RAMONA MUNICIPAL WATER DISTRICT

DRAFT

WATER SYSTEM INFRASTRUCTURE FACILITIES PLAN UPDATE

- FEBRUARY 2023 -

DUDEK

MEMORANDUM

Date: February 14, 2023
Subject: UPDATED WATER SYSTEM INFRASTRUCTURE FACILITIES PLAN

EXECUTIVE SUMMARY

BACKGROUND

The Water System Infrastructure Facilities Plan (Water Facilities Plan) was first introduced and accepted by the Ramona Municipal Water District (District) Board of Directors in February 2017. The Water Facilities Plan is a planning tool to help provide transparency and establish system priorities. The 2017 version of the Water Facilities Plan included projects based on operational needs within the system. Projects were identified in coordination with District operations staff and engineering department.

The Water Facilities Plan was updated in 2018 and presented to the Board for approval during a special Board Meeting on July 31, 2018. The plan was unanimously approved.

In 2019, the Water Facilities Plan was updated once again and presented to the Board during the April 9, 2019, Board meeting. The purpose of the update was to provide the Board with an update on the progress on projects and programs identified under the plan and to introduce potential new projects to be evaluated during the upcoming Water Master Plan Update (WMPU).

In 2019, the District retained the services of Carollo Engineers to complete the update to the 1998 Water Master Plan prepared by Boyle Engineering. Carollo partnered with West Cost Civil to update the District's treated water model and assist in identifying projects recommended as part of the WMPU. Carollo Engineers completed and presented the WMPU at the December 2021 Board Meeting. The WMPU was finalized in January 2022.

In November 2022, the District held a public workshop to discuss the updated Water Facilities Plan which included findings and recommendations for improvement from the WMPU. Each of the projects and programs were presented during the workshop and comments were provided by various Board of Directors and members of the public. Comments were received from the Board on the draft version of the document.

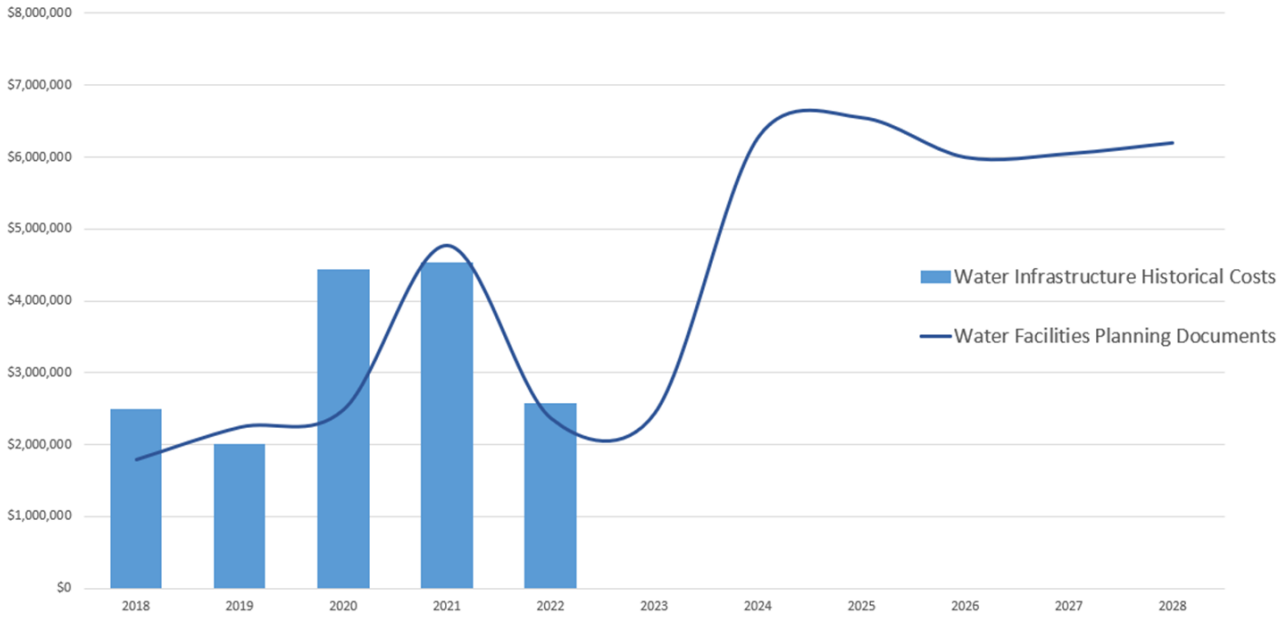
FUNDING AND EXECUTING THE WATER FACILITIES PLAN

Historical Annual Capital Spending

The District has spent $2 to $4.5 million annually, an average of $3.4 million, on water facilities capital projects between Fiscal Years (FY) 2016-2017 and 2021-2022. The District had planned to spend $2.7

million on its water facilities capital program during this same time period and therefore on average met and exceeded its planned capital spending, despite falling short in individual years.

Figure 1. Historical and Planned Spending on Water Facilities Capital Projects



At the November 2021 Water Facilities Plan workshop, staff explained that the current 2022 value of the District's Water Facilities is $252.1 million (not including Lake Ramona). **Table 1** shows the frequency that District Water Facilities will be replaced based on an annual Capital Replacement Program (CRP) spending. District assets vary in useful life with pipelines lasting 50-75 years, pump stations lasting 40-50 years and mechanical parts, such as pumps, lasting 15-20 years. Assuming that, on average, the District's assets have a useful life of 50 years, the District needs to spend at least $5 million annually to maintain its water facilities. If a system has deferred maintenance and replacement, the projected spending needs to be increased to maintain its water facilities. As the District has only spent $3.4 million between FYs 2016-2017 and 2021-2022, the District has an estimated replacement schedule of approximately 75 years and currently has a deferred maintenance and replacement backlog.

Table 1. Capital Replacement Program Spending vs System Replacement

Annual CRP ($M)	System Full Replacement in Years
$2.5	100
$3	84
$4	63
$5	50

Recommended Annual Capital Spending

The updated Water Facilities Plan is recommending a District capital program of $31.1 million over the next five years, or approximately $6.2 million annually. District staff are recommending $6 million instead of $5 million on average, to reduce the deferred maintenance and replacement backlog.

In 2019, Raftelis completed a rate and fee study that included a recommended capital budget of $6.6 million and the proposed $6.2 million is closer to this recommended range than the District has spent historically. District staff also compared the capital spending in the last two to five years on water facilities for other water agencies similar to the District. Valley Center Municipal Water District (MWD), Rainbow MWD and Fallbrook Public Utilities District (FPUD) have an annual capital budget of $5.5 to 6.0 million. Therefore, the proposed $6.2 million is within range for similar water agencies.

Execution of Capital Plan

As shown in Figure 1, the District has been able to execute or exceed the planned spending in its water facilities capital plan. In recent years, the District has committed to designing a project in one year and constructing it in the next to plan and execute projects more reliably. To ensure that the District can continually spend the budget over the five-year period, the District will work between now and the end of the next fiscal year to develop $5-6 million in shovel-ready designs. “Shovel ready” means that the final design is completed and the environmental documentation to satisfy the California Environmental Quality Act (CEQA) and other critical permitting is completed. There are two advantages to this approach: 1) having shovel ready designs makes the District more competitive on grant and loan applications as funding agencies like to issue construction funds to projects that can be completed in the near term and in a timely manner and 2) in an year that there is a delay in a planned project, the District can issue a bid for one of its shovel ready projects to ensure that the plan budget is met. The District is currently evaluating which projects can be completed by its existing engineering staff under contract and whether additional on-call engineering contracts need to be issued.

The District has traditionally only used “PAY-GO,” which means that projects are not bid for construction until sufficient funds are available in the water capital reserve accounts. This has traditionally limited the size of the project that the District can construct in any given year and has resulted in some efficiencies as it can be more cost effective to bid multiple parts of a project as one larger project rather than smaller annual projects. The District plans to explore funding options, such as grants and loans, to enable the District to execute larger projects without resulting in a large rate increase that would occur if the District were to continue to use the “PAY-GO” method.

UPDATED WATER FACILITIES PLAN

The updated Water Facilities Plan incorporates recommendations from the WMPU, comments received during the Board workshop, and input from District operations staff in close coordination with the General Manager and input from the Finance Department. This plan addresses the District’s most immediate needs within the existing treated water system and provides a planning document for budgeting purposes over the next 5 to 10 years.

The Updated Water Facilities Plan includes proposed projects within the identified Water System Programs, including the Radio Read Meter Replacement Program, Pump & Motor Efficiency Program, Pipeline Replacement Program, Tank & Reservoir Rehabilitation Program, and PRV Replacement Program. The primary purpose of these programmatic components of the Water Facilities Plan is to identify ongoing, long-term projects for rehabilitation and replacement of critical water system infrastructure. These programs will continue indefinitely, as ongoing age and deterioration of water infrastructure will necessitate replacement and rehabilitation effort.

The Pipeline Replacement Program incorporates the pipeline replacement recommendations of the WMPU, as well as operationally identified pipeline replacement projects (i.e., replacement of cast iron pipeline materials and pipeline materials that have aged beyond their useful life). Considering the 5-to-10-year scope of the Water Facilities Plan, only those projects to be completed within the next 10 years are included in this document. However, the Pipeline Replacement Program, based in the WMPU, will incorporate the replacement of District distribution pipelines over future facility planning horizons to meet minimum pipeline diameter requirements and deteriorated material replacement.

Outside of the Water Facilities Plan Program projects, there are a few pipeline projects that provide specific benefit to the District water system or are dependent on interrelated projects. For these reasons, these projects are listed separately within the Water Facilities Plan. These projects include the:

- **Project 6**: 18- to 30-inch replacement of the Poway Pump Station discharge pipeline
- **Project 7**: 16-inch Elm Street Transmission Main,
- **Projects 9-11**: Projects associated with long-term decommissioning of the untreated water system,
- **Project 8**: 12-inch Downtown Transmission Main, and
- **Projects 12-14**: Projects related to the Barona and Acres Waterline Projects

The description sheets and graphics provided within the Water Facilities Plan Update identify the proposed justification and schedule of implementation for each project. Additional information is included on Project 3: Pipeline Replacement Program, Project 3.06 4-in and 6-in Pipeline Replacement Program, Project 6, and Project 7.

Project 3 Pipeline Replacement Program

The Pipeline Replacement Program provides for the replacement of aging and deteriorating water distribution facilities throughout the District service area. Past program emphasis has been given to the replacement of existing cast iron water pipelines, primarily within the downtown portion of the community. This portion of the water system has the oldest conveyance facilities, circa 1927.

The District has experienced approximately 47 mainline breaks over the past five years. These mainline breaks represent an impact to the residential and business customers of the District. Main breaks result in unexpected lane closures and traffic delays. Water outages result in closure or reduced service for businesses, as well as residential disruption of daily life. Where possible, water services are highlined to maintain service when mainline breaks occur. However, not all services are able to be highlined.

The resulting water service outages result in District staff working overtime to repair breaks and put the system back into proper operation, preventing work on other system priorities.

Proactive replacement of aging and deteriorating infrastructure also reduces cost to District ratepayers. As shown in **Table 2,** the District spent $0.67 million over the last five years repairing main breaks. The in-house cost of repairing a mainline break is approximately $1,650 per linear foot (lf). This repair cost is compared to planned replacement costs of approximately $500 to $600 per lf, depending on the length and diameter of the main. Other impacts, including excessive pavement damage/repair, sidewalk/curb/gutter repair, and potential private property repair, increase project cost and open the District up to potential claims. The District has been fortunate that property damage related claims related to main breaks are relatively rare. Therefore, the Pipeline Replacement Program lowers overall disruption and cost to the ratepayers, as well as underscores that the District is reliable and focused on the well-being of its customers. The costs related to customer impacts and claims are not included in **Table 2** and therefore the identified $0.67 million underrepresents the economic impact to the District and community.

Table 2. Main Line Breaks 2018-2022 and Associated Costs

	In-House Repairs	Contract Repair	Total Repairs
Number of Main Breaks	44	3	47
Approximate Total Length Repaired (feet)	264	90	354
Material Costs ($)	$210,664		
District Labor Costs ($)	$224,297	$26,609	
Contractor Costs ($)	-	$210,762	
Total Cost ($)	**$434,961**	**$237,370**	**$672,331**
Average Cost Per Main Break ($)	**$9,885**	**$79,123**	**$14,305**
Cost per Length Foot of Repair ($/ft)	**$1,648**	**$2,637**	**$1,899**

New Project 3.02 - Replacement of Existing 14-inch Transmission Main

Within the Woodson-Bargar Pressure Zone, water is conveyed from the Woodson Tank to the influent side of the Olive Pump Station (OPS) through 14-inch steel transmission pipelines. These pipelines were installed in 1958 and are reaching their useful life, with a total of five recent mainline breaks. The 14-inch pipeline forms a loop around the downtown service area along Montecito Road on the north and Dye Road on the south, conveying water throughout the central and northern portions of the service area. This pipeline loop reduces headloss by serving water around the northern and southern side of the downtown area. In the event of a failure in the 14-inch pipeline, water would be required to flow around one side of the downtown area, increasing losses, and significantly impacting the ability to maintain water and fire flow service. Systematic replacement of the 14-inch pipeline is necessary to avoid potential loss of water service in the Woodson-Barger Pressure Zone.

Replacement of the 14-inch pipeline is proposed to be completed in an incremental process, with approximately one or two miles of the pipeline replaced at a time. The District will prioritize replacing portions of this pipeline in the area where main breaks have occurred, which appear to be associated with a more corrosive environment (e.g., near the creek crossings). The District could also elect to identify funding for a larger replacement project and more linear feet of the pipeline could be replaced. Either way, the District intends to design the various replacement components of the 14-inch pipeline to develop "shovel-ready" projects, to be constructed in an efficient and timely manner.

Revisions to Project 3.06 4-inch and 6-inch Pipeline Replacement Program for Fire Flow

In December 2022, the District prepared a memorandum that updated the fire flow analysis included in the final January 2022 WMPU. An error in the model resulted in overestimating the number of locations within the District that did not meet fire flow. The January 2022 WMPU recommended replacement pipe lengths of 383,000 feet and at a total cost of $126.5 million, approximately $9 million annually to be spent between 2022 and 2035. Correction of the error reduces the replacement length to approximately 125,000 and significantly reduces the amount of pipelines in each of the eight priority groups for a revised cost of $41.3 million or $3 million annually. The results of this updated analysis are reflected in Project 3.06 "4-in & 6-in Pipeline Replacement Program (Ongoing)". Due to the revisions in the priority list, the District has scheduled this project to start in FY 27/28 and will spend approximately $15 million in construction on these replacements through FY 32/33.

18- to 30-inch Poway Pump Station Discharge Pipeline Replacement

The Poway Pump Station (PPS) receives water from the San Diego County Water Authority (SDCWA) aqueduct via a flow control facility with a capacity of 32 cubic feet per second (cfs). From the PPS, the 30-inch diameter pipeline splits into two with one branch headed north via a 24-inch diameter pipeline to the 3-million-gallon (MG) West End Tank, which feeds the Highland Valley area and Downtown/West End pressure zone and the other branch headed east via an 18-inch and 30-inch pipeline to the 10-MG Woodson Reservoir, which feeds the Woodson-Bargar pressure zone. It is important for system reliability that the full maximum day demand (MDD) can be supplied to and distributed from the West End Tank and Woodson Reservoirs individually. As in the event of a major transmission main break, the District would not be able to meet demand without requesting customers significantly conserve water.

As the Ramona community relies entirely on SDCWA water, the PPS is critical to the community's water security. The PPS 18-inch discharge pipeline was previously replaced with a 30-inch pipeline, except for approximately 6,700 feet that remained 18-inch. Based on the recent Water Master Plan Update (WMPU), the 18-inch portion is recommended to be replaced with 30-inch to facilitate future water delivery through the PPS. The following analysis provides additional rationale for why the project should be completed.

