



DATE: March 6, 2023

MEMO TO: Jessica Vealitzek, Chair
Operations Committee

FROM: Pati Vitt
Director of Natural Resources

RECOMMENDATION: Recommend approval of a Resolution approving a new Prescribed Burn Management Policy.

STRATEGIC DIRECTIONS SUPPORTED: Conservation; Leadership; Communication, Education and Outreach

FINANCIAL DATA: There is no financial impact.

BACKGROUND: Fire has shaped the landscape and habitats of North America, Illinois, and Lake County, and the native flora and fauna have adapted to fire over many thousands of years. Indigenous Peoples used fire for diverse purposes ranging from cultivation of plants for food, medicine, and basketry to the extensive modification of landscapes for game management or travel (Payne 1982; Anderson 2005; Abrams and Nowacki 2008; McClain et al 2021). Both Anderson (1970) and McClain and Elzinga (1994) have described the dynamic balance between prairie and forests in Illinois, where repeated fires during periods of drought favored the formation of grassland community types.

As European settlers moved westward, natural and human-caused fire regimes were disrupted – prairies were plowed and savannas were cleared to expand agricultural production - dividing the landscape and thereby reducing fire adapted/dependent habitats and their connectivity. Unregulated forest harvesting during the 19th and early 20th centuries generated logging debris that contributed to catastrophic wildfires (Haines and Sando 1969; Pyne et al. 1996). Societal and legal responses to these fires led to widespread fire suppression actions by federal, state, and private forest managers. Agency policies, along with marketing campaigns on fire prevention (Smokey Bear) impacted fire dependent habitats through active suppression (Pyne 1982). The consequences of fire suppression in fire dependent communities has led to a reduction or loss of ecosystem services, altered fuel loads (duff and leaf litter), increased tree and shrub density (i.e. excessive shading) and homogenized landscape structure (Taylor 2004; Hutchinson et al. 2008; Nowacki and Abrams 2008). Consequently, the influx of fire-sensitive and invasive species alters community composition, structure, and ecosystem processes (Keane et al. 2002; Rodewald and Abrams 2002; McShea et al. 2007; Alexander and Arthur 2010; Maynard and Brewer 2013).

In 2001, the District Board approved the Controlled Prescribed Fire Policy, which included approval of procedures for implementation of the program. The policy authorized the Finance and Administrative Committee to approve revisions to the procedures associated with the policy. The procedures have been updated periodically to reflect changes in staff, regulations, and best management practices. The District seeks to replace the previous policy to address changes in language that reflect a growing understanding and acceptance of prescribed burning as a critical

management tool to maintain the quality of publicly owned natural areas, as well as changes in District Committee and Department structure. In addition, the District seeks to update the Prescribed Burn Management Procedures, to reflect changes in Department structure and updated training requirements, and to allow the Director of Natural Resources to update the procedures as needed in the future.

The procedures and methods used to implement the proposed new policy are consistent with the standards developed by the National Wildfire Coordinating Group, the U. S. Forest Service as well as regional standards set by the Chicago Wilderness Alliance. In 2007, the State of Illinois recognized the importance of prescribed burning with the passing of the Illinois Prescribed Burn Act. This act establishes the need for periodic fire as essential to the perpetuation, restoration, and management of the State's plant and animal communities and recognizes that "significant loss of the State's biological diversity will occur if fire is excluded from these fire-dependent communities". Similarly, the Illinois Prescribed Fire Council recognizes prescribed fire as "the most important management practice in maintaining and restoring healthy landscapes." The Objectives of the proposed Prescribed Burn Policy are:

Objective 1. Maintain/Increase Native Species Abundance and Richness

Prescribed burning is an effective tool for maintaining and increasing native species abundance and diversity. Results of studies support high fire frequencies to maintain species richness (Bowles and Jones 2013). Monitoring of District preserves indicates that burning more frequently and maintaining a maximum of 3 to 4 years between burns is correlated with higher native species richness and lower invasive species richness (see Figure 1). The lack of fire or fire suppression also impacts wildlife communities. Butterfly (Huntzinger 2003), Avian, herpetofauna and mammalian (Means 2006) diversity declined substantially in areas that were not burned when compared to recently burned areas. The rarity of some threatened/endangered species may be due to the alteration of habitat caused by the lack of fire.

Objective 2. Decrease Adventive (Non-Native) Species Richness

Prescribed fire can be used to manage unwanted vegetation, such as non-native invasive plant species that outcompete native flora. Burning alone can reduce the need for chemical control measures such as herbicides, but to be effective burning may need be done repeatedly. Burning can also be used in conjunction with chemical or mechanical treatments to maximize effectiveness, minimize chemical use, and reduce costs.

Objective 3. Maintain Quality Habitats Across the LCFPD (including impeding woody encroachment)

Prescribed fire helps maintain many native plant communities, especially prairie and wetland ecosystems. Prescribed fire is also important for maintaining important tree species, such as oaks in our wooded communities. Fire reduces the thick leaf litter layer that is a barrier to oak seedling establishment. Oaks are also intolerant of heavy shade and cannot successfully regenerate in densely wooded areas. Fire can be used to create openings in the canopy necessary to support the light requirements of oak seedlings. Oaks are adapted to withstand regular burning and develop a thick bark at the base of the tree.

Excluding fire from previously fire-frequent ecosystems results in major changes in ecosystem structure, composition, and function across a variety of scales (Covington and Moore, 1994; Keane et al. 2002; Varner et al. 2005). The consequences of suppression-altered fire regimes include a

reduction in or loss of ecosystem services, and vastly altered fuels and potential future fire behavior. In woodland habitats, for example, tree densities increase and the structure of the landscape is homogenized (Taylor 2004; Hutchinson et al. 2008; Nowacki and Abrams 2008). Further the canopy is occupied by shade-tolerant, fire-sensitive trees and the accumulated litter in unburned forest floors can lead to reduced species diversity and low abundance or species cover (Hiers et al. 2007; Engber et al. 2011). Plant species that benefit from disturbance and exposed bare soil typically decline (Harvey et al. 1980; Gilliam and Platt 1999; Knapp et al. 2007).

As a result of these undesirable changes in habitat structure and function associated with lack of fire, the District employs prescribed burning to maintain habitat quality, ecosystem function and species diversity.

Objective 4. Optimize Burn Return Intervals

Fire frequency refers to the recurrence of fire in an area over time, while the burn return interval is the time between fires in a designated area. Vegetation monitoring of District preserves has shown that Burn Return Intervals between 0-1 and 2-3 years is ideal for maintaining native species richness. This means that optimizing our prescribed burn program to ensure that high quality habitats are burned every 3-4 years to maintain species diversity. District monitoring efforts revealed a similar pattern in both prairie and woodland habitat.

