

Minnesota Department of Natural Resources

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

Office of the Commissioner

651-259-5555



January 21, 2014

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

The Honorable Jean Wagenius, Chair
House Environment, Natural Resources &
Agriculture Finance Committee
449 State Office Building
100 Rev. Dr. Martin Luther King Jr. Blvd.
St. Paul, MN 55155-1206

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

The Honorable Lyndon Carlson, Sr., Chair
House Ways and Means Committee
479 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. Pau, MN 55155-1206

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

The Honorable Denny McNamara, Republican Lead
House Environment, Natural Resources &
Agriculture Finance Committee
359 State Office Building
100 Rev. Dr. Martin Luther King Jr. Blvd.
St. Paul, MN 55155-1206

The Honorable Tom Hackbarth, Republican Lead
House Environment & Natural Resources Committee
309 State Office Building
100 Rev. Dr. Martin Luther King Jr. Blvd
St. Paul MN 55155-1206

The Honorable Mary Liz Holberg, Republican Lead
House Ways and Means Committee
349 State Office Building
100 Rev. Dr. Martin Luther King Jr. Blvd.
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.



January 21, 2014

Page Two

The report describes firefighting expenditures and provides information related to the fire danger and fire occurrences that made these expenditures necessary during Fiscal Year 2013.

Please feel free to contact Olin Phillips, Fire Management Section Manager, at 651-259-5282; André Prah, acting Administrator/CFO, Office of Management and Budget Services, at 651-259-5548; or me with any questions or concerns regarding this report.

Sincerely,

/s/

Tom Landwehr

Commissioner

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

Attachment

Minnesota Department of Natural Resources
Fiscal Year 2013
Annual Report
on
Emergency Firefighting Expenditures



County Highway 27 Wildfire in Kittson County – October 2012



Department of Natural Resources
Fiscal Year 2013 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 \$30,578,142 in Fiscal Year (FY) 2013. This represented a demand upon the Emergency Firefighting – Open Appropriation of \$23,373,476. The FY 2013 expenditure of more than \$30 million is the highest required in 36 years. This compares to historical expenditures under similar fire conditions in FY 1977 when nearly \$52.3 million (dollars adjusted to 2013) were spent on wildfire operations.

FY 2013 will be the last year that the Permanent School Trust Fund forest suspense account will reimburse the state general fund for fire protection costs. This reimbursement requirement was changed by the legislature with an effective date of July 1, 2013. This change was made in Minnesota Session Laws of 2012, Regular Session, Chapter 249, Section 3, Subdivision 5 **Forest trust lands** (c).

In FY 2013 the state experienced an extended fire season, with 61 days at Planning Levels 4 and 5. The severe drought conditions experienced in 2012 continued to impact wildfire activity within Minnesota throughout FY 2013. The state continued the past year's pattern of extended high fire danger and the higher levels of preparedness that accompany it. Wildfires burned 50,580 acres in FY 2013. This remains high compared to the 20 year average of about 33,000 acres burned. Persisting drought conditions also sustained peat fire danger on the landscape and further increased response demands and control costs. 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.

FY 2013 wildfire conditions were best characterized by the **North Minnie Fire** that occurred in October of 2012 and burned over 24,000 acres near Baudette, MN. Other major fires included the **County 27 Highway Fire** which burned into the town of Karlstad, and the **Green Valley** fire impacting Menahga. Both fires destroyed numerous residences and out-buildings.

An early July windstorm along US Hwy 2 in northwestern Minnesota blew down approximately 25,000 acres of forested land. State firefighters were mobilized during the emergency to open roads and clear storm debris.

Minnesota exchanged mutual aid support with multiple states, and federal and provincial partners during the FY 2013 wildfire season. These reciprocal working relationships continue to be a critical response resource and opportunity for reducing response costs. Despite the challenging FY 2013 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.

Department of Natural Resources Annual Report on Emergency Fire Expenditures

FY 2013

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 2013, \$23,373,476 was expended.

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

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 2013, receipts came from the following sources:

- Cache Sales - \$260,721
- Fire Cost Collections- \$510,891

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 2013 transfer was based on the 2012 Forest Certification Report.

