

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.



## So many amazing species share our mountain region



If humans were much smaller, we might tremble with intimidation if we faced the menacing glare of an alligator lizard. While most mature alligator lizards are under 12" in length, CSERC staff has encountered rare specimens nearly 18" long with stocky bodies that looked especially powerful and intimidating.

Alligator lizards are common throughout the mountain range, from the foothills on up into the High Sierra. The literature describes that they can feed on a wide range of prey ranging from spiders to baby mice, snails, bird eggs, and even other lizards.

Much more common are western fence lizards, sometimes called "bluebelly lizards" because many have bright blue undersides. Fence lizards (such as the one in the photo at right) often display by raising up prominently and doing "pushups" to show dominance over other nearby male lizards. A subspecies of the western fence lizard is named the Sierra fence lizard. It inhabits high elevation canyons and rocky mountainsides and can have a colorful blue marking on top along with a blue belly and throat.



Because lizards can be commonly seen along trails or at campsites throughout the region, they may only rarely be given close scrutiny. You may see one with a stubby tail. If a predator seizes a lizard by the tail, the often breaks off – leaving the predator with a still twitching tail due to nerve actions. Slowly over months, the lizard tail can regenerate, although usually not as full in length as the original tail.

## Highly publicized escaped fires prompt Forest Service to temporarily halt all prescribed burns nationally to review protocols

On May 20<sup>th</sup>, the Stanislaus National Forest showcased a highly successful prescribed burn project done across hundreds of acres of forest north of Pinecrest Lake. On a field trip, YSS stakeholder group members and a reporter team from the Modesto Bee viewed the wrap-up of more than a week of effective burning that reduced forest fuels by consuming brush, pine needles, and branches. The resulting burn is shown at right.

The U.S. Forest Service conducts about 4,000 prescribed burn projects on average each year on national forest lands. Roughly six of those fires escape, so the Forest Service effectively manages 99.84% of prescribed burns.



But this year, **two prescribed burns in New Mexico burned out of control** due to unexpected winds and dry conditions, combining to burn more than 340,000 acres and also destroying hundreds of homes.

In response to intense public outcry and the tragedy of so many lives affected, Forest Service Chief Randy Moore declared a 90-day pause nationally for all prescribed burn projects. The agency immediately launched a review of what led to the unprecedented size and intensity of the escaped burns, as well as an assessment of fire protocols, decision support tools, and practices. Poor decision-making was a key factor.

Many forest areas have not had any kind of fire for decades, so downed logs, branches, pine needles, and thickets of small trees often create unnaturally high amounts of accumulated fuel. CSERC is highly supportive of prescribed burns because they reduce that forest fuel and lower the potential for high-severity fires that can kill the large over-story trees. Prescribed fires also return fire back into the ecosystem -- recycling nutrients, opening up conditions for ground covers and wildflowers, and creating habitat for many species.

The highly publicized national media coverage of the escaped prescribed burns in New Mexico may set back the USFS burn program at a time when such treatments are critically needed to limit the potential for large, devastating wildfires that have become so widespread in recent years. Flammable fuels will burn one way or the other, either under managed conditions or in wildfires.

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CSERC is a 501(c)(3) non-profit organization working to protect the water, wildlife, and wild places of the Northern Yosemite region. CSERC relies entirely on grants and donations from people like you to do that critical mission.

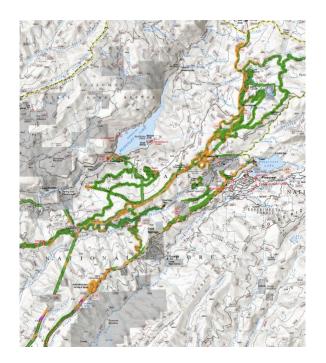
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# After the SERAL project was split into three separate "decisions" – fuel break work has begun, while other project actions inch through appeals



CSERC and others on the leadership team for the Yosemite Stanislaus Solutions (YSS) stakeholder group have spent nearly three years partnering with the local Forest Service staff to try to get approval for a huge amount of forest health treatments in the watersheds of the South Fork and Middle Fork Stanislaus River. That large landscape plan is called the SERAL project.

