

**Northern Lights, Inc.**  
**Wildland Fire Mitigation Plan**

September 18, 2024

## 1.0 Executive Summary

When the Washington Legislature passed [House Bill 1032](#) in July 2023 it stated that, *it is in the best interest of the state, our citizens, and our natural resources to identify the sources of wildland fires; identify and implement best practices to reduce the prevalence and intensity of those wildland fires; put those practices in place; and by putting those practices in place, reduce the risk of wildland fires and damage and losses resulting from those fires.*

The Legislature directed the Department of Natural Resources (DNR), in consultation with the Energy Resilience and Emergency Management Office of the Department of Commerce, to contract with an independent consultant with experience in developing electric utility wildfire mitigation plans to develop an electric utility wildfire mitigation plan format and a list of elements to be included in electric utility wildfire mitigation plans. The Wildfire Mitigation Plan (WMP) format below achieves the direction of the Legislature.

By October 31, 2024, and every three years thereafter, each consumer-owned utility and investor-owned utility must review, if appropriate revise, and adopt its wildfire mitigation plan. When reviewing or revising a wildfire mitigation plan, utilities must use the recommended format and elements contained in the WMP format. The plan must be submitted to the utility wildland fire prevention advisory committee created in RCW 76.04.780 to be posted on their website.

The template and list of elements included were developed in conjunction with the Wildland Fire Prevention Advisory Committee, electric utilities, the state fire marshal, the Governor's Office of Indian Affairs, and the public. The WMP format is intended to function as a guide and provide utilities with suggested elements for their plan which are informed by best practices demonstrated to reduce the prevalence and intensity of wildfires and which reduce the risk of wildfire and the resulting damage and losses.

Each section of the WMP format provides suggested topics, language, and guidance for its completion. This cover letter provides additional guidance to assist utilities in filling out the WMP format with relevant information. It is recognized that each utility faces unique geography, terrain, vegetation, and other characteristics that will present a variety of risk levels and result in unique and tailored approaches to address that risk. To that end, the WMP format has been designed to accommodate a broad range of recommended elements. It is not expected that all utilities will have practices or even a need to complete all sections or elements to the same degree. There are no statutory requirements directing what utilities must include in their plans. It is at the discretion of each utility to determine the elements applicable to its own wildfire mitigation efforts and the level of detail necessary to describe each element.

The WMP format was developed in recognition that some utilities may have wildfire mitigation programs that are more robust than others. It is acceptable to note these limitations when completing the WMP. For any section where a program overlaps two or more elements of the plan, it is acceptable to select the most applicable element to describe the program and reference that section where applicable for other areas. It is not necessary to repeat the program description multiple times.

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## **2.0 Wildfire Mitigation Plan Overview**

### ***2.1 Purpose of the Wildfire Mitigation Plan***

The purpose of this Wildfire Mitigation Plan (WMP) is to document the strategies, programs, and procedures in place to mitigate the threat of electrical equipment ignited wildfires by Northern Lights, Inc. (NLI). The WMP addresses the unique features of its service territory, such as topography, weather, infrastructure, grid configuration, and areas most prone to wildfire risks. The plan includes the maintenance of its transmission and distribution assets as well as the management of vegetation in the right-of-way (ROW) areas that contain these assets.

The WMP is a living document that will be reassessed routinely as projects and initiatives are proposed and completed. Primary accountability for plan implementation resides with the General Manager.

### ***2.2 Description of Where WMP Can be Found Online***

The WMP will be made available publicly on the Washington utility wildland fire prevention committee website under RCW 76.04.780.

