

Climate Change: Recovery and Adaptation from Plan to Action

It is hard to know how to encapsulate climate change. News articles, reports, books and scientific analyses paint a dark picture of our future due to the rise of harmful human-caused emissions into the earth's atmosphere. The climate disaster underway has been described as an existential threat to life on our planet.

This set of systems crises intertwines with environmental justice, sustainability and livability with far reaching consequences for nearly every issue on which the League of Women Voters engages including energy, economics, ethics, health, water and national security. In Lane County, our League has supported local government planning and action on climate recovery and objected to the proposed Jordan Cove Energy Project¹ and other measures that do not align with reducing our carbon footprint.² Among its initiatives, the League of Women Voters of Oregon (LWVOR) addresses climate through legislative action. The League of Women Voters of the United States (LWVUS) also works with its partners and advocates for strong, timely action by governments.

This poem, written and performed by Amanda Gorman, the first person named as the U.S. National Youth Poet Laureate, for a Climate Reality Leadership Training in 2018 eloquently expresses passion, urgency and the climate challenge:

Our Purpose in Poetry: Or, Earthrise Dedicated to Al Gore and The Climate Reality Project

*On Christmas Eve, 1964, astronaut Bill Anders
Snapped a photo of the earth
As Apollo 8 orbited the moon.
Those three guys
Were surprised
To see from their eyes
Our planet looked like an earthrise
A blue orb hovering over the moon's gray horizon,
with deep oceans and silver skies.*

*It was our world's first glance at itself
Our first chance to see a shared reality,
A declared stance and a commonality;*

*A glimpse into our planet's mirror,
And as threats drew nearer,
Our own urgency became clearer,
As we realize that we hold nothing dearer
than this floating body we all call home.*

¹ Jordan Cove Energy Project proposes to construct a liquefied natural gas export facility on 500 acres of the North Spit across the Coos Bay in southern Oregon and an approximately 229-mile pipeline.

² Merriam-Webster definition *carbon footprint* (noun): the amount of greenhouse gases and specifically carbon dioxide emitted by something (such as a person's activities or a product's manufacture and transport) during a given period

We've known
That we're caught in the throes
Of climactic changes some say
Will just go away,
While some simply pray
To survive another day;
For it is the obscure, the oppressed, the poor,
Who when the disaster
Is declared done,
Still suffer more than anyone.

Climate change is the single greatest challenge of our time,

Of this, you're certainly aware.
It's saddening, but I cannot spare you
From knowing an inconvenient fact, because
It's getting the facts straight that gets us to act and not to wait.

So I tell you this not to scare you,
But to prepare you, to dare you
To dream a different reality,

Where despite disparities
We all care to protect this world,
This riddled blue marble, this little true marvel
To muster the verve and the nerve
To see how we can serve
Our planet. You don't need to be a politician
To make it your mission to conserve, to protect,
To preserve that one and only home
That is ours,
To use your unique power
To give next generations the planet they deserve.

We are demonstrating, creating, advocating
We heed this inconvenient truth, because we need to be anything but lenient
With the future of our youth.

And while this is a training,
in sustaining the future of our planet,
There is no rehearsal. The time is
Now
Now
Now,
Because the reversal of harm,
And protection of a future so universal

Should be anything but controversial.

So, earth, pale blue dot
We will fail you not.

Just as we chose to go to the moon
We know it's never too soon
To choose hope.
We choose to do more than cope
With climate change
We choose to end it—
We refuse to lose.
Together we do this and more
Not because it's very easy or nice
But because it is *necessary*,
Because with every dawn we carry
the weight of the fate of this celestial body orbiting a star.
And as heavy as that weight sounded, it doesn't hold us down,
But it keeps us grounded, steady, ready,
Because an environmental movement of this size
Is simply another form of an earthrise.

