

EBMUD Fuel Reduction and Vegetation Management



Frequently Asked Questions

How does EBMUD manage the vegetation and reduce fuel on its watershed?

East Bay Municipal Utility District (EBMUD) has had a comprehensive vegetation management program that includes annual fuel reduction and wildfire mitigation in our watershed for over 40 years. EBMUD has long-standing partnerships with local and state agencies, cities, and fire districts and we work closely with them to coordinate our fuel reduction efforts and share resources.

EBMUD uses a variety of methods throughout the year to reduce fuel

on our watershed including grazing animals, hand pulling, mowing, tree removal, fuel breaks, and prescribed fire. We refer to the EBMUD Watershed Master Plan, last updated in 2018, to guide our vegetation management strategy, however, we remain flexible in our approach as needs can change yearly.

What is a fuel break and how does it work?

A fuel break includes the strategic removal of dry and dead brush within a forested urban or non-urban area that will prevent a fire from spreading rapidly by causing a “break” in the fuel

source. Once a fuel break is established, it allows firefighters the chance to contain the fire before it spreads out of control.

The primary focus in a fuel break is removing undergrowth and removing the lower limbs of trees to prevent a ‘fuel ladder.’ This, along with cutting back dry grasses in the area, slows the spread of fire. When creating a fuel break, large logs and healthy trees are left in place, they do not pose much risk as they do not ignite and burn quickly.

In 2019, EBMUD partnered with Moraga Orinda Fire District (MOFD) and the California Department of Forestry and Fire Protection (CAL FIRE) to complete a 19-mile project called the North Orinda Shaded Fuel break. This project utilized hand-crews to create a contiguous swath of modified fuels adjacent to the communities of Orinda and Lafayette that spans over 1,400 acres. Brush and undergrowth were removed by crews using chain saws. Once EBMUD creates a fuel break, we are responsible for the ongoing maintenance of that area. This includes regular mowing, hand pulling, cow and goat grazing to ensure that the area remains clear. We factor in this regular maintenance when we plan our vegetation management each year. Follow-up maintenance may include the use of prescribed fire or controlled burn.



This fuel break in Moraga is maintained with both mowing and grazing.

Under ideal weather conditions, firefighters use prescribed burns to reduce fuel in a controlled manner.



What is a prescribed fire or controlled burn?

Prescribed fire, also referred to as a controlled burn, is another technique we use to create and maintain fuel breaks. In addition to reducing the fuel load, prescribed fire recycles nutrients back into the soil, improving soil and vegetation health. Opportunities to use prescribed burning are limited based on air quality and weather conditions. When used, prescribed burning is conducted by firefighters to limit the intensity and spread of the fire.

San Pablo Reservoir-Pine removal

In the last couple of years, California experienced an unexpected and rapid die-off of the Monterey Pine tree. This was caused by a combination of factors including drought, pine pitch canker, and bark beetle infestation. For EBMUD, there was the additional component, many of these non-native trees were

planted in the watershed at the same time and are aging at the same rate. Since 2001, EBMUD regularly removes between 250-300 Monterey Pines from our watershed each year, however, in 2021 our regular tree removal efforts could not keep up with the sudden and unexpected death of nearly 1,500 pines.

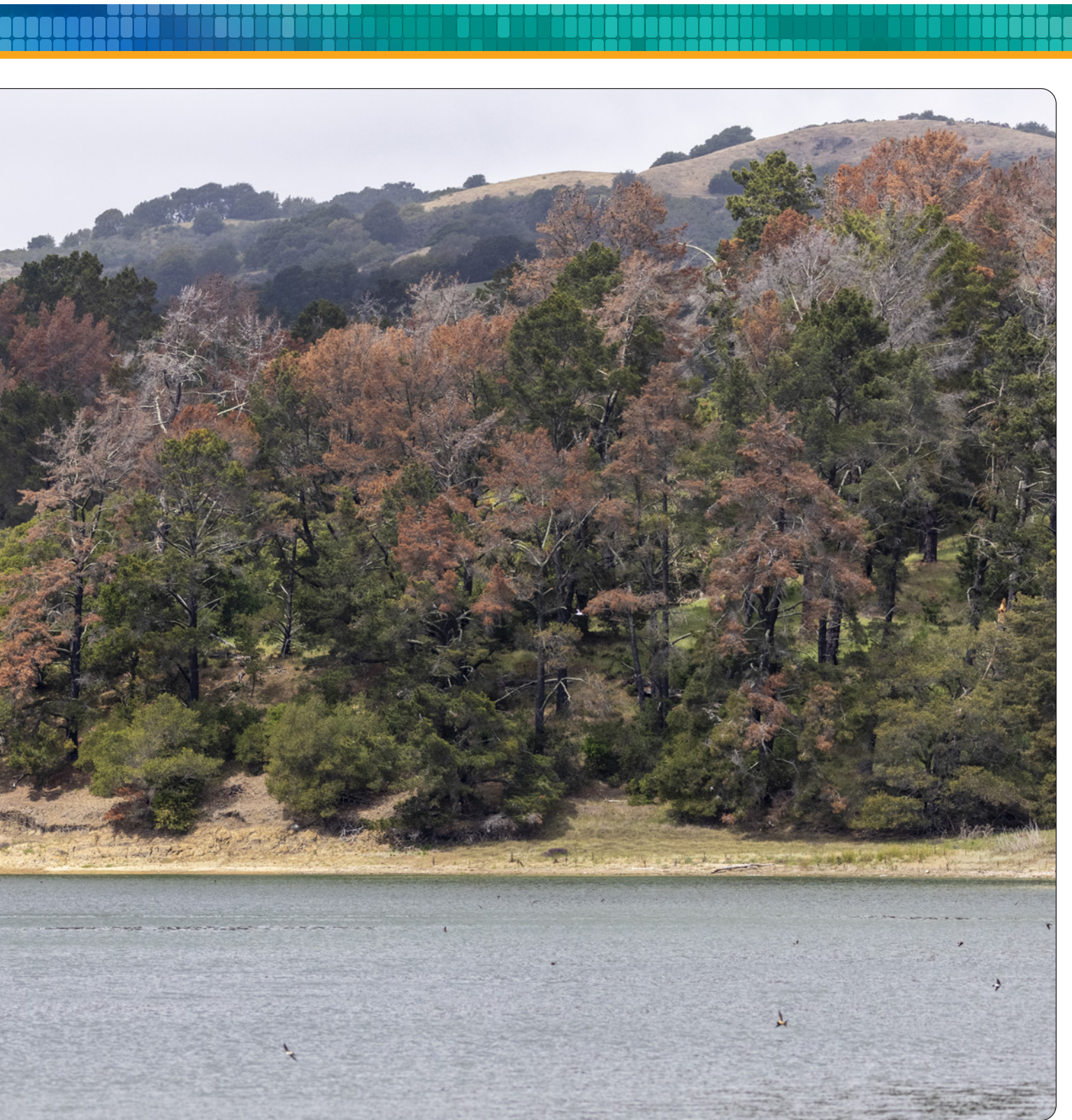
What is EBMUD's plan to address the dead Monterey pines on the San Pablo Reservoir?

