PALMDALE RECYCLED WATER AUTHORITY (PRWA)
HELD AT CITY OF PALMDALE
CITY HALL COUNCIL CHAMBERS
38300 SIERRA HIGHWAY, SUITE B
PALMDALE, CALIFORNIA
REGULAR MEETING
APRIL 19, 2021
6:00 P.M.
www.cityofpalmdale.org
www.palmdalewater.org.

WELCOME

EMERGENCY PUBLIC MEETING PROCEDURE DUE TO COVID-19

As a result of the COVID-19 emergency, and resulting orders and direction from the President of the United States, the Governor of the State of California, and the County of Los Angeles Department of Public Health temporary Health Officer Order, effective Tuesday, December 1, 2020, the Palmdale City Council Chamber will be closed to the public, until further notice. The Board of Directors may choose to participate via conference call.

1) VERBAL PUBLIC COMMENT DURING THE MEETING

MEMBERS OF THE PUBLIC MAY ADDRESS THE BOARD OF DIRECTORS REGARDING ITEMS LISTED OR NOT LISTED ON THE PRINTED AGENDA. UNLESS OTHERWISE EXTENDED BY A MAJORITY VOTE OF THE BOARD OF DIRECTORS COMMENTS SHALL BE LIMITED TO THREE (3) MINUTES PER SPEAKER. MEMBERS OF THE PUBLIC WHO WISH TO VERBALLY ADDRESS THE BOARD OF DIRECTORS MAY SPEAK VIA ZOOM:

Numbers: US: +1 669 900 9128
Webinar ID: 918 3520 3226
Passcode: 371626

Webinar attendee link
https://zoom.us/j/91835203226?pwd=Vmw5VFB3aFpTL21Zd001aGdHU0JTdz09

- Please press *9 to “Raise Your Hand” and wait for the host to ask you to unmute yourself.

- Press *6 to unmute your microphone.
- Please state your name and city of residence for the record and begin

PLEASE NOTE: You can view this agenda and related items on our website at https://cityofpalmdale.org/379/Palmdale-Recycled-Water-Authority-PRWA. You can request a copy of this agenda or attachments, if any, by contacting the City Clerk's Office at 661-267-5151.

A **three-minute time limit** will be imposed on all speakers other than staff members.

In accordance with the Americans with Disabilities Act of 1990, if you require a disability-related modification or accommodation to attend or participate in this meeting, including auxiliary aids or services, please call the City of Palmdale Office of the City Clerk at least 72 hours prior to the meeting.

1. **CALL TO ORDER.**

2. **PLEDGE OF ALLEGIANCE.**

3. **ROLL CALL: CHAIR VINCENT DINO, DIRECTORS AUSTIN BISHOP, DON WILSON, JUAN CARRILLO, AND ZAKEYA ANSON**

4. **ADMINISTRATION OF OATH OF OFFICE**. – (Staff Reference: Acting Authority Secretary Faber).

5. **CONSENT CALENDAR – PUBLIC COMMENTS ONLY:** If you wish to comment on any item(s) listed on the Consent Calendar on this agenda, please come forward to the podium and state the item number(s) and your comments. **PLEASE NOTE: A three-minute time limit** will be imposed on each speaker other than staff members.

6. **CONSENT CALENDAR:**
NOTICE: All matters listed under the Consent Calendar will be enacted by one motion unless an item(s) is pulled by the Board, in which case the item(s) will be removed from the Calendar and will be considered separately following this portion of the Agenda.

6.1 Approve the Minutes from the previous meeting held on February 17, 2021. (Staff Reference: Acting Authority Secretary Faber)

6.2 Approve receipt and filing of the Treasurer's Report for the three months ending March 31, 2021. (Staff Reference: Treasurer-Auditor Williams)

6.3 Approve receipt and filing of the Investment Report for the quarter ending March 31, 2021. (Staff Reference: Treasurer-Auditor Williams)

Staff Recommendation: Move to approve the recommendations and findings on all items listed under this Consent Calendar. (Voice Vote - Requires a majority to approve.)

7. ACTION CALENDAR:

7.1 Consideration and possible action to suspend activity on Phase II of the Recycled Water Facilities Master Plan adopted January 21, 2015 (Staff Reference: Executive Director LaMoreaux)

Call for Public Comments

Staff Recommendation: Approve the suspension of activity on Phase II of the Recycled Water Facilities Master Plan adopted January 21, 2015. (Voice Vote - Requires a majority to approve)

7.2 Consideration and Possible Action to adopt Resolution No. PRWA 2021-001 Authorizing the Adoption of the Revised Palmdale Recycled Water Authority 2021 Annual Budget. (Staff Reference: Executive Director LaMoreaux)

Call for Public Comments

Staff Recommendation: Move to adopt Resolution No. PRWA 2021-001 adopting the revised Palmdale Recycled Water Authority 2021 Annual Budget. **(Vote by Roll Call** – requires a majority to adopt and/or approve and per Section 4.9(e) of the Authority's Joint Exercise of Powers Agreement, the affirmative vote of at least one director from each member agency.)

8. NON-AGENDA ITEMS - PUBLIC COMMENTS: This portion of the Agenda allows an individual the opportunity to address the Board of Directors on any

subject regarding Palmdale Recycled Water Authority business. Under state legislation, no action can be taken on items not specifically referenced on the Agenda. **PLEASE NOTE: A three-minute time limit** will be imposed on each speaker other than staff members.

9. DIRECTOR REQUESTS FOR NEW AGENDA ITEMS:

10. INFORMATIONAL REPORT OF THE BOARD OF DIRECTORS, EXECUTIVE DIRECTOR, AND ASSISTANT EXECUTIVE DIRECTOR.

11. ADJOURNMENT to May 17, 2021 at 6:00 p.m. at the City of Palmdale City Hall Council Chambers located at 38300 Sierra Highway, Suite B, Palmdale, California.

Complete packets can be viewed at City Hall, located at 38300 Sierra Highway, Suite A, Palmdale, California; Palmdale Water District, 2029 East Avenue Q, Palmdale, California, and the Main Library, located at 700 East Palmdale Boulevard, Palmdale, California. You can also view the Agenda for the Palmdale Recycled Water Authority on the City's website at www.cityofpalmdale.org or the Palmdale Water District website at www.palmdalewater.org.

Thank you for attending your Palmdale Recycled Water Authority meeting. If you have any further questions, please contact the Secretary's Office at (661) 267-5151, Monday through Thursday, 7:30 a.m. to 6:00 p.m., closed every Friday.

PALMDALE RECYCLED WATER AUTHORITY

BOARD MEMORANDUM

DATE:	April 13, 2021	**April 19, 2021**
TO:	BOARD OF DIRECTORS	**Board Meeting**
FROM:	Michael Williams, Treasurer-Auditor, PRWA	
VIA:	Mr. Dennis LaMoreaux, Executive Director, PRWA	

RE: AGENDA ITEM NO 6.2 – TREASURER'S REPORT FOR MARCH 2021

Recommendation:

Palmdale Recycled Water Authority (PRWA) staff recommends the Board of Directors to receive and file the Treasurer's Report for the three months ending March 31, 2021.

Background:

To comply with provisions required by Section 4.13 of the Joint Powers of Authority Agreement and responsibilities of Treasurer, a Financial Report is prepared and submitted to the Board of Directors who certifies the availability of funds for the reports presented. These reports are hereby submitted to the Board of Directors for ratification.

