



Sierra Club At Home Climate Actions

A Fact Sheet Series to Build Resilience, Reduce Emissions



We all want to do our part to stop the climate from warming to protect our own lives, future generations, and the natural world. But, how? Where can one person start? Turns out, it is simple!

There are many things each of us can do to increase our resilience and reduce our climate warming emissions. Sierra Club North County Group has developed a series of Fact Sheets that will provide information on how to start-now and at-home.

To see all of our Fact Sheets and Resources, please visit our webpage at www.sierraclubncg.org/home/sierra-club-at-home-resilience-project/.

Even making a few changes can help a lot. And, if everyone does their part, we can make the future safer, healthier, and more livable for all living beings.



CLIMATE BASICS

Change begins at home

We hear a lot about the climate crisis, global warming, and climate change. We all want to do our part to stop the climate from warming to a level that impacts our own lives and that of future generations. But, how? Where can one person start? Sierra Club has developed this packet of information to help us start where we are—at home.

The difference between global warming and climate change.

Global warming is the accumulation of heat in the earth's atmosphere, land, and oceans resulting from increased emissions to the atmosphere. Climate change describes the broad set of changes, including rainfall patterns, heat, drought, glacial melting, and flooding caused, in part, by warming of the atmosphere.

The difference between carbon and carbon dioxide.

Carbon is an element. It makes up a large part of the earth and is vital to all life, including you! Carbon becomes a gas—carbon dioxide—when combined with two molecules of oxygen. In the atmosphere, CO₂ captures heat and leads to warming the planet. Right now, CO₂ concentration in the atmosphere is 421 parts per million (ppm). Other warming gases such as methane and nitrous oxide increase CO₂ equivalent gases in the atmosphere to about 500 ppm. Scientists have found that 350 ppm is the maximum level of CO₂ in the atmosphere that is safe for life on our planet. Higher concentrations will cause the planet to get even hotter.

What is carbon sequestration?

Sequestration is a process, like photosynthesis, that removes carbon dioxide from the atmosphere. Trees and plants are good at this and, as they take in carbon, they release oxygen into the air for us to breathe. Carbon sequestration is why planting trees and large shrubs can help improve our climate.

What can be done to reverse warming?

- **REDUCE** carbon emissions now and cease net carbon dioxide emissions over time.
- **PROTECT** and **RESTORE** our forests, wetlands, grasslands, marshes, oceans, and soils, which store a lot of carbon and keeps it out of the atmosphere.
- **SEQUESTER CARBON** from the atmosphere back to the earth through 'carbon dioxide sequestration' through activities such as planting trees and regenerative farming practices.

What is resilience?

Because we have waited too long to limit the root causes of our warming planet, society is facing significant impacts—from more frequent and severe weather, ocean warming and acidification, extended periods of drought and extreme temperatures, and other extreme negative effects of climate change. The ability to prepare for, recover from, and adapt to these impacts is called "climate resilience." Resilience efforts must be implemented at the local, neighborhood, or individual level. The actions in this fact sheet series will help you become more resilient to impacts from climate change.

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SIERRA CLUB
SAN DIEGO CHAPTER



NURTURE NATURE

Regenerate nature one yard at a time

Many of us want to take action to help nature and stop climate change. One easy thing we all can do is to nurture nature where we live by planting, or helping plant, native plant species. In this way, we can restore nature one garden at a time. Choosing plants local to our area makes a big difference. They are beautiful, support native bees and pollinators, feed birds, need less water, build soil, and turn our yards and patios into mini-nature parks we can enjoy every day for free!

Planting native trees and large shrubs can also provide shade, store carbon, and reduce climate impacts. Adding trees adds economic value to properties, saves money, and improves our quality of life. Even one native plant can help our local wildlife. By replacing lawn and non-native species, we can significantly improve habitat for butterflies, pollinators, and birds.

