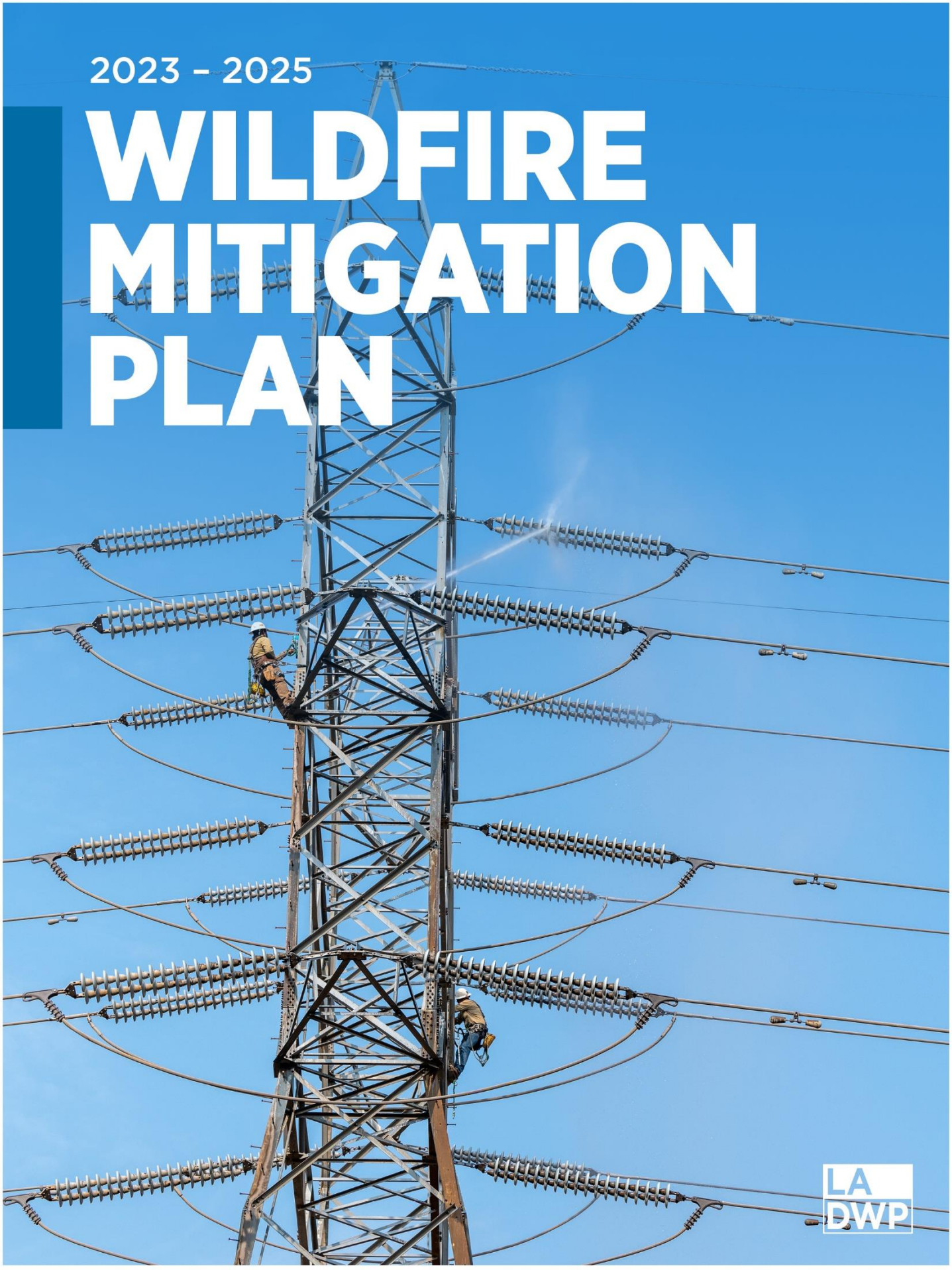
2023 – 2025

WILDFIRE MITIGATION PLAN



LA DWP

TABLE OF CONTENTS

1. OVERVIEW

1.1. POLICY STATEMENT

The Los Angeles Department of Water and Power (LADWP or Department) is a municipal utility serving the City of Los Angeles (City) and the Owens Valley, California. It exists under and by virtue of the Charter of the City of Los Angeles enacted in 1925. LADWP is a vertically-integrated utility that owns and operates the majority of its generation, transmission, and distribution systems. The LADWP exists to support the growth and vitality of the City, its residents, businesses and the communities we serve, providing safe, reliable and cost-effective water and power in a customer-focused and environmentally responsible manner. The LADWP Wildfire Mitigation Plan (Plan or WMP) was developed in alignment with its mission statement.

1.2. THE WILDFIRE MITIGATION PLAN

Wildfires, a longstanding threat to California, are increasing in intensity and frequency due to climate change, wild-and-urban interface, human activity, and development of wildlands. The significant threat posed by wildfires to public safety has resulted in a major change in the State of California's fire prevention approach where a year-round wildfire mitigation plan is required by electrical utilities.

In response to this growing threat, LADWP has developed a Plan consistent with State of California's Senate Bill 901 (SB 901) and Assembly Bill 1054 (AB 1054) with a sense of urgency to safeguard and improve public safety. The Plan will serve as a call for renewed approach by all stakeholders in the implementation of measures taken to prevent, mitigate, and respond to wildfire risks.

In addition, the Plan describes the steps that LADWP is taking to mitigate the threat of wildfires caused by electrical lines and equipment. The Power System Executive office is responsible for the oversight and implementation of this Plan. This Plan is subject to review by the LADWP Board of Water and Power Commissioners (Board) and is implemented by those identified in this Plan under Section 2, titled "Roles and Responsibilities". This Plan complies with California state law that requires publicly owned electric utilities "to prepare a wildfire mitigation plan by January 1, 2020, and annually thereafter."

The Objectives of this Plan are to:

ENSURE PUBLIC SAFETY BY MINIMIZING SOURCES OF IGNITION

The primary goal of this Plan is to ensure the safety of the customers and communities LADWP serves within the City and Owens Valley by minimizing the probability that LADWP's transmission and distribution system might become the original or contributing source of ignition for wildfires. Over the years, LADWP has evaluated the prudent and cost-effective improvements to its physical assets, operations, and training that can help to meet this objective, and since 2008, LADWP has implemented those changes consistent with this evaluation. LADWP continuously evaluates any current and future prudent and cost-effective improvements to ensure that they have been and will be implemented.

IMPROVE RESILIENCY OF THE GRID

The second goal of this Plan is to improve the resiliency of the electric grid. As part of this Plan, LADWP continuously assesses new industry practices and technologies that will reduce the likelihood of an interruption in service and improve the restoration of service.

MAXIMIZE EFFICIENCY AND IMPROVE PROGRAMS AND PROTOCOLS

The final goal for this Plan is to measure the effectiveness of specific wildfire mitigation strategies. Where a particular action, program, or protocol is determined to be potentially unnecessary or ineffective, LADWP assesses whether a modification or replacement is merited. This Plan also helps determine if more cost-effective measures would produce the same or improved results.

This Plan includes the following elements:

- Objectives of the Plan
- Roles and responsibilities for carrying out the Plan
- Identification of key wildfire risks and risk drivers
- Description of wildfire prevention, mitigation, and response strategies and programs
- Restoration of service
- Community outreach and education
- Metrics for evaluating the performance of the Plan and identifying areas for improvement
- Review and validation of the Plan
- Provide considerations for future improvements to further mitigate wildfire risk

1.3.CONTEXT SETTING INFORMATION

LADWP provides the following table below per the recommendation of the Wildfire Safety Advisory Board[1] (WSAB) to assist the WSAB staff and Board members in understanding the unique characteristics of LADWP's service territory.

Utility Name	Los Angeles Department of Water and Power	
Service Territory Size	City of Los Angeles: 478 square miles Owens Valley: 1,839 square miles	
Owned Assets	☒ Transmission ☒ Distribution ☒ Generation	
Number of Customers Served	Approx. 1.6 million customer accounts	
Population Within Service Territory	Approx. 4 million people	
Customer Class Makeup	*Number of Accounts*	*Share of Total Load (MWh)*
	90% Residential; 1% Government; 0% Agricultural; 8% Small/Medium Business; 1% Commercial/Industrial	41% Residential; 10% Government; 0% Agricultural; 10% Small/Medium Business; 39% Commercial/Industrial
Service Territory Location/Topography[2]	The City covers 478 square miles consisting mostly of urban environment with parcels of shrub environment near the Santa Monica Mountains, a portion of the Verdugo Mountains, and small areas located on the outer edges of the City. The Owens Valley covers 1,839 square miles consisting of mostly desert environment with parcels of conifer forest, conifer woodland, herbaceous, and shrub environments on the west between the Sierra Nevada Mountains and U.S. Route 395 and parcels of conifer forest, conifer woodland, and shrub environment on the east near the White Mountains. Further detail on topography within LADWP's service territory can been seen in the maps included in the Appendices of this Wildfire Mitigation Plan.	

[1] https://energysafety.ca.gov/what-we-do/wildfire-safety-advisory-board/

[2] This data shall be based on the California Department of Forestry and Fire Protection, California Multi-Source Vegetation Layer Map, depicting WHR13 Types (Wildlife Habitat Relationship classes grouped into 13 major land cover types) *available at*: https://www.arcgis.com/home/item.html?id=b7ec5d68d8114b1fb2bfbf4665989eb3.

Service Territory Wildland Urban Interface[3] (based on total area)	3.03% Wildland Urban Interface; 1.26% Wildland Urban Intermix;
Percent of Service Territory in CPUC High Fire Threat Districts (based on total area)	☒ Includes maps (see Appendix) Tier 2: 20% Tier 3: 1%
Prevailing Wind Directions & Speeds by Season	☒ Includes maps (see Appendices) The City is most commonly affected by the Santa Ana Winds which are most prevalent during the cooler months of the year, occurring from September through May. The National Weather Service defines the Santa Ana Winds as "strong down slope winds that blow through mountain passes in Southern California". The Santa Ana Winds may increase wildfire risk due to the dryness of the winds and the speed at which they can spread a flame across the landscape. These high, dry, and warm winds may also present a potential risk to LADWP's overhead electric power lines as palm fronds, branches, and other tree limbs can disrupt power if blown into the lines. Areas most affected by these high winds have been designated as High Wind Zones by the City, which LADWP has reflected in its Fire Threat Map, and treats the same as Tier 2 High Fire Threat Districts (HTFDs). LADWP has also developed construction standards for these High Wind Zones to address these risks. Additionally, LADWP primarily uses the Santa Ana Wildfire Threat Index and weather information from National Oceanic and Atmospheric Administration and the City of Los Angeles Fire Department (LAFD) to monitor current and forecasted weather data.
Miles of Owned Lines Underground and/or Overhead	Overhead Dist.: 7,265 miles Overhead Trans.: 4,040 miles Underground Dist.: 3,807 miles Underground Trans.: 135 miles
	Explanatory Note 1 - *Methodology for Measuring "Miles":* The mileage listed above refers to LADWP circuit miles.
	Explanatory Note 2 – *Description of Unique Ownership Circumstances:* LADWP solely or jointly owns 4,040 miles of overhead transmission lines and 135 miles of underground transmission cable located within and outside of its service territory.

[3] This data shall be based on the definitions and maps maintained by the United States Department of Agriculture, as most recently assembled in *The 2010 Wildland-Urban Interface of the Conterminous United States*, *available at* https://www.fs.fed.us/nrs/pubs/rmap/rmap_nrs8.pdf.

	Overhead Distribution Lines as % of Total Distribution System (Inside and Outside Service Territory)
Percent of Owned Lines in CPUC High Fire Threat Districts	Tier 2: 13.8% Tier 3: 0.5%
	Overhead Transmission Lines as % of Total Transmission System (Inside and Outside Service Territory)
	Tier 2: 6.3% Tier 3: 8.6%
	Explanatory Note 4 – *Additional Relevant Context:* LADWP has calculated these percentages by utilizing the total circuit mileage that falls within Tier 2 or Tier 3 HFTDs as the numerator and the total circuit mileage of LADWP's Overhead Distribution and Transmission Lines, respectively, as the denominator.
Customers have ever lost service due to an IOU PSPS event?	☒ Yes ☐ No
Customers have ever been notified of a potential loss of service to due to a forecasted IOU PSPS event?	☐ Yes ☒ No Disclaimer: LADWP is not aware of any notifications of customers affected by IOU Public Safety Power Shutoff (PSPS) Events.
Has developed protocols to pre-emptively shut off electricity in response to elevated wildfire risks?	☐ Yes ☒ No
Has previously preemptively shut off electricity in response to elevated wildfire risk?	☐ Yes ☒ No If yes, then provide the following data for calendar year 2022: *Number of shut-off events*: [____] *Customer Accounts that lost service for >10 minutes:* [____] *For prior response, average duration before service restored:* [____]

Table 1: Context Setting Information

1.4.CROSS REFERENCE TO STATUTORY REQUIREMENTS

LADWP provides the following table below per the recommendation of the WSAB to assist the WSAB staff and Board members in their review of LADWP's Plan to ensure all statutory requirements are met.

Requirement	Statutory Language	Location in Plan
Persons Responsible	**PUC § 8387(b)(2)(A):** An accounting of the **responsibilities of persons** responsible for executing the plan.	Section 2
Objectives of the Plan	**PUC § 8387(b)(2)(B):** The **objectives** of the wildfire mitigation plan.	Section 1.2
Preventive Strategies	**PUC § 8387(b)(2)(C):** A description of the **preventive strategies and programs to be adopted by the local publicly owned electric utility** or electrical cooperative to minimize the risk of its electrical lines and equipment causing catastrophic wildfires, including consideration of dynamic climate change risks.	Section 4
Evaluation Metrics	**PUC § 8387(b)(2)(D):** A description of the **metrics the local publicly owned electric utility or electrical cooperative plans to use to evaluate the wildfire mitigation plan's performance** and the assumptions that underlie the use of those metrics.	Sections 4.5 and 7.1
Impact of Metrics	**PUC § 8387(b)(2)(E):** A discussion of how the **application of previously identified metrics** to previous wildfire mitigation plan performances has informed the wildfire mitigation plan.	Sections 4.5, 7.1, 7.2, and Appendix B
De-energization Protocols	**PUC § 8387(b)(2)(F): Protocols for disabling reclosers and deenergizing portions of the electrical distribution system** that consider the associated impacts on public safety, as well as protocols related to mitigating the public safety impacts of those protocols, including impacts on critical first responders and on health and communication infrastructure.	Section 4.7
Customer Notification Procedures	**PUC § 8387(b)(2)(G):** Appropriate and feasible **procedures for notifying a customer** who may be impacted by the deenergizing of electrical lines. The procedures shall consider the need to notify, as a priority, critical first responders, health care facilities, and operators of telecommunications infrastructure.	Section 4.7

Vegetation Management	**PUC § 8387(b)(2)(H):** Plans for vegetation management.	Section 2.6, 2.7, 2.8, 4.3, and 7.1
Inspections	**PUC § 8387(b)(2)(I): Plans for inspections** of the local publicly owned electric utility's or electrical cooperative's electrical infrastructure.	Section 4.4 and 7.1
Prioritization of Wildfire Risks	**PUC § 8387(b)(2)(J):** A list that **identifies, describes, and prioritizes all wildfire risks, and drivers for those risks, throughout the local publicly owned electric utility's or electrical cooperative's service territory**. The list shall include, but not be limited to, both of the following: **(i)** Risks and risk drivers associated with design, construction, operation, and maintenance of the local publicly owned electric utility's or electrical cooperative's equipment and facilities. **(ii)** Particular risks and **risk drivers** associated with topographic and climatological risk factors throughout the different parts of the local publicly owned electric utility's or electrical cooperative's service territory.	Sections 3, 4.1, and Appendix A
CPUC Fire Threat Map Adjustments	**PUC § 8387(b)(2)(K):** Identification of any **geographic area in the local publicly owned electric utility's or electrical cooperative's service territory** that is a higher wildfire threat than is identified in a commission fire threat map, and identification of where the commission should expand a high fire threat district based on new information or changes to the environment.	Section 3.2 and Appendix A
Enterprise-wide Risks	**PUC § 8387(b)(2)(L):** A methodology for identifying and presenting **enterprise-wide** safety risk and wildfire-related risk.	Section 3
Restoration of Service	**PUC § 8387(b)(2)(M):** A statement of how the local publicly owned electric utility or electrical cooperative will **restore service after a wildfire**.	Section 5

Monitor and Audit	**PUC § 8387(b)(2)(N):** A description of the processes and procedures the local publicly owned electric utility or electrical cooperative shall use to do all of the following (i) **Monitor and audit** the implementation of the wildfire mitigation plan. (ii) **Identify any deficiencies** in the wildfire mitigation plan or its implementation, and correct those deficiencies. (iii) **Monitor and audit** the effectiveness of electrical line and equipment inspections, including inspections performed by contractors, that are carried out under the plan, other applicable statutes, or commission rules.	Section 7.3 and 7.4
Qualified Independent Evaluator	**PUC § 8387(c):** The local publicly owned electric utility or electrical cooperative shall contract with a qualified independent evaluator with experience in assessing the safe operation of electrical infrastructure to review and assess the comprehensiveness of its wildfire mitigation plan. The independent evaluator shall issue a report that shall be made available on the Internet Web site of the local publicly owned electric utility or electrical cooperative, and shall present the report at a public meeting of the local publicly owned electric utility's or electrical cooperative's governing board.	Section 8

Table 2: Cross Reference to Statutory Requirements

2. ROLES AND RESPONSIBILITIES

This section describes the roles and responsibilities required to accomplish the goals of this Plan. Further details for the groups that are related to the implementation of this Plan are provided in Section 2.2. through Section 2.15.

Representatives from the various stakeholder groups meet periodically via LADWP's Wildfire Mitigation Plan Committee to communicate updates and stay apprised of their roles and responsibilities. The Wildfire Mitigation Plan Committee also branches off into smaller subgroups to discuss specific wildfire-related topics such as vegetation management, community outreach and public awareness, metrics, and other various topics as needed.

2.1.LADWP WILDFIRE ORGANIZATIONAL CHART

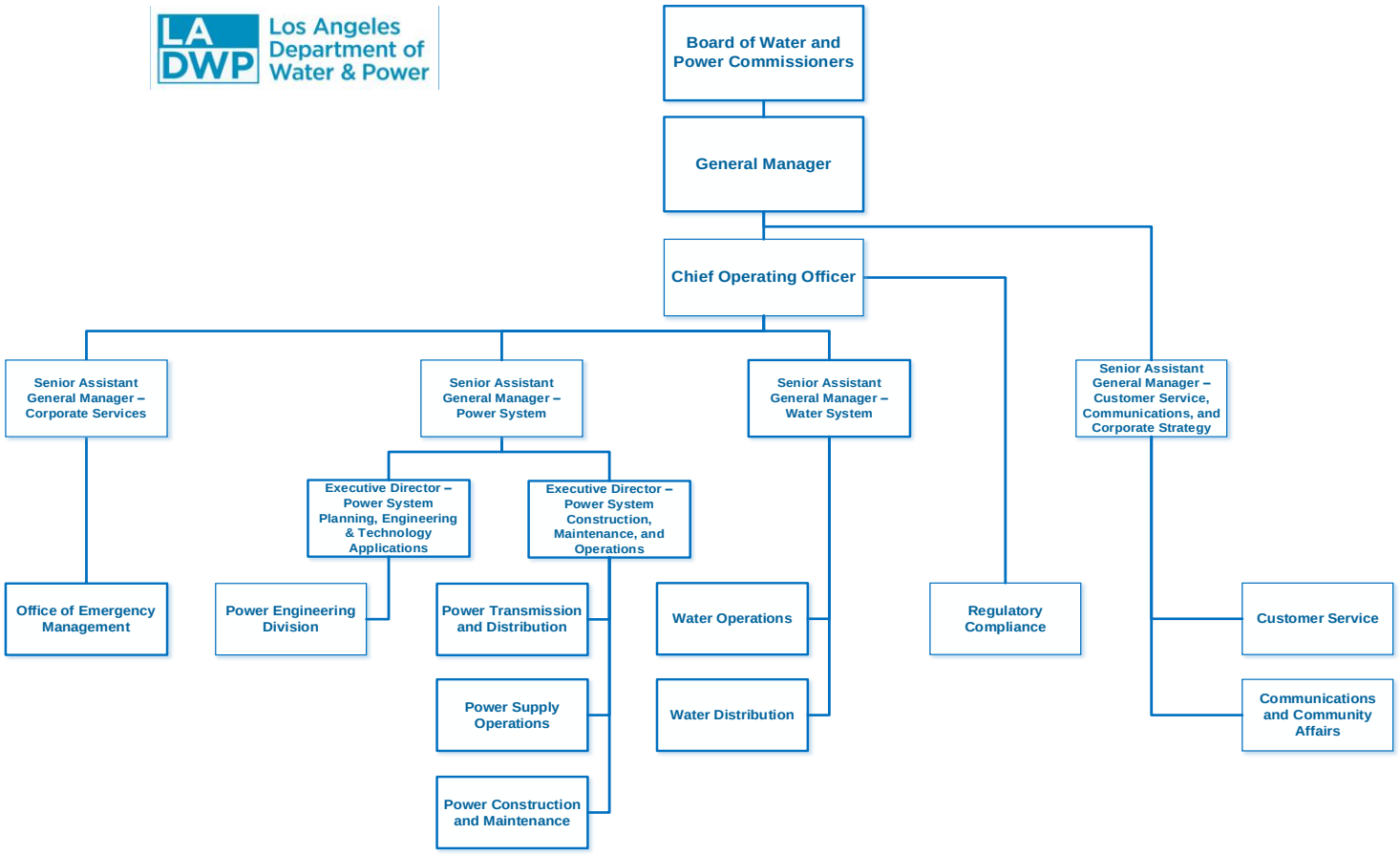


Figure 1: LADWP Wildfire Organizational Chart

2.2.BOARD OF WATER AND POWER COMMISSIONERS

Board of Water and Power Commissioners is granted the possession, management and control of the LADWP. The Board has the power and duty to make and enforce all necessary rules and regulations governing the construction, maintenance, operation, connection to and use of the LADWP and to acquire, construct, extend, maintain and operate all improvements, utilities, structures and facilities the Board deems necessary or convenient for purposes of the Department. The Mayor of the City appoints, and the City Council confirms the appointment of, members of the Board. The Board is traditionally selected from among prominent business, professional and civic leaders in the City. The members of the Board serve with only nominal compensation. Certain matters regarding the administration of the Department also require the approval of the City council.

2.3.GENERAL MANAGER

The management and operation of the Department are administered under the direction of the General Manager. The General Manager oversees various executive positions including the Chief Operating Officer and Senior Assistant General Manager of Customer Service, Communications, and Corporate Strategy.

2.4.CHIEF OPERATING OFFICER (COO)

The Chief Operating Officer reports directly to LADWP's General Manager. The COO oversees the core operations responsible for delivering water and power to LADWP's customers. The COO oversees various executive positions including the Senior Assistant General Managers of Power System, Water System, Corporate Services, Corporate Health and Safety, and Information Technology Services.

2.5.POWER SYSTEM EXECUTIVE OFFICE

Power System Executive Office is responsible for managing all aspects of the Power System and is comprised of three roles: A Senior Assistant General Manager, Executive Director for Power Construction, Maintenance and Operations, and Executive Director for Power Planning, Engineering, and Technology Applications. Both Executive Directors reports to the Senior Assistant General Manager.

The Executive Director of Power System Construction, Maintenance, and Operations manages the Power System's day-to-day power supply operation, construction, and maintenance activities across the generation, transmission, and distribution systems including:

- Power System Construction and Maintenance Division
- Power System Supply Operations Division
- Power System Transmission and Distribution Division

- Advanced Technologies Infrastructure Division
- Fuel and Purchased Power Group
- Power System Safety and Training Group

The Executive Director of Power Planning, Engineering, and Technology Applications manages the Power System's critical engineering and planning functions including:

- Power System Engineering Division
- Power System Capital Projects and External Generation Division
- Power New Business and Electrification Division
- Power System Planning Division

Together, these positions oversee the entirety of the Power System and are responsible for ensuring the implementation of this Plan.

2.6.LADWP POWER SYSTEM TRANSMISSION AND DISTRIBUTION (PTD)

PTD is primarily responsible for the design, construction, inspection, and maintenance of LADWP's transmission and distribution lines. PTD groups adhere to the Operations and Protocols (See Section 4.7. "Operations and Protocols") identified here in this Plan and are directly and indirectly responsible for implementing electric facility design, inspection, maintenance, and vegetation management to minimize the risk of wildfires.

The role of PTD is to:

- Maintain system in a manner that will minimize potential wildfire risks.
- Take all reasonable and practicable actions to correct and/or minimize the risk of a wildfire caused by LADWP's transmission and distribution overhead facilities.
- Comply with relevant federal, state, and industry standard requirements, including the applicable industry standards established by the California Public Utilities Commission (CPUC).
- Provide regular training programs for all PTD employees having obligations for implementation of this Plan.

PTD is currently divided into two sections:

1) Distribution Operations and
2) Distribution Construction and Maintenance

DISTRIBUTION OPERATIONS (DO)

DO inspects and maintains LADWP's overhead and underground transmission lines within and outside of the Los Angeles area. The transmission facilities are used to transport electricity in bulk quantities from generation facilities to distribution facilities over long distances.

DO includes the Transmission Construction and Maintenance (TCM), Vegetation Management, and Electric Trouble groups.

Vegetation Management prunes and removes trees to clear its power system from vegetation interference, conducts zone circuit patrols on a yearly basis, and conducts on the spot inspections for other LADWP groups and ratepayers on an as-needed basis. Electric Trouble supports Vegetation Management by conducting temporary emergency on-the-spot line clearance tree trimming and by switching or de-energizing distribution circuits in order for Vegetation Management crews to work safely. Electric Trouble controls feeder circuits coming out of the distributing stations.

Within the City and Owens Valley, LADWP operates a 24-hour 7 day a week Electric Trouble Section that responds to power outages related issues in the distribution system. If LADWP receives a notification regarding a possible hazard, LADWP will send an Electric Trouble Patrol Crew to the hazard to determine the appropriate action.

TCM is responsible for inspection and maintenance of the Bulk Power System which consists of 4,040 miles of transmission lines in three states. These lines are responsible for transporting electricity from generation facilities to receiving stations over large distances which include a variety of terrains. Due to the area covered by LADWP's transmission lines, TCM has six manned headquarters located throughout California, Nevada, and Utah. One of the headquarters is located in the Los Angeles basin and the others are located in: Victorville, Mojave, and Bishop, California, Boulder City, Nevada, and Delta, Utah. In addition, TCM has three unmanned locations in Fernley and Ely, Nevada and Cedarville, California.

TCM is responsible for responding to any trouble calls relating to the Bulk Power System. This includes line relays, wildfires in proximity to the lines, as well as other issues that could affect the Bulk Power System. TCM also includes a Right-of-Way Maintenance Group that is responsible for vegetation management on in basin transmission rights-of-way including road maintenance, mowing, and brush removal.

DISTRIBUTION CONSTRUCTION AND MAINTENANCE (DCM)

DCM constructs and maintains overhead and underground distribution facilities and equipment that moves electricity from Receiving Stations and Distributing Stations to the customer usually over relatively short distances. There are over 7,265 miles of overhead distribution and another 3,807 miles of underground distribution facilities.

DCM includes the Overhead Distribution Design group, Distribution Inspection and Maintenance group, the Underground Service Alert group, the Contract Operations group and seven distribution operating districts (six in the Los Angeles basin and one located in the Owens Valley).