Objective 5. Ensure Safety of All Prescribed Burn Operations

The District adheres to all established safety protocols when conducting prescribed burning. Burn units are well-established and the optimal conditions for burning each are well documented. Burn breaks are designed to ensure safe containment across and within established burn units. Burn crews are well-trained, experienced, and equipped with the proper Personal Protective Equipment. The District follows the Prescribed Burn Management Procedures during the planning, implementation and reporting of all prescribed burning activities. District staff periodically revise the prescribed burn management procedures to reflect changes in District staffing and/or regulations.

The new Prescribed Burn Policy is intended to reflect:

1. Updated language changing the name of the “Controlled Prescribed Burn Policy” to the “Prescribed Burn Policy” to align with national, regional, and state programs and policies;
2. An updated approval process for the Prescribed Burn Bosses to reflect changes in training procedures;
3. The authorization of the District's Director of Natural Resources to amend and implement updates to the Procedures in order to keep current with changing technologies, science and best practices.

Recommended changes to the Prescribed Burn Procedures are intended to reflect:

1. Updated language changing “Controlled Burn” to “Prescribed Burn” to align with national, regional, and state programs and policies;
2. Updated Department structure and other staff changes;
3. Updated communication procedures that will allow greater efficiency in the use of staff resources and be more cost-effective;

4. Updated training and approval requirements for Prescribed Burn Crew Members and Prescribed Burn Bosses.

REVIEW BY OTHERS: Chief Operations Officer, Director of Operations, Director of Finance, Corporate Counsel

STATE OF ILLINOIS)

COUNTY OF LAKE) SS
)

**BOARD OF COMMISSIONERS
LAKE COUNTY FOREST PRESERVE DISTRICT
REGULAR MARCH MEETING
MARCH 15, 2023**

MISTER PRESIDENT AND MEMBERS OF THE BOARD OF COMMISSIONERS:

Your **OPERATIONS COMMITTEE** presents herewith “A Resolution approving a Prescribed Burn Management Policy,” and requests its approval.

OPERATIONS COMMITTEE:

Date: _____ Roll Call Vote: Ayes: ____ Nays: _____

Voice Vote Majority Ayes; Nays: _____

**LAKE COUNTY FOREST PRESERVE DISTRICT
LAKE COUNTY, ILLINOIS**

A RESOLUTION APPROVING A PRESCRIBED BURN MANAGEMENT POLICY

WHEREAS, the Lake County Forest Preserve District (the “District”) manages thousands of acres of land for outdoor recreation, education, wildlife habitat, preservation of savanna, woodland and prairie communities, and other public purposes; and

WHEREAS, many of the District’s natural plant and animal communities are fire dependent and periodic prescribed burning is required for their perpetuation and management and for restoration of their ecological diversity and function, and

WHEREAS, significant loss of the County’s biological diversity will occur if fire is excluded, and

WHEREAS, the use of prescribed burns for management of public lands is essential to cost effective and efficient maintenance of the specific resource value for which these lands were acquired, by preparing sites for restoration, removing undesirable and competing vegetation, expediting nutrient cycling and controlling invasive species, thus allowing for more abundant growth and reproduction of native species; and

WHEREAS, prescribed burns reduce the buildup of fuels in woodlands, wetlands and prairies lessening the risk and severity of wildfires and reducing the threat of loss of life and property; and

WHEREAS, it is in the best interests of the District to approve the Prescribed Burn Policy in the form attached hereto stating the District’s policy concerning and objectives for prescribed burns of the District’s preserves; and

WHEREAS, the District’s response to wildfires will be directed by the procedures outlined in the Prescribed Burn Management Procedures (the “Procedures”) that are authorized by the Prescribed Burn Policy, and

WHEREAS, safe implementation and proper training as directed by the Procedures are necessary to ensure the maximum benefits and protection for the District and the public; and

WHEREAS, on September 21, 2001, pursuant to Resolution No. 3116, the District Board of Commissioners approved a “Controlled Prescribed Burn Policy” (the “2001 Policy”);

NOW, THEREFORE, BE IT RESOLVED by the Board of Commissioners of the Lake County Forest Preserve District, Lake County, Illinois **THAT**:

Section 1. Recitals. The recitals set forth above are incorporated as part of this Resolution by this reference.

Section 2. Approval of Prescribed Burn Policy. The Prescribed Burn Policy attached to this Resolution is hereby approved.

Section 3. Authority to Approve Procedures. The Director of Natural Resources of the District is hereby authorized to establish and approve changes to procedures to implement the Prescribed Burn Policy.

Section 4. Repealer. The 2001 Policy and (to the extent they are inconsistent with all or any part of the Prescribed Burn Policy attached to this Resolution) the provisions of other District resolutions, policies, and procedures are hereby repealed.

Section 5. Effective Date. This Resolution shall be in full force and effect, from and after its passage and approval in the manner provided by law.

PASSED this _____ day of _____, 2023

AYES:

NAYS:

APPROVED this _____ day of _____, 2023

Angelo D. Kyle, President
Lake County Forest Preserve District

ATTEST

Julie Gagnani, Secretary
Lake County Forest Preserve District

Exhibit No. _____

References Cited in Burn Policy Recommendations

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LAKE COUNTY FOREST PRESERVE DISTRICT
PRESCRIBED BURN POLICY

The Lake County Forest Preserve District (“District”) desires to promote the ecological integrity of its preserves and actively conserve, restore and manage its natural resources including native species and their habitats, ecological processes, and ecosystem services, so visitors to the District's preserves can enjoy their scenic beauty, diversity and ecological functions. Fire has shaped the landscape and habitats of Lake County, and prescribed burning is an effective and efficient management tool.

DISTRICT POLICY AND OBJECTIVES

It is the policy of the District to implement prescribed burns to promote biodiversity, control invasive weeds and shrubs, reduce fuel loads thus decreasing the possibility and severity of wildfires, and to educate and inform the public to the benefits, timing, and location of burns. The District’s Prescribed Burn Program will be conducted using ecologically accepted procedures during the planning and implementation process, described in the Prescribed Burn Management Procedures, to ensure that management objectives are met and all safety issues are addressed. The District's Director of Natural Resources is authorized and directed to prepare, approve, amend, and implement the Procedures.

Update Objective 1. Maintain/Increase Native Species Abundance and Richness

Objective 2. Decrease Adventive (Non-Native) Species Richness

Objective 3. Maintain Quality Habitats Across the LCFPD (including impeding woody encroachment)

Objective 4. Optimize Burn Return Intervals

Objective 5. Ensure Safety of All Prescribed Burn Operations

**PRESCRIBED BURN MANAGEMENT
LAKE COUNTY FOREST PRESERVES**



Policies and Procedures

September 11, 2001

Updated:

April 2003

May 2005 December

2007 February 2012

September 2015

Revised: March 2023

PRESCRIBED BURN MANAGEMENT POLICIES

STATEMENT OF PROCEDURES

This document sets forth the requirements of the Lake County Forest Preserve District (LCFPD) for the use of prescribed burning to ensure safe, professional, and beneficial use, and to manage the inherent risks.

