

Eastern Oregon Climate Change Coalition

EOC3 Newsletter, Volume 1 No. 3, November 2022 Pendleton, Oregon

EOC3 ACCOMPLISHMENTS

It has been a busy year at EOC3. As we wind down this year and plan for 2023, we thought we should share some accomplishments. These have been possible due to your support and participation in programs, workgroups, mailings, and other activities.

We are pleased to have facilitated eleven monthly climate conversations this year. From learning about what various agencies in Oregon are doing to address climate change to ideas for food waste and impacts to natural resources and agriculture, EOC3 has had the privilege of lining up some top-notch experts to help us better understand what is happening around us. We are currently planning our 2023 programs and will announce them at our January annual meeting on January 17.

Due to your feedback, we initiated an advocacy workgroup this year. Through their efforts, we have developed this periodic newsletter, had several articles published in local media, and made contacts with elected officials at all levels. This group facilitated a workshop on xeriscaping and is working on additional hands-on workshops.

Our new website is the result of securing grants and countless hours of volunteer time in designing and overseeing its development. We hope you will check it out at <https://www.eoc3.org/>.

Two of our board members initiated work on researching and developing resources for youth. From this, the Youth and Climate Education Subcommittee was organized last

fall. It is made up of individuals not only from Eastern Oregon but from across Oregon who are interested in providing more consistent and coordinated education for youth on climate change, mitigation, and sustainability both in classrooms and with other activities. Our influence and services are expanding.

EOC3 is led by an all-volunteer board of directors who bring a variety of experience and expertise to the table. With the expansion of our work, we are expanding our board of directors, and are seeking new board members.

The EOC3 mailing list has now topped 300. We are very appreciative of the growing interest in learning about the impacts of climate change, adaptive and mitigation measures that can be taken, and sharing this information with our citizens and communities. As with any organization, there are fixed administrative costs. For this, we rely heavily on annual membership contributions. Now is a great time to join or renew to help support our 2023 programs and activities. Visit our website at eoc3.org for an easy way to join or renew as a member and help make it possible for us to all continue with our efforts.

Again, thank you for your support. EOC3 continues to grow based on your interests, suggestions, and participation.

Jeff Blackwood, Chair, EOC3

From the Editor: Like you, I take seriously the charge to think globally and act locally when it comes to human-induced climate change. We can't get much more local than our personal lifestyles and habits, but how do we determine which of our actions are contributing the most of our carbon footprint and which really don't matter?

A few months ago, I came across a company called Wren which has a web-based carbon footprint calculator that you can use to figure out how you are contributing to global carbon emissions (wren.co). I make no claim about the accuracy of the tool or their business model, and they are in the business of buying and selling carbon offsets, but I still found their assessment of my lifestyle to be interesting. I love travel – and according to Wren this is by far my largest single personal source of carbon emissions.

Board member Dave Powell shared with me an interesting research article about our habits and carbon emissions ([Wynes and Nicholas 2017](#)). These authors evaluated many individual lifestyle choices and recommended four actions that we can take to have the greatest impact: having one fewer child, reducing air travel, opting for a meat-free diet, and going car-free. They also contrasted these findings with the content of high school textbooks teaching adolescents about reducing carbon emissions and found that most of the recommendations we hear might have only minor effects; changing out light bulbs and taking on comprehensive recy-

cling programs have much less impact than reducing air travel, for example. The point is not to throw up our hands and surrender. Rather, becoming educated and aware of the relative effect of our lifestyle choices is important. Knowledge is power, and it is still important to think globally and act locally.

And of course, another way of acting locally is to engage with those that make and enact law and policy related to reducing our impact on the globe. That is a principle purpose of this newsletter; to identify issues and opportunities for EOC3 members to get involved. We've included a legislator and policy maker contact list for this purpose – make your voice heard!

We are always searching for interesting and relevant topics for this newsletter and future climate change conversations. If you have an idea, please let us know by sending an email to our gmail account EastOregonClimateChange@gmail.com.

Last – if you no longer desire to be included on our mailing list, you can unsubscribe by sending a note to the same Gmail account.

Happy reading!

Bill Aney
Newsletter Editor



Understanding Our Changing Climate – Youth Voices on Climate Change

Frightening, anxiety, frustration, and determination. These are words and beliefs currently streaming through younger generations regarding the uncertainty of a future with a world that continues to heat up.