Find the best native plants for your area: www.calscape.org

For native alternative plants to introduced plants look here: <https://bit.ly/3ANBDPe>

For fire resistant natives look here: <https://bit.ly/3uNbdJD>

A wide diversity of California native plants will help the most. Plants that bloom in different seasons offer year round beauty and appropriate food and habit for local wildlife.

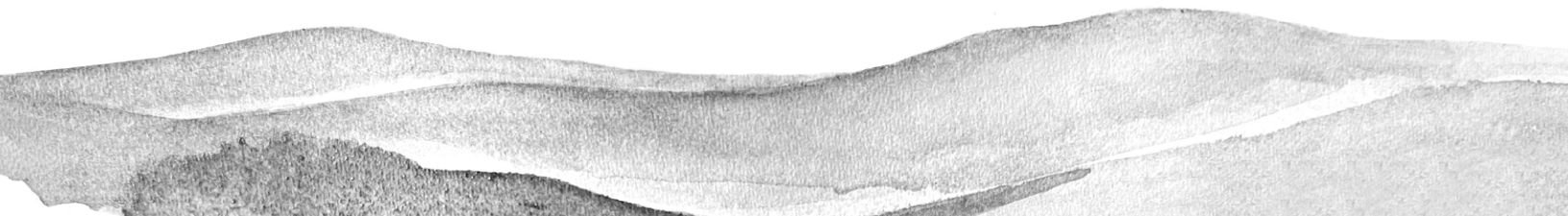
Take Action

OUR STEP-BY-STEP LIST IS HERE: <https://bit.ly/3ANU1aL>

- 1 Shrink the Lawn. Lawns waste water and have little ecological benefit. Make a plan to reduce the size of your lawn and replace with native plants.
- 2 Leave the leaves. Natural leaves are the best mulch for native plants. Leave them in place.
- 3 Remove invasive plant species.
- 4 Plant as many beneficial plants as you can. If you can, plant an oak tree or a white sage.
- 5 Save moths. Reduce nighttime light pollution. Use a motion sensor for floodlights.
- 6 Native plants can be grown in pots, on patios, along fencelines, and next to walkways.
- 7 Join Sierra Club North County Group: <https://bit.ly/3lyw9K2>
- 8 Support Nurture Nature and get a tax deduction by donating to the Sierra Club Foundation.

BUT MOST IMPORTANT! Remember to take time to get out and enjoy nature with your friends and family. Here are 50 hikes to take in North County: <https://bit.ly/3z3QIAh>

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SAN DIEGO CHAPTER



GROW TREES

Expand the urban tree canopy

As the climate crisis worsens, extreme heat events will continue to threaten our health. People in areas with little tree shade canopy will suffer more. Trees and large shrubs are an important and easy way to reduce these 'heat-island' effects. Trees are an affordable way to shade and cool your home.

CONSIDER THAT TREES:

- When mature, can sequester 40-80lbs of carbon per year
- Provide cooling equal to up to 10 room-sized AC units
- Reduce a city's heat island effect by as much as 10-15 degrees
- Are critical for wildlife and biodiversity
- Prevent erosion and retain water, 1000 gallons/year per mature tree
- Absorb air pollutants
- Improve well-being, offer other health benefits and are beautiful

Native trees and large shrubs are better for biodiversity and are adapted to our region. Native plants support local birds, insects, and pollinators. They better support migrating and resident birds, are culturally important, and are likely to survive. Which tree is the best for you? If you have room, the very best tree to plant is a native oak tree. If not, there are many small and medium trees that will work well. Trees and large shrubs planted on the south and west side of buildings will provide the best shade from the hottest sun. Always avoid planting near power lines.

