DESERT WATER AGENCY
JUNE 18, 2024

BOARD OF DIRECTORS
REGULAR MEETING AGENDA

8:00 A.M. OPERATIONS CENTER - 1200 SOUTH GENE AUTRY TRAIL – PALM SPRINGS – CALIFORNIA

This meeting will be held virtually and in person. The link and the telephone option provided is for the convenience of the public.

Toll Free: (253) 215-8782
Meeting ID: 833 2141 6242
Passcode: 683622
or Via Computer:
https://dwa-org.zoom.us/j/83321416242?pwd=XOSGNVaEYsVb1GD5KOpf0KnPxBCvkm.1
Meeting ID: 833 2141 6242

Members of the public who wish to comment on any item within the jurisdiction of the Agency or any item on the agenda may submit comments by emailing sbaca@dwa.org or may do so during the meeting. Comments will become part of the Board meeting record.

**In order to reduce feedback, please mute your audio when you are not speaking.*

Esta reunión se llevará a cabo virtualmente y en persona. El enlace y la opción telefónica proporcionada es para la comodidad del público.

Número gratuito: (253) 215-8782
ID de reunión: 833 2141 6242
código de acceso: 683622
o a través de la computadora:
https://dwa-org.zoom.us/j/83321416242?pwd=XOSGNVaEYsVb1GD5KOpf0KnPxBCvkm.1
ID de reunión: 833 2141 6242

Los miembros del público que deseen comentar sobre cualquier tema dentro de la jurisdicción de la Agencia o cualquier tema en la agenda pueden enviar comentarios por correo electrónico a sbaca@dwa.org o pueden hacerlo durante la reunión. Los comentarios pasarán a formar parte del registro de la reunión de la Junta.

*Para reducir los comentarios, silencia el audio cuando no estés hablando.

1. CALL TO ORDER — ORTEGA
2. PLEDGE OF ALLEGIANCE — ORTEGA
3. ROLL CALL — BACA
4. PUBLIC COMMENT ON ITEMS NOT ON THE AGENDA: Members of the public may comment on any item not listed on the agenda, but within the jurisdiction of the Agency. Speakers are requested to keep their comments to no more than three (3) minutes. As provided in the Brown Act, the Board is prohibited from acting on items not listed on the agenda.
5. PUBLIC COMMENT ON ITEMS LISTED ON THE AGENDA: Members of the public may also comment on items listed on the agenda that are not the subject of a public hearing at this time. Again, speakers are requested to keep their comments to no more than three (3) minutes.

6. CONSENT CALENDAR ITEMS: Items listed under the Consent Calendar are considered to be routine and will be acted upon by one motion of the Board without discussion. There will be no separate discussion on these items unless a Board Member requests a specific item to be discussed and/or removed from the Consent Calendar for separate action.

   A. Approve Minutes of the June 4, 2024 Regular Board Meeting
   B. Receive and File Minutes of the June 6, 2024 Executive Committee Meeting
   C. Receive and File May 2024 Public Affairs & Conservation Activities & Events
   D. Request Authorization to Continue Emergency Repair Work at DWA Facilities Under Resolution No. 1312

7. PUBLIC HEARING:
   2024/2025 Groundwater Replenishment Assessments

   A. West Whitewater River and Mission Creek Subbasins — JOHNSON
      1). Request Adoption of Resolution No. 1328 Making Findings in Fact Pursuant Section 15.4 of DWA Law for the West Whitewater River Subbasin Replenishment Assessment
      2). Request Adoption of Resolution No. 1329 Levying a Replenishment Assessment FY 2024/2025
      3). Request Adoption of Resolution No. 1330 Making Findings in Fact Pursuant to Section 15.4 of DWA Law for the Mission Creek Subbasin Replenishment Assessment
      4). Request Adoption of Resolution No. 1331 Levying a Replenishment Assessment

8. ACTION ITEMS:
   A. Request Adoption of Resolution No. 1332, 1333, and 1334 Establishing Rates and Fees for Domestic Water Service, Recycled Water Service and Sewer Service — SAENZ
   B. Request Adoption of Fiscal Year 2024/2025 Operating, General and Wastewater Budgets — SAENZ
   C. Request Board Authorization for General Manager to Execute Land Lease Agreement with Palm Springs Surf Club (PSSC), LLC — JOHNSON

9. GENERAL MANAGER'S REPORT — JOHNSON

10. DIRECTORS REPORTS ON MEETINGS/EVENTS ATTENDED ON BEHALF OF THE AGENCY

11. DIRECTORS COMMENTS/REQUESTS

12. CLOSED SESSION

   A. CONFERENCE WITH REAL PROPERTY NEGOTIATORS
      Pursuant to Government Code Section 54956.8
      Property: APN# 681-490-006
      Agency Negotiators: Steve L. Johnson, General Manager and David Tate Asst. General Manager
      Negotiating Parties: Palm Springs View Investment Company
      Under Negotiations: Possible Easement Agreement

   B. CONFERENCE WITH LEGAL COUNSEL – EXISTING LITIGATION
      Pursuant to Government Code Section 54956.9 (d) (1)
      Name of Case: PacBell vs. County of Riverside

   C. CONFERENCE WITH LEGAL COUNSEL – EXISTING LITIGATION
      Pursuant to Government Code Section 54956.9 (d) (1)
      Name of Case: Mission Springs Water District vs. Desert Water Agency

D. CONFERENCE WITH LEGAL COUNSEL – EXISTING LITIGATION
Pursuant to Government Code Section 54956.9 (d) (1)
Name of Case: Agua Caliente Band of Cahuilla Indians vs. Coachella Valley Water District, et al
Two Cases

E. PUBLIC EMPLOYMENT
Pursuant to Government Code Section 54957
Unrepresented Employee: General Manager

13. RECONVENE INTO OPEN SESSION – REPORT FROM CLOSED SESSION

14. ADJOURN

Upon request, this agenda will be made available in appropriate alternative formats to persons with disabilities, as required by Section 202 of the Americans with Disabilities Act of 1990. Any person with a disability who requires a modification or accommodation in order to participate in a meeting is asked to contact Desert Water Agency's Assistant Secretary of the Board, at (760) 323-4971, at least 48 working hours prior to the meeting to enable the Agency to make reasonable arrangements. Copies of records provided to Board members that relate to any agenda item to be discussed in open session may be obtained from the Agency at the address indicated on the agenda.

DECLARATION OF POSTING

Pursuant to Government Code Section 54954.2, I certify that this agenda has been posted at least 72 hours prior to the meeting on the Agency's website at www.dwa.org and at the Agency's office located at 1200 South Gene Autry Trail, Palm Springs, CA.

Sylvia Baca, MMC, Asst. Secretary of the Board

MINUTES OF THE REGULAR MEETING OF THE DESERT WATER AGENCY BOARD OF DIRECTORS

June 4, 2024

Board:	Paul Ortega, President Jeff Bowman, Vice President Kristin Bloomer, Director Gerald McKenna, Secretary-Treasurer Steve Grasha, Director
DWA Staff:	Steve Johnson, General Manager David Tate, Assistant General Manager Esther Saenz, Finance Director Kris Hopping, Human Resources Director Victoria Llort, Public Affairs & Conservation Director Sylvia Baca, Asst. Secretary of the Board Jamie Hoffman, Senior Admin. Assistant Sarah Rapolla, Senior Water Resources Specialist Clark Elliott, Conservation Manager
Consultants via Teleconference:	Mike Riddell, Best Best & Krieger

Pledge of Allegiance

President Ortega opened the meeting at 8:00 a.m. and asked Director Bloomer to lead the Pledge of Allegiance.

Roll Call

President Ortega called upon Assistant Secretary of the Board Baca to conduct the roll call:

Present: Grasha, Bloomer, McKenna, Bowman, Ortega

Public Comment on Items Not Listed on the Agenda

President Ortega opened the meeting for public comment for items not listed on the Agenda.

There was no one from the public wishing to address the Board for items not listed on the Agenda.

Public Comment on Items Listed on the Agenda

President Ortega opened the meeting for public comment for items listed on the Agenda.

There was no one from the public wishing to address the Board for items listed on the Agenda.

Approval of the Consent Calendar

A. Receive & File Memo on 5/16/24 SWC's Meeting
B. Approve Minutes of the 5/21/24 Regular Board Meeting
C. Receive & File Minutes of the 5/23/24 Finance Comm. Mtg.
D. Receive & File Minutes of the 5/29/24 HR Comm. Mtg.
E. Receive & File Minutes of the 5/30/24 Exec. Comm. Mtg.
F. Receive & File the Water Use Reduction Figures for April 2024
G. Request Authorization to Continue Emergency Repair Work at DWA Facilities Under Reso. No. 1312

President Ortega called for approval of the Consent Calendar. He noted that Consent Calendar Items 6-A through 6-G are expected to be routine and to be acted upon by the Board of Directors at one time without discussion. If any Board member requests that an item be removed from the consent calendar, it will be removed so that it may be presented separately.

A. Receive and File Memo on May 16, 2024 State Water Contractors' Meeting
B. Approve Minutes of the May 21, 2024 Regular Board Meeting
C. Receive and File Minutes of the May 23, 2024 Finance Committee Meeting
D. Receive and File Minutes of the May 29, 2024 Human Resources Committee Meeting
E. Receive and File Minutes of the May 30, 2024 Executive Committee Meeting
F. Receive and File the Water Use Reduction Figures for April 2024
G. Request Authorization to Continue Emergency Repair Work at DWA Facilities Under Resolution No. 1312

Director Grasha moved for approval of Consent Calendar Items 6A through 6G. After a second by Director Bloomer, the motion carried by the following roll call vote:

AYES:	Grasha, Bloomer, McKenna, Bowman, Ortega
NOES:	None
ABSENT:	None
ABSTAIN:	None

Action Items:
7A - Request Approval of 2024/2027 DWAEA MOU

Human Resources Director Hopping provided highlights of the Memorandum of Understanding (MOU) between Desert Water Agency (DWA) and the Desert Water Agency Employee Association (DWAEA) which will be from July 1, 2024 – June 30, 2027. Staff recommends that the Board of Directors approve the Memorandum of Understanding between Desert Water Agency and the Desert Water Agency Employee Association from July 1, 2024 – June 30, 2027.

Vice President Bowman moved for approval of the Memorandum of Understanding (MOU) between Desert Water Agency and the Desert Water Agency Employee Association (DWAEA) from July 1, 2024 – June 30, 2027. After a second by Director Bloomer the motion carried by the following roll call vote:

AYES:	Grasha, Bloomer, McKenna, Bowman, Ortega
NOES:	None
ABSENT:	None
ABSTAIN:	None

Action Items:
(Cont.)

7B - Request Approval of July 2024 COLA Salary Increase for DWA Employees

Human Resources Director Hopping presented the staff report. She noted that the 2024-2027 Memorandum of Understanding between the Desert Water Agency (DWA) and the Desert Water Agency Employees' Association (DWAEA) calls for a cost-of-living salary increase effective July 1 of each year. Effective July 1, 2025, the maximum cap set for the increase is 6%. For March 2024, the CPI percentage was 4.8%. Based on the DWAEA agreement, DWA employees will receive a 4.8% salary adjustment.

Continuing with her report, Mrs. Hopping stated that the employment agreement with the General Manager provides for a cost-of-living adjustment to the base salary of the same percentage as provided to DWA employees. Upon approval by the Board, the General Manager's agreement will be amended to reflect a 4.8% base salary increase.

Staff recommends that the Board of Directors: 1) Approve a 4.8% Cost of Living increase to DWA employees and the General Manager with an effective date of the pay periods including July 1, 2024; 2) Approve the July 2024 DWA Monthly Salary Schedule reflecting a 4.8% increase; 3) Approve the First amendment to the General Manager's employment agreement reflecting a 4.8% cost of living increase to the base salary.

Director Grasha made a motion to approve the 4.8% Cost of Living Increase to DWA Employees and the General Manager with an effective date of the pay periods including July 1, 2024, Approve the July 2024 DWA Monthly Salary Schedule reflecting a 4.8% increase, and Approve First amendment to the General Manager's Employment Agreement to reflect a 4.8% cost-of-living increase to the base salary. After a second from Director Bloomer the motion carried by the following roll call vote:

AYES:	Grasha, Bloomer, McKenna, Bowman, Ortega
NOES:	None
ABSENT:	None
ABSTAIN:	None

Discussion Items:
8A - Fiscal Year 2023/2024 Operating, General & Wastewater Budgets

Finance Director Saenz presented the staff report.

Mrs. Saenz noted that copies of the draft budgets along with the highlights are included in the agenda packet and that the Finance Committee has met and reviewed the budget. She provided an overview of the Operating, General and Wastewater budgets.

8B - Board of Directors Fee Evaluation

Finance Director Saenz presented the staff report.

Discussion ensued between Board members regarding their views on the fee evaluation and the pros and cons of the proposed rate increase.

Director Grasha made a motion to move forward with the process for the Board of Directors' fee increase After a second by Secretary-Treasurer McKenna, the motion carried by the following roll call vote:

AYES: Grasha, Bloomer, McKenna, Bowman
NOES: Ortega
ABSENT: None
ABSTAIN: None

8C - 2022-2023 SGMA Annual Reports (PowerPoint)

Senior Water Resources Specialist Rapolla provided a PowerPoint presentation of the 2022-2023 SGMA Annual Reports. Mrs. Rapolla stated that the Sustainable Groundwater Management Act (SGMA) requires annual reports to provide groundwater information and progress made toward implementing the Groundwater Sustainability Plan (GSP) during the prior year. She noted Desert Water Agency is a Groundwater Sustainability Agency (GSA) in the Indio, Mission Creek, and San Gorgonio Pass Subbasins and these Groundwater Sustainability Plans (GSPs) provide guidance on how each groundwater basin will achieve long-term sustainability.

Discussion Items:
(Cont.)
8D – Building Industry Association Membership Renewal

General Manager Johnson presented the staff report.

General Manager Johnson noted that prior to rejoining in 2023, the Agency has not been a member of the Building Industry Association (BIA) since 2010 due to its local chapter being dissolved. He went on to state that Staff recommends that the Board consider whether the Agency should renew its membership in the BIA.

Director Grasha made a motion to not renew the Agency's membership with the Building Industry Association. After a second by Vice President Bowman, the motion carried by the following roll call vote:

AYES: Grasha, Bloomer, McKenna, Bowman, Ortega
NOES: None
ABSENT: None
ABSTAIN: None

General Manager's Report

General Manager Johnson provided an update on Agency operations for the past several weeks.

Director of Public Affairs & Conservation Llort introduced herself and gave a brief introduction of her staff and their positions.

Directors Reports on Mtgs/Events Attended on Behalf of the Agency

Director Grasha noted his attendance at the May 22 ACWA Webinar, May 23 DHS Rotary Big Hearts Awards, May 28 CVWD Board meeting, and May 31 ACWA event.

Director Bloomer noted her attendance at the May 23 Finance Committee meeting, Tribal Mediation meeting, and DHS Rotary Big Hearts Awards, May 29 Human Resources Committee meeting, and the June 4 Tribal meeting.

Secretary-Treasurer McKenna noted his attendance at the May 23 Finance Committee meeting and DHS Rotary Big Hearts Awards.

Vice President Bowman noted his attendance at the May 29 Human Resources Committee meeting, and the May 30 Executive Committee meeting.

President Ortega noted his attendance at the May 23 DHS Rotary Big Hearts Awards.

Closed Session:
A. Public Employment – Unrepresented Employee: General Manager
B. Existing Litigation - PacBell vs. County of Riverside
C. Existing Litigation – MSWD vs. DWA, et al
D. Existing Litigation – ACBCI vs. CVWD, et al. (2 Cases)

At 10:30 a.m., President Ortega convened into Closed Session for the purpose of Conference with Legal Counsel, (A) Public Employment, Pursuant to Government Code Section 54957, Unrepresented Employee: General Manager; (B) Conference with Legal Counsel, Existing Litigation, Pursuant to Government Code Section 54956.9 (d) (1), PacBell vs. County of Riverside; (C) Conference with Legal Counsel, Existing Litigation, Pursuant to Government Code Section 54956.9 (d) (1), Mission Springs Water District vs. Desert Water Agency; and (D) Conference with Legal Counsel, Existing Litigation, Pursuant to Government Code Section 54956.9 (d) (1), Agua Caliente Band of Cahuilla Indians vs. Coachella Valley Water District, et al (Two Cases)

Reconvene – No Reportable Action

At 11:21 a.m., President Ortega reconvened the meeting into open session and announced there was no reportable action.

Adjournment

In the absence of any further business, President Ortega adjourned the meeting at 11:22 a.m.

____

Sylvia Baca, MMC
Assistant Secretary of the Board

Executive Committee Meeting Minutes

June 6, 2024

Directors Present: Paul Ortega, Kristin Bloomer
Staff Present: Steve Johnson, David Tate, Esther Saenz, Jamie Hoffman

1. Call to Order

2. Public Comments
   None

3. Discussion Items

   A. Review Agenda for June 18, 2024 Board Meeting
      The proposed agenda for the June 18, 2024 meeting was reviewed.

4. Adjourn

DESERT WATER AGENCY

PUBLIC AFFAIRS & CONSERVATION ACTIVITIES

MAY 2024

Activities

5/1	Victoria Llort attended the ACWA Bay-Delta working group meeting.
5/2	Xochitl Pẽna was on a live segment with KESQ.
5/2	Victoria Llort attended the DVBA monthly legislative meeting.
5/2	Staff attended a weekly Legislative update meeting.
5/8	Staff attended a CVRWMG Business meeting.
5/8	Staff attended Coachella Valley Joint Chamber mixer.
5/9	Nisha Ajmani was on a live segment with KESQ.
5/16	Conservation staff conducted a Water Waste Walkthrough of Sunrise Park.
5/16	Staff attended a weekly Legislative update meeting.
5/16	Victoria Llort was on a live segment with KESQ.
5/17	Victoria Llort attended the ACWA State Legislative meeting.
5/20	Victoria Llort attended the PS Air Museum Educational Wing groundbreaking.
5/20	Victoria Llort attended the Greater Coachella Valley Chamber of Commerce Board Meeting.
5/21	Staff attended a CV Water Counts monthly meeting.
5/21-22	Victoria Llort attended the CSDA Legislative Days in Sacramento.
5/23	Staff hosted a tour of Mission Creek for the PS Planning Commission.
5/23	Victoria Llort was on a live segment with KESQ.
5/28	Staff attended an ACWA Water Use Efficiency meeting.
5/29	Victoria Llort attended the Inland SoCal United Way board strategic retreat.
5/30	Xochitl Pẽna was on a live segment with KESQ.
5/30	Victoria Llort and Xochitl Pẽna recorded a radio interview with Joey English.
5/30	Staff attended a weekly Legislative update meeting.

Public Information Releases/eblasts/Customer Notifications

5/7	Nextdoor – Sunmor Estates Area Pipeline Replacement Project
5/16	Nextdoor – DWR Well Monitoring Project
5/6	Latest News on website – Sunmor Estates Pipeline Replacement Project
5/16	Latest News on website – DWR Well Monitoring Project in Dream Homes Area
5/28	Latest News on website – DWA hosts blood drive

Upcoming Events

6/20 – Greater Coachella Valley Chamber of Commerce 2024 Installation and Business Awards

Conservation Programs

Grass Removal:

24	Inspections
19	Projects pre-approved
14	Projects given final approval

Devices:

11	Washing machine rebates requested
8	Washing machine rebates approved
20	Smart controller rebates requested
13	Smart controller rebates approved
64	Nozzles requested for rebate
50	Nozzles approved for rebate
0	Toilet rebates requested (commercial)
0	Toilet rebates approved (commercial)
22	Toilet rebates requested (residential)
21	Toilet rebates requested (residential)

Water waste:

76	Total complaints submitted
23	Contacts to customers
16	Site inspections scheduled
9	Citations
2	Citations Waived

Analytics | DWA
DWA main site - GA4

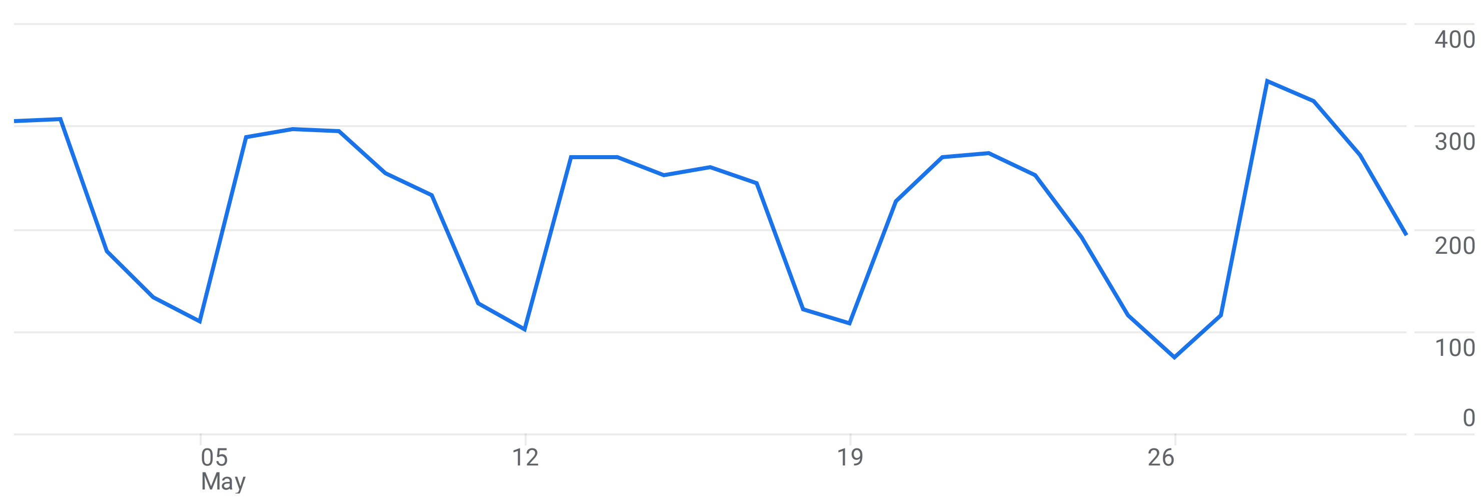
Go to report

All Users | Add comparison +

Custom May 1 - May 31, 2024

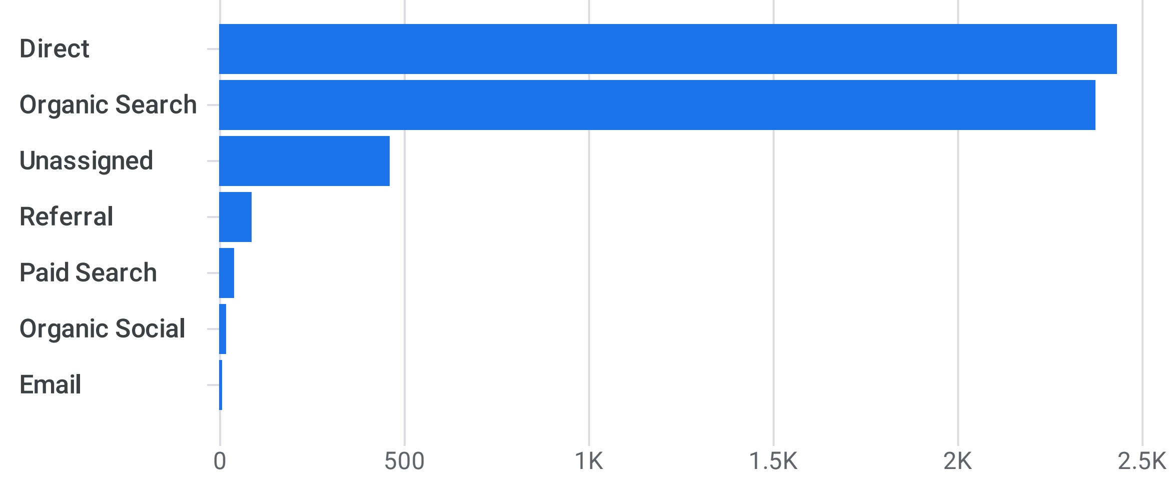
Reports snapshot

Users	New users	Average engagement time	Total revenue
6K	5.4K	13s	$0.00



WHERE DO YOUR NEW USERS COME FROM?

New users by First user primary channel group (Default Channel Group)



View user acquisition →

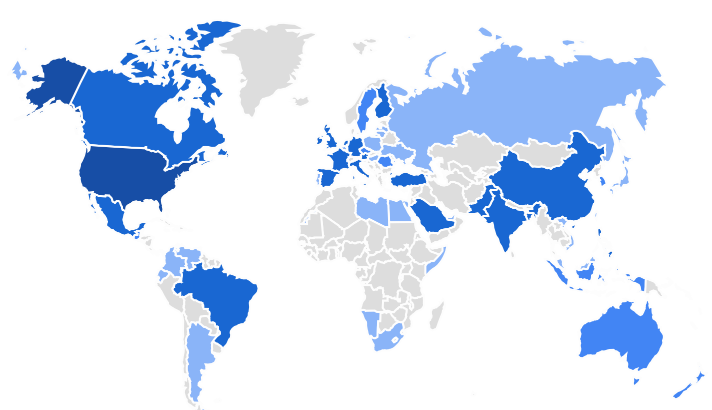
WHAT ARE YOUR TOP CAMPAIGNS?

Sessions by Session primary channel group...

SESSION PRIMARY CHAN...	SESSIONS
Organic Search	4K
Direct	3.7K
Unassigned	507
Referral	343
Paid Search	55
Organic Social	32
Email	9

View traffic acquisition →

Users by Country

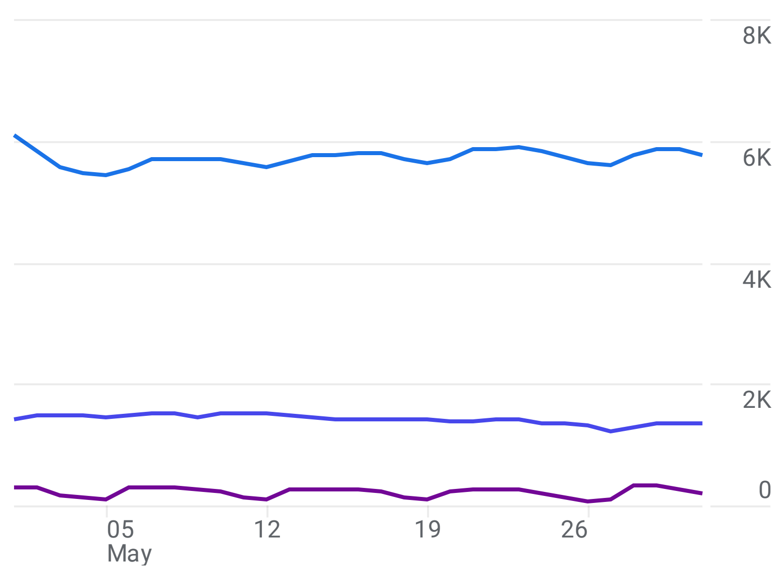


COUNTRY	USERS
United States	5.7K
Canada	101
India	38
China	24
United Kingdom	20
Germany	19
Philippines	16

View countries →

HOW ARE ACTIVE USERS TRENDING?

User activity over time



30 DAYS
5.8K

7 DAYS
1.4K

1 DAY
194

HOW WELL DO YOU RETAIN YOUR USERS?

User activity by cohort
Based on device data only

	Week 0	Week 1	Week 2	Week 3	Week 4	Week 5
All Users	100.0%	3.1%	1.2%	0.8%	1.4%	0.6%
Apr 21 - Apr 27						
Apr 28 - May 4						
May 5 - May 11						
May 12 - May 18						
May 19 - May 25						
May 26 - Jun 1						

6 weeks ending Jun 1

View retention →

WHICH PAGES AND SCREENS GET THE MOST VIEWS?

Views by Page title and screen class

PAGE TITLE AND SCREEN ...	VIEWS
Desert Water Agency | Deser...	5.3K
Pay My Bill | Desert Water Ag...	2.4K
Start Service | Desert Water ...	1.2K
library | Desert Water Agency	891
Save | Desert Water Agency	603
Update your contact informat...	399
Start Stop Service | Desert W...	370

View pages and screens →

WHAT ARE YOUR TOP EVENTS?

Event count by Event name

EVENT NAME	EVENT COUNT
page_view	17K
session_start	8.6K
first_visit	5.4K
dwa__spent_over_o...	2K
click	1.6K
user_engagement	1.3K
scroll	825

View events →

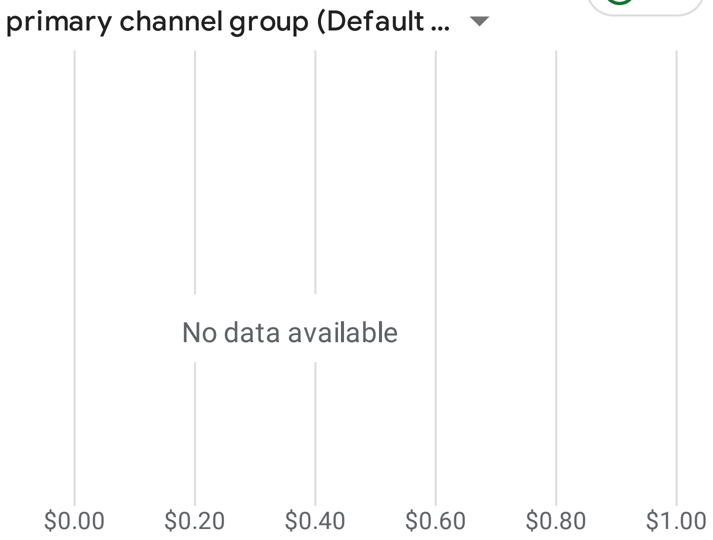
WHAT ARE YOUR TOP PERFORMING KEY EVENTS?

Key events by Event name

EVENT NAME	KEY EVENTS
dwa__spent_over_o...	2K
Grass_Removal_Pag...	386
Smart_Controller_Pa...	152
toilet_rebate_view	149
Washing_Machine_P...	93
Nozzle_Rebate_Page...	62

WHERE DOES YOUR LTV COME FROM?

LTV by
First user primary channel group (Default ...



View user acquisition cohorts →

WHAT ARE YOUR TOP SELLING PRODUCTS?

Items purchased by Item name

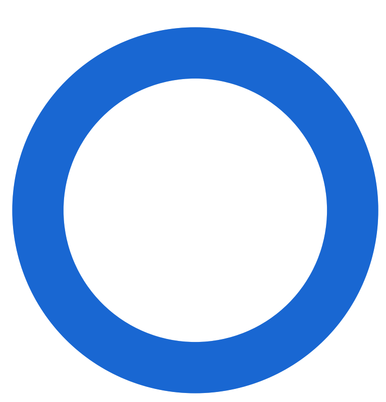
ITEM NAME	ITEMS PURCHA...

No data available

View items →

HOW DOES ACTIVITY ON YOUR PLATFORMS COMPARE?

Key events by Platform



WEB
100.0%

View tech details →

Desert Water Agency Facebook & Instagram Analytics May 2024

facebook

DESERT WATER

Desert Water Agency

1.3K likes • 1.5K followers

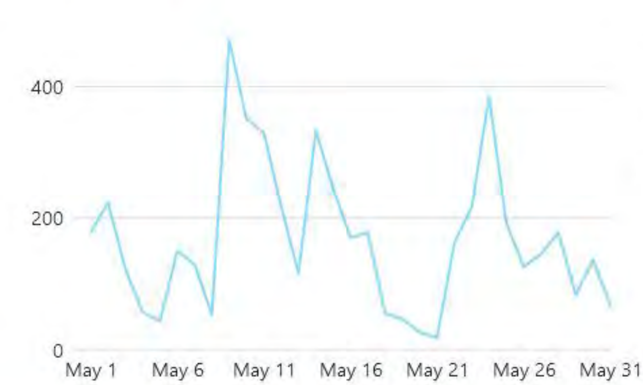
Contact us · Message · Like

Reach

Export

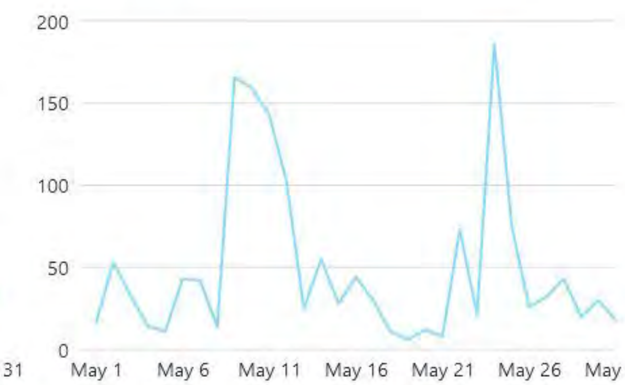
Facebook reach

2.1K ↓ 9.7%



Instagram reach

592 ↑ 53.4%

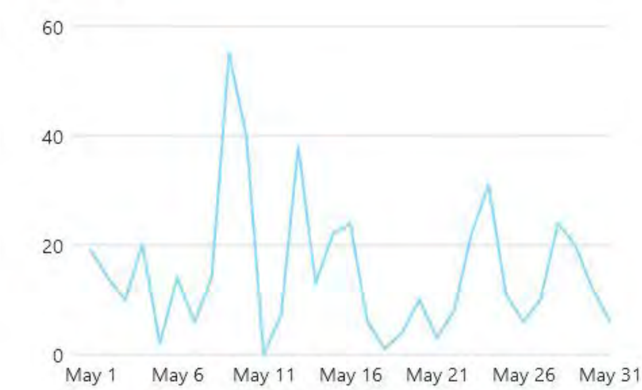


Visits

Export

Facebook visits

472 ↓ 3.9%



Instagram profile visits

121 ↑ 51.2%

Desert Water Agency Facebook & Instagram Analytics May 2024

Post	Account	Boost	Date	Reach	Likes / Reactions	Comments	Shares
Remember to give your garden some love this Water a Flower...	desertwateragency	Boost	Thu May 30, 4:10pm	46 Reach	9 Likes	0 Comments	0 Shares
Remember to give your garden some love this W...	Desert Water Agency	Boost unavailable	Thu May 30, 4:10pm	159 Reach	3 Reactions	0 Comments	0 Shares
Donate blood! Stop by the Lifestream Blood Drive from 9 a.m....	desertwateragency	Boost	Tue May 28, 12:05pm	44 Reach	1 Likes	0 Comments	0 Shares
Donate blood! Stop by the Lifestream Blood Driv...	Desert Water Agency	Boost unavailable	Tue May 28, 12:04pm	145 Reach	4 Reactions	0 Comments	1 Shares
In honor and recognition of Memorial Day and th...	Desert Water Agency	Boost unavailable	Mon May 27, 6:30am	146 Reach	7 Reactions	0 Comments	0 Shares
In honor and recognition of Memorial Day and those who gav...	desertwateragency	Boost	Mon May 27, 6:30am	44 Reach	5 Likes	0 Comments	0 Shares
DWA was honored to host the Palm Springs City ...	Desert Water Agency	Boost unavailable	Sat May 25, 4:30pm	257 Reach	9 Reactions	0 Comments	2 Shares
DWA was honored to host the City of Palm Springs Planning ...	desertwateragency	Boost	Sat May 25, 4:30pm	79 Reach	11 Likes	0 Comments	0 Shares
DWA was proud to participate in honoring "Big Hearts" at last...	desertwateragency	Boost	Fri May 24, 1:05pm	122 Reach	19 Likes	1 Comments	2 Shares
DWA was proud to participate in honoring "Big H...	Desert Water Agency	Boost unavailable	Fri May 24, 1:05pm	343 Reach	17 Reactions	0 Comments	0 Shares
Did you know DWA is a California Special District? We were cr...	desertwateragency	Boost	Fri May 24, 8:01am	171 Reach	11 Likes	0 Comments	2 Shares
Did you know DWA is a California Special District?...	Desert Water Agency	Boost unavailable	Fri May 24, 8:00am	225 Reach	11 Reactions	1 Comments	0 Shares
Happy National Public Works Week! Join us in recognizing the...	desertwateragency	Boost	Wed May 22, 9:35am	91 Reach	11 Likes	0 Comments	0 Shares
Happy National Public Works Week! Join us in rec...	Desert Water Agency	Boost unavailable	Wed May 22, 9:35am	219 Reach	14 Reactions	0 Comments	0 Shares
Get ready for swim season with summer conservation tips! He...	desertwateragency	Boost	Thu May 16, 6:30pm	80 Reach	4 Likes	0 Comments	0 Shares
Get ready for swim season with summer conserv...	Desert Water Agency	Boost unavailable	Thu May 16, 6:30pm	255 Reach	8 Reactions	1 Comments	0 Shares
See a leak or water waste? Report it to DWA at the link in bio ...	desertwateragency	Boost	Tue May 14, 3:00pm	80 Reach	5 Likes	0 Comments	1 Shares
See a leak or water waste? Report it to DWA at w...	Desert Water Agency	Boost unavailable	Tue May 14, 3:00pm	342 Reach	11 Reactions	0 Comments	2 Shares
The Chamber of Commerce Annual Joint Mixer at...	Desert Water Agency	Boost unavailable	Sat May 11, 5:29pm	488 Reach	31 Reactions	1 Comments	0 Shares
The Chamber of Commerce Annual Joint Mixer at the Palm Sp...	desertwateragency	Boost	Sat May 11, 5:19pm	241 Reach	31 Likes	1 Comments	0 Shares
It's Public Service Recognition Week! DWA gives a big shout o...	desertwateragency	Boost	Fri May 10, 1:00pm	128 Reach	12 Likes	0 Comments	0 Shares
It's Public Service Recognition Week! DWA gives a...	Desert Water Agency	Boost unavailable	Fri May 10, 1:00pm	264 Reach	16 Reactions	1 Comments	0 Shares
This post has no text	desertwateragency	Boost unavailable	Thu May 9, 7:42pm	102 Reach	1 Likes	--	0 Shares
This post has no text	desertwateragency	Boost unavailable	Thu May 9, 7:33pm	107 Reach	3 Likes	--	0 Shares

Desert Water Agency Facebook & Instagram Analytics May 2024

This post has no text desertwateragency	Boost unavailable	Thu May 9, 7:30pm	129 Reach	5 Likes	--	0 Shares
Attending the annual ACWA conference is a wonderful opport... desertwateragency	Boost	Thu May 9, 6:00pm	109 Reach	11 Likes	0 Comments	0 Shares
Attending the annual ACWA conference is a won... Desert Water Agency	Boost unavailable	Thu May 9, 4:27pm	608 Reach	33 Reactions	0 Comments	1 Shares
Providing a reliable water supply takes more than... Desert Water Agency	Boost unavailable	Thu May 9, 9:07am	459 Reach	29 Reactions	0 Comments	1 Shares
Providing a reliable water supply takes more than just pipes a... desertwateragency	Boost	Thu May 9, 8:50am	160 Reach	20 Likes	0 Comments	2 Shares
Drinking Water Week highlights the importance of a safe wate... desertwateragency	Boost	Mon May 6, 4:25pm	94 Reach	10 Likes	0 Comments	1 Shares
Drinking Water Week highlights the importance o... Desert Water Agency	Boost unavailable	Mon May 6, 4:25pm	288 Reach	9 Reactions	0 Comments	1 Shares
Happy Water Awareness Month! Join us in making sure every ... desertwateragency	Boost	Thu May 2, 12:45pm	99 Reach	14 Likes	0 Comments	1 Shares
Happy Water Awareness Month! Join us in makin... Desert Water Agency	Boost unavailable	Thu May 2, 12:45pm	246 Reach	10 Reactions	0 Comments	1 Shares

Content overview

Breakdown: Organic/ads

All Posts Stories Reels Videos Live

Reach	3-second views	1-minute views	Content interactions	Minutes viewed
2.1K ↓ 9.7%	8 ↑ 166.7%	0 0%	252 ↑ 31.9%	2m 37s ↑ 293.1%

Reach breakdown

May 1 – May 31

Total

2,113 ↓ 9.7%

From organic

2,103 ↓ 9.9%

From ads

0 0%

nextdoor

Desert Water Agency

1200 S Gene Autry Trl, Palm Springs

Desert Water Agency is the water utility for the Palm Springs area including outlying county areas, Desert Hot Springs, part of Cathedral City and Palm Springs. It is our responsibility to provide a safe, reliable water supply to the area we serve while protecting

See more...

Desert Water Agency

43,492 members

28,100 claimed households

144 neighborhoods

Invite

Desert Water Agency

Senior Outreach Specialist Nisha Ajmani • 16 May

Dream Homes Neighborhood - DWR Well Monitoring Project

...

See more

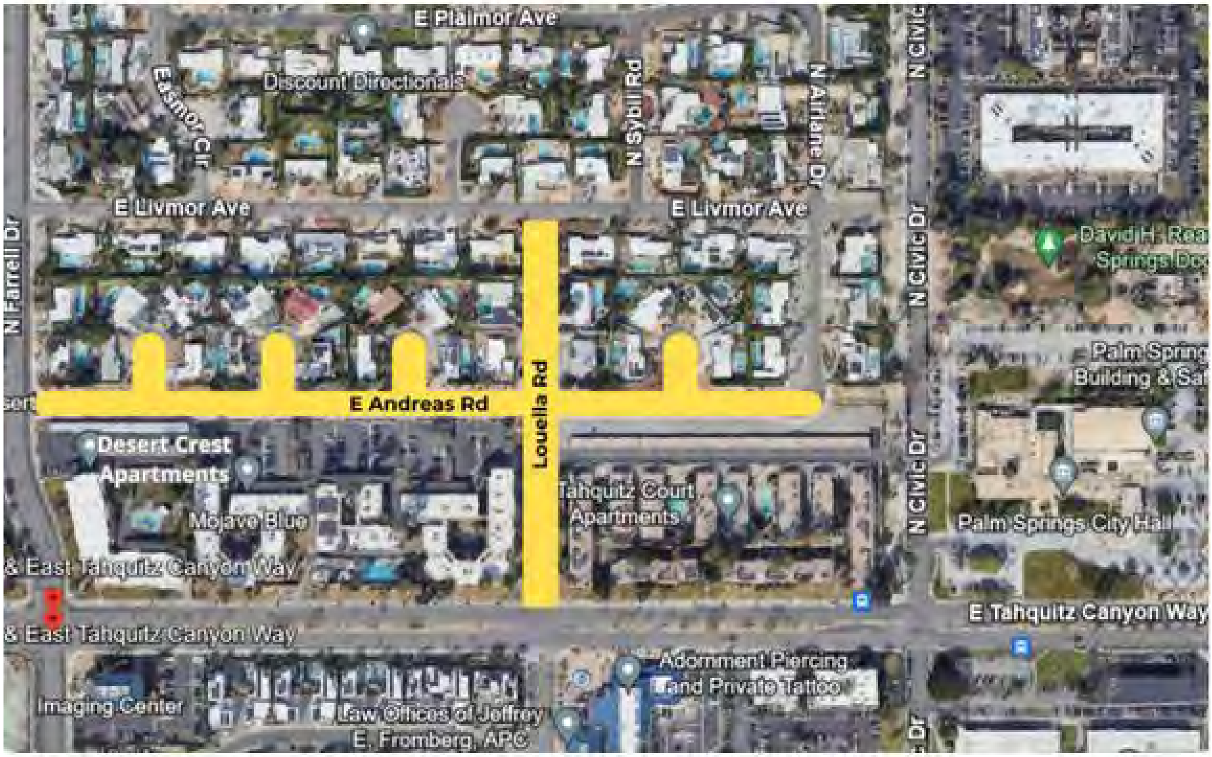
Posted to **Subscribers of Desert Water Agency in 1 neighborhood**

Be the first to react

Like Comment Share

Desert Water Agency
Senior Outreach Specialist Nisha Ajmani • 7 May

Desert Water Agency - Sunmor Estates Area Pipeline Replacement Project
... See more



Posted to **Subscribers of Desert Water Agency in 2 neighborhoods**

Be the first to react   Like   Comment   Share

Desert Water Agency X Analytics May 2024

Desert Water Agency
2,987 posts

Edit profile

Desert Water Agency
@DWAwater

Desert Water Agency is a public, non-profit agency and State Water Contractor, serving a 325-square-mile area in the Palm Springs area. Follow/RT not endorsment

Palm Springs, CA   dwa.org   Joined February 2014

1,444 Following   **1,212** Followers

Your posts earned **963 impressions** over this **31 day** period

YOUR POSTS
During this 31 day period, you earned **31 impressions** per day.

Posts | Top posts | Posts and replies | Promoted

Post	Impressions	Engagements	Engagement rate
Desert Water Agency @DWAwater · May 30 Give your garden some love! Low-water plants like the purple coneflower are long-lasting in the desert heat, thriving in most soils and full sun. The coneflower's casual growth makes it a favorite in natural gardens! #DesertWater #DesertGarden #NationalWaterAFlowerDay pic.twitter.com/E7vT2Je1Vr View post activity	51	3	5.9%
Desert Water Agency @DWAwater · May 28 Donate blood! Stop by the Lifestream Blood Drive from 9 a.m. – 2 p.m. this Wednesday, May 29, in the DWA parking lot located at 1200 S. Gene Autry Trail, Palm Springs. Go to dwa.org/blooddrive to schedule an appointment. Walk-ups also welcome. #BloodDrive #DesertWaterAgency pic.twitter.com/BRdKj1dLo View post activity	55	1	1.8%
Desert Water Agency @DWAwater · May 27 In honor and recognition of Memorial Day and those who gave the ultimate sacrifice, Desert Water Agency is closed today, Monday, May 27. In case of a water emergency, call 760-323-4971, option 4. #MemorialDay #DesertWaterAgency pic.twitter.com/iW7ZLTejjY View post activity	37	1	2.7%
Desert Water Agency @DWAwater · May 25 DWA was honored to host the City of Palm Springs Planning Commission on a tour of our Mission Creek Groundwater Replenishment facility. We look forward to ongoing dialogue to encourage community conservation and improve water security. #DesertWaterAgency #PalmSprings #DesertWater pic.twitter.com/XO4vyRFlto View post activity	51	4	7.8%
Desert Water Agency @DWAwater · May 24 DWA was proud to participate in honoring "Big Hearts" at last night's Desert Hot Springs Rotary Awards ceremony. Congratulations to Mission Springs Water District "People of the Year" – their Hilary Emergency Response Team! #DesertWaterAgency #DesertHotSprings #LocalHeroes pic.twitter.com/T6ZYellxtz View post activity	35	1	2.9%
Desert Water Agency @DWAwater · May 24 DWA is a special district created by residents to support the well-being of our community! Our roles include regional groundwater management and water service to Palm Springs and parts of Cathedral City. More info: dwa.org. #DesertWaterAgency #SpecialDistrictsWeek pic.twitter.com/IiKUeOO1wv View post activity	103	8	7.8%
Desert Water Agency @DWAwater · May 22 Happy National Public Works Week! Join us in recognizing the importance of pipes, pumps and facilities that deliver water to homes and businesses, and the hardworking team that makes it happen! #DesertWater #DesertWaterAgency #NPWW #PalmSprings #CathedralCity #DesertHotSprings pic.twitter.com/ZK6p7Q1SBK View post activity	54	4	7.4%

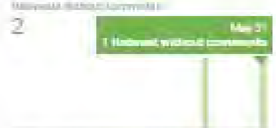
Engagements
Showing 31 days with daily frequency

Engagement rate
3.4%

Link clicks
0

On average, you earned **0 link clicks** per day

Retweets without comments
2



On average, you earned **0 Retweets without comments** per day

Likes
43

On average, you earned **1 likes** per day

Replies
0

On average, you earned **0 replies** per day

Desert Water Agency @DWAwater · May 15 Get ready for swim season with summer conservation tips! 💧Install a pool cover to lessen evaporation. 💧Check for leaks around pool and spa pumps. 💧Hang pool towels to dry to reduce the water used to wash them. Get more ideas at dwa.org/save. #DesertWaterAgency pic.twitter.com/1Ubopgwi5D View post activity	44	1	2.3%
Desert Water Agency @DWAwater · May 14 See a leak or water waste? Report it to DWA at dwa.org/report. Be ready with the location, date, time and description. Photos are a huge help! 🔴 Water emergency? Call 760-323-4971 and push 0 during business hours or 4 after hours. #DesertWater #DesertWaterAgency pic.twitter.com/ReqjHOeJe7 View post activity	40	1	2.5%
Desert Water Agency @DWAwater · May 11 The Chamber of Commerce Annual Joint Mixer at the Palm Springs Air Museum is always lots of fun! We attended earlier this week with our infused water & lots of great info on conservation programs. We love connecting with the community at events like this! 💧 pic.twitter.com/Pj4yUqOrgb View post activity	59	1	1.7%
Desert Water Agency @DWAwater · May 10 This #PublicServiceRecognitionWeek DWA gives a big shout out to our team and to all the public service professionals that strengthen our communities. From water and sanitation to emergency management and parks, thank you for all that you do! #DesertWaterAgency pic.twitter.com/o3n81YdavT View post activity	53	2	3.8%
Desert Water Agency @DWAwater · May 9 Attending the annual ACWA conference is a wonderful opportunity to interact with other water leaders & learn from each other. It was great to connect with California Natural Resources Agency Secretary @wade.crowfoot who was a conference keynote speaker 💧 #DWA #ACWAConf pic.twitter.com/yqN3NBz8D1 View post activity	69	6	8.7%
Desert Water Agency @DWAwater · May 9 DWA is in Sacramento this week meeting with legislators to advocate important water issues on behalf of our community. Thank you to Assemblymember Wallis, Senator Seyarto, Senator Ochoa Bogh and the office of Assemblymember Garcia for taking time to hear about our priorities. pic.twitter.com/CrdxMSlmZ5 View post activity	35	2	5.7%
Desert Water Agency @DWAwater · May 5 #DrinkingWaterWeek highlights the importance of a safe water supply. DWA tests thousands of samples a year in our state-certified lab to ensure water quality for our customers. Learn more at dwa.org/reports. #DesertWater #PalmSprings #CathedralCity #DesertHotSprings pic.twitter.com/7sHa7EL5xR View post activity	76	4	5.3%
Desert Water Agency @DWAwater · May 2 Happy Water Awareness Month! Join us in making sure every drop counts, year-round! Learn how you can make a water-saving difference at dwa.org/news. #WaterAwarenessMonth #DesertWater #CaliforniaWater #PalmSprings #CathedralCity #DesertHotSprings pic.twitter.com/sZB665ZVIM View post activity	82	2	2.4%

STAFF REPORT
TO
DESERT WATER AGENCY
BOARD OF DIRECTORS

JUNE 18, 2024

RE: REQUEST BOARD AUTHORIZATION TO CONTINUE EMERGENCY REPAIR WORK AT DWA FACILITIES UNDER RESOLUTION NO. 1312

On September 19, 2023, the Board adopted Resolution No. 1312 declaring a local emergency that requires emergency repairs to Agency facilities due to Tropical Storm Hilary. As required by the resolution, the following is an update on the repairs:

The following repair work has been done:

Whitewater Headworks:

- Graded road into site.
- Repaired 4" pump and re-established water supply to customers, at reduced delivery flow rate.
- Cleaned out concrete settling structure and transmission main.
- Replaced the fence surrounding the settling structure.
- Working with FEMA on disaster relief.

Mission Creek Groundwater Replenishment Facility:

- Completed aerial survey and CAD mapping of work zone area.
- Installed K-Rail barriers to secure the site from vehicular traffic.
- Completed clearing and restoration of debris basin and basin 2 (See Photos).
- Completed replacement of fence (See Photos).
- Working on final clean-up of site by DWA Construction.
- Working with FEMA on disaster relief funding.
- Replenishment Facility is capable of taking water when needed.

The General Manager has determined that the damage to Agency facilities warrants the continuation of work under a Local Emergency, as outlined in Resolution No. 1312.

<u>Fiscal Impact:</u>
The declaration of work under a Local Emergency does not have a fiscal impact, rather, it allows the Agency to expedite repairs according to the Uniform Public Construction Cost Accounting Act.

<u>Legal Review:</u>
N/A

<u>Recommendation:</u>
Staff recommends, as required by Resolution No. 1312, the Board's concurrence that the continued work to repair Agency facilities shall occur under the Board's declaration of a Local Emergency.

STAFF REPORT
TO
DESERT WATER AGENCY
BOARD OF DIRECTORS

JUNE 18, 2024

RE: GROUNDWATER REPLENISHMENT ASSESSMENT WEST WHITEWATER RIVER SUBBASIN AND MISSION CREEK SUBBASIN (PUBLIC HEARING)

Following presentation of the Engineer's Report on the Groundwater Replenishment and Assessment Program for 2024/2025 at the Board’s May 21, 2024 meeting, a determination was made that funds should be raised by a replenishment assessment, and the Board set today as the time and place for a public hearing on the matter.

As indicated in the Replenishment Reports, the proposed groundwater replenishment assessment for both the West Whitewater Area of Benefit and the Mission Creek Area of Benefit in 2024/2025 is $215 per acre-foot of production.

A copy of the Notice of today’s Public Hearing was sent to all pumpers on May 30, 2024, advising them of the scheduled public hearing, as well as the recommended replenishment assessment to be considered. The notice of Public Hearing, setting the hearing date for today, was published in The Public Record on May 30, 2024.

A comparison of historic and proposed groundwater replenishment rates for Desert Water Agency (DWA) and Coachella Valley Water District (CVWD) is shown in Exhibit 8 of the Engineer’s report (see attached).

Fiscal Impact:
Based on estimated production figures for the West Whitewater River Subbasin and Mission Creek Subbasin, as indicated in the Engineer’s Report, the $215/AF rate will produce $8,851,550 in revenue for the General Fund. This is an increase of $823,400 as compared to the current $195/AF rate. This rate change will also increase the Source of Supply Expense in the Operating Fund by $590,363, producing a net fiscal impact to the Agency as a whole of $233,037. Finance Director Saenz has reviewed this report.

Legal Review:
Legal Counsel has reviewed this report.

Recommendation:

1. Open the Public Hearing on the proposed replenishment assessments to be levied in both areas of benefit, receive public testimony, close public hearing; and

2. Adopt:

Resolution No. 1328 - West Whitewater River Subbasin - Making findings of fact relevant and material to levying the replenishment assessment within the West Whitewater River Subbasin.

Resolution No. 1329 - West Whitewater River Subbasin – Levying the 2024/2025 West Whitewater River Groundwater Replenishment Assessment in the amount of $215.00 per acre-foot.

Resolution No. 1330 - Mission Creek Subbasin – Making findings of fact relevant and material to levying the replenishment assessment within the Mission Creek Subbasin.

Resolution No. 1331 - Mission Creek Subbasin – Levying the 2024/2025 Mission Creek Groundwater Replenishment Assessment in the amount of $215.00 per acre-foot.

Attachments:
Attachment #1 – Resolution No's 1328 thru 1331
Attachment #2 – Exhibit 8
Attachment #3 – Final Engineer's Report

RESOLUTION NO. 1328

RESOLUTION OF THE BOARD OF DIRECTORS OF DESERT WATER AGENCY MAKING FINDINGS OF FACT RELEVANT AND MATERIAL TO THE LEVY OF A REPLENISHMENT ASSESSMENT PURSUANT TO DESERT WATER AGENCY LAW

WEST WHITEWATER RIVER SUBBASIN AREA OF BENEFIT

WHEREAS, this Board has called and conducted a public hearing pursuant to statute in regard to the levy of a replenishment assessment within a portion of the Desert Water Agency for the 2024-2025 fiscal year; and

WHEREAS, it appears to this Board that such an assessment should be levied based upon the following findings material and relevant to such levy;

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of Desert Water Agency that this Board finds:

1. Desert Water Agency was created by statute to manage groundwater supplies within its boundaries. Overdraft conditions historically have existed within that portion of the West Whitewater River Subbasin of the Upper Coachella Valley lying within the boundaries of the Desert Water Agency; therefore, there is need for groundwater replenishment to sustainably manage that portion of the subbasin.

2. There is need to levy a replenishment assessment (charge) for fiscal year 2024-2025 upon groundwater extractions within the aforementioned portion of the West Whitewater River Subbasin or surface water diversions from streams which would naturally replenish such portion of the West Whitewater River Subbasin to defray the costs of groundwater replenishment.

3. Such groundwater replenishment assessment (charge) shall apply to all water production, both groundwater extractions and surface water diversions within the Area of Benefit, at a uniform rate in dollars per acre-foot.

4. Pursuant to statute, the Area of Benefit is hereby delineated as that portion of the West Whitewater River Subbasin of the Upper Coachella Valley lying within the boundaries of the Desert Water Agency (See Figure 2 in "***Engineer's Report on Groundwater Replenishment and Assessment Program for the West Whitewater River and Mission Creek Subbasins – Desert Water Agency 2024-2025***"), and those areas within the Agency from which diversions are made from streamflow which would replenish naturally such portion of the West Whitewater River Subbasin. The reason for delineation of this Area of Benefit is that all producers therein benefit from the groundwater replenishment program now being carried on by the Agency.

5. Extractions of groundwater of 10 acre-feet or less per year are excluded from this process, and are exempted from the levy of any replenishment assessment pursuant to Section 15.4(g) of the Desert Water Agency Law. Diversions which do not diminish streamflow in excess of 10 acre-feet per year shall also be excluded.

6. This Agency plans to take its 2024-2025 Table A Water Allocation under its State Water Project Contract and to exchange such water for other imported water to be used for replenishment purposes.

7. Pursuant to Section 15.4(f) of the Desert Water Agency Law, the maximum permissible amount that may be included in the calculation of the replenishment assessment rate to pay for State Water Project water for the 2024-2025 fiscal year, based on the Agency's estimated applicable State Water Project charges of $10,592,654 and estimated assessable production within all the West Whitewater River and Mission Creek Subbasins of 41,170 acre-feet, is approximately $257 per acre-foot.

8. Pursuant to the provisions of the 2014 Water Management Agreement between the Agency and the Coachella Valley Water District, the replenishment assessment rate that could be levied by Desert Water Agency to pay for State Water Project water for the 2024-2025 fiscal year, based on the Agency's estimated allocated share of State Water Project charges for its Table A Water Allocation of $9,751,144 and estimated assessable production within the

West Whitewater River and Mission Creek Subbasins of 41,170 acre-feet, is approximately $237 per acre-foot.

9. Pursuant to Sections 15.4(b) and 15.4(f) of the Desert Water Agency Law, the replenishment assessment in any given year may also include costs of purchasing, transporting, and spreading water other than State Water Project water.

10. Pursuant to the above provisions, the 2024-2025 replenishment assessment rate shall be $215.00 per acre-foot, which does not exceed the sum of the above mentioned costs.

ADOPTED this 18th day of June, 2024.

____
Paul Ortega, President

ATTEST:

____
Gerald McKenna, Secretary-Treasurer

RESOLUTION NO. 1329

RESOLUTION OF THE BOARD OF DIRECTORS OF DESERT WATER AGENCY LEVYING A WATER REPLENISHMENT ASSESSMENT FOR THE FISCAL YEAR 2024-2025 FOR THE PURPOSE OF REPLENISHING GROUNDWATER SUPPLIES

WEST WHITEWATER RIVER SUBBASIN

AREA OF BENEFIT

WHEREAS, Section 15.4 of the Desert Water Agency Law provides for the levy of water replenishment assessment (charge) upon the extraction of groundwater, or the diversion of surface supplies which would naturally replenish groundwater supplies; and

WHEREAS, the Board has followed and completed the statutory procedures required for the levy of such water replenishment assessment, including the adoption by resolution of specific findings of fact on all matters relevant and material to the purpose for which a water replenishment assessment may be levied.

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Desert Water Agency as follows:

1. The Board does hereby levy a water replenishment assessment upon all water produced during the 2024-2025 fiscal year from within the area of benefit as hereinafter determined.

2. The area of benefit is hereby determined to be that portion of the West Whitewater River Subbasin lying within the boundaries of the Desert Water Agency (See Figure 2 in "**Engineer's Report on Groundwater Replenishment and Assessment Program for the West Whitewater River and Mission Creek Subbasins - Desert Water Agency, 2024-2025**"), and those areas within the Agency from which diversions are made from streamflow which would

replenish naturally such portion of the West Whitewater River Subbasin. Water production shall include both groundwater extractions and surface water diversions.

3. The water replenishment assessment in such area of benefit shall be at the rate of $215.00 per acre foot. The water replenishment assessment shall be due and payable on a quarterly basis, and shall be paid within 30 days after the end of each quarter ending September 30, December 31, March 31, and June 30.

4. The General Manager of the Agency shall give notice of the levy of this water replenishment assessment, and shall provide the necessary forms for production statements, as required by Sections 15.4(h) and 15.4(i) of the Desert Water Agency Law.

5. Minimal production, either groundwater extractions of 10 acre feet or less per year, or streamflow diversions which do not diminish the flow in excess of 10 acre feet per year, shall be exempt from any water replenishment assessment.

ADOPTED this 18th day of June, 2024.

Paul Ortega, President

ATTEST:

Gerald McKenna, Secretary-Treasurer

RESOLUTION NO. 1330

A RESOLUTION OF THE BOARD OF DIRECTORS OF DESERT WATER AGENCY MAKING FINDINGS OF FACT RELEVANT AND MATERIAL TO THE LEVY OF A REPLENISHMENT ASSESSMENT PURSUANT TO DESERT WATER AGENCY LAW

MISSION CREEK SUBBASIN AREA OF BENEFIT

WHEREAS, this Board has called and conducted a public hearing pursuant to statute in regard to the levy of a replenishment assessment within a portion of the Desert Water Agency for the 2024-2025 fiscal year; and

WHEREAS, it appears to this Board that such an assessment should be levied based upon the following findings material and relevant to such levy;

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of Desert Water Agency that this Board finds:

1. Desert Water Agency was created by statute to manage groundwater supplies within its boundaries. Overdraft conditions historically have existed within that portion of the Mission Creek River Subbasin of the Upper Coachella Valley lying within the boundaries of the Desert Water Agency; therefore, there is need for groundwater replenishment to sustainably manage that portion of the subbasin.

2. There is need to levy a replenishment assessment (charge) for fiscal year 2024-2025 upon groundwater extractions within the aforementioned portion of the Mission Creek Subbasin or surface water diversions from streams which would naturally replenish such portion of the Mission Creek Subbasin to defray the costs of groundwater replenishment.

3. Such groundwater replenishment assessment (charge) shall apply to all water production, both groundwater extractions and surface water diversions within the Area of Benefit, at a uniform rate in dollars per acre-foot.

4. Pursuant to statute, the Area of Benefit is hereby delineated as that portion of the Mission Creek Subbasin of the Upper Coachella Valley lying within the boundaries

of the Desert Water Agency (See Figure 2 in "***Engineer's Report on Groundwater Replenishment and Assessment Program for the West Whitewater River and Mission Creek Subbasins – Desert Water Agency 2024-2025***"), and those areas within the Agency from which diversions are made from streamflow which would replenish naturally such portion of the Mission Creek Subbasin. The reason for delineation of this Area of Benefit is that all producers therein benefit from the groundwater replenishment program now being carried on by the Agency.

5. Extractions of groundwater of 10 acre-feet or less per year are excluded from this process, and are exempted from the levy of any replenishment assessment pursuant to Section 15.4(g) of the Desert Water Agency Law. Diversions which do not diminish streamflow in excess of 10 acre-feet per year shall also be excluded.

6. This Agency plans to take its 2024-2025 Table A Water Allocation under its State Water Project Contract and to exchange such water for other imported water to be used for replenishment purposes.

7. Pursuant to Section 15.4(f) of the Desert Water Agency Law, the maximum permissible amount that may be included in the calculation of the replenishment assessment rate to pay for State Water Project water for the 2024-2025 fiscal year, based on the Agency's estimated applicable State Water Project charges of $10,592,654 and estimated assessable production within all the West Whitewater River and Mission Creek Subbasins of 41,170 acre-feet, is approximately $257 per acre-foot.

8. Pursuant to the provisions of the 2014 Water Management Agreement between the Agency and the Coachella Valley Water District, the replenishment assessment rate that could be levied by Desert Water Agency to pay for State Water Project water for the 2024-2025 fiscal year, based on the Agency's estimated allocated share of State Water Project charges for its Table A Water Allocation of $9,751,144 and estimated assessable production within the West Whitewater River and Mission Creek Subbasins of 41,170 acre-feet is approximately $237 per acre-foot.

9. Pursuant to Sections 15.4(b) and 15.4(f) of the Desert Water Agency Law, the replenishment assessment in any given year may also include costs of purchasing, transporting, and spreading water other than State Water Project water.

10. Pursuant to the above provisions, the 2024-2025 replenishment assessment rate shall be $215.00 per acre-foot, which does not exceed the sum of the above-mentioned costs.

ADOPTED this 18th day of June, 2024.

____
Paul Ortega, President

ATTEST:

____
Gerald McKenna, Secretary-Treasurer

RESOLUTION NO. 1331

RESOLUTION OF THE BOARD OF DIRECTORS OF DESERT WATER AGENCY LEVYING A WATER REPLENISHMENT ASSESSMENT FOR THE FISCAL YEAR 2024-2025 FOR THE PURPOSE OF REPLENISHING GROUNDWATER SUPPLIES

MISSION CREEK SUBBASIN

WHEREAS, Section 15.4 of the Desert Water Agency Law provides for the levy of water replenishment assessment (charge) upon the extraction of groundwater, or the diversion of surface supplies which would naturally replenish groundwater supplies; and

WHEREAS, the Board has followed and completed the statutory procedures required for the levy of such water replenishment assessment, including the adoption by resolution of specific findings of fact on all matters relevant and material to the purpose for which a water replenishment assessment may be levied.

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Desert Water Agency as follows:

1. The Board does hereby levy a water replenishment assessment upon all water produced during the 2024-2025 fiscal year from within the area of benefit as hereinafter determined.

2. The area of benefit is hereby determined to be that portion of the Mission Creek Subbasin lying within the boundaries of the Desert Water Agency (See Figure 2 in "**Engineer's Report on Groundwater Replenishment and Assessment Program for the West Whitewater River and Mission Creek Subbasins - Desert Water Agency, 2024-2025**"), and those areas within the Agency from which diversions are made from streamflow which would replenish naturally such portion of the Mission Creek Subbasin. Water production shall include both groundwater extractions and surface water diversions.

3. The water replenishment assessment in such area of benefit shall be at the rate of $215.00 per acre foot. The water replenishment assessment shall be due and payable on a quarterly basis, and shall be paid within 30 days after the end of each quarter ending September 30, December 31, March 31, and June 30.

4. The General Manager of the Agency shall give notice of the levy of this water replenishment assessment, and shall provide the necessary forms for production statements, as required by Sections 15.4(h) and 15.4(i) of the Desert Water Agency Law.

5. Minimal production, either groundwater extractions of 10 acre feet or less per year, or streamflow diversions which do not diminish the flow in excess of 10 acre feet per year, shall be exempt from any water replenishment assessment.

ADOPTED this 18th day of June, 2024.

Paul Ortega, President

ATTEST:

Gerald McKenna, Secretary-Treasurer

EXHIBIT 8
DESERT WATER AGENCY AND COACHELLA VALLEY WATER DISTRICT
COMPARISON OF HISTORIC AND PROPOSED GROUNDWATER REPLENISHMENT
ASSESSMENT RATE FOR THE WEST WHITEWATER RIVER AND MISSION CREEK SUBBASIN AOBS

	DWA WWR & MC		CVWD WWR		CVWD MC	
Year	$/AF	% Increase	$/AF	% Increase	$/AF	% Increase
78/79	$6.81	---	No Assessment	---	No Assessment	---
79/80	$9.00	32%	No Assessment	---	No Assessment	---
80/81	$9.50	6%	$5.66	---	No Assessment	---
81/82	$10.50	11%	$7.43	31%	No Assessment	---
82/83	$21.00	100%	$19.82	167%	No Assessment	---
83/84	$36.50	74%	$33.23	68%	No Assessment	---
84/85	$37.50	3%	$34.24	3%	No Assessment	---
85/86	$31.00	-17%	$21.81	-36%	No Assessment	---
86/87	$21.00	-32%	$19.02	-13%	No Assessment	---
87/88	$22.50	7%	$19.55	3%	No Assessment	---
88/89	$20.00	-11%	$15.96	-18%	No Assessment	---
89/90	$23.50	18%	$19.66	23%	No Assessment	---
90/91	$26.00	11%	$23.64	20%	No Assessment	---
91/92	$31.75	22%	$25.66	9%	No Assessment	---
92/93	$31.75	0%	$28.23	10%	No Assessment	---
93/94	$31.75	0%	$31.05	10%	No Assessment	---
94/95	$31.75	0%	$34.16	10%	No Assessment	---
95/96	$31.75	0%	$37.58	10%	No Assessment	---
96/97	$31.75	0%	$37.58	0%	No Assessment	---
97/98	$31.75	0%	$42.09	12%	No Assessment	---
98/99	$31.75	0%	$47.14	12%	No Assessment	---
99/00	$31.75	0%	$52.80	12%	No Assessment	---
00/01	$33.00	4%	$59.14	12%	No Assessment	---
01/02	$33.00	0%	$66.24	12%	No Assessment	---
02/03	$35.00	6%	$72.86	10%	$59.80	---
03/04	$35.00	0%	$72.86	0%	$59.80	0%
04/05	$34.07	-3%	$78.86	8%	$59.80	0%
05/06	$38.28	12%	$78.86	0%	$59.80	0%
06/07	$177.93	365%	$83.34	6%	$65.78	10%
07/08	$63.00	-65%	$91.67	10%	$72.36	10%
08/09	$72.00	14%	$93.78	2%	$76.60	6%
09/10	$72.00	0%	$102.45	9%	$87.56	14%
10/11	$82.00	14%	$102.45	0%	$89.75	3%
11/12	$82.00	0%	$107.57	5%	$98.73	10%
12/13	$92.00	12%	$110.26	3%	$98.73	0%
13/14	$92.00	0%	$110.26	0%	$98.73	0%
14/15	$102.00	11%	$110.26	0%	$98.73	0%
15/16	$102.00	0%	$112.00	2%	$112.00	13%
16/17	$102.00	0%	$128.80	15%	$123.20	10%
17/18	$120.00	18%	$143.80	12%	$135.52	10%
18/19	$140.00	17%	$143.80	0%	$135.52	0%
19/20	$155.00	11%	$143.80	0%	$135.52	0%
20/21	$165.00	6%	$143.80	0%	$135.52	0%
21/22	$175.00	6%	$165.37	15%	$135.52	0%
22/23	$175.00	0%	$165.37	0%	$135.52	0%
23/24	$195.00	11%	$165.37	0%	$135.52	0%
24/25	$215.00 *	10%	$165.37	0%	$135.52	0%

* Proposed replenishment assessment rate

(760) 323-4971

POST OFFICE BOX 1710
PALM SPRINGS, CALIFORNIA 92263

1200 GENE AUTRY TRAIL SOUTH
PALM SPRINGS, CALIFORNIA 92264

ENGINEER'S REPORT

GROUNDWATER REPLENISHMENT AND ASSESSMENT PROGRAM FOR THE WEST WHITEWATER RIVER SUBBASIN, AND MISSION CREEK SUBBASIN AREAS OF BENEFIT

DESERT WATER AGENCY
2024/2025

JUNE 2024

Prepared by

KRIEGER & STEWART
Engineering Consultants
(951) 684-6900

Office: 3602 University Ave, Riverside, CA 92501
Mail: 3890 Orange St #1509, Riverside, CA 92502

REGISTERED PROFESSIONAL ENGINEER
DAVID F. SCRIVEN
No. 42922
CIVIL
STATE OF CALIFORNIA

David F. Scriven
R.C.E. No. 42922

REGISTERED PROFESSIONAL ENGINEER
TRAVIS ROBERT ROMEYN
No. 84918
CIVIL
STATE OF CALIFORNIA

Travis Romeyn

Travis R. Romeyn
R.C.E. No. 84918

101-33.48
(DFS/TRR/blt)
(REPORTS/101-33P48RPT)

TABLE OF CONTENTS

TABLE OF CONTENTS

Page

Page

FIGURES

TABLES

EXHIBITS

APPENDICES

ABBREVIATIONS

acre feet per year	AF/Yr
Agua Caliente Band of Cahuilla Indians	ACBCI
Area of Benefit	AOB
California Department of Water Resources	CDWR
California State Water Resources Control Board, Division of Drinking Water	DDW
Coachella Valley Water District	CVWD
degrees Fahrenheit	°F
Delta Conveyance Project	DCP
Desert Water Agency	DWA
Garnet Hill Subarea	GH
Kern County Water Agency	KCWA
Metropolitan Water District of Southern California	MWD
Mission Creek/Garnet Hill Water Management Plan	MC/GH WMP
Mission Creek Subbasin	MC
Mission Springs Water District	MSWD
Montgomery Watson Harza	MWH
Multi-Year Water Pool	MYWP
Off-Aqueduct Power Component of the State Water Project Transportation Charge	Off-Aqueduct Power Charge or OAPC
State Water Resources Control Board	SWRCB
State Water Project	SWP
Snow Creek Village Surface Water Treatment Plant	SWTP
Sustainable Groundwater Management Act	SGMA
Tulare Lake Basin Water Storage District	TLBWSD
United States Geological Survey	USGS
Variable OMP&R Component of the State Water Project Transportation Charge	Variable Transportation Charge
Water Management Plan	WMP
West Whitewater River Subbasin	WWR

DEFINITIONS

Term	Definition
Natural Inflow	Water flowing into a groundwater unit from natural sources such as surface water runoff or subsurface underflow from other groundwater units.
Natural Outflow	Water flowing out of a groundwater unit by drainage or subsurface underflow into other groundwater units.
Net Natural Inflow	Natural Inflow minus Natural Outflow.

Term	**Definition**
Production	Either extraction of groundwater from a Management Area or Area of Benefit (including its upstream tributaries), or diversion of surface water that would otherwise naturally replenish the groundwater within the Management Area or Area of Benefit (including its upstream tributaries).
Consumptive Use	Use of groundwater that does not return the water to the groundwater unit from which it was extracted, e.g. evaporation, evapotranspiration, export.
Non-Consumptive Return	Pumped groundwater that is returned to the groundwater unit after pumping, e.g. irrigation return, wastewater percolation, septic tank percolation.
Net Production	Production minus Non-Consumptive Return.
Assessable Production	Production within an Area of Benefit that does not include groundwater extracted by minimal pumpers and minimal diverters.
Minimal Pumper	A groundwater pumper that extracts 10 AF of water or less in any one year.
Minimal Diverter	A surface water diverter that diverts 10 AF of water or less in any one year.
Gross (Groundwater) Overdraft	Total Net Production in excess of Net Natural Inflow.
Net (Groundwater) Overdraft	Gross (Groundwater) Overdraft offset by artificial replenishment.
Cumulative Gross Overdraft	Total Gross Overdraft that has accumulated since the specific year that marks estimated commencement of gross overdraft conditions.
Cumulative Net Overdraft	Cumulative Gross Overdraft offset by Artificial Replenishment since the specific year that marks estimated commencement of artificial replenishment.
Whitewater River (Indio) Subbasin	The entire Indio Subbasin, as defined by the California Department of Water Resources, *Bulletin No. 108: Coachella Valley Investigation* (1964).
Mission Creek Subbasin or MC	The entire Mission Creek Groundwater Subbasin as defined by the California Department of Water Resources, *Bulletin No. 108: Coachella Valley Investigation (1964) and by* the United States Geological Survey in *Geological Survey Water-Supply Paper 2027* (1974).

Term	Definition
Garnet Hill Subarea or GH	The entire Garnet Hill Subarea of the Indio Subbasin, as defined by the California Department of Water Resources, *Bulletin No. 108: Coachella Valley Investigation (1964).* Also known as the Garnet Hill Groundwater Subbasin as defined by the United States Geological Survey in *Geological Survey Water-Supply Paper 2027* (1974).
Palm Springs Subarea	The entire Palm Springs Subarea of the Indio Subbasin, as defined by the California Department of Water Resources, *Bulletin No. 108: Coachella Valley Investigation (1964).* Also known as the Whitewater River Groundwater Subbasin as defined by the United States Geological Survey in *Geological Survey Water-Supply Paper 2027* (1974).
West Whitewater River Subbasin Management Area or WWR Management Area	The westerly portion of the Whitewater River (Indio) Subbasin, including the Palm Springs and Garnet Hill Subareas, and a portion of the San Gorgonio Pass Subbasin tributary to the Whitewater River (Indio) Subbasin, as specifically defined in Chapter II.
West Whitewater River Subbasin Area of Benefit or WWR AOB	The portion of the WWR Management Area that is within DWA's service area and is managed by DWA.
CVWD's West Whitewater River Subbasin Area of Benefit or CVWD's WWR AOB	The portion of the WWR Management Area that is within CVWD's service area and is managed by CVWD.
Mission Creek Subbasin Management Area or MC Management Area	The portion of the Mission Creek Subbasin that lies within the service areas of DWA and CVWD, as specifically defined in Chapter II.
Mission Creek Subbasin Area of Benefit or MC AOB	The portion of the MC Management Area that is within DWA's service area and is managed by DWA.
CVWD's Mission Creek Subbasin Area of Benefit or CVWD's MC AOB	The portion of the MC Management Area that is within CVWD's service area and is managed by CVWD.

CHAPTER I
EXECUTIVE SUMMARY

CHAPTER I
EXECUTIVE SUMMARY

Since 1973, Coachella Valley Water District (CVWD) and Desert Water Agency (DWA) have been using Colorado River water exchanged for State Water Project (SWP) water to replenish groundwater in the West Whitewater River Subbasin (WWR) and Mission Creek Subbasin (MC) Management Areas of the Coachella Valley Groundwater Basin.

A. RECENT DEVELOPMENTS

Since the 2022/2023 report, current estimates of natural inflow, natural outflow, non-consumptive return flows; and future projections of groundwater production and artificial replenishment are based on the assumptions and modeling efforts used for the *2022 Indio Subbasin Water Management Plan Update: SGMA Alternative Plan* (Indio SGMA Alternative Plan) and the *Mission Creek Subbasin SGMA Alternative Plan Update (2021)* (Mission Creek SGMA Alternative Plan). Future projections of the quantities of natural inflow, natural outflow, non-consumptive return flows, groundwater production, and artificial replenishment are not included in this report. For future projections, please refer to the Indio SGMA Alternative Plan and the Mission Creek SGMA Alternative Plan.

As stated in the 2023/2024 report, the California State Water Resources Control Board, Division of Drinking Water (DDW) notified DWA that the Snow Creek/Falls Creek (SC/FC) diversions no longer met the criteria for Surface Water Filtration Avoidance, thus mandating filtration treatment if DWA intended to continue using the SC/FC diversions for potable water. In response, DWA discontinued delivery of surface water to Palm Oasis and Palm Springs North, and constructed the 140 gpm Snow Creek Village Surface Water Treatment Plant (SWTP) to provide approximately 32 AF/Yr of filtered and disinfected water from the SC/FC diversions to Snow Creek Village. Rather than construct additional surface water filtration facilities to treat additional water from the SC/FC diversion, DWA now uses the remainder of the diverted SC/FC flow for generation of electricity and for groundwater replenishment by discharging it into the West Whitewater River Subbasin Groundwater Replenishment Facility. The SC/FC diversions reported herein are the quantities diverted for direct potable use, not for groundwater replenishment. DWA has also budgeted the installation of a 50 gpm capacity package surface water filtration facility at the Chino Creek West diversion.

Also, beginning with this 2024/2025 engineer's report, the Delta Water Rate is subject to new billing provisions effective January 2024 based on a new contract extension amendment executed in 2023. The overall Delta Water Rate is now the summation of three individual rates: one based on charges before the amended billing transition, and the other two based on charges after the amended billing transition.

B. ARTIFICIAL REPLENISHMENT

Groundwater production continues to exceed natural groundwater replenishment, and is expected to do so for the foreseeable future. If groundwater replenishment with imported water (artificial replenishment) is excluded, gross overdraft (defined herein as groundwater extractions or water production in excess of natural groundwater replenishment and/or recharge) within the WWR and MC Management Areas of the Coachella Valley Groundwater Basin (see **Figure 1**) would continue to increase at a steady rate. The five-year average gross overdraft (total net production minus net natural inflow) in the WWR Management Area is currently estimated to be about 79,000 acre-feet per year (AF/Yr), while gross overdraft in the MC Management Area is currently estimated at about 8,000 AF/Yr. Supplementing natural groundwater recharge resulting from rainfall runoff with artificial replenishment using imported water supplies is, therefore, necessary to offset annual and cumulative gross overdraft.

Current levels of groundwater production, without artificial replenishment, would result in adverse effects, including chronic lowering of groundwater levels, reduction of groundwater in storage, decreased well yields, and increased groundwater extraction costs. Additionally, the region could experience water quality degradation, land subsidence, and environmental impacts. Artificial replenishment offsets the deficit between groundwater production and natural groundwater replenishment, and helps avoid adverse effects associated with overdraft.

Because groundwater production continues to exceed natural groundwater replenishment within each subbasin, continued artificial replenishment in the WWR and MC Management Areas is necessary to either eliminate or reduce the adverse effects of cumulative gross overdraft, and to protect the groundwater supply.

C. GROUNDWATER REPLENISHMENT ASSESSMENT

The Areas of Benefit (AOBs) for DWA's portion of the groundwater replenishment program are those portions of the WWR and MC Management Areas, including tributary subbasins (e.g. the San Gorgonio Pass Subbasin), rivers, or streams--which lie within the boundaries of DWA (**Figure 2**). The costs involved in carrying out DWA's groundwater replenishment program are essentially recovered through groundwater replenishment assessments applied to all groundwater and surface water production within each AOB, aside from specifically exempted production.

Section 15.4(a)(3) of Desert Water Agency Law defines *production* as "the extraction of groundwater by pumping or any other method within the boundaries of the agency, or the diversion within the agency of surface supplies which naturally replenish the groundwater supplies within the agency and are used therein." The following producers are specifically exempted from assessment: producers extracting groundwater from both subbasins and upstream tributaries at rates of 10 AF/Yr or less; and producers diverting surface water without diminishing stream flow and groundwater recharge of the subbasins and upstream tributaries by 10 AF/Yr or less. Therefore, *production*, as used herein, is understood as either extraction of groundwater from a Management Area or AOB (including its upstream tributaries), or diversion of surface water that would otherwise naturally replenish the groundwater within the Management Area or AOB (including its upstream tributaries). *Assessable production*, as used herein, is understood as production that does not include water produced by minimal pumpers and minimal diverters at rates of 10 AF/Yr or less.