Certified fire protection costs transferred to the general fund in FY 2013 were:

- Fire Protection Services - \$2,344,369

This is the last year that fire protection costs on Forest Trust lands will be reimbursed from the Permanent School Trust Fund forest suspense account. This change was made in Minnesota Session Laws of 2012, Regular Session, Chapter 249, Section 3, Subdivision 5 **Forest trust lands** (c).

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 2013 the DNR expended \$4,451,095 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 be reimbursed above actual costs from out-of-state deployments. This occurs mostly from use of the CL-215 airtankers, 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 is periodically transferred to the General Fund.

In FY 2013, excess recovery transferred to the general fund was:

- Excess Recovery - \$ 310,229

Total Reimbursement to the general fund in FY 2013 from all sources:

• Cache Sales -	\$ 260,721
• Fire Cost Collections-	\$ 510,891
• School Trust, Fire Protection Services-	\$2,344,369
• Special Revenue, Excess Recovery-	<u>\$ 310,229</u>
Total	\$3,426,210

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 23% of the direct and open fire appropriations in FY 2013. 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 3 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 4 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 2013 had 211 days of possible wildfire danger, which is about average. However, with 61 days being at Planning Levels 4 and 5, the state continued the past year's pattern of extended high fire danger and the higher levels of preparedness that accompany it.**

Fire Occurrence and Causes

General Activity: In FY 2013, 1096 fires occurred - burning 50,580 acres. Historically, the state has experienced a 20-year average of about 1375 fires burning about, 32,856 acres.

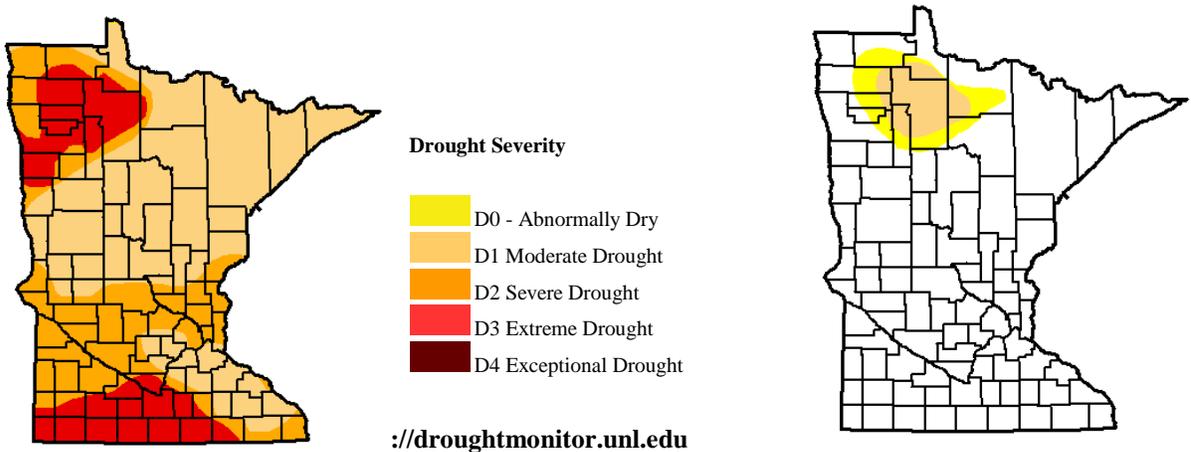
Number Fires By Cause				
	FY 2013	%	20 Yr. Ave.	%
Lightning	20	2	21	2
Campfires	56	5	50	4
Smoking	23	2	37	3
Debris Burning	406	37	507	37
Incendiary/Arson	197	18	400	29
Equipment Use	161	15	129	9
Railroad	45	4	61	4
Misc./Unknown	188	17	170	12
Total	1096		1375	

Overall, FY 2013 was notable for a large drop in arson fires, although arson was the cause of the County Highway 27 fire near Karlstad, where a significant loss of homes occurred.

