

# Environmental Laboratory and Ocean Monitoring Program (Division 630)

Current mooring (mini)



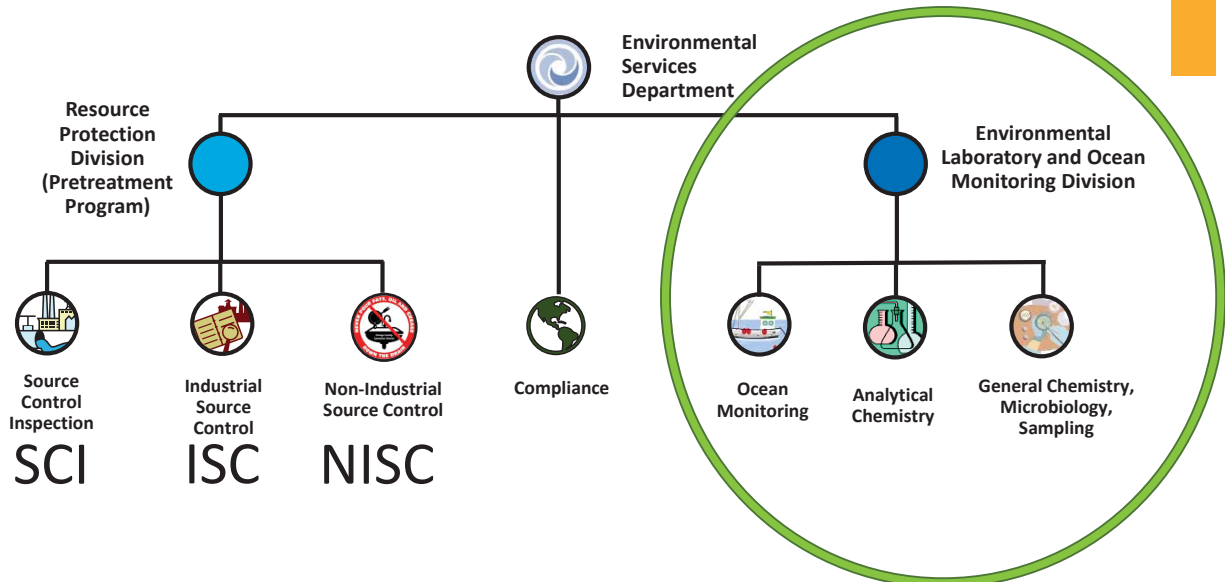
Old mooring



*Presented by:*  
*Samuel Choi*  
*Environmental*  
*Services*  
*Department*  
*Operations*  
*Committee*  
*June 7, 2023*



## Environmental Services Department



# Environmental Monitoring

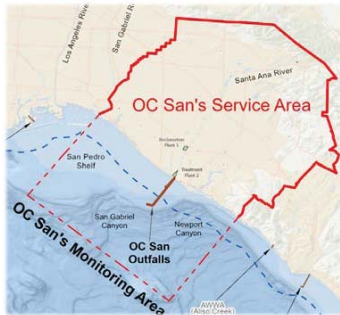


Code of  
Federal  
Regulations



STATE WATER RESOURCES CONTROL BOARD  
REGIONAL WATER QUALITY CONTROL BOARDS

California Ocean Plan  
Santa Ana RWQCB Basin Plan



## NPDES Permit OC San Ocean Monitoring and Reporting Program

- Core Compliance Monitoring
- Regional Monitoring
- Strategic Process Studies

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# Accreditations (Quality Assurance)

## National

State of Utah  
Department of Health and Human Services  
Environmental Laboratory Certification Program  
*Accreditation is hereby granted to*  
Orange County Sanitation District  
10844 Ellis Ave  
Fountain Valley, CA 92708  
*Has conformed with the 2016 TNI Standard*  
*Scope of accreditation is limited to the State of Utah accredited fields that accompany this Certificate*  
EPA Number: CA00307  
Expiration Date: 9/30/2023  
Certificate Number: CA003072023-8  
*Kristin Brown*  
Kristin Brown  
Program Manager  
Continued accredited status depends on successful ongoing participation in the program.

