Orange County Sanitation District

BOARD OF DIRECTORS

Special Meeting Agenda

Wednesday, September 18, 2019 - 5:00 PM

Board Room
Administration Building
10844 Ellis Avenue
Fountain Valley, CA 92708
(714) 593-7433

ACCOMMODATIONS FOR THE DISABLED: Meeting Rooms are wheelchair accessible. If you require any special disability related accommodations, please contact the Orange County Sanitation District Clerk of the Board's office at (714) 593-7433 at least 72 hours prior to the scheduled meeting. Requests must specify the nature of the disability and the type of accommodation requested.

AGENDA POSTING: In accordance with the requirements of California Government Code Section 54954.2, this agenda has been posted outside the main gate of the Sanitation District's Administration Building located at 10844 Ellis Avenue, Fountain Valley, California, and on the Sanitation District's website at www.ocsd.com not less than 72 hours prior to the meeting date and time above. All public records relating to each agenda item, including any public records distributed less than 72 hours prior to the meeting to all, or a majority of the Board of Directors, are available for public inspection in the office of the Clerk of the Board.

AGENDA DESCRIPTION: The agenda provides a brief general description of each item of business to be considered or discussed. The recommended action does not indicate what action will be taken. The Board of Directors may take any action which is deemed appropriate.

MEETING AUDIO: An audio recording of this meeting is available within 24 hours after adjournment of the meeting. Please contact the Clerk of the Board's office at (714) 593-7433 to request the audio file.

NOTICE TO DIRECTORS: To place items on the agenda for a Committee or Board Meeting, the item must be submitted in writing to the Clerk of the Board: Kelly A. Lore, MMC, (714) 593-7433 / klore@ocsd.com at least 14 days before the meeting.

FOR ANY QUESTIONS ON THE AGENDA, BOARD MEMBERS MAY CONTACT STAFF AT:

General Manager: Jim Herberg, jherberg@ocsd.com / (714) 593-7300
Asst. General Manager: Lorenzo Tyner, ltyner@ocsd.com / (714) 593-7550
Asst. General Manager: Rob Thompson, rthompson@ocsd.com / (714) 593-7310
Director of Human Resources: Celia Chandler, cchandler@ocsd.com / (714) 593-7202
Director of Engineering: Kathy Millea, kmillea@ocsd.com / (714) 593-7365
Director of Environmental Services: Lan Wiborg, lwiborg@ocsd.com / (714) 593-7450

CALL TO ORDER

(Board Chairman David Shawver)

INVOCATION AND PLEDGE OF ALLEGIANCE (Steve Nagel, City of Fountain Valley)

ROLL CALL (Clerk of the Board)

DECLARATION OF QUORUM

PUBLIC COMMENTS:

NON-CONSENT:

1. STRATEGIC PLAN DEVELOPMENT **2019-567**

Attachments: Agenda Report
OCSD Biosolids Management Policy Statement
OCSD Constituents of Emerging Concern Policy Statement
OCSD Food Waste Treatment Policy Statement
OCSD Environmental Water Quality, Stormwater Management and Urban Runoff Policy Statement
OCSD Water Reuse Policy Statement

OTHER BUSINESS AND COMMUNICATIONS OR SUPPLEMENTAL AGENDA ITEMS, IF ANY:

BOARD OF DIRECTORS INITIATED ITEMS FOR A FUTURE MEETING:

At this time Board members may request staff to place an item on a future agenda.

ADJOURNMENT:

Adjourn the Special Board meeting until the Regular Meeting of the Board of Directors on September 25, 2019 at 6:00 p.m.

Orange County Sanitation District

BOARD OF DIRECTORS

Agenda Report

Administration Building
10844 Ellis Avenue
Fountain Valley, CA 92708
(714) 593-7433

File #: 2019-567 **Agenda Date:** 9/18/2019 **Agenda Item No:** 1.

FROM: James D. Herberg, General Manager
Originator: Rob Thompson, Assistant General Manager

SUBJECT:

STRATEGIC PLAN DEVELOPMENT

GENERAL MANAGER'S RECOMMENDATION

RECOMMENDATION:

Provide input to staff on the development of the Strategic Plan.

BACKGROUND

The Orange County Sanitation District (Sanitation District) is developing its Strategic Plan. The strategic plan is a policy level roadmap which defines the future desired state of the agency and lays out initiatives to move toward that desired state.

Staff has offered 14 individual policy areas which, when fully developed, will comprise the overall Strategic Plan. Preliminary policy statements have been developed by the Executive Management team based on survey input previously provided by Board Members and staff. Board of Director input is critical to the development of the Strategic Plan. In order to properly review and receive input, the items will be presented individually over three Board of Directors' meetings as follows:

August 28
- Budget Control and Fiscal Discipline
- Energy Independence
- Asset Management
- Chemical Sustainability
- Climate and Catastrophic Event Resiliency

September 18
- Biosolids Management
- Constituents of Emerging Concern
- Food Waste Treatment
- Environmental Water Quality, Stormwater Management and Urban Runoff
- Water Reuse

September 25

- Resilient Staffing
- Safety and Physical Security
- Cyber Security
- Property Management

Staff intends to finalize the items and compile them into a draft plan for formal adoption in October or November of this year. The adopted Strategic Plan will be the basis of Fiscal Year 2020-21 and 2021 -22 budget development.

RELEVANT STANDARDS

- Engage the Board of Directors in setting public policy
- Build brand, trust and support with policy makers and community leaders

PROBLEM

The Strategic Plan needs to be updated.

PROPOSED SOLUTION

Solicit and incorporate the Board of Directors' input in the development of the proposed Strategic Plan document.

ATTACHMENT

The following attachment(s) are included in hard copy and may also be viewed on-line at the OCSD website (www.ocsd.com) with the complete agenda package:

- Proposed Orange County Sanitation District Biosolids Management Policy Statement
- Proposed Orange County Sanitation District Constituents of Emerging Concern Policy Statement
- Proposed Orange County Sanitation District Food Waste Treatment Policy Statement
- Proposed Orange County Sanitation District Environmental Water Quality, Stormwater Management and Urban Runoff Policy Statement
- Proposed Orange County Sanitation District Water Reuse Policy Statement

Proposed Orange County Sanitation District
Biosolids Management Policy

Should OCSD explore alternative uses for biosolids?

Summary Policy Statement

The Orange County Sanitation District (the Sanitation District) will remain committed to a sustainable biosolids program and will beneficially reuse biosolids in accordance with Resolution No. OCSD 13-03 (attached) and the 2017 Biosolids Management Plan.