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

Fire Behavior and Climatology

Following is a comparison of drought conditions in early October 2012 with that of late June 2013, taken from the national Drought Mitigation Center:



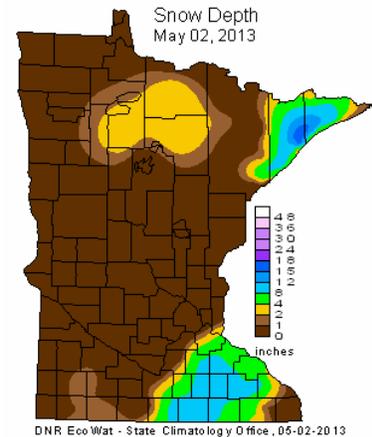
June 25, 2013

Severe to extreme drought encompassed almost 50% of the state during the fall of 2012, with the remainder of the state experiencing moderate drought. Dry conditions resulted in extremely active wildfire activity during the fall, most

notably in northwestern Minnesota. On October 2, the **North Minnie Fire** in Beltrami Island State Forest made a major run, burning over 2 miles per hour through the treetops of a conifer forest. At the same time, on the **County Highway 27 Fire near Karlstad**, the Air Tactical Supervisor flying over the fire observed mass ignition as sheets of fire ignited a couple hundred yards of dry grass at one time.

On October 4, two days after the major fire runs mentioned above, a winter storm warning was issued for northwest Minnesota. By late afternoon 4 to 6” of snow had fallen across much of the area while 14” was measured not far from the town of Badger. Although fires continued to occur across central Minnesota, this well timed storm effectively ended any new fire activity over the northwest part of the state for the remainder of the season. However, due to low soil moisture, peat fires persisted into early winter.

Winter stayed on into late spring of 2013, resulting in very little wildfire activity through the month of April. Snow cover lasted nearly until May over the northern half of the state. While the MN DNR responded to only about 100 fires during the month of April, almost 400 fires required action during the first two weeks of May, including the **Green Valley Fire** near Menahga.



Cooperative Fire Response

During periods of low fire danger in-state, DNR sends crews to other portions of the country and to Canada, upon request under mutual aid agreements. Cooperative responses reciprocate for assistance the state receives from others and provide valuable training for state personnel on large fires. The DNR sent 350 personnel to aid in wildland firefighting efforts throughout the summer, fall and spring. They primarily worked on fires in Colorado, Idaho, Montana, New Mexico and Oregon. DNR firefighters and airtankers also supported the fires of Great Lakes Forest Fire Compact (GLFFC) partners in Manitoba and Wisconsin.



A MNICS Interagency Crew

The Minnesota Interagency Fire Center (MIFC) Dispatch office, which serves as the dispatch center for all state and federal agencies, mobilized 879 personnel (individuals and crews) from multiple agencies to wildfire assignments within the state. These assignments were primarily to major fires under the jurisdiction of the DNR.

Cooperative responses to other jurisdictions are reimbursed to Minnesota by the receiving partner agencies.

All-Hazard Response

The fiscal year started with a wind event and blowdown storm for the third year in a row. On July 2, 2012, a storm hit the north-central portion of the state, primarily along US Highway 2 from Itasca State Park to Bemidji to Grand Rapids. Approximately 25,000 acres of forest land were affected. A MNICS Incident Management Team (IMT) was stationed in Grand Rapids at the Minnesota Interagency Fire Center to coordinate recovery efforts. The primary tasks assigned to the IMT were to coordinate efforts to open forest roads and trails and clear debris from parks and campgrounds. Timber salvage operations were the responsibility of the agencies in charge of affected forest lands. Damaged forests were primarily under the jurisdiction of DNR and the US Forest Service. Recovery efforts were coordinated by the IMT across all ownerships.

In October 2012, **Hurricane Sandy** struck the east coast of the country, triggering a nationwide mobilization of assistance. Sandy was the second-costliest hurricane in United States history. Minnesota firefighting agencies coordinated through the MN Interagency Fire Center (MIFC) supplied several chainsaw crew modules to clear fallen trees in New Jersey. An Interagency Management Team (IMT) accompanied the crew to support and organize the response. These costs were reimbursed to the state.

