

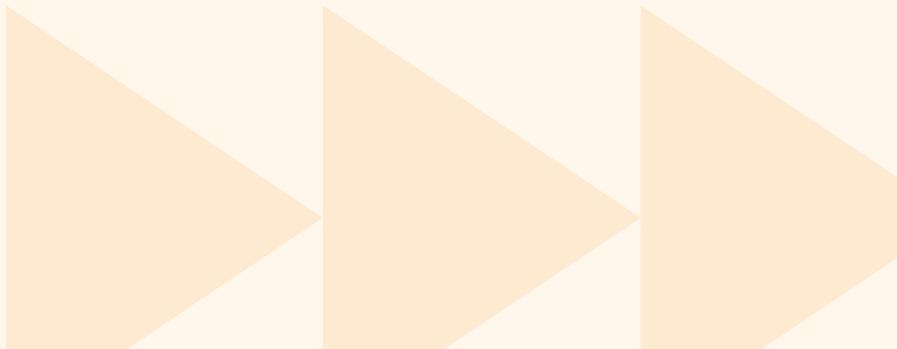
ANNUAL REPORT

2021



**THINGS ARE
DIFFERENT
NOW**

	Director's Message	3
	Our Organization	4
	Continuing Progress	7
	For Our Community	15
	Legislation	21
	Year In Review	26
	Ten-Year Financial Forecast	30



DIRECTOR'S MESSAGE



Welcome to the 2021 OCWR Annual Report.

You may know that I grew up in a family business that provided waste and recycling services. This was back during a time when things like child labor laws did not apply to family businesses, and when the industry was far less regulated than it is now. The service goal was simple: Make it disappear.

Not only is making it disappear far more challenging now, it is no longer the goal. Now, we must find a beneficial reuse for material that was once considered waste. The industry is transforming under monumental legislative mandates. Simply, things are different now. That's the theme of our 2021 Annual Report, because things truly are different in virtually every aspect of waste and recycling, including mandated recovery of edible food and productive use of organic materials that until now have been considered to be waste.

From my perspective, this is the most exciting time ever in the waste and recycling industry. I'm sure you might see it a little differently. And you don't have to reach my level of excitement. I'd be surprised if you did. But the County and its many jurisdictions must collaborate and be on the same page as we meet the demands of this industry-transforming legislation.

What we all – businesses, residents, jurisdictions and haulers – have been doing for decades is not sustainable for the future. That's the premise driving OCWR forward.

Currently, we are permitted to accept waste at our landfills through the year 2102. That date may be extended, based on the pace at which tonnage is received. But OCWR isn't here just to fill up landfills and close.

Our pivot to a resource recovery model is happening. At all three sites, we are recovering mattresses, appliances and scrap metal for recycling. We are composting at two sites; anticipate the third to open in 2022. We'll move from our start-up windrow composting of residential greenwaste to covered aerated static piles and then to integrating multiple types of feedstock. Then on to source separated organics facilities co-located at the landfills, and ahead to anaerobic digestion.

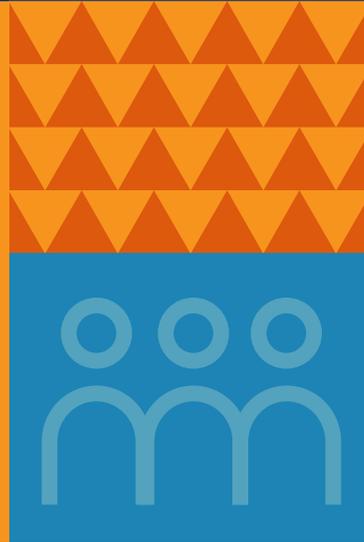
A big part of our shared challenge right now is to educate the public and commercial sector that things are different now, and the minor changes in their waste and recycling behaviors make a big impact. As much as we all have done to this point, the real pioneering lies ahead. I hope you will join us in this effort as we continue our pivot to resource recovery and start doing things a little differently than before.

Thank you and please enjoy OCWR's 2021 Annual Report.

OUR ORGANIZATION

MISSION

The mission of OC Waste & Recycling is to provide waste management services, protect the environment, and promote recycling in order to ensure a safe and healthy community for current and future generations.



VISION



A landfill and resource recovery system that safely manages waste, recycles resources and protects the environment for Orange County residents and businesses.

BOARD OF SUPERVISORS



Doug Chaffee
Chairman
Fourth District



Donald P. Wagner
Vice Chairman
Third District



Andrew Do
First District

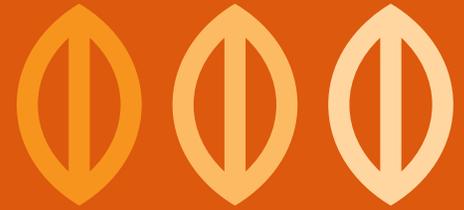


Katrina Foley
Second District



Lisa Bartlett
Fifth District

WASTE MANAGEMENT COMMISSION



The purpose of the Waste Management Commission is to advise the Orange County Board of Supervisors on matters relating to municipal solid waste and hazardous waste management, operation and maintenance of the County's landfills, and other facilities related to the County's solid waste disposal system.

Officers:

Chairman
David Harrington, City of Aliso Viejo,
Second District

Vice Chair
Tri Ta, City of Westminster,
Second District*

Commissioners:

First District:
Juan Villegas, City of Santa Ana
Kimberly Ho, City of Westminster

Second District:

Hong Alyce Van, City of Stanton*
Lee K. Fink, Public

Third District:

Beth Haney, City of Yorba Linda*
Isabell Kerins, Public
Laura Thomas, Public

Fourth District:

Tamara Wallace, Public
Christine Marick, City of Brea*

Fifth District:

Donald Froelich, Public
Joe Soto, Public
Cynthia Conners, City of Laguna
Woods*

Commissioners at Large:

David J. Shawver, City of Stanton*

City Manager Representative:

Jarad Hildenbrand, City of Stanton*

OC Waste & Recycling Director:

Thomas D. Koutroulis

*City Selection Appointee



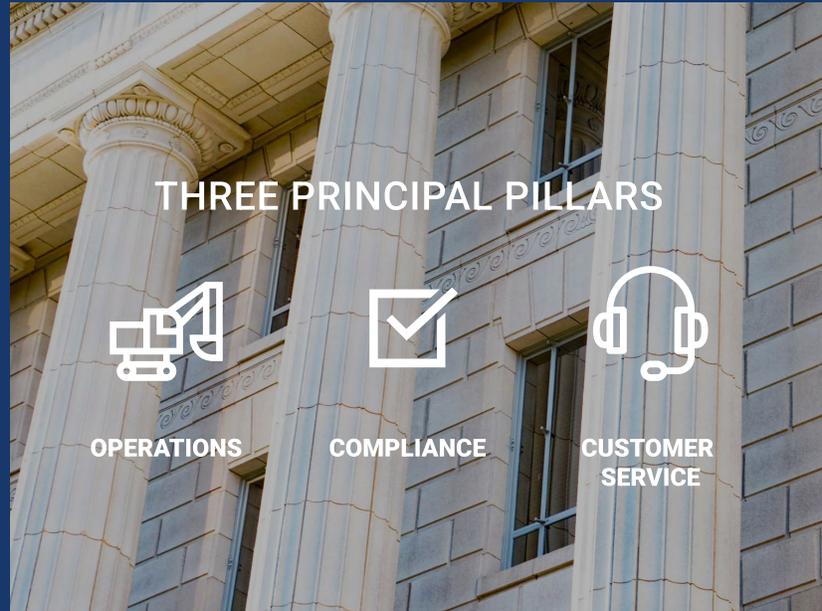
469,255 HOURS

RECORDED BY
OCWR EMPLOYEES



THE OCWR LEADERSHIP TEAM

OCWR's three principal organizational pillars – Operations, Compliance and Customer Service – stand together to form a structure that drives and unites all sections and units. Our leadership team of deputy directors is responsible not only for the pillar that defines their specific area but also for ensuring that the functions thrive in concert with one another.



THREE PRINCIPAL PILLARS



OPERATIONS



COMPLIANCE



CUSTOMER SERVICE

OPERATIONS

A trio of deputy directors also serve as site managers, one for each of the three landfill regions. They oversee all aspects of landfill operations and resource recovery, for the active and closed sites. Another deputy director serves the safety and operational procedures element.



David Tieu
Central Region
Landfill Manager



Hany Ahmed
South Region
Landfill Manager



Jorge Hernandez
North Region
Landfill Manager



Jeff Southern
Safety Culture

COMPLIANCE

Coordination of and support for compliance at a three-region landfill system is imperative. The deputy director for compliance support ensures consistency. This section is responsible for environmental services, renewable energy and capital projects, all of which contribute to compliance.



Julian Sabri
Compliance Support and
Landfill Development

CUSTOMER SERVICE

The customer service pillar serves the internal department and County stakeholders as well as the general public and our contractor partners. This section includes strategic communications, educational outreach and community programs, government relations, financial services and budget, administration, legislation, procurement and contracts, and our network of Household Hazardous Waste Collection Centers.



Lisa Smith
Business Services and
External Affairs

CONTINUING PROGRESS

A look inside the operations of the County's landfills reveals environmental engineering and stewardship at the highest levels, reflected in a variety of activities: the design and location of each fill area, airspace preservation, prevention of hazardous waste from being buried, mitigation of naturally occurring impacts, and even in the heavy equipment we use.



SYSTEMWIDE OPERATIONS HIGHLIGHTS



4,996,158 TONS
BURIED WASTE

762,966
TOTAL FEE BOOTH
TRANSACTIONS



552
TONS

COMPOST APPLIED FOR
BENEFICIAL REUSE



13,768
TONS

GREENWASTE
REPURPOSED FOR COMPOSTING



SYSTEMWIDE OPERATIONS HIGHLIGHTS (continued)



88,500

TOTAL OPERATIONAL HOURS
OF HEAVY EQUIPMENT



35,546

CALLS HANDLED
AT HQ RECEPTION



MORE
THAN

1,800

HABITAT
PLANTINGS



1,697,947

 TONS

SOIL RECEIVED

513,649

 TONS

ASPHALT
RECEIVED



29,277

(805 TONS)
MATTRESSES RECOVERED



SAVING SPACE

As important as it is for OCWR to report on the tonnage accepted and buried each year, it is equally important to count and measure the space in the landfills that did NOT get filled. We call this preserving airspace, and our pivot to resource recovery is already paying dividends.

The airspace preserved in 2021 is roughly equivalent to the space of almost four Olympic-sized swimming pools:

MATTRESSES	SCRAP METAL	COMPOST
805 tons	1,597 tons	13,451 tons

SHIFTING TO RENEWABLE DIESEL

Progress toward efficiency in operations, resource recovery and environmental stewardship can be seen in OCWR's fleet of heavy equipment. In July, we converted to using renewable diesel (RD) fuel.

OCWR operates 94 off-road heavy-duty vehicles (HDVs) powered by a total of 104 diesel engines. It is estimated that this fleet consumes approximately one million gallons of ultra-low sulfur diesel fuel per year. After successful completion of a pilot project to explore using RD in HDVs at Olinda Alpha Landfill, OCWR converted to using RD systemwide. The purpose of RD conversion is to seek to reduce fleet emissions of greenhouse gases and pollutants such as nitrogen oxide (NOx), fine particulate matter (PM10), and sulfur oxides (SOx).