The use of prescribed burning accomplishes specific management objectives and optimizes the efficiency and effectiveness of other management techniques. Prescribed burns may be used to manage all LCFPD land including grassland and woodland natural areas, wetland mitigation areas, golf courses, parking lot islands, trails and around LCFPD buildings as appropriate. Prescribed burning is a valuable and cost-effective ecosystem management tool for the District. To restore and maintain healthy, native, fire-dependent community types in our forest preserves, prescribed burns are necessary to simulate the historic fires that shaped and maintained our natural systems. Prescribed burning improves the growth of native vegetation that can out-compete weeds, compliments the use of mowing and other mechanical methods of invasive species control, and herbicides and is an effective invasive species control technique. Adherence to best practices reduces risks in the use of prescribed burning.

LCFPD is committed to the interdepartmental collaboration that is necessary to operate a prescribed burn program. LCFPD's prescribed burn crews will be available for interdepartmental cooperation on prescribed burns and will ensure training is available to those who wish to participate in prescribed burns across all departments and operations.

Key stakeholders with responsibilities under this policy include:

- Chief Operations Officer
- Director of Natural Resources
- Director of Public Safety
- Director of Operations
- Burn Operations Coordinator
- Burn Planning Coordinator
- Burn Boss
- Prescribed Burn Crew Members

PRESCRIBED BURNING OBJECTIVES:

As set forth in the Lake County Forest Preserve District Prescribed Burn Policy, the following are the objectives of the Burn Program:

Objective 1. Increase Native Species Abundance and Richness

Prescribed burning is an effective tool for maintaining and increasing native species abundance and diversity. Results of studies support high fire frequencies to maintain species richness (Bowles and Jones 2013). Monitoring of District preserves indicates that burning more frequently and maintaining a maximum of 3 to 4 years between burns is correlated with higher native species richness and lower invasive species richness (see Figure 1). The lack of fire or fire suppression also impacts wildlife communities. Butterfly (Huntzinger 2003), Avian, herpetofauna and mammalian (Means 2006) diversity declined substantially in areas that were not burned when compared to recently burned areas. The rarity of some threatened/endangered species may be due to the alteration of habitat caused by the lack of fire.

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Prescribed fire can be used to manage unwanted vegetation, such as non-native invasive plant species that outcompete native flora. Burning alone can reduce the need for chemical control measures such as herbicides, but to be effective burning may need to be done repeatedly. Burning can also be used in conjunction with chemical or mechanical treatments to maximize effectiveness, minimize chemical use, and reduce costs.

Objective 3. Maintain Quality Habitats Across the LCFPD

Prescribed fire helps maintain many native plant communities, especially prairie and wetland ecosystems. Prescribed fire is also important for maintaining important tree species, such as oaks in our wooded communities. Fire reduces the thick leaf litter layer that is a barrier to oak seedling establishment. Oaks are also intolerant of heavy shade and cannot successfully regenerate in densely wooded areas. Fire can be used to create openings in the canopy necessary to support the light requirements of oak seedlings. Oaks are adapted to withstand regular burning and develop a thick bark at the base of the tree.

Excluding fire from previously fire-frequent ecosystems results in major changes in ecosystem structure, composition, and function across a variety of scales (Covington and Moore, 1994; Keane et al. 2002; Varner et al. 2005). The consequences of suppression-altered fire regimes include a reduction in or loss of ecosystem services, and vastly altered fuels and potential future fire behavior. In woodland habitats, for example, tree densities increase and the structure of the landscape is homogenized (Taylor 2004; Hutchinson et al. 2008; Nowacki and Abrams 2008). Further the canopy is occupied by shade-tolerant, fire-sensitive trees and the accumulated litter in unburned forest floors can lead to reduced species diversity and low abundance or species cover (Hiers et al. 2007; Engber et al. 2011). Plant species that benefit from disturbance and exposed bare soil typically decline (Harvey et al. 1980; Gilliam and Platt 1999; Knapp et al. 2007).

As a result of these undesirable changes in habitat structure and function associated with lack of fire, the District employs prescribed burning to maintain habitat quality, ecosystem function and species diversity.

Objective 4. Optimize Burn Return Intervals

Fire frequency refers to the recurrence of fire in an area over time, while the burn return interval is the time between fires in a designated area. Vegetation monitoring of District preserves has shown that Burn Return Intervals between 0-1 and 2-3 years is ideal for maintaining native species richness (Figure 1). This means that optimizing our prescribed burn program to ensure that high quality habitats are burned every 3-4 years to maintain species diversity. District monitoring efforts revealed a similar pattern in both prairie and woodland habitat.

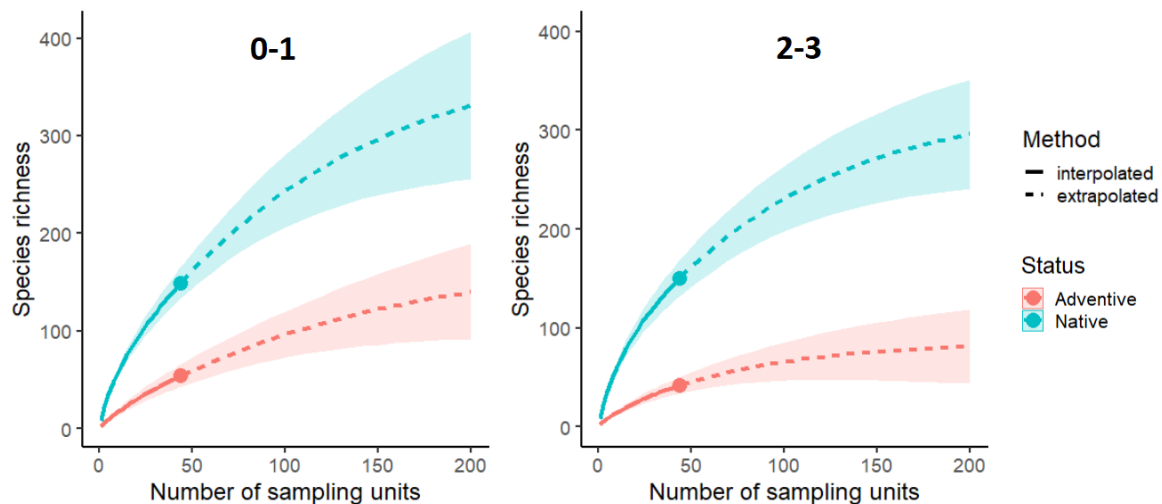


Figure 1. Optimize Burn Return Intervals - species richness, or the number of species observed, during vegetation monitoring of District preserves in 2020 and 202. Monitoring both prairie and woodland habitats across a chronosequence of burning revealed that the number of native species is higher when burning occurs more frequently, with a burn frequency of 1- 4 years. Additionally, the number of invasive species is lower when prescribed burning is conducted more frequently.

