

# Table of Contents

 A. Opinion: The Climate and Community Organizing

2. Bioremediation in OC

3. Inside OCWD's Water Purification System **4. OCEJ Youth E-waste Drive** 

5. OCEJ Youth Fall 2024 Applications

6. About us + contact info

## YOUTH OPINION Climate and the Community

Jorge Figueroa

Note: This is an OPINION article written by a newsletter team member and NOT the OCEJ Organization. All opinions are my own and are purely for informative/educational purposes only.

At my school and in my community, it is common for people to speak about climate change the same way one would talk about Many speak with a novel or a film. disapproval at the ignorance of big businesses, and at the consumers who remain ignorant of carbon emissions. Many more dismiss its existence and are often with their busy classes. too extracurriculars, and the internal identity struggles of a high school student to afford its acknowledgement. And yet, no matter how intensely they feel about the subject, they always tend to position themselves as passive observers. For them, Climate change, no matter its impact or their opinions on the subject, exists elsewhere, and is forever distant from the reality that grounds their lives. They might tune in for the next update, but it never gets close to impacting than their math homework, their friends, or their problems.

This distance, between the person and the problem, is the result of deep psychological obstacles that lie in a person's perception of climate change (I recommend this article by <u>PSYCHOLOGY TODAY</u> for an in-depth analysis). To put it simply, the concept of the climate crisis is extremely hard to grasp for the average person. This is an unfortunate reality, but it is not difficult to see why. People are notoriously bad at long term planning, so how can someone expect people to care about planning for an event whose disastrous effects could begin the future? decades into For many households in my community, paying rent every month is more of a threat to their reality than the collapse of the climate system.

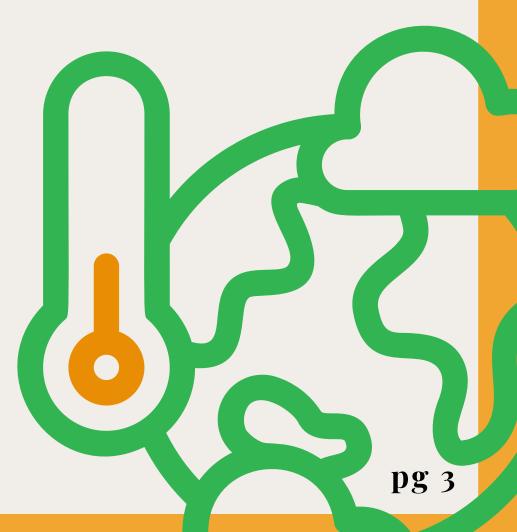
Yet, ultimately, our communities serve an integral part in the fight against the climate crisis, and it is vital that we develop methods to supersede the psychological obstacles which delay large scale and longterm plans. In this respect, community organizations might be an essential element of this fight.

Community organizing offers a method to connect people pressing issues in with methods which national and state climate legislation often fail to; thus, they could prove an essential asset in the fight against climate change. The creation of community climate has strategies been initialize demonstrated to more community input and participation to resolve these issues, and thus surpass many of these psychological obstacles which inhibit Therefore, progress. community organizations would prove an effective the strategy to mend disconnect between the the average person and climate crisis.

For further reading/references, please refer to the references section below:

References:

Hershfield, Hal E. "Future self-continuity: how conceptions of the future self transform intertemporal choice." Annals of the New York Academy of Sciences vol. 1235 (2011): 30-43. doi:10.1111/j.1749-6632.2011.06201.x Schreuder, W., Horlings, L.G. Transforming places together: transformative community strategies responding to climate change and sustainability challenges. Clim Action 1, 24 (2022). https://doi.org/10.1007/s44168-022-00024-3