The best source of information on native plants is www.calscape.org. Type in your address to get a list of suitable options including: Oaks (come in many sizes) / Native Cherry / Desert Willow / Toyon / Lemonade Berry / Redbud / Wild Lilacs (Ceanothus) / Manzanita / Velvet Ash / Ironwood

Take Action

- 1 Purchase native trees/shrubs at a native plant nursery like Moosa Creek and Tree of Life. 1-5 gallon size is best.
- 2 Look for native plant sales in October and plant from November-January, the best time to plant.
- 3 If you live in Escondido, you can apply for a free native tree: www.escondido.org/request-a-free-tree
- 4 SDGE Rebate tree program: www.sdge.com/trees/community-tree-programs/community-tree-rebate-program
- 5 Kate's Trees: www.katestrees.org
- 6 If you don't have room for a tree or want to help others, join our Sierra Club Tree Team to volunteer and help others plant trees. <https://forms.gle/DeGbSwiR6hNZxrdC9>

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USE CLEAN ENERGY

Efficiency can save money and improve health

The amount of greenhouse gas emissions generated by buildings is second only to transportation. Burning of oil, natural gas, and coal is at the root of the climate crisis so everything we do to reduce and eliminate their use at home will help. It is vital that we transition to use clean energy based on sun and wind where possible. The good news is these energy sources are now lower cost.

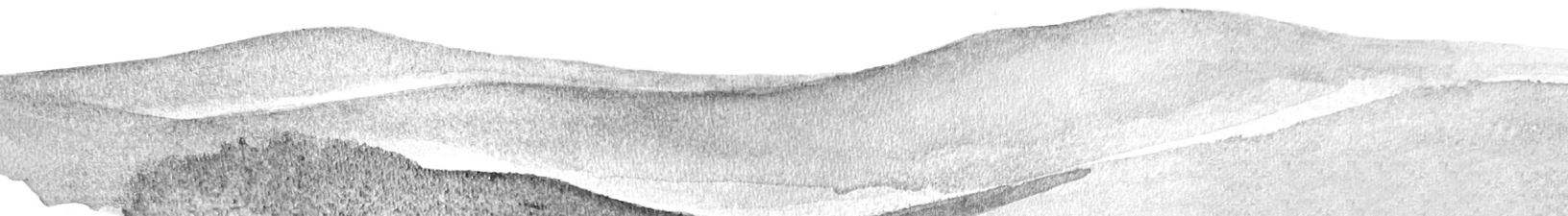
Locally, 59% of home natural gas use is used for water heaters, 29% for heating, 7% for cooking. Reduction of natural gas use in these three areas will yield biggest climate benefits. There are also health reasons to replace natural gas at home. For example, children growing up in a home with natural gas have 42% risk of more asthma symptoms. Gas stoves emit methane, a very destructive greenhouse gas, even when not in use.

Switching to heat pump powered water heaters is 3.5x more energy efficient than a traditional electric or a gas water heater. Replacing a gas furnace with a heat pump space heater to heat your building also serves as an extremely efficient air conditioner in the summer months.

Take Action

- 1 Do an energy audit to see the best ways to reduce your home's energy use. <https://bit.ly/3Ag99Mc>
- 2 Install a heat pump for both heating and cooling. <https://bit.ly/3QNOiXr>
- 3 Install a heat pump hot water heater.
- 4 Install energy-efficient retrofits including additional insulation and windows.
- 5 Use an electric induction stove top for cooking for your health and the climate.
- 6 Use a clothesline to dry your clothes, or an electric clothes dryer.
- 7 Plant shade trees in strategic locations to cool your home naturally.
- 8 If your electricity provider, such as Clean Energy Alliance, offers a 100% clean energy option, please choose it.
- 9 Learn about microgrids. These are a way to power to a building based on solar panels and batteries at your home or at your child's school. <https://microgridknowledge.com/microgrid-defined/>
- 10 To reduce emissions from driving, consider walking, biking, or public transit when you can. E-bikes make a great car replacement for local trips. If you must drive, combine your trips, travel with others, and choose an efficient electric for your next vehicle.