Objective 5. Ensure Safety of All Prescribed Burn Operations

The District adheres to all established safety protocols when conducting prescribed burning. Burn units are well-established and the optimal conditions for burning each are well documented. Burn breaks are designed to ensure safe containment across and within established burn units. Burn crews are well-trained, experienced, and equipped with the proper Personal Protective Equipment. The District follows the Prescribed Burn Procedures during the planning, implementation and reporting of all prescribed burning activities. District staff periodically revise the prescribed burn management procedures to reflect changes in District staffing and/or regulations.

PRESCRIBED BURN MANAGEMENT PROCEDURES

TERMINOLOGY

The terminology and titles listed below are utilized throughout the Prescribed Burn Management Procedures. Each italicized term or title is followed by a definition for that term or position. Position definitions identify the roles, responsibilities, and required burn training of the positions involved in the Prescribed Burn Management Program.

Burn Boss - District staff member that leads a prescribed burn. The Burn Boss communicates directly with the Burn Crew and the Burn Operations Coordinator during a prescribed burn. The Burn Boss also communicates directly with the local emergency response units before, during, and after prescribed burns.

Burn Crew - All of the individuals working together to safely and efficiently implement a prescribed burn. Minimum training required for a person to be a burn crew member is successful completion of National Wildfire Coordinating Group S-130 Firefighter Training & S-190 Introduction to Fire Behavior *or* successful completion of the Midwest Ecological Prescription Burn Crew Member Training.

Burn Operations Coordinator - District staff in the Natural Resources Department who is responsible for the coordination and implementation of prescribed burns.

Burn Planning Coordinator - District staff member in the Natural Resources Department who coordinates the annual planning of the burn program, develops and updates burn plans and units, and establishes the annual burn priorities, with input from the Natural Resources staff.

Burn Plan - A detailed prescription that identifies the burn units in a preserve, the weather parameters, any preserve hazards, preferred wind directions, preferred burn method, smoke management, access, ecologically sensitive areas, ecological goals of burn management, any special conditions, preserve map and a list of local or county authorities and homeowners to be contacted.

Burn Unit - A District preserve or unit of a preserve delineated to receive burn management.

Internal Incident - An event during a prescribed burn when fire burns outside of the intended burn unit(s) and requires the Burn Boss or Crew Boss to reallocate resources or people to control the fire. If an internal incident occurs, it is by definition outside of the intended burn plan. Internal incidents may or may not threaten public safety or property. Internal incidents may or may not be containable by District staff.

Prescribed Burn - A fire implemented in a skillful manner to vegetative fuel in woodlands, grasslands, wetlands, and savannas at specific locations for specific ecological purposes and under exacting weather and fuel conditions to achieve ecological and management goals.

Wildfire - Any unplanned ignition of fuels that requires active or passive containment or suppression.

POSITION DESCRIPTIONS

Burn Boss - Burn Bosses must be a Prescribed Burn Manager as certified by the State of Illinois, and must be approved by the District's Burn Program Coordinator and the Director of Natural Resources.

The Burn Boss is the main contact for communication and is responsible for:

- Implementation of burn operations, including adjustment of burn breaks, pattern of ignition, smoke management, mop-up operations and mECO data entry
- Notifying mandatory and discretionary contacts pre- and post-ignition and recording contact name and time of contact
- Implementing Burn Boss checklist
- Leading the pre-burn meeting with all burn crew members to provide prescribed burn strategy, check communications, assign crews, provide site/burn unit maps, and discuss escape routes/safety zones and all known site hazards
- General communications with and management of the burn crew liaison
- Communications with the Burn Operations Manager and all relevant local emergency response units
- Monitoring weather conditions
- Delegation of work to Burn Crew members
- Assessing fire behavior during prescribed burn
- Determining if a prescribed burn requires after-hours or overnight monitoring
- Distribution of resources and equipment during a prescribed burn
- Communication of overtime needs during burn
- Providing input on seasonal burn priorities
- Daily communication during the burn season with the Burn Planning Coordinator to determine burn unit selection
- Utilizes mECO to record burn event data (weather conditions, staff hours, fire behavior, etc.)
- Preparation of reports if an incident occurs
- Determination that a prescribed burn is completed and release of burn crew members and communication liaison
- Contacting the Burn Operations Coordinator and Ranger Police shift supervisor when crews have safely left the burn site
- Mentoring new Burn Bosses and Burn Crew Members
- May act as Burn Operations Coordinator

Burn Crew Member - Any District staff member or District volunteer who assists with a prescribed burn. Burn crew members are overseen by the Burn Boss during a prescribed burn. Burn Crew Members are responsible for:

- Carrying out the requirements of the respective assignments once assigned by the Burn Boss
- Maintaining situational awareness of their surroundings and fire/weather conditions, and communicating any concerns to the Burn Boss
- Maintain possession of assigned equipment
- Proper use and care of assigned equipment
- Setting up and packing up fire equipment before and after a burn
- Setting up and taking down signage as directed by the Burn Boss
- Assisting with mop-up operations
- Staying at the prescribed burn until released by the Burn Boss
- Maintaining good physical condition (e.g., hydration) during a prescribed burn

Burn Operations Coordinator - District staff in the Natural Resources Department who is responsible for:

- Coordination and allocation of personnel resources and equipment for implementation of prescribed burns
- Communication with District Public Safety staff and other District staff if internal or external burn incidents occur that threaten public safety or property
- Communicating overtime need to Director of Natural Resources for approval
- Oversight of equipment maintenance and purchase of burn program equipment
- Supervision and scheduling of pre-burn season preparation work
- Identifying burn training opportunities for District staff
- Sending electronic burn notifications on the day of a burn
- Providing input on burn priorities
- Reviewing and providing edits and sign-off to all newly developed or updated prescribed burn plans
- Reviewing mECO Burn Reports
- Completing all field reviews of burn incidents and final review of incident and PDRMA reports
- Daily communication during the burn season with the Burn Planning Coordinator to determine burn unit selection
- Tracks and maintains required training and experience of burn crew members, crew bosses and burn bosses in the Natural Resources Department

The Burn Operations Coordinator communicates directly to the Director of Natural Resources. Burn Operations Coordinator experience requirements are equivalent to the Burn Boss. The Burn Operations Coordinator may act as the District's liaison to the Illinois Prescribed Fire Council.

Burn Planning Coordinator – District staff in the Natural Resources Department who is responsible for:

- Coordination of the burn program annual planning
- Development and updating of burn plans and units
- Establishment of annual burn priorities with input from Natural Resource Department staff
- Securing state and local burn permits
- Distribution of written burn notifications to private and public landowners in coordination with Community Engagement & Partnerships staff
- Preparation of annual Prescribed Burn Management Program summary report
- Establishing wildfire response plans with local fire departments
- Identifying burn training for the Department of Natural Resource staff
- Responds to public complaints or questions
- Communicates with the Burn Operations Coordinator to determine daily burn unit selection(s)
- Preparing and submitting an annual burn summary report to IEPA
- May act as the Burn Operations Coordinator

The Burn Planning Coordinator communicates directly to the Director of Natural Resources. Burn Planning Coordinator experience requirements are equivalent to the Burn Boss. The Burn Planning Coordinator may act as the District's liaison to the Illinois Prescribed Fire Council.

