

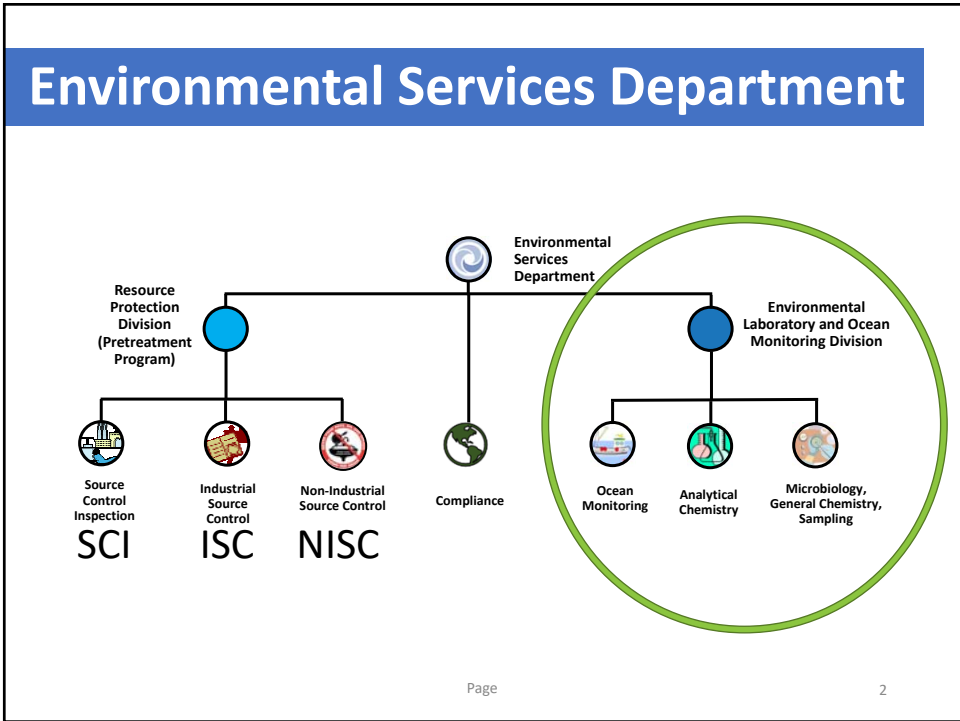


# Environmental Laboratory and Ocean Monitoring Program (Division 630)

Presented by:  
Samuel Choi  
Environmental Services Department  
Administration Committee  
July 14, 2021




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# Environmental Monitoring

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**United States  
Environmental Protection  
Agency**

**Code of  
Federal  
Regulations**

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**CALIFORNIA  
WATER BOARDS**  
State Water Resources Control Board

STATE WATER RESOURCES CONTROL BOARD  
REGIONAL WATER QUALITY CONTROL BOARDS

**California Ocean Plan  
Santa Ana RWQCB Basin Plan**

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**NPDES Permit**

**OC San Ocean Monitoring and Reporting Program**

**Compliance Monitoring**

**Regional Monitoring**


**Strategic Process Studies**

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# Accreditations (Quality Assurance)


National

**State of Utah**  
Department of Health  
Environmental Laboratory Certification Program  
*Certification is hereby granted to*  
**Orange County Sanitation District**  
10844 Ellis Ave  
Fountain Valley, CA 92706  
This certification is issued to the State of Utah accredited labs that accompany this Certificate.  
EPA Number: CA00907  
Expiration Date: 9/30/2021  
Certificate Number: CA003020204  
  
Dr. Erik Christensen  
Director, Utah Public Health Laboratory  
Continued accredited status depends on successful ongoing participation in the program.

State



Regional



March 2, 2021

Dr. Samuel Chen  
Orange County Sanitation District  
Environmental Laboratory & Ocean Monitoring Division  
10844 Ellis Avenue  
Fountain Valley, CA 92708-7018

Subject: LAP Renewal Notice  
Reference # 15LAP0119


Dear Dr. Chen:

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 lab is approved for the period beginning March 2, 2021, and ending September 30, 2023 for the following method:

Method 817-01

Thank you for participating in the LAP. Your participation helps us to achieve the goal of the LAP: to maintain high standards of quality in the sampling and analysis of water resources.

You may direct any questions or submissions to LAP Coordinator, Chita Ekerle. She may be reached by telephone at (951) 360-2476, or via e-mail at [cekerle@aqmd.gov](mailto:cekerle@aqmd.gov).

