DEPARTMENT OF NATURAL RESOURCES

Annual Report on Emergency Firefighting Expenditures

Fiscal Year 2020

01/15/2021

Berry Creek Fire – St. Louis County

Minnesota Department of Natural Resources

Division of Forestry

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As required by *Minnesota Statute,* Section 3.197: This report cost approximately $4,500 to prepare, including staff time, printing and mailing expenses.

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Contents

Executive Summary

The Minnesota Department of Natural Resources (DNR) expended a total of $23,829,652 from the General Fund in Fiscal Year 2020 (FY2020) for wildfire protection and emergency response. This includes $16,811,184 from the Emergency Firefighting Open Appropriation.

In FY2020, the DNR responded to 783 wildfires that burned a total of 3,974 acres in Minnesota. This is well below the 20-year annual average of 1,096 fires burning 27,363 acres, though within the range of number and acres of fires responded to in the last five years.

Weather conditions in FY2020 necessitated that wildfire response be at the ready for much of the year. Although fall and early winter of 2019 provided adequate rain and therefore fewer fires, the cool and dry weather in late winter created abnormally dry conditions statewide. The early, wet spring of 2020 was followed by warmer than average temperatures accompanied by intense winds, causing a number of "Red Flag" days as drought conditions returned and deepened in parts of Minnesota.

In FY2020, the DNR Division of Forestry (Division) once again used a variety of ground and aerial resources to prepare for and suppress wildfires. The ground fleet consists of 172 firefighting engines and 53 tracked vehicles designed to access off-road and remote areas. The DNR used a mix of state-owned and contracted aircraft and interagency and state partnership agreements. Tactical firefighting aircraft responded to 161 requests on 98 wildfires.

Nationally, fire activity was below average during FY2020 resulting in fewer national resource requests. However, the Eastern Area Type II Incident Management Team (IMT), supported by twelve DNR staff, was mobilized to Alaska in July 2019. In total, the DNR mobilized approximately 100 agency employees to assist with out-of-state firefighting efforts during the fiscal year. This included response to wildfires in Alaska, California, Texas, Washington, Montana, Michigan, Idaho, Nevada, Pennsylvania, Florida and Georgia. The DNR also assisted with the large western fires that occurred last summer; those activities occurred in FY2021 and therefore will be addressed in next year's report.

The advent of the COVID-19 pandemic brought with it the need to adapt procedures to reduce the risk of transmission, as well as additional incident management duties to assist in the state's pandemic response. The DNR's preparations included increased strategy development and planning for wildfire response and creating a set of "Wildland Fire Best Management Practices" that outline procedures to reduce the risk of COVID-19 transmission during a response. These practices address everything from how resources interact during suppression activities, to equipment cleaning, to feeding personnel during a response. The DNR also worked with partners to develop a "Large Incident Recovery Plan" to outline how to manage COVID-19 considerations for firefighters deployed to a large incident in Minnesota.

The Minnesota Incident Command System (MNICS) mobilized a Type III IMT in March 2020 to support the Minnesota Department of Health's (MDH's) activation of the Strategic National Stockpile for COVID-19 response. This mobilization occurred under a reimbursement agreement. The Type III team set up the basic layout and operation of the Receive, Stage, Store (RSS) site and began distribution of supplies throughout the state. The DNR, as part of MNICS, will be reimbursed by MDH for the support provided. The DNR also provided logistical support to the State Emergency Operations Center (SEOC) managing Minnesota's COVID-19 pandemic response.

Purpose of this Report

This report addresses the requirements of Minnesota Laws 2019, First Special Session chapter 4, article 1, section 3, subdivision 4, which states in part:

> *"By January 15 of each year, the commissioner of natural resources must 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

Minnesota statutes charge the Commissioner of Natural Resources with preventing and extinguishing wildfires in the forested and prairie areas of the state. Although these statutes were adjusted several times over the years, the initial charge adopted in 1911 remains, and current laws outline the funding sources to meet the requirements of the statutes.

Funding Authorized

Emergency Firefighting Direct Appropriation: Laws 2019, chapter 4, section 3, Subd. 4 appropriated $7,521,000 the first year and $7,521,000 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 2019, chapter 4, section 3, Subd. 4, further states "the amount necessary to pay for presuppression and suppression costs during the biennium is appropriated from the general fund."

Expenditures

During FY2020, the DNR expended $7,018,468 from the Direct Appropriation and $16,811,184 under the Open Appropriation authority. A total of $426,924 of the $7,521,000 FY2020 Direct Appropriation will roll forward to the second year of the biennium.

Attachment 1, FY2020 Emergency Fire Direct and Open Appropriations / State Expenditures by Category, summarizes state firefighting expenditures by salary and operating costs.

Reimbursements to the General Fund

Payments and Collections

The DNR receives payments for certain fire-related activities. These receipts are from supplies sold to local government units (e.g., fire departments) through the Interagency Fire Cache (cache sales authorized under *Minnesota Statutes*, section 88.065), and collections from parties responsible for starting illegal or negligent fires (reimbursement for suppression costs is mandated under *Minnesota Statutes*, section 88.75). These receipts are deposited directly into the General Fund.