### 3.0 Utility Overview

#### 3.1 Utility Description and Context Setting Table

**Table 1. Context-Setting Information Table**

<b>Utility Name</b>	Northern Lights, Inc.
<b>Service Territory Size (sq miles)</b>	Washington: 20 Idaho: 3,000 Montana: 2,500 TOTAL: 5,520
<b>Service Territory Make-up</b> (Note: data are from national land cover database from USGS.gov, not all categories represented in this template)	NLI's Overall Service Area (ID, MT, & WA) 3% Urban 2% Agriculture 1% Barren/Other 78% Conifer Forest 3.5% Herbaceous 10.7% Shrub 1.8% Water  Washington ONLY: 0.1% Urban * Sum of Developed 0.2% Agriculture * Hay/Pasture 97% Conifer Forest *Evergreen Forest 0.7% Herbaceous *Herbaceous 2% Shrub * Shrub/Scrub
<b>Service Territory Wildland Urban Interface (based on total area)</b>	NA / Not tracked.
<b>Customers Served</b> (Note: NLI considers customers as members)	Idaho: 18,838 Montana: 4,971

	Washington: 19 (As of August 2024)																								
<p><b>Account Demographic</b> [Note: Please provide as a percent of total customers served]</p>	<p>Washington is 100% residential.</p> <p>NLI overall:</p> <table border="1" data-bbox="1117 418 1745 993"> <thead> <tr> <th>Type</th> <th>Count</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Irrigation</td> <td>52</td> <td>0.21</td> </tr> <tr> <td>Large Commercial</td> <td>15</td> <td>0.06</td> </tr> <tr> <td>Large Power</td> <td>45</td> <td>0.19</td> </tr> <tr> <td>Primary</td> <td>7</td> <td>0.03</td> </tr> <tr> <td>Residential</td> <td>23050</td> <td>94.83</td> </tr> <tr> <td>Security and Street Lights</td> <td>348</td> <td>1.43</td> </tr> <tr> <td>Small Commercial</td> <td>789</td> <td>3.25</td> </tr> </tbody> </table>	Type	Count	%	Irrigation	52	0.21	Large Commercial	15	0.06	Large Power	45	0.19	Primary	7	0.03	Residential	23050	94.83	Security and Street Lights	348	1.43	Small Commercial	789	3.25
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<p><b>Utility Equipment Make-up (circuit miles)</b> [Line miles are calculated using data from the Engineering Model's GIS data length field. GIS uses the NAD 83 State Plane Idaho West FIPS 1103 coordinate System.]</p>	<p>Overhead Distribution is 7- 34.5 Kv Overhead Transmission is <math>\geq</math> 34.5Kv Underground Distribution is 7- 34.5 Kv Underground Transmission is <math>\geq</math> 34.5Kv</p> <p><b>Washington</b> Overhead Distribution: 5.40 miles Overhead Transmission: 0</p>																								

	<p>Underground Distribution: .61 miles  Underground Transmission: 0</p> <p><b>Total System (WA, ID, MT) 5,280</b></p> <p>Overhead Distribution: 1345.93 miles  Overhead Transmission: 47.79 miles  Underground Distribution: 1266.25 miles  Underground Transmission: .50 miles</p>
<p><b>Has developed protocols to pre-emptively shut off electricity in response to elevated wildfire risks?<sup>1</sup></b></p>	<p>No.  See Section 7.</p>
<p><b>Has previously pre-emptively shut off electricity in response to elevated wildfire risk?</b></p>	<p>No.</p>

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<sup>1</sup> For many utilities this will be a reference to a Public Safety Power Shutoff (PSPS) event. These events, whether through a formally defined PSPS program or not, are recognized as a safety measure of last resort initiated by utilities to pre-emptively de-energize specific powerlines during critical fire weather to reduce the risk of the electric system being involved in an ignition. The decision to either have or not have this type of practice is at the operational discretion of the individual utility.



## **4.0 Objectives of the Wildfire Mitigation Plan**

The objective of the WMP is to minimize the possibility that NLI's facilities may be an original or contributing source of ignition and improve NLI's ability to withstand fire weather conditions and quickly recover services. NLI has evaluated the system improvements, technology, operational procedures, and training that can help to meet this objective.

The WMP was developed to be consistent with state laws of Washington, but also include NLI's service area in Idaho and Montana.