To see it, close your eyes.
Visualize that all of us leaders in this room
and outside of these walls or in the halls, all
of us changemakers are in a spacecraft,
Floating like a silver raft
in space, and we see the face of our planet anew.
We relish the view;
We witness its round green and brilliant blue,
Which inspires us to ask deeply, wholly:
What can we do?
Open your eyes.
Know that the future of
this wise planet
Lies right in sight:
Right in all of us. Trust
this earth uprising.
All of us bring light to exciting solutions never tried before
For it is our hope that implores us, at our uncompromising core,
To keep rising up for an earth more than worth fighting for.³

³ To watch the performance of "Earthwise" by Amanda Gorman go to Lehigh University, Department of Earth and Environmental Sciences.
<https://ees.cas.lehigh.edu/content/earthwise-poem-about-climate-change-amanda-gorman>

The LWVUS makes this call to action on climate:

The League believes that global climate change is the most serious environmental challenge of our time and that aggressive action is needed if we are to avoid irrevocable damage to our planet. An advocate of strong U.S. action to reduce the threat of global warming since the 1990s, the League has made global climate change an action priority since 2006.

But it will take action from individuals and government at **every** level -- local, state, national, and international -- to avert dangerous climate change. And **every League** has an important role to play in this effort. By raising public awareness of the causes and likely impacts of climate change, by helping citizens learn what they can do to curb global warming, and by building broad support for effective climate solutions, local and state Leagues can help put our country -- and our planet -- on the path to a sustainable future. ⁴

And, for an authoritative assessment of the science of climate change, this comes from The Climate Science Special Report (CSSR) with a focus on the United States and the impacts of climate change:

Climate change creates new risks and exacerbates existing vulnerabilities in communities across the United States, presenting growing challenges to human health and safety, quality of life, and the rate of economic growth.

The impacts of climate change are already being felt in communities across the country. More frequent and intense extreme weather and climate-related events, as well as changes in average climate conditions, are expected to continue to damage infrastructure, ecosystems, and social systems that provide essential benefits to communities. Future climate change is expected to further disrupt many areas of life, exacerbating existing challenges to prosperity posed by aging and deteriorating infrastructure, stressed ecosystems, and economic inequality. Impacts within and across regions will not be distributed equally. People who are already vulnerable, including lower-income and other marginalized communities, have lower capacity to prepare for and cope with extreme weather and climate-related events and are expected to experience greater impacts. Prioritizing adaptation actions for the most vulnerable populations would contribute to a more equitable future within and across communities. Global action to significantly cut greenhouse gas emissions can substantially reduce climate-related risks and increase opportunities for these populations in the longer term. ⁵

⁴ LWVUS, Toolkit for Climate Action: Help Protect the Planet, <http://participate.lwv.org>

⁵ USGCRP, 2018: *Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II* [Reidmiller, D.R., C.W. Avery, D.R. Easterling, K.E. Kunkel, K.L.M. Lewis, T.K. Maycock, and B.C. Stewart (eds.)]. U.S. Global Change Research Program, Washington, DC, USA, 1515 pp. doi: 10.7930/NCA4.2018.

From the League of Women Voters, climate scientists, and the poets among us the message rings clear. The big question now is “how”. How do we do our part? What actions will make a difference? How to get from a Climate Action Plan on the page to climate recovery or adaptation on the ground?

Focusing on our home front here is where things stand today with regard to state, county and local governments’ climate initiatives primarily focused on reducing harmful greenhouse gas (GHG) emissions.

State of Oregon - In 2020, Governor Kate Brown signed Executive Order 20-04, directing State of Oregon agencies to take action to reduce and regulate GHG emissions with goals to cut emissions to at least 45 percent below 1990 levels by 2035 and at least 80 percent below 1990 levels by 2050.

Because energy is a big GHG producer the Oregon Department of Energy (ODOE) plays a significant role in implementing the executive order. By 2030, electricity generated by coal will be phased out.⁶ By 2040 fifty percent of Oregon's electricity must come from renewable resources. ODOE supports the *Oregon Global Warming Commission*, which is charged with keeping track of greenhouse gases and helps “state, local governments, businesses, and Oregonians prepare for the effects of climate change.”⁷

ODOE also establishes and updates standards for products (appliance standards, for example), works with the Building Codes Division and with the Oregon Department of Transportation, Department of Environmental Quality, other state agencies, and utilities. Notably, ODOE says that:

Your actions can also make a difference. Even small changes, like installing more energy efficient devices, improving insulation, or investing in renewable energy can help reduce greenhouse gas emissions in the residential and commercial sectors.

