

# The CSERC Newsletter

*Like a stone tossed into still water, knowledge about environmental issues can ripple outward far beyond its beginning point, and perhaps return in a wave of concern, active involvement, and greater awareness of nature in the mountains and foothills around us.*



## Water Board proposes to lower the summer lake level at Pinecrest



On summer weekends as many as 25,000 visitors may crowd the Pinecrest Basin – drawn by warm weather and the Lake's scenic beauty. A proposed State Water Board plan would allow PG&E to favor downstream water users by draining more water from the Lake, rather than keeping it moderately high throughout the summer season as has been required up until this time.

The Tuolumne Utilities District, a water supply customer of PG&E, has lobbied the Water Board for years to prioritize supplying TUD customers with more summer water by dropping lake levels. In dry years the difference can be significant if the Lake is lowered dramatically in late summer (as at left). The resulting bathtub ring of mud flats discourages recreational use. This lake level plan is just one of the issues facing Pinecrest Lake and the South Fork Stanislaus River system. (See page 2))

# TUD seeks “local control” of South Fork Stanislaus River – but acquiring PG&E facilities will cost ratepayers millions of dollars for “free” water



For the past century PG&E has operated Pinecrest Lake (at left), Lyons Reservoir, a water supply canal, and other facilities associated with the South Fork Stanislaus River.

In addition to using the Main Tuolumne Canal to serve its Phoenix hydroelectric powerhouse, PG&E uses that canal to provide water to the Tuolumne Utilities District (which serves the majority of Tuolumne County residents). For many years TUD managers have ambitiously yearned to gain “local control” over the water supply. Now TUD has launched a proposed takeover of the system from PG&E.

**“Local control” sounds good as a rallying cry, but in reality, the plan is a boondoggle that would greatly burden TUD ratepayers and likely degrade environmental values associated with the river system.** Due to a legally binding 1983 Water Supply Agreement, PG&E must provide TUD with water through the Main Tuolumne Canal at no cost to TUD. **TUD can request as much water from the South Fork Stanislaus River each year as TUD needs. It is literally free water to TUD,** even though PG&E spends nearly \$600,000 a year for ownership and operating expenses of the system, not even counting the expenses at Pinecrest Lake.

With free water from PG&E, TUD water customers only pay for TUD’s operating and delivery costs. Yet instead of gratefully embracing that stellar water supply agreement, TUD’s general manager and Board are zealously describing how great it would be to acquire PG&E’s “water rights.” In reality, those rights are meaningless because the legally binding water agreement permanently assures TUD of its water supply.

## Misinformation drives the takeover bid

TUD Board and staff attempt to justify the highly expensive acquisition of PG&E’s South Fork Stanislaus facilities by claiming that TUD has inadequate water available. The fact is that Lyons and Pinecrest Reservoirs fill and spill every year – even in the worst drought, and their storage exceeds any projected TUD demand, decades into the future.

For the environment, PG&E has proven to be a responsible manager of the river system, and at times has actually forgone power generation to assure that water would be available for water supply and ecological needs. In contrast, TUD has consistently prioritized water use. CSERC fears that TUD would stress the already degraded South Fork River even more than its current condition.

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# Long-delayed restoration project at Phoenix Lake finally ready to begin



In 2004, CSERC staff met with concerned property owners who were alarmed by conditions at Phoenix Lake, the 88-acre storage reservoir that provides water to Sonora and other community areas. The Lake was filling in with silt. A lack of flow through the Lake often caused poor water quality, unpleasant odors, and conditions that resulted in heavy infestations of invasive aquatic plant growth.

The Phoenix Lake Task Force was formed, bringing together a diversity of interests who all desired healthier conditions and more water storage at the Lake. Over years of dedicated volunteer efforts (by those at right and others), a draft plan for restoration was crafted by the Task Force.



TUD, which manages the reservoir, brought the restoration project to the local region's water stakeholder collaborative group (the Tuolumne-Stanislaus IRWM). Working with the IRWM, TUD applied for state grants, and over time, millions of dollars in grant funds were acquired for the project.



Due to the need to get many permits and approvals, the project has paused for years while the necessary planning inched forward. At last, this spring TUD has finally been able to put out for bid initial work in the restoration project – dewatering portions of the lake to gain access, dredging 470,000 cubic yards of sediment, and implementing mitigation measures to minimize impacts.

When completed, the Phoenix Lake Restoration Project will improve water quality, increase water storage, and enhance wetland habitat. This is a good example of how efforts by citizen activists can eventually lead to beneficial outcomes.

