



# 2024/25 ANNUAL REPORT




An overview of Poseidon Education's efforts, impact, and partnerships in the 2024/25 school year.

POSEIDON EDUCATION™

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# A Note

As we reflect on this past year, I am filled with deep gratitude and optimism for the future of Poseidon Education and the communities we serve. At a time when our water systems face increasing pressure from climate change, aging infrastructure, and a growing workforce shortage, our mission has never been more urgent. We believe the long-term sustainability of our water resources depends not only on innovation and policy, but on people—informed, inspired, and empowered water stewards and leaders.

This year, Poseidon Education continued to demonstrate the power of early, meaningful engagement by introducing students—some as young as fifth grade—to real-world water challenges and careers. Through hands-on learning experiences, students developed Water Resource Management Plans and Stormwater Pollution Prevention Plans, connected classroom learning to community impact, and began to see themselves as part of the solution. These experiences are already leading to improved water quality outcomes, internships, and students pursuing water-related career pathways.

None of this work would be possible without the dedication of our educators, students, partners, funders, and supporters. Together, we are proving that education can be a workforce strategy and that investing in young people is one of the most effective ways to ensure a resilient water future.

With optimism for the future,

Patti Diaz-Zachary
Chief Executive Officer

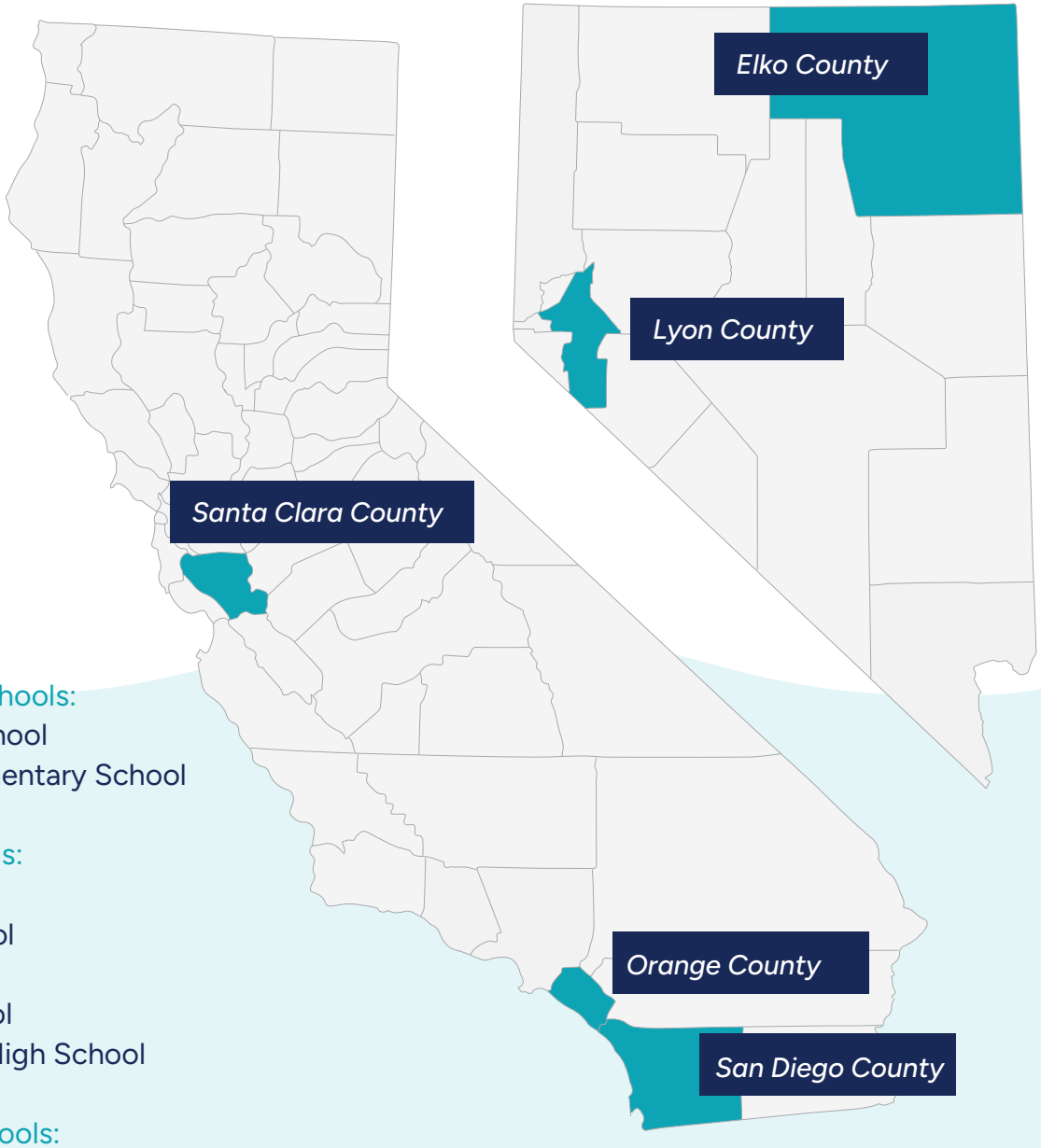
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# Schools and Cities Reached this School Year

