



Budget Workshop – Capital Improvement Plan

March 16, 2021





Agenda

- 1) Department presentation of CIP projects
 - a) Landfill
 - b) Solid Waste
 - c) Water
 - d) Wastewater

- 2) Council Feedback and Questions

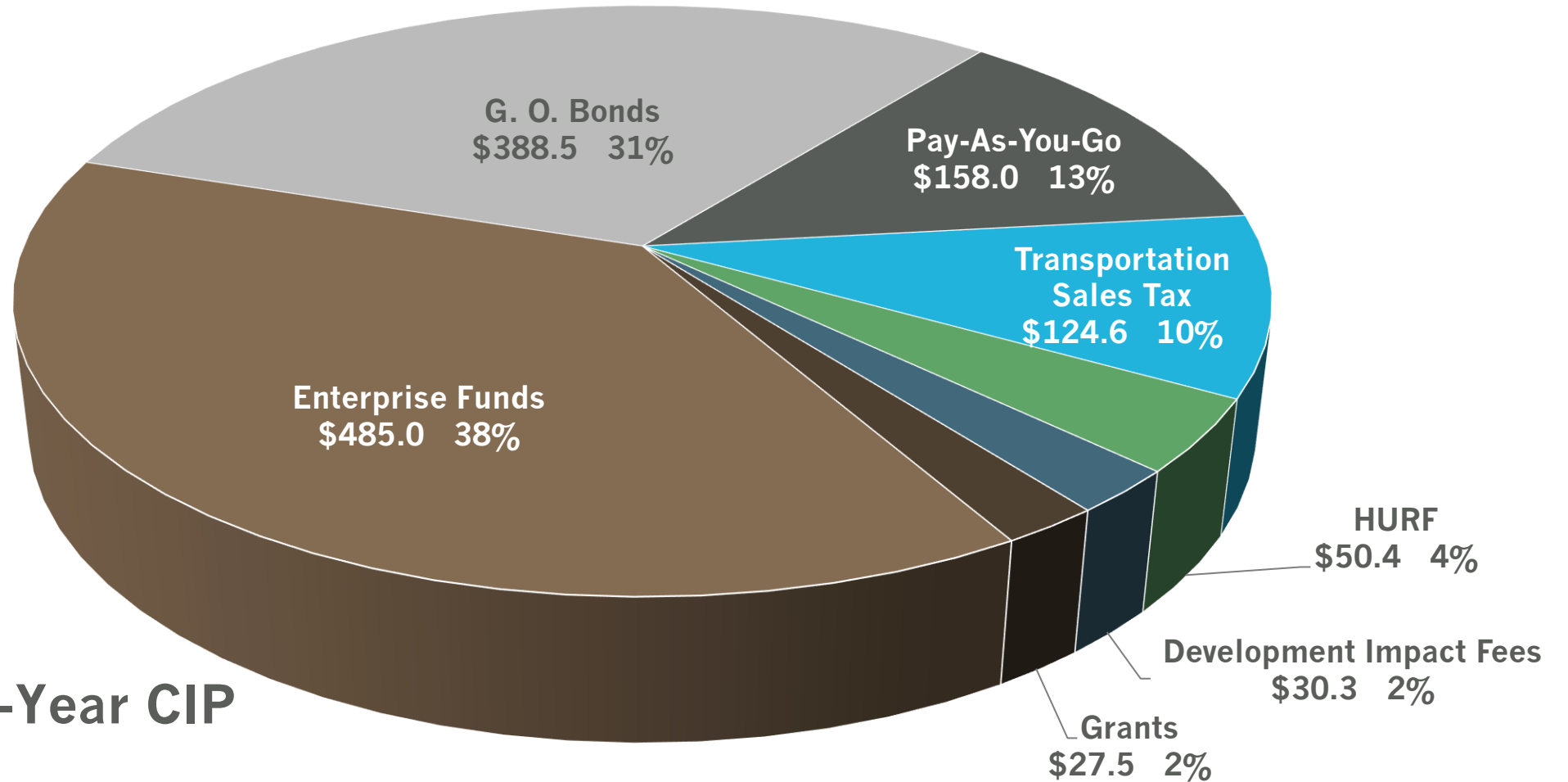


Budget Calendar

Item	Date
Budget Overview / Revenues / Five-Year Financial Forecasts	January 12, 2021
CIP Council Workshop #1 – G. O. Bond Funded CIP Projects (Streets, Flood Control, Libraries, Public Safety)	February 2, 2021
CIP Council Workshop #2 – G. O. Bond Funded CIP (Parks, Cultural Facilities, Open Space, General Government)	February 16, 2021
CIP Council Workshop #3 – Pay-As-You-Go, Transportation Sales Tax, HURF, DIF, and Grant Funded CIP Projects	March 2, 2021
<i>CIP Council Workshop #4 – Enterprise Funded CIP Projects (Landfill, Solid Waste, Water, Wastewater)</i>	<i>March 16, 2021</i>
CIP Council Workshop #5 – Follow Up Items, DRAFT CIP	March 30, 2021
Materials for All Day Budget Workshops	March 26, 2021
Council Workshop (All Day) – FY22 Operating Budget	April 6, 2021
Council Workshop (All Day) – FY22 Operating Budget	April 8, 2021
Updated DRAFT CIP Binder to Council	April 12, 2021
Final Budget Workshop – Tentative Draft Budget & 10-Year CIP Program	April 20, 2021
Voting Meeting – Tentative Budget Adoption	May 11, 2021
Voting Meeting – Final Budget Adoption / Property Tax Levy	June 8, 2021
Voting Meeting – Property Tax Adoption	June 22, 2021