After highly critical comments were submitted against portions of the project by groups that oppose the planned policy changes for the California spotted owl, the Forest Service chose to separate the SERAL project into three separate decisions.



The first "Record of Decision" **(ROD-1)** approved low-controversy treatments that will masticate brush and reduce surface fuels across 6,000 acres of fuel breaks that are intended to improve protection for Highway 108 communities. The map above shows some of the fuel break areas. That work has now begun.

The second SERAL decision (draft ROD-2) authorizes the majority of the project's forest health treatment actions – including selective thinning logging, biomass removal, broadcast burning, invasive weed treatments, and a wide range of road treatments. It also changes CA spotted owl policies based upon a regional USFS 2019 Conservation Strategy.

A number of formal "objections" were filed as appeals of ROD-2, and CSERC engaged in those objection resolution discussions. We looked for possible adjustments that could be made to SERAL treatments that could reduce opposition from those filing objections. The USFS also proposed some changes.

## Social and Ecological Resilience Across the Landscape

A Significant Step Towards Resiliency– Draft Record of Decision



The third decision document (draft ROD-3) would authorize "condition-based" salvage logging and temporary road construction if, within the next decade, tree mortality caused by a wildfire or drought reaches a certain threshold. Planning to take a corrective action before a problem actually exists has drawn legal challenges elsewhere, which is why this part of the SERAL plan was put into a third, separate decision category. As was expected, objections were filed against the draft ROD-3 portion of the SERAL project..

As this newsletter goes to print, the Forest Service is poised to move ahead and begin implementing ROD-2 (which covers most of the SERAL project treatments). Legal challenges could still be filed. The final ROD-3 decision is also planned to be finalized by the Forest Service, but not until later this summer.

## Tuolumne County is on track to have at least three new biomass facilities built in the next few years - Should we be concerned?

CSERC learned over recent months that three different companies have developed plans to build new biomass processing facilities in Tuolumne County. On one hand, these facilities could provide a strong economic incentive for doing fuel reduction treatments in the surrounding forests – removing fuel that could help reduce the threat of high severity wildfires. But the massive scale of woody materials that would be needed for operating the three projects and the extremely high cost of the biomass facilities raise questions and concerns.



Biomass is the renewable organic material that comes from plants and animals. In the forest, biomass refers to leftover material from logging as well as other waste wood materials. When biomass accumulates in the forest, it has the potential to fuel extreme wildfires.



The three facilities being proposed for biomass processing in Tuolumne County have different objectives. The Golden State Natural Resources project would convert woody materials into wood pellets to be transported by rail and then by ship to foreign markets. Yosemite Clean Energy has a plan to use biomass to produce hydrogen gas to power vehicles through a process called gasification; and Biomass Tuolumne plans to turn biomass into firewood, trellis poles, posts, and wood chips.

Dual-bed Gasification

SYNGAS

HEAT

GASIFICATION

COMBUSTION

STEAM

CIRCULATION

AIR

The three combined projects could result in the extraction of hundreds of thousands of tons of biomass material from this region's forests annually. That would be in addition to the amount of woody material already processed by the existing biomass facilities in Tuolumne County.

Those existing facilities include a plant operated by Sierra Pacific Industries and a very large co-generation biomass plant operated by Pacific Ultrapower Chinese Station that produces a substantial amount of electricity.

## Should taxpayers' dollars fund the biggest projects; and given so much demand, how much biomass is sustainably available?

At least two of the biomass projects (the ones planned by Golden State Natural Resources and by Yosemite Clean Energy) anticipate receiving significant federal and/or state grants in addition to getting private financing. Other funding could come through California's carbon offset program. Because these expensive projects will likely use taxpayer-funded grants to build the facilities, the public deserves to know how they will operate and the possible consequences of creating a long-term demand for removing huge amounts of biomass from the forest.

#### What are the potential downsides to biomass removal from the forest?

While large-scale fuel removal in the forests may improve forest resiliency in the short-term, there could be concerns in the future. For example, given the mountainous terrain, challenging forest road system, and the high cost of collecting waste wood from forest sites, there is only so much biomass material feasibly available to meet these project's annual demands. Once \$100 million dollar facilities are built and many jobs are at stake, there may be intense pressure on private and public forest managers to do everything possible to supply enough biomass to meet the demand. Since these facilities anticipate the capacity to process hundreds of thousands of tons of woody materials annually, this could result in the potential stripping of a large percentage of the small trees, brush, snags, and logs from broad areas of the region's forests.