Pursuant to Section 15.4(f) of the current Desert Water Agency Law, the replenishment assessment rate cannot exceed the sum of the following costs and charges:

1. Certain specified charges under the contract between DWA and the state related to the purchase of State Water Project water
2. Costs of importing and recharging water from sources other than the State Water Project (such as the Colorado River Aqueduct)
3. Costs of treating and distributing reclaimed water

The replenishment assessment rate has been calculated to recover the cost of importing and recharging water from the Colorado River Aqueduct shown in **Table 7**.

Costs associated with importing and recharging the water include, but are not limited to, capital expenditures and operation and maintenance expenses related to the purchase of additional water rights, the water recharge facility, monitoring imported water supplies, and a share of general administrative costs.

The specified charges under the contract between DWA and the state related to the purchase of State Water Project water that DWA may include in the replenishment assessment are:

1. The Variable Operation, Maintenance, Power, and Replacement Component of the Transportation Charge (herein the "Variable Transportation Charge")
2. The Off-Aqueduct Power Facilities Component of the Transportation Charge (herein the "Off-Aqueduct Power Charge")
3. The Delta Water Charge
4. Any Surplus Water or Unscheduled Water Charge

DWA has historically not included costs of surplus or unscheduled water deliveries in the replenishment assessment rate; however, as of 2022/23, surplus and unscheduled water charges, were added to the Assessment Rate calculation as shown in **Table 7**.

D. GROUNDWATER REPLENISHMENT AND REPLENISHMENT ASSESSMENT IN 2023

DWA has requested its maximum 2024 Table A SWP water allocation of 55,750 AF pursuant to its SWP Contract, for the purpose of groundwater replenishment. CVWD plans to do the same with its maximum 2024 Table A water allocation.

According to the most recent update from CDWR (CDWR Notification 24-04 to State Water Project Contractors for 2024, dated April 23, 2024), CDWR will deliver a partial 40% of Table A water allocation requests, resulting in deliveries of 77,640 AF of Table A water to MWD on behalf of the Coachella Valley agencies (22,300 AF on behalf of DWA). According to DWR, all of this water is currently scheduled for delivery to MWD during 2024 and none is currently scheduled to be carried over to 2025. Article 56 water from 2023 is scheduled for delivery to MWD in 2024, and over 18,000 AF of Article 56 water has already been delivered to DWA and CVWD. For 2024, no SWP surplus water under Pool A or Pool B of the Turn-Back Water Pool Program has been offered. Article 21 water is not available in 2024. DWA and CVWD may be able to jointly obtain 1,477 AF of water under the Yuba River Accord in 2024. MWD could be obligated under the terms of the Second Amendment to the Quantitative Settlement Agreement (QSA) to deliver up to 50,000 AF of non-SWP water (35 TAF and 15 TAF QSA Programs) to CVWD in 2024. Normally, MWD would also deliver up to 19,000 AF to CVWD during a given year under the Glorious Land/Rosedale-Rio Bravo Agreement, but no water is scheduled for delivery under this agreement during 2024. Deliveries may occur as Colorado River water to the Whitewater River Groundwater Replenishment Facility, or as transfers from the Advance Delivery account, or a combination of both.

Based on the information set forth above, the *maximum permissible* replenishment assessment rate for recovery of Table A charges that can be established for fiscal year 2024/2025 (not including charges for surplus or unscheduled water, which are unknown at this time) is approximately $252/AF, based on DWA's estimated Applicable Charges (Delta Water Charge, Variable Transportation Charge, and Off-Aqueduct Power Charge) of $10,393,897 (average of estimated 2024 and 2025 Applicable Charges) and estimated 2024/2025 combined assessable production of 41,170 AF within the WWR and MC AOBs (see **Table 2**).

The *effective* replenishment assessment rate for Table A water is based on DWA's estimated Allocated SWP Charges for the current year (based on CDWR's projections for the assessment period) divided by the estimated assessable production for the assessment period, as set forth in **Table 6**. For this report, as with most previous reports, the assessable production for 2024/2025 is estimated as the assessable production for the previous year (2023).

Pursuant to the terms of the Water Management Agreement between DWA and CVWD, and based on DWA's estimated 2024/2025 Allocated Charges of $9,567,420 and projected 2024 calendar year assessable production (shown in **Table 6** as estimated 2024/2025 assessable production) of 41,170 AF within the WWR and MC, the effective replenishment assessment rate component for Table A water for the 2024/2025 fiscal year is $232/AF. **Table 6** includes DWA's historical estimated, actual effective, and estimated projected replenishment assessment rates, including amounts to recover costs for surplus and unscheduled water, administrative and general costs for importing and recharging water from the Colorado River Aqueduct, and recovery of costs deferred from previous years.

In winter 2016, DWA elected to adopt anticipated rate ranges for fiscal years 2017/2018 through 2021/2022 based on estimated projections of expenses and revenues at the time of adoption.

In accordance with direction from the DWA Board of Directors at their public meeting on May 4, 2021, the rate will be increased by an increment of $20 annually subsequent to fiscal year 2022/2023. The recommended replenishment assessment rates (based on said $20 annual increase) for fiscal years 2023/2024 through 2027/2028 are set forth in **Section V** herein, with the recommended rate for 2024/2025 being $215.00/AF.

At the $215.00 rate, DWA's replenishment assessment for the entire Replenishment Program will be about $8,851,550, based on estimated assessable production of 41,170 AF (32,420 AF for the WWR AOB, and 8,750 AF for the MC AOB). Accordingly, DWA will bill approximately $6,970,300 for the WWR AOB, and approximately $1,881,250 for the MC AOB.

Due to significant increases in the Delta Water Charge beginning in 2015 that could result in large future increases in the replenishment assessment rate, DWA elected in 2016 to transfer the existing cumulative deficit in the Replenishment Assessment Account to reserve account(s), rather than continue to attempt to recover past deficits by future increases in the replenishment assessment rate. Deficits that result from the current and future assessments will be recovered by adding surcharges, as shown in the "Discretionary Deferral and Recovery" column for each AOB in **Table 7**.

The 2019 Exchange Agreement with MWD contains a provision that obligates DWA and CVWD to pay a portion of MWD's average long-term costs to store water in the Indio Subbasin in years when the SWP Allocation is greater than 55%. The method of calculating the payment amount for DWA and CVWD is set forth in Exhibit C of the 2019 Exchange Agreement. For an SWP Allocation of 40%, DWA's payment amount would be $0.

E. SUMMARY

Groundwater production exceeds natural replenishment in the westerly portion of the Coachella Valley Groundwater Basin even though groundwater levels have generally stabilized. Cumulative net overdraft (cumulative gross overdraft offset by artificial replenishment since commencement of artificial replenishment activities) is currently estimated to be about 135,000 AF in the WWR

Management Area (since 1973) and about 46,800 AF in the MC Management Area (since 2002). Groundwater replenishment is necessary to maintain stable groundwater levels for sustainability. Even though DWA has requested of CDWR its full SWP Table A allocation of 55,750 AF, CDWR has approved delivery of 40% of this allocation during the coming year, and DWA has elected to adopt a groundwater replenishment assessment rate for 2024/2025 of $215.00/AF.

CHAPTER II
INTRODUCTION

CHAPTER II
INTRODUCTION

A. THE COACHELLA VALLEY AND ITS GROUNDWATER

1. The Coachella Valley

The Coachella Valley is a desert valley in Riverside County, California. It extends approximately 45 miles southeast from the San Bernardino Mountains to the northern shore of the Salton Sea. Cities of the Coachella Valley include Cathedral City, Coachella, Desert Hot Springs, Indian Wells, Indio, La Quinta, Palm Desert, Palm Springs, and Rancho Mirage, and the unincorporated communities of Thousand Palms, Thermal, Bermuda Dunes, Oasis, and Mecca. The Coachella Valley is bordered on the north by Mount San Gorgonio of the San Bernardino Mountains, on the west by the San Jacinto and Santa Rosa Mountains, on the east by the Little San Bernardino Mountains, and on the south by the Salton Sea.

The Coachella Valley lies within the northwesterly portion of California's Colorado Desert, an extension of the Sonoran Desert. The San Bernardino, San Jacinto, and Santa Rosa Mountains provide an effective barrier against coastal storms, and greatly reduce the contribution of direct precipitation to replenish the Coachella Valley's groundwater basin, resulting in an arid climate. The bulk of natural groundwater replenishment comes from runoff from the adjacent mountains.

Climate in the Coachella Valley is characterized by low humidity, high summer temperatures, and mild dry winters. Average annual precipitation in the Coachella Valley varies from 4 inches on the Valley floor to more than 30 inches in the surrounding mountains. Most of the precipitation occurs during December through February (except for summer thundershowers). The low rainfall is inadequate to supply sufficient water supply for the valley, thus the need for the importation of Colorado River water. Precipitation data recorded at nine rain gauge stations in the Upper Coachella Valley by Riverside County Flood Control and Water Conservation District is included in **Appendix A**.

Prevailing winds in the area are usually gentle, but occasionally increase to velocities of 30 miles per hour or more. Midsummer temperatures commonly exceed 100 degrees Fahrenheit (°F), frequently reach 110°F, and periodically reach 120°F. The average winter temperature is approximately 60°F.

2. The Coachella Valley Groundwater Basin

The Coachella Valley Groundwater Basin (Basin No. 7-21), as described in CDWR Bulletins 108 and 118, is bounded on the north and east by non-water-bearing crystalline rocks of the San Bernardino and Little San Bernardino Mountains and on the south and west by the crystalline rocks of the Santa Rosa and San Jacinto Mountains. At the west end of the San Gorgonio Pass, between Beaumont and Banning, the basin boundary is defined by a surface drainage divide separating the Coachella Valley Groundwater Basin from the Beaumont Groundwater Basin of the Upper Santa Ana Drainage Area.

The southern boundary is formed primarily by the watershed of the Mecca Hills and by the northwest shoreline of the Salton Sea running between the Santa Rosa Mountains and Mortmar. Between the Salton Sea and Travertine Rock, at the base of the Santa Rosa Mountains, the lower boundary coincides with the Riverside/Imperial County Line.

Southerly of the southern boundary, at Mortmar and at Travertine Rock, the subsurface materials are predominantly fine grained and low in permeability; although groundwater is present, it is not readily extractable. A zone of transition exists at these boundaries; to the north the subsurface materials are coarser and more readily yield groundwater.

Although there is interflow of groundwater throughout the groundwater basin, fault barriers, constrictions in the basin profile, and areas of low permeability limit and control movement of groundwater. Based on these factors, the groundwater basin has been divided into subbasins and subareas as described by CDWR in 1964 and the United States Geological Survey (USGS) in 1971.

3. Subbasins and Subareas

The San Andreas Fault drives a complex pattern of branching fault lines within the Coachella Valley which define the boundaries of the subbasins that make up the Coachella Valley Groundwater Basin (CDWR 2003). According to CDWR, there are four subbasins within the Coachella Valley Groundwater Basin: the Indio Subbasin (referred to herein as the Whitewater Subbasin), Mission Creek Subbasin, San Gorgonio Pass Subbasin, and Desert Hot Springs Subbasin. USGS includes a fifth subbasin, the Garnet Hill Subbasin, which CDWR considers to be a subarea of the Indio Subbasin.

The subbasins, with their groundwater storage reservoirs, are defined without regard to water quantity or quality. They delineate areas underlain by formations which readily yield the stored water through water wells and offer natural reservoirs for the regulation of water supplies.

The boundaries between subbasins within the groundwater basin are generally defined by faults that serve as effective barriers to the lateral movement of groundwater. Minor subareas have also been delineated, based on one or more of the following geologic or hydrologic characteristics: type of water bearing formations, water quality, areas of confined groundwater, forebay areas, groundwater divides and surface drainage divides.

The following is a list of the subbasins and associated subareas, based on the CDWR and USGS designations:

- Mission Creek Subbasin (Subbasin 7-21.02 per CDWR Bulletin 118, Update 2003)
- Desert Hot Springs Subbasin (Subbasin 7-21.03 per CDWR Bulletin 118, Update 2003)
    - Miracle Hill Subarea
    - Sky Valley Subarea
    - Fargo Canyon Subarea
- San Gorgonio Pass Subbasin (Subbasin 7-21.04 per CDWR Bulletin 118, Update 2003)

- Whitewater River (Indio) Subbasin (Subbasin 7-21.01 per CDWR Bulletin 118, Update 2003, referred to therein as the Indio Subbasin)
    - Palm Springs Subarea
    - Garnet Hill (considered a separate subbasin by USGS)
    - Thermal Subarea
    - Thousand Palms Subarea
    - Oasis Subarea

DWA's groundwater replenishment program encompasses portions of three of the four subbasins (Whitewater River (Indio), Mission Creek, and San Gorgonio Pass). DWA's replenishment program does not include the Desert Hot Springs Subbasin. **Figure 2** illustrates the subbasin boundaries per the MC/GH WMP, CDWR Bulletin 118, Update 2003, and DWA's AOBs of the groundwater replenishment program.

The boundaries (based on faults, barriers, constrictions in basin profile, and changes in permeability of water-bearing units), geology, hydrogeology, water supply, and groundwater storage of these subbasins are further described in the following sections.

a. Mission Creek Subbasin (MC)

Water-bearing materials underlying the Mission Creek upland comprise the MC. This subbasin is designated Number 7-21.02 in CDWR's Bulletin 118, Update 2003. The subbasin is bounded on the south by the Banning Fault and on the north and east by the Mission Creek Fault, both of which are branches of the San Andreas Fault. The subbasin is bordered on the west by relatively impermeable rocks of the San Bernardino Mountains. The Indio Hills are located in the easterly portion of the subbasin, and consist of the semi-water-bearing Palm Springs Formation. The area within this boundary northwesterly of the Indio Hills reflects the estimated geographic limit of effective storage within the subbasin (CDWR 1964).

Both the Mission Creek Fault and the Banning Fault are partially effective barriers to lateral groundwater movement, as evidenced by offset water levels, fault springs, and changes in vegetation. Water level differences across the Banning Fault, between the MC and the Garnet Hill Subarea of the WWR, are on the order of 200 feet to 250 feet. Similar water level differences exist across the Mission Creek Fault between the MC and Desert Hot Springs Subbasin (MWH 2013).

This subbasin relies on the same imported SWP/Colorado River Exchange Water source for replenishment, as does the westerly portion of the Whitewater River (Indio) Subbasin. CVWD, DWA, and MSWD make up the Management Committee under the terms of the 2004 Mission Creek Settlement Agreement. This agreement and the 2014 Mission Creek Water Management Agreement between CVWD and DWA specify that the available SWP water will be allocated between the MC and WWR Management Areas in proportion to the amount of water produced or diverted from each subbasin during the preceding year.

b. Desert Hot Springs Subbasin

The Desert Hot Springs Subbasin is designated Number 7-21.03 in CDWR's Bulletin 118 (2003). It is bounded on the north by the Little San Bernardino Mountains and on the southeast by the Mission Creek and San Andreas Faults. The Mission Creek Fault separates the Desert Hot Springs Subbasin from the MC, and the San Andreas Fault separates the Desert Hot Springs Subbasin from the Whitewater River Subbasin. Both faults serve as effective barriers to lateral groundwater flow. The subbasin has been divided into three subareas: Miracle Hill, Sky Valley, and Fargo Canyon (CDWR 1964).

The Desert Hot Springs Subbasin is not extensively developed, except in the Desert Hot Springs area. Relatively poor groundwater quality has limited the use of this subbasin for groundwater supply. The Miracle Hill Subarea underlies portions of the City of Desert Hot Springs and is characterized by hot mineralized groundwater, which supplies a number of spas in that area. The Fargo Canyon Subarea underlies a portion of the planning area along Dillon Road north of Interstate 10. This area is characterized by coarse alluvial fans and stream channels flowing out of Joshua Tree National Park. Based on limited groundwater data for this area, flow is generally to the southeast. Water quality is relatively poor with salinities in the range of 700 milligrams per liter (mg/L) to over 1,000 mg/L (CDWR 1964).

c. San Gorgonio Pass Subbasin

The San Gorgonio Pass Subbasin lies entirely within the San Gorgonio Pass area, bounded by the San Bernardino Mountains on the north and the San Jacinto Mountains on the south (CDWR 2003). This subbasin is designated Number 7 21.04 in CDWR's Bulletin 118 (2003).

The San Gorgonio Pass Subbasin is hydrologically connected to the Whitewater River Subbasin on the east. Groundwater within the San Gorgonio Pass Subbasin moves from west to east and moves into the Whitewater River Subbasin by passing over the suballuvial bedrock constriction at the east end of the pass (CDWR 1964).

DWA's service area includes three square miles of the San Gorgonio Pass Subbasin.

d. Whitewater River (Indio) Subbasin

The Whitewater River Subbasin, as defined herein, is the same as the Indio Subbasin (Number 7 21.01) as described in CDWR Bulletin No. 118 (2003). It underlies the major portion of the Coachella Valley floor and encompasses approximately 400 square miles. Beginning approximately one mile west of the junction of State Highway 111 and Interstate 10, the Whitewater River Subbasin extends southeast approximately 70 miles to the Salton Sea.

The Subbasin is bordered on the southwest by the Santa Rosa and San Jacinto Mountains and is separated from the Mission Creek and Desert Hot Springs Subbasins to the north and east by the Banning Fault (CDWR 1964). The Garnet Hill Fault, which extends southeasterly from the north side of San Gorgonio Pass to the Indio Hills, is a partially effective barrier to lateral groundwater movement from the Garnet Hill Subarea into the Palm Springs Subarea of the Whitewater River Subbasin, with some portions in the shallower zones more permeable. The

San Andreas Fault, extending southeasterly from the junction of the Mission Creek and Banning Faults in the Indio Hills and continuing out of the basin on the east flank of the Salton Sea, is also an effective barrier to lateral groundwater movement from the northeast (CDWR 1964).

The subbasin underlies the cities of Palm Springs, Cathedral City, Rancho Mirage, Palm Desert, Indian Wells, La Quinta, Indio, and Coachella, and the unincorporated communities of Thousand Palms, Thermal, Bermuda Dunes, Oasis, and Mecca. From about Indio southeasterly to the Salton Sea, the subbasin contains increasingly thick layers of silt and clay, especially in the shallower portions of the subbasin. These silt and clay layers, which are remnants of ancient lake bed deposits, impede the percolation of water applied for irrigation and limit groundwater replenishment opportunities to the westerly fringe of the subbasin (CDWR 1964).

In 1964, CDWR estimated that the four subbasins that make up the Coachella Valley Groundwater Basin contained a total of approximately 39.2 million AF of water in the first 1,000 feet below the ground surface; much of this water originated as runoff from the adjacent mountains. Of this amount, approximately 28.8 million AF of water was stored in the overall Whitewater River Subbasin (CDWR 1964). However, the amount of water in the Whitewater River Subbasin has decreased over the years because it has developed to the point where significant groundwater production occurs (CVWD 2012). The natural supply of water to the northwestern part of the Coachella Valley is not keeping pace with the basin outflow, due mainly to large consumptive uses created by the resort-recreation economy and permanent resident population in the northwestern Whitewater River Subbasin, and large agricultural economy in the southeastern Whitewater River Subbasin. Imported SWP water allocations are exchanged for Colorado River water and utilized for replenishment in the westerly portion of the Whitewater River (Indio) Subbasin to replace consumptive uses created by the resort recreation economy and permanent resident population.

The Whitewater River (Indio) Subbasin is not currently adjudicated. From a management perspective, CVWD divides the portion of the subbasin within its service area into two AOBs designated the West Whitewater River Subbasin AOB and the East Whitewater River Subbasin AOB. The dividing line between these two areas is an irregular line trending northeast to southwest between the Indio Hills north of the City of Indio and Point Happy in La Quinta (see paragraph e.5 below for the history of this division). The WWR Management Area is jointly managed by CVWD and DWA under the terms of the 2014 Whitewater Water Management Agreement. The East Whitewater River Subbasin AOB is managed by CVWD (CVWD 2012).

Hydrogeologically, the Whitewater River (Indio) Subbasin is divided into five subareas: Palm Springs, Garnet Hill, Thermal, Thousand Palms, and Oasis Subareas. The Palm Springs Subarea is the forebay or main area of replenishment to the subbasin. The Thermal Subarea is the pressure or confined area within the basin. The other three subareas are peripheral areas having unconfined groundwater conditions.

1) Palm Springs Subarea

The triangular area between the Garnet Hill Fault and the east slope of the San Jacinto Mountains southeast to Cathedral City is designated the Palm Springs Subarea. Groundwater is unconfined in this area. The Coachella Valley fill materials within the Palm Springs Subarea are essentially heterogeneous alluvial fan deposits with little sorting and little fine grained material content. The thickness of these water-bearing materials is not known; however, it exceeds 1,000 feet. Although no lithologic distinction is apparent from well drillers' logs, the probable thickness of recent deposits suggests that Ocotillo conglomerate underlies recent fanglomerate in the subarea at depths ranging from 300 feet to 400 feet.

Natural replenishment to the aquifer in the Whitewater River Subbasin occurs primarily in the Palm Springs Subarea. The major natural sources include infiltration of stream runoff from the San Jacinto Mountains and the Whitewater River, and subsurface inflow from the San Gorgonio Pass Subbasin. Deep percolation of direct precipitation on the Palm Springs

Subarea is considered negligible as it is consumed by evapotranspiration (CDWR 1964).

2) Garnet Hill Subarea (GH)

The area between the Garnet Hill Fault and the Banning Fault, named the Garnet Hill Subarea (GH) of the Whitewater River (Indio) Subbasin by CDWR (1964), was considered a distinct subbasin by the USGS because of the partially effective Banning and Garnet Hill Faults as barriers to lateral groundwater movement. This is demonstrated by a difference of 170 feet in groundwater level elevation in a horizontal distance of 3,200 feet across the Garnet Hill Fault, as measured in the spring of 1961. However, the Garnet Hill Fault does not reach the surface, and is probably only effective as a barrier to lateral groundwater movement below a depth of about 100 feet below ground surface (MWH 2013).

The 2013 MC/GH WMP states groundwater production is low in the Garnet Hill Subarea and is not expected to increase significantly in the future due to relatively low well yields compared to those in the MC. Water levels in the western and central portions of the subbasin show a positive response to large replenishment quantities from the Whitewater River Groundwater Replenishment Facility, while levels are relatively flat in the easterly portion of the subbasin. The small number of wells in the subarea limits the hydrogeologic understanding of how this subbasin operates relative to the MC and the neighboring Palm Springs Subarea of the Whitewater River Subbasin.

Although some natural replenishment to this subarea may come from Mission Creek and other streams that pass through during periods of high flood flows, the chemical character of the groundwater (and its direction of movement) indicate that the main source of natural replenishment to the subbasin comes from the Whitewater River through the permeable deposits which underlie Whitewater Hill (MWH 2013).

This subarea is considered a separate subbasin by USGS; however, it is considered part of the Whitewater River (Indio) Subbasin in CDWR's Bulletin 118 (2003) and, therefore, was not designated with a separate subbasin number therein. CVWD and DWA, both consider the Garnet Hill Subarea to be a part of the WWR Management Area. There are no assessable groundwater pumpers within CVWD's portion of the Garnet Hill Subarea, and two assessable groundwater pumpers within DWA's portion of the Garnet Hill Subarea, which together produced a total of approximately 286 AF of groundwater from the subarea in 2023.

3) Thermal Subarea

Groundwater of the Palm Springs Subarea moves southeastward into the interbedded sands, silts, and clays underlying the central portion of the Coachella Valley. The division between the Palm Springs Subarea and the Thermal Subarea is near Cathedral City. The permeabilities parallel to the bedding of the deposits in the Thermal Subarea are several times the permeabilities perpendicular to the bedding and, therefore, movement of groundwater parallel to the bedding predominates. Confined or semi-confined groundwater conditions are present in the major portion of the Thermal Subarea. Movement of groundwater under these conditions is present in the major portion of the Thermal Subarea and is caused by differences in piezometric (pressure) level, or head. Unconfined or free water conditions are present in the alluvial fans at the base of the Santa Rosa Mountains, such as the fans at the mouth of Deep Canyon and in the La Quinta area.

Sand and gravel lenses underlying this subarea are discontinuous, and clay beds are not extensive. However, two aquifer zones separated by a zone of finer-grained materials were identified from well logs. The fine-grained materials within the intervening horizontal plane are not tight enough or persistent enough to completely restrict the vertical interflow of water, or to warrant the use of the term "aquiclude". Therefore, the term "aquitard" is used for this zone of less permeable material that separates the upper and lower aquifer zones in the southeastern part of the Valley.

The lower aquifer zone, composed of part of the Ocotillo conglomerate, consists of silty sands and gravels with interbeds of silt and clay. It contains the greatest quantity of stored groundwater in the Coachella Valley Groundwater Basin, but serves only that portion of the Valley easterly of Washington Street. The top of the lower aquifer zone is present at a depth ranging from 300 feet to 600 feet below the surface. The thickness of the zone is undetermined, as the deepest wells present in the Coachella Valley have not penetrated it in its entirety. The available data indicate that the zone is at least 500 feet thick and may be in excess of 1,000 feet thick.

The aquitard overlying the lower aquifer zone is generally 100 feet to 200 feet thick, although in small areas on the periphery of the Salton Sea it is more than 500 feet thick. North and west of Indio, in a curved zone approximately one mile wide, the aquitard is apparently lacking and no distinction is made between the upper and lower aquifer zones.

Capping the upper aquifer zone in the Thermal Subarea is a shallow fine-grained zone in which semi-perched groundwater is present. This zone consists of recent silts, clays, and fine sands and is relatively persistent southeast of Indio. It ranges from zero to 100 feet thick and is generally an effective barrier to deep percolation. However, north and west of Indio, the zone is composed mainly of clayey sands and silts, and its effect in retarding deep percolation is limited. The low permeability of the materials southeast of Indio has contributed to irrigation drainage problems in the area. Semi-perched groundwater has been maintained by irrigation water applied to agricultural lands south of Point Happy, necessitating the construction of an extensive subsurface tile drain system (CDWR 1964).

The Thermal Subarea contains the division between CVWD's west and east AOBs of the Whitewater River (Indio) Subbasin, which is more fully described in paragraph e.5 below.

The imported Colorado River supply through the Coachella Canal is used mainly for irrigation in the easterly portion of the Whitewater River Subbasin. Annual deliveries of Colorado River water through the Coachella Canal of approximately 300,000 AF are a significant component of southeastern Coachella Valley hydrology. A smaller portion of the Coachella Canal water supply, along with recycled water, is used to offset groundwater pumping by golf courses in the westerly portion of the Whitewater River (Indio) Subbasin via the Mid-Valley Pipeline (MVP).

Using state-of-the-art technology, CVWD developed and calibrated a peer-reviewed, three-dimensional groundwater model of the entire Coachella Valley Groundwater Basin (Fogg 2000). The model was based on data from over 2,500 wells, and includes an extensive database of well chemistry reports, well completion reports, electric logs, and specific capacity tests. This model improved on previous groundwater models, and incorporated the latest hydrological evaluations from previous studies conducted by CDWR and USGS to gain a better understanding of the hydrogeology in this subbasin and the benefits of water management practices identified in the Coachella Valley Water Management Plan. The model formed the theoretical basis of the 2010 Update to the Coachella Valley Water Management Plan. It was updated in 2021 as part of the development of the Indio SGMA Alternative Plan and the Mission Creek SGMA Alternative Plan.

4) Thousand Palms Subarea

The small area along the southwest flank of the Indio Hills is named the Thousand Palms Subarea. The southwest boundary of the subarea was determined by tracing the limits of distinctive groundwater chemical characteristics. The major aquifers of the Whitewater River Subbasin are characterized by calcium bicarbonate; but water in the Thousand Palms Subarea is characterized by sodium sulfate (CDWR 1964).

The differences in water quality suggest that replenishment to the Thousand Palms Subarea comes primarily from the Indio Hills and is limited in supply. The relatively sharp boundary between chemical characteristics of water derived from the Indio Hills and groundwater in the Thermal Subarea suggests there is little intermixing of the two waters.

The configuration of the water table north of the community of Thousand Palms is such that the generally uniform, southeasterly gradient in the Palm Springs Subarea diverges and steepens to the east along the base of Edom Hill. This steepened gradient suggests a barrier to the movement of groundwater: possibly a reduction in permeability of the water-bearing materials, or possibly a southeast extension of the Garnet Hill Fault. However, such an extension of the Garnet Hill Fault is unlikely. There is no surface expression of such a fault, and the gravity measurements taken during the 1964 CDWR investigation do not suggest a subsurface fault. The residual gravity profile across this area supports these observations. The sharp increase in gradient is therefore attributed to lower permeability of the materials to the east.

Most of the Thousand Palms Subarea is located within the westerly portion of the Whitewater River (Indio) Subbasin. Groundwater levels in this area show similar patterns to those of the adjacent Thermal Subarea, suggesting a hydraulic connectivity (CDWR 1964).

5) Oasis Subarea

Another peripheral zone of unconfined groundwater that is different in chemical characteristics from water in the major aquifers of the Whitewater River Subbasin is found underlying the Oasis Piedmont slope. This zone, named the Oasis Subarea, extends along the base of the Santa

Rosa Mountains. Water-bearing materials underlying the subarea consist of highly permeable fan deposits. Although groundwater data suggest that the boundary between the Oasis and Thermal Subareas may be a buried fault extending from Travertine Rock to the community of Oasis, the remainder of the boundary is a lithologic change from the coarse fan deposits of the Oasis Subarea to the interbedded sands, gravel, and silts of the Thermal Subarea. Little information is available as to the thickness of the water-bearing materials, but it is estimated to be in excess of 1,000 feet. Groundwater levels in the Oasis Subarea have exhibited similar declines as elsewhere in the subbasin due to increased groundwater pumping to meet agricultural demands on the Oasis slope (CDWR 1964).

6) East/West AOB Division

The Thermal Subarea (see paragraph e.2 above) contains the division between the westerly and easterly portions of the Whitewater River Subbasin (CVWD's WWR AOB and East Whitewater River Subbasin AOB). This division constitutes the southern boundary of the management area governed by the Management Agreement between CVWD and DWA.

The boundary between these two Management Areas extends from Point Happy (a promontory of the Santa Rosa Mountains between Indian Wells and La Quinta) northeasterly, generally along Washington Street, to a point on the San Andreas Fault intersecting the northerly prolongation of Jefferson Street in Indio.

The boundary was originally defined primarily on the basis of differing groundwater levels resulting from differences in groundwater use and management northerly and southerly of the boundary. Primarily due to the application of imported water from the Coachella Canal, and an attendant reduction in groundwater extraction, the water levels in the area southeasterly from Point Happy (the East Whitewater River Subbasin Management Area) rose until the early 1970s, while groundwater levels northwesterly from Point Happy (the WWR Management Area) were dropping due to continued development and pumping. This was stated by Tyley (USGS 1974) as follows:

"The south boundary is an imaginary line extending from Point Happy northeast to the Little San Bernardino Mountains and was chosen for the following reasons: (1) North of the boundary, water levels have been declining while south of the boundary, water levels have been rising since 1949 and (2) north of the boundary, ground water is the major source of irrigation water while south of the boundary, imported water from the Colorado River is the major source of irrigation water."

In addition, according to CDWR (1964) and as discussed above, the easterly portion of the Thermal Subarea is distinguished from area north and west of Indio within the Thermal Subarea by the presence of several relatively impervious clay layers (aquitards) lying between the ground surface and the main groundwater aquifer, creating confined and semi-confined aquifer conditions (see Figure 2). These conditions were characterized by Tyley as "artesian conditions" southerly of the south boundary.

Groundwater levels northerly of the boundary have been stable or increasing since the 1970s (per recorded measurements of USGS, DWA, and CVWD wells), except in the greater Palm Desert area, largely due to the commencement of replenishment activities at the Whitewater River Groundwater Replenishment Facility in 1973. Groundwater levels in the greater Palm Desert area continue to decline, but at a reduced rate as a result of the groundwater replenishment program. The construction of CVWD's Palm Desert Groundwater Replenishment Facility (PD-GRF), which commenced operations in early 2019, is expected to further curtail said decline in groundwater levels. Differences between the East Whitewater River Subbasin Management Area and WWR Management Area also persist in terms of management of the groundwater replenishment program and by groundwater usage (there is significantly more agricultural use in CVWD's East Whitewater River Subbasin AOB than in the WWR Management Area).

7) Summary

The Whitewater River (Indio) Subbasin consists of five subareas: Palm Springs, Garnet Hill, Thermal, Thousand Palms, and Oasis Subareas. The Palm Springs Subarea is the forebay or main area of replenishment to the subbasin. The Garnet Hill Subarea lies to the North and adjacent to the Palm Springs Subarea. The Thermal Subarea includes the pressure or confined area within the basin. The Thousand Palms and Oasis Subareas are peripheral areas having unconfined groundwater conditions. From a management perspective, the Whitewater River Subbasin is divided into a westerly and easterly portion, with the dividing line extending from Point Happy in La Quinta to the northeast, terminating at the San Andreas Fault and the Indio Hills at Jefferson Street.

Potable groundwater is not readily available within the following areas in the Coachella Valley: Indio Hills, Mecca Hills, Barton Canyon, Bombay Beach, and Salton City. Water service to these areas is derived from groundwater pumped from adjacent areas.

B. THE GROUNDWATER REPLENISHMENT AND ASSESSMENT PROGRAM

DWA's Groundwater Replenishment and Assessment Program was established to augment groundwater supplies and arrest or retard declining water table conditions within the Coachella Valley Groundwater Basin, specifically within the WWR and MC AOBs (see **Figure 1**).

1. Water Management Areas

Pursuant to the Water Management Agreements between CVWD and DWA, the Water Management Areas encompass the Westerly Portion of the Whitewater River (Indio) Subbasin, a portion of the San Gorgonio Pass Subbasin, and the entire MC (except three square miles in the Painted Hills area and a small portion that lies within San Bernardino County) within the Coachella Valley Groundwater Basin (see **Figure 1**).

- <u>The West Whitewater River Subbasin (WWR) Management Area</u>

  CVWD and DWA have recognized the need to manage the westerly portion of the Whitewater River (Indio) Subbasin as a complete unit rather than as individual segments underlying the individual agencies' boundaries. This management area consists of the Palm Springs, Garnet Hill, and Thousand Palms Subareas, a portion of the San Gorgonio Pass Subbasin (tributary to the Whitewater River (Indio) Subbasin), and the westerly portion of the Thermal Subarea. The management area was established to encompass the area of groundwater overdraft as evidenced by declining water level conditions, and includes areas within both CVWD and DWA boundaries. The easterly boundary of the WWR Management Area extends from Point Happy (a promontory of the Santa Rosa Mountains between Indian Wells and La Quinta) northeasterly, generally along Washington Street, to a point on the San Andreas Fault intersecting the northerly prolongation of Jefferson Street in Indio.

  CVWD has long considered the portion of the Garnet Hill Subarea within its boundaries to be a part of its WWR AOB. Prior to 2020, DWA considered the portion of the Garnet Hill Subarea within its service area to be a separate management area and AOB, but now considers it to be a part of its WWR AOB.

  DWA's WWR AOB is located entirely within the WWR Management Area.

- <u>The Mission Creek Subbasin (MC) Management Area</u>

  CVWD and DWA have recognized the need to manage the MC as a complete unit rather than as individual segments underlying the individual agency's boundaries. This management area consists of the entire MC. DWA's MC AOB is located entirely within the MC Management Area.

2. Areas of Benefit

The Areas of Benefit (AOBs) for DWA's replenishment program consist of the westerly portion of the Coachella Valley Groundwater Basin, including portions of the Whitewater River (Indio) Subbasin (including the Garnet Hill Subarea), MC, and tributaries thereto (such as the San Gorgonio Pass Subbasin), situated within DWA's service area boundary (see **Figure 2**). DWA has two AOBs within its replenishment program: the WWR AOB and the MC AOB.

DWA's **WWR AOB** consists of that portion of the WWR Management Area situated within DWA's service area boundary (including portions of the Garnet Hill Subarea and the San Gorgonio Pass Subbasin).

DWA's **MC AOB** consists of that portion of the MC Management Area situated within DWA's service area boundary.

The AOBs for CVWD's replenishment program consist of the portions of the Whitewater River Subbasin and Mission Creek Subbasin within CVWD's boundary. CVWD has a total of three AOBs within its groundwater replenishment program: the CVWD MC AOB; the CVWD WWR AOB; and the East Whitewater River Subbasin AOB (see **Figure 1**).

Within DWA's WWR AOB, there are seven stream diversions on the Whitewater River and its tributaries, five by DWA (two on Chino Creek, one on Snow Creek, one on Falls Creek, and one (consisting of two shallow wells) by the former Whitewater Mutual Water Company, which was acquired by DWA in 2009), one by the Wildlands Conservancy (formerly the Whitewater Trout Farm) which is used for conservation and educational purposes, and one by CVWD at the Whitewater River Groundwater Replenishment Facility; the latter three being on the Whitewater River itself. There are no stream diversions within the MC AOB. DWA's WWR AOB also includes subsurface tributary flows from the San Gorgonio Pass Subbasin located to the west.

While the replenishment assessments outlined on the following pages are based on and limited to water production within DWA's AOBs, available water supply, estimated water requirements, and groundwater replenishment are referenced herein to the entire WWR

Management Area and MC Management Area. The WWR and MC Management Areas are replenished jointly by CVWD and DWA for water supply purposes, and the two agencies jointly manage the imported water supplies within said Management Areas.

3. Water Management Agreements

The replenishment program was implemented pursuant to a joint Water Management Agreement for the WWR Management Area ("Whitewater River Subbasin Water Management Agreement", executed July 1, 1976 and amended December 15, 1992 and July 15, 2014) between CVWD and DWA. Later, a similar program was implemented within the MC Management Area pursuant to a similar joint Water Management Agreement ("Mission Creek Subbasin Water Management Agreement", executed April 8, 2003 and amended July 15, 2014).

CVWD and DWA entered into a Settlement Agreement with MSWD in December 2004, which affirmed the water allocation procedure that had been established earlier by CVWD and DWA, and which established a Management Committee, consisting of the General Managers of CVWD, DWA, and MSWD, to review production and recharge activities. The Addendum to the Settlement Agreement states that the water available for recharge each year shall be divided between the WWR Management Area and the MC Management Area proportionate to the previous year's production from within each management area (see **Appendix B**). The agreement allows for flexibility in the timing of the deliveries based on delivery capability and operational constraints.

Conditions of the Settlement Agreement and Addendum between DWA, CVWD, and MSWD state that DWA and CVWD have the authority to levy replenishment assessments on water produced from subbasins of the Upper (Western) Coachella Valley Groundwater Basin within DWA and CVWD's AOBs, if found that recharge activities benefit those subbasins.

The Water Management Agreements call for maximum importation of SWP Contract Table A water allocations by CVWD and DWA for replenishment of groundwater basins or subbasins within defined Water Management Areas. The Agreement also requires collection of data necessary for sound management of water resources within these same Water Management Areas.

4. SGMA

In 2014, faced with declining groundwater levels (most notably in California's Central Valley), the California Legislature enacted the Sustainable Groundwater Management Act (SGMA) which was intended to provide a framework for the sustainable management of groundwater resources throughout California, primarily by local authorities. SGMA consisted of three bills, AB 1739 (Dickinson), SB 1168 (Pavley), and SB 1319 (Pavley), and was signed into law by Governor Brown on September 16, 2014, initially becoming effective on January 1, 2015.

SGMA required local authorities to form local Groundwater Sustainability Agencies (GSAs), which are required to evaluate conditions in their local water basins and adopt locally-based Groundwater Sustainability Plans (GSPs) tailored to their regional economic and environmental needs. SGMA allows a 20-year time frame for GSAs to implement their GSPs and achieve long-term groundwater sustainability. It protects existing water rights and does not affect current drought response measures.

SGMA provides local GSAs with tools and authority to:

- Monitor and manage groundwater levels and quality
- Monitor and manage land subsidence and changes in surface water flow and quality affecting groundwater levels or quality or caused by groundwater extraction
- Require registration of groundwater wells
- Require reporting of annual extractions
- Require reporting of surface water diversions to underground storage
- Impose limits on extractions from individual wells
- Assess fees to implement local GSPs
- Request revisions of basin boundaries, including establishing new subbasins

In response to 2010 legislation, CDWR developed the California Statewide Groundwater Elevation Monitoring (CASGEM) program to track seasonal and long-term trends in groundwater elevations in California's groundwater basins. Through its CASGEM program, CDWR ranked the priority of each groundwater basin in California as either very low, low, medium, or high.

In addition, CDWR, as required by SGMA, identified the basins and subbasins that are in conditions of critical overdraft. Twenty-one basins and subbasins in California were identified as critically overdrafted basins.

CDWR has not identified the Indio and Mission Creek Subbasins as critically overdrafted, but has identified them as subbasins of medium priority.

In February of 2015, Desert Water Agency formed the Desert Water Agency Groundwater Sustainability Authority (DWAGSA), covering portions of the Indio, Mission Creek, and San Gorgonio River Subbasins. In October-November of 2015, CVWD formed the Coachella Valley Water District Groundwater Sustainability Agency (CVWDGSA), covering portions of the Indio and Mission Creek Subbasins. The Indio Water Authority and Coachella Water Authority also formed GSAs.

The four GSAs operating within the Indio Subbasin collaboratively submitted the 2010 Coachella Valley Groundwater Management Plan Update and supporting materials as an Alternative Plan to a GSP for the Indio Subbasin in December 2016. In July 2019, that Alternative Plan was approved by DWR, along with some recommendations for new information and requirement that an Alternative Plan Update be prepared by January 1, 2022, and every five years thereafter. The Indio SGMA Alternative Plan was adopted and submitted to DWR in December 2021.

DWAGSA, CVWDGSA. and MSWD submitted the 2013 MC/GH WMP and supporting materials as an Alternative Plan to a GSP for the Mission Creek Subbasin in December 2016. In July 2019, that Alternative Plan was approved by DWR, along with some recommendations for new information and requirement that an Alternative Plan Update be prepared by January 1, 2022, and every five years thereafter. The *Mission Creek SGMA Alternative Plan* was adopted and submitted to DWR in December 2021.

By eliminating overdraft conditions, the goal of SGMA is to create statewide groundwater conditions that are "sustainable". SGMA defines the term "sustainable yield" as follows:

"The maximum quantity of water, calculated over a base period representative of long-term conditions in the basin and including any temporary surplus that can be withdrawn annually from a groundwater supply without causing an undesirable result."

"Undesirable results" are defined in SGMA as:

1. "Chronic lowering of groundwater levels indicating a significant and unreasonable depletion of supply if continued over the planning and implementation horizon. Overdraft during a period of drought is not sufficient to establish a chronic lowering of groundwater levels if extractions and recharge are managed as necessary to ensure that reductions in groundwater levels or storage during a period of drought are offset by increases in groundwater levels or storage during other periods."

2. "Significant and unreasonable reduction of groundwater storage."

3. "Significant and unreasonable seawater (salt water) intrusion."

4. "Significant and unreasonable degraded water quality, including the migration of contaminant plumes that impair water supplies."

5. "Significant and unreasonable land subsidence that substantially interferes with surface land uses."

6. "Depletions of interconnected surface water that have significant and unreasonable adverse impacts on beneficial uses"

Sustainability must be achieved within 20 years after adoption of the GSP or GSP Alternative. The San Gorgonio Pass Subbasin must achieve sustainability in 2042, and the Mission Creek and Indio Subbasins must achieve sustainability by 2036.

5. Groundwater Overdraft

According to DWR Bulletin 118-80 (Groundwater Basins in California):

"Overdraft is the condition of a groundwater basin in which the amount of water withdrawn by pumping over the long-term exceeds the amount of water that recharges the basin. Overdraft is characterized by groundwater levels that decline over a period of years and never fully recover, even in wet years. Overdraft can lead to increased extraction costs, land subsidence, water quality degradation, and environmental impacts."

DWR Bulletin 118-80 states that overdraft conditions in a basin become "critical" when:

"…continuation of present water management practices would probably result in significant adverse overdraft-related environmental, social, or economic impacts."

DWR Bulletin 160-93 (California Water Plan) expands on Bulletin 118-80's "period of years" as follows:

"Such a period of time must be long enough to produce a record that, when averaged, approximates the long-term average hydrologic conditions for the basin."

DWR Bulletin 160-09 (2009 California Water Plan Update) synthesizes the definitions provided in Bulletins 118-80 and 160-93 as follows:

"Overdraft is defined as the condition of a groundwater basin in which the amount of water withdrawn by pumping exceeds the amount of water that recharges the basin over a period of years, during which the water supply conditions approximate average conditions."

The above is the general definition of groundwater overdraft used herein. However, as noted in both CDWR Bulletin 118-80 and SGMA, consideration of groundwater overdraft is qualified by adverse effects of overdraft, such as chronic lowering of groundwater levels, reduction of groundwater in storage, decreased well yields, increased groundwater extraction costs, water quality degradation, sea-water intrusion, land subsidence, depletions of interconnected surface water with adverse impacts on beneficial uses of the surface water, and environmental impacts.

The historical occurrence of overdraft in the Basin was caused by the rapid development of agriculture in the area during the early 1900s, followed by increasing urban and recreational development in the later 1900s. This growth led to increased water demands that were met by groundwater pumping, which exceeded the natural recharge to the Basin and caused overdraft conditions.

For purposes of this report, groundwater overdraft is considered in terms of "gross overdraft" and "net overdraft". The term "gross overdraft" refers to groundwater extractions or water production in excess of natural groundwater replenishment or recharge, as an annual rate in AF/Yr, and "cumulative gross overdraft" refers to the gross overdraft in AF accumulated over the recorded history of an aquifer (since 1956 for WWR and since 1978 for MC). The term "net overdraft" refers herein to gross overdraft offset by artificial replenishment.

The initial Water Management Agreement was developed following numerous investigations regarding the groundwater supply within the Coachella Valley; said investigations are addressed in DWA's previous reports (*Engineer's Report on Groundwater Replenishment and Assessment Program for the Whitewater River Subbasin* for the years 1978/1979 through 1983/1984). These investigations all concluded that gross overdraft (groundwater extractions or water production in excess of natural groundwater replenishment and/or recharge) existed within the Coachella Valley Groundwater Basin and its subbasins.

6. Groundwater Replenishment

a. Summary

Since 1973, CVWD and DWA have been using Colorado River water exchanged for SWP water (Table A water allocations and supplemental water as available) to replenish groundwater in the Coachella Valley Groundwater Basin within the WWR Management Area (including a portion of the San Gorgonio Pass Subbasin and the Garnet Hill Subarea, and, since 2002, within the MC Management Area. The two agencies are permitted by law to replenish the groundwater basins and to levy and collect groundwater replenishment assessments from any groundwater extractor or surface water diverter (aside from exempt producers) within their jurisdictions who benefits, such as those within the Garnet Hill Subarea and San Gorgonio Pass Subbasin, from replenishment of groundwater.

b. History

DWA and CVWD completed construction of the Whitewater River Groundwater Replenishment Facility in 1973 and the Mission Creek Groundwater Replenishment Facility in 2002, and recharge activities commenced within each respective subbasin upon completion of the facilities. Annual recharge quantities are set forth in **Exhibit 6**.

From 1973 through 2023, CVWD and DWA have replenished the WWR and MC Management Areas with approximately 4,367,440 AF (4,144,902 AF to the Whitewater River Groundwater Replenishment Facility, 50,218 AF to the Palm Desert Groundwater Replenishment Facility, and 172,320 AF to the Mission Creek Groundwater Replenishment Facility). Of this total, 3,689,795 AF consisted of exchange deliveries (Colorado River water exchanged for SWP water, including advance deliveries), 50,218 AF consisted of deliveries to the PD-GRF, and 627,427 AF consisted of deliveries from accounts other than the SWP Exchange account. Of the above totals, excluding non-SWP and MWD's advance deliveries, DWA is responsible for approximately 749,857 AF of the artificial replenishment to WWR and approximately 120,339 AF of the artificial replenishment to MC; a total of approximately 870,197 AF.

Between October 1984 and December 1986, MWD initially provided about 466,000 AF of advance delivered water for future exchange with CVWD and DWA that was used to replenish the WWR Management Area. This initial quantity of advanced delivered water has been augmented several times since then (with a portion on the augmented supply delivered to the Mission Creek Groundwater Replenishment Facility), and the total quantity of advance delivered water in both subbasins is currently 1,329,629 AF. During drought conditions, MWD has periodically met exchange delivery obligations with water from its advance delivery account. By December 2023, MWD had converted approximately 1,027,134 AF of advance delivered water to exchange water deliveries, leaving a balance of approximately 302,495 AF in MWD's advance delivery account (see **Exhibit 7**, included at the end of this report, for an accounting of exchange and advance deliveries).

c. Table A Water Allocations and Deliveries

SWP Table A water allocations are based primarily on hydrologic conditions and legal constraints, and vary considerably from year to year. In 2023, the final allocation was 100% of maximum Table A allocations, with 27,875 AF of Article 56 carry-over to 2024. As of the writing of this report, Table A water deliveries in 2024 are projected by DWR to be 40% of maximum Table A allocations. Long-term average Table A allocations are currently predicted to be approximately 45% of maximum Table A allocations. Since DWR delivery projections can vary significantly throughout the year, and occasionally after publication of this report, the long-term average of 45% is used herein for estimating delivery.

A portion of Table A allocations for a given year are occasionally carried over into the following year under Article 56 of the SWP Contract. A total of 27,875 AF of Article 56 water has been scheduled to be carried over from 2023, and no Article 56 water is scheduled to be carried over from 2024 to 2025.

Even though CVWD and DWA have requested and will continue to request their maximum annual Table A allocations, the "Probable Table A Water Deliveries" have been adjusted herein for long-term reliability for estimating purposes. "Probable Table A Water Deliveries" are herein assumed to be 45% of the aforementioned Probable Table A Water Allocations, based on currently estimated SWP delivery capability, as shown in **Table 0**.

From 1973 through 2003, CVWD and DWA had SWP maximum annual Table A allocations of 23,100 AF and 38,100 AF, respectively. To meet projected water demands and to alleviate cumulative gross overdraft conditions, CVWD and DWA have secured additional SWP Table A water allocations, increasing their combined maximum Table A water allocations from 61,200 AF/Yr in 2003 to 194,100 AF/Yr beginning in 2010, as shown in **Table 0**. CVWD and DWA's current Table A allocations are described in additional detail in the following paragraphs.

1) Tulare Lake Purchase

CVWD obtained an additional 9,900 AF/Yr of Table A water allocation from Tulare Lake Basin Water Storage District, another State Water Contractor, thus increasing its annual Table A water allocation to 33,000 AF/Yr, effective January 1, 2004.

2) 2003 and 2019 Exchange Agreements

In 2003, CVWD and DWA obtained a further 100,000 AF/Yr (88,100 AF/Yr for CVWD and 11,900 AF/Yr for DWA) of Table A water allocation through a new exchange agreement (the 2003 Exchange Agreement) among CVWD, DWA, and MWD (all State Water Contractors). The 2003 Exchange Agreement, which became effective January 1, 2005, permitted MWD to call-back or recall the assigned annual Table A water allocation of 100,000 AF/Yr in 50,000 AF/Yr increments during periods of constrained, limited, or low water supply conditions; however, it gave CVWD and DWA the opportunity to secure increased quantities of surplus water in addition to increased quantities of Table A water during normal or high water supply conditions. MWD was required to notify CVWD and DWA of its intentions regarding call-back or recall of the 100,000 AF or 50,000 AF increment thereof.

The 2003 Exchange Agreement was substantially amended, restated, and consolidated in 2019 as the 2019 Exchange Agreement. The 2019 Exchange Agreement provides more certainty of water supplies for DWA and CVWD, and more operational flexibility to MWD. Key elements of the 2019 Exchange Agreement include:

a) Ending MWD's right to call back 100,000 AF of the Table A Quantity,

b) Preserving MWD's ability to advance deliver water to the Whitewater River and Mission Creek Groundwater Replenishment Facilities when conditions allow,

c) Enabling MWD to conditionally defer Colorado River water deliveries during drier periods,

d) Increasing reliability of supplemental State Water Project and non-State Water Project water deliveries,

e) Allowing DWA and CVWD access to Article 21 supplies when available (in proportion to Table A Quantities), and

f) Allowing DWA and CVWD access to MWD's water storage accounts, and defining the cost-sharing structure.

3) Kern County/Tulare Lake Purchase

In 2010, CVWD and DWA negotiated transfer of an additional 16,000 AF/Yr (12,000 AF/Yr for CVWD and 4,000 AF/Yr for DWA) of Table A water allocation from Kern County Water Agency (KCWA) and an additional 7,000 AF/Yr (5,250 AF/Yr for CVWD and 1,750 AF/Yr for

DWA) from Tulare Lake Basin Water Storage District (TLBWSD), both State Water Contractors.

d. Supplemental Water

Any surplus water secured by CVWD and DWA is exchanged for a like quantity of Colorado River Water. Charges for surplus water are allocated between CVWD and DWA in accordance with the terms of the Water Management Agreements. DWA secures funds for its allocated charges for surplus water payments from its Reserve for Additional Water Reserve Account.

1) Turn-Back Water Pool Water

From 1996 through 2017, CVWD and DWA jointly obtained 297,841 AF of water under CDWR's Turn-Back Water Pool Program, which was exchanged for a like quantity of Colorado River Water and delivered to the Whitewater River and Mission Creek Replenishment Facilities.

Turn-Back Water Pool water was originally Table A water scheduled for delivery to other State Water Contractors, but those Contractors subsequently determined that the water was surplus to their needs. Surplus water in the Turn-Back Water Pool Program is allocated between two pools based on time: Pool A water must be secured by March 1 of each year and Pool B water must be secured between March 1 and April 1 of each year. The charge for Pool A water is higher than the charge for Pool B water.

Since fiscal year 1999/2000, requests for Turn-Back Water Pool water have exceeded water available. Quantities of Pool A and Pool B water purchased by CVWD and DWA are shown in **Exhibit 7**.

In 2023, DWA and CVWD were not allocated any SWP surplus water under the Turn-Back Water Pool Program. Based on current projections, CVWD and DWA will not receive any Turn-Back Water Pool water in 2024.

2) Flood Water

In 1997 and 1998, CVWD and DWA jointly obtained 47,286 AF of Kaweah River, Tule River, and Kings River flood flow water, which was also exchanged for a like quantity of Colorado River water delivered to the Whitewater River Groundwater Replenishment Facility. Currently, the availability of flood water in 2024 is uncertain.

3) Article 21 Surplus Water

From 2000 through 2011, CVWD and DWA obtained 42,272 AF of Article 21 surplus water and, similarly, that water was also exchanged for a like quantity of Colorado River water which was delivered to the Whitewater River Groundwater Replenishment Facility. No Article 21 water was delivered to the Coachella Valley between 2011 and 2022. However, the storms of winter, 2022/2023 filled the San Luis Reservoir and made Article 21 water available. In 2023, DWA and CVWD received 13,599 AF of Article 21 water (3,906 AF to DWA). Currently, the availability of Article 21 water in 2024 is uncertain.

4) Yuba River Accord and Other Water

In 2008, CVWD and DWA obtained 1,836 AF of water under the terms of the Yuba River Accord (then newly-ratified). Quantities of water obtained under the Yuba River Accord and other conservation/transfer agreements by DWA and CVWD since 2009 are shown in **Exhibit 7**. Up to 1,477 AF of water under the Yuba River Accord may be available for purchase by DWA and CVWD in 2024. DWA and CVWD have applied for the maximum quantity of Yuba water available, but that exact quantity is yet to be determined by CDWR.

e. Past Year Water Deliveries

Total artificial replenishment (to both the Whitewater River and Mission Creek Replenishment Facilities) for 2023 was 320,962 AF. 304,507 AF was delivered to the Whitewater River Groundwater Replenishment Facility, 11,179 AF was delivered to the Palm Desert Groundwater Replenishment Facility, and 5,276 AF was delivered to the Mission Creek Groundwater Replenishment Facility (see **Exhibit 7**). 134,983 AF of the water delivered to the Whitewater River Groundwater Replenishment Facility during 2023 was delivered under CVWD's Second Supplemental Agreement to their Delivery and Exchange Agreement for the Delivery of 35,000 AF and 15,000 AF per year. Water delivered by MWD to CVWD under this agreement is only delivered to the Whitewater River Replenishment Facility, not to the Mission Creek Replenishment Facility.

f. Water Available in Current Year

The estimated quantity of water available to MWD on behalf of DWA and CVWD for exchange deliveries of Colorado River Aqueduct water for artificial replenishment in the Upper Coachella Valley during 2024, is as follows:

- Table A water: 77,640 AF (based on delivery of 40% of the maximum Table A allocation; 22,300 AF on behalf of DWA)
- Article 56 Carry-over water from 2022: 97,050 AF (27,875 AF on behalf of DWA)
- Estimated supplemental water:
  - 0 AF of Turn-Back Pool water
  - 0 AF of Article 21 water
  - Potentially up to 1,477 AF of Yuba water (424 AF available for DWA purchase)
  - 50,000 AF of Quantitative Settlement Agreement water (CVWD 35 TAF Program and 15 TAF Program)

The grand total is approximately 226,167 AF. MWD will deliver a portion of the above quantities to DWA and CVWD by exchange of Colorado River water, and a portion via credit from the Advance Delivery account. During the first three months of 2024, a total of 16,545 AF of Colorado River water has already been delivered to the Whitewater River Groundwater Replenishment Facility, and no Colorado River water has been delivered to the Mission Creek Groundwater Replenishment Facility.

g. <u>Historic Effects of Artificial Replenishment on Aquifer</u>

Prior to recharge activities in the Whitewater River Subbasin and MC, water levels were declining steadily in those subbasins. As shown in **Exhibits 1, 2, and 3**, after recharge activities commenced in 1973, and specifically after the three large recharge periods listed below, groundwater levels in both subbasins have risen substantially.

- 1985 - 1987: 655,000 AF Recharged (192,000 AF by DWA)
- 1995 - 2000: 609,000 AF Recharged (157,000 AF by DWA)
- 2009 - 2012: 775,000 AF Recharged (176,000 AF by DWA)

Exhibit 1 includes hydrographs for a collection of groundwater wells within the Palm Springs Subarea of the WWR Management Area (see **Figure 2** for the locations of the wells) in comparison with the total annual quantities of water delivered to the Whitewater River Groundwater Replenishment Facility. This comparison clearly indicates that the recharge program has benefitted wells within the subarea.

Water levels in the wells closest to the Whitewater River Groundwater Replenishment Facility rose approximately 400 feet in the late 1980s and nearly 200 feet following each significant recharge period to the Whitewater River Groundwater Replenishment Facility. As expected with groundwater replenishment, the most significant response to recharge in the WWR Management Area is observed in the wells located closest to the Replenishment Facility. The degree of benefit observed from recharge decreases the farther the well is from the Replenishment Facility, as shown by the diminishing intensity of the colors of the hydrographs. Well locations are shown on **Figure 2**.

Exhibit 2 includes hydrographs for MSWD's Wells 25 and 26, which are located upstream of the Whitewater River Groundwater Replenishment Facility within the San Gorgonio Pass Subbasin (a tributary to the Palm Springs Subarea of the WWR Management Area). Similar to other wells in the management area, water levels in these wells were also declining prior to groundwater recharge, and water levels in these wells rose by about 80 feet each after recharge commenced in the 1980s. Water levels in these wells also rose following the other significant recharge periods, such as 1995-97 and 2010-12, thus demonstrating that these wells were benefitted by groundwater replenishment activities at the Whitewater River Groundwater Replenishment Facility.

Exhibit 3 includes hydrographs from a collection of groundwater wells within the Garnet Hill Subarea of the WWR Management Area (see **Figure 2** for the locations of the wells) including one well owned by MSWD in comparison with both the replenishment quantities replenished by the Whitewater River and Mission Creek Replenishment Facilities. Groundwater levels in the Garnet Hill Subarea responded rapidly when replenishment activities commenced at the Whitewater River Groundwater Replenishment Facility in the 1970s. The magnitude of the response to the groundwater recharge is inversely proportional to the distance the wells are located from the Replenishment Facility, as shown by the diminishing intensity of the colors of the hydrographs.

Exhibit 4 includes hydrographs for a selection of groundwater wells owned and operated by MSWD and the Mission Creek Monitoring Well located at the Mission Creek Groundwater Replenishment Facility (see **Figure 2** for the locations of the wells), in comparison with the total annual quantities of water delivered to the Mission Creek Groundwater Replenishment Facility. The comparison clearly indicates that the recharge program has benefitted the wells within the subbasin, especially the wells near the groundwater replenishment facility. The magnitude of the response to the groundwater recharge is inversely proportional to the distance the wells are located from the Replenishment Facility, as shown by the diminishing intensity of the colors of the hydrographs.

Although artificial replenishment with imported water, augmenting natural replenishment, has met increasing average annual groundwater demands during the past 30 years, it has not, for all practical purposes, reduced or diminished cumulative gross overdraft within the Coachella Valley Groundwater Basin, which existed prior to artificial replenishment of the groundwater basin. In effect, the groundwater overdraft condition that existed prior to imported water becoming available for groundwater replenishment has not been significantly altered, but the trend has been arrested. Although current groundwater levels have generally stabilized in the subbasins within the management areas, current cumulative gross overdraft (not yet offset by cumulative artificial replenishment) is estimated at roughly 4,337,000 AF in the WWR Management Area (since 1956) and 334,000 AF in the MC Management Area (since 1978). Cumulative net overdraft, (cumulative gross overdraft offset by replenishment since commencement of artificial replenishment activities) is currently estimated at about 135,000 AF in the WWR Management Area (since 1973) and about 47,000 AF in the MC Management Area (since 2002).

h. <u>Adequacy of Current Supplies, Water Conservation, and Future Prospects</u>

1) State Water Project Improvements

As discussed in previous reports, the State of California is proposing a program of improvements to the SWP. The program was originally called *California WaterFix*, and is now called the *Delta Conveyance Project.*

The California WaterFix program originally involved the construction and operation of new water diversion facilities near Courtland to convey water from the Sacramento River through two tunnels to the existing state and federal pumping facilities near Tracy. In addition to other federal, state, and local approvals, California WaterFix required changes to the water rights permits for the SWP and the federal Central Valley Project to authorize the proposed new points of water diversion and rediversion.

The capital cost of the full California WaterFix Project was estimated at about $17 billion for two tunnels. However, in his first State of the State address on February 12, 2019, Governor Gavin Newsom announced that he supports only the single-tunnel alternative, known as the "Delta Conveyance Project", or DCP, and the California WaterFix project was officially halted in May, 2019.

The planning and environmental review process for the DCP commenced on January 15, 2020 with the release of the Notice of Preparation (NOP) for the development of an Environmental Impact Report (EIR), which would evaluate several project alternatives. Scoping for the EIR has been completed. The Final EIR was certified by CDWR in December 2023, with the remaining key permits anticipated to be obtained by the end of 2026. A new cost estimate and a benefit-cost analysis for the selected project alignment was released in mid-May 2024, and stated the DCP is expected to cost around $20.1 billion, with operation anticipated to begin in 2045.

Eventually, SWP water supply reliability, quality, and delivered quantities and the overall health of the Delta may improve upon implementation of the DCP; however, it is unlikely that the costs for Delta improvements will be allocated to the State Water Contractors before 2030.

The Indio SGMA Alternative Plan and the Mission Creek SGMA Alternative Plan assume that water supplies from the DCP will not become available until around 2040.

2) Sites Reservoir Project

DWA is one of 28 California water agencies to have committed funds to design and build the $4 billion Sites Reservoir Project, which is also supported by state and federal funding. This 1.5-million-acre-foot reservoir will be built near the Sacramento River in Colusa County. The project is designed to increase water supply resilience for participating agencies by capturing and storing water from the Sacramento River in wet years and releasing it in dry years via the State Water Project. Based on current estimates, the reservoir could provide DWA and CVWD with access to 16,500 AF/Yr of supply and 102,960 AF/Yr of storage volume.

As of 2024, construction of the Sites Reservoir is expected to begin in 2026, with completion targeted for 2030. The Indio SGMA Alternative Plan and the Mission Creek SGMA Alternative Plan assume that water supplies from the Sites Reservoir Project will become available around 2035.

3) California Drought

California has been experiencing intermittent, but severe, drought conditions since 2011. The four-year period between fall 2011 and fall 2015 was, at the time, the State's driest since recordkeeping began in 1895. A statewide drought emergency was declared to have ended in early 2017 due to a series of winter storms producing record-level rainfall.

During the course of the drought, the state implemented a number of mandatory water conservation measures, which are discussed in detail in previous reports, along with the efforts of DWA and CVWD to comply with said measures.

At the end of the process, DWA elected to retain a 10% to 13% conservation target for its customers for the purposes of long-term sustainability.

The winter storms of 2018-2019 nearly completely ended the drought conditions in California. However, significant drought conditions returned to California from 2020 through 2022, which was one of the driest periods in California history—worse than the drought of 2011-2015.

During this period, Governor Newsom issued several executive orders implementing various measures intended to encourage water conservation and reduce water waste. In addition, DWR reduced the State Water Project allocation to only 5% of requested supplies for 2021 and 2022.

In August 2022, the Federal Bureau of Reclamation announced what it called "urgent action" regarding the use of water from the Colorado River, as water levels in Lake Powell and Lake Mead continued to drop.

The situation began to change in December 2022, however, as California began to experience the effects of a series of "atmospheric rivers" which brought record quantities of snow and rainfall to the state. As of March 21, 2024, according to the California Drought Monitor website, 95% of the state is experiencing normal conditions, 5% of the state is experiencing abnormally dry conditions, no part of the state is experiencing moderate drought conditions, and no part of the state is experiencing severe or worse drought conditions.

However, due to the hydrologic deficit experienced over the last 25 years (especially with respect to groundwater), the California drought cannot be considered "over" without several additional wet years.

Substantial snowfall in the Colorado River watershed's mountains likely saved Lake Powell and Lake Mead from imminent danger of falling to "dead pool" levels (the point where a dam can no longer produce hydroelectric power nor deliver water downstream). However, the long-term state of the Colorado River remains precarious.

As a result of the Bureau of Reclamation's "urgent action" in August 2022, the seven states that depend on the Colorado River began negotiations for a new agreement that would implement conservation measures to prevent reservoirs from falling to critically low levels. The new agreement was announced on May 22, 2023, and will result in the conservation of about 3 million acre-feet of water from the river by 2026 -- a 14% reduction across the Southwest. The majority of the cuts, about 1.6 million acre-feet, come from California.

4) State Water Project Long-Term Reliability Estimates

CDWR has been releasing various estimates of the long-term reliability and delivery capability ("deliverability") of the SWP since 2014. The 2013 *SWP Final Reliability Report*, dated December 2014, estimated the long-term reliability of SWP supplies at 58% of maximum Table A quantities, projected through the year 2033.

CDWR issued Delivery Capability reports in 2015, 2017, 2019, and 2021. The first three of which used an 82-year hydrologic record (1922 through 2003) for computer model simulations of potential hydrologic conditions (runoff and precipitation patterns) for long-term average delivery, and deliveries during typical wet years and typical dry years. The 2021 Report used a 93-year hydrologic record (1922-2015). Each successive report updated conditions of land use, upstream flow regulations, and sea levels characteristics to the current year. Based on these reports, the long-term SWP reliability figure of 58% continued to be used in these Engineer's Reports through 2017/2018; a 62% long-term average deliverability figure was used in the 2018/2019 and 2019/2020 Engineer's Reports; and a 58% long-term average deliverability figure was used in the 2020/2021 Engineer's Report.

The Indio SGMA Alternative Plan and the Mission Creek SGMA Alternative Plan recognize the results of the final 2019 Delivery Capability Report, but also take into account the significant reduction in reliability associated with climate change and Delta export litigation; and, rather than using the 58% long-term average deliverability figure set forth therein, instead assumes 45% State Water Project reliability through the planning horizon. Said 45% long-term average reliability figure is used in this Engineer's Report.

5) Conclusion

In conclusion, the natural groundwater replenishment to the Coachella Valley Groundwater Basin is not sufficient to support current groundwater pumping levels, so artificial replenishment is necessary. Overdraft in future years is virtually unpredictable, due to the difficulty of projecting long-term growth and reliability of SWP supplies. However, DWA and CVWD have been able to effectively manage the Indio and Mission Creek Subbasins despite the unreliability of SWP supplies; largely avoiding adverse effects. Both agencies continue to investigate and invest in additional sources of imported water, such as the DCP and Sites Reservoir Project, and continue to actively implement water conservation programs. With such continued efforts, both agencies anticipate sustainable groundwater management.

7. Replenishment Assessment

For the WWR Management Area, DWA began its groundwater assessment program in fiscal year 1978/1979 and CVWD began its groundwater assessment program in fiscal year 1980/1981. For the MC Management Area, the two agencies initiated their groundwater assessment programs simultaneously in fiscal year 2003/2004. The two agencies are not required to implement the assessment procedure jointly or identically; however, they have each continuously levied an annual assessment on water produced within their respective jurisdictions since inception of their groundwater assessment programs.

Since the 2013 MC/GH WMP demonstrates that the Garnet Hill Subarea benefits from the groundwater replenishment activities in the two adjacent subbasins, pursuant to the 2004 Settlement Agreement between CVWD, DWA, and MSWD; DWA and CVWD have the authority establish a groundwater assessment program for the Garnet Hill Subarea. DWA's replenishment assessment program was initiated in this subarea in fiscal year 2015/2016. Currently, there is no assessable production in the Garnet Hill Subarea within CVWD's WWR AOB.

Section 15.4(b) of the Desert Water Agency Law requires the filing of an engineer's report regarding the Replenishment Program before DWA can levy and collect groundwater replenishment assessments. The report must address the condition of groundwater supplies, the need for groundwater replenishment, the AOBs, water production within said AOBs, and replenishment assessments to be levied upon said water production. It must also contain recommendations regarding the replenishment program. This report has been prepared in accordance with these requirements.

CHAPTER III
WEST WHITEWATER RIVER SUBBASIN MANAGEMENT AREA
PRODUCTION AND REPLENISHMENT

CHAPTER III
WEST WHITEWATER RIVER SUBBASIN MANAGEMENT AREA
PRODUCTION AND REPLENISHMENT

A. MANAGEMENT AREA

The WWR Management Area consists of two hydrologic subareas, the Palm Springs Subarea and the Garnet Hill Subarea. The Garnet Hill Subarea is separated from the Palm Springs Subarea by the Garnet Hill Fault, which is a reasonably effective barrier to horizontal groundwater movement, but not within the first 100 feet below ground surface.

The Mission Creek/Garnet Hill Management Committee engaged MWH to prepare the MC/GH WMP, which was completed in January 2013. According to the MC/GH WMP, while the Garnet Hill Subarea receives no direct artificial replenishment, it benefits from the artificial replenishment activities in both the MC and Whitewater River Subbasin. It benefits from the replenishment activities in the MC via some subsurface flows across the Banning Fault, and from the replenishment activities in the westerly portion of the Whitewater River (Indio) Subbasin via: (a) infiltration from the Whitewater River channel, which carries imported water from the Colorado River Aqueduct to the replenishment facilities within the Whitewater River Subbasin, and (b) from subsurface flow across the Garnet Hill Fault at the northwesterly end of the Garnet Hill Subarea during major recharge events that significantly raise the groundwater level in the vicinity of the Whitewater River Groundwater Replenishment Facility. Exact quantities of replenishment benefit from the MC and Whitewater River Subbasin to the Garnet Hill Subarea cannot be ascertained at this time with currently available hydrologic data.

From 2005 through 2018, the Garnet Hill Subarea within DWA's service area was treated as a separate Management Area and AOB. In 2019, the Garnet Hill Subbasin Management Area was consolidated into the WWR Management Area to conform to the subbasin delineations adopted by the CDWR. The information presented in this report reflects this change.

B. GROUNDWATER PRODUCTION

Annual water production (groundwater extractions plus surface water diversions) within the WWR Management Area is shown in **Figure 3**, as "Water Requirements". It increased from 1965 through about 1990, then decreased by approximately 13,000 AF in 1991, coincident with the initiation of significant deliveries of recycled water by CVWD and DWA to irrigation users within the Management Area (which had the effect of temporarily reversing the trend toward steadily increasing production of groundwater therein).

Due to development, production increased from 1997 to 1999, then averaged about 211,000 AF during the three-year period 2000 through 2002, and remained relatively stable through 2007; probably as a result of water conservation and increased use of recycled water, and (within CVWD's AOB) conversion of agricultural land to residential development, which leveled off in 2000. Production has decreased following 2007 due to water conservation programs implemented by both agencies and also partly to poor economic conditions reducing demands in the late 2000s/early 2010s.

During the past five calendar years (2019 through 2023), average annual water production within the WWR Management Area has been about 153,000 AF/Yr, approximately three-fourths of which took place within CVWD's AOB and approximately one-fourth within DWA's AOB.

Current (2023 calendar year) and historic groundwater production and surface water diversion data for the WWR Management Area is set forth in **Table 1**.

Until 2020, surface water diversions were reported in **Table 1** as total water diverted, including water returned to the natural stream. Beginning with 2020, due to operational changes, surface water diversions are reported in **Table 1** as water diverted and directed into the domestic water system. Additional surface water diversion quantities, formerly returned to the natural stream, are now diverted and directed into groundwater replenishment facilities,

C. NATURAL RECHARGE

Natural recharge (natural inflow) includes precipitation, surface water runoff, subsurface inflow, and surface water runoff that has been diverted into groundwater replenishment facilities. Based on 2023 estimates, natural inflow into the WWR Management Area is approximately 10,984 AF/Yr, while natural outflow is estimated at approximately 1,828 AF/Yr (Todd, et al.). Thus, approximately 9,156 AF (2023 natural inflow less 2023 natural outflow) of natural, or native, groundwater is currently available for water supply.

D. NON-CONSUMPTIVE RETURN

Consumptive use of water represents the use of water that is not returned to the aquifer (for example: water that is subjected to evapotranspiration by vegetation, thus releasing it into the atmosphere; water that is incorporated into biomass or manufactured products; and water that is exported). Non-consumptive return water is water that is ultimately returned to the aquifer after diversion (for example, diverted surface water returned to the stream channel), or after use (for example, irrigation water percolating beyond the root zone or treated wastewater discharged to percolation ponds or leach fields) or water used for public parks or golf course irrigation (wastewater recycled for irrigation use). Although non-consumptive return in the WWR Management Area has been estimated at approximately 40% (USGS 1974) and 35% (USGS 1992), CVWD's 2010 Update to the Coachella Valley Water Management Plan (and 2014 Status Report to that plan) incorporated groundwater modeling by MWH (now Stantec) which projected that non-consumptive return may decrease from 35% to approximately 30% through 2035 based on the effects of implementing water conservation measures, such as turf removal and more efficient irrigation practices. In the *2022 Indio Subbasin Water Management Plan Update: SGMA Alternative Plan* (Todd, et al. 2021) and the *Mission Creek Subbasin SGMA Alternative Plan Update* (Wood, et al. 2021), Todd, Wood et al have set forth revised estimates for non-consumptive return in each subbasin based on Stantec's and Krieger & Stewart's recent efforts to more accurately characterize non-consumptive return by quantifying water use categories; with estimates made for water percolated via agricultural and landscaping irrigation return, wastewater treatment plant and septic tank discharge, and water recycling activities within each Management Area of the Coachella Valley, and considering such factors as transfers of produced water between subbasins. This effort has resulted in estimates for non-consumptive use within the WWR Management Area that are currently approximately 33% of total estimated groundwater production or about 50,000 AF/Yr (average for the past five years), which are the figures used herein.

E. ARTIFICIAL REPLENISHMENT

Total artificial replenishment (to both the WWR and MC Management Areas) for 2023 was 320,962 AF. Of this quantity, 304,507 AF were delivered to the Whitewater River Groundwater Replenishment Facility (consisting partially of CVWD's QSA water), 11,179 AF were delivered to the Palm Desert Groundwater Replenishment Facility, and 5,276 AF were delivered to the Mission Creek Groundwater Replenishment Facility (see **Exhibit 7**).

F. GROUNDWATER IN STORAGE

Average total annual production within the WWR Management Area of 153,000 AF for the past five years (including reported production and estimated annual production by minimal pumpers based on geographic region) has been met with an average of approximately 9,156 AF of net natural recharge, an average of approximately 52,000 AF of non-consumptive return, and an average of 146,500 AF of net artificial replenishment, resulting in a net increase in groundwater in storage of about 68,000 AF/Yr over the past five years.

G. OVERDRAFT STATUS

Based on information contained in USGS Water Resources Investigations 77-29 and 91-4142, average annual gross overdraft within the WWR Management Area of the Coachella Valley Groundwater Basin began in the 1950s and was estimated to be 30,000 AF/Yr during the late 1960s and early 1970s. Due to increased development and demands, pumping now further outpaces natural inflows. This highlights the importance of artificial replenishment efforts. Gross overdraft within the WWR Management Area (excluding artificial replenishment) is now estimated to have averaged approximately 79,000 AF/Yr over the last five years. Since 1956, cumulative gross overdraft (net extraction minus net natural recharge) is currently estimated at about 4,340,000 AF. Since commencement of artificial replenishment activities in 1973, cumulative net overdraft (cumulative gross overdraft offset by artificial replenishment) is currently estimated to be about 135,000 AF. If considered since 2009, the year of historic low groundwater in storage, there is currently no cumulative net overdraft; instead, there is a surplus of about 821,500 AF.

As noted in CDWR Bulletin 118-80 and SGMA, consideration of groundwater overdraft is qualified by adverse effects of overdraft, such as chronic lowering of groundwater levels, reduction of groundwater in storage, decreased well yields, increased groundwater extraction costs, water quality degradation, sea-water intrusion, land subsidence, and environmental impacts. With continued implementation of the groundwater replenishment program, both agencies anticipate ongoing avoidance of adverse effects of overdraft.

CHAPTER IV
MISSION CREEK SUBBASIN MANAGEMENT AREA
PRODUCTION AND REPLENISHMENT

CHAPTER IV
MISSION CREEK SUBBASIN MANAGEMENT AREA
PRODUCTION AND REPLENISHMENT

A. GROUNDWATER PRODUCTION

Annual water production (groundwater extractions) within the MC Management Area is show in **Figure 4**, as "Water Requirements". It increased from an average of approximately 500 AF/Yr in the late 1950s and 1960s to approximately 2,300 AF/Yr in 1978. Production increased relatively steadily since then to approximately 17,400 AF/Yr in 2006, then began dropping slightly as a result of declining economic conditions to about 16,400 AF/Yr in 2007, 15,800 AF/Yr in 2008, 15,100 AF/Yr in 2009, 14,300 in 2010, 14,200 in 2011, and 13,000 in 2015. Annual groundwater production within the MC Management Area has resulted in cumulative long-term groundwater overdraft, as evidenced by the steady decline of groundwater levels within the MC prior to commencement of recharge activities.

During the past five calendar years (2019 through 2023), average annual reportable water production within the MC Management Area has been about 14,000 AF/Yr; approximately two-thirds of which took place within DWA's AOB and approximately one-third within CVWD's AOB. Current (2023 calendar year) and historic groundwater production and surface water diversion data for the MC Management Area is set forth in **Table 1**.

B. NATURAL RECHARGE

Natural recharge includes precipitation, surface water runoff, and subsurface inflow. As discussed in past reports, it is currently estimated that natural inflow and surface recharge of the MC has averaged approximately 3,500 to 10,800 AF/Yr over the long term. Most estimates of natural outflow from the MC equal or exceed the corresponding estimates of natural inflow.

The most recent estimate for natural inflow into the MC was prepared by Wood et al for the Mission Creek SGMA Alternative Plan (2021). Wood presents variable estimates for natural inflow from precipitation and mountain-front runoff based on historical precipitation records and projected wet and dry years along with approximately 1,200 AF/Yr from flows across the Mission Creek Fault from the Desert Hot Springs Subbasin.

Wood estimated natural outflow of 2,300 AF/Yr of subsurface flow from the Banning Fault to the Garnet Hill Subarea and through semi-water bearing rocks, known as the Indio Hills at the southeastern end of the MC, and 950 AF/Yr of evapotranspiration.

The 5-year average net natural inflow to the Mission Creek Subbasin is approximately 3,500 AF/Yr (Wood, et al. estimate).

C. NON-CONSUMPTIVE RETURN

Consumptive use and non-consumptive return are discussed in **Chapter III, Section C**. Within the MC Management Area, non-consumptive return is currently estimated at approximately 37% of total estimated production, or about 4,700 AF/Yr (average for the past five years).

D. ARTIFICIAL REPLENISHMENT

Total artificial replenishment (to both the WWR and MC Management Areas) for 2023 was 320,962 AF, all delivered to the WWR. There was 5,276 AF of artificial replenishment water delivered to the Mission Creek Groundwater Replenishment Facility in 2023 (see **Exhibit 7**). The MC Management Area remains overdelivered per the 2004 Settlement Agreement.

Based on the production relationship between the Whitewater River Subbasin and the MC, in accordance with the 2014 Mission Creek Water Management Agreement, about 92.0% of imported water deliveries in 2024 will be directed to the WWR Management Area and 8.0% to the MC Management Area, based on 2023 production (see **Exhibit 6**).

E. GROUNDWATER IN STORAGE

Average total annual production within the entire MC Management Area of 14,000 AF for the past five years (including reported production and an estimated 500 AF of annual production by minimal pumpers) has been met with approximately 3,070 AF of net natural recharge, approximately 4,700 AF of non-consumptive return, and 2,103 AF of net artificial replenishment (less evaporative losses), resulting in a net decrease in groundwater in storage of about 4,200 AF/Yr over the past five years.

The change in groundwater storage within DWA's MC AOB has also been estimated using changes in measured static water levels in wells within the AOB. Using the average static water levels in the wells in DWA's AOB, the average annual reduction in stored groundwater was 3,900 AF/Yr from 1955 through 2023, and 3,400 AF/Yr from 1998 through 2023 (see **Exhibit 5**).

F. OVERDRAFT STATUS

Gross overdraft within the MC (excluding artificial replenishment) is now estimated at approximately 8,000 AF/Yr during the last five years. Cumulative gross overdraft (net extraction minus net natural recharge) since 1978 is currently estimated at approximately 334,000 AF. Since commencement of artificial replenishment activities began in 2002, cumulative net overdraft (cumulative gross overdraft offset by artificial replenishment) is currently estimated to be about 46,800 AF. If considered from 2009, the year of historic low groundwater in storage, the cumulative net overdraft is currently estimated to be about 28,000 AF.