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SIERRA CLUB
SAN DIEGO CHAPTER



GROW FOOD, BUY LOCAL

Increase Food Security

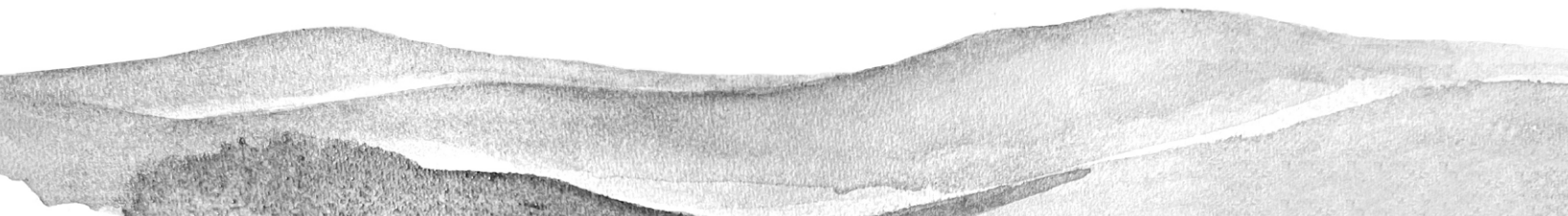
In a climate changed world, the ability to grow our own food and support our local supply chain is even more critical. We are fortunate in San Diego to have a good climate for growing and a wealth of farmers practicing climate smart agriculture. Through growing your own food, returning carbon to the soil, and supporting our local producers who are stewarding the land, we can build long-term resilience together.

Everyone can grow some of their own food. A pot on a patio can grow lettuce, herbs, or a tomato. A small garden bed can yield vegetables, herbs, and roots. A fence can be the perfect place to grow passionfruit, grapes, or blackberries. A trellis can support squash, beans, and cucumbers to grow up. Don't have space to grow? Look for community gardens (<http://sdcgn.org/>) in your area, or join a neighbor to share the work and bounty.

Take Action

- 1 If you are a first time gardener, read this: <https://bit.ly/3T9d0mK> or watch this: <https://bit.ly/3cdGkbh>
- 2 Build/buy a garden bed or prepared containers lined with gopher-wire. Many food plants and dwarf fruit trees also do well in pots or containers.
- 3 Plant seeds or 'starts.' Learning to grow food from seeds is the least expensive way to grow food. <https://bit.ly/3AIB7Wz>
- 4 Use organic pest control. Pesticides are dangerous for you and wildlife. 90% of insects in gardens are beneficial. Hand-picking is a good method of pest control in a small garden.
- 5 Rodent baits and poison kill owls, hawks, falcons, gopher and king snakes, and herons and should be avoided.
- 6 Plant companion and pollinator plants. Calendula, marigolds, and garlic are suitable companion plants.
- 7 Fruit trees, like lemons, limes, pomegranates are well-adapted to our region and will shade your home. Passion fruit and kiwis also grow well here. Buy from local North County nurseries.
- 8 Mulch and water your garden for most success.
- 9 Shop at your local Farmer's Market when possible. <https://bit.ly/3ApvcAa>
- 10 Join a community supported agriculture (CSA) for a box of locally grown, organic, in-season food. (fee applies)
- 11 Learn about the root causes of our food system issues through San Diego County Food Vision 2030. <https://www.sdfsa.org/vision>

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PROTECT FROM EXTREME HEAT

Heat can be deadly

Millions of people are experiencing the negative effects of heat as our climate changes. Blistering heat waves are smashing temperature records around the globe, scorching crops, knocking out power, fueling wildfires, and killing thousands.

Excessive heat is the largest risk to life from climate change. Heat stroke and heat exhaustion are a real threat, especially for youth and elders. Symptoms can include throbbing headache, dizziness and light-headedness, high body temperature, lack of sweating despite the heat, muscle weakness or cramps, nausea and vomiting, and rapid, shallow breathing. In your home and community, there are several steps you can take to protect yourself and loved ones from extreme heat. Heat related deaths are preventable.

