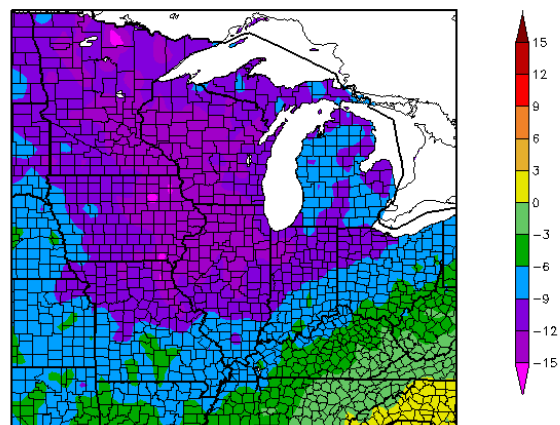


Moderate to severe drought encompassed almost 50 percent of the state during the fall of 2013, with the remainder of the state experiencing abnormally dry conditions. The number of wildfires in the fall of 2013 was at or below normal levels. However, the statewide drought conditions during this same time period necessitated extended preparedness levels.

The winter of 2014 was extremely cold and continued the trend that had occurred in 2013. While the world temperature average increased, Minnesota had one of the coldest and longest winters on record.

With the extreme cold, also came increased precipitation in the form of snow. Above average snowfall was recorded statewide, with Rochester, Minnesota, having the smallest increase at 17 percent. Areas from the Twin Cities to the Arrowhead Region experienced increases of 40 percent to almost 60 percent. The St. Cloud area had over 75 inches of snow, which was a 59 percent increase above the average. The cold weather continued into spring, with temperatures gradually returning to normal in late May.

Departure from Normal Temperature (F)  
2/1/2014 – 2/28/2014



Generated 3/11/2014 at HPRCC using provisional data.

Regional Climate Centers

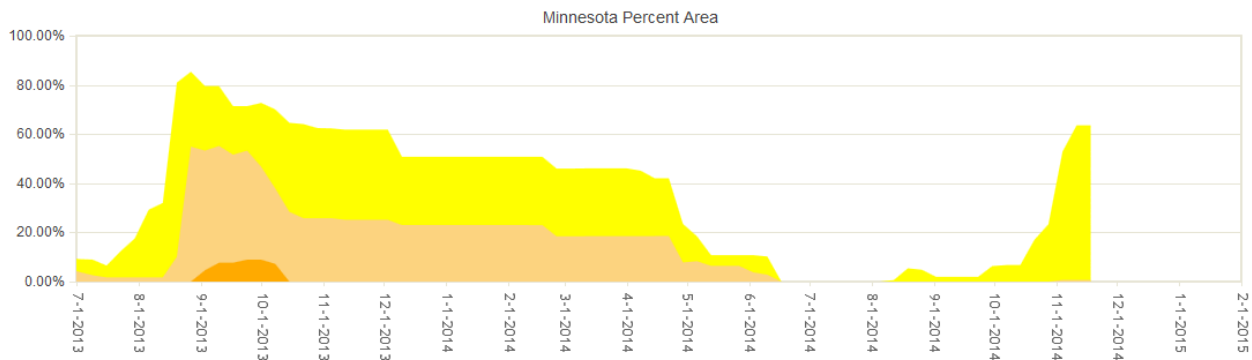
Fire danger and spread potential increased as is common in the spring. Red Flag conditions were reached for two days in April. The fuels continued to dry and a normal spring season started to develop. Overall, the spring was considered wet, especially in June. Rainfall records for the state broke not only the monthly 100-year record, but also the record for the wettest month ever (June) in the state of Minnesota.

Even with the wetter than normal spring, on May 28, 2014, the Nary Road Fire ignited just



outside of Cass Lake, Minnesota. Weather conditions at the time of ignition were as follows: air temperature of 80 degrees, relative humidity of 40 percent, and wind speed at 6 mph. The fire burned on the surface and ignited the crowns of pole-sized pine. The cause of the fire was quickly determined to be arson and local law enforcement had a suspect in custody before the fire was controlled. The fire burned 70 acres of industry-owned pine. More than 50 personnel were assigned to the fire including four fire suppression aircraft, four dozers, and several other tracked vehicles and engines. Eight rural fire departments provided mutual aid on the incident. Eight other fires occurred that day with four of them starting in the same hour, stretching resources statewide.