As noted in CDWR Bulletin 118-80 and SGMA, consideration of groundwater overdraft is qualified by adverse effects of overdraft, such as chronic lowering of groundwater levels, reduction of groundwater in storage, decreased well yields, increased groundwater extraction costs, water quality degradation, sea-water intrusion, land subsidence, and environmental impacts. With continued implementation of the groundwater replenishment program, both agencies anticipate ongoing avoidance of adverse effects of overdraft.

CHAPTER V
REPLENISHMENT ASSESSMENT

CHAPTER V
REPLENISHMENT ASSESSMENT

Desert Water Agency Law, in addition to empowering DWA to replenish groundwater basins and to levy and collect groundwater replenishment assessments within its areas of jurisdiction, defines production and producers for groundwater replenishment purposes as follows:

> Production: The extraction of groundwater by pumping or any other method within the Agency, or the diversion within the Agency of surface supplies which naturally replenish the groundwater supplies within the Agency and are used therein [DWA Law, Section 15.4(a)(3)].
>
> Producer: Any individual, partnership, association, group, lessee, firm, private corporation, public corporation, or public agency including, but not limited to, the DWA, that extracts or diverts water as defined above [DWA Law, Section 15.4(a)(4)].

Producers that extract or divert 10 AF of water or less in any one year are considered minimal pumpers or minimal diverters, and their production is exempt from assessment.

Desert Water Agency Law also states that assessments may be levied upon all water production within an AOB, provided assessment rates are uniform throughout [DWA Law, Section 15.4(e)]. Pursuant to Section 15.4(f) of Desert Water Agency Law, the amount of any replenishment assessment cannot exceed the sum of:

1. Certain SWP charges, specifically, the Delta Water Charge, the Variable OMP&R Component of the SWP Transportation Charge (Variable Transportation Charge), the Off-Aqueduct Power Component of the SWP Transportation Charge (Off-Aqueduct Power Charge and any surplus water or unscheduled water charges), pursuant to the Contract between DWA and the State of California. The aforesaid charges are set forth in each year's CDWR *Bulletin on the State Water Project* (CDWR Series 132, Appendix B).

   The **Delta Water Charge (DWC)**, as used herein, is based on the Delta Water Charge per Appendix B Table B-20 (A & B) and projections from the State Water Contractors.

The **Variable Transportation Charge (VTC)**, as used herein, is based on the Unit Variable OMP&R Component of the Transportation Charge per Appendix B Table B-17 as applied to the Probable Table A Water Delivery. The VTC varies with the quantity of water delivered.

The **Off-Aqueduct Power Charge (OAPC)**, as used herein, is based on the energy necessary to meet the Probable Table A Water Delivery; specifically, the entire Minimum OMP&R Component of the Transportation Charge for Each Contractor for Off-Aqueduct Power Facilities, per Appendix B Table B-16B, allocated among the requested Appendix B Table A deliveries per Appendix B Table B-5B, adjusted to eliminate Bond Cover per Appendix B Table 6 (Note: Bond Cover was reduced to zero in 2017).

The OAPC is highly variable, since the charges, which are essentially fixed, are allocated among the actual deliveries (if requested deliveries are significantly reduced by one contractor, all other contractors must make up the difference--in effect, the charges are distributed over a smaller pool).

The OAPC sunsets after 2025.

2. Costs of importing and recharging water from sources other than the State Water Project (such as the Colorado River Aqueduct).

3. Costs of treating and distributing reclaimed water.

DWA has historically not included costs of importing and recharging water from sources other than the State Water Project, costs of treating and distributing reclaimed water, or costs of surplus or unscheduled water deliveries in the replenishment assessment rate. However, as of 2022/2023, surplus and unscheduled water charges, along with administrative and general costs of importing and recharging water from the Colorado River Aqueduct, are added to the Assessment Rate calculation as shown in **Table 7**.

Prior to 2002, groundwater replenishment with Colorado River Water (exchanged for SWP water) had been limited to recharge of the WWR Management Area. In 2002, DWA and CVWD commenced recharge activities in the MC Management Area, in addition to continuing their ongoing activities in the WWR Management Area. The AOBs for Groundwater Replenishment and Assessment herein consist of those portions of the WWR Management Area (including a portion of the San Gorgonio Pass Subbasin and tributaries thereto) and the MC Management Area, situated within DWA's service area boundary (**Figure 2**).

The groundwater replenishment assessment and replenishment assessment rate for 2024/2025 is based on the following:

1. All groundwater production within DWA and MSWD, with certain exceptions, is metered, and all assessable surface water diversions within DWA are metered or measured. There are no surface water diversions within the MC AOB.

2. The Delta Water Charge, the Variable Transportation Charge, and the Off-Aqueduct Power Charge, as set forth in Appendix B of the most recent CDWR Bulletin Series 132 and hereafter referred to as Applicable SWP Charges.

3. The proportionate share of the Applicable SWP Charges allocable to CVWD and DWA in accordance with the Water Management Agreements between CVWD and DWA (Water Management Agreement for the Whitewater River Subbasin executed July 1, 1976 and amended December 15, 1992, and the Water Management Agreement for the Mission Creek Subbasin executed April 8, 2003; both amended July 15, 2014), hereafter referred to as Allocated SWP Charges. (The applicable charges are essentially apportioned between CVWD and DWA in accordance with relative water production within those portions of each entity lying within the applicable Water Management Areas, either the Whitewater River Subbasin (including the Garnet Hill Subarea and a portion of the San Gorgonio Pass Subbasin) or the MC.

4. Costs for surplus and unscheduled water charges, and administrative and general costs of importing and recharging water from the Colorado River Aqueduct.

5. Reimbursement of charges and costs pursuant to items 1, 2, 3, and 4 above which were accrued in the past but deferred for later recovery.

6. Any of the above-listed charges and costs may be deferred from time to time by discretionary reductions for later recovery.

The replenishment assessment rate, when applied to estimated assessable production (all production, excluding that which is exempt, within the AOB), results in a replenishment assessment which must not exceed the maximum permitted by Section 15.4(f) of Desert Water Agency Law. Due to the interdependent nature of the imported water supply for the WWR Management Area (including the Garnet Hill Subarea and a portion of the San Gorgonio Pass Subbasin), and the MC Management Area, the Allocated SWP Charges component of the replenishment assessment rate is uniform throughout the WWR AOB and MC AOB; however, due to the independent and separate nature of various other aspects of the groundwater replenishment program within the WWR AOB (including the Garnet Hill Subarea and a portion of the San Gorgonio Pass Subbasins), and MC AOB, the other charges and costs component need not be uniform; they are specific to each AOB.

A. ACTUAL 2023 WATER PRODUCTION AND ESTIMATED 2024/2025 ASSESSABLE WATER PRODUCTION

Estimated assessable production within DWA's WWR AOB (including a portion of the Garnet Hill Subarea and the San Gorgonio Pass Subbasin), and MC AOB consist of groundwater extractions from the groundwater subbasins and diversions from streams (Snow, Falls, and Chino Creeks) in the tributary watersheds. Estimated assessable groundwater production is based on metered water production. DWA staff read and record metered water production quantities with the exception of the wells owned by MSWD and the Indigo Power Plant, which are reported to DWA.

The effective replenishment assessment rate for Table A water is based on DWA's estimated Allocated SWP Charges for the current year (based on CDWR's projections for the assessment period) divided by the estimated assessable production for the assessment period, as set forth in **Table 6**. DWA has utilized two bases for estimating assessable production, either assessable production for the previous year, or, when statewide conservation mandates are in effect, a specified year's assessable production minus a water conservation factor. Since the 2019/2020 report, the estimated assessable production for both AOBs has been based on the assessable production for the previous year (for this report, 2023), since the statewide conservation mandate was satisfied in 2017.

Estimated assessable water production is set forth in **Table 2**.

In 2023, actual reported production (including reported production from minimal pumpers, as shown in **Table 1**) within CVWD's AOB within the WWR Management Area was about 3.4 times that within DWA's AOB, 113,603 AF versus 33,774 AF, whereas actual reported production within DWA's AOB within the MC Management Area was about 2.1 times that within CVWD's AOB, 8,742 AF versus 4,030 AF. DWA's 2023 actual reported production accounts for approximately 26.6% of the 160,149 AF combined total of water produced within the Management Areas that year.

B. GROUNDWATER REPLENISHMENT ASSESSMENT RATES

The groundwater replenishment assessment rates consist of two components, one being attributable to SWP annual Table A water allocations, and the other being attributable to other charges or costs necessary for groundwater replenishment. Each component is discussed below.

1. Component Attributable to SWP Table A Water Allocation Charges

In accordance with the current 2014 Water Management Agreement, CVWD and DWA combine their SWP Table A water allocations, exchange them for Colorado River water, and replenish the WWR and MC Management Areas with exchanged Colorado River water. CVWD and DWA each assume the full burden for portions of their respective Fixed State Water Project Charges (Capital Cost Component and Minimum Operating Component of Transportation Charge); however, the two agencies share their Applicable SWP Charges (Delta Water, Variable Transportation, and Off-Aqueduct Power Charges) on the basis of relative production.

Although DWA could base its replenishment assessment rate on its Applicable SWP Charges, it only needs to recover its share (based on relative production) of the combined Applicable SWP Charges for both CVWD and DWA (i.e. its Allocated SWP Charges). CVWD makes up the difference in accordance with the Water Management Agreement.

The Applicable SWP Charges for CVWD and DWA for Table A water are set forth in **Tables 3 and 4**, respectively. Unit Charges for Delta Water, Variable Transportation, and Off-Aqueduct Power Charges are based on estimates presented in Appendix B of CDWR Bulletin 132-23.

Since CDWR has been unable to deliver maximum Table A allocations for 22 of the past 24 years, the amounts of the Applicable SWP Charges for 2024/2025 and future years are computed based on a long-term SWP reliability factor applied to the maximum SWP allocations. A factor of 58% was applied in 2021 and 2022. A factor of 45% is being applied in 2022, 2023, and 2024.

The derivations of the Applicable SWP Charges are set forth in **Tables 3 and 4**. The "Maximum Table A Water Allocation" shown in **Tables 3 and 4** is the currently existing Table A Water Allocation per CDWR Bulletin 132-23, Appendix B, Table B-4 (contractual quantities based on requests for same by CVWD and DWA) with no reliability factors being applied. The "Probable Table A Water Allocation" is the currently existing Table A Water Allocation. The MWD reliability factor was formerly applied to the Probable Table A Allocation column to reflect the long-term average with probable recalls by MWD, pursuant to the remaining years of the 2003 Exchange Agreement and its implementation. The "Probable Table A Water Delivery" is based on 45% long-term reliability of the Table A Water allocation.

Applicable SWP Charges proportioned in accordance with the Water Management Agreement, more particularly in accordance with relative production within CVWD and DWA, yield Allocated SWP Charges. Over the past five years, 2019 through 2023, DWA has been responsible for approximately 22.68% of the water produced within the WWR Management Area, and 68.21% of water produced from the MC Management Area.

In the past, Allocated SWP Charges have been apportioned to CVWD and DWA based on production from the WWR Management Area. Since 2003/2004, Allocated SWP Charges have been apportioned to CVWD and DWA based on production from the combined WWR and MC Management Areas. In 2023, DWA was responsible for approximately 26.6% of the combined water production within the Management Areas. On the assumption that DWA's relative production for 2024 and thereafter will be about the same as for 2023, DWA's share of the combined Applicable SWP Charges (i.e. Allocated Charges) for the next 12 years will be as set forth in **Table 5**.

Table 5 shows that DWA's estimated Allocated Charges (its share of combined Applicable Charges for Table A water) are anticipated to increase by about 1% between 2024 and 2025, increase by about 7% between 2025 and 2026, and increase by about 3% between 2026 and 2027. DWA's estimated Allocated Charges will change as estimates presented in future annual editions of CDWR Bulletin 132 change.

Table 5 also shows that DWA's estimated 2024 Allocated Charges are about 92% of DWA's estimated Applicable Charges. Since groundwater replenishment assessments are used for groundwater replenishment purposes only, implementation of the maximum permissible replenishment assessment rate based on DWA's Applicable Charges would result in the collection of excess funds that would have to be applied to replenishment charges during subsequent years.

Rather than collect excess funds one year and apply the excess funds to replenishment charges in subsequent years, DWA attempts to establish from year to year the replenishment assessment rate that will result in collection of the funds essential to meeting its annual groundwater replenishment costs. DWA therefore bases the Table A portion of its replenishment assessment on estimated Allocated Charges, rather than estimated Applicable Charges.

Pursuant to Section 15.4(f) of current Desert Water Agency Law, the maximum permissible replenishment assessment rate that can be established for fiscal year 2024/2025 based on Applicable State Water Project Charges is approximately $252/AF, based on DWA's estimated Applicable Charges (Delta Water Charge, Variable Transportation Charge, and Off-Aqueduct Power Charge) of $10,393,897 (average of estimated 2024 and 2025 Applicable Charges) and estimated 2024/2025 combined assessable production of 41,170 AF within the WWR and MC AOBs.

The effective replenishment rate is based on DWA's estimated Allocated SWP Charges for the current year, as computed using CDWR's projected Applicable SWP Charges, divided by the estimated assessable production for the assessment period (based on the assessable production for the previous calendar year), as set for in **Table 6**.

Pursuant to the terms of the Water Management Agreement between DWA and CVWD, and based on DWA's estimated 2024/2025 Allocated Charges of $9,567,420 and estimated 2024 calendar year assessable production (shown in **Table 6** as estimated 2024/2025 assessable production) of 41,170 AF within the WWR and MC, the effective replenishment assessment rate component for Table A water for the 2024/2025 fiscal year is $232/AF. **Table 7** includes DWA's historical estimated, actual effective, and estimated projected replenishment assessment rates.

Tables 3 through 6 include future projections through 2035, and **Table 7** includes future projections through 2037. These projections are based on a number of assumptions regarding factors that can be highly variable and difficult to predict, such as development, conservation, and, as mentioned, SWP reliability and cost factors. Actual values in the future may be substantially different than as shown in these tables.

2. Component Attributable to Other Charges and Costs Necessary for Groundwater Replenishment

Charges and costs necessary for groundwater replenishment could include the costs for reimbursement for past SWP Table A water allocations and surplus water allocations for which insufficient assessments had been levied, acquisition or purchases of water from sources other than the SWP, the cost of importing and recharging water from sources other than the SWP (such as the Colorado River Aqueduct), and the cost of treatment and distribution of reclaimed water.

In recent years, with a few exceptions, other charges and costs have been limited to past SWP water payments for which assessments have not been levied. In 2016/2017, due to increases in SWP costs, DWA elected to transfer the deficit resulting from past payments for which assessments have not been levied to reserve account(s). In addition, as of 2022/2023, administrative and general costs of importing and recharging water from the Colorado River Aqueduct are added to the Assessment Rate calculation as shown in **Table 7**.

Since 1996, CVWD and DWA have obtained surplus SWP water, when available, to supplement deliveries of Table A water (see **Chapter II, Section B.5.d**). In recent years, DWA has paid charges for surplus water with funds from its Unscheduled State Water Project Deliveries Reserve Account, rather than from funds raised directly through replenishment assessment levies. However, as of 2022/2023, surplus and unscheduled water charges were added to the Assessment Rate calculation as shown in **Table 7**.

3. Incremental Replenishment Assessment Rate Increases Authorized by DWA Board of Directors

In the winter of 2016, DWA adopted proposed replenishment assessment rate ranges for five years, ending with a range of $130.00 to $175.00 for 2021/2022.

At their public meeting on May 4, 2021, DWA Board of Directors authorized rate increases by an increment of $20 annually subsequent to 2022/2023. The following table sets forth recommended replenishment assessment rates for five fiscal years beginning with 2023/2024, based on the $20 annual increment.

Fiscal Year	Anticipated Adoption Date	Recommended Rate ($/AF)
2023/2024	July 1, 2023	$195.00
2024/2025	July 1, 2024	$215.00
2025/2026	July 1, 2025	$235.00
2026/2027	July 1, 2026	$255.00
2027/2028	July 1, 2027	$275.00

Beyond 2027/2028, projected replenishment assessment rates are shown in **Table 7** as continuing to increase by $20 per AF per year until the replenishment assessment rate is sufficient to recuperate allowable charges included in calculating the replenishment assessment rate (2029/2030), at which time they are shown as increasing at reduced rates as necessary to continue recuperating the allowable charges.

4. Proposed 2024/2025 Replenishment Assessment Rates

As shown in **Table 6**, the estimated effective Table A Assessment Rate is $232/AF. However, this rate exceeds the maximum rate of $215/AF based on the $20 annual increment authorized previously by the Board of Directors. Therefore, as shown in **Table 7**, the recommended replenishment assessment rates proposed for 2024/2025 are:

- **$215.00/AF** for the WWR AOB
- **$215.00/AF** for the MC AOB

Historic replenishment assessment rates for both DWA and CVWD within the Whitewater River Subbasin are included in **Exhibit 8**.

C. ESTIMATED GROUNDWATER REPLENISHMENT ASSESSMENTS FOR 2024/2025

The maximum replenishment assessment that can be levied by DWA for combined estimated production of 41,170 AF (see **Table 2**) within the WWR and MC AOBs based on a replenishment assessment rate of $215.00/AF is approximately $8,851,550 ($6,970,300 in the WWR AOB and $1,881,250 in the MC AOB).

DWA will continue to be the major producer within the WWR AOB, with assessable production of approximately 31,170 AF; nine other significant producers will be responsible for the remaining 1,250 AF AF of estimated assessable production. DWA will also be the major assessee with an estimated replenishment assessment of $6,701,550. The nine other significant producers will be responsible for the remaining $268,750 (water production by the Agua Caliente Band of Cahuilla Indians (ACBCI), including the Indian Canyons Golf Resort, with an estimated production of approximately 1,356 AF, is currently not being assessed for groundwater replenishment pending resolution of a lawsuit challenging DWA's authority to impose the replenishment assessment charge on ACBCI). DWA will therefore be responsible for approximately 96% of the estimated replenishment assessment for the WWR AOB; the other nine assessable producers will be responsible for the remaining 4%.

MSWD will be the major producer within the MC AOB, with assessable production of approximately 7,060 AF; four other producers will be responsible for the remaining 1,690 AF of estimated assessable production. MSWD will also be the major assessee with an estimated replenishment assessment of $1,517,900. The four other producers will be responsible for the remaining $363,350. MSWD will be responsible for approximately 81% of both the estimated assessable water production and the estimated replenishment assessment in the MC AOB; the other four producers will be responsible for the remaining 19%.

CHAPTER VI
BIBLIOGRAPHY

CHAPTER VI
BIBLIOGRAPHY

- Coachella Valley Regional Water Management Group (City of Coachella, Coachella Valley Water District, Desert Water Agency, Indio Water Authority, and Mission Springs Water District), *Final Coachella Valley Integrated Regional Water Management Plan*, prepared by Coachella Valley Regional Water Management Group in collaboration with the Planning Partners, with support from RMC Water and Environment and Integrated Planning and Management Inc., December 2010

- Coachella Valley Water District, *Coachella Valley Water Management Plan,* November 2002

- Coachella Valley Water District, *Final Program Environmental Impact Report for the Coachella Valley Water Management Plan and State Water Project Entitlement Transfer*, prepared by MWH, 2002

- Coachella Valley Water District, *Coachella Valley Water Management Plan Update*, prepared by MWH, 2010

- Coachella Valley Water District, *2014 Status Report for the 2010 Coachella Valley Water Management Plan Update*, prepared by MWH, 2014

- Coachella Valley Water District, Coachella Water Authority, Desert Water Agency, and Indio Water Authority, *2022 Indio Subbasin Water Management Plan Update: SGMA Alternative Plan*, prepared by Indio Subbasin Consulting Team (Todd Groundwater and Woodard & Curran, assisted by Graham Fogg and Associates and David J. Ringel, Consulting Engineer), December, 2021

- Coachella Valley Water District, Coachella Water Authority, Desert Water Agency, and Indio Water Authority, *Indio Subbasin Annual Report for Water Year 2021-2022*, prepared by Todd Groundwater, March, 2023

- Coachella Valley Water District, Desert Water Agency, and Mission Springs Water District, *Mission Creek Subbasin SGMA Alternative Plan Update*, prepared by Mission Creek Subbasin Consulting Team (Wood and Kennedy/Jenks Consultants, Inc.), November, 2021

- Coachella Valley Water District, Desert Water Agency, and Mission Springs Water District, *Mission Creek Subbasin Annual Report for Water Year 2019-2020*, prepared by Wood Environment and Infrastructure Solutions, Inc., February, 2021

- Desert Water Agency, *Domestic Water System General Plan, 2008*, prepared by Krieger & Stewart, May, 2009

- Desert Water Agency, *Draft Domestic Water System General Plan, 2020*, prepared by Krieger & Stewart, December 2020

- Desert Water Agency, *Engineer's Report on Basin Water Supply and Water Replenishment Program*, prepared by Krieger & Stewart, May 1978, Revised June 1978

- Desert Water Agency, *Ground Water Recharge Potential within Mission Creek Subbasin,* prepared by Krieger & Stewart, November 1980

- Desert Water Agency, *Engineer's Report: Groundwater Replenishment and Assessment Program for the Whitewater River, Mission Creek, and Garnet Hill Subbasins*, reports prepared by Krieger & Stewart for Fiscal Years 2016/2017 and 2017/2018

- Desert Water Agency, *Engineer's Report: Groundwater Replenishment and Assessment Program for the West Whitewater River Subbasin, Mission Creek Subbasin, and Garnet Hill Subbasin Areas of Benefit* reports prepared by Krieger & Stewart for Fiscal Years 2018/2019 and 2019/2020

- Desert Water Agency, *Engineer's Report: Groundwater Replenishment and Assessment Program for the West Whitewater River Subbasin and Mission Creek Subbasin Areas of Benefit* reports prepared annually by Krieger & Stewart for Fiscal Years 2020/2021 through 2023/2024

- Desert Water Agency, *Engineer's Report: Groundwater Replenishment and Assessment Program for the Mission Creek Subbasin*, reports prepared annually by Krieger & Stewart for Fiscal Years 2003/2004 through and including 2015/2016

- Desert Water Agency, *Engineer's Report: Groundwater Replenishment and Assessment Program for the Whitewater River Subbasin*, reports prepared annually by Krieger & Stewart for Fiscal Years 1978/1979 through and including 2015/2016

- Fogg, Graham E., Gerald T. O'Neill, Eric M. LaBolle, David J. Ringel, *Groundwater Flow Model of Coachella Valley, California: An Overview*, November 2002

- Desert Water Agency, Inc., *Hydrogeologic Investigation of Groundwater Basin Serving Palm Springs*, prepared by Geotechnical Consultants, October 1978

- Geotechnical Consultants, Inc., *Hydrogeologic Investigation: Mission Creek Subbasin Within the Desert Hot Springs County Water District,* prepared for Desert Water Agency, November 1979

- Huberty, M.R. and A.F. Pillsbury, *Hydrologic Studies in Coachella Valley, California*, University of California, Berkeley 1948

- Krieger & Stewart, *Coachella Valley Groundwater Management Plan for the Coachella Valley Planning Area of the West Colorado River Basin*, 1979

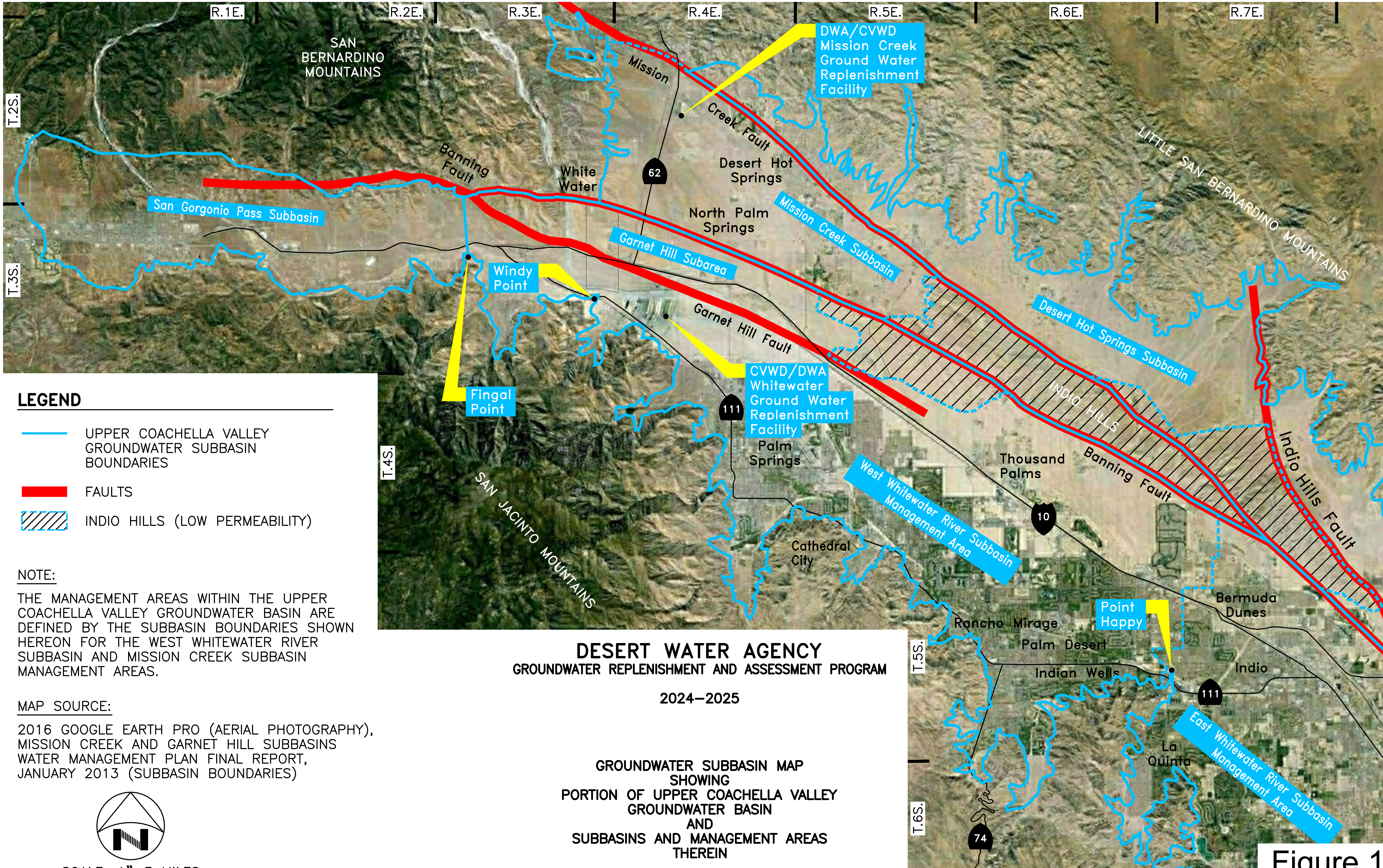
- Mission Springs Water District, *Mathematical Modeling of Proposed Artificial Recharge for the Mission Creek Subbasin,* prepared by Mayer, Alex S. and Wesley L. May, Michigan Technological University Department of Geological Engineering and Sciences, March, 1998

- Mission Springs Water District, *Hydrogeologic Conditions near Mission Springs Water District Well Nos. 25 and 26, Cabazon Area, Riverside County,* prepared by Richard C. Slade and Associates, LLC, September, 2001

- MWH, Groundwater Model Simulations for *Coachella Valley Water Management Plan Update*, for Draft Subsequent Program Environmental Impact Report, July, 2011
- MWH, *Mission Creek and Garnet Hill Subbasins Water Management Plan, Final Report*, January, 2013
- Psomas, *Groundwater Flow Model of the Mission Creek and Garnet Hill Subbasins and Palm Springs Subarea, Riverside, California*, January, 2013
- Richard C. Slade and Associates, LLC, *Final Hydrogeologic Evaluation, Well Siting, And Recharge Potential Feasibility Study Mission Creek Groundwater Subbasin, Riverside County, California,* May 2000
- San Gorgonio Pass Water Agency, *Water Resources Investigation – Groundwater Dependable Yield*, prepared by Boyle Engineering Corporation, 1998
- State of California, The Resources Agency, Department of Conservation, Division of Mines and Geology, *Geologic Map of California, Santa Ana Sheet,* 1966
- State of California, The Resources Agency of California, Department of Water Resources, *Bulletin No. 108, Coachella Valley Investigation,* July, 1964
- State of California, The Resources Agency, Department of Water Resources, *Coachella Valley Area Well Standards Investigation*, 1979
- State of California, The Resources Agency, Department of Water Resources, *Management of the California State Water Project, Bulletin 132-17*, August, 2017
- State of California, The Resources Agency, Department of Water Resources, *California's Groundwater, Bulletin 118*, October, 2003
- State of California, The Resources Agency, Department of Water Resources; *State Water Project Final Reliability Report 2013*, December, 2014
- State of California, The Resources Agency, Department of Water Resources; *2015 State Water Project Deliverability Capability Report*, July, 2015
- State of California, The Resources Agency, Department of Water Resources; *2017 State Water Project Deliverability Capability Report*, March, 2018
- United States Department of the Interior, Geological Survey; Artificial Recharge in the Whitewater River Area, Palm Springs, California, 1973
- United States Department of the Interior, Geological Survey Water-Supply Paper 2027; *Analog Model Study of the Ground-Water Basin of the Upper Coachella Valley, California*, 1974

- United States Department of the Interior, Geological Survey; *Water Resources Investigation 77-29: Predicted Water-Level and Water-Quality Effects of Artificial Recharge in the Upper Coachella Valley, California, Using a Finite-Element Digital Model*, April, 1978
- United States Department of the Interior, Geological Survey; *Water Resources Investigation 91-4142: Evaluation of a Ground-Water Flow and Transport Model of the Upper Coachella Valley, California*, 1992

FIGURES



LEGEND

UPPER COACHELLA VALLEY GROUNDWATER SUBBASIN BOUNDARIES

FAULTS

INDIO HILLS (LOW PERMEABILITY)

NOTE:

THE MANAGEMENT AREAS WITHIN THE UPPER COACHELLA VALLEY GROUNDWATER BASIN ARE DEFINED BY THE SUBBASIN BOUNDARIES SHOWN HEREON FOR THE WEST WHITEWATER RIVER SUBBASIN AND MISSION CREEK SUBBASIN MANAGEMENT AREAS.

MAP SOURCE:

2016 GOOGLE EARTH PRO (AERIAL PHOTOGRAPHY), MISSION CREEK AND GARNET HILL SUBBASINS WATER MANAGEMENT PLAN FINAL REPORT, JANUARY 2013 (SUBBASIN BOUNDARIES)

SCALE: 1"=3 MILES

DESERT WATER AGENCY
GROUNDWATER REPLENISHMENT AND ASSESSMENT PROGRAM

2024–2025

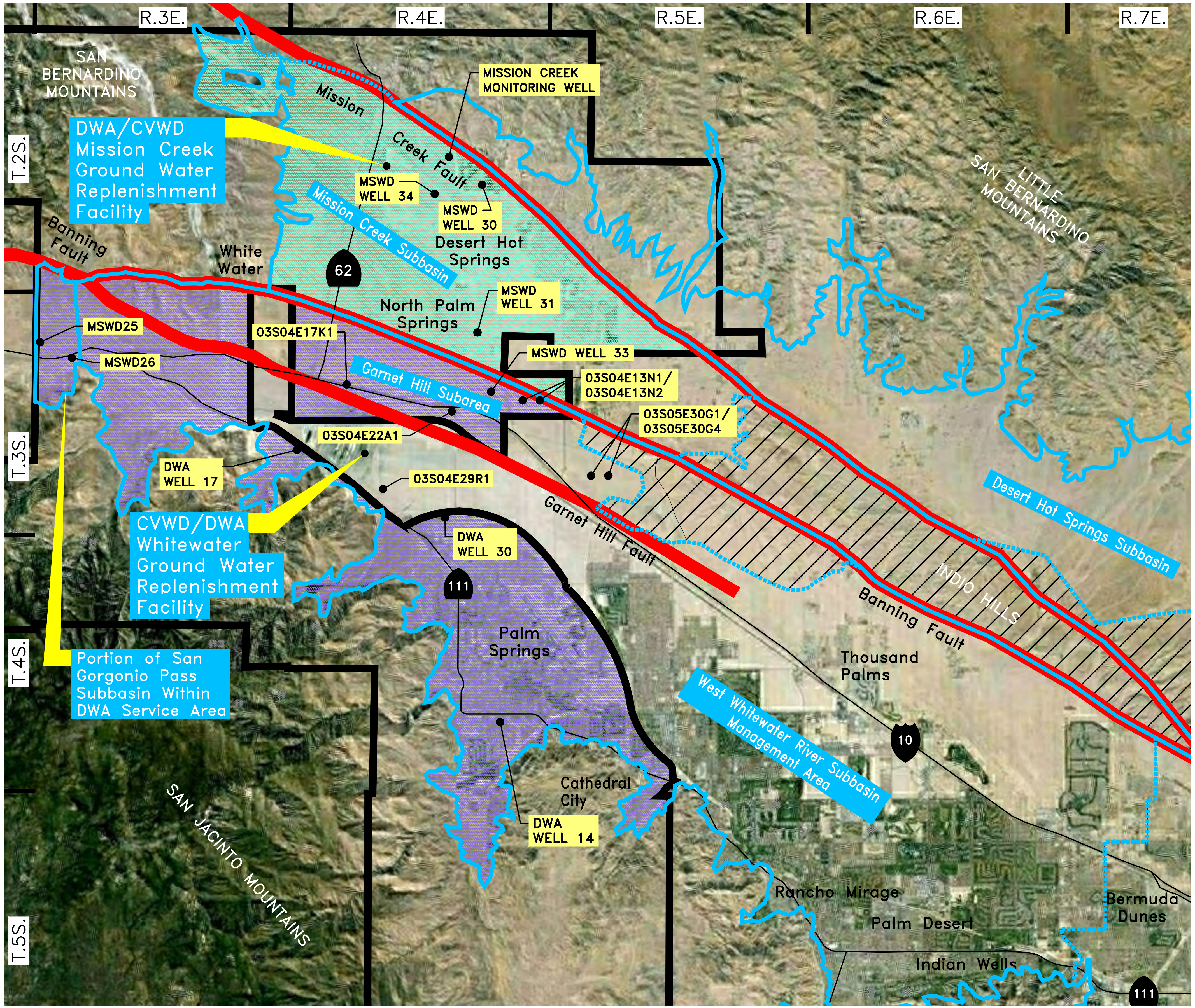
GROUNDWATER SUBBASIN MAP SHOWING PORTION OF UPPER COACHELLA VALLEY GROUNDWATER BASIN AND SUBBASINS AND MANAGEMENT AREAS THEREIN

Figure 1

DESERT WATER AGENCY
GROUNDWATER REPLENISHMENT AND ASSESSMENT PROGRAM

2024–2025

GROUNDWATER SUBBASIN MAP
SHOWING
GROUNDWATER RECHARGE AREAS OF BENEFIT
(EITHER DIRECT OR INDIRECT)
AND
SELECTED GROUNDWATER WELLS



LEGEND

- DWA BOUNDARY
- UPPER COACHELLA VALLEY GROUNDWATER SUBBASIN BOUNDARIES
- FAULTS

UPPER COACHELLA VALLEY GROUNDWATER SUBBASIN AREAS OF BENEFIT WITHIN DWA

- DWA WHITEWATER RIVER SUBBASIN AREA OF BENEFIT
- DWA MISSION CREEK SUBBASIN AREA OF BENEFIT
- INDIO HILLS (LOW PERMEABILITY)
- GROUNDWATER WELL

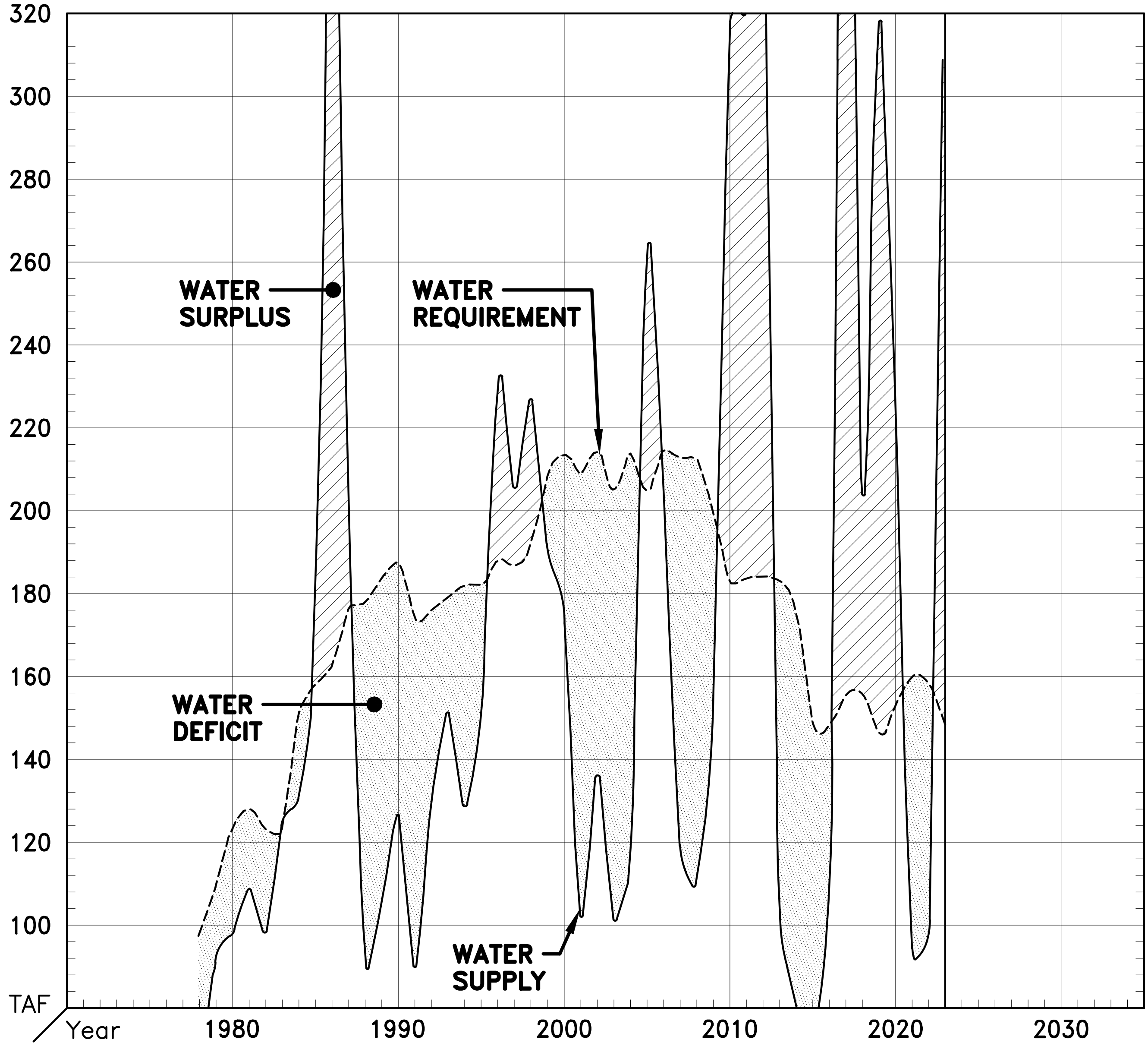
MAP SOURCE:

2016 GOOGLE EARTH PRO (AERIAL PHOTOGRAPHY), MISSION CREEK AND GARNET HILL SUBBASINS WATER MANAGEMENT PLAN FINAL REPORT, JANUARY 2013 (SUBBASIN/SUBAREA BOUNDARIES)

SCALE: 1"=2.5 MILES

Figure 2

\101\33p48\Drawings\Figures\101-33p48_f2.dwg



YEARS	1980	1990	2000	2010	2023
NET INFLOW (ACRE FEET)	98,000	125,800	174,500	317,100	370,556
NONCONSUMPTIVE RETURN	43,200	65,700	74,500	64,300	52,000
NET ARTIFICIAL RECHARGE	25,800	31,100	71,000	223,800	309,400
NET NATURAL INFLOW	29,000	29,000	29,000	29,000	9,156

101−33p48_f3.dwg

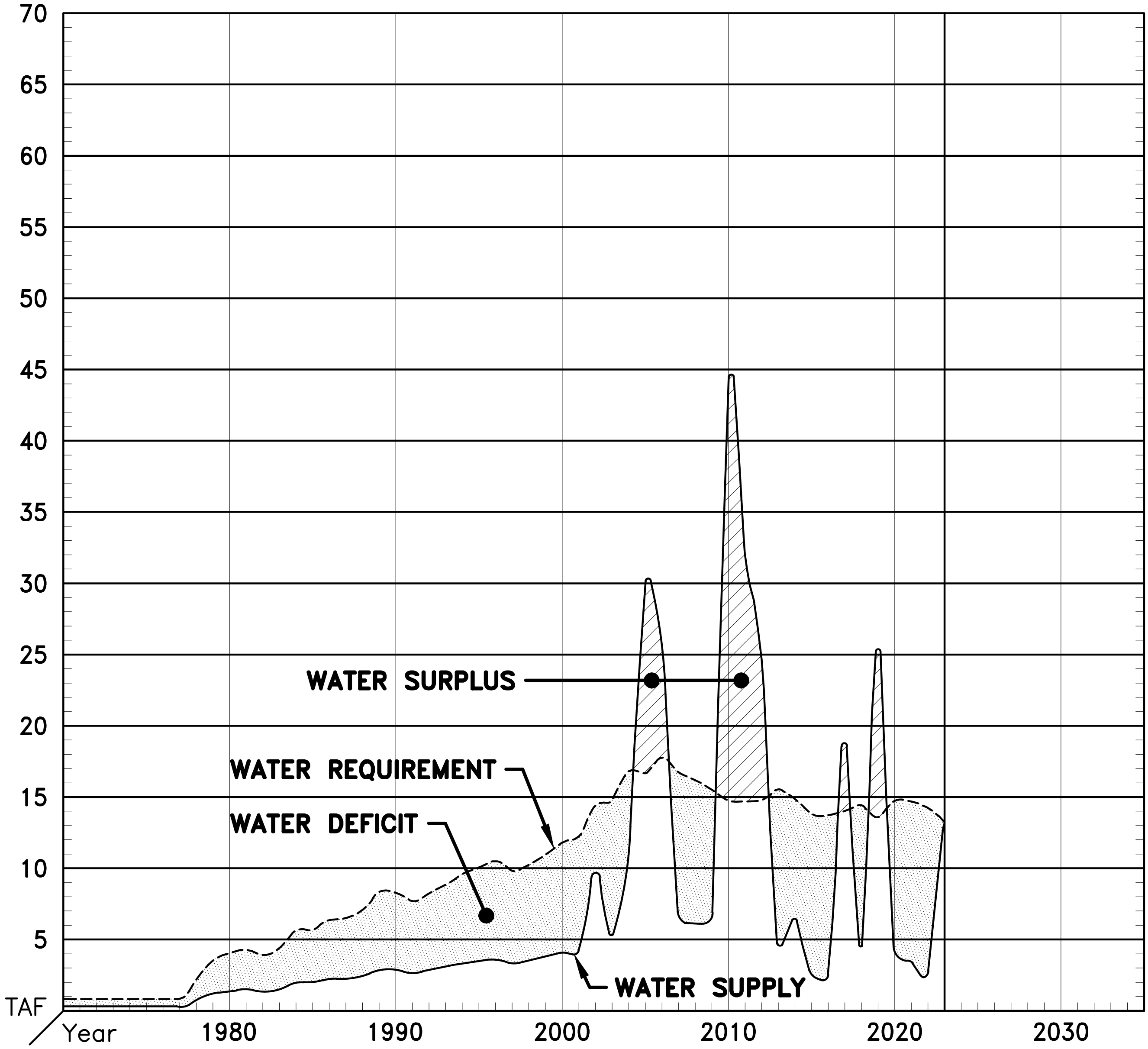
KRIEGER & STEWART
Engineering Consultants
3602 University Avenue • Riverside, CA 92501
www.kriegerandstewart.com • 951 · 684 · 6900

DESERT WATER AGENCY

HISTORIC
WATER REQUIREMENTS AND WATER SUPPLIES FOR
THE WEST WHITEWATER RIVER SUBBASIN MANAGEMENT AREA

FIGURE
3

SCALE: N/A DATE: 06/06/24 DRAWN BY: SPK CHECKED BY: TRR W.O.: 101−33.48



YEARS	1980	1990	2000	2010	2023
NET INFLOW (ACRE FEET)	1,400	2,900	4,100	36,100	13,200
NONCONSUMPTIVE RETURN	1,400	2,900	4,100	3,600	4,900
NET ARTIFICIAL RECHARGE	0	0	0	32,500	5,200
NET NATURAL INFLOW	–	–	–	–	3,100

KRIEGER & STEWART
Engineering Consultants
3602 University Avenue • Riverside, CA 92501
www.kriegerandstewart.com • 951 · 684 · 6900

DESERT WATER AGENCY

HISTORIC WATER REQUIREMENTS AND WATER SUPPLIES FOR THE MISSION CREEK SUBBASIN MANAGEMENT AREA

FIGURE 4

SCALE: N/A DATE: 06/06/24 DRAWN BY: SPK CHECKED BY: TRR W.O.: 101–33.48

TABLES

TABLE 0

DESERT WATER AGENCY

MAXIMUM SWP ALLOCATIONS AND PROBABLE SWP DELIVERIES TO MWD

2024/2025

Contracts and Transfers

Origin	Effective Date	Maximum Allocation (1) CVWD	Maximum Allocation (1) DWA	Maximum Allocation (1) Total	Probable Delivery (2) CVWD	Probable Delivery (2) DWA	Probable Delivery (2) Total
Original	1990	23,100	38,100	61,200	10,395	17,145	27,540
TLBWSD	2005	9,900	0	9,900	4,455	0	4,455
MWD	2005	88,100	11,900	100,000	39,645	5,355	45,000
KCWA	2010	12,000	4,000	16,000	5,400	1,800	7,200
TLBWSD	2010	5,250	1,750	7,000	2,363	788	3,151
Total		138,350	55,750	194,100	62,258	25,088	87,346
Percent		71.3%	28.7%		71.3%	28.7%	

Notes:

(1) The Maximum Allocation is the currently existing Table A Water Allocation per Appendix B, Table B-4 with no reliability factors applied.

(2) The Probable Delivery is based on estimated long-term reliability of 45% of the Maximum Table A Water Allocation.

TABLE 1
DESERT WATER AGENCY
HISTORIC REPORTED WATER PRODUCTION FOR REPLENISHMENT ASSESSMENT FOR
DESERT WATER AGENCY AND COACHELLA VALLEY WATER DISTRICT
WEST WHITEWATER RIVER SUBBASIN (WWR) AND MISSION CREEK SUBBASIN (MC) MANAGEMENT AREAS

	CVWD Production		DWA Production					Combined CVWD & DWA Production					WWR Production Percentages		Combined WWR, MC Production Percentages		MC Production Percentages	
	GWE		GWE		SWD	Total	Total	WWR			MC							
	WWR	MC	WWR	MC	WWR	WWR	Comb	GWE	SWD	Total	Total	Comb						
Year	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	CVWD	DWA	CVWD	DWA	CVWD	DWA
1973										84,008 *	542 *							
1974										84,008 *	542 *							
1975										84,008 *	542 *							
1976	69,700		25,100		7,400	32,500	32,500	94,800	7,400	102,200	542 *	102,742	68.20%	31.80%				
1977	67,696		25,660		7,562	33,222	33,222	93,356	7,562	100,918	542 *	101,460	67.08%	32.92%				
1978	61,172		28,100		8,530	36,630	36,630	89,272	8,530	97,802	2,253 *	100,055	62.55%	37.45%				
1979	72,733		29,393		7,801	37,194	37,194	102,126	7,801	109,927	3,565 *	113,492	66.16%	33.84%				
1980	84,142		32,092		7,303	39,395	39,395	116,234	7,303	123,537	4,021 *	127,558	68.11%	31.89%				
1981	86,973		33,660		7,822	41,482	41,482	120,633	7,822	128,455	4,299 *	132,754	67.71%	32.29%				
1982	83,050		33,382		6,512	39,894	39,894	116,432	6,512	122,944	3,932 *	126,876	67.55%	32.45%				
1983	84,770		33,279		6,467	39,746	39,746	118,049	6,467	124,516	4,421 *	128,937	68.08%	31.92%				
1984	104,477		38,121		7,603	45,724	45,724	142,598	7,603	150,201	5,655 *	155,856	69.56%	30.44%				
1985	111,635		39,732		7,143	46,875	46,875	151,367	7,143	158,510	5,707 *	164,217	70.43%	29.57%				
1986	115,185		40,965		6,704	47,669	47,669	156,150	6,704	162,854	6,437 *	169,291	70.73%	29.27%				
1987	125,229		44,800		5,644	50,444	50,444	170,029	5,644	175,673	6,717 *	182,390	71.29%	28.71%				
1988	125,122		47,593		5,246	52,839	52,839	172,715	5,246	177,961	7,136 *	185,097	70.31%	29.69%				
1989	129,957		47,125		5,936	53,061	53,061	177,082	5,936	183,018	8,296 *	191,314	71.01%	28.99%				
1990	136,869		45,396		5,213	50,609	50,609	182,265	5,213	187,478	8,302 *	195,780	73.01%	26.99%				
1991	126,360		42,729		4,917	47,646	47,646	169,089	4,917	174,006	7,778 *	181,784	72.62%	27.38%				
1992	128,390		42,493		4,712	47,205	47,205	170,883	4,712	175,595	8,375 *	183,970	73.12%	26.88%				
1993	131,314		41,188		6,363	47,551	47,551	172,502	6,363	178,865	8,861 *	187,726	73.42%	26.58%				
1994	134,223		42,115		5,831	47,946	47,946	176,338	5,831	182,169	9,676 *	191,845	73.68%	26.32%				
1995	134,580		41,728		5,809	47,537	47,537	176,308	5,809	182,117	10,102 *	192,219	73.90%	26.10%				
1996	137,410		45,342		5,865	51,207	51,207	182,752	5,865	188,617	10,562 *	199,179	72.85%	27.15%				
1997	137,406		43,658		5,626	49,284	49,284	181,064	5,626	186,690	9,899 *	196,589	73.60%	26.40%				
1998	142,620		41,385		7,545	48,930	48,930	184,005	7,545	191,550	10,291 *	201,841	74.46%	25.54%				
1999	157,148		44,350		6,941	51,291	51,291	201,498	6,941	208,439	10,974 *	219,413	75.39%	24.61%				
2000	161,834		44,458		6,297	50,755	50,755	206,292	6,297	212,589	11,838 *	224,427	76.13%	23.87%				
2001	159,767		44,112		4,928	49,040	49,040	203,879	4,928	208,807	12,350 *	221,157	76.51%	23.49%				
2002	163,185	4,371	46,004	9,597	4,221	50,225	59,822	209,189	4,221	213,410	13,968	227,378	76.47%	23.53%	73.69%	26.31%	31.29%	68.71%
2003	156,185	4,425	43,463	10,073	4,627	48,090	58,163	199,648	4,627	204,275	14,498	218,773	76.46%	23.54%	73.41%	26.59%	30.52%	69.48%
2004	159,849	4,628	48,093	11,920	4,758	52,851	64,771	207,942	4,758	212,700	16,548	229,248	75.15%	24.85%	71.75%	28.25%	27.97%	72.03%
2005	153,462	4,247	46,080	12,080	4,799	50,879	62,959	199,542	4,799	204,341	16,327	220,668	75.10%	24.90%	71.47%	28.53%	26.01%	73.99%
2006	160,239	4,757	48,967	12,608	4,644	53,611	66,219	209,206	4,644	213,850	17,365	231,215	74.93%	25.07%	71.36%	28.64%	27.39%	72.61%
2007	157,487	4,547	50,553	11,862	3,490	54,043	65,905	208,040	3,490	211,530	16,409	227,939	74.45%	25.55%	71.09%	28.91%	27.71%	72.29%
2008	161,695	4,543	45,735	11,232	3,593	49,328	60,560	207,430	3,593	211,023	15,775	226,798	76.62%	23.38%	73.30%	26.70%	28.80%	71.20%
2009	155,793	4,813	42,270	10,295	1,443	43,713	54,008	198,063	1,443	199,506	15,108	214,614	78.09%	21.91%	74.83%	25.17%	31.86%	68.14%
2010	141,481	4,484	39,640	9,820	1,582	41,222	51,042	181,121	1,582	182,703	14,304	197,007	77.44%	22.56%	74.09%	25.91%	31.35%	68.65%
2011	141,028	4,653	40,568	9,607	1,724	42,292	51,899	181,596	1,724	183,320	14,260	197,580	76.93%	23.07%	73.73%	26.27%	32.63%	67.37%
2012	141,379	4,582	39,684	9,634	2,222	41,906	51,540	181,063	2,222	183,285	14,216	197,501	77.14%	22.86%	73.90%	26.10%	32.23%	67.77%
2013	143,108	4,415	37,932	10,341	1,802	39,734	50,075	181,040	1,802	182,842	14,756	197,598	78.27%	21.73%	74.66%	25.34%	29.92%	67.34%
2014	136,027	4,154	36,611	9,937	1,787	38,398	48,335	172,638	1,787	174,425	14,091	188,516	77.99%	22.01%	74.36%	25.64%	29.48%	70.52%
2015	115,558	4,090	30,666	8,927	1,539	32,205	41,132	146,224	1,539	147,763	13,017	160,780	78.20%	21.80%	74.42%	25.58%	31.42%	68.58%
2016	115,659	4,175	30,705	9,044	2,031	32,736	41,780	146,364	2,031	148,395	13,219	161,614	77.94%	22.06%	74.15%	25.85%	31.58%	68.42%
2017	120,383	4,281	33,164	9,250	1,996	35,160	44,410	153,547	1,996	155,543	13,531	169,074	77.40%	22.60%	73.73%	26.27%	31.64%	68.36%
2018	119,250	4,175	34,038	9,695	1,260 **	35,298	44,993	153,288	1,260	154,548	13,870	168,418	77.16%	22.84%	73.28%	26.72%	30.10%	69.90%
2019	113,907	3,993	29,779	9,142	1,916	31,695	40,837	143,686	1,916	145,602	13,135	158,737	78.23%	21.77%	74.27%	25.73%	30.40%	69.60%
2020	117,825	4,655	33,786	9,589	1,454	35,240	44,829	151,611	1,454	153,065	14,244	167,309	76.98%	23.02%	73.21%	26.79%	32.68%	67.32%
2021	122,473	4,602	36,150	9,625	682	36,832	46,457	158,623	682	159,305	14,227	173,532	76.88%	23.12%	73.23%	26.77%	32.35%	67.65%
2022	122,108	4,402	34,977	9,361	599	35,576	44,937	157,085	599	157,684	13,763	171,447	77.44%	22.56%	73.79%	26.21%	31.98%	68.02%
2023	113,603	4,030	33,208	8,742	566	33,774	42,516	146,812	566	147,377	12,772	160,149	77.08%	22.92%	73.45%	26.55%	31.56%	68.44%

* Estimated
** Corrected

NOTES:
Includes assessable production and reported production from minimal producers
Cumulative CVWD and DWA West Whitewater River Subbasin Management Area production 2019 through 2023: 763,033 AF
Cumulative CVWD and DWA Mission Creek Subbasin Management Area production 2019 through 2023: 68,141 AF
Average annual CVWD and DWA West Whitewater River Subbasin Management Area production 2019 through 2023 (rounded): 152,610 AF
Average annual CVWD and DWA Mission Creek Subbasin Management Area production 2019 through 2023 (rounded): 13,630 AF
Average annual DWA West Whitewater River Subbasin Area of Benefit production 2019 through 2023 (rounded): 34,880 AF
Average annual DWA Mission Creek Subbasin Area of Benefit production 2019 through 2023(rounded): 9,290 AF
Average DWA West Whitewater River Subbasin Area of Benefit production percentage 2019 through 2023: 22.68%
Average DWA Mission Creek Subbasin Area of Benefit production percentage 2019 through 2023: 68.21%

ABBREVIATIONS:
GWE = Groundwater Extractions
SWD = Surface Water Diversions
COMB = Combined
WWR = West Whitewater River Subbasin Management Area
MC = Mission Creek Subbasin Management Area

TABLE 2
DESERT WATER AGENCY
GROUNDWATER REPLENISHMENT AND ASSESSMENT PROGRAM
ESTIMATED WEST WHITEWATER RIVER SUBBASIN AND MISSION CREEK SUBBASIN AREAS OF BENEFIT
WATER PRODUCTION AND ESTIMATED GROUNDWATER REPLENISHMENT ASSESSMENTS
2024/2025

ESTIMATED COMBINED AREA OF BENEFIT
ASSESSABLE WATER PRODUCTION AND GROUNDWATER REPLENISHMENT ASSESSMENTS

Area of Benefit	Estimated Assessable Water Production AF	Groundwater Replenishment Assessment Rate $/AF	Groundwater Replenishment Assessment $	Percent
West Whitewater River Subbasin AOB	32,420	$215.00	$6,970,300	79%
Mission Creek Subbasin AOB	8,750	$215.00	$1,881,250	21%
Combined AOBs	41,170		$8,851,550	100%

ESTIMATED WEST WHITEWATER RIVER SUBBASIN AND MISSION CREEK SUBBASIN AREAS OF BENEFIT
WATER PRODUCTION AND GROUNDWATER REPLENISHMENT ASSESSMENTS

	2023 Water Production (1)			Estimated 2024/2025 Assessable Water Production	Estimated Groundwater Replenishment Assessment @ $215/AF	
Producer	Groundwater Extraction AF	Surface Water Diversion AF	Combined Water Production AF	AF[2]	$	Percent
West Whitewater River Subbasin AOB						
Desert Water Agency (Incl. Chino, Falls, Snow Creeks)	30,600.46	565.88	31,166.35	31,170	$6,701,550	96.14%
Agua Caliente Band of Mission Indians [3]	0.19	0.00	0.19	0	$0	0.00%
Caltrans Rest Stop	9.41	0.00	9.41	10	$2,150	0.03%
Indian Canyons Golf Resort [4]	1,356.00	0.00	1,356.00	0	$0	0.00%
Desert Oasis Golf Management - Welk Resort	281.47	0.00	281.47	280	$60,200	0.86%
Los Compadres	51.44	0.00	51.44	50	$10,750	0.15%
Mission Springs Water District (Wells 25 & 25A and 26 & 26A in San Gorgonio River Subbasin)	213.56	0.00	213.56	210	$45,150	0.65%
Seven Lakes Country Club	176.85	0.00	176.85	180	$38,700	0.56%
Escena	58.57	0.00	58.57	60	$12,900	0.19%
Miralon	174.28	0.00	174.28	170	$36,550	0.52%
Palm Springs West	0.00	0.00	0.00	0	$0	0.00%
Mission Springs Water District (Well 33)	275.35	0.00	275.35	280	$60,200	0.86%
Indigo Power Plant	10.88	0.00	10.88	10	$2,150	0.03%
Subtotal	33,208.45	565.88	33,774.34	32,420	$6,970,300	100.00%
Mission Creek Subbasin AOB						
Mission Springs Water District	7,064.53	0.00	7,064.53	7,060	$1,517,900	80.69%
Hidden Springs Country Club	278.24	0.00	278.24	280	$60,200	3.20%
Mission Lakes Country Club	797.46	0.00	797.46	800	$172,000	9.14%
Sands RV Resort	306.28	0.00	306.28	310	$66,650	3.54%
CPV-Sentinel	295.12	0.00	295.12	300	$64,500	3.43%
Subtotal	8,741.62	0.00	8,741.62	8,750	$1,881,250	100.00%
Total	41,950.07	565.88	42,515.95	41,170	$8,851,550	----

(1) 2023 Metered water production, except for Exempt Production and Estimated Production.
(2) Based on 2023 production, all rounded to nearest 10 AF.
(3) Estimated pumpage based on 2021 pumpage. This facility is currently not being assessed for groundwater replenishment, pending resolution of a lawsuit challenging DWA's authority to impose the replenishment assessment charge on the Agua Caliente Band of Cahuilla Indians.
(4) Estimated pumpage based on 2019 recycled water usage. This facility is currently not being assessed for groundwater replenishment, pending resolution of a lawsuit challenging DWA's authority to impose the replenishment assessment charge on the Agua Caliente Band of Cahuilla Indians.

TABLE 3
COACHELLA VALLEY WATER DISTRICT
APPLICABLE STATE WATER PROJECT CHARGES[1]

Year	Maximum Table A Water Allocation AF	Probable Table A Water Delivery[2] AF	Delta Water Charge Amount[3] $	Delta Water Charge Unit $/AF	Variable Transportation Charge Amount[4] $	Variable Transportation Charge Unit $/AF	Off-Aqueduct Power Charge Amount[5] $	Off-Aqueduct Power Charge Unit $/AF	CVWD Applicable Table A Charges Amount $	CVWD Applicable Table A Charges Unit[6] $/AF
2018	138,350	62,258	9,472,825	68.47	10,911,337	175.26	37,977	0.61	20,422,139	328.02
2019	138,350	62,258	9,694,185	70.07	9,854,819	158.29	132,610	2.13	19,681,613	316.13
2020	138,350	62,258	11,289,360	81.60	10,865,266	174.52	41,090	0.66	22,195,716	356.51
2021	138,350	62,258	11,835,843	85.55	18,132,020	291.24	158,758	2.55	30,126,620	483.90
2022	138,350	62,258	14,042,525	101.50	15,910,654	255.56	1,039,709	16.70	30,992,888	497.81
2023	138,350	62,258	12,801,526	92.53	14,474,985	232.50	183,661	2.95	27,460,172	441.07
2024	138,350	62,258	12,653,491	91.46	13,338,154	214.24	84,048	1.35	26,075,693	418.83
2025	138,350	62,258	13,004,900	94.00	12,059,375	193.70	143,193	2.30	25,207,468	404.89
2026	138,350	62,258	13,696,650	99.00	13,251,615	212.85	115,800	1.86	27,064,065	434.71
2027	138,350	62,258	14,526,750	105.00	13,380,489	214.92	24,903	0.40	27,932,143	448.65
2028	138,350	62,258	15,218,500	110.00	13,514,344	217.07	22,413	0.36	28,755,257	461.87
2029	138,350	62,258	16,186,950	117.00	13,650,067	219.25	21,790	0.35	29,858,807	479.60
2030	138,350	62,258	16,740,350	121.00	13,785,166	221.42	12,452	0.20	30,537,968	490.51
2031	138,350	62,258	17,985,500	130.00	13,922,757	223.63	0	0.00	31,908,257	512.52
2032	138,350	62,258	18,953,950	137.00	14,062,214	225.87	0	0.00	33,016,164	530.31
2033	138,350	62,258	20,060,750	145.00	14,202,295	228.12	0	0.00	34,263,045	550.34
2034	138,350	62,258	21,167,550	153.00	14,344,866	230.41	0	0.00	35,512,416	570.41
2035	138,350	62,258	22,274,350	161.00	14,488,059	232.71	0	0.00	36,762,409	590.48

Notes:

(1) As set forth in CDWR Bulletin 132-23, Appendix B (Appendix B).
(2) Probable Table A water delivery is based on 0.45 reliability of CVWD original allocation augmented by TLBWSD, KCWA, and MWD transfers
(3) Amount is based on maximum Table A water allocation and Delta Water Charge per Table B-20 (A & B) of Appendix B. From 2018 through 2035, amount is based on State Water Contractors estimates.
(4) Amount is based on probable Table A water delivery and applicable Variable Transportation Unit Charge per Table B-17 of Appendix B.
(5) Amount is based on probable Table A water delivery and Off-Aqueduct Power Unit Charge derived by dividing data in Table B-16B by data in Table B-5B of Appendix B.
(6) Amount of applicable Table A charges divided by probable Table A water delivery.

TABLE 4
DESERT WATER AGENCY
APPLICABLE STATE WATER PROJECT CHARGES[1]

Year	Maximum Table A Water Allocation AF	Probable Table A Water Delivery[2] AF	Delta Water Charge Amount[3] $	Delta Water Charge Unit $/AF	Variable Transportation Charge Amount[4] $	Variable Transportation Charge Unit $/AF	Off-Aqueduct Power Charge Amount[5] $	Off-Aqueduct Power Charge Unit $/AF	DWA Applicable Table A Charges Amount $	DWA Applicable Table A Charges Unit[6] $/AF
2018	55,750	25,088	3,817,203	68.47	4,396,923	175.26	36,879	1.47	8,251,005	328.88
2019	55,750	25,088	3,906,403	70.07	3,971,180	158.29	115,154	4.59	7,992,736	318.59
2020	55,750	25,088	4,549,200	81.60	4,378,358	174.52	43,653	1.74	8,971,211	357.59
2021	55,750	25,088	4,769,413	85.55	7,306,629	291.24	276,219	11.01	12,352,261	492.36
2022	55,750	25,088	5,658,625	101.50	6,411,489	255.56	921,482	36.73	12,991,597	517.84
2023	55,750	25,088	5,158,548	92.53	5,832,960	232.50	205,722	8.20	11,197,229	446.32
2024	55,750	25,088	5,098,895	91.46	5,374,853	214.24	78,776	3.14	10,552,524	420.62
2025	55,750	25,088	5,240,500	94.00	4,859,546	193.70	135,224	5.39	10,235,270	407.97
2026	55,750	25,088	5,519,250	99.00	5,339,981	212.85	113,649	4.53	10,972,879	437.38
2027	55,750	25,088	5,853,750	105.00	5,391,913	214.92	24,335	0.97	11,269,998	449.22
2028	55,750	25,088	6,132,500	110.00	5,445,852	217.07	21,576	0.86	11,599,928	462.37
2029	55,750	25,088	6,522,750	117.00	5,500,544	219.25	21,074	0.84	12,044,368	480.08
2030	55,750	25,088	6,745,750	121.00	5,554,985	221.42	12,042	0.48	12,312,777	490.78
2031	55,750	25,088	7,247,500	130.00	5,610,429	223.63	0	0.00	12,857,929	512.51
2032	55,750	25,088	7,637,750	137.00	5,666,627	225.87	0	0.00	13,304,377	530.31
2033	55,750	25,088	8,083,750	145.00	5,723,075	228.12	0	0.00	13,806,825	550.34
2034	55,750	25,088	8,529,750	153.00	5,780,526	230.41	0	0.00	14,310,276	570.40
2035	55,750	25,088	8,975,750	161.00	5,838,228	232.71	0	0.00	14,813,978	590.48

Notes:

(1) As set forth in CDWR Bulletin 132-23, Appendix B (Appendix B).

(2) Probable Table A water delivery is based on 0.45 reliability of DWA original allocation augmented by TLBWSD, KCWA, and MWD transfers

(3) Amount is based on maximum Table A water allocation and Delta Water Charge per Table B-20 (A & B) of Appendix B. From 2018 through 2035, amount is based on State Water Contractors estimates.

(4) Amount is based on probable Table A water delivery and applicable Variable Transportation Unit Charge per Table B-17 of Appendix B.

(5) Amount is based on probable Table A water delivery and Off-Aqueduct Power Unit Charge derived by dividing data in Table B-16B by data in Table B-5B of Appendix B.

(6) Amount of applicable Table A charges divided by probable Table A water delivery.

TABLE 5
DESERT WATER AGENCY
ESTIMATED ALLOCATED STATE WATER PROJECT CHARGES FOR TABLE A WATER
(PROPORTIONED APPLICABLE CHARGES)[1]

Year	CVWD Applicable Table A Charges[2] $	DWA Applicable Table A Charges[3] $	Combined Applicable Table A Charges $	CVWD Allocated Table A Charges $	DWA Allocated Table A Charges $	DWA Incremental Increase/(Decrease) $	DWA Incremental Increase/(Decrease) %
2018	20,422,139	8,251,005	28,673,144	21,060,424	7,612,720		
2019	19,681,613	7,992,736	27,674,349	20,326,809	7,347,540	(265,180)	(3)
2020	22,195,716	8,971,211	31,166,927	22,892,108	8,274,819	927,279	13
2021	30,126,620	12,352,261	42,478,881	31,200,738	11,278,143	3,003,324	36
2022	30,992,888	12,991,597	43,984,485	32,306,604	11,677,881	399,738	4
2023	27,460,172	11,197,229	38,657,401	28,393,861	10,263,540	(1,414,341)	(12)
2024	26,075,693	10,552,524	36,628,218	26,903,426	9,724,792	(538,748)	(5)
2025	25,207,468	10,235,270	35,442,738	26,032,691	9,410,047	(314,745)	(3)
2026	27,064,065	10,972,879	38,036,945	27,938,136	10,098,809	688,762	7
2027	27,932,143	11,269,998	39,202,141	28,793,972	10,408,168	309,359	3
2028	28,755,257	11,599,928	40,355,185	29,640,883	10,714,302	306,134	3
2029	29,858,807	12,044,368	41,903,175	30,777,882	11,125,293	410,991	4
2030	30,537,968	12,312,777	42,850,745	31,473,872	11,376,873	251,580	2
2031	31,908,257	12,857,929	44,766,186	32,880,764	11,885,422	508,549	4
2032	33,016,164	13,304,377	46,320,541	34,022,437	12,298,104	412,682	3
2033	34,263,045	13,806,825	48,069,870	35,307,319	12,762,550	464,446	4
2034	35,512,416	14,310,276	49,822,692	36,594,767	13,227,925	465,375	4
2035	36,762,409	14,813,978	51,576,388	37,882,857	13,693,531	465,606	4

Notes:
(1) Proportioned in accordance with 2023 Water Management Area production percentages; CVWD is responsible for 73.45% and DWA is responsible for 26.55% of total combined production for the Whitewater River and Mission Creek Subbasins (see **Table 1**).
(2) From Table 3.
(3) From Table 4.

TABLE 6
DESERT WATER AGENCY
PROJECTED EFFECTIVE REPLENISHMENT ASSESSMENT RATES
PURSUANT TO WATER MANAGEMENT AGREEMENTS BETWEEN
COACHELLA VALLEY WATER DISTRICT AND DESERT WATER AGENCY

Year	DWA Allocated Table A Charges [1] $	Estimated Assessable Production[2] AF	Estimated Effective Table A Assessment Rate[3] Fiscal Year $/AF	Table A Assessment Rate $/AF
2019/2020	7,811,180	45,360	172.20	172.00
2020/2021	9,776,481	40,830	239.44	239.00
2021/2022	11,478,012	44,830	256.03	256.00
2022/2023	10,970,711	45,090	243.31	243.00
2023/2024	9,994,166	43,560	229.43	229.00
2024/2025 [4]	9,567,420	41,170	232.39	232.00
2025/2026 [4]	9,909,108	46,374	213.68	214.00
2026/2027 [4]	10,253,489	46,475	220.62	221.00
2027/2028 [4]	10,561,235	46,579	226.74	227.00
2028/2029 [4]	10,919,798	46,696	233.85	234.00
2029/2030 [4]	11,251,083	46,928	239.75	240.00
2030/2031 [4]	11,631,148	47,021	247.36	247.00
2031/2032 [4]	12,091,763	46,561	259.70	260.00
2032/2033 [4]	12,530,327	46,103	271.79	272.00
2033/2034 [4]	12,995,238	45,657	284.63	285.00
2034/2035 [4]	13,460,728	45,327	296.97	297.00

Notes:

(1) From **Table 5**.

(2) Projections based on model runs for Coachella Valley 2010 Water Management Plan, 2014 Water Management Plan Status Update, and 2022 SGMA GSP Updates.

(3) Necessary to pay DWA's estimated (projected) Allocated Table A Charges.

(4) Projected

TABLE 7
DESERT WATER AGENCY
WEST WHITEWATER RIVER SUBBASIN, MISSION CREEK SUBBASIN, AND GARNET HILL SUBBASIN AREAS OF BENEFIT
HISTORIC AND PROPOSED REPLENISHMENT ASSESSMENT RATES

						Assessment Rate					
						WWR		MC		GH [14]	
Fiscal Year	SWP Table A Allocation[1] $/AF	Net Surplus Water Costs $/AF	Admin and Operational Costs [20] $	Admin and Operational Costs [20] $/AF	Total RAC Costs $/AF	Discretionary Deferral and Recovery[3] $/AF	Total[4] $/AF	Discretionary Deferral and Recovery[3] $/AF	Total[4] $/AF	Discretionary Deferral and Recovery[3] $/AF	Total[4] $/AF
78/79	6.81			--	--	0.00	6.81				
79/80	9.00			0.00	9.00	0.00	9.00				
80/81	9.50			0.00	9.50	0.00	9.50				
81/82	10.50			0.00	10.50	0.00	10.50				
82/83	21.00			0.00	21.00	0.00	21.00				
83/84	36.50			0.00	36.50	0.00	36.50				
84/85	37.50			0.00	37.50	0.00	37.50				
85/86	31.00			0.00	31.00	0.00	31.00				
86/87	21.00			0.00	21.00	0.00	21.00				
87/88	22.50			0.00	22.50	0.00	22.50				
88/89	20.00			0.00	20.00	0.00	20.00				
89/90	23.50			0.00	23.50	0.00	23.50				
90/91	26.00			0.00	26.00	0.00	26.00				
91/92	31.75			0.00	31.75	0.00	31.75				
92/93	31.75			0.00	31.75	0.00	31.75				
93/94	31.75			0.00	31.75	0.00	31.75				
94/95	31.75			0.00	31.75	0.00	31.75				
95/96	31.75			0.00	31.75	0.00	31.75				
96/97	31.75			0.00	31.75	0.00	31.75				
97/98	31.75			0.00	31.75	0.00	31.75				
98/99	31.75			0.00	31.75	0.00	31.75				
99/00	31.75			0.00	31.75	0.00	31.75				
00/01	33.00			0.00	33.00	0.00	33.00				
01/02	33.00			0.00	33.00	0.00	33.00				
02/03	35.00			0.00	35.00	0.00	35.00				
03/04	35.00			0.00	35.00	0.00	35.00	0.00	35.00		
04/05	34.00			0.00	34.00	11.00	34.00	12.00	34.00		
05/06	38.00			0.00	38.00	12.00	38.00	12.00	38.00		
06/07	51.00			0.00	51.00	12.00	51.00	12.00	51.00		
07/08	83.00			0.00	83.00	(34.00)	63.00	(34.00)	49.00		
08/09	65.00			0.00	65.00	(6.00)	72.00	(6.00)	59.00		
09/10	72.00			0.00	72.00	0.00	72.00	0.00	72.00		
10/11	99.00			0.00	99.00	(17.00)	82.00	(17.00)	82.00		
11/12	115.00			0.00	115.00	(33.00)	82.00	(33.00)	82.00		
12/13	117.00			0.00	117.00	(25.00)	92.00	(25.00)	92.00		
13/14	111.00			0.00	111.00	(19.00)	92.00	(19.00)	92.00		
14/15	106.00			0.00	106.00	(4.00)	102.00	(4.00)	102.00		
15/16	112.00			0.00	112.00	(10.00)	102.00	(10.00)	102.00	(10.00)	102.00
16/17	144.00			0.00	144.00	(42.00)	102.00	(42.00)	102.00	(42.00)	102.00
17/18	158.00			0.00	158.00	(38.00)	120.00	(38.00)	120.00	(38.00)	120.00
18/19	196.00			0.00	196.00	(56.00)	140.00	(56.00)	140.00	(56.00)	140.00
19/20	188.00			0.00	188.00	(33.00)	155.00	(33.00)	155.00	(33.00)	155.00
20/21	243.00			0.00	243.00	(78.00)	165.00	(78.00)	165.00	---	--- [14]
21/22	248.00			0.00	248.00	(73.00)	175.00	(73.00)	175.00	---	---
22/23	209.00	5.40	$2,506,436.09	55.59	269.99	(94.99)	175.00	(94.99)	175.00	---	---
23/24	230.00	[18]	$2,584,358.95	59.33	289.33	(94.33)	195.00 [17]	(94.33)	195.00 [17]	---	---
24/25	232.00	[18]	$2,708,408.17	65.79	297.79	(82.79)	215.00 [17]	(82.79)	215.00 [17]	---	---
25/26	232.00	[18]	$2,838,411.77	63.32	295.32	(60.32)	235.00 [17]	(60.32)	235.00 [17]	---	---
26/27	232.00	[18]	$2,974,655.53	66.19	298.19	(43.19)	255.00 [17]	(43.19)	255.00 [17]	---	---
27/28	232.00	[18]	$3,117,439.00	68.97	300.97	(25.97)	275.00 [17]	(25.97)	275.00 [17]	---	---
28/29	234.00	[18]	$3,267,076.07	72.37	306.37	(11.37)	295.00 [17]	(11.37)	295.00 [17]	---	---
29/30	240.00	[18]	$3,423,895.72	75.40	315.40	(0.40)	315.00 [17]	(0.40)	315.00 [17]	---	---
30/31	247.00	[18]	$3,588,242.71	79.07	326.07	3.93	330.00 [17]	3.93	330.00 [17]	---	---
31/32	260.00	[18]	$3,760,478.37	81.97	341.97	3.03	345.00 [17]	3.03	345.00 [17]	---	---
32/33	272.00	[18]	$3,940,981.33	86.48	358.48	1.52	360.00 [17]	1.52	360.00 [17]	---	---
33/34	285.00	[18]	$4,130,148.43	91.88	376.88	3.12	380.00 [17]	3.12	380.00 [17]	---	---
34/35	297.00	[18]	$4,328,395.56	96.94	393.94	1.06	395.00 [17]	1.06	395.00 [17]	---	---
35/36	297.00	[18]	$4,536,158.54	102.96	399.96	0.04	400.00 [17]	0.04	400.00 [17]	---	---
36/37	306.00	[18]	$4,753,894.15	108.07	414.07	0.93	415.00 [17]	0.93	415.00 [17]	---	---

(1) Effective rate necessary to pay DWA's estimated (projected) Allocated Table A Charges. See Table 6.
(2) Administrative and operational costs of importing and recharging water from the Colorado River Aqueduct. Administrative and operational charges for importing water from the State Water Project are not included.
(3) Includes discretionary reductions and charges for recovery of past shortfalls.
(4) Recommended assessment rate based on two components: 1) State Water Project Table A water Allocation, and 2) Other Charges or Costs.
(5) Assessments Estimated are based on applicable assessment rate and estimated assessable production from annual report for that year.
(6) Assessments Levied are based on applicable assessment rate and actual assessable production, except for the previous year, current year, and subsequent years where amounts remain estimated.
(7) Assessments Collected are based on payments made for Assessments Levied, except for the previous year, current year, and subsequent years where amounts remain estimated.
(8) Assessments Delinquent are based on Assessments Levied less payments made.
(9) Cumulative assessment balance to be used for future Delta improvements. Estimates of future assessment rates may need to be adjusted in the future to accommodate unknown charges for expanded State Water Project Facilities.
(10) For 2017/2018 and beyond, Assessments Estimated are based on Proposed Assessment Rate and Estimated Assessable Production.
(11) Assessments Collected are estimated based on first and second quarters of assessment period.
(12) Delinquent assessment is estimated based on first and second quarters of assessment period.
(13) For 2023/2024 and beyond, Payments Made are estimated based on estimated allocated Table A charges.
(14) Starting with 2020/2021, Garnet Hill Subarea is included in West White Water River Subbasin.
(15) Including prior year DWR refunds/adjustments
(16) Existing cumulative deficit in the Replenishment Assessment Account transferred to reserve account(s),
(17) Incremented by $20/Year through 2029/2030, then incremented as necessary to cover Total RAC Costs.
(18) These costs are unpredictable. Projected costs determined using the 2-year historical average with a 4.8% long term CAGR.
(19) Total Payments includes payments for Net Surplus Water Costs (where known) and Operational Costs
(20) Projected costs determined using the 2-year historical average with a 4.8% long term CAGR.