Take Action

PREPARE FOR HEAT

- 1 Develop a plan in advance to protect yourself and your family, including pets. Consider community centers, shopping malls, libraries, parks, school buildings.
- 2 Locate a local cooling center and go there in extreme heat.
- 3 If you can, plant trees on the most exposed side of your home. Plant grapes, passionfruit, or other vines on your walls. White cars and white roofs offer the most heat protection.
- 4 Prepare with a 'swamp cooler' if you don't have AC or a heat pump.

DURING A HEAT EVENT

- 1 Check out CDC's BEAT THE HEAT: <https://www.cdc.gov/cpr/infographics/beattheheat.htm>
- 2 Stay hydrated. Mist yourself with a spray bottle. Mist yourself and others with cool water.
- 3 Avoid intense outside activities. Visit a community pool, if available.
- 4 Wear loose, light weight, light colored clothing. Soak your head and shirt in water.
- 5 When outdoors, wear a hat, sunglasses, sunscreen.
- 6 Avoid alcohol and caffeine drinks as they contribute to dehydration.
- 7 Check in with at-risk friends, family, and neighbors. Bring them cold drinks.
- 8 Never leave children and pets in hot cars.
- 9 Learn to recognize the signs of heat stroke and if needed call 911.
- 10 Protect pets paw pads from hot pavement <https://www.ready.gov/collection/extreme-heat>

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ELECTRIFY LANDSCAPING

Protect worker health and the environment

Small off-road gasoline engines, such as leaf blowers, lawn mowers, and portable generators, produce more smog-forming emissions than all of the passenger cars in California. Two-stroke engines, used in handheld landscaping equipment, are highly polluting because they burn gas mixed with oil. One hour of leaf blower operation equals the same level of smog-forming pollution as driving a midsize sedan 1,100 miles from Los Angeles to Denver.

Health hazards posed by gas-powered leaf blowers are an environmental justice issue for both workers and our most vulnerable populations. Workers are exposed to toxic fumes and fine particles. Vibrations from gas-powered leaf blowers are known to cause nerve damage in the hands and arms of operators. Unsafe noise levels at close range can cause permanent hearing loss. Children, older people and others with respiratory issues, hearing disorders or neurological conditions like autism are especially vulnerable.

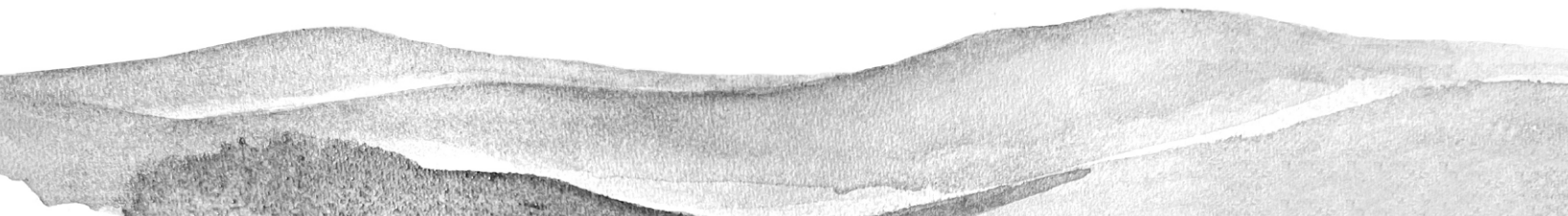
All leaf blowers use high airspeeds that disperse fine particulate matter, including dust, herbicides, animal feces, pollen, pesticides and spores. Rakes and brooms are a much better option. Allow leaves to remain in place and serve as mulch.