Background

Wastewater solids at both our treatment plants are separated, thickened, digested, and dewatered before being recycled offsite by contractors for composting and land application. Biogas created from the digesters is used to generate electricity to offset the need to purchase power from a local utility. The Sanitation District currently receives sewage sludge from the Irvine Ranch Water District at Plant No. 1, which is scheduled to cease by 2021 when Irvine Ranch Water District completes their own solids treatment facility.

Prior to 2019, the Sanitation District produced an average of 800 wet tons per day (~20% solids) of Class B biosolids dewatered by belt press units. Presently, with the construction and commissioning of co-thickening sludge and dewatering centrifuges, the Sanitation District has been producing approximately 500-600 wet tons per day (25%-29% solids) with biosolids hauling cost savings of approximately $200,000-400,000/month due to the reduction in volume.

The Sanitation District's biosolids program is shaped by federal, state, and local regulations and by the Sanitation District's biosolids policy (Board Resolution 13-03), our biosolids management system, and the 2017 Biosolids Master Plan (Plan). The Sanitation District manages a high quality biosolids program built on a solid policy that emphasizes the diversification of product markets for Class A and B biosolids utilized as a soil amendment for agriculture and horticulture uses. The policy also sets direction to seek opportunities in emerging markets such as biosolids-to-energy technologies to produce renewable energy in the form of biogas or used as a heating value source.

These marketing principles are aligned and supported by the Plan, which provides the Sanitation District a roadmap and framework for reliable and sustainable biosolids management options while minimizing cost. In addition, the Plan sets future capital facilities improvements over a 20-year planning horizon. The Sanitation District will be implementing the Plan to develop a capital improvement project for Plant No. 2 that will result in a major change to the Sanitation District's biosolids program; namely, the construction of new mesophilic and thermophilic digesters that will generate Class A biosolids beginning in 2030. These new digesters are needed for operational resiliency against seismic events. Plant No. 1 will continue to produce Class B biosolids.

The Plan evaluated end-use management alternatives for the Sanitation District's biosolids. This work supports the Sanitation District biosolids policy and has taken into account the regulatory

initiatives imposed on organic management in California as explained below. The Plan established a roadmap for the Sanitation District's commitment to beneficial use of its biosolids. The biosolids management portfolio for the Sanitation District is expected to remain similar to the overall current biosolids management end use options as it is today. Currently about half of the annual production going to contract composting and half going to Class B land application in Arizona.

The significant shift will begin when the Sanitation District starts reliably generating Class A biosolids at Plant No. 2. Although this is more than 10 years away, the Plan has identified early planning efforts on future end uses which include:

- Emerging markets: This end use refers to either markets in which biosolids have not been tested in California at this time (e.g., land reclamation) or emerging-technology solutions (e.g., biosolids gasification, supercritical oxidation, fluidized bed combustion, cement kiln drying, pyrolysis etc.).
- Soil blending: This option involves working or partnering with local soil blenders to deliver and blend Class A biosolids with soil to produce a soil amendment.
- Arizona land application: Land application in Arizona will continue to be a part of the Sanitation District's overall biosolids program and serves as a large-capacity outlet for biosolids management.
- California land application: While Class A compost and granules are currently land-applied in California, land application of Class A cake is still restricted in most counties. However, it is anticipated that the implementation of California's organics diversion mandates will loosen local land applications restrictions.

This programmatic framework described above has led to a reliable and sustainable biosolids management program that is designed for the beneficial use of the Sanitation District's biosolids through the utilization of diverse biosolids management options using multiple biosolids contractors, markets, and merchant facilities, while maintaining a failsafe backup capacity of at least 100 percent of the Sanitation District's daily biosolids tonnage. This forethought is necessary due to the flux of regulatory, environmental, market, and financial factors that poses potential risks to the biosolids management in California.

Current Situation

The legislative and regulatory landscapes in California are changing regarding organic management. For the past 15 years, direct land application of Class B biosolids has been predominately prohibited due to strict local ordinances and conditional use requirements, which preempts state recycling laws. However, in recent years there has been a need for organics diversion from landfills, healthy soils, renewable energy, and reduction of Green House Gases (GHGs), which are reflected in several important bills (laws) and initiatives that have been adopted:

- AB 1826 (2014) - Mandatory Organics Recycling for Businesses

- SB 1383 (2016) - 50% organics diversion from landfill by 2020 and 75 % by 2025, which includes biosolids and mandatory organics procurement (compost and biogas) for impacted jurisdiction.
- SB 32 (2016) - 40% Reduction GHG below 1990 levels by 2030
- SB 100 (2018) - 50% renewable resources (i.e. anaerobic co-digestion of food waste) target by December 31, 2026, and to achieve a 60% target by December 31, 2030
- Increasing soil carbon and carbon sequestration under the Healthy Soils Initiative and Forest Carbon Plan

These measures are expanding "organic waste markets," thereby stimulating interest in siting more composting facilities and organic waste-to-energy projects and encouraging soil blending and direct land application of biosolids, opening opportunities for wastewater treatment plants such as the Sanitation District to locally manage more biosolids. Regulatory agencies such as the State Water Resource Control Board, CalRecycle, California Department of Food and Agriculture, California Air Resources Board, and California Energy Commission are developing regulations to implement the new laws. During the rule making process, the Sanitation District has been actively involved through the California Association of Sanitation Agencies (CASA) and the Southern California Alliance of POTWs (SCAP), advocating regulators to open more biosolids management options in California. In particular, the proposed regulations for SB 1383 will require jurisdictions such as cities and counties to procure recycled organics such as compost and biogas for beneficial reuse. This organic market will provide opportunities for regional public and/or private partnerships for biosolids management options.

Although there is growing interest in California for organics management, there has also been a rising concern from the regulatory community regarding emerging contaminants such as polyfluoroakyl substances (PFAS) and microplastics that may have some potential impact to the wastewater sector. Although to date there are no regulatory limits of these contaminants in biosolids or wastewater in California, the Sanitation District has been actively monitoring the development of the science and regulation concerning these emerging concerns.

Future Policy Statement

As the regulatory landscape shapes to stimulate organic waste markets in California, the Sanitation District seeks to leverage its memberships with various industry associations to advocate local, state, and federal agencies to assure biosolids proposed regulations encourage the beneficial use of biosolids as a soil amendment, renewable energy, and a healthy end-use market. The Sanitation District also leverages its memberships to monitor the development of initiatives related to constituents of emerging concern that may impact the beneficial use of biosolids. The Sanitation District's 's leadership role in these organizations enables us to have a greater influence in key regional, state, and national issues.