FY2020 Receipts

• Cache Sales	$32,326
• Fire Cost Collections	$78,052
Total	$110,378

Special Revenue Fund

This fund provides an avenue for reimbursement to the General Fund for expenditures related to fulfilling interagency agreements regarding wildfire suppression. These expenditures and subsequent reimbursements constitute a temporary use of the state emergency firefighting appropriation and are included in this report for enhanced transparency. The DNR provides firefighters and aircraft to assist federal partners within Minnesota, mobilizes firefighters for out-of-state assistance with national wildfire emergencies, and assists Great Lakes Forest Fire Compact (GLFFC) partners. These costs are initially charged to the Emergency Fire Special Revenue Fund and invoiced for reimbursement as soon as practical. The federal government reimburses federal costs and GLFFC partners (adjoining states and Canadian provinces) reimburse their costs. During FY2020, the DNR expended $1,701,859 from the Emergency Fire Special Revenue Fund on reimbursable costs for national mobilizations and GLFFC support.

The reimbursements to the Special Revenue Fund include the actual costs of out-of-state deployments, as well as a portion of the fixed costs associated with any mobilized equipment, such as wildland fire engines. The emergency firefighting appropriation pays for fixed costs including program administration. Reimbursement revenue received, in excess of actual cost (Excess Recovery), is periodically transferred to the General Fund.

Reimbursements to the General Fund in FY2020

• Cache Sales	$ 32,326
• Fire Cost Collections	$ 78,052
• Excess Recovery (Spec. Rev.)	$ 367,157
Total	$ 467,535

Planning and Readiness

Weather patterns and fuel conditions, as well as actual fire occurrence, affect wildfire preparedness and response costs. In advance of each wildfire season, the DNR trains firefighters, maintains and secures equipment, establishes contracts for aerial detection and suppression, supports rural fire departments in securing equipment, and engages in fire prevention efforts. Together, all of these efforts encompass preparedness activities.

To guide its level of readiness from week to week, the DNR uses a tiered system to determine potential wildfire risks and establish fire-planning levels. Attachment 2, A Guideline for Statewide Planning Level Determination, shows the criteria and planning levels currently in use. These guidelines are used to determine the current planning level, by DNR Region, on biweekly conference calls with fire managers from all agencies that cooperate to suppress Minnesota's wildfires. The planning level, in combination with daily fire danger indices, establishes the preparedness level necessary to effectively respond to

wildfires. Historically, about 80 percent of the state's wildfires happen during Planning Level III. Major fires can and do occur at Planning Level III.

FY2020 had 227 days of possible wildfire danger (i.e. at least one DNR Region at Planning Level II or higher). Of those possible wildfire days, 169 were at Planning Level II, 45 were at Planning Level III, 13 were at Planning Level IV, and none was at Planning Level V.

Each Region and Area needs to have equipment and staffing available that is sufficient to respond to fires based on the likelihood of occurrence (planning level). Thus, some Areas may be at a higher staffing level than others and require presuppression expenditures when the overall state or region is not anticipating high fire activity. This past year, on 24 days, at least one area was at Planning Level II while the rest of the state was at Planning Level I. On 22 days, at least one area was at Planning Level III while the rest of the state was at Planning Level II. On 4 days, at least one area was at Planning Level IV while the rest of the state was at Planning Level III.

While Minnesota experienced a mixture of wet and dry periods, FY2020 ended significantly dryer than normal with moderate drought conditions existing across the central and northeastern parts of the state.

The COVID-19 pandemic required increased planning and preparation to ensure safe staffing levels. To mitigate the chances of COVID-19 spread and address potential impacts, a "Wildland Fire Best Management Practices" document was developed. This document outlines practices designed to reduce the potential for COVID-19 exposures during preparation and suppression of wildfires. These practices identify how resources interact during suppression, cleaning of equipment, and even feeding personnel.

In addition, the DNR worked with other agencies to develop a "Large Incident Recovery Plan" outlining how to handle firefighters who are diagnosed with or exposed to COVID-19. Specifically, the plan identifies how to insulate, quarantine or isolate individuals or crews, and identifies how treatment will be handled.

Finally, to determine whether it was safe to send a resource to a particular incident, the DNR used the nationally created "Interagency Checklist for Mobilization of Resources." This checklist ensures agencies requesting resources have plans in place to safely care for any resource they receive. Each request is verified prior to sending personnel or resources to provide assistance.

Fire Suppression and Presuppression

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

J5 Operating in Remote Area

Preparedness (prevention and presuppression) and suppression activities work together to reduce wildfire damages. Presuppression actions are taken before a fire starts to ensure the most effective and efficient direct suppression. These activities include overall planning, recruitment, and training of personnel; procurement of firefighting equipment and contracts; and maintenance of equipment and supplies. Suppression activities directly support and enable the DNR to suppress wildfires, including the prepositioning of resources. As fire danger and occurrence increase, the number of resources positioned for immediate response also increases.