The fires that occurred through June tended to be easily controlled. The exceptionally wet June kept the landscape green.



**Cooperative Fire Response**

During periods of low fire danger in state, the DNR sends crews to other portions of the country and Canada upon request under mutual aid agreements. Assistance is reciprocated when fire conditions in Minnesota are elevated. Out-of-state firefighting assignments also provide valuable training for state personnel. The DNR sent 89 personnel to aid in wildland firefighting efforts throughout the summer, fall, and spring. They primarily worked on fires in Arkansas, Arizona, California, Colorado, Idaho, Illinois, Indiana, Michigan, Missouri, Montana, New Mexico, Nevada, Oregon, South Dakota, Virginia, and Wisconsin.

**Note: Out-of-state firefighting assistance to other jurisdictions is reimbursed to Minnesota by the receiving partner agencies.**



**Interagency Crew**

### **All-Hazard Response**

The DNR and Minnesota Interagency Fire Center (MIFC) assisted with flooding emergency response in FY14. During the critical flooding period, they participated on daily conference calls with the State Emergency Operations Center (SEOC). MIFC received calls for specialty items such as sandbags, sand bagging machines, and cots. The SEOC also referred county EOCs to MIFC for resource needs.

On June 20, 2014, six pumps and pump kits were ordered and sent to International Falls. On June 21, the SEOC ordered a soil engineer. Since the DNR doesn't have one, the request was sent to the Department of Transportation. Additionally, the DNR received a request from Sibley County for a hydrologist. This request was filled by DNR Central Region staff. The last request of that day was from the DNR's Southwest Region asking for assistance with Incident Management intelligence in New Ulm. The order was filled with a Situation Unit Leader from the DNR's Northwest Region and a Situation Unit Leader trainee from Sandstone. Both resources were released by June 25. On June 22, the SEOC requested help in expediting the process for obtaining permits to build a levee in the city of Warroad. The DNR's Northwest Region was contacted and permits issued within two hours. In addition, the DNR provided a list of fire departments that had received high volume pumps through the Federal Excess Property program to the SEOC. This list gave local EOCs the ability to contact local fire departments directly for use of these pumps.

Other activities included dispatching a Conservation Corps Minnesota (CCM) crew from Tower to assist with sandbagging in the Cook and International Falls areas. In addition, many local DNR offices assisted with flooding problems within their local jurisdictions.

### **Instate Wildfire Response**

In FY14 the DNR responded to 500 fires. These fires burned approximately 2,983 acres, which is considerably below the 20-year average of 32,051 acres. FY14 was notable for the low fire occurrence and the almost 9 percent drop in arson fires.

Although favorable weather conditions were a major factor in the lower number of wildfires in FY14, the department also implemented an extensive Wildfire Prevention Campaign that focused on expanding public awareness of the damages and costs associated with wildfires. The campaign was developed through the Great Lakes Forest Fire Compact and funded primarily with a grant from the United States Forest Service. In addition to the campaign, the DNR also implemented some key strategies to reduce the number of arson fires, including increasing the presence of firefighting resources in problem areas and improving detection of fire starts via aerial detection and the newly installed ForestWatch system. The DNR's outreach efforts, coupled with communities' own experiences with wildfires, have increased public awareness of, and sentiment against, arson and careless burning. It should be noted that in areas where high profile arson investigations occurred, reduced numbers of fires followed independent of the outcome of the arson investigation.

The DNR responded to, and took the lead on, many wildfires throughout the state. While the number of fires remained low, wildfire preparedness helped keep the fires small and allowed most fires to be controlled within a 24-hour period.

Although the DNR has increased its efforts to reduce the number of fires caused by arson, there are still those individuals who light fires to destroy timber and property. On May 24, a suspected arson start (County Road 42 Fire) burned 37 acres and required significant efforts to control.

Likewise, on May 28, the Nary Road Fire burned 76 acres and required the evacuation of 10 homes before it was controlled.



**Nary Road Fire, May 28, 2014**

### **CL-215 Water Scooping Air Tankers**

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

Each of the state-owned CL-215 water-scooping air tankers is capable of dropping 1,400 gallons of water per pass over a wildland fire. “Scoopable” lakes are plentiful in Minnesota, making these aircraft very effective. 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 the past, Minnesota CL-215s have also assisted the states of Alaska, California, Idaho, Michigan, Montana, North Carolina, Washington, and Wisconsin, as well as the provinces of Manitoba and Ontario.

