

**AGENDA  
REGULAR MEETING  
GROUNDWATER REPLENISHMENT SYSTEM STEERING COMMITTEE  
(A Committee of Orange County Water District  
and Orange County Sanitation District Directors\*)  
18700 Ward Street, Fountain Valley  
Monday, October 10, 2022 5:00 p.m.**

\* Orange County Water District Notice: The GWRS Steering Committee (SC) meeting is being noticed as a joint meeting with the Orange County Water District (OCWD) Board of Directors and Orange County Sanitation District (OC San) Board of Directors for the purpose of strict compliance with the Brown Act and it provides an opportunity for all Directors to hear presentations and participate in discussions. The SC has been delegated limited authority by the OCWD and OC San Boards of Directors. Agenda items requiring Board approval will be placed on future OCWD and/or OC San Board meeting Agendas. OCWD Directors receive no additional compensation or stipend as a result of simultaneously convening this meeting.

Due to the continuing state of emergency declared by the Governor related to preventing the spread of COVID-19 and pursuant to Government Code Section 54953(e), OCWD will be holding its October 10 GWRS Steering Committee meeting by Zoom Webinar and will be available to the Board and the public by either computer web-link or telephone audio as follows:

**Computer Audio: You can join the Zoom Meeting by clicking on the following link:**  
<https://ocwd.zoom.us/j/82086582137>

**Meeting ID: 820 8658 2137**

**Telephone Audio: (669) 219 2599**

**PLEDGE OF ALLEGIANCE**

**ROLL CALL**

**VISITOR PARTICIPATION**

Time has been reserved at this point in the agenda for persons wishing to comment for up to three minutes to the Board of Directors on any item that is not listed on the agenda, but within the subject matter jurisdiction of the District. By law, the Board of Directors is prohibited from taking action on such public comments. As appropriate, matters raised in these public comments will be referred to District staff or placed on the agenda of an upcoming Board meeting.

At this time, members of the public may also offer public comment for up to three minutes on any item on the Consent Calendar. While members of the public may not remove an item from the Consent Calendar for separate discussion, a Director may do so at the request of a member of the public.

**CONSENT CALENDAR (ITEM NO. 1)**

All matters on the Consent Calendar are to be approved by one motion, without separate discussion on these items, unless a Board member or District staff request that specific items be removed from the Consent Calendar for separate consideration.

**1. MINUTES OF PREVIOUS MEETING**

**RECOMMENDATION:** Approve Minutes of the July 11, 2022 GWRS Steering Committee meeting as presented

## **END OF CONSENT CALENDAR**

### **INFORMATIONAL ITEMS**

2. GWRS OPERATIONS UPDATE
3. UPDATE ON GWRS FINAL EXPANSION PROJECT
4. UPDATE ON OC SAN FLOW PROJECTIONS
5. GWRS THIRD QUARTER OUTREACH REPORT (JULY- SEPTEMBER)

### **DIRECTORS' ANNOUNCEMENTS/REPORTS**

### **GENERAL MANAGERS' REPORT**

- Next GWRS Steering Committee Meeting – January 9, 2023

### **DETERMINATION OF ITEMS (IF ANY) TO BE AGENDIZED FOR FUTURE OCWD BOARD MEETING AND/OR OC SAN BOARD MEETING**

### **ADJOURNMENT**

## **2022 GWRs Steering Committee Members**

### **OCWD Committee Members**

Tri Ta – Committee Chair

Roger Yoh

Cathy Green

### **OCWD Alternates**

Kelly Rowe

Dina Nguyen

Steve Sheldon

### **OC San Committee Members**

Ryan Gallagher – Committee Vice Chair

Bob Ooten

David Shawver

### **OC San Alternates**

Jesus Silva

Brooke Jones

Chad Wanke

In accordance with the requirements of California Government Code Section 54954.2, this agenda has been posted for viewing at the guard shack entrance and in the main lobby of the Orange County Water District, 18700 Ward Street, Fountain Valley, CA not less than 72 hours prior to the meeting date and time above. All written materials relating to each agenda item are available for public inspection in the office of the District Secretary. Backup material for the Agenda is available at the District offices for public review and can be viewed online at the District's website: [www.ocwd.com](http://www.ocwd.com).

Pursuant to the Americans with Disabilities Act, persons with a disability who require a disability-related modification or accommodation in order to participate in a meeting, including auxiliary aids or services, may request such modification or accommodation from the District Secretary at (714) 378-3233, by email at [jdurant@ocwd.com](mailto:jdurant@ocwd.com) by fax at (714) 378-3373. Notification 24 hours prior to the meeting will enable District staff to make reasonable arrangements to assure accessibility to the meeting.

As a general rule, agenda reports or other written documentation has been prepared or organized with respect to each item of business listed on the agenda, and can be reviewed at [www.ocwd.com](http://www.ocwd.com). Copies of these materials and other disclosable public records distributed to all or a majority of the members of the Board of Directors in connection with an open session agenda item are also on file with and available for inspection at the Office of the District Secretary, 18700 Ward Street, Fountain Valley, California, during regular business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday. If such writings are distributed to members of the Board of Directors on the day of a Board meeting, the writings will be available at the entrance to the Board of Directors meeting room at the Orange County Water District office.



**MINUTES OF THE MEETING  
GROUNDWATER REPLENISHMENT SYSTEM STEERING COMMITTEE  
Monday, July 11, 2022**

OCWD Director Ta called the Groundwater Replenishment System Steering Committee meeting to order via Zoom webinar. Following the Pledge of Allegiance to the flag, the Secretary called the roll and reported a quorum.

**Committee Members**

Tri Ta  
Ryan Gallagher  
Roger Yoh (absent)  
Bob Ooten  
Cathy Green  
David Shawver

**Alternates**

Kelly Rowe  
Jesus Silva  
Dina Nguyen (absent)  
Brooke Jones (absent)  
Steve Sheldon (absent)  
Chad Wanke (absent)

OCWD Directors Ma'ae and Whitaker were in attendance.