Marking one year since directing state agencies to reduce GHG emissions, a March 2021 news release from the Governor’s office cited these accomplishments:

- The Oregon Department of Environmental Quality has begun the process to develop rules for its *Climate Protection Program* to exercise its authority under state law to cap and reduce emissions from some of the state’s largest emitters.
- Release of the *Climate Adaptation Framework*, *Climate Equity Blueprint*, and the *Climate and Health in Oregon Report*, which will inform future actions to protect Oregon’s most vulnerable communities from the impacts of climate change.

⁶ Oregon Department of Energy - Reducing Greenhouse Gas Emissions, <https://www.oregon.gov/energy/energy-oregon/Pages/Greenhouse-Gases.aspx>

⁷ Oregon Department of Energy - Oregon Global Warming Commission, <https://www.oregon.gov/energy/energy-oregon/Pages/Oregon-Global-Warming-Commission.aspx>

- The creation of a new *Climate Policy Office* at the Oregon Department of Transportation, that provided data on the climate impacts of ODOT's major investment decisions, resulting in a historic 60% increase in allocation of federal funding for biking, walking, and public transportation for 2021-2024.
- The launch of a statewide public electric charging plan, which aligned statewide electrification efforts and incentivizes charging infrastructure in rural and historically-underserved communities.
- Continued progress implementing the *Every Mile Counts* statewide transportation plan to reduce emissions from the transportation sector equitably through improved land use and transportation planning.
- Wildfire prevention and mitigation work by the Public Utility Commission.
- Agency work is underway to expand the state's successful *Clean Fuels Program*, strengthen rules on methane emissions from landfills, and increase energy efficiency standards for buildings and appliances in Oregon to highest national standards.

One down and nineteen years remain to reach the goal whereby fifty percent of Oregon's electricity will come from renewable resources.

Lane County - In February 2020 the Board of County Commissioners adopted Order & Resolution 20-02-04-04, establishing a Climate Change Strategy and Climate Action Advisory Committee to assist the County in developing a Climate Action Plan (CAP). In summer of 2020, the County conducted a survey to gauge how residents wanted to learn about and participate in Plan development.

An *Internal Operations Greenhouse Gas Emissions Inventory* and a draft of the first county-wide GHG inventory resulted in these high-level findings: ⁸

- Lane County's **local** emissions totaled over 4.2 million Metric Tons of carbon dioxide equivalent (MT CO₂e). Transportation (mostly gas and diesel combustion) represents 66% of that total. Energy use by buildings (natural gas and electricity) is 21% of emissions. The remaining 13% comes from agricultural animal emissions, refrigerant loss and industrial processes and waste disposal.
- **Imported** emissions from household consumption in Lane County and production of fuel and energy sold in Lane County totaled over 3.6 million MT CO₂e and include emissions from upstream fuel production (34%), production of goods (31%), food (29%), and air travel (6%).
- Forest growth and purchased carbon **offsets** sequestered over 3.5 million MT CO₂e.

Referencing *GHG Reductions at Home*:

Lane County residents produce nearly 8 million MTCO₂e annually through local emissions and through imported consumption emissions (*upstream emissions*.) To reduce these emissions, the community will have to act collectively to create

⁸ The full report is available at:
https://lanecounty.org/government/county_departments/public_works/climateplan

and support new policies, make systematic changes, and to alter our individual and family behaviors.

Eat Smart - Waste Less, FixIt Lane County and (in partnership with the City of Eugene) the *Shift Campaign* are offered as ways for individuals to reduce GHG emissions.⁹

City of Eugene - The Eugene City Council set climate-centric goals in 2014 by incorporating them into City Code through a Climate Recovery Ordinance (CRO). Intrinsic to the CRO is returning to 350 parts per million (ppm) as the scientifically recognized "safe" level of carbon dioxide in the atmosphere. The monthly average of carbon dioxide (CO₂) for January 2021 was 415.52 ppm.¹⁰

Eugene's Community Climate Action Plan 2.0 (CAP2.0) is a comprehensive update. The City is now moving from publication to implementation, looking to the community for support through:

- Reconvening the Equity Panel
- Citizen Advisory Committees
- Individual, Household and Neighborhood Action Campaign
- Eugene Climate Collaborative
- Sustainability Business Strategy¹¹

Other Local Agencies - Other local agencies and jurisdictions may have sustainability plans or activities that support regional resilience and adaptation without having adopted formal Climate Action Plans. For example, the City of Springfield, has a number of projects that improve infrastructure to make low-emissions travel easier and safer.