A recent report from the Oregon Health Authority entitled “Climate Change and Youth Mental Health Study” related the fears, anxieties, and frustrations of a cross-section of Oregon youth from ages 14 -24. Two themes stood out: young people are well aware of the climate crisis and are anxious about what this means for their futures, and they are frustrated by the inaction of leaders and people in power. One respondent summed it up by saying, “*They’ve already lived their futures, if that makes sense, but I still don’t know what mine is going to look like because of this existential threat. And so, it’s like yelling at the wall about this really scary thing, but not really hearing anything back.*”

During a recent presentation sponsored by Eastern Oregon Climate Change Coalition, (EOC3), the results of a similar international survey of over 10,000 people between the ages of 16 and 25 were shared. More than 75% of respondents stated they were frightened by a future with the changing climate. Sixty percent were worried about their future, and over half believed humanity is doomed if climate change is not mitigated. Youth shared that it wasn’t only climate disasters causing emotional and mental distress for youth, but also the inaction or the insufficient action of government leaders across the world that was amplifying and creating a sense of hopelessness, powerlessness, and anger from younger people.

Current and future generations will live in a world very different from the one others have enjoyed for decades. Current political divisiveness has increased the frustrations, particularly for our youth. In the US, the actions to address climate change are not well coordinated or clear, with states taking individual and uncoordinated actions, and some taking no action at all. The Inflation Reduction Act, the most far-reaching and aggressive national climate legislation in history, provides strong incentives to significantly reduce greenhouse gases. Even so, resistance to addressing climate change continues through misinformation, threats to funding, and heavy lobbying - making it challenging to work together to find transformational solutions. Without a clear and coordinated approach and political processes that reflect the will of the people, achieving meaningful progress on national climate

goals will be nearly impossible to accomplish.

Facing this reality, youth and the education community have taken action. Across the state, hundreds to thousands of youth activists and students continue to organize events to demand immediate, substantive action from governments and elected leaders. Students have also taken on work and volunteered within their own schools and communities to develop sustainability programs and support local climate action plans. Last month, an article by Oregon Public Broadcasting outlined an effort by Oregon teachers and students to push for significantly expanding the climate change curriculum. Currently climate change is only lightly covered in some science, technology, engineering, and math (STEM) classes.



Listening to our younger generations, supporting their leadership, and acting in concert with their concerns is essential. We need to bridge the generation gap in ideas, experiences, and solutions starting with developing stronger senses of community around common values. Most of us want a clean, safe, and educated world. We want everyone to have an opportunity to prosper. We want sustainable and functioning natural and built environments. Adults with the powerful tool to vote should challenge leaders who impede actions and support candidates who listen to young constituents and coordinate with them towards productive solutions.

The science is clear and overwhelming that climate change is real, and humans play a large role in where we are today and where we are going. It is time to move on to actions. All ages are impacted, and all ages share many common values. Unless we can start finding ways to build better relationships, create trust, and work inter-generationally together, we cannot hope to make meaningful progress in reducing the adverse impacts of a changing climate that will impact all our values.

Given that the realities of climate change will have much more significant impacts on younger generations, it is important to support the leadership of young people who will be the ones dealing with the consequences in the long term. Individual actions are important but only through systemic change, business and government leadership, and collaboration of the generations can we make positive changes in society, future generations, and the world we live in and value.

This opinion piece was written by Jeff Blackwood and originally published in the East Oregonian newspaper on September 24, 2022.

Policy and Legislative Contacts

We live in a representative democracy, where elected officials appoint judges and make law and policy that affect us all. These officials need to hear from us to know what is important.

The significant renewable energy incentives in the Inflation Reduction Act of 2022 are good examples of how legislators and policy makers can make a difference in our efforts to reduce our impact on the earth's climate.

Whether on this piece of policy and legislation or other climate change concerns, you can make yourself heard. Write a letter, send an email, make a phone call – individual citizen voices do count!

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Save the Date – January 17, 2023 at 7:00 pm

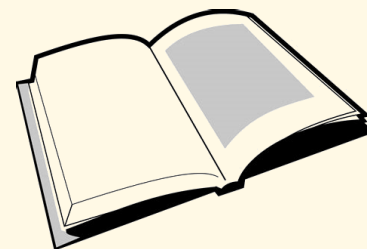
First Climate Change Conversation of the year, followed by annual business meeting.

Book Review: "Before They're Gone: A Family's Year-Long Quest to Explore America's Most Endangered National Parks"

One of my favorite books is by Michael Lanza, entitled "*Before They're Gone: A Family's Year-Long Quest to Explore America's Most Endangered National Parks*" (2012; 197 pages). Lanza is a veteran freelance outdoors writer and photographer. He was the Northwest editor of Backpacker magazine, where his articles about climate change and Montana's Glacier National Park helped Backpacker win a National Magazine Award. He also runs a website (<https://thebigoutside.com/>) focused on America's Best Backpacking and Outdoor Adventures.