10 schools

7 cities




## Nevada

Elko County Schools:
Adobe Middle School

Lyon County Schools:
Fernley High School

## California

Santa Clara County Schools:
Rolling Hills Middle School
Louise Van Meter Elementary School

Orange County Schools:
Cypress High School
Sunny Hills High School
Tesoro High School
Thurston Middle School
Unity Middle College High School

San Diego County Schools:
Knob Hill Elementary School

= 2024-25 program school located in this county

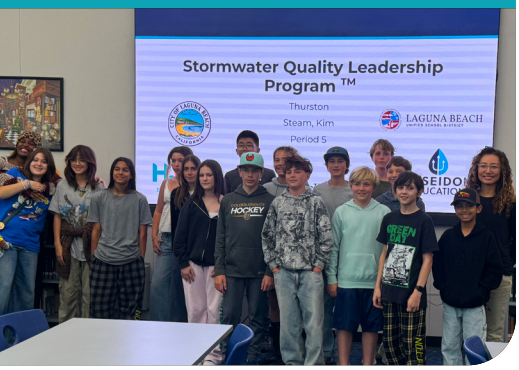
## In the news

### The LA Times

In May, the *LA Times Daily Pilot* highlighted Jennifer Kim's class at Thurston Middle School for their creative work in the Stormwater Quality Leadership Program.

### Los Gatan

In June, the *Los Gatan* recognized students from Louise Van Meter Elementary and Rolling Hills Middle School in Los Gatos for their involvement in the Stormwater Quality Leadership Program.




# Watersheds

By examining their school grounds as a micro-watershed, students designed professional water management solutions. Below are the broader watersheds affected by their efforts:

### Southern California

San Juan Creek Watershed
Laguna Coast Watershed
Santa Ana River Watershed
Carbon Creek Watershed