Presuppression costs were approximately 51 percent, or $12,231,680, of expenditures from the Direct and Open fire appropriations in FY2020. Suppression costs were approximately 47 percent, or $11,112,613, of FY2020 expenditures from the Direct and Open fire appropriations. The final two percent of funds were dedicated to fire prevention efforts throughout the state. The DNR cost-coding structure provides accountability for wildfire expenditures. The fiscal system tracks expenditures by both the type of activity and location (down to the administrative Area level).

Attachment 3, FY2020 State Fire Cost Summary, illustrates the percentages of fire expenditures allocated to prevention, presuppression, and suppression activities. Attachment 4, Wildfire Activities - Ten-Year Expenditure History illustrates the 10-year fire expenditure history. Overall, FY2020 fire expenditures tracked very closely with the 10-year average.

Fire Occurrence and Causes

In FY2020, DNR responded to 783 wildfires that burned 3,974 acres in Minnesota. This is significantly less than the 20-year average of 1,096 fires and 27,363 acres burned. This is largely a result of the wetter than average fall, and dry conditions not appearing until the end of the spring fire season. Soil moisture present in the fall promoted a shorter than normal spring green-up period, reducing spring wildfires. Activity picked up toward the end of the fiscal year when drier conditions returned in the absence of normal precipitation. Continued partnerships, use of aircraft, and attention to wildfire preparedness helped keep fires small and allowed most to be controlled within 24 hours.

The causes of wildfire have not changed significantly over the last 20 years, with the exception of fires caused by incendiary/arson. From 2001 to 2012, at least 25 percent of fires were caused by incendiary/arson. Since 2017, fires caused by incendiary/arson have been between 14 and 18 percent.

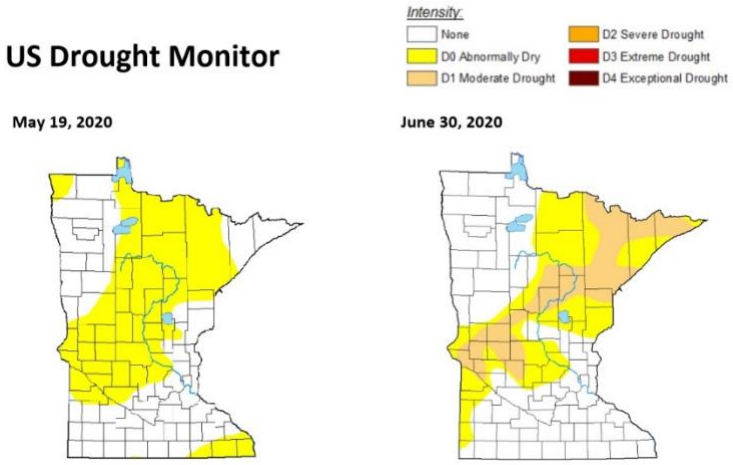
Number of Fires by Cause

	FY 2020	%	20-Year Average	%
Debris Burning	281	36.0	379	35
Incendiary / Arson	141	18.1	295	27
Misc. / Unknown*	194	24.9	168	15
Equipment Use	101	12.9	127	12
Campfires	44	5.3	47	4
Lightning	4	0.5	18	2
Smoking	14	1.8	25	2
Railroad	4	.05	37	3
Total	783	100%	1,096	100%

*Misc./Unknown includes items that usually do not account for a major percentage on their own such as electric fences, power lines, fireworks, fires started within a structure, prescribed fires, other sources like hot ashes, spontaneous combustion, and cause unknown

Attachment 5, Minnesota Fires and Acres Burned, and Attachment 6, FY2020 Number of Wildfires by Cause graphically illustrate fire history and causes.

Weather Summary



Fall and early winter of 2019 brought near record setting levels of precipitation to portions of northern Minnesota, resulting in less than normal fire activity. This pattern began to reverse in January 2020, as precipitation deficits grew. A cool and dry early spring allowed for development of abnormally dry conditions as the state transitioned to summer.

Residual soil moisture from the wetter than average fall and cool spring temperatures, in combination with focused wildfire prevention outreach and extended fire restrictions lead to lighter than anticipated fire activity during the early spring fire season. Late spring and early summer brought warmer temperatures and a number of “Red Flag” days as drought conditions deepened in parts of the state.

As late spring transitioned to summer the number of wildfire occurrences remained low; however, fires started exhibiting behavior typical of drought-related conditions. Specifically, there was increased consumption of larger diameter woody fuels and fires burning deeper into organic soils. These behaviors were concerning as they increase smoke and suppression efforts exponentially.

Fire Response

Cooperative Fire Response

First-year firefighters mop up a wildfire near Sandstone.

In-state cooperative fire response was about average throughout the fiscal year. This was the second year the Minnesota Incident Command System (MNICS) rostered three Type III Incident Management Teams (IMTs) from spring through fall. Each of the MNICS partner agencies contributed to filling rosters for these in-state teams. In addition, the DNR provided staff to fill the roster of the Eastern Area (EA) Type II IMTs. No large incidents occurred in Minnesota in FY2020 that required an IMT.