Financial Impact:

As of March 31, 2021, the PRWA has $2,770,981.95 in cash and investments. PRWA had interest and market adjustment of $165.31, received $21,311.07 in receivables, and there were $6,791.71 in expenses and fees paid for the month.

Supporting Documents:

Treasurer's Report for month ending March 31, 2021.
Balance Sheet for period ending March 31, 2021.
Income Statement for period ending March 31, 2021.

Palmdale Recycled Water Authority
Treasurer's Report
Month Ended March 31, 2021

Cash/Funds Available and held at Bank of America, Citizens Business Bank, & UBS Financial Svcs:	
Bank Balance, beginning March 1, 2021	2,757,039.18
Less: Expenses Paid	(6,686.41)
Less: Bank Fees Paid (Analysis Fees & Credit Card Processing)	(105.30)
Add: Deposits Made	21,311.07
Add: Interest Earned & Market Adjustment on Investments	165.31
Add: Deposit in Transit	-
Less: Outstanding Check (Ledger Tie-Out)	(741.90)
Bank Balance, ending March 31, 2021	2,770,981.95
Less: Accounts Payable	(831.36)
Less: Accrued Purchases	-
Less: Accrued Payroll Taxes	-
Less: Deposits - Customer	(9,000.00)
Add: Accounts Receivable	30,685.62
Add: Interest Receivable	-
Adjusted Bank Balance, ending March 31, 2021	2,791,836.21

Outstanding Checks (Prior Month(s)):

March Checks Issued:

Deposit Refund - Atlas Underground Inc	741.90
Water Purchases - Sanitation Districts of L.A. County	6,686.41
Total Checks Issued	7,428.31

Palmdale Recycled Water Authority
Balance Sheet
For the Three Months Ending 3/31/2021

	YTD
ASSETS	
UBS- Investment Funds	$2,242,066
Bank of America - Checking	$40,783
Citizens Business Bank - Checking	$488,133
Prepaid Memberships	
Prepaid Insurance	
Accounts Receivable	
- Water	(30,686)
- Government Agency	
Interest Receivable	
Property, Plant and Equipment, net	1,682,323
Total Assets	**$4,422,619**
LIABILITIES AND FUND BALANCE	
LIABILITIES	
Accounts Payable	$831
Accrued Expense	
Deposits - Customer	9,000
Total Liabilities	**9,831**
FUND BALANCE	
Unassigned	4,412,788
Total Fund Balance	**4,412,788**
Total Liabilities and Fund Balance	**$4,422,619**

Palmdale Recycled Water Authority
Income Statement - Current and YTD
For the Three Months Ending 3/31/2021

	March	YTD
REVENUES:		
Contributions - Palmdale Water District		
Contributions - City of Palmdale		
Grant Funds		
Water Sales	6,858.86	28,787.53
Interest Earnings	2,323.84	5,278.96
Market Adjustment on Investments	(2,158.53)	(4,883.98)
Total Revenue	**$7,024.17**	**$29,182.51**
EXPEDITURES:		
General Government		
Public Representive - Payroll Tax Expense (Employer)		
Public Representive - Travel & Meeting		
Banking Fees	105.30	210.60
Provision for Bad Debt		
Insurance	568.38	1,705.22
Memberships		250.00
Operating Supplies		120.45
Marketing & Outreach		
Travel & Meeting		
Permits & Fees		
Utilities - Purchased Water		
Materials &Supplies		
Maint. & Repair - Water System		
	$673.68	$2,286.27
Public Resource		
Contracted Services - Professional Svcs		4,137.50
Contracted Services - Audit		
		4,137.50
	$673.68	$6,423.77
Non-Cash Operating Expense		
Depreciation	4,450.59	13,351.77
Non-Operating Revenue		
Capital Contribution		
	($4,450.59)	($13,351.77)
Change in Net Position	**$1,899.90**	**$9,406.97**
Net Position - Beginning of Year		**4,403,380.85**
Net Position - End of Year	**$1,899.90**	**$4,412,787.82**

PALMDALE RECYCLED WATER AUTHORITY

BOARD MEMORANDUM

DATE:	April 13, 2021	**April 19, 2021**
TO:	BOARD OF DIRECTORS	**Board Meeting**
FROM:	Michael Williams, Treasurer-Auditor, PRWA	
VIA:	Mr. Dennis LaMoreaux, Executive Director, PRWA	

RE: AGENDA ITEM NO 6.3 – INVESTMENT REPORT FOR QUARTER ENDING MARCH 31, 2021

Recommendation:

Palmdale Recycled Water Authority (PRWA) staff recommends to the Board of Directors to receive and file the Investment Report for the quarter ending March 31, 2021.

Background:

To comply with provisions of California Government Code 53646, the attached investment report includes a complete description of the portfolio, the type of investments, the issuers, maturity dates, par values and the current market values of each component of the portfolio, including funds managed for the Authority by third party contracted managers. The report is hereby submitted to the Board of Directors for ratification.

Financial Impact:

As of March 31, 2021, the PRWA has $16,408.75 in cash, $1,477,102.80 in U.S. Treasury Bill and $745,894 in Certificates of Deposits with UBS Investment Services with accrued interest in the amount of $2,660.09.

Supporting Documents:

Investment Report for quarter ending March 31, 2021.

PALMDALE RECYCLED WATER AUTHORITY

March 31, 2021

INVESTMENTS — March 2021

UBS Money Market Account (SS 30999)

Cash — $16,408.75

US Government Securities

CUSIP #		Issuer	Maturity Date	Rate	PAR	Market Value
912796A33	1	US Treasury Bill	5/27/2021	0.000	300,000	299,994.00
912796B40	2	US Treasury Bill	07/01/2021	0.000	370,000	369,977.80
912828S76	3	US Treasury Bill	7/21/2021	1.125	300,000	301,056.00
9128285A4	4	US Treasury Bill	9/15/2021	2.750	500,000	506,075.00
					1,470,000	**1,477,102.80**

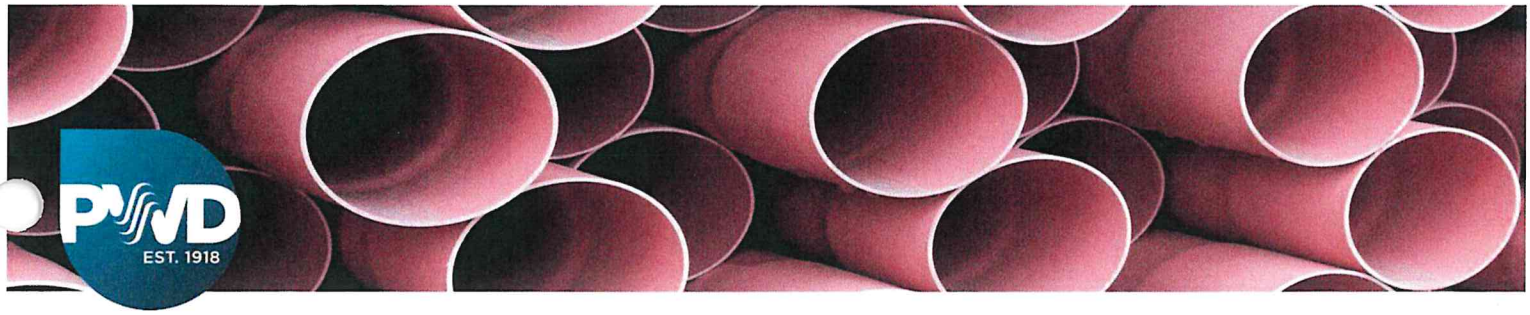
Certificates of Deposit

		Issuer	Maturity Date	Rate	Face Value	
60685BJH5	1	Mizrahi Tefahot Bank	04/12/2021	0.050	93,000	93,000.00
072727BM1	2	Baycoast Bank	05/17/2021	0.050	150,000	150,000.00
36159AV56	3	GE Money Bank	06/17/2021	0.067	150,000	151,056.00
856285UR0	4	State Bank of Indi	08/30/2021	0.100	250,000	250,050.00
90348JFB1	5	UBS Bank UT	10/28/2021	0.092	100,000	101,788.00
					743,000	**$745,894.00**