Director of Natural Resources – The Director of Natural Resources is responsible for:

- Providing final approval of prescribed burn plans, burn units and seasonal burn priorities
- Approval of union employee overtime
- Informing appropriate District Directors, the Executive Director, Risk Manager, and Commissioners of any internal or external burn incidents.
- Assisting in the evaluation of burn incidents and necessary program improvements to prevent future incidents
- Annual budgeting for Prescribed Burn Management Program equipment, temporary hires, and overtime
- Communicating with local fire departments to improve communications with the District on Wildfire Response
- Responds to public complaints or questions as needed
- Liaison with Chicago Wilderness on regional prescribed burn management initiatives
- Informs appropriate District Directors and the Executive Director of the status of the Prescribed Burn Management Program, annual achievements and program improvements.

Communications Liaison / First Responder – District emergency response staff in the Public Safety Department who is responsible for:

- Responding to public complaints
- Providing traffic control support to Burn Crews
- Providing, as necessary, field assessment of overnight complaints following a prescribed burn
- Communicating directly with Burn Boss in the case of an overnight complaint
- Communicating directly with local and county emergency personnel
- Communicating any wildfire incidents to the appropriate Public Safety Department Supervisor and the Burn Operations Coordinator
- Preparation of Loss of Property and Police reports with assistance from Burn Boss

GIS Analyst – The GIS Analyst is responsible for:

- Ensuring maintenance of burn history data in geographic information systems
- Providing program summary statistics as requested

Incident Commander (IC) - The individual responsible for oversight and coordination of actions during an emergency response. IC ensures that the incident is managed safely, effectively, and efficiently through the framework of the Incidental Command System. The IC authorizes incident objectives and strategies that collectively delineate a course of action. Typically, the IC is the first responder to an incident, such as the Crew Boss, Burn Boss, fire department, local police or the District's Public Safety staff.

The IC has control of the incident until the incident has been declared resolved, or a more qualified responder arrives on scene and command is relinquished, or the IC appoints another individual as IC.

PROGRAM PROCEDURES

BURN PLANNING

Burn Plans

Each burn unit shall have a written burn plan that is approved by the Director of Natural Resources prior to implementing a prescribed burn. Burn Plans shall include: Emergency Assistance Contacts, Pre-Ignition Notification, Permits, Description of Prescribed Fire Area, Goals and Objectives, Burn Prescription (Weather Conditions and Fuel Moisture, etc.), Smoke Management and Sensitive Areas, Firebreak Preparations, Ignition Plan, Holding Plan and Hazards, Contingency Plan, Mop-up, Pre-Burn Checklist and Crew Briefing Checklist.

Burn plans shall be prepared and updated by the Burn Planning Coordinator and the Burn Operations Coordinator with input from Burn Bosses and Natural Resource Division staff. Burn plans shall be updated, as needed before each burn season as new conditions develop, such as new notifications, new development adjacent to the unit or within the unit, etc. Burn plans include a Day of Implementation Plan (include emergency and notification contacts, unit maps, smoke sensitive areas, weather report, and burn boss check list) and a Preserve Burn Plan (includes information about fuel types, burn management goals and other site level information). All burn plans shall have sign-off by the Burn Planning Coordinator and the Burn Operations Coordinator prior to review and approval by the Director of Natural Resources. The Burn Operations Coordinator shall provide updated Burn Day Implementation Plans and the Preserve Burn Plans to Burn Bosses. All burn plans will be made available to local fire departments.

Burn Day Implementation Plans

Burn day implementation plans should consider the following weather conditions as guidelines, and ensure that existing conditions are not expected to exceed the top end of the range of these generally accepted-as-safe parameters.

PARAMETER	RANGE
Temperature	32° - 75° F
Relative Humidity	15 – 60%
Wind Speed	5 – 25 mph (30ft winds)

All burning may take place based on optimal conditions on site, allowing for minimal adverse impacts on flora and fauna. The Burn Boss will monitor the fire to ensure that smoke hazards do not occur; that no loss of property or ecological habitat occurs; and that the safety and well-being of the public and preserve users is protected at all times. The goal of smoke management and mop-up shall be to avoid adverse conditions affecting roadways and or adjacent neighbors and by discontinuing smoke generated by the burn unit and assuring further ignition shall not reoccur. The degree of mop-up may be influenced by current or anticipated weather conditions, and may be directed by the Burn Boss as needed per site. The National Oceanic Atmospheric Administration (NOAA) shall be used as the official weather data source.

Permits

Burn Planning Coordinator shall secure all required permits, including an open burn permit from the Illinois Environmental Protection Agency and any local fire departments or municipalities permits where the District may implement a prescribed burn before the fall burn season of each year. The Burn Planning Coordinator shall provide copies of these permits to the Burn Operations Coordinator. The Burn Operations Coordinator shall provide copies the permits to the Burn Bosses. The Burn Planning Coordinator shall provide an annual prescribed burn summary to IEPA.

Annual Public Notifications

Written notifications shall be sent out to private and public landowners within ¼-mile of preserves where a burn is planned 2 to 4 weeks before the start of the fall burn season. Due to the changing climate conditions, it is sometimes difficult to define the boundaries between the traditional fall and spring seasons, and conditions may be favorable for burning even in mid-winter. Therefore, a singular notification will serve as the notification for any potential burns occurring during the fall, winter, or spring seasons. If any new burn areas are added to the burn priority list that would not be covered by the initial notification, then written notification shall be mailed to the newly identified landowners who did not previously receive notification. The Burn Planning Coordinator is responsible for arranging the printing and mailing of the notification in coordination with Community Engagement and Partnerships Department . The notification shall be approved by the Director of Natural Resources prior to mailing.

Schools and other smoke sensitive institutions and businesses within 1 mile of a preserve shall be sent a letter every one to three years as a means of updating the burn plan contact list with current contact information. The Burn Planning Coordinator is responsible for preparing and mailing of the letter in coordination with the Community Engagement and Partnerships (CEP) Department. The letter shall be approved by the Director of Natural Resources prior to mailing. Complaints or questions about the prescribed burn program shall be handled by the Burn Planning Coordinator, whenever feasible. Staff shall forward any complaints or questions they receive, or responses they provide to the Burn Planning Coordinator for tracking. All inquiries shall be tracked in a seasonal prescribed burn public inquiry log. A pre-burn season press release shall be provided to the media and posted on the District's website by CEP. The Burn Planning Coordinator shall work with the District's CEP Department as necessary, to develop and revise publications, notifications and brochures to educate and notify the public about the Prescribed Burn Management Program.

Burn Priority List

A list of burn units that require burn management in a given season shall be developed by the Burn Planning Coordinator with input from the District's Natural Resources Department. A working list is provided to the Burn Operations Coordinator by August 15th of each year, and the final annual list of burn units is approved by the Director of Natural Resources.