In approximately 2016, the District changed from pumping 24/7 as needed throughout the day to pumping only during a 19-hour window to avoid pumping during time of use (TOU) from 4 pm to 9 pm when energy prices are higher. TOU energy prices vary but can be between 4 and 400 times the cost of electrical during non-TOU hours. Prior to 2016, the District spent approximately $1.8 million annually by pumping 24/7 as needed. However, the District has been able to save approximately $0.8 million

annually by avoiding TOU. Due to the significant cost savings, the District would like to continue avoiding TOU electric rates, whenever possible.

Tables 3 and **4** show the flow rate under maximum day demand (MDD) and peak hour demand (PHD) conditions that needs to be conveyed by the PPS under current conditions, current conditions with Barona's near-term demands added and ultimate 2035 conditions with and without Barona, assuming that only the pipeline to the West End Reservoir or Woodson Reservoir is in service. The corresponding velocity through the 30-inch pipeline, 24-inch pipeline to West End Reservoir and 18-inch pipeline restriction to the Woodson Reservoir is also shown. The San Diego Water Agency Standards (WAS) recommend a maximum velocity of 8 feet per second (fps) during peak hour demand. **Table 3** shows that under MDD conditions, the District would be able to stay below the 8 fps criteria for all scenarios except the ultimate scenario with Barona's demands in the 18-inch pipeline. **Table 4 shows that the 18-inch pipeline exceeds the maximum velocity criteria in all PHD scenarios under current and future conditions.**

Table 3. Maximum Day Demand Flowrate and Velocity through PPS Transmission Lines

Scenario	MDD		Flowrate to avoid TOU**		Velocity (fps)		
	(gpm)	(cfs)	(gpm)	(cfs)	18"	24"	30"
Current*	4,028	9.0	5,088	11.3	6.4	3.6	2.3
Current with Barona	4,772	10.6	6,028	13.4	7.6	4.3	2.7
Ultimate (2035)	4,244	9.5	5,361	11.9	6.7	3.8	2.4
Ultimate with Barona	5,732	12.8	7,240	16.1	9.1	5.1	3.3

**5.8 mgd*
***19 hours per day (9 pm to 4 pm, daily)*

Table 4. Peak Hour Demand Flowrate and Velocity through PPS Transmission Lines

Scenario	PHD*		Flowrate to avoid TOU**		Velocity (fps)		
	(gpm)	(cfs)	(gpm)	(cfs)	18"	24"	30"
Current*	6,445	14.4	8,141	18.2	10.3	5.8	3.7
Current with Barona	7,635	17.0	9,644	21.5	12.2	6.8	4.4
Ultimate (2035)	6,790	15.1	8,577	19.1	10.8	6.1	3.9
Ultimate with Barona	9,171	20.4	11,585	25.8	14.6	8.2	5.3

**MDD of 5.8 million gallons per day (4,028 gallons per minute) times a peaking factor of 1.6*
***19 hours per day (9 pm to 4 pm, daily)*

As the SDCWA connection and PPS are the District's sole source of supply, it is critical that the District be able to refill its storage in a timely manner during peak times, such as red flag events that could last multiple days. **Table 5** shows the benefit in decreased time to fill the 10 MG Woodson Reservoir while not exceeding the maximum velocity criteria of 8 fps. Currently, it takes the District greater than one day to refill the storage using the 18-inch pipeline and avoiding exceeding the maximum velocity criteria. With the increased pipeline size, the District can refill the Woodson Reservoir in approximately half a day while remaining outside of the TOU period. The District has 25.4 million gallons of potable water storage District-wide and the time to refill these reservoirs via the change in pipeline diameter is reduced from 3.6 days to

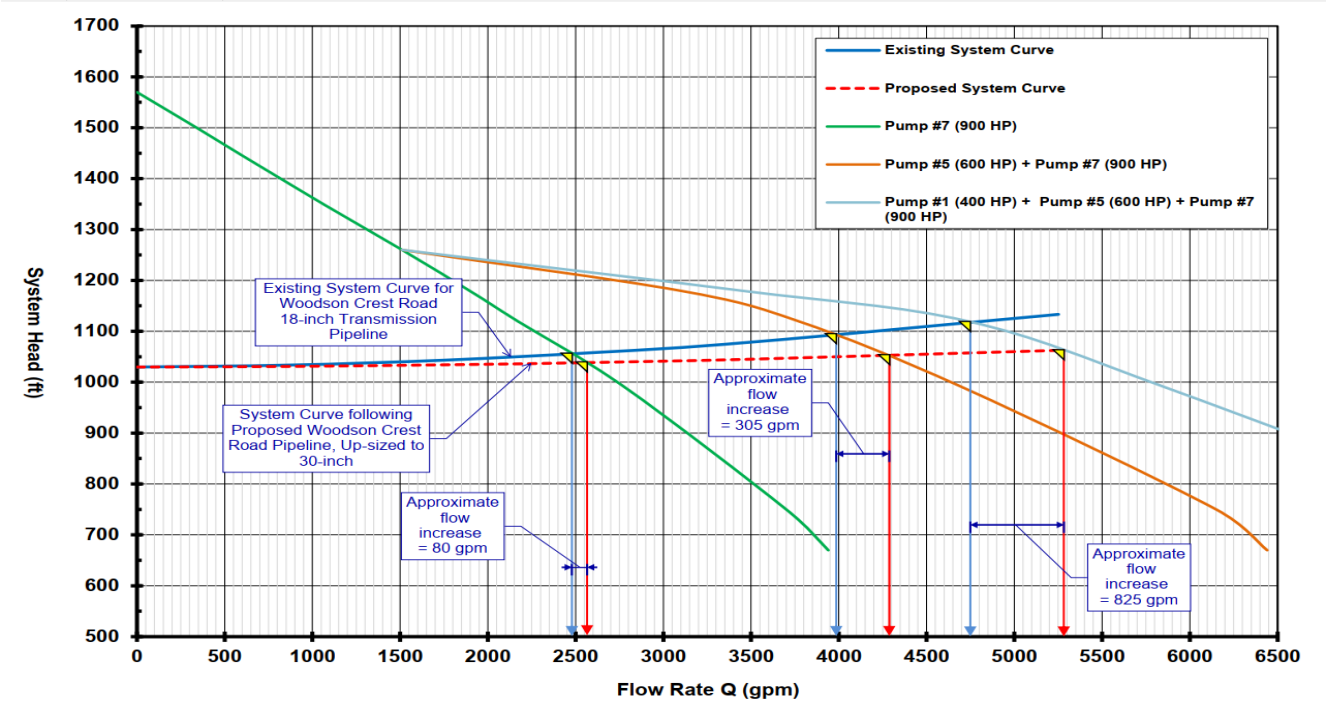
1.6 days, while avoiding TOU, which is typically has higher prices during red flag events when the need to refill is likely to be higher.

Table 5. Time to Fill Storage via 18- and 30-inch Pipelines				
Pipeline	**Max Flow at Max Velocity of 8 fps**		**Time to Refill Reservoir (Hours)**	
	(gpm)	**(cfs)**	**10 MG Woodson Reservoir**	**All District Storage (25.4 MG)**
18-inch	6,329	14.1	26.3	66.9
30-inch	14,363	32*	11.6	29.5

**Note: the maximum velocity of the 30-inch pipeline is 39.3 fps but this exceeds the SDCWA flow control facility capacity of 32 fps, so 32 fps was used.*

Figure 2 illustrates the relationship between total dynamic head (TDH) and flow (Q) relative to the PPS. The PPS has an array of pumping facilities, ranging between 400 and 900 horsepower (HP). At various times of the year, District operations staff run different combinations of these pumps. However, during red flag warnings, all reservoirs and tanks are filled and maintained full throughout the fire danger period. Under these conditions, three pumps are operated at the PPS, including the 900 HP, 600 HP and 400 HP pumps. Figure 2 shows the flow results with one, two and three pumps operating.

Figure 2. Poway Pump Station Analysis



The blue and red dashed lines are the system head curves, representing existing pipeline conditions and conditions with the proposed 30-inch replacement pipeline installed. As shown, replacement of the 18-inch portion of pipeline results in lower headloss with increasing flow rates. The impact with a single 900 Hp pump running is an increase in flow capacity of approximately 80 gallons per minute (gpm). The orange line represents the conditions with two pumps running (900 and 600 Hp). Under this scenario, flow is increased by approximately 305 gpm. The light blue line represents the condition with three pumps running (900, 600 and 400 Hp), resulting in an increased flow of 825 gpm. Figure 2 also indicates that with the current bottleneck on the 18-inch line, greater than three pumps would be needed to meet current MDD of 5,088 gpm outside of TOU but that three pumps can easily meet MDD after the increase in the line size to 30-inch.

The reduced operating losses with the proposed 30-inch pipeline installation increase the efficiencies of the PPS under the various operating scenarios, as shown in **Table 5**. Under each operating condition, pump efficiency is increased. As pumping efficiency increased, pumping cost decreases, saving the District in operating cost.

Table 5. Poway Pump Station Efficiency Computations

Description	Existing Efficiency	Projected Efficiency
One Pump Running (900 HP)	70% (900)	79% (900)
Two Pump Running (900 & 600 HP)	83% (900), 81% (600)	86% (900), 82% (600)
Three Pumps (900, 600 & 400 HP)	81% (900), 82% (600), 76% (400)	83% (900), 86% (600), 81% (400)

The annual operating cost savings are realized based on the combination of pumps used over an annual period and based on operating the pump combinations for the same number of hours per year as currently operated and at the same flows. **Table 6** identifies the annual savings related to each operating scenario, with the expected cost savings to be a median of these values.

Table 6. Projected Annual Operating Cost Savings

Description	Flow rate (gpm) and Annual Run Time (hours)	Annual Savings
One Pump Running (900 HP)	2,480 gpm, 829 hours	$1,911
Two Pump Running (900 & 600 HP)	2,480 gpm, 829 hours 1,532 gpm, 2,552 hours	$12,200
Three Pumps (900, 600 & 400 HP)	2,480 gpm, 829 hours 1,532 gpm, 2,552 hours 830 gpm, 2,552 hours	$21,802

The analyses above identified the following reasons that this 18-inch pipeline should be upsized to a 30-inch pipeline:

- The 18-inch pipeline was installed in 1958, is therefore 65 years old, and is approaching the end of its useful life.
- Failure of this pipeline would require the District to serve all customers via the 24-inch pipeline to the 3 MG West End Tank. This would require the following:
    - Pushing flow from West End Tank to Barger Tank and creating a temporary 1800 pressure zone and eliminating the 1700 pressure zone

    - Taking the 10 MG Woodson Reservoir out of service as it is at a higher elevation than the West End Tank. This would reduce the District's total storage temporarily from 25.4 MG to 15.4 MG (2.6 days at MDD to 1.7 days at MDD).
- Ability to fully supply the District system via the Woodson Reservoir if the 24-inch pipeline is out of service or a critical main break occurs in the Downtown/West End pressure zone.
- Ability to meet system demands without exceeding the 8 fps maximum velocity criteria during current and ultimate peak hour demands with and without the Barona water supply project.
- Ability to quickly refill Woodson Reservoir during peak demand periods in less than 12 hours to maintain fire flow and emergency storage during red flag and other events.
- Increase in flow per pump due to reduced headloss, allowing the District to reduce either pump run times or number of pumps operated, which reduces operation and maintenance (O&M) required and energy costs.
- Minor savings in annual energy costs of up to $20,000 at the PPS without additional changes in pump run times or pump flow rate settings. Additional optimization of the PPS pumps will be required to maximize energy savings after this pipeline project is complete.

With projected flow increases within the District between now and 2035, and to provide treated water to the Barona Reservation, it is recommended that the 30-inch replacement pipeline be installed.

16-inch Elm Street Transmission Main

The Olive Pump Station (OPS) conveys water from the West End Pressure Zone into the Woodson-Bargar Pressure, conveyed through 14-inch pipelines to the Bargar Tank. Based on the recent WMPU, a portion of the existing 14-inch pipeline is recommended to be replaced with a 16-inch pipeline to facilitate existing OPS pump operations, as well as future pump operations. The increased pipeline diameter will decrease excess headloss in the OPS discharge pipeline, thereby increasing OPS pumping efficiency and saving costs for the District.

The proposed pipeline is a replacement for the 14-inch steel pipeline in Highway 78, installed in 1958, and is at the end of its useful life. (Note: There is a 1,200 LF portion of this pipeline that is PVC and was installed in approximately 2006). This alignment on Elm Street was chosen instead of replacing the line on Highway 78. Where possible, the District prefers to avoid placing infrastructure in Caltrans encroachment areas due to the disruption in traffic when a main break occurs and the difficulty in receiving Caltrans permits for planned construction. Therefore, the proposed replacement for this pipeline is proposed to be located in a parallel alignment to Highway 78.

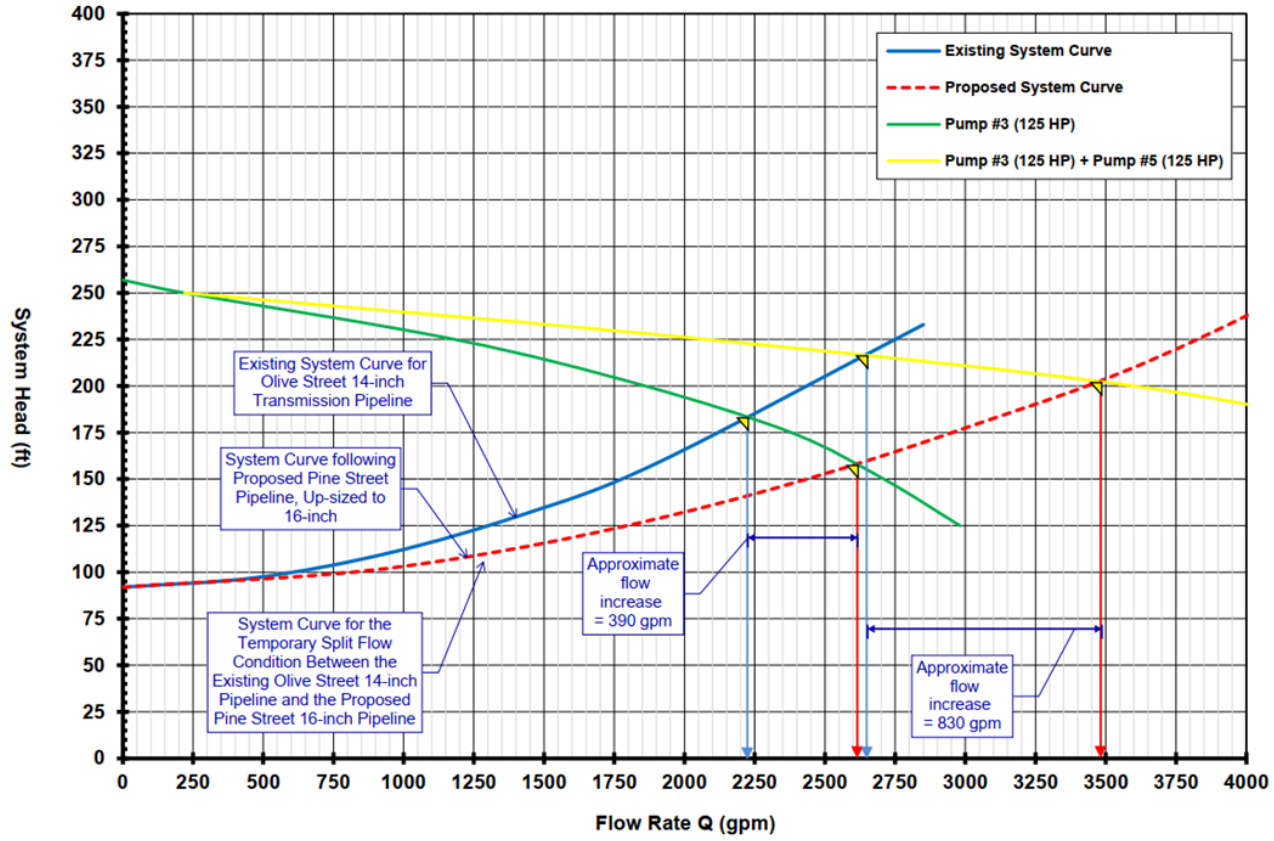
In the last five years, the District has also experienced two main breaks near Alice Street and Montecito Street in the 14-inch steel pipeline that feeds the OPS and three main breaks on the 14-inch steel pipeline that feeds the northeast area of the District's service area, paralleling the proposed pipeline to the east. These 14-inch steel lines were installed in 1958 and portions will be replaced as part of Project 3.02. Installation of the pipeline on Elm Street will provide additional reliability to the northeast part of the District's service area.