2.7.LADWP POWER SYSTEM CONSTRUCTION AND MAINTENANCE (PCM)

LADWP's PCM adheres to the Operations and Protocols (See Section 4.7. "Operations and Protocols") identified here in this Plan. PCM also adheres to its internal fire prevention procedures for its General Construction crews which provide employees with information and guidelines that will assist them in recognizing, reporting, and controlling fire hazards when working near or around electrical equipment. PCM conducts vegetation management for LADWP's substations by monitoring and controlling the vegetation growth through the following:

- Monthly Station Inspections by Electrical Station Maintenance
- Routine Landscape Maintenance

2.8.LADWP POWER SYSTEM SUPPLY OPERATIONS (PSO)

PSO conducts routine and as-needed inspections and maintenance on LADWP's generation and substation facilities. PSO's inspection and maintenance activities ensure the risk of outages and wildfires are reduced within the generation and substation facilities. PSO also has an extensive brush clearance program in which its crews remove brush from around its facilities. PSO crews conduct their inspections in accordance with LADWP's Transmission Maintenance and Inspection Plan and adhere to the Operations and Protocols (See Section 4.7. "Operations and Protocols") identified in this Plan when conducting any work around LADWP's facilities.

A key group within PSO is the Energy Control Center (ECC). The ECC has centralized operational control over LADWP's power system, including the transmission and subtransmission systems. Load Dispatchers at the ECC use the Supervisory Control and Data Acquisition (SCADA) system to monitor and control the operation of the electrical system during normal and emergency conditions including the energizing and de-energizing of individual circuits and blocking or enabling of automatic reclosers. On circuits where direct SCADA control is not available, these functions are executed by dispatching personnel to the locations to perform the functions locally.

2.9.LADWP POWER SYSTEM ENGINEERING DIVISION (PSED)

PSED adheres to LADWP's construction standards when designing the infrastructure necessary to generate, transmit, and distribute power to its customers and communities in a safe and environmentally responsible manner. PSED design criteria and methods are consistent with industry standards that include, but are not limited to, CPUC's General Orders (GO), American National Standards Institute (ANSI), and the Institute of Electrical and Electronics Engineers. All designs are required to meet these criteria to ensure the reliability and safety of LADWP's grid and service territory.

2.10. LADWP INFORMATION TECHNOLOGY SERVICES DIVISION AND POWER CAPITAL PROJECTS AND EXTERNAL GENERATION DIVISION

Key groups within LADWP are Information Technology Services Division's Power Geographical Information Systems Group (GIS) and Power Capital Projects and External Generation Division's Asset Resources Application Management Group (WMIS) which is responsible for compiling data and information related to this Plan's metrics. GIS and WMIS work closely with PTD's Electric Trouble to track LADWP's outages and their causes through its Outage Management System. GIS and WMIS also have the ability to identify if these outages are located within Tier 2 and Tier 3 High Fire Threat Districts (HFTD) and LAFD Fire Zones within LADWP's service territory. For more information on this Plan's metrics, see Section 7.1. "Metrics and Assumptions for Measuring Plan Performance".

2.11. LADWP REGULATORY COMPLIANCE

A key group within LADWP's Regulatory Compliance is the Regulatory, Standards, and Compliance group (RSCG). The core mission of RSCG is to foster a strong culture of compliance throughout LADWP's Power System and ensure that LADWP remains compliant with all reliability-related and legislative-mandated standards and regulations. Weekly meetings are hosted by RSCG to inform LADWP management of all federal, state, and local regulatory updates.

With respect to this Plan, RSCG's role includes, but is not limited to, the following:

- Monitor legislations, regulations, and industry standards related to publicly owned electric utilities' Wildfire Mitigation Plans
- Assess compliance with applicable rules and regulations as they relate to local publicly owned utilities' Wildfire Mitigation Plan
- Coordinate with LADWP stakeholders to incorporate relevant information into the Plan

Although RSCG is not a part of the Plan's implementation, RSCG will continue to provide awareness of relevant activities that may impact the Plan and will coordinate annual updates to the Plan.

2.12. LADWP WATER SYSTEM

In High Fire Threat Districts (See Section 4.1. “High Fire Threat District”) where water pumping support is required, LADWP’s Water Operations has generators and internal combustion engines that auto-start during power outages to ensure pressure to hydrants. Water Operations is aware of the location of generators that auto-start and are able to obtain or access near real-time statuses of these generators. The Water System’s Transmissions Operations section is responsible for these pump station generators and internal combustion engines. The Water System also has water storage tanks and reservoirs that are available for use during wildfire events. Should the need arise, LADWP’s crews are available to provide support in water distribution system operations related to firefighting efforts. There are formal agreements with LAFD and Los Angeles County Fire Department (LACoFD) on the use of LADWP’s tanks, reservoirs, and helipads within the Los Angeles Metro and Aqueduct areas as well as over 60,000 fire hydrants citywide that are available to support fire-fighting efforts.

2.13. LADWP OFFICE OF EMERGENCY MANAGEMENT (OEM)

LADWP’s OEM coordinates with all other City Departments that play key roles in responding to emergencies. In addition, LADWP has a long-standing working relationship and communication protocol with the LAFD before, during, and after wildfire events. Within the City, LAFD oversees direct communication with LACoFD and Cal Fire before, during, and after wildfire events. A key indicator of the City’s coordination and preparedness is LAFD’s response time. For example, the maximum response time by LAFD personnel within the City limits is five to seven minutes. During emergencies, LADWP’s OEM coordinates with Los Angeles City Departments who have pre-defined key response roles. As LADWP’s communication channel to the City, LADWP OEM acts as a liaison with the LAFD. Information from LACoFD or the Cal Fire is disseminated through this communication chain.

LADWP’s OEM represents LADWP within the Emergency Operations Organization (EOO). The EOO is the operational department of the City that centralizes the direction and control of the planning, coordination and management of disaster preparedness, mitigation, response and recovery for the City. Unique in design, it is a "department without walls" which comprises all agencies of the City's government. It centralizes command and information coordination to enable its unified chain-of-command to operate efficiently and effectively in managing the City's resources.

OEM is also responsible for coordinating the deployment of LADWP’s Emergency Command Post Vehicle (ECPV), a mobile coordination and control facility used to respond to LADWP incidents. The ECPV provides mobile, on scene resources with which LADWP can carry out restoration operations in an efficient and uninterrupted manner with proximity to the incident to aid in timely response.

During a large emergency, the City Emergency Operations Center (EOC) is the focal point for coordination of the City's emergency planning, training, response and recovery efforts. EOC processes follow the National All-Hazards approach to major disasters such as fires, floods, earthquakes, acts of terrorism, and large-scale events in the City that require involvement by multiple City departments. LADWP staff is assigned to the City EOC Operations Section Utilities Branch as Branch Directors, Power System Unit Leaders and Water System Unit Leaders as seen in the City's EOC Organizational Chart as seen in Figure 2a. The EOC allows LADWP to provide utility updates and assistance to the rest of the City, as well as request assistance of City resources if necessary. It is important to note that the EOC, while not a direct part of LADWP's Department Operations Centers, adds to its capabilities. These centers act as primary roles that are activated in the event of an emergency. More information on these emergency centers can be seen in Figure 2b.

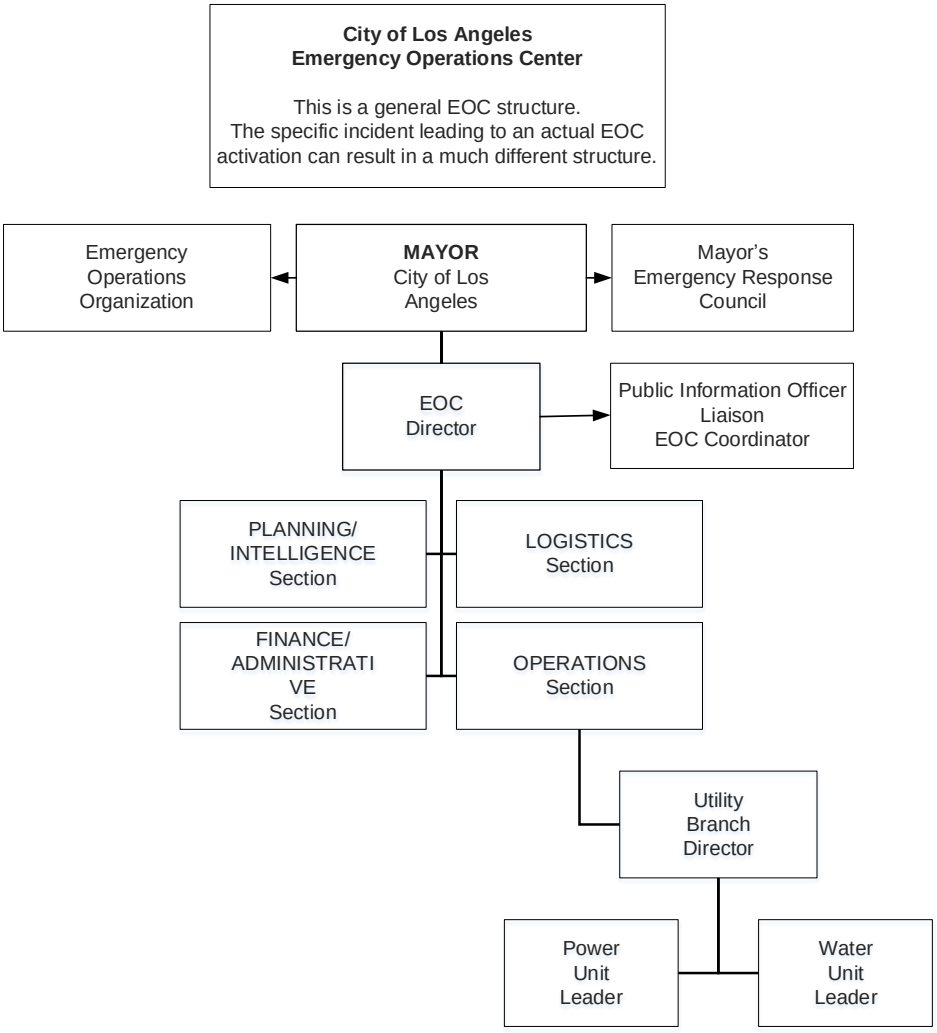
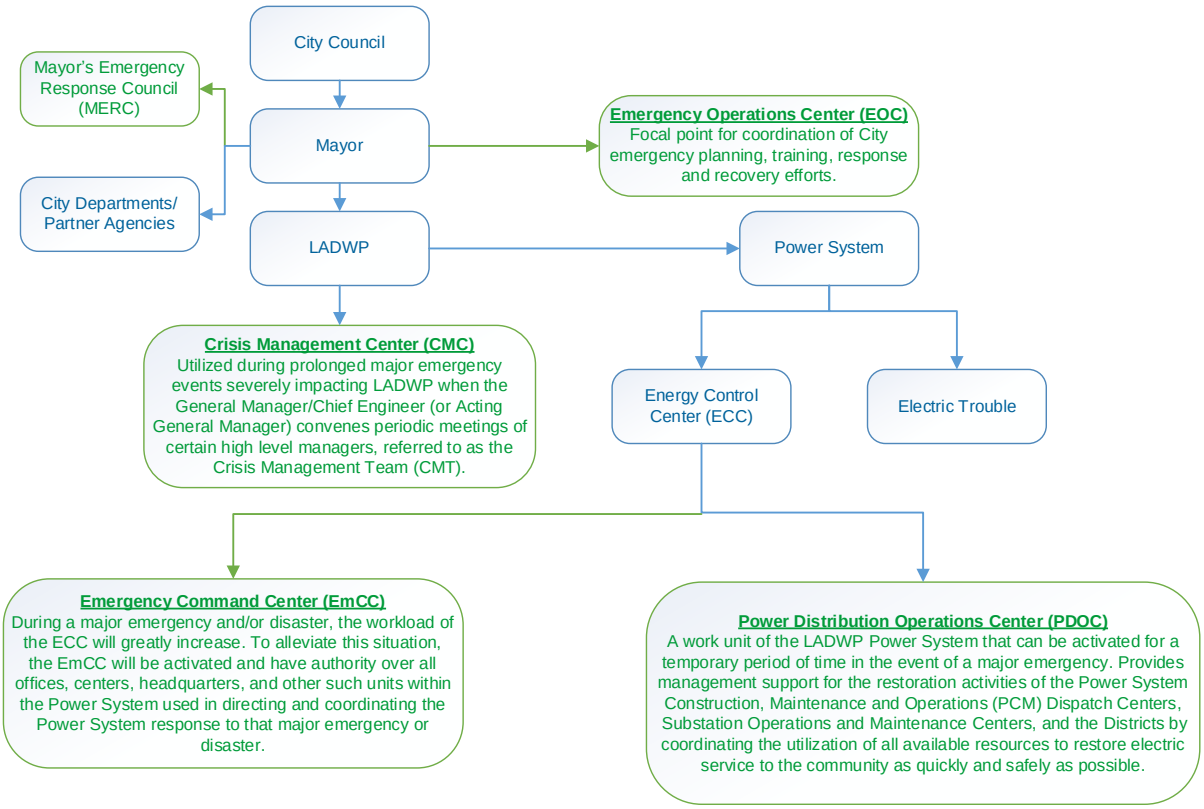


Figure 2a: City of Los Angeles Emergency Operations Center Organizational Chart



Blue Color: Ongoing
Green Color: Activated for Emergencies

Figure 2b: LADWP Power System Emergency Centers

If the LADWP Power System requires additional resources because of a major emergency, it can use LADWP OEM to contact external utility agencies and associations for mutual assistance. LADWP is a signatory to agreements with the following associations:

- Southern California Public Power Association (SCPPA)
- California Utilities Emergency Association (CUEA)
- American Public Power Association (APPA)
- Western Region Mutual Assistance Group (WRMAG)

Additionally, a review of mutual aid agreements is completed on an annual basis to ensure that the Department is capable of addressing all hazards and threats. Customer Service Division, and Corporate Safety and Communications Division also maintain an integral role in relaying information regarding LADWP's response to hazard related outages to the public.

As previously mentioned, LADWP is a member of the CUEA, which plays a key role in ensuring coordination with operators of telecommunication infrastructure and communications between utilities during emergencies. LADWP also participates in the WRMAG's Western Region Mutual Assistance Agreement, which is a mutual assistance agreement covering utilities across a number of western states.

As a member of SCPPA, LADWP is actively involved in the network of local public power utilities to meet future customer expectations and enhance operational efficiencies. Through this network, members have developed a mutual aid playbook to improve the process of obtaining mutual aid in the Southern California region. The SCPPA Playbook provides the following for a streamlined mutual aid process:

- A framework for communication between SCPPA members, CUEA, and the APPA
- A structure for collaboration during emergencies and the need for mutual assistance
- A facilitation of communication among SCPPA members and other agencies

LADWP's OEM participates in conference calls coordinated by SCPPA, CUEA, WRMAG, and APPA regarding actual and potential requests for mutual assistance by external utilities. LADWP's OEM also participates in conference calls with the City's Emergency Management Department (EMD) regarding actual and potential threats such as extreme heat events, high winds, and rainstorms. If there is an impact to the City and required action by LADWP, LADWP may do the following:

- Send responders to the City EOC if it is activated.
- Activate the Power Distribution Operations Center (PDOC) which, when activated in the event of a major emergency, provides management support for the restoration activities of the PCM Dispatch Centers, Substation Operations and Maintenance Centers, and the Districts by coordinating the utilization of all available resources to restore electric service to the community as quickly as possible. The PDOC will not replace the normal paths of reporting damage nor dispatching work, but can augment those resources. The PDOC will also absorb political and influential customer pressure, maintain and overall assessment of the extent and status of the emergency, and obtain resources if required.
- Activate the Emergency Command Center (EmCC) which, when activated, shall have authority over all offices, centers, headquarters, and other such units within the Power System used in directing and coordinating the Power System response to the major emergency or disaster condition.
- Update SCPPA, CUEA, and the EMD Duty Officer regularly on numbers of electrical outages and LADWP's actions in response to those outages. Depending on the severity of the incident, operators of the telecommunications infrastructure will be notified through CUEA.

STANDARDIZED EMERGENCY MANAGEMENT SYSTEM (SEMS)

In responding to emergencies, LADWP ensures that it uses the Standardized Emergency Management System (SEMS) for the City. SEMS is the fundamental structure mandated by law for the response phase of emergency management throughout California. This system unifies all elements of the California emergency management community into a single integrated system with standardized key elements.

SEMS incorporates the Incident Command System (ICS), a field-level emergency response system based on management by objectives, as well as inter-agency coordination and mutual aid. SEMS facilitates both the flow of information within and between levels of the system and coordination among all responding agencies.

All LADWP and City emergency operations follow protocols and procedures of ICS, the California SEMS, and the National Incident Management System (NIMS).

LADWP participates in annual tabletop exercises as a part of the City's SEMS structure. This training incorporates active participation from all departments throughout the City which can be seen in Section 4.6. "Workforce Training" of this Plan. LADWP also participates in drills and exercises held by the City's EOC, SCPPA, APPA, WRMAG, and CUEA.

2.14. LADWP CORPORATE STRATEGY AND COMMUNICATIONS (CSC)

LADWP recognizes that the Department and its personnel are operating on their customers' behalf and for the welfare of all citizens in its service area. Customers and citizens have a right to clear, concise, timely and accurate information about incidents that impact them and activities of LADWP responders during such incidents or emergencies.

LADWP's Corporate Strategy and Communications Division (CSC) supports the Department during a crisis incident by coordinating with other Department divisions to obtain, vet and approve information for disseminating to LADWP's stakeholders including the news media, customers, employees, and members of the city's Neighborhood Councils.

CSC would serve in the role of Public Information Officer during an Incident Command or integrate with other City emergency response communication plans, activation of the City's Emergency Operation Center, or as part of Unified Command, such as that led by the LAFD in the event of a wildfire.

CSC will utilize multiple communication methods to provide needed stakeholder communication, including direct engagement, web publication, email, text messaging, phone messaging and Social Media channels.

2.15. LADWP CUSTOMER SERVICE DIVISION (CSD)

The CSD is dedicated to providing respectful, responsive, and dependable customer service. CSD is composed of nine major groups. These groups are comprised of over 900 employees who are responsible for providing services to LADWP's approximately 1.6 million active customer accounts and supporting Department staff who deliver these services. The following three CSD groups have been identified as key groups to this Plan.

The Customer Contact Center (CCC) provides an essential public service for customers across the greater Los Angeles basin and Owens Valley. Customers rely on the CCC for communication of information and assistance related to emergency response – such as downed power lines, water leaks, and other occurrences – 24-hours a day, 7 days a week. The CCC is critical in providing up-to-date information for incident response and restoration efforts to customers affected by wildfires. CSD has 14 Customer Service Center locations throughout the Los Angeles area. The centers provide customers with in-person assistance, support and services for their current and evolving utility-related needs; and promote a community-centric presence. These centers can facilitate contact with support services to victims of wildfires in the communities they serve.

The Customer Services Support (CSS) in CSD manages LADWP's website, www.ladwp.com, and administers Customer*Connect*, the Customer Relationship Management system. With respect to this Plan, the website hosts a landing page for this Plan, any updates, and public service notifications. Additionally, the website currently hosts a Water Outage map and a Power Outage map where customers can see and report respective outages. The City's Community Subscription Notification is administered through Customer*Connect*. Customers who subscribe to this service receive texts and notifications for Power Outages that affect their communities. The notifications can be customized to provide up-to-date information for incident response and restoration efforts to subscribers affected by wildfires.

The Key Accounts Section (KAS) of the Customer Service Division is responsible for building and maintaining meaningful relationships with the City's largest commercial and industrial customers while supporting LADWP's strategic objectives. KAS account representatives provide dedicated support to premier customers for the communication of information and assistance related to emergency response, including wildfires.

3. WILDFIRE RISKS AND RISK DRIVERS

3.1. WILDFIRE RISKS AND RISK DRIVERS ASSOCIATED WITH TOPOGRAPHIC AND CLIMATOLOGICAL RISK FACTORS

The City and California in general contains the potential for fire hazards. The terrain, climate, and vegetation that make up Southern California create a wildland fire hazard in areas near or around LADWP facilities and other structures, such as towers. Hot summers without rain and low humidity create long periods of high fire danger. LADWP regularly surveys its service territory during its vegetation management and inspection and maintenance activities to determine topographical and climatological risks. The main factors considered are as follows:

- The terrain and the accessibility for first responders to react to an incident
- Vegetation type and density
- Extended drought conditions
- Current weather conditions
- Changing weather patterns (climate change)

According to the National Oceanic and Atmospheric Administration (NOAA), climate change, including increased heat and extended drought, has been a key driver in increasing the risk and extent of wildfires in California. In the past, LADWP has conducted risk assessments to evaluate the risks posed by climate change on LADWP. LADWP has identified that prolonged or extreme droughts can lead to increased wildfire risks which creates increased risk for LADWP's communities, as well as increased liability and risk to the Department, as the threshold for fires to spread and become severe are lowered across California. The risk assessment identified a specific range of monetary losses that LADWP could incur if it's equipment or operations started a wildfire, as well as quantifying a maximum potential loss. As a result of this risk assessment, LADWP has continued its ongoing efforts to reduce wildfire risks and the impacts of climate change by maintaining and strengthening its wildfire preventative strategies identified in Section 4 of this Plan.

LADWP utilizes a risk bowtie to tie identified wildfire-related risks and potential impacts. The bowtie helps to identify measures that aid in the prevention or recovery from a wildfire hazard and associate the measures with specific risks or impacts.

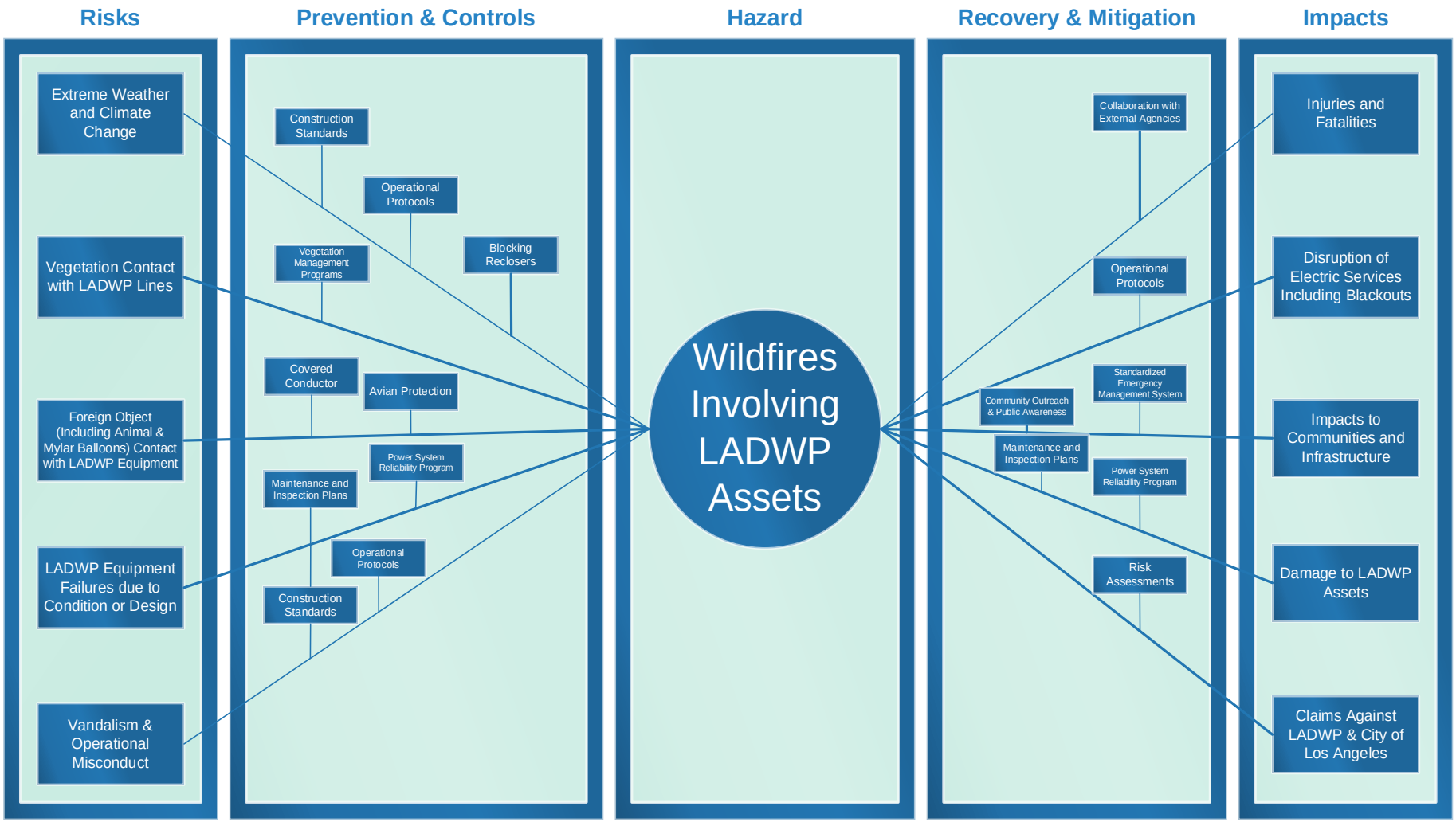


Figure 3: LADWP Wildfire Risk Bow Tie

3.2.CPUC DESIGNATED FIRE THREAT DISTRICTS

LADWP worked with Cal Fire and the CPUC for two years to develop the CPUC Tier 2 and Tier 3 High Fire Threat District map. This map, in conjunction with the City of Los Angeles Very High Fire Hazard Severity Zone (LAFD Fire Zone), was used to create LADWP's Fire Threat Map (See Appendix A "LADWP Fire Threat Map"). The addition of the LAFD Fire Zones provides LADWP with an intermediary zone around the Tier 2 Elevated Fire Threat Districts. LADWP treats the LAFD Fire Zones the same as Tier 2 areas and applies the same Wildfire Prevention Strategies to further mitigate wildfire risks. LADWP's transmission assets have also been outlined on the Fire Threat Map within Appendix A.

3.3. WILDFIRE RISKS AND RISK DRIVERS ASSOCIATED WITH DESIGN, CONSTRUCTION, OPERATION, AND MAINTENANCE

Overhead electric power lines are particularly vulnerable to high winds. Falling palm fronds, branches, and other tree limbs can disrupt power distribution lines due to high winds. According to the National Weather Service wind loading thresholds, wind gusts that exceed 58 miles per hour (mph) are common and can cause small power outages. High winds in steep terrain, mountain passes, or open desert areas have also been responsible for transmission line failures.

LADWP regularly surveys its service territory during its vegetation management and inspection and maintenance activities to determine its wildfire risks and associated risk drivers. Below are LADWP's identified risk drivers and associated mitigation measures/programs:

Risk Drivers	Mitigation Measures and Programs*
High Wind Event	▪ Construction Standards ▪ Operational Protocols ▪ Blocking Reclosers on circuits in Tier 3 areas
Vegetation Contact	▪ Transmission and Distribution Vegetation Management Programs
Conductor Failure Conductor Slap Pole/Hardware Failure	▪ Power System Reliability Program ▪ Transmission and Distribution Maintenance and Inspection Plans ▪ Construction Standards
Aging Infrastructure	▪ Power System Reliability Program ▪ Construction Standards

** The above mitigation measures and programs are discussed in their respective sections.*

Additional risk drivers such as human activity, wildlife contact, and mylar/metallic balloon contacts will be tracked and monitored to determine whether new mitigating activities are warranted. The mitigation measures implemented as part of this Plan are designed to minimize widespread service interruptions, property damages, community impact, equipment damages, and injuries or fatalities due to wildfires.

LADWP's implemented solutions coupled with its rigorous construction standards (See Section 4.2. "Design, Construction Standards, and Infrastructure" for more details) in high fire threat areas, its robust vegetation management program (See Section 4.3. "Vegetation Management" for more details), and collaboration with fire agencies affirm that the utility's overhead electrical lines and equipment do not pose a significant wildfire risk.

