

# sustainable leaders in action

# February 2022

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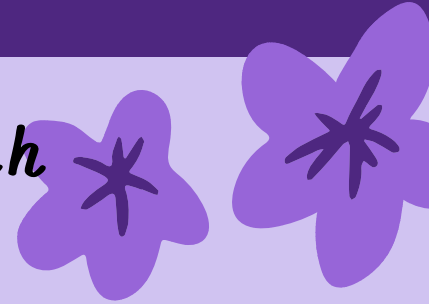




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# FEBRUARY ACTION OF THE MONTH: BIKE, WALK, SKATEBOARD, OR UNICYCLE

by Abigail Stofer

Did you know- that 29% of all of the United States' carbon emissions come from the transportation sector? And 58% of those emissions are from light-duty vehicles! In order to raise awareness about this issue and share what we all can do to help, SLIA has chosen this month's Action of the Month to be "Bike, Walk, Skateboard, or Unicycle".

Almost a  $\frac{1}{3}$  of all trips or errands are only 1 mile or shorter and  $\frac{1}{2}$  are 3 miles or shorter, yet we all are guilty of using our cars just for these short trips, wasting fuel and emitting carbon unnecessarily. However, there are many alternate options to taking our cars for these short trips, such as bikes, scooters, skateboards, or walking just to name a few. Walking is especially great for shorter trips, while biking, long boarding, or riding a scooter are better options if you have a ways to go. There are also options such as electric bikes, scooters, or skateboards that you can use if your commute is especially hilly or difficult. Scooters are quickly rising in popularity for commuters as they are light, portable, and quick! Besides, doesn't it sound so much more appealing to get some fresh air rather than sitting in traffic? There are also many health benefits to taking an alternate mode of transportation. The recommended amount of exercise is 30 to 45 minutes a day, and just walking or biking 1 mile could cause you to easily reach this goal!

If you do decide to take up this challenge, you need to be prepared. The first step is to have the right materials. If you don't already have a bike, there are many options such as used bikes, rentals, bike share programs,

or you can stop by your local bike shop! Some other essential biking equipment to have is a helmet, rear and front lights, a u-lock, a multitool and a basket or saddlebag for easy storage. The roads can be unpredictable, so it's also important to make sure that you stay safe! Make sure to learn the rules of the road, ride predictably in the direction of traffic, and regularly check your tires, brakes, and gears. . Another tip is to plan out your trip. Before you leave your home, check google maps and make sure you leave enough time for you to cool down after your ride or walk, especially if you are going to something you don't want to be all sweaty for! Check what bike lanes are available for use and if there is a place at your destination where you can store your ride. Lastly, remember to wear comfortable shoes and dress according to the weather

Hopefully with the help of these tips, you can feel comfortable occasionally trading driving for some more money-saving, energy-saving, and environmentally friendly modes of transportation. You can track your household's carbon footprint, learn more about this month's action, and take more actions with us on the [Cleaner Contra Costa Challenge website!](#)





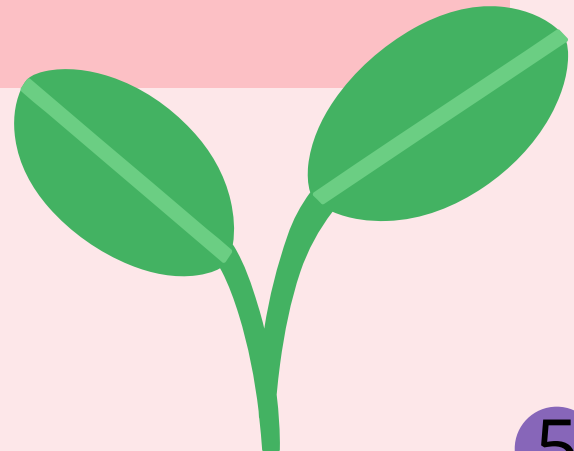
# March Action of the Month:

## Eat Lower Down the Carbon Chain

By Russell Wang, art by Kyle Suen

For March, SLIA has chosen “Eat Lower Down the Carbon Chain” as their Action of the Month! While eating less meat may not seem like a very impactful action, it's way more beneficial than you may realize! It turns out eating less meat not only decreases carbon emissions but also saves water, protects land, and provides many health benefits!