Figure 3 illustrates the relationship between total dynamic head (TDH) and flow (Q) relative to the OPS. The OPS has two existing 125 Hp pumps. While normal operating conditions require only one pump to

operate, District operations staff require both pumps to operate on a regular basis. Figure 3 shows the flow results with one and two pumps operating.

The blue and red dashed lines are the system head curves, representing existing pipeline conditions and conditions with the proposed 16-inch replacement pipeline installed. As shown, replacement of the 16-inch portion of pipeline results in significantly lower headloss with increasing flow rates. The impact with a single 125 Hp pump running (green line) is an increase in flow capacity of approximately 390 gallons per minute (gpm). The yellow line represents the conditions with two 125 HP pumps running. Under this scenario, flow is increased by approximately 830 gpm. Under current conditions, the District can pump approximately 2200 gpm with one pump and with two pumps operating can only pump approximately 2600 gpm, an increase of only 400 pm. After this project, the District will be able to pump approximately 2600 gpm with one pump and 3500 gpm with two pumps.

Figure 3. Olive Pump Station Flow



The reduced operating losses with the proposed 16-inch pipeline installation increase the efficiencies of the OPS under the two operating scenarios, as shown in **Table 3**. Under each operating condition, pump efficiency is stable or increased. As pumping efficiency increases, pumping cost decreases to save the District in operating cost.

Table 3. Olive Pump Station Efficiency Computations		
Description	**Existing Efficiency**	**Projected Efficiency**
One Pump Running (125 Hp)	83% (125)	83% (125)
Two Pump Running (125 & 125 Hp)	76% (125), 81% (125)	78% (125), 84% (125)

The annual operating cost savings are realized based on the combination of pumps used over an annual period. **Table 4** identifies the annual savings related to each operating scenario, with the expected cost savings to be a median of these values.

Table 4. Projected Annual Operating Cost Savings	
Description	**Annual Savings**
One Pump Running (125 Hp)	$1,621
Two Pump Running (125 & 125 Hp)	$3,687

The analyses identify increased flow capacity, stable or increased pumping efficiency, and increase cost savings to the District related to installation of the proposed 16-inch replacement pipeline. With projected flow increases within the District, it is recommended that the 16-inch replacement pipeline be installed.

The analyses above identified the following reasons that this pipeline project should be completed:

- This project is a replacement for the 14-inch steel pipeline located in Highway 78 and is at the end of its useful life.
- The project provides a secondary feed to the northeast portion of the District's system in the event of a pipeline break in the 20-inch line from Woodson Reservoir or in the event of main breaks in the 14-inch steel lines that feed OPS or further east of this pipeline.
- Significant increase in flow per pump at OPS due to reduced headloss, allowing the District to reduce either pump run times or number of pumps operated, which reduces operation and maintenance (O&M) required and energy costs.
- Minor savings in annual energy costs of up to $3,700 without additional changes in pump run times or pump flow rate settings. Additional optimization of the OPS pumps will be required to maximize energy savings after this pipeline project is complete.

RAMONA MUNICIPAL WATER DISTRICT
WATER SYSTEM INFRASTRUCTURE FACILITIES PLAN UPDATE
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- FEBRUARY 2023 -

Task	Project Title	Planning-Level Project Costs *		
		Design, Envir. & CM	Construction	Total (10 Year)
1	Radio Read Meter Replacement Program (One Year Remaining (FY 23/24))		$ 350,000	$ 350,000
2	Pump and Motor Efficiency Program (Ongoing)		$ 600,000	$ 600,000
3	Pipeline Replacement Program (Ongoing)	$ 2,930,000	$ 33,920,000	$ 36,850,000
4	Tank & Reservoir Rehabilitation Program (Ongoing)	$ 590,000	$ 9,210,000	$ 9,800,000
5	PRV Rehabilitation Program (Ongoing)	$ 245,000	$ 1,005,000	$ 1,250,000
6	18-in Poway Transmision Pipeline Replacement (30-in)	$ 300,000	$ 8,000,000	$ 8,300,000
7	16-in Elm Street Transmission Main	$ 300,000	$ 4,750,000	$ 5,050,000
8	12-in Downtown Transmission Main	$ 300,000	$ 1,700,000	$ 2,000,000
9	8-in Snows Loop	$ 75,000	$ 425,000	$ 500,000
10	8-in Chavez Loop	$ 75,000	$ 575,000	$ 650,000
11	12-in Kennedy Pipeline	$ 250,000	$ 2,600,000	$ 2,850,000
Sub Total District Funded Projects Cost				**$ 68,200,000**
12	12-in Wildcat Canyon Road Pipeline**	$ 100,000	$ 1,200,000	$ 1,300,000
13	8-in Acres Waterline Improvements (Alternative 1A)***	$ 170,000	$ 1,850,000	$ 2,020,000
14	8-in Acres Waterline Improvements (Alternative 2 & 3B)***	$ 90,000	$ 900,000	$ 990,000
Sub Total Project Cost (Paid by Others)				**$ 4,310,000**
Total				**$ 72,510,000**

Notes:

* - The planning level costs shown are represented in 2023 dollars. These values must be adjusted for inflation and to reflect increased project definition when developing budgets for future years.
** - All RMWD expenses will be reimbursed and paid by developer
*** - All RMWD expenses will be reimbursed and paid under a grant.

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(DRAFT)

- FEBRUARY 2023 -

Task	Project Title	Planning-Level Project Costs *		
		Design, Envir. & CM	Construction	Total (10 Year)
1	Radio Read Meter Replacement Program (One Year Remaining (FY 23/24))		$ 350,000	$ 350,000
2	Pump and Motor Efficiency Program (Ongoing)		$ 600,000	$ 600,000
3	Pipeline Replacement Program (Ongoing)	$ 2,930,000	$ 33,920,000	$ 36,850,000
3.01	Main Street Cast Iron Waterline Replacement Project (Between 5th and 12th)	$ 100,000	$ 1,900,000	$ 2,000,000
3.02	Replacement of Existing 14-in Transmission Main (Ongoing)	$ 700,000	$ 7,950,000	$ 8,650,000
3.03	Replacement of Waterline Loop on HWY-78 East of Magnolia Ave.	$ 50,000	$ 550,000	$ 600,000
3.04	Upsize of SDCE 12-in Transmission Main to 16-in	$ 200,000	$ 2,300,000	$ 2,500,000
3.05	Replacement of 8-in and 10-in Cast Iron Pipeline	$ 650,000	$ 7,050,000	$ 7,700,000
3.06	4-in & 6-in Pipeline Replacement Program (Ongoing)	$ 1,230,000	$ 14,170,000	$ 15,400,000
4	Tank & Reservoir Rehabilitation Program (Ongoing)	$ 590,000	$ 9,210,000	$ 9,800,000
4.01	West End Tank (3 MG)	$ 100,000	$ 1,400,000	$ 1,500,000
4.02	Bargar Clearwell (2 MG)	$ 100,000	$ 1,200,000	$ 1,300,000
4.03	Black Canyon Tank (0.62 MG)	$ 60,000	$ 590,000	$ 650,000
4.04	Gillette Treated Tank (0.02 MG)	$ 30,000	$ 120,000	$ 150,000
4.05	Boulder Tank (0.88 MG)	$ 100,000	$ 1,900,000	$ 2,000,000
4.06	Woodson Reservoir (10 MG)	$ 100,000	$ 2,400,000	$ 2,500,000
4.07	Kennedy West Tank (5 MG) (Conversion from UT to Treated)	$ 100,000	$ 1,600,000	$ 1,700,000
5	PRV Rehabilitation Program (Ongoing)	$ 245,000	$ 1,005,000	$ 1,250,000
5.01	Relocate PRVs in vaults to above ground	$ 185,000	$ 840,000	$ 1,025,000
5.02	New PRV From Woodson/Bargar to Downtown/West End	$ 60,000	$ 165,000	$ 225,000
6	18-in Poway Transmision Pipeline Replacement (30-in)	$ 300,000	$ 8,000,000	$ 8,300,000
7	16-in Elm Street Transmission Main	$ 300,000	$ 4,750,000	$ 5,050,000
8	12-in Downtown Transmission Main	$ 300,000	$ 1,700,000	$ 2,000,000
9	8-in Snows Loop	$ 75,000	$ 425,000	$ 500,000
10	8-in Chavez Loop	$ 75,000	$ 575,000	$ 650,000
11	12-in Kennedy Pipeline	$ 250,000	$ 2,600,000	$ 2,850,000
Sub Total District Funded Projects Cost				**$ 68,200,000**
12	12-in Wildcat Canyon Road Pipeline**	$ 100,000	$ 1,200,000	$ 1,300,000
13	8-in Acres Waterline Improvements (Alternative 1A)***	$ 170,000	$ 1,850,000	$ 2,020,000
14	8-in Acres Waterline Improvements (Alternative 2 & 3B)***	$ 90,000	$ 900,000	$ 990,000
Sub Total Project Cost (Paid by Others)				**$ 4,310,000**
Total				**$ 72,510,000**

Notes:

The planning level costs shown are represented in 2023 dollars. These values must be adjusted for inflation and to reflect increased project definition when developing budgets for future years.

* -

** - All RMWD expenses will be reimbursed and paid by developer

*** - All RMWD expenses will be reimbursed and paid under a grant.

RAMONA MUNICIPAL WATER DISTRICT
WATER SYSTEM INFRASTRUCTURE FACILITIES PLAN UPDATE
(DRAFT)

- FEBRUARY 2023 -

		1	2	3	4	5	6	7	8	9	10	
Task	**Project Title**	**FY 23/24**	**FY 24/25**	**FY 25/26**	**FY 26/27**	**FY 27/28**	**FY 28/29**	**FY 29/30**	**FY 30/31**	**FY 31/32**	**FY 32/33**	**TOTAL**
1	Radio Read Meter Replacement Program (One Year Remaining (FY 23/24))	$ 350,000										$ 350,000
2	Pump and Motor Efficiency Program (Ongoing)			$ 150,000		$ 150,000		$ 150,000			$ 150,000	$ 600,000
3	Pipeline Replacement Program (Ongoing)	$ 1,200,000	$ 1,200,000	$ 3,750,000	$ 5,500,000	$ 1,100,000	$ 4,400,000	$ 3,200,000	$ 4,500,000	$ 6,000,000	$ 6,000,000	$ 36,850,000
3.01	Main Street Cast Iron Waterline Replacement Project (Between 5th and 12th)	$ 1,200,000	$ 800,000									$ 2,000,000
3.02	Replacement of Existing 14-in Transmission Main (Ongoing)		$ 400,000	$ 3,750,000	$ 4,500,000							$ 8,650,000
3.03	Replacement of Waterline Loop on HWY-78 East of Magnolia Ave.				$ 600,000							$ 600,000
3.04	Upsize of SDCE 12-in Transmission Main to 16-in					$ 100,000	$ 2,400,000					$ 2,500,000
3.05	Replacement of 8-in and 10-in Cast Iron Pipeline							$ 200,000	$ 1,500,000	$ 3,000,000	$ 3,000,000	$ 7,700,000
3.06	4-in & 6-in Pipeline Replacement Program (Ongoing)				$ 400,000	$ 1,000,000	$ 2,000,000	$ 3,000,000	$ 3,000,000	$ 3,000,000	$ 3,000,000	$ 15,400,000
4	Tank & Reservoir Rehabilitation Program (Ongoing)	$ 1,500,000	$ -	$ 1,950,000	$ 150,000	$ -	$ 2,000,000	$ 2,500,000	$ -	$ -	$ 1,700,000	$ 9,800,000
4.01	West End Tank (3 MG)	$ 1,500,000										$ 1,500,000
4.02	Bargar Clearwell (2 MG)			$ 1,300,000								$ 1,300,000
4.03	Black Canyon Tank (0.62 MG)			$ 650,000								$ 650,000
4.04	Gillette Treated Tank (0.02 MG)				$ 150,000							$ 150,000
4.05	Boulder Tank (0.88 MG)						$ 2,000,000					$ 2,000,000
4.06	Woodson Reservoir (10 MG)							$ 2,500,000				$ 2,500,000
4.07	Kennedy West Tank (5 MG) (Conversion from UT to Treated)										$ 1,700,000	$ 1,700,000
5	PRV Rehabilitation Program (Ongoing)	$ 125,000	$ 150,000	$ 150,000	$ 150,000	$ 150,000	$ 150,000	$ 150,000	$ 50,000	$ 175,000	$ -	$ 1,250,000
5.01	Relocate PRVs in vaults to above ground	$ 125,000	$ 150,000	$ 150,000	$ 150,000	$ 150,000	$ 150,000	$ 150,000				$ 1,025,000
5.02	New PRV From Woodson/Bargar to Downtown/West End								$ 50,000	$ 175,000		$ 225,000
6	18-in Poway Transmision Pipeline Replacement (30-in)	$ 3,100,000	$ 5,200,000									$ 8,300,000
7	16-in Elm Street Transmission Main				$ 250,000	$ 4,800,000						$ 5,050,000
8	12-in Downtown Transmission Main							$ 200,000	$ 1,800,000			$ 2,000,000
9	8-in Snows Loop										$ 500,000	$ 500,000
10	8-in Chavez Loop										$ 650,000	$ 650,000
11	12-in Kennedy Pipeline										$ 2,850,000	$ 2,850,000
	Sub Total District Funded Projects Cost	**$ 6,275,000**	**$ 6,550,000**	**$ 6,000,000**	**$ 6,050,000**	**$ 6,200,000**	**$ 6,550,000**	**$ 6,200,000**	**$ 6,350,000**	**$ 6,175,000**	**$ 11,850,000**	**$ 68,200,000**
12	12-in Wildcat Canyon Road Pipeline**	$ 1,300,000										$ 1,300,000
13	8-in Acres Waterline Improvements (Alternative 1A)***	$ 100,000	$ 1,920,000									$ 2,020,000
14	8-in Acres Waterline Improvements (Alternative 2 & 3B)***	$ 50,000	$ 940,000									$ 990,000
	Sub Total Project Cost (Paid by Others)	**$ 1,450,000**	**$ 2,860,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**		**$ 4,310,000**
	Projected Total Expenditures Fiscal Year	**$ 7,725,000**	**$ 9,410,000**	**$ 6,000,000**	**$ 6,050,000**	**$ 6,200,000**	**$ 6,550,000**	**$ 6,200,000**	**$ 6,350,000**	**$ 6,175,000**	**$ 11,850,000**	**$ 72,510,000**

Notes:

The planning level costs shown are represented in 2023 dollars. These values must be adjusted for inflation and to reflect increased project definition when developing budgets for future years.