3.4.LADWP RISK ASSESSMENT

LADWP considered wildfire risks and their respective drivers during the development and subsequent updates of this Plan to ensure that the Plan's objectives can be met. Such wildfire risks and risk drivers can be seen in the subsections of Section 3. LADWP understands and effectively manages the level of exposure to these risks which could impact the Plan's objectives of minimizing sources of ignition, improving the resiliency of the electric grid, and maximizing efficiency and improving programs and protocols. Various policies, programs, standards, and procedures have been implemented to ensure the mitigation of wildfire risks and their associated drivers. LADWP has historically implemented efforts to minimize risks and prevent wildfires and the Plan will leverage on such historical efforts as well as ongoing, new, and future improvements or considerations.

LADWP serves a population of over 4 million residents with approximately 1.6 million customers in the City and 5,000 customers in the Owens Valley. 152,569 of those customers are within the Tier 2 Elevated Fire Threat District and 5,583 customers are within the Tier 3 Extreme Fire Threat District. The City covers 478 square miles consisting mostly of urban environment. The high fire threat areas in the City are the eastern end of the Santa Monica Mountains, a portion of the Verdugo Mountains, and small areas located on the outer edges of the City. The Owens Valley service territory is located in east-central California, between the Sierra Nevada Mountains on the west and the White Mountains on the east, and totals 1,839 square miles. The high fire threat areas in the Owens Valley include sections between the Sierra Nevada Mountains and U.S. Route 395.

To deliver energy from generating plants to its customers, LADWP owns and/or operates a vast network of transmission lines. As the Operating Agent of the Pacific DC Intertie, the Southern Transmission System, the Mead-Adelanto Transmission Project and certain Navajo-McCullough transmission facilities, LADWP transmits energy for the co-owners of, or participants in, these facilities. LADWP's transmission lines traverse through the state of California on steel lattice transmission towers. LADWP solely or jointly owns 4,040 miles of overhead transmission lines, their respective transmission towers, and 135 miles of underground transmission cable located within and outside of its service territory.

LADWP solely or jointly owns 264,148 poles, 7,265 miles of overhead and 3,807 miles of underground distribution lines located within and outside of its service territory. Tables 3 and 4 show the numbers and percentages of LADWP's distribution and transmission assets located in the various fire threat zones within the City and Owens Valley service territories.

Assets Within the City of Los Angeles Service Territory					
	Asset	CPUC Tier 3 (Extreme)	CPUC Tier 2 (Elevated)	LAFD High Fire Risk Zone (Without Tier 2 and Tier 3)	LADWP Total
Distribution	Poles	1,486	33,130	5,688	264,148
		0.6%	12.5%	2.2%	
	Circuit Miles	33	894	169	7,265
		0.5%	12.3%	2.3%	
Transmission	Towers	8	119	58	15,452
		< 0.1%	0.8%	0.4%	
	Circuit Miles	2	40	10	4,040
		< 0.1%	1.0%	0.2%	

Table 3: Assets Within the City of Los Angeles Service Territory

Assets Within the Owens Valley Service Territory				
	Asset	CPUC Tier 3 (Extreme)	CPUC Tier 2 (Elevated)	LADWP Total
Distribution	Poles	NONE	3,082	264,148
			1.2%	
	Circuit Miles		105	7,265
			1.5%	
Transmission	Towers	NONE	251	15,452
			1.6%	
	Circuit Miles		52	4,040
			1.3%	

Table 4: Assets Within the Owens Valley Service Territory

Of LADWP's total service territory in the City and the Owens Valley, approximately 13.8% of its distribution circuit miles are within the Tier 2 Elevated Fire Threat District and 0.5% is within the Tier 3 Extreme Fire Threat District (See Appendix A "LADWP Fire Threat Map"). Of LADWP's total transmission circuit miles, approximately 6.3% are located in Tier 2 Elevated Fire Threat District and 8.6% are located within the Tier 3 Extreme Fire Threat District (See Appendix A "LADWP Fire Threat Map"). These values can be seen in the Table 5 that follows.

Percentage of Circuit Miles in Wildfire Threat Zones		
	Tier 2	Tier 3
% of Overhead Distribution Circuit Miles	13.8%	0.5%
% of Overhead Transmission Circuit Miles	6.3%	8.6%

Table 5: Percentage of Circuit Miles in Wildfire Threat Zones

Every five years, LADWP's primary insurer conducts a risk assessment of LADWP's electric operations. These assessments evaluate various aspects of LADWP's electric operations including such topics as transmission and distribution design, construction, inspections, vegetation management, public safety and awareness, and wildfire mitigation.

LADWP's primary insurer had no findings in its most recent assessment for LADWP's transmission and distribution design construction and inspections, vegetation management, and Wildfire Mitigation Plan nor wildfire mitigating activities. However, LADWP's primary insurer provided recommendations that LADWP is considering regarding enhancing its public safety and awareness information on LADWP's website.

4. WILDFIRE PREVENTATIVE STRATEGIES

4.1. HIGH FIRE THREAT DISTRICT

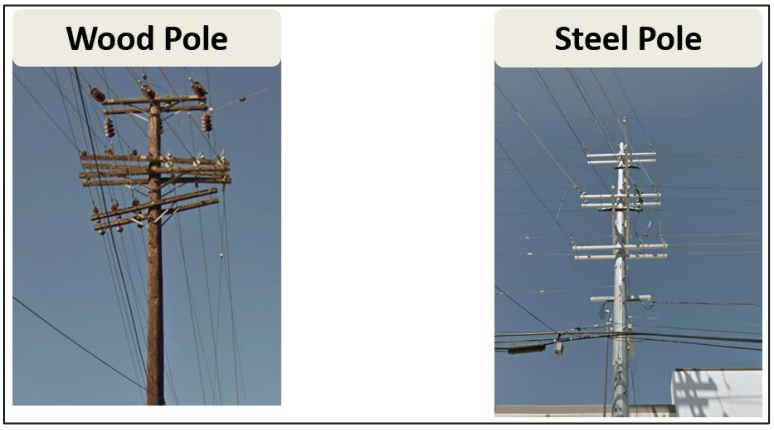
LADWP has developed fire maps and elevated construction standards to ensure it mitigates wildfires that could be initiated by its electrical lines and equipment. As early as February 2008, LADWP's PTD had developed High Wind and Fire Area maps along with new Construction Standards (C030) for these areas. After the CPUC approved a new Tier 2 and Tier 3 HFTDs map, LADWP updated its High Wind and Fire Area map to include the CPUC approved Tier 2 and Tier 3 HFTDs. Following the update, a bulletin was issued to all stakeholders outlining LADWP's updated map (See Appendix A "LADWP Fire Threat Map" for more details). These HFTDs are a key consideration when conducting its construction, inspection, maintenance, repair, and clearance practices. LADWP's core preventative strategies are further described below.

4.2. DESIGN, CONSTRUCTION STANDARDS, AND INFRASTRUCTURE

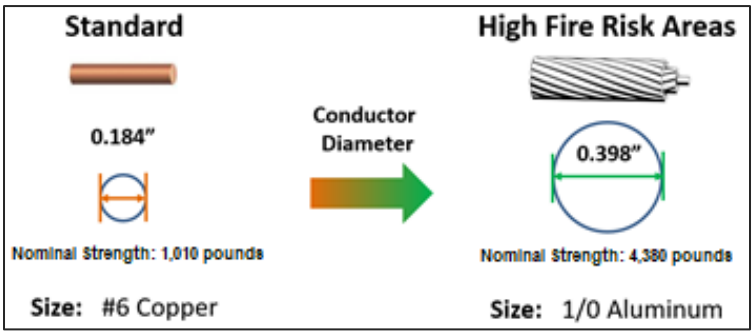
LADWP's electrical equipment and facilities are designed and constructed to meet or exceed applicable federal, state, or industry standards. LADWP treats CPUC GO 95 as a key industry standard for design and construction standards for overhead electrical facilities. LADWP meets all applicable requirements in GO 95. LADWP uses GO 95 as a minimum standard and may exceed these standards to accommodate new materials and new equipment. Additionally, LADWP monitors and follows as appropriate the National Electric Safety Code. LADWP is constantly looking to improve and harden its infrastructure by continuously evaluating and updating its policies, processes, methodologies, and construction standards as new technologies emerge. For example, the use of cellular technology allows for information to be sent directly to LADWP's Electric Trouble who would dispatch crews to inspect and repair circuits quickly.

Starting in 2008, in an effort to protect its overhead facilities, LADWP increased its power line construction standards to reduce risks associated with overhead equipment in the high wind and designated fire hazard areas. Some updates to design and construction standards that exceed GO 95 Standards to mitigate the risk of wildfire include:

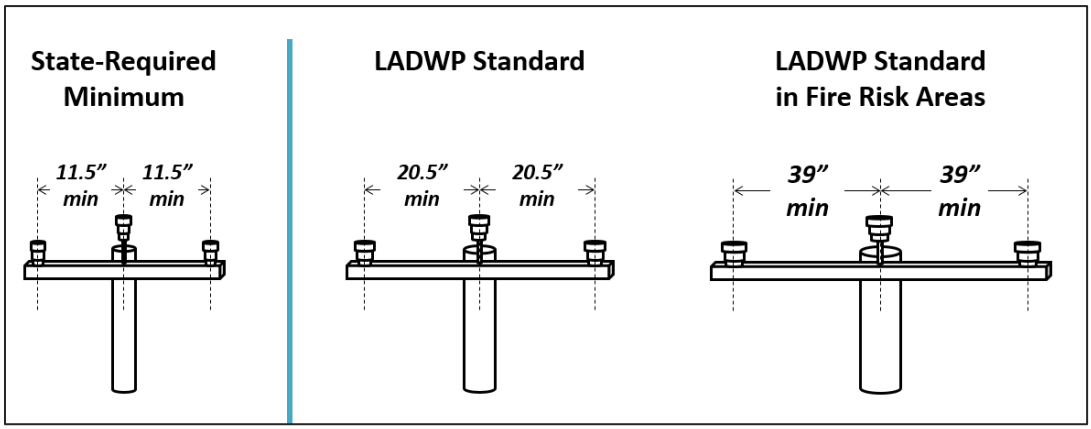
Installing alternative material poles such as ductile iron, steel, and concrete while maintaining compliance with General Order 95 Safety Factors.



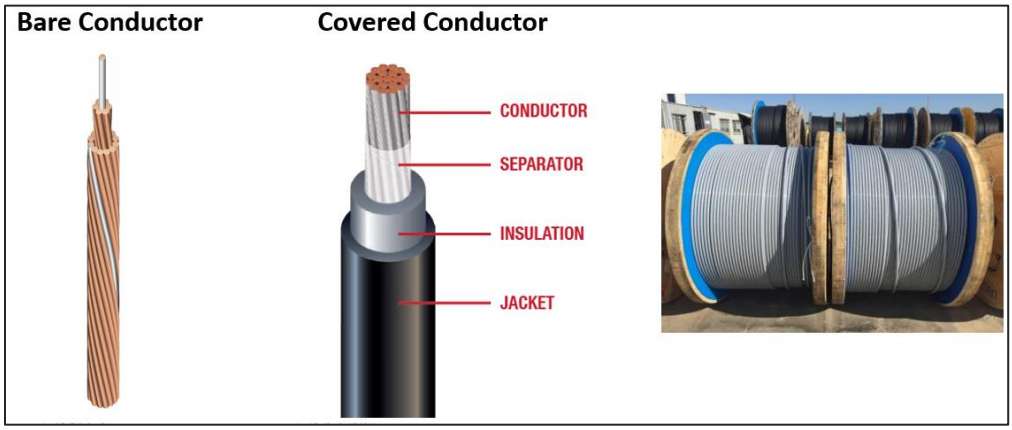
Using larger conductors and fiberglass arms.



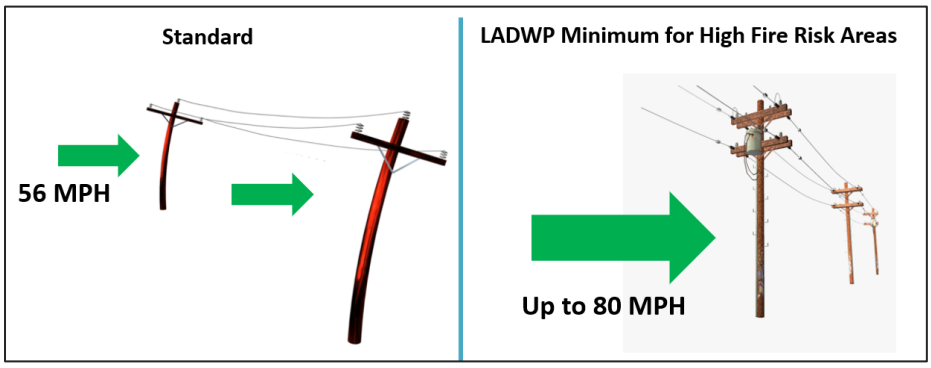
Increasing conductor spacing.



Replacing low voltage bare conductors with insulated conductor.



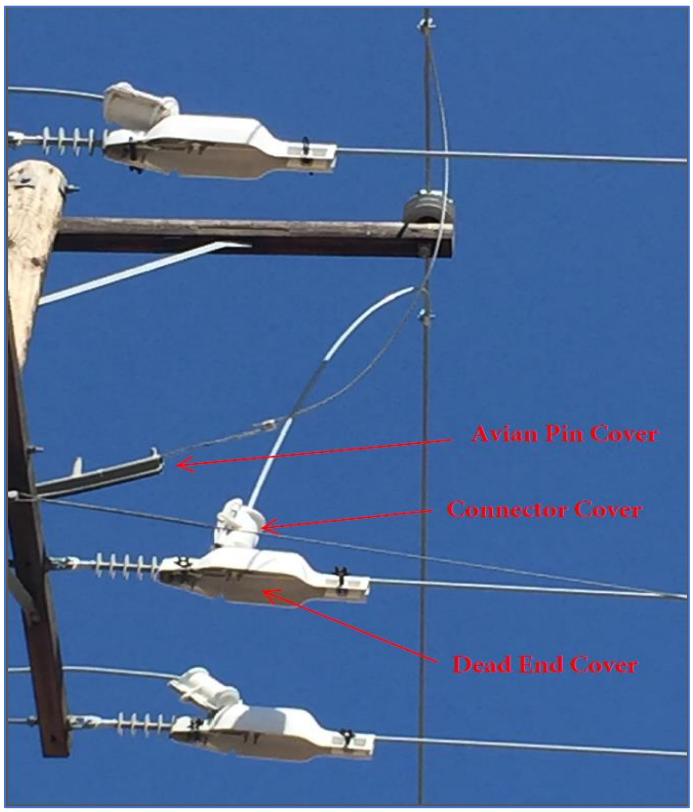
Increasing pole load calculations from 8-pounds of wind pressure (56 mph) to 16-pounds of wind pressure (80 mph), enabling its poles to sustain a higher wind pressure.



These standards were updated again in 2018 and exceed established ratings set by the CPUC for power lines.

Beyond the updates to LADWP's construction standards, LADWP continues to evaluate new solutions to mitigate the risk of wildfire. LADWP continues to assess the feasibility of installing covered conductor and its various accessories, installing avian protection, installing non-expulsion fuses, and undergrounding overhead lines within LADWP's service territory. Thus far, LADWP has installed over 16 miles of covered conductor and various amounts of avian protection on overhead distribution facilities in HFTDs.

Below is an example of avian protection used to reduce the operational and avian risks that result from avian interactions with electric utility facilities.



LADWP has a planned maintenance and replacement program (See Section 4.5. "Power System Reliability Program (PSRP)" for more details) for its infrastructure. Back-up power is available for critical LADWP facilities in the event of power failure. Security has also been increased at key facilities to minimize physical security threats. Additionally, personnel will respond according to the LADWP's emergency response plans to address interruptions and to restore service within the City.

LADWP takes preventive measures by installing fire extinguishers where required for each facility. Vegetation management is conducted under and around critical transmission and distribution lines and equipment. Each facility manager is also responsible for conducting drills for their on-site personnel.

4.3.VEGETATION MANAGEMENT

LADWP meets or exceeds the minimum industry standard vegetation management practices. LADWP complies with North American Reliability Corporation (NERC) standards and requirements including NERC FAC-003-4, where applicable. For both transmission and distribution facilities, LADWP meets or exceeds: (1) GO 95 Rule 35; and (2) the GO 95 Appendix E Guidelines to Rule 35; (3) Public Resources Code (PRC) section 4292; and (4) PRC section 4293. These standards require significantly increased clearances in the HFTDs.

LADWP monitors the clearance for approximately 362,000 trees and maintains a tree type index comprised of 85 tree types. LADWP performs line clearance tree trimming on approximately 185,000 trees per year. Further detail on LADWP's line clearance tree trimming in HFTDs can be seen in Appendix B Table 8. Tree growth is variable throughout LADWP's service territory due to differences in microclimates and topography. Vegetation management prescriptions are based on real time observations by qualified inspection staff. Patrols are driven by the need to ensure power system reliability and integrity while considering applicable compliance requirements.

185,000 TREES TRIMMED PER YEAR

LADWP is responsible for vegetation management around the transmission and distribution facilities that it operates and maintains, and, accordingly, trims vegetation to meet required clearances. Private property trees and vegetation are the responsibility of the private property owner. LADWP's Transmission Vegetation Management Program (TVMP) and Line Clearance Tree Trimming Program meet or exceed all applicable Federal and State mandates. In addition, LADWP follows ANSI Z133 Arboricultural Operations-Safety Requirements, ANSI A300 which is an industry pruning standard, and the International Society of Arboriculture (ISA) Best Management Practices - Utility Pruning of Trees. The objective of LADWP's Vegetation Management group is to ensure the safe and reliable operation of LADWP's transmission and distribution system by eliminating vegetation-caused outages.

LADWP patrols the clearances between conductors and vegetation of 100% of its transmission and distribution lines at least once per calendar year to ensure no vegetation encroachments occur within the conductor's respective clearance distance. When patrols between conductors and vegetation are performed, the findings are recorded on an inspection form, reported to supervision, and work orders are generated, when appropriate. When vegetation is identified as posing a potential hazard, the necessary arrangements are made to mitigate the hazard and the vegetation is trimmed or removed.

LADWP strives to continue a pruning cycle of approximately 12 months. Crews visit each neighborhood within the City and its service areas during the cycle. Trees projected to be within 18 inches, or 48 inches in HFTDs, of the high-voltage lines during the 12 months are pruned. Additionally, all service areas are patrolled for a second time during the pruning cycle using the "mid-cycle" approach to ensure compliance and eliminate encroachments

into the minimum vegetation radial clearance distances. LADWP's conductors, mostly in an urban setting, traverse many private properties. LADWP coordinates with owners of these private properties to ensure the appropriate clearance distances between vegetation and conductors are met. These conductor and vegetation patrols are performed on foot, by car, or by air.

LADWP's practices regarding pruning are as follows:

- All pruning shall be in accordance with the minimum clearances as identified in LADWP's TVMP and Line Clearance Tree Trimming Program
- Line sag, wind sway, tree movement from wind, species, type, and anticipated growth rates shall be considered when identifying trees to be pruned or removed and prescribing clearance distances
- The time required to obtain any necessary permission or permits to perform required pruning or removals shall be taken into consideration when scheduling any vegetation management work and prescribing clearances
- All pruning and removal work shall be in accordance with ANSI Z133, ANSI A300 Part 1 and Part 7

LADWP's practices regarding vegetation removal include:

- Trees and vegetation on LADWP-owned parcels shall be removed when deemed necessary by LADWP
- Vegetation which requires frequent pruning shall be removed, whenever possible
- Trees or vegetation that are growing within LADWP's Transmission right of way that are dead, show signs of disease, decay, or ground or root disturbance shall be removed

LADWP chooses "hands on" mechanical line clearance tree trimming, branch removal, tree removal, and brush clearing practices; the amount of trimming will depend on the conductor voltage, construction, tree location, species, and rate of tree growth with the emphasis on compliance. Quality control of inspections and vegetation work is overseen by LADWP's tree trimming coordinators and superintendents.

LADWP does not use herbicides or growth regulators as part of its vegetation management plan due to the potential impact on water contamination, biodiversity, and human health. In order to reduce ecological impacts, LADWP's Vegetation Management Group coordinates as necessary with the LADWP Environmental Affairs Office to reduce any ecological impacts discovered during vegetation management activities.

To further eliminate the threat and spread of wildfires, LADWP's Vegetation Management Group prescribed work practices call for removal and recycling of the biomass resulting from vegetation management maintenance activities. In certain cases where there is no threat to public or employee safety, logs or trees on LADWP rural properties may be left behind in order to foster wildlife habitat.

LADWP performs annual compliance inspections of every tree that has the potential to come into contact with overhead facilities. LADWP performs more frequent and detailed inspections of any such trees, and in cases where “hazard trees” (dead, dying, diseased or leaning) could strike the facilities, crews will work with the land owner to remove the tree or portion of the tree that poses a risk. In the event that LADWP is notified of vegetation that has either blown into lines or fallen onto its distribution lines, LADWP’s Electric Trouble Group will dispatch personnel to mitigate the issues and will notify LADWP’s Vegetation Management Group as needed. In the event that vegetation has either blown into or fallen onto LADWP’s transmission lines, LADWP’s Energy Control Center will notify the Electric Trouble Board who will then notify the transmission superintendent to resolve the issue. LADWP is exploring the use of emerging and advance technologies to better assess and track vegetation-associated fire risk.

LADWP’s vegetation management program, overseen by the Transmission Vegetation Program Manager, is responsible for qualified line clearance tree trimmer training, certification, and annual refresher training. LADWP personnel performing line-clearance tree trimming are qualified line-clearance tree trimmers and/or Qualified Electrical Workers (QEWs). Additionally, LADWP’s in-house Vegetation Management Group is supplemented by the use vegetation management contractors. The vegetation contract manager ensures contract compliance and contract personnel qualifications. These contractors must meet the same qualifications as LADWP’s in-house vegetation management personnel.

In areas where LADWP’s vegetation management personnel and contractors cannot access due to steep terrain, LAFD’s Brush Clearance Unit, containing LAFD inspectors and LAFD contractors, will inspect and clear brush to meet LAFD Brush Clearance requirements. LAFD also inspects and maintains properties in HFTDs which LADWP owns but does not have any facilities located on those properties. LADWP coordinates with LAFD as necessary to inspect and perform brush clearance maintenance for select LADWP properties within the City to meet LAFD Brush Clearance Requirements. In addition, LADWP coordinates as necessary with the County of Los Angeles, Agricultural Commissioner/Weights and Measures Department to perform inspections and brush clearance maintenance for LADWP-owned properties outside the City.

4.4. INSPECTION AND MAINTENANCE

LADWP meets or exceeds the minimum inspection requirements provided in CPUC GO 165 and CPUC GO 95, Rule 18. At a minimum, LADWP patrols its power distribution system once a year. In designated wildfire risk areas, patrols usually take place between March and April, which helps to identify and address concerns for the upcoming fire season. LADWP conducts its detailed inspection cycles every 5-years in its service territory, and intrusively inspects wood poles after 20 years of service. If a pole passes intrusive inspection, it will be scheduled for another intrusive inspection every 10 years thereafter. LADWP staff uses knowledge of the specific environmental and geographical conditions to determine when areas inside of the HFTD require more frequent inspections. The inspection activities are summarized below:

- **Patrol Inspections**: refers to visual, non-invasive inspections where staff identifies obvious safety and maintenance issues.
- **Detailed Inspections**: refers to full evaluations of distribution facility equipment, where staff assesses the conditions of poles, conductor lines, transformers, fuses, insulators, and other assets. Crews can also make on-the-spot repairs for certain issues identified during the inspection process.
- **Intrusive Pole Inspections**: refers to evaluation of the condition and integrity of the distribution system's utility poles. For wood poles, inspection staff probes the utility pole to test for signs of decay or other factors which indicate the pole requires maintenance, reinforcement, or replacement.
- **Infrared Inspections**: refers to use of heat sensing infrared cameras to detect "hot spots" which cannot be seen by the human eye. Hot spots can indicate potential failure points exist, such as bad connections or failing components.

Repair and maintenance work identified during inspections is prioritized based on the level of risk they pose and the location of the asset. Work associated with immediate safety and/or reliability risks as well as tasks or assignments within the Tier 3 and Tier 2 HFTDs are given the highest priority.

Once the repairs are made, a supervisor will inspect the repairs to ensure they are completed per LADWP's construction standards. Furthermore, if LADWP staff discovers a facility in need of repair and not owned by LADWP but is installed on LADWP's pole, LADWP will issue a notice to the facility owner.

LADWP will review inspections results annually and adjust, if necessary, to lower the risk of wildfire due to its electrical lines. LADWP has placed a higher priority for inspections and maintenance on its transmission and distribution assets within Tier 2 and Tier 3 HFTDs.

As of May 2023, LADWP's Board adopted Motion Number 23222 (Motion 23222) for distribution line pole inspection and maintenance. Motion 23222 requested for increased transparency and independent oversight concerning compliance with CPUC GO 95 and 165, and specifically called for quarterly and annual reporting on various aspects of distribution line pole inspection, maintenance, and compliance. Since the adoption of Motion 23222, LADWP has provided quarterly year-to-date reports on distribution asset inspection statistics and completed and outstanding fix-it tickets to its Board. As a result, these reports allow LADWP and its Board to ensure the accuracy and completeness of its fix-it tickets, Trouble Memo Accelerated Codes (TMACs) and Inspection Maintenance Accelerated Codes (IMACs), reducing the risk of operating damaged equipment and wildfire ignitions.

LADWP also inspects and maintains its transmission lines and towers per its internal procedures such as its Transmission Inspection Maintenance Plan (TMIP). The purpose of LADWP's TMIP is threefold:

- To ensure the safe and reliable operation of the Department's bulk transmission system

- To describe in a single document the maintenance and inspection criteria and activities for certain LADWP lines as identified by the Western Electricity Coordinating Council (WECC), “taking into consideration diverse environmental and climatic conditions, terrain, equipment, maintenance philosophies, and design practices”
- To ensure compliance with WECC Standard FAC-501-WECC, Transmission Maintenance, as approved by the Federal Energy Regulatory Commission on May 30, 2018

LADWP performs aerial patrols of its transmission lines biannually (at least once during the first half of the year and at least once during the second half of the year, with at least 3 months between intervals). These aerial patrols are conducted in order to identify and quantify right of way encroachments, construction, conductor damage, insulator breakage, earth movement, or any other condition which may impact transmission system right of way property or facilities. These patrols include a visual inspection of towers, fixtures, conductors and related hardware, insulators, and overhead ground wires. Attention is also given to right of way conditions, encroachments, and vegetation issues.

LADWP conducts inspections on its transmission towers in an orderly and systematic manner starting with the tower site and progressing up the tower to the static peak circling the tower at each level bar, where feasible, to assure 360-degree coverage. Tower bolts are spot checked for torque to the following specification: 7/8 bolts 90 psi, 3/4 bolts 70 psi, and 5/8 bolts 50 psi. Special attention is given to bolts at splice points, arm supports, and conductor attachment points. Once completed, all reportable conditions are entered in a transmission maintenance database.

LADWP also conducts maintenance on its transmission towers via contamination control (insulator washing) and tower and wood pole structure management. Contamination control is achieved by the use of truck mounted nozzle washers and climbing hand wash methods. All insulator washing is performed with the application of high-pressure de-mineralized water. Intrusive inspections of wood poles are performed in accordance with GO 95. For transmission towers that cross other lines, freeways, major highways, railroads, or bodies of water, a detailed climbing inspection is conducted annually. All other towers are inspected at least once every ten years. Other forms of inspections include patrols by air or ground due to reports of trouble, line relays, or following an extended planned outage.

In addition, LADWP continues to explore enhanced maintenance activities within the HFTD. Such enhancements may include increased frequency of detailed inspections and infrared inspections. LADWP also plans to assess the feasibility of using drone technology to aid in inspections and to provide additional visibility without the need to climb poles.