The livestock we consume produces methane gas, a greenhouse gas that is over 25 times more potent than carbon dioxide and is the main contributor to global warming. Livestock produces methane gas through the digestive process. The microbes in the intestines break down the digested plant material and create methane gas as a by-product, which is emitted into the atmosphere. In other words, the farts and burps of farm animals is what contributes to over 14.5% of global greenhouse gas emissions! So, how can we decrease this? Well, simply substituting meat for other high protein options like tofu, nuts and seitan can help reduce the methane in our atmosphere dramatically. Another great option is switching over to plant based meat, which mainly consists of soy, potato protein, coconut oil, and water- which are all derived from plants! These replacements have almost all the benefits of red meat but without the saturated fat and cholesterol, two things that increase the risk of heart disease, diabetes, stroke, and cancer.

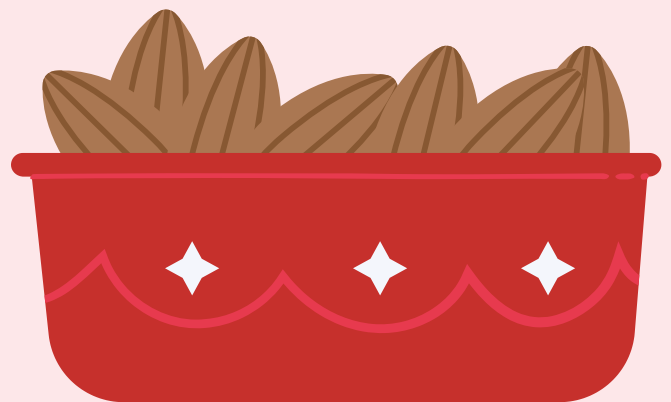




In addition to becoming healthier and decreasing carbon emissions, eating lower down the carbon chain also helps save water! Interestingly enough, it takes more than 2,400 gallons of water to produce a single pound of meat. By decreasing the amount of meat you eat by just one pound, you save more water than you would from not taking a shower for six months! What a lot of people also don't consider when they eat meat is the amount of water it takes to raise an animal. The water that farm animals drink doesn't directly go into meat growth; it's also used for respiration, energy, and other bodily functions. Farm animals also need plants to eat, which means water is also needed for the plants to grow. This makes eating meat much more wasteful compared to eating plants, which take significantly less resources to grow.

To put all of this into perspective, it takes about a whole pool of water to make 24 hamburger patties. It also takes the same amount of water to make 75 loaves of whole-grain bread and 30 jars of peanut butter!

In a nutshell, eating less meat can help make an impact on the environment in more ways than one, and becoming healthier is always beneficial. Not everyone necessarily needs to become vegan, but taking a day off meat every once in a while will help in more ways than one!



# NO DRILLING CONTRA COSTA

## What does “No New Oil and Gas Drilling in Contra Costa” mean?

Due to the health risks and environmental impacts of oil and gas drilling, the “No New Oil and Gas Drilling in Contra Costa” movement works to restrict any new oil and gas drilling initiatives, phase out current ongoing drilling, and provide provisions for fossil fuel workers whose jobs could be impacted in Contra Costa.

## What is gas and oil drilling?

People have been drilling for oil and gas for hundreds and hundreds of years, but more recent events have caused Contra Costa residents to jump into action against oil and gas drilling (see timeline). New permits concerning oil wells have been filed for the purpose of bringing oil and other hydrocarbons up to the surface of the Earth. The drilling, processing, storing, distributing, and transmission of these oils and gases are known to cause pollution and serious health issues to those around drilling sites.



### Precedents

The Los Angeles Board of Supervisors unanimously voted to end and phase out gas and oil drilling on September 15, 2021. Contra Costa's neighbor, Alameda, banned fracking on July 19, 2016, and revoked their conditional-use permit for Livermore oil-producing wells in July 2018, which allowed them to essentially ban oil drilling altogether. Los Angeles and Alameda are proof that it is absolutely achievable for Contra Costa to ban oil and gas drilling, and these precedents help spur on residents' efforts in Contra Costa.

## Timeline of Gas and Oil Drilling Events in Contra Costa and Relevant Events

2016:

- July 19: Alameda county bans fracking.

2018

- July: Alameda revokes conditional-use permit for oil-producing wells.

2019:

- July 15: Exploratory oil drilling permit is approved by Contra Costa county planners for oil drilling on Deer Valley Road (even though the drill site was already in operation six months before it was approved)!