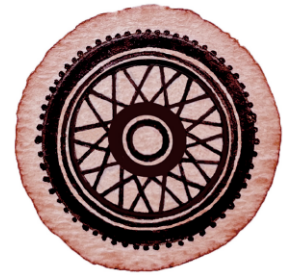
Information on electric landscaping equipment, worker health, state and local legislation and a list of green gardeners can be found at <http://sd-sequel.org>. (San Diegans for Sustainable, Equitable & Quiet Equipment in Landscaping)

Take Action

- 1 Use only electric landscaping equipment on your yard.
- 2 Ask your landscape company to transition to all electric equipment.
- 3 Encourage your gardener to use a rake and broom.
- 4 Contact your City and County representatives to:
 - Implement a program to transition city landscaping crews/contractors to battery powered lawn equipment.
 - Help secure funding for an equitable trade-in/buy back program to assist individuals and small landscaper businesses transition to electric equipment.
 - Enact a ban on gas-powered leaf blowers, once funds are available for a buy back program.
- 5 Contact sd.sequel@gmail.com to learn more about the statewide \$30M voucher program for sole proprietors and small landscaper businesses and the San Diego Air Pollution Control District's \$3M trade-in program. Both programs will commence in Fall 2022 and volunteers are needed for outreach.

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WALK, BIKE, RIDE TRANSIT

Cleaner trips make a difference

Transportation emissions are the largest human-related contributor of greenhouse gases (GHGs) in California. Driving and flying generally constitute the majority of our individual climate warming emissions, or “carbon footprint.” Emissions from driving can be greatly reduced by how we drive, what kind of fuel our car uses, and how well it is maintained. Electric cars are becoming more affordable and save money over the long term.

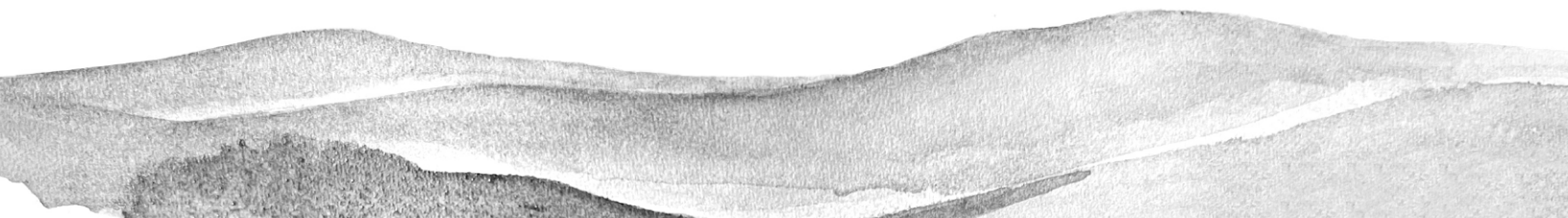
Flying is also often a huge part of our carbon footprint. One round-trip flight between New York and California generates around 20% of the GHGs an average car emits annually.

With planning, we can reduce these emissions. Whenever possible, consider walking, biking, or public transit, which all have lower impacts. A workable transit system will be essential to a livable future, so using transit, walking, and biking will be key for all of us.

Take Action

- 1 Assess your carbon footprint to determine how much is due to driving and flying: <https://www.nature.org/en-us/get-involved/how-to-help/carbon-footprint-calculator/>
- 2 Get a free youth transit pass (Pronto): <https://youthopportunitypass.sandag.org/>
- 3 Learn the bus, trolley, and train routes and use public transit when you can. We lower emissions greatly by sharing the ride on public transit, and transit-rich countries prove it becomes more convenient if we all adopt it.
- 4 If you can, invest in an electric e-bike. E-bikes offer a great car replacement for local trips, and the electric power drive makes riding more accessible to people of all ages.
- 5 When you must drive:
 - Combine trips and carpool with others.
 - Learn to go easy on the gas and brakes.
 - Regularly service your car to keep it efficient.
 - Check your tires. Properly inflated tires reduce emissions.
 - Use cruise control on long drives when safe to do so, and drive at the speed limit.
- 6 Learn the Amtrak schedule and consider using trains for long-distance trips: <https://www.amtrak.com/home.html>
- 7 Avoid flying as much as you can. COVID showed how many business trips/conferences can be replaced by teleconferencing. Let organizers know that you prefer not to fly.
- 8 Ask transit authorities and local schools to use electric buses.
- 9 Become a transit advocate by supporting groups working for better transit for all.