4.5.POWER SYSTEM RELIABILITY PROGRAM (PSRP)

LADWP is investing heavily in its Power System Reliability Program (PSRP) in order to maintain a robust, reliable, and safe Power System through the replacement of aging infrastructure assets related to its transmission and distribution system. In July 2014, the Power Reliability Program (PRP) which started in 2007 with a focus on improving the distribution system, evolved into the PSRP to help prioritize asset maintenance and capital work for each major section of the Power System, including generation, transmission, substation, and distribution.

The PSRP is a comprehensive, long-term power reliability program with the following goals: (a) mitigate problem circuits and stations based on the types of outages and equipment failures specific to the facility, (b) expedite restoring temporary repairs of equipment failures and target circuits that contribute heavily to LADWP's reliability indices, (c) commit to proactive maintenance and effective capital improvements, and (d) achieve replacement cycles that align with the assets' respective life cycles, including replacement of overloaded distribution transformers, worn underground cables, deteriorated overhead poles, and fatigued substation equipment.

The PSRP identifies the replacement goals for specific assets to be focused on by fiscal year. These PSRP targets are expected to be updated on a fiscal year basis to adjust to varying Power System conditions and resource allocations. As a part of these goals, LADWP has placed an emphasis on the assets located in the various HFTDs due to inspection priorities of CPUC's GO 95 Rule 18. A minimal amount of LADWP's distribution assets are located within HFTDs. LADWP continues to inspect and replace assets in these High Fire Threat Districts to harden its infrastructure and mitigate wildfire risks. The figures seen in Appendix B. LADWP Metrics list the overhead targets and accomplishment which includes the fire threat zones. These figures depict the most recent information collected by LADWP's WMIS and GIS groups and are subject to modification based on actual completion of on-going field work. The replacements of assets in the HFTDs are constructed using the Standards that are developed for High Wind and Fire areas. These replacement metrics can be seen in Section 7.1 Metrics and Assumptions and Appendix B. LADWP Metrics.

LADWP has planned the PSRP budget to support the following key objectives: (a) gradually ramp up investments to hasten efforts to address the backlog of asset inspection/maintenance and capital improvement work; (b) systematically invest in current and future projects that have the greatest impact to improve LADWP's reliability indices; (c) increase investments to achieve replacement cycles that align with the assets' respective life cycles; and (d) invest in the training and resources needed to ensure LADWP's capability to maintain the higher level of reliability. Starting with the actuals since FY 14-15 (i.e. $659.1 million), the PSRP expenditures are expected to ramp up to the approved FY 22-23 budget of $1.04 billion, which represents an increase of just under 58% within a seven-year period. This is to allow LADWP to achieve the preferred replacement cycle for all its major assets within generation, transmission, substation, and distribution. In Fiscal Year 2022-23, LADWP has spent over $114M of its PSRP budget to strengthen its grid by replacing poles, crossarms, transformers, and conductors.

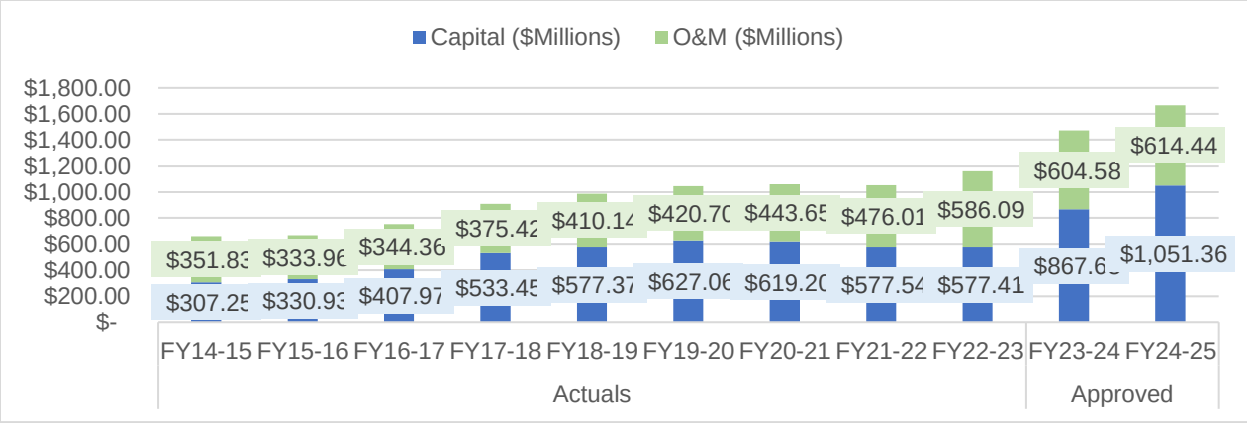


Figure 4: Historical and Approved O&M and Capital Funding (FY 2014 - 2024)

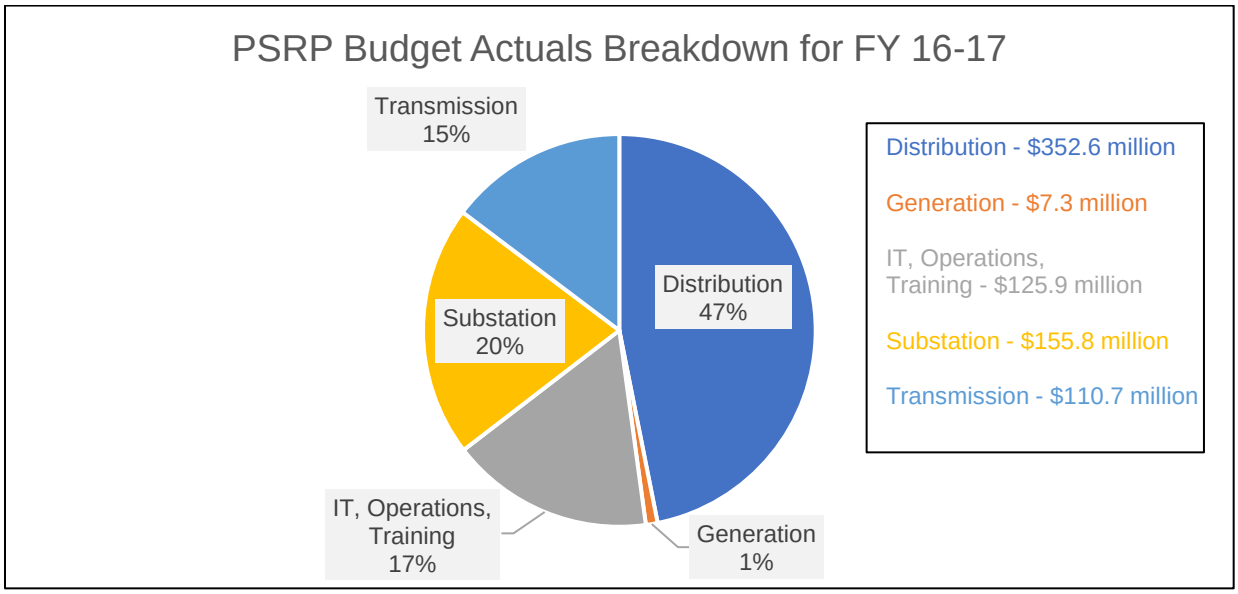


Figure 5: PSRP Budget Actuals Breakdown for FY 2016-17

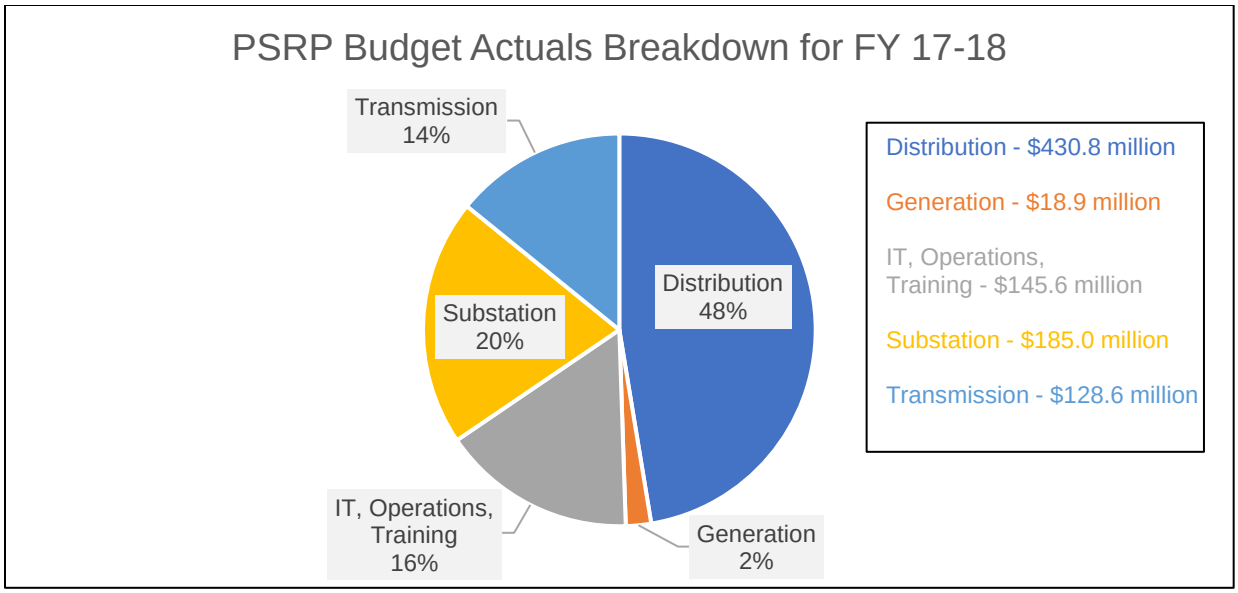


Figure 6: PSRP Budget Actuals Breakdown for FY 2017-18

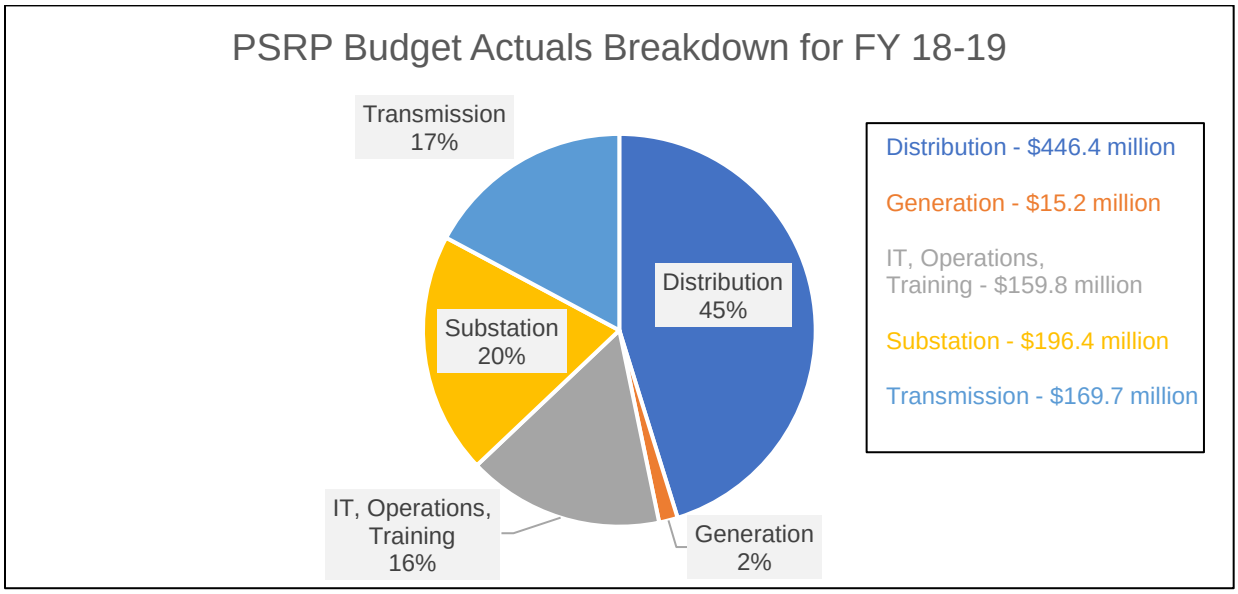


Figure 7: PSRP Budget Actuals Breakdown for FY 2018-19

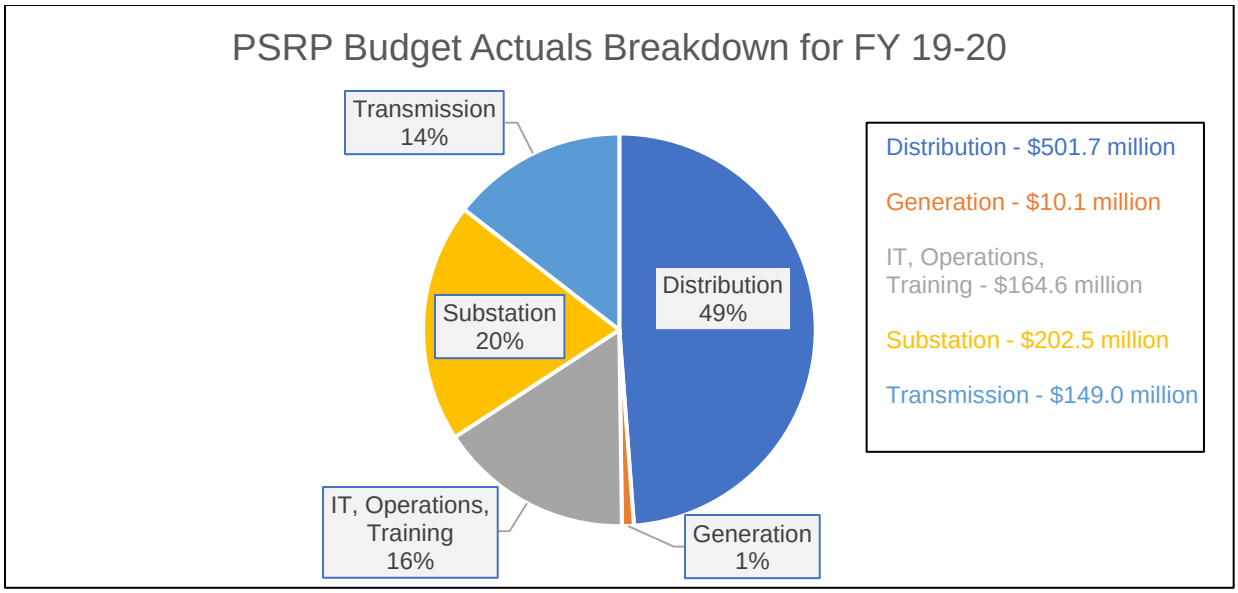


Figure 8: PSRP Budget Actuals Breakdown for FY 2019-20

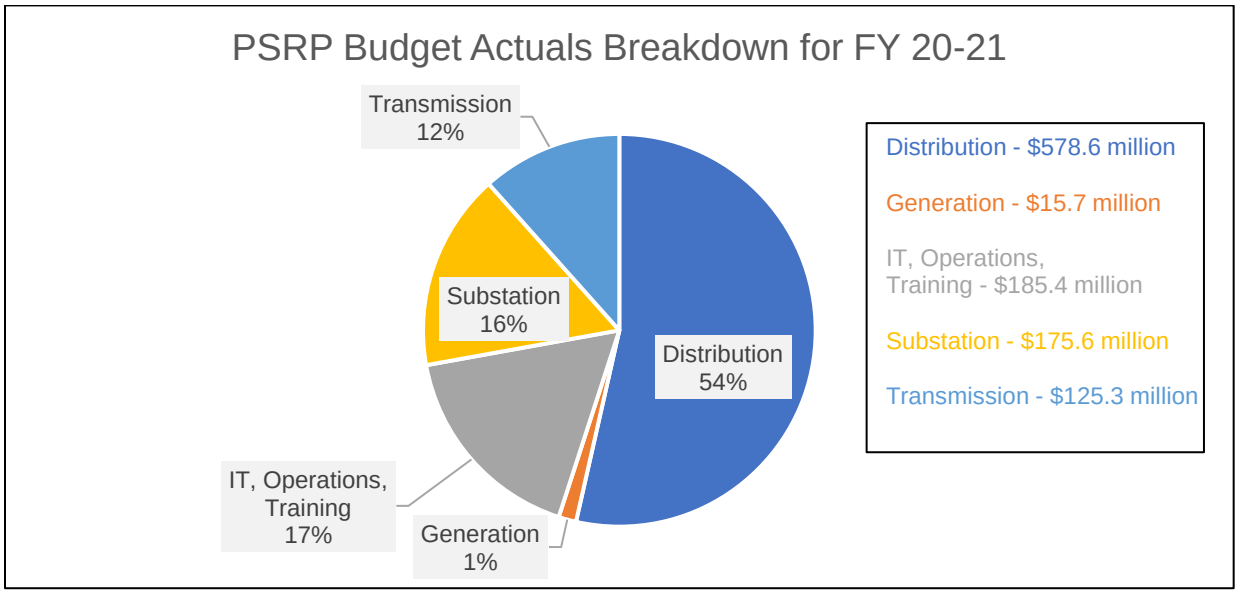


Figure 9: PSRP Budget Actuals Breakdown for FY 2020-21

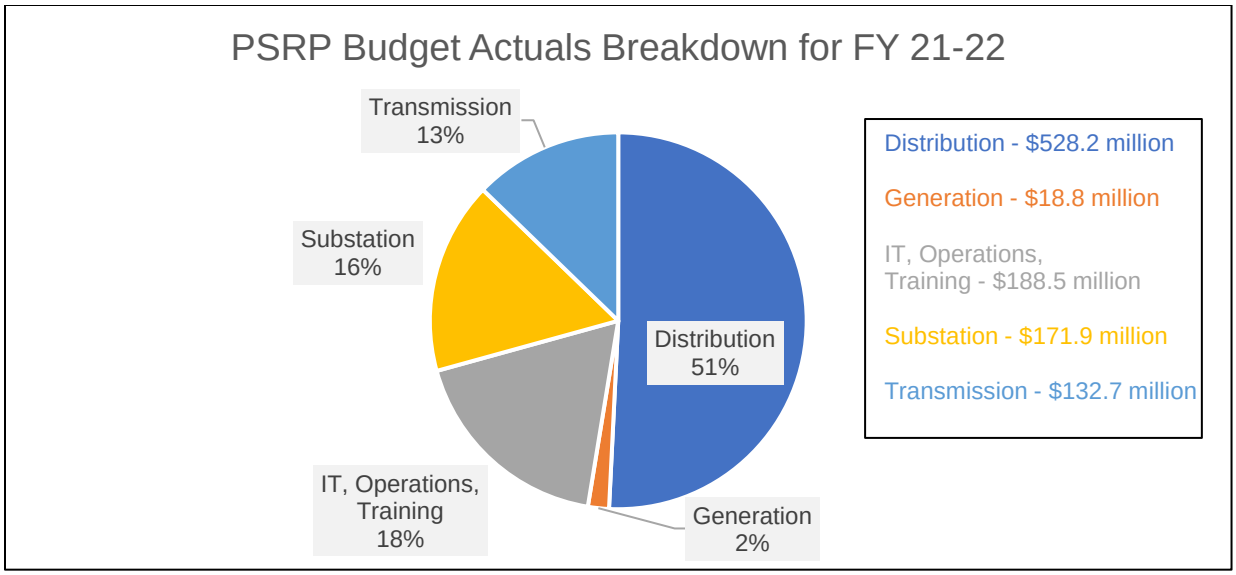


Figure 10: PSRP Budget Actuals Breakdown for FY 2021-22

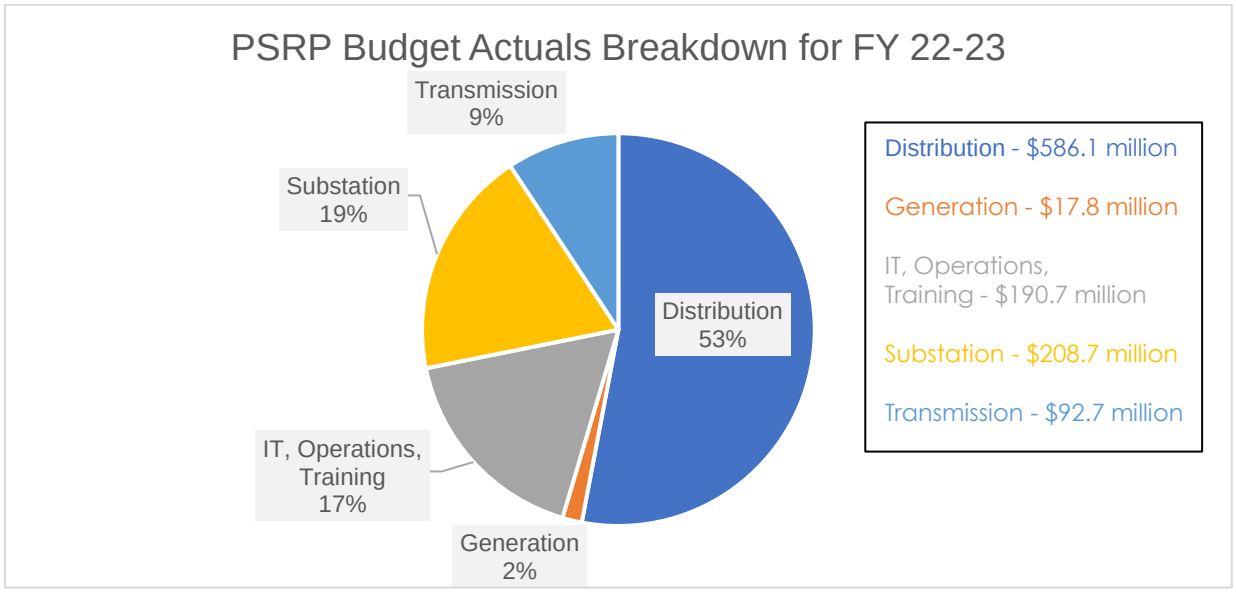


Figure 11: PSRP Budget Actuals Breakdown for FY 2022-23

4.6.WORKFORCE TRAINING

LADWP has implemented rules and corresponding training programs for its workforce to increase awareness of the hazards of wildfires during high fire threat conditions and the potential sources of ignition.

LADWP provides annual training to its employees who have responsibilities related to the Plan. These trainings are provided to the appropriate personnel annually and as-needed if there are any major changes to the Plan. Such training includes, but is not limited to, the following:

- Fire Extinguisher Training
- Working in HFTDs during Red Flag Conditions
- Participating in OEM meetings and both internal and external table top drills and exercises with the other City departments through the Emergency Management Department and the City Emergency Operations Organization

  Table top drills consist of the following topics, activities, and exercises:

  - Brushfire, Earthquake, El-Nino, Tsunami, Damage Assessment Team, Grid-Ex
  - Command and Management activation activities
  - Annual Citywide EOC Exercise
  - Partner Utility/Association Exercises

As an example, LADWP routinely holds a Power System Command and Management Exercise whose objectives is to provide an overview of the ICS, SEMS, and NIMS, provide an overview of Power System command centers, such as the EmCC and the PDOC, and provide an introductory overview on ICS forms and their use. Additional to LADWP's internal training, LADWP also participates in drills and exercises in collaboration with SCPPA, APPA, WRMAG, CUEA, and the City's EOC.

The Plan, presentation, and related materials are reviewed, updated, and disseminated prior to workforce training. Workforce Training includes but is not limited to training to become a Qualified Person and QEW.

- Qualified Person is an employee that has completed Department-approved training and demonstrated competency related to the scope of their work in:
  - Operations to be performed
  - Hazards involved with the work
  - Hazards involved in the work environment where work is performed
- QEW is an employee who fulfills the requirements of a Qualified Person and has a minimum of 2 years of training and experience with high-voltage circuits and equipment. A QEW is allowed to work on or near equipment within the minimum approach distance of exposed, energized high-voltage circuits and equipment if precautions are taken to ensure employee safety.

LADWP also provides its QEWs with an Annual Refresher Course (ARC) training. Such training includes, but is not limited to, the following:

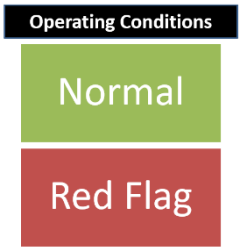
- Pole Top, Bucket and Vault Rescue
- Fall Restraint and Prevention

- First Aid, Cardiopulmonary Resuscitation (CPR), and Automated External Defibrillators (AEDs)
- Personal Protective Equipment (PPE)
- Injury and Illness Prevention Program (IIPP)

When new equipment or material is introduced, it goes through the Joint Labor Management (JLM) committee. This committee determines whether the new equipment or material will provide a safer work environment and/or increase reliability to the Department and its customers. Once this has been determined, the committee sets up mock installations at the Department's Training Center. At this point, they determine whether specific training is required and, if so, they develop training modules prior to the new equipment or material being released to the field crews. If specific training is not required at a minimum they produce a Bulletin with instructions introducing the new equipment or material.

Additionally, LADWP maintains and utilizes its own internal wildfire information website for LADWP's employees to use when working in LAFD Fire Zones and Tier 2 and Tier 3 HFTDs. The website contains the latest version of LADWP's WMP and links to other resources, training materials, and reminders for what tools and equipment are required under all conditions, including Red Flag conditions.

4.7.OPERATIONS AND PROTOCOLS



LADWP's operations and protocols dictate what actions are prohibited, required, or recommended during normal operating conditions or red flag conditions. LADWP's operations and protocols also consider Situational Awareness, Collaboration with LAFD, Blocking Reclosers on circuits in Tier 3 areas, Incident Based De-energization, Impacts to Public Safety, Customer Notification Protocols, and Communication Infrastructure.

NORMAL OPERATING CONDITIONS

- LADWP crews are required to follow the protocols listed below when working on energized electrical lines and/or equipment in the LAFD Fire Zones and the CPUC Tier 2 and Tier 3 HFTDs.
  - Clear any dry vegetation at a radius of 10 feet at the base of the pole
  - Required at immediate work location:
    - Fire Extinguisher
    - Shovel
    - Fire Rake/Pulaski
    - Radio Communication (i.e. portable radio)
  - Extreme Caution:
    - When using equipment that can create a spark or get hot enough that if laid down could cause a fire (i.e. welding or soldering)

- Prohibited:
    - Parking vehicles over dry brush as the exhaust can cause a fire
    - Smoking in these designated areas

RED FLAG CONDITIONS

- LADWP limits non-essential work on all Water and Power facilities in the LAFD Fire Zones and the CPUC Tier 2 and Tier 3 HFTDs.
- Only jobs that are essential for public safety or jobs that reduce fire risk will be allowed including:
    - Work for Electric Trouble on power restoration
    - Repair General Order 95 Rule 18 Level 1 and 2 non-conformances which are classified in LADWP's work management system as Priority 1, 2a and 2b Trouble Memo Accelerated Codes (TMACs) and Inspection Maintenance Accelerated Codes (IMACs)
- Clear any dry vegetation at a radius of 10 feet at the base of poles when working on energized electrical lines and/or equipment.
- Remind all personnel the following must be used with extreme caution during these jobs:
    - Use extreme caution when using equipment that can create a spark or get hot enough that if laid down could cause a fire (i.e. welding or soldering)
    - Parking vehicles over dry brush as the exhaust can cause a fire
    - Smoking in these designated areas
- If work must take place, crews are required to have the following available at the immediate work site
    - Fire Extinguisher
    - Shovel
    - Fire Rake/Pulaski
    - Radio Communication (i.e. portable radio)

Figure 12: LADWP Wildfire Handout

SITUATIONAL AWARENESS

LADWP primarily uses the following sources to monitor current and forecasted weather data:

- Santa Ana Wildfire Threat Index (SAWTi) - https://fsapps.nwcg.gov/psp/sawti
- National Oceanic and Atmospheric Administration (NOAA) - https://www.noaa.gov/ and https://www.weather.gov/fire/
- City of Los Angeles Fire Department Red Flag - https://ers.lafd.org/redflag/
- City of Los Angeles Fire Department Fire Weather - http://lafdweather.blogspot.com/

LADWP's OEM receives and sends email notifications from NOAA's National Weather Service (NWS) alerting key LADWP personnel of NWS Red Flag Warnings. Once LADWP receives these notifications, whether from NOAA and/or SAWTi, LADWP will do the following:

- Limit all non-essential work for all Water and Power facilities in the HFTDs
- Only perform work required for public safety and to prevent ignition from electrical facilities
- Inspect Transmission circuits in Tier 2 and 3 areas prior to energizing for test

LAFD also notifies LADWP's ECC, PTD, and OEM of LAFD Red Flag Alerts. The NWS Red Flag Warnings may not necessarily reflect actual conditions specific to the City whereas the LAFD Red Flag Alerts are specific to the City. When LADWP receives these Alerts, LADWP will do the following:

- Block reclosers on distribution circuits located within CPUC Tier 3 HFTDs unless abnormal system conditions make this imprudent

LADWP's ECC monitors the following conditions and information:

- Red flag warnings and other weather alerts
- Earthquake information
- 14-day hourly weather forecasts by location
- Displays of CPUC Tier 2 and Tier 3 HFTDs
- Displays of active fires

ALERTWildfire (http://www.alertwildfire.org) is also available to support situational awareness within LADWP's service territory and provide aid to first responders and firefighters in the event of a wildfire. ALERTWildfire is a consortium of three universities (the University of Nevada, Reno, University of California San Diego, and the University of Oregon) which provides access to state-of-the-art fire cameras and associated tools that entities use to enhance situational awareness around wildfire.