# State decides foothill yellow-legged frog deserves “endangered” status



Photo courtesy Amy Lind - USFS

**Conservation groups and university researchers have worked for years to get state and federal protection for the foothill-yellow legged frog (FYLF).** The frog was once highly abundant in streams and rivers across our region. A wide range of human-caused impacts – such as non-native fish stocking, pesticides, and an introduced fungal disease – have ravaged the frog populations.

Foothill yellow-legged frogs get their name because many have yellow coloring on the underside of their hind limbs. Under ideal circumstances, a frog can live for a decade or more. Adult females lay egg masses that look somewhat like clusters of grapes. The egg masses need to stay submerged in the river or stream, attached to rocks or logs, until the tadpoles emerge.

Dams in particular have caused multiple negative impacts for amphibians. Reduction of the natural, unimpaired river flows often results in the stranding of frog egg masses – wiping out the embryos. With so many threats, the scattered surviving populations of FYLF have been a key focus of debate in many hydroelectric relicensing processes and development plans.

In recent years, conservation groups and university scientists have pressed for increased levels of protection for foothill yellow-legged frogs. **Last month, the California Fish and Game Commission finally determined that designating the East/Southern Sierra clade of the foothill yellow-legged frog and two other clades (groupings) as “endangered” is warranted.**

**CSERC strongly applauds the State determination.** That will hopefully provide new pressure on decision-makers to mitigate projects to reduce impacts to foothill yellow-legged frogs across our region.



Photo courtesy Amy Lind - USFS



## The USFWS proposes to list the extremely rare Sierra Nevada red fox



**As CSERC has shared previously, the Sierra Nevada red fox is on the brink of disappearing forever from its historic, iconic habitat. Across the entire mountain range, scientists believe there may be only 15 to 50 SNRF adults, with the best estimate being a meager 29 adults still surviving.**

The SNRF is uniquely adapted to thrive amidst deep snow and severe winter temperatures, thanks to a very thick winter coat and small toe pads covered in dense fur that enable the fox to travel over snow. Sadly, the fox faces many threats. The tiny population poses the risk of inbreeding and poor reproduction. Climate change now frequently results in a diminished winter snowpack. Coyotes (competitors and possible predators of foxes) can take advantage of the minimal snow to intrude high up into the fox's crest zone habitat.

**In January, the U.S. Fish and Wildlife Service asked all interested parties for any additional scientific data before the agency makes a final decision whether to list the "Sierra Nevada Distinct Population Segment" of the fox as either threatened or endangered.** CSERC joined with four other conservation organizations to submit detailed comments with strong support for listing the fox. Over the years CSERC staff has done extensive photo-detection surveys – searching for the elusive fox in remote, high elevation areas. During all those efforts, we've only managed to get photo evidence of foxes in a few widely spaced locations.

Why is USFWS just considering designating the "Distinct Population Segment" for proposed protection? A small population of Sierra Nevada red foxes that exists in the Southern Cascades near Lassen Park is considered to be less at risk, while the foxes in the Sierra Nevada range are judged to be so few in number that their persistence is far less likely.

**Based on what we have learned over the years, CSERC strongly endorses listing the Sierra Nevada red fox to give it extra protection. By being listed, that designation will eventually lead to a formal recovery plan to strategize how to best preserve the species over the long term.**

## Root rot fungus and mistletoe are affecting the health of red fir and white fir forests across the region



“True fir” forests blanket the upper middle elevations of the region. Many areas suffered from attacks by fir engraver beetles during the drought. But a less episodic, more persistent impact to fir forests are effects caused by mistletoe and root rot.

The [fir annosus root disease](#) has likely been around in California forests for centuries; but after the Gold Rush, the widespread cutting of trees in the Sierra Nevada began to increase the spread of the disease. Often called root rot, the fungus decays a stump or the bole of a tree from the inside out over time. Once the top of a rotted cavity collapses, spores escape to infect freshly cut stumps or dying trees.

Even worse, the fungus can spread through the decaying roots of the stump to the roots of healthy adjacent trees, infecting those trees. Slowly, over time, the newly infected trees weaken and die.

A treatment used by foresters to halt the spread of root rot is to coat freshly cut stumps with borax. If such treatments aren’t done, entire fir stands can slowly decline or fade.

[A second health risk to red firs and white firs is dwarf mistletoe.](#) Mistletoe is a parasite that steals water from the host tree. Mistletoes and firs have coevolved historically as part of the natural forest. However, when fire suppression by forest managers greatly reduced the size and number of fires burning in California’s forests, many more young trees survived and began crowding the existing mature trees. In the denser forest conditions, mistletoe spread far easier, especially in red fir stands.