<b>OCWD Staff</b>	<b>OC SAN Staff</b>
Mike Markus, Mehul Patel, Sandy Scott-Roberts, Gina Ayala, Emily Calderon, Recording Secretary	Jim Herberg, Rob Thompson, Kathleen Millea, Jennifer Cabral, Kelly Lore

**CONSENT CALENDAR**

The Consent Calendar was approved upon motion by Director Green, dually seconded and carried [6-0] as follows.

*Yes – Ta, Gallagher, Ooten, Green, Shawver, Silva*

1. Minutes of Previous Meeting

**The minutes of the GWRS Steering Committee meeting held April 11, 2022 are approved as presented.**

**INFORMATIONAL ITEMS**

2. GWRS Operations Update

Executive Director of Operations/GWRS Mr. Patel reported that the average daily production for the quarter, April through June 2022, was 82 mgd. He stated that as of June 30, 2022, the GWRS Fiscal Year 2021-2022 production total was 92,774 acre feet (af) which is 4,226 af below the target fiscal year production of 97,000 af. He specified that this shortfall was anticipated due to the GWRS Final Expansion project construction activities including two large outages, and a shutdown of three reverse osmosis (RO) units for a two-week period to complete retrofit work to add a booster pump. Mr. Patel noted that seasonal fouling of the MF membranes has further limited production. He reported that OCWD completed a planned microfiltration membranes replacement project to replace all membranes in Train B and completed installation of RO membranes three units for the current fiscal year. He noted that 3,150 RO membranes were installed in the current fiscal year.

3. Update on GWRS Final Expansion

GWRS Program Manager Sandy Scott-Roberts provided a presentation on construction activities and schedules, completion status of project elements and the project budget. She also provided an update on RO Interstage Booster Pumps and OC San Plant 2: Flow EQ Tanks, Pump Station, and Headworks Modification. She noted a final completion date of March 3, 2023 but targeting December 2022 to start up the plant with new Plant 2 water. There will be a 60-day acceptance test period during which the water produced can be used for groundwater replenishment and the seawater intrusion barrier if water quality test meet all permit standards.

4. Quarterly Outreach Report (April – June 2022)

Director of Public Affairs Gina Ayala reviewed public outreach highlights including tours, the speakers bureau program, media, and construction outreach. She stated that there were 19 tours for 224 guests in the 2nd quarter. Ms. Ayala reported that there has been an increase of media coverage due to the heightened interest on the drought topic. She also reported that in April, OCWD hosted its Annual Children’s Water Education Festival virtually with 5,500 student participants. She stated that both OC SAN and OCWD staff are jointly working on media opportunities in 2023, as well as the GWRS 15<sup>th</sup> anniversary in January 2023 and Final Expansion dedication in Spring 2023.

**ADJOURNMENT**

There being no further business to come before the Committee, the meeting was adjourned at 5:30 p.m.

---

OCWD Director Tri Ta, Chair



## AGENDA ITEM SUBMITTAL

**Meeting Date:** October 10, 2022

**To:** GWRS Steering Committee

**From:** Mike Markus/Jim Herberg

**Staff Contact:** M. Patel

**Budgeted:** N/A

**Budgeted Amount:** N/A

**Cost Estimate:** N/A

**Funding Source:** N/A

**Program/Line Item No.:** N/A

**General Counsel Approval:** N/A

**Project Report Approved:** N/A

**CEQA Compliance:** N/A

**Subject: GWRS OPERATIONS UPDATE**

---

### SUMMARY

Operation of the Groundwater Replenishment System (GWRS) commenced on January 10, 2008. The GWRS operations update will be discussed at the Committee.

### RECOMMENDATION

Informational.

### DISCUSSION/ANALYSIS

Since startup in 2008 GWRS continues to produce water that meets regulatory requirements. The quality of the secondary effluent received from the Orange County Sanitation District (OC San) continues to meet all water quality requirements while operating in the nitrified/denitrified (NDN) mode. The GWRS Microfiltration (MF) and Reverse Osmosis (RO) treatment processes have benefited in overall operational improvements as a result of OCSD's efforts to successfully maintain stable operation in the NDN mode.

The average daily average production for the quarter July through September 2022 was 85 mgd. The average production was lower than normal due to a one day GWRS Final Expansion construction project related full plant outage on September 20, ongoing shutdowns of RO trains for final expansion construction activity, and Demand Response load reduction events caused by the heat wave in the first week of September.

The GWRS effluent production for the months of July through September 2022 is shown in the following tables:



**GWRS EFFLUENT PRODUCTION  
(April – June 2022)**

	<b>July 2022 (million gallons)</b>	<b>July 2022 (acre feet)</b>
Mira Loma, Kraemer/Miller Basin Recharge, Mid Basin Injection, Artic, and Canyon Power	1,936	5,944
Seawater Intrusion Barrier	733	2,250
<b>Total</b>	<b>2,669</b>	<b>8,194</b>

	<b>August 2022 (million gallons)</b>	<b>August 2022 (acre feet)</b>
Mira Loma, Kraemer/Miller Basin, Recharge, Mid Basin Injection, Artic and Canyon Power	1,986	6,098
Seawater Intrusion Barrier	736	2,261
<b>Total</b>	<b>2,722</b>	<b>8,359</b>

	<b>September 2022 (million gallons)</b>	<b>September 2022 (acre feet)</b>
Mira Loma, Kraemer/Miller Basin Recharge, Mid Basin Injection, Artic and Canyon Power	1,740	5,340
Seawater Intrusion Barrier	687	2,108
<b>Total</b>	<b>2,427</b>	<b>7,448</b>

The following graph shows the actual fiscal year 2022/2023 production to date compared to the target increased production of 110,000 af due to completion of the GWRSFE in the current fiscal year. As of September 30, 2022, the GWRS Fiscal Year 2022-2023 production to date is 23,996 af which is 3,730 af below our target fiscal year production to date of 27,726 af.