The list shall include: GIS file showing the geographic locations of the units and a ranking of priority (e.g., Must Burn, High, Medium, Low Priority and Do Not Burn, or equivalent ranking system). Information on the prescription and rationale for the priority should be included. The priority list is considered a working document; priority units may be added or removed from the list and re-ranked as needed, depending on seasonal conditions, unexpected conditions, etc.

Pre-season Burn Preparation

Based on the Burn Priority List, the Burn Operations Coordinator shall work with the Burn Planning Coordinator and Burn Bosses to identify units that require burn preparation prior to the burn season, including installation of mown burn breaks. The Burn Planning Coordinator shall approve the location and method of installation of all preseason burn preparation. The Burn Operations Coordinator shall oversee the implementation of approved preparations. Once complete and prior to the burn season, the Burn Operations Coordinator shall, with assistance from GIS Analyst, map all completed burn preparation locations in GIS to make them available to all staff.

The Burn Operations Coordinator is responsible for overseeing the organization, maintenance, and preparation of all burn equipment, including communication devices and safety gear, prior to the start of the season, ensuring that sufficient equipment is in safe and effective working order.

Burn Unit Selection during the Burn Season

The Burn Operations and Burn Planning Coordinators (Burn Coordinators) shall communicate the day before each likely burn day and discuss potential weather conditions, resource availability, and possible burn units to burn. On the morning of a burn day the Burn Coordinators shall determine, with input from the Burn Bosses and Burn Crew Members, which units to burn and the number of burn crews needed. The Burn Planning Coordinator will review the units to be burned with the Director of Natural Resources.

The Burn Operations Coordinator, in consultation with the Burn Bosses, shall determine the necessary burn crew size for each burn unit and allocate resources and equipment for each burn unit. The Burn Operations Coordinator is responsible for preparing maps of each burn unit and assigning Burn Bosses and crew members to each burn team.

The Burn Operations Coordinator will communicate the final preserves to be burned and the Burn Boss contact information to District staff, Commissioners and Volunteer Stewards through an email announcement. Additionally, the Burn Operations Coordinator will notify the public of preserves to be burned by updating on a daily basis the District's website to list the preserve locations for prescribed burns before the burns are started. Notification shall be updated by the Burn Operations Coordinator if burn crews change to different units or preserves during the day.

Equipment Resources

The types of firefighting equipment and vehicles available within the District include, but are not limited to the following:

Fire Trucks with pumper units	Leaf Rakes
Portable Water Backpacks	Pulaski
ATV's with portable pumper units	Leaf Blowers
Drip Torches	Fire Flappers
Fire Rakes	Chainsaws

Personnel Safety Equipment

All Burn Crew Members shall have and wear the following safety equipment during a prescribed burn:

Leather Boots

Leather Gloves

Eye-protection

Nomex Fire Suit

Burn Helmet

Communications Radio

Map of Burn Unit

PRE-IGNITION

A Burn Boss shall be present while any prescribed burn is being conducted on District lands.

Pre-Burn Reconnaissance

It is the responsibility of the Burn Boss to assess the conditions of the burn unit to verify unit boundaries, survey combustible fuels, verify local weather conditions and to look for any unexpected conditions or hazards that might alter the ignition plan for the unit or require last minute preparation.

Pre-Ignition Notifications

The Burn Boss is responsible for ensuring all local notifications are made prior to ignition on the morning of any prescribed burn. Notification via phone call shall be made to the following entities:

- Local Fire Department(s)
- County Sheriff Dispatcher
- Local Law Enforcement
- Hospitals, schools, private landowners with health concerns or any other entity listed in the burn plan
- The Burn Boss shall post signs around the site the day of the burn on nearby roads surrounding the burn site and shall notify schools and any smoke-sensitive residents and/or businesses within ¼ mile radius from the site that have requested such notification. The list is available via mECO for each burn unit.

Public Safety Position Presence

It is at the discretion of the Burn Boss that a member of the Public Safety staff be present during a burn to assist with traffic control and Burn Crew safety on roadways. The request for a Public Safety staff member shall be made to the Burn Operations Coordinator. The Public Safety staff member shall take direction from and coordinate with the Burn Boss and shall have constant communication with the Burn Boss.

Pre-burn Meeting

The Burn Boss shall hold a pre-burn meeting with all burn crew members prior to starting a burn. The pre-burn meeting should cover the goals of the burn, unit boundaries, location of firebreaks, safety zones, escape routes, potential hazards, description of fuels, ignition plans, holding plans, fire line sequencing, contingency plan, and communication methods and protocol. The Burn Boss is responsible for using the Burn Boss checklist as a reminder of all topics to cover during the burn meeting.

Methods of Communication

The Burn Boss shall have a mobile phone at all times in order to be in contact with local authorities.

All crew members shall have access to a functioning communication device that allows them to communicate with the Burn Boss and all other crew members. Proper radio communication procedures shall be used at all times during the prescribed burn.