The estimated results of RD conversion:

EMISSION TYPE	BASELINE	RD EMISSIONS	REDUCTION	PERCENT REDUCTION
NOx	24.232 tons/year	21.653 tons/year	2.579 tons/year	11%
PM10	1.077 tons/year	0.765 tons/year	0.312 tons/year	29%
SOx	0.1003 tons/year	0.0028 tons/year	0.0975 tons/year	97%

Data Source: Gladstein, Neandross & Associates; OCWR Final Report, May 2021



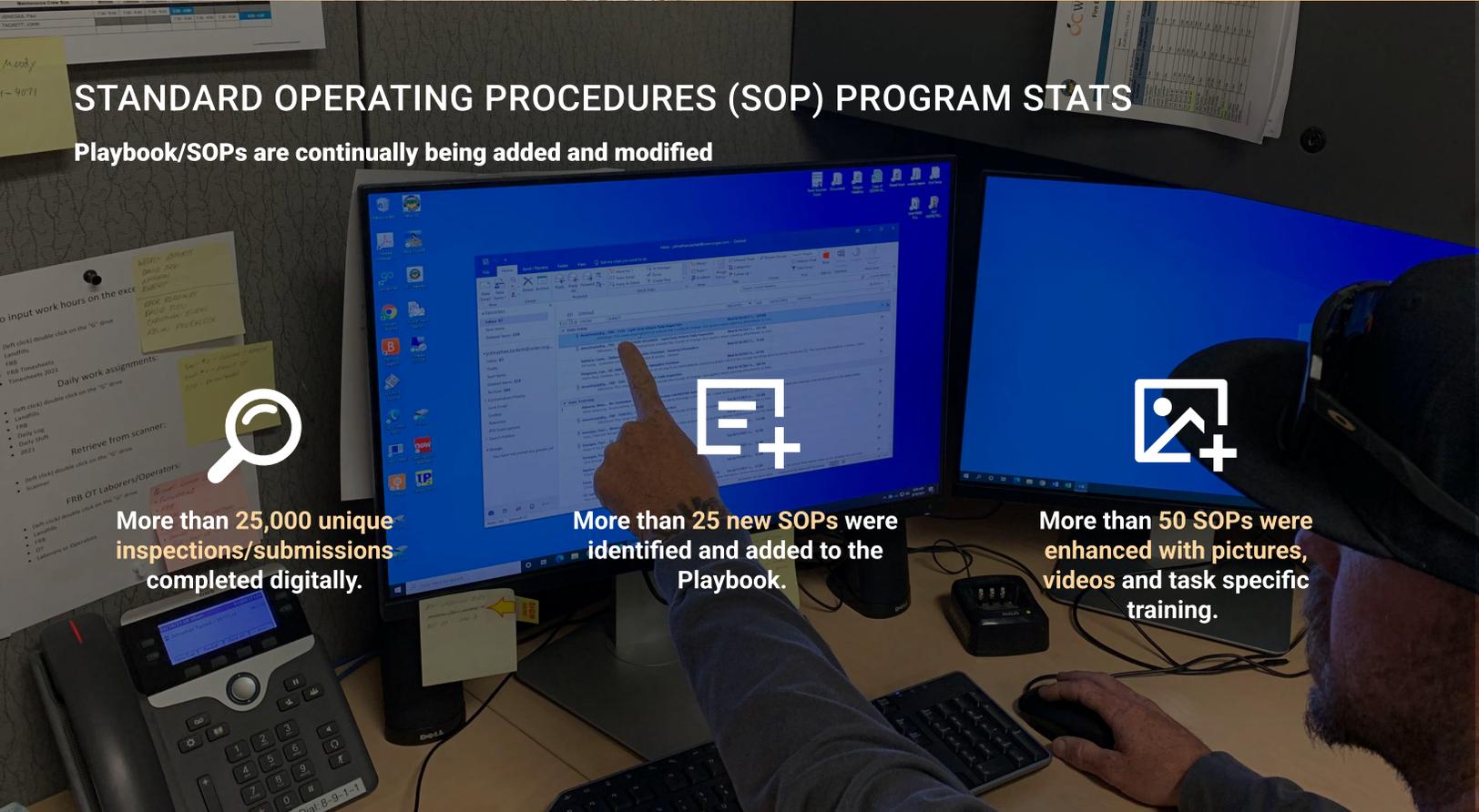
WORKING SAFELY

Progress does not happen by accident, and high **productivity is achieved only when work is conducted safely**. The waste industry is among the top-10 high hazard industries, so safety is the thread that weaves together the fabric of our operations. Here are some highlights:

- ✔ Generated the **lowest workers compensation claims** it has seen over the last 12 years.
- ✔ **Improved operational safety performance** at all three landfills; ending the year with Total Recordable Injury Rates (TRIR) below 2019 industry standard rates.
- ✔ Reduced TRIR by effective supervision and employee engagement via **safety tailgate meetings and training**.
- ✔ **OCWR supervision coached and mentored in the field**; efforts were supported by a maturing Standard Operating Procedures program (SOP Playbook).
- ✔ OCWR staff logged a total of 4,394 training hours in the County's Learning Management System.

STANDARD OPERATING PROCEDURES (SOP) PROGRAM STATS

Playbook/SOPs are continually being added and modified



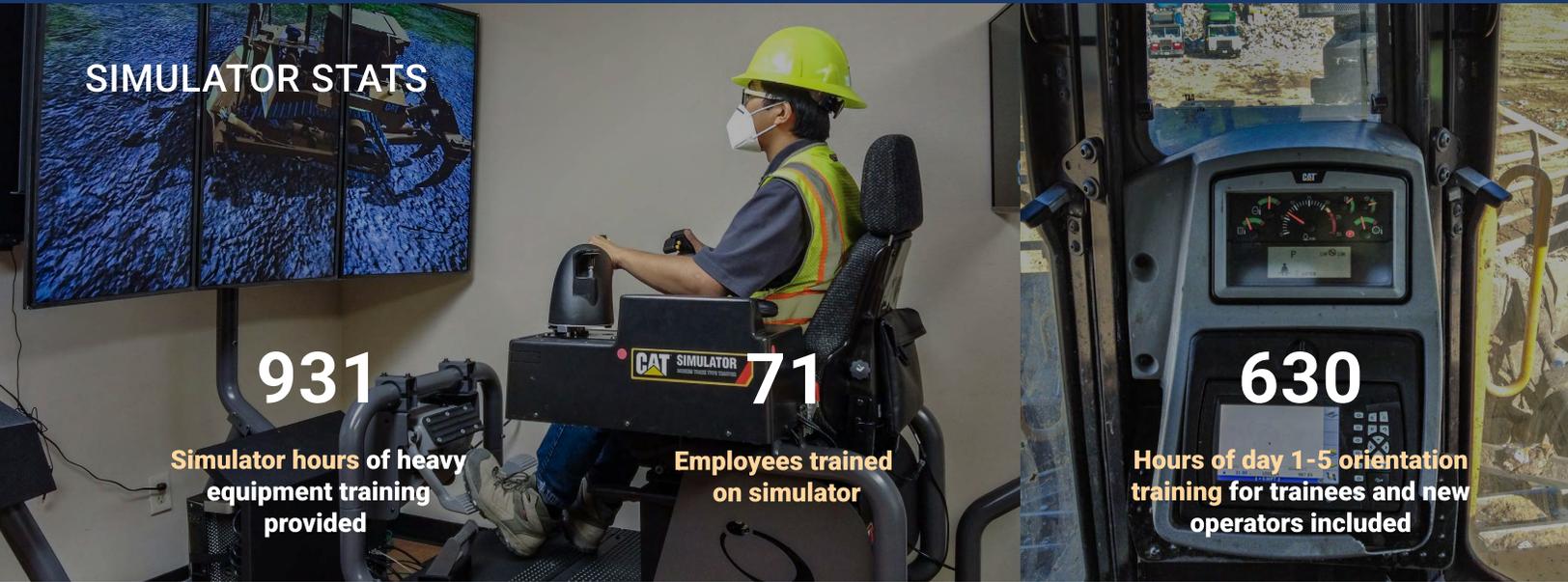
More than 25,000 unique inspections/submissions completed digitally.



More than 25 new SOPs were identified and added to the Playbook.



More than 50 SOPs were enhanced with pictures, videos and task specific training.



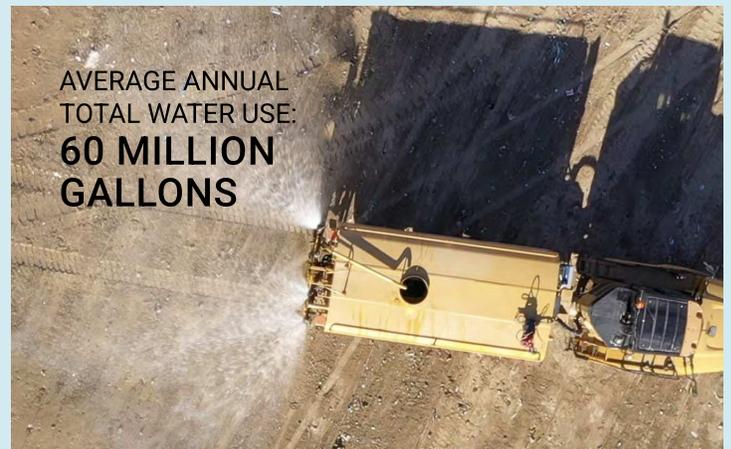
RECOVERING GREEN ENERGY

The ability to recover and put landfill gas to its best and highest use, reflects sustainability and a circular economy. Working with our energy partners, OCWR utilizes landfill gas to power generators, which in turn produced more than 410,000,000 kwh of electricity in 2021. **This is enough energy to power almost 69,000 homes in Orange County.**



UTILIZING WATER WISELY

Limiting domestic water consumption at landfills is a key component of environmental stewardship. Since 2014, OCWR has implemented a Water Conservation Plan to reduce the usage of domestic water by using alternative sources. **Preferred alternative sources include reuse of landfill-generated liquids such as leachate, condensate, extracted groundwater, collected stormwater and reclaimed water.** These efforts support the state's water conservation goals in response to the ongoing drought. The primary uses of water at OC's landfills are for dust control and for the composting operations. Repurposing available liquids is central to efficient water management. In 2021, OCWR significantly increased our use of reclaimed water, **reducing the reliance on domestic water.** OCWR plans to increase the usage of environmental water by constructing a landfill liquid treatment system at the Frank R. Bowerman Landfill.



	POTABLE	ENVIRONMENTAL*	RECLAIMED
2020	24.9 MG 46%	5.8 MG 11%	22.9 43%
2021	25.5 MG 39%	4.2 MG 6%	36.2 MG 55%

* Environmental water includes groundwater and stormwater, and naturally occurring liquids (leachate and condensate).

RESTORING HABITAT AREAS

Habitat restoration is a critical component of OCWR’s compliance and environmental stewardship efforts. The restorations improve natural streamflow, raise the water table and provide a quality habitat for wildlife. Efforts include removing invasive and non-native plant species.

We have approximately 485 acres of habitat restoration projects underway throughout Orange County, including two new projects which took root in 2021:

- ✔ Trabuco Creek Mitigation project, located in O’Neill Regional Park, encompasses about 51 acres of managed land within which we are actively installing native plants and sycamore trees and removing invasive Arundo, a bamboo-like plant naturally found in eastern Asia. The Arundo plant reproduces quickly and outcompetes native plant species for access to soil and water.
- ✔ Prima Onsite Drainage includes the creation of 25,215 feet of riparian drainages over approximately 1.93 acres that will be planted and seeded with native plant species.



- ✔ Sycamore trees (*Platanus racemosa*) – we’re planting 307 sycamores in Trabuco creek
- ✔ Increased available habitat for sensitive species including the endangered least bell’s vireo (*Vireo bellii pusillus*) and southwestern willow flycatcher (*Empidonax traillii extimus*)
- ✔ Western cottonwood trees (*Populus fremontii*)
- ✔ Seep monkey flower (*Mimulus guttatus*)
- ✔ Virgate sand aster (*Corethrogyne filaginifolia*)
- ✔ California rose (*Rosa californica*)

KEEPING THE HAZARDS OUT

OCWR landfills do not accept hazardous waste of any kind. But occasionally hazardous household waste products, such as paint, batteries, various chemicals and e-waste make their way to the refuse area.