* -

** - All RMWD expenses will be reimbursed and paid by developer

*** - All RMWD expenses will be reimbursed and paid under a grant.

Project No:	Priority Task:	CIP/CRP ID:
TBD	1	CRP
Project Title:	**Department:**	**Project Manager:**
Radio Read Meter Replacement Program	Water Operations	Joe Lomeli / Tim Warner

Project Description:

- The District currently has approximately 9,700 customer retail meters in service. Since the Meter Replacement Program began Operations staff has installed over 8,190 radio read meters to date.
- All of the meters are read either on a monthly and by monthly basis by the meter reading department, which is staffed by a supervisor and three meter reading staff members. The project proposes to gradually replace existing meters that need to be manually read with new radio read meters to eventually eliminate all manually read meters.
- Project is expected to take one more year to complete.

Justification:

- With technology being enhanced at a rapid pace and radio reads becoming the way of the future, Staff believe that the conversion to radio read meters will improve reading efficiencies, promote customer service, and the ability to maintain operations meter issues to minimum. To be reasonable operations staff has identified a 10 year program that can be completed with budgeted staff; meter replacement was able to cut the program to 6 years with FY 23/24 being the last year of the program.
- The annual budget is $350K for FY 22/23 and projected $350k for FY 23/24 to complete with the remaining meters to get replaced.
- Some meters have been removed since the program started and therefore the total number of meter to replace continue to change.

Budget Impact:

Fund 011: TBD
Fund XXX: TBD
Imp. Bond: TBD

Scheduling:

Design Phase:
Construction Phase:

Equipment:

FUNDING	TOTAL FUNDING	FY 2023/24 BUDGET	FY 2024/25 BUDGET	FY 2025/26 BUDGET	FY 2026/27 BUDGET	FY 2027/28 BUDGET	FY 2028/29 BUDGET	FY 2029/30 BUDGET	FY 2030/31 BUDGET	FY 2031/32 BUDGET	FY 2032/33 BUDGET
Fund XXX	TBD										
Imp. Bond	TBD										
Fund 011	TBD	$ 350,000									
TOTAL FUNDING	**TBD**	**$ 350,000**									

COST BREAKDOWN	TOTAL COST	FY 2023/24 PROJECTED EXPENSES	FY 2024/25 PROJECTED EXPENSES	FY 2025/26 PROJECTED EXPENSES	FY 2026/27 PROJECTED EXPENSES	FY 2027/28 PROJECTED EXPENSES	FY 2028/29 PROJECTED EXPENSES	FY 2029/30 PROJECTED EXPENSES	FY 2030/31 PR0JECTED EXPENSES	FY 2031/32 PR0JECTED EXPENSES	FY 2032/33 PROJECTED EXPENSES
Land Acquisition											
Design, Environmental and Construction Management											
Construction	$ 350,000	$ 350,000									
TOTAL COST	**$ 350,000**	**$ 350,000**									

Note: The costs shown are represented in 2023 dollars. These values must be adjusted for inflation and to reflect increased project definition when developing budgets for future years.

Project No:	Priority Task:	CIP/CRP ID:	Location:
TBD	2	CRP	
Project Title:	**Department:**	**Project Manager:**	
Pump & Motor Efficiency Program	Water Operations		
Project Description: • RMWD currently has 28 active pumps and motors throughout the domestic distribution system and 10 pumps and motors on the untreated distribution system. The Pump and Motor efficiency program will provide the opportunity to move forward and remove and replace all out date non-efficient assets. • This FY 2022/23 will complete the replacement of the pumps and motors that required replacement. After this fiscal year District Staff proposes budgeting $150,000 every other year starting on FY25/26 for as needed maintenance, repair and or replacement.	**Justification:** • The program will provide the opportunity to enhance efficiencies throughout the distribution system and ensure the system is operating at the most optimum level and therefore potentially reducing energy cost and providing savings to the rate payers. The ultimate goal is to maintain the overall pumping and motor infrastructure at a 75% efficiency level or better. Pump Efficiency testing is outsourced every three years, so that operations staff can prioritize pump and motor replacements and maintain all facilities operating with the most optimum level.		
Budget Impact: Fund 010: TBD Fund XXX: TBD Imp. Bond: TBD	**Scheduling:** Design Phase: Construction Phase:		

FUNDING	TOTAL FUNDING	FY 2023/24 BUDGET	FY 2024/25 BUDGET	FY 2025/26 BUDGET	FY 2026/27 BUDGET	FY 2027/28 BUDGET	FY 2028/29 BUDGET	FY 2029/30 BUDGET	FY 2030/31 BUDGET	FY 2031/32 BUDGET	FY 2032/33 BUDGET
Fund XXX	**TBD**										
Imp. Bond	**TBD**										
Fund 010	**TBD**										
TOTAL FUNDING	**TBD**										

COST BREAKDOWN	TOTAL COST	FY 2023/24 PROJECTED EXPENSES	FY 2024/25 PROJECTED EXPENSES	FY 2025/26 PROJECTED EXPENSES	FY 2026/27 PROJECTED EXPENSES	FY 2027/28 PROJECTED EXPENSES	FY 2028/29 PROJECTED EXPENSES	FY 2029/30 PROJECTED EXPENSES	FY 2030/31 PR0JECTED EXPENSES	FY 2031/32 PR0JECTED EXPENSES	FY 2032/33 PROJECTED EXPENSES
Land Acquisition											
Design, Environmental and Construction Management											
Construction	$ 600,000			$ 150,000		$ 150,000		$ 150,000			$ 150,000
TOTAL COST	**$ 600,000**			**$ 150,000**		**$ 150,000**		**$ 150,000**			**$ 150,000**

Note: The costs shown are represented in 2023 dollars. These values must be adjusted for inflation and to reflect increased project definition when developing budgets for future years.

Project No:	Priority Task:	CIP/CRP ID:
TBD	3	CRP
Project Title:	**Department:**	**Project Manager:**
Pipeline Replacement Program	Water Operations	Joe Lomeli / Ricardo Soto

Project Description:

- Replacement of aging cast iron pipeline throughout the Districts' water system including related appurtenances associated with the pipeline including valves, water services, fire hydrants, fire service laterals, blow-offs, air valves, water test stations, etc.
- Replacement of the existing 14-in transmission on Alice Street, Olive Street, Haverford Rd east of Elm Street, Pamo Road and Pile Street.
- Replacement of 4-in and 6-in pipelines to 8-in in the order of priority as identified in the 2022 Water Master Plan Update.

Justification:

- Pipelines included under this program are beyond their designed lifespan, with the oldest being installed in the 1920's by Ramona Irrigation District. In the past 10 years various emergency repairs have been completed on pipelines identified under this program further confirming the condition and need of replacement.
- Pipelines targeted under this program include cast iron and asbestos cement pipelines that are undersized for today's standards and have been identified for replacement in the 2022 Water Master Plan Update.
- Replacement of these pipelines will provide a more reliable and robust water system and improve fire flow and hydraulics of the water system.

Budget Impact:

Fund 011: TBD
Fund XXX: TBD
Imp. Bond: TBD

Scheduling:

Design Phase:
Construction Phase:

Location:

FUNDING	TOTAL FUNDING	FY 2023/24 BUDGET	FY 2024/25 BUDGET	FY 2025/26 BUDGET	FY 2026/27 BUDGET	FY 2027/28 BUDGET	FY 2028/29 BUDGET	FY 2029/30 BUDGET	FY 2030/31 BUDGET	FY 2031/32 BUDGET	FY 2032/33 BUDGET
Fund XXX	TBD										
Imp. Bond	TBD										
Fund 011	TBD										
TOTAL FUNDING	**TBD**										

COST BREAKDOWN	TOTAL COST	FY 2023/24 PROJECTED EXPENSES	FY 2024/25 PROJECTED EXPENSES	FY 2025/26 PROJECTED EXPENSES	FY 2026/27 PROJECTED EXPENSES	FY 2027/28 PROJECTED EXPENSES	FY 2028/29 PROJECTED EXPENSES	FY 2029/30 PROJECTED EXPENSES	FY 2030/31 PR0JECTED EXPENSES	FY 2031/32 PR0JECTED EXPENSES	FY 2032/33 PROJECTED EXPENSES
Land Acquisition											
Design, Environmental and Construction Management	$ 2,930,000	$ 50,000	$ 430,000	$ 250,000	$ 650,000	$ 150,000	$ 250,000	$ 350,000	$ 200,000	$ 300,000	$ 300,000
Construction	$ 33,920,000	$ 1,150,000	$ 770,000	$ 3,500,000	$ 4,850,000	$ 950,000	$ 4,150,000	$ 2,850,000	$ 4,300,000	$ 5,700,000	$ 5,700,000
TOTAL COST	**$ 36,850,000**	**$ 1,200,000**	**$ 1,200,000**	**$ 3,750,000**	**$ 5,500,000**	**$ 1,100,000**	**$ 4,400,000**	**$ 3,200,000**	**$ 4,500,000**	**$ 6,000,000**	**$ 6,000,000**

Note: The costs shown are represented in 2023 dollars. These values must be adjusted for inflation and to reflect increased project definition when developing budgets for future years.

PIPELINE REPLACEMENT PROGRAM
TARGETED PIPELINE FACILITIES FOR REPLACEMENT

LOCATION	YEAR INSTALLED	SIZE PIPE	TYPE PIPE	APPROX. PIPE LENGTH
5TH ST FORM MAIN ST TO G ST	1927	4"	CI	1,500
B ST FROM 9TH TO 8TH	1927 - 1950	4"	CI	580
D St FROM 3RD TO 2ND ST	1927	4"	CI	350
E ST FROM 5TH TO 8TH	1927	4" & 6"	CI	1,700
A ST FROM 9TH ST TO 11TH ST	1927	6"	CI	850
9TH ST FROM A ST TO G ST	1927	6"	CI	2,275
F ST FROM 3RD ST TO 6TH ST	1927	6"	CI	1,750
11TH STREET FORM G ST TO H ST	1927	4"	CI	483
4TH ST FROM B TO MAIN	1927	4"	CI	323
5TH ST FROM B TO MAIN	1927	4"	CI	451
H St from 11th St to 12th St	1927	4" & 6"	CI	718
12TH ST FROM D ST TO F ST	1927	6"	CI	901
B St from 4TH TO 2ND	1927 - 1950	8"	CI	998
MAIN STREET FROM 5TH ST TO 12TH ST	1927	4" & 6"	CI	4,275
WOODCREST RD TO WOODSON RESERVOIR	1958	18"	CMLC	8,600
7TH ST FROM E ST TO I ST	1927	8"	CI	1,900
TANK HILL TO OPERATIONS YARD	1927	8"	CI	1,000
MAIN STREET FROM FLAG/TANK HILL TO 5TH ST	1927	8" & 10"	CI	1,850
G ST FROM 9TH ST TO 3RD ST	1927	10"	CI	3,850
E ST FROM 9TH TO 10TH	1957	4"	ACP	560
KELLY ST FROM WYNOLA TO KALBAUGH	1957	4"	ACP	680
ETCHEVERRY ST,HUNTER ST TO SD AVE	1957	4"	ACP	4,000
RANSOM HILL	1958	4"	CMLC	1,100
D ST FROM 12TH ST TO 14TH ST	1957	4"	ACP	1,165
WEEKEND VILLA, HWY 78	1957	4" & 6"	ACP	6,500
B ST FROM 4TH ST TO 8TH ST	1957	6"	ACP	2,300
D ST FROM 3RD ST TO 12TH ST	1957	6"	ACP	5,200
OLIVE ST FROM SUMMER GLEN TO DAVIS ST	1957	6"	ACP	3,500
DAVIS ST FROM OLIVE ST TO MONTICETO	1957	6"	ACP	3,000
WALNUT ST, JAMES ST	1957	6"	ACP	3,600
PILE ST EAST OF MAGNOLIA, ORANGE ST	1957	6"	ACP	5,200
MUSSEY GRADE RD FROM HWY 67 TO DOS PICOS	1957	6"	ACP	6,000
MONTECITO WAY	1958	6"	ACP	3,300
STEFFY RD	1958	6"	ACP	6,300
WILSON RD	1958	6"	ACP	6,300
KEYS RD SOUTH OF HANSON	1958	6"	ACP	2,600
9TH ST, ASHLEY	1958	6"	ACP	8,000
8TH ST	1958	6"	ACP	3,500
TELFORD LN	1958	6"	ACP	3,500
14TH ST FROM MAIN ST SOUTHEAST	1958	6"	ACP	2,500
MUSSEY GRADE RD, ROSEMONT TO FERNBROOK	1958	6"	ACP	13,000
MAIN ST FROM 13 TO RAMONA ST	1958	8"	ACP	2,300
16TH ST FROM MAIN TO ANGEL PL	1958	8"	ACP	3,000
DYE RD FROM HWY 67 TO SV RD	1957	10"	ACP	16,000
HIGHLAND VALLEY RD FROM HWY 67 TO TRAILER	1957	10"	ACP	11,000
RANGELAND RD, AIRPORT THROUGH SPRAY FIELDS	1958	14"	CMLC	16,000
HUNTER, ROWELY, SD AVE, HANSON, KEYS	1958	14"	CMLC	21,000
OLD JULIAN HWY, AMIGOS, MAGNOLIA, PILE	1958	14"	CMLC	15,500
PAMO, HAVERFORD, HWY 78	1958	14"	CMLC	12,000
OLIVE, ALICE, MONTECITO AT MONTECITO WAY	1958	14"	CMLC	13,000
HWY 67 FROM DYE RD TO RAMONA ST	1958	16"	CMLC	11,000
POWAY P.S TO WOODSON CREST RD	1958	18"	CMLC	3,000
SAN DIEGO AQUADUCT TO POWAY P.S.	1958	18"	CMLC	8,000
MUSSEY GRADE RD TO DYE RD	1958	18"	CMLC	3,000
WOODSON RESERVOIR TO MUSSEY GRADE RD	1958	20"	TWS	17,000

ABBREVIATIONS:

ACP - ASBESTOS CEMENT PIPE
CI - CAST IRON
CMLC - CONCRETE MORTAT LINED AND COATED
TWS - TAR WRAPPED STEEL

REPLACEMENT COMPLETED
REPLACEMENT SCHEDULED FOR FY 22/23
REPLACEMENT SCHEDULED FOR FY 23/25

Project No:	Priority Task:	CIP/CRP ID:	Location:
TBD	4	CRP	
Project Title:	Department:	Project Manager:	
Tanks and Reservoir Rehabilitation Program	Water Operations	Joe Lomeli	

Project Description:

- Storage Tank and Reservoir rehabilitation includes interior and exterior recoating and designing to current OSHA standards. Rehabilitation also addresses any miscellaneous metal and concrete repairs as necessary.
- Scope of work will be based on third party inspection of each tank and recommendations based on the findings of the inspection reports.

Justification:

- The District currently has 21 water storage tanks within the district service area. The water tanks are designed to meet daily peak demands and provide fire protection for the District's sphere of influence boundaries.
- Ongoing maintenance and recoating is necessary to maintain storage tanks operating at optimum condition while maintaining water quality.
- The scope of the work will vary from tank to tank based on the tank conditions, required repairs and third-party inspection findings and recommendations.