In FY14, the two CL-215s made 150 water drops, delivering approximately 206,800 gallons of water on eight missions flown in Minnesota. These aircraft are also sent locally to other states through cooperative agreements. While based in Minnesota, the CL-215s are often used to respond to federal agency (e.g., United States Forest Service) requests in both Minnesota and Wisconsin. In FY14, the aircraft delivered 66 drops totaling 127,600 gallons of water in support of these requests for assistance. Costs incurred as a result of assisting cooperating agencies are reimbursed to the state.

Despite the below-average number of wildfires in Minnesota in FY14, there were no opportunities to preposition the DNR-owned CL-215 firefighting aircraft outside of Minnesota to support other regions’ wildfire efforts. In the past, deployments outside of Minnesota helped reduce the state’s direct costs of owning and operating these aircraft. Minnesota’s CL-215s have radial engine technology from the 1950s. Recent changes in national policy related to this

technology have made future out-of-state deployments of Minnesota's CL-215s unlikely.

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

### **Other Firefighting Aircraft**

Several other types of aircraft are used for tactical firefighting support. In FY14, the DNR used aircraft under seasonal contracts or on a call-when-needed basis. These aircraft included a "Fire Boss" single engine, water-scooping float plane; two Canadian CL-415s; one Canadian aerial supervision aircraft; and six Minnesota-based aerial supervision airplanes. The DNR also procures seasonal contracts for eight helicopters with water buckets and 15 small fixed-wing airplanes used for fire detection and tactical intelligence.

## **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** – Ten-Year Expenditure History of State Firefighting Costs

**Attachment 4** - Guideline for Statewide Planning Level Determination

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

**Attachment 6** - Summary of Costs and Activity for CL-215 Air Tankers

For further information, contact:  
Ron Stoffel, Forest Protection Section Manager  
DNR Division of Forestry  
500 Lafayette Road  
St Paul, MN 55155-4044  
651-259-5282

**Attachment 1**

**Emergency Fire Direct and Open Appropriations  
State Expenditures by Category  
FY 2014**

Direct Appropriation *	\$6,918,792
Open Appropriation	\$15,008,912
Total	\$21,927,704
Salary Costs	\$9,952,960
Operating Costs	\$11,974,744
Total**	\$21,927,704

\* This does not include \$102,465 rolled forward to FY 2015.

\*\* Actual expenditures as of November 12, 2014.

FY 2014 State Fire Cost Summary						
By Type of Activity and Appropriation						
	<b>Emergency Firefighting Direct</b>	<b>Emergency Firefighting Open</b>	<b>Total Open and Direct Combined</b>			
<b>Fire Prevention</b>	6%	0%	2%			
<b>Fire Presuppression</b>	47%	21%	28%			
<b>Fire Suppression</b>	47%	79%	70%			
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>			

**Fire Prevention** activities include public information and education, fire permitting, and operation of the Township Fire Warden system, plus advice and assistance to communities and homeowners to inform them about protecting their property in the event of a wildfire in their community (Firewise).

State Fire Prevention activities are supplemented by annual grants from the USDA Forest Service as follows:

- o State Fire Assistance – approximately \$550,000 (supports fire prevention and readiness).
- o Volunteer Fire Assistance – approximately \$300,000 (supports Rural Fire Department readiness).
- o Cooperative Fire Assistance – approximately \$300,000 (supports Firewise – Community Fire Protection activities).

**Fire Presuppression** includes 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.

**Fire Suppression** includes direct action to suppress wildfires and other activities that directly support and enable the DNR to suppress wildfires during times when fires are likely to occur, including the prepositioning of firefighting resources.