DRAFT 10-Year CIP by Funding Source

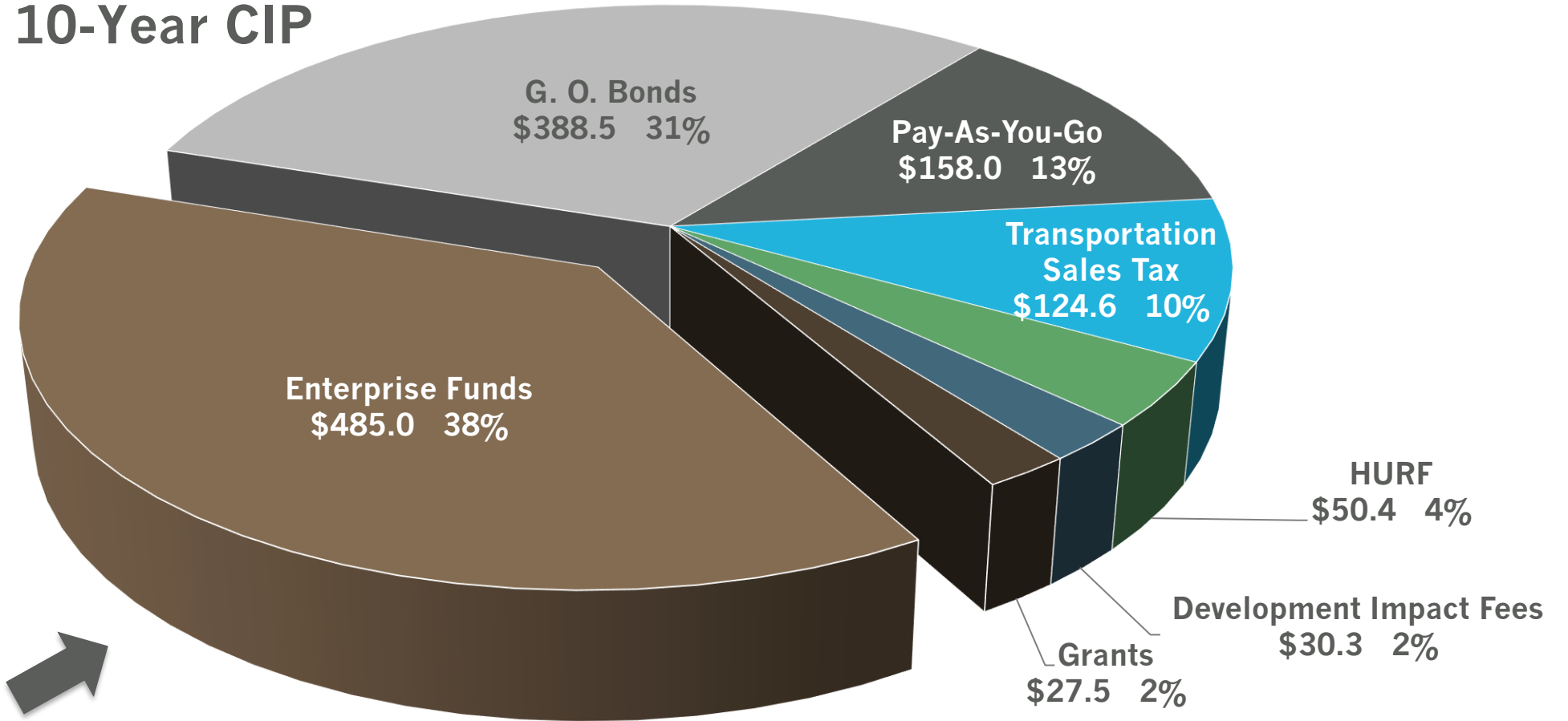


Total DRAFT 10-Year CIP
\$1,264.3M



DRAFT 10-Year CIP by Funding Source

Total DRAFT 10-Year CIP
\$1,264.3M





Capital Improvement Plan Funding Sources

- Pay-As-You-Go Funds
 - 1080 – General Government Capital Projects (General Fund)
 - 2110 – Arts Commission
- General Obligation Bonds
 - 4010 – Streets Construction
 - 4040 – Public Safety Construction
 - 4050 – Parks Construction
 - 4060 – Government Facilities
 - 4080 – Cultural Facility
 - 4090 – Open Space/Trail Construction
 - 4100 – Library Construction
 - 4110 – Flood Control Construction



Capital Improvement Plan Funding Sources

- Development Impact Fees (DIF)
 - 4172 – 2019 DIF – Fire West
 - 4190 – 2012 DIF – Police Facilities
 - 4222 – 2014 DIF – Police West
 - 4240 – 2012 DIF – Citywide Parks
 - 4290 – 2003 DIF – Citywide Open Space
 - 4320 – 2014 DIF – Parks and Rec Zone 1 East
 - 4330 – 2014 DIF – Parks & Rec Zone 2 West 101
 - 4410 – 2014 DIF – Streets Zone 1 East
 - 4420 – 2014 DIF – Streets Zone 2 West
 - 4431 – 2019 DIF – Streets East
 - 6071 – 2019 DIF – Water East
 - 6101 – 2019 DIF – Sewer East



Capital Improvement Plan Funding Sources

- HURF Operating (Pavement Management) – 2050
- HURF Streets Construction – 4020
- Transportation Sales Tax Operating (Pavement Management) – 2070
- Transportation Sales Tax – 4030
- Enterprise User Fees
 - 6020 – Water
 - 6030 – Sewer
 - 6110 – Landfill
 - 6120 – Solid Waste
- Grants
 - 2060 – Transportation Grants
 - 2160 – Other Grants
 - 2190 – Airport Capital Grants