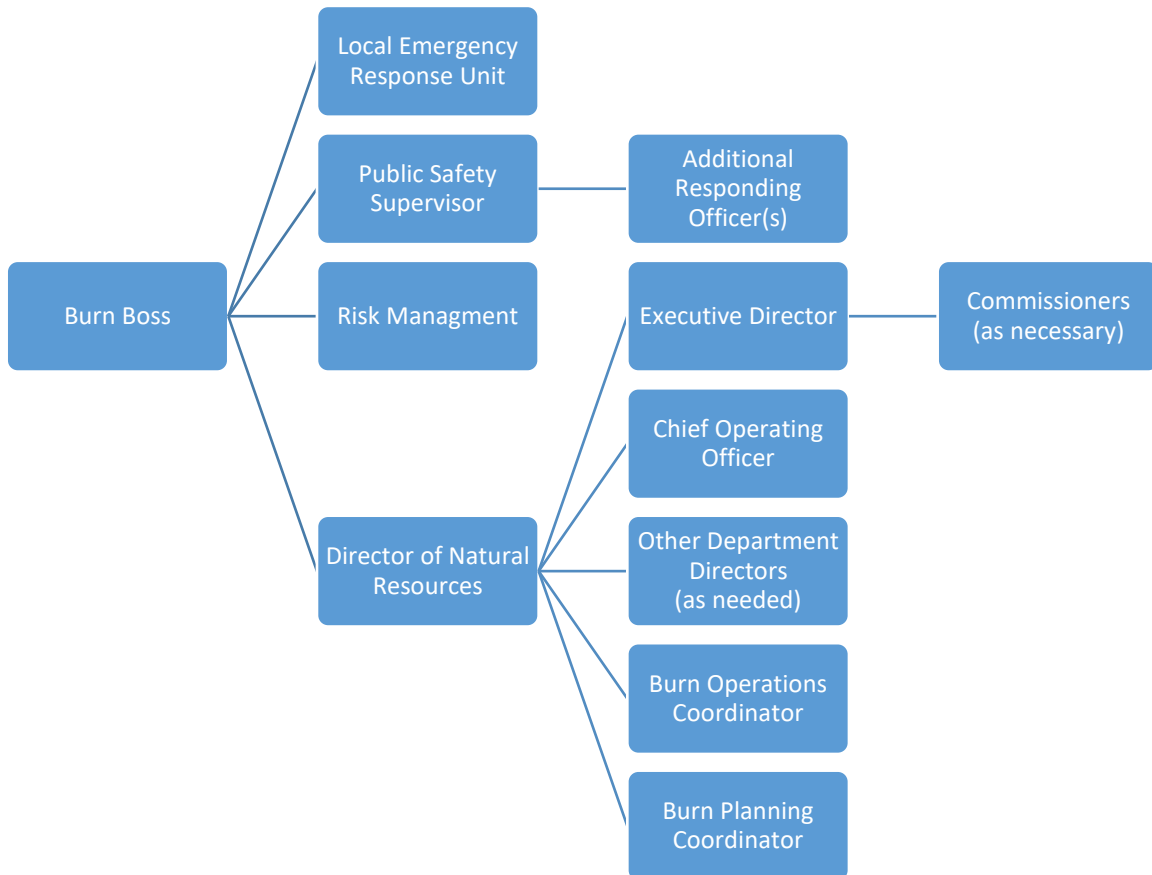
Hazard Assessment and Public Safety

The Communications Liaison/First Responder (if requested to be on preserve by the Burn Boss via the Burn Operations Coordinator) shall be assigned by the District's Public Safety shift supervisor and shall be responsible for the following:

- Be able to communicate with all Burn Crew Members and be in constant communication with the Burn Boss
- Shall handle all on-preserve public questions and ensure that visitors do not enter the burn unit or smoke hazard areas
- Shall notify proper emergency authorities if directed by the Burn Boss
- Shall assist Burn Boss in determining any smoke hazards
- Shall assist/coordinate any traffic control that is required
- Shall direct emergency authorities to proper staging areas as noted in the burn plan and direct them to the Burn Boss
- Shall coordinate with media representatives or photographers/videographers at a burn.

Internal Incident Emergency Assistance

If during a prescribed burn fire escapes the intended burn unit *and* requires significant reallocation of resources or a change to the burn plan it is at the discretion of the Burn Boss to call the fire department. Any incident requiring an emergency response will be consistent with the District's Emergency Response Procedures. If imminent threats or incident of damage of property (public or private), harm to human life, traffic or safety issues occur, the Burn Boss will initiate the following communications at first need of assistance or at the first safe opportunity



In the above communication chain, the Director of Natural Resources will contact the Chief Operations Officer immediately following notification of an internal incident. If the Chief Operations Officer is unavailable, the Director of Natural Resources shall contact the Executive Director.

Internal Incident Reporting

The following reports shall occur after an internal incident:

- If a minor injury results (requires medical attention but not emergency medical attention) from the incident the Burn Boss shall contact Risk Management immediately to notify them of the injury.
- If a major injury results from the incident (requires emergency medical attention or hospitalization) the Burn Boss shall contact Risk Management as soon as possible to notify them of the injury. Further, if any injury occurs during a prescribed burn, the Burn Boss shall prepare an accident report and submit that report to the Burn Operations Coordinator. The Burn Operations Coordinator will provide a copy of the report to Risk Management and the Director of Natural Resources. The Burn Boss shall also prepare a PDRMA report to be submitted to Risk Management.
- If property damage or loss of property occurs, the Reporting Officer shall prepare a police report or loss of property report and submit to Risk Management for compensatory purposes within 12 hours of the incident.

Overtime Request

The Burn Boss shall notify the Burn Operations Coordinator by 2:00PM if he or she is requesting weekday overtime for Burn Crew Members. The Burn Operations Coordinator shall relay this request to the Director of Natural Resources for approval.

For weekend or holiday overtime approval, the Burn Operations Coordinator shall contact the Director of Natural Resources no later than 2:00PM the last regular work day preceding the weekend or holiday day for which approval is being requested.

The Director of Natural Resources shall notify the Chief Operations Officer of any overtime approval related to the burn program.

POST-IGNITION

The Burn Boss is responsible for using the Burn Boss checklist as a reminder of all items and issues to address during post burn procedure.

Mop-up

The Burn Boss will determine the amount and extent of mop-up procedures. After completion of the prescribed burn crews shall check the burn unit for any hazards. At the minimum, all material within 100 feet of any fire line shall be extinguished or moved away from the fire line to a safe distance. Any standing trees that are burning or smoldering shall be felled to the ground and the burning portion isolated. Some fuels, such as large logs or stumps, may be left burning or smoldering as long as they are lying on the ground in an area where other fuels have been completely consumed and are beyond 100 feet of a fire line. The Burn Boss may request, through the Burn Operations Coordinator, that a member of the Public Safety staff check the burn unit that evening if a burn unit has fuels that are left burning or smoldering overnight.

Perimeter Check

After mop-up is complete, the Burn Boss shall check the burn unit perimeter for hazards, ground fire, burning stumps or logs in view of roadways, chimney fires, etc. Before leaving the burn unit the Burn Boss shall verify that burn unit is secure and any remaining fire is safely contained within the perimeter of the unit.

Post-burn Notifications

After completion of the prescribed burn, the Burn Boss shall notify the local emergency agency responsible for response, the Burn Operations Coordinator and the Public Safety shift supervisor that the prescribed burn has been completed and that all crew members have safely left the site.

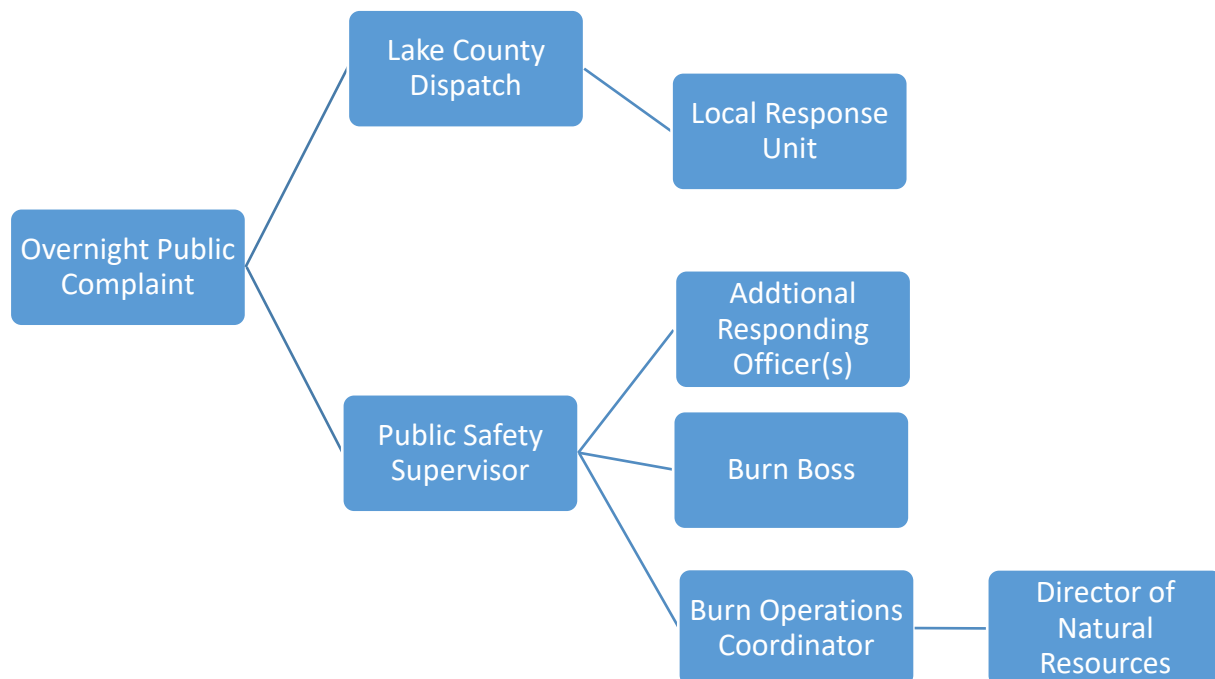
The Burn Operations Coordinator shall notify the Director of Natural Resources upon the completion of any burn activity requiring overtime.

