



100 Valleys

A Quarterly Publication for the Supporters of Umpqua Watersheds, Inc

An Oregon 501(c)(3) Non-Profit

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Geoff Niles instructing on mushroom ID at Severt Iverson Memorial Park.

OUTREACH UPDATE

By Kasey Hovik

LOOKING BACK ON 2022 WE ARE VERY HAPPY TO BE able to meet again in person. The 11th Umpqua Brew Fest was a great success. It was a lot of work to put together after not having one since 2019 but we couldn't be more grateful to the support we had from brewers, sponsors, and volunteers. We will be working to solidify a lot of things earlier in 2023 including sponsors, promotion, music and volunteer recruitment. If you are interested in being on the Brew Fest committee, please email Kasey@umpquawatersheds.org.

In November, Geoff Niles led a Mushroom Hike and Identification workshop at Severt Iverson Memorial

Park. We had a lot of participation and had great success finding mushrooms. We plan on making this an annual event with a workshop prior to the hike.

We got a lot of feedback in response to our annual banquet behind the UW building in May. It helped us come up with the goal of making significant improvements to make it possible to accommodate more events on our premises. (See details in my executive director update.) This will be more cost-effective than paying to have events at other venues, and enable us to better showcase our organization and support local businesses and community organizations.

Another important role of our Outreach Committee is to add to our list of volunteers and members. In 2022, we tabled at several events and held a volunteer training. We will expand our efforts in 2023 by collaborating with other nonprofit and community groups. I am very proud that through the



Janice & Kasey promoting Umpqua Watersheds at a CFC event in Portland.

considerable efforts of Janice Reid, we are now a Combined Federal Campaign participating organization, which provides Federal employees and retirees the opportunity to donate to Umpqua Watershed before taxes.

Our Mission:

Umpqua Watersheds is dedicated to the protection and restoration of the ecosystems of the Umpqua watershed and beyond through education, training, advocacy and ecologically sound stewardship.

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1-5 M-W & 9-1 Th-F

FROM THE PRESIDENT

By Janice Reid

AS WE CLOSE ANOTHER YEAR, we are in awe of how fortunate we are here in our corner of the world. Umpqua Watersheds continues to celebrate, protect, and restore our environment and community. We face many challenges regularly. Ongoing efforts advocating for the Crater Lake Wilderness protection, The River Democracy Act, and public land stewardship, protection, and restoration continue through our Conservation Committee. Our new Wilderness Committee Chair, Robbin Shindele, takes over the helm from Tony Cannon, who stepped down to focus on family and work. Robbin has much committee experience, graphic design, and computer skills. Look for his new Crater Lake Wilderness Campaign webpage soon on the Umpqua Watersheds website. Our Conservation Chair and Legal Director, Angela Jensen, also had to step down to focus on personal matters. Angela brought so many skills to the position. She will be missed, and we hope that someday she rejoins us. Diana Pace and Steve Cole remain fully engaged in the public land management issues concerning our forests, including the Elliott State Forest, Umpqua National Forest, Coos Bay, and Roseburg BLM. Cindy Haws, Kirsten Campbell, and Jessica Saxton contribute immensely to the committee with their broad knowledge and important skills. We happily welcomed new member Daniel Garcia to the group recently.

We've had some changes on the Education Committee as well. Ryan Kincaid has provided substantial time to the education and Diversity, Equity, and Inclusion committees' efforts before becoming employed full-time in New York. We miss Ryan's contributions, but we are thrilled with her new position! Meanwhile, Jessica Saxton is our new AmeriCorps Education and Outreach Leader, taking over from Viviana Young.

Outreach efforts continue to increase as we learn to live with the pandemic. We held our annual Banquet, River Appreciation Day, the AmeriCorps group campout, Youth Wilderness Campout, and the Umpqua Brew Fest. Some things are returning to normal. Kasey Hovik plows full steam ahead. His efforts, with Patrick Schneider, to increase the reach of the KQUA radio station are starting to materialize, showing major progress. This committee is a great way to learn about the organization and engage with activities while finding your niche.

Restoration efforts were spearheaded by Spencer Dieterich, thanks to a grant from the River Network. Spencer spent his time in the Archie Creek Fire area organizing and implementing restoration projects. Ken Carloni, the chair for Restoration, continues to work collaboratively with organizations interested in the Umpqua Rivers and fisheries. Kasey Hovik is also working collaboratively on projects within the Umpqua watershed.

