



LIFE CYCLE SOLUTION

# Wildfire Risk Mitigation

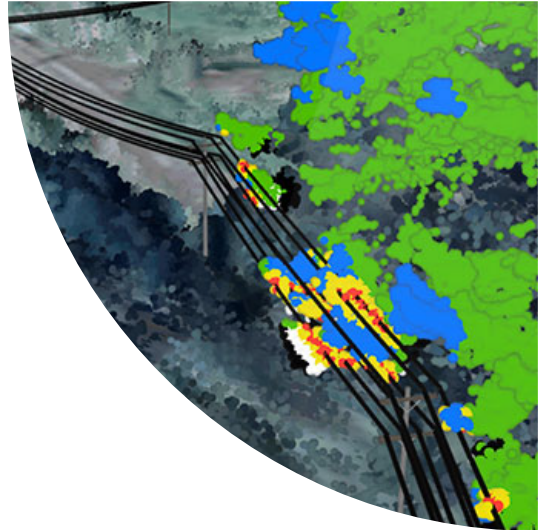


Bringing you closer to your assets,  
environment and business.

# Understand Wildfire Risk Across Your Whole Network

Neara provides utilities with new **wildfire prevention technology** for mitigating current and future wildfire risk.

Manage and mitigate wildfire potential by identifying vegetation encroachment, pinpointing high risk equipment and precisely simulating adverse weather conditions across the network.



Simulate conditions in which failure *might* occur and cause wildfire.



Identify and eliminate potential problems across your network *before* they happen.

## NEARA PAIRS TECHNOLOGY AND WILDFIRE USE CASES SO YOU CAN:

- // Simulate potential vegetation contact under various weather conditions and calculate maximum sag and blow-out to assess wildfire risk across your network.
- // Pinpoint the highest priority assets within high-risk areas to inform grid hardening initiatives for wildfire mitigation.
- // Detect vegetation encroachment within conventional clearance zones to show at-risk areas in your network, and limit grow-in, fall-in and blow-in risks.
- // Overlay wildfire risk zones with wind events and extreme temperatures to calculate blow-out, stress on poles, and conductor clashing or galloping.

# Utilize Neara Before, During and After a Wildfire Event

Neara's end-to-end packaged solution for wildfire risk mitigation and disaster response comprises **four stages**: a network model set up, the preparation before, response during and recovery afterwards.

## 1 NETWORK MODEL SETUP

As a one-time setup, Neara combines your GIS, LiDAR and construction standards to create an engineering grade digital twin within the Neara Platform that mirrors the real-life conditions of your assets in the field.

## 2 PRE-WILDFIRE PREPARATION

As part of this **wildfire risk assessment** process, we identify any data contradictions, including finding assets which are missing in data systems but logically connected to the network in the field. We also identify the exact distance between assets in the field and their GIS location.

Use dynamic engineering calculations to determine:

- // Cross arm analysis, including lean angle and offset between ends of crossarms
- // Pole loading in different environmental conditions on a span-by-span basis
- // Finite Element Analysis (FEA) for pole and conductor failure

Neara's physics-enabled model allows in-depth engineering calculations and vegetation risk modeling to identify the most at-risk wildfire zones across your network.

Combining engineering calculations with geospatial data, such as soil type, high fire risk areas and distance from a roadway allows us to create predictive prioritization matrices for risk across your network. Our collaborative dashboard tools can apply risk categories across the network and color code them to easily display your most critical assets. These dashboards make it easy to align efforts between teams for **wildfire risk mitigation**.

## 3 DURING WILDFIRE RESPONSE

Neara can import data as it becomes available and overlay live fire datasets to track at-risk assets. Multiple teams within a disaster relief effort can annotate, comment and scope information for live responses to events. This allows utilities to make updates to their network quickly and address their most critical zones first in the event of a wildfire.

## 4 POST-WILDFIRE RECOVERY

After a wildfire, Neara's technology can help prioritize recovery efforts and restore power faster. Neara can ingest and rapidly classify new LiDAR data to automatically update the network model of your service area(s). The post-wildfire region is automatically audited for changed, moved or removed assets. Our Design Modules integrate with the Neara Platform and can be used to apply rules across the network to identify exactly where poles can and should be placed.

# Wildfire Risk Assessment



## A Autoprocessing + Vectorization + Insights

The engineering grade 3D model of network assets forms the basis upon which any number of complex scenarios and simulations can be run. Results are outputted at a whole-of-network scale, and can then be inspected on a per-asset basis.

## B Mitigation

Combine complex physical asset modeling with extensive internal and external datasets to understand wildfire risk exposure like never before. Stress test the network under maximum allowable conditions, and automatically flag areas and assets at high risk of failure. By incorporating and weighting the significance of individual layers of data, a prioritized schedule of work can be automatically produced for the entire network.

## C Vegetation + Structural + Clash

Understand precise load, stress, and tension of every asset across the entire network. Precision modeling of clash risk that takes the physical properties of cables into account helps prevent sparking and other wildfire creation risks.

## D Climate

Prepare for extreme events and build grid resiliency. Find points of likely asset failure and prioritize remediation to ensure the most vulnerable, most critical network components are hardened. As an extreme weather event unfolds, use the Neara platform to identify affected assets, and provide up-to-date information to field and control teams.

## E Dashboards / Reporting

Generate advanced dashboards using highly customizable visualization tools including tables, heatmaps, map views, reports, scenarios / simulations, formulas, and more.

# A Holistic Solution

Neara's lifecycle wildfire solution enables a holistic, accurate understanding of wildfire risk across a utility's entire network. The Neara Platform delivers complete **wildfire risk assessment** and analysis, combining precise network modeling with asset management, maintenance, and external data. Potential risks are identified, visualized, organized, and prioritized - all within a single cloud-based platform.

## ABOUT NEARA

Neara is a physics-enabled, cloud-based platform that builds 3D interactive models of critical infrastructure networks and assets, providing the ability to run real-world scenarios, assess current and future risk, and prioritize maintenance and disaster response. We are focused on connecting industry knowledge and data with our digital twin technology to solve the complex problems facing infrastructure companies globally.



For more information, visit [www.neara.com](https://www.neara.com)

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