The Sanitation District seeks to stay abreast of developments in organic waste markets as they develop in California. The Sanitation District seeks both public and private partnerships with regional biosolids management opportunities including new innovative technology options that convert biosolids to energy and other biosolids recycling operations. This is consistent with the

Sanitation District's biosolids policy and Plan. To accomplish this, the Sanitation District will issue a request for information to research and evaluate available emerging market such as biosolids-to-energy options or other biosolids recycling operations within a 200-mile radius of the Sanitation District to potentially develop a scope of work and minimum requirements for a future contract solicitation.

Consistent with the Sanitation District's Plan, staff will seek to collaborate with OC Waste and Recycling (OCWR) for regional biosolids management opportunities as well as partnering with OCWR to find local solutions to meet SB 1383's organics diversion mandates including in-county biosolids management, composting, food waste co-digestion, and biogas production.

Initiatives to Support Progress Toward the Policy Goal:

Initiative: Educate and advocate with the local, state, and federal agencies to assure biosolids will continue to be safely and legally used as a soil amendment and monitor and research the development of initiatives of constituents of emerging concerns such as PFAS and microplastics that may impact biosolids.

Initiative: Stay abreast of new technology options to convert organics to energy and other regional biosolids recycling and renewable energy partnerships within Southern California.

Initiative: Proceed with mesophilic and thermophilic biosolids facility at Plant No. 2 to enhance biosolids quality and marketability while improving the Sanitation District's operational resiliency against seismic events.

Proposed Orange County Sanitation District

Constituents of Emerging Concern Policy

Should OCSD take a lead role on Constituents of Emerging Concern in wastewater and develop detection and characterization methods in wastewater treatment?

Summary Policy Statement

The Orange County Sanitation District (Sanitation District) will partner with other agencies, associations, and institutions to support the use of sound science to inform policy and regulatory decisions on constituents of emerging concern (CECs) at the federal, state, and regional levels. Staff will obtain and maintain current knowledge on CECs under regulatory consideration, including occurrence, analytical methods, regulations, and treatment to support the Sanitation District's mission.

Background

CECs also referred to as Constituents or Contaminants of Emerging Concern are pollutants that may or may not be subject to regulatory requirements or statutes yet pose a risk to public health and/or the environment. The Sanitation District is a recipient of CECs that are discharged along with domestic and residential wastewater; discharges from industrial, commercial, and other governmental facilities; and tributary discharging jurisdictions. The concept of CECs evolves over time and often the Sanitation District and other entities must acknowledge and understand their impacts to address the effects posed by each CEC.

For more than 50 years, the Sanitation District has adopted and enforced standards and requirements to protect the public health and safety, the environment, and the Sanitation District's workers and facilities, while collecting and treating wastewater. Initially the primary concern to the Sanitation District was conventional pollutants, those that originate from normal sanitary use and can be addressed by conventional wastewater treatment. With the 1972 amendment to the Clean Water Act, and as required by the Code of Federal Regulations, the Sanitation District implemented a mandated pretreatment program to control discharges containing toxic pollutants at their sources through permitting, enforcement, inspection, and sampling. The Sanitation District's Pretreatment Program promulgates the Sanitation District's *Wastewater Discharge Regulations Ordinance* (Wastewater Ordinance), which governs discharges to the sewer through various types of permits. The Wastewater Ordinance also includes numeric limits, referred to as Local Limits, that control the quality of non-domestic discharges to the sewer. These Local Limits are the result of a technical evaluation and comprehensive sampling and analysis effort, required under the Sanitation District's permit issued by the state to discharge to the ocean – the National Pollutant Discharge Elimination System (NPDES) Permit.

The Sanitation District's current NPDES Permit requires evaluation and monitoring of CECs. The Regional Water Quality Control Board (RWQCB) and EPA required the Sanitation District to study

and report on certain newer CECs in the Sanitation District's effluent and the receiving waters. The CEC study had to include the following categories and specified a set of particular constituents in each category: Hormones (8), Industrial Endocrine Disrupting Compounds (7), Pharmaceuticals and Personal Care Products (13), and Flame Retardants (9). Since 2014, California's State Water Resource Control Board has been updating its Recycled Water Policy and has identified CECs under consideration for projects that conduct surface spreading of recycled water, including the Groundwater Replenishment System (GWRS). In addition, to meet the Sanitation District's obligations to provide a high level of service for biosolids reuse and water reclamation through GWRS, the Sanitation District must evaluate and monitor CECs that affect these initiatives.

Although the Sanitation District has been involved with water reclamation with the Orange County Water District (OCWD) since the mid-1970's, the Sanitation District's mission changed significantly in the years leading up to 2008 when the Groundwater Replenishment System (GWRS) was commissioned. GWRS compelled the Sanitation District to consider impacts to drinking water limits and Notification and Response Levels, which are typically much lower than the standards in place for a wastewater treatment plant. For several critical constituents, OCWD and the Sanitation District established Level of Service commitments. The Sanitation District and OCWD established a response plan to follow when a constituent becomes a concern to either agency. Where the source can be identified, the plan organizes responsive actions from the Sanitation District and OCWD for industrial and commercial facilities. Domestic and residential sources are typically addressed by way of educational outreach to the public.

To determine the constituents that impact the Sanitation District's operations and reuse initiatives, the Sanitation District interacts with federal, state, and local agencies and monitors their regulatory and legislative efforts. Sometimes the job is straightforward, because the federal, state, or local agency focuses on a specific CEC chemical which yields a concentrated effort; however, sometimes, the effort can be interpretative. This requires a comprehensive, well-established program and experienced subject matter experts to identify the CECs that impact the Sanitation District. The Sanitation District must then evaluate the sources and decide what methods will be employed to control the discharges, if necessary.

Current Situation

With newer equipment and techniques, federal, state, and local government agencies are detecting constituents at very low concentrations in the drinking water. This has resulted in agencies studying more constituents and requesting NPDES Permit holders, such as the Sanitation District, to monitor and report CECs detected in the influent and effluent. However, wastewater is a much more complex matrix than drinking water, so reproducible low-level analytical methods are much more difficult to develop and implement for wastewater than drinking water.

The Sanitation District will also be required to develop new methods for addressing some of the CECs primarily discharged from residential communities or are present in the existing drinking water supply. The Sanitation District typically attempts to address such discharges through education and outreach while working with other agencies. Some CECs require the Sanitation District and other agencies to sponsor legislation and regulation development or to comment on a particular subject to protect the agency's interests. For example, the Sanitation District has advocated for minimizing or eliminating the use of specific CECs in manufacturing or consumer use to the California Department of Toxic Substances Control. To achieve its mission, the Sanitation District will need to continue supporting a variety of regulatory and legislative efforts.