In-State Wildfire Response

In FY 2013 DNR responded to 1096 fires. These fires burned over 50,500 acres, which is considerably above the 20 year average of 32, 856 acres.

In October 2012, the **North Minnie Fire** burned large areas of peat in a very remote part of the state. That fire was part the Wannaska Complex for a while and was later separated out and supported with an Eastern Area Interagency Incident Management Team (IMT).

The **County Highway 27 Fire** was also part of the Wannaska Complex. It forced the evacuation of the City of Karlstad. State CL-215s and National Guard Blackhawk helicopters, along with diligent ground forces, kept the fire from destroying the city. Eleven homes were lost. No injuries were reported.

In May of 2013, the **Green Valley Fire** started burned into three counties – Becker, Hubbard, and Wadena. At the peak of suppression, resources included 53 local fire departments, 142 pieces of equipment, one Hotshot crew from Illinois, three 5-person Conservation Corp Minnesota crews, three Type-3 light helicopters, three Type-3 heavy National Guard helicopters (two Blackhawks and one Chinook), 15 engines, seven dozers, nine water tenders, two tracked vehicles and three CL-215 water scooping airtankers.

The Green Valley Fire ultimately spread about 7 miles over an approximate 5 hour period, destroying or damaging a large number of residences and other personal property. The fire destroyed 12 homes, 43 outbuildings, and three commercial properties. Suppression efforts saved over 400 structures. The fire burned 7,100 acres. There were no accidents or injuries reported.

A Word About Peat Fire

The high cost of peat fire remained a significant contributing factor to the cost of fire suppression in FY 2013. 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 wildfire air-tanker 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 2013, these aircraft made 830 water drops, delivering approximately 1,162,000 gallons of water on 57 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 the month of July, both aircraft spent 15 days on assignment in Manitoba, Canada. They flew 41 hours and dropped over 250,000 gallons of water. In August the aircraft were on assignment in Washington and Oregon. There, they flew 64 hours, delivering over 103,000 gallons. The CL-215's also supported federal fire incidents in Minnesota. They flew 48 hours, making 388 drops on twelve fires. Costs incurred as a result of assisting cooperating agencies are reimbursed to the state.

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

Attachment 7 illustrates the CL-215 dispatches in FY 2013

Other Firefighting Aircraft

Several other types of aircraft are utilized for tactical firefighting support. In FY 2013, the DNR utilized contract aircraft under seasonal contracts or on a call-when-needed basis. These included four "**Fire Boss**" single engine water-scooping float-planes, six land-based **Single Engine Air Tankers** (SEAT), one **Type 1 retardant air tanker** (heavy), six **Canadian CL-415** water-scooping air tankers, three Canadian **aerial supervision airplanes**, and eight Minnesota-based aerial supervision airplanes. The DNR also procures seasonal contracts for eight **helicopters** with water buckets, and fifteen **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 Fire Fighting 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

Attachment 7 – Illustrates the CL-215 Dispatches in FY 2013

For further information, contact:
S. Olin Phillips, Forest Protection Section Manager
DNR Division of Forestry
500 Lafayette Road, Box 44
St Paul, MN 55155
651-259-5282

Attachment 1

**Emergency Fire Direct and Open Appropriations
State Expenditures by Category
FY 2013**

Direct Appropriation *	7,204,666
Open Appropriation	23,373,476
Total	30,578,142
Salary Costs	12,617,748
Operating Costs	17,960,394
Total**	<u>30,578,142</u> *

* This includes \$59,666 of FY 2012 roll forward dollars

** Actual expenditure as of November 14, 2013.

FY 2013 State Fire Cost Summary						
By Type of Activity and Appropriation						
	Emergency Firefighting Direct	Emergency Firefighting Open	Total Open and Direct Combined			
Fire Prevention	4%	0%	1%			
Fire Presuppression	32%	20%	23%			
Fire Suppression	64%	80%	76%			
Total	100%	100%	100%			

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 – approx. \$550m (supports fire prevention and readiness).
- o Volunteer Fire Assistance – approx. \$300m (supports Rural Fire Department readiness).
- o Cooperative Fire Assistance – approx.\$300m (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 pre-positioning of firefighting resources.