Budget Impact:

Fund 011: TBD
Fund XXX: TBD
Imp. Bond: TBD

Scheduling:

Design Phase:
Construction Phase:

FUNDING	TOTAL FUNDING	FY 2023/24 BUDGET	FY 2024/25 BUDGET	FY 2025/26 BUDGET	FY 2026/27 BUDGET	FY 2027/28 BUDGET	FY 2028/29 BUDGET	FY 2029/30 BUDGET	FY 2030/31 BUDGET	FY 2031/32 BUDGET	FY 2032/33 BUDGET
Fund XXX	TBD										
Imp. Bond	TBD										
Fund 011	TBD	$ 1,500,000									
TOTAL FUNDING	**TBD**	**$ 1,500,000**									

COST BREAKDOWN	TOTAL COST	FY 2023/24 PROJECTED EXPENSES	FY 2024/25 PROJECTED EXPENSES	FY 2025/26 PROJECTED EXPENSES	FY 2026/27 PROJECTED EXPENSES	FY 2027/28 PROJECTED EXPENSES	FY 2028/29 PROJECTED EXPENSES	FY 2029/30 PROJECTED EXPENSES	FY 2030/31 PR0JECTED EXPENSES	FY 2031/32 PR0JECTED EXPENSES	FY 2032/33 PROJECTED EXPENSES
Land Acquisition											
Design, Environmental and Construction Management	$ 590,000	$ 100,000		$ 160,000	$ 30,000		$ 100,000	$ 100,000			$ 100,000
Construction	$ 9,290,000	$ 1,400,000		$ 1,790,000	$ 120,000		$ 1,900,000	$ 2,400,000			$ 1,600,000
TOTAL COST	**$ 9,880,000**	**$ 1,500,000**		**$ 1,950,000**	**$ 150,000**		**$ 2,000,000**	**$ 2,500,000**			**$ 1,700,000**

Note: The costs shown are represented in 2023 dollars. These values must be adjusted for inflation and to reflect increased project definition when developing budgets for future years.

	TARGETED STORAGE TANK LIST	Remarks
TREATED TANKS	Julian Tank (1 MG)	Completed FY 16/17
	Poway Forebay (Interior)(1 MG)	Completed FY 16/17
	Robinson Tank (0.5 MG)	Completed FY 17/18
	SDCE Tank # 4 (1 MG)	Completed FY 17/18
	Snows Treated Tank (0.5 MG)	Completed FY 17/18
	SDCE Tank # 1 (2 MG)	Completed FY 18/19
	SDCE Tank # 2 (1 MG) **	Completed FY 22/23
	SDCE Tank # 3 (2 MG) **	
	West End Tank (3 MG)	
	Bargar Clearwell (2 MG)	
	Black Canyon Tank (0.62 MG)	
	Boulder Tanks (0.88 MG)	
	Gillette Treated Tank (0.02 MG)	
	Woodson Reservoir (10 MG)	
UNTREATED TANKS	Woodson Steel Tank (1.5 MG)	TBD Convert to RW Tank ***
	Kennedy Tank West (5 MG)	TBD Convert to Treated Tank ***
	Kennedy Tank East (5 MG)	
	Robb Tank (1 MG)	
	Snow Untreated Tank (0.5 MG)	
	Gillette Untreated Tank (0.5 MG)	
	Yard Tank *	

Notes:

* - Currently out of service

** - Fire Storage Only

Project No:	Task:	CIP/CRP ID:
TBD	5	CRP
Project Title:	**Department:**	**Project Manager:**
PRV Rehabilitation Program	Water Operations	Joe Lomeli / Ricardo Soto

Project Description:

- Program includes maintenance, repair, relocation, and installation of Pressure Reducing Valves (PRV), as required.
- The 2022 Water Master Plan Update (WMPU) recommended installation of additional PRV's within the system, which are included in this program.

Justification:

- RMWD has over 25 PRV's throughout the distribution system. Many of them have been in operations since the early 1970's and are at the end of their service life span. The majority of these facilities have never been rehabilitated with exception of maintenance by the in-house District personnel and contract vendors. Staff has evaluated these facilities and determine that many require attention.
- PRV's are crucial infrastructure to a distribution system for the purposes of separating high/low pressure zones. Failure of these valves could potentially create damage to existing infrastructure downstream from their current location due to the increase in pressure which will amount to substantial cost and emergency repairs. District staff proposed a proactive approach to mitigate potential problems.
- Relocation of PRV's from vaults will mitigate the requirement of confined space entry. Confined spaces are one of most time-consuming responsibilities with the respect to staff Safety Training, therefore by eliminating the confined spaces promotes safety.

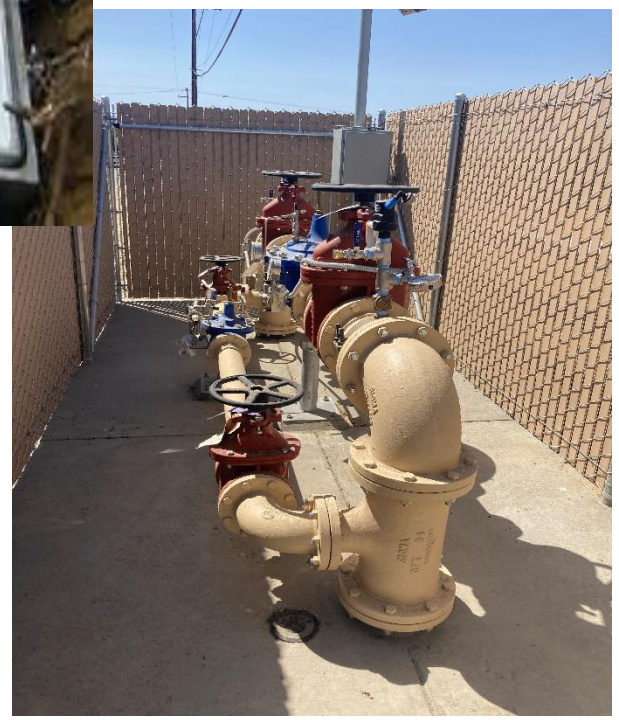
Budget Impact:

Fund 043: TBD
Fund XXX: TBD
Imp. Bond: TBD

Scheduling:

Design Phase:
Construction Phase

Equipment:



FUNDING	TOTAL FUNDING	FY 2023/24 BUDGET	FY 2024/25 BUDGET	FY 2025/26 BUDGET	FY 2026/27 BUDGET	FY 2027/28 BUDGET	FY 2028/29 BUDGET	FY 2029/30 BUDGET	FY 2030/31 BUDGET	FY 2031/32 BUDGET	FY 2032/33 BUDGET
Fund XXX	TBD										
Imp. Bond	TBD										
Fund 043	TBD	$ 100,000									
TOTAL FUNDING	**TBD**	**$ 100,000**									

COST BREAKDOWN	TOTAL COST	FY 2023/24 PROJECTED EXPENSES	FY 2024/25 PROJECTED EXPENSES	FY 2025/26 PROJECTED EXPENSES	FY 2026/27 PROJECTED EXPENSES	FY 2027/28 PROJECTED EXPENSES	FY 2028/29 PROJECTED EXPENSES	FY 2029/30 PROJECTED EXPENSES	FY 2030/31 PR0JECTED EXPENSES	FY 2031/32 PR0JECTED EXPENSES	FY 2032/33 PROJECTED EXPENSES
Land Acquisition	$ 10,000								$ 10,000		
Design, Environmental and Construction Management	$ 230,000	$ 125,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 40,000	$ 10,000	
Construction	$ 1,005,000		$ 140,000	$ 140,000	$ 140,000	$ 140,000	$ 140,000	$ 140,000		$ 165,000	
TOTAL COST	**$ 1,245,000**	**$ 125,000**	**$ 150,000**	**$ 150,000**	**$ 150,000**	**$ 150,000**	**$ 150,000**	**$ 150,000**	**$ 50,000**	**$ 175,000**	

Note: The costs shown are represented in 2023 dollars. These values must be adjusted for inflation and to reflect increased project definition when developing budgets for future years.

Project No:	Priority Task:	CIP/CRP ID:
TBD	6	CRP
Project Title:	**Department:**	**Project Manager:**
18-in Transmission Pipeline Replacement (30-in)	Water Operations	

Project Description:

- Replacement of approximately 6,700 feet of 18-in transmission main between Woodson Crest and the Mount Woodson Reservoir to 30" transmission main.
- Project identified as part of the water master plan update (Project O-4).

Justification:

- The existing 18" transmission main is currently undersized and restricts pumping capacity to 11 cfs (7.1 MG). Current RMWD daily peak demand is 8.0 cfs (5.2 MG) or 73% of the maximum.
- The 6.700 ft of 18" pipeline creates a bottle neck, restricting full flow capacity from San Diego County Water Authority (SDCWA) flow control facility # 3.
- Upsize this pipeline allows the District to pump water during super off-peak period, reducing energy costs.

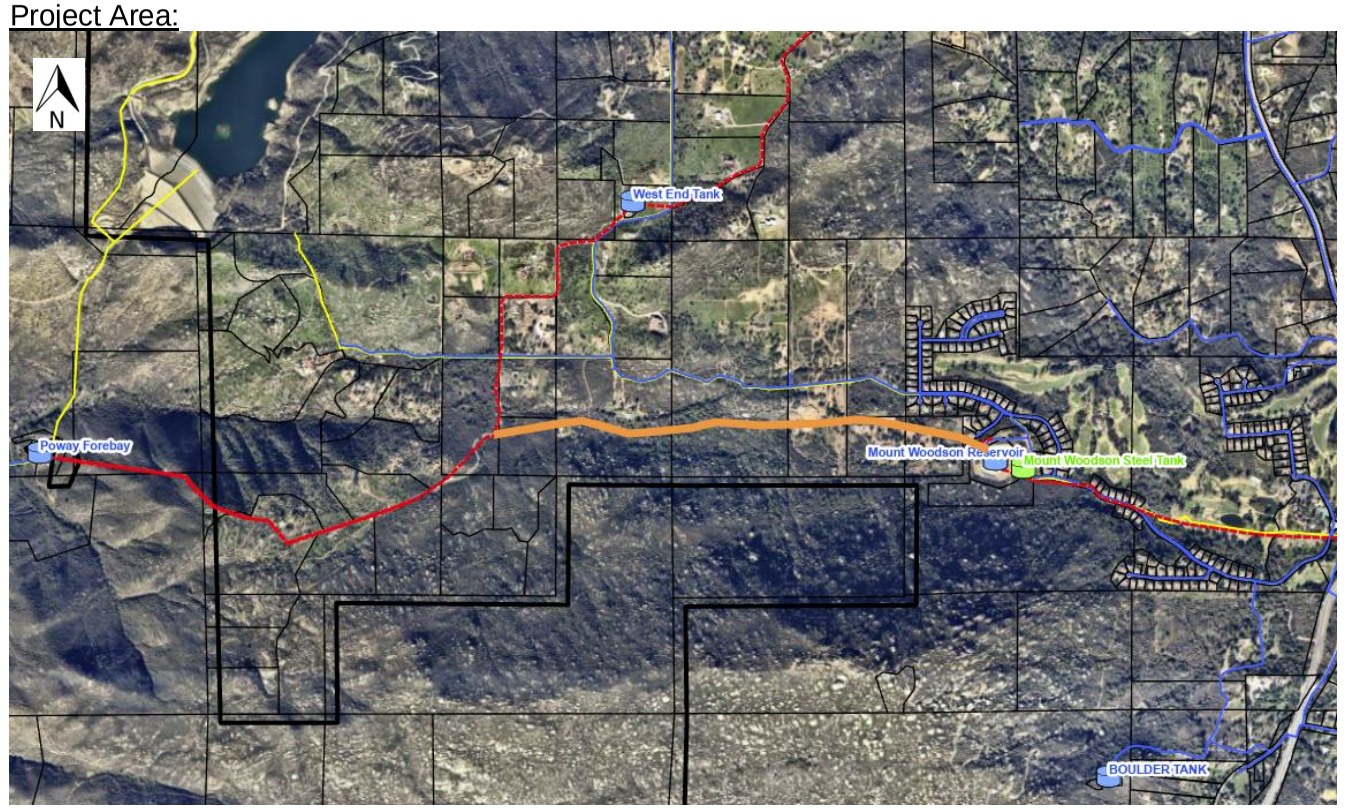
Budget Impact:

Fund 011: TBD
Fund XXX: TBD
Imp. Bond: TBD

Scheduling:

Design Phase:
Construction Phase:

Project Area:



FUNDING	TOTAL FUNDING	FY 2023/24 BUDGET	FY 2024/25 BUDGET	FY 2025/26 BUDGET	FY 2026/27 BUDGET	FY 2027/28 BUDGET	FY 2028/29 BUDGET	FY 2029/30 BUDGET	FY 2030/31 BUDGET	FY 2031/32 BUDGET	FY 2032/33 BUDGET
Fund XXX	TBD										
Imp. Bond	TBD										
Fund 011	TBD	$ 3,100,000									
TOTAL FUNDING	**TBD**	**$ 3,100,000**									

COST BREAKDOWN	TOTAL COST	FY 2023/24 PROJECTED EXPENSES	FY 2024/25 PROJECTED EXPENSES	FY 2025/26 PROJECTED EXPENSES	FY 2026/27 PROJECTED EXPENSES	FY 2027/28 PROJECTED EXPENSES	FY 2028/29 PROJECTED EXPENSES	FY 2029/30 PROJECTED EXPENSES	FY 2030/31 PR0JECTED EXPENSES	FY 2031/32 PR0JECTED EXPENSES	FY 2032/33 PROJECTED EXPENSES
Land Acquisition											
Design, Environmental and Construction Management	$ 300,000	$ 100,000	$ 200,000								
Construction	$ 8,000,000	$ 3,000.000	$ 5,000,000								
TOTAL COST	**$ 8,300,000**	**$ 3,100,000**	**$ 5,200,000**								

Note: The costs shown are represented in 2022 dollars and are estimates from the Water Master Plan Update prepared by Carollo Engineers. These values must be adjusted for inflation and to reflect increased project definition when developing budgets for future years.

Project No:	Priority Task:	CIP/CRP ID:
TBD	7	CRP
Project Title:	**Department:**	**Project Manager:**
16-in Elm Street Transmission Main	Water Operations	Joe Lomeli

Project Description:

- Installation of approximately 7,100 feet of new 16-in diameter transmission main on Elm Street from 7th Street to Haverford Rd to replace the existing transmission main on SR-78.
- Similar project identified as part of the water master plan update (Project O-5). The identified project recommended installation of the transmission main on CALTRANS right-of-way (SR-78); this alternative alignment is shorter and would install facilities outside CALTRANS right-of-way while meeting the same purpose.

Justification:

- There is an existing 14-in diameter transmission main along Caltrans (SR-78) right-of-way (Pine Street) from Olive Street to Haverford Rd. This transmission main was installed in 1957 and is towards the end of its designed lifespan and requires replacement.
- The existing 14-in pipeline is undersized and limits the ability to pump water from the Olive Pump Station to Barger Tank (1,800-ft zone). Upsizing the pipeline will improve operational conditions at the Olive Pump Station.
- This pipeline will add reliability and redundancy to the system in the event of a pipe break on the 20-in pipeline from Mt Woodson Reservoir and allow the District to maintain customers in the 1,800-ft zone in service while repairs are being completed.