Grant writing is one way we have been able to keep programs going, and it takes a lot of effort to apply, manage, and report on grants and grant activities. Melanie MacKinnon keeps a sharp eye and a sharp pencil on those grant applications and manages the office tasks and facility.

With the new year, new tenants are coming to the facility, along with new plans for repair, expansion, and upgrades to the building—more on that in Kasey Hovik's article. While we continue to make huge advances, we still need help from our members and supporters with monetary and non-monetary donations, volunteering, and encouragement. If you have a specialized skill, we could use you. Even if you don't have a specialized skill, we could still use your help with many tasks. They may not be exciting, but they go a long way to helping the organization further its mission. For a list of items needed, visit <https://umpquawatersheds.org/non-monetary-donation-opportunities/>

If you are interested in joining the board, email me: janice@umpquawatersheds.org. Remember to renew your membership. Every little bit helps! Here is looking toward 2023!



EXECUTIVE DIRECTOR'S REPORT

By Kasey Hovik

AS WE HEAD INTO A NEW YEAR, IT IS always amazing to look back at the events, activities, and hard work that the Staff, Board of Directors, and our committees have accomplished over the past year. Umpqua Watersheds is driven by the work of our committees — Conservation, Wilderness, Outreach, Restoration, and Education.

Our Committees and Staff review and update our Strategic Plan every November. Part of this process involves looking back to see what we have achieved and tracking the progress we are making on our long-term goals to sustain the organization in years to come. I am happy to report that we are making steady progress in developing programs, projects, and events to achieve the mission of Umpqua Watersheds. Once again, we had over 4,000 hours of volunteer work that made this happen in addition to the great work of our staff.

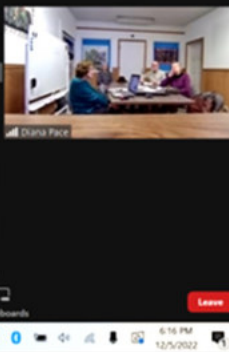


UVAS AmeriCorps member, Tracy Maxwell, work closely together to support education and outreach programs for both organizations.

In 2023, we will significantly expand our footprint through two major projects under the umbrella of a plan we call "Operation Access". The goal is to increase our ability to utilize our facilities and radio station to hold more community events in and outside of our building and reach more of the community by increasing the signal strength of KQUA. We will be working closely with



Above, Diana Pace presenting during the Forest Defender seminar in the new multimedia conference room; Left, The new setup makes Zoom participation easy.



neighbors Old Soul Pizza to utilize our whole parking lot by constructing a balcony at the back of the building, reconstructing the shed so it will have a flat roof, and building a covered stage that will incorporate the width of the parking lot. When we are finished this will enable us to have indoor and outdoor events downtown

as opposed to renting space for those events in other areas. We will also make our space available to partners and community groups to hold concerts, presentations, and movies. These plans will require a lot of work and financial resources. We are in the process of writing major grants to support the project, with several of our partners providing letters of support for the project, and soliciting volunteers to help make it happen. We will keep you updated on progress in our monthly Watershed Moments and quarterly newsletters. Thank you for your support. We wish you all Happy Holidays and hope the coming New Year will bring us many opportunities to do good work together.

CONSERVATION UPDATE

By Janice Reid

DIFFICULTIES IN ACCESSING OUR PUBLIC LANDS ARE ON the rise. Public land management agencies invite the public to comment on their management actions, but in many cases, especially in the landscape of checkerboard ownership patterns on the O&C lands, access to these lands takes quite a bit of effort and time.

Gate construction has increased substantially over the last ten years, and whole drainages are now off-limits to motorized traffic. People want to be out in nature. However, only those interested in destructive activities seem to be able to gain access. Some inconsiderate off-road vehicle users can gain access and damage the resource without impunity. Prospective purchasers of timber sales are allowed to check out keys to the gates, but those who want to comment on a project are prevented from driving to the site. If you are a friend or retiree of a timber company, you will probably have no problem getting a gate key. Wealth, influence, and connections are now necessary to access our public lands.