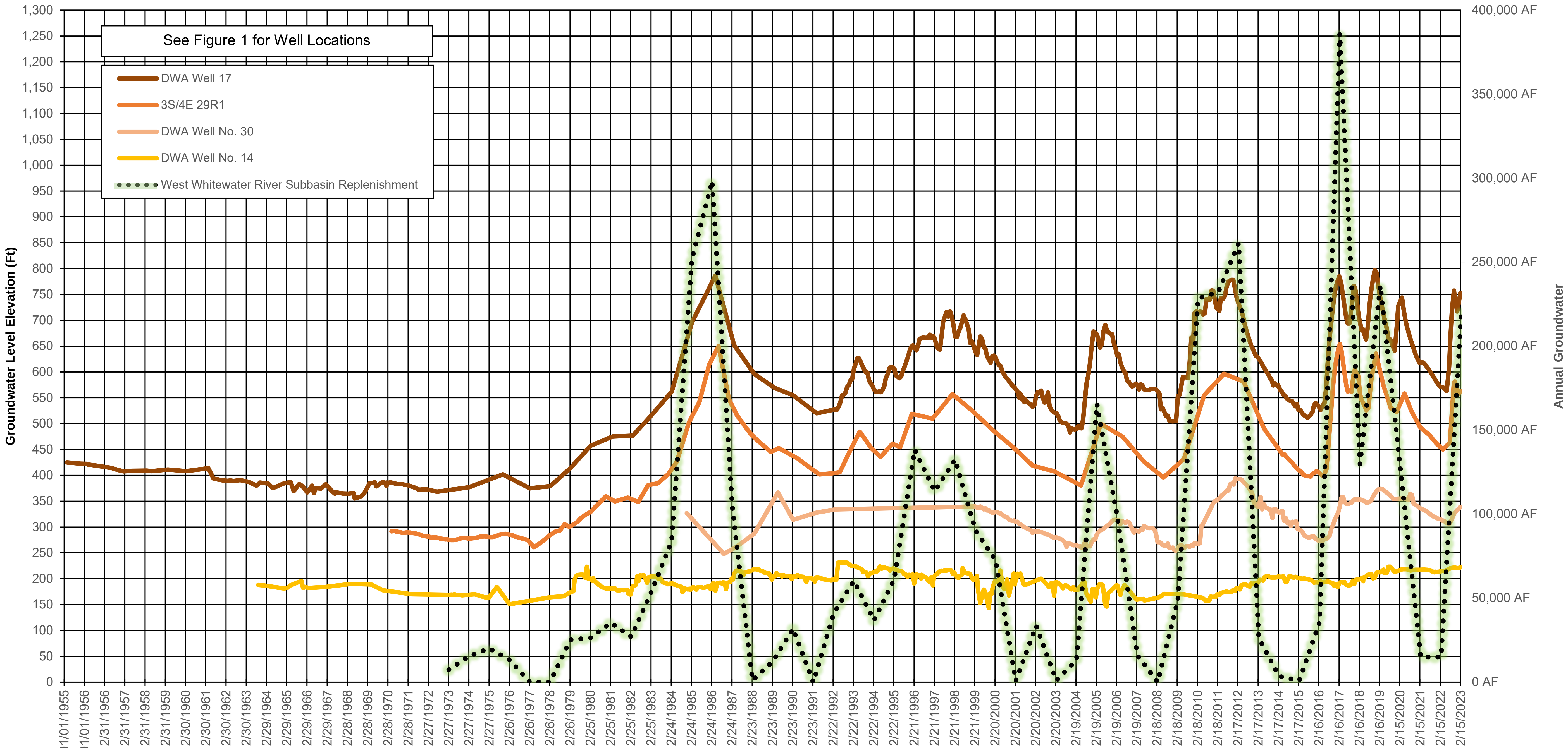
TABLE 7
DESERT WATER AGENCY
WEST WHITEWATER RIVER SUBBASIN, MISSION CREEK SUBBASIN, AND GARNET HILL SUBBASIN AREAS OF BENEFIT
HISTORIC AND PROPOSED REPLENISHMENT ASSESSMENT RATES

	Assessments															Payments Made		Surplus (Deficit)	
Fiscal	Estimated[5] $			Levied[6] $			Billed[7] $				Delinquent[8] $			Revenue $	SWP Table A	Total [19]	Annual	Cumulative[9]
Year	WWR	MC	GH	WWR	MC	GH	WWR	MC	GH	Total	WWR	MC	GH	Total	$	$	$	$
78/79	226,245			199,004			199,004			199,004	0			199,004	267,193	267,193	(68,189)	(68,189)
79/80	282,405			309,225			309,225			309,225	0			309,225	267,125	267,125	42,100	(26,089)
80/81	317,482			355,925			355,925			355,925	0			355,925	347,491	347,491	8,434	(17,655)
81/82	378,838			406,160			406,160			406,160	0			406,160	414,086	414,086	(7,926)	(25,581)
82/83	800,499			770,871			770,871			770,871	0			770,871	891,544	891,544	(120,673)	(146,254)
83/84	1,331,374			1,452,317			1,452,317			1,452,317	0			1,452,317	492,329	492,329	959,988	813,734
84/85	1,375,762			1,577,125			1,577,125			1,577,125	0			1,577,125	381,713	381,713	1,195,412	2,009,146
85/86	1,309,750			1,363,239			1,363,239			1,363,239	0			1,363,239	637,841	637,841	725,398	2,734,544
86/87	911,673			912,583			912,583			912,583	0			912,583	876,544	876,544	36,039	2,770,583
87/88	994,749			1,099,130			1,099,130			1,099,130	0			1,099,130	934,920	934,920	164,210	2,934,793
88/89	970,000			965,811			965,811			965,811	0			965,811	748,195	748,195	217,616	3,152,409
89/90	1,175,002			1,105,446			1,105,446			1,105,446	0			1,105,446	888,979	888,979	216,467	3,368,876
90/91	1,313,000			1,207,593			1,207,593			1,207,593	0			1,207,593	784,369	784,369	423,224	3,792,100
91/92	1,524,000			1,408,108			1,408,108			1,408,108	0			1,408,108	439,549	439,549	968,559	4,760,659
92/93	1,412,875			1,389,641			1,389,641			1,389,641	0			1,389,641	902,273	902,273	487,368	5,248,027
93/94	1,397,000			1,411,406			1,411,406			1,411,406	0			1,411,406	1,508,408	1,508,408	(97,002)	5,151,025
94/95	1,412,875			1,384,996			1,384,996			1,384,996	0			1,384,996	2,291,661	2,291,661	(906,665)	4,244,360
95/96	1,425,575			1,434,798			1,434,798			1,434,798	0			1,434,798	2,282,379	2,282,379	(847,581)	3,396,779
96/97	1,409,700			1,517,690			1,517,690			1,517,690	0			1,517,690	1,153,620	1,153,620	364,070	3,760,849
97/98	1,527,175			1,368,789			1,368,789			1,368,789	0			1,368,789	1,560,592	1,560,592	(191,803)	3,569,046
98/99	1,463,675			1,510,078			1,510,078			1,510,078	0			1,510,078	2,663,096	2,663,096	(1,153,018)	2,416,028
99/00	1,436,370			1,530,344			1,530,344			1,530,344	0			1,530,344	2,137,145	2,137,145	(606,801)	1,809,227
00/01	1,576,080			1,506,011			1,506,011			1,506,011	0			1,506,011	1,993,058	1,993,058	(487,047)	1,322,180
01/02	1,563,870			1,534,500			1,559,325			1,559,325	0			1,559,325	273,679	273,679	1,285,646	2,607,826
02/03	1,627,500			1,679,300			1,636,783			1,636,783	0			1,636,783	1,226,335	1,226,335	410,448	3,018,274
03/04	1,679,300	336,000		1,609,300	352,555		1,609,300	397,708		2,007,008	0	0		2,007,008	4,199,358	4,199,358	(2,192,350)	825,924
04/05	2,069,100	464,140		1,718,700	405,280		1,718,700	529,108		2,247,808	0	0		2,247,808	3,813,947	3,813,947	(1,566,139)	(740,215)
05/06	2,527,500	596,000		1,844,520	459,040		1,844,520	635,562		2,480,082	0	0		2,480,082	5,791,887	5,791,887	(3,311,805)	(4,052,020)
06/07	3,058,020	761,040		2,614,770	643,008		2,614,770	789,471		3,404,241	0	0		3,404,241	6,087,627	6,087,627	(2,683,386)	(6,735,406)
07/08	3,230,010	794,430		3,222,450	581,238		3,222,450	720,025		3,942,475	0	0		3,942,475	9,131,044	9,131,044	(5,188,569)	(11,923,975)
08/09	3,682,800	876,240		3,371,040	662,688		3,337,053	778,029		4,115,082	33,987	0		4,081,095	6,936,896	6,936,896	(2,855,801)	(14,779,776)
09/10	3,605,140	802,800		3,097,440	741,240		3,023,070	718,452		3,741,522	74,370	0		3,667,152	6,236,894	6,236,894	(2,569,742)	(17,349,518)
10/11	3,527,640	828,200		3,302,140	805,240		3,223,003	616,632		3,839,635	79,137	0		3,760,499	4,174,012	4,174,012	(413,513)	(17,763,031)
11/12	3,302,140	805,240		3,374,300	783,100		3,302,079	820,179		4,122,258	72,221	0		4,050,037	7,005,049	7,005,049	(2,955,012)	(20,718,043)
12/13	3,788,326	878,600		3,779,360	874,000		3,772,499	888,405		4,660,904	6,861	0		4,654,043	8,169,744	8,169,744	(3,515,701)	(24,233,745)
13/14	3,779,360	785,587		3,578,800	927,360		3,572,722	785,587		4,358,309	6,078	0		4,352,230	6,078,542	6,078,542	(1,726,312)	(25,960,056)
14/15	3,684,919	756,041		3,826,020	987,360		3,684,919	561,213		4,246,132	66	0		4,246,066	3,798,705	3,798,705	447,361	(25,512,695)
15/16	3,846,970	989,318	24,480	3,150,780	875,160	34,680	3,150,780	875,160		4,025,940	656	0		4,025,284	7,304,465	7,304,465	(3,279,181)	(28,791,877)
16/17	3,443,112	892,273	31,235	3,211,980	873,120	30,600	3,577,041	748,643		4,325,684	19	0		4,545,289	7,436,703 [15]	7,440,556	(2,891,414)	(2,891,414) [16]
17/18	3,410,450 [10]	1,583,978	34,771	4,106,400	1,110,000	56,400	4,386,192	956,836	43,996	5,387,024	9	0	0	5,385,371	11,210,398 [15]	11,221,104	(5,825,027)	(8,716,441)
18/19	4,837,000	1,295,000	65,800	4,971,400	1,356,600	22,400	4,742,251	1,115,705	27,553	5,885,509	10	0	0	5,885,509	6,095,640 [15]	6,027,501	(210,131)	(8,926,572)
19/20	5,504,050	1,501,950	24,800	4,870,658	1,416,700	41,292	5,168,090	1,115,175	44,420	6,327,685	0	0	0	6,327,687	11,374,605 [15]	11,355,890	(5,046,918)	(13,973,490)
20/21	5,228,850	1,508,100	0	5,814,600	1,582,350	0	6,369,125	1,289,379	32,352	7,690,856	18,094	0	0	7,690,856	4,383,087 [15]	4,409,947	3,307,769	(10,665,721)
21/22	6,171,457	1,673,793	0	6,171,457	1,673,793	0	5,694,297	1,338,078	19,628	7,052,002	0	0	0	7,872,027	5,675,969 [15]	5,902,607	2,196,058	(8,469,663)
22/23	5,975,221	1,915,529	0	5,975,221	1,915,529	0	3,609,828	746,016	47,169	4,403,014	0	0	0	7,052,002	7,523,595 [15]	10,273,713	(3,221,712)	(11,691,374)
23/24	6,406,914	2,087,286	0	6,406,914	2,087,286	0	6,406,914 [11]	2,087,286 [11]	0	8,494,200	0 [11]	0	0	8,494,200	9,994,166 [13]	12,578,525	(4,084,325)	(15,775,699)
24/25	6,631,366	2,220,184	0	6,631,366	2,220,184	0	6,631,366	2,220,184	0	8,851,550	0	0	0	8,851,550	9,567,420	12,275,828	(3,424,278)	(19,199,977)
25/26	8,092,152	2,805,776	0	8,092,152	2,805,776	0	8,092,152	2,805,776	0	10,897,928	0	0	0	10,897,928	9,909,108	12,747,519	(1,849,591)	(21,049,568)
26/27	8,791,421	3,059,793	0	8,791,421	3,059,793	0	8,791,421	3,059,793	0	11,851,213	0	0	0	11,851,213	10,253,489	13,228,144	(1,376,931)	(22,426,498)
27/28	9,492,289	3,316,998	0	9,492,289	3,316,998	0	9,492,289	3,316,998	0	12,809,287	0	0	0	12,809,287	10,561,235	13,678,674	(869,387)	(23,295,885)
28/29	10,194,508	3,580,696	0	10,194,508	3,580,696	0	10,194,508	3,580,696	0	13,775,204	0	0	0	13,775,204	10,919,798	14,186,874	(411,670)	(23,707,555)
29/30	10,895,376	3,886,805	0	10,895,376	3,886,805	0	10,895,376	3,886,805	0	14,782,181	0	0	0	14,782,181	11,251,083	14,674,979	107,202	(23,600,353)
30/31	11,328,816	4,188,068	0	11,328,816	4,188,068	0	11,328,816	4,188,068	0	15,516,884	0	0	0	15,516,884	11,631,148	15,219,390	297,494	(23,302,859)
31/32	11,666,121	4,397,273	0	11,666,121	4,397,273	0	11,666,121	4,397,273	0	16,063,394	0	0	0	16,063,394	12,091,763	15,852,241	211,152	(23,091,706)
32/33	11,987,981	4,608,954	0	11,987,981	4,608,954	0	11,987,981	4,608,954	0	16,596,936	0	0	0	16,596,936	12,530,327	16,471,308	125,627	(22,966,079)
33/34	12,458,028	4,891,695	0	12,458,028	4,891,695	0	12,458,028	4,891,695	0	17,349,724	0	0	0	17,349,724	12,995,238	17,125,386	224,338	(22,741,741)
34/35	12,742,725	5,161,617	0	12,742,725	5,161,617	0	12,742,725	5,161,617	0	17,904,342	0	0	0	17,904,342	13,460,728	17,789,124	115,219	(22,626,522)
35/36	11,579,102	4,858,724	0	11,579,102	4,858,724	0	11,579,102	4,858,724	0	16,437,826	0	0	0	16,437,826	12,049,329	16,585,488	(147,662)	(22,774,184)
36/37	12,024,046	5,070,219	0	12,024,046	5,070,219	0	12,024,046	5,070,219	0	17,094,264	0	0	0	17,094,264	12,604,803	17,358,697	(264,433)	(23,038,617)

(1) Effective rate necessary to pay DWA's estimated (projected) Allocated Table A Charges. See Table 6.
(2) Administrative and operational costs of importing and recharging water from the Colorado River Aqueduct. Administrative and operational charges for importing water from the State Water Project are not included.
(3) Includes discretionary reductions and charges for recovery of past shortfalls.
(4) Recommended assessment rate based on two components: 1) State Water Project Table A water Allocation, and 2) Other Charges or Costs.
(5) Assessments Estimated are based on applicable assessment rate and estimated assessable production from annual report for that year.
(6) Assessments Levied are based on applicable assessment rate and actual assessable production, except for the previous year, current year, and subsequent years where amounts remain estimated.
(7) Assessments Collected are based on payments made for Assessments Levied, except for the previous year, current year, and subsequent years where amounts remain estimated.
(8) Assessments Delinquent are based on Assessments Levied less payments made.
(9) Cumulative assessment balance to be used for future Delta improvements. Estimates of future assessment rates may need to be adjusted in the future to accommodate unknown charges for expanded State Water Project Facilities.
(10) For 2017/2018 and beyond, Assessments Estimated are based on Proposed Assessment Rate and Estimated Assessable Production.
(11) Assessments Collected are estimated based on first and second quarters of assessment period.
(12) Delinquent assessment is estimated based on first and second quarters of assessment period.
(13) For 2023/2024 and beyond, Payments Made are estimated based on estimated allocated Table A charges.
(14) Starting with 2020/2021, Garnet Hill Subarea is included in West White Water River Subbasin.
(15) Including prior year DWR refunds/adjustments
(16) Existing cumulative deficit in the Replenishment Assessment Account transferred to reserve account(s),
(17) Incremented by $20/Year through 2032/2033
(18) These costs are unpredictable. Projected costs determined using the 2-year historical average with a 4.8% long term CAGR.
(19) Total Payments includes payments for Net Surplus Water Costs (where known) and Operational Costs
(20) Projected costs determined using the 2-year historical average with a 4.8% long term CAGR.

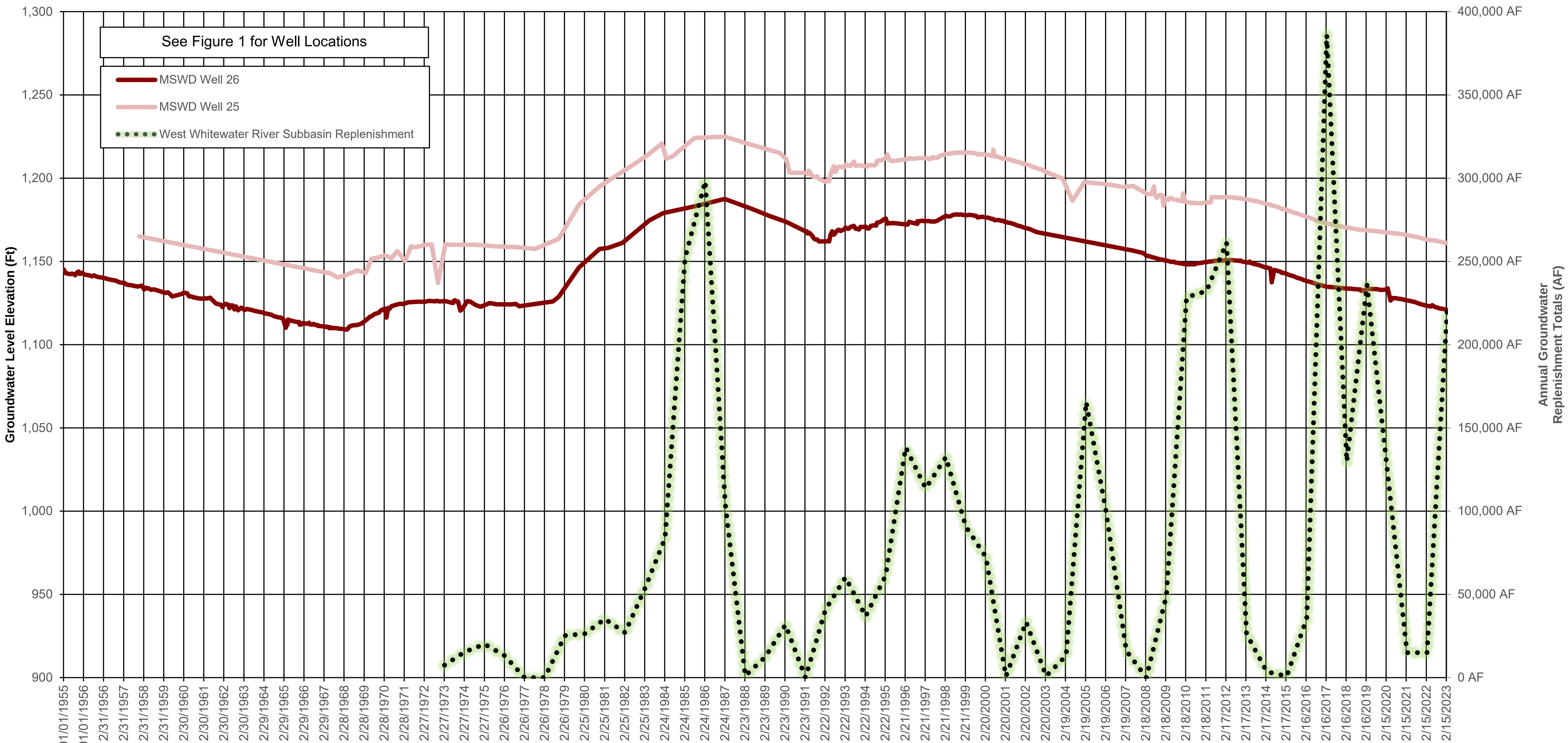
EXHIBITS

EXHIBIT 1
DESERT WATER AGENCY
GROUNDWATER WELL HYDROGRAPHS
PALM SPRINGS SUBAREA OF WEST WHITEWATER RIVER SUBBASIN MANAGEMENT AREA
GROUNDWATER REPLENISHMENT QUANTITIES AT WHITEWATER RIVER REPLENISHMENT FACILITY



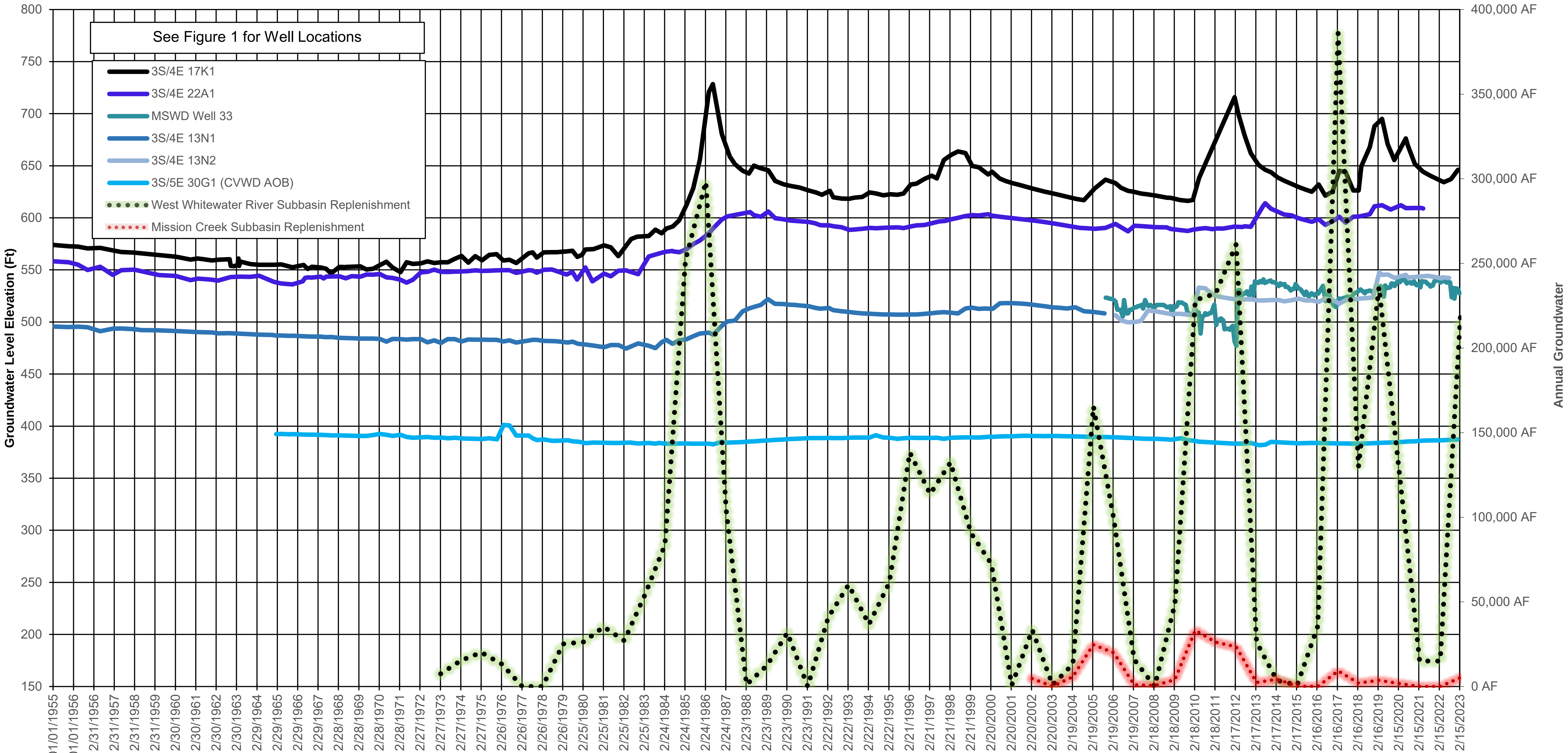
DFS/blt
101-33p48-Hydrographs.xlsx/Exhibit 1 WWR (5/9/2024)

EXHIBIT 2
DESERT WATER AGENCY
GROUNDWATER WELL HYDROGRAPHS
SAN GORGONIO PASS SUBBASIN PORTION OF WEST WHITEWATER RIVER SUBBASIN MANAGEMENT AREA
GROUNDWATER REPLENISHMENT QUANTITIES AT WHITEWATER RIVER REPLENISHMENT FACILITY



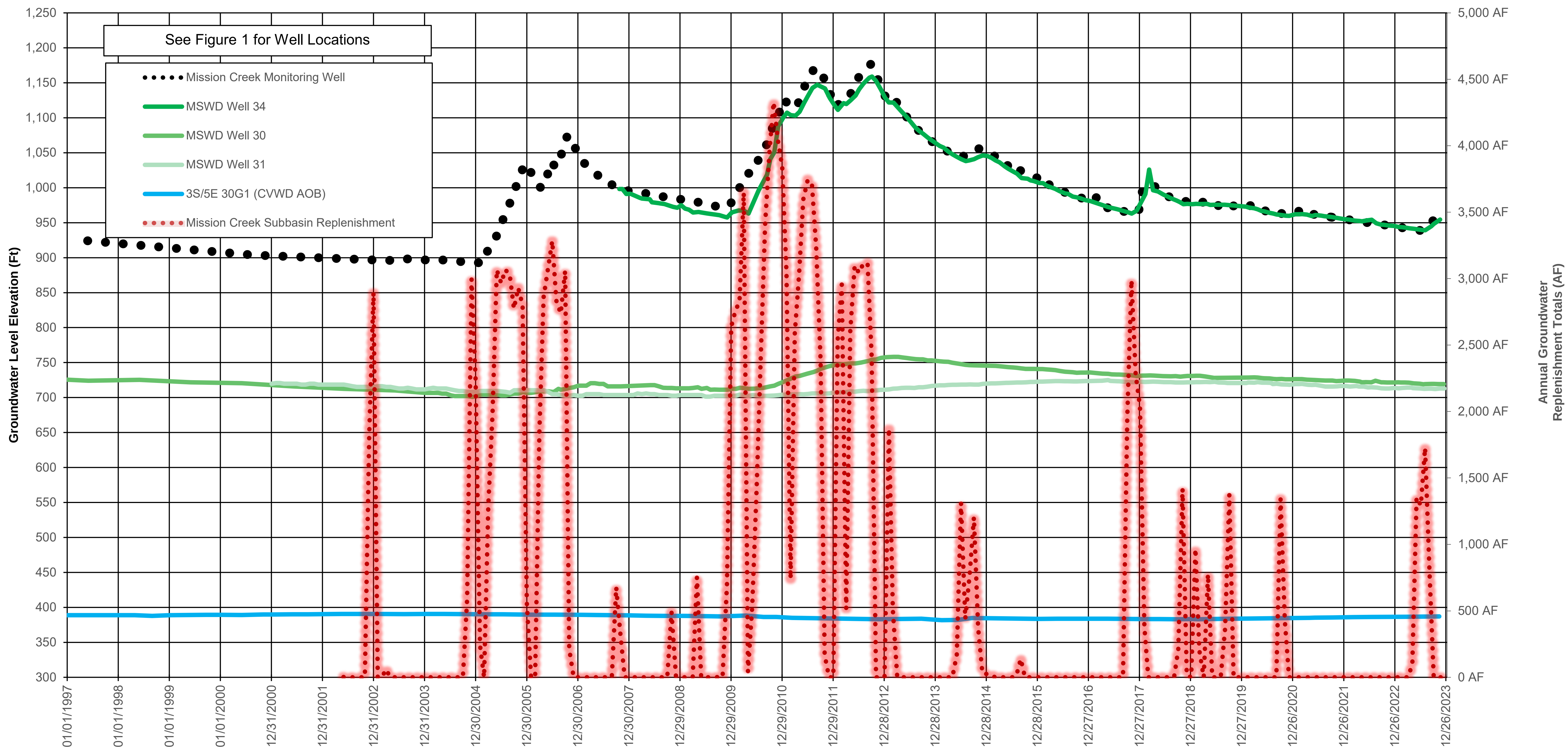
DFS/blt
101-33p48-Hydrographs.xlsx/Exhibit 2 SGR (5/9/2024)

EXHIBIT 3
DESERT WATER AGENCY
GROUNDWATER WELL HYDROGRAPHS
GARNET HILL SUBAREA OF WEST WHITEWATER RIVER SUBBASIN MANAGEMENT AREA
GROUNDWATER REPLENISHMENT QUANTITIES AT WHITEWATER RIVER AND MISSION CREEK REPLENISHMENT FACILITIES



DFS/blt
101-33p48-Hydrographs.xlsx/Exhibit 3 GH (5/9/2024)

EXHIBIT 4
DESERT WATER AGENCY
GROUNDWATER WELL HYDROGRAPHS
MISSION CREEK SUBBASIN MANAGEMENT AREA
GROUNDWATER REPLENISHMENT QUANTITIES AT MISSION CREEK REPLENISHMENT FACILITY



DFS/blt
101-33p48-Hydrographs.xlsx/Exhibit 4 MC (5/9/2024)

EXHIBIT 5
DESERT WATER AGENCY
MISSION CREEK SUBBASIN AREA OF BENEFIT[1]
HISTORIC VOLUME OF GROUNDWATER IN STORAGE[2]

Time Period	Pre-1955	1955 - 1978	1979 - 1997	1998 - 2023	**1955 - 2023**
Number of Years		24	19	25	**68**
Water Level Decline, Ft[3]		20	30	24	**74**
Period Reduction in Storage, AF		71,200	106,800	85,440	**263,440**
Annual Reduction in Storage, AF/Yr		3,000	5,600	3,400	**3,900**
Change in Storage		0.047	0.074	0.064	**0.174**
Remaining Storage, AF	1,511,800	1,440,600	1,333,800	1,248,360	**1,248,360**

(1) Northwest three-quarters of subbasin: GTC (1979) & Slade (2000)
(2) Storage loss of 3,560 AF/Ft of water level decline: GTC (1979) & Slade (2000)
(3) Mission Springs Water District data

EXHIBIT 6

DESERT WATER AGENCY

COMPARISON OF WATER PRODUCTION AND GROUNDWATER REPLENISHMENT

WEST WHITEWATER RIVER SUBBASIN (WWR) AND MISSION CREEK SUBBASIN (MC) MANAGEMENT AREAS

Production[1]

	WWR (AF)		MC (AF)		Total (AF)		Ratio of Production	
Year	Annual	Cumulative	Annual	Cumulative	Annual	Cumulative	WWR/Total	MC/Total
2002	213,410	213,410	13,968	13,968	227,378	227,378	93.9%	6.1%
2003	204,275	417,685	14,498	28,466	218,773	446,151	93.4%	6.6%
2004	212,700	630,385	16,548	45,014	229,248	675,399	92.8%	7.2%
2005	204,341	834,726	16,327	61,341	220,668	896,067	92.6%	7.4%
2006	213,850	1,048,576	17,365	78,706	231,215	1,127,282	92.5%	7.5%
2007	211,530	1,260,106	16,409	95,115	227,939	1,355,221	92.8%	7.2%
2008	211,023	1,471,129	15,775	110,890	226,798	1,582,019	93.0%	7.0%
2009	199,506	1,670,635	15,108	125,998	214,614	1,796,633	93.0%	7.0%
2010	182,703	1,853,338	14,304	140,302	197,007	1,993,640	92.7%	7.3%
2011	183,320	2,036,658	14,260	154,562	197,580	2,191,220	92.8%	7.2%
2012	183,285	2,219,943	14,216	168,778	197,501	2,388,721	92.8%	7.2%
2013	182,842	2,402,785	14,756	183,534	197,598	2,586,319	92.5%	7.5%
2014	174,425	2,577,210	14,091	197,625	188,516	2,774,835	92.5%	7.5%
2015	147,763	2,724,973	13,017	210,642	160,780	2,935,615	91.9%	8.1%
2016	148,395	2,873,368	13,219	223,861	161,614	3,097,229	91.8%	8.2%
2017	155,543	3,028,911	13,531	237,392	169,074	3,266,303	92.0%	8.0%
2018	154,548	3,183,459	13,870	251,262	168,418	3,434,721	91.8%	8.2%
2019	145,602	3,329,061	13,135	264,397	158,737	3,593,458	91.7%	8.3%
2020	153,065	3,482,126	14,244	278,641	167,309	3,760,767	91.5%	8.5%
2021	159,305	3,641,431	14,227	292,868	173,532	3,934,299	91.8%	8.2%
2022	157,684	3,799,115	13,763	306,631	171,447	4,105,746	92.0%	8.0%
2023	147,377	3,946,492	12,772	319,403	160,149	4,265,895	92.0%	8.0%
Cumulative	---	---	---	---	---	---	92.5%	7.5%

Replenishment (Total)

	WWR (AF)		MC (AF)		Total (AF)		Ratio of Replenishment	
Year	Annual	Cumulative	Annual	Cumulative	Annual	Cumulative	WWR/Total	MC/Total
2002	33,435	33,435	4,733	4,733	38,168	38,168	87.6%	12.4%
2003	902	34,337	59	4,792	961	39,129	93.9%	6.1%
2004	13,224	47,561	5,564	10,356	18,788	57,917	70.4%	29.6%
2005	165,554	213,115	24,723	35,079	190,277	248,194	87.0%	13.0%
2006	98,959	312,074	19,901	54,980	118,860	367,054	83.3%	16.7%
2007	16,009	328,083	1,011	55,991	17,020	384,074	94.1%	5.9%
2008	8,008	336,091	503	56,494	8,511	392,585	94.1%	5.9%
2009	57,024	393,115	754	57,248	57,778	450,363	98.7%	1.3%
2010	228,330	621,445	31,083	88,331	259,413	709,776	88.0%	12.0%
2011	232,214	853,659	20,888	109,219	253,102	962,878	91.7%	8.3%
2012	257,267	1,110,926	23,160	132,379	280,427	1,243,305	91.7%	8.3%
2013	26,620	1,137,546	1,305	133,684	27,925	1,271,230	95.3%	4.7%
2014	3,549	1,141,095	4,325	138,009	7,874	1,279,104	45.1%	54.9%
2015	865	1,141,960	171	138,180	1,036	1,280,140	83.5%	16.5%
2016	35,699	1,177,659	0	138,180	35,699	1,315,839	100.0%	0.0%
2017	385,994	1,563,653	9,248	147,428	395,242	1,711,081	97.7%	2.3%
2018	129,725	1,693,378	2,027	149,455	131,752	1,842,833	98.5%	1.5%
2019	235,968	1,929,346	3,688	153,143	239,656	2,082,489	98.5%	1.5%
2020	126,487	2,055,833	1,768	154,911	128,255	2,210,744	98.6%	1.4%
2021	15,006	2,070,839	0	154,911	15,006	2,225,750	100.0%	0.0%
2022	15,011	2,085,850	0	154,911	15,011	2,240,761	100.0%	0.0%
2023	304,507	2,390,357	5,276	160,187	309,783	2,550,544	98.3%	1.7%
Cumulative	---	---	---	---	---	---	93.7%	6.3%

Replenishment (SWP Exchange Only) [2]

	WWR (AF)		MC (AF)		Total (AF)		Ratio of Replenishment	
Year	Annual	Cumulative	Annual	Cumulative	Annual	Cumulative	WWR/Total	MC/Total
2002	33,435	33,435	4,733	4,733	38,168	38,168	87.6%	12.4%
2003	902	34,337	59	4,792	961	39,129	93.9%	6.1%
2004	13,224	47,561	5,564	10,356	18,788	57,917	70.4%	29.6%
2005	165,554	213,115	24,723	35,079	190,277	248,194	87.0%	13.0%
2006	98,959	312,074	19,901	54,980	118,860	367,054	83.3%	16.7%
2007	9	312,083	1,011	55,991	1,020	368,074	0.9%	99.1%
2008	0	312,083	0	55,991	0	368,074	n/a	n/a
2009	46,032	358,115	0	55,991	46,032	414,106	100.0%	0.0%
2010	209,937	568,052	29,340	85,331	239,277	653,383	87.7%	12.3%
2011	127,214	695,266	20,888	106,219	148,102	801,485	85.9%	14.1%
2012	253,267	948,533	23,160	129,379	276,427	1,077,912	91.6%	8.4%
2013	24,112	972,645	1,305	130,684	25,417	1,103,329	94.9%	5.1%
2014	0	972,645	4,325	135,009	4,325	1,107,654	0.0%	100.0%
2015	0	972,645	171	135,180	171	1,107,825	0.0%	100.0%
2016	699	973,344	0	135,180	699	1,108,524	100.0%	0.0%
2017	350,994	1,324,338	9,248	144,428	360,242	1,468,766	97.4%	2.6%
2018	94,725	1,419,063	2,027	146,455	96,752	1,565,518	97.9%	2.1%
2019	200,968	1,620,031	3,688	150,143	204,656	1,770,174	98.2%	1.8%
2020	76,487	1,696,518	1,768	151,911	78,255	1,848,429	97.7%	2.3%
2021	0	1,696,518	0	151,911	0	1,848,429	n/a	n/a
2022	0	1,696,518	0	151,911	0	1,848,429	n/a	n/a
2023	84,762	1,781,280	5,276	157,187	90,038	1,938,467	94.1%	5.9%
Cumulative	---	---	---	---	---	---	91.9%	8.1%

Notes:

(1) Production in both DWA and CVWD service areas.

(2) This table excludes all non-SWP supplemental water deliveries such as those made for CPV Sentinel.

EXHIBIT 7
DESERT WATER AGENCY
SUMMARY OF DELIVERIES TO METROPOLITAN WATER DISTRICT (MWD)
AND TO GROUNDWATER REPLENISHMENT FACILITIES (AF)[1]

BEFORE EXCHANGE AGREEMENT (JULY 1973 - JUNE 1984)

Delivery to MWD

Year	Table A DWA/CVWD Combined Allocation	SWP Contract Water: Table A Allocation Delivered to MWD	% Delivery to MWD	Carry-Over From Previous Year	SWP Surplus Water: Pool A	Pool B	Multi-Year Pool	Article 21	Flood	Yuba	CPV Sentinel (North Kern)	CPV Sentinel (Yuba)	Other	Total	SWP Total	Non-SWP Contract Water: CVWD: DMB Pacific	Glorious Land Rosedale	Colorado River Credit	Needles	MWD QSA	Total
1973 (Jul-Dec)	14,800	14,800	100%												14,800						14,800
1974	16,400	16,400	100%												16,400						16,400
1975	18,000	18,000	100%												18,000						18,000
1976	19,600	19,600	100%												19,600						19,600
1977	21,421	0	0%												0						0
1978	23,242	25,384	109%												25,384						25,384
1979	25,063	25,063	100%												25,063						25,063
1980	27,884	27,884	100%												27,884						27,884
1981	31,105	31,105	100%												31,105						31,105
1982	34,326	34,326	100%												34,326						34,326
1983	37,547	37,547	100%												37,547						37,547
1984 (Jan-Jun)[4]	N/A	25,849	N/A												*25,849*						*25,849*
1984 Total	40,768	40,768	100%												40,768						40,768

Delivery to DWA/CVWD Recharge Facilities

Year	To WWRF and MCRF: From SWP Exchange Account: WRRF[2]	MCRF[3]	Total	From Other Accounts: WRRF[2]	MCRF[3]	Total	Total WRRF	Total MCRF	Total PD-GRF [15]	Grand Total	MWD Delivery Surplus/(Deficit) Prior to Exchange and Delivery Agreement: Annual	Cumulative
1973 (Jul-Dec)	7,475		7,475				7,475			7,475	(7,325)	(7,325)
1974	15,396		15,396				15,396			15,396	(1,004)	(8,329)
1975	20,126		20,126				20,126			20,126	2,126	(6,203)
1976	13,206		13,206				13,206			13,206	(6,394)	(12,597)
1977	0		0				0			0	0	(12,597)
1978	0		0				0			0	(25,384)	(37,981)
1979	25,192		25,192				25,192			25,192	129	(37,852)
1980	26,341		26,341				26,341			26,341	(1,543)	(39,395)
1981	35,251		35,251				35,251			35,251	4,146	(35,249)
1982	27,020		27,020				27,020			27,020	(7,306)	(42,555)
1983	53,732		53,732				53,732			53,732	16,185	(26,370)
1984 (Jan-Jun)[4]	*50,912*		*50,912*				*50,912*			*50,912*	25,063	(1,307)
1984 Total	83,708		83,708				83,708			83,708		

WITH EXCHANGE AGREEMENT (JULY 1984 - PRESENT)

Delivery to MWD

Year	Table A DWA/CVWD Combined Allocation	SWP Contract Water: Table A Allocation Delivered to MWD	% Delivery to MWD	Carry-Over	SWP Surplus Water: Pool A	Pool B	Multi-Year Pool	Article 21	Flood	Yuba	CPV Sentinel (North Kern)	CPV Sentinel (Yuba)	Other	Total	SWP Total	Non-SWP Contract Water: CVWD: DMB Pacific	Glorious Land Rosedale	Colorado River Credit	Needles	MWD QSA	Total
1984 (Jul-Dec)[5]	N/A	14,919	N/A												*14,919*						*14,919*
1985	43,989	43,989	100%												43,989						43,989
1986	47,210	47,210	100%												47,210				10,000 (7)		57,210
1987	50,931	50,931	100%												50,931						50,931
1988	54,652	54,652	100%												54,652						54,652
1989	58,373	58,373	100%												58,373						58,373
1990	61,200	61,200	100%												61,200						61,200
1991	61,200	18,360	30%												18,360						18,360
1992	61,200	27,624	45%												27,624						27,624
1993	61,200	61,200	100%												61,200						61,200
1994	61,200	37,359	61%												37,359						37,359
1995	61,200	61,200	100%												61,200						61,200
1996	61,200	61,200	100%			103,641								103,641	164,841						164,841
1997	61,200	61,200	100%			50,000			27,130					77,130	138,330						138,330
1998	61,200	61,200	100%			75,000			20,156					95,156	156,356						156,356
1999	61,200	61,200	100%			47,380								47,380	108,580						108,580
2000	61,200	55,080	90%			9,837		35,640					1 (8)	45,478	100,558						100,558
2001	61,200	23,868	39%			242								242	24,110						24,110
2002	61,200	42,840	70%		436	819		300						1,555	44,395						44,395
2003	61,200	55,080	90%	(17,867)	457	58		532					2 (8)	1,049	38,262						38,262
2004	61,200	18,597	30%	17,867		191								191	36,655						36,655
2005	171,100	60,152	35%	27,618	585	3,253								3,838	91,608						91,608
2006	171,100	171,100	100%											0	171,100						171,100
2007	171,100	102,660	60%		802									802	103,462			16,000 (9)			119,453
2008	171,100	59,885	35%		151					1,833	8,350			10,334	70,219		3,000	8,008 (9)			81,218
2009	171,100	57,710	34%		35	58				2,111		871	500 (10)	3,575	61,285		3,000	7,992 (9)			72,268
2010	194,100	97,050	50%	10,730	66	536								602	108,382	8,393				10,000 *	126,775
2011	194,100	124,156	64%		836	1,666							5,800 (14)	8,302	132,458					105,000 *	237,458
2012	194,100	126,166	65%	31,124	431					689		278		1,398	158,688		4,000				162,688
2013	194,100	67,936	35%		230					1,452		1,212		2,894	70,830		16,500			2,508 *	89,838
2014	194,100	9,706	5%							1,213				1,213	10,919		5,000			3,549 ***	19,468
2015	194,100	38,820	20%				67			426				493	39,313		9,500			865 *	49,678
2016	194,100	74,249	38%				566							566	74,815		16,500			64,135 **	155,450
2017	194,100	66,805	34%	25,435	1,131								16,776 (11)	17,907	110,147		5,397			35,000	150,544
2018	194,100	67,936	35%	97,050						1,246				1,246	166,232		20,603			35,000	221,835
2019	194,100	48,526	25%											0	48,526					35,000	83,526
2020	194,100	38,820	20%	97,050						1,140				1,140	137,010		19,000			50,000	206,010
2021	194,100	9,706	5%	0						1,613				1,613	11,319		9,500			15,006	35,825
2022	194,100	9,706	5%	0						1,528				1,528	11,234		0			15,011	26,245
2023	194,100	45,291	23%	0				13,599		0				13,599	58,890		10,000			134,983	203,873
Totals[12]:	5,056,211	2,529,620	---	289,007	5,160	292,681	633	50,071	47,286	13,251	8,350	2,361	23,079	442,872	3,261,499	8,393	122,000	32,000	10,000	506,057	3,939,922

Delivery to DWA/CVWD Replenishment Facilities; MWD Exchange and Advance Deliveries

Year	To WWRF and MCRF: From SWP Exchange Account: WRRF[2]	MCRF[3]: DWA	MCRF[3]: CPV	Total	From Other Accounts: WRRF[2]	MCRF[3] CPV Sentinel Agmt: DWA Portion	CPV Portion	Total	Total WRRF	Total MCRF	Total PD-GRF [15]	Grand Total	Exchange Deliveries	Advance Deliveries	Advance Deliveries Converted to Exchange Deliveries	Advance Delivery Account [5] Credit/(Debit): Annual	Balance
1984 (Jul-Dec)[5]	*32,796*			*32,796*					32,796			32,796	32,796	16,570		16,570 (6)	16,570
1985	251,994			251,994					251,994			251,994	251,994	208,005		208,005	224,575
1986	288,201			288,201	10,000 (7)			10,000	298,201			298,201	288,201	240,991		240,991	465,566
1987	104,334			104,334					104,334			104,334	104,334	53,403		53,403	518,969
1988	1,096			1,096					1,096			1,096	1,096		53,556	(53,556)	465,413
1989	12,478			12,478					12,478			12,478	12,478		45,895	(45,895)	419,518
1990	31,721			31,721					31,721			31,721	31,721		29,479	(29,479)	390,039
1991	14			14					14			14	14		18,346	(18,346)	371,693
1992	40,870			40,870					40,870			40,870	40,870	13,246		13,246	384,939
1993	60,153			60,153					60,153			60,153	60,153		1,047	(1,047)	383,892
1994	36,763			36,763					36,763			36,763	36,763		596	(596)	383,296
1995	61,318			61,318					61,318			61,318	61,318	118		118	383,414
1996	138,266			138,266					138,266			138,266	138,266		26,575	(26,575)	356,839
1997	113,677			113,677					113,677			113,677	113,677		24,653	(24,653)	332,186
1998	132,455			132,455					132,455			132,455	132,455		23,901	(23,901)	308,285
1999	90,601			90,601					90,601			90,601	90,601		17,979	(17,979)	290,306
2000	72,450			72,450					72,450			72,450	72,450		28,108	(28,108)	262,198
2001	707			707					707			707	707		23,403	(23,403)	238,795
2002	33,435	4,733		38,168					33,435	4,733		38,168	38,168		6,227	(6,227)	232,568
2003	902	59		961					902	59		961	961		37,301	(37,301)	195,267
2004	13,224	5,564		18,788					13,224	5,564		18,788	18,788		17,867	(17,867)	177,400
2005	165,554	24,723		190,277					165,554	24,723		190,277	190,277	98,669		98,669	276,069
2006	98,959	19,901		118,860					98,959	19,901		118,860	118,860		52,240	(52,240)	223,829
2007	9	1,011		1,020	16,000			16,000	16,009	1,011		17,020	1,020		102,442	(102,442)	121,387
2008	0	0		0	8,008		503	8,511	8,008	503		8,511	0		64,869	(64,869)	56,518
2009	46,032	0	3,336	49,368	10,992		754	11,746	57,024	4,090		61,114	49,368		11,917	(11,917)	44,601
2010	209,937	29,340	2,127	241,404	18,393		1,743	20,136	228,330	33,210		261,540	241,404	133,022		133,022	177,623
2011	127,214	20,888		148,102	105,000	5,350		110,350	232,214	26,238		258,452	148,102	25,644 (7)		25,644	203,267
2012	253,267	23,160	246	276,673	4,000			4,000	257,267	23,406		280,673	276,673	117,985		117,985	321,252
2013	24,112	1,305	1,074	26,491	2,508			2,508	26,620	2,379		28,999	26,491		60,839	(60,839)	260,413
2014	0	4,325		4,325	3,549			3,549	3,549	4,325		7,874	4,325		11,610	(11,610)	248,803
2015	0	171		171	865			865	865	171		1,036	171		48,642	(48,642)	200,161
2016	699	0		699	35,000			35,000	35,699	0		35,699	699		119,751	(119,751)	80,410
2017	350,994	9,248		360,242	35,000			35,000	385,994	9,248		395,242	360,242	244,698		244,698	325,108
2018	94,725	2,027		96,752	35,000			35,000	129,725 ##	2,027		131,752 ##	96,752		90,083	(90,083)	235,025
2019	200,968 #	3,688		204,656	35,000			35,000	235,968 ##	3,688 #	7,757	247,413 ##	204,656	156,130		156,130	391,155
2020	76,487	1,768		78,255	50,000			50,000	126,487	1,768	9,700	137,955	78,255		77,755	(77,755)	313,400
2021	0	0		0	15,006			15,006	15,006	0	10,633	25,639	0		20,819	(20,819)	292,581
2022	0	0		0	15,011			15,011	15,011	0	10,949	25,960	0		11,234	(11,234)	281,347
2023	84,762	5,276		90,038	219,745			219,745	304,507	5,276	11,179	320,962	90,038	21,148		21,148	302,495
Totals[12]:	3,525,825	157,187	6,783	3,689,795	619,077	5,350	3,000	627,427	4,144,902	172,320	50,218	4,367,440	3,689,795	1,329,629	1,027,134	---	---
												3,689,795					

NOTES:

(1) As reported by Metropolitan Water District in its monthly "Exchange Water Delivery in Acre-Feet" reports.
(2) Whitewater River Replenishment Facility
(3) Mission Creek Replenishment Facility
(4) The Advance Delivery Agreement between MWD and CVWD/DWA became effective on 7/1/84; discrepancies in exchange deliveries between MWD and CVWD/DWA after 7/1/84 are adjusted per said agreement.
(5) The effective date of the Advance Delivery Agreement between MWD and CVWD/DWA was 7/1/84.
(6) The first advance delivery figure of 16,570 AF is equal to 32,796 AF of deliveries to CVWD/DWA from 7/84 - 12/84, minus 14,919 AF of deliveries to MWD from 7/84 - 12/84, minus cumulative MWD delivery deficiency of 1,307 AF as of 7/1/84.
(7) 10,000 AF of Needles Water delivered to CVWD in 1986 was credited to the Advance Delivery Account in 2011.
(8) Adjustment for rounding error to reconcile MWD Advance Delivery Account Balance
(9) CVWD's PVID credit
(10) Drought Water Bank
(11) Flexible Storage Payback at Lake Perris
(12) Since 1973
(13) Not used
(14) MWD Article 21 water exchanged for unused CVWD 20 TAF CRA water
(15) Deliveries to the Palm Desert Groundwater Replenishment Facility (PD-GRF) are made from CVWD's Colorado River supplies via the Mid-Valley Pipeline (MVP)
* Not deducted from the Advance Delivery Account
** Includes 29,135 AF withdrawn from AD Account to meet 2015 CVWD 30 TAF Obligation
*** 16 AF deducted from the Advance Delivery Account to make up for delivery shortage
\# Revised by MWD
\#\# Corrected: CVWD QSA deliveries for 2018 and 2019 were credited from AD Account, not physical deliveries
Not included in DWR Bulletin 132-17 Appendix B Table B-5B

EXHIBIT 8
DESERT WATER AGENCY AND COACHELLA VALLEY WATER DISTRICT
COMPARISON OF HISTORIC AND PROPOSED GROUNDWATER REPLENISHMENT
ASSESSMENT RATE FOR THE WEST WHITEWATER RIVER AND MISSION CREEK SUBBASIN AOBS

	DWA WWR & MC		CVWD WWR		CVWD MC	
Year	$/AF	% Increase	$/AF	% Increase	$/AF	% Increase
78/79	$6.81	---	No Assessment	---	No Assessment	---
79/80	$9.00	32%	No Assessment	---	No Assessment	---
80/81	$9.50	6%	$5.66	---	No Assessment	---
81/82	$10.50	11%	$7.43	31%	No Assessment	---
82/83	$21.00	100%	$19.82	167%	No Assessment	---
83/84	$36.50	74%	$33.23	68%	No Assessment	---
84/85	$37.50	3%	$34.24	3%	No Assessment	---
85/86	$31.00	-17%	$21.81	-36%	No Assessment	---
86/87	$21.00	-32%	$19.02	-13%	No Assessment	---
87/88	$22.50	7%	$19.55	3%	No Assessment	---
88/89	$20.00	-11%	$15.96	-18%	No Assessment	---
89/90	$23.50	18%	$19.66	23%	No Assessment	---
90/91	$26.00	11%	$23.64	20%	No Assessment	---
91/92	$31.75	22%	$25.66	9%	No Assessment	---
92/93	$31.75	0%	$28.23	10%	No Assessment	---
93/94	$31.75	0%	$31.05	10%	No Assessment	---
94/95	$31.75	0%	$34.16	10%	No Assessment	---
95/96	$31.75	0%	$37.58	10%	No Assessment	---
96/97	$31.75	0%	$37.58	0%	No Assessment	---
97/98	$31.75	0%	$42.09	12%	No Assessment	---
98/99	$31.75	0%	$47.14	12%	No Assessment	---
99/00	$31.75	0%	$52.80	12%	No Assessment	---
00/01	$33.00	4%	$59.14	12%	No Assessment	---
01/02	$33.00	0%	$66.24	12%	No Assessment	---
02/03	$35.00	6%	$72.86	10%	$59.80	---
03/04	$35.00	0%	$72.86	0%	$59.80	0%
04/05	$34.07	-3%	$78.86	8%	$59.80	0%
05/06	$38.28	12%	$78.86	0%	$59.80	0%
06/07	$177.93	365%	$83.34	6%	$65.78	10%
07/08	$63.00	-65%	$91.67	10%	$72.36	10%
08/09	$72.00	14%	$93.78	2%	$76.60	6%
09/10	$72.00	0%	$102.45	9%	$87.56	14%
10/11	$82.00	14%	$102.45	0%	$89.75	3%
11/12	$82.00	0%	$107.57	5%	$98.73	10%
12/13	$92.00	12%	$110.26	3%	$98.73	0%
13/14	$92.00	0%	$110.26	0%	$98.73	0%
14/15	$102.00	11%	$110.26	0%	$98.73	0%
15/16	$102.00	0%	$112.00	2%	$112.00	13%
16/17	$102.00	0%	$128.80	15%	$123.20	10%
17/18	$120.00	18%	$143.80	12%	$135.52	10%
18/19	$140.00	17%	$143.80	0%	$135.52	0%
19/20	$155.00	11%	$143.80	0%	$135.52	0%
20/21	$165.00	6%	$143.80	0%	$135.52	0%
21/22	$175.00	6%	$165.37	15%	$135.52	0%
22/23	$175.00	0%	$165.37	0%	$135.52	0%
23/24	$195.00	11%	$165.37	0%	$135.52	0%
24/25	$215.00 *	10%	$165.37	0%	$135.52	0%

* Proposed replenishment assessment rate

APPENDIX A

APPENDIX A
COACHELLA VALLEY
MONTHLY AND ANNUAL RECORDED PRECIPITATION DATA
(INCHES)
2023

STATION NAME	WHITEWATER NORTH	SNOW CREEK	TACHEVAH DAM	TRAM VALLEY	CATHEDRAL CITY	THOUSAND PALMS	PALM SPRINGS SUNRISE	DESERT HOT SPRINGS	EDOM HILL	OASIS	MECCA LANDFILL III	THERMAL AIRPORT
LOCATION	WWR	WWR	WWR	WWR	WWR	WWR	WWR	MC	MC	EWR	EWR	EWR
STATION NUMBER	233	207	216	224	34	222	442	57	436	431	432	443
LATITUDE	33°59'23.06"	33°53'32.64"	33°49'51.26"	33°50'11.56"	33°46'51.49"	33°49'1.66"	33°48'35.94"	33°58'2.85"	33°53'7.52"	33°26'21.64"	33°34'20.19"	33°37'53.90"
LONGITUDE	116°39'21.39"	116°41'41.06"	116°33'31.53"	116°36'49.72"	116°27'29.69"	116°23'46.30"	116°31'37.94"	116°29'39.93"	116°26'18.48"	116° 4'44.83"	116° 0'15.33"	116° 9'50.81"
ELEVATION (FT ABOVE MSL)	2220	1658	570	2675	283	230	397	1223	1038	-108	13	-122
JANUARY	8.78	6.61	2.86	5.88	0.87	0.68	1.51	1.57	0.80	0.39	0.20	0.26
FEBRUARY	4.13	3.13	0.47	2.12	0.21	0.08	0.33	0.64	0.32	0.26	0.19	0.06
MARCH	6.77	5.61	2.72	5.21	1.27	1.03	1.81	1.30	1.20	0.34	0.10	0.21
APRIL	0.01	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MAY	0.18	0.06	0.00	0.16	0.01	0.00	0.00	0.00	0.00	0.02	0.08	0.14
JUNE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JULY	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.09	0.01	0.00
AUGUST	6.96	5.99	3.22	7.37	3.26	2.99	3.24	3.44	2.96	2.16	1.82	3.01
SEPTEMBER	0.39	0.10	0.00	0.91	0.79	0.87	0.00	0.42	0.05	0.61	2.43	1.35
OCTOBER	0.25	0.09	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NOVEMBER	0.62	0.51	0.48	0.76	0.55	0.52	0.33	0.33	0.48	0.18	0.05	0.15
DECEMBER	0.65	0.24	0.12	1.01	0.21	0.69	0.17	0.67	0.95	0.47	0.03	0.33
TOTAL	**28.74**	**22.34**	**9.87**	**23.45**	**7.17**	**6.86**	**7.40**	**8.38**	**6.76**	**4.52**	**4.91**	**5.51**
AVERAGE: WWR	**15.12**											
AVERAGE: MC								**7.57**				
AVERAGE: WWR+MC	**13.44**											
AVERAGE: EWR										**4.98**		
AVERAGE: ALL	**11.33**											

APPENDIX B

ADDENDUM TO SETTLEMENT AGREEMENT
MANAGEMENT AREA DELIVERIES

The Settlement Agreement between Coachella Valley Water District (CVWD), Desert Water Agency (DWA) and Mission Springs Water District (MSWD) dated December 7, 2004 shall be supplemented by the following Addendum, and thus shall be deemed a part thereof:

The Mission Creek Groundwater Replenishment Agreement provides for the delivery to the Mission Creek Subbasin, for groundwater replenishment, of a proportionate share of the imported water delivered to CVWD and DWA for replenishment of the Upper Coachella Valley Groundwater Basin. To ensure that the Mission Creek Subbasin receives its proportionate share of that water, as set forth in the Mission Creek Replenishment Agreement, and to provide for the monitoring thereof, the following procedures shall be applied:

Each year CVWD and DWA shall calculate the combined total quantity of water produced during the previous year from the Whitewater River Management Area and the Mission Creek Management Area, and from sources tributary to those Management Areas, and shall determine from that the percentages of the total production from those Management Areas and their sources.

Water supplies available to CVWD and DWA each year, through their respective State Water Project Contracts, for the replenishment of those Management Areas will be allocated and delivered to the Management Areas for groundwater replenishment in the same percentages, subject to delivery capability and operational constraints in any particular year.

STAFF REPORT
TO
DESERT WATER AGENCY
BOARD OF DIRECTORS

JUNE 18, 2024

RE: REQUEST FOR ADOPTION OF RESOLUTION NOS. 1332, 1333 AND 1334 ESTABLISHING RATES AND FEES FOR DOMESTIC WATER SERVICE, RECYCLED WATER SERVICE AND SEWER SERVICE

The Agency completed a comprehensive rate study with rate consultant NBS in 2023, conducted a public protest hearing pursuant to Proposition 218, and the Board then adopted a five-year rate schedule to be implemented annually thereafter by Board action each year.

Staff requests the Board of Directors act on three resolutions to update the domestic water, sewer (wastewater) and recycled water rates for the second of the five rate increases included in the Board approved rate schedule.

Recycled water rates and sewer pass through charge to CVWD will be effective July 1, 2024, and domestic water and Agency sewer charges will be effective on January 1, 2025. Staff recommends that all future rate adjustments included in the approved schedule be evaluated closer to the implementation date in conjunction with the annual budget.

Resolution No. 1332 Establishing Rates, Fees and Charges for Domestic Water Service

Potable Water Rate: Resolution No. 1332 updates the quantitative water rate component of the monthly service charge, per hundred cubic feet, for all metered and unmetered water used for all purposes other than through temporary service facilities and the Chino Creek potable water system.

Potable Water Rate

	Current	Effective 01/01/25
Quantitative Rate Charge (per hcf)	$2.44	$2.59

Chino Creek Potable Water Rate: Resolution No. 1332 updates the quantitative water rate component of the monthly service charge, per hundred cubic feet, for the Chino Creek potable water system. Currently, the Palm Springs Aerial Tramway is the only customer in this system.

Chino Creek Potable Water Rate

	Current	Effective 01/01/25
Quantitative Rate Charge (per hcf)	$6.40	$7.36

Temporary Construction Meter Water Rate: Resolution No. 1332 also includes adjustments to the quantitative rate for water delivered through Temporary Construction Meters.

Temporary Construction Meter Water Rate

	Current	Effective 01/01/25
Quantitative Rate Charge (per hcf)	$2.48	$2.64

Monthly Service Charge: The resolution updates the fixed water service charge component of the monthly service charge for domestic water customers to maintain approximately 30% of revenue requirements collected from fixed charges with the remaining 70% collected from the Quantitative Rate.

Monthly Service Charge

Meter Size	Current	Effective 01/01/25
5/8” x 3/4”	$38.32	$40.72
1”	$38.32	$40.72
1 ½”	$72.02	$76.52
2”	$112.46	$119.49
3”	$240.53	$255.56
4”	$429.27	$456.10
6”	$880.88	$935.94
8”	$1,622.34	$1,723.74
10”	$2,566.01	$2,726.39
12”	$3,374.87	$3,585.80

Drought Rate: Resolution No. 1332 updates the Drought Rate that could be required to be added to the normal monthly quantitative charge, per hundred cubic feet of water delivered. The Drought Rate would be implemented if later adopted by the Board of Directors in the case of extreme shortage. The Board would vote to adopt the Drought Rate, which would only remain in place for six months unless increased, renewed or rescinded by the Board. Staff will be monitoring consumption levels and revenues to determine when to recommend implementation of the Drought Rate to the Board.

Drought Rate (per hcf)

Conservation Required	Current	Effective 01/01/25
Less than 10%	$0.00	$0.00
10-20%	$0.24	$0.13
20-30%	$0.53	$0.43
30-40%	$0.91	$0.82
40-50%	$1.37	$1.33
More than 50%	$2.07	$2.05

Revenue Stabilization Rate: Resolution No. 1332 updates the Revenue Stabilization Rate that the Board could elect to add to the normal monthly quantitative charge, per hundred cubic feet of water delivered. The Revenue Stabilization Rate would be implemented if later adopted by the Board of Directors in the case of events, other than drought or other water shortages, that cause revenues to fall well below projected levels. The Board would vote to implement the Revenue Stabilization Rate, which would only remain in place until water revenues return to fiscal year to date projected levels or until rescinded by the Board for any other reason, whichever occurs first. The Agency's Drought Rate is the primary means of addressing revenue shortfalls during times of declared water shortage in conjunction with the Agency's Water Shortage Contingency Plan. The Agency's Drought Rate and Revenue Stabilization Rate may not be in effect at the same time.

Revenue Stabilization Rate (per hcf)

Revenue Shortfall	Current	Effective 01/01/25
Less than 10%	$0.00	$0.00
10%	$0.28	$0.30
15%	$0.44	$0.46
20%	$0.61	$0.66
25%	$0.82	$0.87
30%	$1.05	$1.12

Zone Charge: Resolution No. 1332 adjusts the zone charges per hundred cubic feet of delivered water necessary to cover the costs associated with pumping water to higher elevations. The proposed zone charges are as follows:

Zone Charges

Zone	Current	Effective 01/01/25
B, D, G, I	$0.29	$0.31
E, H, K	$0.33	$0.34
L	$0.67	$0.71

Monthly Fire Service Charge: Resolution No. 1332 includes adjustments to the monthly fire service charge.

Monthly Fire Service Charge

Meter Size	Current	Effective 01/01/25
2”	$12.00	$12.75
4”	$33.70	$35.81
6”	$69.25	$73.58
8”	$115.41	$122.62
10”	$180.04	$191.29
12”	$235.44	$250.16

Backflow Protection Device Repair Charge: Resolution No. 1332 updates the Backflow Protection Device Repair Charge.

Backflow Protection Device Repair Charge

Meter Size	Current	Effective 01/01/25
3/4” to 1 ¼”	$3.36	$3.71
1 ½” to 3”	$3.91	$4.33
4” to 6”	$6.49	$7.17
8” to 10”	$7.83	$8.66
Const. Mtr	$38.19	$42.24

Resolution No. 1333 Establishing Rates, Fees and Charges for Recycled Water

In July 2022, the Agency reduced the recycled water rate from $0.79 per hundred cubic feet to $0.60 per hundred cubic feet (hcf) and implemented a multi-year strategy to increase the quantitative rate by $0.05 per hundred cubic feet per year through 2028 in order to make the cost of recycled water comparable to the cost of pumping groundwater from a private well including the replenishment assessment charge levied by DWA. After 2028, a new rate study will be performed to determine the new recycled water quantitative rate. NBS incorporated this quantitative rate strategy into its review of DWA's recycled water costs and revenues. During the 2023 Rate Study, a 5-year fixed rate increase plan was put in place to continue to generate 0.5% of Recycled Water revenue requirements from the fixed monthly charge and the remaining 99.5% from the monthly quantitative rate.

Recycled Water Rate

	Current	Effective 07/01/24
Quantitative Rate Charge (per hcf)	$0.65	$0.70

Recycled Water Monthly Service Charge

Meter Size	Current	Effective 07/01/24
2”	$22.26	$23.65
3”	$44.52	$47.30
4”	$69.56	$73.91
6”	$139.12	$147.82
8”	$222.59	$236.50
10”	$584.29	$620.81
12”	$737.32	$783.40

Resolution No. 1334 Establishing Rates, Fees and Charges for Sewer Service

In addition to the Agency's charge for sewer services, the Agency passes through the treatment charges imposed by the Coachella Valley Water District (CVWD) and the City of Palm Springs for sewage treatment. CVWD imposes a charge for sewer customers located in Cathedral City; the City of Palm Springs imposes a charge for sewer customers located in the Palm Oasis and Dream Homes communities within Cathedral City. These charges are collected by the Agency on the customers' monthly bills and are remitted in full to CVWD and to the City of Palm Springs.

CVWD Monthly Sewer Service Charge: On June 11, 2024, the Coachella Valley Water Districted adopted a rate increase, effective July 1, 2024. With CVWD's adoption of this rate increase, DWA must also adopt the same rate increase in order to pass the charge through to DWA customers whose sewage is collected by DWA and then delivered to CVWD for treatment.

CVWD Monthly Sewer Service Charge

Sewer Charge	Current	Effective 07/01/24
Per EDU	$27.10	$29.48

Total Cathedral City Sewer Service Charge per EDU
Effective July 1, 2024

DWA	$ 7.31
CVWD	29.48
TOTAL	**$36.79**

DWA Monthly Sewer Service Charge: Resolution No. 1334 updates the monthly sewer service charge DWA collects per Equivalent Dwelling Unit (EDU). In addition to the service charge listed below, DWA also passes through the charges for sewer treatment from either CVWD (Cathedral City) or City of Palm Springs (Palm Oasis and Dream Homes).

DWA Monthly Sewer Service Charge

Sewer Charge	Current	Effective 01/01/25
Per EDU	$7.31	$7.66

Total Cathedral City Sewer Service Charge per EDU
Effective January 1, 2025

DWA	$ 7.66
CVWD	29.48
TOTAL	**$37.14**

Total Palm Oasis / Dream Homes Sewer Service Charge per EDU
Effective January 1, 2025

DWA	$ 7.66
City of PS	20.00
TOTAL	**$27.66**

Legal Review:

Legal Counsel has reviewed this staff report and resolutions.

Fiscal Impact:

Operating Fund:

The monthly fire service rate increases will result in an additional $59,900 per year in fire protection revenues.

The quantitative, zone and monthly service charge rate increases will result in an additional $2,489,000 per year in water sales revenues, of which $1,015,000 is included in the proposed Operating Fund Budget for 2024/2025 to reflect the January 1, 2025 effective date.

The recycled water rate increase will result in an additional $74,000 per year in revenues and has been included in the proposed Operating Fund Budget for 2024/2025.

Wastewater Fund:

The sewer rate increase effective July 1, 2024, attributable to CVWD's rate increase will have no net fiscal impact on the Agency as it is a pass through charge collected on behalf of and remitted to CVWD.

The sewer rate increase effective January 1, 2025 will result in an additional $6,500 per year in DWA sewer revenues, of which $3,200 is included in the proposed Wastewater Fund Budget for 2024/2025 to reflect the January 1, 2025 effective date.

Recommendation:

Staff recommends that the Board of Directors:

1. Adopt Resolution No. 1332 for domestic water rates, fees and charges effective January 1, 2025.
2. Adopt Resolution No. 1333 for recycled water rates, fees and charges effective July 1, 2024.
3. Adopt Resolution No. 1334 for sewer rates, fees and charges with the CVWD pass through rate effective July 1, 2024, and DWA's monthly service charge rate effective January 1, 2025.

Attachments:

1. Resolution No. 1332 – Domestic Water Rates
2. Resolution No. 1333 – Recycled Water Rates
3. Resolution No. 1334 – Sewer Service (Wastewater) Rates

RESOLUTION NO. 1332

A RESOLUTION OF THE BOARD OF DIRECTORS OF DESERT WATER AGENCY ESTABLISHING RATES, FEES & CHARGES FOR DOMESTIC WATER SERVICE, BACKUP FACILITY, SUPPLEMENTAL WATER SUPPLY DEVELOPMENT AND SERVICE CONNECTION CHARGES

WHEREAS, by previous action this Board has approved various rates, fees and charges for water service, as provided by law; and

WHEREAS, it is appropriate at this time to revise the Agency's Rates, Fees & Charges for Domestic Water Service, while restating all other rates, fees and charges which remain unchanged; and

WHEREAS, in June 2023 this Board conducted a majority protest hearing for the proposed revision of the Agency's monthly charges for domestic water service over the next subsequent five years, as required by law, and has determined that a majority protest does not exist;

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of Desert Water Agency that the Agency's rates, fees and charges for water service shall be as follows:

1. Backup Facility Charges. Every applicant for a regular service connection shall, in addition to other charges, pay a Backup Facility Charge based on the size and location of the applicant's service and meter connection as follows:

SNOW CREEK VILLAGE ZONE (Zone J)

Meter	Charge
5/8 x 3/4 inch	$ 2,082
1 inch	$ 5,207
1-1/2 inch	$ 10,414
2 inch	$ 16,662

Backup Facility Charges (Cont.)

PALM OASIS ZONE (Zone I)

Meter	Charge
5/8 x 3/4 inch	$ 1,493
1 inch	$ 3,734
1-1/2 inch	$ 7,468
2 inch	$ 11,948

BASE ZONE (Zone A)

Meter	Charge
5/8 x 3/4 inch	$ 2,470
1 inch	$ 6,175
1-1/2 inch	$ 12,350
2 inch	$ 19,760

CHINO ZONE (Zone C)

Meter	Charge
5/8 x 3/4 inch	$ 3,026
1 inch	$ 7,565
1-1/2 inch	$ 15,130
2 inch	$ 24,208

CHINO “A” ZONE (Zone D)

Meter	Charge
5/8 x 3/4 inch	$ 3,679
1 inch	$ 9,198
1-1/2 inch	$ 18,396
2 inch	$ 29,433

CHINO “B” ZONE (Zone E)

Meter	Charge
5/8 x 3/4 inch	$ 3,276
1 inch	$ 8,190
1-1/2 inch	$ 16,380
2 inch	$ 26,208

Backup Facility Charges (Cont.)

ACANTO ZONE (Zone B)

Meter	Charge
5/8 x 3/4 inch	$ 4,108
1 inch	$ 10,271
1-1/2 inch	$ 20,542
2 inch	$ 32,867

SOUTHRIDGE “A” ZONE (Zone K)

Meter	Charge
5/8 x 3/4 inch	$ 4,390
1 inch	$ 10,977
1-1/2 inch	$ 21,954
2 inch	$ 35,126

SOUTHRIDGE “B” ZONE (Zone L)

Meter	Charge
5/8 x 3/4 inch	$ 2,320
1 inch	$ 5,800
1-1/2 inch	$ 11,600
2 inch	$ 18,560

EAST ZONE (Zone F)

Meter	Charge
5/8 x 3/4 inch	$ 2,357
1 inch	$ 5,893
1-1/2 inch	$ 11,786
2 inch	$ 18,857

EAST “A” ZONE (Zone G)

Meter	Charge
5/8 x 3/4 inch	$ 2,541
1 inch	$ 6,354
1-1/2 inch	$ 12,708
2 inch	$ 20,332

Backup Facility Charges (Cont.)

EAST "B" ZONE (Zone H)

Meter	Charge
5/8 x 3/4 inch	$ 3,030
1 inch	$ 7,575
1-1/2 inch	$ 15,150
2 inch	$ 24,240

2. Supplemental Water Supply Development Charges. Every applicant for a regular service connection shall, in addition to other charges, pay a Supplemental Water Supply Development Charge based on the size of the applicant's service and meter connection as follows:

Meter Size	
Residential	Charge
5/8 x 3/4 inch	$ 1,370.00
1 inch	$ 2,250.00
1-1/2 inch	$ 4,440.00
2 inch	$ 10,960.00
3 inch	$ 72,070.00
Commercial	Charge
5/8 x 3/4 inch	$ 1,250.00
1 inch	$ 2,740.00
1-1/2 inch	$ 8,830.00
2 inch	$ 15,090.00
3 inch	$ 21,350.00
6 inch	$ 677,430.00
Irrigation	Charge
5/8 x 3/4 inch	$ 1,720.00
1 inch	$ 6,530.00
1-1/2 inch	$ 25,210.00
2 inch	$ 23,970.00

3. Backup Facility Charges and Supplemental Water Supply Development Charges for Increased Service. A Backup Facility Charge and a Supplemental Water Supply Development Charge shall be required for all existing regular service connections for which increased capacity is requested and larger service connections and meters are installed. Said charges shall apply to the difference in service capacity between the new meter and service, and the meter and service which is being replaced.

4. Exemption. The Backup Facility Charge shall apply to all applications for regular service, regardless of the type of use, but shall not apply to applications for temporary service. The Backup Facility Charge may be exempted, or partially exempted for private commercial fire protection service, and where certain water supply, storage, treatment and transmission facilities are required of an applicant. The exemption will be determined by the Agency, whose decision will be final.

5. Accounting of Funds. All revenues collected from backup facility charges shall be deposited with other such fees in a separate capital facilities account or fund in a manner to avoid any commingling of the charges with other revenues and funds of the Agency, except for temporary investments, and such revenues may be expended solely for the purpose for which the backup facility charges are collected. Any interest income earned by moneys in said account or fund shall also be deposited in that account or fund and may be expended only for the purpose for which the backup facility charges are imposed. The Agency shall make findings once each fiscal year with respect to any portion of the backup facility charges remaining unexpended or uncommitted in the account five or more years after deposit of the charges. The findings shall identify the purpose to which the backup facility charges are to be put, and will demonstrate a reasonable relationship between the charges and the purpose for which the charges were imposed.

6. Meter Installation Charge. The charge for meter installation shall be as follows:

Size	Charge
5/8 x ¾ inch	$ 255.00
1 inch	$ 355.00
1-1/2 inch	$ 530.00
2 inch	$ 705.00

7. Customer Control Valve Charge. The customer control valve charge shall be as follows:

Size	Charge
1 inch	$ 360.00
1-1/2 inch	$ 370.00
2 inch	$ 435.00

8. Service Connection Charge. The charge for service connection shall be as follows:

	Size	Charge
a.)	1 inch	$ 1,800.00
	2 inch	$ 3,230.00
b.)	Payment Patch	$ 1,380.00
	Concrete Patch	$ 664.00

9. Connection Charge. A charge for all new connections based on the front footage served thereby shall be levied and collected at the rate of $70.00 per lineal foot of frontage, or the actual rate in accordance with a valid main extension refund agreement, whichever is greater.

10. Meter Test Deposit. The required deposit for testing a water meter shall be as follows:

Size	Charge
5/8 & 3/4 inch to 2 inches	$ 70.00
3 inch or larger	$ 140.00

11. Plan Check Fees. The plan check fees for Agency installed water facilities with no mains shall be $280. For developer installed facilities with mains, the fee shall be $280, plus $0.35 per lineal foot of main installed. There is no charge for single residences not falling within the above categories.

12. Design Review Fees. Fees charged for design review for water facilities shall be as follows:

a.) Agency Engineering Department	$140.00 per hour
b.) Engineering Consultants	Actual cost plus 15%
c.) Legal Consultants	Actual cost plus 15%

13. Fire Flow Model and Verification Fees. The following charges shall be imposed for fire flow model analysis and verification within our domestic water service area;

a.) Fire Flow Model and Letter	$ 500.00
b.) Fire Flow Verification Letter	$ 70.00

14. Temporary Service Connection Charge. The following deposits and charges shall be imposed for a temporary service connection:

a.) Deposits	
Meter	$ 964.00
Backflow Device	$ 500.00
Total	$ 1,464.00
b.) Meter Installation Charges	
Meter	$ 70.00
Backflow Device	$ 70.00
Total	$ 140.00
c.) Meter Relocation Charges	
Each Occurrence	$ 70.00

15. Restoration of Service. The charge for service restored on Agency's normal working days and during normal working hours will be $70. The charge for service restored other than that on Agency's normal working days and after normal working hours will be $150. To have service restored the same day, during working hours, payment must be received between 8:00 a.m. and 4:00 p.m. Payments received after 4:00 p.m. will be at the after-hours rate for restoration of service the same day.

Customers demonstrating financial hardship, as outlined in the Agency's Policy on Discontinuation of Residential Water Service, shall pay a reduced service restoration fee of $50 during Agency normal working Days and during normal working hours.

If service is discontinued or turned off by customer request for any reason, other than repairs, the restoration charges will be enforced if restoration of service is requested within 90 days of the initial request of discontinuance.

16. Backflow Protection Device Installation Charges. The following charges shall be imposed for the installation of a backflow protection device:

a.) Double Check Device

Size	Charge
3/4 inch	$ 647.00
1 inch	$ 812.00
1-1/2 inch	$ 1,480.00
2 inch	$ 1,870.00

b.) Reduced Pressure Principal Device Assemblies

Size	Charge
3/4 inch	$ 843.00
1 inch	$ 1,005.00
1-1/2 inch	$ 1,689.00
2 inch	$ 2,053.00

c.) Double Check Device with Fire Service Outlet

Size	Charge
1 inch	$ 1,000.00
1-1/2 inch	$ 1,668.00
2 inch	$ 2,149.00

d.) Reduced Pressure Device with Fire Service Outlet

Size	Charge
1 inch	$ 1,193.00
1-1/2 inch	$ 1,877.00
2 inch	$ 2,333.00

17. Metered Service Charge. Service charges for water service include a monthly service charge, a quantitative rate charge, and a zone charge if applicable, as follows:

a.) Monthly Service Charge

Size	Charge
5/8 x 3/4 inch	$ 40.72
1 inch	$ 40.72
1-1/2 inch	$ 76.52
2 inch	$ 119.49
3 inch	$ 255.56
4 inch	$ 456.10
6 inch	$ 935.94
8 inch	$ 1,723.74
10 inch	$ 2,726.39
12 inch	$ 3,585.80

Metered Service Charge. (Cont.)

b.) Quantitative Rate Charge

The base rate charge for all metered and unmetered water used for all purposes other than through temporary service facilities and the Chino Creek potable water system facilities shall be $2.59 per 100 cubic feet.

c.) Chino Creek Quantitative Rate Charge

The base rate charge for all metered and unmetered water used within the Chino Creek Potable Water System facilities shall be $7.36 per 100 cubic feet.

d.) Temporary Service Quantitative Rate Charge

The base rate charged for all metered and unmetered water used for construction and temporary service shall be $1,149.98 ($2.64 per 100 cubic feet) per acre-foot.

e.) Zone Charge

The Zone Charge, which is assessed in addition to the Quantitative Rate Charge, per 100 cubic feet is as follows:

Zone	Zone Charge
A, C, F, J	$ 0.00
B, D, G, I	$ 0.31
E, H, K	$ 0.34
L	$ 0.71

f.) Drought Rate

The Drought Rate is in addition to the Quantitative Rate Charge. It may be applied in times of mandatory restrictions or extreme water supply shortage.

Use Reduction Required	Addition to Quantitative Rate Charge
10-20%	$ 0.13
20-30%	$ 0.43
30-40%	$ 0.82
40-50%	$ 1.33
More than 50%	$ 2.05

g.) Revenue Stabilization Rate

The Revenue Stabilization Rate is in addition to the Quantitative Rate Charge but shall not be applied if the Drought Rate is being applied. It may be applied when the monthly volumetric rate revenue falls 10% or more below the fiscal year-to-date projected monthly volumetric revenue.

Revenue Shortfall	Revenue Stabilization Rate
10%	$ 0.30
15%	$ 0.46
20%	$ 0.66
25%	$ 0.87
30%	$ 1.12

18. Private Fire Protection Monthly Service Charges. The monthly service charge for private fire protection shall be as follows:

Service Size	Charge
2 inch	$ 12.75
4 inch	$ 35.81
6 inch	$ 73.58
8 inch	$ 122.62
10 inch	$ 191.29
12 inch	$ 250.16

19. Backflow Protection Device Repair Charge. The monthly charge for backflow protection device repair shall be as follows:

Size	Charge
3/4 inch	$ 3.71
1 inch	$ 3.71
1-1/4 inch	$ 3.71
1-1/2 inch	$ 4.33
2 inch	$ 4.33
2-1/2 inch	$ 4.33
3 inch	$ 4.33
4 inch	$ 7.17
6 inch	$ 7.17
8 inch	$ 8.66
10 x 12 inch	$ 8.66

20. Construction and Temporary Service Monthly Charges. The construction and temporary service monthly charge shall include the following and be set as follows:

a. Monthly Service Charges
To be in accordance with Item 17-a of this Resolution

b. Quantitative Charges
To be in accordance with Item 17-b and 17-c of this Resolution

c. Zone Pumping Charges
To be in accordance with Item 17-e of this Resolution

d. Backflow Protection Device Charge: $42.24

21. Deposit to Establish Credit. The minimum deposit to establish credit will be two (2) times the average monthly bill. If this cannot be determined, the minimum deposit shall be as follows:

Size	Deposit
5/8 x 3/4 inch	$ 100.00
1 inch	$ 100.00
1-1/2 inch	$ 150.00
2 inch	$ 200.00

22. Development Review. A charge for Agency provided Administrative Services shall be collected at the rate of $140 for each of the following:

a.) Will Serve Letter

b.) Development Bond Amount Letter

c.) Response to Initial Study

d.) Non-Interference Letter

23. Water Quality Sampling. The charge for Agency collection and analysis of development bacteriological samples shall be at the rate of $75.00 per sample.

24. Account Establishment Fee Charge. An administrative charge for Agency services to establish account in the new owner's name shall be $30.00 per account.

25. Late Fee. An administrative late fee charge of $25.00 per account will be assessed on accounts that are delinquent (30 days).

26. Main Extension By Applicant Deposit. The applicant shall deposit with the Agency a sum in the amount equal to twenty percent (20%) of the estimated main extension construction costs, as determined by the Agency, for inspection and incidental costs. The Agency shall refund the applicant any deposit amount above the final inspection and incidental costs. The Agency shall also collect additional money, as required, if the initial deposit amount does not cover the final inspection and incidental costs.

27. Effective Date: The charges set forth herein shall become effective on January 1, 2025 and as of that date shall replace the charges set forth in Resolution No. 1307.

ADOPTED this 18th day of June 2024.

____
Paul Ortega, President

ATTEST:

____
Gerald McKenna, Secretary-Treasurer

BACKUP FACILITY CHARGES
FOR WATER SERVICE
October 16, 2018

New development creates an additional demand for water. In order to meet the new demand, new wells must be constructed to provide more water, new storage tanks must be constructed to store water for emergency use, equalizing, and fire storage, and new transmission pipelines must be constructed to transport water from wells to storage tanks and throughout the distribution system. New development in hillside areas and service areas above the Base Zone places demand upon facilities, such as booster pumping plants, water storage tanks and transmission pipelines, whose basic function is to lift the water up to and store in these higher zones.