2020

- Spring 2020: Second permit application for oil drilling site 900 feet from Brentwood homes is filed.
- April 13: Power drive and the Contra Costa County Department of Conservation and Development issue intent to a negative declaration (meaning that they believe there would be no negative impacts) for the permit.
- May 19-June 9: Public comment window is extended after public pressure.
- August 1: Department of Conservation and Development announces "additional environmental review is required" and will issue a Draft Environmental Impact Report.
- September 22: Contra Costa Board of Supervisors unanimously voted to endorse a declaration of a climate emergency.

2021

- September 15: Los Angeles Board of Supervisors unanimously votes to end and phase out gas and oil drilling.

2022

- January: Contra Costa waits on the revised county general plan (most likely in the second quarter of the year) and the Draft Environmental Impact Report (as promised in August 2020).

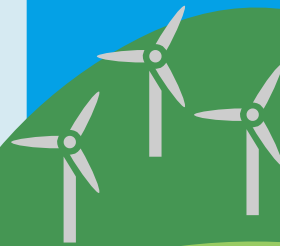


### Why support the cause?

Gas and oil drilling poses a lot of different problems and issues when it is active near people. There are a multitude of health issues and concerns caused by oil and gas drilling, including: dangerous air pollutants (leading to asthma in children and adults), cancer, miscarriage, birth defects, low weight/prematurity, explosions, and fires. These health issues can be so serious that recent studies from Stanford show that pollutants emitted from oil and gas drills can affect the air up to 2.5 miles away. Additionally, oil and gas drilling causes severe environmental issues, including (but not limited to) air pollution (releasing methane 21 times more potent than carbon dioxide as a greenhouse gas), water pollution, and light pollution. In fact, it might even lower property values when close to housing, just as the new permit plans for! These possible negative effects of the proposed oil and gas drilling sites are just some of the many driving forces behind those who support the “No New Oil and Gas Drilling in Contra Costa” movement!

### How can you help?

- Sign and spread the petition
- Go to city council meetings and provide public comment.
  - Don't feel intimidated by providing public comment; you can always use a template. And don't forget - there's strength in numbers!
- Help out or volunteer with Sunflower Alliance.
- Follow and share posts on Instagram @nodrillingcontracosta.  
Spread information about it and help educate others!







# Realities of the Meat and Dairy Industry



By Aliyah Ramirez

Everyone has a favorite food they can think of on the spot, however, how many of those foods contain meat or dairy products? The world consumes three times the amount of meat compared to 50 years ago, and dairy consumption has doubled as well. As of 2018, production for meat was around 340 million tonnes but it does not get distributed evenly amongst countries.

“Meat consumption is highest across high-income countries...The average European and North American consumes nearly 80 kilograms and more than 110 kilograms, respectively. Consumption trends across Africa are varied; some countries consume as low as 10 kilograms per person, around half of the continental average,” stated UN Food and Agriculture Organization.

Animal proteins hold vital nutrients that are difficult to find in plants, including B12, which maintains brain function; iron, which helps your body use oxygen; calcium, which is essential for bone health; and zinc which benefits the immune system. However, plant-based diets are full of fibers and antioxidants, which have been proven to lower risk for heart disease, stroke, hypertension, diabetes, obesity, and breast cancer, as well as boost immunity.

“So with a healthy diet, we tell people you want to keep things as natural as possible. So that would be your meats, vegetables, dairy – keeping to the perimeters of the grocery store. That’s where you will find more of those fresh foods for your diet,” explains Nicole Tramp, a registered dietitian and dietetic internship instructor at Iowa State University.



Despite altering opinions, consuming meat or plants in moderation holds benefits for one's health. Over the past decades, more people have switched over to plant-based diets for health, personal, or environmental reasons, but there are both positives and negatives for cutting down on meat consumption.

Ninety-nine percent of meat, dairy, and egg products reportedly come from the United States' factory farms. A wide range of data from agencies such as USDA (United States Department of Agriculture), the EPA (Environmental Protection Agency), and Concentrated Animal Feeding Operations (CAFOs) reveal the harsh realities of animal farms.

Grocery stores sell cartons of "all natural" eggs bearing illustrations of rustic farms or packages of chickens claiming to be "humanely raised." Animal and agriculture organizations have found this is rarely the case. Over the past two decades, undercover investigations of animal farms have gained widespread attention in the media, giving viewers their first glimpse into the inhumane practices of America's meat industry.



Across factory farms, animals are tightly contained in unsanitary and dark warehouses. Food production also accounts for one quarter of the world's greenhouse gas emissions and takes up half of the planet's habitable surface. Many animals are kept in cages with little exercise and little fresh air, doubling the chances of disease. However, with farms fixated on increasing growth for animals, they are given large amounts of antibiotics to make up for unsustainable living conditions.