LANDFILL CAPITAL IMPROVEMENT PROJECTS



LANDFILL CIP PROJECTS BY FUNDING SOURCE

FUND	FUND NAME	FY22	FY23	FY24	FY25	FY26	FY27-31	TOTAL
6110	LANDFILL	\$16,380,249	\$6,236,420	\$3,728,050	\$2,690,500	\$8,115,945	\$13,008,526	\$50,159,690
TOTAL		\$16,380,249	\$6,236,420	\$3,728,050	\$2,690,500	\$8,115,945	\$13,008,526	\$50,159,690



LANDFILL PROJECTS (1 of 2)

PROJECT #	PAGE	PROJECT NAME	FY22	FY23	FY24	FY25	FY26	FY27-31	TOTAL
CIPLF19019	68	LANDFILL COMPACTOR REPLACEMENT	\$1,517,725				\$2,100,000	\$1,600,000	\$5,217,725
CIPLF19024	69	BULLDOZER REBUILD AND REPLACEMENT	\$1,200,000	\$1,550,000				\$1,900,000	\$4,650,000
CIPLF19090	71	LANDFILL MOTOR GRADER REPLACEMENT				\$550,000			\$550,000
CIPLF19091	72	LANDFILL SCRAPER REPLACEMENT				\$1,050,000			\$1,050,000
CIPLF78506	80	LANDFILL 4X4 REPLACEMENT TRUCKS	\$39,000				\$411,800	\$150,000	\$600,800
CIPLF78512	81	FUEL TANKER REPLACEMENT	\$26,752					\$262,500	\$289,252
CIPLF78514	82	SOLID WASTE INSPECTION TRUCKS	\$65,999	\$33,000			\$43,045	\$92,556	\$234,600
CIPLF78522	83	LANDFILL WATER PULL/TRUCK	\$3,000					\$1,563,000	\$1,566,000
CIPLF78532	85	AUXILIARY EQUIPMENT	\$173,712	\$66,000			\$50,000		\$289,712
CIPLF21029	74	LANDFILL GPS SYSTEM EQUIPMENT	\$225,000			\$65,000			\$290,000



LANDFILL PROJECTS (2 of 2)

PROJECT #	PAGE	PROJECT NAME	FY22	FY23	FY24	FY25	FY26	FY27-31	TOTAL
CIPLF78503	78	LANDFILL CLOSURE (SOUTH)	\$572,065	\$505,000	\$126,250	\$151,500	\$151,500	\$454,500	\$1,960,815
CIPLF78505	79	LF PHASE CONSTRUCTION (NORTH)	\$1,253,810	\$2,514,200	\$2,937,200	\$0	\$101,000	\$4,609,200	\$11,415,410
CIPLF19025	70	NORTH CELL LINER	\$7,812,400	\$157,200			\$3,114,000	\$30,000	\$11,113,600
CIPLF22006	77	SITE PAVING AND MARKINGS				\$229,600			\$229,600
CIPLF20040	73	SCALE HOUSE PEDESTRIAN LANDING	\$59,322						\$59,322
CIPLF22005	76	MRF PROCESS LINE IMPROVEMENTS	\$277,500	\$555,000					\$832,500
CIPLF21030	75	CLOSED LANDFILLS	\$820,122	\$50,000	\$50,000	\$50,000	\$50,000	\$250,000	\$1,270,122
CIPLF78535	87	LANDFILL GAS EXTRACTION SYSTEM	\$713,360	\$504,500	\$302,600	\$282,400	\$1,211,000	\$536,770	\$3,550,630
CIPLF78534	86	STORMWATER CONTROLS	\$1,370,159	\$301,520	\$312,000	\$312,000	\$883,600	\$1,560,000	\$4,739,279
CIPLF78528	84	NORTHERN AVE IMPROVEMENTS (MCDOT)	\$250,322						\$250,322
TOTAL			\$16,380,249	\$6,236,420	\$3,728,050	\$2,690,500	\$8,115,945	\$13,008,526	\$50,159,690



LANDFILL COMPACTOR REPLACEMENT (Pg. 68)

Project Number: CIPLF19019

Project Description:

Rebuild and replacement of the two landfill compactors. Compactors will be replaced or rebuilt on a five year, 10,000-hour schedule. Updated costs include current quotes and inflation.