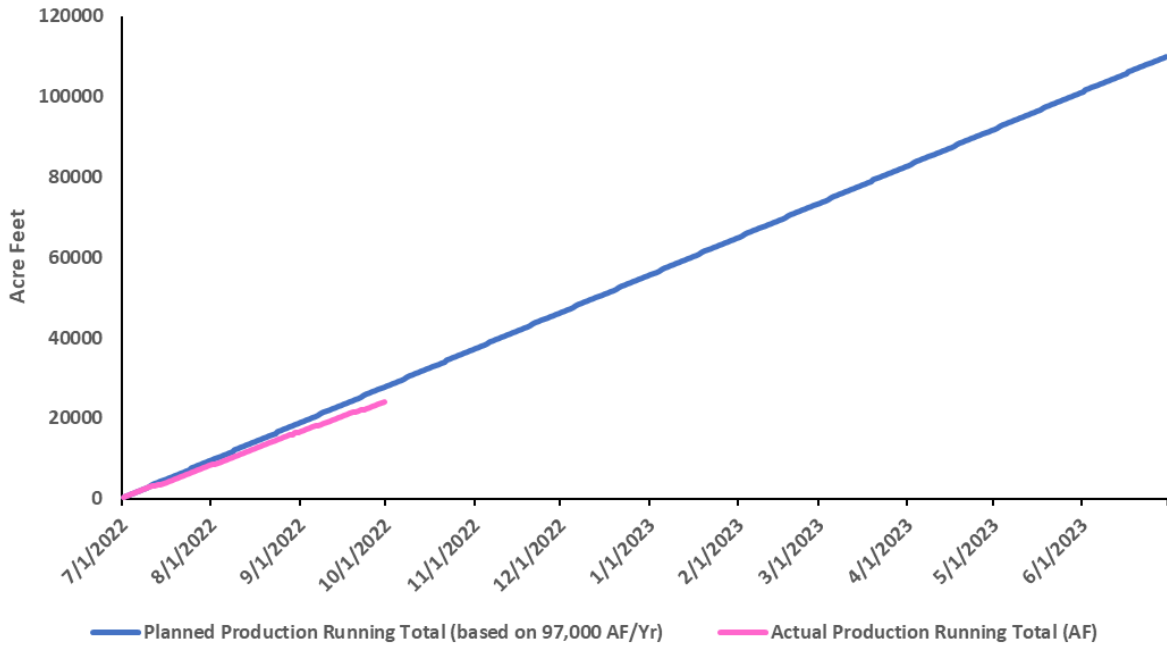
A shortfall in planned production to date is anticipated due to the GWRS Final Expansion (GWRSFE) project construction activities. In the current reporting period from July to September 2022 there was a full one day outage on September 20 that required plant production to be ramped down prior to and after the shutdown. In addition, the outage caused some process control system programming issues that limited production after the shutdown. Also, as mentioned the heat wave in the first week of September required Demand Response electrical load reductions by OCWD on September 5, 6, and 7. During Demand Response events the GWRS production is lowered to 15 mgd production from the normal 100 mgd rate to help the power demand on the state's electrical grid. Also, during the heat wave event OC San had their own electrical reduction strategy in place that required turning off one Steve Anderson Lift Station pump. That reduces flow to GWRS by 30 mgd with that excess flow going to OC San Plant No. 2 for treatment.

# GWRS ACTUAL PRODUCTION TO TARGET PRODUCTION

Fiscal Year

July 1, 2022 to June 30, 2023

110,000 acre feet planned





## AGENDA ITEM SUBMITTAL

**Meeting Date:** October 10, 2022

**To:** GWRS Steering Committee

**From:** Mike Markus/Jim Herberg

**Staff Contact:** S. Scott-Roberts

**Budgeted:** N/A

**Budgeted Amount:** N/A

**Cost Estimate:** N/A

**Funding Source:** N/A

**Program/Line Item No.:** N/A

**General Counsel Approval:** N/A

**Project Report Approved:** N/A

**CEQA Compliance:** N/A

**Subject: UPDATE ON GWRS FINAL EXPANSION PROJECT**

---

### SUMMARY

The GWRS Final Expansion Project is currently under construction by Shimmick Construction Company to expand the Advanced Water Treatment Facility and construct the GWRS pump station and flow equalization tanks at Orange County Sanitation District (OC San) Plant No. 2. In addition, updates on construction progress on the Headworks Modification Project and Pipeline Rehabilitation Project will be presented.

### RECOMMENDATION

Informational.

### DISCUSSION/ANALYSIS

The GWRS Final Expansion Project is the build-out capacity of the GWRS facility that treats secondary effluent from OC San to drinking water standards for groundwater replenishment water. The current GWRS facility produces 100 MGD of purified water. The build-out treatment capacity increases the water production to a total of 130 MGD. OC San/OCWD completed a joint effluent reuse study (SP-173) in 2016 which analyzed the project components required to facilitate the GWRS Final Expansion Project. With the study complete, both agencies embarked on completing all the projects required to meet the build-out capacity of 130 MGD as part of the GWRS Final Expansion Project.

To increase the amount of water produced from the GWRS facility, additional secondary effluent from OC San must be conveyed to GWRS. With an analysis of average raw wastewater inflows to OC San's two treatment plants, both OC San Plant No. 1 and Plant No. 2 secondary effluent is required to meet the 130 MGD GWRS production goal. Therefore, new secondary effluent conveyance facilities are required at OC San Plant No. 2 to convey the secondary effluent to GWRS. These conveyance facilities include an effluent pump station, flow equalization tanks and a pipeline. In addition, recommendations from the SP-173 study showed that the segregation of the Santa Ana Regional Interceptor (SARI) trunk flows to OC San Plant No. 2 is feasible as part of the GWRS Final Expansion Project. Currently SARI flows are not permitted to be recycled through GWRS due to the industrial and treatment facility discharges that currently flow in the SARI trunk sewer. Therefore, in addition to the conveyance facilities, the OC San Plant No. 2 headworks facilities will segregate the SARI trunk flows and treat these

flows separately for discharge to the ocean outfall. This project is referred to as the Plant No. 2 Headworks Modification Project.