The waste inspection team is our front line to prevent hazardous waste from being accidentally buried. Team members look in potential hiding spots such as buckets and wastebaskets. It is not uncommon for inspectors to find such hazardous waste items such as latex paint, certain light bulbs, batteries, computers and televisions.



PAINTS	FLUORESCENT LIGHTS	TELEVISIONS	BATTERIES	COMPUTERS
15,430 gallons	2,142 pounds	10,096 pounds	2,451 pounds	7,743 pounds

INNOVATING WHAT'S NEXT

Demonstration projects provide opportunities for innovation toward continuous improvement.

BOWERMAN

Usage of Thermal Oxidizer

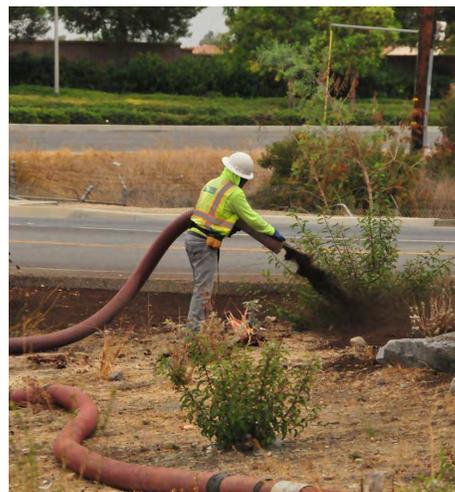
To remediate following the Silverado Fire, we used a technology not commonly employed at landfills, and it contributed minimizing landfill gas migration, emissions, and odors.

Compost Screening Equipment

We rented various pieces of compost screening equipment to determine which would best meet the needs of Bee Canyon Greenery.

Compost Placement

Placed finished compost at various locations to test the durability and beneficial usage of the compost we produce.



PRIMA

New Tarping System Demonstration

The new tarp machine, Tarparmor, demonstrated three major safety upgrades over the existing equipment: better visibility due to a new camera system, increased clearance and system does not require ground crews.

- ✔ New compost/hydroseed combinations for erosion control
- ✔ The application of all three combinations of compost and hydroseed prevented major erosions during heavy December rains.



OLINDA

Renewable Fuels Project

This exploration compared renewable diesel to conventional diesel. We tested it on several types of heavy equipment over six months.

Outcomes include:

- ✔ No loss of performance
- ✔ Burns much cleaner than conventional diesel creating less emissions
- ✔ 100 percent renewable and sustainable resource, which reduces dependence on diminishing fossil fuel supplies.



BUILDING AND IMPROVING

Landfills are living facilities, always changing to accommodate operational, environmental or legislative factors. Multi-million-dollar capital projects reflect this change and growth.



3 CAPITAL PROJECTS

Completed in 2021 with a combined construction value of more than \$12M that include the FRB Bee Canyon Greenery, FRB Silverado Fire Liner System Repairs and the FRB South East Perimeter Access Road Improvements.

30 MAJOR PROJECTS

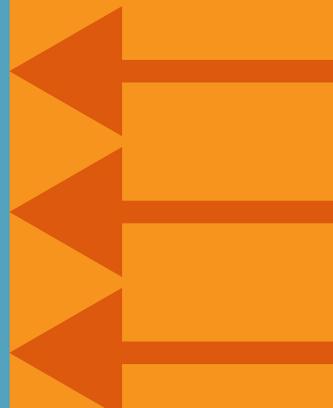
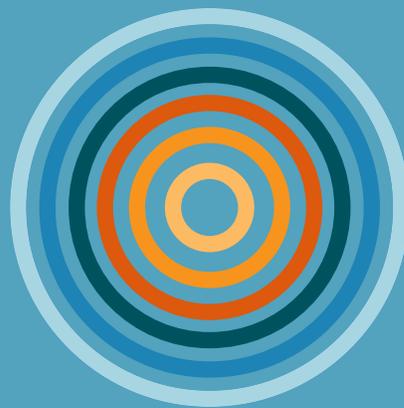
Completed in 2021 with a combined construction value of more than \$8.8M that include channel diversions, cable rail fencing, erosion repairs, road repairs and resurfacing, stockpile relocation and repairs, and building improvements that include patio awnings, lighting and ice maker sheds.



4/14/2021 12:33

FOR OUR COMMUNITY

OCWR's role in the community includes educational outreach, engagement programs and events, communication and needs-based service, such as our Household Hazardous Waste Collection Centers. OCWR also engages a Good Neighbor approach to serve residents living near the landfills.



DISCOVERY CUBE PARTNERSHIP

Although the pandemic kept the Cube closed for nearly half the year, significant progress continued with the construction of the Organic Waste Lab. The new outdoor EcoChallenge exhibit opened on May 28, with the reopening of the Cube. On July 22, the unveiling of the Organic Waste Lab was celebrated by community and district partners and key community stakeholders. The County also presented Discovery Cube with a check for its continued support of conservation education.

This new exhibit marked a critical achievement towards the regional education mandates of SB 1383. Families could now learn first-hand about organic recycling changes, experience the science behind the composting process and understand their role in preserving environmental resources.



*Discovery Cube closure from January through May 27, 2021 due to pandemic

Approximately

432,923

EDUCATIONAL TOUCHPOINTS

through visitors, field trips, promotions and waste diversion outreach campaigns.



GRANT PROGRAM

Through these partnerships, Discovery Cube is bringing a comprehensive educational program to students at no cost to local schools. For the 2021 school year, Discovery Cube partnered with five cities across two counties reaching 3,891 students.

MOBILE KIOSK PILOT

At the Irvine Global Village event hosted in October, OCWR tested a mobile kiosk version of the World of Organic Waste programming created by Discovery to take organic waste education on the road. Feedback from the pilot is helping streamline the units for 2022.

ORANGE COUNTY DEPARTMENT OF EDUCATION

In 2021, OCWR and the Orange County Department of Education (OCDE) launched a next-generation curriculum that brings waste diversion education directly into classrooms as part of standards-based teaching. We launched a first-year pilot program in Spring 2021, offering teachers essential tools to meeting state requirements tied to local environmental initiatives. Regardless of pandemic impacts, we pushed forward with a successful pilot and right into a full-scale, County wide program in August 2021. The curriculum utilized OCWR educational materials in a variety of formats, provided simplified access via existing teacher and student portals and seamlessly created a foundation for future expansion.



We successfully served 2,501 students through 88 teachers across 51 schools and 14 school districts. From the Spring pilot to full-scale launch, participation increased by 68 percent, and we sustained 100 percent teacher retention into the Fall 2021 school year. This set the stage to expand curriculum to additional grade levels and languages into year two.

OC DEPARTMENT OF EDUCATION PILOT YEAR TIMELINE

July 2020 - June 2021

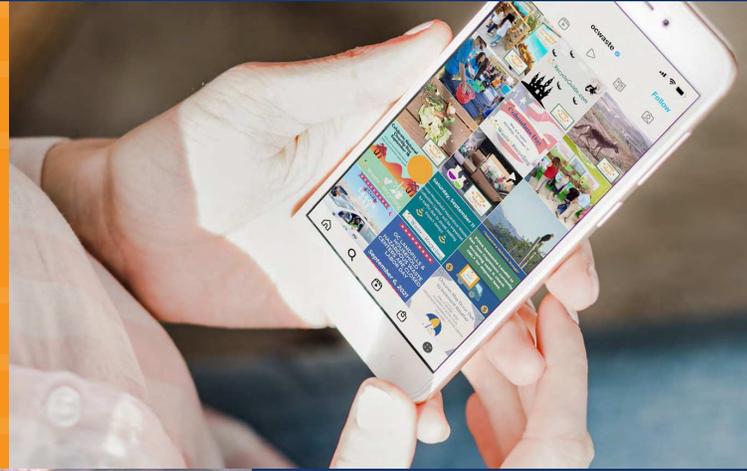


EVENTS

OCWR participated in several in-person, virtual and online outreach activities, adjusting as needed during the pandemic. These included **community event booths, landfill tours, virtual campaigns and speaking engagements.**

SOCIAL MEDIA

Social media enables OCWR to consistently communicate with the public. Informational posts share important updates on weather-related impacts and closures. Targeted campaigns help increase followers on all platforms including Twitter, Facebook and Instagram.



The Trick-or-Treat October campaign quizzed followers in weekly true or false posts, with the top post garnering 725 engagements and a reach of more than 6,000 unique viewers.



"I PLEDGE TO RECYCLE BY ADVOCATING THE IMPORTANCE OF RECYCLING AT MY SCHOOL AND MY COMMUNITY."

The America Recycles Day® campaign welcomed followers to participate in a contest by **pledging to recycle in the comments**. All participants were awarded a family four pack of tickets to the Discovery Cube to experience OCWR's World of Organics Waste Lab. The contest inspired pledges to recycle and a local high school student to start a battery recycling program in his science class.



OCRECYCLEGUIDE.COM

71K
PAGE VIEWS



Appliances, large and small

4.3K



Computers, televisions, electronics

3.5K



Batteries

3K



Clothing and shoes

2.2K



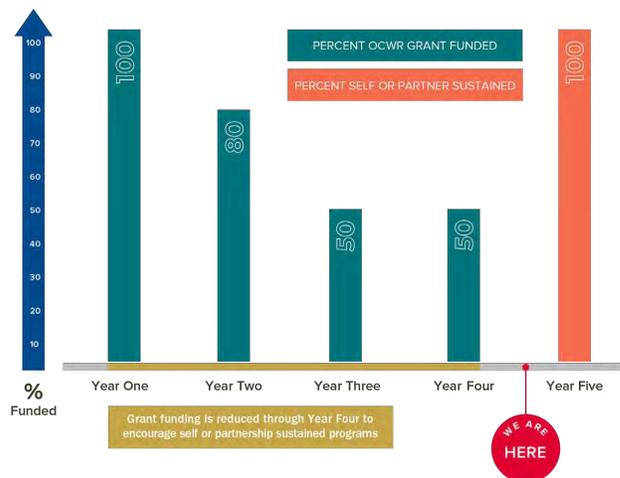
Cardboard

2K

GRANT PROGRAM UPDATE

Despite continued COVID-19 impacts, OCWR grant program recipients continued to thrive and make progress towards each of their respective goals to achieve compliance, conduct education and recover edible food. Recipients were granted deadline extensions allowing for reimbursement into year four of the grant program, while the fifth and final year will require recipients to continue programming without receiving financial assistance from OCWR.

OCWR REGIONAL RECYCLING & WASTE REDUCTION GRANTS – FOURTH CYCLE \$3M



IN 2021, OCWR GRANT RECIPIENTS:



Educated more than **10,000** students and residents on waste diversion and proper recycling



Collected nearly **10 tons** of organic material



Recovered and distributed **10,600 tons** of edible food to combat food insecurity



Aided more than **260 commercial businesses** with compliance

HOUSEHOLD HAZARDOUS WASTE

Our Household Hazardous Waste Collection Centers (HHWCC) provide a highly valuable service to OC residents and play a critical role in the proper disposal or recycling of materials that should not go to our landfills.

TOTAL POUNDS OF ITEMS TAKEN IN

2019	2020	2021
5,555,996	5,736,212	8,707,841



RECYCLED VS. DISPOSED

Recycled= 636,315 Pounds vs. Disposed= 2,398,130 Pounds

Some materials reach the end of their life at the HHWCC and are transferred to Class 1 Landfills that accept flammables, sharps, corrosives and poisons. Others, such as fire extinguishers, propane tanks and alkaline batteries can be recycled.

MATERIAL EXCHANGE PROGRAM TAKEBACK ITEMS

887,893 Pounds

HHWCC customers may select up to five items per day from those brought to the facilities. Such items must be deemed acceptable for continued use after initial drop off. Among them: motor oil, bug spray, car wax, paint and other household items.