**Mistletoe has both positive and negative effects. Mistletoe brooms in firs can provide beneficial habitat for birds, mammals, and insects. But mistletoe can also lead to decay fungi that can weaken or kill host trees.** The more it spreads, the more that the infected stands can be weakened. Mistletoe-stressed trees become more vulnerable to another pathogen: *Cytospora*, which is a fungus that produces cankers that girdle fir branches. Because *Cytospora* and mistletoe are so often associated together, foresters often look at the “flagging” (dead, red-colored branches) on a fir tree to judge whether or not it is infected by mistletoe. The branches are actually killed by the *Cytospora*, but they often reflect how much mistletoe is also present.

When forest stands are surveyed prior to logging projects, the extent of root rot and mistletoe can often determine how Forest Service foresters design the logging treatment, choose which trees to spare, and plan for the future of the logged area.

By understanding how foresters see the stressors of mistletoe and root rot, citizen activists can more effectively advocate for retaining ecologically valuable large, old trees that otherwise may consistently be targeted as “dead or dying” or “infested” in proposed logging treatments.



## The State changes tree stocking standards for private timberlands to avoid creating overly dense forests that lead to extreme wildfires



Despite decades of efforts by CSERC and other forest conservation organizations, even-age logging treatments such as clear-cuts or modified clear-cuts continue to be fully authorized by California's forest practice regulations. **Separate from all the issues that come from the ecological impacts of clear-cutting, one major associated issue has been the State's reforestation regulations that have mandated the intensive planting of 300 trees per acre after clear-cut logging has cleared a hillside.**

When the crop of new trees is young (*as above*), there is spacing in between trees. But as trees grow, if sites are not thinned, so many conifers per acre results in densely stocked stands (*as at right*) that burn severely in wildfires and pose risk to firefighters.

**In January, the tree stocking standards were changed to only require the replanting of 125 trees per acre.** CSERC has often recommended such lower reforestation standards, both for fire reasons and also to allow other vegetation to grow on reforested sites rather than be shaded out by thickets of trees. CSERC supports the new changes – which also make sense given climate change that often results in less water for competing trees.





## Tree mortality from drought years creates fuel build-up and fire risk in Yosemite Valley and other areas in the Park



*A drive around Yosemite Valley reveals carefully treated areas along roads; but just beyond those cleared areas, thousands of deteriorating snags and fallen logs create high fuel levels.*

When multiple years of drought led to conifers dying from bark beetles and a lack of water, Yosemite officials launched a major clean-up. They targeted dead trees that posed safety risks adjacent to roads, campgrounds, and facilities in Yosemite Valley and elsewhere along the Park's heavily-used road system. But just outside those treated narrow strips, countless thousands of trees that died in the drought are now falling over and piling up in jumbled concentrations, or dropping limbs that add to already high levels of woody fuel.

### Intensive clean-up needed to reduce risk

Many people value Yosemite in part due to the perception that it is "natural" with little active management. In reality, for decades the suppression of any fires led to unnaturally dense and dangerous fuel levels in many locations. In the recent past, Park managers have strategically reintroduced fire at low intensity, but the minimal prescribed burns so far in Yosemite Valley have not returned the Valley to its historic far-more-open (fewer trees) condition.

**Now, with so much woody material from tree mortality accumulating, Park officials will likely need to use both managed fire and mechanical treatments (where allowed) to help restore forest areas to more balanced, safer fuel conditions.**





# Local forest stakeholder groups help convince Forest Service to reduce potential controversy of a Large Landscape Project



CSERC and other local area conservation groups have openly supported an increased pace and scale of forest treatments that we agree are needed to reduce high severity wildfires and to improve forest health.

But last year a massive “Large Landscape Plan” put forward by the Forest Service caused a high level of alarm. Forest leaders promoted a 15-year plan that would have greatly reduced opportunities for public input. It would have allowed a huge number of projects to be approved before on-the-ground surveys had been done for rare wildlife, sensitive plants, and other at-risk resources.

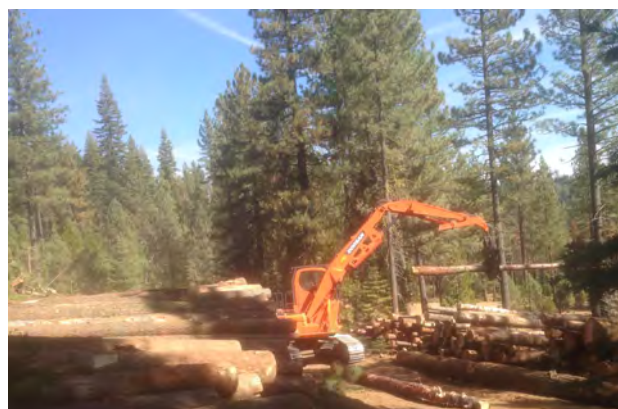
CSERC and other environmental organizations openly opposed the plan. The Amador Calaveras Consensus Group (ACCG) and the Yosemite Stanislaus Solutions (YSS) – the two collaborative groups that serve as forest stakeholders for the Stanislaus National Forest -- raised concerns that the massive controversial plan might undo the years of relationships that had been built by participants. Timber industry interests feared that putting all wood product planning into one plan could result in gridlock if a lawsuit was filed against the Large Landscape Plan. Others were concerned that doing “condition-based” planning and approving projects without first doing field surveys could lead to widespread risk to spotted owls and rare plants.