The Advanced Water Treatment Facility is the GWRS facility made up of the microfiltration (MF), reverse osmosis (RO) and ultraviolet (UV) advanced oxidation treatment processes. The AWTF will need to be expanded to treat the additional 30 MGD of secondary effluent to meet the build-out water production goal of 130 MGD total. With all the above considerations, the GWRS Final Expansion Project includes the following project contracts/components:

### **GWRS Final Expansion Project Components**

#### ***CONTRACT 1 – Construction Phase (Shimmick)***

- Advanced Water Treatment Facility (AWTF) Expansion
- P2 Effluent Pump Station
- P2 Flow Equalization Tanks

#### ***CONTRACT 2: - Construction Phase (JF Shea)***

- Pipeline Rehabilitation

#### ***CONTRACT 3: - Construction Phase (Shimmick)***

- OC San Headworks Modification

OCWD is responsible for the costs of all the projects listed above for the GWRS Final Expansion Project. However, OC San is managing the construction of the P2 Headworks Modification Project (P2-122).

The construction phase of Contract 1 was awarded to Shimmick Construction Company, Inc. in the amount of \$199.9 million – which includes the AWTF Expansion, P2 Pump Station, and the P2 Flow Equalization Tanks. The Notice to Proceed was issued on November 2, 2019 and per the allotted construction duration and approved additional days added to the contract – the project will be substantially complete by November 23, 2022. Current construction activities include installation of new microfiltration membranes and commissioning activities on the microfiltration system. At OC San Plant No. 2, the work this quarter included the testing and backfilling of the process piping and the removal of OC San's effluent pipeline within the diversion structure. This work required three outages of OC San's trickling filter solids contactor facility. Future work includes removal of OC San's effluent pipeline from the weir box and commissioning the new P2 pump station.

Contract 2 (Pipeline Rehab) was awarded to JF Shea Construction in the amount of \$11.6 million on July 15, 2020. The Notice to Proceed was issued on August 17, 2020 and per the allotted construction duration (with delay allowances due to pipe delivery issues) – the project was scheduled to be complete by December 31, 2021. JF Shea successfully completed all the pipeline slip-lining work of the new Fiberglass Reinforced Polymer (FRP) pipe within the existing 66-inch secondary effluent pipeline and this project is officially complete.

The OC San Headworks Modification Project was awarded to Shimmick Construction Co., Inc. at the January 22, 2020 OC San Board of Directors meeting. The Notice to Proceed was issued on March 2, 2020 and per the allotted construction duration – the

project is scheduled to be complete on March 8, 2023. Current construction activities include a completed 72-inch diversion pipeline (flowing water), completed installation of the gates, and influent meter drains. The new headworks facility is set to begin commissioning on October 17<sup>th</sup>.

The approved GWRSE Project budget, which includes all three contracts, is shown in Table 1 below with the expected GWRSE Project Budget shown in the right column.

**Table 1 – Approved GWRSE Project Budget vs Expected Project Budget**

<b>Description</b>	<b>Approved Project Budget</b>	<b>Expected Project Budget</b>
<b>Pre-Design</b>		
Studies/CEQA for GWRSE Projects	\$1,000,000.00	\$890,000
<b>Design Engineering Services</b>		
B&V Design Phase Services (Incl. Amend. Nos. 1, 2, 4, 5)	\$7,356,450	\$7,356,450
B&V Design Services During Construction (Amend. No. 3)	\$6,345,300	\$6,345,300
<b>Construction Management/Inspection</b>		
Butier/Carollo CM Agreement	\$8,500,000	\$8,500,000
Specialty/Materials Construction Inspection	\$1,500,000	\$1,900,000
<b>Total CM and Inspection</b>	<b>\$10,000,000</b>	<b>\$10,400,000</b>
<b>Construction</b>		
Contract 1 - AWTF Expansion; P2 Pump Station & Flow EQ Tank Construction	\$199,942,000	\$191,154,273
Contract 2 - P2 Pipeline Rehabilitation Construction	\$18,000,000	\$11,552,734
<b>Total Construction Phase</b>	<b>\$217,942,000</b>	<b>\$202,707,007</b>
<b>Engineering Support, Legal &amp; Administration</b>		
SPI Agreement (Process Support)	\$792,817	\$792,817
Legal/Admin/Survey/Public Outreach Support	\$2,584,183	\$2,800,000
<b>Total ELA</b>	<b>\$3,377,000</b>	<b>\$3,592,817</b>
Construction Contingency	\$14,283,250	\$12,025,426
OC San Agreement (Headworks Mod/Plant PS)	\$50,000,000	\$48,000,000
<b>TOTAL</b>	<b>\$310,304,000</b>	<b>\$291,317,000</b>
Grant - State Revolving Fund		-\$5,000,000
Grant - Round 1 IRWM (Prop 1)		-\$3,589,553
Grant - USBR Title XVI		-\$1,325,000
<b>Total Net Expected Project Budget</b>		<b>\$281,402,447</b>

The expected GWRSE Project Budget is less than the approved project budget due to the following factors:

- The MF system for the GWRSE Project was competitively bid in this phase and due to this process – significant savings in the cost of the MF equipment were achieved
- The Headworks Modification Project bid was significantly lower than the Engineer’s Estimate
- The Pipeline Rehabilitation Project bid was also significantly lower than the Engineer’s Estimate

The expected GWRSE Project budget will continue to be tracked for planning purposes. Funding for this project is through a variety of different sources. In August 2018, OCWD Board of Directors executed a loan agreement with the EPA for a low interest rate WIFIA loan in the amount of \$135 million. The remaining \$186 million is slated to be received from the State Revolving Fund (SRF) Loan. Also, through the SRF Loan application process the GWRSE Project was awarded a total of \$5 million in grants.