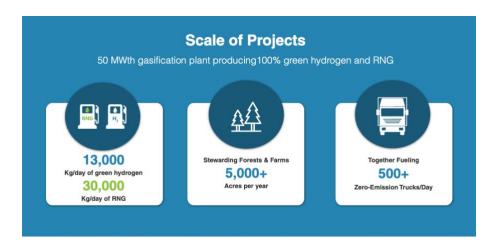
#### What other consequences could occur if these facilities are approved?

In the case of Golden State Natural Resources' project, wood pellets would be loaded onto railcars and transported to the Port of San Francisco before being shipped overseas. More trains could lead to various impacts for the communities located along the railway line, as well as increased emission from shipping.

#### Final takeaway

Biomass processing presents an opportunity to improve the fire resiliency of the region's forests by providing a commercial market to pay for the removal of excess woody material. But if planning for the facilities is done without a long-term assessment of how much biomass is truly accessible and how biomass demand may affect local forests in the future, there is potential that too much biomass removal could occur. CSERC will strive to monitor these projects and provide feedback as we learn more information.

Yosemite Clean Energy infographic



### Field tour at Ackerson Meadow highlights upcoming restoration project

Ackerson Meadow and South Ackerson Meadow make up the largest mid-elevation meadow complex in Yosemite National Park. The meadow complex sits partially in the Stanislaus National Forest and partially in Yosemite National Park. Ackerson Meadow is home to endangered species like the great grey owl and the willow flycatcher and is an important habitat site for a suite of other at-risk wildlife species. Currently, a large, eroded gully network over 10 feet deep in places is actively draining 90 acres of former wetlands in the meadow complex and threatens an additional 100 acres of wet meadow habitat.



The Ackerson Meadow restoration project has been several years in the making. The project is a joint effort by Yosemite National Park, the Stanislaus National Forest, and non-profit partners like American Rivers. The goal for the project is to significantly reduce erosion and to restore wetland functionality to correct a century of landscape manipulation caused by water diversion, livestock impacts, and logging.

The project partners hosted a field tour last month for non-profit and government agencies to see the existing conditions in the Meadow and discuss the upcoming interventions. Under the plan, the giant eroded gully in the meadow will be filled using a combination of woody material and soil. Some woody material will come from the chipping of trees in the Meadow, but much will be sourced from offsite locations. Soil will also be extracted from nearby, offsite locations. It is estimated that approximately 151,000 cubic yards of material will be needed to fill the erosion gullies – a truly massive amount of material to be moved



Following the fill, the restoration will focus on revegetating with native species – planting salvaged wetland sedge sod and willow shrubs, broadcasting seed, and planting nursery-grown local, native wetland plants. Field tour hosts underscored the importance of developing a robust root network to achieve long-term success in the restoration project. Given the size of the meadow and extent of degradation, the Ackerson Meadow restoration project will be a huge undertaking.

The project is anticipated to cost millions of dollars and will be funded primarily through grants -- some which have not yet been secured. The initial restoration of the Meadow is expected to take several years. At that point there will be a continued need for monitoring and intermittent intervention to prevent new gullies from forming and to ensure that cattle are not being accessing restricted areas. **CSERC** is excited to see this unique ecological site restored to support water retention in the meadow and to restore habitat for the species that rely on healthy conditions.

### New members of CSERC staff take on a wide range of fieldwork tasks



As mentioned in the last newsletter, due to some staff leaving, CSERC was fortunate to hire a new conservation director (Tatiana Altman) and a new staff ecologist (Manny Eichholz). Both Tatiana and Manny have been busy early in this summer field season taking on some of the key tasks that are the core fieldwork that informs much of CSERC's advocacy efforts.

At left, Tatiana stands on a unique waterbed-like fen that literally sways as water underneath the meadow mound ripples from side to side when you shift your weight. This is one of the rare fen sites within the local national forest that has approved fence protection to keep livestock away from the sensitive fen. The CSERC staff was at the meadow helping to erect the fence. Already this summer CSERC staff has erected fences at three key meadows -- an oftenchallenging task given terrain and conditions.