Future Policy Statement

If source control, education and outreach, or legislative and regulatory efforts are not successful, the Sanitation District may be required to implement a technological or operational process change/investment to address a CEC.

The Sanitation District must align its resources to continue managing CECs throughout the service area and treatment process in order to comply with the Sanitation District's existing regulatory requirements. The Sanitation District must remain vigilant in monitoring the threats posed by upstream sources to its system; to continue to work with other agencies and professional organizations to develop robust analytical methods; and to evaluate routinely the need to establish sound policies, local limits, or other regulations and standards based on new local, state, and federal regulations to protect public health and the environment. The Sanitation District is required to continue implementing its established response plan by promoting effective source control and treatment, while also preparing for newer CECs and regulatory obligations. The Sanitation District will continue to work to understand current and future CECs by monitoring developing regulations and legislation and actively engaging water and wastewater stakeholders.

Two families of chemicals, PFAS and PFOA, have been identified as CEC's with a probability of impacting water and biosolids reuse. At the request of various Board Members, we have included the OCWD's August 2019 PFOA and PFAS Fact Sheet. This is an example of a CEC where the Sanitation District must be engaged helping to explore the science and shape future legislation and regulation to help create practical solutions to real world concerns.

Initiatives to Support Progress Toward the Policy Goal:

Initiative: The Sanitation District will continue to actively engage water and wastewater stakeholders on CECs to stay abreast of the scientific progress and provide timely briefings to the Sanitation District's Management Team and Board to facilitate informed decision making.

Initiative: The Sanitation District will continue to develop capacity to detect, quantify, and characterize CECs throughout the service area and treatment process in order to promote treatment effectiveness and the communication of credible risks.

Initiative: The Sanitation District will actively research laboratory technics and other scientific research to understand the real and potential impact of CECs, like PFAS and PFOA, on the reuse of water and biosolids. The Sanitation District will use science-based knowledge to help shape legislation and regulation to protect the public health and environment.

Proposed Orange County Sanitation District
Food Waste Treatment Policy

How should OCSD structure the tipping fee for digestion of food waste?

Should OCSD conduct a feasibility study for digestion of green waste?

Summary Policy Statement

The State of California limits the volume of organic waste that may be diverted to landfills. The Orange County Sanitation District (Sanitation District) will collaborate with the County of Orange, other local agencies, and waste haulers to find ways to beneficially reuse food waste, a type of organic waste to assist cities in our service area in meeting their diversion requirements while increasing The Sanitation District's energy production.

Background

Whether supplying secondary treated wastewater for the GWRS, creating renewable energy in the form of biogas from anaerobic digestion to produce electricity, or benefiting from the use of biosolids as a soil amendment, the Sanitation District is a resource recovery agency committed to providing resilient and reliable wastewater treatment service while protecting the public health and the environment.

In recent years, there has been a significant change in the regulatory landscape in California related to the diversion of organics such as food, green material, wood, paper, biosolids, digestate, and sludges from landfills. Currently, much of the state's diverted organics are being composted or used as alternative daily cover on landfills. With the phaseout of organics as alternative daily cover, the regulatory shift is creating an organics market for the wastewater sector to provide a solution to manage organics such as food waste by way of co-digestion. There is an opportunity for the Sanitation District to produce additional biogas, reducing the need to purchase electricity from the local utility.

Anaerobic digestion is currently at the nexus of important State of California mandates, namely: (1) organics diversion from landfills (AB 1826 and SB 1383), and (2) increased renewable energy and fuels generation (SB 32 and SB 100). The primary alternatives for organics management are anaerobic digestion and composting – of which anaerobic digestion is the only process offering energy recovery potential. Over the next few years, California's cities and counties, along with municipal solid waste haulers, material recovery facilities, and landfills will need to develop collections, processing, and energy recovery infrastructure to address these state legislations and goals. Existing wastewater treatment plants such as the Sanitation District are uniquely positioned to play a role in the new organics marketplace since solid waste management facilities do not typically have anaerobic digesters, the energy recovery infrastructure in place, or experience regarding the management of biosolids for beneficial use.

In 2017, the Sanitation District completed a comprehensive Biosolids Master Plan (Plan) that provides a roadmap and framework for sustainable and cost-effective biosolids management options and future capital facilities improvement over a 20-year planning horizon. Considering

the timeliness of the regulatory mandates requiring organic diversion from the landfills and increased renewable energy, the Plan evaluated the feasibility of implementing a high strength organic waste receiving program involving the co-digestion of preprocessed food.

The Sanitation District's existing infrastructure isn't well suited for receiving, handling, or digesting green waste. Current digester feed, mixing, heating, dewatering and truck loading facilities aren't designed to deal with cellulosic products in green waste. The highly fibrous material doesn't readily break down and clogs the various systems optimized for sewage sludge treatment. In addition, there may be legal hurdles specified in the California Health and Safety Code, Section 4700, that must be addressed before the Sanitation District could operate a refuse transfer facility.

Current Situation

Project Viability

The Sanitation District's Plan concluded that the costs to construct and operate a food waste receiving facility could be offset by tipping fees charged to food waste processors/haulers and by additional power associated with the increased digester gas production. The Plan recommended that the Sanitation District build an interim food waste receiving station immediately to take advantage of existing digestion capacity of approximately 150-250 wet tons per day at Plant No. 2 and then construct a more permanent facility in the future to coincide with the planned construction of new digesters in Plant No. 2, allowing an additional capacity to co-digest approximately 500 wet tons per day of food waste. The Sanitation District also has at least 6 MW of installed electrical generation capacity that can convert the produced biomethane to electricity and heat.

Based on these recommendations, in 2018 the Sanitation District's Board approved a project (P2-124) to construct an interim (10-15 years) food waste facility to receive, store, and feed preprocessed food waste slurry to the digester complex at Plant No. 2 to generate additional digester gas. This project will be designed to accept approximately 150 wet tons per day of preprocessed food waste and will produce approximately 15percent more methane gas for on-site energy production, resulting in a greenhouse gas reduction of approximately 10,800 metric tons of carbon dioxide equivalent annually which is equivalent to the annual greenhouse gases generated by approximately 2,000 passenger vehicles. This is consistent with the Sanitation District's Energy Policy (OCSD 16-12) which is to strive to be energy independent by minimizing energy utilization and maximizing useful energy recovery from the sewage it receives. The interim receiving station is scheduled to be completed in 2022.