OCWD was also recently notified that the project is being awarded \$3.6 million in Prop 1 grants from the IRWM grant program managed by the California Department of Water Resources.

Additionally, OC San/OCWD applied for USBR Title XVI grant for the P2 Headworks Modification Project in Summer of 2017. Staff was notified in November 2017 that the application for P2-122 received some of the highest ratings and was awarded \$1,325,000 in grant funding.

The grants described above are also shown on the expected GWRSE Project Budget.

Table 2 below shows the construction completion percentages for each of the project elements (based on expenditures and duration) as of June 30, 2022.

**Table 2 – GWRSE Project Elements Completion Status Table as of June 30, 2022**

<b>GWRSE Project Element</b>	<b>Percent Complete (Expenditures)</b>	<b>Percent Completed (Duration)</b>
AWTF Expansion	95%	85%
P2 Effluent Pump Station	95%	85%
P2 Flow Equalization Tanks	95%	85%
Pipeline Rehabilitation	100%	100%
OCSD Headworks Modification	85%	85%

The detailed construction progress criteria for each of the contracts will be presented during this meeting in addition to construction photos and milestones.

**PRIOR BOARD/COMMITTEE ACTIONS**





## AGENDA ITEM SUBMITTAL

**Meeting Date:** October 10, 2022

**To:** GWRS Steering Committee

**From:** Mike Markus/Jim Herberg

**Staff Contact:** Kathy Millea

**Budgeted:** N/A

**Budgeted Amount:** N/A

**Cost Estimate:** N/A

**Funding Source:** N/A

**Program/Line Item No.:** N/A

**General Counsel Approval:** N/A

**Project Report Approved:** N/A

**CEQA Compliance:** N/A

**Subject: UPDATE ON OC SAN FLOW PROJECTIONS**

---

### SUMMARY

Historical tracking and projection of flow data has been important for the Orange County Sanitation District (OC San) since its inception to ensure both collection and treatment capacity is achieved. Since OC San's partnership with the Orange County Water District (OCWD) in the creation and continued expansion of the Groundwater Replenishment System (GWRS), understanding influent flows, their sources, and the ability to forecast these quantities becomes even more significant. OC San has recently completed a flow projection study and results from that study will be presented by OC San staff.

### RECOMMENDATION

Informational.

### DISCUSSION/ANALYSIS

Historical sewer flows within OC San have seen a decline since 2008 due to the economic downturn of that year along with continued drought conditions. In addition, SB 1157 (Herzberg) requires updated standards for daily per capita indoor water use to reflect the joint recommendations of the Department of Water Resources and the State Water Board and was signed into law effective January 1, 2023. The standard for residential indoor water use will be 47 gallons per person per day (gpcd) in 2025 and 42 gpcd in 2030.

OC San has analyzed its current and projected wastewater flows under the new standards. The estimated indoor residential water usage rate based on current (2022) OC San influent flows is 47 gpcd which meets the SB 1157 standard for 2025. Under current flow conditions and projected conditions in 2030, OC San estimates the combined reclaimable flows from both OC San Plant No.1 and Plant No. 2 are projected to be enough to allow OCWD's GWRS to meet the production goal of 134,000 acre-feet per year while also having flow available to the Green Acres Project.

### PRIOR BOARD/COMMITTEE ACTIONS



## AGENDA ITEM SUBMITTAL

**Meeting Date:** October 10, 2022

**To:** GWRS Steering Committee

**From:** Mike Markus

**Staff Contact:** G. Ayala/C. Nettles

**Budgeted:** N/A

**Budgeted Amount:** N/A

**Cost Estimate:** N/A

**Funding Source:** N/A

**Program/Line Item No.:** N/A

**General Counsel Approval:** N/A

**Engineers/Feasibility Report:** N/A

**CEQA Compliance:** N/A

**SUBJECT: GWRS THIRD QUARTER OUTREACH REPORT (JULY - SEPT 2022)**

---

### SUMMARY

Outreach for the Orange County Water District (OCWD) and its programs and projects, including the Groundwater Replenishment System (GWRS), continues with a major focus to build and maintain support for the GWRS, grow outreach programs and field media interest and coverage.

#### Attachment(s):

- 2022 third quarter news clip report

### RECOMMENDATION

Informational

### DISCUSSION/ANALYSIS

#### Tours

There were 21 tours during the third quarter of 2022. The tours accounted for approximately 385 guests. Following is a list of groups, companies, schools, and organizations that participated in the tours:

Third quarter tours:

- July 11 – Cal Poly Pomona Engineering
- July 13 – Colgate University
- July 15 – Black & Veatch
- July 15 – FIRO UC San Diego
- July 19 – UCI Cosmos Camp
- July 22 – Regional Water Quality Control Board
- July 22 – OC Department of Public Works Camp
- July 26 – OCWD Recharge Staff
- July 27 – Yorba Linda Water District
- July 27 – OCWD Lab Staff
- July 27 – Amici OC

- August 3 – Cypress College NASA Camp
- August 5 – Public Tour
- August 18 – UCI Japanese Exchange Program
- August 23 – Disneyland Resort
- August 30 – City of Santa Ana Environmental & Transportation Committee
- September 1 – Public Tour
- September 1 – UCI Japanese Exchange Program
- September 6 – Orange County Grand Jury
- September 29 – Lincoln Club
- September 30 – Costa Mesa Sanitation District – Korean Delegation

Scheduled fourth quarter tours:

- October 4 – K-Water
- October 6 – Cal State Dominguez Hills
- October 7 – Public tour
- October 12 – Delegation from South Korea
- October 14 – Huntington Beach City Council Candidate
- October 17 – Murex Environmental
- October 18 – Disneyland Resort
- October 20 – Leadership Tomorrow
- October 23 – American Society of Civil Engineering
- October 27 – Cypress College (2 tours)
- October 31 – UCI Engineering
- November 4 – Public tour
- November 7 – Inside the Outdoors
- November 17 – County of Santa Barbara
- December 2 – Public tour

A 10-minute [on-demand general tour](#) and 30-minute [on-demand technical tour](#) are posted to the District's social media channels and have collectively been viewed more than 9,500 times.