Another CSERC focus is to sample selected streams in the forest. Livestock can pollute water with pathogenic bacteria at levels deemed unsafe for recreational contact. At right, Manny is shown at a stream location where water quality samples are taken and then transported to an independent laboratory for analysis.

A third fieldwork effort is when our staff places cameras at remote sites to gain photo evidence of rare wildlife. Scented attractants and bait bring a variety of species to the cameras, enabling CSERC to share photo evidence with Forest Service biologists as to where reclusive or at-risk wildlife may be found in the forest.

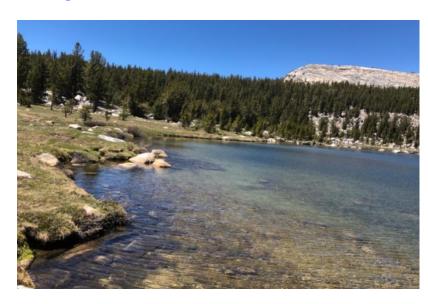


A large percentage of CSERC staff time is spent at meetings or in the office reviewing proposed project plans or providing comments in response to new developments, but CSERC's fieldwork provides important on-the-ground knowledge about logging, livestock impacts, water, wildlife, the status of wild areas, and other key information. That watchdog monitoring also raises CSERC's credibility with the media and with agencies who often have little time to do their own field monitoring.

## A place in Yosemite Park where you can often avoid crowds

There is a lot of good news and a little bit of bad news about planning a day hike to the "top of the world" crest zone area near the east entrance of Yosemite National Park. One piece of the good news is that the Gaylor Lakes Basin (located at the top of the Tioga Pass) provides a truly rewarding range of hiking opportunities for those willing to do a little work to get to a scenic destination.

With so many iconic and popular trails, lakes, climbs, and passes within Yosemite Park, the Gaylor Lakes Basin goes relatively unnoticed. On a summer weekday, the number of visitors may be surprisingly low for such a scenic high-country destination that lies only a short distance from the entrance station. Weekends can be busier, but those who hike a mile or two further out across the open meadows to reach upper or lower Granite Lake can often find plenty of solitude.



#### Two ways to access the Basin

Most visitors to the Gaylor Lakes area will park at the lot near the Tioga Pass entrance station and take the very steep trail up and over the ridge to descend into the Basin. The trailhead is located just below 10,000', so ascending the ridge can require pacing your climb for those not acclimated to crest zone elevations. Once on the other side, the Gaylor Lakes and the two Granite Lakes offer enticing destinations; or you can do a full-day loop hike to circle the entire area. A second trail into the Basin comes up from the south, starting at a barely noticeable trail sign located on the highway two miles east of Lembert Dome.



Yosemite Park does not allow overnight camping in the Gaylor Lakes Basin, which prevents the area from being overrun by crowds of campers. No pets are allowed. Some backpackers pass through the area headed to popular sites further north, but most use in the Basin comes from day hikers strolling amidst summer wildflowers, snowmelt ponds, meandering streams, and the diversity of scenic vistas.

The bad news this summer is that the highway route that runs through Tuolumne Meadows to access the Tioga Pass is undergoing extensive repaving and reconstruction.

Traffic delays can last up to 30 minutes each direction, which may discourage any visit until the highway paving work is finished later this summer.



## The Harlequin Duck -- A most audacious waterfowl



Breeding adult male. Photo: William Dix/Audubon Photography Awards

This rare to locally uncommon species of sea duck is primarily found along California's coast, but it may also be seen when it breeds along streams and rivers in the subalpine zone of the Sierra Nevada. In the past, some harlequin ducks have been reported in Yosemite, so keep your eyes peeled for this striking waterfowl.

These birds are easily identified with their plumage of chestnut, white, and blue and by their daring foraging behavior. Early in the breeding season, you can find harlequin ducks in the most turbulent stretches of rivers, swimming against the flow and diving for aquatic invertebrates or small fish and fish eggs.