In the Archie Creek Fire area, we have so far been able to access areas and evaluate the activities and projects on public lands. We increasingly began to see more gates in new places, frequently erected on public land. The reason for the gates is not to protect the public from “hazard” trees. Lands behind the gate are already harvested, and then the gate is installed, preventing us from evaluating post-harvest projects. Admittedly, trash dumped from forest roads has become a great problem. Still, those areas are usually close to towns and rural communities.



Is this a familiar sight to you?

In some neighboring states, hunters face the same access issues to public land. As wealthier individuals purchase surrounding lands, community connections and cooperation are getting lost. Court cases and lawsuits have arisen from hunters and recreationists utilizing extreme measures, such as “corner crossing,” to gain access. These wealthy plaintiffs claim to own the airspace above their land and thus can claim trespass if even an arm passes over the private landowner’s property. Can this affect airline traffic, small plane operation, drone flights, and more? How absurd. You can read more about it [here](#)¹.

Now, I don’t mind walking. My team and I have walked many miles on public land. It is the time involved that is at issue. Driving time plus walking time to some of these sites leaves little time to evaluate the project at the stand level. I worked for over 30 years for the federal government. Yet, I have no wealth, influence, or connections to acquire access to the lands I spent 30 years walking, driving, and studying. Gates are making it nearly impossible for our team to continue to monitor public land projects effectively, and for us to have “standing” in any legal challenges, but maybe that is the point. Our organization is not out there to extract the resource, damage the landscape, or dump the trash, yet we are the ones denied access.

Perhaps there should be a way to establish access to public land as volunteers or utilize a memorandum of understanding. After all, we have been invited to participate in the planning and implementation of projects on our public land.

Citation:

1. <https://www.boisestatepublicradio.org/environment/2022-09-28/corner-crossing-lawsuit-is-the-latest-fight-over-mountain-west-land-access>.



The Combined Federal Campaign is open until **January 14, 2023.**

Federal employees and retirees can donate to Umpqua Watersheds pre-tax!

CFC# 71336

THE WILDERNESS COMMITTEE NEEDS YOUR HELP!

The Wilderness Committee is in the early stages of developing a new radio show for KQUA, Umpqua Watersheds' radio station, and we need your help.

Besides news about wilderness and conservation efforts in our communities, a core feature of each program will be what we're calling "*Tales from the Trail*."

Have you ever had an adventure? Ever gotten lost in the woods, encountered a bear, been bumped from a white-water raft, or been caught in a sudden downpour? Or any other event that seemed frightening at the time, but you survived to tell the tale.

Have you ever been in the woods with friends or family when something humorous occurred?

Have you ever had an "aha" or awe-inspiring moment when the beauty or majesty of the natural world took your breath away or changed the way that you experience or perceive nature?

If you have ever experienced any of these moments, or something similar, we'd like you to share them with us and our radio audience. And we want you to tell it in your own voice. You can either write it down or just send us a short synopsis and we'll help you build a compelling narrative of between 10 and 15 minutes in length.

When it comes time to record your story, we'll contact you by phone and record it over the phone from the comfort of your own home.

I know that you care about Oregon's forests, streams, and the creatures who depend on them for their existence or you wouldn't be reading this newsletter. So please share your stories and help us reach out and inspire others to join us in protecting and preserving the natural world.

Send your story or ideas to robbin@umpquawatersheds.org or call me at 208.365.1789.

Upcoming Events:

Saturday, December 17th ~ Audubon Society Christmas Bird Count. Counters still needed! Contact Matt Hunter matthewghunter@gmail.com



Monday, January 16th ~ MLK Day of Service River Cleanup and Volunteer Celebration. Contact Jessica Jessica@umpquawatershed.org or the office at 541-672-7065 for details.

Saturday, February 11th ~ Crater Lake Snowshoe Hike. Spaces are limited so reserve your spot by emailing kasey@umpquawatersheds.org or call the office at 541-672-7065.

Thursday, March 2nd — Sunday 5th in Eugene ~ Public Interest Environmental Law Conference. See <http://pielc.org/> for details.

Get Involved! Join a Committee

Until further notice, our committee meetings are being held via Zoom Conferencing. If you are interested in participating in any of the committee meetings, please contact the Committee Chair listed below.