Attachment 3: Ten Year Expenditure History – State Firefighting Costs

12/18/2013

Attachment 4

Nominal Dollars By Source of Funds	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	(g) FY 2009	(h) FY 2010	FY 2011	FY 2012	FY 2013	10 Year Average
Emergency Fire-Direct	\$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	\$7,204,666	\$7,182,784
Emergency Fire-Open	\$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	\$23,373,476	\$12,846,268
Fire Activity Total	\$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	\$30,578,142	\$20,029,053
Cost Recovery (a)	\$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	\$3,426,210	\$2,631,271
Net Cost to General Fund	\$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	\$27,151,932	\$17,397,782
Reimbursable Mobilization Fire Costs (i)	\$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	\$4,451,095	\$3,429,221

(a) Cost Recovery Breakout \$ 3,426,210

Fire Cost Collections - \$ 510,891
 Fire Cache Sales - \$ 260,721
 School Trust Fund - \$ 2,344,369
 Excess Recovery, Sp. Rev. \$ 310,229

(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.

(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)

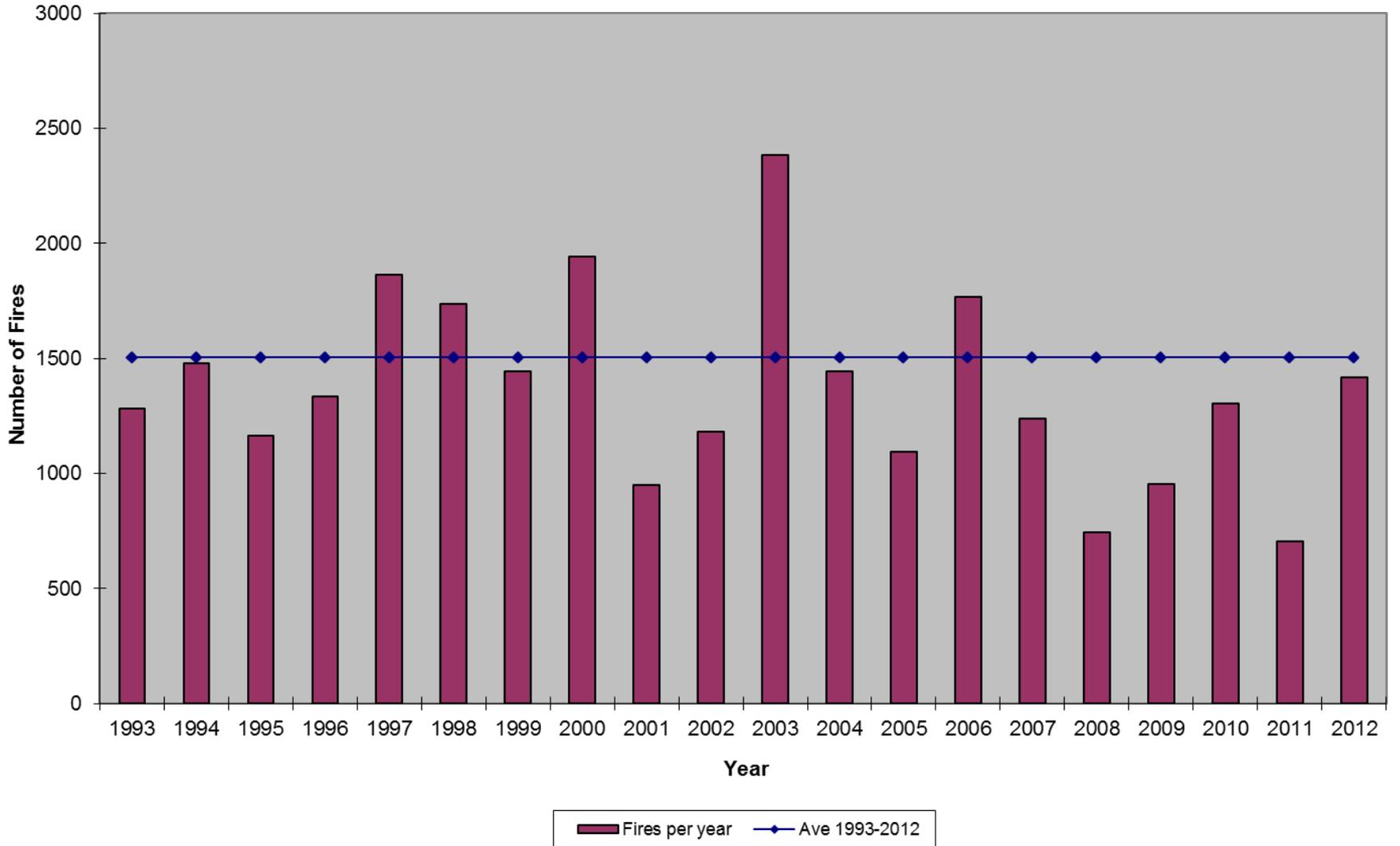
ATTACHMENT 4

A GUIDELINE FOR STATEWIDE WILDFIRE PLANNING LEVEL DETERMINATION

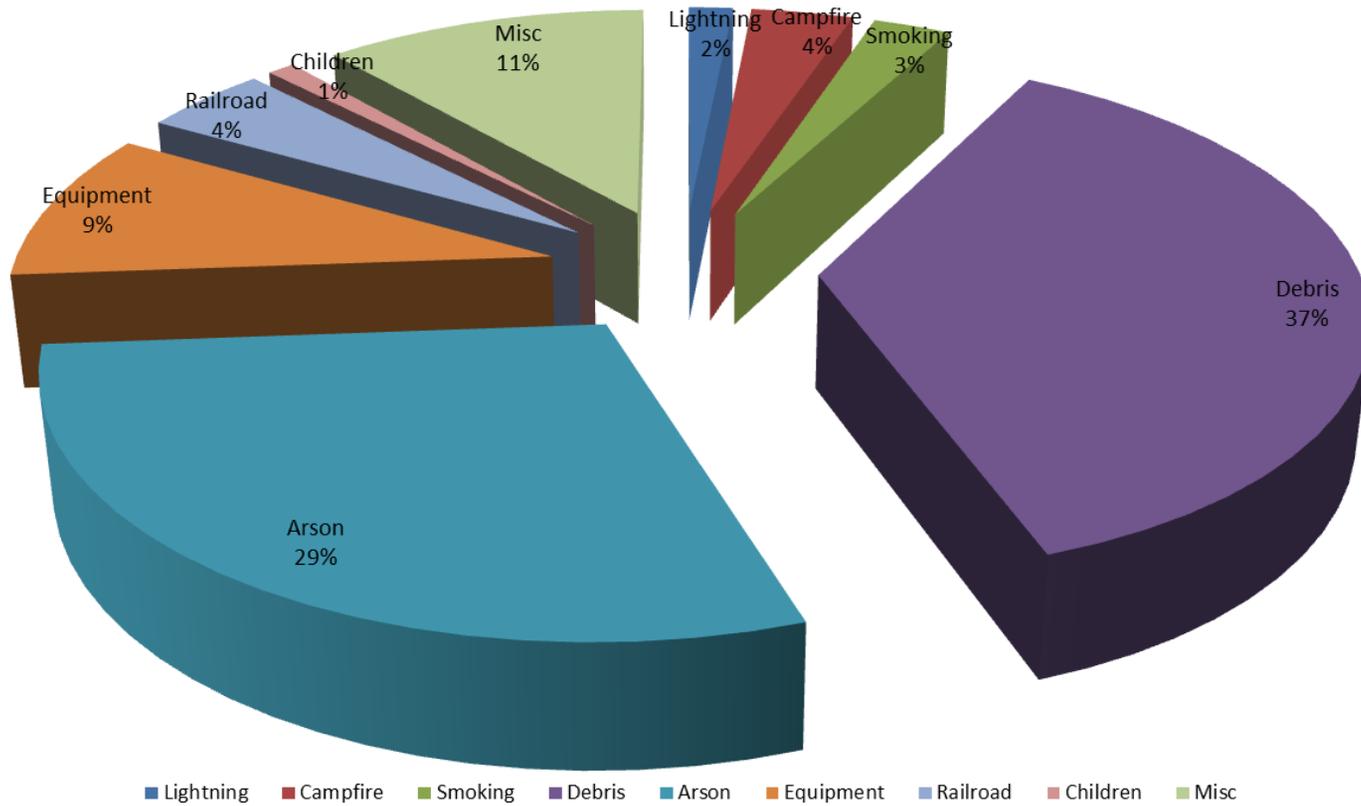
	PLANNING LEVEL I	PLANNING LEVEL II	PLANNING LEVEL III	PLANNING LEVEL IV	PLANNING LEVEL V
BI (Q) spring , pre-green, floating 5 day average	Not applicable	0-45	46-70	71-95	96+
BUI (after June 1, floating 5 day average)	Not applicable	0-25	26-50	51-67	68+
ERC (Q) (alternate summer/fall indicator, after 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 fire line.