Here is Michael explaining his rationale for writing the book:

"In the cold, darkening weeks of late autumn 2009, an idea began taking shape: embarking on wilderness adventures with my family in as many climate-threatened U.S. national parks as we could cram into a year. It was not, of course, the last year to see these places before some climate cataclysm.



And the motivation was about more than that – it was about sharing these experiences with our kids. Plus, the changes taking place, the rising seas, melting ice, and dwindling snowpack, are occurring not on a geologic time scale, but on a human one. If Glacier National Park's glaciers are diminishing almost every summer, should we wait even five years?"

"Penny (Lanza's wife) and I had long, skeptical discussions about the wisdom of taking nine- and seven-year-old kids backpacking among grizzly bears in Glacier, or paddling among alligators in the Everglades or sea kayaking in Glacier Bay, where orcas patrol water cold enough to suck the life from an adult in fifteen minutes."

"But life doesn't extend opportunities indefinitely, waiting for us to grab them. In a few years, Alex and Nate [daughter and son] will be teenagers, consumed with their own interests. They may be harder to persuade to take long, arduous wilderness journeys with their annoying parents. Many

people make a vow to accomplish a goal eventually, only to realize years later that their promise has eluded fulfillment, sacrificed to career, family, inertia.”

“Then in early December 2009, the World Meteorological Organization announced that the first decade of the 21st century was very likely the warmest on record. That came on the heels of the 1990s, which had a string of the warmest years on record.”

“My plan was feasible, if at times hectic. The eleven adventures I had in mind lent themselves to a nicely rhythmic seasonal progression: backpacking into the Grand Canyon in early spring; hiking to Yosemite’s waterfalls at their peak in early summer; sea kayaking in Alaska’s Glacier Bay and backpacking in the North Cascades, in the wildflower meadows of Mount Rainier, on the Olympic coast, and in Montana’s Glacier National Park at the height of summer; catching the golden explosion of Colorado’s aspens in early autumn; rock climbing during the mild days of mid-autumn in the desert of Joshua Tree National Park; and cross-country skiing in Yellowstone and paddling the subtropical Everglades in winter. Seven of those parks are UNESCO World Heritage Sites, selected for their unique natural beauty and biological value.”

“So, I suppose it was inevitable that a story that consumed me, about national parks and climate change, would eventually meld with my biggest responsibility – that the two small people whose needs and laughter fill my typical days would become part of that story. Although I’m telling it, it’s more their story than mine. Whatever becomes of our changing world, they have to live in it. This book only begins a much longer tale. My kids will own its ending.”

“In spite of the overwhelming weight of science, we’ve failed to gather the momentum of honesty required to do what is necessary and right. So I take my kids on this year-long journey in part because I wonder whether my generation possesses the collective humility to save us from ourselves. Because I want my kids to see these things before they’re gone.”

“John Muir said, ‘In every walk with nature one receives far more than he seeks.’ That’s exactly what I hope we’ll find.”

I heartily recommend this book. It is an easy read, hard to put down and with no stilted language or convoluted word gymnastics. It left me wanting more (in a good way). Each of the 10 chapters is centered on a different national park area they visited. I especially enjoyed the kids’ perspectives that add richness to the adventures.

Lanza’s deep experience as an outdoors writer shines through in his excellent and compelling prose.

The book title is at least a mild play on words – not only does the phrase ‘Before They’re Gone’ refer to the quintessential park experiences we’ve grown to know and expect (such as glaciers in Glacier National Park – better visit now before all of them are gone!), but it also refers to Alex and Nate as important protagonists in this tale.

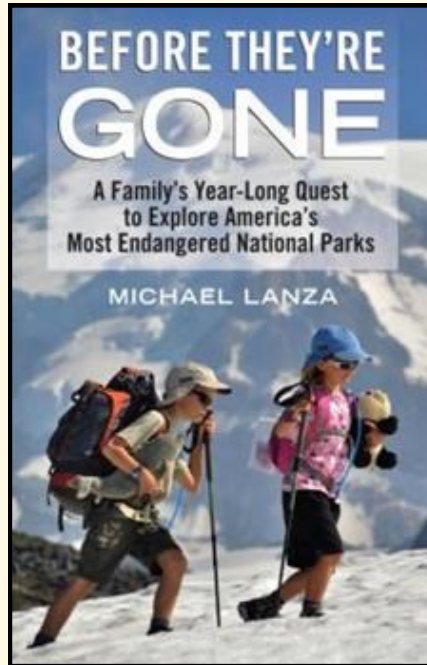
Alex and Nate are sub-teens when these adventures occur, and it’s clear their parents are keenly aware that as time flies by both kids will be preparing to head off to college in what will seem like the blink of an eye. If

Michael and Penny want to build lasting memories with their children and use these adventures as a springboard for conversations about climate change, then they should do so ‘before they’re gone’ and have left for college.