BATTERIES

Alkaline= 228,275 Pounds • Rechargeable= 24,371 Pounds

While alkaline batteries are not recyclable, rechargeable batteries are. The HHWCCs send these to a program called Call 2 Recycle, the nation's foremost consumer battery recycling stewardship program.

PAINT

160, 839 Gallons to Paint Care

OCWR launched a new initiative to recover leftover or unwanted paint, which is recycled into such products as asphalt sealer and paint for graffiti abatement.



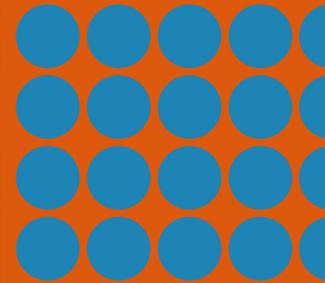
E-WASTE

Non-CRT= 2,756,542 Pounds | CRT= 474,948 Pounds

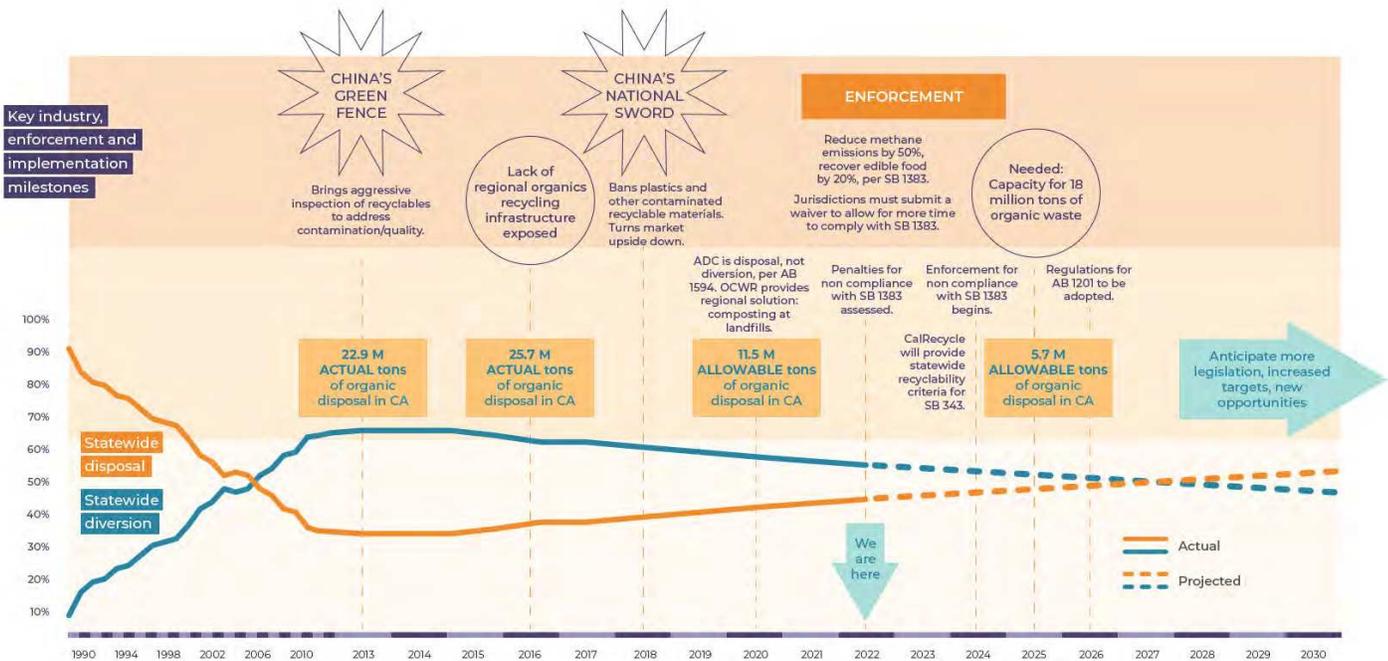
The volume of electronic waste is increasing every year as new types of devices become available. E-waste includes such items as anything with a circuit board, TVs, monitors, computers and mobile phones/tablets. Items are recycled using our contractor third party E-Recycling. Items are dismantled and precious metals are separated for scrap metals.

LEGISLATION

Mobilizing the framework to support the industry-transforming Senate Bill 1383 was a top priority in 2021. Enforcement will begin on January 1, 2024. OCWR worked together with the County's 34 cities, jurisdictions, and waste haulers with a common goal of creating the infrastructure needed to comply with the legislative requirements. This included updating franchise agreements, passing mandatory organic waste management ordinances, conducting capacity planning activities and establishing edible food recovery contracts.



LEGISLATION AND RECYCLING TIMELINE



Key legislation milestones

- 1989 AB 939 passes.** CA Integrated Waste Management Act requires all jurisdictions to divert 50% of waste from landfills.
- 2011 AB 341 passes.** Commercial recycling; requires 75% diversion by 2020.
- 2014 AB 1826 passes.** Commercial organics recycling; requires statewide commercial recycling; 75% goal by 2020.
- 2016 AB 1594 passes.** Eliminates diversion credit for green waste; changes status of PGM to disposal.
- 2016 SB 1383 passes.** Methane reduction and edible food recovery. Recover 20% of edible food by 2022; enforcement begins in 2024.
- 2021 SB 619 passes.** March 1, 2022, jurisdictions who met certain conditions were allowed to come into SB 1383 compliance without being subject to penalties by CalRecycle.
- AB 1201 passes.** Prohibits sale of plastic products labeled as "compostable" or "home compostable" unless product meets ASTM compostability standard by January 1, 2026.
- SB 343 passes.** Beginning January 1, 2024, only products meeting statewide recyclability criteria can utilize the chasing arrows symbol.

**SB
1383**

METHANE EMISSIONS
REDUCTION AND
EDIBLE FOOD RECOVERY

**AB
1826**

MANDATORY COMMERCIAL
ORGANICS RECYCLING

**AB
1594**

PHASE OUT OF
ORGANICS DAILY COVER

SB 1383 IMPLEMENTATION ELEMENTS



Collection and Recycling – Organic Waste Collection

All jurisdictions will need to provide organic waste collection services to all residents and businesses and recycle these organic materials using recycling facilities.

Effective January 1, 2022



Contamination Minimization

Keeping organics waste streams clean will help ensure that the organic material can be processed and composted or anaerobically digested. Contamination minimization will also help develop markets for recycled products in California.

Effective January 1, 2022



Waivers

If certain conditions are met, CalRecycle and OCWR may review and issue waivers and exemptions as applicable.

Effective January 1, 2022



Education and Outreach

The SB 1383 regulations require that jurisdictions conduct education and outreach on organics recycling to all residents, businesses (including those that generate edible food that can be donated), haulers, solid waste facilities and local food banks and other food recovery organizations.

Effective February 1, 2022



Hauler Oversight

Each jurisdiction manages solid waste management programs, including organics recycling. Each local program is based on state minimum standards, including collection service options, container color and labeling requirements and contamination monitoring.

Effective January 1, 2022



Edible Food Recovery

Some food service businesses must donate edible food to food recovery organizations. This program will be expanded in 2024. By 2025 California has a goal to redirect 20 percent of edible food.

Effective January 1, 2022



CALGreen Building Standards and Model Water Efficient Landscape Ordinance (MWELO)

Jurisdictions are to specifically adopt an ordinance or other enforceable measure that requires compliance with specific sections of CALGreen and MWELO.

Effective January 1, 2022



Capacity Planning

Requires the development and planning of organic waste recycling and food recovery capacity program needs required to divert organic waste from landfills into recycling activities and food recovery organizations.

Initial report due April 1, 2022; second report due August 2022



Procurement

Local governments will be required to use Recycled Organic Waste Products (ROWP) and recycled paper products, as well as products made from recycled organic materials, such as renewable energy, compost and mulch.

Effective January 1, 2022



Inspection and Enforcement

Jurisdictions are required to implement an inspection and enforcement program to ensure that organic waste generators and food recovery organizations comply with SB 1383 requirements.

Effective January 1, 2022



Enforceable Mechanisms

The enforcement provisions in SB 1383 and jurisdictional ordinances will establish enforceable mechanisms to regulate compliance, requirements and standards.

Effective January 1, 2022



Compliance

Compliance will be determined by how jurisdictions and non-local entities implement programs that include:

- Organics waste collection, processing and diversion
- Using recycled organics products like compost and biofuel
- Edible food recovery

Effective January 1, 2022



Reporting

Jurisdictions are required to report on program implementation and capacity planning.

Effective January 1, 2022

BILLS WE'RE FOLLOWING

Legislative activity continued to unfold throughout 2021. OCWR tracked 79 bills, of which 21 were signed into law. Key legislative highlights include:



SOLID WASTE: PRODUCTS AND LABELING

Prohibits the sale of plastic products that are labeled as “compostable” or “home compostable”, if not actually compostable according to ASTM standards. Regulations for this bill to be adopted by January 1, 2026.

TRUTH IN RECYCLABILITY CLAIMS

Only products meeting statewide recyclability criteria, accepted by at least 60% of the recycling programs and do not contain PFAs can utilize the chasing arrows symbol. The product or packaging must also have accurate and useful information on how to handle it's end of life. The symbol must include the plastic resin code inside a triangle for easier identification. CalRecycle will provide information to the public regarding product or packaging recyclability by January 1, 2024.



NOTICE OF INTENT TO COMPLY WITH SB 1383

Allows jurisdictions to submit a notice of intent to comply with SB 1383 regulations by March 1, 2022. If CalRecycle approves the plan, the jurisdictions will avoid penalties.



YEAR IN REVIEW

The pivot to resource recovery and preservation is happening in every aspect of OCWR's drive to advance our mission and fulfill our vision.



JANUARY

More than 30 OCWR staff volunteer to serve Operation Independence, the County's COVID-19 vaccination effort.

FEBRUARY

- ✓ Olinda surpasses a monthly total of 1,000 mattresses recovered.
- ✓ OCWR releases RFP seeking bids for franchise hauler contracts to serve the County's unincorporated areas.



MARCH

Completed demonstration use of thermal oxidizer equipment, which significantly contributed to minimizing landfill gas migration, emissions, and odors.

APRIL

LEA holds public meeting as part of the CEQA process to revise Olinda Alpha Landfill's SWFP, extending it through the year 2036.



2021 ACHIEVEMENT AWARD WINNER

"When you have exhausted all possibilities, remember this: you haven't."
— Thomas Edison

The National Association of Counties is proud to award

Orange County

A 2021 Achievement Award for its program titled:

Building a World Class Organic Waste Management Infrastructure from Scratch

Matthew Chase
Matthew Chase, NACo Executive Director



Gary W. Moore
Hon. Gary Moore, NACo President

MAY

OCWR wins four NACo awards:

1. Virtual Outreach Program
2. Building a World Class Organic Waste Management Infrastructure from Scratch
3. Enhancing Safety, Efficiency and Consistency - OCWR's Playbook/SOPs
4. Resource Recovery vs. Waste Disposal: OCWR Mattress Recycling Program

JUNE

- ✔ Board approves new franchise hauler contracts for OC unincorporated areas.
- ✔ OCWR releases video sequel, "OC Landfills: Resource Recovery for a Greener Future," to help educate the general public about resource recovery and organic waste management.
- ✔ New franchise hauler contracts go into effect.
- ✔ OCWR hosts City Manager Workshop Part 1.
- ✔ OCWR participates in Fourth District's Juneteenth Freedom Day event at Anaheim Community Center Park.
- ✔ OCWR partners with OC Department of Education to launch a pilot curricular initiative that challenges students to adopt sustainable behaviors.