For the past eight years, new development has added an annual average of about 120 service connections to the Desert Water Agency water system. At this growth rate, every seven years new connections will create a demand for water equivalent to the production capacity of one well. The increased demand will also burden storage, transmission, and booster pumping facilities in all Zones. These facilities must be in place ahead of new connections. Therefore, in most cases, the facilities are constructed in anticipation of demand, and costs of the facilities are recovered through the Backup Facility Charge.

Staff has reviewed the costs that make up the Backup Facility Charge and find that a tiered rate based on our pressure zones is justified to recover cost of the well plants, booster plants, treatment plants, surface water facilities, storage reservoirs, and transmission mains required by each zone.

All new development requiring water service will be charged for Backup Facilities. The charge is based upon the capacity/service size ratio of the service provided and the proportional potential demand placed upon the available water production, transmission, treatment, pressure boosting and storage facilities within the appropriate pressure zone. The charge is not based upon the type of service connection (i.e., residential, commercial, and industrial). The amount of the charge for any particular development is based on the number of services, service size, meter size and the assigned number of capacity units per service as determined by the Agency. The capacity unit (C.U.) is based on the capacity/service size ratio of the service connection.

Service capacity ratios have historically been based on the relationship between capacity and pipe diameter. Originally established in 1973, the service capacity/diameter relationship for the Agency was based on a 1" service size capacity ratio of Q=KD^2.54. Depending on the specific hydraulic formula selected the service size relationship can range from D^2.5 to D^2.667. These hydraulic formula and capacity/diameter relationships are empirical and therefore approximate. The selected relationship of D^2.54 is reasonable in that it is slightly less than the median relationship of D^2.58.

However, capacity is ultimately limited by the maximum continuous operation flow rate of the meter installed on each service connection. To account for this, the Agency has opted to utilize the AWWA meter factors in lieu of the abovementioned D^2.54 formula. AWWA meter factors are an industry standard and, therefore, a reasonable method to use in determining equivalent capacity units within the system.

To determine the standard capacity for each of the Agency's pressure zones, all active services smaller and larger than the standard one-inch service are converted to one-inch equivalent capacity units using the AWWA meter factors discussed above.

The Agency currently operates 12 different pressure zones. Calculation of the C.U. for each service size in the zones are shown in the tables below:

SYSTEM CAPACITY UNITS – SNOW CREEK VILLAGE ZONE

SERVICE SIZE	SERVICES	AWWA METER FACTORS	CAPACITY UNITS
3/4"	0	0.40	0
1"	45	1.00	45
1-1/2"	0	2.00	0
2"	2	3.20	6.4
Total	47		51

SYSTEM CAPACITY UNITS – PALM OASIS ZONE

SERVICE SIZE	SERVICES	AWWA METER FACTORS	CAPACITY UNITS
3/4”	0	0.40	0
1”	193	1.00	193
1-1/2”	0	2.00	0
2”	12	3.20	38.4
Total	205		231

SYSTEM CAPACITY UNITS – BASE ZONE

SERVICE SIZE	SERVICES	AWWA METER FACTORS	CAPACITY UNITS
3/4”	98	0.40	39.2
1”	11,672	1.00	11,672
1-1/2”	491	2.00	982
2”	1,977	3.20	6,326.4
Total	14,238		19,019

SYSTEM CAPACITY UNITS – CHINO ZONE

SERVICE SIZE	SERVICES	AWWA METER FACTORS	CAPACITY UNITS
3/4”	6	0.40	2.4
1”	1,802	1.00	1,802
1-1/2”	111	2.00	222
2”	269	3.20	860.8
Total	2,188		2,887

SYSTEM CAPACITY UNITS – CHINO “A” ZONE

SERVICE SIZE	SERVICES	AWWA METER FACTORS	CAPACITY UNITS
3/4”	0	0.40	0
1”	68	1.00	68
1-1/2”	43	2.00	86
2”	9	3.20	28.8
Total	120		182

SYSTEM CAPACITY UNITS – CHINO "B" ZONE

SERVICE SIZE	SERVICES	AWWA METER FACTORS	CAPACITY UNITS
3/4"	0	0.40	0
1"	54	1.00	54
1-1/2"	0	2.00	0
2"	0	3.20	0
Total	54		54

SYSTEM CAPACITY UNITS – ACANTO ZONE

SERVICE SIZE	SERVICES	AWWA METER FACTORS	CAPACITY UNITS
3/4"	0	0.40	0
1"	372	1.00	372
1-1/2"	5	2.00	10
2"	30	3.20	96
Total	407		478

SYSTEM CAPACITY UNITS – SOUTHRIDGE "A" ZONE

SERVICE SIZE	SERVICES	AWWA METER FACTORS	CAPACITY UNITS
3/4"	0	0.40	0
1"	5	1.00	5
1-1/2"	15	2.00	30
2"	0	3.20	0
Total	20		35

SYSTEM CAPACITY UNITS – SOUTHRIDGE "B" ZONE

SERVICE SIZE	SERVICES	AWWA METER FACTORS	CAPACITY UNITS
3/4"	0	0.40	0
1"	6	1.00	6
1-1/2"	1	2.00	2
2"	3	3.20	9.6
Total	10		18

SYSTEM CAPACITY UNITS – EAST ZONE

SERVICE SIZE	SERVICES	AWWA METER FACTORS	CAPACITY UNITS
3/4”	89	0.40	35.6
1”	3,723	1.00	3,723
1-1/2”	174	2.00	348
2”	660	3.20	2,112
Total	4,646		6,218

SYSTEM CAPACITY UNITS – EAST “A” ZONE

SERVICE SIZE	SERVICES	AWWA METER FACTORS	CAPACITY UNITS
3/4”	6	0.40	2.4
1”	344	1.00	344
1-1/2”	8	2.00	16
2”	7	3.20	22.4
Total	365		384

SYSTEM CAPACITY UNITS – EAST “B” ZONE

SERVICE SIZE	SERVICES	AWWA METER FACTORS	CAPACITY UNITS
3/4”	11	0.40	4.4
1”	381	1.00	381
1-1/2”	14	2.00	28
2”	6	3.20	19.2
Total	412		432

The charge per capacity unit for each zone is obtained by determining the cost of water production, pressure boosting, treatment, storage and transmission facilities and dividing it by the total capacity units served by the facilities. The method for determining facility cost and total capacity units for each zone is discussed below.

The total number of current services in each zone was obtained from the Desert Water Agency Information Systems Department.

SNOW CREEK VILLAGE ZONE

The existing capacity units (C.U.) for the Snow Creek Village Zone is 51. To determine the total capacity units for the zone, we must first calculate the max demand day (MDD) value utilizing the current General Plan formula:

- MDD = 1.85 x Average Day Annual Demand (ADD)

The Snow Creek Village Zone is served from two surface water sources. Since 1993, the stream sources have had an average capacity rate of 1,257 GPM, or 1.81 MGD. Based on meter consumption data for 2017, the current ADD for the zone is equal to 0.032 MGD, therefore, the MDD is equal to 0.061 MGD. If the MDD is equal to 0.061 MGD, the current gal/C.U./day is equal to 1,196 gal/C.U./day, or (0.06 MGD÷51).

The General Plan has calculated a max demand for the area to be 1.12 MGD, with the remaining water to be delivered to the Base and Chino Zones. Since all service capacity must be met by the stream capacity, the existing units are using 5.4% of the total capacity of the stream source (0.061 MGD ÷ 1.12 MGD). The total maximum capacity units for the entire system are then equal to 944, or (51 ÷ 0.054).

Facility costs were determined by analyzing facility cost valuation from Agency Annual Operating Statistics Reports, cost estimates prepared in conjunction with the currently proposed budget and rate study, and by assessing the current facilities using the 2008 General Plan Update. The facilities cost valuation per capacity unit was determined from the total number of capacity units and the facilities costs.

The Snow Creek Village Zone charge is composed of costs per capacity unit for production (stream source), treatment, storage and transmission facilities assignable to the Snow Creek Village Zone service.

SNOW CREEK VILLAGE ZONE PRODUCTION COST

In order to calculate the cost of surface water per capacity unit we first determine the cost of those facilities from actual project costs. Surface water is transmitted from the diversions into the Snow Creek Village Zone where it is distributed to the zone services.

DESCRIPTION	YEAR CONSTRUCTED	*SURFACE WATER FACILITY COST
Snow Creek Diversion	1990	$2,000,000
Falls Creek Diversion	1990	$1,300,000
TOTAL		**$3,300,000**

* Actual project costs, unadjusted for present value.

The surface water not only benefits the Snow Creek Village Zone, the water can also benefit the Base Zone and Chino Zones. The Snow Creek Village Zone will use 61.2% of the total stream capacity (1.12 ÷ 1.81); therefore, the cost per capacity unit for the Snow Creek Village Zone is $3,300,000 (0.612) ÷ 944 C.U. = **$2,139/C.U.**

SNOW CREEK VILLAGE WATER TREATMENT COSTS

In order to calculate the cost of water treatment per capacity unit we first determine the cost of those facilities from actual project costs for this zone. Water is treated using chlorine and U.V. in this zone. Since the chlorine facilities were part of the production facilities costs, we will only include U.V for this calculation.

UV TREATMENT

DESCRIPTION	YEAR CONSTRUCTED	*FOREBAY COST
UV Treatment (Snow Creek/Falls Creek)	2014	$317,142
TOTAL		**$317,142**

*Actual project costs.

The UV treated surface water not only benefits the Snow Creek Village Zone, it can also benefit the Base Zone and Chino Zones. The Snow Creek Village Zone will use 61.2% of the total stream capacity (1.12 ÷ 1.81); therefore, the cost of treatment per capacity unit is $317,142 (0.612) ÷ 944 C.U. = **$205/C.U.**

SNOW CREEK VILLAGE ZONE WATER STORAGE COSTS

In order to calculate the cost of water storage per capacity unit we first determine the cost of those facilities from actual project costs and approved capital improvement budgets. The most current water storage estimated costs are used to determine the ratio of water storage cost to unit of storage volume. The unit cost of water storage per gallon (utilizing the most recent storage facility project costs is $3,844,585 ÷ 5,500,000 GAL= $0.70/GAL. By applying this ratio to each water storage reservoir, the cost of each reservoir within the zone are then determined.

SNOW CREEK VILLAGE ZONE WATER STORAGE COSTS

DESCRIPTION	WATER STORAGE CAPACITY (GAL.)	UNIT COST PER UNIT STORAGE ($/GAL.)	ZONE STORAGE COST
Equalization	1,000,000	0.70	$700,000
Village	150,000	0.70	$105,000
TOTAL			**$805,000**

The Equalization Reservoir not only benefits the Snow Creek Village Zone, it can also benefit the Base Zone and Chino Zones. The Snow Creek Village Zone current storage requirements are 0.168 MG, which is 16.8% of the Equalization Reservoir capacity (0.168 ÷ 1.0); therefore, the cost per capacity unit is $700,000 (0.168) ÷ 944 C.U. = $124/C.U. and the cost of storage per capacity unit for the Village Reservoir is therefore, $105,000 ÷ 944 C.U. = $111/C.U., for a total of **$235/C.U.**

FUTURE STORAGE CAPACITY REQUIREMENTS

The General Plan requires that the Agency have 18 hours ADD emergency storage, along with fire flow and equalization storage during energy Time of Use (T.O.U.) periods. The 18 hour ADD during T.O.U periods for the zone is 0.024 MG, or (0.032 x 0.75). The fire flow requirement for the zone is 0.12 MG, or (1,000 GPM for 2 hours per General Plan) and the equalization, or operational storage is 40% of the MDD and is therefore equal to 0.024 MG. Adding all of these components equates to 0.168 MG of storage. The current storage capacity for the system is 1.15 MG.

The existing stream capacity of the zone will accommodate an additional 893 capacity units (944 - 51). These additional units will add 1.0 MGD to the MDD. This additional demand will increase the storage requirement to 0.97 MG. Since this is less than the existing storage capacity, no future storage is required.

SNOW CREEK VILLAGE ZONE WATER TRANSMISSION MAIN COSTS

Historically, the Agency has calculated the cost of water transmission mains per capacity unit by determining the cost of those facilities from actual project costs and approved capital improvement budgets. The ratio of cost per lineal foot to diameter is determined.

DESCRIPTION	YEAR CONSTRUCTED	PIPELINE LENGTH (L.F.)	*PIPELINE COST	PIPELINE UNIT COST ($/L.F.)
12”Alejo/Tamarisk/ Indian Canyon	2012/2014/2015	4,958	$1,290,176	$260/L.F.
14”	-	-	-	-
15”	-	-	-	-
16” Sunny Dunes	2013	1,100	$301,462	$274/L.F.
18”	-	-	-	-
20” E. Well Field	-	-	-	-
24” E. Well Field	-	-	-	-
26”	-	-	-	-
30” N. Well Field	-	-	-	-
36” Avenida Caballeros	2014/2015	2,659	$2,509,219	$944/L.F.
42”	-	-	-	-

* Actual project cost, unadjusted for present value.

Due to the lack of current data available for the varying sizes of transmission mains in our system, the Agency has opted to utilize a “unit construction cost for pipelines” equation used by Eastern Municipal Water District (EMWD) in their 2015 rate study (study conducted by Kennedy/Jenks Consultants). Said equation assumes that unit cost ($/linear foot) = Diameter (inch) x 40.47 x

[Diameter (inch) $^{\wedge -0.309}$]. Utilization of said equation allows the Agency to determine uniform unit construction estimates for all sizes of transmission mains in our system.

***ESTIMATED WATER TRANSMISSION MAIN UNIT CONSTRUCTION COSTS**

TRANSMISSION MAIN DIAMETER (INCHES)	TRANSMISSION MAIN LENGTH ($/L.F.)
12”	225
14”	250
15”	265
16”	275
18”	300
20”	320
24”	365
26”	385
30”	425
36”	480
42”	535

*Based on the following EMWD assumption: cost $/L.F. = Diameter (inch) x 40.47 x [Diameter (inch) $^{\wedge -0.309}$].

The most current water transmission main estimated costs are used to determine the ratio of water main cost to diameter as shown in the table on the previous page. By applying these ratios to system transmission mains, the cost of all size mains for the entire system is determined by zone.

SNOW CREEK VILLAGE ZONE WATER TRANSMISSION MAIN COSTS

TRANSMISSION MAIN DIAMETER (INCHES)	TRANSMISSION MAIN LENGTH (L.F.)	UNIT COST PER UNIT LENGTH ($/L.F.)	ZONE TRANSMISSION MAIN COST
12”	1,500	225	$337,500
***24”**	9,600	365	$3,504,000*
TOTAL			**$3,841,500**

*The 24” main not only benefits the Snow Creek Village Zone, it can also benefit the Base Zone and Chino Zones. The Snow Creek Village Zone will use 61.2% of the total stream capacity rate (1.12 ÷ 1.81); therefore, the cost of transmission main per capacity unit for the 24” main is therefore, $3,504,000 (0.612) ÷ 944 C.U. = **$2,271/C.U.**

The cost of transmission main per capacity unit for the 12” main is therefore, $337,500 ÷ 944 C.U. = **$357/C.U.**

COST PER ZONE SUMMARY

ZONE	SURFACE WATER COST	TREATMENT COST	STORAGE COST	TRANSMISSION COST	TOTAL CAPACITY UNIT COST
Snow Creek Village	$2,139	$205	$235	$2,628	$5,207

The cost of a 1-inch service in the zone is comprised of the cumulative capacity unit costs for surface water production, treatment, storage and transmission facilities.

In order to determine the capacity unit cost for each meter size the AWWA meter factors are used. The table below shows the capacity unit charge (Backup Facility Charge) per meter size.

SNOW CREEK VILLAGE FINAL BACKUP FACILITY CHARGE COST SUMMARY

METER SIZE	AWWA METER FACTOR	BACKUP FACILITY CHARGE
3/4 X 5/8	0.4	$2,082
1	**1.0**	**$5,207**
1.5	2.0	$10,414
2	3.2	$16,662

PALM OASIS ZONE

The existing capacity units (C.U.) for the Palm Oasis Zone is 231. To determine the total capacity units for the zone, we must first calculate the max demand day (MDD) value utilizing the current General Plan formula:

- MDD = 1.85 x Average Day Annual Demand (ADD)

Using annual production data from 2017, the ADD calculated for the zone equals 0.14 MGD, therefore, the MDD is equal to 0.26 MGD. If the MDD is equal to 0.26 MGD, the current gal/C.U./day is equal to 1,134 gal/C.U./day, or (0.26 MGD ÷ 231).

The current pumping capacity for the Palm Oasis Zone is 2.56 MGD. Since all service capacity must be met by the Palm Oasis Zone pumping capacity, all of the existing units are using 10.2% of the total capacity of the Palm Oasis Zone (0.26 MGD÷2.56 MGD). The total maximum capacity units for the zone is then equal to 2,265, or (231÷0.102).

Facility costs were determined by analyzing facility cost valuation from Agency Annual Operating Statistics Reports, cost estimates prepared in conjunction with the currently proposed budget and rate study, and by assessing the current facilities using the 2008 General Plan Update. The facilities cost valuation per capacity unit was determined from the total number of capacity units and the facilities costs.

The Palm Oasis Zone charge is composed of costs per capacity unit for production (wells and boosters), treatment, storage and transmission facilities assignable to the Palm Oasis Zone service.

PALM OASIS PUMPING/WATER PRODUCTION COST

In order to calculate the cost of pumping water per capacity unit we first determine the cost of those facilities from approved capital improvement budgets. The ratio of plant cost to horsepower is determined.

DESCRIPTION	YEAR CONSTRUCTED	PUMPING PLANT HORSEPOWER	PUMPING PLANT COST*
Well 39	2010	450 HP Pumping Plant	$1,320,156.59
Well 40	2009	450 HP Pumping Plant	$1,498,356.82
Well 41	2006	450 HP Pumping Plant	$1,561,858.76
Well 42	2006	200 HP Pumping Plant	$1,175,156.15
TOTAL		**1,550 HP**	**$5,555,528.32**

* Current Capital Improvement Budget Amounts for Pumping Plants.

The most current pumping plant estimated costs are used to determine the ratio of pumping plant cost to unit of horsepower from the table above. The unit cost of pumping per horsepower is $5,555,528.32 ÷ 1,550 hp= $3,584/hp. By applying this ratio to each active pumping plant the cost of each plant and the zone system pumping cost is determined.

Similarly, the cost of pressure boosting facilities is determined.

DESCRIPTION	YEAR CONSTRUCTED	BOOSTER PLANT HORSEPOWER	BOOSTER PLANT COST*
Zone 1240 Booster	2016	80 HP Booster Plant	$950,000
Janis Tuscany Booster Upgrades	2016	225 HP Booster Pumping Plant	$230,000
TOTAL		**305 HP**	**$1,180,000**

* Actual project costs, unadjusted for present value.

The most current pumping plant costs are used to determine the ratio of booster pumping plant cost to unit of horsepower from the table above. The unit cost of booster pumping per horsepower is $1,180,000 ÷ 305 hp= $3,869/hp. By applying this ratio to each active pumping plant the cost of each plant and the zone's booster pumping cost is determined.

PALM OASIS ZONE PUMPING COSTS

WELL/BOOSTER BASE ZONES	DESCRIPTION	PLANT HORSEPOWER	ZONE PUMPING COST ($3,584/HP)
Well 17	Well Pumping Plants	150	$537,600
Well 43	Well Pumping Plants	250	$896,000
Well 17 Booster	Booster Pumping Plants	80	$309,520*
TOTAL			**$1,743,120**

*$3,869/HP Unit Cost of Booster Pumping Per Horsepower.

The cost of production per capacity unit is therefore, $1,743,120 ÷ 2,265 C.U. = **$769/C.U.**

PALM OASIS ZONE WATER TREATMENT COSTS

In order to calculate the cost of water treatment per capacity unit we first determine the cost of those facilities from actual project costs.

FOREBAY TREATMENT

DESCRIPTION	YEAR CONSTRUCTED	*FOREBAY COST
Well 17 Forebay		$137,500
TOTAL		**$137,500**

The cost of forebay treatment per capacity unit is therefore, $137,500 ÷ 2,265 C.U. = **$61/C.U**.

CHLORINE INJECTION TREATMENT

DESCRIPTION	NUMBER OF ACTIVE SITES	AVG. COST PER SITE	ZONE PUMPING COST (ACTUAL)
Chlorine storage building and pad, injection vault	1	$30,440	$30,440
TOTAL			**$30,440**

*Based on average construction cost per site to install chlorine injection facilities.

The cost of chlorine injection treatment per capacity unit is therefore, $30,440 ÷ 2,265 C.U. = **$13/C.U**.

PALM OASIS ZONE WATER STORAGE COSTS

In order to calculate the cost of water storage per capacity unit we first determine the cost of those facilities from actual project costs and approved capital improvement budgets. The ratio of storage cost to volume is determined.

DESCRIPTION	YEAR CONSTRUCTED	RESERVOIR STORAGE CAPACITY	RESERVOIR COST*
Tahquitz Reservoir II	2004	5,000,000 gallons	$2,299,785**
Zone 1060	2016	500,000 gallons	$1,544,800*
TOTAL		**5,500,000 gallons**	**$3,844,585**

*Revised Budget Amount for project.

** Actual project costs, unadjusted for present value.

The most current water storage estimated costs are used to determine the ratio of water storage cost to unit of storage volume from the table above. The unit cost of water storage per gallon is $3,844,585 ÷ 5,500,000 GAL= $0.70/GAL. By applying this ratio to each water storage reservoir, the cost of each reservoir and the entire zone's water storage costs are determined.

PALM OASIS ZONE WATER STORAGE COSTS

DESCRIPTION	WATER STORAGE CAPACITY (GAL.)	UNIT COST PER UNIT STORAGE ($/GAL.)	ZONE STORAGE COST
Palm Oasis I	1,000,000	0.70	$700,000
Palm Oasis II	1,000,000	0.70	$700,000
TOTAL			**$1,400,000**

The cost of storage per capacity unit is therefore, $1,400,000 ÷ 2,265 C.U. = **$618/C.U**.

FUTURE STORAGE CAPACITY REQUIREMENTS

The General Plan requires that the Agency have 18 hours ADD emergency storage, along with fire flow and equalization storage during energy Time of Use (T.O.U.) periods. The 18 hour ADD during T.O.U periods for the zone is 0.105 MG (0.14 x 0.75). The fire flow requirement for the zone is 0.12 MG (1,000 GPM for 2 hours per General Plan) and the equalization, or operational storage is 40% of the MDD and is therefore equal to 0.105 MG. Adding all of these components equates to 0.33 MG of storage. The current storage capacity for the zone is 2.0 MG.

The existing pumping capacity of the system will accommodate an additional 2,034 capacity units (2,265 - 231). These additional units will add 2.3 MGD to the MDD. This additional demand will increase the storage requirement to 2.2 MG, requiring 0.2 MG of additional storage (2.2-2.0). The cost for the additional storage will be $140,000, or ($0.70/gal x 0.2 MG). The cost of future storage per capacity unit is therefore, $140,000 ÷ 2,265 C.U. = **$61/C.U.**

PALM OASIS ZONE WATER TRANSMISSION MAIN COSTS

Historically, the Agency has calculated the cost of water transmission mains per capacity unit by determining the cost of those facilities from actual project costs and approved capital improvement budgets. The ratio of cost per lineal foot to diameter is determined.

DESCRIPTION	YEAR CONSTRUCTED	PIPELINE LENGTH (L.F.)	*PIPELINE COST	PIPELINE UNIT COST ($/L.F.)
12”Alejo/Tamarisk/ Indian Canyon	2012/2014/2015	4,958	$1,290,176	$260/L.F.
14”	-	-	-	-
15”	-	-	-	-
16” Sunny Dunes	2013	1,100	$301,462	$274/L.F.
18”	-	-	-	-
20” E. Well Field	-	-	-	-
24” E. Well Field	-	-	-	-
26”	-	-	-	-
30” N. Well Field	-	-	-	-
36” Avenida Caballeros	2014/2015	2,659	$2,509,219	$944/L.F.
42”	-	-	-	-

* Actual project cost, unadjusted for present value.

Due to the lack of current data available for the varying sizes of transmission mains in our system, the Agency has opted to utilize a "unit construction cost for pipelines" equation used by Eastern Municipal Water District (EMWD) in their 2015 rate study (study conducted by Kennedy/Jenks Consultants). Said equation assumes that unit cost ($/linear foot) = Diameter (inch) x 40.47 x [Diameter (inch) $^{\wedge -0.309}$]. Utilization of said equation allows the Agency to determine uniform unit construction estimates for all sizes of transmission mains in our system.

***ESTIMATED WATER TRANSMISSION MAIN UNIT CONSTRUCTION COSTS**

TRANSMISSION MAIN DIAMETER (INCHES)	**TRANSMISSION MAIN LENGTH ($/L.F.)**
12"	225
14"	250
15"	265
16"	275
18"	300
20"	320
24"	365
26"	385
30"	425
36"	480
42"	535

*Based on the following EMWD assumption: cost $/L.F. = Diameter (inch) x 40.47 x [Diameter (inch) $^{\wedge -0.309}$].

The most current water transmission main estimated costs are used to determine the ratio of water main cost to diameter as shown in the table on the previous page. By applying these ratios to system transmission mains, the cost of all size mains for the entire system is determined by zone.

PALM OASIS ZONE WATER TRANSMISSION MAIN COSTS

TRANSMISSION MAIN DIAMETER (INCHES)	TRANSMISSION MAIN LENGTH (L.F.)	UNIT COST PER UNIT LENGTH ($/L.F.)	ZONE TRANSMISSION MAIN COST
12”	17,134	225	$3,855,150
16”	4,200	275	$1,155,000
TOTAL			**$5,010,150**

The cost of transmission mains per capacity unit is therefore, $5,010,150 ÷ 2,265 C.U. = **$2,212/C.U**.

COST PER ZONE SUMMARY

ZONE	WATER PRODUCTION COST	TREATMENT COST	STORAGE COST	TRANSMISSION COST	TOTAL CAPACITY UNIT COST
Palm Oasis	$769	$74	$679	$2,212	$3,734

The cost of a 1-inch service in the zone is comprised of the cumulative capacity unit costs for water production, treatment, storage and transmission facilities.

In order to determine the capacity unit cost for each meter size the AWWA meter factors are used. The table below shows the capacity unit charge (Backup Facility Charge) per meter size.

PALM OASIS ZONE FINAL BACKUP FACILITY CHARGE COST SUMMARY

METER SIZE	AWWA METER FACTOR	BACKUP FACILITY CHARGE
3/4 X 5/8	0.4	$1,493
1	**1.0**	**$3,734**
1.5	2.0	$7,468
2	3.2	$11,948

BASE ZONE

The existing capacity units (C.U.) for the Base Zone is 19,019. To determine the total capacity units for the zone, we must first calculate the max demand day (MDD) value utilizing the current General Plan formula:

- MDD = 1.85 x Average Day Annual Demand (ADD)

Using annual production data from 2017, the ADD calculated for the zone equals 18.5 MGD, therefore, the MDD is equal to 34 MGD. If the MDD is equal to 34 MGD, the current gal/C.U./day is equal to 1,787 gal/C.U./day, or (34 MGD ÷ 19,019).

The current pumping capacity for the Base Zone is 40.4 MGD (The total Base Zone well capacity minus the Acanto, Chino Booster and Southridge "A" capacity). Since all service capacity must be met by the Base Zone pumping capacity, all of the existing units are using 84% of the total capacity of the Base Zone (34 MGD ÷ 40.4 MGD). The total maximum capacity units for the zone is then equal to 22,641, or (19,019 ÷ 0.84).

Facility costs were determined by analyzing facility cost valuation from Agency Annual Operating Statistics Reports, cost estimates prepared in conjunction with the currently proposed budget and rate study, and by assessing the current facilities using the 2008 General Plan Update. The facilities cost valuation per capacity unit was determined from the total number of capacity units and the facilities costs.

The Base Zone charge is composed of costs per capacity unit for production (wells and boosters), treatment, surface water, storage and transmission facilities assignable to the Base Zone service.

BASE ZONE PUMPING/WATER PRODUCTION COST

In order to calculate the cost of pumping water per capacity unit we first determine the cost of those facilities from approved capital improvement budgets. The ratio of plant cost to horsepower is determined.

DESCRIPTION	YEAR CONSTRUCTED	PUMPING PLANT HORSEPOWER	PUMPING PLANT COST*
Well 39	2010	450 HP Pumping Plant	$1,320,156.59
Well 40	2009	450 HP Pumping Plant	$1,498,356.82
Well 41	2006	450 HP Pumping Plant	$1,561,858.76
Well 42	2006	200 HP Pumping Plant	$1,175,156.15
TOTAL		**1,550 HP**	**$5,555,528.32**

* Current Capital Improvement Budget Amounts for Pumping Plants.

The most current pumping plant estimated costs are used to determine the ratio of pumping plant cost to unit of horsepower from the table above. The unit cost of pumping per horsepower is $5,555,528.32/1,550 hp= $3,584/hp. By applying this ratio to each active pumping plant the cost of each plant and the zone system pumping cost is determined.

Similarly, the cost of pressure boosting facilities is determined.

DESCRIPTION	YEAR CONSTRUCTED	BOOSTER PLANT HORSEPOWER	BOOSTER PLANT COST*
Zone 1240 Booster	2016	80 HP Booster Plant	$950,000
Janis Tuscany Booster Upgrades	2016	225 HP Booster Pumping Plant	$230,000
TOTAL		**305 HP**	**$1,180,000**

* Actual project costs, unadjusted for present value.

The most current pumping plant costs are used to determine the ratio of booster pumping plant cost to unit of horsepower from the table above. The unit cost of booster pumping per horsepower is $1,180,000/305 hp= $3,869/hp. By applying this ratio to each active pumping plant the cost of each plant and the zone's booster pumping cost is determined.

BASE ZONE PUMPING COSTS

WELL/BOOSTER BASE ZONES	DESCRIPTION	PLANT HORSEPOWER	ZONE PUMPING COST ($3,584/HP)
Well 14	Well Pumping Plants	200	$716,800
Well 16	Well Pumping Plants	250	$896,000
Well 20	Well Pumping Plants	300	$1,075,200
Well 22	Well Pumping Plants	500	$1,792,000
Well 23	Well Pumping Plants	300	$1,075,200
Well 24	Well Pumping Plants	500	$1,792,000
Well 27	Well Pumping Plants	400	$1,433,600
Well 28	Well Pumping Plants	400	$1,433,600
Well 29	Well Pumping Plants	400	$1,433,600
Well 32	Well Pumping Plants	400	$1,433,600
Well 33	Well Pumping Plants	400	$1,433,600
Well 34	Well Pumping Plants	400	$1,433,600
Well 37	Well Pumping Plants	450	$1,612,800
Well 38	Well Pumping Plants	450	$1,612,800
Well 39	Well Pumping Plants	450	$1,612,800
Well 40	Well Pumping Plants	450	$1,612,800
Well 14 Booster	Booster Plant	210	$812,490*
Well 16 Booster	Booster Plant	210	$812,490*
TOTAL			**$24,489,260**

*$3,869/HP Unit Cost of Booster Pumping Per Horsepower.

The Base Zone uses 78.9% (40.4 ÷ 51.2) of the Base Zone total well capacity, therefore, the cost of production per capacity unit is $24,489,260 (0.789) ÷ 22,641 C.U. = **$853/C.U.**

BASE ZONE WATER TREATMENT COSTS

In order to calculate the cost of water treatment per capacity unit we first determine the cost of those facilities from actual project costs. The Base Zone includes:

FOREBAY TREATMENT

DESCRIPTION	YEAR CONSTRUCTED	*FOREBAY COST
Well 14 Forebay	1993	$376,750
Well 16 Forebay	1993	$376,750
TOTAL		**$753,500**

Since the Base Zone uses 78.9% of total pumping capacity, the cost of forebay treatment per capacity unit is therefore, $753,500 (0.789) ÷ 22,641 C.U.= **$26/C.U**.

CHLORINE INJECTION TREATMENT

DESCRIPTION	NUMBER OF ACTIVE SITES	AVG. COST PER SITE	ZONE PUMPING COST (ACTUAL)
Chlorine storage building and pad, injection vault	12	$30,440	$365,280
TOTAL			**$365,280**

*Based on average construction cost per site to install chlorine injection facilities.

Since the Base Zone uses 78.9% of pumping capacity, the cost of chlorine injection treatment per capacity unit is therefore, $365,280 (0.789) ÷ 22,641 C.U. = **$12/C.U.**

UV TREATMENT

DESCRIPTION	YEAR CONSTRUCTED	*FOREBAY COST
UV Treatment (Snow Creek/Falls Creek)	2014	$317,142
TOTAL		**$317,142**

*Actual project costs.

The UV treated surface water not only benefits the Base Zone, the water is also used by Snow Creek Village Zone and Chino Zone. The Base Zone and Chino Zones will use 38% of the total stream capacity (0.69 ÷ 1.81); therefore, the cost per capacity unit for the UV treatment per capacity unit is $317,142 (0.38) ÷ 30,494 C.U. = **$4/C.U.**

BASE ZONE SURFACE WATER COST

In order to calculate the cost of surface water per capacity unit we first determine the cost of those facilities from actual project costs. Surface water is transmitted from the diversions into the Base Zone where it is distributed to the zone.

DESCRIPTION	YEAR CONSTRUCTED	*SURFACE WATER FACILITY COST
Snow Creek Diversion	1990	$2,000,000
Falls Creek Diversion	1990	$1,300,000
TOTAL		**$3,300,000**

* Actual project costs, unadjusted for present value.

The surface water not only benefits the Base Zone, the water also serves the Snow Creek Village Zone and Chino Zone. The Base Zone and Chino Zones will use 38% of the total stream capacity (0.69 ÷ 1.81); therefore, the cost per capacity unit is $3,300,000 (0.38) ÷ 30,494 C.U. = **$41/C.U.**

BASE ZONE WATER STORAGE COSTS

In order to calculate the cost of water storage per capacity unit we first determine the cost of those facilities from actual project costs and approved capital improvement budgets. The ratio of storage cost to volume is determined.

DESCRIPTION	YEAR CONSTRUCTED	RESERVOIR STORAGE CAPACITY	RESERVOIR COST*
Tahquitz Reservoir II	2004	5,000,000 gallons	$2,299,785**
Zone 1060	2016	500,000 gallons	$1,544,800*
TOTAL		**5,500,000 gallons**	**$3,844,585**

*Revised Budget Amount for project.

** Actual project costs, unadjusted for present value.

The most current water storage estimated costs are used to determine the ratio of water storage cost to unit of storage volume from the table above. The unit cost of water storage per gallon is $3,844,585 ÷ 5,500,000 GAL= $0.70/GAL. By applying this ratio to each water storage reservoir, the cost of each reservoir and the entire zone's water storage costs are determined.

BASE ZONE WATER STORAGE COSTS

DESCRIPTION	WATER STORAGE CAPACITY (GAL.)	UNIT COST PER UNIT STORAGE ($/GAL.)	ZONE STORAGE COST
Palm Springs North I	1,500,000	0.70	$1,050,000
Palm Springs North II	12,000,000	0.70	$8,400,000
Tahquitz I	5,000,000	0.70	$3,500,000
Tahquitz II	5,000,000	0.70	$3,500,000
Palm Springs South I	5,000,000	0.70	$3,500,000
Palm Springs South II	5,000,000	0.70	$3,500,000
Equalization	1,000,000	0.70	$700,000*
TOTAL			**$24,150,000**

* The Equalization Reservoir serves the Base Zone, Snow Creek Village Zone, and the Chino Zone. The Base Zone and Chino Zones will use 83% of the total reservoir capacity.

The required storage for the Base Zone is 29.42 MG. The existing storage capacity for the Base Zone is 34.5 MG; therefore, the Base zone storage is 85.2% of existing storage, or (29.42 ÷ 34.5).

The cost of storage per capacity unit is therefore equal to $700,000 (0.83) ÷ 30,494 plus $23,450,000(0.852) ÷ 22,641 C.U.: $19 + $882 = **$901/C.U.**

FUTURE STORAGE CAPACITY REQUIREMENTS

The General Plan requires that the Agency have 18 hours ADD emergency storage, along with fire flow and equalization storage during energy Time of Use (T.O.U.) periods. The 18 hour ADD during T.O.U periods for the zone is 13.9 MG, or (18.6 x 0.75). The fire flow requirement for the zone is 1.92 MG (8,000 GPM for 4 hours per General Plan) and the equalization, or operational storage is 40% of the MDD and is therefore equal to 13.6 MG. Adding all of these components equates to 29.42 MG of storage. The current storage capacity for the system is 34.5 MG.

The existing pumping capacity of the system will accommodate an additional 3,622 capacity units (22,641 – 19,019). These additional units will add 6.5 MGD to the MDD. This additional demand will increase the storage requirement to 34.5 MG, equaling the existing storage and therefore no future storage for the Base Zone is required.

BASE ZONE WATER TRANSMISSION MAIN COSTS

Historically, the Agency has calculated the cost of water transmission mains per capacity unit by determining the cost of those facilities from actual project costs and approved capital improvement budgets. The ratio of cost per lineal foot to diameter is determined.

DESCRIPTION	YEAR CONSTRUCTED	PIPELINE LENGTH (L.F.)	*PIPELINE COST	PIPELINE UNIT COST ($/L.F.)
12”Alejo/Tamarisk/ Indian Canyon	2012/2014/2015	4,958	$1,290,176	$260/L.F.
14”	-	-	-	-
15”	-	-	-	-
16” Sunny Dunes	2013	1,100	$301,462	$274/L.F.
18”	-	-	-	-
20” E. Well Field	-	-	-	-
24” E. Well Field	-	-	-	-
26”	-	-	-	-
30” N. Well Field	-	-	-	-
36” Avenida Caballeros	2014/2015	2,659	$2,509,219	$944/L.F.
42”	-	-	-	-

* Actual project cost, unadjusted for present value.

Due to the lack of current data available for the varying sizes of transmission mains in our system, the Agency has opted to utilize a “unit construction cost for pipelines” equation used by Eastern Municipal Water District (EMWD) in their 2015 rate study (study conducted by Kennedy/Jenks Consultants). Said equation assumes that unit cost ($/linear foot) = Diameter (inch) x 40.47 x

[Diameter (inch) $^{\wedge -0.309}$]. Utilization of said equation allows the Agency to determine uniform unit construction estimates for all sizes of transmission mains in our system.

***ESTIMATED WATER TRANSMISSION MAIN UNIT CONSTRUCTION COSTS**

TRANSMISSION MAIN DIAMETER (INCHES)	TRANSMISSION MAIN LENGTH ($/L.F.)
12”	225
14”	250
15”	265
16”	275
18”	300
20”	320
24”	365
26”	385
30”	425
36”	480
42”	535

*Based on the following EMWD assumption: cost $/L.F. = Diameter (inch) x 40.47 x [Diameter (inch) $^{\wedge -0.309}$].

The most current water transmission main estimated costs are used to determine the ratio of water main cost to diameter as shown in the table on the previous page. By applying these ratios to system transmission mains, the cost of all size mains for the entire system is determined by zone.

BASE ZONE WATER TRANSMISSION MAIN COSTS

TRANSMISSION MAIN DIAMETER (INCHES)	TRANSMISSION MAIN LENGTH (L.F.)	UNIT COST PER UNIT LENGTH ($/L.F.)	ZONE TRANSMISSION MAIN COST
***12”**	231,958	225	$52,190,550
14”	2,570	250	$642,500
16”	28,442	275	$7,821,550
20”	9,580	320	$3,065,600
24”	20,727	365	$7,565,355
26”	2,620	385	$1,008,700
30”	50,993	425	$21,672,025
36”	30,618	480	$14,696,640
42”	70’	535	$37,450
****20”**	9,673	320	$3,095,360**
****24”**	37,551	365	$13,706,115**
TOTAL			**$108,700,370**

*Approximately 60% of all mains in the system are transmission mains with the remaining 40% being distribution mains. Therefore, only 60% of the total mains are included in the above table.

**Main that serves surface water to both the Base Zone and the Chino Zone. The cost of this main was not added to the total. The total capacity units that benefit from this main is 30,494.

Since the Base Zone uses 78.9% of pumping capacity, the cost of transmission mains per capacity unit for the mains only in the Base Zone is therefore, $108,700,370 (0.789) ÷ 22,641 C.U.= **$3,788/C.U.**

The cost of transmission mains per capacity units for the Base Zone and Chino Zone mains is therefore, $16,801,475 ÷ 30,494 C.U. = **$550/C.U.**

COST PER ZONE SUMMARY

ZONE	WATER PRODUCTION COST	TREATMENT COST	SURFACE WATER COST	STORAGE COST	TRANSMISSION COST	TOTAL CAPACITY UNIT COST
Base	$853	$42	$41	$901	$4,338	$6,175

The cost of a 1-inch service in the zone is comprised of the cumulative capacity unit costs for water production, treatment, surface water, storage and transmission facilities.

In order to determine the capacity unit cost for each meter size the AWWA meter factors are used. The table below shows the capacity unit charge (Backup Facility Charge) per meter size.

BASE ZONE FINAL BACKUP FACILITY CHARGE COST SUMMARY

METER SIZE	AWWA METER FACTOR	BACKUP FACILITY CHARGE
3/4 X 5/8	0.4	$2,470
1	**1.0**	**$6,175**
1.5	2.0	$12,350
2	3.2	$19,760

CHINO ZONE

The existing capacity units (C.U.) for the Chino Zone is 2,887. To determine the total capacity units for the zone, we must first calculate the max demand day (MDD) value utilizing the current General Plan formula:

- MDD = 1.85 x Average Day Annual Demand (ADD)

Using annual production data from 2017, the ADD calculated for the zone equals 3.1 MGD, therefore, the MDD is equal to 5.7 MGD. If the MDD is equal to 5.7 MGD, the current gal/C.U./day is equal to 1,975 gal/C.U./day, or (5.7 MGD ÷ 2,887).

The current pumping capacity for the Chino Zone is 10 MGD (The total of Chino Zone well capacity and the Chino Booster capacity minus the Chino "A" booster capacity). Since all service capacity must be met by the Chino Zone pumping capacity, all of the existing units are using 57%

of the total capacity of the Chino Zone (5.7 MGD ÷ 10 MGD). The total maximum capacity units for the zone is then equal to 5,064, or (2,887 ÷ 0.57).

Facility costs were determined by analyzing facility cost valuation from Agency Annual Operating Statistics Reports, cost estimates prepared in conjunction with the currently proposed budget and rate study, and by assessing the current facilities using the 2008 General Plan Update. The facilities cost valuation per capacity unit was determined from the total number of capacity units and the facilities costs.

The Chino Zone charge is composed of costs per capacity unit for production (wells and boosters), treatment, surface water, storage and transmission facilities assignable to the Chino Zone service.

CHINO ZONE PUMPING/WATER PRODUCTION COST

In order to calculate the cost of pumping water per capacity unit we first determine the cost of those facilities from approved capital improvement budgets. The ratio of plant cost to horsepower is determined.

DESCRIPTION	YEAR CONSTRUCTED	PUMPING PLANT HORSEPOWER	PUMPING PLANT COST*
Well 39	2010	450 HP Pumping Plant	$1,320,156.59
Well 40	2009	450 HP Pumping Plant	$1,498,356.82
Well 41	2006	450 HP Pumping Plant	$1,561,858.76
Well 42	2006	200 HP Pumping Plant	$1,175,156.15
TOTAL		**1,550 HP**	**$5,555,528.32**

* Current Capital Improvement Budget Amounts for Pumping Plants.

The most current pumping plant estimated costs are used to determine the ratio of pumping plant cost to unit of horsepower from the table above. The unit cost of pumping per horsepower is $5,555,528.32 ÷ 1,550 hp= $3,584/hp. By applying this ratio to each active pumping plant the cost of each plant and the zone system pumping cost is determined.

Similarly, the cost of pressure boosting facilities is determined.

DESCRIPTION	YEAR CONSTRUCTED	BOOSTER PLANT HORSEPOWER	BOOSTER PLANT COST*
Zone 1240 Booster	2016	80 HP Booster Plant	$950,000
Janis Tuscany Booster Upgrades	2016	225 HP Booster Pumping Plant	$230,000
TOTAL		**305 HP**	**$1,180,000**

* Actual project costs, unadjusted for present value.

The most current pumping plant costs are used to determine the ratio of booster pumping plant cost to unit of horsepower from the table above. The unit cost of booster pumping per horsepower is $1,180,000 ÷ 305 hp= $3,869/hp. By applying this ratio to each active pumping plant the cost of each plant and the zone's booster pumping cost is determined.

CHINO ZONE PUMPING COSTS

WELL/BOOSTER BASE ZONES	DESCRIPTION	PLANT HORSEPOWER	ZONE PUMPING COST ($3,584/HP)
Well 21	Well Pumping Plants	300	$1,075,200
Well 30	Well Pumping Plants	400	$1,433,600
Well 35	Well Pumping Plants	400	$1,433,600
Chino Booster	Booster Plants	475	$1,837,775*
TOTAL			**$5,780,175**

*$3,869/HP Unit Cost of Booster Pumping Per Horsepower.

The Chino Zone uses 78% of the total zone capacity (12.8-2.8) ÷ 12.8, where 12.8 MGD is the total capacity of the wells and chino booster and 2.8 MGD is the capacity needed for Chino "A" Zone; therefore, the cost of production per capacity unit for the Chino Zone wells and booster is $5,780,175 (0.78) ÷ 5,064 C.U. = **$890/C.U.** plus a component cost of the Base Zone pumping since Chino Boosters are used to pump Base Zone water to the Chino Zone.

The Chino Zone uses 8.3% of the Base Zone wells (5.5-1.2) ÷ 51.2, where 5.5 MGD is the Chino Booster capacity, 1.2 MGD is the capacity provided to Chino “A” zone, and 51.2 MGD is the total Base Zone capacity; therefore, the component cost of production per capacity unit is ($24,489,260 (0.083) ÷ 5,064 = **$401/C.U.**

CHINO ZONE WATER TREATMENT COSTS

Since Base Zone water is pumped to the Chino Zone, the treatment costs for the Chino Zone is a component of the Base Zone treatment costs and any additional treatment facilities associated with the Chino Zone.

CHINO ZONE CHLORINE INJECTION TREATMENT

DESCRIPTION	NUMBER OF ACTIVE SITES	AVG. COST PER SITE	ZONE PUMPING COST (ACTUAL)
Chlorine storage building and pad, injection vault	2	$30,440	$60,880
TOTAL			**$60,880**

*Based on average construction cost per site to install chlorine injection facilities.

The Chino Zone uses 78% of the total zone capacity (12.8-2.8) ÷ 12.8, where 12.8 MGD is the total capacity of the wells and booster and 2.8 MGD is the capacity needed for Chino “A” Zone; therefore, the cost of treatment per capacity unit for the Chino Zone facilities is $60,880 (0.78) ÷ 5,064 C.U. = **$9/C.U.**

BASE ZONE FOREBAY TREATMENT

DESCRIPTION	YEAR CONSTRUCTED	*FOREBAY COST
Well 14 Forebay	1993	$376,750
Well 16 Forebay	1993	$376,750
TOTAL		**$753,500**

BASE ZONE CHLORINE INJECTION TREATMENT

DESCRIPTION	NUMBER OF ACTIVE SITES	AVG. COST PER SITE	ZONE PUMPING COST (ACTUAL)
Chlorine storage building and pad, injection vault	12	$30,440	$365,280
TOTAL			**$365,280**

*Based on average construction cost per site to install chlorine injection facilities.

The Chino Zone uses 8.3% of the Base Zone wells (5.5-1.2) ÷ 51.2, where 5.5 MGD is the Chino Booster capacity, 1.2 MGD is the capacity provided to Chino “A” zone, and 51.2 is the total Base Zone capacity; therefore, the component costs of treatment per capacity unit for the Base Zone facilities are $753,500 (0.083) ÷ 5,064 = **$12/C.U.** and $365,280 (0.083) ÷ 5,064 = **$5/C.U.**

UV TREATMENT

DESCRIPTION	YEAR CONSTRUCTED	*FOREBAY COST
UV Treatment (Snow Creek/Falls Creek)	2014	$317,142
TOTAL		**$317,142**

*Actual project costs.

The UV treated surface water not only benefits the Chino Zone, the water is also used by Snow Creek Village Zone and Base Zone. The Base Zone and Chino Zones will use 38% of the total stream capacity (0.69 ÷ 1.81); therefore, the component cost per capacity unit for the UV treatment per capacity unit is therefore, $317,142 (0.38) ÷ 30,494 C.U. = **$4/C.U.**

CHINO ZONE SURFACE WATER COST

In order to calculate the cost of surface water per capacity unit we first determine the cost of those facilities from actual project costs. Surface water is transmitted from the diversions into the Base Zone where it is distributed to the zone.

DESCRIPTION	YEAR CONSTRUCTED	*SURFACE WATER FACILITY COST
Snow Creek Diversion	1990	$2,000,000
Falls Creek Diversion	1990	$1,300,000
TOTAL		**$3,300,000**

* Actual project costs, unadjusted for present value.

The surface water not only benefits the Chino Zone, the water also serves the Snow Creek Village Zone and Base Zone. The Base Zone and Chino Zones will use 38% of the total stream capacity (0.69 ÷ 1.81); therefore, the component cost per capacity unit is $3,300,000 (0.38) ÷ 30,494 C.U. = **$41/C.U.**

CHINO ZONE WATER STORAGE COSTS

In order to calculate the cost of water storage per capacity unit we first determine the cost of those facilities from actual project costs and approved capital improvement budgets. The ratio of storage cost to volume is determined.

DESCRIPTION	YEAR CONSTRUCTED	RESERVOIR STORAGE CAPACITY	RESERVOIR COST*
Tahquitz Reservoir II	2004	5,000,000 gallons	$2,299,785**
Zone 1060	2016	500,000 gallons	$1,544,800*
TOTAL		**5,500,000 gallons**	**$3,844,585**

*Revised Budget Amount for project.

** Actual project costs, unadjusted for present value.

The most current water storage estimated costs are used to determine the ratio of water storage cost to unit of storage volume from the table above. The unit cost of water storage per gallon is $3,844,585 ÷ 5,500,000 GAL= $0.70/GAL. By applying this ratio to each water storage reservoir, the cost of each reservoir and the entire zone's water storage costs are determined.

CHINO ZONE WATER STORAGE COSTS

DESCRIPTION	WATER STORAGE CAPACITY (GAL.)	UNIT COST PER UNIT STORAGE ($/GAL.)	ZONE STORAGE COST
Chino II	3,500,000	0.70	$2,450,000
Chino III	3,500,000	0.70	$2,450,000
TOTAL			**$4,900,000**

The required storage for the Chino Zone is 5.54 MG. The existing storage capacity for the Chino Zone is 7.0 MG; therefore, the Chino Zone storage is 79.1% of existing storage (5.54 ÷ 7.0); therefore, the cost of storage per capacity unit for the Chino Zone facilities is $4,900,000 (0.791) ÷ 5,064 C.U.= **$765/C.U.** plus the component cost of the Base Zone storage since Chino Zone utilizes Base Zone water.

BASE ZONE WATER STORAGE COSTS

DESCRIPTION	WATER STORAGE CAPACITY (GAL.)	UNIT COST PER UNIT STORAGE ($/GAL.)	ZONE STORAGE COST
Palm Springs North I	1,500,000	0.70	$1,050,000
Palm Springs North II	12,000,000	0.70	$8,400,000
Tahquitz I	5,000,000	0.70	$3,500,000
Tahquitz II	5,000,000	0.70	$3,500,000
Palm Springs South I	5,000,000	0.70	$3,500,000
Palm Springs South II	5,000,000	0.70	$3,500,000
Equalization	1,000,000	0.70	$700,000*
TOTAL			**$24,150,000**

* The Equalization Reservoir serves the Base Zone, Snow Creek Village Zone, and the Chino Zone. The Base Zone and Chino Zones will use 83% of the total reservoir capacity.

The required storage for the Chino Zone is 5.54 MG. The Chino Booster provides 43% of the Chino Zone storage; therefore, the amount of storage from the Base Zone is 2.38 MG, or (5.54 x 0.43). The existing storage capacity for the Base Zone is 34.5 MG; therefore, the Chino Zone storage is 6.9% of Base Zone storage (2.38 ÷ 34.5).

The cost of storage per capacity is therefore equal to the component of the Equalization Reservoir and the Base Zone storage, or $700,000 (0.83) ÷ 30,494 plus $23,450,000 (0.069) ÷ 5,064 C.U.: $19 + 319 = **$338/C.U.**

FUTURE STORAGE CAPACITY REQUIREMENTS

The General Plan requires that the Agency have 18 hours ADD emergency storage, along with fire flow and equalization storage during energy Time of Use (T.O.U.) periods. The 18 hour ADD during T.O.U periods for the zone is 2.3 MG (3.1 x 0.75). The fire flow requirement for the zone is 0.96 MG (4,000 GPM for 4 hours per General Plan) and the equalization, or operational storage is 40% of the MDD and is therefore equal to 2.28 MG. Adding all of these components equates to 5.54 MG of storage. The current storage capacity for the system is 7.0 MG.

The existing pumping capacity of the system will accommodate an additional 2,177 capacity units (5,064 – 2,887). These additional units will add 4.3 MGD to the MDD. This additional demand will increase the storage requirement to 9.0 MG, requiring 2.0 MG of additional storage (9.0 – 7.0). The cost for the additional storage will be $1,400,000, or ($0.70/gal x 2.0 MG). The cost of future storage per capacity unit is therefore, $1,400,000 ÷ 5,064 C.U. = **$276/C.U.**

CHINO ZONE WATER TRANSMISSION MAIN COSTS

Historically, the Agency has calculated the cost of water transmission mains per capacity unit by determining the cost of those facilities from actual project costs and approved capital improvement budgets. The ratio of cost per lineal foot to diameter is determined.

DESCRIPTION	YEAR CONSTRUCTED	PIPELINE LENGTH (L.F.)	*PIPELINE COST	PIPELINE UNIT COST ($/L.F.)
12”Alejo/Tamarisk/ Indian Canyon	2012/2014/2015	4,958	$1,290,176	$260/L.F.
14”	-	-	-	-
15”	-	-	-	-
16” Sunny Dunes	2013	1,100	$301,462	$274/L.F.
18”	-	-	-	-
20” E. Well Field	-	-	-	-
24” E. Well Field	-	-	-	-
26”	-	-	-	-
30” N. Well Field	-	-	-	-
36” Avenida Caballeros	2014/2015	2,659	$2,509,219	$944/L.F.
42”	-	-	-	-

* Actual project cost, unadjusted for present value.

Due to the lack of current data available for the varying sizes of transmission mains in our system, the Agency has opted to utilize a “unit construction cost for pipelines” equation used by Eastern Municipal Water District (EMWD) in their 2015 rate study (study conducted by Kennedy/Jenks Consultants). Said equation assumes that unit cost ($/linear foot) = Diameter (inch) x 40.47 x

[Diameter (inch) $^{\wedge -0.309}$]. Utilization of said equation allows the Agency to determine uniform unit construction estimates for all sizes of transmission mains in our system.

***ESTIMATED WATER TRANSMISSION MAIN UNIT CONSTRUCTION COSTS**

TRANSMISSION MAIN DIAMETER (INCHES)	TRANSMISSION MAIN LENGTH ($/L.F.)
12”	225
14”	250
15”	265
16”	275
18”	300
20”	320
24”	365
26”	385
30”	425
36”	480
42”	535

*Based on the following EMWD assumption: cost $/L.F. = Diameter (inch) x 40.47 x [Diameter (inch) $^{\wedge -0.309}$].

The most current water transmission main estimated costs are used to determine the ratio of water main cost to diameter as shown in the table on the previous page. By applying these ratios to system transmission mains, the cost of all size mains for the entire system is determined by zone.

CHINO ZONE WATER TRANSMISSION MAIN COSTS

TRANSMISSION MAIN DIAMETER (INCHES)	TRANSMISSION MAIN LENGTH (L.F.)	UNIT COST PER UNIT LENGTH ($/L.F.)	ZONE TRANSMISSION MAIN COST
***12”**	26,436	225	$5,948,100
15”	940	265	$249,100
16”	4,117	275	$1,132,175
18”	5,927	300	$1,778.100
20”	1,610	320	$515,200
24”	14,021	365	$5,117,665
30”	3,400	425	$1,445,000
****20”**	9,673	320	$3,095,360**
****24”**	37,551	365	$13,706,115**
TOTAL			**$16,185,340**

*Approximately 60% of all mains in the system are transmission mains with the remaining 40% being distribution mains. Therefore, only 60% of the total mains are included in the above table.

**Main that serves surface water to both the Base Zone and the Chino Zone. The cost of this main was not added to the total. The total capacity units that benefit from this main is 30,494.

The Chino Zone uses 78% of the total capacity (12.8-2.8) ÷ 12.8, where 12.8 is the total capacity of the wells and booster and 2.8 is the capacity needed for Chino “A” Zone; therefore, the cost of transmission per capacity unit for the Chino Zone mains is $16,185,340 (0.78) ÷ 5,064 C.U. = **$2,493/C.U**. plus a component of the Base Zone mains cost since Chino Boosters are used to pump Base Zone water to the Chino Zone.

The Chino Zone uses 8.3% of the Base Zone wells (5.5-1.2) ÷ 51.2, where 5.5 MGD is the Chino Booster capacity and 1.2 MGD is the capacity provided to Chino “A” zone; therefore, the component cost of transmission mains per capacity unit for the Base Zone facilities is ($108,700,370 (0.083) ÷ 5,064 = **$1,781/C.U.**

The component cost of transmission mains per capacity units for the shared Base Zone and Chino Zone mains is therefore, $16,801,475 ÷ 30,494 C.U. = **$550/C.U.**

COST PER ZONE SUMMARY

ZONE	WATER PRODUCTION COST	TREATMENT COST	SURFACE WATER COST	STORAGE COST	TRANSMISSION COST	TOTAL CAPACITY UNIT COST
Chino	$1,291	$30	$41	$1,379	$4,824	$7,565

The cost of a 1-inch service in the zone is comprised of the cumulative capacity unit costs for water production, treatment, surface water, storage and transmission facilities.

In order to determine the capacity unit cost for each meter size the AWWA meter factors are used. The table below shows the capacity unit charge (Backup Facility Charge) per meter size.

CHINO ZONE FINAL BACKUP FACILITY CHARGE COST SUMMARY

METER SIZE	AWWA METER FACTOR	BACKUP FACILITY CHARGE
3/4 X 5/8	0.4	$3,026
1	**1.0**	**$7,565**
1.5	2.0	$15,130
2	3.2	$24,208

CHINO “A” ZONE

The existing capacity units (C.U.) for the Chino “A” Zone is 182. To determine the total capacity units for the zone, we must first calculate the max demand day (MDD) value utilizing the current General Plan formula:

- MDD = 1.85 x Average Day Annual Demand (ADD)

Using annual production data from 2017, the ADD calculated for the zone equals 0.13 MGD, therefore, the MDD is equal to 0.24 MGD. If the MDD is equal to 0.24 MGD, the current gal/C.U./day is equal to 1,318 gal/C.U./day, or (0.24 MGD ÷ 182).

The current pumping capacity for the Chino “A” Zone is 2.8 MGD; however, 1.1 MGD is dedicated to Chino “B” Zone. The pumping capacity for Chino “A” Zone is therefore 1.7 MGD (2.8 - 1.1). Since all service capacity must be met by the Chino “A” Zone pumping capacity, all of the existing units are using 14.1% of the total capacity of the Chino “A” Zone (0.24 MGD ÷ 1.7 MGD). The total maximum capacity units for the zone is then equal to 1,290, or (182 ÷ 0.141).

Facility costs were determined by analyzing facility cost valuation from Agency Annual Operating Statistics Reports, cost estimates prepared in conjunction with the currently proposed budget and rate study, and by assessing the current facilities using the 2008 General Plan Update. The facilities cost valuation per capacity unit was determined from the total number of capacity units and the facilities costs.

The Chino “A” Zone charge is composed of costs per capacity unit for production (wells and boosters), treatment, surface water, storage and transmission facilities assignable to the Chino “A” Zone service.

CHINO "A" ZONE PUMPING/WATER PRODUCTION COST

In order to calculate the cost of pumping water per capacity unit we first determine the cost of those facilities from approved capital improvement budgets. The ratio of plant cost to horsepower is determined.

DESCRIPTION	YEAR CONSTRUCTED	PUMPING PLANT HORSEPOWER	PUMPING PLANT COST*
Well 39	2010	450 HP Pumping Plant	$1,320,156.59
Well 40	2009	450 HP Pumping Plant	$1,498,356.82
Well 41	2006	450 HP Pumping Plant	$1,561,858.76
Well 42	2006	200 HP Pumping Plant	$1,175,156.15
TOTAL		**1,550 HP**	**$5,555,528.32**

* Current Capital Improvement Budget Amounts for Pumping Plants.

The most current pumping plant estimated costs are used to determine the ratio of pumping plant cost to unit of horsepower from the table above. The unit cost of pumping per horsepower is $5,555,528.32 ÷ 1,550 hp= $3,584/hp. By applying this ratio to each active pumping plant the cost of each plant and the zone system pumping cost is determined.

Similarly, the cost of pressure boosting facilities is determined.

DESCRIPTION	YEAR CONSTRUCTED	BOOSTER PLANT HORSEPOWER	BOOSTER PLANT COST*
Zone 1240 Booster	2016	80 HP Booster Plant	$950,000
Janis Tuscany Booster Upgrades	2016	225 HP Booster Pumping Plant	$230,000
TOTAL		**305 HP**	**$1,180,000**

* Actual project costs, unadjusted for present value.

The most current pumping plant costs are used to determine the ratio of booster pumping plant cost to unit of horsepower from the table above. The unit cost of booster pumping per horsepower is $1,180,000 ÷ 305 hp= $3,869/hp. By applying this ratio to each active pumping plant the cost

of each plant and the zone's booster pumping cost is determined. Since Chino "A" Zone is provided water by booster pumps only, we will only be using the booster pump costs.

CHINO "A" ZONE PUMPING COSTS

WELL/BOOSTER BASE ZONES	DESCRIPTION	PLANT HORSEPOWER	ZONE PUMPING COST ($3,869/HP)
Janis Tuscany	Booster Plant	150	$580,350
TOTAL			**$580,350**

The Chino "A" Zone uses 60.7% of the total capacity (1.7 ÷ 2.8), where 2.8 MGD is the total capacity of the booster and 1.7 MGD is the capacity needed for Chino "A" Zone; therefore, the cost of production per capacity unit for the Chino "A" Zone booster is $580,350 (0.607) ÷ 1,290 C.U.= **$273/C.U.** plus the component cost of the Chino Zone pumping and Base Zone pumping since Chino Zone and Base Zone water is pumped to the Chino "A" Zone.

The Chino "A" Zone uses 13.3% of the Chino Zone capacity (2.8-1.1) ÷ 12.8, where 2.8 MGD is the Chino "A" Booster capacity, 1.1 MGD is the Chino "B" zone capacity, and 12.8 MGD is the capacity provided to Chino "A" zone by the Chino Zone booster; therefore, the component cost of production per capacity unit for the Chino "A" Zone is ($5,780,175 (0.133) ÷ 1,290 = **$595/C.U**

The Chino "A" Zone uses 2.3% of the Base Zone pumping capacity (1.2 ÷ 51.2), where 1.2 MGD is the capacity provided to Chino "A" Zone by the Base Zone wells and 51.2 MGD is the capacity of the Base Zone; therefore, the component cost of production per capacity unit for the Chino "A" Zone is ($24,489,260 (0.023) ÷ 1,290 = **$436/C.U**

CHINO "A" ZONE WATER TREATMENT COSTS

Since Base Zone and Chino Zone water is pumped to the Chino "A" Zone, the treatment costs for the Chino "A" Zone is a component of the Base Zone treatment costs, Chino Zone treatment costs and any additional treatment facilities associated with the Chino "A" Zone.

CHINO ZONE CHLORINE INJECTION TREATMENT

DESCRIPTION	NUMBER OF ACTIVE SITES	AVG. COST PER SITE	ZONE PUMPING COST (ACTUAL)
Chlorine storage building and pad, injection vault	2	$30,440	$60,880
TOTAL			**$60,880**

*Based on average construction cost per site to install chlorine injection facilities.

BASE ZONE FOREBAY TREATMENT

DESCRIPTION	YEAR CONSTRUCTED	*FOREBAY COST
Well 14 Forebay	1993	$376,750
Well 16 Forebay	1993	$376,750
TOTAL		**$753,500**

BASE ZONE CHLORINE INJECTION TREATMENT

DESCRIPTION	NUMBER OF ACTIVE SITES	AVG. COST PER SITE	ZONE PUMPING COST (ACTUAL)
Chlorine storage building and pad, injection vault	12	$30,440	$365,280
TOTAL			**$365,280**

*Based on average construction cost per site to install chlorine injection facilities.

The Chino "A" Zone uses 13.3% of the Chino Zone capacity (2.8-1.1) ÷ 12.8, where 2.8 MGD is the Chino "A" Booster capacity, 1.1 MGD is the Chino "B" zone capacity, and 12.8 MGD is the capacity provided to Chino "A" zone by the Chino Zone booster; therefore, the component cost of treatment per capacity unit for the Chino "A" Zone is $60,880 (0.133) ÷ 1,290 = **$6/C.U**

The Chino “A” Zone uses 2.3% of the Base Zone pumping capacity (1.2 ÷ 51.2), where 1.2 MGD is the capacity provided to Chino “A” Zone by the Base Zone wells and 51.2 MGD is the capacity of the Base Zone; therefore, the component cost of treatment per capacity unit for the Chino “A” Zone is ($753,500 + $365,280) (0.023) ÷ 1,290 = **$19/C.U**

U.V TREATMENT

DESCRIPTION	YEAR CONSTRUCTED	*FOREBAY COST
UV Treatment (Snow Creek/Falls Creek)	2014	$317,142
TOTAL		**$317,142**

*Actual project costs.

The UV treated surface water not only benefits the Chino “A” Zone, the water is also used by Snow Creek Village Zone and Base Zone. The Base Zone and Chino Zones will use 38% of the total stream capacity (0.69 ÷ 1.81); therefore, the component cost per capacity unit for the UV treatment per capacity unit is therefore, $317,142 (0.38) ÷ 30,494 C.U. = **$4/C.U.**

CHINO “A” ZONE SURFACE WATER COST

In order to calculate the cost of surface water per capacity unit we first determine the cost of those facilities from actual project costs. Surface water is transmitted from the diversions into the Base Zone where it is distributed to the zone.

DESCRIPTION	YEAR CONSTRUCTED	*SURFACE WATER FACILITY COST
Snow Creek Diversion	1990	$2,000,000
Falls Creek Diversion	1990	$1,300,000
TOTAL		**$3,300,000**

* Actual project costs, unadjusted for present value.

The surface water not only benefits the Chino “A” Zone, the water also serves the Snow Creek Village Zone and Base Zone. The Base Zone and Chino Zones will use 38% of the total stream capacity (0.69 ÷ 1.81); therefore, the component cost per capacity unit is $3,300,000 (0.38) ÷ 30,494 C.U. = **$41/C.U.**

CHINO "A" ZONE WATER STORAGE COSTS

In order to calculate the cost of water storage per capacity unit we first determine the cost of those facilities from actual project costs and approved capital improvement budgets. The ratio of storage cost to volume is determined.

DESCRIPTION	YEAR CONSTRUCTED	RESERVOIR STORAGE CAPACITY	RESERVOIR COST*
Tahquitz Reservoir II	2004	5,000,000 gallons	$2,299,785**
Zone 1060	2016	500,000 gallons	$1,544,800*
TOTAL		**5,500,000 gallons**	**$3,844,585**

*Revised Budget Amount for project.

** Actual project costs, unadjusted for present value.

The most current water storage estimated costs are used to determine the ratio of water storage cost to unit of storage volume from the table above. The unit cost of water storage per gallon is $3,844,585 ÷ 5,500,000 GAL= $0.70/GAL. By applying this ratio to each water storage reservoir, the cost of each reservoir and the entire zone's water storage costs are determined.

CHINO "A" ZONE WATER STORAGE COSTS

DESCRIPTION	WATER STORAGE CAPACITY (GAL.)	UNIT COST PER UNIT STORAGE ($/GAL.)	ZONE STORAGE COST
Desert Palisade Res.	500,000	0.70	$350,000
TOTAL			**$350,000**

The required storage for the Chino "A" Zone is 0.42 MG. The existing storage capacity for the Chino "A" Zone is 0.50 MG; therefore, the Chino "A" Zone storage is 84% of existing storage (0.42 ÷ 0.50); therefore, the cost of storage per capacity unit for the Chino "A" Zone facilities is $350,000 (0.84) ÷ 1,290 C.U. = **$227/C.U.** plus the component cost of the Base Zone and Chino Zone storage since Chino "A" Zone utilizes those zones for water.

CHINO ZONE WATER STORAGE COSTS

DESCRIPTION	WATER STORAGE CAPACITY (GAL.)	UNIT COST PER UNIT STORAGE ($/GAL.)	ZONE STORAGE COST
Chino II	3,500,000	0.70	$2,450,000
Chino III	3,500,000	0.70	$2,450,000
TOTAL			**$4,900,000**

BASE ZONE WATER STORAGE COSTS

DESCRIPTION	WATER STORAGE CAPACITY (GAL.)	UNIT COST PER UNIT STORAGE ($/GAL.)	ZONE STORAGE COST
Palm Springs North I	1,500,000	0.70	$1,050,000
Palm Springs North II	12,000,000	0.70	$8,400,000
Tahquitz I	5,000,000	0.70	$3,500,000
Tahquitz II	5,000,000	0.70	$3,500,000
Palm Springs South I	5,000,000	0.70	$3,500,000
Palm Springs South II	5,000,000	0.70	$3,500,000
Equalization	1,000,000	0.70	$700,000*
TOTAL			**$24,150,000**

* The Equalization Reservoir serves the Base Zone, Snow Creek Village Zone, and the Chino Zones. The Base Zone and Chino Zones will use 83% of the total reservoir capacity.

The required storage for the Chino "A" Zone is 6% of the Chino Zone total storage capacity (0.42 ÷ 7.0); therefore, the component cost of storage per capacity unit for Chino "A" Zone is $4,900,000 (0.06) ÷ 1,290 C.U.= **$227/C.U.**.

Since the Chino Booster provides 43% of the water to the Chino Zone, only 43% of the required storage will be provided from the Chino Booster. The percentage of water from the Base Zone is 0.5% or (0.42 x 43%) ÷ 34.5; therefore, the component cost of storage per capacity unit for the Chino "A" Zone is $23,450,000 (0.005) ÷ 1,290 C.U. = **$90/C.U.**.

The component cost of storage per capacity for the Equalization Reservoir is equal to \$700,000 (0.83) ÷ 30,494 = **\$19/C.U.**

FUTURE STORAGE CAPACITY REQUIREMENTS

The General Plan requires that the Agency have 18 hours ADD emergency storage, along with fire flow and equalization storage during energy Time of Use (T.O.U.) periods. The 18 hour ADD during T.O.U periods is 0.09 MG (0.13 x 0.75). The fire flow requirement for the system is 0.24 MG (2,000 GPM for 2 hours per General Plan) and the equalization, or operational storage is 40% of the MDD and is therefore equal to 0.09 MG. Adding all of these components equates to 0.42 MG of storage. The current storage capacity for the system is 0.50 MG.

The existing pumping capacity of the system will accommodate an additional 1,108 capacity units (1,290 - 182). These additional units will add 1.5 MGD to the MDD. This additional demand will increase the storage requirement to 2.5 MG, requiring 2.0 MG of additional storage (2.5 – 0.5). The cost for the additional storage will be \$1,400,000, or (\$0.70/gal x 2.0 MG). The cost of future storage per capacity unit is therefore, \$1,400,000 ÷ 1,290 C.U. = **\$1,085/C.U.**

CHINO "A" WATER TRANSMISSION MAIN COSTS

Historically, the Agency has calculated the cost of water transmission mains per capacity unit by determining the cost of those facilities from actual project costs and approved capital improvement budgets. The ratio of cost per lineal foot to diameter is determined.

DESCRIPTION	YEAR CONSTRUCTED	PIPELINE LENGTH (L.F.)	*PIPELINE COST	PIPELINE UNIT COST ($/L.F.)
12"Alejo/Tamarisk/ Indian Canyon	2012/2014/2015	4,958	$1,290,176	$260/L.F.
14"	-	-	-	-
15"	-	-	-	-
16" Sunny Dunes	2013	1,100	$301,462	$274/L.F.
18"	-	-	-	-
20" E. Well Field	-	-	-	-
24" E. Well Field	-	-	-	-
26"	-	-	-	-
30" N. Well Field	-	-	-	-
36" Avenida Caballeros	2014/2015	2,659	$2,509,219	$944/L.F.
42"	-	-	-	-

* Actual project cost, unadjusted for present value.

Due to the lack of current data available for the varying sizes of transmission mains in our system, the Agency has opted to utilize a “unit construction cost for pipelines” equation used by Eastern Municipal Water District (EMWD) in their 2015 rate study (study conducted by Kennedy/Jenks Consultants). Said equation assumes that unit cost ($/linear foot) = Diameter (inch) x 40.47 x [Diameter (inch) $^{\wedge -0.309}$]. Utilization of said equation allows the Agency to determine uniform unit construction estimates for all sizes of transmission mains in our system.

***ESTIMATED WATER TRANSMISSION MAIN UNIT CONSTRUCTION COSTS**

TRANSMISSION MAIN DIAMETER (INCHES)	TRANSMISSION MAIN LENGTH ($/L.F.)
12”	225
14”	250
15”	265
16”	275
18”	300
20”	320
24”	365
26”	385
30”	425
36”	480
42”	535

*Based on the following EMWD assumption: cost $/L.F. = Diameter (inch) x 40.47 x [Diameter (inch) $^{\wedge -0.309}$].

The most current water transmission main estimated costs are used to determine the ratio of water main cost to diameter as shown in the table on the previous page. By applying these ratios to system transmission mains, the cost of all size mains for the entire system is determined by zone.

CHINO “A” ZONE WATER TRANSMISSION MAIN COSTS

TRANSMISSION MAIN DIAMETER (INCHES)	TRANSMISSION MAIN LENGTH (L.F.)	UNIT COST PER UNIT LENGTH ($/L.F.)	ZONE TRANSMISSION MAIN COST
***12”**	6,493	225	$1,460,925
16”	3,782	275	$1,040,050
18”	1,600	300	$480,000
24”	3,600	365	$1,314,000
TOTAL			**$4,294,975**

*Approximately 60% of all mains in the system are transmission mains with the remaining 40% being distribution mains. Therefore, only 60% of the total mains are included in the above table.

The Chino “A” Zone uses 60.7% of the total capacity (1.7 ÷ 2.8), where 2.8 MGD is the total capacity of the booster and 1.7 MGD is the capacity needed for Chino “A” Zone; therefore, the cost of transmission mains per capacity unit for the Chino “A” Zone is $4,294,975 (0.607) ÷ 1,290 C.U.= **$2,020/C.U.** plus a component cost of the Chino Zone and Base Zone transmission main since Chino and Base Zone water is pumped to the Chino “A” Zone.

The Chino “A” Zone uses 13.3% of the Chino Zone capacity (2.8-1.1) ÷ 12.8, where 2.8 MGD is the Chino “A” Booster capacity, 1.1 MGD is the Chino “B” zone capacity, and 12.8 MGD is the capacity provided to Chino “A” zone by the Chino Zone booster; therefore, the component cost of transmission mains per capacity unit for the Chino “A” Zone is $16,185,340 (0.133) ÷ 1,290 = **$1,668/C.U**

The Chino “A” Zone uses 2.3% of the Base Zone pumping capacity (1.2 ÷ 51.2), where 1.2 MGD is the capacity provided to Chino “A” Zone by the Base Zone wells and 51.2 MGD is the capacity of the Base Zone; therefore, the component cost of transmission mains per capacity unit for the Chino “A” Zone is $108,700,370 (0.023) ÷ 1,290 = **$1,938/C.U**

The component cost of transmission mains per capacity units for the mains that serve the Chino “A” Zone for surface water is $16,801,475 ÷ 30,494 C.U. = **$550/C.U.**

COST PER ZONE SUMMARY

ZONE	WATER PRODUCTION COST	TREATMENT COST	SURFACE WATER COST	STORAGE COST	TRANSMISSION COST	TOTAL CAPACITY UNIT COST
Chino “A”	$1,304	$29	$41	$1,648	$6,176	$9,198

The cost of a 1-inch service in the zone is comprised of the cumulative capacity unit costs for water production, treatment, surface water, storage and transmission facilities.

In order to determine the capacity unit cost for each meter size the AWWA meter factors are used. The table below shows the capacity unit charge (Backup Facility Charge) per meter size.

CHINO “A” ZONE FINAL BACKUP FACILITY CHARGE COST SUMMARY

METER SIZE	AWWA METER FACTOR	BACKUP FACILITY CHARGE
3/4 X 5/8	0.4	$3,679
1	**1.0**	**$9,198**
1.5	2.0	$18,396
2	3.2	$29,433

CHINO “B” ZONE

The existing capacity units (C.U.) for the Chino “B” Zone is 54. To determine the total capacity units for the zone, we must first calculate the max demand day (MDD) value utilizing the current General Plan formula:

- MDD = 1.85 x Average Day Annual Demand (ADD)

Currently, there are no active services connected to this zone. If we assume that the gal/c.u./day is equal to Chino “A” Zone, 1,318, the MDD is equal to 0.071 MGD.

The current pumping capacity for the Chino “B” Zone is 1.1 MGD. Since all service capacity must be met by the Chino “B” Zone pumping capacity, all of the current units would use 6.45% of the total capacity of the Chino "B" Zone (0.071 MGD÷1.1 MGD). The total maximum capacity units for the zone is then equal to 837, or (54÷0.0645).

Facility costs were determined by analyzing facility cost valuation from Agency Annual Operating Statistics Reports, cost estimates prepared in conjunction with the currently proposed budget and rate study, and by assessing the current facilities using the 2008 General Plan Update. The facilities cost valuation per capacity unit was determined from the total number of capacity units and the facilities costs.

The Chino "B" Zone charge is composed of costs per capacity unit for production (wells and boosters), treatment, surface water, storage and transmission facilities assignable to the Chino "B" Zone service.

CHINO "B" ZONE PUMPING/WATER PRODUCTION COST

In order to calculate the cost of pumping water per capacity unit we first determine the cost of those facilities from approved capital improvement budgets. The ratio of plant cost to horsepower is determined.

DESCRIPTION	YEAR CONSTRUCTED	PUMPING PLANT HORSEPOWER	PUMPING PLANT COST*
Well 39	2010	450 HP Pumping Plant	$1,320,156.59
Well 40	2009	450 HP Pumping Plant	$1,498,356.82
Well 41	2006	450 HP Pumping Plant	$1,561,858.76
Well 42	2006	200 HP Pumping Plant	$1,175,156.15
TOTAL		**1,550 HP**	**$5,555,528.32**

* Current Capital Improvement Budget Amounts for Pumping Plants.

The most current pumping plant estimated costs are used to determine the ratio of pumping plant cost to unit of horsepower from the table above. The unit cost of pumping per horsepower is $5,555,528.32 ÷ 1,550 hp= $3,584/hp. By applying this ratio to each active pumping plant the cost of each plant and the zone system pumping cost is determined.

Similarly, the cost of pressure boosting facilities is determined.

DESCRIPTION	YEAR CONSTRUCTED	BOOSTER PLANT HORSEPOWER	BOOSTER PLANT COST*
Zone 1240 Booster	2016	80 HP Booster Plant	$950,000
Janis Tuscany Booster Upgrades	2016	225 HP Booster Pumping Plant	$230,000
TOTAL		**305 HP**	**$1,180,000**

* Actual project costs, unadjusted for present value.

The most current pumping plant costs are used to determine the ratio of booster pumping plant cost to unit of horsepower from the table above. The unit cost of booster pumping per horsepower is $1,180,000 ÷ 305 hp= $3,869/hp. By applying this ratio to each active pumping plant the cost of each plant and the zone's booster pumping cost is determined. Since Chino "B" Zone is provided water by booster pumps, we will only be using the booster pump costs.

CHINO "B" ZONE PUMPING COSTS

WELL/BOOSTER BASE ZONES	DESCRIPTION	PLANT HORSEPOWER	ZONE PUMPING COST ($3,869/HP)
Desert Palisade	Booster Plant	80	$309,520
TOTAL			**$309,520**

The cost of production per capacity unit is $309,520 ÷ 837 C.U. = **$369/C.U**. plus a component cost of the Chino "A" Zone, Chino Zone, and Base Zone pumping.

The Chino "B" Zone uses 39.2% of the Chino "A" pumping capacity (1.1 ÷ 2.8), where 2.8 MGD is the total capacity of the Chino "A" booster and 1.1 MGD is the capacity of the Chino "B" Zone; therefore, the component cost of production per capacity unit for the Chino "B" Zone is $580,350 (0.392) ÷ 837 C.U.= **$271/C.U.**

The Chino "B" Zone uses 8.5% of the Chino Zone pumping capacity (1.1 ÷ 12.8), where 12.8 MGD is the Chino Booster capacity, 1.1 MGD is the Chino "B" zone capacity; therefore, the component cost of production per capacity unit for the Chino "B" Zone is $5,780,175 (0.085) ÷ 837 = **$586/C.U**

The Chino “B” Zone uses 0.92% of the Base Zone pumping capacity (0.47 ÷ 51.2), where 0.47 MGD is the capacity provided to Chino “B” Zone by the Base Zone and 51.2 MGD is the capacity of the Base Zone; therefore, the component cost of production per capacity unit for the Chino “B” Zone is $24,489,260 (0.0092) ÷ 837 = **$263/C.U**

CHINO “B” ZONE WATER TREATMENT COSTS

Since Base Zone, Chino Zone, and Chino “A” Zone water is pumped to the Chino “B” Zone, the treatment costs for the Chino “B” Zone is a component of the Base Zone treatment costs, Chino Zone treatment costs, Chino “A” Zone treatment costs and any additional treatment facilities associated with the Chino “B” Zone.

CHINO ZONE CHLORINE INJECTION TREATMENT

DESCRIPTION	NUMBER OF ACTIVE SITES	AVG. COST PER SITE	ZONE PUMPING COST (ACTUAL)
Chlorine storage building and pad, injection vault	2	$30,440	$60,880
TOTAL			**$60,880**

*Based on average construction cost per site to install chlorine injection facilities.