### Attachment 3: Ten-Year Expenditure History – State Firefighting Costs

1/20/2014													
Nominal Dollars													
By Source of Funds	FY 2005	FY 2006	FY 2007	FY 2008	(b)	FY 2009	(c)	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	10 Year Average
Emergency Fire-Direct	\$7,136,680	\$7,084,432	\$7,319,596	\$6,938,928		\$7,388,440		\$7,109,695	\$6,928,432	\$7,066,975	\$7,184,311	\$6,918,792	\$7,107,628
Emergency Fire-Open	\$6,934,419	\$8,424,271	\$16,518,294	\$12,221,642		\$11,695,791		\$13,873,176	\$8,558,008	\$17,303,580	\$23,373,476	\$15,008,912	\$13,391,157
<b>Fire Activity Total</b>	<b>\$14,071,099</b>	<b>\$15,508,703</b>	<b>\$23,837,890</b>	<b>\$19,160,570</b>		<b>\$19,084,231</b>		<b>\$20,982,871</b>	<b>\$15,486,440</b>	<b>\$24,370,555</b>	<b>\$30,557,787</b>	<b>\$21,927,704</b>	<b>\$20,498,785</b>
Cost Recovery	(a) \$2,538,675	\$2,090,598	\$1,893,112	\$3,636,908		\$3,058,986		\$3,007,734	\$2,610,699	\$1,523,872	\$3,426,210	\$602,622 €	\$2,438,942
<b>Net Cost to General Fund</b>	<b>\$11,532,424</b>	<b>\$13,418,105</b>	<b>\$21,944,778</b>	<b>\$15,523,662</b>		<b>\$16,025,245</b>		<b>\$17,975,137</b>	<b>\$12,875,741</b>	<b>\$22,846,683</b>	<b>\$27,131,577</b>	<b>\$21,325,082</b>	<b>\$15,927,335</b>
Reimbursable Mobilization Fire Costs	(d) \$3,384,226	\$3,997,899	\$4,317,572	\$2,442,486		\$2,014,520		\$2,125,711	\$2,204,635	\$4,913,097	\$4,451,095	\$1,806,396	\$2,985,124

(a) Cost Recovery Breakout \$ 602,622  
 Fire Cost Collections - \$ 165,162  
 Fire Cache Sales - \$ 188,377  
 Excess Recovery, Sp. Rev. \$ 249,083  
 Note the major reduction in Cost recovery from previous years is due to School Trust Fund protection services no-longer being included

(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. FY 2013 was the last year School Trust Funds were applied.

(b) \$600,000 direct fire support that had been funded through the forest management account, moved to the emergency fire appropriation in FY 08

(c) \$600,000 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.