JULY

- ✔ CalRecycle grants revised SWFP permit to Olinda Alpha Landfill, extending the life of the landfill through 2036.
- ✔ Playing off the fast-food industry's "National Drive Thru Day," OCWR encourages residents to visit one of the County's four Household Hazardous Waste Collection Centers and "drive through" to drop off items.
- ✔ Discovery Cube hosts open house event to introduce and present new Organic Waste Lab.
- ✔ OCWR shifts heavy equipment fleet to renewable diesel fuel.

AUGUST

- ✔ OCWR participates in Fourth District's Fishing Derby at Carbon Canyon Regional Park.
- ✔ OCWR hosts City Managers Workshop Part 2, reflecting regional leadership and collaboration in response to industry-transforming legislation and the need for local infrastructure.
- ✔ OCWR and OC Department of Education launch full-scale version of the standards based school program with OC teachers.



SEPTEMBER

- ✔ CalRecycle grants permit to operate Capistrano Greenery at full, commercial scale.
- ✔ OC Grand Jury Tours Olinda Alpha Landfill.
- ✔ OCWR participates in Silverado Canyon community cleanup event.

OCTOBER

- ✔ OCWR participates at the Irvine Global Village Festival.
- ✔ To help prevent roadway debris, OCWR launches a “Cover Your Load” campaign and partners with CHP for Outreach and Enforcement.



NOVEMBER

- ✔ Supervisor Bartlett delivers the keynote remarks at the Ceremonial Grand Opening of Capistrano Greenery.
- ✔ OCWR Celebrates America Recycles Day®, reminding residents to recycle every day and enhance their recycling knowledge.

DECEMBER

- ✔ Aliso Viejo City Council member Dave Harrington is elected Chair of the Waste Management Commission for 2022; Westminster Mayor Tri Ta is elected Vice Chair.
- ✔ OCWR’s “Holly Jolly Compost Circle” entry wins Best by an Organization in the Discovery Cube’s “Science of Gingerbread” contest. The entry reflects the circular nature of composting.
- ✔ California State Associate of Counties (CSAC) recognizes OCWR with a Merit Award in the category of environment and natural resources for World-Class Organic Waste Management Infrastructure.

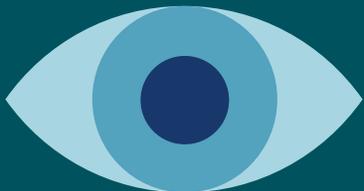


OC WASTE&RECYCLING

TEN-YEAR FINANCIAL FORECAST

ANNUAL REPORT

2021



HIGHLIGHTS OF TEN-YEAR FINANCIAL FORECAST

OC Waste & Recycling (OCWR) is responsible for the administration and management of Orange County's solid waste disposal system. The Department is structured as an enterprise fund and is primarily supported by revenues from disposal fees that are charged to customers. OC Waste & Recycling receives no tax revenues or County General Fund contributions to support its operations.

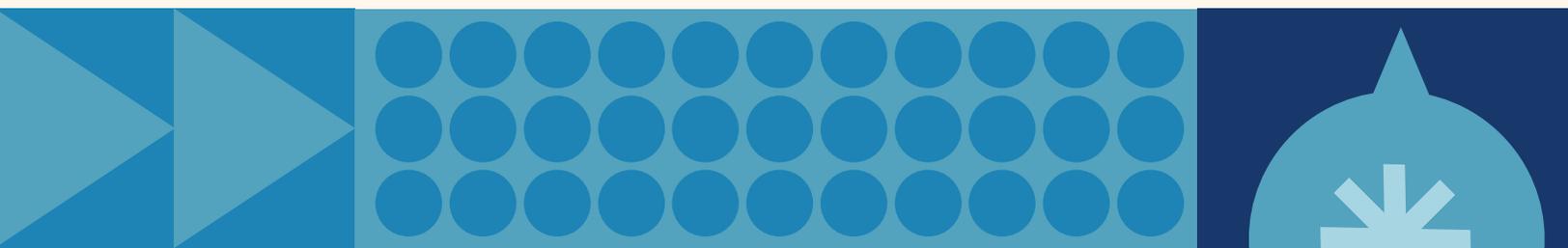
OCWR has actively pursued ways to expand its service and core functions by exploring new technologies and alternatives in organic waste management, in addition to converting landfill gas into beneficial sources of energy. Including in the Department's strategic plan is also a future focused on increased recycling resource recovery and renewable energy. Although landfilling remains an essential public service, OCWR recognizes the need to evolve along with new legislation requirements from SB 1383, that is creating the need for additional organics infrastructure as well as keep pace with technology and environmental demands to broaden its waste management services.

The 10-Year Financial Forecast included in this Annual Report is for the period of FY 2021/22 through FY 2030/31. The projected tonnage anticipates a trend of lower tonnage due to impacts of legislation that requires increased diversion and industry-transforming organic waste management. The Department plans to continue accepting importation tonnage to supplement the decrease in in-county tonnage revenue and to provide a stable source of net revenue sharing to the County and cities. A revised permit for extension of Olinda Alpha Landfill operation to December 30, 2036 was approved by the Local Enforcement Agency (LEA) in 2021.

Forecasted system revenues (Table B. Forecasted System Revenues) reflect a stagnant tonnage revenue growth due to the lower trend of tonnage (CHART 1) and the Olinda landfill's projected closure, which could be earlier than the permit date. Net importation revenue sharing to the County is expected to be in the range of \$7 million a year then lower to over \$5 million a year starting FY 2027/28, with the same amount going to Orange County cities.

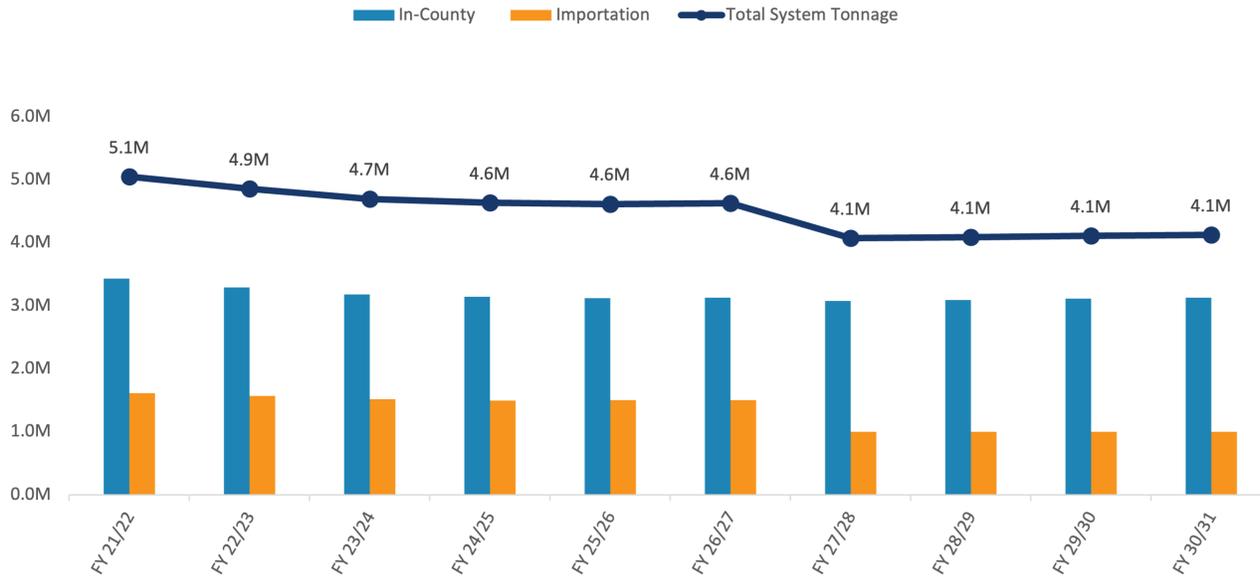
Forecasted system expenses include significant capital project costs related to the future development of the landfill system, costs for organics infrastructure, specifically for the Central and South Region landfills' anaerobic digesters, and construction costs of renewable energy plants (Table C. Forecasted System Expenses). Expenses are projected to be significantly higher than revenue in many years during the forecasted period, which has major capital projects in planning (CHART 2). OCWR maintains the practice to strategically utilize reserves, maximize operational efficiencies, and closely monitor expenditures. However, the Department is in dire need to obtain a new rate structure that provides sufficient financial inflows to sustain its operation and to continue providing quality services to the County residents.

The schedule following CHART 1 and CHART 2 provides a two-year summary of audited financial data for fiscal years ending June 30, 2021 and 2020, respectively. In addition, detailed schedules for tonnage, revenues, expenses, cash balances and accrued closure and post-closure liabilities for the 10-year forecast period are presented in Exhibits A through G.



SYSTEM TONNAGE (IN MILLIONS)

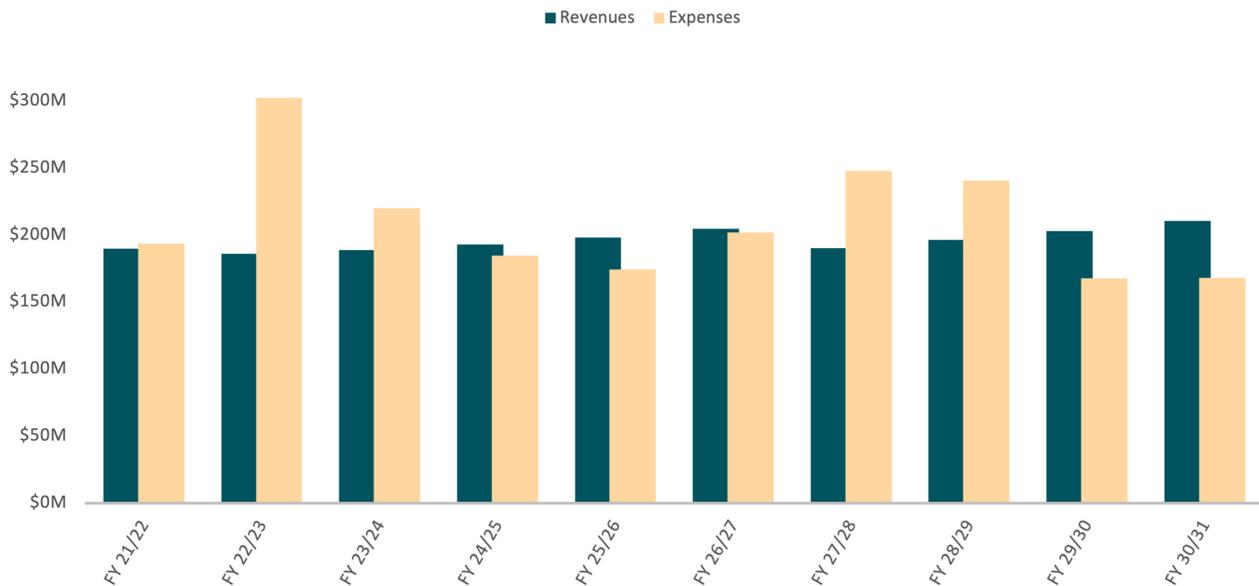
CHART 1



SYSTEM FINANCIAL PROJECTIONS (IN MILLIONS)

FUNDS 273, 295 AND 299

CHART 2



TONNAGE & AUDITED FINANCIAL DATA FOR FISCAL YEARS ENDING JUNE 30, 2021 & 2020

Disposal Waste Tonnage [1]

	6/30/2021	6/30/2020
In-County	3,368,487	3,325,884
Importation	1,609,655	1,847,630
Total System Tonnage	4,978,142	5,173,514

Statements of Revenues, Expenses and Changes in Fund Net Position

For the Years Ended June 30, 2021 & 2020 [2]

	6/30/2021	6/30/2020
Total Revenues	\$ 184,212,975	\$ 193,645,323
Total Expenses	\$ 142,699,075	\$ 141,113,551
Change in Net Position	\$ 41,513,900	\$ 52,531,772

Cash Balances

	6/30/2021	6/30/2020
Enterprise/Operating Fund	\$ 255,770,004	\$ 240,373,944
Capital Project Fund	\$ 52,429,866	\$ 36,368,087
Corrective Action Escrow Fund	\$ 10,456,214	\$ 8,796,318
Environmental Reserve Fund	\$ 32,170,021	\$ 62,079,880
Deferred Payment Security Deposits Fund	\$ 854,346	\$ 851,660
Habitat Mitigation Escrow Funds	\$ 879,010	\$ 983,289

Accrued Closure and Postclosure

	6/30/2021	6/30/2020
Landfill Closure Liabilities	\$ 73,040,280	\$ 70,158,517
Landfill Postclosure Liabilities	\$ 113,793,485	\$ 114,222,626
Escrow Funds (Closure) Cash Balance	\$ 95,238,427	\$ 94,957,465
Landfill Postclosure Cash Balance	\$ 143,114,761	\$ 146,042,589

[1] Source: Disposal Reporting System (DRS) Monthly Tonnage Reports.