Monthly Board of Directors:

When: 3rd Tuesday of Every Month 5pm
For board and staff members only. If there is a topic, you feel the board should broach, let us know!
Email kasey@umpquawatersheds.org

KQUA Committee

When: Every Wednesday at 3pm
Patrick Schneider patrick@umpquawatersheds.org

Conservation & Restoration Committees

When: 1st Thursday of Every Month at 6pm
Conservation:
Janice Reid janice@umpquawatersheds.org
Restoration:
Ken Carloni ken@umpquawatersheds.org

Diversity, Equity, and Inclusion (DEI) & Education Committees

When: 2nd Tuesday of Every Month at 5:30pm
Ryan Kincaid ryan@umpquawatersheds.org

Wilderness Committee

When: Last Wednesday of Every Month at 6pm
Robbin Schindele robbin@umpquawatersheds.org

Outreach Committee

When: Last Thursday of every month at 5:30pm
Kasey Hovik kasey@umpquawatersheds.org

Volunteers can track hours using the website. Visit umpquawatersheds.org and click on the "Get involved" tab to find the "Track your volunteer hours" selection. Fill in the information and we will take it from there!



**KQUA IS ALWAYS SEEKING
UNDERWRITERS!**

**WE HAVE \$125 AND \$50
UNDERWRITING DEALS**

**GET YOUR STICKER FOR \$5 AND
SUPPORT OUR COMMUNITY RADIO**
KQUA@UMPQUAWATERSHEDS.ORG





HELLO, UMPQUA WATERSHEDS COMMUNITY. My name is **Jessica Saxton**, and I am the new Environmental Education and Outreach Leader for Umpqua Watersheds via the United Communities AmeriCorps program.

I am dual enrolled at Umpqua Community College, where I will receive my Associate of Science, and Oregon State University, where I will receive my Bachelor of Science in Natural Resources Fish and Wildlife. I have lived in Roseburg, Oregon my entire life and love the amazing community here. I attended Glide School District for most of my K-12 years but transferred to Roseburg High for my last two years of high school. I participated in 4-H, FFA, choir, and the National Honor Society. In my "free" time, I enjoy gardening, hiking, painting, swimming, volunteering, and spending time with my dogs. I am excited to begin making new connections and hearing great new perspectives. I have always loved the outdoors and believe the natural environment plays a vital role in sustaining us both mentally and physically. Plus, there are many incredible things to explore and learn in nature.

I have gotten to know several colleagues, all of whom have been marvelous, helpful, and welcoming. I produce the "Living Downstream" radio show and podcast for KQUA 99.7, and I look forward to interviewing great scientific and eco-friendly minds! Cindy Haws has been an incredible mentor and has inspired me to volunteer my time surveying wetlands and restoring them. It is vital to protect the environment and do our part to reduce any further damage and restore what can be saved. We have a responsibility to protect our planet and the species that live here. I have always been captivated by the beauty of the Umpqua River and I aspire to make the environment as healthy as possible through participation in community organizations, such as Umpqua Watersheds and Umpqua Natural Leadership Science Hub (UNLSH).

I am glad to be serving with Umpqua Watersheds, working alongside like-minded people and I hope that through our efforts, we can bring more people to engage with nature in a positive way.

AMERICORPS AND EDUCATION UPDATE

By Jessica Saxton

IT'S BEEN ABOUT FOUR MONTHS SINCE I JOINED THE UNITED Communities AmeriCorps, serving with Umpqua Watersheds as the Environmental Education and Outreach Leader. During this time, I've had the pleasure of being introduced to all sorts of fun and important activities, such as helping with the annual Umpqua Brew Fest and helping to host 99.7 KQUA Living Downstream. As important as Umpqua Watersheds' work is for the environment and our community, it has also had a great impact on me. I've already gained a great deal of life and career experiences, such as the opportunity to practice my organizational and networking skills, leadership, and more. I am so grateful for the opportunity to serve with Umpqua Watersheds and learn more from the incredible people in our community.