The final biosolids product currently produced by the Sanitation District is anticipated to be largely unaffected by the addition of food waste slurry. Pilot testing conducted by the Sanitation District indicates that there will be some increased gas production due to mixing sewage sludge and food waste feed stock, but the final biosolids product will remain largely unchanged going to centrifuge dewatering or to final reuse markets.

A draft Preliminary Design Report was issued in June 2019 for the interim receiving facility which included a viability evaluation concluding that the project is economically justifiable based on

project costs and anticipated tipping fees. Final Design work has started and among other important items, the tipping fee and food slurry specifications will be further refined and validated.

There are three large municipal solid waste haulers that have expressed interest in collaborating with the Sanitation District to provide preprocessed food waste for digestion. Of these, two haulers are located within the county and one is located outside the county. Another important partner for the Sanitation District is Orange County Waste and Recycling (OCWR). The Sanitation District has met with OCWR on a couple occasions and they expressed interest in partnering with the Sanitation District to find local solutions to meet SB 1383's organics diversion mandates including in-county biosolids management, composting, food waste co-digestion, and biogas production.

Future Policy Statement

Food Waste Slurry

The Sanitation District will only accept a preprocessed food waste slurry. We do not have available land or air permits to handle, sort, and process solid or green wastes. The Sanitation District will work with other public agencies and waste haulers to develop an industry standard for food waste slurry that specifies water, organic, metal, plastic, and glass content requirements. A common specification for slurry will help all parties make investment decisions.

Food Waste Volume

The Sanitation District has identified available capacity within its infrastructure at Plant No. 2 to accommodate food waste conversion to energy. The processes impacted by food waste conversion are digestion, gas cleaning, gas compression, generation, process heating, biosolid dewatering and biosolids loading. These impacted systems have the capacity to accept 150 to 250 wet tons per day for the next ten years. Beyond ten years, the Sanitation District plans on upgrading its digestion, gas compression, and gas treatment systems. Based on the lessons learned from the interim system and the development of the food waste market, the Sanitation District plans to be able to accept up to 500 wet tons per day when the new digestion, gas compression, and gas treatment systems are completed.

The Sanitation District believes that the full implementation of the current regulations will create a food waste slurry market significantly greater than 500 wet tons per day in Southern California.

Tipping Fee Basis

The acceptance of food waste has the opportunity to more fully utilize the system capacity that already exists for the benefit of the Sanitation District's rate payers.

The Sanitation District staff will develop a base tipping fee rate schedule that meets the following criteria:

- Recover all capital costs to construct facilities within five years (this will allow the Sanitation District and waste haulers to properly invest in processing facilities);

- Recover all operating costs including operating cost, maintenance cost, electricity usage, biosolids dewatering, and reuse costs;

There shall be no credit given for the value of the biogas created by the Sanitation District. The value of the biogas is offset by the cost to gather the gas, clean the gas, compress the gas, and covert the gas to electricity and heat. In addition, there is no way to reliably measure gas production attributable to food waste or sewage sludge, and food waste volume is a small fraction of the sewage sludge production.

Food waste generated and processed within the service area will be charged the base rate and will be prioritized over food waste from outside the service area. This is justified by the fact that the underlying infrastructure of the Sanitation District is already owned by service area rate payers. The Sanitation District contracts with service area waste haulers must provide for a pass-through savings to the Sanitation District rate payers. That means waste haulers may charge for collection and processing of food waste but must disclose to their City or Special District franchise partner the Sanitation District's tipping fees and negotiate pricing adjustments as necessary with City or Special District franchise partners.

If additional capacity exists, but isn't utilized by in service area users, then that capacity may be contracted by out of service area users at a premium to help offset the cost of the underlying infrastructure necessary to process the food waste.

The Sanitation District will pursue grant opportunities to the extent possible to reduce the overall capital and operating cost basis for the program to reduce the tipping fee base rate.

Initiatives to Support Progress Toward the Policy Goal:

Initiative: The Sanitation District will accept a preprocessed food waste slurry from contracted waste haulers that will be fed to existing anaerobic digesters. The Sanitation District will charge a tipping fee to offset its costs for capital construction, operations, handling, maintenance, and biosolids disposal.

Initiative: Design, build, and operate a food waste receiving station. Create a specification for food waste slurry and contract with solid waste haulers to receive and process food waste.

Proposed Orange County Sanitation District

Environmental Water Quality, Stormwater Management and Urban Runoff Policy

Should OCSD explore accepting controlled discharge of stormwater?

Summary Policy Statement

The Sanitation District will partner with storm water permittees to accept up to ten million gallons per day of dry weather urban runoff at no charge in order to improve water quality in streams, rivers and beaches as long as the constituents within the flow do not adversely impact the Sanitation District's worker safety, treatment processes, reuse initiatives, or permit compliance. The Sanitation District facilities are subject to significant flow increases during wet weather events and are not capable of accepting stormwater flow volumes.

Background

The Sanitation District's wastewater collection system is designed to be wholly separate from the region's stormwater systems, also referred to as storm sewers and/or storm drains. The Sanitation District implements a system-specific Sewer System Management Plan in compliance with the California Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, Water Quality Order No. 2006-0003-DWQ. In the Sanitation District's service area, most local sanitary sewer systems are owned by city municipalities and discharge into the Sanitation District -owned regional sewers. Similarly, many stormwater systems are also owned and maintained at the local level, referred to as municipal separate storm sewer systems or MS4 – publicly owned conveyances or a system of conveyances that are designed to collect/convey stormwater, are not combined with sanitary sewers, and not part of the sewage treatment works. Stormwater runoff is water generated from precipitation events that flows over land or impervious surfaces including streets, parking lots, and building rooftops – this water does not return to groundwater basins, because it does not soak into the ground. This runoff accumulates pollutants from transportation, construction, industrial, and residential sources that can include trash or other solid waste, chemicals, oil, and other sediments. MS4 stormwater that is not captured for reuse, typically discharges into regional systems, most notably flood control channels (e.g. the Santa Ana River), that subsequently flow to the ocean and are regulated by the National Pollutant Discharge Elimination System (NPDES) that also regulates the Sanitation District's discharge to the ocean.