[2] Source: OC Waste & Recycling 2021 Audited Financial Statements and Trial Balance (Eide Bailly LLP - Certified Public Accountants).
OC Waste & Recycling 2020 Audited Financial Statements and Trial Balance (Eide Bailly LLP - Certified Public Accountants).

[3] Source: 2nd Close Figures obtained from County financial system reports.
2nd Close Figures include adjustments and reclassifications to the General Ledger subsequent to the official June 30 year-end close.

A. FORECASTED SYSTEM TONNAGE

Description	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26
Frank R. Bowerman Landfill	1,659,801	1,590,392	1,538,289	1,518,464	1,507,364
Olinda Alpha Landfill	1,285,327	1,221,143	1,181,137	1,165,915	1,156,588
Prima Deshecha Landfill	488,019	480,545	464,802	458,812	455,321
Total In-County Tonnage	3,433,147	3,292,080	3,184,228	3,143,191	3,119,273
Frank R. Bowerman Landfill	603,326	713,755	765,261	713,599	728,000
Olinda Alpha Landfill	863,673	707,854	341,216	356,438	365,765
Prima Deshecha Landfill	150,831	146,164	409,933	426,830	406,235
Total Imported Tonnage [2]	1,617,830	1,567,773	1,516,410	1,496,867	1,500,000
Total System Tonnage	5,050,977	4,859,853	4,700,638	4,640,058	4,619,273

Description	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31
Frank R. Bowerman Landfill	1,505,479	1,872,851	2,145,537	2,227,490	2,227,490
Olinda Alpha Landfill	1,147,335	358,269	0	0	0
Prima Deshecha Landfill	477,372	843,585	947,489	883,981	901,984
Total In-County Tonnage [3]	3,130,187	3,074,705	3,093,026	3,111,471	3,129,474
Frank R. Bowerman Landfill	713,440	537,149	455,463	373,510	373,510
Olinda Alpha Landfill [1]	375,018	0	0	0	0
Prima Deshecha Landfill	411,542	462,851	544,537	626,490	626,490
Total Imported Tonnage [2]	1,500,000	1,000,000	1,000,000	1,000,000	1,000,000
Total System Tonnage	4,630,187	4,074,705	4,093,026	4,111,471	4,129,474

[1] Based on current estimates, Olinda Alpha Landfill is projected to fill earlier than the permit date. Disposal tonnage of North Landfill Region will be diverted to Central and South Landfill Region.

[2] Importation is planned to be continued with tonnage intake based on landfill system's capacity.

[3] OCWR is working on planning for landfill cell construction project and additional permitting for tonnage diversion from North Landfill Region to other landfill regions.

B. FORECASTED SYSTEM REVENUES

Description	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26
Fund 299 Enterprise / Operating - Total Revenues ^[1]	\$ 141,111,679	\$ 137,188,598	\$ 139,769,663	\$ 143,204,379	\$ 146,618,012
Fund 273 Capital Project / Operating - Total Revenues ^[2]	\$ 257,453	\$ 740,682	\$ 544,908	\$ 377,277	\$ 381,049
Fund 295 Importation Revenue Sharing - Total Revenues	\$ 48,411,917	\$ 48,067,920	\$ 48,352,856	\$ 49,209,321	\$ 50,840,999
Total Projected Revenues	\$ 189,781,050	\$ 185,997,200	\$ 188,667,426	\$ 192,790,977	\$ 197,840,061

Description	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31
Fund 299 Enterprise / Operating - Total Revenues ^[1]	\$ 151,783,120	\$ 153,730,069	\$ 158,849,782	\$ 164,577,761	\$ 170,737,859
Fund 273 Capital Project / Operating - Total Revenues ^[2]	\$ 384,860	\$ 388,709	\$ 392,596	\$ 6,522	\$ 206,587
Fund 295 Importation Revenue Sharing - Total Revenues ^[3]	\$ 52,417,081	\$ 36,028,011	\$ 37,144,868	\$ 38,296,359	\$ 39,483,546
Total Projected Revenues	\$ 204,585,061	\$ 190,146,788	\$ 196,387,245	\$ 202,880,641	\$ 210,427,992

[1] Major sources of revenue for Fund 299 Operating are from disposal tonnage, interest earnings, lease & royalty, and recycling operation.

[2] Interest earnings is the only revenue generated by Fund 273. Its annual interest earning projection is based on ending cash balance of prior year.

[3] Importation tonnage revenue is projected to decrease starting FY 2027/28.

C. FORECASTED SYSTEM EXPENSES

System Expenses by Fund	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26
Fund 299 Enterprise/ Operating	\$ 139,790,812	\$ 175,220,557	\$ 137,567,453	\$ 138,358,627	\$ 131,543,007
Fund 273 Capital Project/ Operating ^[1]	\$ 34,563,049	\$ 108,175,000	\$ 63,225,000	\$ 26,925,000	\$ 23,025,000
Fund 295 Importation Revenue Sharing ^[2]	\$ 19,215,282	\$ 18,966,918	\$ 18,903,446	\$ 19,103,710	\$ 19,602,300
Total System Expenses	\$ 193,569,143	\$ 302,362,475	\$ 219,695,898	\$ 184,387,338	\$ 174,170,307

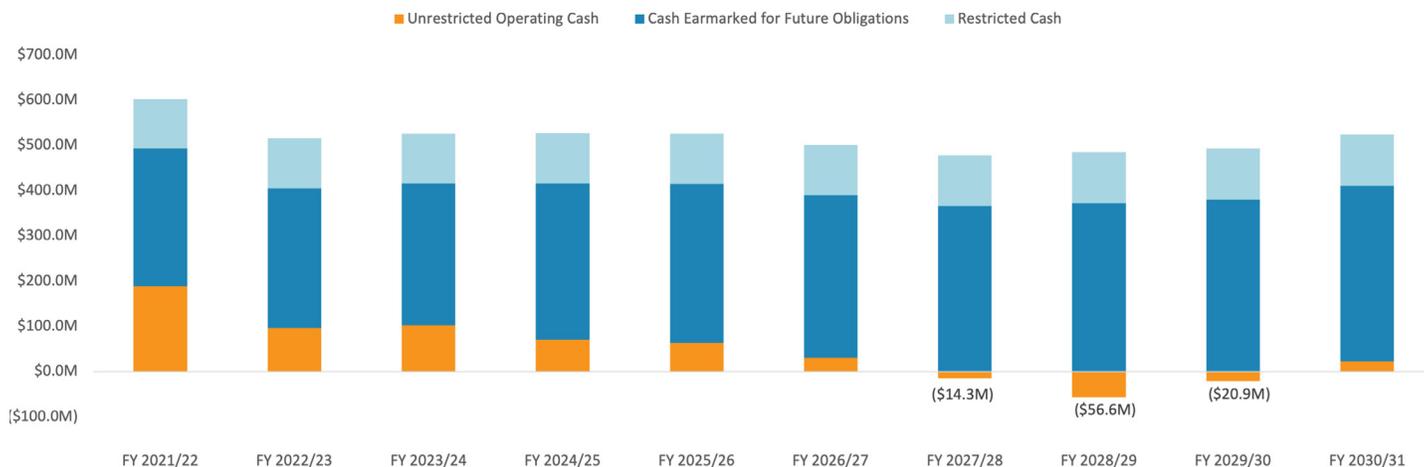
System Expenses by Fund	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31
Fund 299 Enterprise/ Operating	\$ 137,350,374	\$ 135,651,866	\$ 132,615,495	\$ 134,620,054	\$ 136,010,874
Fund 273 Capital Project/ Operating ^[1]	\$ 44,525,000	\$ 98,415,000	\$ 93,825,000	\$ 18,625,000	\$ 17,225,000
Fund 295 Importation Revenue Sharing ^[2]	\$ 20,075,125	\$ 13,708,404	\$ 14,043,460	\$ 14,388,908	\$ 14,745,064
Total System Expenses	\$ 201,950,499	\$ 247,775,270	\$ 240,483,955	\$ 167,633,962	\$ 167,980,937

[1] Capital project expenditures are high during the forecasting period due to major landfill development projects, construction plan for renewable energy facility and Phase II Organics infrastructure including the building of anaerobic digesters.

[2] Fund 295 Importation Revenue Sharing's expenses include Net Revenue Sharing to County & Cities, Host Fees and Special Fee to the State for importation tonnage.

D. FORECASTED CASH BALANCES

TOTAL CASH BALANCES



Ending Cash Balances

		FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26
Fund 299	OCWR Operating Fund	\$114.8M	\$42.5M	\$64.7M	\$32.5M	\$25.3M
Fund 273	Capital Project Fund	\$74.1M	\$54.5M	\$37.7M	\$38.1M	\$38.5M
Total Unrestricted Operating Cash		\$188.9M	\$97.0M	\$102.4M	\$70.6M	\$63.7M
Fund 299	Operating Cash Earmarked for Future Use	\$131.2M	\$143.1M	\$126.2M	\$128.8M	\$131.4M
Fund 275	Environmental Reserves Fund	\$32.3M	\$32.6M ^[2]	\$52.9M ^[2]	\$67.5M ^[2]	\$68.1M
Fund 279	Postclosure Maintenance Fund	\$141.6M	\$132.6M	\$134.6M	\$149.3M	\$151.5M
Total Cash Earmarked for Future Obligations		\$305.0M	\$308.3M	\$313.7M	\$345.5M	\$351.0M
Fund 276	Deferred Payment Security Deposits	\$0.9M	\$0.8M	\$0.8M	\$0.8M	\$0.8M
Fund 274	Corrective Action Escrow Fund	\$12.0M	\$12.1M	\$12.2M	\$12.4M	\$12.5M
Fund 288	FRB Landfill Wetland & Agua Chinon Wash Riparian Escrow Fund	\$0.9M	\$0.9M	\$0.9M	\$0.9M	\$0.9M ^[3]
Fund 286	Olinda Alpha Closure Escrow Fund	\$41.9M	\$42.3M	\$42.4M	\$42.7M	\$42.8M
Fund 284	Frank R. Bowerman Closure Escrow Fund	\$31.5M	\$31.7M	\$31.8M	\$32.0M	\$32.1M
Fund 287	Prima Deshecha Closure Escrow Fund	\$22.2M	\$22.3M	\$22.4M	\$22.6M	\$22.6M
Total Restricted Cash		\$109.3M	\$110.2M	\$110.4M	\$111.4M	\$111.6M
Total Fiscal Year End Cash Balances		\$603.2M	\$515.5M	\$526.6M	\$527.4M	\$526.4M