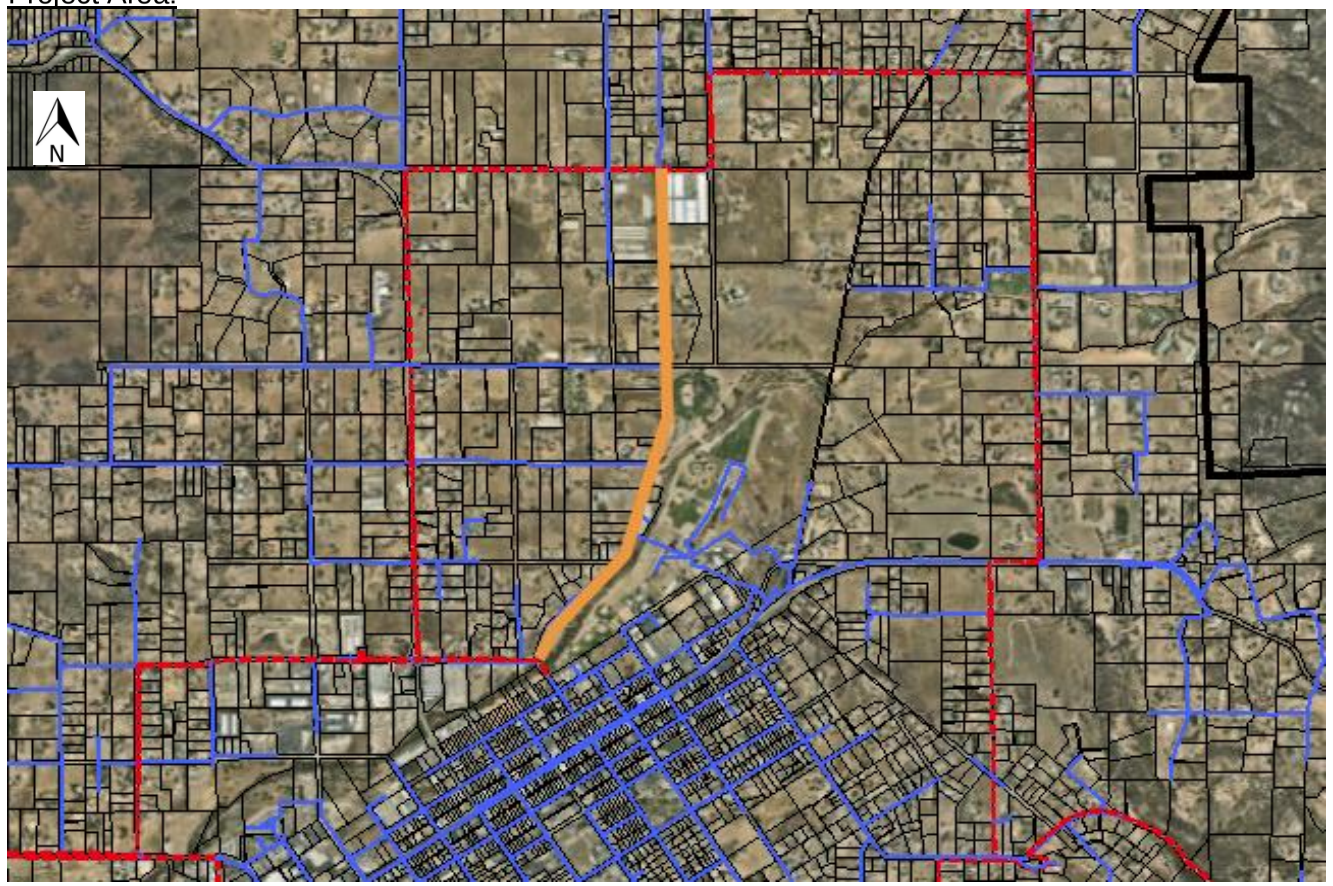
Budget Impact:

Fund 11: TBD
Fund XXX: TBD
Imp. Bond: TBD

Scheduling:

Design Phase:
Construction Phase:

Project Area:



FUNDING	TOTAL FUNDING	FY 2023/24 BUDGET	FY 2024/25 BUDGET	FY 2025/26 BUDGET	FY 2026/27 BUDGET	FY 2027/28 BUDGET	FY 2028/29 BUDGET	FY 2029/30 BUDGET	FY 2030/31 BUDGET	FY 2031/32 BUDGET	FY 2032/33 BUDGET
Fund XXX	TBD										
Imp. Bond	TBD										
Fund 11/43	TBD										
TOTAL FUNDING	**TBD**										

COST BREAKDOWN	TOTAL COST	FY 2023/24 PROJECTED EXPENSES	FY 2024/25 PROJECTED EXPENSES	FY 2025/26 PROJECTED EXPENSES	FY 2026/27 PROJECTED EXPENSES	FY 2027/28 PROJECTED EXPENSES	FY 2028/29 PROJECTED EXPENSES	FY 2029/30 PROJECTED EXPENSES	FY 2030/31 PR0JECTED EXPENSES	FY 2031/32 PR0JECTED EXPENSES	FY 2032/33 PROJECTED EXPENSES
Land Acquisition											
Design, Environmental and Construction Management	$ 550,000				$ 250,000	$ 300,000					
Construction	$ 4,500,000					$ 4,500,000					
TOTAL COST	**$ 5,050,000**				**$ 250,000**	**$ 4,800,000**					

Note: The costs shown are represented in 2023 dollars. These values must be adjusted for inflation and to reflect increased project definition when developing budgets for future years.

Project No:	Priority Task:	CIP/CRP ID:
TBD	8	CIP
Project Title:	**Department:**	**Project Manager:**
12-in Downtown Street Transmission Main	Water Operations	

Project Description:

- Installation of approximately 4,000 feet of new 12-in diameter transmission main on Main Street, between Ramona Street and 10th Street.
- Project identified as part of the water master plan update (Project FF-2)

Justification:

- Installation of this 12-in transmission main completes looping of two existing transmission mains installed on the southbound lanes in Main Street, including the 14-in transmission main on Main Street south of Ramona street and the 12-in transmission main on Main Street north of 10th street.
- This project improves fire flow to the Downtown / West End pressure zones.

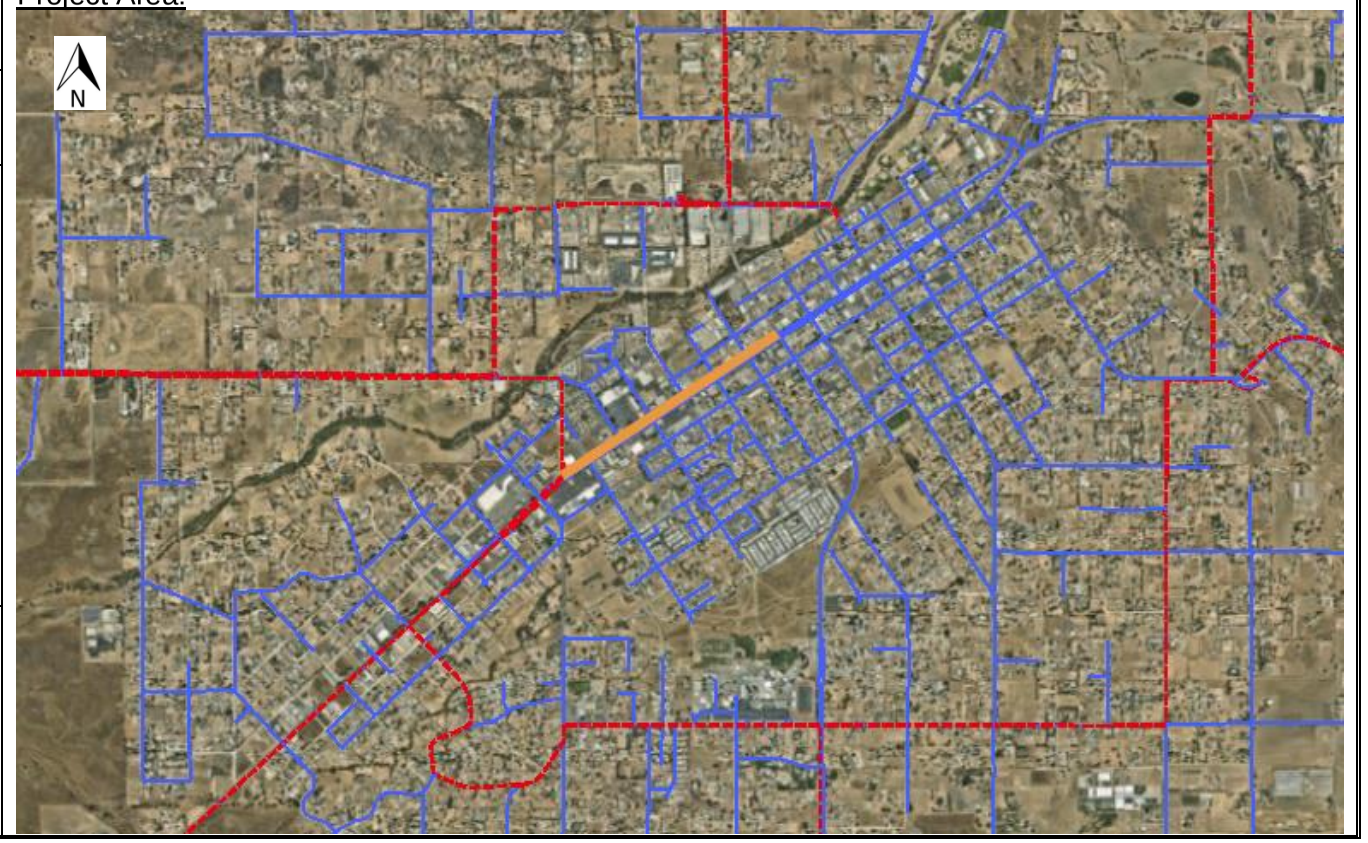
Budget Impact:

Fund 43: TBD
Fund XX: TBD
Imp. Bond: TBD

Scheduling:

Design Phase:
Construction Phase:

Project Area:



FUNDING	TOTAL FUNDING	FY 2023/24 BUDGET	FY 2024/25 BUDGET	FY 2025/26 BUDGET	FY 2026/27 BUDGET	FY 2027/28 BUDGET	FY 2028/29 BUDGET	FY 2029/30 BUDGET	FY 2030/31 BUDGET	FY 2031/32 BUDGET	FY 2032/33 BUDGET
Fund XXX	TBD										
Imp. Bond	TBD										
Fund 043	TBD										
TOTAL FUNDING	**TBD**										

COST BREAKDOWN	TOTAL COST	FY 2023/24 PROJECTED EXPENSES	FY 2024/25 PROJECTED EXPENSES	FY 2025/26 PROJECTED EXPENSES	FY 2026/27 PROJECTED EXPENSES	FY 2027/28 PROJECTED EXPENSES	FY 2028/29 PROJECTED EXPENSES	FY 2029/30 PROJECTED EXPENSES	FY 2030/31 PR0JECTED EXPENSES	FY 2031/32 PR0JECTED EXPENSES	FY 2032/33 PROJECTED EXPENSES
Land Acquisition											
Design, Environmental and Construction Management	$ 300,000							$ 200,000	$ 100,000		
Construction	$ 1,700,000								$ 1,700,000		
TOTAL COST	**$ 2,000,000**							**$ 200,000**	**$ 1,800,000**		

Note: The costs shown are represented in 2023 dollars and are estimates from the Water Master Plan Update prepared by Carollo. These values must be adjusted for inflation and to reflect increased project definition when developing budgets for future years.

Project No:	Priority Task:	CIP/CRP ID:
TBD	9	CIP
Project Title:	**Department:**	**Project Manager:**
8-in Snows Loop	Water Operations	Joe Lomeli

Project Description:

- Installation of approximately 1,350 feet of 8-in pipeline from Sky High Road to Highland Valle Road, within a new easement.
- Project identified as part of the updated water master plan (Project FF-3).

Justification:

- The existing pipeline on Sky High Road is a dead-end pipeline, located within the Snow pressure zone. Based on the Master Plan, installation of this pipeline loop will increase fire flow service to the Snow pressure zone customers.
- This project is associated with the ongoing decommissioning of the untreated water system. As such, the project may be eliminated or accelerated, depending on the ultimate decision of the Board relative to decommissioning.

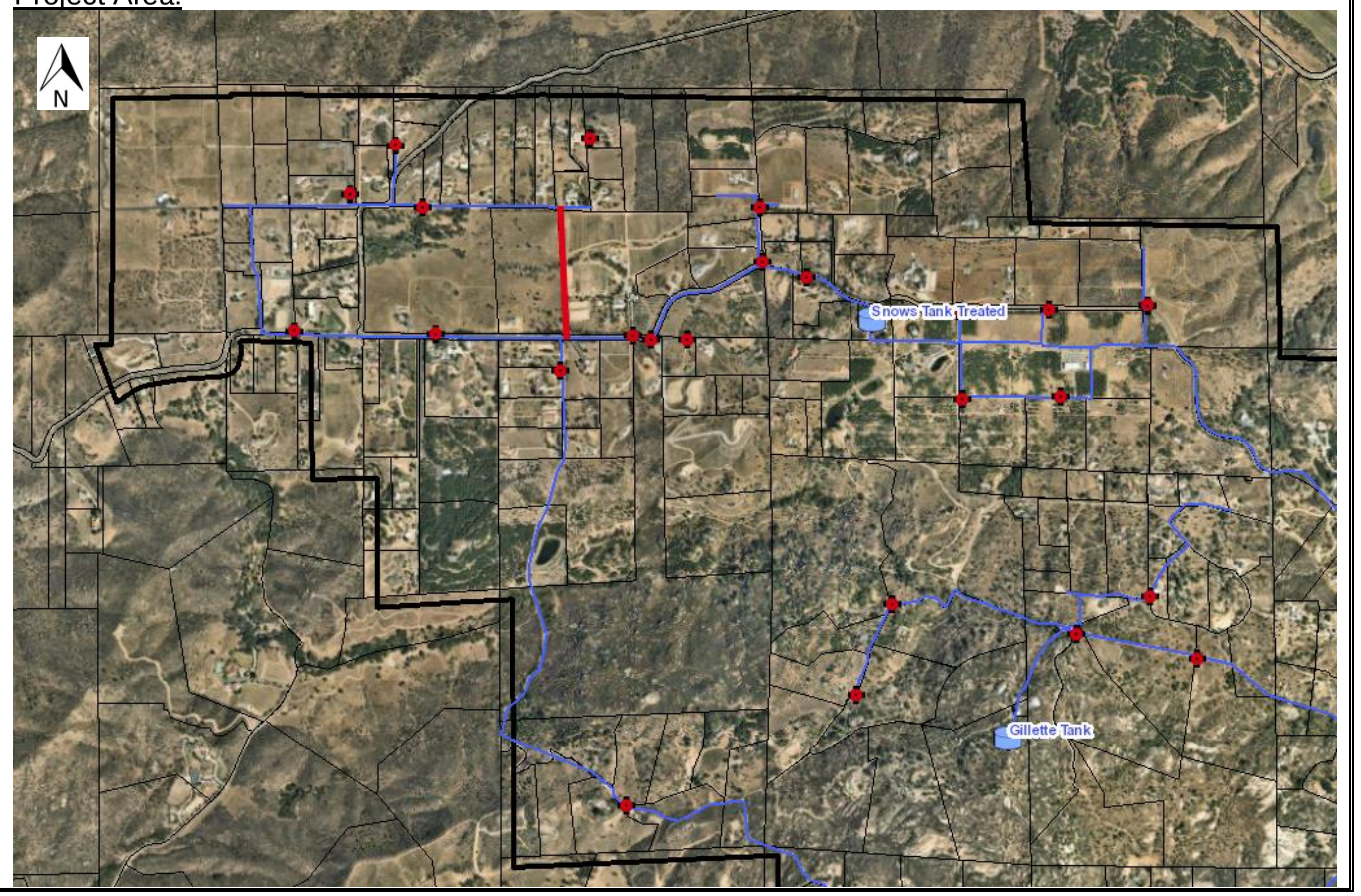
Budget Impact:

Fund 043: TBD
Fund XXX: TBD
Imp. Bond: TBD

Scheduling:

Design Phase:
Construction Phase:

Project Area:



FUNDING	TOTAL FUNDING	FY 2023/24 BUDGET	FY 2024/25 BUDGET	FY 2025/26 BUDGET	FY 2026/27 BUDGET	FY 2027/28 BUDGET	FY 2028/29 BUDGET	FY 2029/30 BUDGET	FY 2030/31 BUDGET	FY 2031/32 BUDGET	FY 2032/33 BUDGET
Fund XXX	TBD										
Imp. Bond	TBD										
Fund 043	TBD										
TOTAL FUNDING	**TBD**										

COST BREAKDOWN	TOTAL COST	FY 2023/24 PROJECTED EXPENSES	FY 2024/25 PROJECTED EXPENSES	FY 2025/26 PROJECTED EXPENSES	FY 2026/27 PROJECTED EXPENSES	FY 2027/28 PROJECTED EXPENSES	FY 2028/29 PROJECTED EXPENSES	FY 2029/30 PROJECTED EXPENSES	FY 2030/31 PR0JECTED EXPENSES	FY 2031/32 PR0JECTED EXPENSES	FY 2032/33 PROJECTED EXPENSES
Land Acquisition											
Design, Environmental and Construction Management	$ 75,000										$ 75,000
Construction	$ 425,000										$ 425,000
TOTAL COST	**$ 500,000**										**$ 500,000**

Note: The costs shown are represented in 2022 dollars and are based on estimates form the water master plan prepared by Carollo Engineers. These values must be adjusted for inflation and to reflect increased project definition when developing budgets for future years.