**Representatives of the ACCG and YSS groups met with Forest Service officials to urge a halt to the gigantic Large Landscape Plan that would have allowed 750,000 acres of logging and other treatments across the Stanislaus Forest.** Deputy Regional Forester Barnie Gyant responded with a challenge to the stakeholder groups to suggest alternative approaches that would still increase the pace and scale of projects.

Despite the uncertainty posed by Covid-19 and the potential for a major economic slowdown, both forest stakeholder groups are attempting to partner with the Forest staff to get a ramped-up expansion of restoration treatments approved as rapidly as possible.

ACCG is considering an “all lands” fuelbreak system to help in suppression of intense wildfires and that would provide control lines for prescribed burns and managed low-intensity wildfires.

YSS is proposing a “bridge project” – a low-controversy large landscape plan for the Stanislaus River watershed that would emphasize consensus-based treatments designed to achieve a suite of economic, social, and environmental goals. Both approaches are in early stages of planning.



## CSERC attempts to raise awareness about the positive role of prescribed burning in contrast to the devastating effects of high-severity fires



Both photos courtesy Scott Stephens PhD

**If most Californians were asked: “What is the greatest threat to forests?” - you would likely get “fires” as the answer.** In reality, it is only when wildfires burn at high-severity that forests are significantly damaged and communities can suffer burned homes and a loss of lives. CSERC has repeatedly communicated to the media and with presentations over the years that **the forests of the Sierra Nevada actually need MORE managed fires if forests are to be shifted toward their natural, historic resilient condition.**

That concept – that fire is an important natural function of healthy forests – can be easy to agree with when reading this newsletter or when viewing an online article about prescribed burning. But when smoke begins to drift into a community from a prescribed fire project, emotional responses often trigger passionate complaints to forest officials or to political representatives, and valuable managed burns may be halted.

There is scientific agreement that low and moderate-intensity burns need to be aggressively applied to reduce woody fuels that will otherwise burn far more destructively in an unplanned, high-severity wildfire.

If CSERC managed Yosemite Park and the Stanislaus Forest, both would have an average of 20,000+ acres of under-burns done each year. If limited staff or competing agency demands make that level of burning not currently feasible, each agency should at least underburn “strategically placed area treatments” (SPLATs) across the landscape to slow high-severity wildfires and to get ecologically positive fire back in the ecosystem. Both agencies have been doing some level of planned burning for years, but far more is needed to make up for a century of fire suppression.





# THE NEAR-TERM FUTURE IS UNCERTAIN, BUT THE NEED TO PROTECT THE ENVIRONMENT IS CLEARLY STILL VITAL

The current pandemic poses a global health risk at a scale not seen for a century. Lives are at risk and cultural and economic stability are threatened.

It is not disrespecting those significant human risks to consider in context how the environment suffers almost continual threats at a global scale. For many decades, dwindling species have fallen victim to the wildlife trade, poaching, and loss of vital habitat. Human-affected climate change is strssing the rain forests and eradicating species from some areas, and the scale of climate effects may even escalate as the melting arctic permafrost releases more carbon.



How are we, as a society, helping or harming the global environment? By taking all the steps that we feasibly can, advocacy for nature can still fill an essential need... and be an enduring legacy.

If at this time , due to the crisis, your economic situation is difficult, thanks, but please hold off on donating. We're grateful for your past support that has already benefited CSERC's work.

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### **What will the spring season bring?**

The season that is just beginning comes with a high degree of uncertainty and concerns. None of us can know how the Covid-19 situation will unfold or how our region may be affected.

But the beauty, sounds, and smells of spring provide us with the awareness that nature's time of renewal has begun. To the extent possible, it is rewarding to get outside, look at the buds and flowers that are emerging, note the migratory songbirds calling from the trees, and start to savor spring's sunshine and warmth.

Despite stressful threats and challenges, there is much to be grateful for, especially at this time of year. If you now have some extra time for reading, we hope that the diverse articles inside this newsletter will be of interest.

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