D. FORECASTED CASH BALANCES

CASH BALANCES

Ending Cash Balances		FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31
Fund 299	OCWR Operating Fund	(\$8.3M)	(\$53.6M)	(\$57.3M)	(\$41.5M)	\$1.6M
Fund 273	Capital Project Fund	\$38.9M	\$39.3M	\$0.7M	\$20.7M	\$20.9M
Total Unrestricted Operating Cash		\$30.5M	(\$14.3M)	(\$56.6M)	(\$20.9M)	\$22.4M^[1]
Fund 299	Operating Cash Earmarked for Future Use	\$137.1M	\$140.8M	\$144.2M	\$148.9M	\$153.5M
Fund 275	Environmental Reserves Fund	\$68.8M	\$69.5M	\$70.2M	\$70.9M	\$71.6M
Fund 279	Postclosure Maintenance Fund	\$153.8M	\$156.1M	\$158.4M	\$160.8M	\$163.2M
Total Cash Earmarked for Future Obligations		\$359.7M	\$366.4M	\$372.8M	\$380.6M	\$388.3M
Fund 276	Deferred Payment Security Deposits	\$0.8M	\$0.8M	\$0.8M	\$0.8M	\$0.8M
Fund 274	Corrective Action Escrow Fund	\$12.6M	\$12.7M	\$12.9M	\$13.0M	\$13.1M
Fund 288	FRB Landfill Wetland & Agua Chinon Wash Riparian Escrow Fund	\$0.0M	\$0.0M	\$0.0M	\$0.0M	\$0.0M
Fund 286	Olinda Alpha Closure Escrow Fund	\$43.1M	\$43.2M	\$43.6M	\$43.6M	\$44.0M
Fund 284	Frank R. Bowerman Closure Escrow Fund	\$32.4M	\$32.4M	\$32.7M	\$32.7M	\$33.0M
Fund 287	Prima Deshecha Closure Escrow Fund	\$22.8M	\$22.8M	\$23.0M	\$23.1M	\$23.3M
Total Restricted Cash		\$111.7M	\$112.0M	\$112.9M	\$113.2M	\$114.2M
Total Fiscal Year End Cash Balances		\$501.9M	\$464.0M	\$429.1M	\$473.0M	\$525.0M

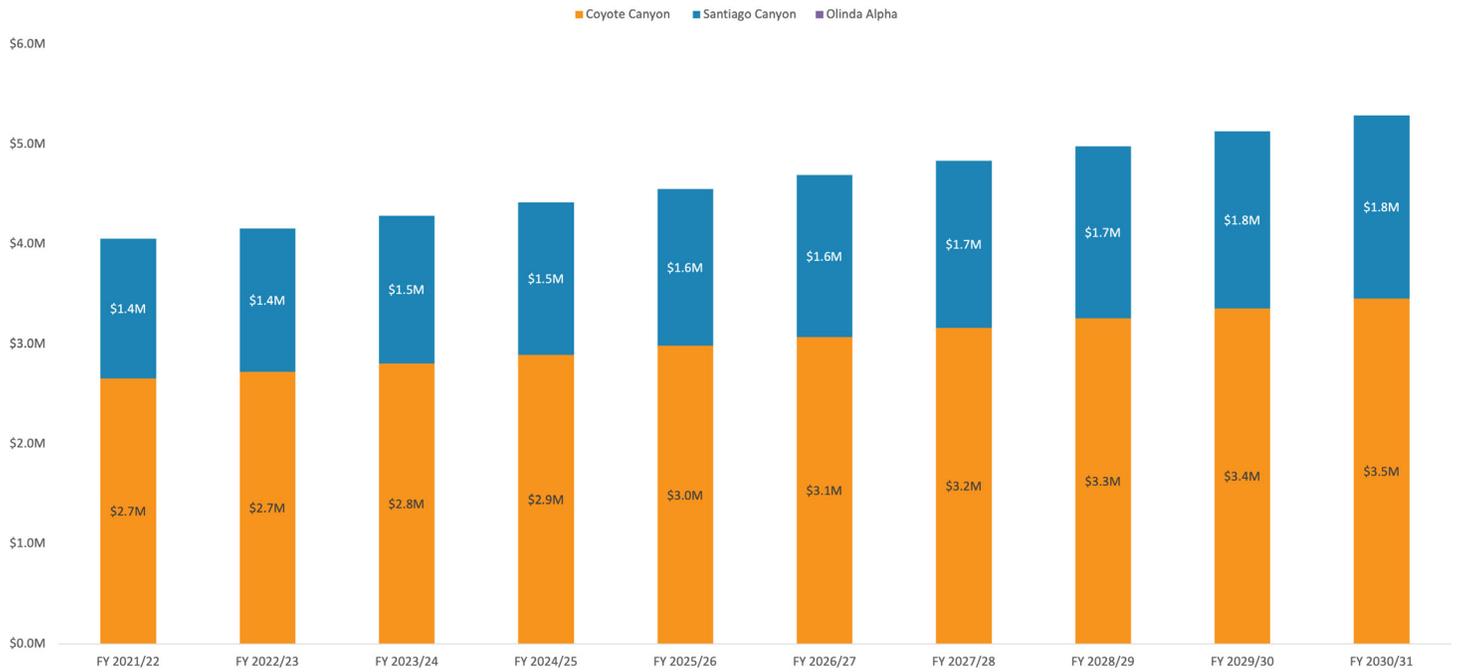
[1] Total Unrestricted Operating Cash balance is projected to be negative during period of FY 2027/28 to FY 2029/30 with Fund 299 balance negative during FY 2026/27 - FY 2029/30. New and higher disposal rate is needed to increase tonnage revenue and to fill the negative gap for Fund 299 Unrestricted Operating Cash balance.

[2] Fund 275 cash balance is low until FY 2022/23 due to the borrowing from other County departments. Loans will be fully repaid by FY 2024/25, and Fund 275 cash balance cap of \$70 million will be reinstated.

[3] Per the agreement with the California Department of Fish and Game for habitat mitigation, requirement for Fund 288 escrow is estimated to end in FY 2025/26.

E. LANDFILL POSTCLOSURE MAINTENANCE FUND

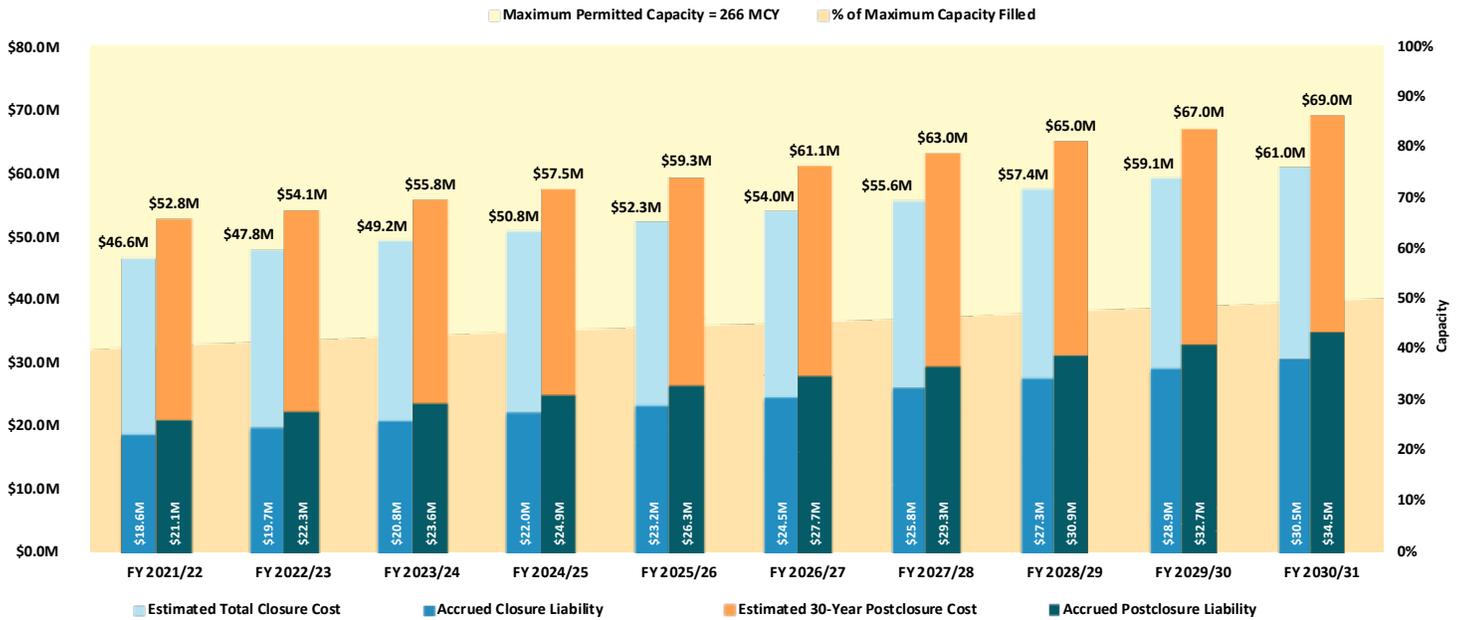
ANNUAL POSTCLOSURE MAINTENANCE EXPENDITURES



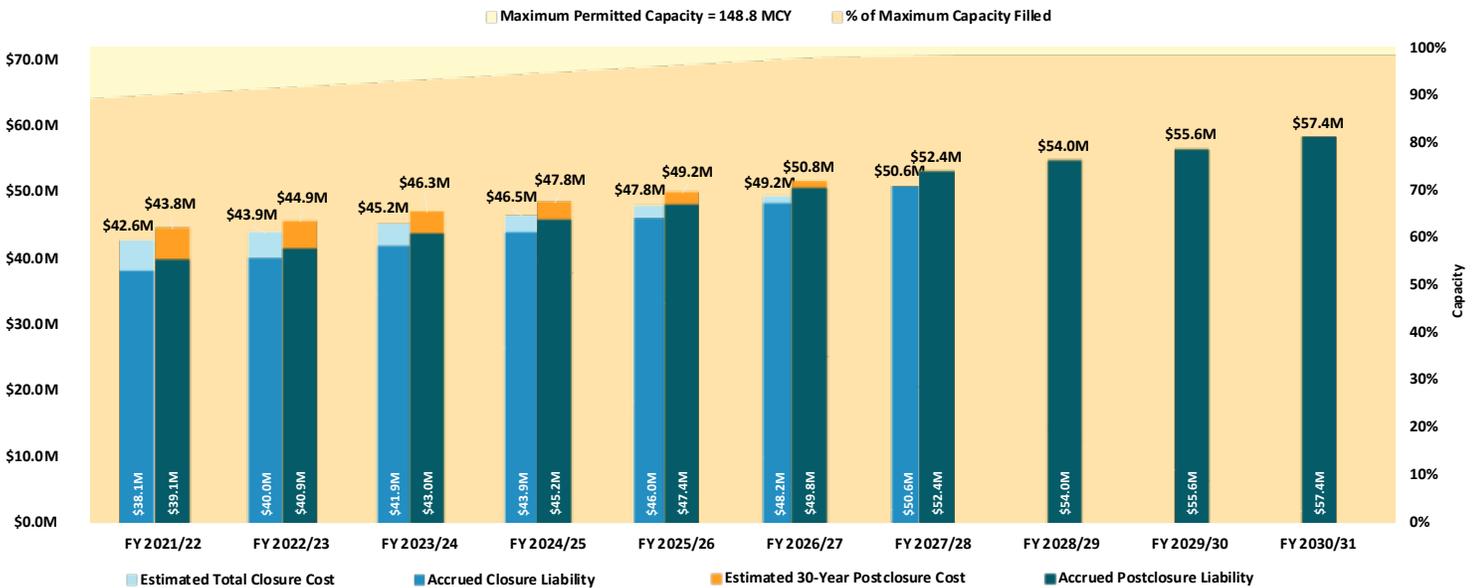
[1] Olinda Alpha Landfill is estimated to prepare its 30-year postclosure maintenance period in FY 2031/32