### **Speakers Bureau**

Below is a listing of the July through September speakers' bureau engagements that included a portion of the presentation about the GWRS.

- July 7 – Executive Director of Engineering and Water Resources John Kennedy provided a GWRS presentation to the Southern California Association of Governments.

- July 26 – Chief Hydrogeologist Roy Herndon provided a briefing on OCWD projects and groundwater basin conditions to the Groundwater Resources Association of Southern California.
- July 28 – General Manager Mike Markus presented on OCWD at the ISDOC quarterly meeting.
- August 12 – Communications Specialist Rose Wilke hosted an exhibitor table at the Southern California Water Conference-Building Industry Association, Mount Baldy Chapter.
- August 19 – 1<sup>st</sup> Vice President Cathy Green and Executive Director of Engineering and Water Resources John Kennedy appeared as guests on LA Island Radio and spoke about OCWD and the GWRS during a 90-minute segment.
- September 2 – Executive Director of Engineering and Water Resources John Kennedy presented on the future of water supply in Orange County at the Mensa OC Chapter Regional Annual Meeting.
- September 11-12 – General Manager Mike Markus, Director of Public Affairs Gina Ayala, GWRS Program Manager Sandy-Scott Roberts, and Scientist Dr. Han Gu presented on panels during the WaterReuse CA Annual Conference.
- September 15 – President Steve Sheldon spoke about OCWD and General Manager Mike Markus spoke about the GWRS and water recycling during a Chapman University water event.
- September 19 – Executive Director of Engineering and Water Resources John Kennedy spoke on a panel about the drought during the World Water Tech North America Summit.

## **Media**

There were 35 global news hits for the GWRS. This number reflects multiple hits of the same story. The total reach for the combined articles was 18.8 million. The news clip report is attached.

## **Electronic Publications and Videos:**

- Staff wrote and distributed the July, August and September issues of Hydrospectives, OCWD's monthly e-newsletter, which mention or feature articles about the GWRS.
  - [Hydrospectives – July 2022](#)
  - [Hydrospectives – August 2022](#)
  - [Hydrospectives – September 2022](#)

## **Website**

There were 5,954 views of the GWRS portion of OCWD's website. The top three web pages within the GWRS section of the website were: 1) GWRS, 2) the process, 3) final expansion. These views relate to external traffic and do not include internal OCWD views.

## **Construction Outreach and Events**

- Staff monitored the OCWD construction hotline.
- Staff is planning GWRS 15<sup>th</sup> anniversary activities.
- Staff is planning the GWRS Final Expansion dedication event scheduled for Spring 2023.

**MEDIA CLIPS**  
**GWRS**  
**JULY 1 - SEPTEMBER 30, 2022**

	Date	Media Outlet	Title	Country	Link	Total Readership
1	9/22/22	Water Online	Orange County Water District Wins Groundwater Resources Association's Kevin J. Neese Award For PFAS Treatment Program	United States	<a href="https://www.wateronline.com/doc/orange-county-water-district-wins-groundwater-resources-association-s-kevin-j-neese-award-for-pfas-treatment-program-0001">https://www.wateronline.com/doc/orange-county-water-district-wins-groundwater-resources-association-s-kevin-j-neese-award-for-pfas-treatment-program-0001</a>	57,901
2	9/19/22	KUER 90.1	With a shriveling Colorado River, water managers see promise in recycling sewage	United States	<a href="https://www.kuer.org/health-science-environment/2022-09-19/with-a-shriveling-colorado-river-water-managers-see-promise-in-recycling-sewage">https://www.kuer.org/health-science-environment/2022-09-19/with-a-shriveling-colorado-river-water-managers-see-promise-in-recycling-sewage</a>	59,443
3	9/16/22	KPCW	As the Colorado River shrinks, water managers see promise in recycling sewage	United States	<a href="https://www.kpcw.org/state-regional/2022-09-16/as-the-colorado-river-shrinks-water-managers-see-promise-in-recycling-sewage">https://www.kpcw.org/state-regional/2022-09-16/as-the-colorado-river-shrinks-water-managers-see-promise-in-recycling-sewage</a>	31,541
4	9/16/22	HPPR	As the Colorado River shrinks, water managers see promise in recycling sewage	United States	<a href="https://www.hppr.org/hppr-news/2022-09-16/as-the-colorado-river-shrinks-water-managers-see-promise-in-recycling-sewage">https://www.hppr.org/hppr-news/2022-09-16/as-the-colorado-river-shrinks-water-managers-see-promise-in-recycling-sewage</a>	20,609