Due to the design and operation of local and regional sanitary sewers, there is not system capacity to allow 'wet weather' stormwater discharges to the sewer. Excessive flows into the sewer beyond its design capacity can lead to sanitary sewer overflows (also called SSOs), spills, and potential sewage backups. The Santa Ana River can provide massive storm-flow capacity at approximately 22,000 cubic feet per second (cfs) of water, and the Delhi Channel at 325 cfs, as compared to the peak wet weather flow for both the Sanitation District Plant Nos. 1 and 2 combine to less than 1,000 cfs – much of which is utilized for sanitary sewer service at all times. During 'dry weather', stormwater systems collect flow from 'dry weather urban runoff' activities, such as residential or industrial use, irrigation, water released from previous precipitation, among others. Most sanitary sewer systems are gravity draining, that is, most non-industrial facilities passively drain to the sewer and do not typically take action to commence discharge of

wastewater. As a result, it's important that facilities are constructed in such a way that they will not drain active stormwater or urban runoff flow to the sewer, especially during rain. Additionally, stormwater best management practices (BMPs) typically dictate that the generation of contaminated stormwater should be mitigated through proper facility design including berms and grading.

The Sanitation District's Wastewater Discharge Regulations Ordinance, which sets quality standards and requirements for facilities discharging to the Sanitation District, includes language to prohibit sewer users from discharging groundwater, stormwater, surface runoff, or subsurface drainage to the sewer without written authorization or a permit issued for such a purpose. In addition to the concerns related to insufficient capacity in the Sanitation District's sewer collection system, there is a concern that uncontrolled discharge to the sewer from these types of systems can introduce pollutants that may cause issues in the Sanitation District's treatment and reclamation plants, discharge to the ocean, or affect the agency's ability to recycle water or reuse biosolids. The Sanitation District's Ordinance was recently revised to clarify these restrictions and include a prohibition on drainage from non-domestic surface and floor drains to address these types of uncontrolled discharges.

However, given the public health and environmental protection issues that may arise from runoff-carried pollutants being transferred into the Sanitation District's coastal beaches and waters, in April 2000 the Sanitation District initiated a permitting program to assist in the economical and practical control of these pollutants during dry weather conditions.

Following the Sanitation District's sponsored legislation (AB 1892), the Sanitation District's charter was amended to authorize the Board of Directors to adopt Resolution No. 00-04 establishing a dry season urban runoff policy that allowed local agencies to obtain a Dry Weather Urban Runoff Permit to discharge to the Sanitation District. Agencies could apply for this permit type where there was not an economically or practically feasible alternative (i.e. discharge to storm drain, reclamation/reuse, etc.) to discharging dry weather urban runoff to the sewer, and the discharger met other conditions including complying with the Sanitation District's Wastewater Discharge Regulations Ordinance.

In September 2000, the Sanitation District modified the Dry Weather Urban Runoff Policy (Resolution No. 00-22) to cap discharges received to ten (10) million gallons per day (mgd). Furthermore, the policy revision established the waiving of fees associated with the program until discharges exceeded four (4) mgd, or until the policy underwent future revisions. There were a number of other modifications to the policy that added facility and compliance requirements for Dry Weather Urban Runoff permittees.

The Sanitation District Board Resolution No. 01-07, adopted in March 2001, added language to the policy clarifying conditions in which the Sanitation District would and would not be indemnified against liability associated with diversion systems. Indemnification is a critical component of Dry Weather Urban Runoff agreements necessary to address the risks posed to the Sanitation District associated with water quality, flooding, trash, infrastructure damage, and other concerns. In June 2013, the Sanitation District's current policy was established when Resolution

No. 13-09 was adopted. This included a revision where upon reaching a dry weather urban runoff influent rate of 9 mgd, the Sanitation District will take action to reevaluate the policy.

In addition to Dry Weather Urban Runoff Permits, the Sanitation District's Ordinance allows for normally prohibited wastes such as groundwater, stormwater, surface runoff, and subsurface drainage to be discharged to the Sanitation District as authorized through a Special Purpose Discharge Permit or written authorization from the Sanitation District; only when no alternate method of disposal is reasonably available or to mitigate an environmental risk or health hazard.

The Dry Weather Urban Runoff and Special Purpose Discharge permit programs are intended to assist in the protection of public health and the environment by routing contaminated discharges into the Sanitation District's treatment and reclamation plants. For example, the toxic amounts of selenium in the Upper Newport Bay Watershed have resulted in regulatory requirements to remove selenium loadings from upstream creeks and channels to protect downstream aquatic life. For dry weather urban runoff discharges, the Sanitation District is able to accommodate certain waste streams that mitigate these hazards. However, the Sanitation District treatment and reclamation plants also have limitations on the loading of pollutants that can be discharged to them – particularly because traditional sewage treatment plants are not designed to remove toxic pollutants, but are designed to remove the conventional pollutants typically found in wastewater generated from normal sanitary uses. The Sanitation District's Ordinance dictates that permitted users, such as Dry Weather Urban Runoff or Special Purpose Discharge users, must comply with numeric effluent limit standards for toxic pollutants. Continuing the example from above, discharges must meet a selenium effluent limit of 3.9 milligrams per liter (mg/L), a derived value based on the compliance standard, the Sanitation District is held accountable in order to reuse biosolids. In this example, the Sanitation District may choose to issue a permit to mitigate a public health or environmental concern, but must do so in such a way as to also address the potential impact on the Sanitation District's plants and its reuse initiatives – with permit numeric limits and conditions.

Current Situation

As of June 2019, the Sanitation District maintains 21 active Dry Weather Urban Runoff Permits for diversions owned and operated by the City of Huntington Beach, the City of Newport Beach, OC Public Works, Irvine Ranch Water District, and a LLC responsible for the areas in and around Pelican Point community. For the June to December 2018 reporting period, the Sanitation District received an average of 1.03 mgd from these facilities, well below the current ten (10) mgd policy cap and nine (9) mgd action threshold. Since the program's inception in 2000, the Dry Weather Urban Runoff Program has treated 9.4 billion gallons of dry weather urban runoff. The success of this program is captured succinctly in reviewing the Heal the Bay 2018-2019 Beach Report Card. Heal the Bay is an environmental non-profit organization focused on coastal water and watershed quality, and reported that 92 percent of beaches in Orange County received an 'A' rating during summer dry weather conditions – some the Sanitation District -service area beaches made the report card 'honor roll' with an A+ rating. It should be noted that this overall rating is negatively impacted by south orange county beaches that are not in the Sanitation District's service area.

Both the permitted Dry Weather Urban Runoff users and the Sanitation District staff collect samples from Dry Weather Urban Runoff facilities (during dry season discharge) on a semi-annual basis to evaluate compliance with pollutant limits establish in the Sanitation District's Ordinance.