## State

CALIFORNIA STATE  
ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM  
**CERTIFICATE OF ENVIRONMENTAL LABORATORY ACCREDITATION**  
Is hereby granted to  
Orange County Sanitation District  
Laboratory, Monitoring, and Compliance  
10844 Ellis Avenue  
Fountain Valley, CA 92708  
Scope of the certificate is limited to the "Fields of Accreditation" which accompany this Certificate.  
Continued accredited status depends on compliance with applicable laws and regulations, proficiency testing studies, and payment of applicable fees.  
This Certificate is granted in accordance with provisions of Section 109825, et seq. of the Health and Safety Code.  
Certificate No.: 1861  
Effective Date: 9/1/2021  
Expiration Date: 8/31/2023  
*Christine Sabin*  
Christine Sabin, Chief  
Environmental Laboratory Accreditation Program  
Sacramento, California  
subject to forfeiture or revocation

## Regional

South Coast Air Quality Management District  
September 8, 2022  
Dr. Samuel Choi  
Orange County Sanitation District  
Environmental Laboratory & Ocean Monitoring Division  
10844 Ellis Avenue  
Fountain Valley, CA 92708-7018  
Subject: LAP Renewal Notice  
Reference # 05LA0519  
Dear Dr. Choi:  
We completed our review of the renewal application you submitted for approval under the South Coast Air Quality Management District's Laboratory Approval Program (LAP). We are pleased to inform you that your firm is approved for the period beginning September 30, 2022, and ending September 30, 2023 for the following method:  
South Coast AQMD Method 307-91  
Thank you for participating in the LAP. Your cooperation helps us to achieve the goal of the LAP: to maintain high standards of quality in the sampling and analysis of source emissions.  
You may direct any questions or information to LAP Coordinator, Colin Eckerle. He may be reached by telephone at (909) 396-2476, or via e-mail at [ceckerle@aqmd.gov](mailto:ceckerle@aqmd.gov).  
Sincerely,  
*D. Sarkar*  
Dipankar Sarkar  
Program Supervisor  
Source Test Engineering

# Laboratory and Ocean Monitoring Division

## Mission Statement

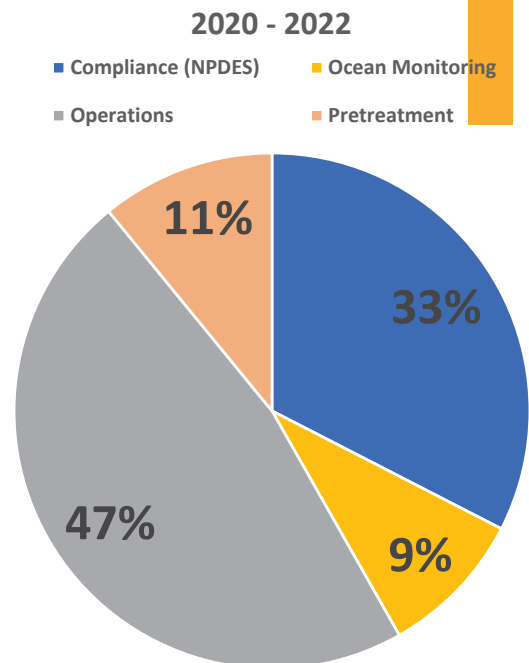
To ensure safe recreational and environmental protection; perform sampling, analysis and reporting to document OC San's exemplary regulatory compliance, inclusive of air, biosolids, water recycling and ocean discharge



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# Laboratory Tests

No. of Laboratory Tests			
Sample Type	2020	2021	2022
General Chemistry	67668	67604	67752
Metals	10101	9989	9799
Microbiology	23188	22066	20432
Analytical Chemistry	6160	5635	5407
Toxicology	60	70	61
<b>Total</b>	<b>107,177</b>	<b>105,364</b>	<b>103,451</b>



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# Laboratory Instruments

## Sample Preparation

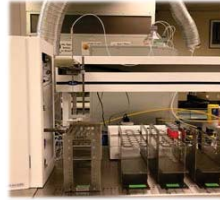
ASE



AutoTrace



GPC



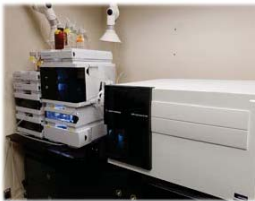
Concentrator



## Analytical Instruments

Andor (LC-MS)