**MEDIA CLIPS**  
**GWRS**  
**JULY 1 - SEPTEMBER 30, 2022**

	Date	Media Outlet	Title	Country	Link	Total Readership
5	9/15/22	Nevada Public Radio	As the Colorado River shrinks, water managers see promise in recycling sewage	United States	<a href="https://knpr.org/knpr/2022-09/colorado-river-shrinks-water-managers-see-promise-recycling-sewage">https://knpr.org/knpr/2022-09/colorado-river-shrinks-water-managers-see-promise-recycling-sewage</a>	66,742
6	9/15/22	KJZZ.org	Water managers see promise in recycling sewage	United States	<a href="https://news.azpm.org/p/news-topical-nature/2022/9/15/212873-water-managers-see-promise-in-recycling-sewage/">https://news.azpm.org/p/news-topical-nature/2022/9/15/212873-water-managers-see-promise-in-recycling-sewage/</a>	19,210
7	9/14/22	www.boisestatepubl	As the Colorado River shrinks, water managers see promise in recycling sewage	United States	<a href="https://www.boisestatepublicradio.org/science-research/2022-09-14/as-the-colorado-river-shrinks-water-managers-see-promise-in-recycling-sewage">https://www.boisestatepublicradio.org/science-research/2022-09-14/as-the-colorado-river-shrinks-water-managers-see-promise-in-recycling-sewage</a>	79,302
8	9/14/22	UPR.org	As the Colorado River shrinks, water managers see promise in recycling sewage	United States	<a href="https://www.upr.org/utah-news/2022-09-14/as-the-colorado-river-shrinks-water-managers-see-promise-in-recycling-sewage">https://www.upr.org/utah-news/2022-09-14/as-the-colorado-river-shrinks-water-managers-see-promise-in-recycling-sewage</a>	32,831



**MEDIA CLIPS**  
**GWRS**  
**JULY 1 - SEPTEMBER 30, 2022**

	Date	Media Outlet	Title	Country	Link	Total Readership
9	9/14/22	www.aspenpublicradio.org	As the Colorado River shrinks, water managers see promise in recycling sewage	United States	<a href="https://www.aspenpublicradio.org/environment/2022-09-14/as-the-colorado-river-shrinks-water-managers-see-promise-in-recycling-sewage">https://www.aspenpublicradio.org/environment/2022-09-14/as-the-colorado-river-shrinks-water-managers-see-promise-in-recycling-sewage</a>	7,563
10	9/11/22	UCI School of Social Ecology	Liquid Courage   School of Social Ecology	United States	<a href="https://socialecology.uci.edu/news/liquid-courage-1">https://socialecology.uci.edu/news/liquid-courage-1</a>	5,533
11	9/11/22	UCI School of Social Ecology	Liquid Courage	United States	<a href="https://socialecology.uci.edu/news/liquid-courage">https://socialecology.uci.edu/news/liquid-courage</a>	5,533
12	8/26/22	Plumbing Online	Independent advisory panel for water reuse established	South Africa	<a href="https://plumbingafrica.co.za/independent-advisory-panel-for-water-reuse-established/">https://plumbingafrica.co.za/independent-advisory-panel-for-water-reuse-established/</a>	338
13	8/20/22	carsalad.co.uk	Southern California Has A Plan To Ease The Colorado River Disaster. And It Begins Proper Beneath Your Toes	United Kingdom	<a href="https://carsalad.co.uk/southern-california-has-a-plan-to-ease-the-colorado-river-disaster-and-it-begins-proper-beneath-your-toes/">https://carsalad.co.uk/southern-california-has-a-plan-to-ease-the-colorado-river-disaster-and-it-begins-proper-beneath-your-toes/</a>	3,834
14	8/19/22	LAist	Southern California Has A Plan To Ease The Colorado River Crisis. And It Starts Right Under Your Feet	United States	<a href="https://laist.com/news/climate-environment/southern-california-has-a-plan-to-ease-the-colorado-river-crisis-and-it-starts-right-under-your-feet">https://laist.com/news/climate-environment/southern-california-has-a-plan-to-ease-the-colorado-river-crisis-and-it-starts-right-under-your-feet</a>	1,171,309

**MEDIA CLIPS**  
**GWRS**  
**JULY 1 - SEPTEMBER 30, 2022**

	Date	Media Outlet	Title	Country	Link	Total Readership
15	8/19/22	Engineering News	City of Cape Town establishes an independent advisory panel for water reuse	South Africa	<a href="https://www.engineeringnews.co.za/article/city-of-cape-town-establishes-an-independent-advisory-panel-for-water-reuse-2022-08-19">https://www.engineeringnews.co.za/article/city-of-cape-town-establishes-an-independent-advisory-panel-for-water-reuse-2022-08-19</a>	114,382
16	8/19/22	Polity.org.za	City of Cape Town establishes an independent advisory panel for water reuse	South Africa	<a href="https://www.polity.org.za/article/city-of-cape-town-establishes-an-independent-advisory-panel-for-water-reuse-2022-08-19">https://www.polity.org.za/article/city-of-cape-town-establishes-an-independent-advisory-panel-for-water-reuse-2022-08-19</a>	44,172
17	8/19/22	Technology Today - B	City of Cape Town establishes an independent advisory panel for water reuse	United States	<a href="https://tech.einnews.com/article/586831467/lrVNvTVFtjkGtwF">https://tech.einnews.com/article/586831467/lrVNvTVFtjkGtwF</a>	1,753
18	8/16/22	The Honest Company	Facing drought, climate change recycled water is key to survival – Capitol Weekly	United States	<a href="https://honestcolumnist.com/health/facing-drought-climate-change-recycled-water-is-key-to-survival-capitol-weekly/">https://honestcolumnist.com/health/facing-drought-climate-change-recycled-water-is-key-to-survival-capitol-weekly/</a>	6,599
19	8/16/22	Capitol Weekly	Facing drought, climate change recycled water is key to survival	United States	<a href="http://capitolweekly.net/facing-drought-climate-change-recycled-water-is-key-to-survival/">http://capitolweekly.net/facing-drought-climate-change-recycled-water-is-key-to-survival/</a>	15,246
20	8/08/22	90.5 WESA	Water Week: Access to clean drinking water	United States	<a href="https://www.wesa.fm/2022-08-07/water-week-access-to-clean-drinking-water">https://www.wesa.fm/2022-08-07/water-week-access-to-clean-drinking-water</a>	186,063