Living Downstream Radio Show

I've had the opportunity to interview some amazing people in my new hosting role. The first episode that I had a hand in creating was an interview with a volunteer butterfly liaison at the Elkton Community Education Center, Barb Slott and the co-founder of Western

Monarch Advocates, Robert Coffan. During this interview, both guests spoke about monarchs and the ways in which their organizations help to protect the species. This was my first taste of preparing questions, editing audio, and of course, actually interviewing someone! The position of host was one of the roles I was most apprehensive about, but Barb, Robert, and every interviewee since have been wonderful. I'm grateful for their patience as I learn, adapt, and build confidence. Subsequent interviewees include Jordan Weiss, a mushroom foraging expert, and Bryan Benz, professor and head of the Natural Resource Program at Umpqua Community College, who provided information regarding the Natural Resource program in which I am enrolled. Most recently aired was an interview with Woody Lane, a livestock nutritionist, forage and grazing specialist, who shared some insight into his line of work and its importance.

Education

I have been developing my leadership skills with the help and guidance of Fremont Natural Resources Teacher, Robyn Bath-Rosenfeld. Robyn has helped me gain confidence in the classroom by allowing me to lead activities. One such activity was building miniature watersheds to explore how water and pollution flow



Above, Robyn and her 7th grade class on their trip to the Elkton Community Education Center; **Right,** Miniature watershed created by Fremont 7th graders; **Below,** Boys and Girls Club participants dissecting owl pellets.



through local watersheds. The middle schoolers enjoyed this hands-on activity that helps them to visualize what they were learning during their lessons about water. During the following week, the students collected water samples from a nearby pond, and placed the samples under microscopes, documenting the results in their nature journals.

I also volunteered on a field trip with the Fremont middle schoolers. Students visited the Elkton Community Education Center, where they learned about monarch butterflies from the researchers and caretakers. The students enjoyed seeing these butterflies in stages from cocoon to maturity and had the opportunity to see them released into the wild. They learned how to carefully pick up monarchs, determine gender, and assisted in tagging them for tracking. Another aspect of the field trip was to encourage the students to find natural resources around them. After walking the grounds and exploring nature, the students took turns listing different natural resources and their uses. Upon completion, many of the students understood and acknowledged more natural resources in the environment compared to when they first arrived.

During October the children at Fremont Middle School participated in an activity known as Gyotaku Fish. Gyotaku is a traditional form of Japanese art that began over 100 years ago as a way for fishermen to keep a record of the fish they caught. They would apply Sumi ink to one side of a freshly caught fish, then cover the fish with rice paper and rub it to create an exact image of the fish. The students recreated this traditional form of art with acrylic paint, paper, and some creativity.

Additionally, I have been helping out at the Boys and Girls Club, where the variety of age groups means that a different activity is offered every week. So far, they have done the Gyotaku Fish, owl pellet dissection, and miniature watershed creation. Upcoming activities include creating bees from toilet paper rolls, hummingbirds from pinecones, and more. I'm also preparing for the upcoming "Environmental Detectives" series with Alexandra Harding's class at Jolane Middle School. These students will be participating in Forestry Thursday activities throughout the rest of the school year. I can't wait to support Alexandra, and all our partners in education, in teaching our local youth about fun environmental topics!





WE NEED YOU!

Not all that wander are lost. Or is it wonder? We can't imagine what Umpqua Watersheds would be like without you, our members and supporters, through these years. Our "100 Valleys" newsletter and our "Watershed Moments" emails throughout the year are provided to give you updates and inspiration about our natural heritage, and

Umpqua Watersheds needs YOUR help this Giving Tuesday.



We are actively engaged with land managers who plan ecologically-sound restoration activities on our forests. We partner on restoration projects around the watersheds with both public and non-profit organizations.

YOU CAN HELP US SAVE THE WORLD...

... one native plant at a time.



Your attendance at our fundraisers and your generous donations have allowed us to hire dedicated young professionals in our community. *Jessica Saxton*, our newest AmeriCorps member, is carrying on that legacy through authentic youth education initiatives which will include our Twin Lakes Wilderness Campout, Middle School classroom visits and after-school Elementary science clubs.

YOU CAN HELP US SAVE THE WORLD...

... one bright young mind at a time.

With your support, we continue to have a big impact in our small community engaging the public through **River Cleanup Day**, **River Appreciation Day**, the **Crater Lake Wilderness Campaign**, the **Umpqua Brew Fest**, our radio station **KQUA**, mushroom hikes, **Youth Wilderness Campout**, and more.

YOU CAN HELP US SAVE THE WORLD...

... one community at a time.