MN DNR Wildfires by Calendar Year 1993 - 2012



MN DNR Wildfires by Cause 20 year average 1993-2012



Attachment 6

CL – 215 AIR TANKER OPERATION COSTS

FY 2013

State Owned (2 aircraft):

1.) Availability Cost: 250 days @ \$6,208	=	\$1,552,000
150 days @ \$6,425	=	<u>\$ 963,750</u>
(200 days per aircraft)		\$2,515,750
Total availability cost:	=	\$2,515,750
2.) State flight time: 163.97 hrs @ \$4,255.00	=	\$ 697,692.35
State flight time: 63.36 hrs @ \$4,340.00*	=	\$ 274,982.40
State flight time: 34.35 hrs @ \$4,379.00*	=	\$ 150,418.65
State flight time: 8.15 hrs @ \$4,426.00*	=	<u>\$ 36,071.90</u>
		\$1,159,165.30
Total state flight time for 269.83 hrs / cost:	=	\$ 1,159,165
*(Flight rate change due to fuel price adjustments)		
3.) Annual liability insurance policy:	=	\$ 14,161
FY 2013 State Costs (gross):	=	\$3,689,076
Availability savings from cooperative deployments (see below):	=	<u>(\$ 384,896)</u>
Total State Operation Costs (net):	=	\$3,304,180
4.) Availability Savings:		
Reimbursements for daily availability: Wash/Oregon (16 days x2 aircraft)	=	\$198,656
Reimbursements for daily availability: Canada (15 days x 2 aircraft)	=	<u>\$186,240</u>
Total availability savings:	=	\$384,896
5.) Additional flight time paid by others -		
Reimbursements via MNICS/GLFFC partners flight time (88.24 hrs)	=	\$ 376,739
Reimbursements for flight time in Washington/Oregon (63.59 hrs)	=	<u>\$ 270,575</u>
Total flight time paid by others:	=	\$ 647,314