Periodically, the Sanitation District works with other organizations and industries that have intentionally or unintentionally captured stormwater or runoff on-site and seek guidance on disposing of the water. The Sanitation District may authorize such a discharge request where: there is adequate capacity, wastewater meets applicable effluent discharge standards, there is no practical alternative method of disposal, and the wastewater is captured and held until it can be released to the sewer apart from a high-capacity or storm event. The Sanitation District can utilize written authorizations, special conditions on an existing wastewater discharge permit, or a Special Purpose Discharge Permit – issued for planned short-or-long-term discharges. In other instances, the Sanitation District has observed unauthorized stormwater connections to the sewer during routine inspections of facilities and worked with the dischargers to mitigate these to prevent potential overflow conditions.

The assistance the Sanitation District provides to local agencies, businesses, and other industries in providing an alternative for stormwater or runoff disposal (where acceptable through an Special Purpose Discharge Permit or written authorization) is not included in the ten (10) MGD allowance under the Dry Weather Urban Runoff program, and demonstrates the Sanitation District's commitment to be a community partner in local water resource policy.

Key Issues for the Future

Under the current policy, the Sanitation District has the capacity to accept additional dry weather urban runoff flows (up to 10 mgd), however, this allotted capacity is not typically the limiting factor in increasing the volume of runoff diverted to the Sanitation District. As Dry Weather Urban Runoff diversion projects are initiated and funded at the local municipality level, capital support for such projects can be limited. Without funding and operational support from a public agency that has jurisdiction and authority over surface water runoff and wastewater, this water cannot be diverted.

Diversion systems must be pumped (not gravity-fed) into the Sanitation District's collection system to ensure the necessary level of control. Furthermore, diversions cannot be implemented just anywhere. In order for the Sanitation District to accept this dry weather runoff water, the supporting sewer hydraulic capacity and infrastructure must already be in place at the specific location where the gravity diversion exists. Otherwise constructing new the Sanitation District facilities to convey diverted waters would require a significant capital investment from the Sanitation District and its rate-payers. In short, acceptance of dry weather runoff must be evaluated based on the site-specific capacity of the Sanitation District's collection system, i.e. the hydraulic capacity of a specific interceptor/sewer trunkline. In addition, where the intention is to also recycle this runoff water as well as divert it from the Sanitation District's coastal beaches and waters, it must be routed to the Sanitation District's Plant No. 1 facility in Fountain Valley where it can discharge to OCWD's Groundwater Replenishment System (GWRS). At present, the Sanitation District's Plant No. 2 facility does not discharge wastewater to GWRS for recycling, and the majority of existing DWUR facilities discharge to Plant No. 2. The Sanitation District is working to divert the majority of Plant No. 2 influent wastewater to GWRS, however, the expected

completion date of this project is not until 2023. It should be noted that the recycling capacity of GWRS is not unlimited and the plan to divert wastewater from Plant No. 2 is expected to provide the near maximum level of influent to GWRS. Therefore, the Sanitation District is not in a position to accept additional wastewater for recycling, and the notion that stormwater is necessary to augment GWRS influent is not a valid assumption.

Given the above conditions, to expand the current programs to a larger-scale stormwater/rain-event capture and discharge program, means an investment for stormwater-authority agencies to build water storage systems in addition to existing or new diversion systems.

The regional benefit for such an initiative would be the increased capture and recycling of water that would otherwise be discharged to the ocean. The potential risk to the Sanitation District and its reuse initiatives from pollutants in stormwater and runoff would be directly impacted by our agency's future ability to control these wastes – that is permit, inspect, and monitor discharging facilities, and when warranted – enact enforcement to ensure compliance with the Sanitation District's Wastewater Discharge Regulations Ordinance. To protect the Sanitation District, this means issuing stringent requirements on discharges or suspending a discharge when an existing or potential sewer user does not meet a compliance obligation. Moreover, the Sanitation District will only be able to accept stormwater and runoff discharges that can be captured and held beyond storm events, and where that water can be adequately evaluated before being released for discharge into the Sanitation District's system.

The financial impact for the Sanitation District would translate to capital and operational costs where the Sanitation District is involved in the construction and maintenance of facilities to support these diversion systems. In addition, a larger-scale stormwater/rain-event capture and discharge program most certainly will require an investment in additional the Sanitation District staff in the workgroup that oversees the current permitting programs.

The larger question, beyond the scope of this white paper, is to evaluate at a regional level whether stormwater capture from a rain event will provide an additional source of water significant enough to offset the costs to capture this water and temporarily store it until it can be reused, including the associated infrastructure, staff, and other public resources this would require; and considering the intrinsic restrictions of the current sewer system, GWRS limitations, and the potential risks posed to the Sanitation District's existing water and biosolid reuse initiatives.

Initiatives to Support Progress Toward the Policy Goal

In accordance with Resolution No. 13-09, the Sanitation District intends to continue accepting up to ten (10) million gallons per day of pumped dry weather urban runoff diversion where existing conveyance capacity exists, and the constituents of the flow will not adversely impact the Sanitation District. The Sanitation District also intends to continue working with industries, agencies, and other facilities to offer alternatives to stormwater and runoff disposal through special purpose discharge permits or other written authorization in accordance with the Sanitation District's Ordinance, where doing so does not negatively affect the Sanitation District's operation or compliance with local, state, and federal regulations, and wastewater can be held for evaluation prior to discharge.

Additionally, to act as a regional partner in resolving issues associated with disposing of and reusing stormwater, the Sanitation District intends to work with local jurisdictions to determine the feasibility of regional wet weather runoff capture, storage, and use projects.

Initiative: Issue dry weather urban runoff connection permits up to a total of ten million gallons per day to other service area local agencies to accept pumped dry weather urban runoff flows where existing conveyance capacity exists, and the constituents of the flow will not adversely impact the Sanitation District.

Initiative: Continue working with industries, facilities, agencies, and local jurisdictions that have authority over stormwater or surface water runoff to determine the feasibility of regional wet weather runoff capture, storage, and use projects or offer alternatives to stormwater and runoff disposal through permits or other written authorization. The Sanitation District will promote responsible stormwater utilization and sewer protection, where doing so does not negatively affect the Sanitation District's operation or compliance with local, state, and federal regulations, and wastewater can be held for evaluation prior to discharge.

Proposed Orange County Sanitation District

Water Reuse Policy

Should OCSD study the feasibility of tapping non-wastewater sources for the purpose of generating more water recycling beyond the final expansion of GWRS?

Summary Policy Statement

The Sanitation District will seek to beneficially reuse all reclaimable water for potable, industrial, irrigation and environmental uses.

Background

For over 40 years, the Sanitation District and the Orange County Water District (OCWD) have partnered to beneficially reuse treated wastewater from the Sanitation District. OCWD, which serves roughly the same service area as the Sanitation District, manages and replenishes the groundwater basin in northern and central Orange County, ensures water reliability and quality, prevents seawater intrusion, and protects Orange County's rights to Santa Ana River water.