BASE ZONE FOREBAY TREATMENT

DESCRIPTION	YEAR CONSTRUCTED	*FOREBAY COST
Well 14 Forebay	1993	$376,750
Well 16 Forebay	1993	$376,750
TOTAL		**$753,500**

BASE ZONE CHLORINE INJECTION TREATMENT

DESCRIPTION	NUMBER OF ACTIVE SITES	AVG. COST PER SITE	ZONE PUMPING COST (ACTUAL)
Chlorine storage building and pad, injection vault	12	$30,440	$365,280
TOTAL			**$365,280**

*Based on average construction cost per site to install chlorine injection facilities.

The Chino “B” Zone uses 8.5% of the Chino Zone capacity (1.1 ÷ 12.8), where 1.1 MGD is the Chino “B” zone capacity, and 12.8 MGD is the capacity provided by the Chino Zone booster; therefore, the component cost of treatment per capacity unit for the Chino “B” Zone is $60,880 (0.085) ÷ 837 = **$6/C.U**

The Chino “B” Zone uses 0.92% of the Base Zone pumping capacity (0.47 ÷ 51.2), where 0.47 MGD is the capacity provided to Chino “B” Zone by the Base Zone wells and 51.2 MGD is the capacity of the Base Zone; therefore, the component cost of treatment per capacity unit for the Chino “B” Zone is ($753,500 + $365,280) (0.0092) ÷ 837 = **$12/C.U**

UV TREATMENT

DESCRIPTION	YEAR CONSTRUCTED	*FOREBAY COST
UV Treatment (Snow Creek/Falls Creek)	2014	$317,142
TOTAL		**$317,142**

*Actual project costs.

The UV treated surface water not only benefits the Chino “B” Zone, the water is also used by Snow Creek Village Zone and Base Zone. The Base Zone and Chino Zones will use 38% of the total stream capacity (0.69 ÷ 1.81); therefore, the component cost per capacity unit for the UV treatment per capacity unit is therefore, $317,142 (0.38) ÷ 30,494 C.U. = **$4/C.U.**

CHINO “B” ZONE SURFACE WATER COST

In order to calculate the cost of surface water per capacity unit we first determine the cost of those facilities from actual project costs. Surface water is transmitted from the diversions into the Base Zone where it is distributed to the zone.

DESCRIPTION	YEAR CONSTRUCTED	*SURFACE WATER FACILITY COST
Snow Creek Diversion	1990	$2,000,000
Falls Creek Diversion	1990	$1,300,000
TOTAL		**$3,300,000**

* Actual project costs, unadjusted for present value.

The surface water not only benefits the Chino "B" Zone, the water also serves the Snow Creek Village Zone and Base Zone. The Base Zone and Chino Zones will use 38% of the total stream capacity (0.69 ÷ 1.81); therefore, the component cost per capacity unit is $3,300,000 (0.38) ÷ 30,494 C.U. = **$41/C.U.**

CHINO "B" ZONE WATER STORAGE COSTS

In order to calculate the cost of water storage per capacity unit we first determine the cost of those facilities from actual project costs and approved capital improvement budgets. The ratio of storage cost to volume is determined.

DESCRIPTION	YEAR CONSTRUCTED	RESERVOIR STORAGE CAPACITY	RESERVOIR COST*
Tahquitz Reservoir II	2004	5,000,000 gallons	$2,299,785**
Zone 1060	2016	500,000 gallons	$1,544,800*
TOTAL		**5,500,000 gallons**	**$3,844,585**

*Revised Budget Amount for project.

** Actual project costs, unadjusted for present value.

The most current water storage estimated costs are used to determine the ratio of water storage cost to unit of storage volume from the table above. The unit cost of water storage per gallon is $3,844,585 ÷ 5,500,000 GAL= $0.70/GAL. By applying this ratio to each water storage reservoir, the cost of each reservoir and the entire zone's water storage costs are determined.

CHINO "A" ZONE WATER STORAGE COSTS

DESCRIPTION	WATER STORAGE CAPACITY (GAL.)	UNIT COST PER UNIT STORAGE ($/GAL.)	ZONE STORAGE COST
Desert Palisade Res.	500,000	0.70	$350,000
TOTAL			**$350,000**

The required storage for the Chino "B" Zone is 0.28 MG. The existing storage capacity for the Chino "B" Zone is 0.50 MG; therefore, the Chino "B" Zone storage is 56% of existing storage (0.28 ÷ 0.50); therefore, the cost of storage per capacity unit for the Chino "B" Zone is $350,000

(0.56) ÷ 857 C.U. = **$228/C.U.** plus the component cost of the Base Zone and Chino Zone storage since Chino "B" Zone utilizes those zones for water.

CHINO ZONE WATER STORAGE COSTS

DESCRIPTION	WATER STORAGE CAPACITY (GAL.)	UNIT COST PER UNIT STORAGE ($/GAL.)	ZONE STORAGE COST
Chino II	3,500,000	0.70	$2,450,000
Chino III	3,500,000	0.70	$2,450,000
TOTAL			**$4,900,000**

BASE ZONE WATER STORAGE COSTS

DESCRIPTION	WATER STORAGE CAPACITY (GAL.)	UNIT COST PER UNIT STORAGE ($/GAL.)	ZONE STORAGE COST
Palm Springs North I	1,500,000	0.70	$1,050,000
Palm Springs North II	12,000,000	0.70	$8,400,000
Tahquitz I	5,000,000	0.70	$3,500,000
Tahquitz II	5,000,000	0.70	$3,500,000
Palm Springs South I	5,000,000	0.70	$3,500,000
Palm Springs South II	5,000,000	0.70	$3,500,000
Equalization	1,000,000	0.70	$700,000*
TOTAL			**$24,150,000**

* The Equalization Reservoir serves the Base Zone, Snow Creek Village Zone, and the Chino Zones. The Base Zone and Chino Zones will use 83% of the total reservoir capacity.

The required storage for the Chino "B" Zone is 4% of the Chino Zone total storage capacity (0.28 ÷ 7.0); therefore, the component cost of storage per capacity unit for the Chino "B" Zone is $4,900,000 (0.04) ÷ 837 C.U.= **$234/C.U.**.

Since the Chino Booster provides 43% of the water to the Chino Zone, only 43% of the required storage will be provided from the Chino Booster. The percentage of water from the Base Zone is

0.3% or (0.28 x 43%) ÷ 34.5, therefore, the component cost of storage per capacity unit for the Chino “B” Zone is $23,450,000 (0.003) ÷ 837 C.U. = **$84/C.U.**.

The component cost of storage per capacity for the Equalization Reservoir is equal to $700,000 (0.83) ÷ 30,494 = **$19/C.U.**

FUTURE STORAGE CAPACITY REQUIREMENTS

The General Plan requires that the Agency have 18 hours ADD emergency storage, along with fire flow and equalization storage during energy Time of Use (T.O.U.) periods. The 18 hour ADD during T.O.U periods is 0.02 MG (0.03 x 0.75). The fire flow requirement for the system is 0.24 MG (2,000 GPM for 2 hours per General Plan) and the equalization, or operational storage is 40% of the MDD and is therefore equal to 0.02 MG. Adding all of these components equates to 0.28 MG of storage. The current storage capacity for the system is 0.50 MG.

The existing pumping capacity of the system will accommodate an additional 783 capacity units (837 - 54). These additional units will add 1.03 MGD to the MDD. This additional demand will increase the storage requirement to 1.07 MG, requiring 0.57 MG of additional storage (1.07 – 0.5). The cost for the additional storage will be $1,400,000, or ($0.70/gal x 2.0 MG). The cost of future storage per capacity unit is therefore, $570,000 ÷ 837 C.U. = **$681/C.U.**

CHINO "B" WATER TRANSMISSION MAIN COSTS

Historically, the Agency has calculated the cost of water transmission mains per capacity unit by determining the cost of those facilities from actual project costs and approved capital improvement budgets. The ratio of cost per lineal foot to diameter is determined.

DESCRIPTION	YEAR CONSTRUCTED	PIPELINE LENGTH (L.F.)	*PIPELINE COST	PIPELINE UNIT COST ($/L.F.)
12"Alejo/Tamarisk/ Indian Canyon	2012/2014/2015	4,958	$1,290,176	$260/L.F.
14"	-	-	-	-
15"	-	-	-	-
16" Sunny Dunes	2013	1,100	$301,462	$274/L.F.
18"	-	-	-	-
20" E. Well Field	-	-	-	-
24" E. Well Field	-	-	-	-
26"	-	-	-	-
30" N. Well Field	-	-	-	-
36" Avenida Caballeros	2014/2015	2,659	$2,509,219	$944/L.F.
42"	-	-	-	-

* Actual project cost, unadjusted for present value.

Due to the lack of current data available for the varying sizes of transmission mains in our system, the Agency has opted to utilize a "unit construction cost for pipelines" equation used by Eastern Municipal Water District (EMWD) in their 2015 rate study (study conducted by Kennedy/Jenks Consultants). Said equation assumes that unit cost ($/linear foot) = Diameter (inch) x 40.47 x [Diameter (inch) $^{\wedge -0.309}$]. Utilization of said equation allows the Agency to determine uniform unit construction estimates for all sizes of transmission mains in our system.

***ESTIMATED WATER TRANSMISSION MAIN UNIT CONSTRUCTION COSTS**

TRANSMISSION MAIN DIAMETER (INCHES)	TRANSMISSION MAIN LENGTH ($/L.F.)
12"	225
14"	250
15"	265
16"	275
18"	300
20"	320
24"	365
26"	385
30"	425
36"	480
42"	535

*Based on the following EMWD assumption: cost $/L.F. = Diameter (inch) x 40.47 x [Diameter (inch) $^{\wedge -0.309}$].

The most current water transmission main estimated costs are used to determine the ratio of water main cost to diameter as shown in the table on the previous page. By applying these ratios to system transmission mains, the cost of all size mains for the entire system is determined by zone.

Since the same transmission mains are used by both Chino "B" and Chino A" Zones, the capacity unit cost for Chino "B" Zone will be based on a component cost of Chino "A" Zone, Chino Zone, and Base Zone values.

CHINO "A" ZONE WATER TRANSMISSION MAIN COSTS

TRANSMISSION MAIN DIAMETER (INCHES)	TRANSMISSION MAIN LENGTH (L.F.)	UNIT COST PER UNIT LENGTH ($/L.F.)	ZONE TRANSMISSION MAIN COST
***12"**	6,493	225	$1,460,925
16"	3,782	275	$1,040,050
18"	1,600	300	$480,000
24"	3,600	365	$1,314,000
TOTAL			**$4,294,975**

*Approximately 60% of all mains in the system are transmission mains with the remaining 40% being distribution mains. Therefore, only 60% of the total mains are included in the above table.

The Chino "B" Zone uses 39.2% of the total capacity (1.1 ÷ 2.8), where 2.8 MGD is the total capacity of the booster and 1.1 MGD is the capacity needed for Chino "B" Zone; therefore, the component cost of transmission mains per capacity unit for the Chino "B" Zone is $4,294,975 (0.392) ÷ 837 C.U.= **$2,011/C.U.**

The Chino "B" Zone uses 8.6% of the Chino Zone capacity (1.1 ÷ 12.8), where 1.1 MGD is the Chino "B" zone capacity, and 12.8 MGD is the capacity provided to Chino "A" zone by the Chino Zone booster; therefore, the component cost of transmission mains per capacity unit for the Chino "B" Zone is $16,185,340 (0.086) ÷ 837 = **$1,663/C.U**

The Chino "B" Zone uses 0.92% of the Base Zone pumping capacity (0.47 ÷ 51.2), where 0.47 MGD is the capacity provided to Chino "B" Zone by the Base Zone wells and 51.2 MGD is the capacity of the Base Zone; therefore, the component cost of transmission mains per capacity unit for the Chino "B" Zone is ($108,700,370 (0.009) ÷ 837 = **$1,168/C.U**

The component cost of transmission mains per capacity units for the mains that serve the Chino "B" Zone for surface water is \$16,801,475 ÷ 30,494 C.U. = **\$550/C.U.**

COST PER ZONE SUMMARY

ZONE	WATER PRODUCTION COST	TREATMENT COST	SURFACE WATER COST	STORAGE COST	TRANSMISSION COST	TOTAL CAPACITY UNIT COST
Chino "B"	\$1,489	\$22	\$41	\$1,246	\$5,392	\$8,190

The cost of a 1-inch service in the zone is comprised of the cumulative capacity unit costs for water production, treatment, surface water, storage and transmission facilities.

In order to determine the capacity unit cost for each meter size the AWWA meter factors are used. The table below shows the capacity unit charge (Backup Facility Charge) per meter size.

CHINO "B" ZONE FINAL BACKUP FACILITY CHARGE COST SUMMARY

METER SIZE	AWWA METER FACTOR	BACKUP FACILITY CHARGE
3/4 X 5/8	0.4	\$3,276
1	**1.0**	**\$8,190**
1.5	2.0	\$16,380
2	3.2	\$26,208

ACANTO ZONE

The existing capacity units (C.U.) for the Acanto Zone is 478. To determine the total capacity units for the zone, we must first calculate the max demand day (MDD) value utilizing the current General Plan formula:

- MDD = 1.85 x Average Day Annual Demand (ADD)

Using annual production data from 2017, the ADD calculated for the zone equals 0.57 MGD, therefore, the MDD is equal to 1.05 MGD. If the MDD is equal to 1.05 MGD, the current gal/C.U./day is equal to 2,196 gal/C.U./day, or (1.05MGD ÷ 478).

The current pumping capacity for the Acanto Zone is 4.7 MGD. Since all service capacity must be met by the Acanto Zone pumping capacity, all of the existing units are using 22% of the total capacity of the Acanto Zone (1.05 MGD÷4.7 MGD). The total maximum capacity units for the zone is then equal to 2,172, or (478÷0.22).

Facility costs were determined by analyzing facility cost valuation from Agency Annual Operating Statistics Reports, cost estimates prepared in conjunction with the currently proposed budget and rate study, and by assessing the current facilities using the 2008 General Plan Update. The facilities cost valuation per capacity unit was determined from the total number of capacity units and the facilities costs.

The Acanto Zone charge is composed of costs per capacity unit for production (wells and boosters), treatment, surface water, storage and transmission facilities assignable to the Acanto Zone service.

ACANTO ZONE PUMPING/WATER PRODUCTION COST

In order to calculate the cost of pumping water per capacity unit we first determine the cost of those facilities from approved capital improvement budgets. The ratio of plant cost to horsepower is determined.

DESCRIPTION	YEAR CONSTRUCTED	PUMPING PLANT HORSEPOWER	PUMPING PLANT COST*
Well 39	2010	450 HP Pumping Plant	$1,320,156.59
Well 40	2009	450 HP Pumping Plant	$1,498,356.82
Well 41	2006	450 HP Pumping Plant	$1,561,858.76
Well 42	2006	200 HP Pumping Plant	$1,175,156.15
TOTAL		**1,550 HP**	**$5,555,528.32**

* Current Capital Improvement Budget Amounts for Pumping Plants.

The most current pumping plant estimated costs are used to determine the ratio of pumping plant cost to unit of horsepower from the table above. The unit cost of pumping per horsepower is $5,555,528.32 ÷ 1,550 hp= $3,584/hp. By applying this ratio to each active pumping plant the cost of each plant and the zone system pumping cost is determined.

Similarly, the cost of pressure boosting facilities is determined.

DESCRIPTION	YEAR CONSTRUCTED	BOOSTER PLANT HORSEPOWER	BOOSTER PLANT COST*
Zone 1240 Booster	2016	80 HP Booster Plant	$950,000
Janis Tuscany Booster Upgrades	2016	225 HP Booster Pumping Plant	$230,000
TOTAL		**305 HP**	**$1,180,000**

* Actual project costs, unadjusted for present value.

The most current pumping plant costs are used to determine the ratio of booster pumping plant cost to unit of horsepower from the table above. The unit cost of booster pumping per horsepower is $1,180,000 ÷ 305 hp= $3,869/hp. By applying this ratio to each active pumping plant the cost of each plant and the zone's booster pumping cost is determined. Since Acanto Zone is provided water by booster pumps, we will only be using the booster pump costs.

ACANTO ZONE PUMPING COSTS

WELL/BOOSTER BASE ZONES	DESCRIPTION	PLANT HORSEPOWER	ZONE PUMPING COST ($3,869/HP)
Acanto Booster	Booster Plant	300	$1,160,700
TOTAL			**$1,160,700**

The cost of production per capacity unit for the Acanto Zone is $1,160,700 ÷ 2,172 C.U.= **$534/C.U.** plus a component cost of the Base Zone pumping since Acanto Boosters are used to pump Base Zone water to the Acanto Zone.

The Acanto Zone uses 9.2% of the Base Zone wells (4.7 ÷ 51.2), where 4.7 MGD is the Acanto Booster capacity and 51.2 MGD is the Base Zone wells capacity; therefore, the component cost of production per capacity unit for the Base Zone wells is $24,489,260 (0.092) ÷ 2,172 = **$1,037/C.U**

ACANTO ZONE WATER TREATMENT COSTS

Since Base Zone water is pumped to the Acanto Zone, the treatment costs for the Acanto Zone is a component of the Base Zone treatment costs and any additional treatment facilities associated with the Acanto Zone.

BASE ZONE FOREBAY TREATMENT

DESCRIPTION	YEAR CONSTRUCTED	*FOREBAY COST
Well 14 Forebay	1993	$376,750
Well 16 Forebay	1993	$376,750
TOTAL		**$753,500**

BASE ZONE CHLORINE INJECTION TREATMENT

DESCRIPTION	NUMBER OF ACTIVE SITES	AVG. COST PER SITE	ZONE PUMPING COST (ACTUAL)
Chlorine storage building and pad, injection vault	12	$30,440	$365,280
TOTAL			**$365,280**

*Based on average construction cost per site to install chlorine injection facilities.

The Acanto Zone uses 9.2% of the Base Zone wells (4.7 ÷ 51.2), where 4.7 MGD is the Acanto Booster capacity and 51.2 MGD is the Base Zone wells capacity; therefore, the component cost of treatment per capacity unit for the Base Zone facilities is $753,500 (0.092) ÷ 2,172 = **$32/C.U.** and $365,280 (0.092) ÷ 2,172 = **$15/C.U.**

UV TREATMENT

DESCRIPTION	YEAR CONSTRUCTED	*FOREBAY COST
UV Treatment (Snow Creek/Falls Creek)	2014	$317,142
TOTAL		**$317,142**

*Actual project costs.

The UV treated surface water not only benefits the Acanto Zone, the water is also used by Snow Creek Village Zone and Base Zone. The Base Zone and Chino Zones will use 38% of the total stream capacity (0.69 ÷ 1.81); therefore, the component cost per capacity unit for the UV treatment per capacity unit is therefore, $317,142 (0.38) ÷ 30,494 C.U. = **$4/C.U.**

ACANTO ZONE SURFACE WATER COST

In order to calculate the cost of surface water per capacity unit we first determine the cost of those facilities from actual project costs. Surface water is transmitted from the diversions into the Base Zone where it is distributed to the zone.

DESCRIPTION	YEAR CONSTRUCTED	*SURFACE WATER FACILITY COST
Snow Creek Diversion	1990	$2,000,000
Falls Creek Diversion	1990	$1,300,000
TOTAL		**$3,300,000**

* Actual project costs, unadjusted for present value.

The surface water not only benefits the Acanto Zone, the water also serves the Snow Creek Village Zone and Chino Zone. The Base Zone and Chino Zones will use 38% of the total stream capacity (0.69 ÷ 1.81); therefore, the cost per capacity unit is $3,300,000 (0.38) ÷ 30,494 C.U. = **$41/C.U.**

ACANTO ZONE WATER STORAGE COSTS

In order to calculate the cost of water storage per capacity unit we first determine the cost of those facilities from actual project costs and approved capital improvement budgets. The ratio of storage cost to volume is determined.

DESCRIPTION	YEAR CONSTRUCTED	RESERVOIR STORAGE CAPACITY	RESERVOIR COST*
Tahquitz Reservoir II	2004	5,000,000 gallons	$2,299,785**
Zone 1060	2016	500,000 gallons	$1,544,800*
TOTAL		**5,500,000 gallons**	**$3,844,585**

*Revised Budget Amount for project.

** Actual project costs, unadjusted for present value.

The most current water storage estimated costs are used to determine the ratio of water storage cost to unit of storage volume from the table above. The unit cost of water storage per gallon is $3,844,585 ÷ 5,500,000 GAL= $0.70/GAL. By applying this ratio to each water storage reservoir, the cost of each reservoir and the entire zone's water storage costs are determined.

ACANTO ZONE WATER STORAGE COSTS

DESCRIPTION	WATER STORAGE CAPACITY (GAL.)	UNIT COST PER UNIT STORAGE ($/GAL.)	ZONE STORAGE COST
Andreas I	1,500,000	0.70	$1,050,000
Andreas II	1,500,000	0.70	$1,050,000
TOTAL			**$2,100,000**

The cost of storage per capacity unit for the Acanto Zone facilities is $2,100,000 ÷ 2,172 C.U.= **$967/C.U.** plus the component cost of the Base Zone storage since Acanto Zone utilizes Base Zone water.

BASE ZONE WATER STORAGE COSTS

DESCRIPTION	WATER STORAGE CAPACITY (GAL.)	UNIT COST PER UNIT STORAGE ($/GAL.)	ZONE STORAGE COST
Palm Springs North I	1,500,000	0.70	$1,050,000
Palm Springs North II	12,000,000	0.70	$8,400,000
Tahquitz I	5,000,000	0.70	$3,500,000
Tahquitz II	5,000,000	0.70	$3,500,000
Palm Springs South I	5,000,000	0.70	$3,500,000
Palm Springs South II	5,000,000	0.70	$3,500,000
Equalization	1,000,000	0.70	$700,000*
TOTAL			**$24,150,000**

* The Equalization Reservoir serves the Base Zone, Snow Creek Village Zone, and the Chino Zone. The Base Zone and Chino Zones will use 83% of the total reservoir capacity.

The required storage for the Acanto Zone is 1.08 MG. The existing storage capacity for the Base Zone is 34.5 MG; therefore, the Acanto Zone storage is 3.1% of Base Zone storage (1.08 ÷ 34.5).

The cost of storage per capacity is therefore equal to the component of the Equalization Reservoir and the Base Zone storage, or $700,000 (0.83) ÷ 30,494 plus $23,450,000 (0.031) ÷ 2,172 C.U.: $19 + 334 = **$353/C.U.**

FUTURE STORAGE CAPACITY REQUIREMENTS

The General Plan requires that the Agency have 18 hours ADD emergency storage, along with fire flow and equalization storage during energy Time of Use (T.O.U.) periods. The 18 hour ADD during T.O.U periods for the zone is 0.42 MG (.57 x 0.75). The fire flow requirement for the zone is 0.24 MG (2,000 GPM for 2 hours per General Plan) and the equalization, or operational storage is 40% of the MDD and is therefore equal to 0.42 MG. Adding all of these components equates to 1.08 MG of storage. The current storage capacity for the system is 3.0 MG.

The existing pumping capacity of the system will accommodate an additional 1,694 capacity units (2,172 - 478). These additional units will add 3.7 MGD to the MDD. This additional demand will increase the storage requirement to 4.07 MG, requiring 1.07 MG of additional storage (4.07 – 3.0). The cost for the additional storage will be $749,000, or ($0.70/gal x 1.07 MG). The cost of future storage per capacity unit is therefore, $749,000 ÷ 2,172 C.U. = **$345/C.U.**

ACANTO ZONE WATER TRANSMISSION MAIN COSTS

Historically, the Agency has calculated the cost of water transmission mains per capacity unit by determining the cost of those facilities from actual project costs and approved capital improvement budgets. The ratio of cost per lineal foot to diameter is determined.

DESCRIPTION	YEAR CONSTRUCTED	PIPELINE LENGTH (L.F.)	*PIPELINE COST	PIPELINE UNIT COST ($/L.F.)
12”Alejo/Tamarisk/ Indian Canyon	2012/2014/2015	4,958	$1,290,176	$260/L.F.
14”	-	-	-	-
15”	-	-	-	-
16” Sunny Dunes	2013	1,100	$301,462	$274/L.F.
18”	-	-	-	-
20” E. Well Field	-	-	-	-
24” E. Well Field	-	-	-	-
26”	-	-	-	-
30” N. Well Field	-	-	-	-
36” Avenida Caballeros	2014/2015	2,659	$2,509,219	$944/L.F.
42”	-	-	-	-

* Actual project cost, unadjusted for present value.

Due to the lack of current data available for the varying sizes of transmission mains in our system, the Agency has opted to utilize a “unit construction cost for pipelines” equation used by Eastern Municipal Water District (EMWD) in their 2015 rate study (study conducted by Kennedy/Jenks Consultants). Said equation assumes that unit cost ($/linear foot) = Diameter (inch) x 40.47 x [Diameter (inch) $^{\wedge -0.309}$]. Utilization of said equation allows the Agency to determine uniform unit construction estimates for all sizes of transmission mains in our system.

***ESTIMATED WATER TRANSMISSION MAIN UNIT CONSTRUCTION COSTS**

TRANSMISSION MAIN DIAMETER (INCHES)	TRANSMISSION MAIN LENGTH ($/L.F.)
12”	225
14”	250
15”	265
16”	275
18”	300
20”	320
24”	365
26”	385
30”	425
36”	480
42”	535

*Based on the following EMWD assumption: cost $/L.F. = Diameter (inch) x 40.47 x [Diameter (inch) $^{\wedge-0.309}$].

The most current water transmission main estimated costs are used to determine the ratio of water main cost to diameter as shown in the table on the previous page. By applying these ratios to system transmission mains, the cost of all size mains for the entire system is determined by zone.

ACANTO ZONE WATER TRANSMISSION MAIN COSTS

TRANSMISSION MAIN DIAMETER (INCHES)	TRANSMISSION MAIN LENGTH (L.F.)	UNIT COST PER UNIT LENGTH ($/L.F.)	ZONE TRANSMISSION MAIN COST
***12”**	8,875	225	$1,996,200
16”	6,832	275	$1,878,800
24”	23	365	$8,395
****20”**	9,673	320	$3,095,360**
****24”**	37,551	365	$13,706,115**
TOTAL			**$3,888,395**

*Approximately 60% of all mains in the system are transmission mains with the remaining 40% being distribution mains. Therefore, only 60% of the total mains are included in the above table.

The cost of transmission per capacity unit for the Acanto Zone mains is $3,888,395 ÷ 2,172 C.U.= **$1,790/C.U**. plus a component of the Base Zone mains cost since Acanto Boosters are used to pump Base Zone water to the Acanto Zone.

The Acanto Zone uses 9.2% of the Base Zone wells (4.7 ÷ 51.2), where 4.7 MGD is the Acanto Booster capacity and 51.2MGD is the Base Zone wells capacity; therefore, the component cost of transmission mains per capacity unit for the Base Zone facilities is $108,700,370 (0.092) ÷ 2,172 = **$4,604/C.U.**

The component cost of transmission mains per capacity units for the shared Base Zone and Chino Zone mains is therefore, $16,801,475 ÷ 30,494 C.U. = **$550/C.U.**

COST PER ZONE SUMMARY

ZONE	WATER PRODUCTION COST	TREATMENT COST	SURFACE WATER COST	STORAGE COST	TRANSMISSION COST	TOTAL CAPACITY UNIT COST
Acanto	$1,571	$51	$41	$1,664	$6,944	$10,271

The cost of a 1-inch service in the zone is comprised of the cumulative capacity unit costs for water production, treatment, surface water, storage and transmission facilities.

In order to determine the capacity unit cost for each meter size the AWWA meter factors are used. The table below shows the capacity unit charge (Backup Facility Charge) per meter size.

ACANTO ZONE FINAL BACKUP FACILITY CHARGE COST SUMMARY

METER SIZE	AWWA METER FACTOR	BACKUP FACILITY CHARGE
3/4 X 5/8	0.4	$4,108
1	**1.0**	**$10,271**
1.5	2.0	$20,542
2	3.2	$32.867

SOUTHRIDGE “A” ZONE

The existing capacity units (C.U.) for the Southridge “A” Zone is 35. To determine the total capacity units for the zone, we must first calculate the max demand day (MDD) value utilizing the current General Plan formula:

- MDD = 1.85 x Average Day Annual Demand (ADD)

Using annual production data from 2017, the ADD calculated for the zone equals 0.04 MGD, therefore, the MDD is equal to 0.07 MGD. If the MDD is equal to 0.07 MGD, the current gal/C.U./day is equal to 2,000 gal/C.U./day, or (0.07MGD ÷ 35).

The current pumping capacity for the Southridge “A” Zone is 0.64 MGD; however, 0.44 MGD is dedicated to Southridge “B” Zone. The pumping capacity for Southridge “A” Zone is therefore 0.20 MGD (0.64 - 0.44). Since all service capacity must be met by the Southridge “A” Zone pumping capacity, all of the existing units are using 35% of the total capacity of the Southridge “A” Zone, or (0.07 MGD ÷ 0.20 MGD). The total maximum capacity units for the zone is then equal to 100, or (35 ÷ 0.35).

Facility costs were determined by analyzing facility cost valuation from Agency Annual Operating Statistics Reports, cost estimates prepared in conjunction with the currently proposed budget and rate study, and by assessing the current facilities using the 2008 General Plan Update. The facilities cost valuation per capacity unit was determined from the total number of capacity units and the facilities costs.

The Southridge “A” Zone charge is composed of costs per capacity unit for production (wells and boosters), treatment, surface water, storage and transmission facilities assignable to the Southridge “A” Zone service.

SOUTHRIDGE “A” ZONE PUMPING/WATER PRODUCTION COST

In order to calculate the cost of pumping water per capacity unit we first determine the cost of those facilities from approved capital improvement budgets. The ratio of plant cost to horsepower is determined.

DESCRIPTION	YEAR CONSTRUCTED	PUMPING PLANT HORSEPOWER	PUMPING PLANT COST*
Well 39	2010	450 HP Pumping Plant	$1,320,156.59
Well 40	2009	450 HP Pumping Plant	$1,498,356.82
Well 41	2006	450 HP Pumping Plant	$1,561,858.76
Well 42	2006	200 HP Pumping Plant	$1,175,156.15
TOTAL		**1,550 HP**	**$5,555,528.32**

* Current Capital Improvement Budget Amounts for Pumping Plants.

The most current pumping plant estimated costs are used to determine the ratio of pumping plant cost to unit of horsepower from the table above. The unit cost of pumping per horsepower is $5,555,528.32 ÷ 1,550 hp= $3,584/hp. By applying this ratio to each active pumping plant the cost of each plant and the zone system pumping cost is determined.

Similarly, the cost of pressure boosting facilities is determined.

DESCRIPTION	YEAR CONSTRUCTED	BOOSTER PLANT HORSEPOWER	BOOSTER PLANT COST*
Zone 1240 Booster	2016	80 HP Booster Plant	$950,000
Janis Tuscany Booster Upgrades	2016	225 HP Booster Pumping Plant	$230,000
TOTAL		**305 HP**	**$1,180,000**

* Actual project costs, unadjusted for present value.

The most current pumping plant costs are used to determine the ratio of booster pumping plant cost to unit of horsepower from the table above. The unit cost of booster pumping per horsepower is $1,180,000 ÷ 305 hp= $3,869/hp. By applying this ratio to each active pumping plant the cost of each plant and the zone's booster pumping cost is determined. Since Southridge "A" Zone is provided water by booster pumps, we will only be using the booster pump costs.

SOUTHRIDGE "A" ZONE PUMPING COSTS

WELL/BOOSTER BASE ZONES	DESCRIPTION	PLANT HORSEPOWER	ZONE PUMPING COST ($3,869/HP)
Araby	Booster Plant	50	$193,450
TOTAL			**$193,450**

The Southridge "A" Zone uses 31.3% of the Zone capacity (0.64 – 0.44) ÷ 0.64, where 0.64 MGD is the Southridge "A" Zone total pumping capacity and 0.44 MGD is the Southridge "B" Zone capacity; therefore, the component cost of production per capacity unit for the Southridge "A" Zone is $193,450 (0.313) ÷ 100 = **$605/C.U**

The Southridge "A" Zone uses 0.39% of the Base Zone pumping capacity (0.20 ÷ 51.2), where 0.20 MGD is the capacity provided to Southridge "A" Zone by the Base Zone wells and 51.2 MGD is the capacity of the Base Zone; therefore, the component cost of production per capacity unit for the Southridge "A" Zone is $24,489,260 (0.0039) ÷ 100 = **$955/C.U**

SOUTHRIDGE "A" ZONE WATER TREATMENT COSTS

Since Base Zone water is pumped to the Southridge "A" Zone, the treatment costs for the Southridge "A" Zone is a component of the Base Zone treatment costs and any additional treatment facilities associated with the Southridge "A" Zone.

BASE ZONE FOREBAY TREATMENT

DESCRIPTION	YEAR CONSTRUCTED	*FOREBAY COST
Well 14 Forebay	1993	$376,750
Well 16 Forebay	1993	$376,750
TOTAL		**$753,500**

BASE ZONE CHLORINE INJECTION TREATMENT

DESCRIPTION	NUMBER OF ACTIVE SITES	AVG. COST PER SITE	ZONE PUMPING COST (ACTUAL)
Chlorine storage building and pad, injection vault	12	$30,440	$365,280
TOTAL			**$365,280**

*Based on average construction cost per site to install chlorine injection facilities.

The Southridge “A” Zone uses 0.39% of the Base Zone pumping capacity (0.20 ÷ 51.2), where 0.20 MGD is the capacity provided to Southridge “A” Zone by the Base Zone wells and 51.2 MGD is the capacity of the Base Zone; therefore, the component cost of treatment per capacity unit for the Southridge “A” Zone is ($753,500 + $365,280) (0.0039) ÷ 100 = **$43/C.U**

U.V TREATMENT

DESCRIPTION	YEAR CONSTRUCTED	*FOREBAY COST
UV Treatment (Snow Creek/Falls Creek)	2014	$317,142
TOTAL		**$317,142**

*Actual project costs.

The UV treated surface water not only benefits the Southridge “A” Zone, the water is also used by Snow Creek Village Zone and Base Zone. The Base Zone and Chino Zones will use 38% of the total stream capacity (0.69 ÷ 1.81); therefore, the component cost per capacity unit for the UV treatment per capacity unit is therefore, $317,142 (0.38) ÷ 30,494 C.U. = **$4/C.U.**

SOUTHRIDGE “A” ZONE SURFACE WATER COST

In order to calculate the cost of surface water per capacity unit we first determine the cost of those facilities from actual project costs. Surface water is transmitted from the diversions into the Base Zone where it is distributed to the zone.

DESCRIPTION	YEAR CONSTRUCTED	*SURFACE WATER FACILITY COST
Snow Creek Diversion	1990	$2,000,000
Falls Creek Diversion	1990	$1,300,000
TOTAL		**$3,300,000**

* Actual project costs, unadjusted for present value.

The surface water not only benefits the Southridge “A” Zone, the water also serves the Snow Creek Village Zone and Base Zone. The Base Zone and Chino Zones will use 38% of the total stream capacity (0.69 ÷ 1.81); therefore, the component cost per capacity unit is $3,300,000 (0.38) ÷ 30,494 C.U. = **$41/C.U.**

SOUTHRIDGE “A” ZONE WATER STORAGE COSTS

In order to calculate the cost of water storage per capacity unit we first determine the cost of those facilities from actual project costs and approved capital improvement budgets. The ratio of storage cost to volume is determined.

DESCRIPTION	YEAR CONSTRUCTED	RESERVOIR STORAGE CAPACITY	RESERVOIR COST*
Tahquitz Reservoir II	2004	5,000,000 gallons	$2,299,785**
Zone 1060	2016	500,000 gallons	$1,544,800*
TOTAL		**5,500,000 gallons**	**$3,844,585**

*Revised Budget Amount for project.

** Actual project costs, unadjusted for present value.

The most current water storage estimated costs are used to determine the ratio of water storage cost to unit of storage volume from the table above. The unit cost of water storage per gallon is $3,844,585 ÷ 5,500,000 GAL= $0.70/GAL. By applying this ratio to each water storage reservoir, the cost of each reservoir and the entire zone's water storage costs are determined.

SOUTHRIDGE "A" ZONE WATER STORAGE COSTS

DESCRIPTION	WATER STORAGE CAPACITY (GAL.)	UNIT COST PER UNIT STORAGE ($/GAL.)	ZONE STORAGE COST
Southridge I	100,000	0.70	$70,000
Southridge II	300,000	0.70	$210,000
TOTAL			**$280,000**

The required storage for the Southridge "A" Zone is 0.30 MG. The existing storage capacity for the Southridge "A" Zone is 0.40 MG; therefore, the Southridge "A" Zone storage is 75% of existing storage (0.30 ÷ 0.40); therefore, the cost of storage per capacity unit for the Southridge "A" Zone facilities is $280,000 (0.75) ÷ 100 C.U. = **$2,100/C.U.** plus the component cost of the Base Zone storage since Southridge "A" Zone utilizes the Base Zone for water.

BASE ZONE WATER STORAGE COSTS

DESCRIPTION	WATER STORAGE CAPACITY (GAL.)	UNIT COST PER UNIT STORAGE ($/GAL.)	ZONE STORAGE COST
Palm Springs North I	1,500,000	0.70	$1,050,000
Palm Springs North II	12,000,000	0.70	$8,400,000
Tahquitz I	5,000,000	0.70	$3,500,000
Tahquitz II	5,000,000	0.70	$3,500,000
Palm Springs South I	5,000,000	0.70	$3,500,000
Palm Springs South II	5,000,000	0.70	$3,500,000
Equalization	1,000,000	0.70	$700,000*
TOTAL			**$24,150,000**

* The Equalization Reservoir serves the Base Zone, Snow Creek Village Zone, and the Chino Zones. The Base Zone and Chino Zones will use 83% of the total reservoir capacity.

The required storage for the Southridge “A” Zone is 0.80% of the Base Zone total storage capacity (0.30 ÷ 34.5); therefore, the component cost of storage per capacity unit for Southridge “A” Zone is $23,450,000 (0.008) ÷ 100 C.U.= **$1,876/C.U.**.
The component cost of storage per capacity for the Equalization Reservoir is equal to $700,000 (0.83) ÷ 30,494 = **$19/C.U.**

FUTURE STORAGE CAPACITY REQUIREMENTS

The General Plan requires that the Agency have 18 hours ADD emergency storage, along with fire flow and equalization storage during energy Time of Use (T.O.U.) periods. The 18 hour ADD during T.O.U periods for the zone is 0.03 MG (.04 x 0.75). The fire flow requirement for the zone is 0.24 MG (2,000 GPM for 2 hours per General Plan) and the equalization, or operational storage is 40% of the MDD and is therefore equal to 0.028 MG. Adding all of these components equates to 0.298 MG of storage. The current storage capacity for the system is 0.40 MG.

The existing pumping capacity of the system will accommodate an additional 65 capacity units (100 - 35). These additional units will add 0.13 MGD to the MDD. This additional demand will increase the storage requirement to 0.40 MG, equaling the existing storage and therefore no future storage for the Southridge “A” Zone is required.

SOUTHRIDGE "A" ZONE WATER TRANSMISSION MAIN COSTS

Historically, the Agency has calculated the cost of water transmission mains per capacity unit by determining the cost of those facilities from actual project costs and approved capital improvement budgets. The ratio of cost per lineal foot to diameter is determined.

DESCRIPTION	YEAR CONSTRUCTED	PIPELINE LENGTH (L.F.)	*PIPELINE COST	PIPELINE UNIT COST ($/L.F.)
12"Alejo/Tamarisk/ Indian Canyon	2012/2014/2015	4,958	$1,290,176	$260/L.F.
14"	-	-	-	-
15"	-	-	-	-
16" Sunny Dunes	2013	1,100	$301,462	$274/L.F.
18"	-	-	-	-
20" E. Well Field	-	-	-	-
24" E. Well Field	-	-	-	-
26"	-	-	-	-
30" N. Well Field	-	-	-	-
36" Avenida Caballeros	2014/2015	2,659	$2,509,219	$944/L.F.
42"	-	-	-	-

* Actual project cost, unadjusted for present value.

Due to the lack of current data available for the varying sizes of transmission mains in our system, the Agency has opted to utilize a "unit construction cost for pipelines" equation used by Eastern Municipal Water District (EMWD) in their 2015 rate study (study conducted by Kennedy/Jenks Consultants). Said equation assumes that unit cost ($/linear foot) = Diameter (inch) x 40.47 x [Diameter (inch) $^{\wedge -0.309}$]. Utilization of said equation allows the Agency to determine uniform unit construction estimates for all sizes of transmission mains in our system.

***ESTIMATED WATER TRANSMISSION MAIN UNIT CONSTRUCTION COSTS**

TRANSMISSION MAIN DIAMETER (INCHES)	TRANSMISSION MAIN LENGTH ($/L.F.)
12”	225
14”	250
15”	265
16”	275
18”	300
20”	320
24”	365
26”	385
30”	425
36”	480
42”	535

*Based on the following EMWD assumption: cost $/L.F. = Diameter (inch) x 40.47 x [Diameter (inch) $^{\wedge -0.309}$].

The most current water transmission main estimated costs are used to determine the ratio of water main cost to diameter as shown in the table on the previous page. By applying these ratios to system transmission mains, the cost of all size mains for the entire system is determined by zone.

SOUTHRIDGE “A” ZONE WATER TRANSMISSION MAIN COSTS

TRANSMISSION MAIN DIAMETER (INCHES)	TRANSMISSION MAIN LENGTH (L.F.)	UNIT COST PER UNIT LENGTH ($/L.F.)	ZONE TRANSMISSION MAIN COST
12”	775	225	$174,375
TOTAL			**$174,375**

The Southridge “A” Zone uses 31.3% of the total capacity (0.20 ÷ 0.64), where 0.64 MGD is the total capacity of the Southridge “A” booster and 0.20 MGD is the capacity needed for Southridge “A” Zone; therefore, the cost of transmission mains per capacity unit for the Southridge “A” Zone is $174,375 (0.313) ÷ 100 C.U.= **$545/C.U.** plus a component cost of the Base Zone transmission main since Base Zone water is pumped to the Southridge “A” Zone.

The Southridge “A” Zone uses 0.39% of the Base Zone pumping capacity (0.20 ÷ 51.2), where 0.20 MGD is the capacity provided to Southridge “A” Zone by the Base Zone wells and 51.2 MGD is the capacity of the Base Zone; therefore, the component cost of transmission mains per capacity unit for the Southridge “A” Zone is $108,700,370 (0.0039) ÷ 100 = **$4,239/C.U**

The component cost of transmission mains per capacity units for the mains that serve the Southridge “A” Zone for surface water is $16,801,475 ÷ 30,494 C.U. = **$550/C.U.**

COST PER ZONE SUMMARY

ZONE	WATER PRODUCTION COST	TREATMENT COST	SURFACE WATER COST	STORAGE COST	TRANSMISSION COST	TOTAL CAPACITY UNIT COST
Southridge “A”	$1,560	$47	$41	$3,995	$5,334	$10,977

The cost of a 1-inch service in the zone is comprised of the cumulative capacity unit costs for water production, treatment, surface water, storage and transmission facilities.

In order to determine the capacity unit cost for each meter size the AWWA meter factors are used. The table below shows the capacity unit charge (Backup Facility Charge) per meter size.

SOUTHRIDGE “A” ZONE FINAL BACKUP FACILITY CHARGE COST SUMMARY

METER SIZE	AWWA METER FACTOR	BACKUP FACILITY CHARGE
3/4 X 5/8	0.4	$4,390
1	**1.0**	**$10,977**
1.5	2.0	$21,954
2	3.2	$35,126

<u>SOUTHRIDGE “B” ZONE</u>

The existing capacity units (C.U.) for the Southridge “B” Zone is 18. To determine the total capacity units for the zone, we must first calculate the max demand day (MDD) value utilizing the current General Plan formula:

- MDD = 1.85 x Average Day Annual Demand (ADD)

Using annual production data from 2017, the ADD calculated for the zone equals 0.01 MGD, therefore, the MDD is equal to 0.0185 MGD. If the MDD is equal to 0.0185 MGD, the current gal/C.U./day is equal to 1,028 gal/C.U./day, or (0.0185MGD÷18).

The current pumping capacity for the Southridge “B” Zone is 0.44 MGD. Since all service capacity must be met by the Southridge “B” Zone pumping capacity, all of the existing units are using 4.2% of the total capacity of the Southridge “B” Zone (0.0185 MGD ÷ 0.44 MGD). The total maximum capacity units for the zone is then equal to 428, or (18÷0.042).

Facility costs were determined by analyzing facility cost valuation from Agency Annual Operating Statistics Reports, cost estimates prepared in conjunction with the currently proposed budget and rate study, and by assessing the current facilities using the 2008 General Plan Update. The facilities cost valuation per capacity unit was determined from the total number of capacity units and the facilities costs.

The Southridge “B” Zone charge is composed of costs per capacity unit for production (wells and boosters), treatment, surface water, storage and transmission facilities assignable to the Southridge “B” Zone service.

SOUTHRIDGE "B" ZONE PUMPING/WATER PRODUCTION COST

In order to calculate the cost of pumping water per capacity unit we first determine the cost of those facilities from approved capital improvement budgets. The ratio of plant cost to horsepower is determined.

DESCRIPTION	YEAR CONSTRUCTED	PUMPING PLANT HORSEPOWER	PUMPING PLANT COST*
Well 39	2010	450 HP Pumping Plant	$1,320,156.59
Well 40	2009	450 HP Pumping Plant	$1,498,356.82
Well 41	2006	450 HP Pumping Plant	$1,561,858.76
Well 42	2006	200 HP Pumping Plant	$1,175,156.15
TOTAL		**1,550 HP**	**$5,555,528.32**

* Current Capital Improvement Budget Amounts for Pumping Plants.

The most current pumping plant estimated costs are used to determine the ratio of pumping plant cost to unit of horsepower from the table above. The unit cost of pumping per horsepower is $5,555,528.32 ÷ 1,550 hp= $3,584/hp. By applying this ratio to each active pumping plant the cost of each plant and the zone system pumping cost is determined.

Similarly, the cost of pressure boosting facilities is determined.

DESCRIPTION	YEAR CONSTRUCTED	BOOSTER PLANT HORSEPOWER	BOOSTER PLANT COST*
Zone 1240 Booster	2016	80 HP Booster Plant	$950,000
Janis Tuscany Booster Upgrades	2016	225 HP Booster Pumping Plant	$230,000
TOTAL		**305 HP**	**$1,180,000**

* Actual project costs, unadjusted for present value.

The most current pumping plant costs are used to determine the ratio of booster pumping plant cost to unit of horsepower from the table above. The unit cost of booster pumping per horsepower is $1,180,000 ÷ 305 hp= $3,869/hp. By applying this ratio to each active pumping plant the cost

of each plant and the zone's booster pumping cost is determined. Since Southridge "B" Zone is provided water by booster pumps, we will only be using the booster pump costs.

SOUTHRIDGE "B" ZONE PUMPING COSTS

WELL/BOOSTER BASE ZONES	DESCRIPTION	PLANT HORSEPOWER	ZONE PUMPING COST ($3,869/HP)
Southridge	Booster Plant	90	$348,210
TOTAL			**$348,210**

The cost of production per capacity unit is $348,210 ÷ 428 C.U. = **$813/C.U**. plus a component cost of the Southridge "A" Zone and Base Zone pumping.

The Southridge "B" Zone uses 68.8% of the Southridge "A" pumping capacity (0.44 ÷ 0.64), where 0.64 MGD is the total capacity of the Southridge "A" booster and 0.44 MGD is the capacity of the Southridge "B" Zone; therefore, the component cost of production per capacity unit for the Southridge "B" Zone is $193,450 (0.688) ÷ 428 C.U.= **$310/C.U.**

The Southridge "B" Zone uses 0.86% of the Base Zone pumping capacity (0.44 ÷ 51.2), where 0.44 MGD is the capacity provided to Southridge "B" Zone by the Base Zone and 51.2 MGD is the capacity of the Base Zone; therefore, the component cost of production per capacity unit for the Southridge "B" Zone is $24,489,260 (0.0086) ÷ 428 = **$492/C.U**

SOUTHRIDGE "B" ZONE WATER TREATMENT COSTS

Since Base Zone and Southridge "A" Zone water is pumped to the Southridge "B" Zone, the treatment costs for the Southridge "B" Zone is a component of the Base Zone treatment costs, Southridge "A" Zone treatment costs and any additional treatment facilities associated with the Southridge "B" Zone.

BASE ZONE FOREBAY TREATMENT

DESCRIPTION	YEAR CONSTRUCTED	*FOREBAY COST
Well 14 Forebay	1993	$376,750
Well 16 Forebay	1993	$376,750
TOTAL		**$753,500**

BASE ZONE CHLORINE INJECTION TREATMENT

DESCRIPTION	NUMBER OF ACTIVE SITES	AVG. COST PER SITE	ZONE PUMPING COST (ACTUAL)
Chlorine storage building and pad, injection vault	12	$30,440	$365,280
TOTAL			**$365,280**

*Based on average construction cost per site to install chlorine injection facilities.

The Southridge "B" Zone uses 0.86% of the Base Zone pumping capacity (0.44 ÷ 51.2), where 0.44 MGD is the capacity provided to Southridge "B" Zone by the Base Zone wells and 51.2 MGD is the capacity of the Base Zone; therefore, the component cost of treatment per capacity unit for the Southridge "B" Zone is ($753,500 + $365,280) (0.0086) ÷ 428 = **$22/C.U.**

UV TREATMENT

DESCRIPTION	YEAR CONSTRUCTED	*FOREBAY COST
UV Treatment (Snow Creek/Falls Creek)	2014	$317,142
TOTAL		**$317,142**

*Actual project costs.

The UV treated surface water not only benefits the Southridge “B” Zone, the water is also used by Snow Creek Village Zone and Base Zone. The Base Zone and Chino Zones will use 38% of the total stream capacity (0.69 ÷ 1.81); therefore, the component cost per capacity unit for the UV treatment per capacity unit is therefore, $317,142 (0.38) ÷ 30,494 C.U. = **$4/C.U.**

SOUTHRIDGE “B” ZONE SURFACE WATER COST

In order to calculate the cost of surface water per capacity unit we first determine the cost of those facilities from actual project costs. Surface water is transmitted from the diversions into the Base Zone where it is distributed to the zone.

DESCRIPTION	YEAR CONSTRUCTED	*SURFACE WATER FACILITY COST
Snow Creek Diversion	1990	$2,000,000
Falls Creek Diversion	1990	$1,300,000
TOTAL		**$3,300,000**

* Actual project costs, unadjusted for present value.

The surface water not only benefits the Southridge “B” Zone, the water also serves the Snow Creek Village Zone and Base Zone. The Base Zone and Chino Zones will use 38% of the total stream capacity (0.69 ÷ 1.81); therefore, the component cost per capacity unit is $3,300,000 (0.38) ÷ 30,494 C.U. = **$41/C.U.**

SOUTHRIDGE "B" ZONE WATER STORAGE COSTS

In order to calculate the cost of water storage per capacity unit we first determine the cost of those facilities from actual project costs and approved capital improvement budgets. The ratio of storage cost to volume is determined.

DESCRIPTION	YEAR CONSTRUCTED	RESERVOIR STORAGE CAPACITY	RESERVOIR COST*
Tahquitz Reservoir II	2004	5,000,000 gallons	$2,299,785**
Zone 1060	2016	500,000 gallons	$1,544,800*
TOTAL		**5,500,000 gallons**	**$3,844,585**

*Revised Budget Amount for project.

** Actual project costs, unadjusted for present value.

The most current water storage estimated costs are used to determine the ratio of water storage cost to unit of storage volume from the table above. The unit cost of water storage per gallon is $3,844,585 ÷ 5,500,000 GAL= $0.70/GAL. By applying this ratio to each water storage reservoir, the cost of each reservoir and the entire zone's water storage costs are determined.

SOUTHRIDGE "B" ZONE WATER STORAGE COSTS

DESCRIPTION	WATER STORAGE CAPACITY (GAL.)	UNIT COST PER UNIT STORAGE ($/GAL.)	ZONE STORAGE COST
Southridge I	100,000	0.70	$70,000
Southridge II	300,000	0.70	$210,000
TOTAL			**$280,000**

The required storage for the Southridge "B" Zone is 0.25 MG. The existing storage capacity for the Southridge "B" Zone is 0.40 MG; therefore, the Southridge "B" Zone storage is 62.5% of existing storage (0.25 ÷ 0.40). The cost of storage per capacity unit for the Southridge "B" Zone facilities is $280,000 (0.625) ÷ 428 C.U. = **$408/C.U.** plus the component cost of the Base Zone storage since Southridge "B" Zone utilizes the Base Zone water.

BASE ZONE WATER STORAGE COSTS

DESCRIPTION	WATER STORAGE CAPACITY (GAL.)	UNIT COST PER UNIT STORAGE ($/GAL.)	ZONE STORAGE COST
Palm Springs North I	1,500,000	0.70	$1,050,000
Palm Springs North II	12,000,000	0.70	$8,400,000
Tahquitz I	5,000,000	0.70	$3,500,000
Tahquitz II	5,000,000	0.70	$3,500,000
Palm Springs South I	5,000,000	0.70	$3,500,000
Palm Springs South II	5,000,000	0.70	$3,500,000
Equalization	1,000,000	0.70	$700,000*
TOTAL			**$24,150,000**

* The Equalization Reservoir serves the Base Zone, Snow Creek Village Zone, and the Chino Zones. The Base Zone and Chino Zones will use 83% of the total reservoir capacity.

The required storage for the Southridge "B" Zone is 0.70% of the Base Zone total storage capacity (0.25 ÷ 34.5); therefore, the component cost of storage per capacity unit for Southridge "B" Zone is $23,450,000 (0.007) ÷ 428 C.U.= **$383/C.U.**.

The component cost of storage per capacity for the Equalization Reservoir is equal to $700,000 (0.83) ÷ 30,494 = **$19/C.U.**

FUTURE STORAGE CAPACITY REQUIREMENTS

The General Plan requires that the Agency have 18 hours ADD emergency storage, along with fire flow and equalization storage during energy Time of Use (T.O.U.) periods. The 18 hour ADD during T.O.U periods for the zone is 0.0075 MG (0.01 x 0.75). The fire flow requirement for the zone is 0.24 MG (2,000 GPM for 2 hours per General Plan) and the equalization, or operational storage is 40% of the MDD and is therefore equal to 0.0074 MG. Adding all of these components equates to 0.25 MG of storage. The current storage capacity for the system is 0.40 MG.

The existing pumping capacity of the system will accommodate an additional 410 capacity units (428 - 18). These additional units will add 0.42 MGD to the MDD. This additional demand will increase the storage requirement to 0.58 MG requiring 0.18 MG of additional storage (0.58 – 0.40). The cost for the additional storage will be $126,000, or ($0.70/gal x 0.18 MG). The cost of future storage per capacity unit is therefore, $126,000 ÷ 428 C.U. = **$294/C.U.**

SOUTHRIDGE "B" ZONE WATER TRANSMISSION MAIN COSTS

Historically, the Agency has calculated the cost of water transmission mains per capacity unit by determining the cost of those facilities from actual project costs and approved capital improvement budgets. The ratio of cost per lineal foot to diameter is determined.

DESCRIPTION	YEAR CONSTRUCTED	PIPELINE LENGTH (L.F.)	*PIPELINE COST	PIPELINE UNIT COST ($/L.F.)
12"Alejo/Tamarisk/ Indian Canyon	2012/2014/2015	4,958	$1,290,176	$260/L.F.
14"	-	-	-	-
15"	-	-	-	-
16" Sunny Dunes	2013	1,100	$301,462	$274/L.F.
18"	-	-	-	-
20" E. Well Field	-	-	-	-
24" E. Well Field	-	-	-	-
26"	-	-	-	-
30" N. Well Field	-	-	-	-
36" Avenida Caballeros	2014/2015	2,659	$2,509,219	$944/L.F.
42"	-	-	-	-

* Actual project cost, unadjusted for present value.

Due to the lack of current data available for the varying sizes of transmission mains in our system, the Agency has opted to utilize a "unit construction cost for pipelines" equation used by Eastern Municipal Water District (EMWD) in their 2015 rate study (study conducted by Kennedy/Jenks Consultants). Said equation assumes that unit cost ($/linear foot) = Diameter (inch) x 40.47 x [Diameter (inch) $^{\wedge -0.309}$]. Utilization of said equation allows the Agency to determine uniform unit construction estimates for all sizes of transmission mains in our system.

***ESTIMATED WATER TRANSMISSION MAIN UNIT CONSTRUCTION COSTS**

TRANSMISSION MAIN DIAMETER (INCHES)	TRANSMISSION MAIN LENGTH ($/L.F.)
12”	225
14”	250
15”	265
16”	275
18”	300
20”	320
24”	365
26”	385
30”	425
36”	480
42”	535

*Based on the following EMWD assumption: cost $/L.F. = Diameter (inch) x 40.47 x [Diameter (inch) $^{\wedge -0.309}$].

The most current water transmission main estimated costs are used to determine the ratio of water main cost to diameter as shown in the table on the previous page. By applying these ratios to system transmission mains, the cost of all size mains for the entire system is determined by zone.

SOUTHRIDGE “B” ZONE WATER TRANSMISSION MAIN COSTS

TRANSMISSION MAIN DIAMETER (INCHES)	TRANSMISSION MAIN LENGTH (L.F.)	UNIT COST PER UNIT LENGTH ($/L.F.)	ZONE TRANSMISSION MAIN COST
12”	775	225	$174,375
TOTAL			**$174,375**

The Southridge “B” Zone uses 68.8% of the total capacity (0.44 ÷ 0.64), where 0.64 MGD is the total capacity of the Southridge “B” booster and 0.44 MGD is the capacity needed for Southridge “B” Zone; therefore, the cost of transmission mains per capacity unit for the Southridge “B” Zone is $174,375 (0.688) ÷ 428 C.U.= **$280/C.U.** plus a component cost of the Base Zone transmission main since Base Zone water is pumped to the Southridge “B” Zone.

The Southridge “B” Zone uses 0.86% of the Base Zone pumping capacity (0.44 ÷ 51.2), where 0.44 MGD is the capacity provided to Southridge “B” Zone by the Base Zone wells and 51.2 MGD is the capacity of the Base Zone; therefore, the component cost of transmission mains per capacity unit for the Southridge “B” Zone is $108,700,370 (0.0086) ÷ 428 = **$2,184/C.U**

The component cost of transmission mains per capacity units for the mains that serve the Southridge “A” Zone for surface water is $16,801,475 ÷ 30,494 C.U. = **$550/C.U.**

COST PER ZONE SUMMARY

ZONE	WATER PRODUCTION COST	TREATMENT COST	SURFACE WATER COST	STORAGE COST	TRANSMISSION COST	TOTAL CAPACITY UNIT COST
Southridge “B”	$1,615	$26	$41	$1,104	$3,014	$5,800

The cost of a 1-inch service in the zone is comprised of the cumulative capacity unit costs for water production, treatment, surface water, storage and transmission facilities.

In order to determine the capacity unit cost for each meter size the AWWA meter factors are used. The table below shows the capacity unit charge (Backup Facility Charge) per meter size.

SOUTHRIDGE “B” ZONE FINAL BACKUP FACILITY CHARGE COST SUMMARY

METER SIZE	AWWA METER FACTOR	BACKUP FACILITY CHARGE
3/4 X 5/8	0.4	$2,320
1	**1.0**	**$5,800**
1.5	2.0	$11,600
2	3.2	$18,560

EAST ZONE

The existing capacity units (C.U.) for the East Zone is 6,218. To determine the total capacity units for the zone, we must first calculate the max demand day (MDD) value utilizing the current General Plan formula:

- MDD = 1.85 x Average Day Annual Demand (ADD)

Using annual production data from 2017, the ADD calculated for the zone equals 4.9 MGD, therefore, the MDD is equal to 9.0 MGD. If the MDD is equal to 9.0 MGD, the current gal/C.U./day is equal to 1,447 gal/C.U./day, or (9.0 MGD÷6,218).

The current pumping capacity for the East Zone is 12.68 MGD. Since all service capacity must be met by the East Zone pumping capacity, all of the existing units are using 71% of the pumping capacity of the East Zone (9.0 MGD÷12.68 MGD). The total maximum capacity units for the zone is then equal to 8,757, or (6,218÷0.71).

Facility costs were determined by analyzing facility cost valuation from Agency Annual Operating Statistics Reports, cost estimates prepared in conjunction with the currently proposed budget and rate study, and by assessing the current facilities using the 2008 General Plan Update. The facilities cost valuation per capacity unit was determined from the total number of capacity units and the facilities costs.

The East Zone charge is composed of costs per capacity unit for production (wells and boosters), treatment, storage and transmission facilities assignable to the East Zone service.

EAST ZONE PUMPING/WATER PRODUCTION COST

In order to calculate the cost of pumping water per capacity unit we first determine the cost of those facilities from approved capital improvement budgets. The ratio of plant cost to horsepower is determined.

DESCRIPTION	YEAR CONSTRUCTED	PUMPING PLANT HORSEPOWER	PUMPING PLANT COST*
Well 39	2010	450 HP Pumping Plant	$1,320,156.59
Well 40	2009	450 HP Pumping Plant	$1,498,356.82
Well 41	2006	450 HP Pumping Plant	$1,561,858.76
Well 42	2006	200 HP Pumping Plant	$1,175,156.15
TOTAL		**1,550 HP**	**$5,555,528.32**

* Current Capital Improvement Budget Amounts for Pumping Plants.

The most current pumping plant estimated costs are used to determine the ratio of pumping plant cost to unit of horsepower from the table above. The unit cost of pumping per horsepower is $5,555,528.32 ÷ 1,550 hp= $3,584/hp. By applying this ratio to each active pumping plant the cost of each plant and the zone system pumping cost is determined.

Similarly, the cost of pressure boosting facilities is determined.

DESCRIPTION	YEAR CONSTRUCTED	BOOSTER PLANT HORSEPOWER	BOOSTER PLANT COST*
Zone 1240 Booster	2016	80 HP Booster Plant	$950,000
Janis Tuscany Booster Upgrades	2016	225 HP Booster Pumping Plant	$230,000
TOTAL		**305 HP**	**$1,180,000**

* Actual project costs, unadjusted for present value.

The most current pumping plant costs are used to determine the ratio of booster pumping plant cost to unit of horsepower from the table above. The unit cost of booster pumping per horsepower is $1,180,000 ÷ 305 hp= $3,869/hp. By applying this ratio to each active pumping plant the cost of each plant and the zone's booster pumping cost is determined.

EAST ZONE PUMPING COSTS

WELL/BOOSTER BASE ZONES	DESCRIPTION	PLANT HORSEPOWER	ZONE PUMPING COST ($3,584/HP)
Well 25	Well Pumping Plants	400	$1,433,600
Well 26	Well Pumping Plants	400	$1,433,600
Well 31	Well Pumping Plants	400	$1,433,600
Well 36	Well Pumping Plants	400	$1,433,600
Well 41	Well Pumping Plants	450	$1,612,800
TOTAL			**$7,347,200**

The East Zone uses 90.5% of the total well capacity (12.68 ÷ 14), therefore, the cost of production per capacity unit is therefore, $7,347,200 (0.905) ÷ 8,757 C.U. = **$759/C.U.**

EAST ZONE WATER TREATMENT COSTS

In order to calculate the cost of water treatment per capacity unit we first determine the cost of those facilities from actual project costs.

CHLORINE INJECTION TREATMENT

DESCRIPTION	NUMBER OF ACTIVE SITES	AVG. COST PER SITE	ZONE PUMPING COST (ACTUAL)
Chlorine storage building and pad, injection vault	4	$30,440	$121,760
TOTAL			**$121,760**

*Based on average construction cost per site to install chlorine injection facilities.

The East Zone uses 90.5% of the total well capacity (12.68 ÷ 14), therefore the cost of chlorine injection treatment per capacity unit is $121,760(0.905) ÷ 8,757C.U. = **$12/C.U.**

EAST ZONE WATER STORAGE COSTS

In order to calculate the cost of water storage per capacity unit we first determine the cost of those facilities from actual project costs and approved capital improvement budgets. The ratio of storage cost to volume is determined.

DESCRIPTION	YEAR CONSTRUCTED	RESERVOIR STORAGE CAPACITY	RESERVOIR COST*
Tahquitz Reservoir II	2004	5,000,000 gallons	$2,299,785**
Zone 1060	2016	500,000 gallons	$1,544,800*
TOTAL		**5,500,000 gallons**	**$3,844,585**

*Revised Budget Amount for project.

** Actual project costs, unadjusted for present value.

The most current water storage estimated costs are used to determine the ratio of water storage cost to unit of storage volume from the table above. The unit cost of water storage per gallon is $3,844,585 ÷ 5,500,000 GAL= $0.70/GAL. By applying this ratio to each water storage reservoir, the cost of each reservoir and the entire zone's water storage costs are determined.

EAST ZONE WATER STORAGE COSTS

DESCRIPTION	WATER STORAGE CAPACITY (GAL.)	UNIT COST PER UNIT STORAGE ($/GAL.)	ZONE STORAGE COST
East I	5,000,000	0.70	$3,500,000
East II	5,000,000	0.70	$3,500,000
TOTAL			**$7,000,000**

The East Zone uses 81.6% of the total East Zone storage capacity (8.16 ÷ 10), therefore, the cost of storage per capacity unit is $7,000,000 (0.816) ÷ 8,757 C.U. = **$652/C.U.**

FUTURE STORAGE CAPACITY REQUIREMENTS

The General Plan requires that the Agency have 18 hours ADD emergency storage, along with fire flow and equalization storage during energy Time of Use (T.O.U.) periods. The 18 hour ADD during T.O.U periods for the zone is 3.6 MG (4.9 x 0.75). The fire flow requirement for the zone is 0.96 MG (4,000 GPM for 4 hours per General Plan) and the equalization, or operational storage is 40% of the MDD and is therefore equal to 3.6 MG. Adding all of these components equates to 8.16 MG of storage. The current storage capacity for the system is 10 MG.

The existing pumping capacity of the system will accommodate an additional 2,539 capacity units (8,757 – 6,218). These additional units will add 3.67 MGD to the MDD. This additional demand will increase the storage requirement to 11.13 MG, requiring 1.13 MG of additional storage (11.13 -10.0). The cost for the additional storage will be $791,000, or ($0.70/gal x 1.13 MG). The cost of future storage per capacity unit is therefore, $791,000 ÷ 8,757 C.U. = **$90/C.U.**

EAST ZONE WATER TRANSMISSION MAIN COSTS

Historically, the Agency has calculated the cost of water transmission mains per capacity unit by determining the cost of those facilities from actual project costs and approved capital improvement budgets. The ratio of cost per lineal foot to diameter is determined.

DESCRIPTION	YEAR CONSTRUCTED	PIPELINE LENGTH (L.F.)	*PIPELINE COST	PIPELINE UNIT COST ($/L.F.)
12”Alejo/Tamarisk/ Indian Canyon	2012/2014/2015	4,958	$1,290,176	$260/L.F.
14”	-	-	-	-
15”	-	-	-	-
16” Sunny Dunes	2013	1,100	$301,462	$274/L.F.
18”	-	-	-	-
20” E. Well Field	-	-	-	-
24” E. Well Field	-	-	-	-
26”	-	-	-	-
30” N. Well Field	-	-	-	-
36” Avenida Caballeros	2014/2015	2,659	$2,509,219	$944/L.F.
42”	-	-	-	-

* Actual project cost, unadjusted for present value.

Due to the lack of current data available for the varying sizes of transmission mains in our system, the Agency has opted to utilize a “unit construction cost for pipelines” equation used by Eastern

Municipal Water District (EMWD) in their 2015 rate study (study conducted by Kennedy/Jenks Consultants). Said equation assumes that unit cost ($/linear foot) = Diameter (inch) x 40.47 x [Diameter (inch) $^{\wedge -0.309}$]. Utilization of said equation allows the Agency to determine uniform unit construction estimates for all sizes of transmission mains in our system.

***ESTIMATED WATER TRANSMISSION MAIN UNIT CONSTRUCTION COSTS**

TRANSMISSION MAIN DIAMETER (INCHES)	**TRANSMISSION MAIN LENGTH ($/L.F.)**
12”	225
14”	250
15”	265
16”	275
18”	300
20”	320
24”	365
26”	385
30”	425
36”	480
42”	535

*Based on the following EMWD assumption: cost $/L.F. = Diameter (inch) x 40.47 x [Diameter (inch) $^{\wedge -0.309}$].

The most current water transmission main estimated costs are used to determine the ratio of water main cost to diameter as shown in the table on the previous page. By applying these ratios to system transmission mains, the cost of all size mains for the entire system is determined by zone.

EAST ZONE WATER TRANSMISSION MAIN COSTS

TRANSMISSION MAIN DIAMETER (INCHES)	TRANSMISSION MAIN LENGTH (L.F.)	UNIT COST PER UNIT LENGTH ($/L.F.)	ZONE TRANSMISSION MAIN COST
12”	116,491	225	$26,210,475
16”	5,410	275	$1,487,750
20”	3,365	320	$1,076,800
24”	33,345	365	$12,170,955
30”	3,400	425	$1,445,000
TOTAL			**$42,390,980**

Since the East Zone uses 90.5% of pumping capacity, the cost of transmission mains per capacity unit for the East Zone is therefore, $42,390,980 (0.905) ÷ 8,757 C.U.= **$4,380/C.U.**

COST PER ZONE SUMMARY

ZONE	WATER PRODUCTION COST	TREATMENT COST	STORAGE COST	TRANSMISSION COST	TOTAL CAPACITY UNIT COST
East	$759	$12	$742	$4,380	$5,893

The cost of a 1-inch service in the zone is comprised of the cumulative capacity unit costs for water production, treatment, storage and transmission facilities.

In order to determine the capacity unit cost for each meter size the AWWA meter factors are used. The table below shows the capacity unit charge (Backup Facility Charge) per meter size.

EAST ZONE FINAL BACKUP FACILITY CHARGE COST SUMMARY

METER SIZE	AWWA METER FACTOR	BACKUP FACILITY CHARGE
3/4 X 5/8	0.4	$2,357
1	**1.0**	**$5,893**
1.5	2.0	$11,786
2	3.2	$18,857

<u>EAST “A” ZONE</u>

The existing capacity units (C.U.) for the East “A” Zone is 384. To determine the total capacity units for the zone, we must first calculate the max demand day (MDD) value utilizing the current General Plan formula:

- MDD = 1.85 x Average Day Annual Demand (ADD)

Using annual production data from 2017, the ADD calculated for the zone equals 0.22 MGD, therefore, the MDD is equal to 0.41 MGD. If the MDD is equal to 0.41 MGD, the current gal/C.U./day is equal to 1,067 gal/C.U./day, or (0.41MGD÷384).

The current pumping capacity for the East “A” Zone is 0.54 MGD. Since all service capacity must be met by the East “A” Zone pumping capacity, all of the existing units are using 75.9% of the capacity of the East “A” Zone (0.41 MGD ÷ 0.54 MGD). The total maximum capacity units for the zone is then equal to 505, or (384 ÷ 0.759).

Facility costs were determined by analyzing facility cost valuation from Agency Annual Operating Statistics Reports, cost estimates prepared in conjunction with the currently proposed budget and rate study, and by assessing the current facilities using the 2008 General Plan Update. The facilities cost valuation per capacity unit was determined from the total number of capacity units and the facilities costs.

The East “A” Zone charge is composed of costs per capacity unit for production (wells and boosters), treatment, storage and transmission facilities assignable to the East “A” Zone service.

EAST "A" ZONE PUMPING/WATER PRODUCTION COST

In order to calculate the cost of pumping water per capacity unit we first determine the cost of those facilities from approved capital improvement budgets. The ratio of plant cost to horsepower is determined.

DESCRIPTION	YEAR CONSTRUCTED	PUMPING PLANT HORSEPOWER	PUMPING PLANT COST*
Well 39	2010	450 HP Pumping Plant	$1,320,156.59
Well 40	2009	450 HP Pumping Plant	$1,498,356.82
Well 41	2006	450 HP Pumping Plant	$1,561,858.76
Well 42	2006	200 HP Pumping Plant	$1,175,156.15
TOTAL		**1,550 HP**	**$5,555,528.32**

* Current Capital Improvement Budget Amounts for Pumping Plants.

The most current pumping plant estimated costs are used to determine the ratio of pumping plant cost to unit of horsepower from the table above. The unit cost of pumping per horsepower is $5,555,528.32 ÷ 1,550 hp= $3,584/hp. By applying this ratio to each active pumping plant the cost of each plant and the zone system pumping cost is determined.

Similarly, the cost of pressure boosting facilities is determined.

DESCRIPTION	YEAR CONSTRUCTED	BOOSTER PLANT HORSEPOWER	BOOSTER PLANT COST*
Zone 1240 Booster	2016	80 HP Booster Plant	$950,000
Janis Tuscany Booster Upgrades	2016	225 HP Booster Pumping Plant	$230,000
TOTAL		**305 HP**	**$1,180,000**

* Actual project costs, unadjusted for present value.

The most current pumping plant costs are used to determine the ratio of booster pumping plant cost to unit of horsepower from the table above. The unit cost of booster pumping per horsepower is $1,180,000 ÷ 305 hp= $3,869/hp. By applying this ratio to each active pumping plant the cost

of each plant and the zone's booster pumping cost is determined. Since East "A" Zone is provided water by booster pumps, we will only be using the booster pump costs.

EAST "A" ZONE PUMPING COSTS

WELL/BOOSTER BASE ZONES	DESCRIPTION	PLANT HORSEPOWER	ZONE PUMPING COST ($3,869/HP)
Terrace	Booster Plant	45	$174,105
TOTAL			**$174,105**

The East "A" Zone uses 40.1% of the Zone capacity (1.32 – 0.78) ÷ 1.32, where 1.32 MGD is the East "A" Zone total pumping capacity and 0.78 MGD is the East "B" Zone pumping capacity; therefore, the component cost of production per capacity unit for the East "A" Zone is $174,105 (0.401) ÷ 505 = **$138/C.U**

The East "A" Zone uses 3.9% of the East Zone pumping capacity (0.54 ÷ 14), where 0.54 MGD is the capacity provided to East "A" Zone by the East Zone wells and 14 MGD is the capacity of the East Zone; therefore, the component cost of production per capacity unit for the East "A" Zone is $7,347,200 (0.039) ÷ 505 = **$567/C.U**

EAST "A" ZONE WATER TREATMENT COSTS

Since East Zone water is pumped to the East "A" Zone, the treatment costs for the East "A" Zone is a component of the East Zone treatment costs and any additional treatment facilities associated with the East "A" Zone.

EAST ZONE CHLORINE INJECTION TREATMENT

DESCRIPTION	NUMBER OF ACTIVE SITES	AVG. COST PER SITE	ZONE PUMPING COST (ACTUAL)
Chlorine storage building and pad, injection vault	4	$30,440	$121,760
TOTAL			**$121,760**

*Based on average construction cost per site to install chlorine injection facilities.

The East “A” Zone uses 3.9% of the East Zone pumping capacity (0.54 ÷ 14), where 0.54 MGD is the capacity provided to East “A” Zone by the East Zone wells and 14 MGD is the capacity of the East Zone; therefore, the component cost of treatment per capacity unit for the East “A” Zone is $121,760 (0.039) ÷ 505 = **$9/C.U**

EAST “A” ZONE WATER STORAGE COSTS

In order to calculate the cost of water storage per capacity unit we first determine the cost of those facilities from actual project costs and approved capital improvement budgets. The ratio of storage cost to volume is determined.

DESCRIPTION	YEAR CONSTRUCTED	RESERVOIR STORAGE CAPACITY	RESERVOIR COST*
Tahquitz Reservoir II	2004	5,000,000 gallons	$2,299,785**
Zone 1060	2016	500,000 gallons	$1,544,800*
TOTAL		**5,500,000 gallons**	**$3,844,585**

*Revised Budget Amount for project.

** Actual project costs, unadjusted for present value.

The most current water storage estimated costs are used to determine the ratio of water storage cost to unit of storage volume from the table above. The unit cost of water storage per gallon is $3,844,585÷5,500,000 GAL= $0.70/GAL. By applying this ratio to each water storage reservoir, the cost of each reservoir and the entire zone’s water storage costs are determined.

EAST “A” ZONE WATER STORAGE COSTS

DESCRIPTION	WATER STORAGE CAPACITY (GAL.)	UNIT COST PER UNIT STORAGE ($/GAL.)	ZONE STORAGE COST
CC North	500,000	0.70	$350,000
Vista Miller	225,000	0.70	$157,500
TOTAL			**$507,500**

The required storage for the East “A” Zone is 0.57 MG. The existing storage capacity for the East “A” Zone is 0.725 MG; therefore, the East “A” Zone storage is 78.6% of existing storage (0.57 ÷ 0.725); therefore, the cost of storage per capacity unit for the East “A” Zone facilities is $507,500 (0.786) ÷ 505 C.U. = **$787/C.U.** plus the component cost of the East Zone storage since East “A” Zone utilizes the East Zone for water.

EAST ZONE WATER STORAGE COSTS

DESCRIPTION	**WATER STORAGE CAPACITY (GAL.)**	**UNIT COST PER UNIT STORAGE ($/GAL.)**	**ZONE STORAGE COST**
East I	5,000,000	0.70	$3,500,000
East II	5,000,000	0.70	$3,500,000
TOTAL			**$7,000,000**

The East “A” Zone uses 5.7% of the total East Zone storage capacity (0.57 ÷ 10), therefore, the cost of storage per capacity unit is $7,000,000 (0.057) ÷ 505 C.U. = **$790/C.U.**

FUTURE STORAGE CAPACITY REQUIREMENTS

The General Plan requires that the Agency have 18 hours ADD emergency storage, along with fire flow and equalization storage during energy Time of Use (T.O.U.) periods. The 18 hour ADD during T.O.U periods for the zone is 0.165 MG (0.22 x 0.75). The fire flow requirement for the zone is 0.24 MG (2,000 GPM for 2 hours per General Plan) and the equalization, or operational storage is 40% of the MDD and is therefore equal to 0.164 MG. Adding all of these components equates to 0.57 MG of storage. The current storage capacity for the system is 0.725 MG.

The existing pumping capacity of the system will accommodate an additional 121 capacity units (505 - 384). These additional units will add 0.13 MGD to the MDD. This additional demand will increase the storage requirement to 0.68 MG; therefore, no future storage for East “A” Zone is required.

EAST “A” WATER TRANSMISSION MAIN COSTS

Historically, the Agency has calculated the cost of water transmission mains per capacity unit by determining the cost of those facilities from actual project costs and approved capital improvement budgets. The ratio of cost per lineal foot to diameter is determined.

DESCRIPTION	YEAR CONSTRUCTED	PIPELINE LENGTH (L.F.)	*PIPELINE COST	PIPELINE UNIT COST ($/L.F.)
12”Alejo/Tamarisk/ Indian Canyon	2012/2014/2015	4,958	$1,290,176	$260/L.F.
14”	-	-	-	-
15”	-	-	-	-
16” Sunny Dunes	2013	1,100	$301,462	$274/L.F.
18”	-	-	-	-
20” E. Well Field	-	-	-	-
24” E. Well Field	-	-	-	-
26”	-	-	-	-
30” N. Well Field	-	-	-	-
36” Avenida Caballeros	2014/2015	2,659	$2,509,219	$944/L.F.
42”	-	-	-	-

* Actual project cost, unadjusted for present value.

Due to the lack of current data available for the varying sizes of transmission mains in our system, the Agency has opted to utilize a “unit construction cost for pipelines” equation used by Eastern Municipal Water District (EMWD) in their 2015 rate study (study conducted by Kennedy/Jenks Consultants). Said equation assumes that unit cost ($/linear foot) = Diameter (inch) x 40.47 x [Diameter (inch) $^{\wedge -0.309}$]. Utilization of said equation allows the Agency to determine uniform unit construction estimates for all sizes of transmission mains in our system.

***ESTIMATED WATER TRANSMISSION MAIN UNIT CONSTRUCTION COSTS**

TRANSMISSION MAIN DIAMETER (INCHES)	TRANSMISSION MAIN LENGTH ($/L.F.)
12”	225
14”	250
15”	265
16”	275
18”	300
20”	320
24”	365
26”	385
30”	425
36”	480
42”	535

*Based on the following EMWD assumption: cost $/L.F. = Diameter (inch) x 40.47 x [Diameter (inch) $^{\wedge -0.309}$].

The most current water transmission main estimated costs are used to determine the ratio of water main cost to diameter as shown in the table on the previous page. By applying these ratios to system transmission mains, the cost of all size mains for the entire system is determined by zone.

EAST “A” ZONE WATER TRANSMISSION MAIN COSTS

TRANSMISSION MAIN DIAMETER (INCHES)	TRANSMISSION MAIN LENGTH (L.F.)	UNIT COST PER UNIT LENGTH ($/L.F.)	ZONE TRANSMISSION MAIN COST
12”	4,310	225	$969,750
TOTAL			**$969,750**

The East “A” Zone uses 40.1% of the Zone capacity (1.32 – 0.78) ÷ 1.32, where 1.32 MGD is the East “A” Zone total pumping capacity and 0.78 MGD is the East “B” Zone pumping capacity; therefore, the component cost of transmission main per capacity unit for the East “A” Zone is $969,750 (0.401) ÷ 505 = **$770/C.U**

The East “A” Zone uses 3.9% of the East Zone pumping capacity (0.54 ÷ 14), where 0.54 MGD is the capacity provided to East “A” Zone by the East Zone wells and 14 MGD is the capacity of the East Zone; therefore, the component cost of transmission main per capacity unit for the East “A” Zone is $42,390,980 (0.039) ÷ 505 = **$3,273/C.U**

COST PER ZONE SUMMARY

ZONE	WATER PRODUCTION COST	TREATMENT COST	STORAGE COST	TRANSMISSION COST	TOTAL CAPACITY UNIT COST
East “A”	$725	$9	$1,577	$4,043	$6,354

The cost of a 1-inch service in the zone is comprised of the cumulative capacity unit costs for water production, treatment, storage and transmission facilities.

In order to determine the capacity unit cost for each meter size the AWWA meter factors are used. The table below shows the capacity unit charge (Backup Facility Charge) per meter size.