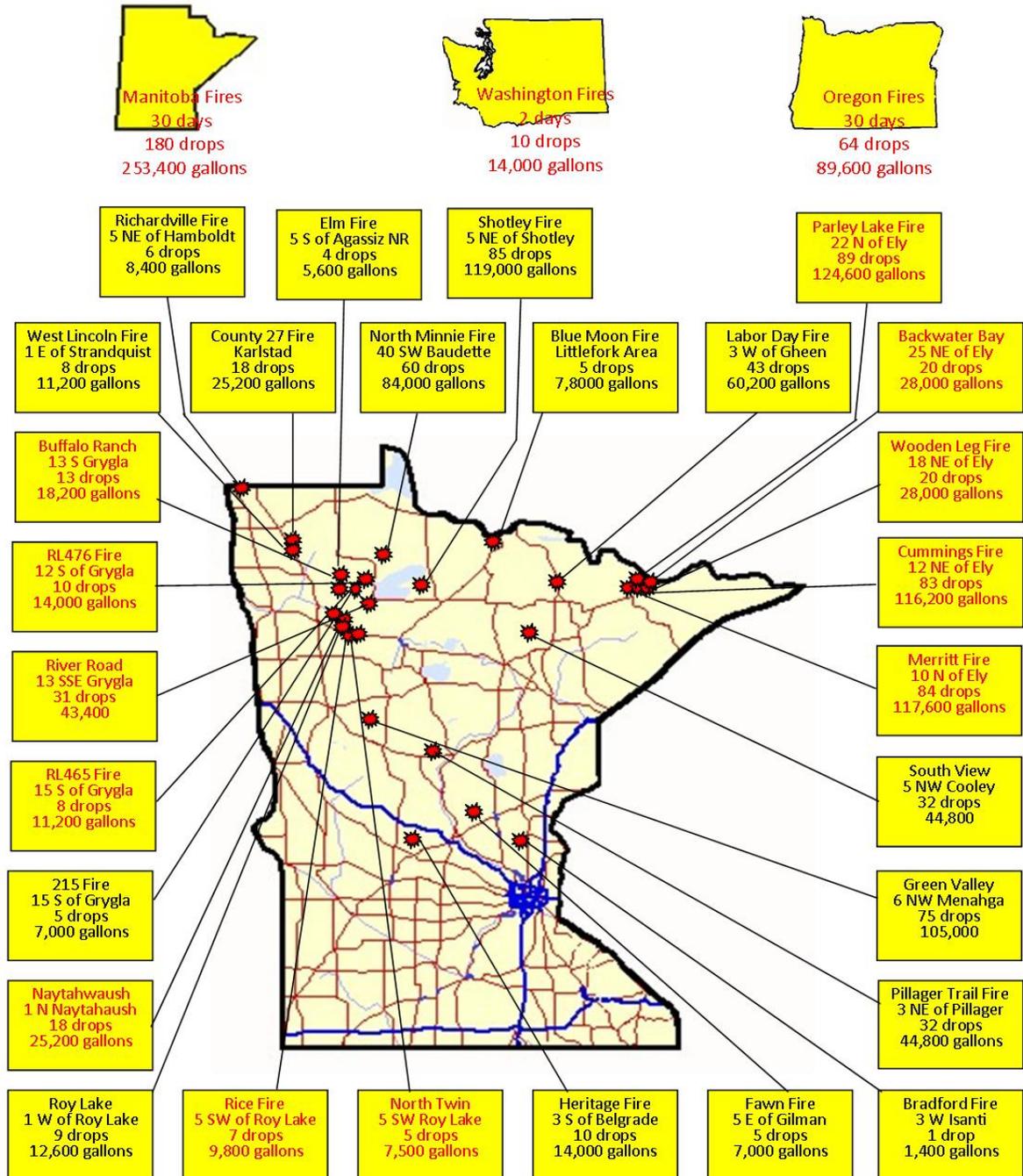
Discussion:

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) 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).
- 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) Liability Insurance - protects the state from damage claims related to use of the aircraft. The contractor is required to carry equipment or "hull" insurance on the aircraft.

FY 2013 CL-215 Dispatches

Red text indicates reimbursable missions



Date: January 22, 2014

**LEGISLATIVE REPORT
Cost of Preparation**

NAME OF LEGISLATIVE REPORT:

Minnesota Department of Natural Resources Fiscal Year 2013 Annual Report on Firefighting Expenditures

Based on: Legislatively Mandated Report

Minnesota Statute Reference: Minnesota Laws of 2011, 1st Special Session, Chapter 2, Article 1, Section 4, subd. 4

Prepared by: S. Olin Phillips, Division of Forestry, Department of Natural Resources

Phone: (651) 259-5282

Email: olin.phillips@state.mn.us

Description of Cost	Further Explanation, if necessary	Amount
Staff Time	70 hours at \$51 per hour, includes fringe	\$3,570.00
Duplication Cost (includes paper)	Nominal	0.00
Other	None	0.00
Total to Prepare Report		\$3,570.00