If you’re looking for facts and figures, charts, and graphs then it’s best to skip this book. But if you want an engaging climate-change read presented in a personal, human context, then this book is well worth your time. Lanza does include an extensive sources section organized by chapter so if you want to follow up on the science used by Lanza the sources are provided.

In my view, a common theme that permeates Lanza’s book is this quote from the book’s frontispiece: “Unless someone like you cares a whole awful lot, nothing is going to get better. It’s not.”
Dr. Seuss, from *The Lorax*

By: Dave Powell, EOC3 Board member



The 2022 Inflation Reduction Act Helps Renewable Energy Industry and Consumers



In August of 2022, the Inflation Reduction Act was signed into law. In some respects, it's the most important piece of legislation in decades, and it was carefully crafted to pay for itself through significant corporate tax reform and helping the IRS better track down tax fraud.

For the first time the bill authorizes Medicare to negotiate prices for the most expensive drugs. If those drug prices exceed inflation, Medicare will also receive rebates. Those provisions and more will also return billions of dollars to the federal government.

All of that is a precursor for what the bill is really about: to take us a long way down the road in dealing with a changing climate.

Almost every part of the act has incentives for doing just that. There are provisions for conservation and renewable energy in agricultural, forestry, transportation and housing practices. There's a program to quantify carbon sequestration. State and private forest landowners will be paid to implement climate mitigation and forest resilience practices. Low-emission technologies for aviation are funded. Energy and water-use efficiency projects for affordable housing can also receive grants.

The Department of Energy (DOE) will head the energy program efforts. For example, funds will be provided so that States can provide rebates to home and property owners for energy saving retrofits to low- or moderate-income dwellings. The Department will also provide the capital for energy transmission infrastructure, where the goal should be to develop robust transmission at a scale that will enable distributed generation. That will come from businesses and homeowners generating some of their own power with the ability to sell any excess back to the utility. DOE is also tasked with taking the lead on the development of technology to reduce and eventually eliminate emissions from industrial facilities.

All that and much, much more is part of the sea change away from regulatory penalties and towards positive incentives. The act provides incentives for

both manufacturers and consumers of their goods, including solar systems, heat pumps for home heating and cooling and for heating water. That is the way government funding has been used to move our economy in a different direction in the past, and that's what this bill does for our future.

For manufacturers and installers, the most important change by far is the extension of the tax credit for investment in renewable energy over the next ten years. Industry has faced uncertainty since the tax credits were first put in place, subject

to the vagaries of policy at the federal level, on again and off again like a roll of the dice. States were forced to follow along with their incentives, reflecting those ups and downs. Now there is certainty and for business owners that's a big deal. They have a time horizon that is wired up so they can plan for and fund their evolution.

The message from the Solar Energy Industries Association (SEIA) to its members was clear: this clean energy bill is a huge boost to their industry. Rural co-ops are also big winners ([link](#)), as they will now be able to participate in renewable energy projects and receive tax credits as direct payment, something they could not take advantage of in the past as non-profits. There's also \$9.7 billion in grant funding available for co-ops to participate in clean energy and energy efficiency projects.

Like any bill it was a product of compromise, and it isn't perfect. There are provisions for energy leasing on public lands, for example, but there are also changes that will have lessees paying a fair price for those leases. Many of the potential bidders are already holding a large number of leases that may never be developed.

Believe it or not, this summary barely scratches the surface of what's in this bill. I'd urge everyone to look for themselves. A good place to start [is here](#), with a summary of the contents. The devil, as always, will live in the details, so we can be the angels who track what happens at the federal and state levels. More to come...

Submitted by Norm Cimon



Drones: A New Option for Reforesting Wildfire-Killed Forests?

In August of 2021, Angela Boag presented an interesting Climate Conversation program entitled “Forest Recovery Following Wildfires.” Angela’s presentation described her Ph.D. project examining how tree regeneration was occurring on 8 wildfire sites across the Blue Mountains, 15-21 years after burning. Results from Angela’s work and other studies across the western United States raise questions about whether we should continue to assume burned forests will naturally return to tree cover afterward.

In fact many of these studies found that trees are not returning in some portions of burned areas, instead being replaced with shrubs, herbs, and grasses. Even though forests cover 30% of our planet’s land surface, some locations where they traditionally grew now appear to be too dry or hot to support forests, and the precipitating factor causing this loss of forest is often wildfire.