Acct. Total — **$2,239,405.55**

Accrued interest — $2,660.09

TOTAL CASH AND INVESTMENTS — **$2,242,065.64**



Optimizing the Use of Tertiary Water for Palmdale

Options for Utilizing Tertiary Water	Advanced Water Treatment Plant and Injection	Irrigation	Recharge and Recovery
Volume (afy)	5,325	1,725	4,000
Cost ($/afy)	$1,710	$2,600	$3,160

1. Advanced Treatment Facility and injection wells
2. Irrigation or purple pipe system
3. Recharge is a blend of tertiary and imported water that is spread in the basins and extracted using wells

BENEFITS OF ADVANCED TREATED TERTIARY WATER

- ***Larger volume of recycled water used***
- ***Improve basin water quality and help with basin health***
- ***Less infrastructure required***
- ***Smaller environmental impact***
- ***Less loss from evaporation***
- ***No required imported water for blending***
- ***No additional imported water purchase costs***
- ***More drought resilient***

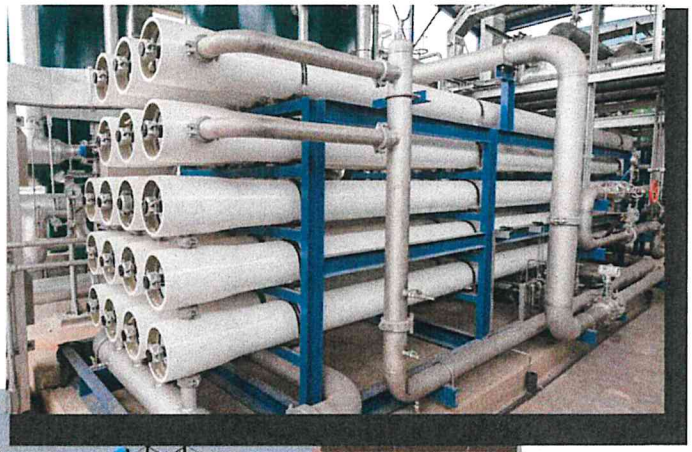


Photo courtesy of the City of Rio Rancho

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PALMDALE RECYCLED WATER AUTHORITY

BOARD MEMORANDUM

DATE: May 21, 2018
TO: BOARD OF DIRECTORS
FROM: Mr. Dennis LaMoreaux, Executive Director, PRWA
CC: Mr. Chuck Heffernan, Assistant Executive Director, PRWA

RE: PRWA RECYCLED WATER FACILITIES MASTER PLAN EXCERPTS

Director Carrillo requested a briefing to better understand the future plans of PRWA. The attached information will be used for the briefing and is from the Recycled Water Facilities Master Plan approved in January 2015. The entire report can be found on the PWD website under Reports and Studies; Planning Reports; PRWA Plans.

https://www.palmdalewater.org/about/reportsstudies/planning-reports/

The excerpts are as follows:

- Report Cover
- Table of Contents
- List of Tables
- List of Figures
- Pages 3-2 to 3-5 listing potential school and park customers
- Pages 5-2 to 5-9 describing the phasing (Note: Phase 5 was removed when the Plan was approved)
- Figure 7 showing future facilities

Carollo

PALMDALE RECYCLED WATER AUTHORITY

RECYCLED WATER FACILITIES MASTER PLAN

January 2015

199 SOUTH LOS ROBLES AVENUE, SUITE 530 • PASADENA, CALIFORNIA 91101 • P. 626.535.0180 • F. 626.535.0185

PALMDALE RECYCLED WATER AUTHORITY

RECYCLED WATER FACILITIES MASTER PLAN

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

Table 6	Customer List – Schools Recycled Water Facilities Master Plan Palmdale Recycled Water Authority					
Customer Name	Account Number	Site ID	Irrigated Area (acres)	Annual Demand (afy)	Max Day Demand (mgd)	Peak Hour Demand (gpm)
Manzanita Elementary School	42961620	S1	3.8	27.0	0.05	100.6
Tumbleweed Elementary School	43662101	S10	5.6	29.6	0.05	110.1
Yucca Elementary School	42662450	S11	3.2	19.0	0.03	70.9
Cactus K-8	33061060	S12	4.5	37.9	0.07	140.8
Mesa Intermediate School	43261101	S13	9.1	47.7	0.09	177.5
Los Amigos School	23561917	S14	1.7	35.3	0.06	131.3
Pete Knight High School	23561001	S15	20	243.9	0.44	907.5
Shadow Hills Intermediate School	23461001	S16	7.0	98.6	0.18	367.0
Yellen Learning Center School	40481015	S17	2.1	16.1	0.03	60.0
Oak Tree Learning Center	23261001	S18	7.1	40.9	0.07	152.2
Mesquite Elementary School	43361101	S2	3.4	28.7	0.05	106.7
R. Rex Parris High School	22362903	S20	1.7	16.6	0.03	61.9
Buena Vista Elementary School	40451001	S22	7.1	53.2	0.10	198.1
Cimmaron Elementary School	10551004	S23	2.8	28.1	0.05	104.5
Golden Poppy Elementary School	43561001	S24	2.3	29.3	0.05	109.1
Chaparral Elementary School	33461101	S26	2.5	16.3	0.03	60.5

Table 6	Customer List – Schools Recycled Water Facilities Master Plan Palmdale Recycled Water Authority					
Customer Name	Account Number	Site ID	Irrigated Area (acres)	Annual Demand (afy)	Max Day Demand (mgd)	Peak Hour Demand (gpm)
Palmtree Elementary School	60794001	S3	3.3	32.1	0.06	119.6
Tamarisk Elementary School	12562700	S5	3.3	24.4	0.04	90.7
Wildflower Elementary School	32971136	S6	3.8	30.4	0.05	113.0
Palmdale Learning Plaza	22762900	S7	6.6	52.3	0.09	194.7
Palmdale High School	33061061	S8	5.6	82.1	0.15	305.5
Desert Rose Elementary School	23161801	S9	4.4	26.2	0.05	97.3
High School (47th & Pearblossom)	n/a	S27	6.8	26.2	0.05	97.5
Phoenix High School	n/a	S4	4.4	11.7	0.02	43.5
Barrel Springs Elementary School	n/a	S19	9.7	58.0	0.10	215.8
Desert Millow Intermediate School	n/a	S21	10.2	36.8	0.07	136.9
Joshua Hills Elementary School	n/a	S25	9.3	22.9	0.04	85.2
Total	-	-	151	1,172	2.09	4,358