EAST “A” ZONE FINAL BACKUP FACILITY CHARGE COST SUMMARY

METER SIZE	AWWA METER FACTOR	BACKUP FACILITY CHARGE
3/4 X 5/8	0.4	$2,541
1	**1.0**	**$6,354**
1.5	2.0	$12,708
2	3.2	$20,332

EAST "B" ZONE

The existing capacity units (C.U.) for the East "B" Zone is 432. To determine the total capacity units for the zone, we must first calculate the max demand day (MDD) value utilizing the current General Plan formula:

- MDD = 1.85 x Average Day Annual Demand (ADD)

Using annual production data from 2017, the ADD calculated for the zone equals 0.25 MGD, therefore, the MDD is equal to 0.46 MGD. If the MDD is equal to 0.46 MGD, the current gal/C.U./day is equal to 1,064 gal/C.U./day, or (0.46MGD÷432).

The current pumping capacity for the East "B" Zone is 0.78 MGD. Since all service capacity must be met by the East "B" Zone pumping capacity, all of the existing units are using 59% of the total capacity of the East "B" Zone (0.46 MGD÷0.78 MGD). The total maximum capacity units for the zone is then equal to 732, or (432 ÷ 0.59).

Facility costs were determined by analyzing facility cost valuation from Agency Annual Operating Statistics Reports, cost estimates prepared in conjunction with the currently proposed budget and rate study, and by assessing the current facilities using the 2008 General Plan Update. The facilities cost valuation per capacity unit was determined from the total number of capacity units and the facilities costs.

The East "B" Zone charge is composed of costs per capacity unit for production (wells and boosters), treatment, storage and transmission facilities assignable to the East "B" Zone service.

EAST "B" ZONE PUMPING/WATER PRODUCTION COST

In order to calculate the cost of pumping water per capacity unit we first determine the cost of those facilities from approved capital improvement budgets. The ratio of plant cost to horsepower is determined.

DESCRIPTION	YEAR CONSTRUCTED	PUMPING PLANT HORSEPOWER	PUMPING PLANT COST*
Well 39	2010	450 HP Pumping Plant	$1,320,156.59
Well 40	2009	450 HP Pumping Plant	$1,498,356.82
Well 41	2006	450 HP Pumping Plant	$1,561,858.76
Well 42	2006	200 HP Pumping Plant	$1,175,156.15
TOTAL		**1,550 HP**	**$5,555,528.32**

* Current Capital Improvement Budget Amounts for Pumping Plants.

The most current pumping plant estimated costs are used to determine the ratio of pumping plant cost to unit of horsepower from the table above. The unit cost of pumping per horsepower is $5,555,528.32 ÷ 1,550 hp= $3,584/hp. By applying this ratio to each active pumping plant the cost of each plant and the zone system pumping cost is determined.

Similarly, the cost of pressure boosting facilities is determined.

DESCRIPTION	YEAR CONSTRUCTED	BOOSTER PLANT HORSEPOWER	BOOSTER PLANT COST*
Zone 1240 Booster	2016	80 HP Booster Plant	$950,000
Janis Tuscany Booster Upgrades	2016	225 HP Booster Pumping Plant	$230,000
TOTAL		**305 HP**	**$1,180,000**

* Actual project costs, unadjusted for present value.

The most current pumping plant costs are used to determine the ratio of booster pumping plant cost to unit of horsepower from the table above. The unit cost of booster pumping per horsepower is $1,180,000 ÷ 305 hp= $3,869/hp. By applying this ratio to each active pumping plant the cost

of each plant and the zone's booster pumping cost is determined. Since East "B" Zone is provided water by booster pumps, we will only be using the booster pump costs.

EAST "B" ZONE PUMPING COSTS

WELL/BOOSTER BASE ZONES	DESCRIPTION	PLANT HORSEPOWER	ZONE PUMPING COST ($3,869/HP)
Vista Miller	Booster Plant	60	$232,140
TOTAL			**$232,140**

The cost of production per capacity unit is $232,140 ÷ 732 C.U. = **$317/C.U**. plus a component cost of the East "A" Zone and East Zone pumping.

The East "B" Zone uses 59% of the East "A" pumping capacity (0.78 ÷ 1.32), where 1.32 MGD is the total capacity of the East "A" booster and 0.78 MGD is the capacity of the East "B" Zone; therefore, the component cost of production per capacity unit for the East "B" Zone is $174,105 (0.59) ÷ 732 C.U.= **$140/C.U.**

The East "B" Zone uses 5.6% of the East Zone pumping capacity (0.78 ÷ 14), where 0.78 MGD is the capacity provided to East "B" Zone by the Base Zone and 14 MGD is the capacity of the East Zone; therefore, the component cost of production per capacity unit for the East "B" Zone is $7,347,200 (0.056) ÷ 732 = **$562/C.U.**

EAST "B" ZONE WATER TREATMENT COSTS

Since East Zone water is pumped to the East "B" Zone, the treatment costs for the East "B" Zone is a component of the East Zone and East "A" Zone treatment costs and any additional treatment facilities associated with the East "B" Zone.

EAST ZONE CHLORINE INJECTION TREATMENT

DESCRIPTION	NUMBER OF ACTIVE SITES	AVG. COST PER SITE	ZONE PUMPING COST (ACTUAL)
Chlorine storage building and pad, injection vault	4	$30,440	$121,760
TOTAL			**$121,760**

*Based on average construction cost per site to install chlorine injection facilities.

The East “B” Zone uses 5.6% of the East Zone pumping capacity (0.78 ÷ 14), where 0.78 MGD is the capacity provided to East “B” Zone by the East Zone wells and 14 MGD is the capacity of the East Zone; therefore, the component cost of treatment per capacity unit for the East “B” Zone is $121,760 (0.056) ÷ 732 = **$9/C.U.**

EAST “B” ZONE WATER STORAGE COSTS

In order to calculate the cost of water storage per capacity unit we first determine the cost of those facilities from actual project costs and approved capital improvement budgets. The ratio of storage cost to volume is determined.

DESCRIPTION	YEAR CONSTRUCTED	RESERVOIR STORAGE CAPACITY	RESERVOIR COST*
Tahquitz Reservoir II	2004	5,000,000 gallons	$2,299,785**
Zone 1060	2016	500,000 gallons	$1,544,800*
TOTAL		**5,500,000 gallons**	**$3,844,585**

*Revised Budget Amount for project.

** Actual project costs, unadjusted for present value.

The most current water storage estimated costs are used to determine the ratio of water storage cost to unit of storage volume from the table above. The unit cost of water storage per gallon is $3,844,585 ÷ 5,500,000 GAL= $0.70/GAL. By applying this ratio to each water storage reservoir, the cost of each reservoir and the entire zone’s water storage costs are determined.

EAST “B” ZONE WATER STORAGE COSTS

DESCRIPTION	WATER STORAGE CAPACITY (GAL.)	UNIT COST PER UNIT STORAGE ($/GAL.)	ZONE STORAGE COST
Foothill I	100,000	0.70	$70,000
Foothill II	500,000	0.70	$350,000
TOTAL			**$420,000**

The cost of storage per capacity unit for the East "B" Zone facilities is $420,000 ÷ 732 C.U. = **$573/C.U.** plus the component cost of the East "A" Zone and East Zone storage since East "B" Zone utilizes the East "A" and East Zone for water.

EAST "A" ZONE WATER STORAGE COSTS

DESCRIPTION	WATER STORAGE CAPACITY (GAL.)	UNIT COST PER UNIT STORAGE ($/GAL.)	ZONE STORAGE COST
CC North	500,000	0.70	$350,000
Vista Miller	225,000	0.70	$157,500
TOTAL			**$507,500**

The East "B" Zone uses 25% of the total East "A" Zone storage capacity (0.184 ÷ 0.725), therefore, the cost of storage per capacity unit is $507,500 (0.25) ÷ 732 C.U. = **$173/C.U.**

EAST ZONE WATER STORAGE COSTS

DESCRIPTION	WATER STORAGE CAPACITY (GAL.)	UNIT COST PER UNIT STORAGE ($/GAL.)	ZONE STORAGE COST
East I	5,000,000	0.70	$3,500,000
East II	5,000,000	0.70	$3,500,000
TOTAL			**$7,000,000**

The East "B" Zone uses 1.8% of the total East Zone storage capacity (0.184 ÷ 10), therefore, the cost of storage per capacity unit is $7,000,000 (0.018) ÷ 732 C.U. = **$172/C.U.**

FUTURE STORAGE CAPACITY REQUIREMENTS

The General Plan requires that the Agency have 18 hours ADD emergency storage, along with fire flow and equalization storage during energy Time of Use (T.O.U.) periods. The 18 hour ADD during T.O.U periods for the zone is 0.187 MG (0.25 x 0.75). The fire flow requirement for the zone is 0.24 MG (2,000 GPM for 2 hours per General Plan) and the equalization, or operational storage is 40% of the MDD and is therefore equal to 0.184 MG. Adding all of these components equates to 0.61 MG of storage. The current storage capacity for the system is 0.60 MG.

The existing pumping capacity of the system will accommodate an additional 300 capacity units (732 - 432). These additional units will add 0.32 MGD to the MDD. This additional demand will increase the storage requirement to 0.87 MG, requiring 0.27 MG of additional storage (0.87 – 0.60). The cost for the additional storage will be $189,000, or ($0.70/gal x 0.27 MG). The cost of future storage per capacity unit is therefore, $189,000 ÷ 732 C.U. = **$258/C.U.**

EAST "B" WATER TRANSMISSION MAIN COSTS

Historically, the Agency has calculated the cost of water transmission mains per capacity unit by determining the cost of those facilities from actual project costs and approved capital improvement budgets. The ratio of cost per lineal foot to diameter is determined.

DESCRIPTION	YEAR CONSTRUCTED	PIPELINE LENGTH (L.F.)	*PIPELINE COST	PIPELINE UNIT COST ($/L.F.)
12"Alejo/Tamarisk/ Indian Canyon	2012/2014/2015	4,958	$1,290,176	$260/L.F.
14"	-	-	-	-
15"	-	-	-	-
16" Sunny Dunes	2013	1,100	$301,462	$274/L.F.
18"	-	-	-	-
20" E. Well Field	-	-	-	-
24" E. Well Field	-	-	-	-
26"	-	-	-	-
30" N. Well Field	-	-	-	-
36" Avenida Caballeros	2014/2015	2,659	$2,509,219	$944/L.F.
42"	-	-	-	-

* Actual project cost, unadjusted for present value.

Due to the lack of current data available for the varying sizes of transmission mains in our system, the Agency has opted to utilize a "unit construction cost for pipelines" equation used by Eastern Municipal Water District (EMWD) in their 2015 rate study (study conducted by Kennedy/Jenks

Consultants). Said equation assumes that unit cost ($/linear foot) = Diameter (inch) x 40.47 x [Diameter (inch) $^{\wedge -0.309}$]. Utilization of said equation allows the Agency to determine uniform unit construction estimates for all sizes of transmission mains in our system.

***ESTIMATED WATER TRANSMISSION MAIN UNIT CONSTRUCTION COSTS**

TRANSMISSION MAIN DIAMETER (INCHES)	TRANSMISSION MAIN LENGTH ($/L.F.)
12”	225
14”	250
15”	265
16”	275
18”	300
20”	320
24”	365
26”	385
30”	425
36”	480
42”	535

*Based on the following EMWD assumption: cost $/L.F. = Diameter (inch) x 40.47 x [Diameter (inch) $^{\wedge -0.309}$].

The most current water transmission main estimated costs are used to determine the ratio of water main cost to diameter as shown in the table on the previous page. By applying these ratios to system transmission mains, the cost of all size mains for the entire system is determined by zone.

EAST “B” ZONE WATER TRANSMISSION MAIN COSTS

TRANSMISSION MAIN DIAMETER (INCHES)	TRANSMISSION MAIN LENGTH (L.F.)	UNIT COST PER UNIT LENGTH ($/L.F.)	ZONE TRANSMISSION MAIN COST
12”	4,383	225	$986,175
TOTAL			**$986,175**

The cost of transmission mains per capacity unit is $986,175 ÷ 732 C.U. = **$1,347/C.U.** plus a component cost of the East “A” Zone and East Zone transmission mains since East “B” Zone utilizes water from the East “A” Zone and East Zone.

The East “B” Zone uses 59% of the East “A” pumping capacity (0.78 ÷ 1.32), where 1.32 MGD is the total capacity of the East “A” booster and 0.78 MGD is the capacity of the East “B” Zone; therefore, the component cost of transmission main per capacity unit for the East “B” Zone is $969,750 (0.59) ÷ 732 C.U.= **$781/C.U.**

The East “B” Zone uses 5.6% of the East Zone pumping capacity (0.78 ÷ 14), where 0.78 MGD is the capacity provided to East “B” Zone by the Base Zone and 14 MGD is the capacity of the East Zone; therefore, the component cost of transmission mains per capacity unit for the East “B” Zone is $42,390,980 (0.056) ÷ 732 = **$3,243/C.U.**

COST PER ZONE SUMMARY

ZONE	WATER PRODUCTION COST	TREATMENT COST	STORAGE COST	TRANSMISSION COST	TOTAL CAPACITY UNIT COST
East “B”	$1,019	$9	$1,176	$5,371	$7,575

The cost of a 1-inch service in the zone is comprised of the cumulative capacity unit costs for water production, treatment, surface water, storage and transmission facilities.

In order to determine the capacity unit cost for each meter size the AWWA meter factors are used. The table below shows the capacity unit charge (Backup Facility Charge) per meter size.

EAST “B” ZONE FINAL BACKUP FACILITY CHARGE COST SUMMARY

METER SIZE	AWWA METER FACTOR	BACKUP FACILITY CHARGE
3/4 X 5/8	0.4	$3,030
1	**1.0**	**$7,575**
1.5	2.0	$15,150
2	3.2	$24,240

FINAL BACKUP FACILITY CHARGE COST SUMMARY

SNOW CREEK VILLAGE FINAL BACKUP FACILITY CHARGE COST

METER SIZE	AWWA METER FACTOR	BACKUP FACILITY CHARGE
3/4 X 5/8	0.4	$2,082
1	**1.0**	**$5,207**
1.5	2.0	$10,414
2	3.2	$16,662

PALM OASIS ZONE FINAL BACKUP FACILITY CHARGE COST

METER SIZE	AWWA METER FACTOR	BACKUP FACILITY CHARGE
3/4 X 5/8	0.4	$1,493
1	**1.0**	**$3,734**
1.5	2.0	$7,468
2	3.2	$11,948

BASE ZONE FINAL BACKUP FACILITY CHARGE COST

METER SIZE	AWWA METER FACTOR	BACKUP FACILITY CHARGE
3/4 X 5/8	0.4	$2,470
1	**1.0**	**$6,175**
1.5	2.0	$12,350
2	3.2	$19,760

CHINO ZONE FINAL BACKUP FACILITY CHARGE COST

METER SIZE	AWWA METER FACTOR	BACKUP FACILITY CHARGE
3/4 X 5/8	0.4	$3,026
1	**1.0**	**$7,565**
1.5	2.0	$15,130
2	3.2	$24,208

CHINO “A” ZONE FINAL BACKUP FACILITY CHARGE COST

METER SIZE	AWWA METER FACTOR	BACKUP FACILITY CHARGE
3/4 X 5/8	0.4	$3,679
1	**1.0**	**$9,198**
1.5	2.0	$18,396
2	3.2	$29,433

CHINO “B” ZONE FINAL BACKUP FACILITY CHARGE COST

METER SIZE	AWWA METER FACTOR	BACKUP FACILITY CHARGE
3/4 X 5/8	0.4	$3,276
1	**1.0**	**$8,190**
1.5	2.0	$16,380
2	3.2	$26,208

ACANTO ZONE FINAL BACKUP FACILITY CHARGE COST

METER SIZE	AWWA METER FACTOR	BACKUP FACILITY CHARGE
3/4 X 5/8	0.4	$4,108
1	**1.0**	**$10,271**
1.5	2.0	$20,542
2	3.2	$32,867

SOUTHRIDGE “A” ZONE FINAL BACKUP FACILITY CHARGE COST

METER SIZE	AWWA METER FACTOR	BACKUP FACILITY CHARGE
3/4 X 5/8	0.4	$4,390
1	**1.0**	**$10,977**
1.5	2.0	$21,954
2	3.2	$35,126

SOUTHRIDGE “B” ZONE FINAL BACKUP FACILITY CHARGE COST

METER SIZE	AWWA METER FACTOR	BACKUP FACILITY CHARGE
3/4 X 5/8	0.4	$2,320
1	**1.0**	**$5,800**
1.5	2.0	$11,600
2	3.2	$18,560

EAST ZONE FINAL BACKUP FACILITY CHARGE COST

METER SIZE	AWWA METER FACTOR	BACKUP FACILITY CHARGE
3/4 X 5/8	0.4	$2,357
1	**1.0**	**$5,893**
1.5	2.0	$11,786
2	3.2	$18,857

EAST “A” ZONE FINAL BACKUP FACILITY CHARGE COST

METER SIZE	AWWA METER FACTOR	BACKUP FACILITY CHARGE
3/4 X 5/8	0.4	$2,541
1	**1.0**	**$6,354**
1.5	2.0	$12,708
2	3.2	$20,332

EAST “B” ZONE FINAL BACKUP FACILITY CHARGE COST

METER SIZE	AWWA METER FACTOR	BACKUP FACILITY CHARGE
3/4 X 5/8	0.4	$3,030
1	**1.0**	**$7,575**
1.5	2.0	$15,150
2	3.2	$24,240

RESOLUTION NO. 1333

RESOLUTION OF THE BOARD OF DIRECTORS OF DESERT WATER AGENCY ESTABLISHING RATES, FEES AND CHARGES FOR RECYCLED WATER SERVICE

WHEREAS, by previous action this Board has approved various rates, fees and charges for recycled water service, as provided by law; and

WHEREAS, it is appropriate at this time to revise the Agency's charges for recycled water service and for other related services, while restating all other rates, fees and charges which remain unchanged; and

WHEREAS, in June, 2023 this Board conducted a majority protest hearing for the proposed revision of the Agency's monthly charges for recycled water service over the next subsequent five years, as required by law, and determined that a majority protest did not exist;

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of Desert Water Agency as follows:

1. Backup Facility Charges. Every applicant for recycled water service shall, in addition to other charges and as a condition of receiving such service, pay a Backup Facility Charge based on the size of the applicant's meter connection as follows:

Meter Size	Charge
2 inch	$ 8,300.00
4 inch	33,300.00
6 inch	75,000.00
8 inch	125,000.00
10 inch	166,700.00
12 inch	250,000.00

2. Backup Facility Charges for Increased Service. Backup Facility Charges for recycled water service shall be imposed for all existing recycled water service connections for which increased capacity is requested and larger meters are installed. The charges shall apply to the difference in service capacity between (a) the new meter and (b) the meter which is being replaced.

3. Accounting of Funds. All revenues collected from Backup Facility Charges for recycled water service shall be deposited with other such fees in a separate capital facilities account or fund in a manner to avoid any commingling of the charges with other revenues and funds of the Agency, except for temporary investments, and such revenues may be expended solely for the purpose for which the Backup Facility Charges are collected. Any interest income earned by moneys in said account or fund shall also be deposited in that account or fund and may be expended only for the purpose for which the Backup Facility Charges are imposed. The Agency shall make findings once each fiscal year with respect to any portion of the Backup Facility Charges remaining unexpended or uncommitted in the account five or more years after deposit of the charges. The findings shall identify the purpose to which the Backup Facility Charges are to be put, and will demonstrate a reasonable relationship between the charges and the purpose for which the charges are imposed.

4. Meter Installation Charge. The charge for meter installation for recycled water service shall be the actual cost plus any applicable overhead charges.

5. Flow Control Valve Charge. The charge for installation of a flow control valve for any recycled water service connection shall be the actual cost of the device, its installation and any applicable overhead charges.

6. Service Connection Charge. The charge for the recycled water service connection shall be the actual cost of connection to an existing main plus any applicable overhead charges.

7. Meter Test Deposit. The required deposit for testing a recycled water service meter shall vary according to the size of the meter, as follows:

Meter Size	Charge
5/8 x 3/4 to 2 inch	$ 70.00
3 inch or larger	$140.00

8. Plan Check Fees. Plan check fees for Agency-installed recycled water facilities with no mains shall be $140. For developer-installed facilities with main, the fees shall be $140 plus $0.10 per lineal foot of main installed.

9. Design Review Fees. Fees charged for design review for recycled water facilities shall be as follows:

a.) Agency Engineering Department	$140 per hour
b.) Engineering Consultants	Actual cost plus 15%
c.) Legal Consultants	Actual cost plus 15%

10. Restoration of Service. For restoring recycled water service during Agency's normal working hours, on normal working days, the charge shall be $140. After normal working hours, or on days other than normal working days, the charge shall be $280.

11. Metered Service Charges. Service charges for recycled water service shall include a monthly service charge and a quantitative charge as follows:

a.) Monthly Service Charge.

Meter Size	Charge
2 inch	$23.65
3 inch	$47.30
4 inch	$73.91

a.) Monthly Service Charge. (Cont.)

Meter Size	Charge
6 inch	$147.82
8 inch	$236.50
10 inch	$620.81
12 inch	$783.40

b.) Quantitative Charge. The base rate charge for all metered and unmetered recycled water used for all purposes shall be $0.70 per 100 cubic feet and shall increase $0.05 per year on the anniversary date of this resolution through the year 2028, at which time a rate study will be performed to establish a new recycled water quantitative charge.

12. Monthly Flow Control Valve Charges (8" – 12"). A charge of $35.00 per flow control valve per month will be added to the billing for testing and annual maintenance.

13. Deposit to Establish Credit. The minimum deposit amount to establish credit will be two (2) times the average monthly bill. If this cannot be determined, the minimum deposit shall be charged as follows:

Meter Size	Deposit
5/8 x 3/4 inch	$ 100.00
1 inch	100.00
1-1/2 inch	150.00
2 inch	200.00
3 inch	250.00
4 inch	300.00
6 inch	350.00
8 inch	400.00
10 inch	450.00
12 inch	500.00

14. Development Review. A charge for Agency provided Administrative Services shall be collected at the rate of $140 for each of the following:

a) Will Serve Letter

b) Development Bond Amount Letter

c) Response to Initial Study

15. Effective Date. The charges set forth herein shall become effective July 1, 2024, and as of that date shall replace the charges set forth in Resolution No. 1308.

ADOPTED this 18th day of June 2024.

____

Paul Ortega, President

ATTEST:

____

Gerald McKenna, Secretary-Treasurer

RESOLUTION NO. 1334

RESOLUTION OF THE BOARD OF DIRECTORS OF DESERT WATER AGENCY ESTABLISHING RATES, FEES AND CHARGES FOR SEWER SERVICE

WHEREAS, by previous action this Board has approved various rates, fees and charges for sewer service, as provided by law; and

WHEREAS, it is appropriate at this time to revise the Agency's charges for sewer service and for other related services, while restating all other rates, fees and charges which remain unchanged; and

WHEREAS, in June 2023 this Board conducted a majority protest hearing for the proposed revision of the Agency's monthly charges for sewer service over the next subsequent five years, as required by law, and has determined that a majority protest does not exist; and

WHEREAS, in addition to the Agency's charges for sewer services, charges imposed by Coachella Valley Water District (CVWD) must also be collected by the Agency, as CVWD's collection agent, for sewer service and treatment in Cathedral City; and

WHEREAS, in addition to the charges collected for CVWD in the Cathedral City area, the Agency has also entered into an agreement with the City of Palm Springs (City) to provide wastewater treatment and disposal service to the Agency's customers receiving sewage collection service from the Agency in the Dream Homes and Palm Oasis areas; and

WHEREAS, said agreement requires the Agency to collect from those customers the City's sewer capacity and customer service charges for wastewater treatment and disposal provided by the City, in addition to collecting the Agency's charges for sewer services; and

WHEREAS, this resolution reflects the current City rates for sewage treatment and disposal services, which are subject to change by that entity, the increased rate charged by CVWD for sewage treatment and disposal services, to effect on July 1, 2024, the Agency's new rates for sewage collection to take effect on January 1, 2025, and restates other Agency rates, fees and charges which remain unchanged;

NOW, THEREFORE, be it resolved by the Board of Directors of Desert Water Agency that the rates, fees and charges assessed by the Agency for sewer services within the Agency's sewer service areas are as follows:

1. Capacity Charges

	CVWD Treatment Cathedral City (Effective 06/21/22)	City Treatment Palm Oasis / Dream Homes (Effective 09/21/21)
A.) Residential (including single family, apartments, condos and mobile home park spaces (1 EDU=1 Unit or Space)	Total Charge: $4,879.67/EDU a. $3,829.67/EDU (CVWD) b. $1,050.00/EDU (DWA)	Total Charge: $ 1,006.00/Unit a. $1,006.00/Unit (CPS)
B.) Commercial, Industrial, Institutional	Total Charge: $4,879.67/EDU a $3,829.67/EDU (CVWD) b. $1,050.00/EDU (DWA)	Total Charge: $100.00/ Fixture Unit (FU) a. $100.00/FU (CPS)
C.) Hotel /Motel (1/2 EDU = 1 Room)	Total Charge: $4,879.67/EDU a. $3,829.67/EDU (CVWD b. $1,050.00/EDU (DWA)	Total Charge: 1. $663.00/Room (with kitchen-CPS) 2. $343.00/Room (without kitchen-CPS)
D.) R.V. Park (1/2) EDU = 1 Space)	Total Charge: $4,879.67/EDU a. $3,829.67/EDU (CVWD) b. $1,050.00/EDU (DWA)	Total Charge: $246.00/Space a. $246.00/Space (CPS)

2. Accounting of Funds. All revenues collected from capacity charges shall be deposited with other such fees in a separate capital facilities account or fund in a manner to avoid any commingling of the charges with other revenues and funds of the Agency, except for the temporary investments, and such revenues may be expended solely for the purpose for which the capacity charges are collected. Any interest income earned by moneys in said account or fund shall also be deposited in that account or fund and may be expended only for the purpose for which the capacity charges are imposed. The Agency shall make findings once each fiscal year with respect to any portion of the capacity charges remaining

unexpended or uncommitted in the account five or more years after deposit of the charges. The findings shall identify the purpose to which the capacity charges are to be put, and will demonstrate a reasonable relationship between the charges and the purpose for which the charges were imposed.

3. Connection Fee.

   a.) Single Family Residence - $1,700

   b.) Other than Single Family Residence:
   A charge for all new connections based on the front footage served thereby shall be levied and collected at the rate of $70 per lineal foot of frontage, or the actual rate in accordance with a valid main extension refund agreement, whichever is greater.

4. Plan Check Fees.

   a.) Existing Main Available (lateral installation only)
      1) Single Family Residence (1-4" Lateral) - no fee
      2) Single Family Residence (other than above) and all other types of development - $140

   b.) The Plan Check fee for Agency-installed sewer facilities with no mains shall be $280. For developer-installed facilities with mains, the fee shall be $280 plus $0.35 per lineal foot of main installed.

5. Design Review Fees.

   a.) Desert Water Agency Engineering Department - $140/Hour
   b.) Engineering Consultants - Actual Cost plus 15%
   c.) Legal Consultants - Actual Cost plus 15%

6. Monthly Service Charges

	CVWD Treatment Cathedral City (Effective 07/01/24)	CVWD Treatment Cathedral City (Effective 01/01/25)	City Treatment Palm Oasis/Dream Homes (Effective 01/01/24)	City Treatment Palm Oasis/Dream Homes (Effective 01/01/25)
A. Residential				
Single Family, Condo (1 EDU = 1 Unit)	Total Charge: $36.79/EDU a. $29.48/EDU (CVWD) b. $7.31/EDU (DWA) ***Rate (1)***	Total Charge: $37.14/EDU a. $29.48/EDU (CVWD) b. $7.66/EDU (DWA) ***Rate (1)***	Total Charge: $27.31/Unit a. $20.00/Unit (CPS) b. $7.31/Unit (DWA) ***Rate (5)***	Total Charge: $27.66/Unit a. $20.00/Unit (CPS) b. $7.66/Unit (DWA) ***Rate (5)***
Mobile Home Park (1 EDU = 1 Space)	Total Charge: $36.79/EDU a. $29.48/EDU (CVWD) b. $7.31/EDU (DWA) ***Rate (1)***	Total Charge: $37.14/EDU a. $29.48/EDU (CVWD) b. $7.66/EDU (DWA) ***Rate (1)***	Total Charge: $27.31/Spc. plus $1.98/FU a. $20.00/Unit (CPS) b. $7.31/Unit (DWA) c. $1.98/FU (CPS) ***Rate (6)***	Total Charge: $27.66/Spc. plus $1.98/FU a. $20.00/Unit (CPS) b. $7.66/Unit (DWA) c. $1.98/FU (CPS) ***Rate (6)***
Apartments (1 EDU = 1 Unit)	Total Charge: $36.79/EDU a. $29.48/EDU (CVWD) b. $7.31/EDU (DWA) ***Rate (4)***	Total Charge: $37.14/EDU a. $29.48/EDU (CVWD) b. $7.66/EDU (DWA) ***Rate (4)***	Total Charge: $27.31/Unit a. $20.00/Unit (CPS) b. $7.31/Unit (DWA) ***Rate (7)***	Total Charge: $27.66/Unit a. $20.00/Unit (CPS) b. $7.66/Unit (DWA) ***Rate (7)***
B. Hotel / Motel (1/2 EDU = 1 Room)	Total Charge: $36.79/EDU a. $29.48/EDU (CVWD) b. $7.31/EDU (DWA) ***Rate (4)***	Total Charge: $37.14/EDU a. $29.48/EDU (CVWD) b. $7.66/EDU (DWA) ***Rate (4)***	N/A	N/A
C. R.V. Park (1/2 EDU = 1 Space)	Total Charge: $36.79/EDU a. $29.48/EDU (CVWD) b. $7.31/EDU (DWA) ***Rate (4)***	Total Charge: $37.14/EDU a. $29.48/EDU (CVWD) b. $7.66/EDU (DWA) ***Rate (4)***	N/A	N/A
D. Commercial, Industrial, or Institutional (Other than Schools)	Total Charge: $36.79/EDU a. $29.48/EDU (CVWD) b. $7.31/EDU (DWA) ***Rate (4)***	Total Charge: $37.14/EDU a. $29.48/EDU (CVWD) b. $7.66/EDU (DWA) ***Rate (4)***	Total Charge: $1.98/FU (Minimum $20.00) plus $7.31/EDU a. $1.98/FU (CPS) (minimum $20.00) b. $7.31/EDU (DWA) ***Rate (8)***	Total Charge: $1.98/FU (Minimum $20.00) plus $7.66/EDU a. $1.98/FU (CPS) (minimum $20.00) b. $7.66/EDU (DWA) ***Rate (8)***

6. Monthly Service Charges (Cont.)

	CVWD Treatment Cathedral City (Effective 07/01/24)	CVWD Treatment Cathedral City (Effective 01/01/25)	City Treatment Palm Oasis/Dream Homes (Effective 01/01/24)	City Treatment Palm Oasis/Dream Homes (Effective 01/01/25)
E. Schools and Colleges Kindergarten Elementary Schools & Colleges	Total Charge: $36.79/EDU a. $29.48/EDU (CVWD) b. $7.31/EDU (DWA) ***Rate (3)***	Total Charge: $37.14/EDU a. $29.48/EDU (CVWD) b. $7.66/EDU (DWA) ***Rate (3)***	(See Commercial) ***Rate (8)***	(See Commercial) ***Rate (8)***
All Other Schools	Total Charge: $36.79/EDU a. $29.48/EDU (CVWD) b. $7.31/EDU (DWA) ***Rate (2)***	Total Charge: $37.14/EDU a. $29.48/EDU (CVWD) b. $7.66/EDU (DWA) ***Rate (2)***	N/A	N/A
*The number of students to be used in calculating the monthly sewer charges shall be based on the previous year's average monthly attendance.				
F. Interceptor/ Separator Surcharge	$14.00 ***Rate (4)***	$14.00 ***Rate (4)***	N/A	N/A

7. Sewer Lateral Inspection. The charge for inspection of all new sewer laterals installed on existing mains shall be $140 per lateral.

8. Main Extension By Applicant Deposit. The applicant shall deposit with the Agency a sum in the amount equal to twenty percent (20%) of the estimated main extension construction costs, as determined by the Agency, for inspection and incidental costs. The Agency shall refund the applicant any deposit amount above the final inspection and incidental costs. The Agency shall also collect additional money, as required, if the initial deposit amount does not cover the final inspection and incidental costs.

9. Development Review. A charge for Agency provided Administrative Services shall be collected at the rate of $140 for each of the following:

a.) Will Serve Letter
b.) Development Bond Amount Letter
c.) Response to Initial Study
d.) Non-Interference Letter

10. Effective Date: This resolution shall become effective immediately upon adoption and shall replace Resolution No. 1309.

ADOPTED this 18th day of June 2024.

____
Paul Ortega, President

ATTEST:

____
Gerald McKenna, Secretary-Treasurer

STAFF REPORT
TO
DESERT WATER AGENCY
BOARD OF DIRECTORS

JUNE 18, 2024

RE: REQUEST ADOPTION OF FISCAL YEAR 2024/2025 OPERATING, GENERAL AND WASTEWATER BUDGETS

Attached for your review is the final draft of the proposed Operating, General and Wastewater Fund Budgets for Fiscal Year 2024/2025.

After the Draft Budget presentation on June 4, 2024, there have been no adjustments made to the proposed 2024/2025 Budget.

Fiscal Impact:
The 2024/2025 Budget provides the anticipated revenues and expenditures for the Operating, General and Wastewater Funds for the upcoming 2024/2025 fiscal year.

Legal Review:
N/A

Recommendation:
Staff recommends the Board of Directors adopt the Operating, General and Wastewater Fund budgets for Fiscal Year 2024/2025.

Attachments:
1. 2024 2025 Desert Water Agency Budget

DESERT WATER

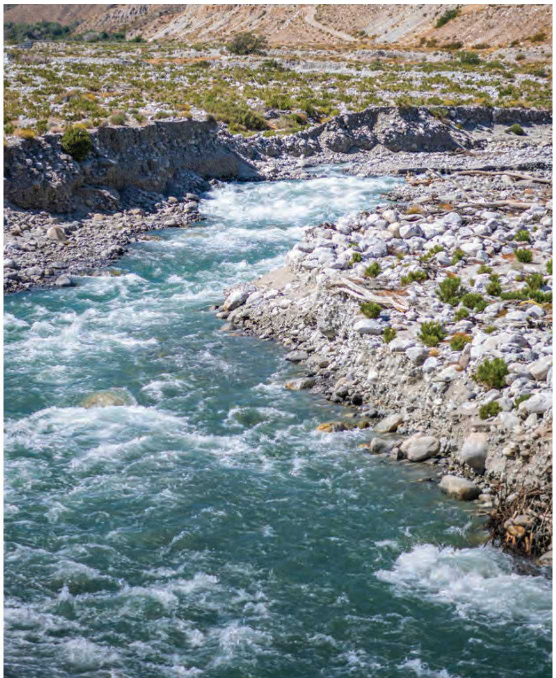
Fiscal Year 2024 - 2025

BUDGET

OPERATING FUND

GENERAL FUND

WASTEWATER FUND



DESERT WATER AGENCY
2024 / 2025
Budget

Operating Fund
General Fund
Wastewater Fund

DESERT WATER AGENCY

2024 / 2025 Budget

Contents

DESERT WATER AGENCY

Operating Fund Budget

2024 / 2025

DESERT WATER AGENCY

OPERATING FUND

2024-2025 Budget with Prior Year Comparison

	ACTUAL 2022-2023	ACTUAL TO 3/31/2024	BUDGET 2023-2024	BUDGET 2024-2025	Increase / (Decrease)
OPERATING REVENUES					
WATER REVENUE					
Water Sales	$38,983,355	$30,082,277	$43,080,000	$41,227,000	($1,853,000)
Recycled Water Sales	$895,990	$704,268	$996,000	$1,035,000	$39,000
TOTAL WATER REVENUES	$39,879,345	$30,786,545	$44,076,000	$42,262,000	($1,814,000)
OTHER OPERATING REVENUE					
Fire Protection	$446,935	$342,258	$435,000	$492,000	$57,000
Charge for Inst of Serv & Mtr	$118,020	$122,371	$177,600	$162,000	($15,600)
Back-up Facility Charge	$789,370	$556,850	$912,000	$766,000	($146,000)
Service Charges	$1,020,825	$878,711	$940,800	$969,600	$28,800
Power Sales	$45,298	$87,311	$56,400	$86,400	$30,000
TOTAL OTHER OPERATING REVENUE	$2,420,447	$1,987,501	$2,521,800	$2,476,000	($45,800)
TOTAL OPERATING REVENUES	**$42,299,792**	**$32,774,046**	**$46,597,800**	**$44,738,000**	**($1,859,800)**
OPERATING EXPENSES					
SOURCE OF SUPPLY EXPENSE					
Supervision & Engineering	$77,174	$50,614	$94,800	$102,000	$7,200
Operating Labor	$58,736	$36,577	$60,960	$115,200	$54,240
Maint of Struct & Improv	$169,457	$128,073	$319,080	$278,200	($40,880)
Maint, Rds & Res Security	$20,410	$9,765	$286,920	$688,510	$401,590
Maintenance of Intakes	$300,180	$92,406	$64,560	$15,550	($49,010)
Maintenance of Wells	$2,328	$14,076	$12,960	$15,060	$2,100
Water Replenishment	$5,298,877	$4,436,453	$6,149,040	$6,348,000	$198,960
Misc Source of Supply	$64,493	$22,026	$57,000	$10,000	($47,000)
TOTAL SOURCE OF SUPPLY	$5,991,655	$4,789,989	$7,045,320	$7,572,520	$527,200
PUMPING EXPENSE					
Supervision & Engineering	$123,356	$78,316	$159,600	$169,200	$9,600
Pumping Labor	$370,863	$134,764	$205,800	$219,300	$13,500
Maintenance of Structures	$209,993	$103,901	$102,000	$116,060	$14,060
Maint of Pumping Equipment	$236,904	$194,497	$936,600	$504,300	($432,300)
Power Purchases	$3,905,148	$3,653,183	$4,398,000	$4,896,000	$498,000
Misc Exp & Care of Grounds	$115,965	$85,889	$19,920	$157,000	$137,080
TOTAL PUMPING	$4,962,228	$4,250,550	$5,821,920	$6,061,860	$239,940

DESERT WATER AGENCY

OPERATING FUND

2024-2025 Budget with Prior Year Comparison

	ACTUAL 2022-2023	ACTUAL TO 3/31/2024	BUDGET 2023-2024	BUDGET 2024-2025	Increase / (Decrease)
REGULATORY WATER TREATMENT EXPENSE					
Supervision & Engineering	$159,087	$128,687	$175,200	$206,400	$31,200
Operating Labor	$240,721	$176,476	$214,680	$223,380	$8,700
Maint of Structures	$5,618	$4,363	$15,000	$16,550	$1,550
Maint of Water Treat Equipment	$109,293	$64,450	$102,000	$108,000	$6,000
Chem & Filtering Material	$415,018	$390,236	$399,960	$525,100	$125,140
Misc Water Treatment	$179,453	$125,125	$146,400	$154,800	$8,400
TOTAL REGULATORY WATER TRTMT	$1,109,190	$889,337	$1,053,240	$1,234,230	$180,990
TRANSMISSION & DISTRIBUTION EXPENSE					
Supervision & Engineering	$719,957	$544,392	$751,200	$882,000	$130,800
Maintenance of Struct & Impv	$358	$0	$4,560	$5,000	$440
Storage Facilities	$167,725	$115,699	$148,560	$121,500	($27,060)
Trans & Distr Lines	$135,086	$129,648	$98,040	$114,000	$15,960
Customer Installation	$63,382	$49,162	$164,160	$178,800	$14,640
Cross Connection	$177,081	$98,503	$175,080	$175,000	($80)
Maintenance of Reservoirs	$57,278	$47,036	$41,640	$580,000	$538,360
Maintenance of Mains	$1,139,392	$876,330	$1,751,280	$1,296,500	($454,780)
Maintenance of Whitewater MWC	$200,520	$124,574	$317,880	$41,750	($276,130)
Maintenance of Hydrants	$106,942	$102,521	$175,080	$150,000	($25,080)
Maintenance of Fire Services	$58,930	$33,464	$110,040	$110,000	($40)
Maintenance of Services	$309,822	$199,196	$275,040	$200,000	($75,040)
Maintenance of Meters	$300,856	$163,965	$325,560	$263,810	($61,750)
Misc Supply Expense	$103,397	$82,249	$127,800	$106,600	($21,200)
TOTAL TRANS & DISTRIBUTION	$3,540,725	$2,566,738	$4,465,920	$4,224,960	($240,960)
CUSTOMER ACCOUNT EXPENSE					
Supervision & Engineering	$156,283	$161,469	$230,400	$234,000	$3,600
Meter Reading Expense	$156,570	$128,482	$161,040	$168,000	$6,960
Customer Rec & Coll Exp	$702,283	$544,076	$823,560	$876,180	$52,620
Uncollectible Accounts	$132,677	$12,280	$86,400	$38,400	($48,000)
TOTAL CUSTOMER ACCOUNT	$1,147,813	$846,306	$1,301,400	$1,316,580	$15,180

DESERT WATER AGENCY

OPERATING FUND

2024-2025 Budget with Prior Year Comparison

	ACTUAL 2022-2023	ACTUAL TO 3/31/2024	BUDGET 2023-2024	BUDGET 2024-2025	Increase / (Decrease)
ADMINISTRATIVE & GENERAL EXPENSE					
Admin. & Gen Salaries	$1,125,705	$859,440	$1,110,000	$1,279,200	$169,200
Supervision & Engineering	$244,485	$197,339	$289,200	$322,800	$33,600
Director's Fees	$69,376	$64,054	$116,400	$108,000	($8,400)
General Office Supplies & Expense	$373,717	$240,949	$456,360	$489,970	$33,610
Legal Services	$158,018	$38,620	$120,000	$120,000	$0
Professional Consulting Services	$155,913	$249,036	$393,480	$416,500	$23,020
Engineering Services	$88,618	$13,915	$114,000	$84,000	($30,000)
Insurance & Claims	$314,658	$291,158	$408,000	$494,400	$86,400
Injuries & Safety	$421,668	$315,442	$484,800	$430,480	($54,320)
Health Care Benefits	($1,363,528)	$1,258,867	$1,728,000	$2,077,200	$349,200
Payroll Taxes & Unemployment	$592,775	$513,088	$690,000	$728,400	$38,400
Paid Time Off	$1,562,692	$1,210,905	$1,573,200	$1,860,000	$286,800
Pension	$2,428,233	$2,601,722	$2,897,280	$3,692,800	$795,520
OPEB Interest	$503,005	$0	$870,000	$1,308,000	$438,000
Other Employee Benefits	$202,507	$195,825	$330,240	$413,800	$83,560
Operations Center Security	$4,445	$5,637	$12,000	$19,800	$7,800
Operations Center Maintenance	$273,897	$240,987	$547,800	$468,900	($78,900)
Solar Facilities Maintenance	$11,299	$3,435	$7,440	$7,650	$210
Information Technology	$1,350,271	$706,391	$1,586,040	$1,769,970	$183,930
Maint - Telemetry Equipment	$46,033	$36,445	$44,640	$48,400	$3,760
Maint - Communications Equipment	$13,937	$8,070	$44,280	$15,500	($28,780)
Storeroom	$87,219	$72,207	$146,040	$160,000	$13,960
Transportation	$468,563	$349,665	$560,400	$599,700	$39,300
Tools & Work Equipment	$199,847	$129,266	$176,040	$170,000	($6,040)
Public Information	$262,343	$207,377	$231,360	$324,000	$92,640
Water Conservation	$130,656	$103,514	$332,040	$228,000	($104,040)
Water Cons - Grass Removal	$1,813,195	$639,723	$1,845,480	$530,570	($1,314,910)
Services Rendered - Customers	$159,666	$203,000	$156,000	$204,000	$48,000
Direct/Indirect Costs	($787,420)	($2,283,253)	($1,373,400)	($1,772,600)	($399,200)
TOTAL ADMINISTRATIVE & GENERAL	$10,911,794	$8,472,823	$15,897,120	$16,599,440	$702,320
REGULATORY EXPENSES					
Certificates/Training/School	$132,356	$142,474	$169,440	$231,900	$62,460
Health Department / Services	$31,117	$58,494	$20,040	$82,000	$61,960
State - Regulatory	$157,599	$213,437	$155,040	$180,600	$25,560
Federal - Regulatory	$9,354	$12,719	$92,520	$64,550	($27,970)
Recycled Water - Regulatory	$0	$2,662	$15,120	$18,000	$2,880
AQMD Compliance	$1,051	$964	$3,000	$3,000	$0
RMP/OSHA/Misc.	$47,388	$33,417	$30,000	$35,000	$5,000
Legal Services - Regulatory	$0	$0	$0	$0	$0
TOTAL REGULATORY	$378,864	$464,165	$485,160	$615,050	$129,890

DESERT WATER AGENCY

OPERATING FUND

2024-2025 Budget with Prior Year Comparison

	ACTUAL 2022-2023	ACTUAL TO 3/31/2024	BUDGET 2023-2024	BUDGET 2024-2025	Increase / (Decrease)
SNOW CREEK HYDRO EXPENSE					
Snow Creek Hydro	$97,558	$64,264	$76,920	$42,600	($34,320)
TOTAL SNOW CREEK HYDRO	$97,558	$64,264	$76,920	$42,600	($34,320)
RECYCLED WATER PLANT EXPENSE					
Pumping	$415,589	$259,674	$381,240	$407,950	$26,710
Treatment	$495,227	$281,873	$1,305,840	$1,366,800	$60,960
Transportation/Distribution	$76,748	$69,474	$218,400	$167,220	($51,180)
Administrative & General	$165,308	$119,271	$351,120	$297,950	($53,170)
TOTAL RECYCLED WATER PLANT	$1,152,872	$730,291	$2,256,600	$2,239,920	($16,680)
OTHER OPERATING EXPENSE					
Exp App to Prior Years	($10,391)	($5,839)	$0	$0	$0
Other Misc Expense	$16,518	$0	$25,080	$45,000	$19,920
Depreciation & Amortization	$6,296,466	$3,191,433	$6,894,000	$6,807,600	($86,400)
TOTAL OTHER OPERATING	$6,302,593	$3,185,594	$6,919,080	$6,852,600	($66,480)
TOTAL OPERATING EXPENSES	**$35,595,292**	**$26,260,058**	**$45,322,680**	**$46,759,760**	**$1,437,080**
NET INC/(LOSS) FROM OPERATIONS	$6,704,500	$6,513,988	$1,275,120	($2,021,760)	($3,296,880)
NON-OPERATING REVENUES					
Gains/Loss Investments	($299,050)	$244,789	$0	$0	$0
Interest	$1,029,348	$1,153,980	$1,320,000	$1,500,000	$180,000
DWA Front Footage Chgs	$0	$0	$0	$0	$0
Revenue from Leases	$234,771	$36,176	$201,000	$214,000	$13,000
Gains on Retirements	$1,957	$0	$52,000	$6,800	($45,200)
Other Misc Income	$298,822	$1,738,085	$445,400	$355,100	($90,300)
Revenue - Contributed	$383,978	$0	$315,000	$315,000	$0
TOTAL NON-OPERATING REV	**$1,649,827**	**$3,173,030**	**$2,333,400**	**$2,390,900**	**$57,500**
NON-OPERATING EXPENSES					
Losses on Retirements	$20,465	$0	$106,800	$63,600	($43,200)
TOTAL NON-OPERATING EXP	**$20,465**	**$0**	**$106,800**	**$63,600**	**($43,200)**
TOTAL NET INCOME/(LOSS)	$8,333,862	$9,687,019	$3,501,720	$305,540	($3,196,180)

DESERT WATER AGENCY

OPERATING FUND

2024-2025 Budget with Prior Year Comparison

	ACTUAL 2022-2023	ACTUAL TO 3/31/2024	BUDGET 2023-2024	BUDGET 2024-2025	Increase / (Decrease)
APPLICATION OF COMMITTED FUNDS					
Current Year SBITA	$0	$0	$0	$214,000	$214,000
Other Post Employment Benefits	$637,839	$443,451	$860,000	$860,000	$0
TOTAL COMMITTED FUNDS	**$637,839**	**$443,451**	**$860,000**	**$1,074,000**	**$214,000**
BALANCE REMAINING	$7,696,023	$9,243,568	$2,641,720	($768,460)	($3,410,180)
Add Back OPEB Interest	$503,005	$0	$870,000	$1,308,000	$438,000
Add Back Depreciation	$6,296,466	$3,191,433	$6,894,000	$6,807,600	($86,400)
Funds Avail For Capital Additions	$14,495,494	$12,435,000	$10,405,720	$7,347,140	($3,058,580)
CAPITAL ADDITIONS					
Routine Improvements			$17,647,100	$12,599,000	($5,048,100)
General Plan Improvements			$100,000	$100,000	$0
Outstanding future SBITA			$0	($642,000)	($642,000)
TOTAL CAPITAL ADDITIONS			**$17,747,100**	**$12,057,000**	**($5,690,100)**
BALANCE			($7,341,380)	($4,709,860)	$2,631,520
TOTAL BUDGET			**$64,036,580**	**$59,954,360**	**($3,440,220)**

	2023-2024 BEGIN BAL	2023-2024 ADJUSTMENTS	2024-2025 ADDITIONS	2024-2025 DELETIONS	BALANCE
Estimated Reserve Fund Balance 6/30/24					$62,216,000
Inter-Fund Loan - General Fund					$0
RESERVES					
Reserve for Land Acquisition	$675,000	$0	$0	$0	$675,000
Reserve for Operations	$18,838,700	($1,660,200)	$0	($190,500)	$16,988,000
Reserve for Replacements	$2,760,000	$0	$0	$0	$2,760,000
Reserve for Regulatory Compliance	$0	$0	$0	$0	$0
Reserve for Disaster Response	$2,000,000	$0	$0	$0	$2,000,000
Reserve for Retirement Benefits	$5,000,000	$0	$0	($902,000)	$4,098,000
	$29,273,700	($1,660,200)	$0	($1,092,500)	$26,521,000
Total Reserves - 6/30/25					($26,521,000)
Required for 2023-2024 Carryover Capital Items					($30,985,061)
2024-2025 Budget Balance					($4,709,860)
Unappropriated Fund Balance 6/30/25					$79

BUDGET SUMMARY

Operating Expenses	$46,759,760
Non-Operating Expenses	$63,600
Application of Committed Funds	$1,074,000
Capital Additions	$12,057,000
TOTAL BUDGET	**$59,954,360**

DESERT WATER AGENCY

OPERATING FUND

2024 / 2025

Capital Improvements

PROJECT #	DESCRIPTION	ASSET ACCOUNT	ESTIMATED COST
Routine			
WELLS			
241060W00	Well Flow Meter Digital Upgrade Kits	180310	$26,000
241061W00	Well Water Level Monitoring SCADA (2 wells)	180640	$46,000
	TOTAL RECLAMATION		**$72,000**
PIPELINES			
211012020	Vista Chino Repl. Pipeline - Const. - Augment	180351	$200,000
221068W17	Palm Oasis Connection to Main System - Augment	180351	$200,000
231014008	2024 Summer Repl. Pipeline - Const. - Augment	180351	$5,200,000
243099	Contingency - Mains	180351	$200,000
	TOTAL PIPELINES		**$5,800,000**
RESERVOIRS			
241062R33	Destratification/Chlorine Mixer - Palisades (R-33)	180345	$25,000
241063R08	Seismic Actuator - Tahquitz #1 (R-8)	180345	$45,000
241064R32	Seismic Actuator - Tahquitz #2 (R-32)	180345	$45,000
241065R19	Seismic Actuator - PS North #1 (R-19)	180345	$45,000
	TOTAL RESERVOIRS		**$160,000**
SERVICES			
241000S01	1" Service Replacements	180430	$300,000
241000S02	2" Service Replacements	180430	$300,000
242001S01	1" Invoiced Services	180430	$48,000
242001S02	2" Invoiced Services	180430	$22,000
	TOTAL SERVICES		**$670,000**

DESERT WATER AGENCY

OPERATING FUND

2024 / 2025

Capital Improvements

PROJECT #	DESCRIPTION	ASSET ACCOUNT	ESTIMATED COST
METERS			
242002E00	Encoder Receiver Transmitter (ERT) Purchases	180510	$43,000
242002M01	1" Meter Purchases	180510	$130,000
242002M02	2" Meter Purchases	180510	$60,000
242002M03	3" Meter Purchases	180510	$12,000
242002M06	6" Meter Purchases	180510	$4,000
242002M15	1 1/2" Meter Purchases	180510	$90,000
242002M75	3/4" Meter Purchases	180510	$160,000
		TOTAL METERS	**$499,000**
TRANSPORTATION EQUIPMENT			
241066M18	2024 EV E-450 XL Reg Cab w/ Combo Body (Replace Unit # 18)	180630	$205,000
241067M21	2024 EV E-450 XL Reg Cab w/ Mech. Utility Body (Replace Unit # 21)	180630	$215,000
241069M48	2024 Ford F-450 XL Reg Cab w/ Utility Body (Replace Unit # 48)	180630	$105,000
241070M55	2024 Ford F-450 XL Reg Cab w/ Utility Body (Replace Unit # 55)	180630	$110,000
241071M15	2024 Ford F-150 (Replace Unit # 15)	180630	$48,000
241072M00	Electric Vehicle Charging Stations	180630	$24,000
		TOTAL TRANSPORTATION EQUIPMENT	**$707,000**

DESERT WATER AGENCY

OPERATING FUND

2024 / 2025

Capital Improvements

PROJECT #	DESCRIPTION	ASSET ACCOUNT	ESTIMATED COST
RECYCLED WATER			
231011C00	Ammonia Analyzer - Augment	180710	$25,000
231013012	Sunrise Park Recycled Water Pipeline - Augment	180710	$1,000,000
241073C00	Effluent Reservoir Roof Reconstruction	180710	$2,000,000
241074B00	Sunrise Park Recycled Water Booster Station	180710	$550,000
241075M00	Chlorine Crane Replacement	180710	$25,000
		TOTAL RECLAMATION	**$3,600,000**
MISCELLANEOUS			
241076M00	Snow Creek Filtration High Turbidity Bypass Line	180251	$125,000
241077M00	Operations Center Generator Platform	180556	$14,000
241078M00	Operations Center Electrical Upgrades	180556	$297,000
241079M00	Operations Center Lobby Counter Remodel	180556	$34,000
241080M00	Operations Center Office Construction (3 offices)	180556	$40,000
241081M00	Operations Center HVAC VAV Upgrades	180556	$77,000
241082M00	DS700i Folder/Inserter	180620	$120,000
241083M00	IX-9 Mailing System	180620	$32,000
241084M00	Operations Center Gate Communication System	180640	$17,000
241085M00	Replace 20 inch Self - Propelled Saw	180660	$32,000
241086M00	Xerox Copier	180680	$10,000
241087M00	Canon Plotter Replacements (x2)	180680	$27,000
241088M00	GIS System	180680	$116,000
244099	Contingency - Other	VARIOUS	$150,000
		TOTAL MISCELLANEOUS	**$966,000**
	TOTAL ROUTINE		**$12,599,000**

Capital Improvements

PROJECT #	DESCRIPTION	ASSET ACCOUNT	ESTIMATED COST
General Plan			
PIPELINES			
246099	Main Oversizing	180351	$100,000
		TOTAL PIPELINES	**$100,000**
TOTAL GENERAL PLAN			**$100,000**
TOTAL CAPITAL IMPROVEMENTS 2024-2025			**$12,699,000**

Reserve Policy Analysis

In June 2023, the Board of Directors revised the policy for Agency Reserves (Resolution No. 1302). Per section 5 of the policy, an annual review of the reserves will be presented during the annual budget presentation. Presented below is the reserve analysis:

Reserve for Land Acquisitions

Reserve shall not exceed $5,000,000

Maximum Reserve Balance		*$*	*5,000,000*
2023 / 2024	Current Reserve Balance	$	675,000
2024 / 2025	Reserve Adjustment *	$	-
2024 / 2025	**Reserve Balance**	**$**	**675,000**
2024 / 2025	Maximum Reserve Shortfall	$	(4,325,000)

* There are no excess funds available to add to the Reserve for Land Acquisition in Fiscal Year 2024 / 2025

2024 / 2025	**RESERVE FOR LAND ACQUISITIONS**	**$**	**675,000**

Reserve for Operations

Reserve should be equal to 6-months to 1 year of operations

2024 / 2025	Cost of Operations	$	46,759,760
Minimum Reserve Requirement		*$*	*23,379,880*
Maximum Allowable Reserve Balance		*$*	*46,759,760*
2023 / 2024	Current Reserve Balance	$	17,178,500
2024 / 2025	Reserve Adjustment *	$	(190,500)
2024 / 2025	**Reserve Balance**	**$**	**16,988,000**
2024 / 2025	Minimum Target Reserve Shortfall	$	(6,391,880)
2024 / 2025	Maximum Reserve Shortfall	$	(29,771,760)

* Proposed $190,500 reduction to the Reserve for Operations in Fiscal Year 2024 / 2025

2024 / 2025	**RESERVE FOR OPERATIONS**	**$**	**16,988,000**

Reserve Policy Analysis

Reserve for Replacements

Reserve should be equal to at least 6% of Agency infrastructure and not to exceed 10% of fixed assets reflected in the last annual audit

Agency Infrastructure at 6/30/2023		$	275,054,706
Minimum Reserve Balance		*$*	*16,503,282*
Maximum Reserve Balance		*$*	*27,505,471*
2023 / 2024	Current Reserve Balance	$	2,760,000
2024 / 2025	Reserve Adjustment *	$	-
2024 / 2025	**Reserve Balance**	**$**	**2,760,000**
2024 / 2025	Minimum Reserve Shortfall	$	(13,743,282)
2024 / 2025	Maximum Reserve Shortfall	$	(24,745,471)

* There are no excess funds available to add to the Reserve for Replacements in Fiscal Year 2024 / 2025

2024 / 2025	**RESERVE FOR REPLACEMENTS**	**$**	**2,760,000**

Reserve for Regulatory Compliance

Reserve shall not exceed $10,000,000

Maximum Reserve Balance		*$*	*10,000,000*
2023 / 2024	Current Reserve Balance	$	-
2024 / 2025	Reserve Adjustment *	$	-
2024 / 2025	**Reserve Balance**	**$**	**-**
2024 / 2025	Maximum Reserve Shortfall	$	(10,000,000)

* There are no excess funds available to add to the Reserve for Regulatory Compliance in Fiscal Year 2024 / 2025

2024 / 2025	**RESERVE FOR REGULATORY COMPLIANCE**	**$**	**-**

DESERT WATER AGENCY

OPERATING FUND

2024 / 2025 Budget

Reserve Policy Analysis

Reserve for Disaster Response

Reserve should be equal to approximately 15% of the Agency's General System

System Value at 3/31/24		$	278,008,730
15% of System Value		$	41,701,300
Maximum Reserve Balance		*$*	*41,701,300*
2023 / 2024	Current Reserve Balance	$	2,000,000
2024 / 2025	Reserve Adjustment *	$	-
2024 / 2025	**Reserve Balance**	**$**	**2,000,000**
2024 / 2025	Maximum Reserve Shortfall	$	(39,701,300)

* There are no excess funds available to add to the Reserve for Disaster Response in Fiscal Year 2024 / 2025

2024 / 2025	**RESERVE FOR DISASTER RESPONSE**	**$**	**2,000,000**

Reserve for Retirement Benefits

Reserve should equal two times the actual annual retirement benefit costs from the preceding year but not to exceed four times the cost

Annual OPEB Costs - Actuarial study (2023)		$	1,017,842
Annual CalPERS Normal Contributions		$	1,033,640
Minimum Reserve Requirement		*$*	*4,102,964*
Maximum Allowable Reserve Balance		*$*	*8,205,928*
2023 / 2024	Current Reserve Balance	$	5,000,000
2024 / 2025	Reserve Adjustment *	$	(902,000)
2024 / 2025	**Reserve Balance**	**$**	**4,098,000**
2024 / 2025	Minimum Target Reserve Shortfall	$	(4,964)
2024 / 2025	Maximum Reserve Shortfall	$	(4,107,928)

* Proposed $902,000 reduction to the Reserve for Retirement Benefits in Fiscal Year 2024 / 2025

2024 / 2025	**RESERVE FOR RETIREMENT BENEFITS**	**$**	**4,098,000**

Reserve Policy Analysis

Reserve Policy Summary

**	2024 / 2025	Minimum Reserve Requirement	$	100,687,426	*
**	2024 / 2025	Maximum Reserve Requirement	$	139,172,459	
	2024 / 2025	**Projected Total Reserves**	**$**	**26,521,000**	
	2024 / 2025	Projected Minimum Reserve Shortfall	$	(74,166,426)	
	2024 / 2025	Maximum Reserve Shortfall	$	(112,651,459)	

* Where no minimum reserve balance is established, the maximum reserve balance is used

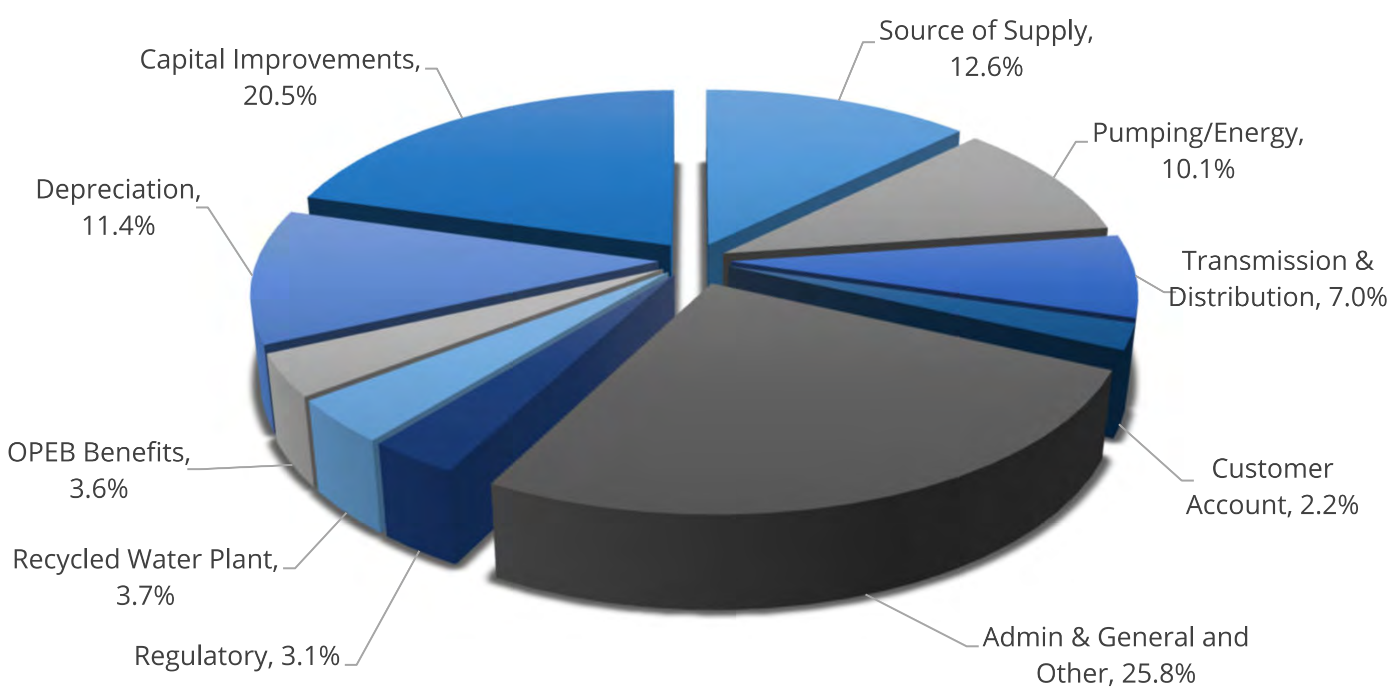
** Reserve Policy and Reserve Requirements (Resolution No. 1302)

DESERT WATER AGENCY

OPERATING FUND

2024 / 2025 Budget Summary

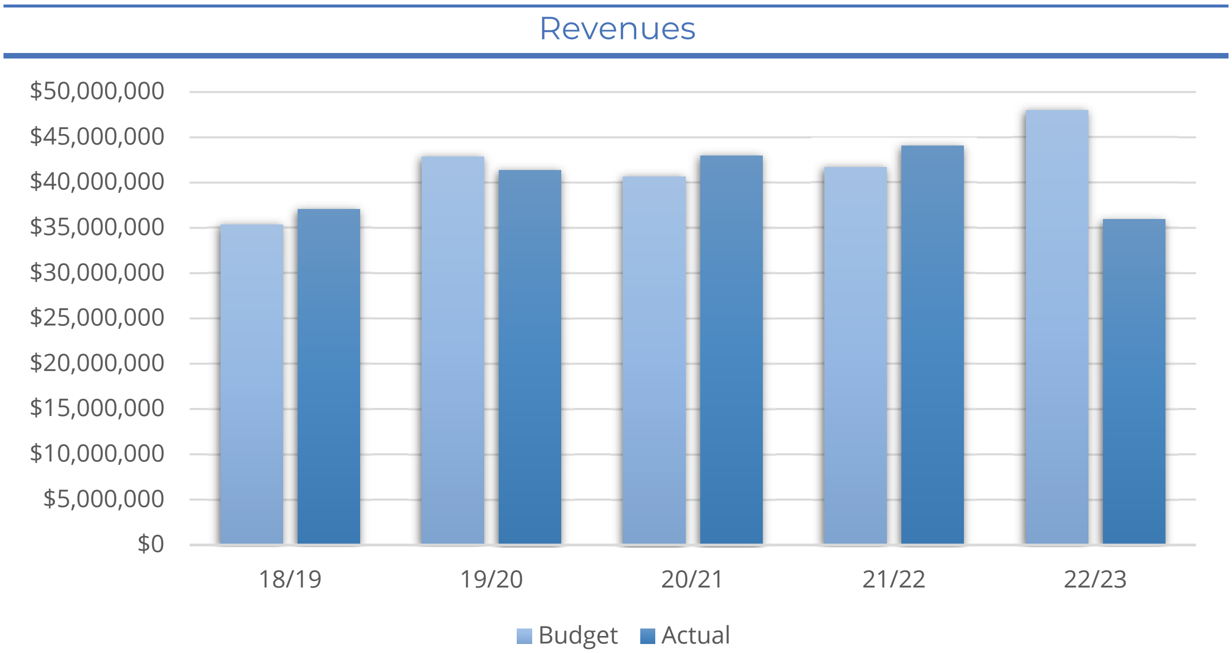
Category		Cost	%
Source of Supply	$	7,572,520	12.6%
Pumping/Energy	$	6,061,860	10.1%
Transmission & Distribution	$	4,224,960	7.0%
Customer Account	$	1,316,580	2.2%
Admin & General and Other	$	15,442,640	25.8%
Regulatory	$	1,849,280	3.1%
Recycled Water Plant	$	2,239,920	3.7%
OPEB Benefits	$	2,168,000	3.6%
Depreciation	$	6,807,600	11.4%
Capital Improvements	$	12,271,000	20.5%
TOTAL	**$**	**59,954,360**	**100.0%**

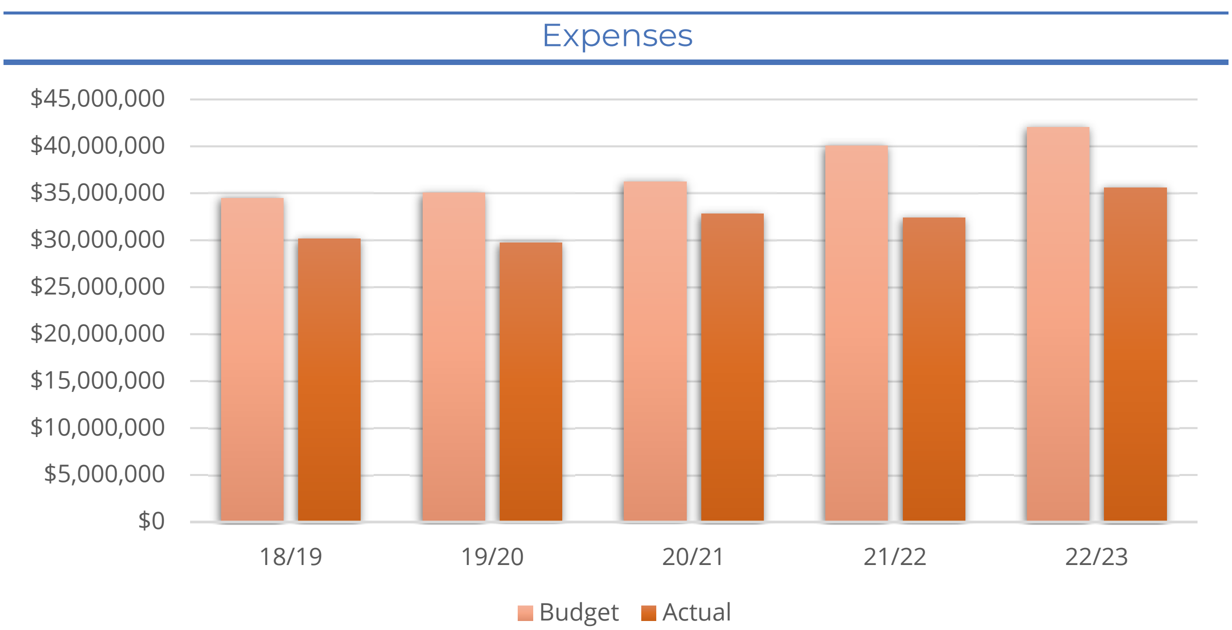


DESERT WATER AGENCY

OPERATING FUND

Historical Analysis
Budget vs. Actual





DESERT WATER AGENCY

General Fund Budget

2024 / 2025

DESERT WATER AGENCY

GENERAL FUND

2024-2025 Budget with Prior Year Comparison

	ACTUAL 2022-2023	ACTUAL TO 3/31/2024	BUDGET 2023-2024	BUDGET 2024-2025	Increase / (Decrease)
OPERATING REVENUES					
Replenishment Assessments	$7,052,002	$5,861,108	$8,155,000	$8,492,000	$337,000
Power Sales - Whitewater Hydro	$48,429	$131,179	$129,000	$132,660	$3,660
TOTAL OPERATING REVENUES	**$7,100,431**	**$5,992,287**	**$8,284,000**	**$8,624,660**	**$340,660**
OPERATING EXPENSES					
SOURCE OF SUPPLY EXPENSE					
Whitewater Basin Management	$366,099	$175,872	$451,200	$454,000	$2,800
Indio Subbasin Management	$14,146	$0	$48,000	$50,000	$2,000
Mission Creek Subbasin Mgmt	$70,419	$65,355	$588,000	$522,000	($66,000)
Mission Creek - Garnett Hill Mgmt	$14,330	$0	$12,000	$50,000	$38,000
San Gorgonio Pass Subbasin Mgmt	$13,564	$0	$25,200	$25,000	($200)
SGMA	$46,071	$0	$50,400	$55,000	$4,600
USGS Water Quality Monitoring Sys	$10,597	$10,889	$15,600	$7,200	($8,400)
USGS Stream Gauging Study	$60,047	$61,703	$85,200	$93,200	$8,000
Groundwater Monitoring Wells	$0	$0	$0	$0	$0
Urban Water Management Plan	$0	$0	$0	$30,000	$30,000
Salt Nutrient Plan	$71,375	$0	$217,200	$234,000	$16,800
Legal - Water Rights	$137,464	$122,327	$372,000	$276,000	($96,000)
Water Banking - Metropolitan	$0	$0	$1,166,400	$0	($1,166,400)
Lake Perris Seepage Recovery Proj	$0	$0	$0	$0	$0
Other Source of Supply Expense	$0	$0	$12,000	$0	($12,000)
TOTAL SOURCE OF SUPPLY	$804,113	$436,145	$3,043,200	$1,796,400	($1,246,800)
STATE WATER PROJECT EXPENSE					
Delta O.M.P.& R.	$3,102,486	$2,205,782	$3,131,000	$3,088,000	($43,000)
Transportation O.M.P.& R.	$6,487,467	$5,912,766	$6,179,000	$8,115,000	$1,936,000
Transportation Variable O.M.P.& R.	$2,737,663	$1,445,296	$12,444,000	$10,348,000	($2,096,000)
Off-Aqueduct Power Facilities	$119,935	$83,681	$171,000	$214,000	$43,000
Replacement Component	$0	$0	$0	$0	$0
East Branch Enlargement	$628,326	$581,954	$835,000	$562,000	($273,000)
Delta Conveyance Facilities	$0	$0	$0	$0	$0
Water Purchases	$255,066	$0	$0	$100,000	$100,000
CVWD Reimb (Delta, Var, OAP)	($576,910)	($11,057)	($1,540,100)	($768,500)	$771,600
TOTAL STATE WATER PROJECT	$12,754,033	$10,218,422	$21,219,900	$21,658,500	$438,600

DESERT WATER AGENCY

GENERAL FUND

2024-2025 Budget with Prior Year Comparison

	ACTUAL 2022-2023	ACTUAL TO 3/31/2024	BUDGET 2023-2024	BUDGET 2024-2025	Increase / (Decrease)
WHITEWATER HYDRO EXPENSE					
Supervision & Labor	$18,517	$8,870	$39,600	$41,250	$1,650
Miscellaneous/SCE	$3,600	$5,026	$8,400	$13,000	$4,600
Tools & Work Equipment	$654	$0	$2,400	$3,000	$600
Maint Structures & Improvements	$1,000	$293	$1,200	$1,500	$300
Maint of Equipment	$66,644	$6,908	$152,400	$206,000	$53,600
Whitewater Hydro Contract Mgmt	$7,221	$10,559	$9,600	$19,200	$9,600
TOTAL WHITEWATER HYDRO	$97,636	$31,656	$213,600	$283,950	$70,350
CUSTOMER ACCOUNT EXPENSE					
Meter Reading Expense	$461	$786	$4,800	$5,000	$200
Uncollectible Accounts	$0	$0	$0	$0	$0
TOTAL CUSTOMER ACCOUNT	$461	$786	$4,800	$5,000	$200
ADMINISTRATIVE & GENERAL EXPENSE					
Salaries	$506,471	$374,298	$553,200	$720,000	$166,800
Directors' Fees	$64,309	$64,608	$116,400	$108,000	($8,400)
General Office Supplies & Expense	$82,792	$72,689	$159,600	$114,455	($45,145)
Utilities	$83,773	$49,505	$108,000	$98,400	($9,600)
Seminar & Travel Expense	$75,062	$3,379	$44,400	$85,200	$40,800
Legal Services	$427,300	$243,586	$612,000	$468,000	($144,000)
Professional Consulting Services	$152,637	$182,778	$380,400	$288,500	($91,900)
Engineering Services	$68,720	$26,214	$108,000	$72,000	($36,000)
State Water Contractors - Misc	$104,124	$114,395	$133,200	$121,200	($12,000)
Insurance & Claims	$87,351	$87,731	$117,600	$153,600	$36,000
Injury & Safety	$0	$0	$0	$8,400	$8,400
Information Technology	$0	$3,472	$0	$0	$0
Payroll Taxes	$74,471	$43,802	$50,400	$63,600	$13,200
Pension	$0	$233,886	$334,800	$400,400	$65,600
Health Care Benefits	$0	$0	$0	$122,400	$122,400
Other Employee Benefits	$465,869	$155,360	$111,600	$6,000	($105,600)
Operations Center Security	$471	$2,601	$12,000	$30,000	$18,000
Operations Center Maintenance	$113,268	$93,622	$219,600	$241,000	$21,400
Public Information	$230,507	$150,572	$231,600	$237,412	$5,812
Transportation Expense	$166	$605	$0	$1,200	$1,200
Water Conservation	$119,098	$67,900	$316,800	$202,250	($114,550)
Water Cons - Grass Removal	$1,733,837	$593,677	$1,845,600	$530,570	($1,315,030)
LAFCO Expenses	$17,340	$18,155	$19,200	$20,000	$800
Urban Water Management Plan	$50,973	$0	$16,800	$25,000	$8,200
Election Expense	$95,865	$0	$0	$110,000	$110,000
Direct/Indirect Costs	($40,020)	($1,097)	($72,000)	($144,000)	($72,000)
TOTAL ADMINISTRATIVE & GENERAL	$4,514,385	$2,581,736	$5,419,200	$4,083,587	($1,335,613)

DESERT WATER AGENCY

GENERAL FUND

2024-2025 Budget with Prior Year Comparison

	ACTUAL 2022-2023	ACTUAL TO 3/31/2024	BUDGET 2023-2024	BUDGET 2024-2025	Increase / (Decrease)
OTHER OPERATING EXPENSES					
Exp App to Prior Years	$83	$0	$0	$0	$0
Prior Year - State Water Project	($60,756)	$0	$0	$0	$0
Other Misc Expense	$0	$0	$0	$25,000	$25,000
Depreciation	$1,436,692	$0	$1,130,400	$1,520,000	$389,600
TOTAL OTHER OPERATING	$1,376,019	$0	$1,130,400	$1,545,000	$414,600
TOTAL OPERATING EXPENSES	**$19,546,647**	**$13,268,745**	**$31,031,100**	**$29,372,437**	**($1,658,663)**
NET INC/(LOSS) FROM OPERATIONS	($12,446,216)	($7,276,457)	($22,747,100)	($20,747,777)	$1,999,323
NON-OPERATING REVENUES					
Property Taxes	$45,286,416	$21,492,598	$40,352,000	$39,119,000	($1,233,000)
Gains/Loss Investments	($2,251,457)	($775,915)	($379,200)	($346,800)	$32,400
Interest - Invested Reserves	$3,051,400	$3,508,436	$3,636,000	$5,304,000	$1,668,000
Supplemental Imported Water Fees	$312,847	$325,395	$502,800	$428,400	($74,400)
Other Misc Income	$924	$0	$0	$0	$0
TOTAL NON-OPERATING REV	**$46,400,130**	**$24,550,514**	**$44,111,600**	**$44,504,600**	**$393,000**
NON-OPERATING EXPENSES					
Losses on Retirements	$0	$0	$0	$0	$0
TOTAL NON-OPERATING EXP	**$0**	**$0**	**$0**	**$0**	**$0**
TOTAL NET INCOME/(LOSS)	$33,953,914	$17,274,056	$21,364,500	$23,756,823	$2,392,323
APPLICATION OF COMMITTED FUNDS					
Bond Service - Principle & Interest	$1,344,084	$271,920	$1,344,650	$1,342,650	($2,000)
TOTAL COMMITTED FUNDS	**$1,344,084**	**$271,920**	**$1,344,650**	**$1,342,650**	**($2,000)**
BALANCE REMAINING	$32,609,829	$17,002,136	$20,019,850	$22,414,173	$2,394,323
Add Back Depreciation	$1,436,692	$0	$1,130,400	$1,520,000	$389,600
Funds Avail For Capital Additions	$34,046,522	$17,002,136	$21,150,250	$23,934,173	$2,783,923

DESERT WATER AGENCY

GENERAL FUND

2024-2025 Budget with Prior Year Comparison

	BUDGET 2023-2024	BUDGET 2024-2025	Increase / (Decrease)
CAPITAL ADDITIONS			
Delta	$1,810,800	$1,818,100	$7,300
Transportation	$2,170,000	$2,530,000	$360,000
Revenue Bond Surcharge	$1,383,000	$1,499,000	$116,000
East Branch Enlargement	$1,838,000	$2,086,000	$248,000
Tehachapi	$98,000	$98,000	$0
Delta Conveyance	$0	$0	$0
Lake Perris Seepage Recovery Project	$550,000	$550,000	$0
Sites Reservoir Project	$1,300,000	$335,000	($965,000)
Routine Capital Improvements	$219,000	$971,000	$752,000
TOTAL CAPITAL ADDITIONS	**$9,368,800**	**$9,887,100**	**$518,300**
BALANCE	$11,781,450	$14,047,073	$2,265,623
TOTAL BUDGET	**$41,744,550**	**$40,602,187**	**($1,142,363)**

	2023-2024 BEGIN BAL	2023-2024 ADJUSTMENTS	2024-2025 ADDITIONS	2024-2025 DELETIONS	BALANCE
Estimated Reserve Fund Balance 6/30/24					$259,050,000
RESTRICTED & UNRESTRICTED RESERVES					
State Water Contract Fund	$75,779,000	$0	$13,033,000	$0	$88,812,000
Reserve for Delta Conveyance	$19,238,000	$0	$0	$0	$19,238,000
Reserve For SWP Additional Water	$23,643,000	$15,000,000	$16,533,000	$0	$55,176,000
Reserve For Addtnl Non-SWP Water	$59,086,400	$22,433,000	$0	$0	$81,519,400
Land Acquisition Reserve	$5,000,000	$0	$0	$0	$5,000,000
Reserve For Operations	$6,004,800	$3,756,800	$0	($2,047,700)	$7,713,900
Reserve For Replacements	$10,346,800	($5,638,740)	$0	($16,660)	$4,691,400
Regulatory Compliance Reserve	$10,000,000	$0	$0	$0	$10,000,000
	$209,098,000	$35,551,060	$29,566,000	($2,064,360)	$272,150,700
Total Reserves - 6/30/25					($272,150,700)
Required for 2023-2024 Carryover Items					($945,605)
2024-2025 Budget Balance					$14,047,073
Unappropriated Fund Balance - 6/30/25					$768

BUDGET SUMMARY

Operating Expense	$29,372,437
Non-Operating Expense	$0
Application of Committed Funds	$1,342,650
Capital Additions	$9,887,100
TOTAL BUDGET	**$40,602,187**

DESERT WATER AGENCY

GENERAL FUND

2024 - 2025 Budget

Summary of Assessed Valuations
and Resulting Tax Rates

Assessed Valuations		
Secured	$24,712,867,040	
Unsecured	$927,435,135	
Total Estimated Assessed Valuations*		**$25,640,302,175**

Tax Rate	**2023-2024**	**2024-2025**
Secured	$0.08	$0.07
Unsecured	$0.10	$0.08

Estimated Revenue from Property Taxes		
Secured	$17,002,000	
Unsecured	$742,000	
SBE Unitary	$17,706,000	
RPTTF	$1,921,000	
County 1% General Purpose Allocation	$1,748,000	
TOTAL ESTIMATED PROPERTY TAXES		**$39,119,000**

* Assessed values reflect a combined 2.87% delinquency and value adjustment factor for secured and unsecured valuations

DESERT WATER AGENCY

GENERAL FUND

2024 - 2025 Budget

Estimated State Water Project Payments

	CAPITAL					O.M.P. & R.					TOTAL
	Rev. Bond Surcharge	Delta	Transport	Tehachapi	East Branch Enlrgmt	Delta	Transport	Variable	Off-Aq. Power Facilities	East Branch Enlrgmt	CAPITAL & OMP&R
2024											
July	$760,500	$1,028,000	$1,165,000	---	---	$242,200	$802,500	$945,600	$13,900	$50,600	$5,008,300
August	---	---	---	---	---	$242,200	$802,500	$945,600	$13,900	$50,600	$2,054,800
September	---	---	---	$48,500	$1,184,000	$242,200	$802,500	$945,600	$13,900	$50,600	$3,287,300
October	---	---	---	---	---	$242,200	$802,500	$945,600	$13,900	$50,600	$2,054,800
November	---	---	---	---	---	$242,200	$802,500	$945,600	$13,900	$50,600	$2,054,800
December	---	---	---	---	---	$242,200	$802,500	$945,500	$13,900	$50,600	$2,054,700
2025											
January	$738,500	$921,000	$1,365,000	---	---	$272,500	$550,000	$779,100	$21,700	$43,100	$4,690,900
February	---	---	---	---	---	$272,500	$550,000	$779,100	$21,700	$43,100	$1,666,400
March	---	---	---	$48,500	$902,000	$272,500	$550,000	$779,100	$21,700	$43,100	$2,616,900
April	---	---	---	---	---	$272,500	$550,000	$779,100	$21,700	$43,100	$1,666,400
May	---	---	---	---	---	$272,500	$550,000	$779,100	$21,700	$43,100	$1,666,400
June	---	---	---	---	---	$272,300	$550,000	$779,000	$21,700	$42,900	$1,665,900
Total	**$1,499,000**	**$1,949,000**	**$2,530,000**	**$97,000**	**$2,086,000**	**$3,088,000**	**$8,115,000**	**$10,348,000**	**$213,600**	**$562,000**	**$30,487,600**

Cost Share Agreement

DWA and CVWD have entered into a cost share agreement where the Variable, Delta Water and Off Aqueduct Charges are shared in proportion to production in a calendar year.

