

2024

County of Orange/OC Public Works

OC Environmental Resources

2024 Internship Program



<https://ocer.ocpublicworks.com/>

OC Environmental Resources Internship Opportunities Summer 2024



What is the Internship Program? [OC Environmental Resources](#) (part of the County of Orange/OC Public Works) has intern positions available for this summer and early fall. Interns will work with environmental scientists on a wide range of projects involving water quality, watershed management, environmental policy, and regulatory compliance.

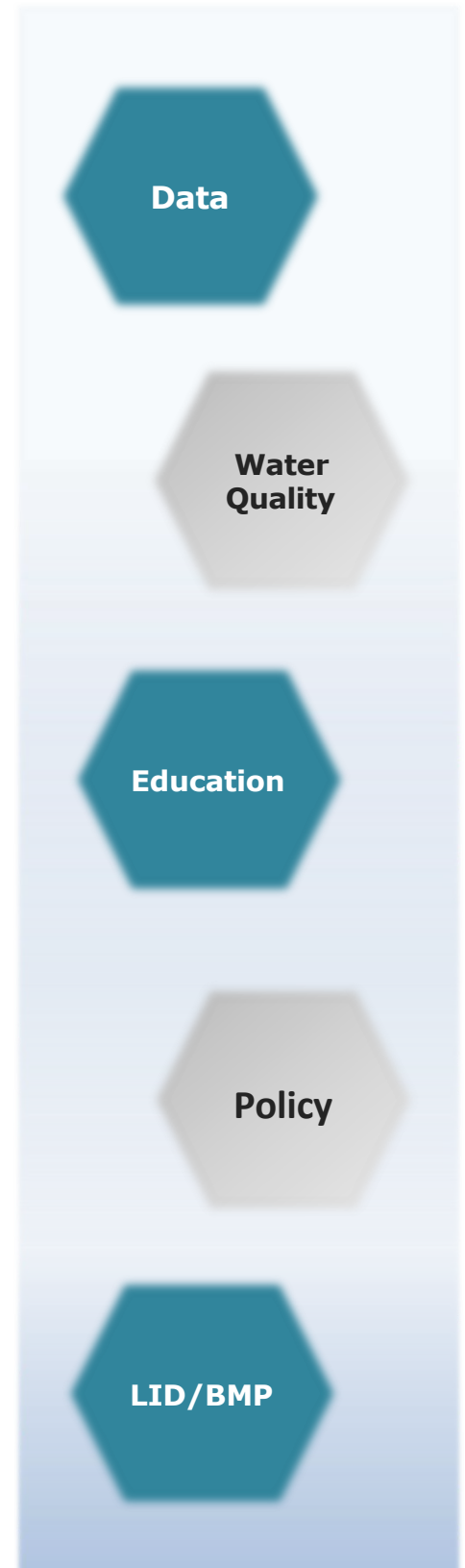
Internship positions are unpaid and require a commitment of at least 2 days a week for a 3-month period and could continue into Fall 2024.

Where is it Based? OC Environmental Resource's main office is located at 2301 N. Glassell Street, Orange, CA 92865. A number of the intern projects will require field activities in different parts of Orange County. For some assignments, interns may be required to operate their own personal vehicle and will receive mileage reimbursement.

Who can apply? College students and recent graduates with a strong interest in water quality issues are encouraged to apply. Some of the projects may require a strong science background and specialized coursework.

How do I apply? Please review the projects on the following pages and determine which one is of most interest to you. You must then submit: 1) a cover letter, clearly identifying your project selection and your reasons and applicable skills for selecting it; and 2) your current resume, to **Dallana De Leon** at dallana.deleon@ocpw.ocgov.com with the subject line "Summer 2024 Internship Application". Applications that list more than one project will not be considered. Some projects may have multiple interns.

The application period will close at 11:59 pm on **April 28, 2024**. As some projects tend to fill up quickly, applicants are encouraged to apply early. The applications will be used as part of the selection process, so please ensure they fully reflect your qualifications and interests. The candidates whose applications best meet the needs of the projects will be scheduled for interviews.



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Project 1: Water Quality Monitoring Support (North/South Watersheds Programs)

This internship will support various water quality monitoring activities throughout the County at channels, creeks, outfalls, and coastal ocean for physical, chemical, and biological (including microbial) analyses. The monitoring data will then be used in various compliance, investigative, and research projects and programs to better understand aquatic resources.