Beginning in 1975, the Sanitation District contributed treated wastewater from its Plant No. 1 to OCWD for the operation of Water Factory 21, which reclaimed the treated wastewater and injected it along with deep well water into the groundwater basin to prevent seawater intrusion. In the mid-1990s, OCWD needed to expand Water Factory 21. At the same time, the Sanitation District faced the challenge of having to build a second ocean outfall pipe to discharge treated wastewater into the Pacific Ocean. Both agencies collaborated to build an advanced water purification facility to resolve these challenges. This state-of-the-art facility, known as the Groundwater Replenishment System (GWRS), took the place of Water Factory 21, and began operation in 2008. The GWRS treats secondary treated wastewater from the Sanitation District Plant No. 1 to drinking water standards and uses the purified water for both injection and percolation, through injection wells and recharge basins, as source water to replenish the groundwater basin's drinking water supplies. With approximately 75 percent of the water demand in northern and central Orange County cities coming from the groundwater basin, GWRS supplements existing water supplies by providing a new, reliable, high-quality source of water.

While the original GWRS facility was constructed to supply up to a 70 million gallon per day (MGD) of purified water, the facility was designed for an ultimate treatment and conveyance capacity of 130 MGD. The original GWRS design intent was to expand the GWRS facility in two phases – an initial and a final expansion of an additional 30 MGD of treatment capacity with each expansion. The GWRS Initial Expansion Project was completed in June 2015 and has been producing up to 100 MGD of purified water for groundwater injection and recharge. The Final Expansion of GWRS is scheduled to be completed in 2023 and will produce the maximum capacity of 130 MGD.

In addition to providing treated wastewater to the GWRS, the Sanitation District also provides treated water to OCWD's Green Acres Project, which provides recycled water for landscape

irrigation at parks, schools, and golf courses; and industrial uses, such as carpet dying; toilet flushing; and power generation cooling.

Current Situation

The GWRS currently produces 100 million gallons per day of purified water – enough water for about 850,000 people. All of the Sanitation District's Plant No. 1 secondary effluent, between 120-130 MGD, is sent to OCWD for the GWRS and Green Acres Project. However, secondary effluent from the Sanitation District's Plant No. 2 and other non-reclaimable flows, such as brine from inland desalters and GWRS's reverse osmosis process, and the Sanitation District's process sidestreams, continue to be released into the ocean.

In 2016, the Sanitation District and OCWD jointly conducted the Effluent Reuse Study, which evaluated the feasibility of recycling the Sanitation District's secondary effluent from Plant No. 2 and identified projects required to achieve the final expansion of the GWRS. The GWRS final expansion effort will include implementation of projects to construct new, modified or rehabilitated facilities at Plant No. 2 to separate reclaimable flows from non-reclaimable flows; to equalize, pump, and convey secondary effluent from the Sanitation District's Plant No. 2 to the GWRS facility; and to treat the additional source water to produce 130 MGD of purified water.

Reverse Osmosis brine generated at the GWRS Initial Expansion is currently discharged into the ocean. The 2016 Effluent Reuse Study identified alternative brine management strategies such as evaporation ponds, deep well injection, and engineered wetlands. Evaporation ponds are land intensive and are also energy intensive when combined with a brine crystallizer to remove solids from highly concentrated brine system using heat and pressure. While the areas around both the Sanitation District treatment plants have the appropriate geology for brine injection, there are concerns with contamination of drinking water aquifers, and seismic risks due to the Newport-Inglewood zones near Plant No. 2. At this time, it does not appear economically feasible to provide alternative management strategies for the brine discharge.

In November 2016, the Sanitation District Board of Directors adopted the Second Amended and Restated Joint Exercise of Powers Agreement for the Development, Operation and Maintenance of the Groundwater Replenishment System and Green Acres Project, which committed the agency to continue supporting the GWRS and the Green Acres Project, and specifically, the final expansion of the GWRS. The implementation of the final phase of the expansion will be executed by multiple projects, some executed by the Sanitation District while the others executed by OCWD. Project costs related to GWRS are funded by OCWD, including $50 million reimbursement to the Sanitation District for its costs incurred to manage related projects.

By supporting the GWRS Final Expansion, the Sanitation District will be able to recycle all reclaimable wastewater generated in its service area and treated at its two treatment plants, and OCWD will have sufficient water to run the GWRS facility to full capacity.

Future Policy Statement

The treated effluent produced from the Sanitation District's Plant Nos. 1 and 2 is a valuable resource that can help boost local water resources and reduce dependence on imported water, while reducing the effluent discharged to the ocean. The Sanitation District will continue to seek opportunities for beneficial reuse of all reclaimable wastewater collected and treated at its facilities.

The Sanitation District will continue to support the completion of the final expansion of the GWRS in accordance to the adopted Second Amended and Restated Joint Exercise of Powers Agreement for the Development, Operation and Maintenance of the Groundwater Replenishment System and Green Acres Project. This includes providing secondary effluent as source water for GWRS free of charge; allowing OCWD to discharge brine via the Sanitation District's ocean outfall free of charge; leasing approximately 10 acres of land to the Sanitation District at $1 per year for the GWRS Final Expansion project; allowing OCWD to discharge North and South Basin extraction well flows to the Sanitation District sewers; managing the design and construction efforts of the Plant No. 2 Headworks Modifications Project and the Plant Water Pump Station Replacement Project (OCWD will reimburse up to $50 million of project cost); managing and finance the construction of the Ocean Outfall Low Flow Pump Station at Plant No. 2 and the construction of Plant No. 2 primary and secondary facilities to allow segregation of non-reclaimable flows.

The Sanitation District will continue to maximize the delivery of secondary effluent available to GWRS and the Green Acres Project in order to maximize full production of purified recycled water for indirect potable reuse, and industrial and irrigational uses. The Sanitation District has been operating the Steve Anderson Lift Station to divert more flows to Plant No. 1. The two agencies regularly communicate and coordinate the Sanitation District operations and construction projects that may have impacts on GWRS operation and will continue this collaboration effort.

Input received during the Strategic Planning process included enhancing flows available for recycling by pumping shallow groundwater into OCSD's sewer system. The desired goal is to increase the water supply for recycling, beyond the planned final expansion of GWRS, as well as reduce problematic shallow aquifers for member agencies.

Initiatives to Support Progress Toward the Policy Goal:

Initiative: Support the completion of the final phase of the Groundwater Replenishment System and maximize water availability to the Orange County Water District.

Initiative: Support Green Acres project water production to provide reclaimed water for industrial and irrigation uses.