F. LANDFILL CLOSURE AND POSTCLOSURE LIABILITIES

Frank R. Bowerman Landfill Closure and Postclosure Liabilities

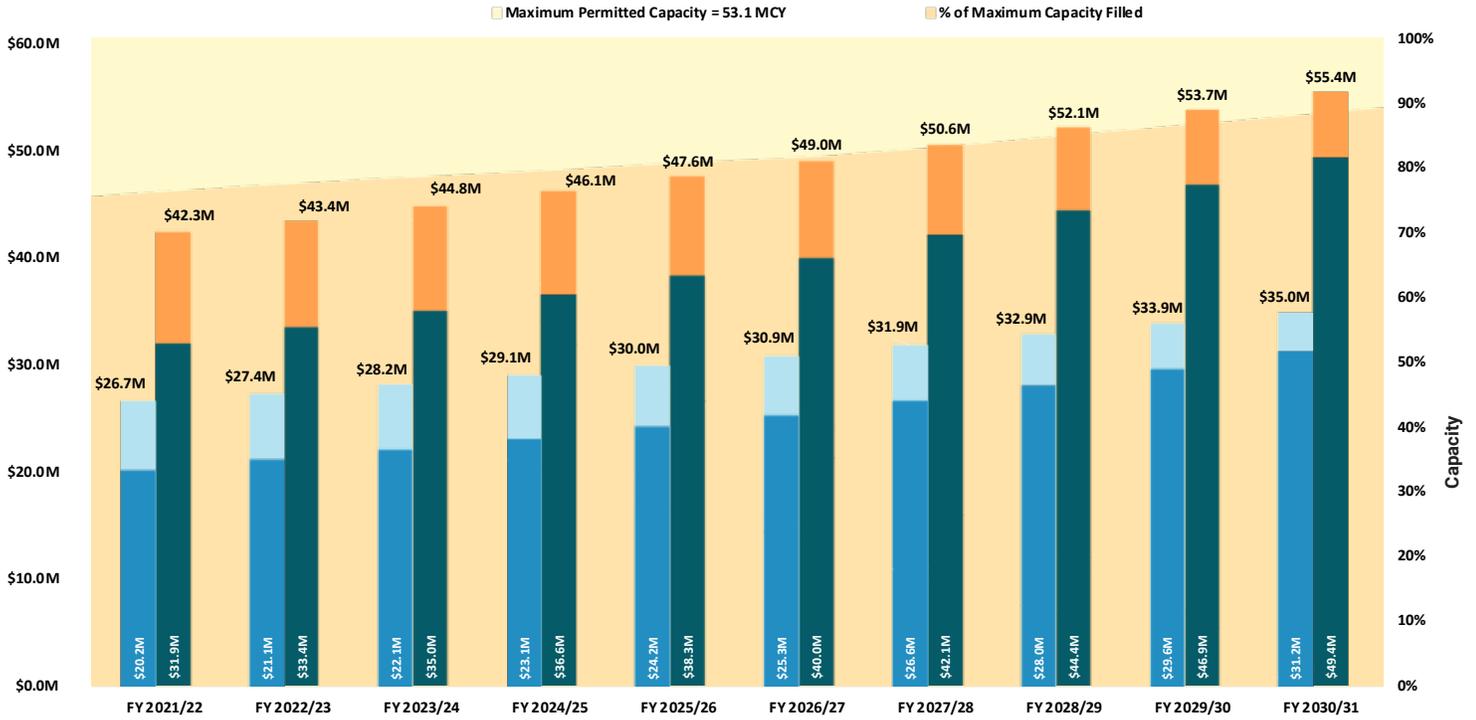


Olinda Alpha Landfill Closure and Postclosure Liabilities

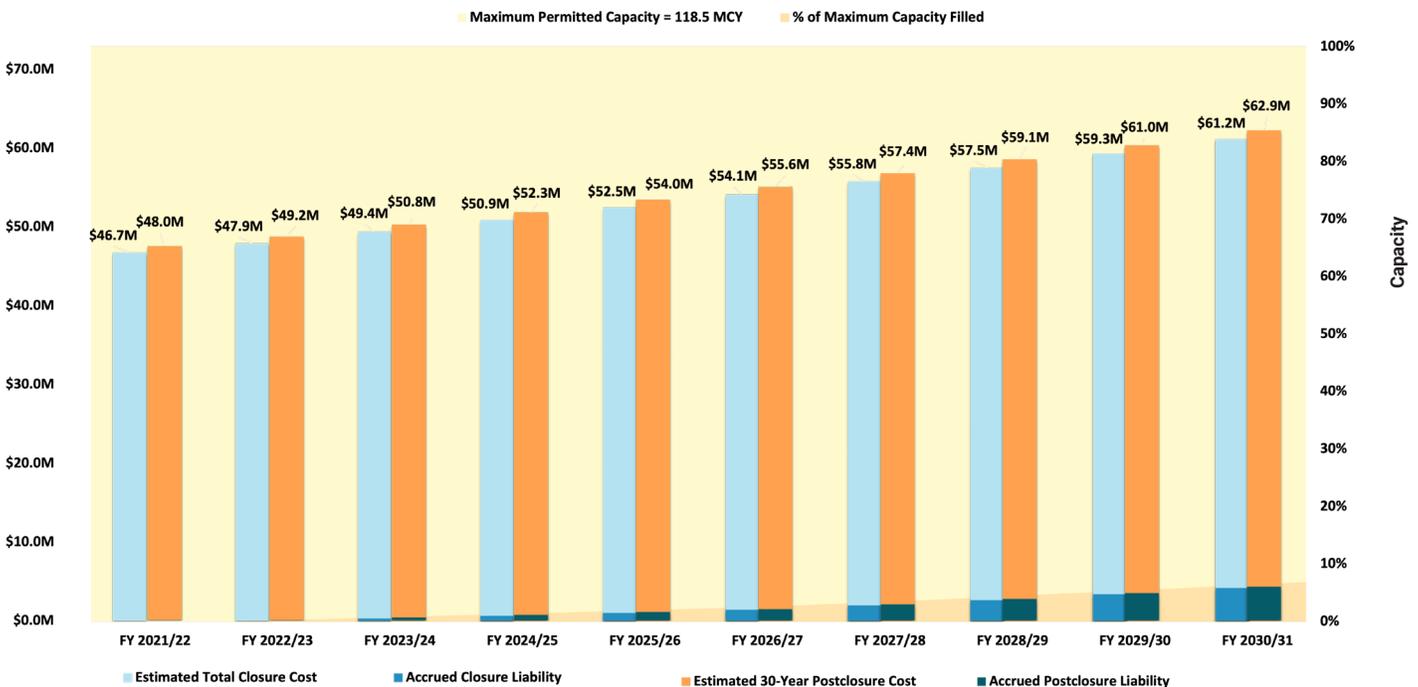


F. LANDFILL CLOSURE AND POSTCLOSURE LIABILITIES

Prima Deshecha Landfill - Zone 1 Closure and Postclosure Liabilities



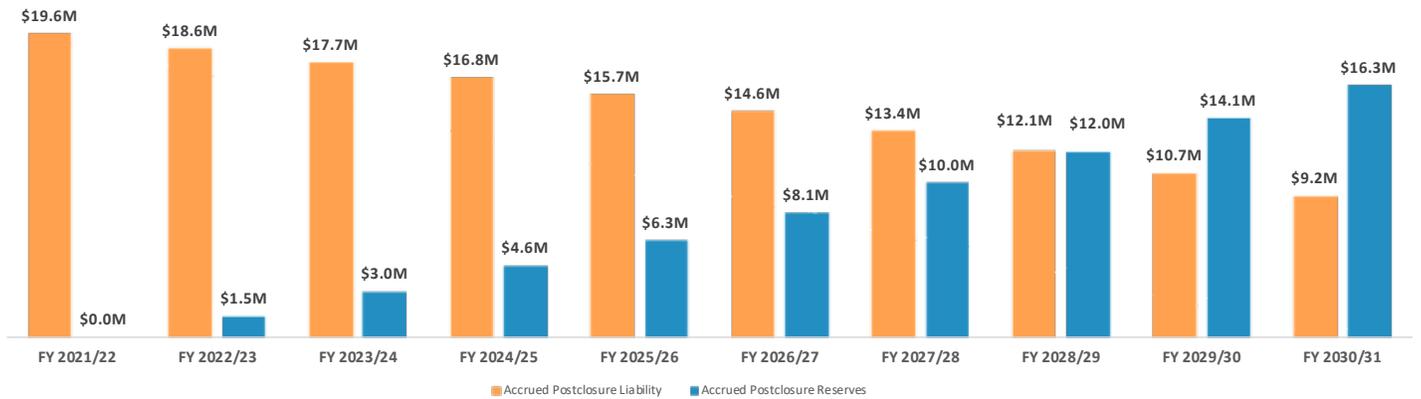
Prima Deshecha Landfill - Zone 4 Closure and Postclosure Liabilities



Prima Deshecha Landfill Zone 4 is estimated to start accepting waste in last quarter of FY 2023/24. Accrued liabilities are required when waste is accepted.

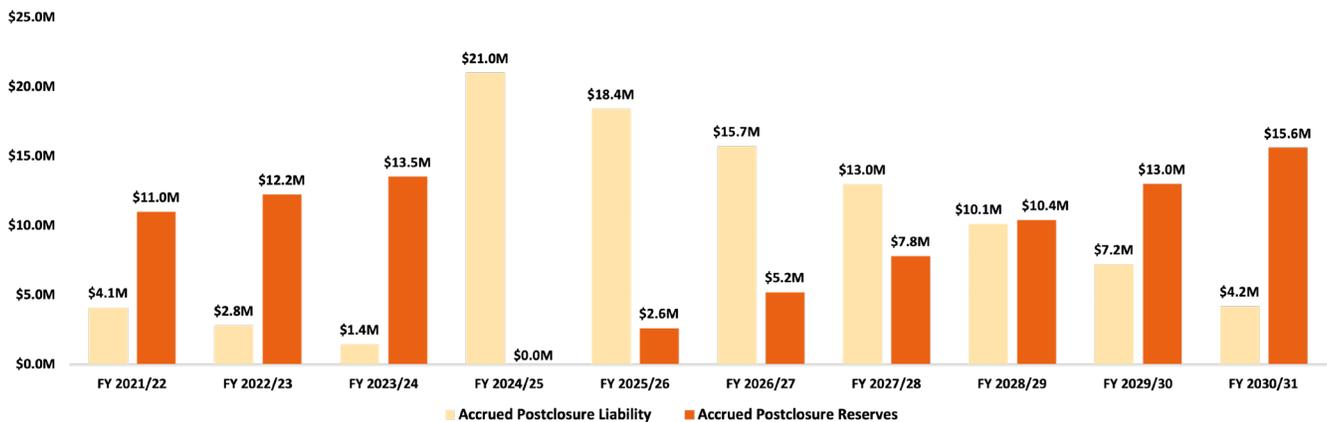
G. CLOSED LANDFILL POSTCLOSURE LIABILITIES & RESERVES

SANTIAGO CANYON POSTCLOSURE LIABILITY AND RESERVES



Since FY 2015/16, OCWR has implemented a reserves policy to maintain 15 year cost of the annual postclosure maintenance cost estimates for each closed site that has been in its postclosure phase longer than 15 years. Santiago Canyon has reached its 15th year of postclosure in FY 2021/22; Santiago accrued postclosure reserves will be recorded starting FY 2022/23.

COYOTE CANYON POSTCLOSURE LIABILITY AND RESERVES



In FY 2024/25, Coyote Canyon Landfill will complete its 30-year postclosure period. Although GASB 18 postclosure liability will be no longer required in this case, Cal Recycle still requires a perpetuity postclosure maintenance. Therefore, \$21M will be funded to Coyote accrued postclosure liabilities. Coyote accrued postclosure reserves will be built up again, starting FY 2025/26.