		Table A Allotment	Variable	Delta Charge	Off Aqueduct	Total	DWA 26.29%	CVWD 73.71%
2024	DWA	55,750 AF	$11,346,545	$5,098,707	$166,360	$16,611,612	$4,367,193	$12,244,419
	CVWD	128,450 AF	$29,986,945	$12,653,024	$189,128	$42,829,097	$11,259,770	$31,569,327
						$59,440,709	$15,626,962	$43,813,747
2025	DWA	55,750 AF	$9,348,081	$5,109,279	$260,010	$14,717,370	$3,869,197	$10,848,173
	CVWD	128,450 AF	$24,895,028	$12,679,258	$295,594	$37,869,880	$9,955,991	$27,913,889
						$52,587,250	$13,825,188	$38,762,062
					TOTALS	**$112,027,959**	**$29,452,150**	**$82,575,809**

Less Amount Billed Direct to CVWD	($80,698,977)
Amount Due To DWA	$1,876,832
ONE-HALF FOR FISCAL YEAR	$938,416

State Water Project Table A Allotments

DWA - 38,100 A.F. + MWD Transfer 11,900 A.F. = 50,000 A.F.
CVWD - 23,100 A.F. + MWD Transfer 88,100 A.F. + Tulare Transfer 9,000 A.F. = 121,100 A.F.
Beginning January 1, 2010 : Berrenda-Mesa 16,000 A.F. Transfer = DWA 4,000 A.F. / CVWD 12,000 A.F.
Beginning January 1, 2010 : Westlake Farms 7,000 A.F. Transfer = DWA 1,750 A.F. / CVWD 5,250 A.F.

Calendar years 2023 & 2024 = DWA 55,750 A.F. / CVWD 128,450 A.F.

DESERT WATER AGENCY

GENERAL FUND

2024 / 2025

Capital Improvements

PROJECT #	DESCRIPTION	ASSET ACCOUNT	ESTIMATED COST

Routine

MISCELLANEOUS

211034M00	M.C. Recharge Facility Flow Meter - Augment	180180	$575,000
241077M00	Operations Center Generator Platform	180571	$7,000
241078M00	Operations Center Electrical Upgrades	180571	$149,000
241079M00	Operations Center Lobby Counter Remodel	180571	$17,000
241080M00	Operations Center Office Construction (3 offices)	180571	$20,000
241081M00	Operations Center HVAC VAV Upgrades	180571	$39,000
241084M00	Operations Center Gate Communication System	180640	$9,000
241086M00	Xerox Copier	180680	$5,000
244099	Contingency - Other	VARIOUS	$150,000
		TOTAL MISCELLANEOUS	**$971,000**

TOTAL CAPITAL IMPROVEMENTS 2024-2025	**$971,000**

Reserve Policy Analysis

In June 2023, the Board of Directors revised the policy for Agency Reserves (Resolution No. 1302). Per section 5 of the policy, an annual review of the reserves will be presented during the annual budget presentation. Presented below is the reserve analysis:

State Water Contract Fund Reserve

Minimum reserve requirement is two and one half times prior year DWR Statement of Charges, not to exceed six times the total of such charges

2024 DWR Statement of Charges			
Delta Capital		$	2,054,898
Delta OMP&R		$	2,905,874
Transportation Capital		$	2,330,606
Transportation OMP&R		$	9,629,433
Variable Entitlement		$	11,203,742
Water System Revenue Bond		$	1,520,531
Off Aqueduct		$	166,360
Conservation Replacement		$	-
East Branch Enlargement Capital		$	1,010,022
East Branch Enlargement OMP&R		$	606,254
Tehachapi Second Afterbay		$	96,830
Total 2024 Statement of Charges		**$**	**31,524,550**
Minimum Reserve Requirement		*$*	*78,811,375*
Maximum Allowable Reserve Balance		*$*	*189,147,300*
2023 / 2024	Current Reserve Balance	$	75,779,000
2024 / 2025	Reserve Adjustment *	$	13,033,000
2024 / 2025	**Reserve Balance**	**$**	**88,812,000**
2024 / 2025	Minimum Target Reserve Shortfall	$	-
2024 / 2025	Maximum Reserve Shortfall	$	(100,335,300)

* Proposed $13,033,000 addition to the Reserve for Additional SWP Water in Fiscal Year 2024 / 2025

2024 / 2025	**STATE WATER CONTRACT RESERVE**	**$**	**88,812,000**

Reserve Policy Analysis

Reserve for Delta Conveyance Facilities

Minimum reserve requirement is two and one half times annual charges, not to exceed six times the total of such charges. The 10-year average from the most recent project cost projections and payment timeline have been used to establish the average annual charge.

10 Year DWR Cost projection		$	43,424,000
Average Annual Charge		$	4,342,400
Minimum Reserve Requirement		*$*	*10,856,000*
Maximum Allowable Reserve Balance		*$*	*26,054,400*
2023 / 2024	Current Reserve Balance	$	19,238,000
2024 / 2025	Reserve Adjustment *	$	-
2024 / 2025	**Reserve Balance**	**$**	**19,238,000**
2024 / 2025	Minimum Target Reserve Shortfall	$	-
2024 / 2025	Maximum Reserve Shortfall	$	(6,816,400)

* No proposed adjustment to the Reserve for Delta Conveyance Facilities in Fiscal Year 2024 / 2025

2024 / 2025	**RESERVE FOR DELTA CONVEYANCE**	**$**	**19,238,000**

DESERT WATER AGENCY

GENERAL FUND

2024 / 2025 Budget

Reserve Policy Analysis

Reserve for SWP Additional Water

The minimum reserve requirement should be greater than the prior year DWR Invoices, not to exceed five times the total of such charges

2024 DWR Statement of Charges			
Delta Capital		$	2,054,898
Delta OMP&R		$	2,905,874
Transportation Capital		$	2,330,606
Transportation OMP&R		$	9,629,433
Variable Entitlement		$	11,203,742
Water System Revenue Bond		$	1,520,531
Off Aqueduct		$	166,360
Conservation Replacement		$	-
East Branch Enlargement Capital		$	1,010,022
East Branch Enlargement OMP&R		$	606,254
Tehachapi Second Afterbay		$	96,830
Total 2024 Statement of Charges		**$**	**31,524,550**
Minimum Reserve Requirement		*$*	*31,524,550*
Maximum Allowable Reserve Balance		*$*	*157,622,750*
2023 / 2024	Current Reserve Balance	$	38,643,000
2024 / 2025	Reserve Adjustment *	$	16,533,000
2024 / 2025	**Reserve Balance**	**$**	**55,176,000**
2024 / 2025	Minimum Target Reserve Shortfall	$	-
2024 / 2025	Maximum Reserve Shortfall	$	(102,446,750)

* Proposed $16,533,000 addition to the Reserve for Additional SWP Water in Fiscal Year 2024 / 2025

2024 / 2025	**RESERVE FOR ADDITIONAL SWP WATER**	**$**	**55,176,000**

Reserve Policy Analysis

Reserve for Non-SWP Additional Water

The minimum reserve requirement should be greater than the prior year DWR Invoices, not to exceed five times the total of such charges. The DWR Invoices are utilized for setting the reserve target levels for Non-SWP Additional Water to establish the magnitude of costs associated with purchasing additional non State Water Project water.

2024 DWR Statement of Charges			
Delta Capital		$	2,054,898
Delta OMP&R		$	2,905,874
Transportation Capital		$	2,330,606
Transportation OMP&R		$	9,629,433
Variable Entitlement		$	11,203,742
Water System Revenue Bond		$	1,520,531
Off Aqueduct		$	166,360
Conservation Replacement		$	-
East Branch Enlargement Capital		$	1,010,022
East Branch Enlargement OMP&R		$	606,254
Tehachapi Second Afterbay		$	96,830
Total 2024 Statement of Charges		**$**	**31,524,550**
Minimum Reserve Requirement		*$*	*31,524,550*
Maximum Allowable Reserve Balance		*$*	*157,622,750*
2023 / 2024	Current Reserve Balance	$	81,519,400
2024 / 2025	Reserve Adjustment *	$	-
2024 / 2025	**Reserve Balance**	**$**	**81,519,400**
2024 / 2025	Minimum Target Reserve Shortfall	$	-
2024 / 2025	Maximum Reserve Shortfall	$	(76,103,350)

* No proposed adjustment to the Reserve for Additional Non-SWP Water in Fiscal Year 2024 / 2025

2024 / 2025 RESERVE FOR ADDTINL NON-SWP WATER $ 81,519,400

DESERT WATER AGENCY

GENERAL FUND

2024 / 2025 Budget

Reserve Policy Analysis

Reserve for Land Acquisitions

Reserve shall not exceed $5,000,000

	Maximum Reserve Balance		*$*	*5,000,000*
2023 / 2024	Current Reserve Balance		$	5,000,000
2024 / 2025	Reserve Adjustment *		$	-
2024 / 2025	**Reserve Balance**		**$**	**5,000,000**
2024 / 2025	Maximum Reserve Shortfall		$	-

* No proposed adjustment to the Reserve for Land Acquision in 2024 / 2025, reserve is at maxium allowable balance.

2024 / 2025	**RESERVE FOR LAND ACQUISITIONS**	**$**	**5,000,000**

Reserve for Operations

Reserve should be equal to 6-months to 1 year of operations

	2024 / 2025	Cost of Operations	$	30,213,737
Less:	2024 / 2025	State Water Project Expense	$	(22,499,800)
	Net Cost of Operations		$	7,713,937
	Minimum Reserve Requirement		*$*	*3,856,969*
	Maximum Allowable Reserve Balance		*$*	*7,713,937*
	2023 / 2024	Current Reserve Balance	$	9,761,600
	2024 / 2025	Reserve Adjustment *	$	(2,047,700)
	2024 / 2025	**Reserve Balance**	**$**	**7,713,900**
	2024 / 2025	Minimum Target Reserve Shortfall	$	-
	2024 / 2025	Maximum Reserve Shortfall	$	-

* Proposed $2,047,700 reduction to the Reserve for Operations in Fiscal Year 2024 / 2025

2024 / 2025	**RESERVE FOR OPERATIONS**	**$**	**7,713,900**

DESERT WATER AGENCY

GENERAL FUND

2024 / 2025 Budget

Reserve Policy Analysis

Reserve for Replacements

Reserve should be equal to at least 6% of Agency infrastructure and not to exceed 10% of fixed assets (excluding State Water Project Capital)

Agency Infrastructure at 6/30/2023		$	179,623,265
Less:	SWP - Transportation	$	(74,132,137)
	SWP - Delta	$	(22,081,538)
	SWP - East Branch Enlargement	$	(27,251,674)
	SWP - Water System Rev Bond	$	(9,143,658)
	SWP - Advance Water Deliveries	$	(69,273)
	SWP - Tehachapi Second Afterbay	$	(31,081)
Net Accumulated Depreciation		**$**	**46,913,904**
Minimum Reserve Balance		*$*	*2,814,834*
Maximum Reserve Balance		*$*	*4,691,390*
2023 / 2024	Current Reserve Balance	$	4,708,060
2024 / 2025	Reserve Adjustment *	$	(16,660)
2024 / 2025	**Reserve Balance**	**$**	**4,691,400**
2024 / 2025	Minimum Reserve Shortfall	$	-
2024 / 2025	Maximum Reserve Shortfall	$	-

* Proposed $16,600 reduction to the Reserve for Replacements in Fiscal Year 2024 / 2025

2024 / 2025	**RESERVE FOR REPLACEMENTS**	**$**	**4,691,400**

DESERT WATER AGENCY

GENERAL FUND

2024 / 2025 Budget

Reserve Policy Analysis

Reserve for Regulatory Compliance

Reserve shall not exceed $10,000,000

Maximum Reserve Balance		*$*	*10,000,000*
2023 / 2024	Current Reserve Balance	$	10,000,000
2024 / 2025	Reserve Adjustment *	$	-
2024 / 2025	**Reserve Balance**	**$**	**10,000,000**
2024 / 2025	Maximum Reserve Shortfall	$	-

* No proposed adjustment to the Reserve for Regulatory Compliance in 2024 / 2025, reserve is at maxium allowable balance.

2024 / 2025	**RESERVE FOR REGULATORY COMPLIANCE**	**$**	**10,000,000**

Reserve Policy Summary

**	2024 / 2025	Minimum Reserve Requirement	$	174,388,278	*
**	2024 / 2025	Maximum Reserve Requirement	$	557,852,527	
	2024 / 2025	**Projected Total Reserves**	**$**	**272,150,700**	
	2024 / 2025	Projected Minimum Reserve Shortfall	$	-	
	2024 / 2025	Projected Maximum Reserve Shortfall	$	(285,701,827)	

* Where no minimum reserve balance is established, the maximum reserve balance is used

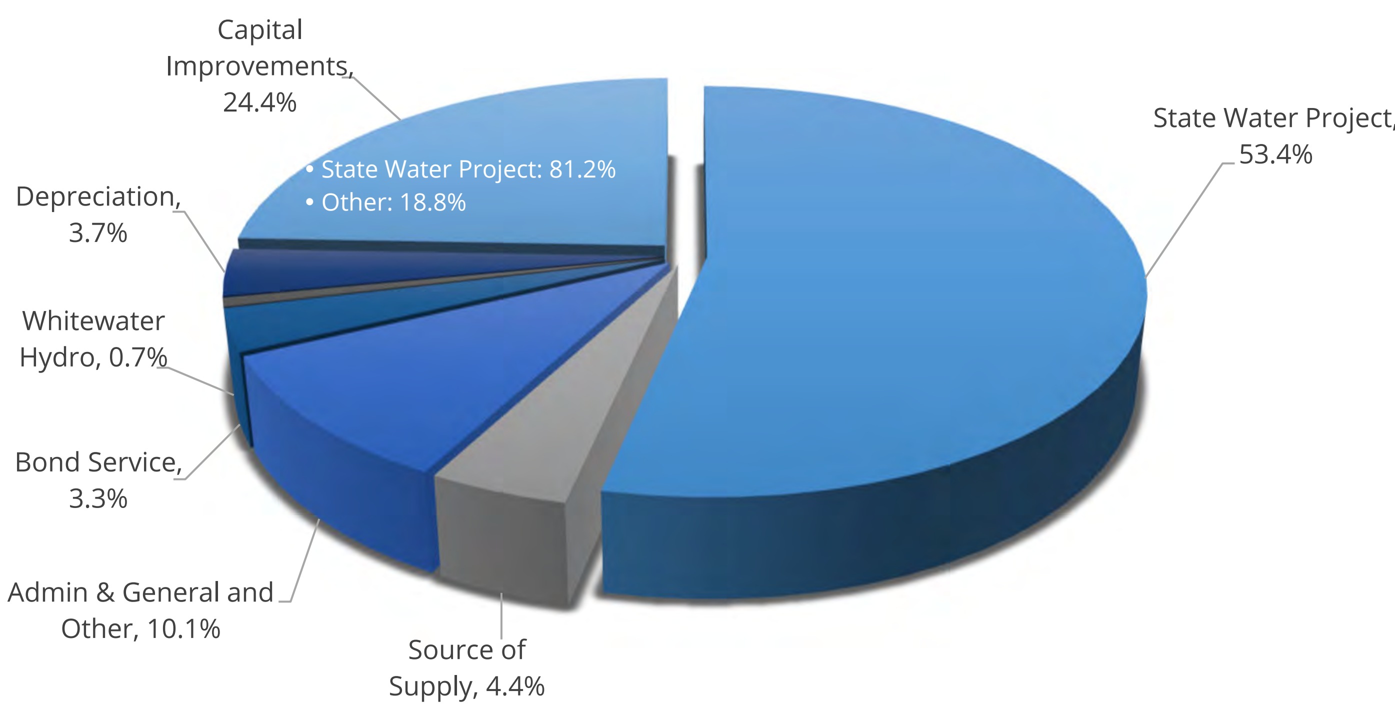
** Reserve Policy and Reserve Requirements (Resolution No. 1302)

DESERT WATER AGENCY

GENERAL FUND BUDGET

2024 / 2025 Budget Summary

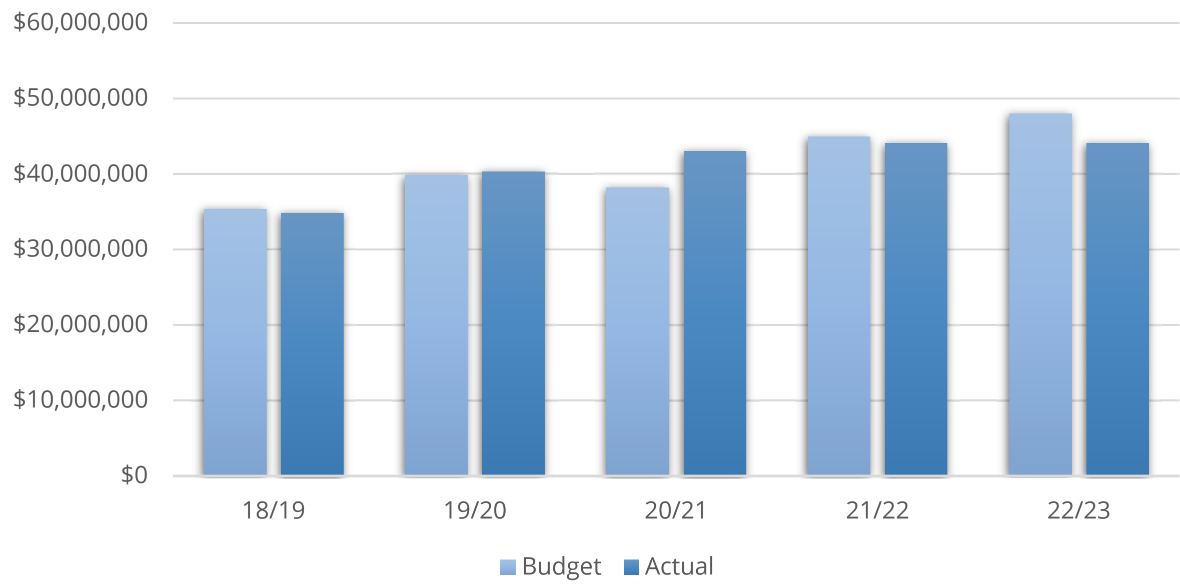
Category	Cost	%
State Water Project	$ 21,658,500	53.4%
Source of Supply	$ 1,796,400	4.4%
Admin & General and Other	$ 4,113,587	10.1%
Bond Service	$ 1,342,650	3.3%
Whitewater Hydro	$ 283,950	0.7%
Depreciation	$ 1,520,000	3.7%
Capital Improvements	$ 9,887,100	24.4%
TOTAL	**$ 40,602,187**	**100.0%**



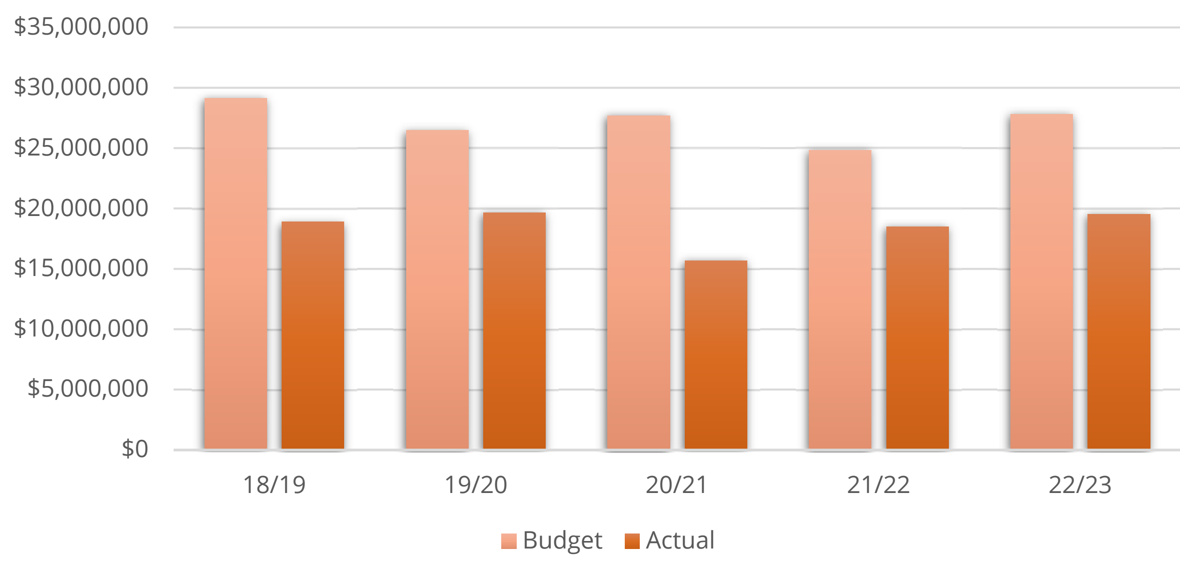
DESERT WATER AGENCY
GENERAL FUND

Historical Analysis
Budget vs. Actual

Revenues



Expenses



DESERT WATER AGENCY

Wastewater Fund Budget

2024 / 2025

DESERT WATER AGENCY

WASTEWATER FUND

2024-2025 Budget with Prior Year Comparison

	ACTUAL 2022-2023	ACTUAL TO 3/31/2024	BUDGET 2023-2024	BUDGET 2024-2025	Increase / (Decrease)
OPERATING REVENUES					
Wastewater Service	$1,152,400	$851,879	$1,299,600	$1,423,200	$123,600
Plan Check Fees/Inspection/Srvs	$0	$8,980	$1,160	$0	($1,160)
TOTAL OPERATING REVENUES	**$1,152,400**	**$860,859**	**$1,300,760**	**$1,423,200**	**$122,440**
OPERATING EXPENSES					
MAINTENANCE & OPERATIONS					
Maintenance of Pumps	$43	$77,386	$3,600	$2,550	($1,050)
Maintenance of Laterals	$12,041	$15,212	$7,200	$18,500	$11,300
Maintenance of Lift Stations	$104,262	$92,639	$92,400	$171,750	$79,350
Maintenance of Mains	$118,867	$41,818	$142,800	$155,000	$12,200
Transportation Expense	$23,785	$4,052	$6,000	$26,400	$20,400
Tools & Work Equipment	$54	$131	$6,000	$0	($6,000)
Other Maint & Operations	$0	$0	$2,400	$0	($2,400)
TOTAL MAINT & OPERATIONS	$259,053	$231,237	$260,400	$374,200	$113,800
WASTEWATER TREATMENT SERVICE EXPENSE					
Coachella Valley Water District	$749,212	$661,129	$890,400	$961,200	$70,800
City of Palm Springs	$110,253	$82,729	$111,600	$112,800	$1,200
TOTAL WW TREATMENT SERVICE	$859,465	$743,858	$1,002,000	$1,074,000	$72,000
ADMINISTRATIVE & GENERAL EXPENSE					
General Office Supplies & Expense	$443	$1,080	$1,200	$3,200	$2,000
Utilities	$15,589	$10,920	$27,600	$1,200	($26,400)
Legal Services	$2,995	$783	$6,000	$6,000	$0
Professional Consulting Services	$1,155	$2,126	$2,400	$2,500	$100
Engineering Services	$0	$0	$3,600	$3,600	$0
Insurance & Claims	$14,837	$17,518	$19,200	$22,800	$3,600
Information Technology	$510	$0	$2,400	$2,400	$0
Communications Equipment	$0	$0	$2,400	$3,000	$600
Misc Admin & General Exp	$792	$799	$850	$850	$0
TOTAL ADMINISTRATIVE & GENERAL	$36,322	$33,226	$65,650	$45,550	($20,100)
OTHER OPERATING EXPENSE					
Regulatory Expense	$0	$0	$0	$0	$0
Uncollectible Accounts	$0	$0	$0	$0	$0
Exp App to Prior Years	$0	$0	$0	$0	$0
Depreciation	$578,598	$0	$585,600	$588,000	$2,400
Other Misc Operating Expense	$91	$0	$0	$0	$0
TOTAL OTHER OPERATING	$578,689	$0	$585,600	$588,000	$2,400
TOTAL OPERATING EXPENSES	**$1,733,530**	**$1,008,321**	**$1,913,650**	**$2,081,750**	**$168,100**
NET INCOME FROM OPERATIONS	($581,130)	($147,461)	($612,890)	($658,550)	($45,660)

DESERT WATER AGENCY

WASTEWATER FUND

2024-2025 Budget with Prior Year Comparison

	ACTUAL 2022-2023	ACTUAL TO 3/31/2024	BUDGET 2023-2024	BUDGET 2024-2025	Increase / (Decrease)
NON-OPERATING REVENUES					
Interest Short Term	$34,915	$47,346	$48,000	$61,200	$13,200
Contributed Revenue - Customer	$161,962	$0	$0	$0	$0
Capacity Charges	$3,421	$37,414	$4,800	$13,200	$8,400
Other Misc Income/(Expense)	$0	$0	$0	$0	$0
TOTAL NON-OPERATING REV	**$200,298**	**$84,760**	**$52,800**	**$74,400**	**$21,600**
NON-OPERATING EXPENSES					
Loss on Retirement	$0	$0	$0	$0	$0
TOTAL NON-OPERATING EXP	**$0**	**$0**	**$0**	**$0**	**$0**
TOTAL NET INCOME/(LOSS)	($380,832)	($62,701)	($560,090)	($584,150)	($24,060)
APPLICATION OF COMMITTED FUNDS					
Principal - General Fund Loan	$0	$0	$0	$0	$0
Principal - Operating Fund Loan	$0	$0	$0	$0	$0
TOTAL COMMITTED FUNDS	**$0**	**$0**	**$0**	**$0**	**$0**
Balance Remaining	($380,832)	($62,701)	($560,090)	($584,150)	($24,060)
Add Back Depreciation	$578,598	$0	$585,600	$588,000	$2,400
Funds Avail. Capital Additions	$197,767	($62,701)	$25,510	$3,850	($21,660)

LESS CAPITAL ADDITIONS	BUDGET 2023-2024	BUDGET 2024-2025	Increase / (Decrease)
Routine Capital Improvements	$15,000	$15,000	$0
TOTAL CAPITAL ADDITIONS	**$15,000**	**$15,000**	**$0**
BALANCE	$10,510	($11,150)	($21,660)
TOTAL BUDGET	**$1,928,650**	**$2,096,750**	**$2,400**

ESTIMATED RESERVE FUND BALANCE

Estimated Reserve Fund Balance 6/30/24	$1,787,000
2024-2025 Budget Balance	($11,150)
Required for 2023-2024 Carryover Items	($161,530)
Estimated Reserve Fund Balance 6/30/25	$1,614,320

BUDGET SUMMARY

Operating Expenses	$588,000
Non-operating Expenses	$0
Application of Committed Funds	$0
Capital Additions	$15,000
TOTAL BUDGET	**$603,000**

Capital Improvements

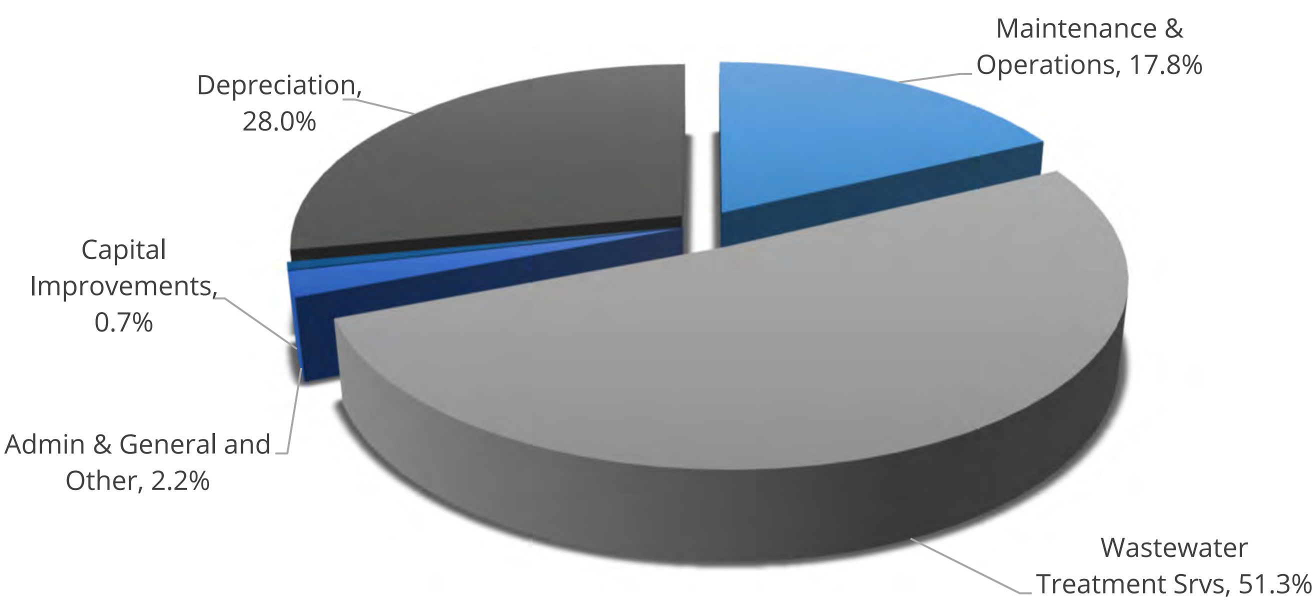
PROJECT #	DESCRIPTION	ASSET ACCOUNT	ESTIMATED COST
Routine			
MISCELLANEOUS			
244099	Contingency - Other	VARIOUS	$15,000
		TOTAL MISCELLANEOUS	**$15,000**
TOTAL CAPITAL IMPROVEMENTS 2024-2025			**$15,000**

DESERT WATER AGENCY

WASTEWATER FUND BUDGET

2024 / 2025 Budget Summary

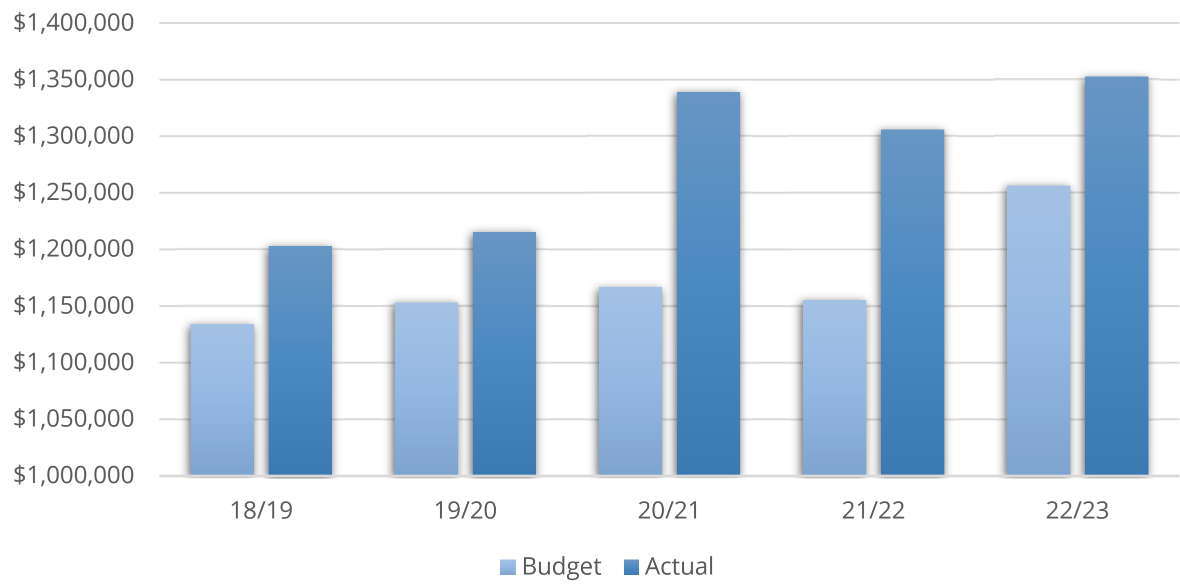
Category		Cost	%
Maintenance & Operations	$	374,200	17.8%
Wastewater Treatment Srvs	$	1,074,000	51.3%
Admin & General and Other	$	45,550	2.2%
Capital Improvements	$	15,000	0.7%
Depreciation	$	588,000	28.0%
TOTAL	**$**	**2,096,750**	**100.0%**



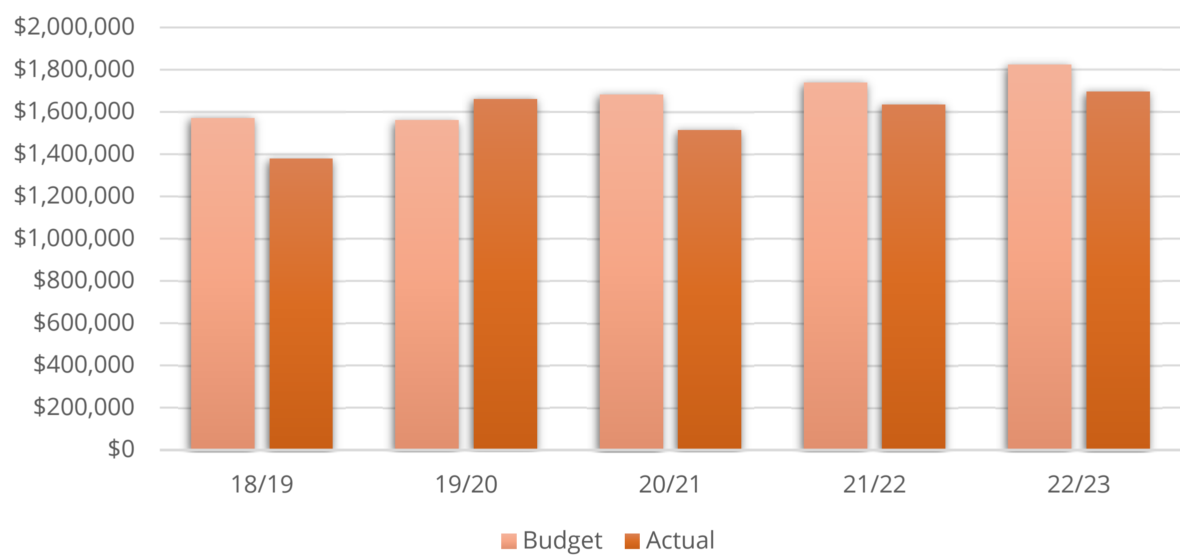
DESERT WATER AGENCY
WASTEWATER FUND

Historical Analysis
Budget vs. Actual

Revenues



Expenses



STAFF REPORT
TO
DESERT WATER AGENCY
BOARD OF DIRECTORS

JUNE 18, 2024

RE: REQUEST BOARD AUTHORIZATION FOR GENERAL MANAGER TO EXECUTE LAND LEASE AGREEMENT WITH PALM SPRINGS SURF CLUB (PSSC) LLC

Palm Springs Surf Club (PSSC) LLC is seeking a land lease agreement over approximately 2,500 square feet portion of Desert Water Agency's recycled water plant property for use as a fire lane access to the Surf Club property immediately adjacent to the Agency's property. The agreement allows for improvements within the leased space with consent by the Agency, however, if the lease is terminated, or expires, the lessee, within 30 days, shall remove all improvements and restore the space to its original condition.

The lease shall be for ten (10) years with an automatic extension of two (2) additional five (5) year terms.

Attached for the Board's review is a copy of the proposed Land Lease Agreement. The first year's lease payment will be $3,100. After the first year, rent shall increase annually by an amount equal to the greater of 4% or the CPI increase based on the prior twelve-month period.

Fiscal Impact:
The fiscal impact for the 2024/2025 fiscal year is $3,100 and at least $37,200 for the first 10-year term within the lease agreement. Finance Director Saenz has reviewed this report.

Legal Review:
Legal Counsel has reviewed this report.

Recommendation:
Staff requests Board authorization for the General Manager to execute the lease agreement with Palm Springs Surf Club (PSSC) LLC.

Attachments:
Attachment #1 – Land Lease Agreement

LAND LEASE AGREEMENT

This Agreement, made this ___ day of June, 2024 between Desert Water Agency with its principal offices located at 1200 Gene Autry Trail South, Palm Springs California 92264 (telephone number 760-323-4971), hereinafter designated LESSOR and PSSC, LLC doing business as The Palm Springs Surf Club, located at 1500 S Gene Autry Trail, Palm Springs California 92264 (telephone number 303-410-5050), hereinafter designated LESSEE. The LESSOR and LESSEE are at times collectively referred to hereinafter as the "Parties" or individually as the "Party".

LESSOR is the owner of that certain real property located in the City of Palm Springs, Riverside County, State of California, commonly known as Assessor's Parcel No. 680-180-027 and more particularly described in Exhibit "A" (the "Property"). LESSEE desires to lease a portion of the Property as shown on Exhibit "A" attached hereto and made a part hereof.

1. <u>LEASED PREMISES</u>. LESSOR hereby leases to LESSEE a portion of the Property, described as a rectangle shaped area containing approximately two thousand, five hundred (2,500) square feet depicted in Exhibit "B" attached hereto and made a part hereof (the "Leased Space") for use as a fire lane access to the Surf Club property immediately adjacent thereto.

2. <u>SURVEY</u>. LESSOR also hereby grants to LESSEE the right to survey the Leased Space, and said survey shall then become Exhibit "C" which shall be attached hereto and made a part hereof, and shall control in the event of boundary discrepancies between it and Exhibit "B". Cost for such work shall be borne by the LESSEE.

3. <u>TERM; RENTAL</u>.

a. This Agreement shall be effective as of the date of execution by both Parties, provided, however, the initial term shall be for ten (10) years and shall commence on the Commencement Date (as hereinafter defined) at which time rental payments for the first year of the initial term shall commence and be due at a total annual rental of Three Thousand, One Hundred Dollars ($3,100) to be paid on the first day of July, to LESSOR or to such other person, firm or place as LESSOR may, from time to time, designate in writing at least thirty (30) days in advance of any rental payment date by notice given in accordance with Paragraph 23 below (being the "Commencement Date").

b. Upon agreement of the Parties, LESSEE may pay rent by electronic funds transfer and in such event, LESSOR agrees to provide to LESSEE bank routing information for such purpose upon request of LESSEE. If, at any time, LESSEE fails to make any payment within 10 days after its due date, then a late charge equal to five percent (5%) of such past due amount, as well as interest which shall accrue on the past due amount until paid in full at the rate of one percent (1%) per month or the maximum allowable by law, whichever is less.

4. <u>EXTENSIONS</u>. Provided that LESSEE is not then in default of this Agreement, this Agreement shall automatically be extended for two (2) additional five (5) year terms

unless LESSEE terminates it at the end of the then current term by giving LESSOR written notice of the intent to terminate at least six (6) months prior to the end of the then current term.

5. ANNUAL RENTAL INCREASE. The annual rental shall increase annually on each anniversary of the Commencement Date by an amount equal to the greater of: (i) four percent (4%) or (ii) the most recently available increase during the prior twelve month period in the Consumer Price Index – All Urban Consumers, Riverside-San Bernardino-Ontario, CA (All items; December 2017 equals 100) issued by the U.S. Department of Labor, Bureau of Labor Statistics or any successor agency ("CPI-U").

6. ADDITIONAL EXTENSIONS. If at the end of the two (2) five (5) year extension terms this Agreement has not been terminated by either Party by giving to the other written notice of an intention to terminate it at least six (6) months prior to the end of such term, and provided that LESSEE is not then in default of this Agreement, this Agreement shall continue in force upon the same covenants, terms and conditions for a further term of one (1) year and for one (1) year terms thereafter until terminated by either Party by giving to the other written notice of its intention to so terminate at least three (3) months prior to the end of such term. Annual rental for each such additional one (1) year term shall be equal to the annual rental payable with respect to the immediately preceding year, plus the applicable annual rent increase under Section 5. The initial term and all extensions shall be collectively referred to herein as the "Term".

7. TAXES. LESSOR hereby provides notice pursuant to California Revenue and Taxation Code Section 107.6, and LESSEE acknowledges that this Agreement may create a possessory interest and LESSEE may be subject to property taxes levied on such interest, as described in California Revenue and Taxation Code Section 107. LESSEE shall have the responsibility to pay any personal property, real estate taxes, assessments, or charges owed on the Property which LESSOR demonstrates is the result of LESSEE's use of the Leased Space and/or the installation, maintenance, and operation of the LESSEE's improvements, and any sales tax imposed on the rent (except to the extent that LESSEE is or may become exempt from the payment of sales tax in the jurisdiction in which the Leased Space is located), including any increase in real estate taxes at the Property which LESSOR demonstrates arises from the LESSEE's improvements and/or LESSEE's use of the Leased Space. LESSOR and LESSEE shall each be responsible for the payment of any taxes, levies, assessments and other charges imposed including franchise and similar taxes imposed upon the business conducted by LESSOR or LESSEE at the Property. Notwithstanding the foregoing, neither Party shall have the obligation to pay any tax, assessment, or charge that the Party is disputing in good faith in appropriate proceedings prior to a final determination that such tax is properly assessed provided that no lien attaches to the Property. Nothing in this Paragraph shall be construed as making either Party liable for any portion of the other Party's taxes in connection with any property or otherwise. Except as set forth in this Paragraph, LESSOR shall have the responsibility to pay any personal property, real estate taxes, assessments, or charges owed on the Property and shall do so prior to the imposition of any lien on the Property.

LESSEE shall have the right, at its sole option and at its sole cost and expense, to appeal, challenge or seek modification of any tax assessment or billing for which LESSEE is wholly or partly responsible for payment. LESSOR shall reasonably cooperate with LESSEE at LESSEE's expense in filing, prosecuting and perfecting any appeal or challenge to taxes as set forth in the preceding sentence, including but not limited to, executing any consent, appeal or other similar document. In the event that as a result of any appeal or challenge by LESSEE, there is a reduction, credit or repayment received by the LESSOR for any taxes previously paid by LESSEE, LESSOR agrees to promptly reimburse to LESSEE the amount of said reduction, credit or repayment.

8. USE; GOVERNMENTAL APPROVALS.

a. LESSEE shall use the Leased Space only for the purpose of providing fire lane access to the Surf Club property. All improvements shall be at LESSEE's expense and their installation shall be at the discretion and option of LESSEE; provided that LESSEE shall not add, modify or otherwise vary from approved plans without the prior written consent of LESSOR. LESSEE shall have the right to replace or repair its improvements or any portion thereof without the prior consent of LESSOR provided that such replacements or repairs do not expand outside of the Leased Space, interfere with facilities of LESSOR or other lessees located on the Property. LESSEE shall prepare and provide to LESSOR an Exhibit describing the replacement or repairs within 30 days of LESSOR's request for same.

b. It is understood and agreed that LESSEE's ability to use the Leased Space is contingent upon its obtaining all of the certificates, permits and other approvals (collectively the "Governmental Approvals") that may be required by any Federal, State or Local authorities. LESSOR shall reasonably cooperate with LESSEE in its effort to obtain such approvals and shall take no action which would adversely affect the status of the Leased Space with respect to the proposed use thereof by LESSEE. In the event that prior to the Commencement Date, (i) any of such applications for such Governmental Approvals should be finally rejected; (ii) LESSEE determines that such Governmental Approvals may not be obtained in a timely manner; (iii) LESSEE determines that the Leased Space is no longer technically compatible for its use, or (iv) LESSEE, in its sole discretion, determines that the use of the Leased Space is obsolete or unnecessary, LESSEE shall have the right to terminate this Agreement. Notice of LESSEE's exercise of its right to terminate shall be given to LESSOR in writing by certified mail, return receipt requested, and shall be effective upon the mailing of such notice by LESSEE, or upon such later date as designated by LESSEE. All rentals paid to said termination date shall be retained by LESSOR. Upon such termination, this Agreement shall be of no further force or effect except to the extent of the representations, warranties and indemnities made by each Party to the other hereunder. Otherwise, the LESSEE shall have no further obligations for the payment of rent to LESSOR.

c. All replacements or repairs on the Leased Space by LESSEE shall comply with all applicable rules and regulations of all applicable federal, state, city, county and local codes and regulations. LESSOR assumes no responsibility for the maintenance of the LESSEE's facilities or activities on the Leased Space.

9. INDEMNIFICATION. Subject to Paragraph 10 below, each Party shall indemnify and hold the other harmless against any claim of liability or loss from personal injury or property damage resulting from or arising out of the negligence or willful misconduct of the

indemnifying Party, its employees, contractors or agents, except to the extent such claims or damages may be due to or caused by the negligence or willful misconduct of the other Party, or its employees, contractors or agents.

10. INSURANCE.

a. Notwithstanding the indemnity in section 9, the LESSEE hereby waives and releases any and all rights of action for negligence against the LESSOR which may hereafter arise on account of damage to the Leased Space or to LESSEE's adjacent Surf Club property, resulting from any fire, or other casualty of the kind covered by standard fire insurance policies with extended coverage, regardless of whether or not, or in what amounts, such insurance is now or hereafter carried by the LESSEE. This waiver and release shall apply to the LESSEE's claims and it shall also apply to any claims under or through the LESSEE as a result of any asserted right of subrogation.

b. LESSEE will maintain at its own cost;

i. Commercial General Liability insurance with limits not less than $2,000,000 for injury to or death of one or more persons in any one occurrence and $1,000,000 for damage or destruction to property in any one occurrence

ii. Commercial Auto Liability insurance on all owned, non-owned and hired automobiles with a minimum combined limit of not less than one million ($1,000,000) per occurrence

iii. Workers Compensation insurance providing the statutory benefits and not less than one million ($1,000,000) of Employers Liability coverage.

LESSEE will include the LESSOR as an additional insured on the Commercial General Liability and Auto Liability policies with respect to its use of the Leased Space.

11. LIMITATION OF LIABILITY. LESSOR shall not be liable to the LESSEE, or any of its agents, representatives, employees for any lost revenue, lost profits, loss of technology, rights or services, incidental, punitive, indirect, special or consequential damages, loss of data, or interruption or loss of use of service, even if advised of the possibility of such damages, whether under theory of contract, tort (including negligence), strict liability or otherwise.

12. [***intentionally omitted***]

13. INTERFERENCE. LESSEE acknowledges that the primary purpose of the Property is to serve as the Recycled Water Treatment Plant for Desert Water Agency, and LESSEE shall conduct itself at all times in such as manner as to avoid disrupting, diminishing or interfering with the primary purpose of the Property, or the use or enjoyment of the Property by LESSOR's invitees or other lessees or licensees. The Parties acknowledge that there will not be an adequate remedy at law for noncompliance with the provisions of this Paragraph and therefore, either Party

shall have the right to equitable remedies, such as, without limitation, injunctive relief and specific performance.

14. REMOVAL AT END OF TERM. LESSEE shall, upon expiration of the Term, or within thirty (30) days after any earlier termination of the Agreement, remove all improvements, to include walls, footings, fencing, and landscape, and all personal property and restore the Leased Space to its original condition, reasonable wear and tear and casualty damage excepted. LESSOR agrees and acknowledges that all of the improvements installed by the LESSEE shall remain the personal property of LESSEE and LESSEE shall have the right to remove the same at any time during the Term, whether or not said items are considered fixtures and attachments to real property under applicable Laws (as defined in Paragraph 33 below). If such time for removal causes LESSEE to remain on the Leased Space after termination of this Agreement, LESSEE shall pay rent at the then existing annual rate or on the existing annual pro-rata basis if based upon a longer payment term, until such time as the removal of the improvements and all personal property are completed.

15. HOLDOVER. LESSEE has no right to retain possession of the Leased Space or any part thereof beyond the expiration of that removal period set forth in Paragraph 14 herein, unless the Parties are negotiating a new lease or lease extension in good faith. In the event that the Parties are not in the process of negotiating a new lease or lease extension in good faith, LESSEE holds over in violation of Paragraph 14 and this Paragraph 15, then the rent then in effect payable from and after the time of the expiration or earlier removal period set forth in Paragraph 14 shall be one hundred fifty percent (150%) of the rent applicable during the month immediately preceding such expiration or earlier termination.

16. [***intentionally omitted***].

17. [***intentionally omitted***]

18. QUIET ENJOYMENT. LESSOR covenants that LESSEE, on paying the rent and performing the covenants herein, shall peaceably and quietly have, hold and enjoy the Leased Space.

19. TITLE. LESSOR represents and warrants to LESSEE as of the execution date of this Agreement, and covenants during the Term that LESSOR is seized of good and sufficient title and interest to the Property and has full authority to enter into and execute this Agreement.

20. INTEGRATION. It is agreed and understood that this Agreement contains all agreements, promises and understandings between LESSOR and LESSEE and that no verbal or oral agreements, promises or understandings shall be binding upon either LESSOR or LESSEE in any dispute, controversy or proceeding at law, and any addition, variation or modification to this Agreement shall be void and ineffective unless made in writing signed by the Parties or in a written acknowledgment in the case provided in Paragraph 3. In the event any provision of the Agreement is found to be invalid or unenforceable, such finding shall not affect the validity and enforceability of the remaining provisions of this Agreement. The failure of either Party to insist

upon strict performance of any of the terms or conditions of this Agreement or to exercise any of its rights under the Agreement shall not waive such rights and such Party shall have the right to enforce such rights at any time and take such action as may be lawful and authorized under this Agreement, in law or in equity.

21. GOVERNING LAW. This Agreement and the performance thereof shall be governed, interpreted, construed and regulated by the Laws of the State of California without giving effect to principles of conflicts of laws, and venue shall be in the courts of Riverside County and the federal Central District of California

22. ASSIGNMENT. LESSEE may not assign this Agreement in whole or in part or sublet any portion of the Leased Space (including a sublease to an Affiliate) without the express written consent of the LESSOR. Notwithstanding the foregoing, LESSEE may assign this Agreement in whole to any person or business entity which is an “Affiliate” of LESSEE upon written notification to LESSOR. The term “Affiliate” means a person that (directly or indirectly) owns or controls, is owned or controlled by, or is under common ownership or control with, LESSEE. The term “own” means to own an equity interest (or the equivalent thereof) of more than 50 percent. Notwithstanding California Civil Code Sections 1995.260 and 1995.270, LESSOR can withhold its consent to any assignment or sublicense in its sole and complete discretion, if to a party other than an Affiliate. Any assignment consented to by LESSOR in its sole discretion shall not operate to release the assigning LESSEE from its liabilities and obligations arising hereunder unless specifically granted.

23. NOTICES. All notices hereunder must be in writing and shall be deemed validly given if sent by certified mail, return receipt requested or by commercial courier, provided the courier's regular business is delivery service and provided further that it guarantees delivery to the addressee by the end of the next business day following the courier's receipt from the sender, addressed as follows (or any other address that the Party to be notified may have designated to the sender by like notice):

LESSOR: Desert Water Agency
1200 Gene Autry Trail South
Palm Springs, CA 92264
Attn: Steve L. Johnson, General Manager

LESSEE: PSSC, LLC DBA: The Palm Springs Surf Club
1500 S Gene Autry Trail
Palm Springs, CA 92264
Attn: Tim O’Byrne

Notice shall be effective upon actual receipt or refusal as shown on the receipt obtained pursuant to the foregoing.

24. SUCCESSORS. This Agreement shall extend to and bind the heirs, personal representative, successors and permitted assigns of the Parties hereto.

25. SUBORDINATION AND NON-DISTURBANCE. At LESSOR's option, this Agreement shall be subordinate to any future master lease, ground lease, mortgage, deed of trust or other security interest (a “Mortgage”) by LESSOR which from time to time may encumber all or part of the Leased Space or right-of-way; provided, however, as a condition precedent to LESSEE being required to subordinate its interest in this Agreement to any future Mortgage covering the Leased Space, LESSOR shall obtain for LESSEE's benefit a non-disturbance and attornment agreement for LESSEE's benefit in the form reasonably satisfactory to LESSEE, and containing the terms described below (the “Non-Disturbance Agreement”), and shall recognize LESSEE's right to remain in occupancy of and have access to the Leased Space as long as LESSEE is not in default of this Agreement. The Non-Disturbance Agreement shall include the encumbering party's (“Lender's”) agreement that, if Lender or its successor-in-interest or any purchaser of Lender’s or its successor’s interest (a “Purchaser”) acquires an ownership interest in the Leased Space, Lender or such successor-in-interest or Purchaser will (1) honor all of the terms of the Agreement, (2) fulfill LESSOR's obligations under the Agreement, and (3) promptly cure all of the then-existing LESSOR defaults under the Agreement. Such Non-Disturbance Agreement must be binding on all of Lender's participants in the subject loan (if any) and on all successors and assigns of Lender and/or its participants and on all Purchasers. In return for such Non-Disturbance Agreement, LESSEE will execute an agreement for Lender's benefit in which LESSEE (1) confirms that the Agreement is subordinate to the Mortgage or other real property interest in favor of Lender, (2) agrees to attorn to Lender if Lender becomes the owner of the Leased Space, and (3) agrees to accept a cure by Lender of any of LESSOR's defaults, provided such cure is completed within the deadline applicable to LESSOR. In the event LESSOR defaults in the payment and/or other performance of any mortgage or other real property interest encumbering the Property, LESSEE, may, at its sole option and without obligation, cure or correct LESSOR's default and upon doing so, LESSEE shall be subrogated to any and all rights, titles, liens and equities of the holders of such mortgage or other real property interest and LESSEE shall be entitled to deduct and setoff against all rents that may otherwise become due under this Agreement the sums paid by LESSEE to cure or correct such defaults.

26. RECORDING. LESSOR agrees to execute a Memorandum of this Agreement which LESSEE may record with the appropriate recording officer. The date set forth in the Memorandum of Lease is for recording purposes only and bears no reference to commencement of either the Term or rent payments.

27. DEFAULT.

a. In the event there is a breach by LESSEE with respect to any of the provisions of this Agreement or its obligations under it, including the payment of rent, LESSOR shall give LESSEE written notice of such breach. After receipt of such written notice, LESSEE shall have fifteen (15) days in which to cure any monetary breach and thirty (30) days in which to cure any non-monetary breach, provided LESSEE shall have such extended period as may be required beyond the thirty (30) days if the nature of the cure is such that it reasonably requires more than thirty (30) days and LESSEE commences the cure within the thirty (30) day period and thereafter continuously and diligently pursues the cure to completion. LESSOR may not maintain any action or effect any remedies for default against LESSEE unless and until LESSEE has failed to cure the breach within the time periods provided in this Paragraph.

b. In the event there is a breach by LESSOR with respect to any of the provisions of this Agreement or its obligations under it, LESSEE shall give LESSOR written notice of such breach. After receipt of such written notice, LESSOR shall have thirty (30) days in which to cure any such breach, provided LESSOR shall have such extended period as may be required beyond the thirty (30) days if the nature of the cure is such that it reasonably requires more than thirty (30) days and LESSOR commences the cure within the thirty (30) day period and thereafter continuously and diligently pursues the cure to completion. LESSEE may not maintain any action or effect any remedies for default against LESSOR unless and until LESSOR has failed to cure the breach within the time periods provided in this Paragraph. Notwithstanding the foregoing to the contrary, it shall be a default under this Agreement if LESSOR fails, within five (5) days after receipt of written notice of such breach, to perform an obligation required to be performed by LESSOR if the failure to perform such an obligation interferes with LESSEE's ability to conduct its business on the Leased Space; provided, however, that if the nature of LESSOR's obligation is such that more than five (5) days after such notice is reasonably required for its performance, then it shall not be a default under this Agreement if performance is commenced within such five (5) day period and thereafter diligently pursued to completion.

28. <u>REMEDIES</u>. Upon a default, the non-defaulting Party may at its option (but without obligation to do so), perform the defaulting Party's duty or obligation on the defaulting Party's behalf, including but not limited to the obtaining of reasonably required insurance policies. The costs and expenses of any such performance by the non-defaulting Party shall be due and payable by the defaulting Party upon invoice therefor. In the event of a default by either Party with respect to a material provision of this Agreement, without limiting the non-defaulting Party in the exercise of any right or remedy which the non-defaulting Party may have by reason of such default, the non-defaulting Party may terminate the Agreement and/or pursue any remedy now or hereafter available to the non-defaulting Party under the Laws or judicial decisions of the State of California; provided, however, LESSOR shall use reasonable efforts to mitigate its damages in connection with a default by LESSEE

29. <u>ENVIRONMENTAL</u>.

a. For purposes of this Agreement, the term "**Hazardous Substances**" means: (a) any substance, products, waste, or other material of any nature whatsoever which is or becomes listed, regulated, or addressed pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 United States Code Section 9601 et seq.; the Resources Conservation and Recovery Act, 42 United States Code Section 6901 et seq.; the Hazardous Materials Transportation Conservation and Recovery Act, 42 United States Code Section 1801 et seq.; the Clean Water Act, 33 United States Code Section 1251 et seq.; the Toxic Substances Control Act, 15 United States Code Section 2601 et seq.; the California Hazardous Waste Control Act, Health and Safety Code Section 25100 et seq.; the Hazardous Substance Account Act, Health and Safety Code Section 25330 et seq.; the California Safe Drinking Water and Toxic Enforcement Act, Health and

Safety Code Section 25249.5 et seq.; California Health and Safety Code Section 25280 et seq. (Underground Storage of Hazardous Substances); the California Hazardous Waste Management Act, Health and Safety Code Section 25170.1 et seq.; California Health and Safety Code Section 25501 et seq. (Hazardous Materials Release Response Plans and Inventory); or the California Porter-Cologne Water Quality Control Act, Water Code Section 13000 et seq., all as amended; or any other federal, state, or local statute, law, ordinance, resolution, code, rule, regulation, order or decree regulating, relating to, or imposing liability or standards of conduct concerning any Hazardous Substance, now or at any time hereinafter in effect; (b) any substance, product, waste or other material of any nature whatsoever which may give rise to liability under any of the above statutes or under any statutory or common law theory based on negligence, trespass, intentional tort, nuisance or strict liability or under any reported decisions of a state or federal court; (c) petroleum or crude oil, other than petroleum and petroleum products which are contained within regularly operated motor vehicles; and (d) asbestos.

b. LESSOR makes no warranty or representation whatsoever concerning the Premises, including without limitation, the condition, fitness or utility for any purpose thereof, of any improvements thereto with applicable laws, ordinances or governmental regulations. LESSEE's right to use Premises is strictly on an "as is" basis with all faults. LESSOR hereby disclaims all warranties whatsoever, express or implied, the condition of the soil (or water), geology, and any warranty of merchantability or habitability or fitness for a particular purpose.

c. Except as otherwise specifically permitted under the terms of this Agreement, LESSEE shall not use, create, generate, store, deposit, dispose of or allow any Hazardous Substances on, under, about or within the Leased Space in violation of any federal, state, or local law, rule, regulation, order, decree or other requirement listed in sub-Section 29(a).

d. LESSOR or its officers, employees, contractors, or agents shall at all times have the right to go upon and inspect Leased Space and the operations conducted thereon to assure compliance with the requirements herein stated. This inspection may include taking samples for chemical analysis of substances and materials present and/or testing soils on the Leased Space and taking photographs.

e. LESSEE shall, within forty-eight (48) hours of the discovery by LESSEE of the presence of, or believed presence of, a Hazardous Substance as defined herein, give written notice to LESSOR in the event that LESSEE knows or has reasonable cause to believe that any release of Hazardous Substance has come or will come to be located on, under, about or within Leased Space. The failure to disclose in a timely manner the release of a Hazardous Substance, including but not limited to, an amount which is required to be reported to a state or local agency pursuant to law (e.g., California's Hazardous Materials Storage and Emergency Response Act, Health and Safety Code Section 25550 et seq.) shall be grounds for termination of this Agreement by LESSOR in addition to actual damages and other remedies provided by law. LESSEE shall immediately clean up and completely remove all Hazardous Substances placed by LESSEE on, under, about or within Leased Space, in a manner that is in all respects safe and in accordance with all applicable laws, rules and regulations.

f. In the event Hazardous Substances are discovered, LESSEE shall disclose to LESSOR the specific information regarding LESSEE’s discovery of any Hazardous Substances placed on, under, about or within the Leased Space by LESSEE, and provide written documentation of its safe and legal disposal.

g. Breach of any of these covenants, terms, and conditions, and LESSEE’s failure to cure within thirty (30) days of LESSEE’s receipt of written notice from LESSOR, shall give LESSOR the authority to either immediately terminate this Agreement or to shut down LESSEE’s use of the Leased Space, at the sole discretion of LESSOR. In either case, LESSEE will continue to be liable under this Agreement to remove and mitigate all Hazardous Substances placed by LESSEE on, under, about or within Leased Space. LESSEE shall be responsible for, and bear the entire cost of removal and disposal of, all Hazardous Substances introduced to the Leased Space by LESSEE during LESSEE’s period of use and possession of the Leased Space. Upon termination of this Agreement, LESSEE shall, in accordance with all laws, remove from Leased Space any equipment or improvements placed on Leased Space by LESSEE that may be contaminated by Hazardous Substances.

h. LESSEE shall defend, indemnify and hold LESSOR and its officials, officers, employees, contractors and agents free and harmless from any and all claims, liability, injury, damage, costs, or expenses (including, without limitation, the cost of attorney’s fees) arising as a result of the presence of use of any Hazardous Substances placed or caused to be placed by LESSEE or its partners, affiliates, agents, officials, officers, contractors or employees on the Leased Space. The foregoing indemnity is intended to operate as an agreement pursuant to, among other requirements, Section 107, subdivision (e) of CERCLA, 42 United States Code Section 9607, subdivision (e), and California Health and Safety Code Section 25364, to insure, protect, hold harmless and indemnify LESSOR from any liability created by the LESSEE pursuant to such sections.

i. The terms of this Section shall survive the expiration or earlier termination of this Agreement.

30. <u>CASUALTY</u>. In the event of damage by fire or other casualty to the Leased Space that cannot reasonably be expected to be repaired within forty-five (45) days following same or, if the Leased Space is damaged by fire or other casualty so that such damage may reasonably be expected to disrupt LESSEE's operations at its Surf Club property for more than forty-five (45) days, then LESSEE may, at any time following such fire or other casualty, provided LESSOR has not completed the restoration required to permit LESSEE to resume its operation at the Premises, terminate this Agreement upon fifteen (15) days prior written notice to LESSOR. Any such notice of termination shall cause this Agreement to expire with the same force and effect as though the date set forth in such notice were the date originally set as the expiration date of this Agreement and the Parties shall make an appropriate adjustment, as of such termination date, with respect to payments due to the other under this Agreement. Notwithstanding the foregoing, the rent shall abate during the period of repair following such fire or other casualty in proportion to the degree to which LESSEE’s use of its Surf Club property is impaired.

31. CONDEMNATION. In the event of any condemnation of all or any portion of the Leased Space, this Agreement shall terminate as to the part so taken as of the date the condemning authority takes title or possession, whichever occurs first. If as a result of a partial condemnation of the Leased Space, LESSEE, in LESSEE's sole discretion, is unable to use the Leased Space for the purposes intended hereunder, LESSEE may, at LESSEE's option, to be exercised in writing within fifteen (15) days after LESSOR shall have given LESSEE written notice of such taking (or in the absence of such notice, within fifteen (15) days after the condemning authority shall have taken possession) terminate this Agreement as of the date the condemning authority takes such possession. LESSEE may on its own behalf make a claim in any condemnation proceeding involving the Leased Space for losses, but not for the loss of its leasehold interest. Any such notice of termination shall cause this Agreement to expire with the same force and effect as though the date set forth in such notice were the date originally set as the expiration date of this Agreement and the Parties shall make an appropriate adjustment as of such termination date with respect to payments due to the other under this Agreement. If LESSEE does not terminate this Agreement in accordance with the foregoing, this Agreement shall remain in full force and effect as to the portion of the Leased Space remaining, except that the rent shall be reduced in the same proportion as the rentable area of the Leased Space taken bears to the total rentable area of the Leased Space. In the event that this Agreement is not terminated by reason of such condemnation, LESSOR shall promptly repair any damage to the Leased Space caused by such condemning authority.

32. SUBMISSION OF AGREEMENT/PARTIAL INVALIDITY/AUTHORITY. The submission of this Agreement for examination does not constitute an offer to lease the Leased Space and this Agreement becomes effective only upon the full execution of this Agreement by the Parties. If any provision herein is invalid, it shall be considered deleted from this Agreement and shall not invalidate the remaining provisions of this Agreement. Each of the Parties hereto warrants to the other that the person or persons executing this Agreement on behalf of such Party has the full right, power and authority to enter into and execute this Agreement on such Party's behalf and that no consent from any other person or entity is necessary as a condition precedent to the legal effect of this Agreement.

33. APPLICABLE LAWS. During the Term, LESSOR shall maintain the Property in compliance with all applicable laws, rules, regulations, ordinances, directives, covenants, easements, zoning and land use regulations, and restrictions of record, permits, building codes, and the requirements of any applicable fire insurance underwriter or rating bureau, now in effect or which may hereafter come into effect (including, without limitation, the Americans with Disabilities Act and laws regulating hazardous substances) (collectively "Laws"). LESSEE shall, in respect to the condition of the Leased Space and at LESSEE's sole cost and expense, comply with (a) all Laws relating solely to LESSEE's specific and unique nature of use of the Leased Space; and (b) all building codes requiring modifications to the Leased Space due to the improvements being made by LESSEE in the Leased Space.

34. SURVIVAL. The provisions of the Agreement relating to indemnification from one Party to the other Party shall survive any termination or expiration of this Agreement. Additionally, any provisions of this Agreement which require performance subsequent to the termination or expiration of this Agreement shall also survive such termination or expiration.

35. CAPTIONS. The captions contained in this Agreement are inserted for convenience only and are not intended to be part of the Agreement. They shall not affect or be utilized in the construction or interpretation of the Agreement.

IN WITNESS WHEREOF, the Parties hereto have set their hands and affixed their respective seals the day and year first above written.

LESSOR:

______________________________	By:________________________________
WITNESS	Its:______________________________
______________________________	Date: ______________________________

LESSEE:

______________________________	By:________________________________
WITNESS	Its:___________________________
______________________________	Date:______________________________

GENERAL MANAGER'S REPORT
JUNE 18, 2024

Sites Reservoir Project CEQA Lawsuit Update

On Friday, May 31, 2024, the Superior Court of Yolo County released an Order denying all claims in the Friends of the River v. Sites Project Authority case.

In late 2023, six environmental organizations, Friends of the River, Center for Biological Diversity, California Sportfishing Protection Alliance, California Water Impact Network, Save California Salmon, and Sierra Club, petitioned the Court to review certain aspects of the Authority's California Environmental Quality Act (CEQA) process and the Authority's certification of the Final Environmental Impact Report (Final EIR) for the Sites Reservoir Project.

The Yolo County Superior Court found in the Authority's favor in every claim asserted by the environmental organizations. The Sites Final EIR fully complies with CEQA.

"We embrace environmental values and have taken extra steps at every turn to ensure this project is an environmental asset. California upholds the most rigorous environmental standards in the nation, and we are committed to building a reservoir that meets or exceeds those standards. We are grateful the court's decision will allow us to advance Sites Reservoir and ultimately supply more water for people, farms, and the environment. The need for this water is significant, and we have no time to waste," said Fritz Durst, chair of the Sites Project Authority.

"The court has recognized that the Authority conducted an exhaustive environmental review process and a complete analysis of potential project impacts. The Authority's efforts included extensive public outreach over more than six years," said Jerry Brown, executive director of the Sites Project Authority.

Construction and Development of First Monitoring Well Under DWR's TSS Program is in Progress

Desert Water Agency, along with other agencies throughout the Coachella Valley, submitted a service request to the Department of Water Resources (DWR) Technical Support Services (TSS) program for construction and development of water quality monitoring wells. These wells will fill data gaps identified in the Coachella Valley Salt Nutrient Management Plan (CV-SNMP) Groundwater Monitoring Program Workplan. DWR approved the request for three wells in DWA's service area – two in the Indio Subbasin and one in the Mission Creek Subbasin.

On May 20, 2024, ABC Liovin (driller) began construction on the first monitoring well in DWA's service area in the Indio Subbasin. To date, the following tasks have been completed:

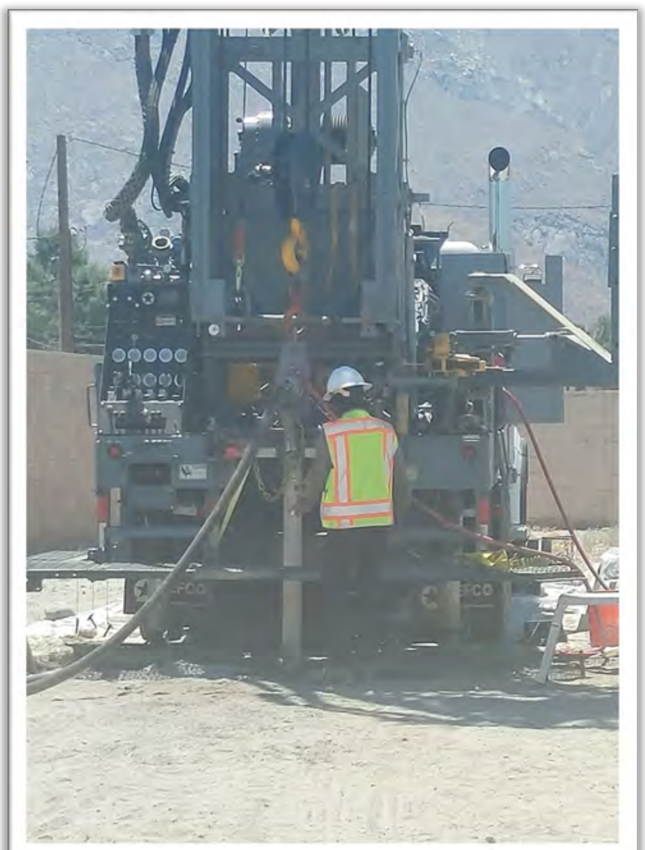
1. Drilling pilot hole
2. Conductor casing installation
3. Geophysical surveys
4. Well casing installation
5. Filter pack installation
6. Sanitary seal installation

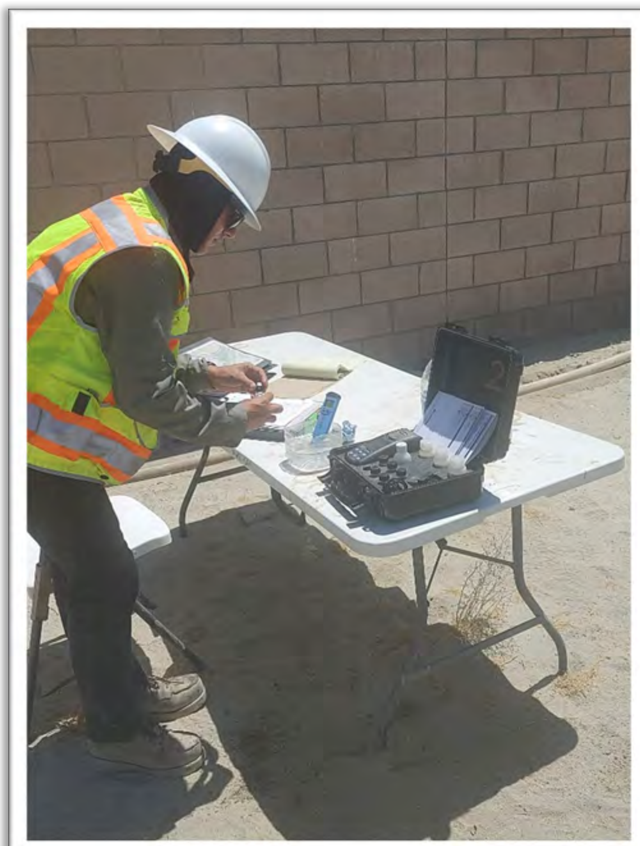
As of June 10, 2024, work has begun on development of the well which includes airlifting, bailing, surging, and pumping. The first water quality samples will be collected during this phase of the project.

Development of the monitoring well is tentatively scheduled to be completed on or around June 14, 2024.

Construction and Development of First Monitoring Well Under DWR's TSS Program is in Progress (Cont.)

Installation of tremie pipe and well casing





Air-lifting the well and testing for turbidity

SYSTEM LEAK DATA 2024

May 27, 2024 - Jun 10, 2024

Street Name	Number of Leaks	Pipe Diameter (inches)	Install Date	Material	Coatling/Linning	Planned Replacement
CALLE MARCUS	4	4"	1945	Steel - SP	UL	
LOUELLA RD	3	6"	1955	Steel - SP	UL	2021/2022
WARM SANDS DR, CAMINO PAROCELA, PAROCELA PL	3	4"	1946	Steel - SP	UL	
VIA DEL NORTE	2	4"	1945	Steel - SP	UL	
PALM CANYON DR E	2	6"	1955	Steel - SP	UL	
STEVENS RD	2	8"	1951	Steel - SP	UL	
ANDREAS RD	1	6"	1958	Steel - SP	UL	2021/2022
LURING DR	1	4"	1946	Steel - SP	UL	2021/2022
AVENIDA CABALLEROS	1	14"	1953	Steel - SP	UL	2020/2021
PANGA WY	1	4"	1950	Steel - SP	UL	
WARM SANDS PL	1	4"	1946	Steel - SP	UL	
CALLE ROCA, CALLE CHIA	1	4"	1954	Steel - SP	UL	
VISTA ORO	1	4"	1958	Steel - SP	UL	
VIA MONTE VISTA	1	8"	1959	Steel - SP	CML	
PALM CANYON DR E (SOUTH SIDE)	1	6"	1955	Steel - SP	UL	
WILLIAMS RD	1	6"	1958	Steel - SP	UL	
PARK VIEW DR	1	4"	1955	Steel - SP	UL	

Total Leaks In System
27

Planned Replacement

- 2020/2021
- 2021/2022

SYSTEM INFORAMTION

Oldest Pipe in the System (Year of Installation): 1935, 89 years old

Average Year of Installation of Unlined Steel Pipe (Systemwide): 1954, 70 years old

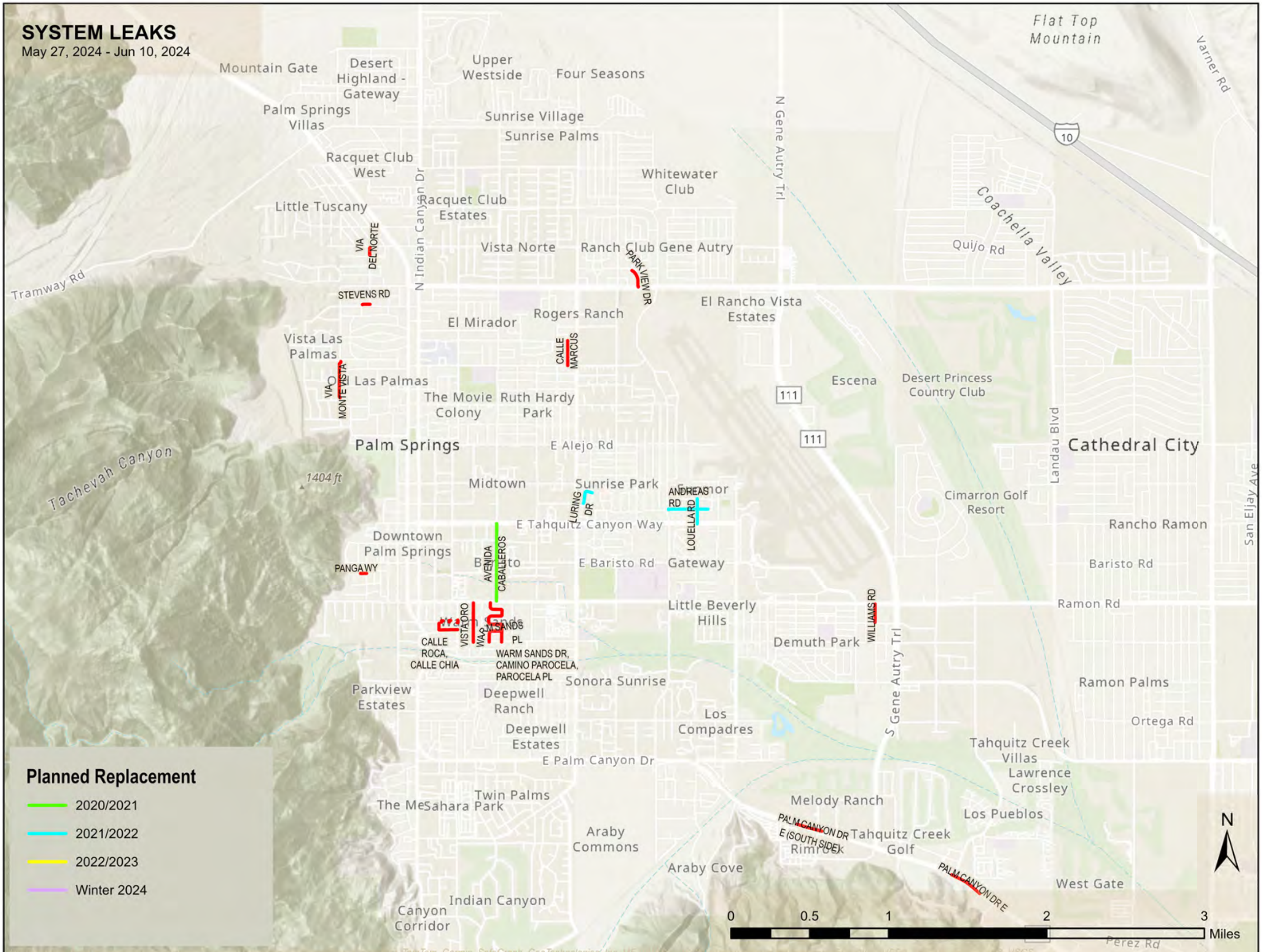
Total Length of Unlined Pipe Systemwide (Linear Feet): 255,100 ft

*Average Length of Pipe Replaced Annually (Linear Feet): 15,000 ft

***Projected Time Frame for 100% Replacement of Unlined Steel Pipe: 16 years**

Year Agency Transitioned to Cement Lined Steel Pipe: 1960

*Please note this figure represents the average linear footage of pipeline replaced annually given an average annual budget of $3 million


SYSTEM LEAKS
May 27, 2024 - Jun 10, 2024
Planned Replacement
2020/2021
2021/2022
2022/2023
Winter 2024
VIA DEL NORTE
STEVENS RD
PARK VIEW DR
CALLE MARCUS
VIA MONTE VISTA
LURING DR
ANDREAS RD
LOUELLA RD
AVENIDA CABALLEROS
PANGA WY
WILLIAMS RD
VISTA ORO
CALLE ROCA, CALLE CHIA
WARM SANDS PL
WARM SANDS DR, CAMINO PAROCELA, PAROCELA PL
PALM CANYON DR E (SOUTH SIDE)
PALM CANYON DR E
Palm Springs
Cathedral City
Miles
0
0.5
1
2
3
N

General Manager's Meetings and Activities

Meetings:

06/06/24	Executive Committee Meeting	DWA
06/07/24	SWC Update Call	Conf Call
06/10/24	Tribal Mediation Small Group Meeting (Tate, Saenz)	Conf Call
06/10/24	Tribal Mediation Tech Group (Tate)	Conf Call
06/12/24	DCP Coordination Meeting (Tate, Saenz)	Conf Call
06/12/24	DCP Update (Tate, Saenz)	Conf Call
06/12/24	SWC Monthly Meeting (Tate, Saenz)	Conf Call
06/13/24	Legislative Update (Llort)	Conf Call
06/14/24	DWA/CVWD/MWD Coordination Call (Tate)	Conf Call
06/17/24	Department Heads Meeting	DWA
06/17/24	Tribal Mediation Small Group	Conf Call
06/17/24	DWA/CVWD/MWD Coordination Meeting	Conf Call
06/18/24	DWA Bi-Monthly Board Meeting	DWA

Activities:

1) DWA Surface Water Rights
2) Water Supply Planning – DWA Area of Benefit
3) Sites Reservoir Finance
4) DCP Financing
5) Lake Perris Seepage Recovery Project Financing
6) Recycled Water Supply - Strategic Planning
7) AQMD Rule 1196
8) DWA Organizational Restructuring
9) DWA Tax Rate Analysis
10) DWA Remote Meter Reading Fixed Network
11) Whitewater River Surface Water Recharge
12) DC Project – Finance JPA Committee (Standing)
13) DWA/CVWD/MWD Operations Coordination (Standing)
14) DWA/CVWD/MWD Exchange Agreement Coordination Committee (Standing)
15) ACBCI Water Rights Lawsuit
16) Whitewater Hydro Operations Coordination with Recharge Basin O&M
17) Whitewater Spreading Basins – BLM Permits
18) Delta Conveyance Project Cost Allocation
19) MCSB Delivery Updates
20) SWP East Branch Enlargement Cost Allocation
21) RWQCB Update to the SNMP