



Electra Lake Sporting Club

Community Wildfire Risk Assessment

Completed August 26th 2019

Location

Electra Lake Sporting Club is located approximately 20 miles north of Durango on the east side of Highway 550. Elevation within the club is approximately 8,500 feet with aspects ranging from east facing on the west side of the lake to west facing on the east side of the lake. The community wraps around the southern end of Electra Lake. The Animas Valley continues to rise to the north until the summit of Coal Bank Pass at 10,600 feet. Because of the high elevation of the community, there is generally snow on the ground from November through April. Annually, the area receives an average of 20 inches of precipitation. The vegetation type throughout the community is dense mixed conifer forest with aspens mixed throughout and a thick understory and continuous fuel load both vertically and horizontally throughout the tree crowns. Gambel oak understory is present throughout much of the community with other shrub species mixed in. In open areas without continuous crown cover, mature oak stands approximately 15-20 feet in height are continuous for areas as large as 3 acres. To the west there are a number of private parcels between the community and Highway 550 including, but not limited to, the communities of Lakewood Meadows, Electra Lake Estates, and other parcels not part of a larger community. To the east is mountainous terrain of the San Juan National Forest leading down to the Durango Silverton Narrow Gauge Railroad approximately a mile away across the Animas River in the valley. To the north approximately 7.2 miles away is Purgatory Ski Resort.

Community

Electra Lake is a reservoir controlled by Excel Energy. The vast majority of land within the community is owned by Excel Energy but managed by the Electra Lake Sporting Club for public use. Private individuals own the footprint of each cabin but Excel Energy owns the surrounding land. In total, there are 160 structures within the boundaries of the community, including the gatehouse and sporting club. Ninety-nine of those structures are residential cabins, 40 are attached structures, and 3 are pit toilets. The community maintains seasonal residency for many properties.

The lake is currently used to produce energy for the surrounding area and, therefore, its use is regulated by the Federal Energy Regulatory Commission (FERC). Under FERC, this reservoir is considered critical infrastructure. Through Excel Energy, the reservoir is required to meet certain standards of safety in order to maintain its continued function

Wildfire History

Wildfires in this area of Colorado are common occurrences due to the relatively arid climate and low average rainfall. Due to historic fire suppression practices, this area has a significantly high fuel load and an overabundance of many species, predominantly pine, spruce, and oak. These factors contribute to a high level of fire risk for the area. While no major fires have occurred within the community, two major wildfire events have occurred within close proximity to the community in the last 20 years. The Missionary Ridge fire occurred approximately 12.5 miles south of the community in 2002, burning over 71,000 acres, resulting in one death and the loss of 46 structures. In 2017 there were at least 3 lightning strike fires that started within the community. Quick response by Bob Haines, Caretaker for the Electra Lake Sporting Club, and firefighters from Durango Fire ensured none of these fires grew to larger than 1/10th of an acre in size. The other major wildfire event was the 416 Fire in 2018, occurring on the west side of Highway 550 opposite from the community. This fire burned a total of 54,000 acres with no structures lost. Due to the extreme fire conditions in 2018, the San Juan National Forest Closed under Stage 3 Fire Restrictions for the first time in the history of the forest.



Colorado Wildfire Risk Public Viewer

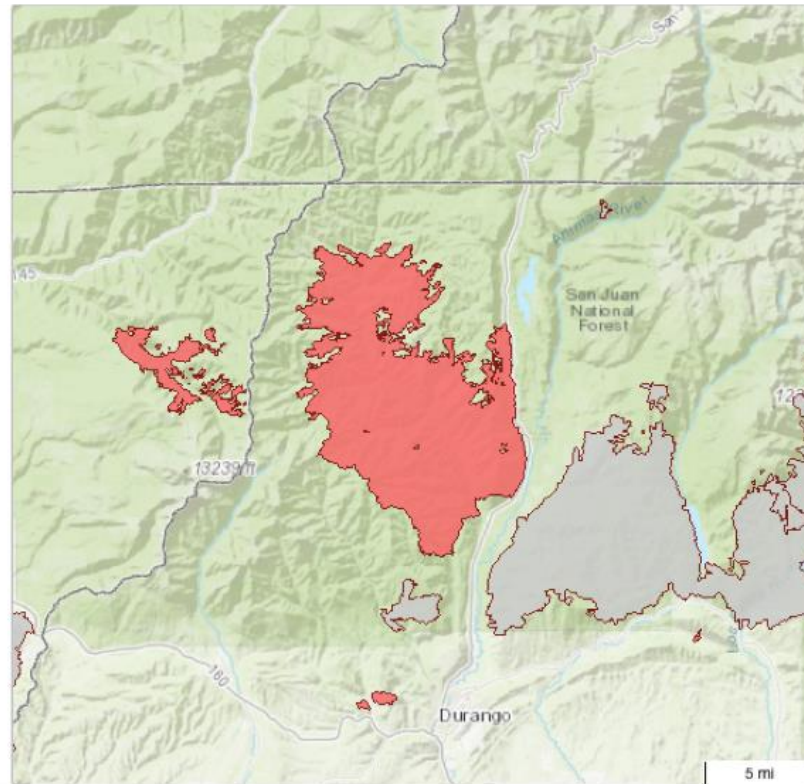
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Electra Lake Historical Fire Map