The intern will assist with 1) field monitoring support for permit compliance, 2) monitoring of storm drain outfalls; 3) using a laboratory information management system, 4) on-site analysis of water quality, and 5) other monitoring, research projects and lab work.

The intern should have a reliable mode of transportation and a strong interest in fieldwork and water quality science. Experience in field work is a plus.



Project 2: Water Quality Asset Management (North/South Watersheds Programs)

The intern will review Water Quality Management Plans (WQMPs) and utilize data collection tools associated with a proprietary assets management application (OC Stormwater Tools) to identify and geolocate structural water quality assets, delineate drainage areas, and evaluate the technical performance of identified assets. This work will assist in understanding and modeling the performance of these assets. The intern may also assist in maintaining regulatory compliance with Orange County's municipal stormwater permits.

The intern will 1) review WQMPs; 2) populate jurisdictional water quality asset inventories; 3) collect and log field data; 4) interpret technical specifications or engineering calculations, as needed; and 5) support the program staff with tracking regulatory items and coordinating committees comprised of key stormwater stakeholders.

The intern should have a strong interest in regulatory compliance and water quality, have reliable transportation, be comfortable with independent field work, and be able to interact with County staff or consultants.



Project 3: Green Infrastructure Program Support (Countywide Compliance Program)

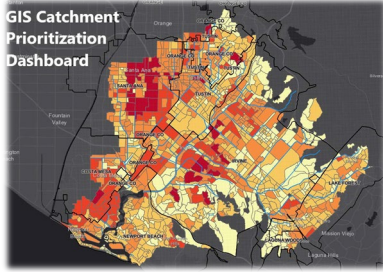
This internship will support the Green Infrastructure Program's efforts managing an inventory of Water Quality Management Plans (WQMPs) and their associated best management practices (BMPs). Tasks for this project include reviewing recently approved WQMPs, inputting key attributes and files into an existing database, verifying BMP coordinates, field inspections, and assisting in the development of GIS-based layers. This project will also include opportunities to assist staff with construction site inspections and water quality monitoring at various locations throughout Orange County.

The intern should have a strong interest in GIS mapping, environmental policy, field work, and may be asked to operate their personal vehicle to perform tasks in the field.





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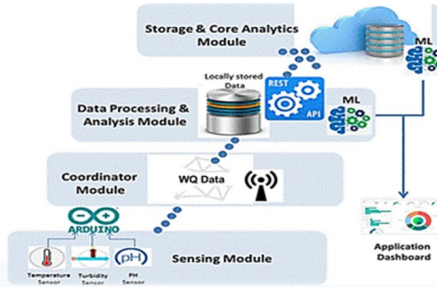


Project 4: Stormwater Compliance Support (Countywide Compliance Program)

This internship will expose the intern to the variety of program compliance elements which make up the basis of the County of Orange and Orange County Flood Control District stormwater programs. Multiple metrics are needed to track and report progress and compliance with two separate regional NPDES permits issued to the County.

The intern will assist with one or more of the following projects:

- 1) GIS based and/or web-based data management of commercial and industrial inventories
- 2) website reorganization, design, and mockup of stormwater program elements
- 3) SharePoint- based hub site for County of Orange's Local Implementation Plan (LIP)



Project 5: Smart Water Quality Sensors (North OC Watersheds Program)

OC Environmental Resources has been working with some external research institutions on low-cost miniature water and flow sensors that can detect pollution incidents in the storm drain system. The sensors send real-time, continuous water quality and flow data to a cloud-based dashboard, and anomalies can be detected through a customized algorithm under development. The system will be pilot tested this summer.

The intern will: 1) conduct routine field sensor maintenance; 2) monitor online dashboard and assist in the development of the algorithm; and 3) interface with another team to confirm anomalies with field/lab testing and analyses.

The intern should have a strong interest in and understanding of water quality, electronics, and data science.



Past Internship Experiences and Testimonials



“This Internship with Orange County Public Works was both a valuable and eye-opening experience. I gained practical knowledge and skills and worked with a dedicated team. I am grateful for the opportunity this provided me to contribute to impactful projects and I appreciate the guidance I received. I look forward to applying these learning to my future endeavors.”

- Miguel Leon., Summer 2023

“I think this internship was very insightful in the operations of my local government and it was a great opportunity to work with professionals in the field. The environment was very welcoming and provided an enriching space for learning and growing.”

- Evan Zhou., Summer 2023