Sighting this impressive duck can be exciting, not only because of their colorful appearance and entertaining behavior, but because of the female's excellent taste in nesting habitat. If you do spot a pair, you will almost certainly be amidst a highly impressive riverine landscape. Females construct beautiful down lined nests of conifer needles, mosses and leaves along a streambank's rocks and shrubs. Pairs are monogamous and stay bonded beyond the breeding season year after year. Males and female couples will participate in elaborate courtship displays that include gestural head nods, stretching of the neck, raising of the tail, and "rushing" – when pairs hold their heads low and scoot quickly across the water.

- Females are brown with the same sharp white eye patch behind the eye as the male.
- Scientists are unsure why the harlequin duck population has been declining, but habitat degradation likely plays a role.
- Young ducklings leave the nest shortly after hatching and are also able to dive while they're still very small!
- Harlequin ducks have sometimes been found with broken bones, a possible result of their dramatically rugged lifestyle amidst powerful river rapids.

## Camp Jack Hazard provides environmental education and backpacking opportunities for children from the Central Valley and Tuolumne County

Camp Jack Hazard (CJH), located in the Dardanelle area, is entering its 98th consecutive season providing summer camp programs for children and families. CJH is one of numerous camps in the Central Sierra Nevada that offer opportunities for young people to connect with nature. Some know CJH as the youth camp that ran out of the YMCA in Stanislaus County for many years. After the YMCA had financial issues, CJH was at risk of shutting down. In 2011 a group of camp alumni formed a non-profit called the "Jack and Buena Foundation" and took over operations.



The initial transition and re-building of operations presented a sharp learning curve for the Foundation. But camp enrollments have risen steadily over the last decade, and CJH currently has over 400 children signed up for the 2022 season. CJH is distinguishable from other summer camps in the area based on its backpacking and adventure programming, and its focus on environmental education.

Children who attend CJH resident camp sessions go on a two-night, three-day backpacking trip in the Emigrant and Carson-Iceberg Wilderness areas. Kids are taught backcountry skills and Leave No Trace ethics. They develop deep and lasting appreciation for the forest. At camp, programs include activities like rock climbing, a challenge course, swimming, arts and crafts, and more.



CJH maintains its on-site operations through a long-term lease with U.S. Forest Service. CJH considers itself a steward of the site and has put considerable effort into maintaining the site so that it operates sustainably and will be resilient in the event of wildfire. The importance of that work became evident in 2018, when the Donnell Fire scorched over 36,000 acres in the surrounding area. Years of preventative tree thinning and fuel removal around the CJH site made it possible for the Stanislaus Hot Shot crew to protect nearly every structure at camp from the blaze. Nearby cabins and businesses, including the Dardanelle Resort, were not so lucky.

Four years after the fire, the burn scar presents a stark reminder of the importance of wildfire planning and preparation. Last winter crews came to CJH to complete pile-burning of trees killed in 2018. Signs of new growth abound, and kids learn about wildfires and the role humans play - both causing and preventing fires. Although sessions are quickly filling up for this summer, CJH still has spots available. **CJH also has grant funding available that can partially or fully cover the cost of camp for children in Tuolumne County**. If you have questions about camperships or CJH in general, visit campjackhazard.org or call (209) 965-7254.

### CSERC serves as a key voice for water, wildlife, and wild places



CSERC's mission is to protect water, wildlife, and wild places of the Northern Yosemite region. We work day after day, year round – showing up at important meetings, doing needed fieldwork, contacting the media, and advocating for the environment.

If you care about the wildlife, wild places, forests, and the precious water resources of our vast region, CSERC's efforts truly matter.



**Donations can be mailed to:** 



### Have you donated to CSERC this year?

Because we know that there are many deserving causes that can use your support, our staff strives to put in the extra effort to stretch member contributions to their fullest. We work hard so that your donations truly make a difference.

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## A good time of year to be on the lookout for elusive wildlife

This adult male Gilbert's skink, with its bright orange head, is just one species of lizards that can be found in the Sierra Nevada. Because skinks prefer cover, hikers in the region may seldom see one.



Young skinks usually have brilliant blue tails that gradually fade with age, but some may have quite different bright pink tails.



Did you know skinks can prey on scorpions and that they lay eggs to produce their young? The cover article of this newsletter describes other lizards that may add interest to your wildlife viewing this summer.

Summer 2022 newsletter

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