Project No:	Priority Task:	CIP/CRP ID:
TBD	10	CIP
Project Title:	**Department:**	**Project Manager:**
8-in Chavez Loop	Water Operations	Joe Lomeli

Project Description:

- Installation of approximately 1,560 feet of 8-in pipeline in Starvation Mountain Rd to Camino del Aguila.
- Project identified as part of the updated water master plan (Project FF-4).

Justification:

- The existing pipeline on Starvation Mountain Rd is not looped. Completing the proposed looping pipeline to the 8-in pipeline in Camino del Aguila improves fire flow and system reliability for customers in this remote portion of the water service area.
- This project is associated with the ongoing decommissioning of the untreated water system. As such, the project may be eliminated or accelerated, depending on the ultimate decision of the Board relative to decommissioning.

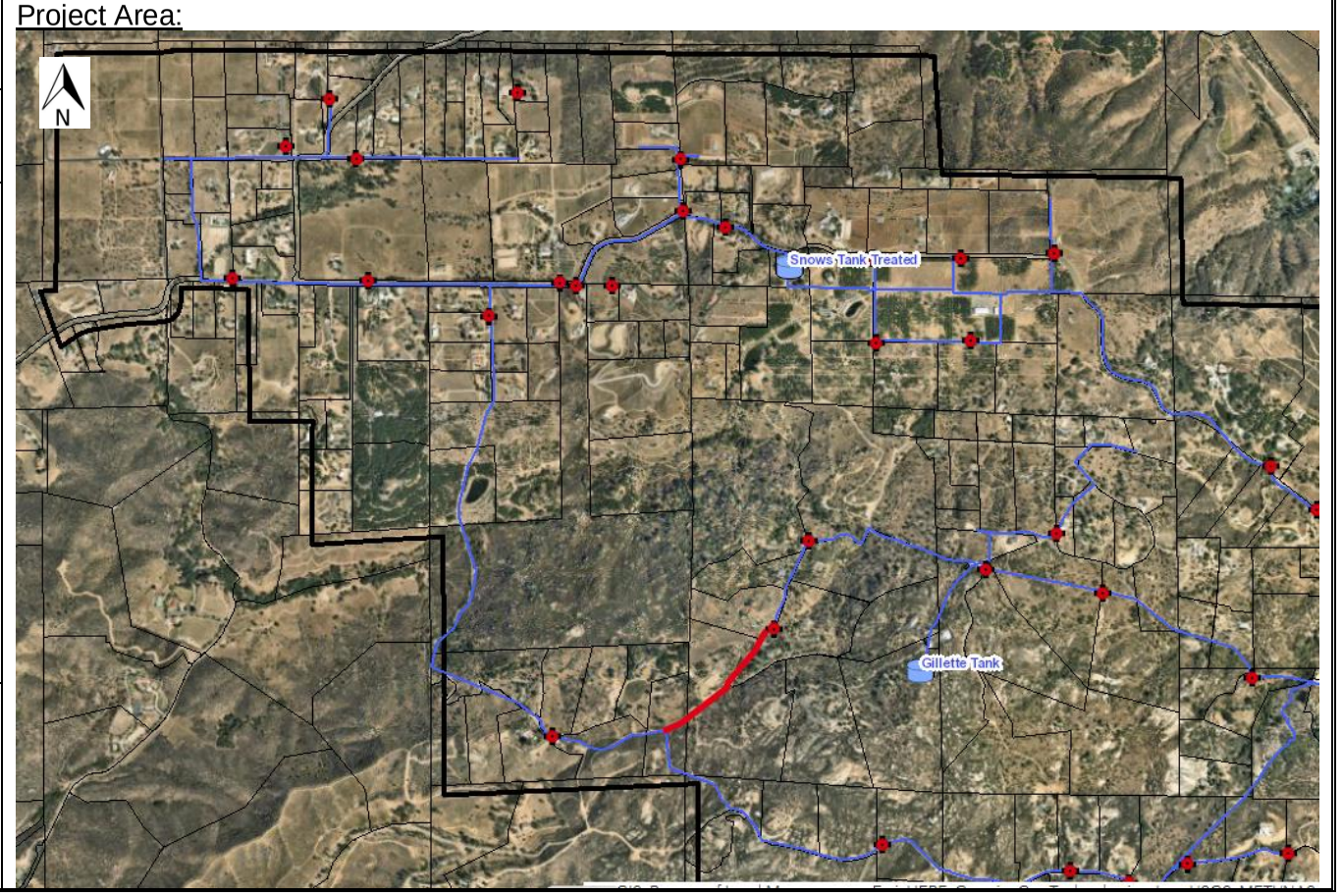
Budget Impact:

Fund 043: TBD
Fund XXX: TBD
Imp. Bond: TBD

Scheduling:

Design Phase:
Construction Phase:

Project Area:



FUNDING	TOTAL FUNDING	FY 2023/24 BUDGET	FY 2024/25 BUDGET	FY 2025/26 BUDGET	FY 2026/27 BUDGET	FY 2027/28 BUDGET	FY 2028/29 BUDGET	FY 2029/30 BUDGET	FY 2030/31 BUDGET	FY 2031/32 BUDGET	FY 2032/33 BUDGET
Fund XXX	TBD										
Imp. Bond	TBD										
Fund 043	TBD										
TOTAL FUNDING	**TBD**										

COST BREAKDOWN	TOTAL COST	FY 2023/24 PROJECTED EXPENSES	FY 2024/25 PROJECTED EXPENSES	FY 2025/26 PROJECTED EXPENSES	FY 2026/27 PROJECTED EXPENSES	FY 2027/28 PROJECTED EXPENSES	FY 2028/29 PROJECTED EXPENSES	FY 2029/30 PROJECTED EXPENSES	FY 2030/31 PR0JECTED EXPENSES	FY 2031/32 PR0JECTED EXPENSES	FY 2032/33 PROJECTED EXPENSES
Land Acquisition	$ 15,000										$ 15,000
Design, Environmental and Construction Management	$ 60,000										$ 60,000
Construction	$ 575,000										$ 570,000
TOTAL COST	**$ 650,000**										**$ 650,000**

Note: The costs shown are represented in 2023 dollars and are based on estimates from the water master plan update prepared by Carollo Engineers. These values must be adjusted for inflation and to reflect increased project definition when developing budgets for future years.

Project No:	Priority Task:	CIP/CRP ID:
TBD	11	CIP
Project Title:	**Department:**	**Project Manager:**
12-in Kennedy Pipeline	Water Operations	Joe Lomeli

Project Description:

- Installation of approximately 7,200 feet of 12-in pipeline form Kennedy Tank No 1 (West) to the upper Chavez pressure reducing valve (PRV).
- Fire hydrants would be included on this pipeline to further improve fire flow service in the Chavez area.

Justification:

- With the intent to convert Kennedy Tank West to a treated water tank, installing this 12-in pipeline will greatly improve fire flow conditions in the Snows pressure zone.
- This pipeline also allows for growth providing a reliable water system for the planned developments in the west side of the District service area.
- This project is associated with the ongoing decommissioning of the untreated water system. As such, the project may be eliminated or accelerated, depending on the ultimate decision of the Board relative to decommissioning.

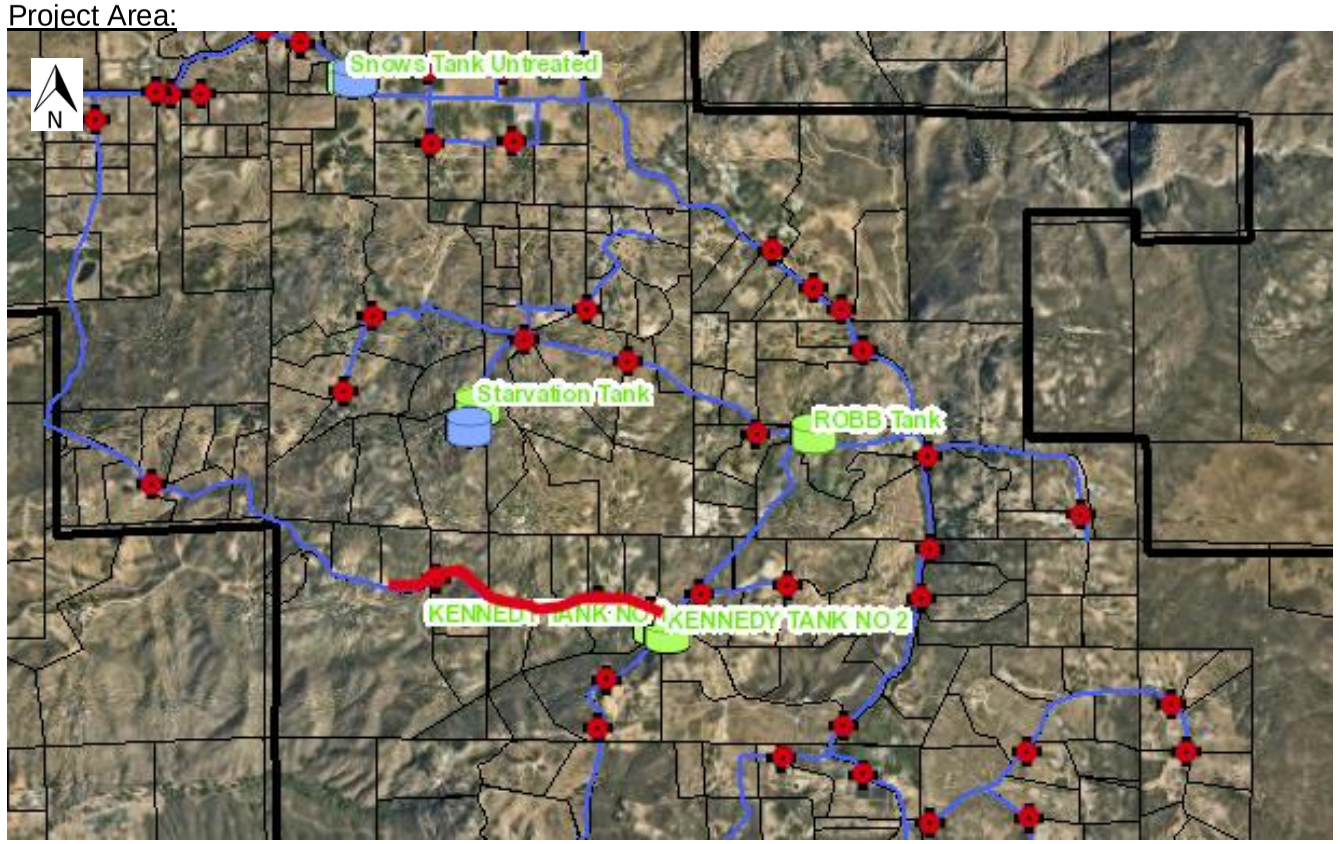
Budget Impact:

Fund 043: TBD
Fund XXX: TBD
Imp. Bond: TBD

Scheduling:

Design Phase:
Construction Phase:

Project Area:



FUNDING	TOTAL FUNDING	FY 2023/24 BUDGET	FY 2024/25 BUDGET	FY 2025/26 BUDGET	FY 2026/27 BUDGET	FY 2027/28 BUDGET	FY 2028/29 BUDGET	FY 2029/30 BUDGET	FY 2030/31 BUDGET	FY 2031/32 BUDGET	FY 2032/33 BUDGET
Fund XXX	TBD										
Imp. Bond	TBD										
Fund 043	TBD										
TOTAL FUNDING	**TBD**										

COST BREAKDOWN	TOTAL COST	FY 2023/24 PROJECTED EXPENSES	FY 2024/25 PROJECTED EXPENSES	FY 2025/26 PROJECTED EXPENSES	FY 2026/27 PROJECTED EXPENSES	FY 2027/28 PROJECTED EXPENSES	FY 2028/29 PROJECTED EXPENSES	FY 2029/30 PROJECTED EXPENSES	FY 2030/31 PR0JECTED EXPENSES	FY 2031/32 PR0JECTED EXPENSES	FY 2032/33 PROJECTED EXPENSES
Land Acquisition											
Design, Environmental and Construction Management	$ 250,000										$ 250,000
Construction	$ 2,600,000										$ 2,600,000
TOTAL COST	**$ 2,850,000**										**$ 2,850,000**

Note: The costs shown are represented in 2023 dollars. These values must be adjusted for inflation and to reflect increased project definition when developing budgets for future years.

Project No:	Priority Task:	CIP/CRP ID:
TBD	12	CIP
Project Title:	**Department:**	**Project Manager:**
12-in Wildcat Canyon Road Pipeline	Water Operations	Joe Lomeli

Project Description:

- Installation of approximately 2,300 feet of new 12-in diameter transmission main on Wildcat Canyon Road to the boundary of the District.
- The proposed pipeline will connect to new water service pipeline on the Barona Reservation, providing increase water reliability to the Barona Tribe.
- The Barona Tribe completely funds project.

Justification:

- The Barona Tribe petitioned the District to supply water service to its Reservation under AB1361 legislation. The District in in the process of collaborating with the Tribe, San Diego County Water Authority, Metropolitan Water District and LAFCO to prepare the agreement and design of the necessary facilities.
- The Barona Tribe will pay the total cost of these facilities.