### Northern California

West Valley Watersheds:
Santa Clara Basin Watershed
Guadalupe River Watershed

### Nevada

Humboldt River Watershed
Truckee River Watershed

**Watershed:**

An area of land that channels all stormwater into a common body of water



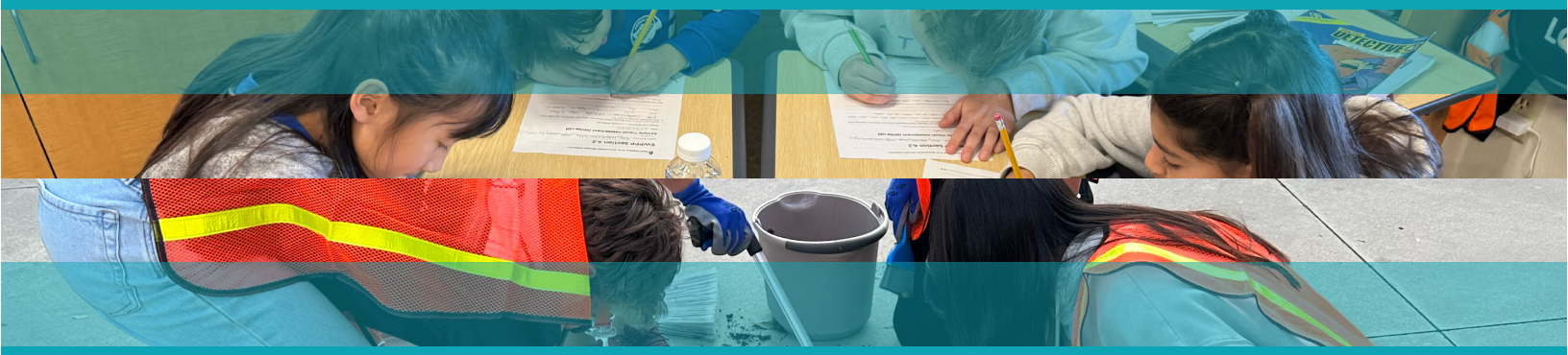
# 810 student interns

**SWPPP:**

Stormwater Pollution Prevention Plan; a site-specific plan that identifies potential pollution sources and outlines BMPs to reduce pollutants



# 9 SWPPP reports created (and 1 WRMP)



# 45 drain sites studied and cleaned



# 77 lbs. of debris removed from catch basins



# Guest Speakers

## Stormwater Quality Leadership Program



Anthony Delgado
Water Distribution Supervisor
City of Fullerton



Jonathan Humphrey
Spill Response Specialist
Orange County Public Works



Jenny Gomez
Senior Environmental Specialist
Orange County Sanitation District



Nate Adams
Director of Water Resiliency
Santa Margarita Water District



Julie Schaer
Senior Environmental Specialist
West Valley Stormwater Authority



Victoria Tiscareno
Supervisor Associate Engineer
Nevada Department of Transportation



Jerome Joaquin
Public Works Admin. Manager
City of Fullerton



Andrew Grajeda
Water Systems Manager
City of Fullerton



Louis Gonzales
Water Distribution Supervisor,
City of Fullerton



Delaney Felix
Water Quality Supervisor
City of Fullerton



Olivia Martinez
Environmental Services Coordinator
City of Fullerton



Ronnie Acosta
Water Production Supervisor
City of Fullerton




Sabah Awan
Environmental Resources Specialist
Orange County Public Works

Thank you to the dedicated water industry professionals who shared their knowledge and passion for water with our students! These interactions give student leaders the chance to meet experts from a wide range of water careers and may even inspire their own future paths.

## Water Resources Leadership Program



Jo MacKenzie
Board Member
Vista Irrigation District



Peter Kuchinsky II
Board Member
Vista Irrigation District



Glenn Pruim
Former General Manger
Vallecitos Water District



Lisa Urabe
Public Information Representative
Vallecitos Water District



Sarah Ahmad
Board Member
San Marcos Unified
School District



Andy Johnson
Superintendent
San Marcos Unified
School District



Mike Sannella
Deputy Mayor
City of San Marcos



Reed Thornberry
Watershed Program Manager
City of San Marcos

# Water Taste Test

As part of the Water Resources Leadership Program, Knob Hill Elementary School hosted a Water Taste Test, where 112 students, teachers, and VIP guests—listed above—compared tap, bottled, and filtered water. Many participants were surprised by how challenging it was to distinguish between the different types of water, especially considering the significant price disparity. Tap water costs around two cents per gallon, while bottled water can exceed $8 per gallon. This event underscored the value of local water resources and raised awareness about the financial and environmental costs of bottled water. It also reinforced the program's focus on sustainability, giving participants a deeper appreciation for tap water as a sustainable and cost-effective solution.



# Field Trips

Seven classes had the opportunity to embark on a field trip this school year, linking their studies on stormwater and water management with real-world operations at various water facilities!

