Forest Health – An Emerging Issue

According to climatologists, we may be entering a long period characterized by higher summer temperatures and less than normal precipitation throughout much of the West. This century is expected to be warmer and dryer than the last 50 years.

Southern California and much of the Southwest is experiencing severe drought conditions. This is the fifth consecutive year that Southern California has received below normal rainfall, and 2002 is listed as one of the driest years in recent history. Severe drought stress has caused extensive and widespread tree mortality throughout the region. As a result of the weakened condition of the trees, unprecedented outbreaks of beetles are currently ravaging forests from Alaska to San Diego. Sudden Oak Death is taking its toll in California’s oak woodlands and Pitch Canker has recently been found to be intensifying in Marin County.

Competition for water due to overcrowding is often a critical factor in tree mortality in wildland forests and in less crowded urban forested areas where development and urban sprawl interrupts natural moisture absorption into the ground. Drought alone can kill trees without insect or disease intervention.

Exposure to air pollution (ozone in particular) is thought to be another environmental factor that has been weakening trees for years. Ozone causes tissue damage when it enters the foliage, often causing needles to drop and in severe cases, dieback and decline. Sulfur and nitrogen-based compounds increase soil acidity allowing essential nutrients like calcium, magnesium and potassium to leach away during rainy periods.

Bark beetles are really not the issue here, nor is drought or air pollution. The real problem is that

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Hot Topics

Official National Tree Selected The oak tree was selected during a four-month-long open voting process hosted by the Arbor Day Foundation. From the first day of voting, oak was the people’s clear choice, finishing with more than 101,000 votes, compared to almost 81,000 for the magnificent runner-up, the redwood. Congress passed legislation making the selection official on November 20, 2004.

Proposition 12 2005-2006 applications are available on the UFEI site at www.ufei.org

Grant Opportunities For additional urban forestry-related grant opportunities visit www.fedgrants.gov or www.treelink.org

Leaf-It-To-Us applications for the 2004/2005 cycle are being evaluated and a list of successful applicants will be posted shortly.

Trees are Terrific…and Energy Wise! is the theme for the 2005 National Arbor Day Fifth Grade Poster Contest. Deadline for entries is March 18, 2005. For more information call 1-800-523-8733 or email ben.thompson@wadnr.gov.

Nature at Your Service 2005 National Conference on Urban Ecosystems will show how to reconnect people to their city’s natural resources. From local to regional perspectives, the conference will highlight latest technologies, emerging public policies and tools to help put the urban forest to its best use. The conference will be held November 17-18 in Charlotte, NC. For more information visit www.americanforests.org

Proposition 12 2004-2005 contracts are being worked up at this time.
The term Urban Forestry conjures images of bustling cities of concrete and steel, skyscrapers towering over busy streets and the decorative trees and shrubbery used to soften the hard angles. In California’s central region, there may not be many skyscrapers or large cities of concrete and steel, but thanks to a dedicated urban forester, there is a whole lot of urban forestry going on. In December of 2001 Darla Mills accepted a position with the California Department of Forestry and Fire Protection (CDF) as the Urban Forestry Regional Field Specialist for the Central Valley and Central Coast, a position that oversees 16 counties. Her home office is located at the Fresno/Kings unit in Tulare, California. Darla worked for the US Forest Service in 1983-84, where she developed her love of forestry, and realized that was the direction her career path would take. She started with CDF in 1985 working at the Sacramento headquarters office learning the accounting and budgeting elements of state forestry programs. She also worked in an urban forestry grant program in the headquarters Resource Management office. After completing her Bachelors degree in forestry with Northern Arizona University she returned to CDF to work in the Forest Practice program in licensing and enforcing Timber Operators policies and the Forest Practice Act and Rules. She also reviewed Timberland conversion applications for environmental compliance.

Central California enjoys a diverse combination of landscape and climate. From the rugged Sierra Nevada Mountains into the Central Valley with its blistering summer temperatures, on to the Central coast range’s rolling hills and plunging coastline from Monterey to Santa Barbara. The cities and towns in this area tend to be smaller and more rural, and most residents make their living at some form of agriculture or ranching. In general, life moves a little slower here than in the urban centers to the north and south of this area, and these smaller cities and townships often don’t have money for luxuries like planting trees.

“I love my job and CDF, and the mission of the department is a good fit with my beliefs,” said Darla. “In Urban Forestry, I give money away for tree-planting projects. It is wonderful to see the positive influence tree planting has on a community and its residents. I like going into communities and talking with their schoolchildren about trees and CDF. The looks on their faces when you see that an idea has struck them is priceless.”

Darla says that her goals for urban forestry are twofold. “First, I would like to see trees planted in every community of the Central Valley and Central Coast using CDF’s tree-planting grant opportunities. Second, I would like to see sound urban forestry principles and practices implemented and utilized in cities and counties and become the norm, rather than the exception. It is fulfilling to be on the edge of urban forestry principles and be able to influence and assist with policy-making and direction for the entire state. Urban Forestry within CDF is not a job; it is a career!”

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Our forests are unhealthy—out of balance. Bark beetles and fire are the most common natural agents that work to maintain balance or, as the case may be, reestablish balance, by clearing out the forest understory and culling old and diseased trees. That scenario works in static climate conditions; a forest that is stressed with increasingly severe drought conditions and climate change may not respond with healthy new growth.

Urban forests are also at risk, since California’s population growth is strongly concentrated in areas that will be affected by climate change. When communities plan for planting new trees, consideration must be given to these changing conditions.

Many trees live 100 years or more. The urban forests we plant today could be experiencing much warmer and dryer conditions 80 years from now. Our future urban forests may depend upon our willingness today to anticipate and plan for the possibility of a warmer, dryer climate and an increase in population that will place additional demands on our water supply.

Cleaning up California’s forests is something we can do to prevent catastrophic wildfires. Adjusting our urban forest practices to include drought-resistant tree species and fire-safe landscapes may be the best way to protect our urban forests from changes in climate and water supply. Contact your area forester for more information on trees that can survive these changing conditions and grow to maturity.
Living History

In October 2004 Palo Alto City arborists and foresters collected seeds and saplings from the El Palo Alto Redwood, a City Heritage Tree and California Historic Landmark. The tree is estimated to be 1063 years old. The tree served as a landmark for travelers, settlers and early explorers including Gasper de Portola’s expedition party of 1769 which camped beneath the tree.

The seeds and saplings will be sold in an effort by American Forests, a non-profit conservation organization founded in 1875 and dedicated to tree planting for environmental restoration, in their Historic Tree Project.

Each year the project collects seeds and saplings from historic trees around the nation and sells them to raise money to help fund their efforts to replant ecosystems damaged by wildfire, flooding or deforestation. Included are the honey locust tree that sheltered Lincoln when he delivered the Gettysburg Address, the last living tree planted by ‘Johnny Appleseed’, and the tulip poplars planted by George Washington at Mount Vernon in 1785. For more information visit their website at www.historictrees.org.