### ***4.1 Minimizing likelihood of ignition***

The WMP describes the range of activities that NLI is taking or considering, to mitigate the threat of power-line ignited wildfires, including its various programs, policies, and procedures. The plan will be iterative, promote continuous improvement, and represent NLI's efforts to implement industry best practices in a reasonable manner. This WMP also establishes methods and procedures used to construct, maintain, and operate NLI's electrical system and equipment to minimize the risk of wildfire.

### ***4.2 Resiliency of the electric grid***

NLI's design and construction of its distribution and transmission systems and equipment is intended to reduce the likelihood of ignition and improve electrical asset survivability. System hardening investments are evaluated on a case-by-case basis. When prudent, NLI utilizes system hardening measures including:

- Stronger or metal poles to address engineering standards that exceed code requirement.
- Shorter span length and larger spacing between energized conductors to reduce mid-span conductor contact.
- Relocate utility poles closer to the road to enhance access.
- Strategic undergrounding in areas prone to repeated outages due to tree exposure.

## **5.0 Roles and Responsibilities**

NLI utilizes a Board/General Manager governance and reporting hierarchy. Board members are elected by NLI member owners to a rotating four-year term. NLI's Board will be responsible for approving the WMP.

NLI staff, including the General Manager and the Engineering & Operations Manager, will be responsible for implementation and updating the WMP.

### ***5.1 Utility Roles and Responsibilities***

NLI employees have the following responsibilities regarding fire prevention and response:

- Conduct work in a manner that will minimize potential fire dangers.

- Take reasonable and practical actions to prevent fires caused by NLI electric infrastructure.
- Immediately report any observed fires and if possible, extinguish them.
- Take corrective action if infrastructure or a ROW becomes a wildfire hazard.
- Ensure data related to WMP are appropriately collected and documented.
- Provide feedback to management on the WMP and strategies to improve the WMP.

### ***5.2 Coordination with local utility and infrastructure providers***

NLI will coordinate its WMP with other utilities and infrastructure providers as necessary. In the event of a major wildfire emergency, NLI will lean on the local emergency management or incident command team to coordinate efforts among all entities.

### ***5.3 Coordination with local Tribal entities***

NLI has limited tribal residents and electric services in its service territory. Any Tribes impacted due to a wildfire will be coordinated with as needed and if a larger event, NLI will collaborate with the local emergency management team or the incident command team to coordinate among all entities.

### ***5.4 Emergency Management / Incident Response Organization***

NLI attends coordination meetings with local county emergency management agencies throughout the year. NLI provides electric services in six different counties in three states, including Pend Oreille County in Washington, Bonner, Boundary and Kootenai Counties in Idaho, Lincoln and Sanders Counties in Montana. NLI receives alerts from local agencies when threatening conditions are possible, imminent, or occurring.

Should a large-scale wildfire event occur and coordination outside of NLI be necessary with area agencies, NLI's Engineering & Operations Manager or Operations Superintendent will be assigned to coordinate with the agencies. It is anticipated that NLI would not be a lead agency in a major wildfire event, however, NLI would be involved, as necessary.

## **6.0 Wildfire Risks and Drivers Associated with Design, Construction, Operation, and Maintenance**

To establish a baseline understanding of the risks and risk drivers involved, NLI regularly evaluates its exposure to wildfire related hazards. NLI has mapped its assets overlaid with wildfire risk to provide insight into risk. This section provides an overview of the service area properties and associated risks.

### ***6.1 Risks and risk drivers associated with topographic and climatological risk factors***

NLI staff evaluates its own, as well as past experiences of other electric utilities, along with geographical characteristics within the region and field experience to determine the key potential

risk drivers. NLI then enhances its existing mitigation approaches and incorporates the best available utility practices. This combination of current and future-implemented strategies is intended to manage or mitigate the risk drivers identified below.