Signage

Burn signage may be left at a unit overnight but shall be removed from a preserve by 10:00AM the morning following the burn.

Overnight Complaints

If the local fire or police department requests a follow up visit to a recently burned unit after burn crews have left a preserve the Communications Liaison will dispatch a Ranger Police Officer to the burn unit in question and determine whether the Burn Boss should be notified. The following communication chain shall be followed as needed:



Post Burn Reporting

At the end of each burn day, each Burn Boss will submit a report into mECO.

Post Burn Meeting

Every morning following a burn day, all burn teams will congregate for a post burn meeting, led by the Burn Operations Coordinator, to discuss the previous day's burns, identify any problems, resource issues, new conditions observed on the preserve, etc. Issues identified in the meeting will be followed-up by the Burn Operations and Burn Planning Coordinators.

WILDFIRE ASSISTANCE AND COMMUNICATION PROCEDURES

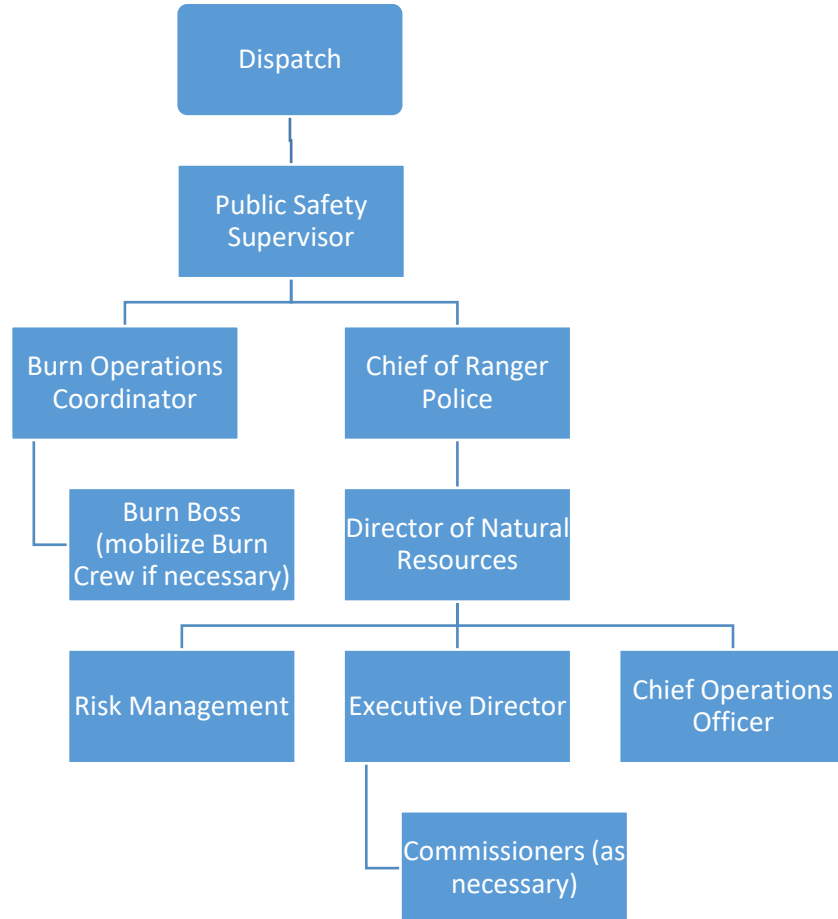
Wildfire response is a reactionary event as it is an ignition of fuels not initiated by the District that requires active or passive containment or suppression. As such, the responses can be different in each instance and requires adaptability and critical thinking on the part of first responders. Most frequently the response is initiated from a wildfire reported to public safety personnel from a preserve user, someone driving by a preserve or a preserve neighbor. The initial report may be to the local fire protection agency, the Lake County Sheriff or to Forest Preserve staff. The National Incident Management System (NIMS) will guide wildfire response regardless of which agency or department is the first to arrive at the scene.

If a wildfire is reported to District staff by the public or if any staff member discovers a wildfire, 911 shall be called immediately. When a Ranger Police shift supervisor is notified of a wildfire, an Officer will be dispatched to the area in question to secure the preserve and ensure the safety of people. Any incident requiring an emergency response will be consistent with the District's Emergency Response Procedures. The Burn Operations Coordinator is responsible for allocation of appropriate burn crew resources to the preserve in coordination with the IC. Any District staff reporting to a wildfire should first report to the Incident Commander (IC) on site and provide support as directed. Ranger Police should provide security as directed. Fire crews should provide suppression activities as directed by IC.

If a wildfire occurs while the District is conducting prescribed burns at other sites, the Burn Operations Coordinator shall determine what resources are available to assist with control of the wildfire in coordination with the IC. If crews are requested from the prescribed burns, the Burn Boss shall determine which, if any, crew members can be released. The Burn Boss shall insure that the prescribed burn site is secure before releasing crew members.

Internal Communication of a Wildfire Event

Internal communication tree for a wildfire incident on District lands:



In the above communication chain, the Director of Natural Resources will contact the Chief Operations Officer immediately following notification of a wildfire incident. If the Chief Operations Officer is unavailable, the Director of Natural Resources shall contact the Executive Director.

Post Wildfire Reporting

A member of the Public Safety staff shall be responsible for completing an incident report and PDRMA report, and follow up on any issues that may involve investigations or violations of law after the wildfire incident. The Burn Operations Coordinator is responsible for completing a Wildfire/Escape Incident report and map within 48 hours of the event and forwarding the information to Risk Management, Director of Natural Resources, and the Burn Planning Coordinator. The Director of Natural Resources shall forward the report on to the Chief Operations Officer.