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Wildfire Risk

Proximity to Highway 550

Due to its proximity to a major highway, the community's wildfire risk is increased due to the number of people traveling along the roadway. High activity along a roadway increases the chances for human ignitions, which could subsequently ignite the woodland areas leading to the community. Along roadways, ignitions from cigarettes, chains dragging, and even vehicle fires are common.

Lightning

Dependent upon the year, late spring and summer months bring monsoon rains to southwest Colorado. With these rains comes an increased likelihood for lightning strikes. Due to the low humidity and dry climate of the area, lightning strikes have the potential to ignite fuels. With its proximity to the San Juan National Forest, Electra Lake is at risk

for a potential lightning ignition of dry fuels within or in the vicinity of the community. Dry lightning is also a common occurrence throughout the region that can cause ignitions that grow faster since rain is not wetting fuels during the ignition.

Proximity to Railroad

The Electra Lake community is also in close proximity to the Durango Silverton Narrow Gauge Railroad. The railroad is a significant attraction for the area, bringing in thousands of tourists every year. Because of this popularity, the train is constantly running along its route to Silverton. With this high traffic railway and a close proximity to the tracks, the chance of spot fires occurring near the tracks due to the coal burning nature of the train are a constant threat to the community. In 2019, the USFS concluded the Durango Silverton Narrow Gauge Railroad was responsible for the cause of the 416 Fire.

Recreation

When the lake is full, Electra Lake is a popular location for water sports and fishing. With an increase in day use activities comes an increased likelihood for human ignition.

Proximity to Wildland

The entirety of Electra Lake is considered a Wildland-Urban Interface (WUI) because of the proximity of the homes to dense wildland areas. The WUIs carries a number of inherent risks that significantly increase the likelihood of wildfire because of the opportunity for either human caused or natural ignitions to spread from one area to the other.



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Burn Probability

Annual probability of any location burning due to wildfire.

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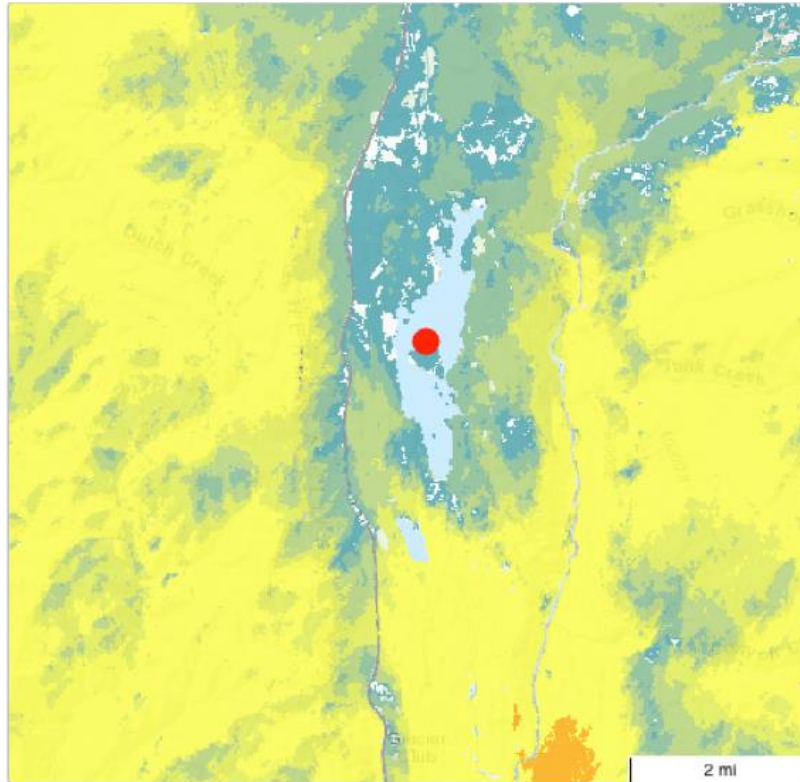
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Fire Intensity Scale