COLLABORATION WITH EXTERNAL AGENCIES

LADWP is exploring new technologies and methods, including the use of cameras and weather stations, to increase situational awareness. LADWP intends to share relevant and useable information, where feasible, with LAFD and local fire departments within the Owens Valley to provide the ability to monitor potential wildfire risks around LADWP facilities and improve operational response to wildfire threats from LADWP, LAFD, and local fire departments within the Owens Valley.

BLOCKING RECLOSERS

Currently, LADWP's OEM group is responsible for receiving notifications of adverse weather conditions from the National Weather Service and the City Emergency Management Department. LADWP's OEM will forward these notices to affected stakeholders such as LADWP's ECC for operational planning needs and necessary action. Upon notification from LAFD of a Red Flag Alert, ECC personnel will be responsible for blocking the 4.8kV distribution system reclosers in Tier 3 HFTDs either remotely or by dispatching personnel to reduce wildfire ignition risks. 34.5kV circuit reclosers within Tier 3 HFTDs will also be blocked unless doing so would jeopardize the safe and reliable operation of the power system. On circuits where direct SCADA control is not available, these functions are executed by dispatching personnel to the locations and performing the functions locally.

Similarly, the blocking specific reclosers within Tier 2 will be determined on a condition or incident-based basis.

INCIDENT BASED DE-ENERGIZATION

LADWP is committed to providing reliable power and improving public safety. Due to LADWP's highly urbanized service territory and circuit configuration, the wildfire risk profile is minimal. Careful assessment of wildfire risks including the impacts of preemptive and wind-event triggered proactive power shut-off procedures were considered during the development of this Plan. However, LADWP has determined that the adverse impact on health, safety, and quality of life of its customers outweighs the perceived benefits derived from pre-emptive power shut-offs. In order to maintain public safety, LADWP executes its de-energization protocols on a per incident basis. As a result, LADWP may block reclosers or de-energize its lines in the event of a wildfire, or specific threat identified by LADWP personnel if it is deemed necessary based on safety and reliability issues. Additionally, LADWP maintains compliance with all relevant federal, state, and local resource planning standards, including contingencies for generation and transmission losses or outages due to any unplanned event.

Within the City, LADWP operates a 24-hour, 7-day a week Electric Trouble Section that responds to power outage related concerns in the distribution system. If LADWP receives a notification regarding a possible hazard, LADWP will send an Electric Trouble Patrol Crew to the hazard to determine the appropriate action. If that crew determines that there as an imminent public safety hazard, they have the authority to call an Electric Trouble Dispatcher, or the ECC, and de-energize the power line. LADWP's Electric Trouble Section has direct phone contacts with LAFD and LAPD for any and all emergencies. When LADWP receives a notice of a possible hazard from any of these agencies, LADWP responds immediately without any delay. Within its HFTDs, LADWP's patrol crews patrol the entirety of the de-energized circuit prior to re-energization. The patrol crew, in conjunction with Electric Trouble, then determines what is needed to either: make any necessary repairs and to re-energize the line or isolate the hazard through switching and re-energize the line from another source. Typically, the average length of outage in LADWP service territory is under 2.5 hours.

Additionally, LADWP will also notify affected neighboring entities who may be impacted by transmission-level de-energization such as Glendale Water and Power and Burbank Water and Power in the event of an incident based de-energization. LADWP will make all efforts to notify these entities in real-time over the phone in the event of an incident based de-energization event. LADWP will also keep these entities apprised if conditions change, and will ensure lines are effectively repaired and re-energized as soon as practicable.

Within LADWP's Owens Valley service territory, LADWP, in coordination with the Inyo County Sheriff's Office, Cal Fire, Inyo National Forest and Local Volunteer Fire Departments, patrol the HFTDs to determine the appropriate action which may include

blocking reclosers or de-energizing the circuit. LADWP will coordinate with the aforementioned departments prior to re-energizing the circuit.

Due to the nature of incident based de-energization, some notifications will be after the de-energization event. LADWP will enact the appropriate actions per LADWP internal policies to ensure personnel and customer safety in compliance with federal and state requirements.

LADWP's ECC will coordinate with Southern California Edison (SCE) in the event where SCE notifies LADWP of an SCE Public Safety Power Shutoff in areas where LADWP has customers in fringe areas that may be impacted by the shutoff. Through this coordination, LADWP follows existing intercompany work procedures to ensure the impacted circuits are de-energized and re-energized safely.

LADWP will also consider the impacts included herein:

IMPACTS TO PUBLIC SAFETY

In the City, LADWP considers impacts to public safety and has developed protocols in the event of any unplanned outages. When an outage occurs: LADWP's Electric Trouble Section notifies LAPD and LAFD for the areas affected.

When an outage occurs, LADWP's Electric Trouble Section sends out summary outage emails approximately every four hours. The information given includes the area affected by the outage, the estimated time of restoration, and any updates throughout the outage period including time of actual restoration. Members of the Mayor's office are notified via email of significant outages. Corporate Safety and Communications would respond to inquiries for additional information from the Mayor's office and coordinate the response based on information they are able to obtain from either Electric Trouble, ECC, or Power System executives. Members of LADWP's Intergovernmental Affairs receive the same summary outage emails and would provide information and respond to inquiries from affected City Council offices. LAPD and LAFD are also notified of any Life Support Equipment recipients that are affected. Customer Call Center will notify these recipients and provide them with the same information and updates. In addition to the outside agency notification, the following parties within LADWP are notified:

- City of Los Angeles Board of Water and Power Commissioners
- General Manager
- Chief Operating Officer
- Senior Assistant General Manager of Power System
- Executive Director of Power System Construction, Maintenance, and Operation
- Executive Director of Power Planning, Engineering, and Technology Applications
- General Counsel of the Los Angeles City Attorney's Office
- Director of Power System Transmission and Distribution
- Director of Power System Construction and Maintenance

- Director of Power System Supply Operations
- Director of Power System Engineering
- Director of Power System Planning
- Director of Power New Business and Electrification
- Director of Capital Projects and External Generation
- Director of Advanced Technologies Infrastructure
- Director of Water Operations
- Director of Water Distribution
- Office of Emergency Management
- Corporate Safety and Communications
- Key Accounts

The Key Accounts Representative will take the information they received and determine if there are any schools, hospitals, and other emergency services affected by the outage, and provide them with notifications and updates.

Within LADWP's service territory in Owens Valley, LADWP, in coordination with the Inyo County Sherriff's Office, Cal Fire, Inyo National Forest, and Local Volunteer Fire Departments, will patrol the Elevated Fire Threat Areas to determine the appropriate action such as notifying the affected stakeholders and communities.

If outages exceed 10,000 customers, LADWP's OEM will notify both the City Emergency Management Department (EMD) Duty Officer and the CUEA by email of the current total number of outages and a breakdown of outages by community. This data is obtained from Electric Trouble. As long as the outages exceed 10,000 customers, OEM will continue to report at least twice daily to these entities.

The Los Angeles County Office of Emergency Management may request information on any potential or actual impact to the LADWP Power System. The Federal government or State agencies, such as California Office of Emergency Services (Cal OES), may also submit requests for this information which are funneled through the Los Angeles County Office of Emergency Management. Cal OES and other State agencies may also utilize CUEA for that same purpose.

CUSTOMER NOTIFICATION PROTOCOLS

LADWP's Outage Management Website provides information for affected customers and allows for customers to report power outages. LADWP's Outage Management Website is linked below:

HTTPS://WWW.LADWP.COM/OUTAGES

This site can also be accessed by going to www.ladwp.com and clicking on the top right corner “Power Outages”. A sample of what the customers will be able to see from the website is shown in the figure below.

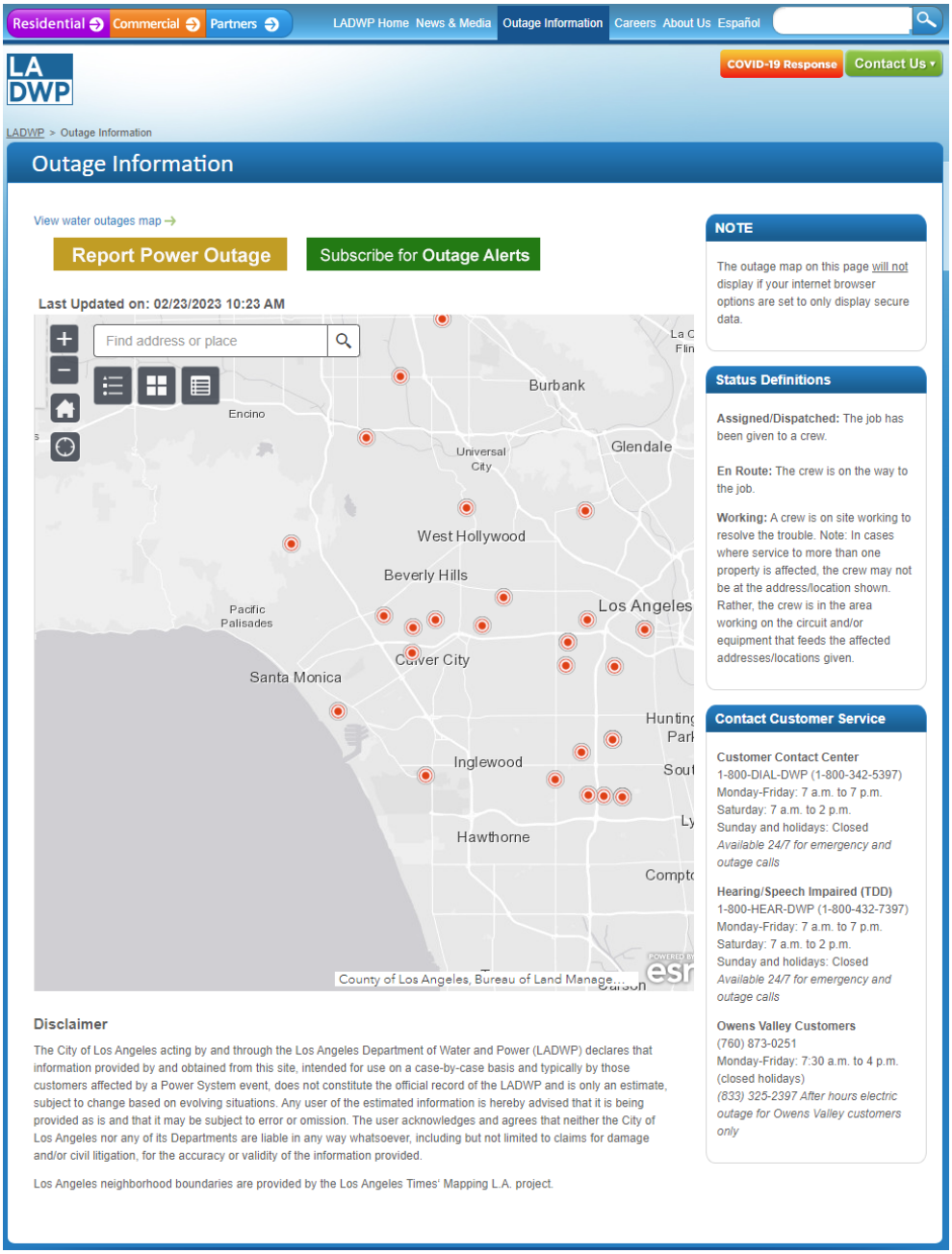


Figure 13: LADWP Outage Management System

LADWP also notifies affected customers of community outages within its service territory via text message and e-mail notifications in English and Spanish. In order to receive

these notifications, customers must subscribe to LADWP's Outage Alerts via its Outage Management Website as seen above (www.ladwp.com/outages) or by visiting www.ladwp.com/OutageAlert for more information.

LADWP's CSC team also coordinates closely with Electric Trouble to share outage information via social media. Outage updates are typically posted on https://nextdoor.com/ to just the affected communities, as the platform allows for targeted distribution of messages to select areas in the City, including the ability to send messages out to the entire service area, if desired. Updates and customer replies are also sent using the Department's Twitter handle: @LADWP.

LADWP's customers can report a power outage or reach customer service in the Owens Valley by calling 1-800-992-8331 or 833-325-2397 after hours. Additionally, LADWP customers in the Owens Valley can visit www.ladwpeasternsierra.com/customerservice for more information.

COMMUNICATION INFRASTRUCTURE

LADWP's communication infrastructure is necessary to ensure information sharing can be maintained with all critical stakeholders, including other City departments, SCPPA, and CUEA, during an emergency.

A local emergency can impact heavily upon the City's communications systems, especially those resources dedicated to immediate response efforts. LADWP's Power System utilizes the following communication devices and systems for primary and redundant communication needs:

- Vehicle and Handheld Radios (Low Band, Ultra-high Frequency, and 900 MHz)
- Voice Over Internet Protocol Telephone System
- Cellular Phones
- Satellite Phones
- Dedicated Power Operations Phone System (DPOPS)
- Microwave Communication System
- Data Systems

LADWP has satellite phones assigned to Power System Senior Assistant General Managers, Power System employees, facilities, and mobile command centers.

Per LADWP's incident-based de-energization policy (See Section 4.7. "Operations and Protocols" for more details), LADWP will only de-energize if there is an immediate hazard to public safety, personnel safety, or as guided by LAFD. This instruction will require LADWP to act immediately without any delay. Any coordination between LADWP and Communication Infrastructure Providers will be filtered through Electric Trouble if there was damage to communication lines. However, if time permits, LADWP will take the necessary steps to notify affected stakeholders.

5. RESTORATION OF SERVICE

5.1. WILDFIRE RESPONSE AND RECOVERY

LADWP takes all reasonable and practicable actions to prevent and suppress fires resulting from our electric facilities. Ongoing communications ensure necessary actions are also taken outside of emergency conditions, such as elevated communication during a red flag condition following an emergency. LADWP implements the following recovery steps after an emergency event takes place:

- Maintain Core Services
- Internal Debrief
- After Action Reporting
    - Best Practices and Strengths
    - Lessons Learned, Gaps, and Weaknesses
    - Improvement Planning
- Plan for Restoration
- Prepare for Federal and State Public Assistance
- Streamline Rebuilding Process Where Possible

The Plan is designed for disaster preparation, response, and safe and efficient recovery from any type of outages caused by exogenous forces including those resulting from wildfires. Any communications by LADWP during an active emergency, such as a wildfire, will be in accordance with SEMS as necessary and will be at the direction of the entity responsible for disseminating information about the emergency. Additional information on activities performed during and after wildfire events is provided in Section 2.12, LADWP Office of Emergency Management (OEM).

6. COMMUNITY OUTREACH AND PUBLIC AWARENESS

Keeping LADWP's customers informed and aware of proactive planning and action to mitigate wildfires is of utmost importance. LADWP will share the availability of this plan, and highlight LADWP's ongoing work to advance the plan through the following channels:

BOARD PRESENTATION

LADWP presents this Plan to its Board of Water and Power Commissioners on an annual basis. The annual LADWP Board Presentation will allow for public engagement, opportunity for public commenting, solicitation of feedback from the LADWP Board, and sharing of any pertinent public service announcements.

WEBSITE

LADWP's Wildfire Mitigation Plan is available for public review and download at the following link: https://www.ladwp.com/wildfireplan. The plan will also be made available through the LADWP in the Eastern Sierra page at: www.ladwpeasternsierra.com.

For additional information on the City's wildfire prevention and wildfire mitigation efforts, LADWP's customers can visit https://www.lafd.org/wildfire. For the Owens Valley, LADWP's customers can visit https://www.cityofbishop.com/departments/fire/chief_s_message.php and https://www.readyforwildfire.org/.

PUBLIC COMMENT

LADWP also accepts comments from the public via the e-mail link: wmp@ladwp.com.

NEIGHBORHOOD COUNCIL MEETINGS

LADWP will provide updates and presentations as requested on the contents of its Wildfire Mitigation Plan to affected Neighborhood Councils in Appendix A and Neighborhood Council Coalitions at one of their regularly scheduled meetings.

- See Appendix A for affected Neighborhood Councils
- Los Angeles Neighborhood Council Coalition
- Valley Alliance of Neighborhood Councils
- Westside Regional Alliance of Councils
- Alliance of River Communities
- Harbor Alliance of Neighborhood Councils

MEDIA AND SOCIAL MEDIA

LADWP shares the Plan with the media through a press release. The Plan's availability will also be posted on the LADWP's newsroom (https://www.ladwpnews.com/) and social media channels to highlight LADWP's proactive planning and ongoing efforts to create a resilient power system.

7. EVALUATING THE PLAN

7.1. METRICS AND ASSUMPTIONS FOR MEASURING PLAN PERFORMANCE

As part of its wildfire mitigation measures, LADWP plans to monitor and track the following metrics, as applicable, in order to measure the Plan's performance and make necessary improvements.

EXTERNAL RISK METRICS

External Risk Metrics includes metrics that track the relative risks that impact LADWP that are outside of LADWP's control including Red Flag Warning Days and Red Flag Alert Days. These Metrics can be seen in Table 6 of Appendix B of this Plan.

In addition, LADWP has access to NOAA's Climate Data Online Data Tools to obtain and utilize other External Risk Metrics for various locations in LADWP's service territory.

OUTCOME METRICS

Outcome Metrics measure outcomes that may be associated with an increased risk of utility-caused wildfires. LADWP tracks the following outage information for its Outcome Metrics:

- Distribution Outages Within HFTDs
- Subtransmission Outages Within HFTDs
- Transmission Outages Within HFTDs

In addition to tracking the outages within HFTDs, LADWP tracks the respective causes associated with the aforementioned outages:

- Contact from Object (Non-Vegetation)
- Vegetation Caused
- Equipment/Facility Failure
- Fire
- Force Majeure (Excluding Fire)
- Wire-to-Wire Contact
- Contamination
- Utility Work/Operation
- Vandalism/Theft
- Other
- Unknown

The data can be seen in Appendix B Metrics Table 7 and Figures 14 through 28.

RELIABILITY METRICS

In addition to the outage metrics provided, LADWP is also tracking its reliability performance indices such as the System Average Interruption Duration Index (SAIDI) and System Average Interruption Frequency Index (SAIFI). These indices track the average interruption duration for each customer served and the number of interruptions that a customer would experience, respectively. By tracking the SAIDI and SAIFI values, this allows LADWP to improve and ensure the resiliency of its grid. LADWP's SAIDI and SAIFI values are compared against the California large Investor-Owned Utility (IOU) average, which includes Southern California Edison, Pacific Gas and Electric, and San Diego Gas and Electric, from 2018-2023 and can be seen in Appendix B. LADWP Metrics under Figures 29 and 30.

PERFORMANCE METRICS

Performance Metrics describe actions that are intended to reduce the risk of utility-caused wildfires. These Performance Metrics include inspection and vegetation management data on LADWP's distribution and transmission systems as well as LADWP's PSRP replacement metrics.

The output of these Performance Metrics will be evaluated to determine potential improvements to LADWP's construction standards and for infrastructural and operational needs. Tracking Performance Metrics allows LADWP to pinpoint trends in outage causes and their associated risks, thus allowing LADWP to efficiently reduce risk events. LADWP continuously prioritizes its preventative and mitigating activities for operations based on the output of these metrics. Performance Metrics could also be used to re-evaluate LADWP's vegetation management program, inspection and maintenance programs, and future potential projects. These Performance Metrics include the following:

- Distribution Patrol and Detailed Inspections
- Transmission Patrol and Detailed Inspections
- Routine Vegetation Management

100% OF INSPECTIONS COMPLETED

The Performance Metrics data reveal that LADWP completed 100% of its routine vegetation management inspections (once per year in non-HFTDs and twice per year in HFTDs), distribution patrol inspections (once per year), distribution detailed inspections (once every three years), transmission patrol inspections (twice per year), and transmission detailed inspections (every 10 years). In addition to LADWP's inspection and vegetation management metrics, LADWP also tracks the replacement goals and actuals for specific assets by fiscal year. These include the following assets replaced within and outside HFTDs:

- Poles
- Crossarms
- Transformers
- Conductor Mileage

These PSRP metrics can be seen in Figures 31 through 34 of Appendix B. Between fiscal years 2015-2018, LADWP has replaced the following quantities of assets in its HFTDs as part of its PSRP: 1,541 poles, 3,994 crossarms, 326 transformers, and 4.64 miles of conductor.

7.2.IMPACTS OF METRICS ON PLAN

LADWP's data gathering for its WMP metrics is relatively limited as it only covers the last few years. However, as LADWP's data collection history becomes more robust, LADWP will be able to identify areas of its operations and service territory that are disproportionately impacted, if any. LADWP plans to use the aforementioned metrics to evaluate its Plan and investigate potential improvements to the Plan.

The Outcome Metrics, as seen in Table 7 of Appendix B, reveals that a majority of distribution-level and subtransmission-level outages occur outside of the CPUC-designated HFTDs. This is due to the fact that only 21% of LADWP's service territory is within HFTDs while 79% of its service territory is outside HFTDs. This data reaffirms LADWP's approach of its wildfire mitigation strategies and practices in ensuring a safe and reliable grid.

The Reliability Metrics data set reveals that LADWP operates and maintains its system reliably compared to the California large IOU average. This data affirms LADWP's approach of operating and maintaining its system to ensure the resiliency of the electric grid.

7.3.MONITORING AND AUDITING THE PLAN

LADWP will continually update this Plan as its wildfire mitigation strategies evolve over time, assessing all aspects to determine where further enhancements are needed. LADWP will review and update this Plan on an annual basis with comprehensive updates performed triennially. As a part of this review process, LADWP's internal groups meet under the LADWP WMP Committee and various LADWP WMP Committee Subgroups to discuss and develop any updates required for its WMP. These updates are then reviewed by LADWP management prior to implementation. The LADWP WMP Committee meet at least annually to set priorities for WMP updates. Revisions are managed by the Core WMP team. The Core team work with the WMP Committee to address all concerns. The WMP is subsequently approved by Power System Executive Office prior to being filed with the Board of Water and Power Commissioners prior to the annual July 1 submittal. Final WMP updates are presented annually to LADWP's Board and public for additional feedback and submitted to the California Wildfire Safety Advisory Board in accordance with Senate Bill 901 and Assembly Bill 1054, respectively. Additionally, per Senate Bill 901, LADWP has contracted with a qualified Independent Evaluator to review and assess the comprehensiveness of this

Plan and present its report to LADWP's Board. LADWP will also internally monitor and audit the successful implementation of the Plan including relevant activities related to its transmission and distribution systems.

7.4. IDENTIFYING AND CORRECTING DEFICIENCIES IN THE PLAN

As a critical step, LADWP reviews the Plan annually and adjust, if necessary, to lower the risk of wildfire due to its electrical lines. The Regulatory Compliance Group will oversee, monitor, review, and address deficiencies in the plan to address any potential performance challenges. All stakeholders listed in Sections 2.2. through Section 2.14 will be empowered to provide corrective actions for improvement of the established metrics during the execution of the mitigation plan.

8. INDEPENDENT EVALUATOR

Public Utilities Code section 8387(c) requires LADWP to contract with a qualified independent evaluator with experience in assessing the safe operation of electrical infrastructure to review and assess the comprehensiveness of this Plan. The independent evaluator must issue a report that is posted to LADWP's website. This report will also be presented to LADWP's Board at a public meeting. The most recent Independent Evaluator report is available for public review at the following link: https://www.ladwp.com/wildfireplan.

9. CONCLUSION

Despite having a mostly urban service territory, LADWP understands the reality of increasing wildfire risks due to climate change. Since 2008, LADWP has taken significant steps to proactively harden its infrastructure to mitigate the risk of wildfire caused by its electrical equipment. In addition to the current wildfire mitigation strategies identified in this Plan, LADWP continually seeks to enhance its existing practices. LADWP looks forward to exploring new technologies to better assess and mitigate wildfire risks, as well as pursuing new partnerships to further collaborate with industry experts and advance its wildfire mitigation solutions. LADWP strives to maintain the safety of its customers and is committed to overcoming the challenges of addressing wildfire risks.