Table 7	Customer List – Parks Recycled Water Facilities Master Plan Palmdale Recycled Water Authority					
Customer Name	Account Number	Site ID	Irrigated Area (acres)	Annual Demand (afy)	Max Day Demand (mgd)	Peak Hour Demand (gpm)
Dr. Robert C. St. Clair Parkway	12662405	P1	2.8	31.9	0.06	118.5
Pelona Vista Park	43462001	P10	26.2	116.6	0.21	434.0
Dry Town Water Park	40551905	P11	7.1	68.4	0.12	254.5
McAdam Park	23271901	P2	15.3	64.1	0.11	238.6
Courson Park	32562226	P3	4.0	35.1	0.06	130.7
Desert Sands Park	76700008	P4	11.3	53.7	0.10	199.7
Domenic Massari Park	01762991	P7	30	150.6	0.27	560.2
60th St E/Ave S-8 Park	n/a	P12	19.2	84	0.15	312.5
72nd St E/Ave R-8 Park	n/a	P13	10.4	42	0.07	156.3
70th St E/Ave R Park	n/a	P14	10.4	42.0	0.07	156.3
Sam Yellen Park	n/a	P15	0.8	105.0	0.19	390.6
Sierra Hwy Green Belt	n/a	P16	0.2	16.0	0.03	59.5
Palmdale Park	n/a	P17	0.3	11.0	0.02	40.9
Desert Sands Expansion	n/a	P5	4.0	29.0	0.05	107.9
Desert Lawn Memorial Park	n/a	P6	47	32.3	0.06	120.2
Joshua Hills Park	n/a	P8	3.6	16.3	0.03	60.6
Total	-	-	142	849	1.6	3,160

Table 8	Customer List – Others Recycled Water Facilities Master Plan Palmdale Recycled Water Authority					
Customer Name	Account Number	Site ID	Irrigated Area (acres)	Annual Demand (afy)	Max Day Demand (mgd)	Peak Hour Demand (gpm)
American Indian Little League	76700006	O1	4.5	10.5	0.02	39.0
Ponciltan Square	22662991	O2	1.5	0.0	0.00	-
Ponciltan Square (New Mtr-A)	69400291	O2	1.5	8.9	0.02	32.9
Ponciltan Square (New Mtr-B)	69400292	O2	1.5	7.6	0.01	28.1
Palmdale Pony League	33061000	O_3	21.4	19.9	0.04	74.0
Trailer Shay	20351003	O4	14.1	3.7	0.01	13.8
Palmdale City Library	22662701	O5	0.2	5.0	0.01	18.6
Palmdale Parks & Rec Office	32562260	O6	0.3	3.5	0.01	12.9
Palmdale Playhouse	32562334	O7	0.1	2.8	0.01	10.5
Total[(1)]	-	-	42	62	0.11	230

Note:
(1) Ponciltan Square area only counted once

As shown on Table 6, Table 7, and Table 8, schools represent the largest group of recycled customers within the PRWA service area with more than 1,100 afy of annual demand. Parks are the second largest group, with 850 afy of annual demand, and roughly 60 afy of annual demand used by the Other category.

3.1.2 Landscape Maintenance Districts (LMDs)

In addition to the Schools, Parks, and Others list of customers, the PRWA could provide water to a second group, the Landscape Maintenance Districts (LMDs), which represent residential areas similar to homeowners associations. These areas are within residential neighborhoods and typically consist of communal landscape areas such as street medians or sidewalk shoulders. One hundred sixty-six (166) LMDs have been identified by the PWRA. Where available, consumption data from 2012 was used to predict future demands. Using 2012 consumption data for 133 of the identified LMDs, an average LMD demand of 31 HCF per acre per year was developed. This water demand factor was assigned to the

- The slight increase provides PRWA with the flexibility to serve potential customers in the future that do not yet exist in or around the service area.

The Project will most effectively be implemented in multiple, manageable, phases. Six such phases have been identified. Rather than prioritizing these six recommended phases sequentially, they are each identified by an anchor customer. Three of the phases can proceed all the way to construction, regardless of the status of the other phases, which provides the PRWA with options based on the availability of grant funds and local support from the community.

The recycled water system conveyance components (i.e., pumping and piping) will be able to supply the peak hour demand of the recycled water system. The necessary pressure will be supplied by the recommended variable head pump station at the Palmdale Water Reclamation Plant (PWRP).

5.1.2 Project Costs

A full list of the assumptions used to generate the project costs, including O&M estimates, contingency markups, and facility costs, is presented in Chapter 4. The phasing specific data presented in this chapter uses the same data.

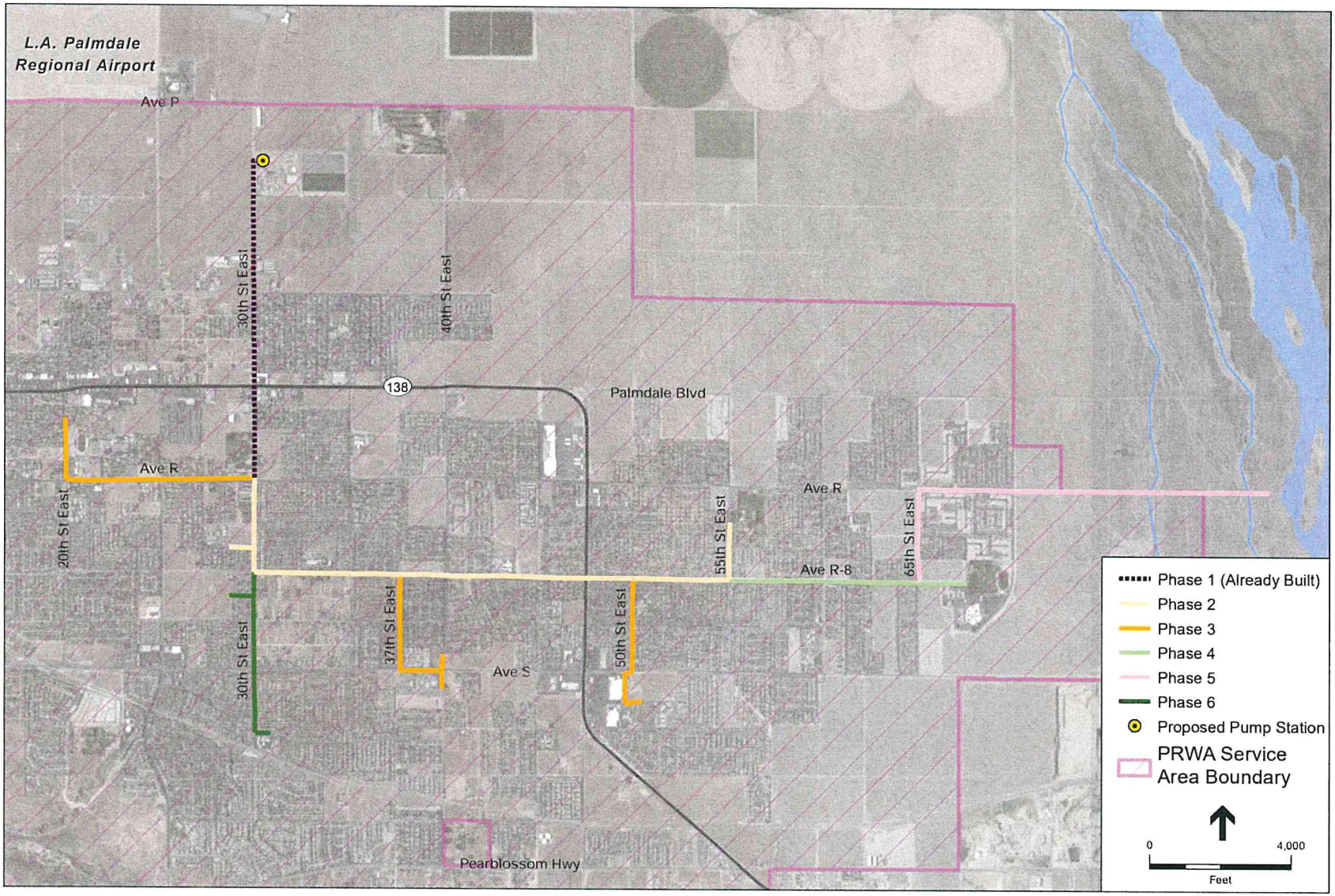
The majority of the Project costs will be upfront costs in the form of construction, engineering, construction management, environmental, legal, and contingency. In total, the entire recycled water system is projected to cost roughly $30 million. A full list of costs, by phase and facility is presented in the following section in Table 24 and Table 25.

