

Orange County Sanitation District Wastewater Treatment

Presented By:

*April Frost, Chief
Plant Operator
Plant No. 1*

*Administration
Committee*

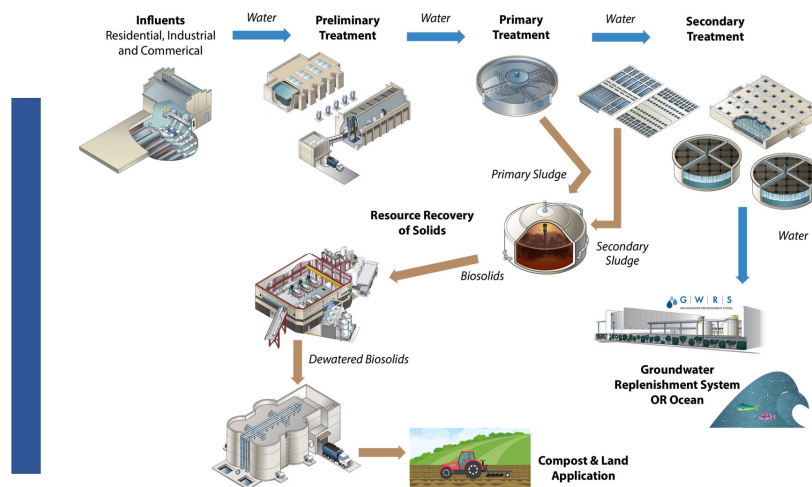
May 11, 2022



OC SAN
ORANGE COUNTY SANITATION DISTRICT

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Water Reclamation Process



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Metering and Diversion Structure



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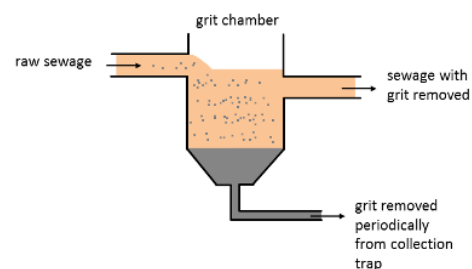
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Preliminary Treatment

Barscreen



Grit Chamber



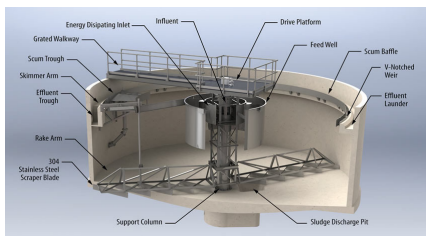
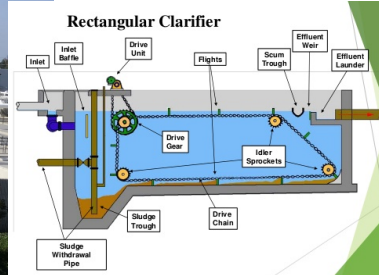
Grit is mostly inorganic material like sand, gravel, and eggshells.

Grit is very abrasive and heavy. It clogs flow channels and digesters and wears out pumps.

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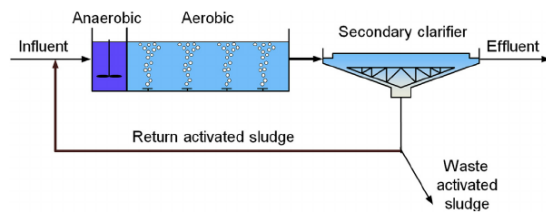
Primary Treatment



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Secondary Treatment

Activated Sludge Process



**Trickling Filter
at Plant No. 1**



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Effectiveness of Water Treatment

Raw Sewage



Primary Treated Effluent



Secondary Treated Effluent



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Solids Recovery Process

Anaerobic Digester



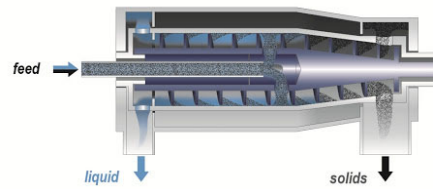
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Dewatering Operation



Centrifuge System
at Plant No. 1



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Truckloading



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Central Generation Engines



Plant No. 2 Central Generation Engines

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Evolution of Ocean Discharge

Fiscal Year	OC San Daily Ocean Outfall Effluent Average [MGD]
1990-1991	262
1996-1997	242
2008-2009 (GWRS starts)	167
2015-2016 (GWRS Initial Expansion)	92
2019-2020 (Most recent year)	101
2022-2024 (GWRS Final Expansion)	~40-60*

*mostly non-reclaimable : SAWPA discharge and GWRS RO reject

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Agency Partnerships

Coordination and Communication to ensure Discharge Quality for OCWD and the Ocean Outfall

- Flow management and infrastructure soundness
- Change in wastewater stream/source
- Change in influent and effluent characteristics
- Change in operations



Urban Runoff

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Environmental Compliance and Reporting Governance

FEDERAL



STATE



REGIONAL/LOCAL

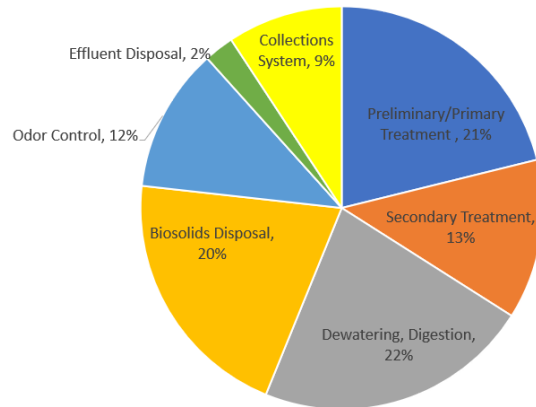


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FY 2020/21 Operating Costs

2020-21 Direct Costs \$65.5 Million



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Questions



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