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

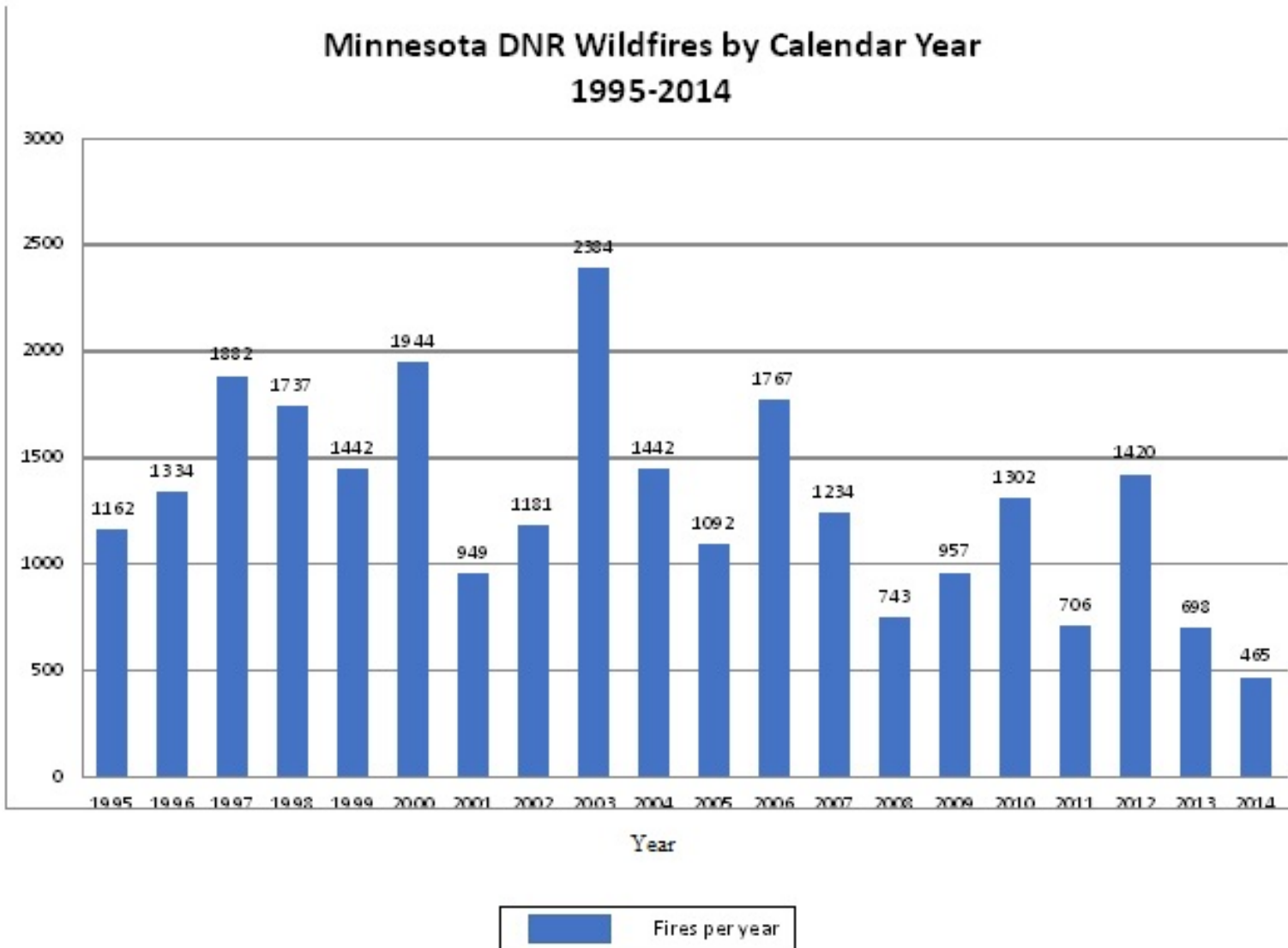


**ATTACHMENT 4**

**A GUIDELINE FOR STATEWIDE WILDFIRE PLANNING LEVEL DETERMINATION**

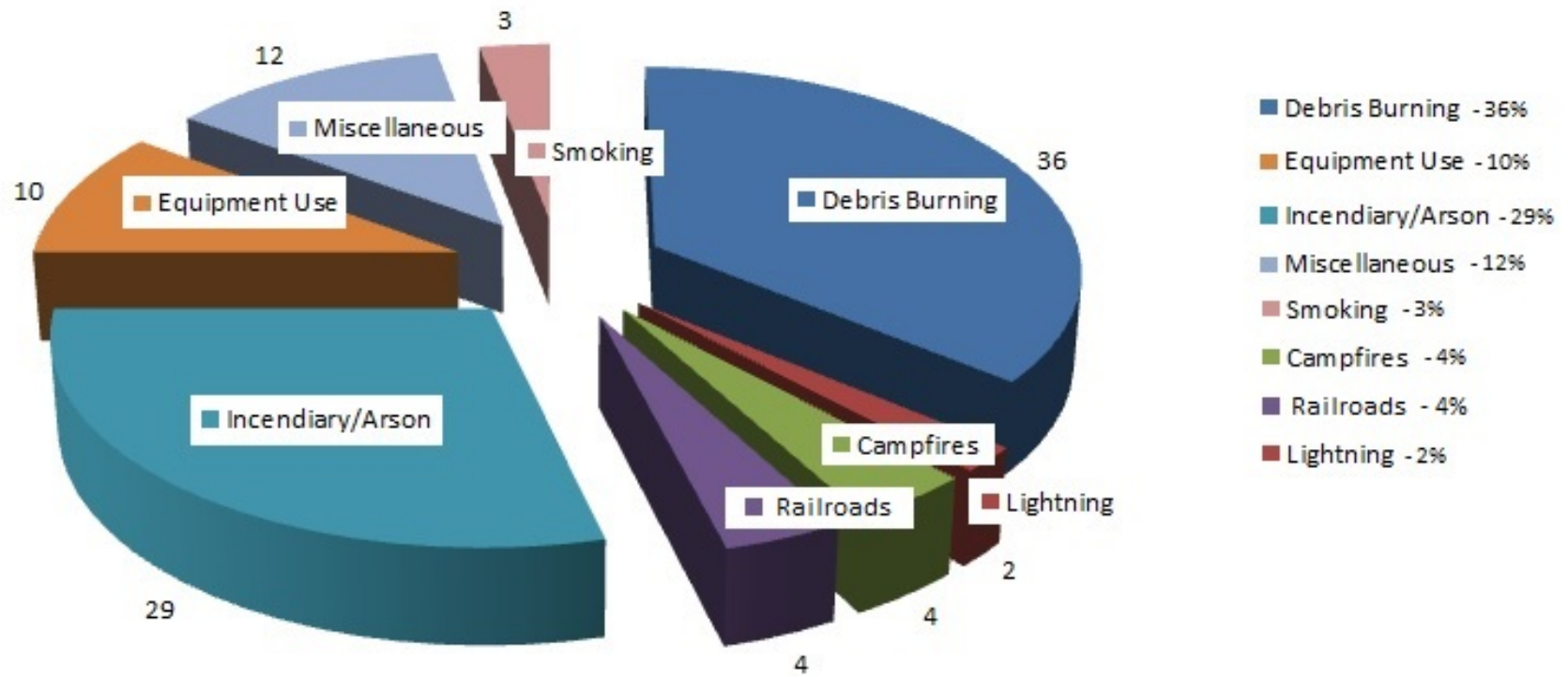
	<b>PLANNING LEVEL I</b>	<b>PLANNING LEVEL II</b>	<b>PLANNING LEVEL III</b>	<b>PLANNING LEVEL IV</b>	<b>PLANNING LEVEL V</b>
<b>BI (Q) spring</b> , pre-green, floating 5 day average	Not applicable	0-45	46-70	71-95	96+
<b>BUI</b> (after June 1, floating 5 day average)	Not applicable	0-25	26-50	51-67	68+
<b>ERC (Q)</b> (alternate summer/fall indicator, after June 1, floating 5 day average)	Not applicable	0-15	16-29	30-36	37+
<b>8-14 day Weather Forecast</b>	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.
<b>MN Regional Planning Levels</b>	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
<b>Eastern Area Planning Level</b>	I	I-II	I-III	I-IV	I-IV
<b>National Planning Level</b>	I-II	I-III	I-IV	I-V	I-V
<b>Fire Occurrence</b> (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.
<b>Fire Occurrence</b> (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
<b>Sociopolitical Considerations</b>	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.				
<b>Resource Availability</b>	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.
<b>In-State Mobilization</b>	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.
<b>Out of State Mobilization</b>	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 III has been reached in the spring, preparedness will not drop below that level 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 fire line.