5.2 IMPLEMENTATION

This section gives an overview of project implementation. Individual pipe segment phasing is considered foremost. Schedule, finance, permitting, and agreements are all also included in the discussion.

5.2.1 Phasing

The Project will most effectively be implemented in multiple, manageable, phases as demonstrated on Figure 8. As there are currently minimal existing revenue streams available to the PRWA for designing or constructing the Project, it is anticipated that the Project will likely proceed only after PRWA secures grant funds for individual phases of the Project. As such, the phases need to be sized such that they can be packaged as standalone projects, meet typical grant requirements, and have an overall budget that includes a realistic amount of matching funds from the PRWA. Rather than prioritizing the six recommended phases sequentially, they are each identified by an anchor customer. Three of the phases can proceed all the way to construction, regardless of the status of the other phases, which provides the PRWA with options based on the availability of grant funds and local support from the community.



SOURCE: ESRI

PRWA Recycled Water Facilities Plan IS/MND . 130096

Figure 4

Proposed Construction Phases

Finally, the appropriate next steps for each Phase are identified, again providing the PRWA with options.

Prior to the use of recycled water within the PRWA service area, a pump station must be built at the PWRP in order to provide sufficient pressure so that recycled water can be supplied to customers.

The total system peak hour demand at build out is estimated to be about 6,700 gpm. Given the total dynamic head requirement of 335 ft and average pump efficiency, the pump station should have a net capacity of about 800 hp, and be variable speed, in order to meet shifting and expanding system demands.

Palmdale High School Phase

The Palmdale High School Phase will connect to the existing recycled water pipeline on 30th Street East and transport this water west along Avenue R to 20th Street East. This will allow PRWA to serve Palmdale High School, located at 2137 Avenue R. Because this phase is an offshoot of the main trunk line, it can be constructed independent of the other phases. Other customers met by this phase include the Cactus School and Palmdale Pony League. In total, this phase will be used to meet approximately 140 afy of recycled water demand.

Domenic Masari Park Phase

The Domenic Masari Park Phase will extend the existing recycled water pipeline south along 30th Street East then continue east along Avenue R-8 to 55th Street East via a 24" line. This phase will allow PRWA to serve Mesa Intermediate School, Mesquite Elementary School, Desert Rose Elementary School, and finally Domenic Masari Park. Similar to the Palmdale High School Phase, this section of pipe can be constructed independent of other phases. In total, this phase will be used to meet approximately 290 afy of recycled water demand.

Dry Town Laterals Phase

The Dry Town Laterals Phase does not include the installation of any trunk line to transport PRWA recycled water supplies eastward. Instead, this phase focuses on extending smaller distribution laterals south from the mainline along Avenue R-8. These laterals will be located on 30th Street East, 40th Street East, and 50th Street East, and will serve demand at four parks and five schools. The largest of these customers are Dry Town Water Park and Sam Yellow Park. In total, this phase will be used to meet approximately 350 afy of recycled water demand.

Implementing this phase requires the completion of the Domenic Masari Park Phase.

Pete Knight High School Phase

The Pete Knight High School Phase will move recycled water supplies from the intersection of 55th Street East and Avenue R-8 north to Avenue R, and then directly east along Avenue R until reaching 70th Street East. This will allow PRWA to serve Pete Knight High School, Shadow Hills Intermediate School, and Los Amigos School. As with the Dry Town Laterals phase, implementing this phase requires the completion of the Domenic Masari Park Phase. In total, this phase will be used to meet approximately 390 afy of recycled water demand.

Littlerock Creek Phase

The Littlerock Creek Phase will move recycled water from the intersection of 70th St and Avenue R to the future Littlerock Creek recharge site. As the terminus of the system, this location will serve as a groundwater recharge site where recycled water may be supplemented with imported water resources for the purposes of recharging the groundwater basin. In addition to groundwater recharge, this phase will also serve a new park at 70th Street East. The park will use approximately 40 afy while recharge is anticipated to utilize 9,450 afy.

Implementing this phase requires the completion of the Domenic Masari Park Phase and Pete Knight High School Phase

Before this phase may be undertaken, PRWA must complete the Feasibility Study for the Littlerock Creek Recharge Project. This will involve initiating communication with LCID, Waterworks No. 40, and AVEK, as well as meeting with the Regional Water Quality Control Board and the California Department for Public.

Amargosa Creek Phase

Groundwater recharge at Amargosa Creek does not rely on the recycled water transmission lines described in the other phases. Rather, the Amargosa Phase would use currently planned infrastructure to move recycled water supplies to the Upper Amargosa Creek Recharge Project site or another potential recharge area along the Amargosa Creek.

As shown in the Alternatives Evaluation in Section 4, the effective unit cost for reuse of the available recycled water is dramatically reduced when groundwater recharge is included as part of the Project. In order for the PRWA to use recycled water for recharge, it will likely occur in locations outside of PRWA's service area and require collaboration with neighboring agencies such as AVEK, Waterworks No. 40, and others. This will be the case for recharge occurring in either Littlerock or Amargosa Creeks.

While the entire Amargosa Creek is located outside of the PRWA service area, preliminary studies by the USGS for the Upper Amargosa Creek Recharge Project have predicted that water that infiltrates into the ground from the creek serves to recharge the groundwater basin underlying the PRWA service area. Once the Upper Amargosa Creek Recharge

Project is operational and shown to be functional, the initial results can be used to determine if recycled water could be used to supplement imported and storm water supplies. Ultimately, the ability to use Amargosa Creek as a site for groundwater recharge and indirect potable reuse hinges on the success of the Upper Amargosa Creek Recharge Project.