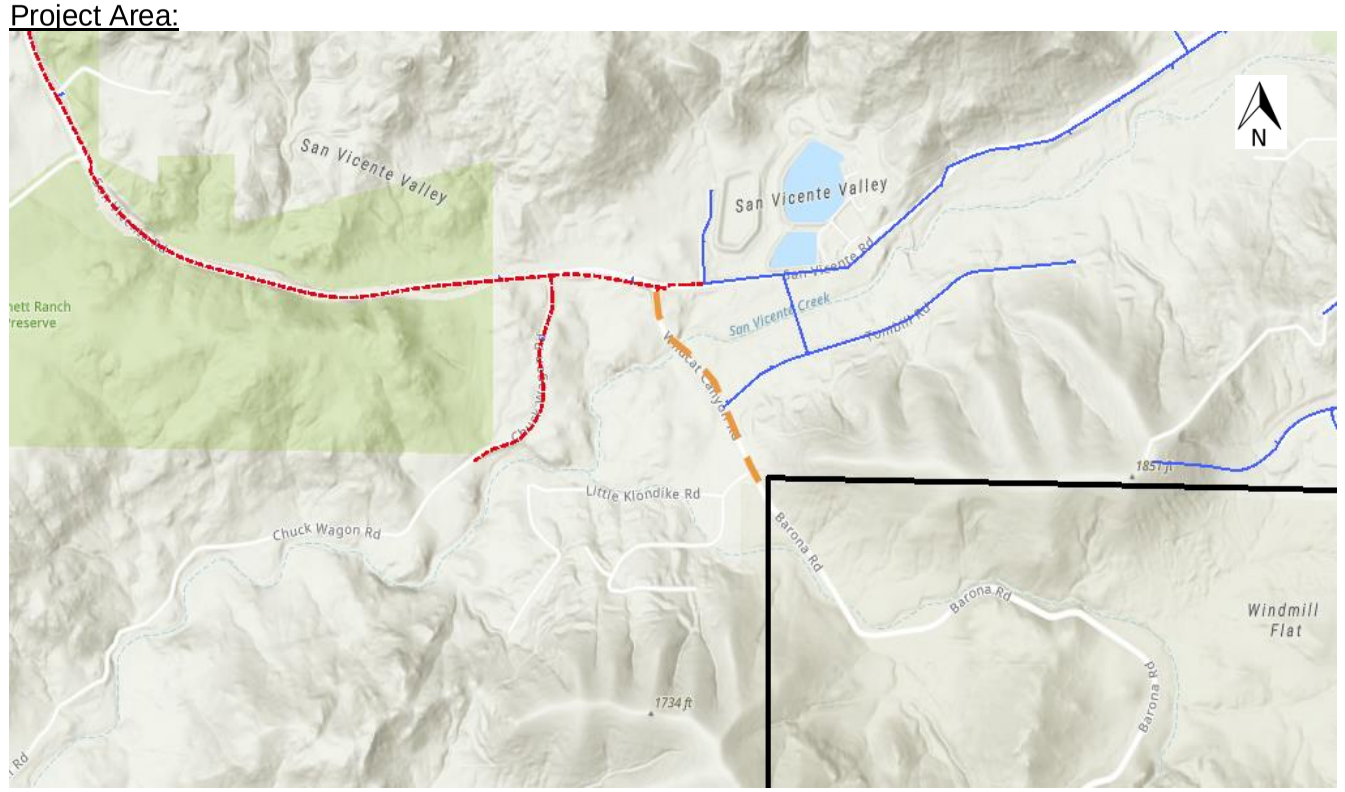
Budget Impact:

Fund 011: TBD
Fund XXX: TBD
Imp. Bond: TBD

Scheduling:

Design Phase:
Construction Phase:

Project Area:



FUNDING	TOTAL FUNDING	FY 2023/24 BUDGET	FY 2024/25 BUDGET	FY 2025/26 BUDGET	FY 2026/27 BUDGET	FY 2027/28 BUDGET	FY 2028/29 BUDGET	FY 2029/30 BUDGET	FY 2030/31 BUDGET	FY 2031/32 BUDGET	FY 2032/33 BUDGET
GRANT	100%										
Imp. Bond	TBD										
Fund 011	TBD										
TOTAL FUNDING	**TBD**										

COST BREAKDOWN	TOTAL COST	FY 2023/24 PROJECTED EXPENSES	FY 2024/25 PROJECTED EXPENSES	FY 2025/26 PROJECTED EXPENSES	FY 2026/27 PROJECTED EXPENSES	FY 2027/28 PROJECTED EXPENSES	FY 2028/29 PROJECTED EXPENSES	FY 2029/30 PROJECTED EXPENSES	FY 2030/31 PR0JECTED EXPENSES	FY 2031/32 PR0JECTED EXPENSES	FY 2032/33 PROJECTED EXPENSES
Land Acquisition											
Design, Environmental and Construction Management	$100,000	$ 100,000									
Construction	$ 1,200,000	$ 1,200,000									
TOTAL COST	**$ 1,300,000**	**$ 1,300,000**									

Note: The costs shown are represented in 2022 dollars. These values must be adjusted for inflation and to reflect increased project definition when developing budgets for future years.

Project No:	Priority Task:	CIP/CRP/DEVELOPER ID:
TBD	13	DEVELOPER
Project Title:	**Department:**	**Project Manager:**
8-in Acres Waterline Improvements (Alternative 1A)	Water Operations	Joe Lomeli

Project Description:

- Installation of approximately 3,300 feet of new 8-in diameter pipeline on Kalbaugh Street, Beverly Street and Haley Street (Alternative 1A – RED).
- Project is 100% funded under an existing grant.

Justification:

- Proposed waterline to provides water service to 12 parcels, which are currently served by private wells. The project also eliminates existing private "spaghetti" line connections.
- Proposed waterline also install adds new fire hydrants, improving fire flow capacity in the area.
- Project is paid under an existing grant, with no fiscal impact to the District.

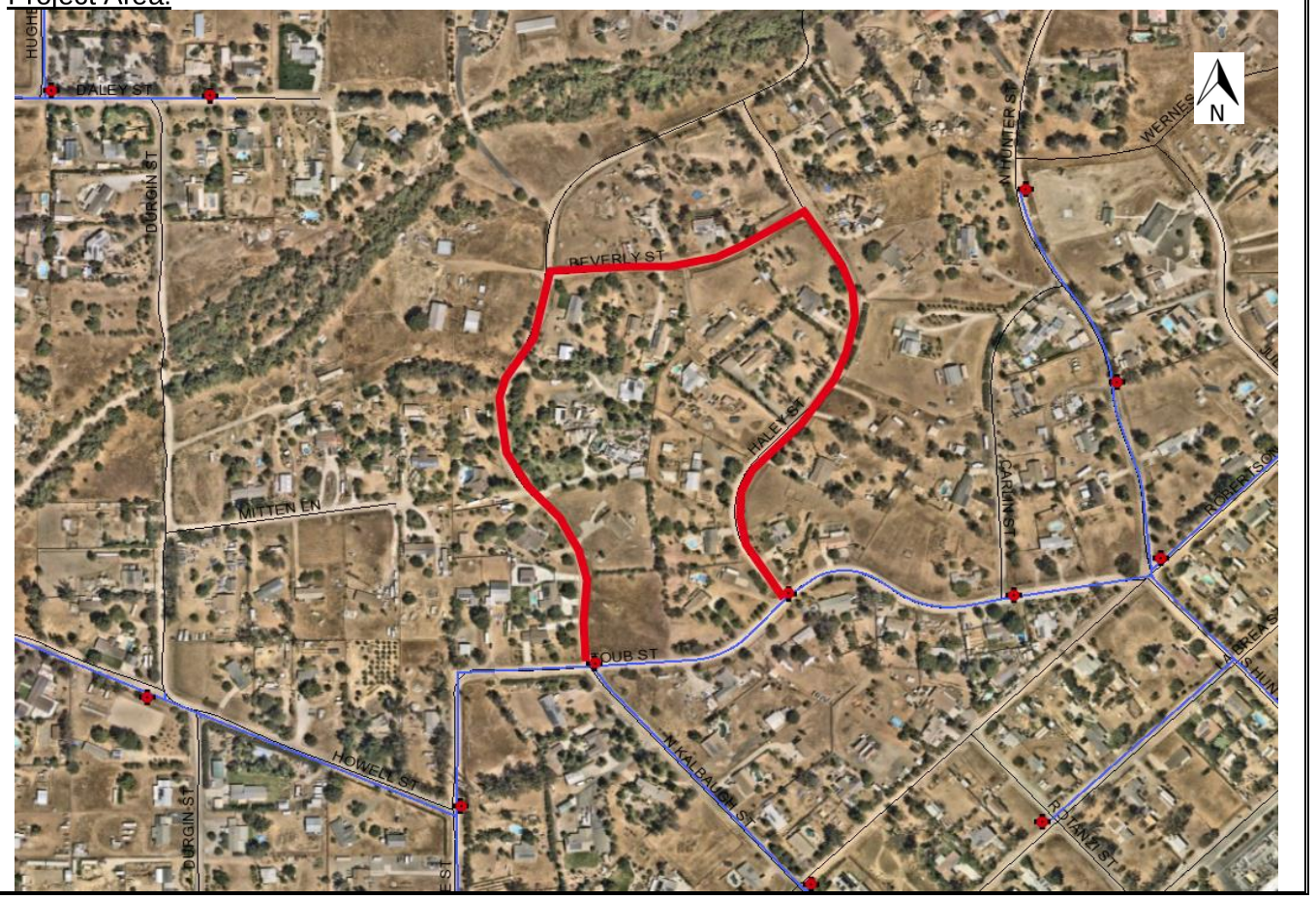
Budget Impact:

Fund 011: None
Fund XXX: None
Imp. Bond: None
GRANT: 100%

Scheduling:

Design Phase:
Construction Phase:

Project Area:



FUNDING	TOTAL FUNDING	FY 2023/24 BUDGET	FY 2024/25 BUDGET	FY 2025/26 BUDGET	FY 2026/27 BUDGET	FY 2027/28 BUDGET	FY 2028/29 BUDGET	FY 2029/30 BUDGET	FY 2030/31 BUDGET	FY 2031/32 BUDGET	FY 2032/33 BUDGET
GRANT	100%										
Imp. Bond	TBD										
Fund 011	TBD										
TOTAL FUNDING	**TBD**										

COST BREAKDOWN	TOTAL COST	FY 2023/24 PROJECTED EXPENSES	FY 2024/25 PROJECTED EXPENSES	FY 2025/26 PROJECTED EXPENSES	FY 2026/27 PROJECTED EXPENSES	FY 2027/28 PROJECTED EXPENSES	FY 2028/29 PROJECTED EXPENSES	FY 2029/30 PROJECTED EXPENSES	FY 2030/31 PR0JECTED EXPENSES	FY 2031/32 PR0JECTED EXPENSES	FY 2032/33 PROJECTED EXPENSES
Land Acquisition											
Design, Environmental and Construction Management	$ 200,000	$ 100,000	$ 100,000								
Construction	$ 1,820,000		$ 1,820,000								
TOTAL COST	**$ 2,200,000**	**$ 100,000**	**$ 1,920,000**								

Note: The costs shown are represented in 2022 dollars. These values must be adjusted for inflation and to reflect increased project definition when developing budgets for future years.

Project No:	Priority Task:	CIP/CRP/DEVELOPER ID:
TBD	14	DEVELOPER
Project Title:	**Department:**	**Project Manager:**
8-in Acres Waterline Improvements (Alternatives 2 & 3B)	Water Operations	Joe Lomeli

Project Description:

- Installation of approximately 640 feet of new 8-in diameter pipeline on La Brea Street (Alternative 2 – GREEN).
- Installation of approximately 430 feet of new 8-in diameter pipeline on Rotanzi Street (Alternative 3B – ORANGE).
- Project to be 100% funded under a grant.

Justification:

- Proposed waterline to loop the waterlines on Kalbaugh Street, La Brea Street and Rotanzi Street. By looping the waterlines three dead end waterlines are eliminated improving fire flow capacity.
- Completing the loop on existing pipelines also adds an alternative source of water to the area of the Acres therefore creating a more robust and reliable water system with added redundancy.

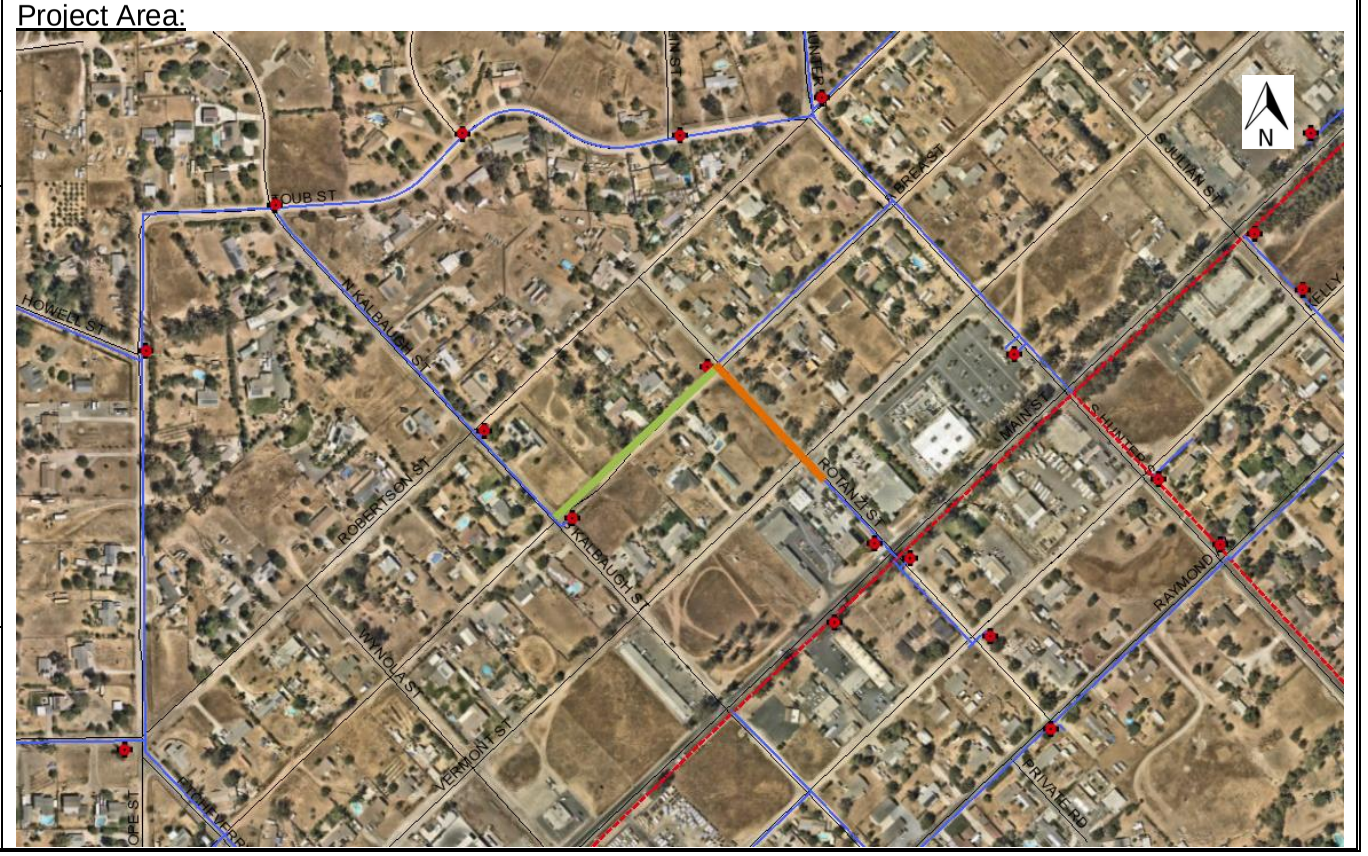
Budget Impact:

Fund 011: None
Fund XXX: None
Imp. Bond: None
GRANT: 100%

Scheduling:

Design Phase:
Construction Phase:

Project Area:



FUNDING	TOTAL FUNDING	FY 2023/24 BUDGET	FY 2024/25 BUDGET	FY 2025/26 BUDGET	FY 2026/27 BUDGET	FY 2027/28 BUDGET	FY 2028/29 BUDGET	FY 2029/30 BUDGET	FY 2030/31 BUDGET	FY 2031/32 BUDGET	FY 2032/33 BUDGET
GRANT	100%										
Imp. Bond	TBD										
Fund 011	TBD										
TOTAL FUNDING	**TBD**										

COST BREAKDOWN	TOTAL COST	FY 2023/24 PROJECTED EXPENSES	FY 2024/25 PROJECTED EXPENSES	FY 2025/26 PROJECTED EXPENSES	FY 2026/27 PROJECTED EXPENSES	FY 2027/28 PROJECTED EXPENSES	FY 2028/29 PROJECTED EXPENSES	FY 2029/30 PROJECTED EXPENSES	FY 2030/31 PR0JECTED EXPENSES	FY 2031/32 PR0JECTED EXPENSES	FY 2032/33 PROJECTED EXPENSES
Land Acquisition											
Design, Environmental and Construction Management	$ 90,000	$ 50,000	$ 40,000								
Construction	$ 900,000		$ 900,000								
TOTAL COST	**$ 990,000**	**$ 50,000**	**$ 940,000**								

Note: The costs shown are represented in 2022 dollars. These values must be adjusted for inflation and to reflect increased project definition when developing budgets for future years.