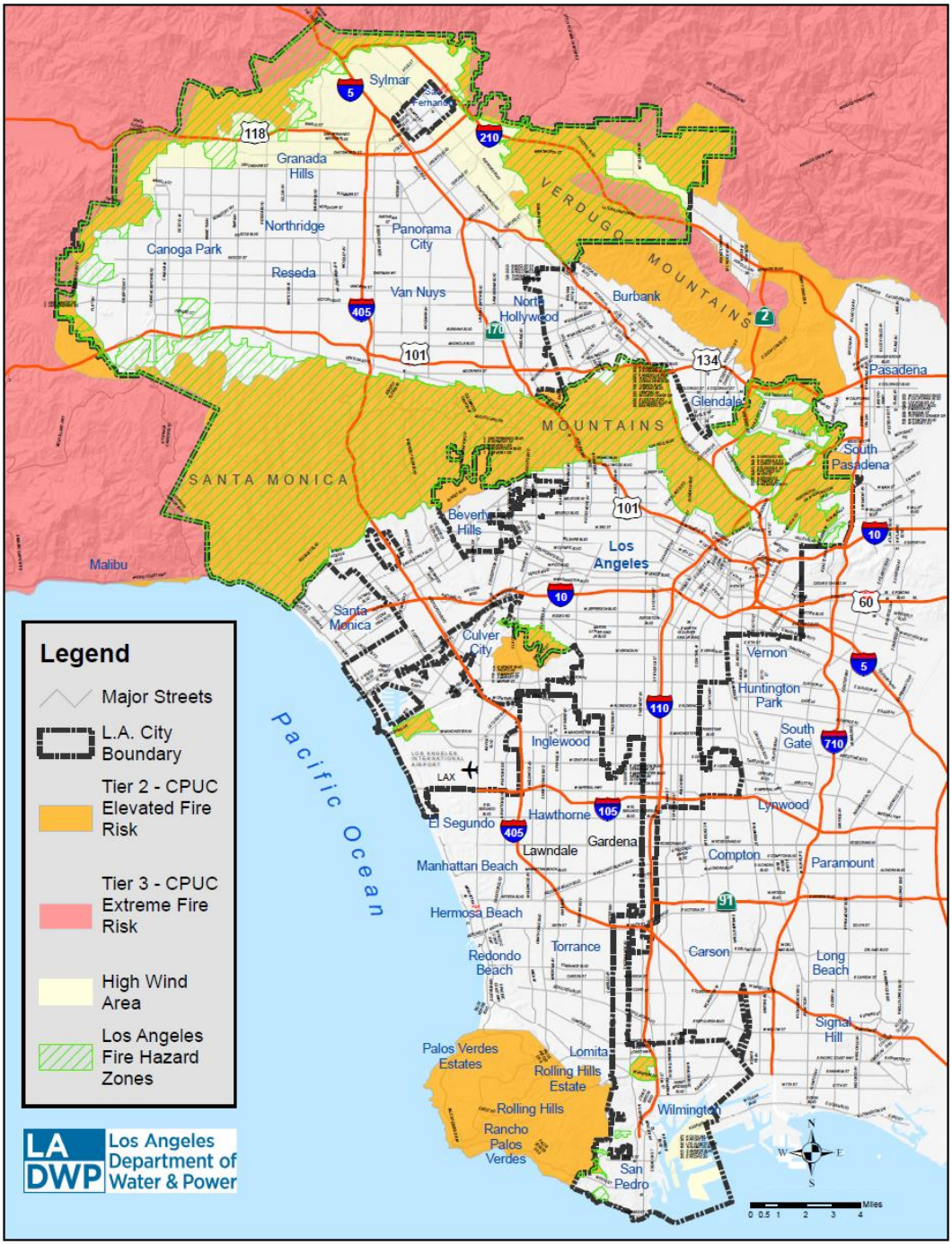
10. REVISION HISTORY

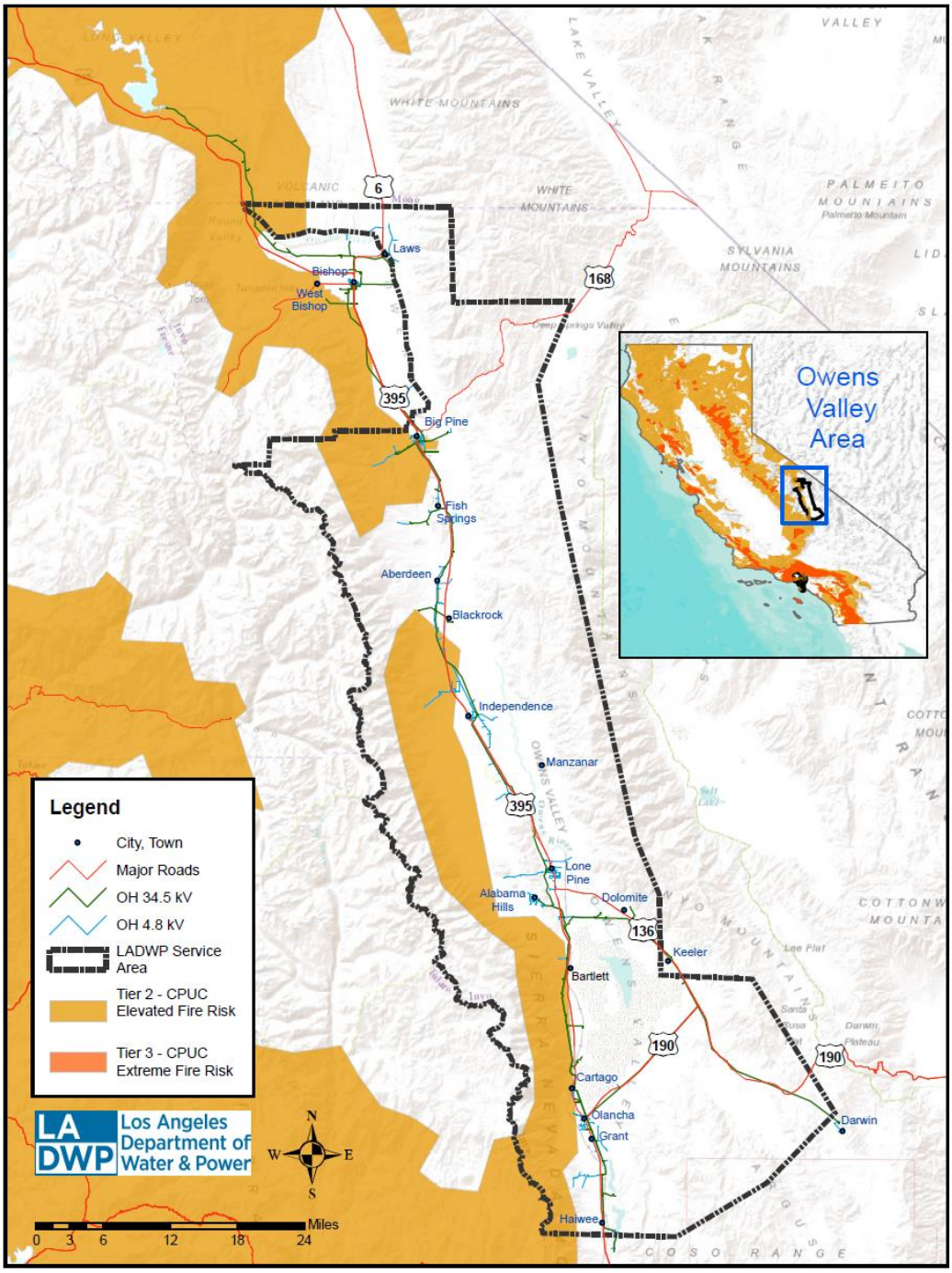
Date	Revision
12/09/2019	Initial Version.
04/17/2020	Updated Section 2.5: Description of DO responsibilities Updated Section 3.4: OH transmission mileage in Tables 1, 2, and 3 Updated Section 4.5: PSRP replacements in Graphs 1 through 4

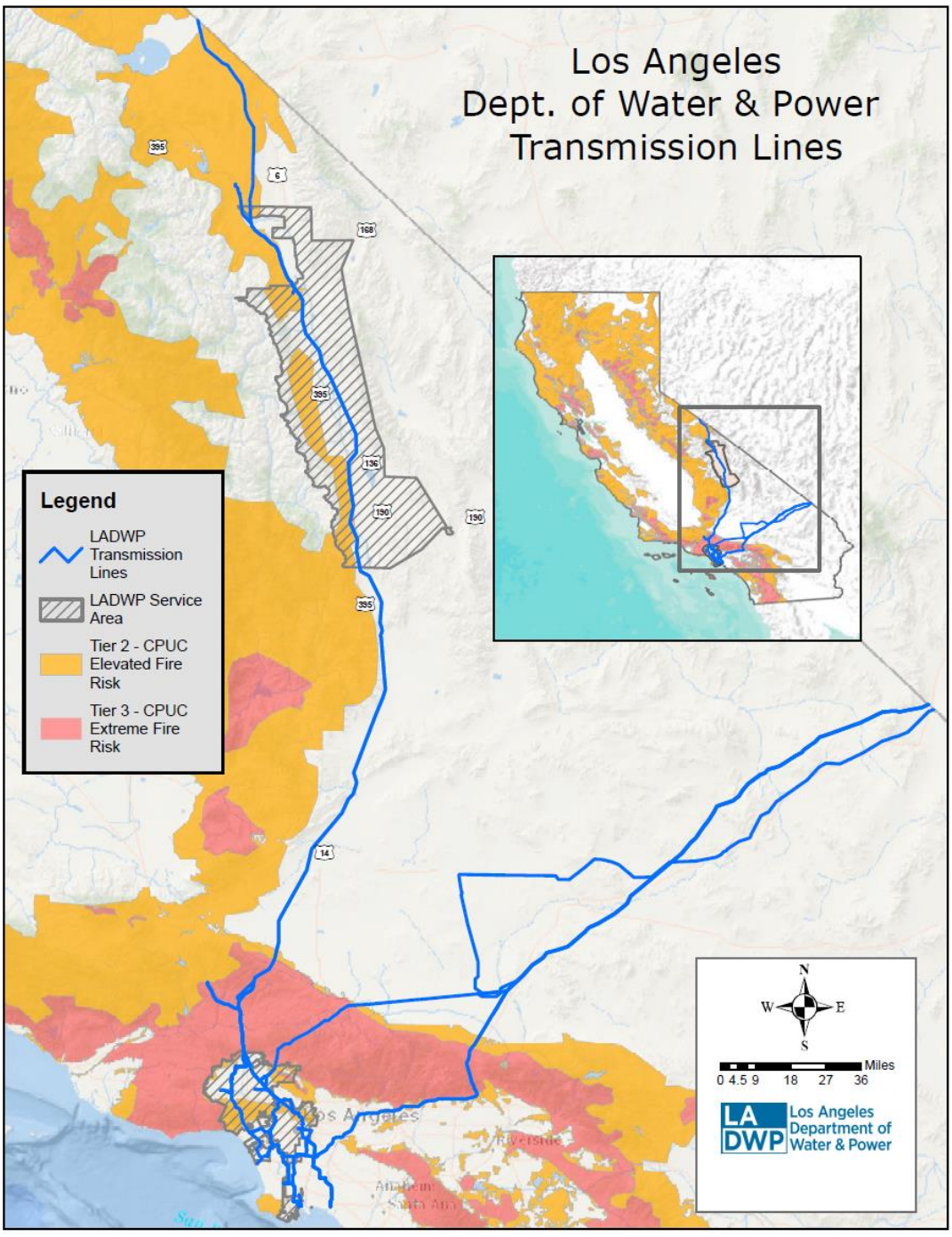
	Updated Section 4.5: PSRP budget numbers in Figures 3 through 6
04/21/2021	Updated Section 2: Roles and Responsibilities Updated Section 3.3: Wildfire Risks and Risk Drivers Associated with Design, Construction, Operation, and Maintenance Updated Section 3.4: LADWP Asset Information Updated Section 4.3: Vegetation Management Updated Section 4.6: Workforce Training Updated Section 4.5: PSRP graphs and figures Updated Section 4.7: Operations and Protocols Updated Section 6: Community Outreach and Public Awareness
05/11/2022	Added Section 1.3: Context Setting Information Added Section 1.4: Cross Reference to Statutory Requirements Updated Section 2: Roles and Responsibilities Updated Section 4.2: Design, Construction Standards, and Infrastructure Updated Section 4.6: Workforce Training Updated Section 4.7: Operations and Protocols Updated Section 6: Community Outreach and Public Awareness
03/21/2023	Added Section 2.4: Chief Operating Officer (COO) Updated Section 2.5: LADWP Power System Executive Office Updated Section 2.6: LADWP Power System Transmission and Distribution Updated Section 2.12: LADWP Office of Emergency Management Updated Section 3.1: Wildfire Risks and Risk Drivers Associated with Topographic and Climatological Risk Factors Updated Section 3.4: LADWP Risk Assessment Updated Section 4.2: Design, Construction Standards, and Infrastructure Updated Section 4.4 Inspection and Maintenance Updated Section 7.1: Metrics and Assumptions for Measuring Plan Performance Updated Section 7.2: Impacts of Metrics on Plan Added Appendix B: LADWP Metrics Added Appendix C: Definitions
05/08/2024	Updated Section 2. Roles and Responsibilities Updated Section 4.3: Vegetation Management Updated Section 4.4: Inspection and Maintenance Updated Section 4.6: Workforce Training Updated Section 4.7: Operations and Protocols Updated Section 7.3: Monitoring and Auditing the Plan Updated Appendix B: LADWP Metrics

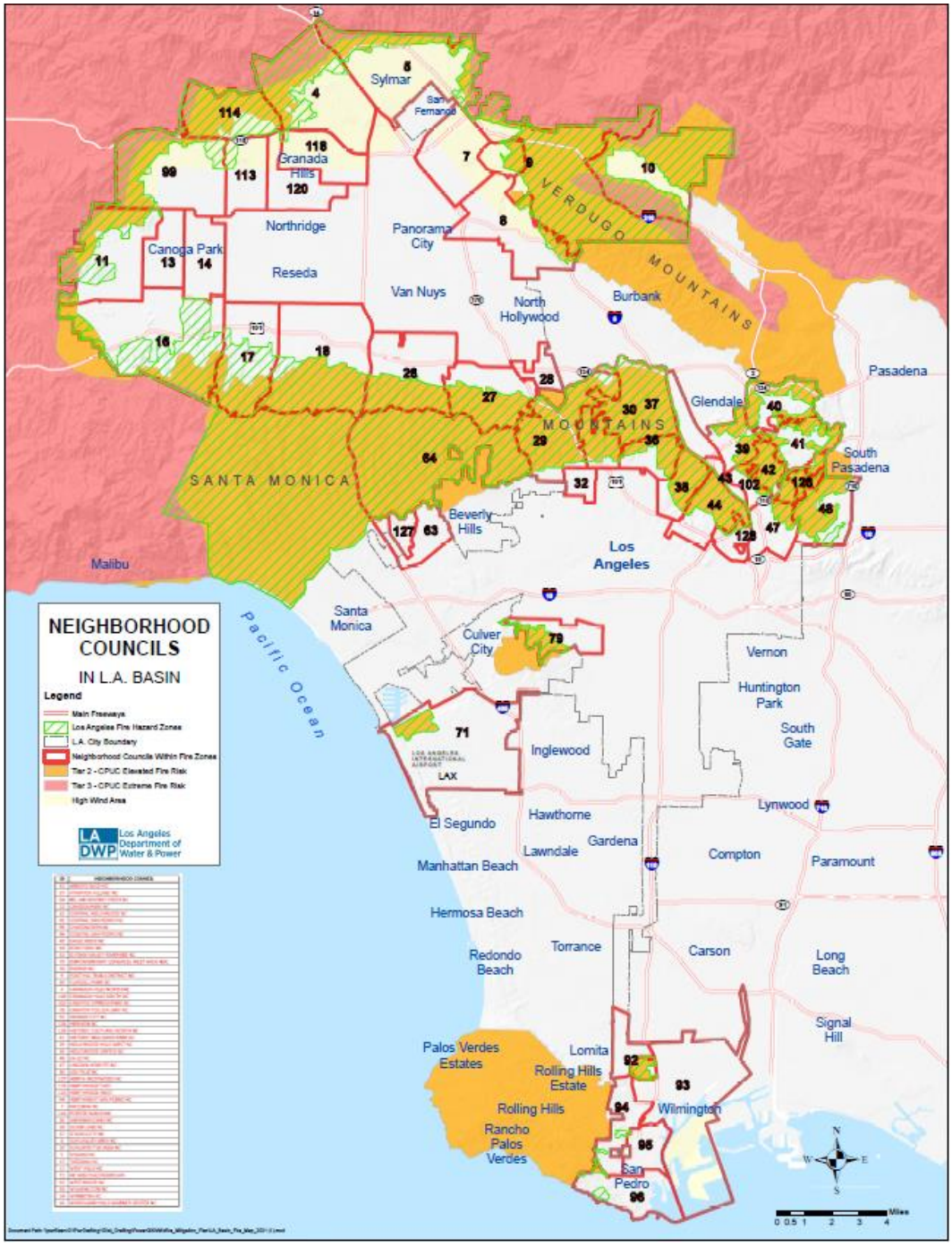
11. APPENDICES

APPENDIX A. LADWP FIRE THREAT MAPS




Owens Valley Area
Legend
City, Town
Major Roads
OH 34.5 kV
OH 4.8 kV
LADWP Service Area
Tier 2 - CPUC Elevated Fire Risk
Tier 3 - CPUC Extreme Fire Risk
LA DWP Los Angeles Department of Water & Power
N
W
E
S
Miles
0 3 6 12 18 24
Laws
Bishop
West Bishop
Big Pine
Fish Springs
Aberdeen
Blackrock
Independence
Manzanar
Lone Pine
Alabama Hills
Dolomite
Keeler
Bartlett
Cartago
Olancha
Grant
Darwin
Halwee
WHITE MOUNTAINS
SYLVANIA MOUNTAINS
PALMEITO MOUNTAINS
INYO MOUNTAINS
SIERRA NEVADA
COSO RANGE
6
168
395
136
190


Los Angeles
Dept. of Water & Power
Transmission Lines
Legend
LADWP Transmission Lines
LADWP Service Area
Tier 2 - CPUC Elevated Fire Risk
Tier 3 - CPUC Extreme Fire Risk
N
W
E
S
Miles
0 4.5 9 18 27 36
LA DWP
Los Angeles Department of Water & Power


NEIGHBORHOOD COUNCILS
IN L.A. BASIN
Legend
Main Freeways
Los Angeles Fire Hazard Zones
L.A. City Boundary
Neighborhood Councils Within Fire Zones
Tier 2 - CPUC Elevated Fire Risk
Tier 3 - CPUC Extreme Fire Risk
High Wind Area
Los Angeles Department of Water & Power
Pacific Ocean
SANTA MONICA MOUNTAINS
VERDUGO MOUNTAINS
Sylmar
San Fernando
Granada Hills
Northridge
Panorama City
Canoga Park
Reseda
Van Nuys
North Hollywood
Burbank
Pasadena
Glendale
South Pasadena
Beverly Hills
Malibu
Los Angeles
Santa Monica
Culver City
Vernon
Huntington Park
South Gate
Inglewood
LAX
Lynwood
El Segundo
Hawthorne
Gardena
Lawndale
Compton
Paramount
Manhattan Beach
Hermosa Beach
Redondo Beach
Torrance
Carson
Long Beach
Signal Hill
Palos Verdes Estates
Lomita
Rolling Hills Estate
Rolling Hills
Rancho Palos Verdes
Wilmington
San Pedro
N
S
E
W
Miles
0 0.5 1 2 3 4

APPENDIX B. LADWP METRICS

Extreme Weather Type	2019	2020	2021	2022	2023
Red Flag Warnings	0	24	27	12	2
Red Flag Alerts	4	2	5	5	3

Table 6: Number of Red Flag Warnings and Red Flag Alerts

	Distribution		Subtransmission	
	% of Outages Within HFTDs	% of Outages Outside HFTDs	% of Outages Within HFTDs	% of Outages Outside HFTDs
2019	15%	85%	3%	97%
2020	15%	84%	3%	97%
2021	14%	86%	5%	95%
2022	14%	86%	4%	96%
2023	15%	85%	2%	98%

Table 7: LADWP Outage Percentages Within and Outside HFTDs

Distribution-level Line Clearance Tree Trimming in HFTDs		
	Number of Trees Patrolled	Number of Trees Trimmed
2021	125,720	80,249
2022	127,290	72,790
2023	315,770	152,890

Table 8: LADWP's Distribution-level Line Clearance Tree Trimming in HFTDs

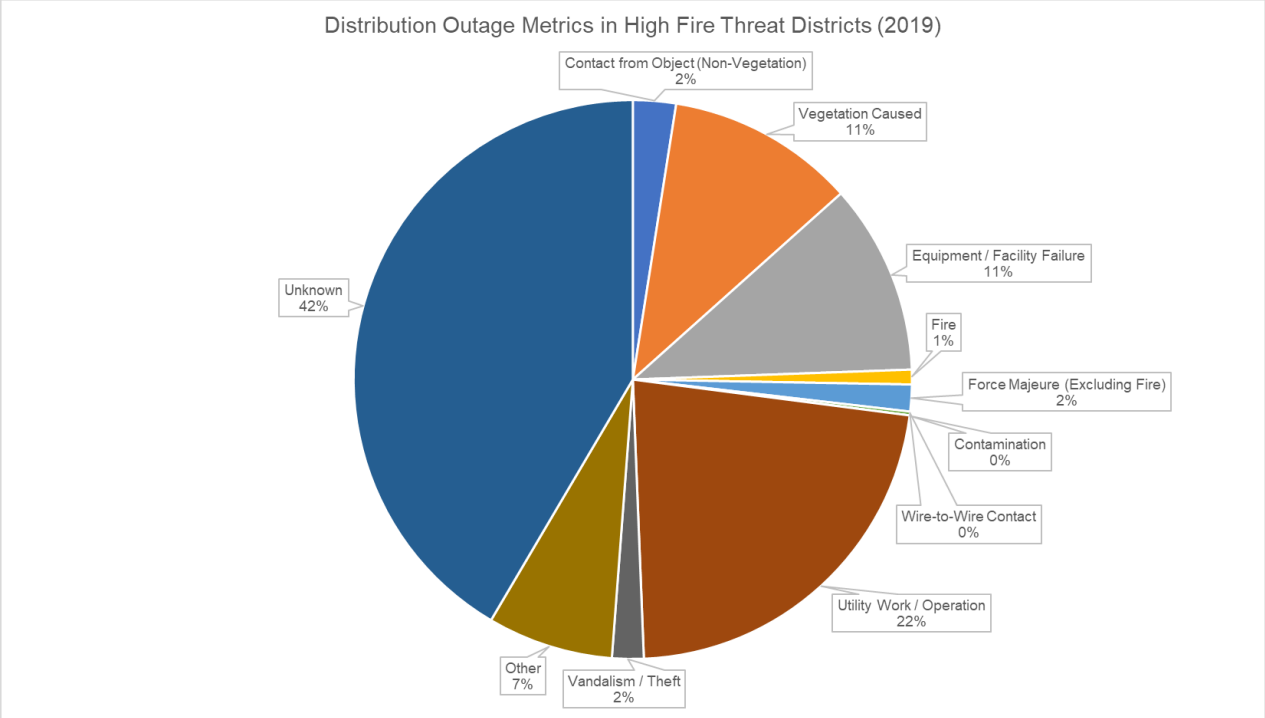


Figure 14: Distribution Outage Breakdown in HFTDs (2019)

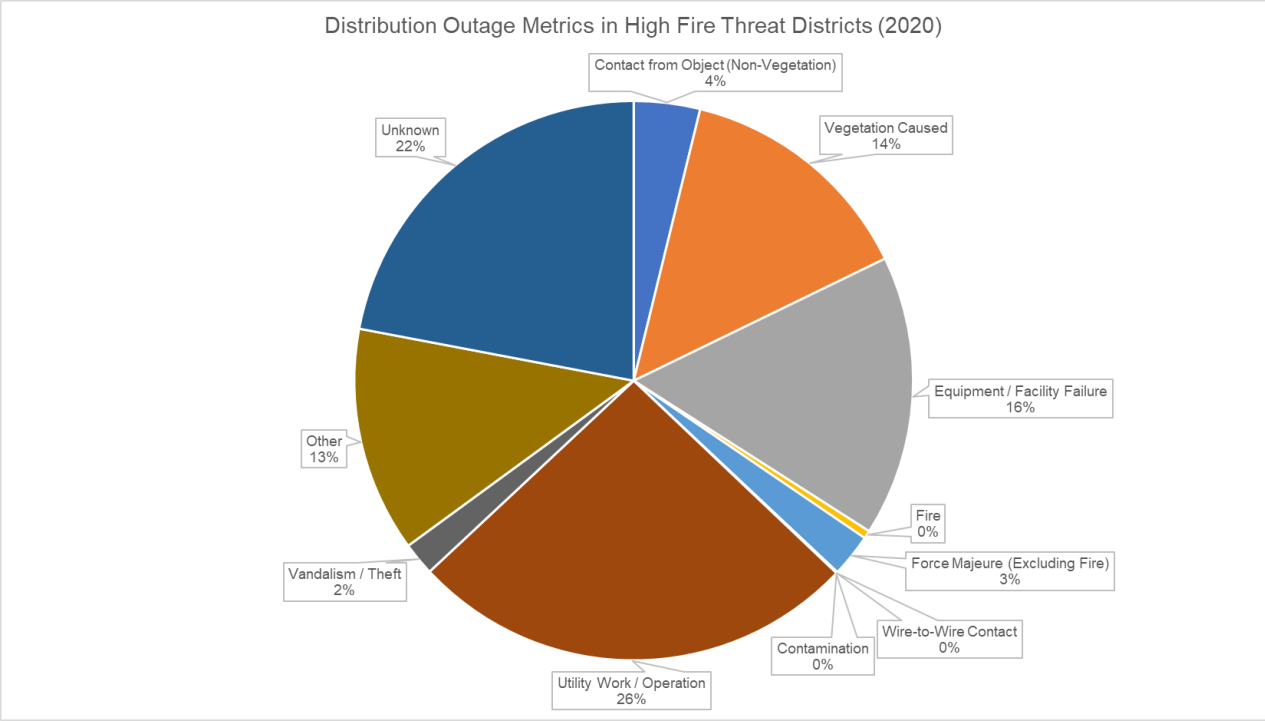


Figure 15: Distribution Outage Breakdown in HFTDs (2020)

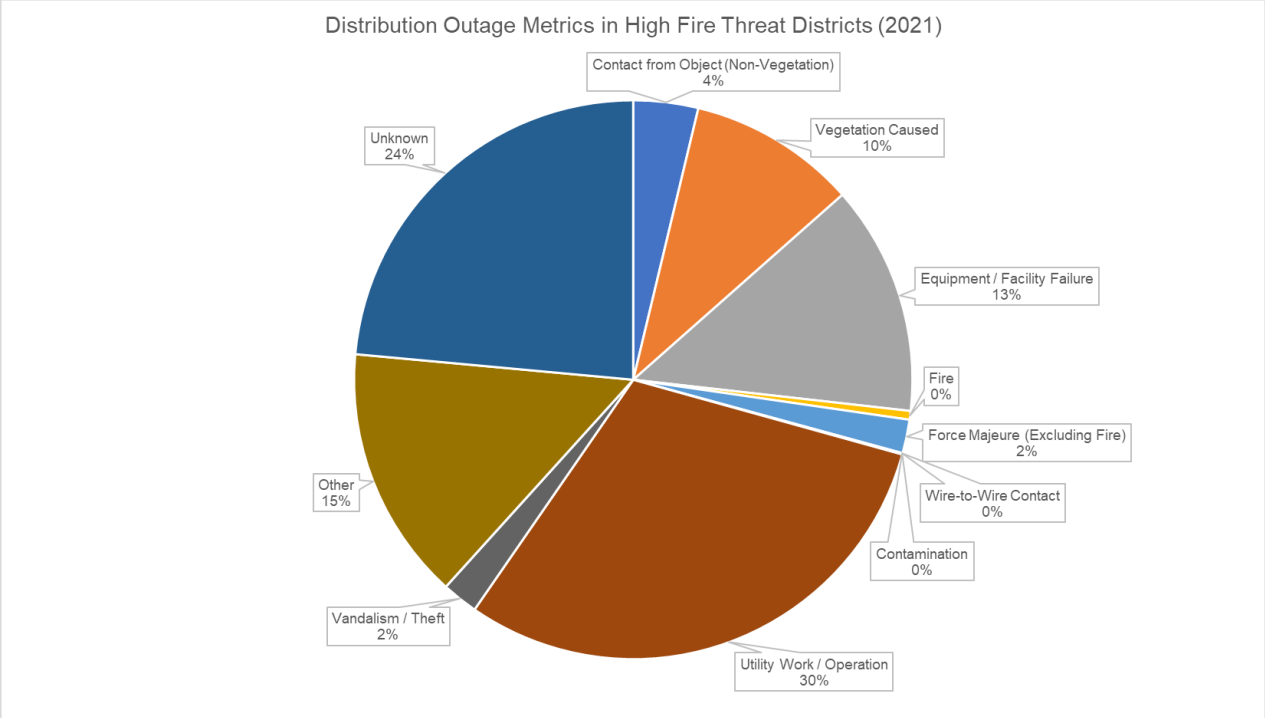


Figure 16: Distribution Outage Breakdown in HFTDs (2021)