EBMUD is working to secure additional resources to remove the trees at San Pablo Reservoir. We are collaborating with MOFD for a \$5 million Cal Fire grant that would allow us to remove the trees at an increased rate. We do have to be conscious of sensitive habitat and protected species in the area, including bald eagles. We work around the bird nesting season and we are developing a more thoughtful approach to



Many Monterey Pine trees at San Pablo Reservoir have died suddenly and require removal.

our existing vegetation management program to remove the dead trees.



**How are the trees removed?
How many can be removed
in a typical day?**

Using our typical resources, EBMUD can remove about 10 dead trees in a day. This includes felling the tree and removing the limbs, and creating burn

piles where they will be burned at an appropriate time in the right weather conditions. With additional resources, this can be done much quicker.

**How are fuel reduction
projects and strategies
prioritized?**

Public safety is the most important factor in planning our fuel reduction projects. We focus on areas where dead and dry vegetation poses the clearest

and most imminent threat to homes and schools. Secondly, we focus on the protection of water quality and the delicate ecosystem within our watershed.

EBMUD usually performs pine tree removals from October through February. Once bird nesting season begins, we move on to other projects that are closer to the urban interface and pose a direct threat to homes. Currently, we are considering additional projects including adding another fuel break in the El Toyonal area of Orinda, connecting to a fuel break that PG&E has already created.

How much of a threat to the dead pine trees around San Pablo Reservoir pose?

Fire and wind conditions can be unpredictable, this makes it difficult to know for certain the threat level of any one factor. In normal conditions, a fire in the area of San Pablo Reservoir would likely pose less of a threat to public safety than one closer to homes and schools. The area is isolated from the community, additional mitigation strategies are in place to reduce the intensity and slow the spread of fire, and it is adjacent to a water source that could be used for firefighting.

Will you plant another species of trees to replace the pines?

By selectively removing the dead, diseased, and dying pine trees we are allowing the coast live oak trees to thrive, restoring the native oak woodland.

When is peak fire season?

Peak fire season is usually considered to start in October and last until it begins to rain in mid to late December. This is

when hot, dry winds combined with dry vegetation create the opportunity for fast-moving, hot wildfires to occur. Climate change and drought are causing the vegetation to dry out earlier in the season. As early as May, this vegetation is dry and available to fuel a wildfire.

How does EBMUD work with PG&E to reduce fuels and what has PG&E done in Orinda?

EBMUD has a long-standing relationship with PG&E and works closely with them on fuel reduction and wildfire mitigation in the East Bay. In 2019, PG&E did extensive work in Orinda to remove trees along their powerline alignment and create a large fuel break in the El Toyonal neighborhood. EBMUD worked closely with them on this effort along with many other past projects.

What are your next steps?

EBMUD is currently working to secure funding and resume removing dead pine trees at San Pablo Reservoir in the Fall of 2021.

For more information or questions about EBMUD's vegetation management program and preparations for wildfire season please visit ebmud.com/about-us/vegetation-management/



Seasonal goat and cattle grazing helps reduce fire danger on EBMUD's watershed.

EBMUD has a proud history of providing high-quality drinking water for 1.45 million customers in Alameda and Contra Costa counties. The District's award-winning wastewater treatment protects San Francisco Bay and serves 740,000 customers.

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