Quantifies the potential fire intensity by orders of magnitude.

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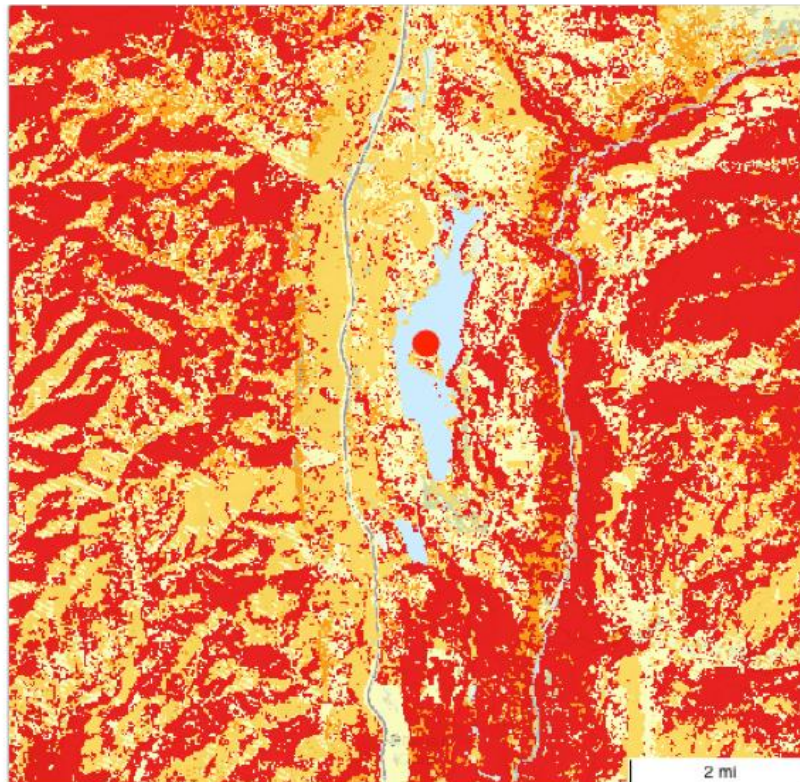
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Wildfire Preparedness Activities

Community Mitigation

Using funds awarded to the community through a Stevens Grant (now CAFA Grant), the Electra Lake community has created a shaded fuel break around the exterior of the community. Through this mitigation process, they have successfully thinned between 72 and 78 acres of their community. The community has also utilized the Wildfire Adapted Partnership (WAP) Kickstart Grant to further mitigate their community and masticate roadways. Fifteen foot thinning along roadways and mastication of fuel load have also helped to decrease wildfire risk by creating larger fuel breaks and restoring property to a healthy vegetation density. The community is also in the process of reshaping some roadways in order to increase access.

Private Assessments

Many residents within the community have had private assessments conducted through the WAP Site Visit Program and have pursued mitigation. Additionally, the majority of homes within the community have established some form of defensible space around their homes.

Slash/Burn Piles

Community burn piles have been created for the residents' use. This slash pile is used to discard and eventually burn excess fuels that have been removed from residents' properties. This community slash pile has collected between 20-80 thousand cubic feet of excess fuels for burning.

Community Strengths and Vulnerabilities

Access

The community has one access point from Highway 550 for ingress and egress, severely limiting the potential routes for evacuation. Due to the topography and various

landowners, the development of additional evacuation routes is unlikely but should be explored.