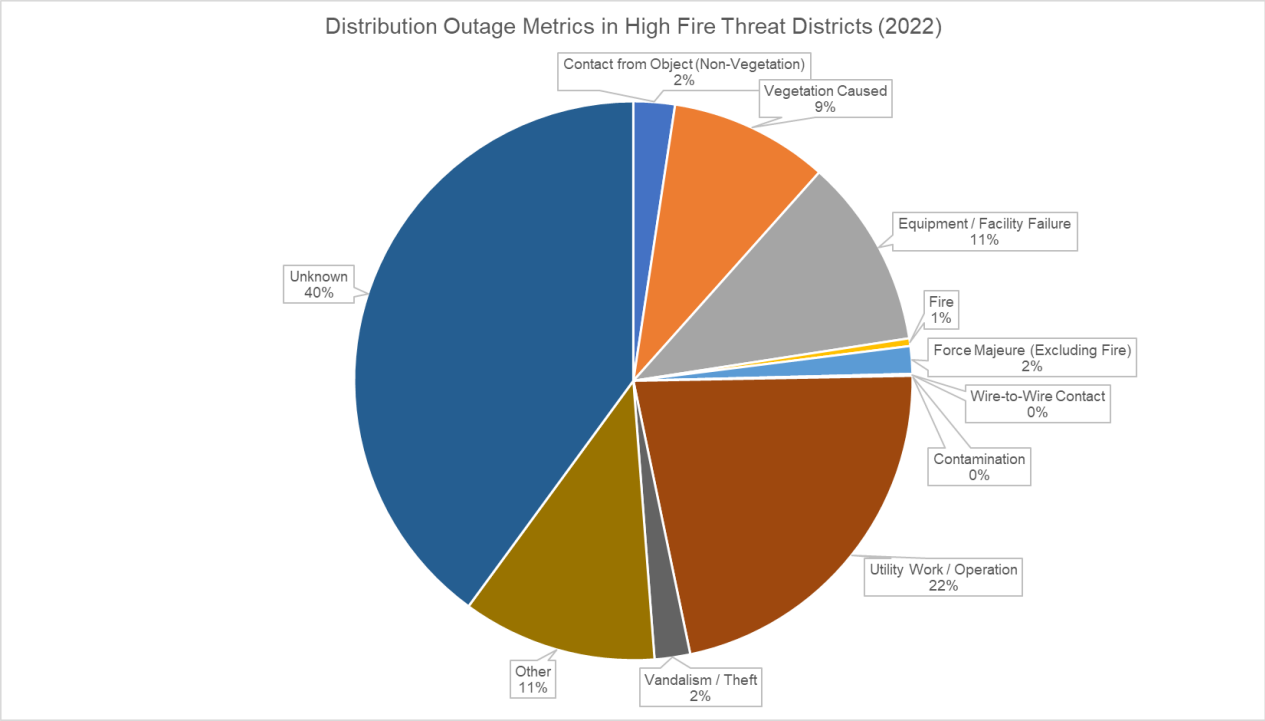


Figure 17: Distribution Outage Breakdown in HFTDs (2022)

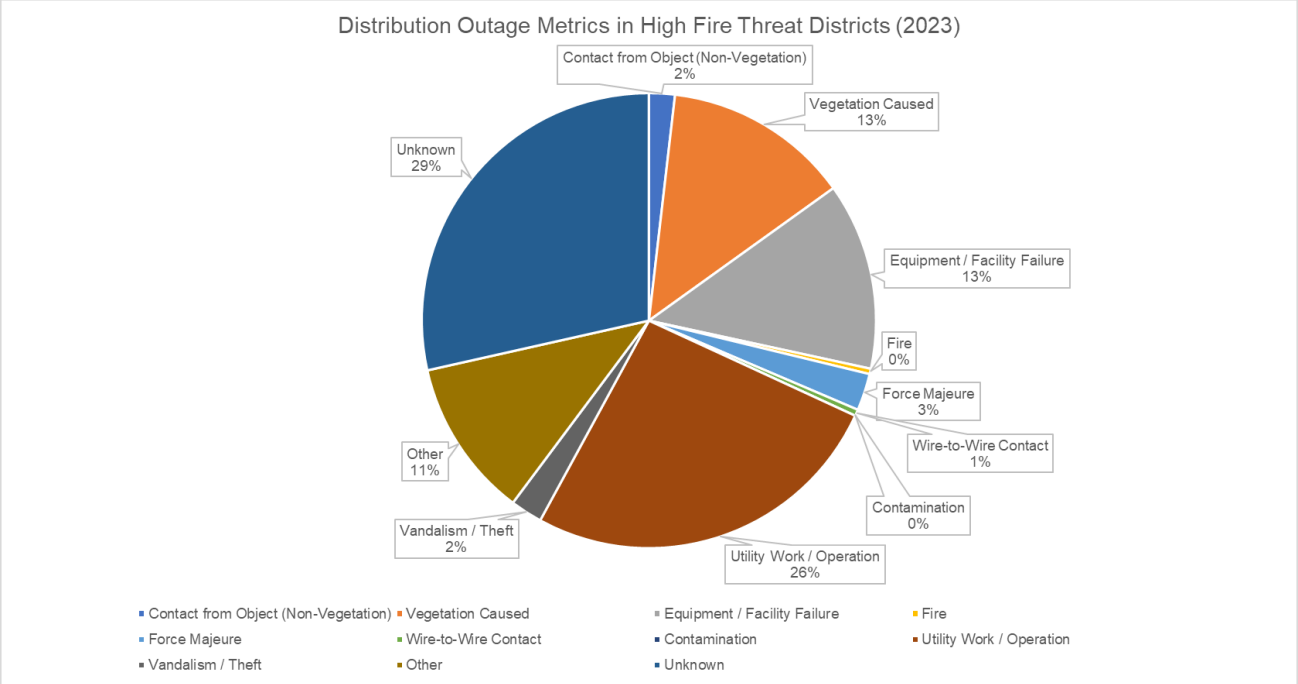


Figure 18: Distribution Outage Breakdown in HFTDs (2023)

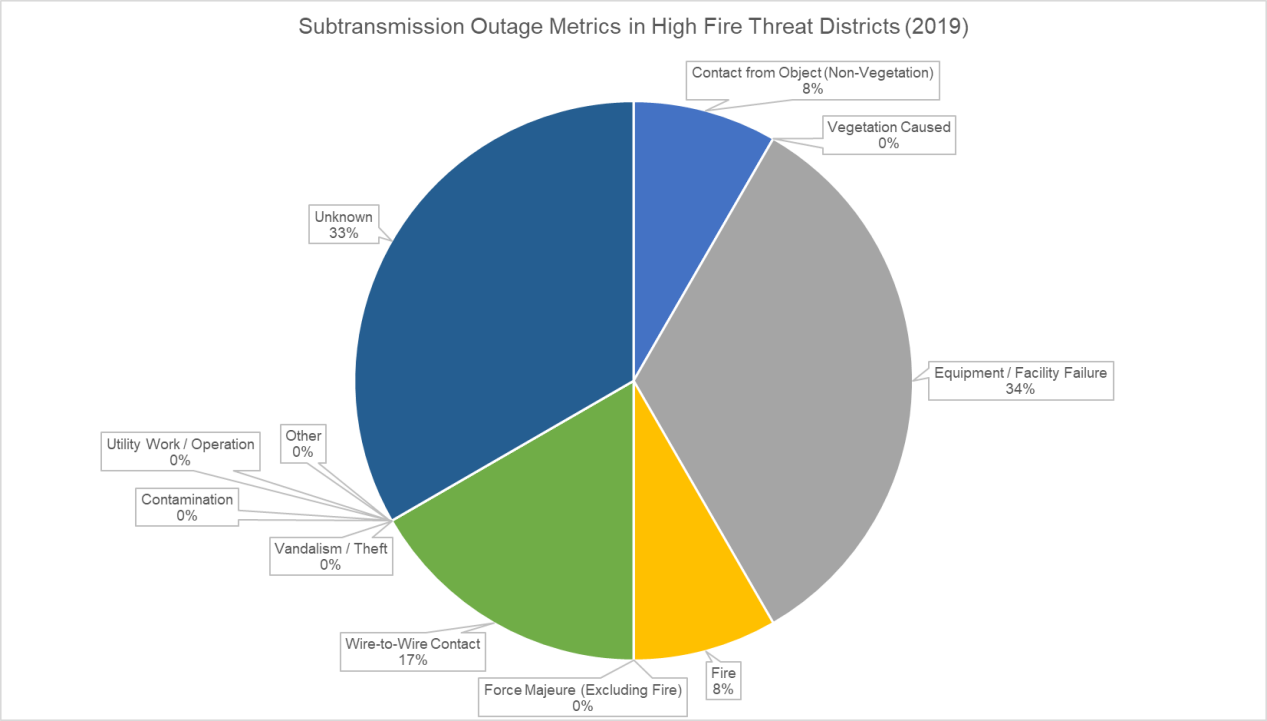


Figure 19: Subtransmission Outage Breakdown in HFTDs (2019)

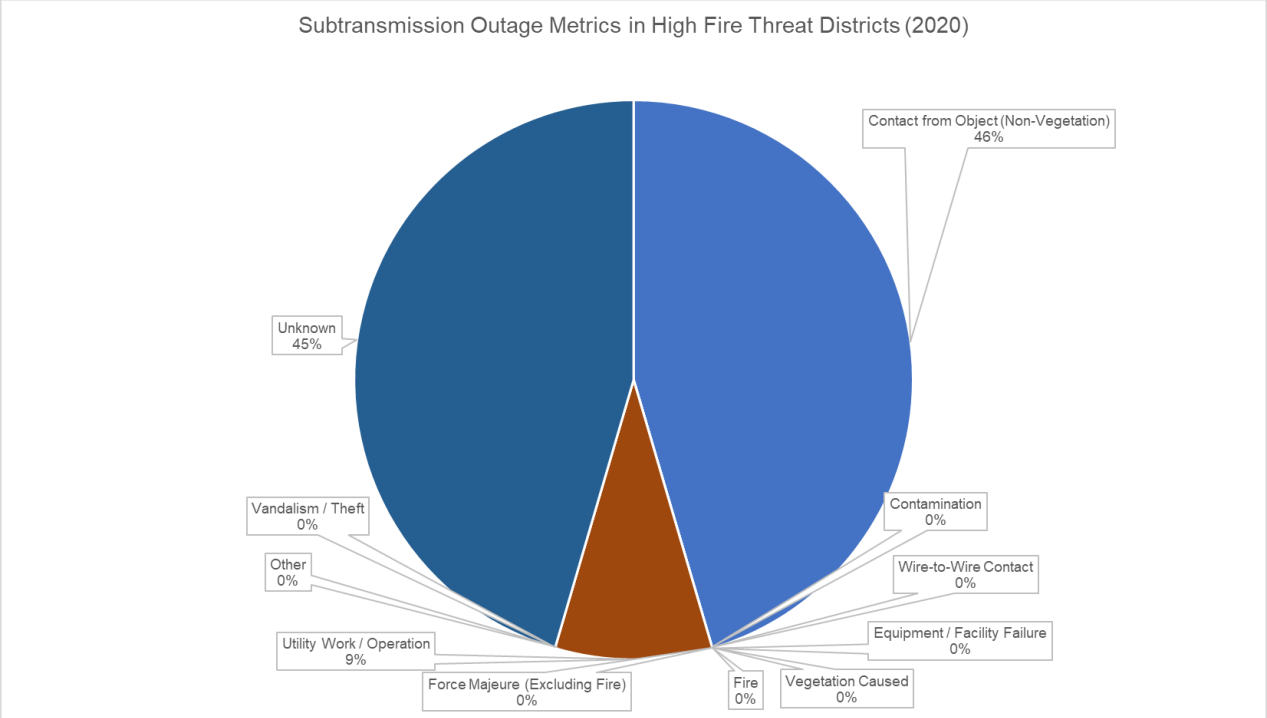


Figure 20: Subtransmission Outage Breakdown in HFTDs (2020)

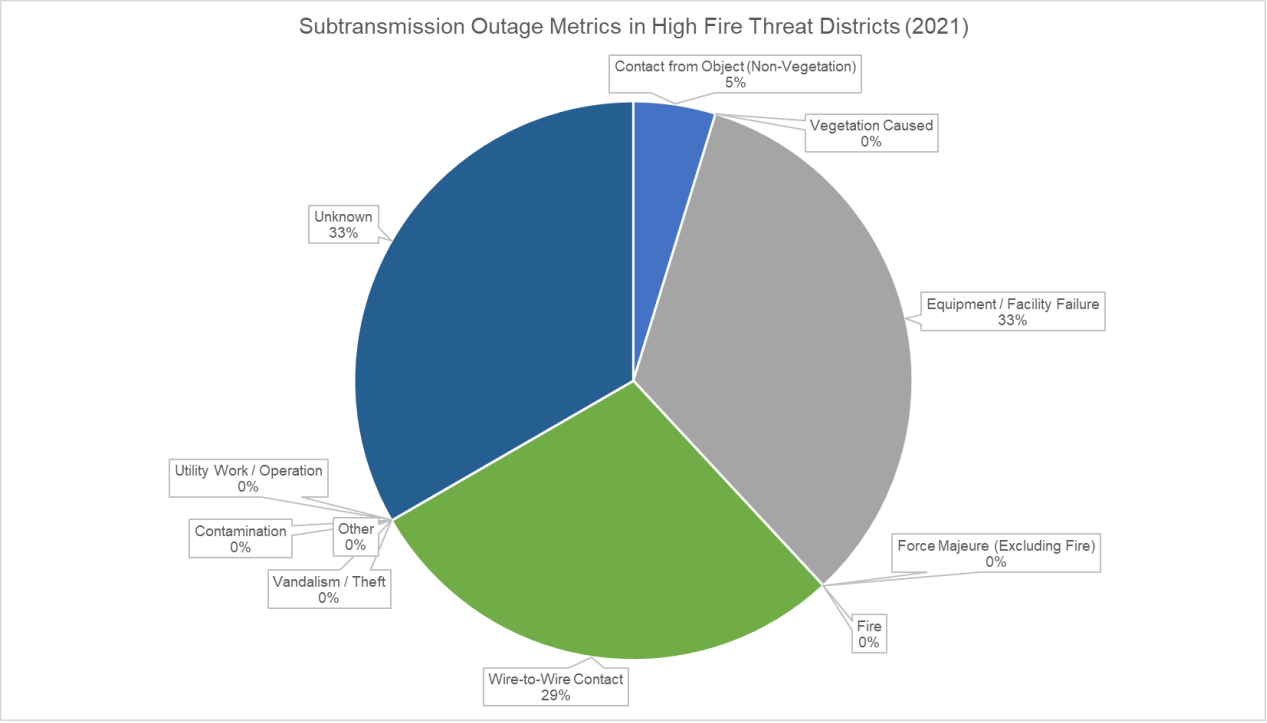


Figure 21: Subtransmission Outage Breakdown in HFTDs (2021)

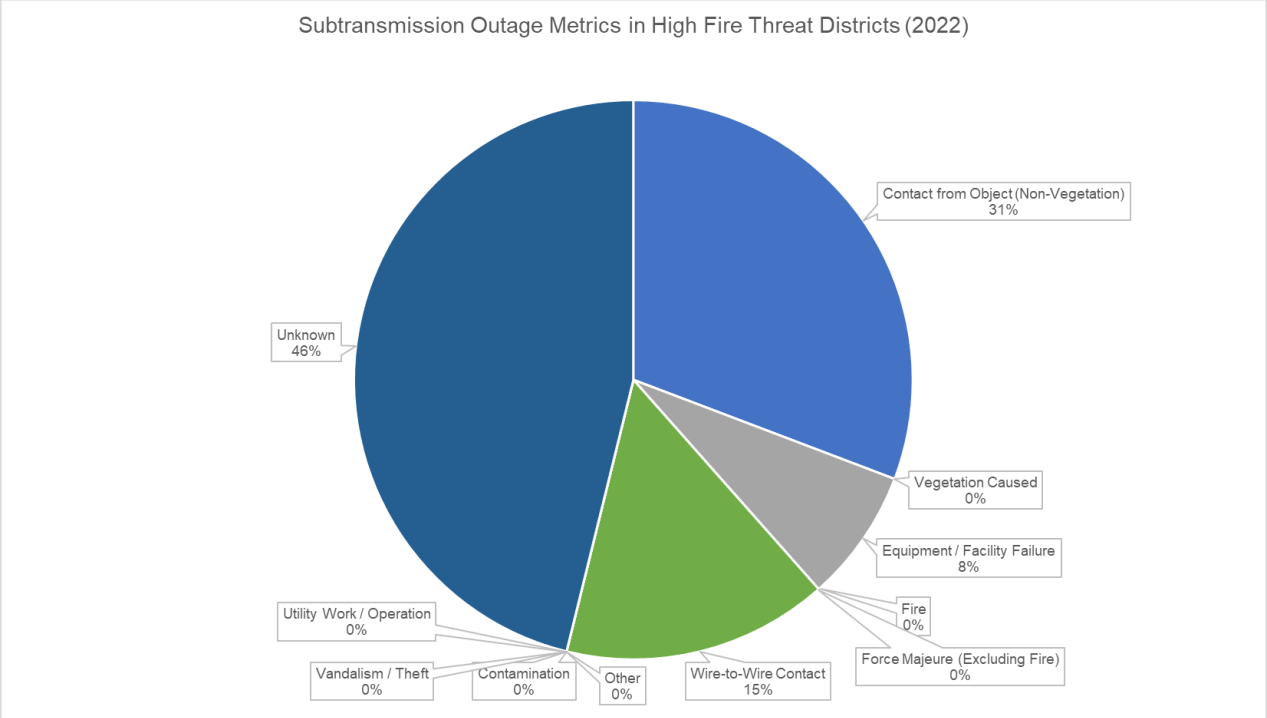


Figure 22: Subtransmission Outage Breakdown in HFTDs (2022)

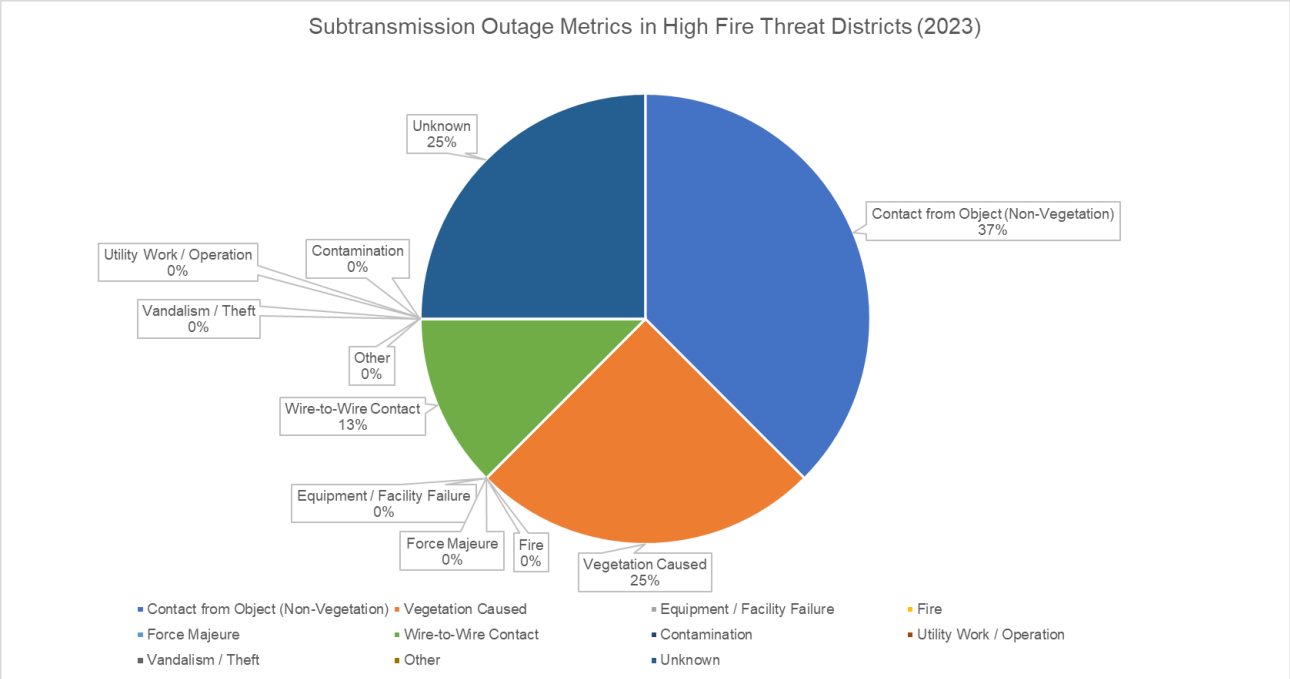


Figure 23: Subtransmission Outage Breakdown in HFTDs (2023)

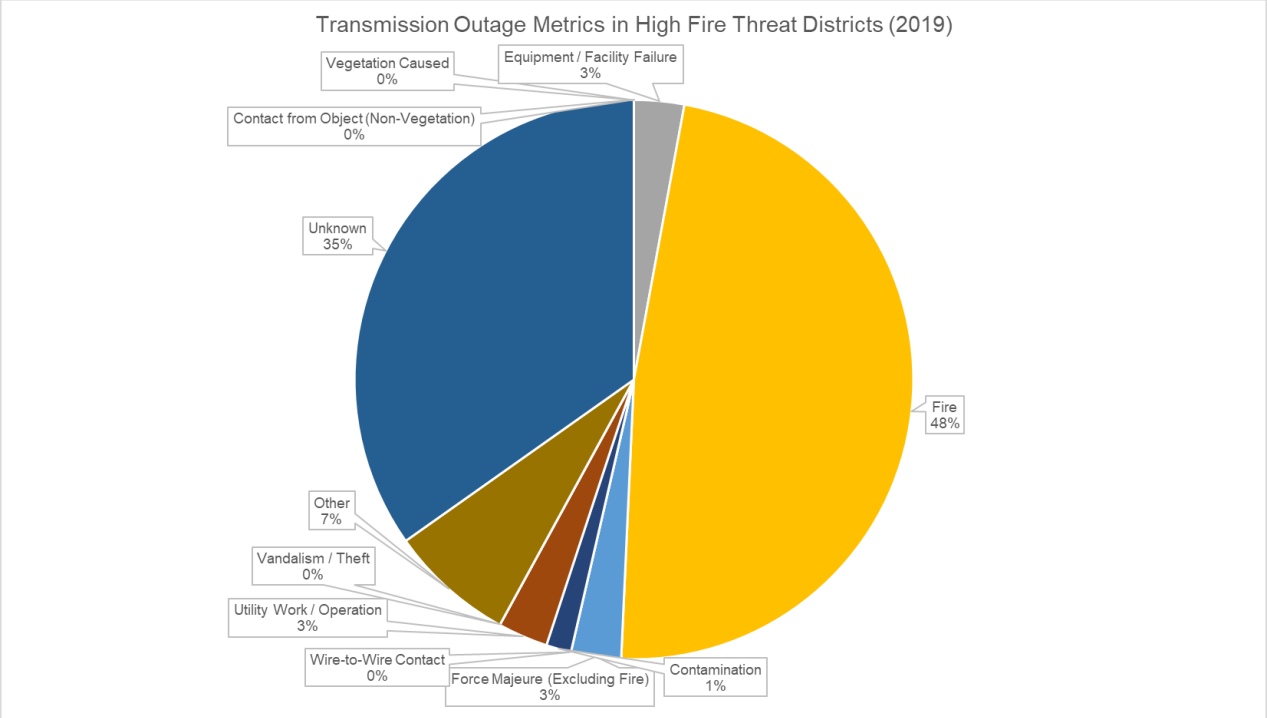


Figure 24: Transmission Outage Breakdown in HFTDs (2019)*

**Note: Includes additional lines that were de-energized by remedial action during fire incidents.*

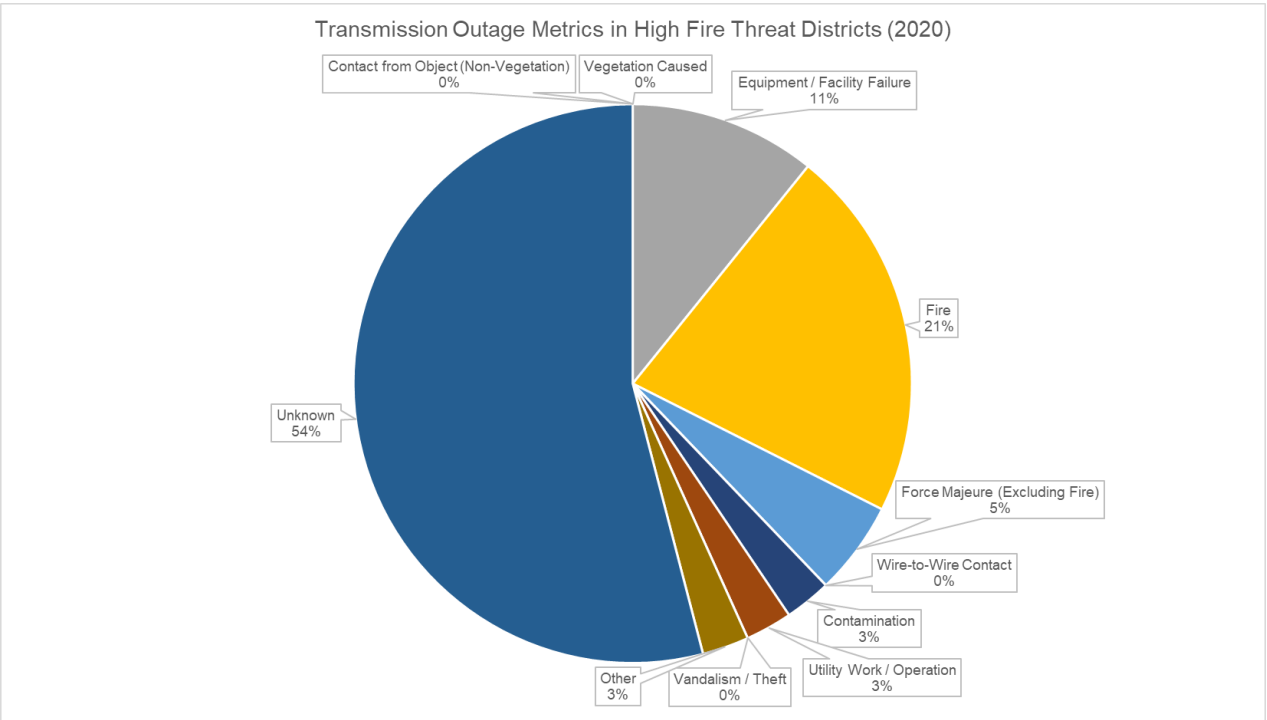


Figure 25: Transmission Outage Breakdown in HFTDs (2020)

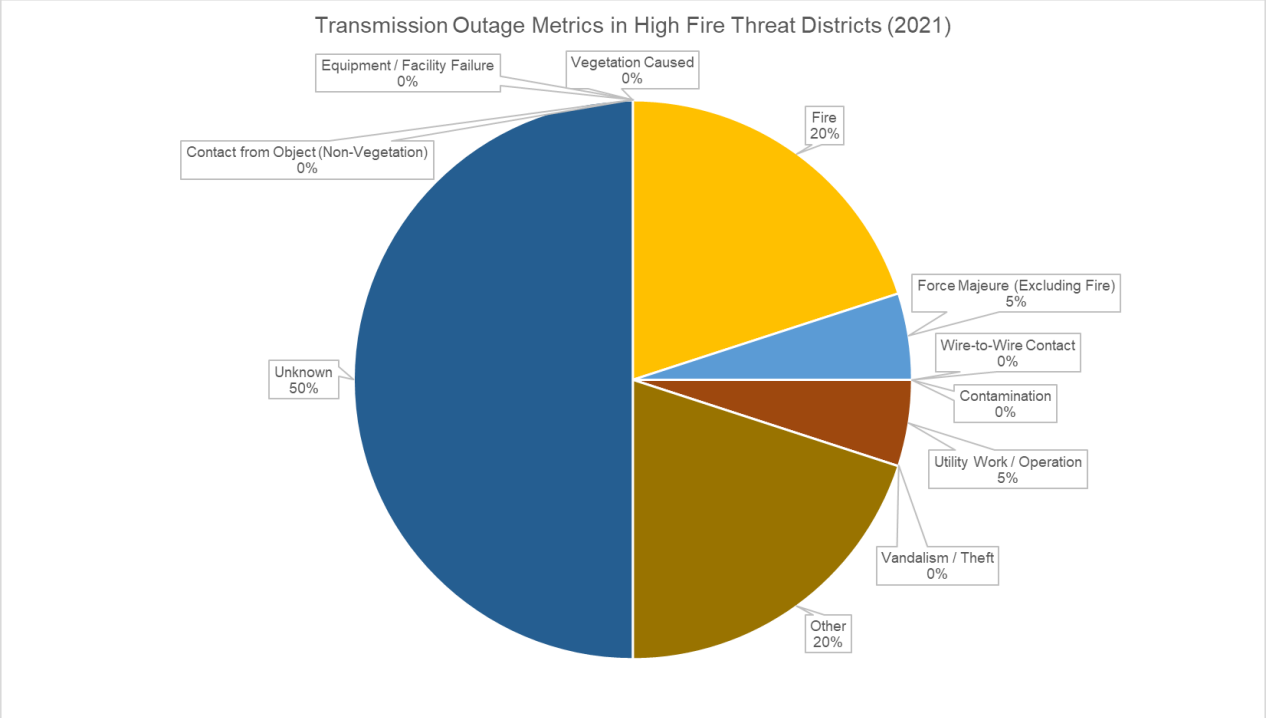


Figure 26: Transmission Outage Breakdown in HFTDs (2021)