**7** field trips

**4** sites



Orange County Water District Groundwater Replenishment System

Nevada Department of Transportation Maintenance Yard

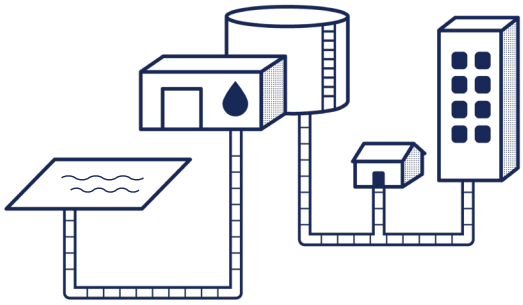




Santa Margarita Water District Chiquita Reclamation Plant

South Orange County Water Authority JB Latham Treatment Plant





Field trips are more than a day away from the classroom. They give students the opportunity to connect with professionals across the water industry, from plant operators and technicians to hydrologists and environmental compliance officers.

## This year's field trips introduced students to the following careers:

Communications Specialist
Recharge System Operator
Hydrogeologist
Environmental Health & Safety Specialist

Environmental Engineer
Stormwater Manager
Environmental Compliance Specialist

Communications & Customer Engagement Director
Instrumentation Technician
Hydrogeologist
Laboratory Technologist

Chief Plant Operator
Laboratory Technician
Environmental Compliance Manager

**Source Control:**

Reducing or stopping pollution at its origin, before it enters a water system or the environment

# Stormwater BMP Gallery

A key aspect of the Stormwater Quality Leadership Program, students implement source control and treatment control BMPs to manage stormwater pollution. Explore their work below:

## Drain cleanings and maintenance

Students surveyed and cleaned 45 storm drains and catch basins, utilizing PPE and professional equipment to remove debris and directly improve drainage systems. Kudos to Fernley High School for removing 38.6 pounds of debris — more than any other school!









## Campus cleanups and incentive programs

This year, multiple schools led cleanup initiatives. Fifth graders at Louise Van Meter Elementary School ran a four-day program during lunch period, where students earned stickers for picking up litter around campus.










## Peer-to-peer outreach



Classes inspired their peers by creating public service announcements, designing classroom posters, delivering slideshow presentations, running educational booths, and more!




Rolling Hills Middle School students distributed stickers for water bottles as a daily reminder of how litter impacts our waterways (see two designs at right).









Cypress High School students designed ground decals to replace over 300 outdated stencils for social distancing. Funded and printed by Poseidon Education, students then installed the decal across the campus (see design above).

Fernley High School students designed and placed banners in high-traffic, high-pollution areas featuring a QR code linked to a Google Classroom page where they upload photos of trash collected on campus to earn points toward prizes.









## School spotlight

Students at Tesoro High School culminated their program by hosting a symposium, featuring educational materials that engaged attendees in conversations about the BMPs they designed. One creative solution was a series of vibrant trash can murals promoting proper waste disposal, each featuring a QR code with information about the species depicted and the impacts of pollution on their survival. Student teams also worked on social media campaigns and informative campus posters.

# Proposed Stormwater BMPs

- Gravel/sediment filters
- Hooded trash can systems to reduce wind-blown litter
- UV-light-based water sanitization to treat coliform bacteria before discharge
- Bioswales and vegetated areas to improve filtration and slow stormwater flow
- Curb cuts to redirect runoff into vegetated areas, enhancing water infiltration
- Permeable pavers to increase groundwater recharge and reduce runoff
- Reduce fertilizer application near road-adjacent planters
- Jute netting for erosion control
- Reinforce concrete to prevent drain intrusion and improve system durability
- Downspout extensions to redirect runoff

## Proposed BMPs

Some BMPs are labeled "Proposed" if not completed by the end of the academic session. This allows them to be carried forward into the next school year's program and gives students the opportunity to think creatively beyond budget limitations.