Wildfires are now operating differently than they used to, with a major reason being climate change. Fires are more common now, and often burn more intensely than they used to. Climate change is not the only reason for this difference though. Western forests are denser than historically, largely due to human influences – we’ve been snuffing out fires for the last century or more, allowing flammable fuels to build to unusually high levels. And by snuffing out these fires, we haven’t let Mother Nature use light fires to thin the forest by weeding out undergrowth and small trees.

So, wildfire is burning more area than ever before, partly due to climate change, and some of the burns are not returning to trees even after several decades. When a tree is killed, it stops absorbing atmospheric carbon, and eventually, all the carbon it gathered in its lifetime is released back into the air. Replacing dead trees by using reforestation is seen as one of the best and most cost-effective solutions to fight our climate crisis – last year, 140 countries agreed to halt deforestation and restore degraded forests by 2030.

Reforestation using hand tools and machines to plant tree seedlings grown in a nursery is how we usually help Mother Nature return trees to an area denuded by wildfire, timber harvest, or bark-beetle outbreaks. To a large extent, it’s been the same process for 100 years. But drones are now being used for many purposes. Could drones also play a role in reforesting burned areas?

A company in British Columbia, called Flash Forest, has worked for years to develop pods to be deployed by using drones. Each pod contains one tree seed and enough nutrients, predator deterrents, and microfungi to help the tree germinate and grow through its first year.

Flash Forest has been hired to help reforest areas burned in forest fires. First, a mapping drone is sent across the burn to identify which areas to plant, excluding lakes, ponds, roads, streams, living trees, and other situations where seedlings aren’t needed. Then, software is used to calculate how many pods are needed to plant the area,

and to calculate an efficient flight path.

On the ground, a crew loads 1,500 pods into a hopper attached to the bottom of a drone like a bulging potbelly. A pilot then maneuvers the drones, with one pilot often controlling three or four drones. As a drone flies, a sort of mechanical gun fires off five seed pods per second from under the drone.

One good thing about this approach is that it can be implemented quickly after a fire before grasses, shrubs, and weeds invade the open burn sites. Getting tree seeds into the ground ahead of the competition results in better success and recently burned areas provide a good seedbed for tree seeds relatively free of competing vegetation.

Another challenge with traditional reforestation is the labor shortage, as it seems like every industry is now dealing with labor and supply chain issues, and reforestation companies are struggling to find tree planters. If drones work out well, many more acres can be planted with fewer workers than with our current methods involving shovels and seedlings.

A big challenge with the drone method is collecting enough tree seed. DroneSeed, a Seattle-based company, has been establishing their own seed storage facilities, and they recently bought Silvaseed, a long-term supplier of tree seed. DroneSeed now has the largest private seed bank west of Colorado.

So far, results of drone seeding with pods look promising – more promising than similar methods tried in the past (which involved dispersing seed, without pods or nutrients, from aircraft). Will this make traditional reforestation obsolete? Not likely, at least not anytime soon. But as our backlog of burned acreage continues to grow, I suspect that the drone option will become more attractive in the future.

By: Dave Powell, EOC3 board member

Background: In September 2015, a study estimated the total number of trees on Earth. Previously, many studies examined the global area of forests – how much land is covered by forest. This study was the first to quantify how many trees were present in forested areas. It had good news and bad news – it was previously estimated that there were 400 billion trees worldwide, about 61 trees for every person on Earth. This study found that the true number is about 3 trillion trees, roughly 422 trees per person. But the study also estimated that Earth used to have about 6 trillion trees, and the number of trees has fallen by almost half (46%) since the start of human civilization.

EOC3 THANKS OUR GRANTORS

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Pendleton Foundation Trust provided a grant for website development.

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Donate to EOC3 by using the 2022 Valley Giving Guide



The Valley Giving Guide is a year-end fundraising effort to bring donations and attention to the incredible nonprofits making a difference in our community. The Valley Giving Guide is a tool for local nonprofits to raise money and attract new donors. Any 501c3 nonprofit located in Walla Walla, Columbia, Garfield, or Umatilla counties is eligible to participate, and EOC3 is now a participant.

Donations made through the Valley Giving Guide are tax deductible to the fullest extent of the law. You will receive a tax receipt via email from the Blue Mountain Community Foundation.

All donations you make will be matched from the Bonus Pool. Please contribute and have your donation matched by the Blue Mountain Community Foundation bonus pool.

This is a one-month event only – from November 29 to December 31.

All donations must be received or postmarked by December 31, 2022.

Visit this website to donate: <https://valleygivingguide.org/>