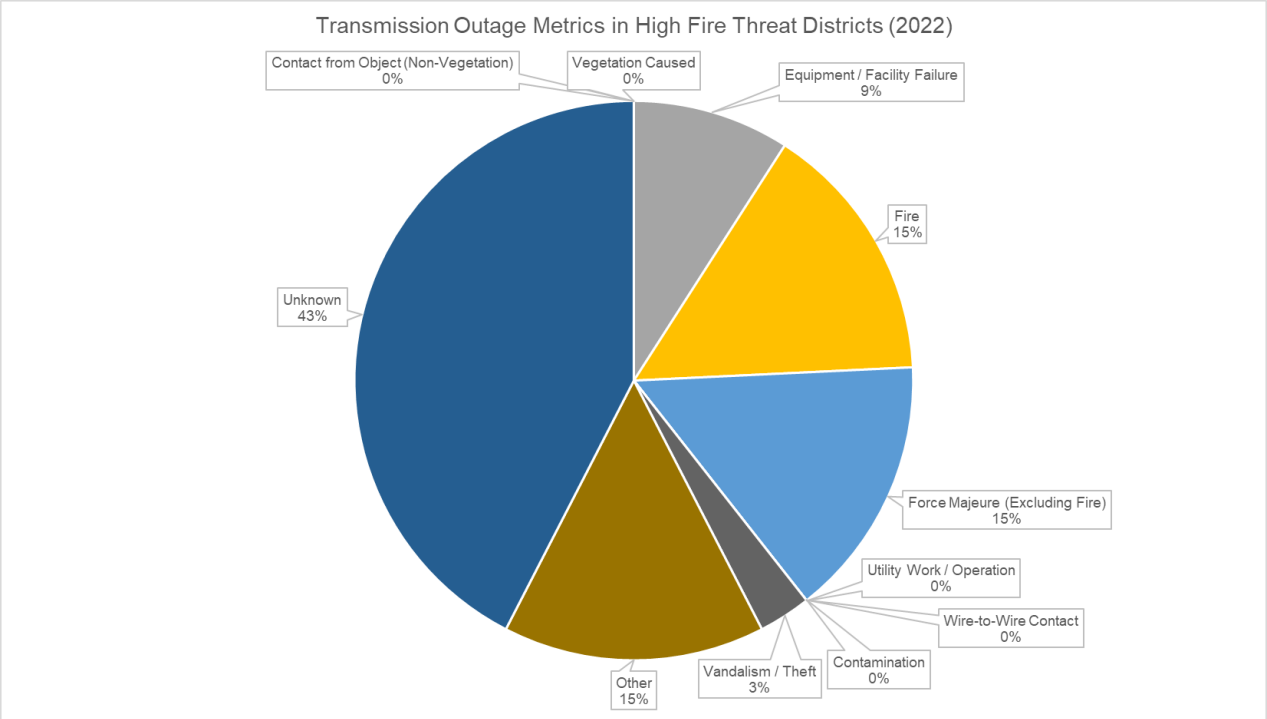


Figure 27: Transmission Outage Breakdown in HFTDs (2022)

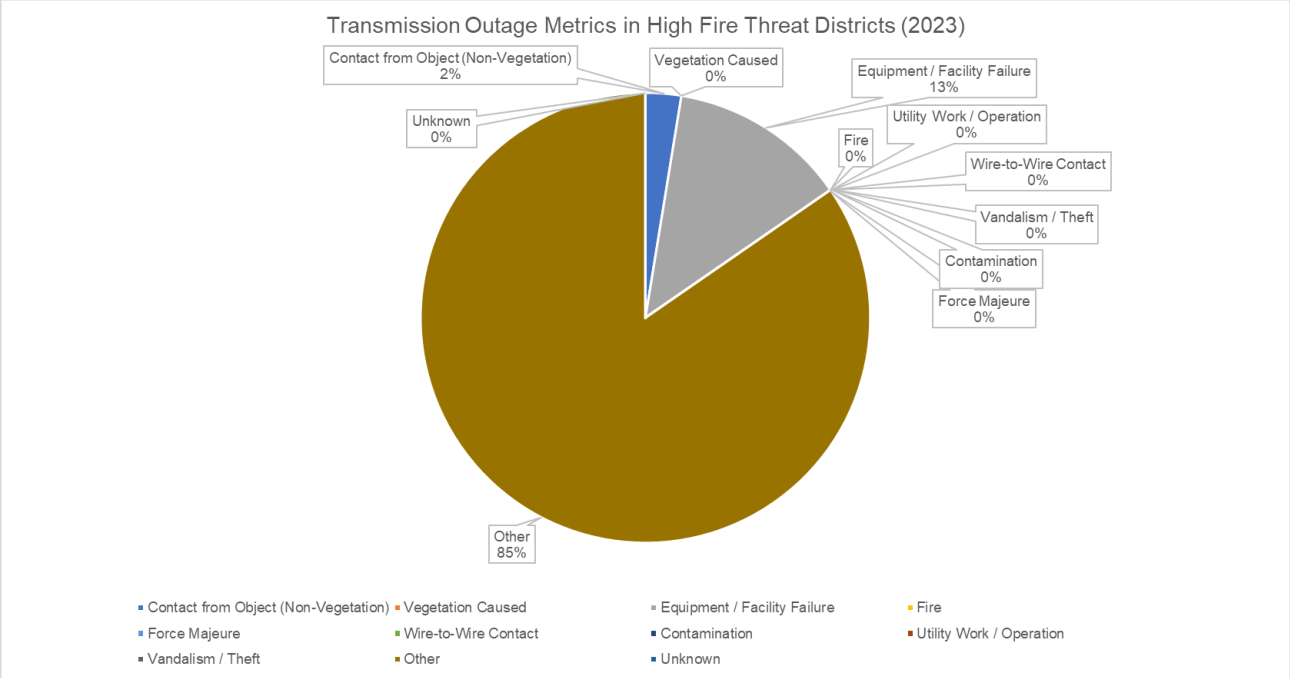


Figure 28: Transmission Outage Breakdown in HFTDs (2023)

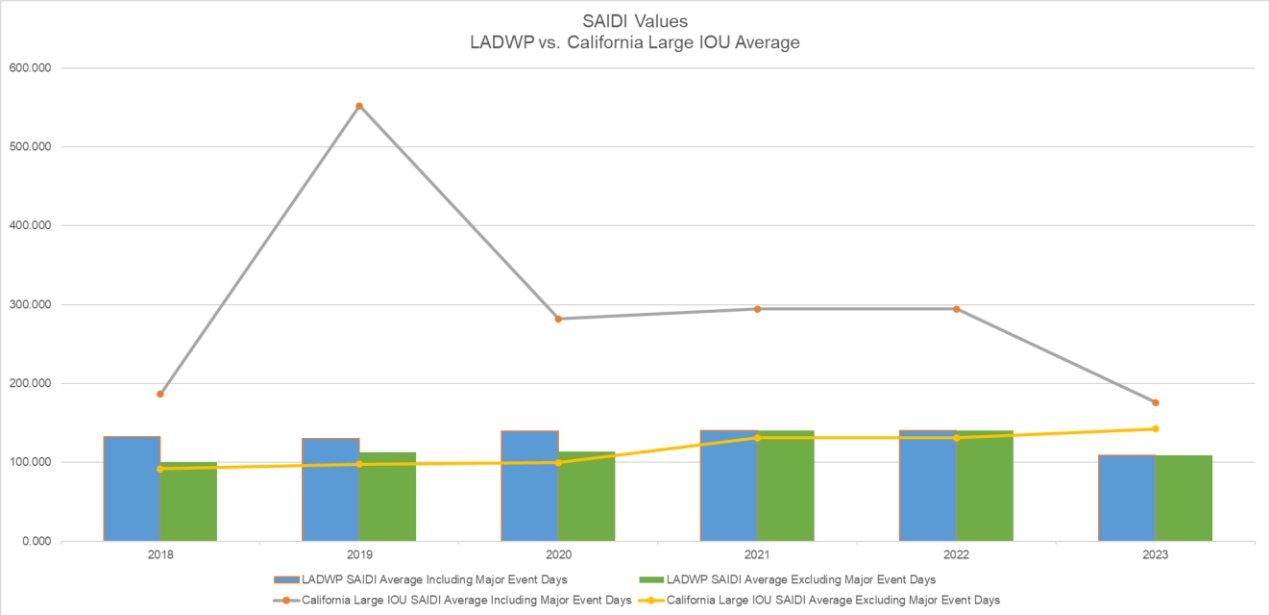


Figure 29: LADWP's System Average Interruption Duration Index (2018-2023)

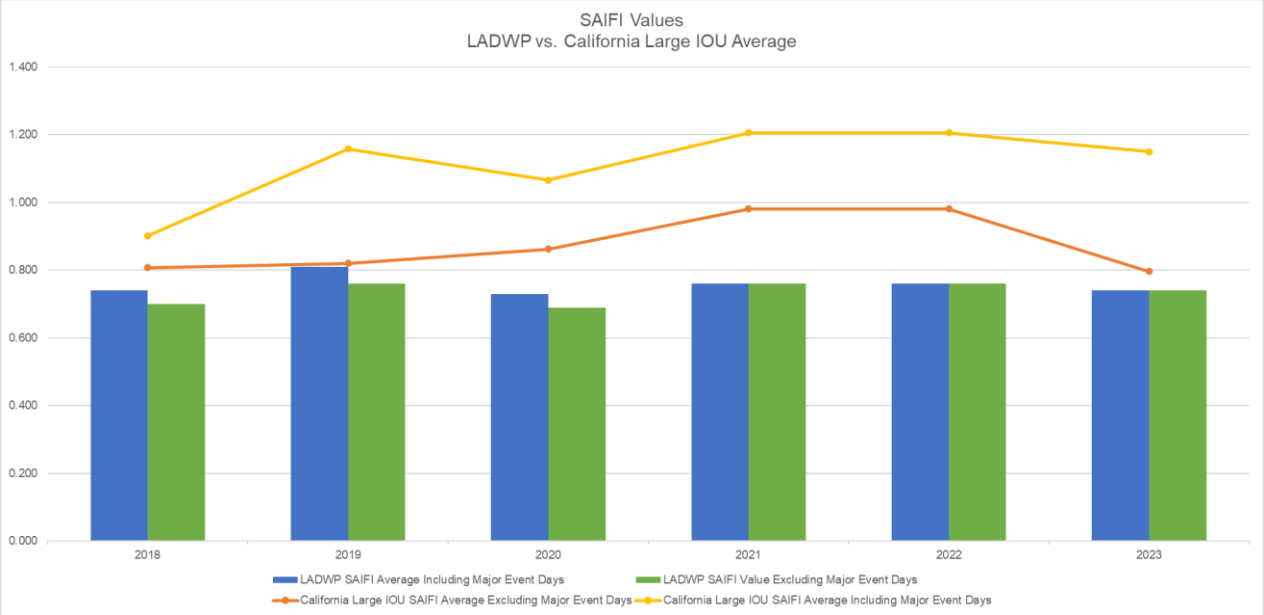


Figure 30: LADWP's System Average Interruption Frequency Index (2018-2023)

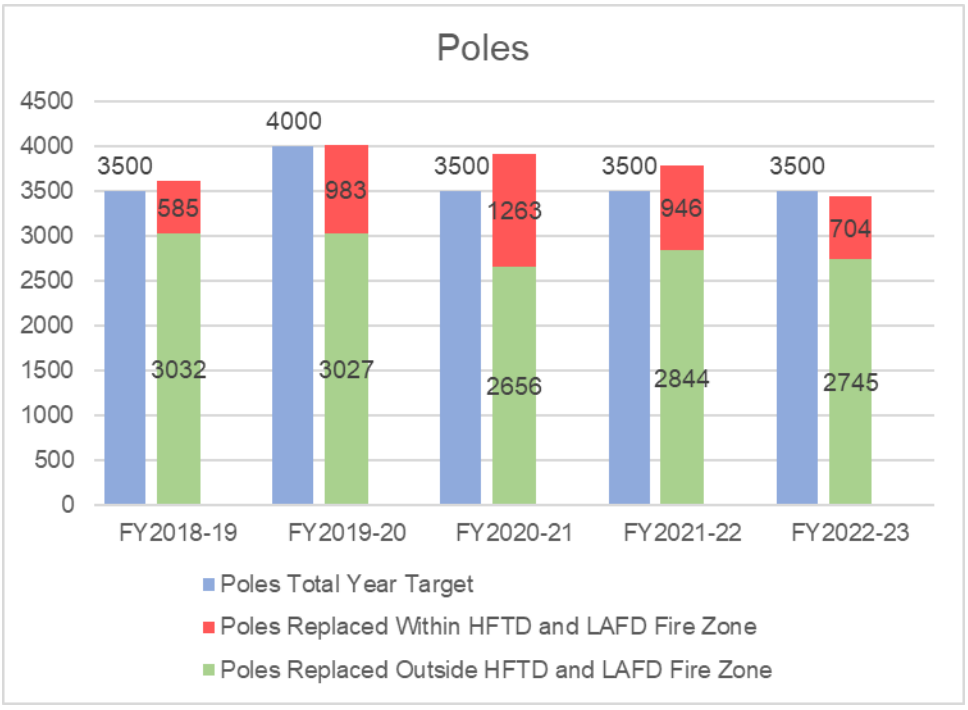


Figure 31: PSRP Pole Replacement

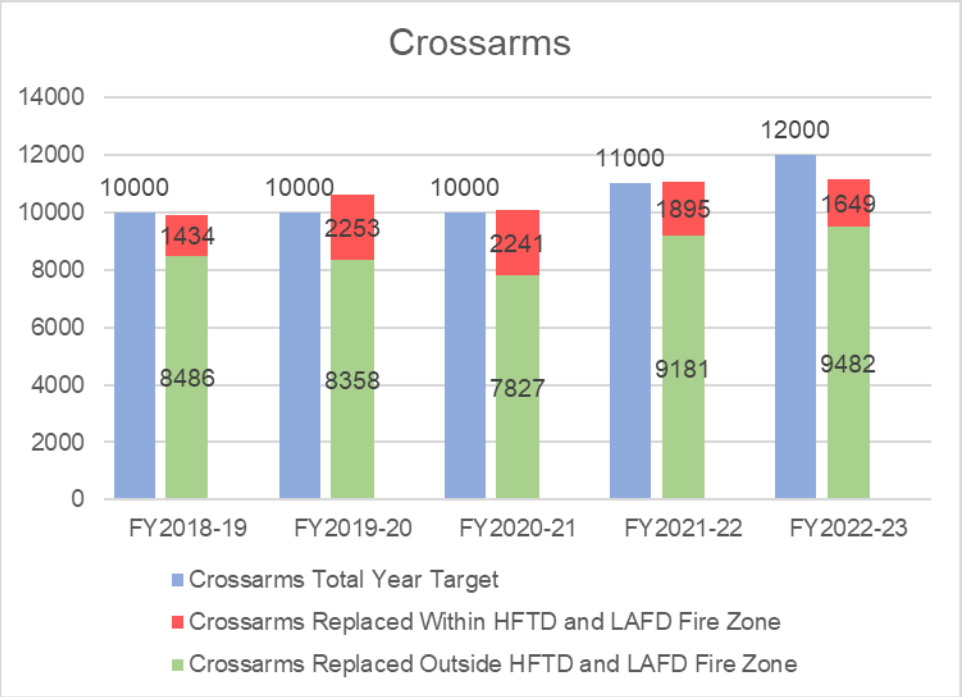


Figure 32: PSRP Crossarm Replacement

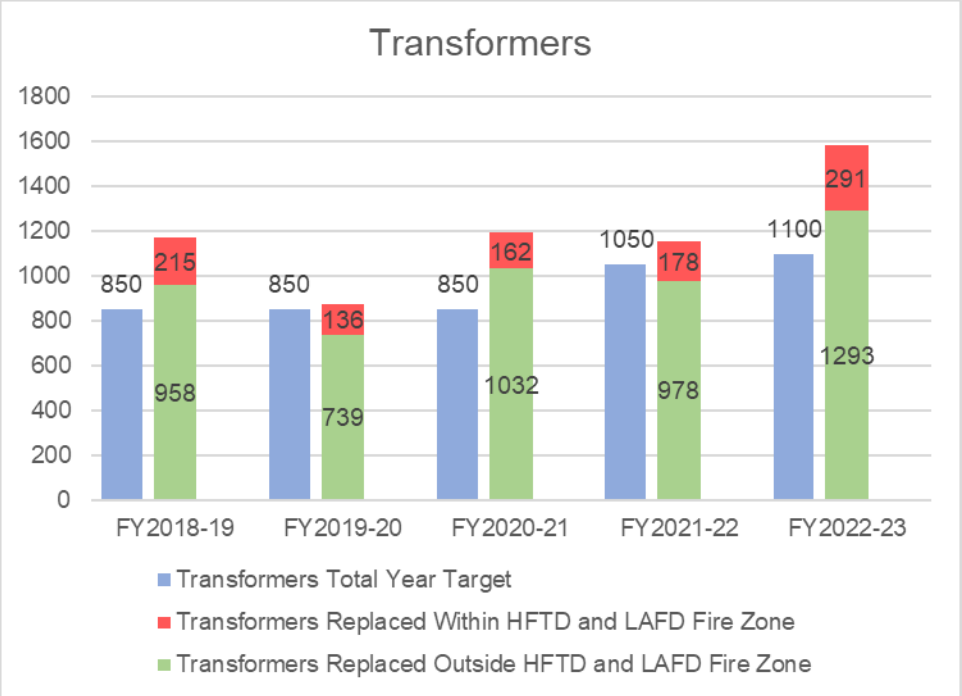


Figure 33: PSRP Transformer Replacement

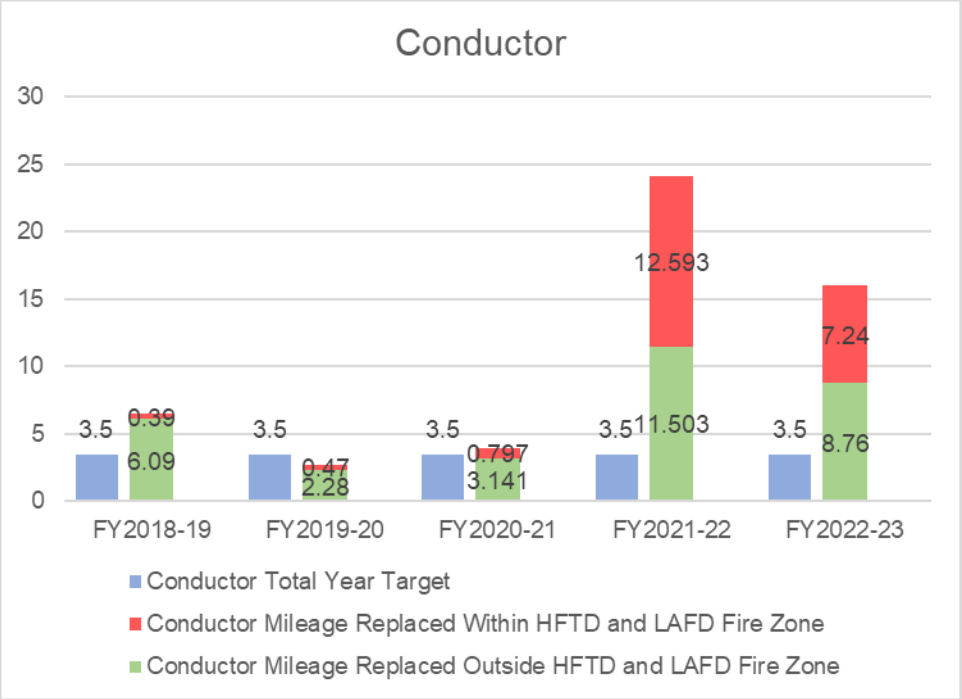


Figure 34: PSRP Conductor Mileage Replacement

APPENDIX C. DEFINITIONS

Key Term	Definition
American Public Power Association	The American Public Power Association (APPA) is a service organization with approximately 1,400 members from public power utilities among the nation's 2,000 public power utilities that provide electricity to 49 million people. APPA's purpose is to advance the public policy interests of its members and their consumers and provide member services to ensure adequate, reliable electricity at a reasonable price with the proper protection of the environment.
Assembly Bill 1054	The Assembly Bill 1054 (AB 1054) was created to encourage utility companies to invest in safety and improve safety culture to limit wildfire risks and reduce costs, created the Wildfire Safety Advisory Board, and required publicly-owned utilities to submit their Wildfire Mitigation Plans to the Wildfire Safety Advisory Board.
Bulk Power System	A large interconnected electrical system made up of generation and transmission facilities and their control systems. Typically considered to be 100KV or above.
Cal Fire	California Department of Forestry and Fire Protection serves and safeguards the people and protects the property and resources of California.
California Public Utilities Commission	California Public Utilities Commission (CPUC) is a regulatory agency that regulates privately owned public utilities in the state of California which includes electric power, telecommunications, natural gas, and water companies.
California Utilities Emergency Association	The California Utilities Emergency Association (CUEA) is an association created to represent California utilities on emergency related issues with nearly 100 members that represent the following utility sectors: water, wastewater, electric, gas, telecommunications, and pipelines.
CPUC Tier 2 High Fire Threat District	CPUC Tier 2 High Fire Threat District consists of areas on the CPUC Fire-Threat Map where there is an elevated risk from wildfires associated with overhead utility power lines or overhead utility power-line facilities also supporting communication facilities.
CPUC Tier 3 High Fire Threat District	CPUC Tier 3 High Fire Threat District consists of areas on the CPUC Fire-Threat Map where there is an extreme risk from wildfires associated with overhead utility power lines or overhead utility power-line facilities also supporting communication facilities.
High Fire Threat Districts	The High Fire Threat District (HFTD) is the composition of the three fire-threat areas, Zone 1, Tier 2, and Tier 3, on the CPUC High Fire-Threat District Map.
Los Angeles Department of Water and Power	The Los Angeles Department of Water and Power (LADWP) is a vertically integrated public municipal utility that serves more than 4 million residents and local businesses within the city of Los Angeles and Owens Valley.
Los Angeles Fire Department	The Los Angeles Fire Department (LAFD) is a local organization that provides firefighting and emergency services for the City of Los Angeles.
LAFD Fire Zone	The Los Angeles Fire Department (LAFD) Fire Zone are areas designated by the Los Angeles Fire Department's Bureau of Fire Prevention and Public Safety, under criteria established by the State Fire Marshal, with high risk of fast-moving brush fires among habitable communities. Notable features within the Fire Zone include grass/ brush accumulation and cut or piled combustible materials.
Los Angeles Police Department	The Los Angeles Police Department (LAPD) is the municipal law enforcement agency of Los Angeles, California.

Key Term	Definition
National Oceanic and Atmospheric Administration	The National Oceanic and Atmospheric Administration (NOAA) is a scientific and regulatory agency within the United States Department of Commerce that forecasts weather, monitors oceanic and atmospheric conditions, charts the seas, conducts deep sea exploration, and manages fishing and protection of marine mammals and endangered species in the U.S. exclusive economic zone.
National Weather Service	The National Weather Service (NWS) is a US government federal agency that provides weather, water and climate data, forecasts, warnings, and impact-based decision support services for the protection of life and property and enhancement of the national economy.
North American Reliability Corporation	The North American Electric Reliability Corporation (NERC) is a not-for-profit international regulatory authority whose mission is to assure the effective and efficient reduction of risks to the reliability and security of the grid. NERC develops and enforces Reliability Standards; annually assesses seasonal and long-term reliability; monitors the bulk power system through system awareness; and educates, trains, and certifies industry personnel.
Owens Valley	Owens Valley is an arid valley east of the Sierra Nevada and North of the Mojave Desert and is home to the towns of Bishop, Lone Pine, Independence, Big Pine, and more.
Public Utilities Code	The California Public Utilities Code (PUC) is one of 29 Codes that contain state statutes. The Public Utilities Code contains 33 Divisions, and the range of topics within this Code includes natural gas restructuring, private energy producers, telecommunication services, and specific municipal utility districts and transit authorities. There are also numerous parts, chapters, and articles containing hundreds of code sections, or individual statutes.
Qualified Electrical Worker	A Qualified Electrical Worker is one who has received training in and has demonstrated skills and knowledge in the construction and operation of electric equipment and installations and the hazards involved.
Qualified Person	Per Occupation Safety and Health Administration (OSHA) definition, A Qualified Person is someone who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated his ability to solve or resolve problems relating to the subject matter, the work, or the project.
Red Flag Day	A Red Flag Day are days within the LAFD Fire Zone (or Very High Fire Hazard Severity Zones) with wind speeds faster than 25 mph and humidity levels being less than 15 percent. The combination of these conditions creates potential hazards associated with a fast-moving brush fire.
Red Flag Warning	A Red Flag Warning means warm temperatures, very low humidity, and stronger winds are expected to combine to produce an increased risk of fire danger.
Santa Ana Wildfire Threat Index	The Santa Ana Wildfire Threat Index (SAWTi) categorizes Santa Ana winds based on anticipated fire potential. The index uses a comprehensive, state-of-the-art predictive model that includes dead fuel moisture, live fuel moisture, and the greenness of annual grasses to create a detailed daily assessment of the fuel conditions across Southern California.
Senate Bill 901	Senate Bill 901 (SB 901) Wildfire Protection Package is legislation that aims to address the catastrophic wildfires across California.

Key Term	Definition
Southern California Public Power Association	Southern California Public Power Authority (SCPPA) is a Joint Powers Authority for the purpose of providing joint planning, financing, construction, and operation of transmission and generation projects.
Standardized Emergency Management System	The Standardized Emergency Management System (SEMS) is California's emergency response system and the fundamental structure for the response phase of emergency management.
System Average Interruption Duration Index	The System Average Interruption Duration Index (SAIDI) is a metric used to measure the reliability of U.S. electric utilities, which measures the total time an average customer experiences a non-momentary power interruption in a one-year period.
System Average Interruption Frequency Index	The System Average Interruption Frequency Index (SAIFI) is the average number of times that a system customer experiences an outage during the year (or time period under study).
Western Region Mutual Assistance Group	The Western Region Mutual Assistance Group (WRMAG) is comprised of voluntary participating utilities, public and private, in an organized effort to communicate and coordinate multiple mutual assistance requests for large scale emergency incidents.
Wildfire Mitigation Plan	Wildfire Mitigation Plans (WMPs) are plans enacted by electric utilities within California that aims to reduce the risk of wildfires that originate from electrical equipment or facilities owned by the utility in hire fire threat locations.
Wildfire Safety Advisory Board	Assembly Bill 1054, signed into law in July 2019, created the California Wildfire Safety Advisory Board. The Wildfire Safety Advisory Board advises the Office of Energy Infrastructure Safety on electrical corporations' Wildfire Mitigation Plans (WMP), requirements for these plans, and other wildfire safety matters. Additionally, the Board reviews the WMPs submitted by Publicly-Owned Electric Utilities and Electrical Cooperatives (together, POUs) and provides comments and Advisory Opinions. The Board also serves as an additional forum for the public to provide input on the important topic of wildfire safety.

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WILDFIRE MITIGATION PLAN

2023 – 2025