- Drought Conditions
- Real-Time Fire Weather
  - High Winds
  - High Temperatures
  - Low Humidity
  - Poor Moisture Recoveries
  - Red flag conditions
- Vegetation Type & Fuels
- Wildland urban interface

## ***6.2 Enterprise-wide Safety Risks***

NLI evaluated other the causes of fires at other utilities and applied our field experience to determine the potential risk drivers. The following categories were identified as risk drivers:

- Foreign contact
- Equipment failure
- Vehicle impact
- Expulsion fuses
- Wire to wire contact

## **7.0 Wildfire Preventative Strategies**

### ***7.1 Weather Monitoring***

#### **7.1.1 Current Strategy Overview**

The following resources are used by NLI for weather monitoring:

- National Weather Service (NWS) – emailed weekly briefings, event-based email notifications, live pre-event briefings and real-time access to chat and live notifications (Slack messenger). NLI staff monitors weather daily from online NWS sources.
- National Fire Danger Rating System

### **7.1.2 Planned Updates**

No changes in weather monitoring are anticipated, however, NLI will continue to evaluate available resources and tools and add additional monitoring as available.

## **7.2 *Design and Construction Standards***

### **7.2.1 Current Strategy Overview**

NLI's construction specifications include Rural Utilities Services (RUS) and National Electric Safety Code (NESC) design recommendations.

Current wildfire mitigation design and construction approaches that NLI is actively implementing include:

- Overhead to underground power line conversions
- System monitoring of substation feeders (SCADA) (partially completed)
- Recloser upgrades (partially completed)
- Pole replacements and replacing wood poles with steel poles

### **7.2.2 Planned Updates**

No design standard changes are anticipated in the next 3-year period, however, NLI will continue to evaluate and monitor changes to RUS and NESC and utility best practices.

## **7.3 *Fuel & Vegetation Management***

### **7.3.1 Current Strategy Overview**

NLI has at least one internal person assigned to oversee the vegetation management contractors and program. Contractors trim vegetation year-round and mower crews are added during the warmer weather months along with additional aerial crews. NLI's goal is to have a 7-year trim cycle for all sections of overhead line.

Dangerous or hazardous trees are removed, including dead trees at risk of falling into overhead powerlines. Right-of-way mowing is performed in areas after larger trees have been removed or if growth is minimal. A US Forest Service approved regional seed mix is also planted in many rights-of-way after a mowing crew has cleared the area. This helps prevent new trees from returning and encourages smaller vegetation to grow in the right-of-way.

NLI uses a satellite vegetation analysis provider. This provides a vegetation intelligence solution that takes data and applies AI machine learning to provide a risk-based approach to vegetation management and helps prioritize areas. NLI has utilized this service for image capture in 2023 and 2024.

### **7.3.2 Planned Updates**

NLI will continue to use the satellite vegetation analysis provider. This may lead to changes in approach to trim cycles for certain areas as more data are gathered each year.

## ***7.4 Asset Inspections and Response***

### **7.4.1 Current Strategy Overview**

NLI's current inspection strategies are as follows:

- NLI started an inspection program in 2024 utilizing mobile tablets with survey forms tied to NLI's mapping system. The goal is to inspect all overhead lines in a 7-year period. Repairs or remediation are performed when issues are noted.
- NLI contracts with a pole inspection company to test 8-10% of our poles annually. Data from the contract inspectors are input into NLI's mapping system for follow-up.
- NLI's meter reader inspects member meters with the goal of a 4-year cycle to inspect each meter. Any issues found are reported to the appropriate department for follow-up.
- As mentioned above in section 7.3, Fuel & Vegetation Management, NLI utilizes a satellite vegetation analysis provider to provide an aerial survey of NLI's overhead powerline assets. See section 7.3.1 above for more details.

### **7.4.2 Planned Updates**

NLI will modify its inspection program it started in 2024 as lessons are learned and as forms are improved upon on the mobile tablet application. No other major changes are anticipated in the next 3 years.

## ***7.5 Workforce training***

### **7.5.1 Current Strategy Overview**

NLI has monthly safety meetings where topics such as wildfire and safety are covered. This includes Washington State Department of Labor & Industries Chapter 296-45 WAC safety rules. NLI also coordinates training and other events with local fire departments.