Responding to out-of-state mutual aid requests is included in mutual aid agreements to support suppression efforts. Cooperative fire response provides training opportunities, helps maintain DNR's response capabilities, and ensures Minnesota will receive assistance when needed. It also helps to defray some of DNR's fixed costs for fire response, since as noted in the "Reimbursements" section beginning on page 5 of this report, a portion of the fixed costs associated with any mobilized equipment is included in the reimbursement for cooperative wildfire response.

The EA Type II IMT (gold team), supported by twelve DNR staff, mobilized to Alaska in July 2019. Other than the mobilization to Alaska, the first half of FY 2020 saw lower than average national fire activity, and corresponding reduction in resource requests. The DNR sent approximately 100 agency employees to assist with out-of-state firefighting efforts in FY2020. This included response to wildfires in Alaska, California, Texas, Washington, Montana, Michigan, Idaho, Nevada, Pennsylvania, Florida, and Georgia. During the second half of FY2020, activities were primarily focused on mobilizing personnel across the country, while not increasing risk for exposure+ or spread of COVID-19. As a result, there were fewer out-of-state requests than normal.

COVID-19 presented many challenges to agencies throughout the country. Each agency adapted and embraced a "Module of one" concept – deploying fire response personnel who consistently worked together as a single unit. The sharing of these agency resources across the states worked well. MNICS agencies were still able to respond effectively while minimizing firefighter exposure to COVID-19.

In addition to aiding firefighting efforts, the DNR works with agency partners to provide wildland fire training for firefighters. These trainings provide an opportunity to experience firefighting in diverse conditions throughout North America, gain valuable skills, and secure qualifications needed for fighting wildfires in Minnesota. Training with other agencies and local fire departments also builds important relationships that prove critical when responding to Minnesota incidents.

Interagency All-Hazard Response

Minnesota firefighters are trained to national standards for firefighting and incident management. Qualifications meet both firefighting standards and those of the Federal Emergency Management Agency (FEMA). As a result, Minnesota firefighters can respond to and manage incidents no matter the cause (i.e., "all-hazard").

The first half of FY2020 was quiet for all-hazard incidents and response in Minnesota. Local agencies and DNR Forestry Areas responded to all incidents without the need for outside resources. However, the second half of FY2020 was active. The DNR, as part of MNICS, has an agreement with the Department of Health (MDH) to activate a MNICS IMT to manage the Receive, State Store (RSS) for the Strategic National Stockpile (SNS). The Center for Disease Control maintains the SNS, which consists of pharmaceutical and medical supplies delivered to states for distribution during a public health emergency (e.g. terrorist attack, flu outbreak, or earthquake). MDH activated the RSS and SNS site and mobilized a MNICS Type III team in March to support COVID-19 response. In accordance with the cooperative agreement, the DNR will be reimbursed by MDH for the support provided.

In addition to the Type III Team deployment, the DNR supported the State Emergency Operation Center (SEOC), filling seven logistical ground support positions throughout the spring. The DNR also responded to a request to support the SEOC response to civil unrest following the death of George Floyd. The DNR supported this request with personnel and aircraft.

In-state Wildfire Response

In FY2020, the DNR responded to 783 wildfires that burned 3,974 acres throughout the state. This is significantly lower than average due to a wetter than normal fall 2019 and fewer people burning because of extended spring burning restrictions in 2020. These restrictions helped reduce fire occurrence and associated response, thus reducing potential COVID-19 transmission among firefighters.

Because of COVID-19, firefighters were encouraged to use aerial resources earlier in suppression response to keep fires small and reduce the need for extended response and potential COVID-19 transmission among firefighters. The complement of aircraft, continued partnerships, and attention to wildfire preparedness conditions helped keep most wildfires small and controlled within 24 hours.

Firefighting Fleet

The DNR firefighting fleet is comprised of engines and tracked vehicles. Engines are medium- to large-sized pickup trucks, customized for wildland firefighting. They are deployed for firefighting on mostly dry, upland sites.

Tracked vehicles are custom-built firefighting units driven by two endless metal belts, or tracks. Transported on trailers to fire locations, these vehicles are designed to fight fires on wet sites or those with difficult accessibility. The DNR uses two basic models of tracked vehicles: the J-5 and the Muskeg.

The complement of equipment varies from one DNR Forestry Area to another depending on local fuel, topography, and soil conditions. The DNR strives to have reliable and efficient engines and tracked

vehicles that meet the needs of the firefighters. This requires an annual investment to specify, test, and secure equipment before older units become inoperable.

Engines

DNR engines vary in size and capacity. In general, the lighter the vehicle, the more maneuverable it is, but the lower its capacity to haul water and firefighters. Each DNR Forestry Area has a mix of engine types best suited to their location.

Areas often use heavy-duty half-ton trucks. These units are less expensive (both base and operating rates) than larger-sized engines, yet serve well as a maneuverable initial attack unit when equipped with a small water tank and pump. The most common fire vehicle is a one-ton pickup. These trucks haul 300 gallons of water. Service-body pickups are 1¼- or 1½-ton pickups, fitted with storage compartments for an assortment of firefighting equipment. Three-ton fire engines carry more than 750 gallons of water and are capable of towing large equipment, like bulldozers, to a fire.