"Through the success of those [labeling] programs, consumers started to view *humane* and *humanely raised* as a valuable claim...food companies can easily make animal welfare and sustainability claims that sound wholesome and genuine without changing their practices meaningfully – or at all," claimed Dena Jones of the Animal Welfare Institute (AWI), an American nonprofit advocacy group.

Much needs to be done to better meat and dairy industries, and the World Bank is committed to improving the livestock sector's contribution to sustainable development. Veterinary and animal disease surveillance reduces the economic impact of animal diseases, improves food safety, and reduces risks, bettering the overall health of animals, plants, and humans. Responding with sustainable methods leads to significantly less harm to the environment to benefit the demand for animal products in the future.

# ***Hydrogen-Powered Fuel Cells in Vehicles***

By Liezyl Ann Catahan

## ***Gas and the Atmosphere***

For the longest time, gas-powered cars have damaged the environment as fuel pollutes our atmosphere. Gas is one of the main contributors to our planet's carbon emissions and comes from all types of vehicles. Not only does it affect our atmosphere, but it also affects soil, water, and humans. While vehicles are convenient for travel, they also harm us with the emission of carbon monoxide, which could kill us if we inhale enough of it. Fortunately, technological advances have led us to find newer and safer ways to travel that won't hurt the environment, like hydrogen fuel cells.

## ***Hydrogen Fuel Cells***

But what are hydrogen fuel cells? They're quite similar to electric vehicles but operate using different components. Sir William Robert Grove discovered them in 1838 when he mixed hydrogen and oxygen with an electrolyte and produced electricity. This would later be used as an engine by Ludwig Mond and Charles Langer, whom both attempted to create the first fuel cell in 1889. This idea would start to gain popularity in the 1900s when it would eventually be tested as a car vehicle engine in 1959.

## ***How Fuel Cells Work***

Hydrogen fuel cells work in a complex way. These fuel cells consist of an anode, cathode, and an electrolyte. The anode and cathode both act as catalysts for the electrolyte, as it is placed on either side, essentially sandwiching the electrolyte. Because of this specific arrangement, hydrogen can flow through the anode, separating the hydrogen molecules into protons and electrons. From there, protons can go through the electrolyte and meet up with excess water and gas while electrons move around the electrolyte. This leads to the creation of a running circuit, creating energy.

## ***Hydrogen Cells vs. Electric Engines***

Hydrogen fuel cells and electric engines both work well to sustain the environment. But which one is the better option? They both have their pros and cons, especially since both engines have similar mechanics. Hydrogen fuel cells are quick to refuel and are also abundant, so it won't ever run out. But because they are not very commonly found, hydrogen fuel stations aren't easy to find or accessible. On top of that, they are a lot more expensive when compared to electricity. Electric cars, on the other hand, are a lot cheaper than hydrogen-powered vehicles and don't produce air pollution, but charging takes a lot more time, which affects how far a vehicle can travel.

## ***Hydrogen Cells in Our Communities***

Despite the problems with the efficiency of clean energy usage, we have started to implement this technology into our modern vehicles today. Currently, motor companies such as Daimler, Volvo, and Hyundai work with hydrogen fuel cells in their vehicles, displaying how this idea is starting to grow in popularity in the car industry. Even countries like Germany and China are starting to use hydrogen fuel cells to power their public transportation. There are also everyday cars in Korea that are powered by hydrogen. These examples of hydrogen fuel cells' growing popularity display how far we've come in making ends meet between technology and environmental sustainability.

## ***The Future of Hydrogen Cells***

The future of these hydrogen fuel cells has a lot of potential. The sheer fact that hydrogen fuel cells can power huge vehicles such as ships and aircrafts shows how much fuel cells could help our environment. While they are still not as incredibly well known as electric cars, they will start to rise in the field of technology in the near future. They definitely need to be researched more so that some of their drawbacks can be resolved, such as better travel distance and efficient fuel access. Aside from that, it is definitely mind-blowing to see how far we have come with clean energy and how much more we can achieve in the future.



# Zero-Waste Stores That You Didn't Know About

By Lorin Iglesias, art by Tatiana Torres

In the United States, around 552 million shampoo bottles end up in landfills that could cover 1,164 football fields, says [Johnson and Johnson](#). That said, food packaging and product containers that we use everyday play a big part in this issue, which is why we must make it our mission to support businesses that work towards eliminating this threat. Here are some small yet promising zero-waste stores that are definitely worth checking out.