**MEDIA CLIPS**  
**GWRS**  
**JULY 1 - SEPTEMBER 30, 2022**

	Date	Media Outlet	Title	Country	Link	Total Readership
21	8/03/22	usa-online-news.com	Thirsty? What was derided as 'toilet-to-tap' is key to California water future	United States	<a href="https://usa-online-news.com/news/thirsty-what-was-derided-as-toilet-to-tap-is-key-to-california-water-future/">https://usa-online-news.com/news/thirsty-what-was-derided-as-toilet-to-tap-is-key-to-california-water-future/</a>	4,146
22	8/03/22	Latest & Breaking News	Thirsty? What was derided as 'toilet-to-tap' is key to California's water future	United States	<a href="https://freetips4u365.blogspot.com/2022/08/thirsty-what-was-derided-as-toilet-to.html">https://freetips4u365.blogspot.com/2022/08/thirsty-what-was-derided-as-toilet-to.html</a>	790
23	8/03/22	East Bay Times	Thirsty? What was derided as 'toilet-to-tap' is key to California's water future	United States	<a href="https://www.eastbaytimes.com/2022/08/03/thirsty-what-was-derided-as-toilet-to-tap-is-key-to-our-water-future/">https://www.eastbaytimes.com/2022/08/03/thirsty-what-was-derided-as-toilet-to-tap-is-key-to-our-water-future/</a>	607,593
24	8/03/22	The Mercury News	Thirsty? What was derided as 'toilet-to-tap' is key to California's water future	United States	<a href="https://www.mercurynews.com/2022/08/03/thirsty-what-was-derided-as-toilet-to-tap-is-key-to-our-water-future/">https://www.mercurynews.com/2022/08/03/thirsty-what-was-derided-as-toilet-to-tap-is-key-to-our-water-future/</a>	5,145,359
25	8/03/22	The Mercury News	Thirsty? What was derided as 'toilet-to-tap' is key to California water future	United States	<a href="https://www.mercurynews.com/2022/08/03/thirsty-what-was-derided-as-toilet-to-tap-is-key-to-our-water-future/">https://www.mercurynews.com/2022/08/03/thirsty-what-was-derided-as-toilet-to-tap-is-key-to-our-water-future/</a>	5,145,359

**MEDIA CLIPS**  
**GWRS**  
**JULY 1 - SEPTEMBER 30, 2022**

	Date	Media Outlet	Title	Country	Link	Total Readership
26	8/03/22	The Orange County Register	Thirsty? What was derided as 'toilet-to-tap' is key to our water future	United States	<a href="https://www.ocregister.com/2022/08/03/thirsty-what-was-derided-as-toilet-to-tap-is-key-to-our-water-future/">https://www.ocregister.com/2022/08/03/thirsty-what-was-derided-as-toilet-to-tap-is-key-to-our-water-future/</a>	1,783,166
27	8/03/22	www.contracostatimes.com	Thirsty? What was derided as 'toilet-to-tap' is key to California's water future	United States	<a href="https://app2.cision.com/#/articles/48394507173">https://app2.cision.com/#/articles/48394507173</a>	6,140
28	8/03/22	The Mercury News	Thirsty? What was derided as 'toilet-to-tap' is key to California's water future	United States	<a href="https://app2.cision.com/#/articles/48394507439">https://app2.cision.com/#/articles/48394507439</a>	3,991,427
29	8/03/22	Usa News	Thirsty? What was derided as 'toilet-to-tap' is key to California water future	United States	<a href="https://usa-today-news.com/news/thirsty-what-was-derided-as-toilet-to-tap-is-key-to-california-water-future/">https://usa-today-news.com/news/thirsty-what-was-derided-as-toilet-to-tap-is-key-to-california-water-future/</a>	1,875
30	7/30/22	Your So Cal Tap Water	California Wildfires and Water: Tied Together in a Destructive Harmony	United States	<a href="https://yoursocaltapwater.org/2022/07/30/california-wildfires-and-water-tied-together-in-a-destructive-harmony/">https://yoursocaltapwater.org/2022/07/30/california-wildfires-and-water-tied-together-in-a-destructive-harmony/</a>	2,644
31	7/22/22	KCET	Can Desalination Be a Solution for Drought in SoCal?	United States	<a href="https://www.kcet.org/news-community/can-desalination-be-a-solution-for-drought-in-social">https://www.kcet.org/news-community/can-desalination-be-a-solution-for-drought-in-social</a>	157,205
32	7/05/22	californiapolicycenter.org	The Abundance Choice – Part 11: The Desalination Option	United States	<a href="https://californiapolicycenter.org/the-abundance-choice-part-11-the-desalination-option/">https://californiapolicycenter.org/the-abundance-choice-part-11-the-desalination-option/</a>	14,132

**MEDIA CLIPS**  
**GWRS**  
**JULY 1 - SEPTEMBER 30, 2022**

	Date	Media Outlet	Title	Country	Link	Total Readership
33	7/05/22	Content Engine LLC	The Abundance Choice - Part 11: The Desalination Option	United States	<a href="https://app2.cision.com/#/articles/48164754893">https://app2.cision.com/#/articles/48164754893</a>	8,685
34	7/03/22	Content Engine LLC	The Abundance Choice - Part 10: Time to Stop Wasting Wastewater	United States	<a href="https://app2.cision.com/#/articles/48148163005">https://app2.cision.com/#/articles/48148163005</a>	8,685
35	7/03/22	californiapolicycenter	The Abundance Choice – Part 10: Time to Stop Wasting Wastewater	United States	<a href="https://californiapolicycenter.org/the-abundance-choice-part-10-time-to-stop-wasting-wastewater/">https://californiapolicycenter.org/the-abundance-choice-part-10-time-to-stop-wasting-wastewater/</a>	18,522
					<b>Total Readership</b>	<b>18,825,632</b>