The City has partnered with Waterworks No. 40 to design and construct a 24-inch recycled water pipeline from the PWRP to the City of Palmdale Hybrid Power Plant Project. A portion of this pipeline runs adjacent to Amargosa Creek and terminates approximately two miles north of the Upper Amargosa Creek Recharge Project. Independent of the design and construction of all other phases of the Project, the PRWA should partner in any effort to extend a recycled water pipeline to the Upper Amargosa Creek Recharge Project

Total Project Phasing

The completed recycled water system will require approximately 70,000 linear feet of pipe to be installed, along with a variable horsepower pump station. These facilities are presented by phase in Table 23.

Table 23 Summary of Proposed Facilities by Phase
Recycled Water Facilities Master Plan
Palmdale Recycled Water Authority

	Pump Station	Palmdale High School (Feet)	Domenic Masari (Feet)	Dry Town Laterals (Feet)	Pete Knight High School (Feet)	Littlerock Creek (Feet)	Total (Feet)	Capital Cost ($ M)
Pipelines								
6-inch Pipeline	-	2,450	700	10,450	-	-	13,600	$2.9 M
8-inch Pipeline	-	7,800	1,650	1,850	-	-	11,300	$3.0 M
12-inch Pipeline	-	-	750	3,550	1,350	-	5,650	$1.8 M
24-inch Pipeline	-	-	21,400	-	5,400	12,600	39,400	$19.2 M
Pump Station	PWRP Pump Station	-	-	-	-	-		$3.0 M

As shown in Table 23, the largest facility expansion will occur in the Domenic Masari Phase of the project. Other phases either focus more on transmission or distribution. While the pump station Phase is shown separately in this table, it is anticipated that it will be constructed simultaneously with either the Palmdale High School Phase or Domenic Masari

Phase. Below, Table 24 shows all the stages of project phasing along with demand and unit costs. Again, the pump station construction is separated into its own phase for cost presentation purposes, but will be constructed simultaneously with either the Palmdale High School Phase or Domenic Masari Phase.

Table 24 Project Costs by Phase
Recycled Water Facilities Master Plan
Palmdale Recycled Water Authority

Phase	Prerequisite[1]	Total Annual Demand (afy)	Annual Demand per Phase (afy)	Total Capital Cost ($ M)	Capital Cost per Phase ($ M)	Unit Cost[2] ($/af)
Pump Station	n/a	n/a	n/a	$3.0 M	$3.0 M	n/a
Palmdale High School	Pump Station	145	145	$5.6 M	$2.6 M	$3,425
Domenic Masari Park	Pump Station	295	295	$14.3 M	$11.3 M	$4,275
Dry Town Laterals	Domenic Masari Park	645	350	$18.1 M	$3.9 M	$2,550
Pete Knight High School	Domenic Masari Park	685	390	$17.3 M	$3.1 M	$2,300
Littlerock[3]	Peter Knight High School	10,200	9,500	$23.5 M	$6.1 M	$350
Complete System	**All**	**10,700**	**n/a**	**$29.9 M**	**n/a**	**$400**

Note:
(1) Total capital costs and unit costs are calculated with the assumption that phases are completed with minimum number of prerequisites (e.g. Pete Knight phase assumes Palmdale High School and Dry Town Lateral phases have *not* been built)
(2) Unit cost is derived by amortizing capital costs over a 30 year payback period, and includes O&M (2% of capital cost, annually)
(3) The Littlerock phase annual demand is composed of roughly 50 afy of direct non-potable reuse, and roughly 9,450 afy of groundwater recharge

As shown in Table 24, the unit cost to deliver recycled water to direct non-potable customers within the PRWA is expected to range from $350 per afy to over $4,000 per afy. Once recycled water can be delivered to the groundwater recharge site planned for Littlerock Creek, utilization of the system will increase by roughly 9,500 afy.

It is also important to note that after the Domenic Masari Phase is complete, further expansion of the system leads to a decrease in unit cost. This is because the majority of

potential customers are in the eastern half of the PRWA service area and once that area is reached, recycled water utilization should significantly increase, relative to the cost of the system. As shown, the majority of project costs are due to installation of nearly 40,000 linear feet of the 24-inch pipeline.

It should be noted that following installation of the pump station, the phasing costs will be determined by pipeline construction. The project costs presented in Table 23 and Table 24 assume a 30-year payback period on all project capital costs.

5.3 SCHEDULE

A tentative project schedule is presented below in Figure 9.

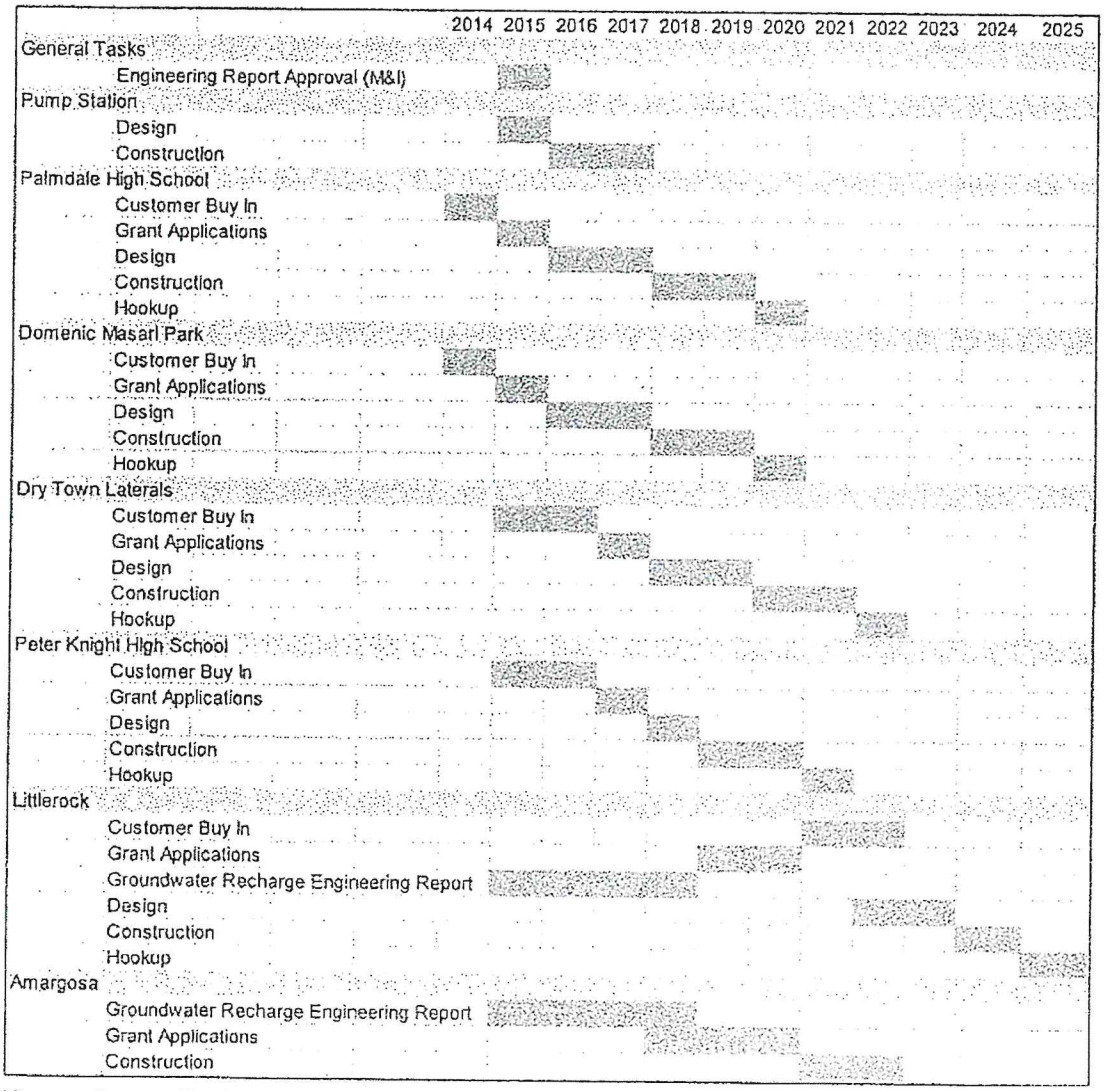


Figure 9 Project Schedule

As shown in Figure 9, the Project is anticipated to require over 10 years to complete. The direct non-potable use stages of the project have the potential to be completed much earlier.