Home Construction and Landscaping

Home construction and landscaping vary from the property to property. Construction materials range from Class A to Class B and C Roofing materials are predominantly metal, but wood and asphalt shingles are also present. Siding materials also vary, ranging from faux wood paneling to exposed cedar shake. Defensible space and landscaping is also inconsistent, ranging from 20-50 feet of cleared space to dense tree canopy overhanging homes. Many homes have unattached or extended structures along their sides, including firewood piles and propane tanks. With this level variation comes an increased risk of potential wildfire spread, particularly to homes that are adjacent to unmitigated properties. There is room for improvement with defensible space to almost all structures within the community.

Defensible Space Zones

Defensible space varies on the properties within the community. The majority of homes have established some form of defensible space between 10-30 feet from their home, but many structures have trees and shrubbery within the home ignition zone.

Forest Fuels

The vegetation surrounding the community would be considered to be a mixed conifer forest. This area contains an abundance of ponderosa pine, Douglas fir, blue spruce, Engelmann spruce, juniper, aspen, Gamble oak, and a variety of other bushes and trees. Many areas within this community have large amounts of fuel load and dense stands of trees, particularly in extreme topological areas on the hillsides leading down towards the lake.

Community Fuel Breaks and Safe Areas

A number of pullouts and parking areas have been constructed along roadways, with

cleared and masticated areas surrounding them. Two turnarounds have been created at the end of each major road to allow Type 3 and Type 6 engines to turnaround at the dead ends. A community safe area has also been cleared which could potentially be used to shelter if, and only if, evacuation is not possible. A pump station could also be constructed to simplify refilling of engines and fire apparatus during a fire.

Fire Suppression Resources

Electra Lake provides a nearby water source for fire suppression, although access to the lake could be hindered by narrow roadways and by the fact that there is only one way in and one way out.

Evacuation Readiness

There is currently no comprehensive evacuation plan for the community, so any evacuation would be dependent upon the readiness of the individual residents. Similar to the mitigation efforts within the community, individual readiness varies significantly.

The community is substantially limited in evacuation readiness by the single ingress and egress point to Highway 550, which is also used by many residents from surrounding communities. Lakewood Meadows does have a secondary egress route, which also lets people out onto Highway 550. The complex network of roadways and side roads would also make mass evacuation difficult. In addition, many of the side roads within the community have not been masticated, limiting the width of the road and potentially preventing access to emergency services. These side roads are being mitigated depending upon the frequency of use and necessity of access for service vehicles, but progress is slow due to the unforgiving nature of the community's topography. The extent of the homes spread throughout the community would also increase the difficulty of evacuation, with some homes being isolated from larger groups of structures.

However, due to the seasonal residency of many residents, the number of people who would need to be evacuated would likely be reduced from the 99 total residences in the

community. Spring and summer are the busiest times at Electra Lake, especially on holiday weekends. During these times it is particularly important for residents to be prepared to evacuate early in case of a wildfire. This could potentially prevent the single access point from becoming a choke point in the event of a wildfire. The extensive mitigation efforts and continued reshaping of roadways will further increase the efficiency of evacuation. In addition, the pullouts and turn-arounds that have been constructed could prove to be invaluable for the prevention of structure loss and fire spread.

Course of Action

Community Projects

- Continue mitigation efforts and attempt to obtain further grants/funding through federal, state, and local grants
- Collaborate with La Plata Electric Association, Excel Energy, and other companies associated with Electra Lake and the surrounding area to protect mutual assets and explore alternative funding opportunities
- Remove ladder fuels and continuous fuel loads from throughout the community to ensure fire does not increase in intensity within the community borders
- Research potential pumping station to safely refill fire apparatus without threat of contaminating reservoir with invasive species

Roadways

- Increase access through continued reshaping and mastication of side roads
- Install Dead End Signs and reflective street signs for fire crews from out of town
- Clear vegetation 15 feet beyond edge of roadway
- Clear vegetation a minimum of 20 feet vertically above roadways to allow Type 1 and Type 3 engines to pass through without scraping roof or breaking lights

- Widen and clear intersections to increase visibility and decrease chances of vehicle collisions

Individuals

- Establish a comprehensive evacuation plan for the community and encourage individuals to develop their own evacuation plans including go bags
- Encourage residents to sign up for La Plata County Code Red to receive early notification about evacuations
- Sign up for a WAP Site Visit to receive an individualized management plan for all homes or cabins
- Create defensible space to CSFS Standards

This Community Wildfire Assessment was completed with input from:

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