# Minnesota DNR Wildfires by Cause

20 Year Average from 1995 through 2014



## Attachment 6

### CL – 215 AIR TANKER OPERATION COSTS FY 2014

#### State Owned (two aircraft):

Availability Cost: 400 days @ \$6,425 (200 days per aircraft)	=	\$2,570,000	
<b>Total availability cost:</b>	=	<b>\$2,570,000</b>	
State flight time: 24.87 hrs @ \$4,426.00	=	\$ 110,074.62	
State flight time: 25.68 hrs @ \$4,464.90*	=	<u>\$ 114,658.63</u>	
		\$ 224,733.25	
<b>Total state flight time for 50.55 hrs / cost:</b>	=	<b>\$ 224,733</b>	
*(Flight rate change due to contract period)			
Annual liability insurance policy	=	<b>\$ 14,237</b>	
<b>FY 2014 State Costs:</b>	=	<b>\$2,808,970</b>	
Availability savings from cooperative placements:	=	<u>-\$ 0</u>	
<b>State Operation Costs (net):</b>	=	<b>\$2,808,970</b>	

Reimbursements for daily availability:	=	\$ 0
<b>Total availability savings:</b>	=	\$ 0

Additional flight time paid by others -		
Reimbursements via MNICS/GLFFC partners flight time (13.52 hrs)	=	\$ 60,042
Total flight time paid by others:	=	\$ 60,042

#### **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 who 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).

DATE: 1/22/15

**LEGISLATIVE REPORT – Cost of Preparation**

NAME OF LEGISLATIVE REPORT – Minnesota Department of Natural Resources: Fiscal Year 2014 Annual Report on Firefighting Expenditures

Based on: Legislatively Mandated Report

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

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Description of Cost	Further explanation if necessary	Amount
Staff Time	50 hours @ \$90/hr	\$4,500
<b>TOTAL TO PREPARE REPORT</b>		\$4,500