## AUGUST 2024 NEWSLETTER BIORENEDIATION IN OC Maya Bowen

Bioremediation is a process in which biological systems are employed to remove environmental pollutants from the air, water and soil. These systems are often microorganisms, like fungi and bacteria and have the ability to remediate contaminated soil and oil, among other non-environmental uses. Contaminated soil is a huge environmental issue in Orange County due to previous usage of leaded gasoline. Lead in gas has leaked into our soil, causing it to be contaminated. This is where bioremediation comes in. While there are many types of remediation, and often multiple are used for the same issue, bioremediation is a safe and sustainable solution to this environmental issue. Bioremediation can also happen on many different scales, making it a good solution to multiple problems. For example, bioremediation can occur in one person's backyard when they plant indigenous seeds with remediation properties, in a community by handing out seed balls to plant, or on a bigger level by moving the soil or bioremediating the entire city.

 processes involving working with living plants to remove or contain heavy metals or degrade certain organic contaminants in-situ (on-site)  processes involving working with bacteria to decompose organic contaminants in-situ or exsitu (off-site)

Bio or Microbial Remediation



 processes engaging the decomposing superpowers of fungi to degrade organic contaminants or contain metals





Some plants that help Orange County's soil are Telegraph Weed, California Buckwheat and the California bush sunflower. These plants are particularly good at absorbing heavy metals and are native to Southern California.



## **CALIFORNIA BUCKWHEAT**



## TELEGRAPH WEED



## CALIFORNIA BUSH SUNFLOWER pg 5

### *GWRS Tour Recap:* **Inside OCWD's Water Purification System** Penelope Morris

This month, I was lucky enough to attend a tour of the Orange County Water District's Groundwater Replenishment System (GWRS) along with students from OCEJ's 2024 Environmental Justice Organizing Academy cohort. GWRS, located in Fountain Valley, is the world's largest water purification system for potable reuse, producing 130 million gallons of water per day and minimizing reliance on imported water. 85% of Orange County's drinking water will go through the following steps at GWRS!

### 1. Pre-Purification

Prior to arriving at OCWD, wastewater is treated at the nearby Orange County Sanitation District through a series of filtration processes, which mainly serve to extract large solids from the water.

### 2. Microfiltration

The treated water is then sent to the microfiltration area, where it is pushed through hollow, straw-like polypropylene fibers around 0.2 microns in diameter in 20-minute cycles. This allows bacteria, solids, and some viruses to be filtered from the water.

### 3. Reverse Osmosis

Water is then forced through long cylinders made of a tightly wound, semi-permeable polymer, removing pharmaceuticals, chemicals, and viruses, in the reverse osmosis step. Water that has gone through this step is purified to a near-distilled-quality; minerals will be added back in later on.

### 4. Ultraviolet Light

Any trace organic compounds left in the water at this point are destroyed by exposure to high-intensity UV light with hydrogen peroxide. Calcium hydroxide is then blended with the purified water to restabilize it.

### 5. Water Distribution

About 30 million gallons of water from GWRS are pumped into injection wells, which keep the water pressure within the Orange County basin high enough to create a seawater intrusion barrier. The remaining 100 million gallons are directed to percolation basins, where the water will travel through the groundwater basin, increasing the drinking water supply.



^ Reverse osmosis cylinders

JOINUS

## **EWASTE DRIVE RECAP**

### **OCEJ Youth**

# eWaste **IVe Carnival**

Saturday, August 10 | 9 AM - 12 PM

837 N Ross St Santa Ana, CA, 92701

Bring your old/unused electronics to us, and we will recycle them for you!

#### Examples of eWaste:

- Cell phones
- Printers
- Computer peripherals
- Old car batteries
- Tablets
- Monitors
- Cables/wires
- Small kitchen appliances



- Hazardous waste
- Household batteries
- Plastic, Paper, or Trash
- Lamps and lightbulbs
- Toner cartridges
- TVs
- NO TVs please!



- Join us for fun carnival activities all about recycling!
- · Learn about the importance of eWaste at our info booth

FOILTH

- Make crafts out of recyclables
- Guess the weight of our eWaste to enter a raffle for a gift card
- Donate e-waste to spin the wheel and earn a prize!