## Planet Renu



This women-owned business began its zero-waste journey by selling reusable produce bags. Now, they are working with Mount Diablo Yoga Center to bring about a sustainable store that not only helps its customers live a healthy lifestyle but also benefits the environment with its unique zero-waste feature. In Planet Renu, you can buy products like detergents, cleaners, lotion, shampoos, conditioners, baby products, etc., by the (reusable) bottle. Once you've finished the bottle, you can come by the store to have it refilled and pay by the ounce, or you can buy a big refill (with proof of the original product bottle) that you take home to refill the original bottle yourself. Planet Renu's efforts don't stop there. They also offer scheduled presentations for schools, colleges and companies regarding a "zero-waste lifestyle." You can also bring Refill Day to your community by booking a monthly appointment with Planet Renu and they will set up a refill station of shampoo, soaps, detergent, etc. in a location near you!







### Re-Up Refill Shop



The Re-Up Refill Shop is an affordable and sustainable lifestyle store found in Oakland, California. Their products range from jars of herbs and honey to incense sticks. Their website provides the necessary steps on how to work with them to achieve a sustainable lifestyle. Their team encourages everyone to check out their products either online or in their actual store and compare prices to commercially branded alternatives. Once you've zeroed in on the products that you like, you may come by the store with your own containers, or you can use the ones available at the store as well. Next, fill your containers with your desired products, pay for it by weight, and then repeat! The Re-Up Refill Shop highlights how easy it is to be sustainable, especially now that people like them are making it easy for everyone to do so. Imagine, in four easy steps, you could prevent a ton of plastic use and pollution!



### Mighty Market



Mighty Market has a wide variety of products that are made from clean and nourishing ingredients and packaged in zero-waste containers. Located in Martinez, California, this apothecary provides self-care products as well as pet grooming items and more! Furthermore, Mighty Market supports and markets women-made products relating to personal care such as body oils, bath bombs, cleansers, etc. Much like other refill stores, Mighty Market promotes sustainability with the exclusive use of reusable containers. You can also purchase a gift card for their store, which I believe is a smart tactic because it encourages more people to come by and learn more about the wonders of this zero-waste store and urges people into a sustainable lifestyle.

These stores might not be your typical big supermarkets like Costco or Whole Foods, but their efforts to cut down waste are incomparable. These stores use clean ingredients along with environment-friendly packaging so that it not only satisfies the customers but also our planet. The products and items that we use and consume every day correlate to a routine that we follow day by day, which is why it is understandable why some people are skeptical of trying something new. However, the best thing you can do for yourself and the world around you is to take that first step towards a better direction

# Vegan Chocolate Cherry Muffin Recipe

By Brooke Abess

Adapted from: The Minimalist Baker

This recipe feels very fitting for February, and it is one of my personal favorites! I found this recipe a few years ago, and I've never been disappointed with it. These chocolate chip cherry muffins are quick, easy to make, and are sure to be a new favorite. Feel free to make this recipe your own, but keep in mind that some substitutions might change the final product!



## Ingredients:

- ⅓ cup oat flour
- 1 cup whole wheat flour
- ½ tsp baking soda
- 1 tsp baking powder
- 1 pinch salt
- ¼ cup maple syrup, agave nectar, or other liquid sweetener of your choice
- ¼ cup avocado oil
- ¾ cup plant milk
- 1 ½ tsp almond extract
- 1 heaping cup cherries (frozen or fresh, pitted and chopped)
- ½ cup vegan chocolate chips (divided)





# Vegan Chocolate Cherry Muffin Recipe

By Brooke Abess

Adapted from: The Minimalist Baker

## Instructions:

1. Preheat the oven to 375 degrees Fahrenheit (190 degrees Celsius).
2. Combine the flours, baking soda, baking powder, and salt in a mixing bowl.
3. Combine the plant milk, avocado oil, agave nectar or maple syrup, and almond extract in a separate bowl.
4. Add the wet ingredients to the dry and mix until just combined. Fold in the cherries and about  $\frac{3}{4}$  of the vegan chocolate chips until combined.
5. Spoon the mix into greased or paper-lined muffin tins and top with the remaining chocolate chips.
6. Bake for about 23-25 minutes or until golden brown and a toothpick inserted comes out clean. 7. Let the muffins rest in the pan for about 5 minutes, then transfer to a cooling rack to cool completely.
8. Enjoy! These can also be kept in an airtight container in the fridge for a few days, or the freezer.



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