Engines		
Type	Size	Number
T7	½ ton HD	33
T6	1 ton	80
T6 – Service Body	1 ¼ ton	18
T6 – Service Body	1 ½ ton	27
T4	3 ton	14
Total Engines		172

Tracked Vehicles

The DNR's tracked vehicle fleet, like the engine fleet, has a range of sizes and capacities. The smaller units, known as J-5s, are designed to get into forested areas that larger units cannot, but do not have the water capacity of larger units. Each unit has been custom built and the fleet is aging. The DNR has 12 J-5s, manufactured in 1988, that are still in active status.

The DNR entered into a contract with All Track to update the small tracked vehicle fleet. To date, All Track has delivered three new J5-model type tracked vehicles, called AT-20s. Experienced DNR tracked-vehicle operators are currently testing these machines, as well as similar vehicles acquired from Lite Tech Industries in FY2019. This testing will allow DNR to determine which model (i.e., All Track or Lite Tech) is most suitable for firefighting in Minnesota. Once suitability is determined, additional units of the same model will be ordered each year until the small tracked vehicle fleet is modernized. There will be an overlap of new units entering the fleet before releasing older models. This overlap allows firefighters time to familiarize themselves with the new equipment.

A similar situation exists in the Muskeg fleet, DNR's larger tracked vehicles. The oldest muskeg was manufactured in 1993, and all eight units were manufactured in or prior to 2006. DNR has acquired an All Track AT-50, similar to the AT-20 model but larger in frame and water capacity. The testing and use of the AT-50 at three separate field locations proved it to be a good replacement for the older Muskegs. Plans are in place to secure additional machines to replace our aging fleet over the next five to seven years.

Tracked Vehicles		
Type	Model	Number
CT	Cross Tracker	3
LT-5	Lite Tech	3
J-5	Bombardier	14
J-5	Camoplast	21
AT-20	All Track	3
Muskeg	Bombardier	7
Muskeg	Camoplast	1
AT - 50	All Track	1
Total Tracked Vehicles		53

Firefighting Aircraft

The DNR uses several types of aircraft to provide tactical aerial firefighting support and intelligence to ground firefighters. In FY2020, the DNR responded with tactical firefighting aircraft to 161 requests on 98 wildfires. In FY2020, the DNR used a mix of aircraft procured under Exclusive Use and Call-When-Needed contracts, aircraft owned and operated by the DNR, and aircraft obtained through interagency and partnership agreements.

Helicopter Dropping Water

The DNR owns and operates two airplanes, a Cessna 310 and a Quest Kodiak, used for fire detection, transportation, aerial photography, and logistical and tactical aerial supervision. The Cessna is a 1977 model and is the oldest aircraft in the State of Minnesota's fleet. Projected maintenance costs in FY2021 will exceed the value of the airplane; the DNR identified this aircraft for replacement in the near future.

Through Exclusive Use contracts in place for FY2020, DNR had four FireBoss airtankers (800 gallon single engine water-scooping airplanes); two Single Engine Air Tankers (SEATs, ground-based airtankers on wheels); eight helicopters with water buckets; two light airplanes used for aerial supervision; and 22 light airplanes available for fire detection and tactical intelligence.

Interagency partnerships continued to be a key part of the DNR's aerial firefighting program. The Red Lake Agency, with assistance from the Bureau of Indian Affairs provided two aerial supervision planes, one helicopter, one FireBoss and one SEAT in Bemidji. The U.S. Forest Service (USFS) provided three Beaver float planes in Ely along with two aerial supervision planes, six helicopters, two CL-415 air tankers, and aerial detection aircraft used within their jurisdiction. The DNR and USFS partnered to contract an additional Call-When-Needed FireBoss airtanker.

The DNR can also request firefighting aircraft when needed from a variety of other sources, including: helicopters from the Minnesota Army National Guard (Blackhawks with 660 gallon water buckets and Chinooks with 2,000 gallon water buckets); helicopters from the Minnesota State Patrol; and CL-215s, CL-415s, and aerial supervision aircraft from the Canadian Provinces of Ontario and Manitoba.

Rural Fire Department Support

The DNR's Rural Fire Program objectives are to obtain low-cost equipment, manage cost-share grants, and provide technical expertise for Minnesota fire departments.

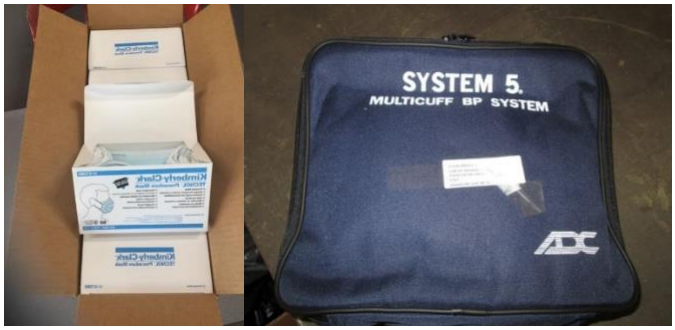
Federal Excess Property Program

The DNR uses the Firefighter Federal Property Program (FFP) to secure about $12.5 million worth of equipment and supplies each year to support rural fire departments in Minnesota. Rural communities consider this a valuable program as it supplements their limited budgets.