\*ALL E-WASTE WILL BE RECYCLED AT THE OCRECYCLING CENTER IN SANTA ANA.

# OCEJ YOUTH EVENT RECAP



8/10/24



Total: recycled over 200 pounds of e-waste!





## E-Waste: 5 Reasons Why We Recycle Rachel Yoon

Look around any garage and you will see old TVs, broken cell phones, obsolete chargers, defunct DVD players. The accumulation of personal devices is hardly a surprise: the average American household discards a whopping 80 kg (176 lbs) of electronic waste per year. Here are the top five reasons why e-waste recycling is now a necessity for both governments and their citizens:

### **1. Environmental Protection**

Electronic devices are created using toxic materials and heavy metals. When disposed of improperly, these hazardous substances can leach into the environment, polluting soil and water sources for both humans and wildlife. Recycling electronic devices is critical in order to save landfill space and reduce the risk of toxic contamination.

#### 2. Resource Conservation

Gold, silver, copper, platinum, and other precious metals are often found in electronic devices, most of which are 100% recyclable. Recovering and repurposing valuable materials is an example of environmental stewardship and a primary contributor to the circular economy.

#### **3. Saving Energy**

Extracting new materials for the production of electronics requires a significant amount of energy. In contrast, recycling e-waste saves nearly 95% of the energy needed to produce it.

#### 4. Circular Economy

According to Ernst & Young, the disposal of e-waste, and thus raw materials, leads to a loss of \$57 billion annually in the United States. Recycling and repurposing contributes to a circular economy, creating jobs and stimulating innovation in the green sector.

### 5. Compliance with State Regulations

Although it is yet to be a federal law, the proper disposal and recycling of e-waste is mandated in many states. California, in particular, implements the Universal Waste Rule, which requires e-waste to be disposed of at designated waste facilities rather than in the household trash.

What may seem like thrown-out garbage to some, is becoming a national problem for the United States - a pile growing so large that it is now impossible to ignore. As the technology market continues to advance, citizens must take on an imperative responsibility to properly handle and recycle electronic waste.

# JOIN THE OCEJ Youth Committee Fall 2024 Cohort

We are looking for **high school students (grades 9-12)** living in **Orange County** who are passionate about local sustainability issues and tackling environmental injustices.

No previous knowledge required! We will teach you everything there is to know about environmental sustainability and justice.

# Apply Now!

Click the linktree in our bio to go to the application form!

Or scan the QR code:



Application closes on AUGUST 25 @ 11:59 PM!



## About the Authors The OCEJ newsletter team

### Jorge Figueroa(He/Him)

I am a well rounded person who tries to get involved in school as much as possible. My goal is to improve and impact the things which matter most to me, and my dream career is to work on environmental/climate research to create solutions for climate change.





### Maya Bowen

People often define me as adventurous, artistic and driven. I love to play sports outside or paint in my free time. My favorite subject in school is science or history, but I love learning in general. The health of our environment is very important to me, which is why I participate in Lionsheart, Rooted and OCEJ to advocate and make changes that benefit our environment.

### Penelope Morris (they/she)

Having grown up in the Pacific Northwest and lived in Orange County since 2019, I have been lucky to interact with a wide variety of social and environmental causes. As part of the OCEJ Youth Committee, my goal is to continue to advocate for underrepresented communities alongside my interest in environmental science.



# **ADDITIONAL INFO**

## About OCEJ Youth

The OCEJ Youth committee is a youth advocacy group comprising 18 high school students from all over Orange County, working together to spread environmental sustainability across the community. The committee is affiliated with OCEJ, a 501(c)3 multi-cultural, multi-ethnic environmental justice organization.



Visit **ocej.org** to learn more about OCEJ and their mission!



## Lots to come this summer!



Follow us on Instagram (*a*ocejyouth) to learn about local environmental issues, stay updated on OCEJ Youth events, and register for monthly digital webinars!



Contact us at **ocejyouth@gmail.com.** We are open for partnerships & collaborations!