Sincerely,  
  
Chita Ekerle  
Program Supervisor  
Source Test Engineering

South Coast Air Quality Management District  
11800 Century Drive, Diamond Bar, CA 91765-4178  
(951) 370-2500 • [www.aqmd.gov](http://www.aqmd.gov)

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## 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*



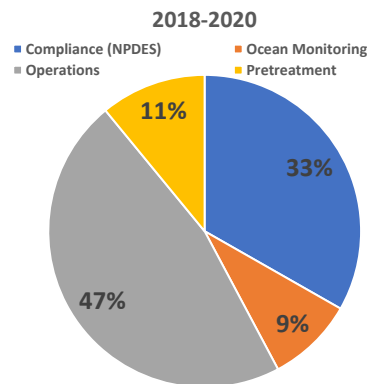
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## Laboratory Tests

Sample Type	No. of Laboratory Tests		
	2018	2019	2020
General Chemistry	59,282	56,274	58,259
Metals	10,227	10,517	10,089
Microbiology	22,878	23,377	23,185
Organic Chemistry	6,721	6,140	6,036
Toxicology	69	64	60
<b>Total</b>	<b>99,177</b>	<b>96,372</b>	<b>97,629</b>





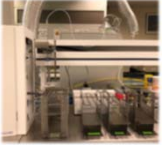

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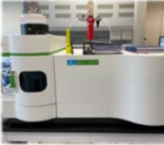

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## Laboratory Instruments

**Sample Preparation**

<b>ASE</b> 	<b>AutoTrace</b> 	<b>GPC</b> 	<b>Concentrator</b> 
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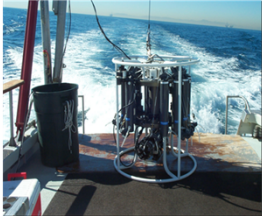




**Analytical Instruments**

<b>Gandalf (GC-MS)</b> <small>PAHs</small> 	<b>Xena (GC-MS)</b> <small>PCBS, Pesticides, PAHs</small> 	<b>ICP-MS</b> <small>Metals</small> 	<b>FTIR</b> <small>Microplastics</small> 
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## Ocean Monitoring

<b>R/V Nerissa</b> 	<b>Water Quality</b> 	<b>Ocean Bottom Health</b> 
<b>Fish Health</b> 	<b>Oceanography</b> 	<b>Toxicology</b> 

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## 2020-2021 OC Beach Report Card



**2020-2021  
Beach Report Card**

**ORANGE COUNTY**

2020-2021	Summer Dry ☀️		Winter Dry ☁️		Wet Weather ☁️	
	#	%	#	%	#	%
<b>A</b>	118	88%	122	90%	24	31%
<b>B</b>	11	8%	9	7%	9	12%
<b>C</b>	4	3%	5	4%	2	3%
<b>D</b>	1	1%	0	0%	10	13%
<b>F</b>	0	0%	0	0%	33	42%
<b>A+B</b>	129	96%	131	96%	33	42%
<b>C,D,F</b>	5	4%	5	4%	45	58%

### HONOR ROLL

2020-2021

4+

BEACH NAME	COUNTY
Crown Beach, at Sunset Rd.	Alameda
Royal Palms State Beach	Los Angeles
Leo Carrillo Beach, at Arroyo Sequit Creek	Los Angeles
Puerco State Beach, at creek mouth	Los Angeles
Las Flores State Beach, at Las Flores Creek	Los Angeles
Broad Beach, at Trancas Creek	Los Angeles
Escondido State Beach, at Escondido Creek	Los Angeles
Nicholas Beach, at San Nicholas Canyon Creek	Los Angeles
Newport Bay, Promontory Point	Orange
Crystal Cove (CSDOC)	Orange
Newport Beach, at Orange Street	Orange
Newport Beach, at 52nd/53rd Street	Orange
Balboa Beach Pier	Orange
Balboa Beach, The Wedge	Orange
Crystal Cove	Orange
1000 Steps Beach, at 9th St.	Orange
North Aliso County Beach	Orange
Treasure Island Beach	Orange
Carlsbad, at Encina Creek	San Diego
Carlsbad, at Palomar Airport Rd.	San Diego

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## Team in Action



From Left to Right

**Staff**

Dr. Jeff Armstrong  
Laura Terriquez

**Former Directors**

Keith Curry  
Bob Kiley

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## 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	TNI Committee	SCAS
SETAC	Standard Methods	SCAITE
ELTAC	CSEA	SCUM
ASM	CWEA	

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# Questions

## Contact Info

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



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