5.4 FINANCE

This section describes how the recycled water project will generate funds for the PRWA, as well as how different elements of the project will be financed.

5.4.1 Rates

Based on the assumption that Alternative 3 is selected at the estimated total capital cost of $30 million (Table 24), a *Preliminary Recycled Water Financial Plan* (Carollo, 2014) was prepared to assess the PRWA recycled water rates, primarily the City and PWD. The City will purchase recycled water for its parks and landscape maintenance districts, while PWD will use recycled water for groundwater recharge. Recycled water will also be sold to private customers, mostly in the form of schools, which use recycled water for irrigation purposes.

To develop recycled water rate unit costs, three methodologies were evaluated: (1) Straight Unit Cost; (2) Rate Smoothing; (3) Percent of Potable. Under the first rate alternative, Straight Unit Cost, a unit cost is calculated by dividing that year's assumed expenditures by assumed recycled water deliveries. As costs relative to deliveries are higher for the earlier phases, the unit cost is highest in the first few years and drops as expected recycled water deliveries expand. As such, this approach requires the least amount of funding commitments from the City and PWD. Since the system is projected to take nearly 10 years to expand projected deliveries, normalizing the short-term marginal cost of recycled water would be advantageous to prevent the system's initial users from paying a higher rate than users later in the development phase.

Conceptualizing the recycled water system as a complete system involves allocating upfront costs of the system (e.g. pump stations) to all users based on full utilization, rather than to existing usage. As the second alternative, a rate smoothing approach was evaluated to guard initial users (first connectors) from large fluctuations in unit costs over the initial phases of the project. This approach further provides a mechanism to smooth upfront costs to future users. For example, given the financial assumptions, the pump station unit cost for initial users is $541 per af (pump station debt service / 2020 demand). Spreading this fixed cost over the full demand of the system reduces the unit cost to $195 per af (pump station debt service / 2025 demand). A rate smoothing approach calculates the revenue difference between the two prices and amortizes that lost revenue (expense) over a set number of years for repayment (recovery). However, this methodology would require either adequate reserves or an outside funding source to fund the impact of the rate normalization. The rate smoothing approach results in a lower cost in the short term, but higher in the long term as the reserves are replenished or outside funding commitments are repaid.

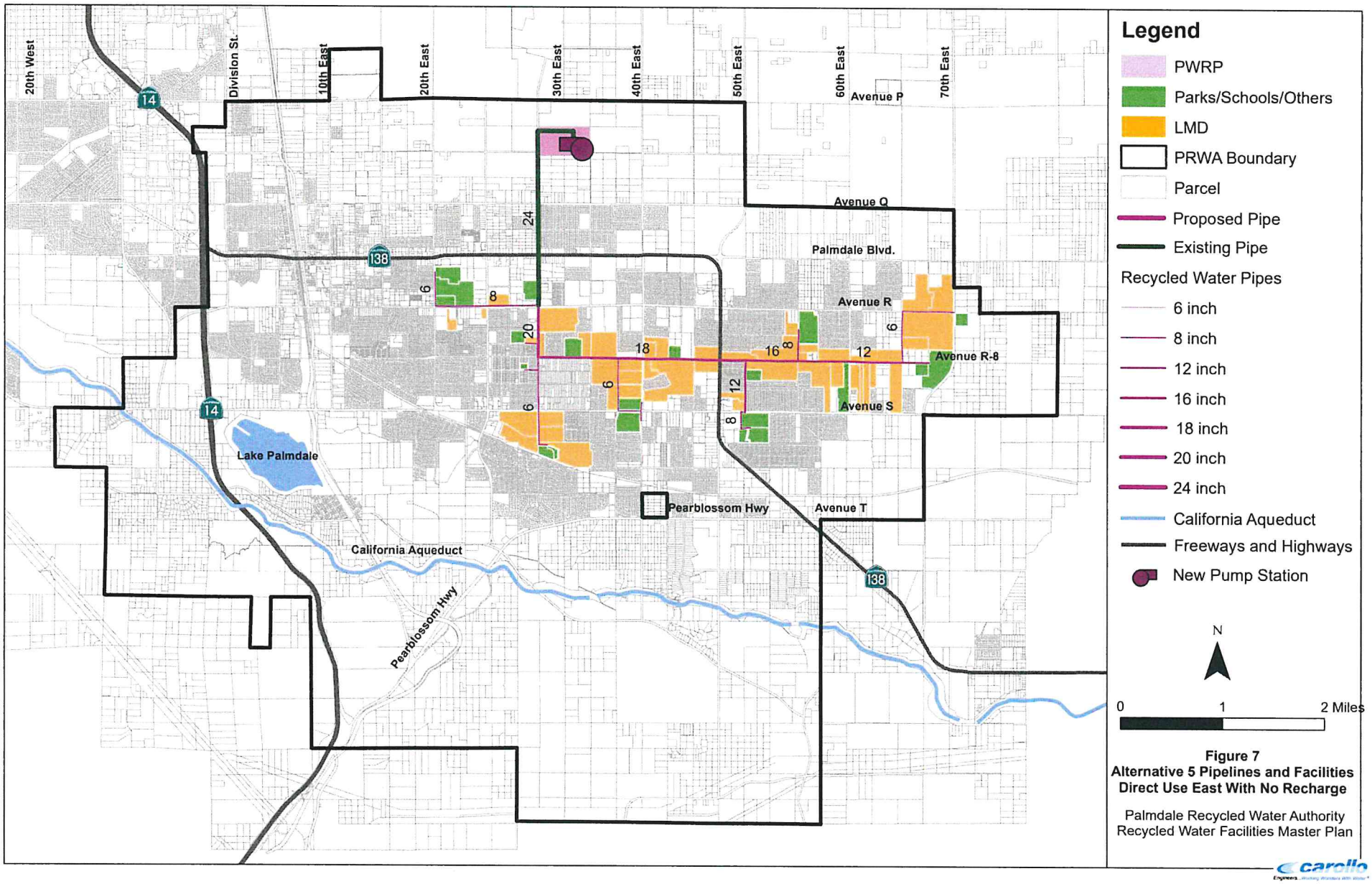


Figure 7
Alternative 5 Pipelines and Facilities
Direct Use East With No Recharge

Palmdale Recycled Water Authority
Recycled Water Facilities Master Plan

carollo

PALMDALE RECYCLED WATER AUTHORITY

BOARD MEMORANDUM

DATE:	April 12, 2021	**April 19, 2021**
TO:	BOARD OF DIRECTORS	**Board Meeting**
FROM:	Michael Williams, Treasurer-Auditor, PRWA	
VIA:	Mr. Dennis LaMoreaux, Executive Director, PRWA	

RE: AGENDA ITEM NO 7.2 – CONSIDERATION AND POSSIBLE ACTION ON RESOLUTION NO. 2021-001 AUTHORIZING THE ADOPTION OF THE REVISED PALMDALE RECYCLED WATER AUTHORITY 2021 ANNUAL BUDGET

Recommendation:

Palmdale Recycled Water Authority (PRWA) staff recommends approving the revised 2021 annual budget as presented in the 2021 Budget Document and approve Resolution No. PRWA 2021-001 authorizing the adoption of the Revised Palmdale Recycled Water Authority 2021 Annual Budget.

