QUESTION: Your article about defensible space in the Aug. 7 Press Democrat was very helpful. What do I need to do in my garden when a red flag warning is issued?

Answer: The National Weather Service issues a red flag warning when weather events may result in extreme fire behavior within 24 hours. A red flag is the highest alert. During a red flag warning, a simple spark can cause a major wildfire, so we all must be extremely cautious. The warning gives us a little time to take basic precautions and prepare for evacuation orders.

The weather service looks at three measures before issuing a red flag warning: sustained wind speeds, relative humidity and 10-hour fuel moisture levels.

What to do at home during a red flag alert

debriş and litter accumulation in corners and nooks around the house.
8. Avoid using any outdoor machinery that can create sparks, like lawn mowers and metal-blade weed wackers.

You also can help first responders. They don’t all come with hoses and equipment; sometimes they are just driving a utility truck. As Linda Collister, Healdsburg Fire Department fire marshal, said, “We practice ‘fire front following.’ Once the main fire moves through, we try to extinguish any embers or burning materials that may threaten your home.

“During the Glass and Walbridge fires, utility trucks drove through the neighborhoods and caught spot fires in backyards and near homes using hoses and tools left by the homeowners. Having hoses that reached the perimeter of the house greatly helped reach all areas and even neighbors’ homes that had no hoses.”

Take these precautions to help first responders:
- Don’t leave sprinklers on. They waste water that may be needed during a firefight to save your home.
- Organize your hoses and store them neatly by a faucet with spray nozzles attached. Try to have hose in multiple areas or enough hose to reach the perimeter of your home.
- If you have a ladder, place it outside next to the house, in case firefighters need access to the roof.
- Leave a shovel or other tools useful for spot fires.
- If you must evacuate, leave your gates open for fire responders.
- If you have time, leave the lights on for visi-
bility and a note indicating where you went.

- Set up and practice a red flag day routine to ease your mind and help you understand your vulnerability. For your family:
  - Have all your evacuation supplies, including flashlights and a portable radio, ready to go.
  - Make sure your cars have plenty of gas and are parked outside or that the garage door can be opened manually and all able family members know how to open it.
  - Maintain your defensible space throughout the year. If you remove plants during the drought, start with those nearest the house and work your way out. Defensible space principles, particularly maintaining the 5-foot zone around the house, do work.

Question: My redwood tree has a lot of brown needles and looks unhealthy. Why is this happening and what should I do?
Answer: In recent years, we have received many inquiries from homeowners about the poor condition of coast redwoods (Sequoia sempervirens) in their gardens and communities. University of California Extension Forester Michael Jones suspects redwood decline and dieback are caused by many health issues that can occur when redwoods are planted outside their natural coastal range.

Coast redwoods thrive in habitats that provide soaking winter rains (an annual rainfall of 25 to 100 inches), high-humidity summers, moderate temperatures, loamy and well-drained soil and room to grow. "Redwoods are resilient, but urban environ-
ments can be challenging places for them to grow," Jones said.

There are many factors that can lead to redwood decline, according to Jones, including soil compaction, overwatering, poorly draining soil, underwatering, high salt concentrations or toxins in the soil, pollution, limited growing space and mechanical injury.

"The continued stress of these factors can eventually weaken trees, making them vulnerable to native insects and diseases," Jones said.

Some needle browning and loss is normal in late summer and early fall. If that happens after an abundant flush of new needles, don't be concerned. But be on the lookout for canopy decline and dieback, both significant signs of damage.

Canopy decline shows up as drooping and discolored needles, reduced new needle flush and, in some cases, a heavy cone crop, all which indicate water stress from drought or other factors such as soil compaction or soil-borne pathogens that may inhibit the uptake of water.

Top and branch dieback may indicate a fungal redwood canker that can encircle the main stem or a branch, inhibiting the movement of water and eventually killing the tissues above. Fungal diseases may be introduced through stems or root injuries.

Trees weakened by canker diseases attract the redwood bark beetle, which bores holes into the bark and further restricts water movement, hastening the decline of the tree.

To manage the health of redwoods in your landscape, keep them vigorous and resistant to drought, insects and diseases. Here are some tips:

- Provide adequate irrigation and mulching to meet their water needs. Water around the drip line, away from the trunk, and keep mulch away from the trunk.
- Maintain loose soil structure to allow room for their shallow roots.
- Remove diseased wood.
- For additional information on growing healthy ornamental redwoods, check out these links:
  - Decline of ornamental redwood in Mendocino, Lake and Sonoma counties: bit.ly/3AHBV71
  - Watering redwoods: bit.ly/3iOlDwG
  - Growing coast redwoods: bit.ly/3TTT7tv
  - Pests and disorders of coast redwood: bit.ly/2UaLOKE

Contributors to this week's column were Janet Bair; Mimi Brent, Karen Felker; Nancy Pemberton; Pat Rosales; Laura Southworth and Clio Tarazi. Send your gardening questions to scompgd@gmail.com.

The UC Master Gardener Program of Sonoma County (sonomagardens.ucanr.edu) provides environmentally sustainable, science-based horticultural information to Sonoma County home gardeners. The Master Gardeners will answer in the newspaper only questions selected for this column. Other questions may be directed to their Information Desk: 707-365-2666 or msgardens@ucanr.edu.
A fire danger warning on the Trinity-Oakville grade in east Sonoma County.
Redwood decline and dieback are caused by many health issues that can occur when redwoods are planted.