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WORK FOR JUSTICE

Like all ecological systems, we are all connected

At its root, the climate crisis has occurred due to destabilizing human activity, much of which has its roots in the societal exploitation, injustice, and colonization of indigenous and people of color communities. What the colonizing populations in societies have done to the exploit the earth is the same thing that has been done to indigenous and people of color communities.

There are inequities that prevent all Californians from sharing in prosperity and that expose many to disproportionate pollution burdens and negative health impacts. Sierra Club volunteers have made extraordinary efforts in many places to address community environmental problems. It is a tradition of success which we will continue.

However, what is also true is that Sierra Club is over 130 years old. It has been part of our history that racism and exclusion have played a part in some of our decisions, practices, and processes. We are committed to changing that every day through commitment to Sierra Club Core Values. We commit to shifting power away from white supremacy, repairing harm, and ending structural racism.

Sierra Club's vision is of a just, equitable, and sustainable future built on a foundation of racial, economic, and gender equity – where all people benefit from a healthy thriving planet and a direct connection to nature. Our mission is to explore, enjoy, and protect the wild places of the earth; practice and promote the responsible use of the earth's ecosystems and resources; educate and enlist humanity to protect and restore the quality of the natural and human environment. We will do this using our core values of anti-racism, balance, collaboration, justice, and transformation.

We invite all Sierra Club members, activists, and residents to join us in standing for social, environmental, racial, indigenous, LGBTQ+, and worker justice.

Take Action

- 1 Learn about Sierra Club's Core Values: <https://www.sierraclub.org/sierra-club-values>
- 2 Follow Sierra Club's Equity, Justice, and Inclusion program: <https://www.sierraclub.org/equity>
- 3 Read Sierra Club's Environmental Justice Policy: <https://bit.ly/3BF1kSI>
- 4 Examine your beliefs and habits and join allied organizations working for justice.
- 5 Begin gatherings with a land acknowledgement of the indigenous people of your area. <https://www.csusm.edu/cicsc/land.pdf>
- 6 Whether an injustice applies directly to you or not, know that everyone is connected. Speak out for justice and support others who are.

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MAKE POSITIVE CHANGE

Engage in climate and land protection

We can all do our part. In addition to improving resilience and reducing emissions at home, we can also:

1. Oppose Sprawl Development in sensitive habitat and fire-prone areas.

Projects like Harvest Hills in Escondido will destroy habitat and endanger residents due to extreme fire risks. Sign the Harvest Hills petition at <https://bit.ly/3PzJmEb>

Join our 'STOP Harvest Hills' campaign by emailing conservation@sierraclubncg.org.

2. Engage vigorously in your city and county Climate Action Plans.

Climate action plans will only work if they result in climate action. Learn about the Climate Action Plans in your community and help take action to implement them.

3. Support a Strong North County Multiple Species Conservation Plan (MSCP).

The North County MSCP is being developed now. Please contact your county supervisor and let them know you support a strong and protective plan.

4. Recreate responsibly.

Off-trail activities by mountain biking and hikers is severely damaging sensitive habitat and impacting species. Always follow the rules and stay on the trails.

Take Action

Sometimes 'politics' can feel overwhelming. We might say, we don't 'do' politics. But living in a political society as we do, non-engagement is a political act as much as voting. Non-engagement means others will decide for you, your family, and your future. Pick one issue, one candidate, one Council, Board, or Commission and engage!

- 1 Register to vote! And VOTE! <https://www.sdvote.com/content/rov/en/Registration.html>
- 2 Help your friends and family register to vote.
- 3 Attend government meetings and speak out.
- 4 Get to know your elected and appointed officials and engage with them on issues important to you.
- 5 Network! Talk to friends, family, and neighbors about issues you care about.
- 6 Even if you cannot vote, you can be a political force for good and for the planet.
- 7 JOIN Sierra Club! We can do more when we work together. Help grow our voice and our power to make change for good and save life on the planet. <https://Bit.ly/3Iyw9K2>
For more ways to get involved contact conservation@sierraclubncg.org

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