Converted Federal Surplus Heavy Rescue Unit

In FY2020 the rural fire program distributed equipment and supplies to 212 Minnesota communities and three state agencies. Items distributed included "rolling stock" to aid fire departments and medical supplies to support community response to the COVID-19 pandemic.

The "rolling stock" distributed included Utility Terrain Vehicles (UTVs), snowmobiles, and large truck chassis. DNR secured and distributed medical supplies for COVID-19 pandemic response, including cots, gowns, gloves, masks, pulse oximeters, blood pressure cuff systems, and isolation tents.



COVID-19 Supplies

State Surplus Engines

State surplus engine – Two Harbors Fire Department

The state-funded Rural Fire Program secured 10 one-ton trucks for communities from the State of Minnesota Fleet Program at a reduced price. This approach also eliminated auction and selling costs for Minnesota fire departments. Although these trucks have met the criteria for replacement by state agency fleet managers, they still have service life and can be used as initial attack engines to extinguish small fires. The demand by rural fire departments for these units exceeds their availability.

Volunteer Fire Assistance Grants

Minnesota fire departments that protect communities of 10,000 or fewer people may participate in the Volunteer Fire Assistance (VFA) grant program. A total of $556,585 in federal and state VFA grants provided cost-share assistance for radios and pagers, personal protective gear, water movement equipment, and wildland firefighting safety items. The VFA program received 350 grant applications in FY2020 requesting a total of $2,559,272. The program awarded 177 grants to Minnesota fire departments.

M.S. 88.068 provides 25 percent of tax from fireworks sales in Minnesota to support rural fire departments through the VFA program. An increase in fireworks sales led to an additional $100,000 of funding becoming available for VFA grants in FY2020. This allowed 43 additional VFA grants to be awarded to rural communities.

Although the VFA program usually supports training of rural fire department personnel at the annual Wildfire Academy, the COVID-19 pandemic resulted in the cancellation of the Academy this past year and therefore no VFA funds were expended to support training.

Training

FY2020 resulted in a significant reduction in training due to COVID-19. The DNR and MNICS partners reviewed the anticipated training scheduled against the advice and requirements associated with slowing the spread of COVID-19 and determined that it would not be possible to conduct much of the planned training in a manner that assured adequate social distancing. A determination was made by MNICS and federal and state agencies that suspending in-person training for the season would not greatly compromise the efficiency or safety of the firefighters.

Specifically, DNR and GLFFC suspended all planned in-person fire training and meetings beginning in early March. Just prior to the pandemic, Minnesota DNR and its GLFFC partners offered four fire-related training courses to approximately 80 personnel. In addition to the instructor-led courses, many state employees received the annual fire safety refreshers online.

Similarly, MNICS offered three trainings to approximately 65 personnel. The 20th Annual Minnesota Wildfire Academy was canceled due to COVID-19. The Academy is a joint effort between DNR, MNICS, and Itasca Community College. This event normally draws over 700 students with courses ranging from basic wildfire suppression to dispatch to advanced incident command system (ICS) leadership. At this time, all instructor-led fire training has been paused.

The DNR wildland fire-training program is working with all partners to develop more e-Learning and virtual fire training courses, to adapt training to any public-health related restrictions that remain necessary until the end of the pandemic.

Fire Prevention

The DNR has long recognized the importance of providing a consistent, statewide fire prevention message. The combination of fire prevention and safety tips with current, timely fire weather information helps Minnesotans avoid burning in conditions that could have potentially damaging results. Minnesota uses a variety of methods to reach residents, including news releases, social media, community events, workshops, classroom visits, parades, and the State Fair. Each activity seeks to provide targeted information to a given audience.

Prevention Activities

The DNR wildfire prevention efforts were significantly impacted by the public health measures that were necessary to limit and slow the spread of COVID-19. This required the DNR to substitute traditional prevention efforts, which largely rely on interacting one-on-one with the public at community events and in classroom settings, with virtual and other approaches that did not involve large gatherings.

In place of in-person events, the DNR shifted to social media and virtual interactions. Wildfire Prevention Week, the third full week of April, included focused social media communications in addition to traditional radio ads to raise awareness for wildfire prevention. Increased social media in the FY2020 campaign stressed the importance of limiting the number of fires to further reduce the risk of a wildfire, and potential exposure to COVID-19 by the firefighters who must work in close contact to respond effectively to a wildfire. Another key message emphasized the need to reduce debris burning, which is the number one cause of wildfires in Minnesota. Daily messages, coordinated with the MNICS information officer, communicated timely and current information on wildfire conditions. Prevention staff also contributed to overall COVID-19 communication efforts.

With the cancelation of the Minnesota State Fair, the DNR worked with numerous fire service partners to develop an interactive, virtual replacement for the annual Governor's Fire Prevention Day. Each partner agency quickly adapted materials to an online format. The virtual event extended a single day of contact to six weeks of activities that children and families could do from home. For example, the DNR created a virtual fire tower video to substitute for in-person visits to this popular State Fair attraction. This video will be used in future fire prevention efforts.

