

**What are the impacts of logging?** Every logging operation, no matter how carefully managed, can cause impacts to the land as well as adjacent homes and downstream communities. Cumulative impacts to watersheds are also of concern.

Direct impacts from logging, and cumulative impacts beyond the property involved, include:

- \* **Increased erosion and sedimentation:** Heavy equipment used in logging, including bulldozers, excavators, grapple skidders, mowers, backhoes, and a variety of heavy trucks and trailers, all affect the highly erodible forest soils. Runoff from winter storms carries increased loads of sediment that can bury the gravelly stream bottoms used by fish for spawning habitat, and can increase flooding hazards downstream. Some communities and homes depend upon streams for their drinking water. Increased sediment can adversely affect these drinking water supplies.
- \* **Increased fire hazards:** Redwood forests are different from forests in other parts of California as they are dependent upon our cooler, foggy coastal climate. Mature redwood trees create continuous shade that discourages competing vegetation from growing. Summer fog drip from redwood forests replenishes water in the creeks. In San Mateo County, half of the annual precipitation recorded in redwood forests is from summer fog drip. Cutting half or more of the largest trees in a commercial timber harvest opens up the tree canopy and exposes more of the forest floor to sunlight, which increases fire hazards. Slash and other logging debris as deep as 30 inches is left on the forest floor which increases the potential fire hazards. Increased sunlight encourages growth of weedy and fire-prone shrubs such as ceanothus and broom. These shrubs grow rapidly, and may reach a height of 30-40 feet, creating a “fire ladder” that enables a less intense ground fire to ignite the branches and crown of even fire-resistant redwoods. A few years after logging, young redwoods and firs will overtake the brushy species, and the tree canopy becomes continuous again. The more sun-loving brushy shrubs are shaded out and eventually die, adding to the fire hazard.
- \* **Increased hazards from landslides:** Roads, skid trails, and landings that are constructed on steep slopes, even when properly maintained, can increase landslide hazards in forested areas. San Mateo County has the distinction of being one of the most landslide prone areas in the State, if not the nation. After the El Nino storms in 1982, the USGS documented thousands of debris flow avalanches (mud, rocks, trees, and other debris) in San Mateo County over 400 of these were in Pescadero Creek County Park.
- \* **Increased hazards from windthrow:** Individual trees within a redwood forest are protected from strong winds by the surrounding trees of the forest. In San Mateo County, the timber rules allow cutting of up to 60% of the trees measuring 18 inches and diameter and greater, and up to 50% of the trees measuring between 12 inches and 18 inches in diameter. In addition to the loss of half of the larger forest trees, roads, skid trails, and landings created for logging open up additional avenues for wind. The remaining trees do not have the same protection from high winds. Trees blow down, often creating a domino effect on other large trees, which in turn can fall. This phenomenon is called **windthrow**. San Mateo County’s 1,000 foot buffer zone to protect adjacent residences from

timber harvesting (on lands not zoned for commercial timber harvesting) was based in part on the increased hazards from windthrow.

- Lennie Roberts 8/06