Background:

A part of the Palmdale Recycled Water Authority's duties is to create an annual operating budget. The revised 2021 Budget removes the contributions by both agencies as it has been determined that contributions this year are not needed. The revision also removes the anticipated professional work associated with the activities related to Phase II of the Recycled Water Facility Master Plan.

Financial Impact:

As set forth in the 2021 Budget Document, the fiscal year is projected to result in $1,773,448 in unappropriated reserves.

Supporting Documents:

Resolution No. PRWA 2021-001
2021 Budget Document (Exhibit A to Resolution No. PRWA 2021-001)

RESOLUTION NO. PRWA 2021-001

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE PALMDALE RECYCLED WATER AUTHORITY AUTHORIZING THE ADOPTION OF THE REVISED PALMDALE RECYCLED WATER AUTHORITY 2021 BUDGET

WHEREAS, The Palmdale Recycled Water Authority Board adopted their Budget for calendar year 2021 on November 16, 2020, and

WHEREAS, The Palmdale Recycled Water Authority has identified the need to revise its 2021 Budget, and

WHEREAS, the Palmdale Recycled Water Authority has determined that agency contributions were not needed for the 2021 budget; and

PROPOSED

WHEREAS, the Palmdale Recycled Water Authority also determined that anticipated professional work associated with the activities related to Phase II of Recycled Water Facility Master Plan be suspended during the 2021 budget year.

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Palmdale Recycled Water Authority:

SECTION 1: The original of the Budget of the Palmdale Recycled Water Authority is on file in the office of the Authority Clerk and shall be open to public inspection.

SECTION 2: The Palmdale Recycled Water Authority hereby approves all the adjustments to the calendar year 2021 revenues and expenditures as presented in the calendar year 2021 budget document, attached hereto as Exhibit A.

SECTION 3: The revised Budget of the Palmdale Recycled Water Authority is hereby approved and adopted. In adopting said budget the Authority Board approved the revisions as presented.

SECTION 4: The Authority Treasurer is hereby authorized and instructed to take all steps necessary to implement this resolution in accordance with the provisions of the budget document.

SECTION 5: Without prior approval of the Authority Board, the Executive Director shall have authority to transfer up to $25,000 from program to program, except for shifts in appropriations relating to personnel. Any transfer of more than such amount shall be approved by the Authority Board.

SECTION 6: The Authority Treasurer, with the approval of the Executive Director shall approve the Encumbrances and Continuing Appropriations from the Authority's budget for calendar year 2021.

SECTION 7: The revised Budget for calendar year 2021, as submitted, amended, modified, revised, corrected, adopted, and filed by the Authority shall be the calendar year 2021 Budget for the Palmdale Recycled Water Authority. The Budget is subject to the requirements of Article XIII B of the California Constitution.

SECTION 8: The Clerk of the Authority shall certify to the adoption of this Resolution and enter it into the official records of the Authority.

PASSED, APPROVED and ADOPTED this 19th day of April, 2021, by the following vote:

AYES:_____

NOES:_____

ABSTAIN:_____ ABSENT:_____

PROPOSED

_____
Vincent Dino Chair

ATTEST:

_____
Roxanne Faber,
Acting Authority Secretary

Approved as to form:

_____
Christopher L. Beck
Authority Counsel

EXHIBIT A
PALMDALE RECYCLED WATER AUTHORITY
Revised Budget - CY 2021

Acct. #		CY 2016 ACTUAL	CY 2017 ACTUAL	CY 2018 ACTUAL	CY 2019 ACTUAL	CY 2020 PROJECTED	CY 2021 REVISED
	Revenues:						
1-00-3100-100	Contribution - Palmdale Water District	$ 100,000	$ 100,000	$ 300,000	$ 300,000	$ 300,000	$ -
1-00-3100-200	Contribution - City of Palmdale	100,000	100,000	300,000	300,000	300,000	-
1-00-3000-000	Revenue - Water Sales	59,472	28,748	55,806	34,829	47,090	46,000
1-00-3050-000	Revenue - Meter Fees	31,775	22,812	19,579	17,982	15,930	20,000
1-00-3075-000	Revenue - Miscellaneous Fees	112	-	578	100	555	500
1-00-3150-000	Grants	19,418	55,582	-	-	-	-
1-00-3500-000	Interest Earnings	1,051	1,667	4,543	26,902	14,990	17,000
	Total Revenue	$ 311,828	$ 308,809	$ 680,506	$ 679,813	$ 678,565	$ 83,500
	Expenses:						
1-00-4000-000	Public Representative - Meetings & Travel	$ 750	$ 1,830	$ 2,722	$ 750	$ 1,050	$ 3,000
1-00-4010-000	Payroll Tax Expense (Employer)	57	82	57	57	75	200
1-00-4500-100	Depreciation-General	-	280,387	53,407	53,407	53,407	53,407
1-00-5000-000	Banking Fees	-	424	939	523	742	750
1-00-5025-000	Provision for Bad Debt	-	695	-	-	-	700
1-00-5100-000	Insurance	-	-	1,789	6,703	6,457	6,500
1-00-5200-000	Memberships	2,552	2,408	2,996	3,130	4,102	4,100
1-00-5300-000	Marketing & Outreach	5,922	-	-	-	7,000	25,550
1-00-5500-000	Travel & Meetings	-	595	-	-		1,500
1-00-5600-000	Permits & Fees	-	76	-	-		5,000
1-00-6000-000	Purchased Water	20,143	14,789	16,631	16,963	12,794	17,500
1-00-6500-000	Materials & Supplies	-	-	7,928	-	-	10,000
1-00-6600-000	Maint. & Rep. - Water System	-	9,783	-	-	11,600	12,000
1-00-8000-150	Contract Services - Professional Services	90,891	22,647	-	1,382	54,500	-
1-00-8000-200	Contract Services - Financial Audit	10,000	9,000	10,225	8,000	8,500	8,500
	Total Expenses	$ 130,315	$ 342,715	$ 96,694	$ 90,915	$ 160,227	$ 148,707
					Net Income/(Expense):	$ 518,338	$ (65,207)
	Change in Net Position at December 31	$ 181,513	$ 147,607	$ 731,419	$ 1,320,317	$ 1,838,655	$ 1,773,448

Prepared 4/12/2021