"Thankful" is a word we hear often from family and friends at this time of year. It is no different for the Umpqua Watersheds family. We recognize that your heart is with those dear to you and we hope that Umpqua Watersheds is in your thoughts as you reflect on the past year. If you are fortunate to have family join you in our incredible corner of the world, we hope you give thanks for the jewel that is the Umpqua! We have done so much work and still have so much to do in **conserving** endangered species and their habitat, **restoring** degraded ecosystems, **educating** local youth about the natural world, and **involving** the community while celebrating and taking time to explore and enjoy our surroundings.

Thank you for helping us do our part to save the world! – Janice Reid, President



communities. You too can become a forest defender by watching the video of the seminar posted on the Watersheds' website.

The committee will be working in December on enlisting new business endorsers for the Crater Lake Wilderness proposal. Business endorsers are important to our federal legislators because they want to see that we have support from business as well as individuals. We have purged our list and currently have 84 businesses signed on and we'd like to reach 100 by the end of the year. So, if you have a business and haven't signed up yet, please do. Just send an email to me at robbin@umpquawatersheds.org and I'll be in touch with you. There is no cost or obligation, and it will help a lot.

WILDERNESS UPDATE

By Robbin Schindele.

HAPPY HOLIDAYS EVERYONE, MAY ALL

the best come to you and yours during this joyous time of year.

There's plenty of snow at Crater Lake as this webcam photo shows. Take the family up there for a fun day of snowshoeing, cross-country skiing, or to enjoy the beauty and crisp clean air. If you do go, make sure to check the Park website for any road closures and weather conditions.

The Wilderness Committee has been busy these past few weeks doing some housekeeping and planning for the coming year. A recent highlight is Bob Hoehne's letter to the News Review in support of Senator Wyden's River Democracy Act. The letter expresses his strong support for the Act and presents a call to action for locals to get involved by asking our senators to push for the Act to be passed by Congress. If you missed it in the newspaper, you can find the [link](#) on the Watersheds' Facebook page.

On December 5th, wilderness committee member Diana Pace put on a seminar about how to become a forest defender. The dual in-person and Zoom event instructed people on how to effectively communicate with decision-makers and public land managers regarding old forest protection. It incorporated a section on how to write a letter to the editor and to decision-makers, along with a section on the definition of old forests and their importance to our environment and our



As for the coming year, we plan to continue our grassroots efforts at the Umpqua Farmers Market and other events and festivals in the land of the Umpqua. We're also in the early stages of developing a new wilderness-centric radio show for KQUA. Initial plans have us broadcasting the half-hour show twice a month. Watch out for it!

Finally, if you're in search of a last-minute gift or stocking stuffer drop by the Watersheds office and pick up a Wilderness T-shirt. Their sales help support our efforts.

That's about it for this issue. Watch for updates in the monthly email newsletter and on the watersheds' Facebook page. As I said in the beginning, have a great holiday season, stay warm and safe and we'll see you next year.



ARCHIE CREEK REVISITED:

Lessons From Pacific Northwest Megafires?

Ken Carloni, Ph.D.

TWO YEARS AGO, I WROTE AN ARTICLE IN the *100 Valleys* on the Archie Creek Fire and its implications for future forest management¹. Recently, I was alerted to a video² produced by The Nature Conservancy (TNC) on the effects of the 2021 Bootleg Fire on forest land that they manage east of Chiloquin, OR in the Sycan Marsh area. The video highlights the behavior of that fire in areas that TNC had thinned and burned compared to untreated areas. I had known that the Bootleg burned through areas that had been treated for fire resiliency by both the TNC and the US Forest Service in a number of ways, and have anxiously awaited the results ever since. The video prompted me to look more closely at these outcomes, and to revisit the Archie Creek Fire to see if they might be applicable on this side of the Cascades. Although the TNC video indicates that their thinning and burning efforts were highly effective at least in some areas, the story is much more complicated.

Data analyzed in a ground-breaking study³ of the 2013 Douglas Complex Fire in southern Douglas County showed that the most important factors influencing fire severity are *extreme weather* followed by *forest management practices* and to a lesser extent *topography*. Subsequent studies of the 2020 Cascade fires⁴ (including Archie Creek) and the 2021 Bootleg Fire⁵ reinforced these findings, and all concluded that weather is the strongest driver of fire severity.