Lane Transit District (LTD) is shifting to electric buses to reduce GHG emissions from its fossil fuel-powered vehicles and is exploring the use of other fuels and technologies.¹² The Metropolitan Wastewater Management Commission (MWMC)¹³ has a Renewable Natural Gas (RNG) project aimed at purifying biogas, a by-product of the wastewater treatment process, into a clean vehicle fuel.

The challenge ahead is how to embrace the ever present reality of climate disruption and begin anew by seeking ways to reduce our own use of fossil fuels and support efforts at all levels to stop further disintegration of the earth's atmosphere.

⁹ For links to *GHG Reductions at Home* resources:

https://lanecounty.org/government/county_departments/public_works/climateplan/g_h_g_reductions_at_home

¹⁰ NOAA Earth System Research Laboratories/Global Monitoring Laboratory

<https://www.esrl.noaa.gov/> As measured at Mauna Loa Observatory, Hawaii. The carbon dioxide data on Mauna Loa constitute the longest record of direct measurements of CO₂ in the atmosphere. They were started by C. David Keeling of the Scripps Institution of Oceanography in March of 1958 at a facility of the National Oceanic and Atmospheric Administration [Keeling, 1976]. NOAA started its own CO₂ measurements in May of 1974, and they have run in parallel with those made by Scripps since then [Thoning, 1989].

¹¹ To view the complete plan and appendices <https://eugene-or.gov/4284/Climate-Action-Plan-20>

¹² For more on LTD's climate goals go to: ltd.org/sustainability-at-ltd/

¹³ Metropolitan Wastewater Management Commission <http://www.mwmcpartners.org/>

Report by: Terry Parker
Questions by: Keli Osborn

1. What do you think of when asked about climate change, recovery and adaptation? What concerns you most?
2. Have you ever taken stock of your own carbon footprint? What are your biggest challenges in reconsidering personal energy use?
3. When it comes to taking actions to mitigate and adapt to climate disruption, how do you see the roles of individuals, coalitions and non-government organization (NGOs)¹⁴, businesses, governments and other institutions?
4. The climate crisis braids together many gnarly environmental, economic and social issues. What tips can you share for avoiding being overwhelmed? How do you take your next best step?
5. If the climate crisis truly is an existential threat, how do you hear the call to individuals and organizations to commit nonviolent, disruptive civil disobedience, as advocated by the Extinction Rebellion?¹⁵ What about interrupting the sleep of politicians, as is being done by the Sunshine Movement in its Wide Awake campaign?¹⁶ What are some of the pros and cons of such strategies and tactics?
6. What are your thoughts on the equity imbalance of climate disruption? How should these be acknowledged and addressed?
7. University of Oregon Sociology Professor Kari Marie Norgaard studies and writes about climate denialism—but not the kind that debunks the evidence. In her book, *Living in Denial: Climate Change, Emotions and Everyday Life*, she examines how people experience disturbing information regarding global climate change, and asks: “Why do some social and environmental problems result in people’s rising up when others do not? And given that many people do know the grim facts, how do they manage to produce an everyday reality in which this urgent social and ecological problem is invisible?” What do these questions bring up for you?

¹⁴ From *Investopedia* “A non-governmental organization (NGO) is a non-profit group that functions independently of any government. NGOs, sometimes called civil societies, are organized on community, national and international levels to serve a social or political goal such as humanitarian causes or the environment.”

¹⁵ Extinction Rebellion (XR) is an international movement that uses non-violent direct action and civil disobedience to persuade governments to act justly on the Climate and Ecological Emergency <https://rebellion.global/>

¹⁶ The Sunrise Movement is a youth led movement to stop climate change <https://www.sunrisemovement.org/>