Firewise Program

The Minnesota Firewise Program supports Minnesota communities through a combination of grants and technical assistance. This combination helps communities better prevent and prepare for wildfires, and

mitigate potential damage. The program assists with wildfire assessment and planning, resulting in the establishment of a Community Wildfire Protection Plan. When implemented, this plan reduces fire risk by addressing known hazards or problems. Each plan identifies issues or areas on which the community should focus its fire prevention and mitigation efforts. Firewise USA, a national program sponsored by the National Fire Protection Association, recently recognized Itasca County as the fifth most active county Firewise Program in the nation.

The Minnesota Firewise Program also supports home risk evaluations and trains local emergency response staff to conduct evaluations. In FY2020, DNR Firewise staff participated in numerous virtual webinars to continue providing information to communities at risk for wildfire.

Fire Wardens and Burning Permits

In an effort to reduce wildfire risk and the need for wildfire response during the COVID-19 pandemic, the DNR delayed issuing outdoor burning permits in the spring of 2020 until fire danger lessened significantly and Minnesota was in full green up. All fire wardens were asked to not issue burning permits, since often these wardens issue permits out of their homes, potentially creating an avenue for exposure.

When fire conditions improved, and COVID-19 guidance allowed for these types of interactions, businesses and fire wardens returned to issuing three-day burning permits. It is important to note that, during the period when fire wardens were not issuing permits, DNR Forestry Field Offices continued to offer permits. Since most permits are issued electronically, and forestry offices continued to issue paper permits for those without access to the electronic system, most residents were able to obtain burning permits without disruption.

The electronic permit system will see more changes in FY2021. Updates to the phone-based activation system and development of an electronic signature option will make the system more user-friendly. Permittees will no longer need to print and sign their permit for it to be valid.

Summary

The onset and spread of the COVID-19 pandemic greatly influenced FY2020 fire preparation and suppression activities. The steps taken to reduce firefighter exposure, and maintain suppression capabilities, allowed for continued resource protection throughout the state. The procedures developed this past year will remain in place to guide our preparations and suppression operations. Thus far, FY2021 has continued with a dry pattern and the majority of the state is now under abnormally dry to moderate drought conditions that could make for a very active fire season this coming spring.

Attachment 1: 2020 Emergency Fire Direct and Open Appropriations / State Expenditures by Category

FY2020 Emergency Fire Direct and Open Appropriations	
Direct Appropriation	$ 7,018,468
Open Appropriation	$ 16,811,184
Total Expenditures	$ 23,829,652
State Expenditures by Category	
Salary Costs	$ 13,218,939
Operating Costs	$ 10,610,713
Total Expenditures *	$ 23,829,652

Attachment 2: Guideline for Statewide Wildfire Planning Level Determination

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 DNR Regional Planning Levels	All DNR Regions/Agencies at P.L. I	One or more DNR Regions/Agencies at P.L. II	Two or more DNR Regions/Agencies at P.L. III	Two or more DNR Regions/Agencies at P.L. IV	Two or more DNR 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 (with active fire)	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 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

Attachment 3: FY2020 State Fire Cost Summary

FY2020 - State Fire Cost Summary			
By Type of Activity and Appropriation			
	Emergency Firefighting Direct Appropriation	**Emergency Firefighting Open Appropriation**	**Total Open and Direct Combined**
Fire Prevention	6.9%	0%	**2.0%**
Fire Presuppression	76.6%	40.8%	**51%**
Fire Suppression	16.5%	59.2%	**47%**
Total	**100%**	**100%**	**100%**

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

State fire prevention activities are supplemented by annual grants from the U.S. Forest Service as follows:

- State Fire Assistance – approximately $590,000 (supports fire prevention and readiness).
- Volunteer Fire Assistance – approximately $300,000 federal support and $8,000 state support through sales tax on fireworks (supports Rural Fire Department readiness).
- Cooperative Fire Assistance – approximately $150,000 (Wildfire Risk Reduction grants support Firewise – Community Fire Protection activities).

Fire Presuppression includes activities undertaken before a fire happens 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 support and enable the DNR to suppress wildfires, including the prepositioning of firefighting resources.