But when wind speed, temperature, and humidity were closer to average, all of these studies found that, forest ownership patterns had the strongest impact on fire severity. Private industrial forest lands are dominated by even-aged plantations with a densely packed, uniform fuel structure that has little resistance to high-mortality crown fires. Older primary forests hold more moisture, have trees with uneven heights and branching patterns that discourage crown fires, and have large trees with thick bark that protect them from ground fires. These older forests exist almost entirely on public lands.



Aerial view of clearcut surrounded by national forest burned in the Archie Creek Fire.

The effects of management regimes on fire severity can also be seen at larger scales on lands with differing levels of forest protection. A recent study⁶ that analyzed data from 23.5 million acres of western pine and mixed-conifer forest found that burn severity tended to be lower in areas with more ecological protections (less intensive management), after accounting for topographic and climatic conditions.

Data from the Archie Creek Fire also indicate that after weather, forest management is the primary driver of fire severity. Under extreme wind conditions in the first 24 hours of the fire, ~95,000 ac. of the 131,000 total acres burned, and severity on public land was only slightly lower than on private land (75.3% and 80.7% respectively). However, on subsequent days when windspeeds decreased to more typical conditions, fire severity on less intensively managed public land dropped significantly compared to private industrial lands (35.3% vs 47.0%). This effect was even more dramatic on the Holiday Farm Fire just to the north, with public lands experiencing only half of the mortality of private lands (23.9% vs 46.3%) under more average wind speeds.

While there is photographic evidence that thinning and under-burning on TNC land in the Bootleg Fire decreased mortality in at least some cases, another analysis by Forest Watch⁷ suggests that thinning and other vegetation treatments did little to slow the spread of the Bootleg Fire during extreme weather. Given the steadfast inability (or flat-out refusal) of a large portion of the planet's population to come to grips with the



Aerial view of The Nature Conservancy's land in Sycan Marsh. Forest on the left was thinned, forest on the right was not.

climate crisis, we can expect more extremely hot, dry and windy conditions to coincide with fire ignitions well into the future. Many analysts believe that we are just wasting our money on thinning projects that can fail spectacularly⁸ as they did during the Camp Fire that destroyed the town of Paradise, CA. Rather than spending public funds in the backcountry, they instead argue that those funds are better spent on more fire-resistant building design and more intensive fuels management in the Wildland-Urban Interface.

But extreme fire weather is still the exception rather than the rule, and TNC's thinning work in the Sycan Marsh and other studies⁹ suggest that under mild to moderate weather conditions, thinning can be an effective tool to reduce fire severity risk, particularly when followed by prescribed fire.

Restoration ecologists (including me) are taking a more holistic approach to "active" forest management, thinning our forests in ways that mimic historic conditions while promoting biodiversity AND fire resilience. Although I strongly agree that concentrating our work around homes and infrastructure is the best way to spend fire resilience dollars, I am still an advocate for thinning in remote plantations (but not in primary forests) for two reasons.

First, proximity to highly flammable plantations puts our dwindling acres of precious old growth in greater jeopardy of being lost for centuries in high severity burns. Protecting these important reserves of carbon and genetic diversity is a challenge to which we must rise to give ancient forests a fighting chance to

survive for the benefit of future generations.

Second, the pattern of forest thinning can serve other ecological goals in between fires. Typically, forests are "grid-thinned" creating a uniform structure that is less resistant to wildfires than stands thinned with "clumps and skips". This patchy structural configuration more closely emulates the chaotic patterns of historic wildfires, adding structural diversity to the landscape that promotes biotic diversity in return. "Thinning from below" (taking the smallest trees and leaving the largest), removes the "ladder fuels" that can carry a fire from the forest floor to the canopy, and leaves the largest, most fire-resistant trees on site. And creating small, scattered openings creates more

habitats to support a wider variety of understory plants and wildlife.

The takeaway here is that wildfire is complicated — weather, management, and topography all have significant impacts on fire severity, and they all interact with each other in often highly unpredictable ways. It is clear that under extreme fire conditions, thinning treatments do little to decrease fire severity. However, thinning plantations in ecologically appropriate patterns to minimize the loss of adjacent old growth resources under most conditions is an effort worth making to protect our descendants' natural heritage.

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