**BMP:**

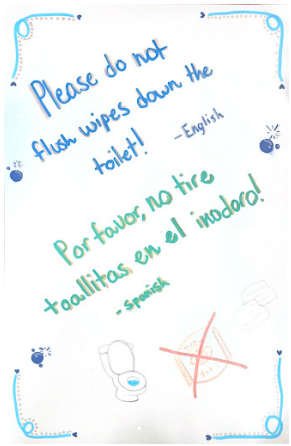
Best Management Practice; a measure or structural control used to manage stormwater runoff flow and improve water quality

# Water Resources BMP Gallery

Fifth graders across three classrooms at Knob Hill Elementary School took on a range of challenges affecting their school's water systems, including litter on campus, single-use water bottles, toilet leaks, pipe clogs, and overuse of potable water. Explore their work below:

## Peer-to-peer outreach

Students took the lead in creating outreach materials and sharing them across campus, raising awareness about wastewater challenges and the impact of litter on stormwater runoff. After discovering that handwashing uses approximately 2,632 gallons of water per day—nearly 20% of the school's potable water—the students brought their findings into classrooms, educating peers through interactive handwashing demonstrations focused on conserving potable water.





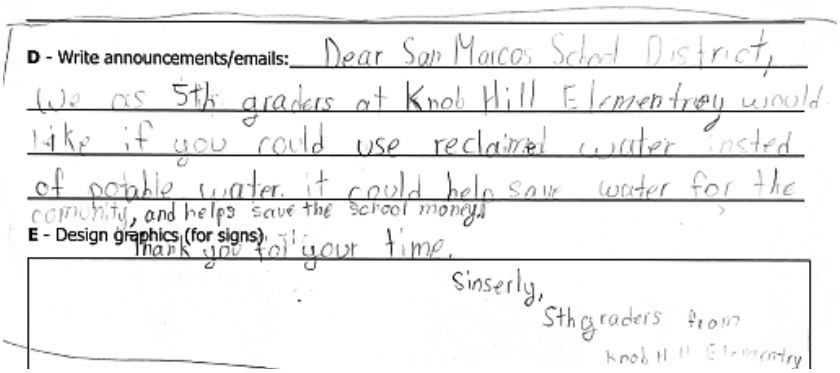




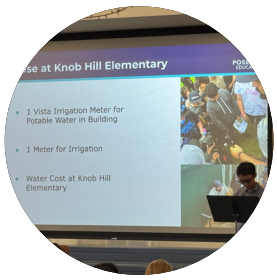


## Engaging decision-makers

They also contacted school district officials to advocate for switching the irrigation system from potable to reclaimed water, a change they calculated could save the school more than $9,000 annually.


D - Write announcements/emails: Dear San Marcos School District, We as 5th graders at Knob Hill Elementary would like if you could use reclaimed water instead of potable water. it could help save water for the community, and helps save the school money.
E - Design graphics (for signs) Thank you for your time.
Sinserly, 5th graders from Knob Hill Elementary



# Voices from the Classroom



"[My favorite part was] being able to learn about the problems people make, like pollution...and how I can help."

- J. Jasso, student at Thurston Middle School



"My favorite part was when we collected water samples when it was raining."

- J. Fine, student at Thurston Middle School




"This is an amazing project and I am very happy to have had this opportunity to work with Poseidon Education."

- S. Danner, program teacher at Tesoro High School



"Students took ownership of their own drains and enjoyed problem solving for a hands-on situation."

- K. Noonan, program teacher at Fernley High School



"Collecting and testing our water samples was really eye opening for all of us."

- P. Brunet, program teacher at Cypress High School

# 2024/25 Partnerships

Thank you to our partners for their essential role in supporting water education programs that empower students to tackle real-world water challenges through hands-on learning.

West Valley Stormwater Authority supported the Stormwater Quality Leadership Program at:

Louise Van Meter Elementary School
Rolling Hills Middle School

Valley Water supported the Stormwater Quality Leadership Program at:

Louise Van Meter Elementary School
Rolling Hills Middle School

Vallecitos Water District supported the Water Resources Leadership Program at:

Knob Hill Elementary School

Orange County Public Works supported the Stormwater Quality Leadership Program at:

Cypress High School
Thurston Middle School

Orange County Department of Education supported the Stormwater Quality Leadership Program at:

Unity Middle College High School
Sunny Hills High School
Tesoro High School

Nevada DOT supported the Stormwater Quality Leadership Program at:

Fernley High School
Adobe Middle School