Attachment 4: Wildfire Activities 10-Year Expenditure History

10/23/2020

Department of Natural Resources, Division of Forestry

Wildfire Activities Ten Year Expenditure History

Nominal Dollars By Source of Funds		FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	10 Year Average
Emergency Fire-Direct	(c)	$6,928,432	$7,066,975	$7,184,311	$6,918,792	$7,363,656	$6,739,596	$7,160,792	$6,939,074	$7,840,566	$7,018,468	$7,116,066
Emergency Fire-Open		$8,558,008	$17,303,580	$23,373,476	$15,008,912	$18,971,895	$17,709,549	$16,271,730	$16,487,420	$15,312,697	$16,811,184	$16,580,845
Fire Activity Total		$15,486,440	$24,370,555	$30,557,787	$21,927,704	$26,335,551	$24,449,145	$23,432,522	$23,426,494	$23,153,263	$23,829,652	$23,696,911
Cost Recovery	(a)	$2,610,699	$1,523,872	$3,426,210	$602,622	$1,032,502	$628,660	$262,871	$1,626,745	$1,458,506	$467,535	$1,364,022
Net Cost to General Fund		$12,875,741	$22,846,683	$27,131,577	$21,325,082	$25,303,049	$23,820,485	$23,169,651	$21,799,749	$21,694,757	$23,362,117	$22,332,889
Reimbursable Mobilization Fire Costs	(b)	$2,204,635	$4,913,097	$4,451,095	$1,806,396	$2,106,290	$4,370,469	$3,423,285	$4,558,888	$3,722,193	$1,701,859	$3,325,821

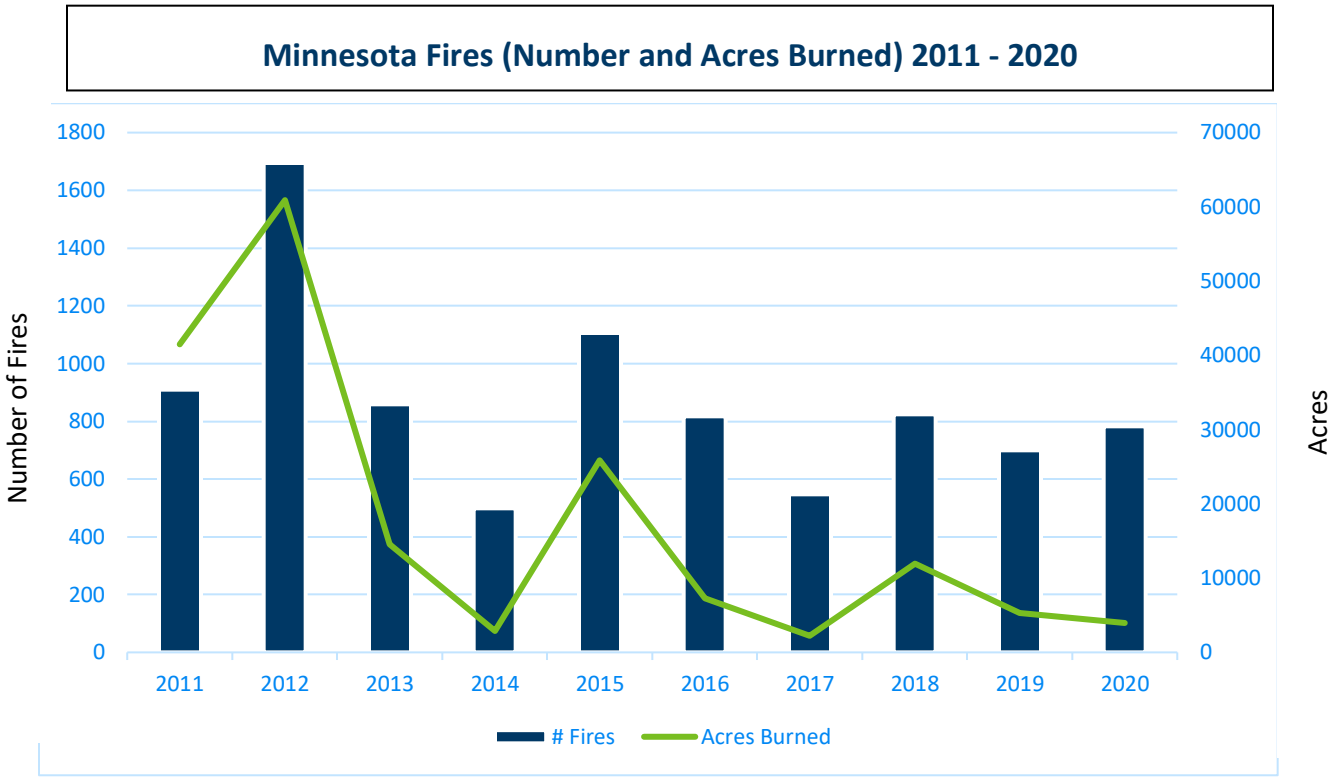
(a)Fire Cache Sales, Fire Cost Collections, Permanent School Trust Fund - protection services reimbursement, excess recovery from Special Revenue Fund. Beginning in FY 02, Cost Recoveries were deposited to the general fund. In FY 10, School Trust Fund protection services were included retroactive to FY 2001. FY 2013 was the last year School Trust Funds were applied.

(b) This is not a state expenditure. Costs are initially expended from the Fire Fund for assistance to federal partners and other states. Minnesota will be reimbursed.

(c) Beginning in FY2009, $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.

(a) Cost Recovery Breakout	$ 467,535
Fire Cost Collections -	$ 78,052
Fire Cache Sales -	$ 32,326
Excess Recovery, Sp. Rev.	$ 367,157

Attachment 5: Minnesota Fires, Numbers and Acres Burned 2011 - 2020



Attachment 6: FY2020 Wildfires by Cause