### **7.5.2 Planned Updates**

Training needs are evaluated and managed throughout the year and training topics are modified as needed. No major changes are expected within the next 3 years.

## ***7.6 Relay and Recloser Practices***

### **7.6.1 Current Strategy Overview**

NLI currently has seasonal settings in the Yaak area ("Y line"). The seasonal settings provide a more sensitive setting for tripping a fault during summer loads.

### **7.6.2 Planned Updates**

At this time NLI is currently exploring how additional recloser operations could be implemented for fire mitigation strategies.

## **7.7 *De-energization / Public Safety Power Shutoff***

### **7.7.1 Current Strategy Overview**

NLI does not have a Public Safety Power Shutoff (PSPS) procedure, but is exploring how a PSPS protocol could be implemented.

### **7.7.2 Planned Updates**

See above 7.7.1.

## **8.0 Community Outreach and Public Awareness**

### **8.1 *Current Community Outreach and Public Awareness Program***

NLI communicates with its members through multiple means, and wildfire is a topic often covered. The resources NLI uses to communicate with its members include:

- Social media platforms.
- Website, [www.nli.coop](http://www.nli.coop)
- Print magazine and bill stuffers.
- Videos are available online and pushed to social media.
- Annual meeting and member events
- Employee meetings and interactions with members.

NLI utilizes various platforms to communicate during a major storm or other event. Should a wildfire event occur for which NLI needs to communicate with its members, the above (8.1) methods can be utilized, as well as:

- Telephonic services using an interactive voice responsive (IVR) platform.
- Coordination with local jurisdictions to push county wide messages via text or email.

### **8.2 *Planned Updates***

NLI is adding additional capabilities for text communication with its members that will be implemented within the next 3 years. Additionally, should NLI add a PSPS, or other protection scheme related to wildfire, NLI will develop a communication strategy to inform members of these changes and possible scenarios.

## **9.0 Restoration of Service**

NLI does not currently have a de-energization procedure. Restoration of service due to a wildfire event would be coordinated with local fire chiefs or incident commanders. Lines would be repaired, as needed, and patrolled prior to re-energization.

## 10.0 Evaluating the Plan

### 10.1 Metrics and Assumptions for Measuring Plan Performance

NLI has selected several metrics (see table below) intended to gauge the effectiveness of the various programs and strategies outlined in the WMP. The annual tracking of these metrics will help identify circuits most susceptible to unexpected outages, time-of-year risks, and the adequacy of the vegetation management and asset inspection schedules. NLI will reassess its operations and identify areas for improvement as more data become available, and refine the WMP as needed.

#### Performance Metrics

Metric	Rational	Measure of Effectiveness
<b>Red Flag Warnings in service area</b>	Used to adjust annual variation in criteria	Indication of overall threat level for each fire season
<b>Number of system related ignitions</b>	Effectiveness of the mitigation plan	Reduction or no material increase
<b>System Average Interruption Frequency Index (SAIFI)</b>	Assess system hardening & overall reliability	Reduction in annual average score
<b>System Average Interruption Duration Index (SAIDI)</b>	Assess system hardening & overall reliability	Reduction in annual average score

### 10.2 Identifying and Addressing Areas of Continued Improvement in the Plan

There have been no improvements to the WMP. This section is intended to be left blank.

### 10.3 Monitoring the Performance of Inspections

NLI's inspections are followed up using various notifications. For internal line inspections, any issues are assigned follow-up, and immediate issues are assigned to a service crew to repair as soon as possible. For pole testing, the contractor provides weekly reports and GIS data are provided. Any immediate issue is provided to NLI's dispatch or Operations Superintendent to assign a crew to remedy. Other lower priority items are tracked on an internal map dashboard. Vegetation inspections also are tracked on an internal map dashboard.

Inspections are considered an important part of NLI's maintenance and fire mitigation goals. The process to determine deficiencies within the electric system will continue to go through adjustments to improve the results, as deemed needed by NLI operations and engineering employees.