PFAS, PPCPs, IEDCs, DA, Hormones



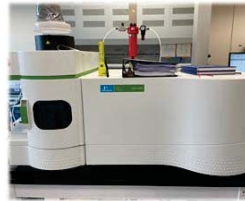
Annikan (TQ GC-MS)

PCBs, Pesticides



ICP-MS

Metals



FTIR

Microplastics



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# Ocean Monitoring

R/V Nerissa



Water Quality



Ocean Bottom Health



Fish Health



Oceanography



Toxicology



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# 2021-2022 OC Beach Report Card



2021-2022 GRADE	Summer Dry ☀️		Winter Dry ❄️		Wet Weather ☁️	
	#	%	#	%	#	%
<b>A</b>	121	96%	101	86%	73	53%
<b>B</b>	4	3%	10	9%	17	12%
<b>C</b>	0	0%	4	3%	19	14%
<b>D</b>	0	0%	1	1%	9	7%
<b>F</b>	1	1%	1	1%	19	14%
<b>A+B</b>	125	99%	111	95%	90	66%
<b>C,D,F</b>	1	1%	6	5%	47	34%

## HONOR ROLL 2021-2022

BEACH NAME	COUNTY
Venice City Beach, at Brooks Ave. drain	Los Angeles
Rancho Palos Verdes, Long Point	Los Angeles
Royal Palms State Beach	Los Angeles
Palos Verdes Estates, at Malaga Cove trail outlet	Los Angeles
Las Tunas County Beach, at Pena Creek	Los Angeles
Nicholas Beach, at San Nicholas Canyon Creek	Los Angeles
Dana Point Harbor Youth Dock	Orange
Dana Point Harbor Guest Dock	Orange
Poche Beach	Orange
Doheny Beach	Orange
Doheny State Beach, End of the Park	Orange
Doheny State Beach, at Last Campground	Orange
Corona Del Mar	Orange
Crystal Cove	Orange
Marine Science Institute Beach	Orange
Dana Point, Capistrano County Beach	Orange
Doheny State Beach, Pedestrian Bridge	Orange
Dana Strands Beach	Orange
Huntington City Beach, at 17th Street	Orange
Bolsa Chica Reserve, at Flood Gates	Orange
Surfside Beach, at Sea Way	Orange
San Clemente, at Avenida Calafia	Orange
Salt Creek Beach	Orange
Laguna Lido	Orange
Treasure Island Beach	Orange
Del Mar, at 15th Street	San Diego

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## Team in Action



*From Left to Right*

Staff

*Dr. Jeff Armstrong (Retired)*

*Laura Terriquez*

Former Directors

*Keith Curry*

*Bob Kiley*

Upcoming events for our Board

- Rig fishing – 9/23/2023
- Day at the Dock – 10/4/2023

# Looking Forward (Research and Innovation)

## Strategic Process Studies (SPS)

- Plume modeling
- Changes in discharge footprint using LABs
- Meiofauna baseline assessment
- Use of bioassays for biological response
- Microplastics characterization

## Regional Monitoring

- Leverage resources to address regional issues such as:
  - Ocean acidification and Hypoxia (OAH)
  - Persistent contaminants

## Innovation and Research

- Method development – PFAS, Microplastics, Domoic Acid
- Explore cutting edge technologies

## COVID-19 Wastewater Surveillance

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# OC San Partners



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# Serving the Community

## Protect Public Health and the Environment

Water Quality: **Safe to Swim**

Sediment Quality: **Health Ecosystem**

Fish Health: **Safe to Eat**

## Public Outreach

Laboratory Tours (including virtual)

Open House

Science Fairs

Children's Water Festival



## Technical/Professional Organizations

SCAMIT

SETAC

ELTAC

ASM

TNI

Standard Methods

CSEA

CWEA

SCAS

SCAITE

SCUM

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# Questions

## Contact Info

Samuel Choi  
schoi@ocsan.gov  
714-593-7497



## Where's Kevin?