Justification:

Compactors are used daily for placement and compaction of solid waste. Compactors maximize landfill compaction, improve safety, manage airspace, and comply with environmental requirements.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6110 – Landfill	\$1,517,725				\$2,100,000	\$1,600,000	\$5,217,725



BULLDOZER REBUILD AND REPLACEMENT

(Pg. 69)

Project Number: CIPLF19024

Project Description:

Rebuild and/or replacement of the 3 landfill bulldozers. D8 bulldozer in FY22; D9 in FY23; the D6 is scheduled for a complete undercarriage rebuild FY23. Replace D8 and D6 in FY27-31.

Justification:

The landfill has 3 bulldozers used for landfill applications and establishing haul roads for accessibility. They maximize landfill operation efficiency and meet regulatory permit requirements.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6110 – Landfill	\$1,200,000	\$1,550,000				\$1,900,000	\$4,650,000



LANDFILL MOTOR GRADER REPLACEMENT (Pg. 71)

Project Number: CIPLF19090

Project Description:

Replacement of the motor grader that is expected to reach the end of its serviceable life in FY25. Landfill vehicles and equipment are not included in the Vehicle Replacement Fund.

Justification:

The motor grader is used to create and maintain temporary roads on the active portion of the landfill. Landfill roadways must be maintained for heavy equipment and customer vehicles and safe landfill access.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6110 – Landfill				\$550,000			\$550,000



LANDFILL SCRAPER REPLACEMENT (Pg. 72)

Project Number: CIPLF19091

Project Description:

This project provides for the rebuild and/or replacement of the landfill scraper.

Justification:

The scraper is an essential piece of equipment that excavates, transports, and stockpiles soil used for covering waste disposed of at the landfill so the City can meet regulatory requirements.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6110 – Landfill				\$1,050,000			\$1,050,000



LANDFILL 4x4 REPLACEMENT TRUCKS

(Pg. 80)

Project Number: CIPLF78506

Project Description:

This funding is for trucks that are used by key landfill staff to access the landfill site to monitor operations and perform regulatory inspections to include replacement of one field truck in FY22 and six trucks between 2026 and 2030: 2 field trucks; a mechanic service truck; Inspector and crew utility trucks.

Justification:

Trucks are critical to transport landfill personnel to locations throughout the landfill site to ensure operations and regulatory compliance is met. Service trucks are required for landfill systems and equipment services maintenance. Conditions of the landfill require the truck fleet to be replaced at minimum every seven to ten years.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6110 – Landfill	\$39,000				\$411,800	\$150,000	\$600,800



FUEL TANKER REPLACEMENT (Pg. 81)

Project Number: CIPLF78512

Project Description:

This project will fund the replacement of the landfill fuel tanker truck.

Justification:

The fuel tanker is an essential piece of support equipment that maximizes operational efficiencies and minimizes downtime by having a mobile source for diesel and gasoline refueling at the landfill working face. Particularly for the large heavy equipment compactors and dozers that are too cumbersome to transport efficiently to the stationary diesel tank.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6110 – Landfill	\$26,752					\$262,500	\$289,252



SOLID WASTE INSPECTION TRUCKS (Pg. 82)

Project Number: CIPLF78514

Project Description:

Replacement of trucks in the Recycling Division including seven half-ton extended cab pick-up trucks with lift gates in the Solid Waste Management fleet. Replacement: 2 in FY22; 1 in FY23, and 2 in FY26-31.

Justification:

Trucks enable the inspectors to provide quality control by education and mandated inspections of solid waste containers in accordance with Maricopa County Regulations in order to have a refuse variance of collection and to improve the quality of recycled material.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6110 – Landfill	\$65,999	\$33,000			\$43,045	\$92,556	\$234,600



LANDFILL WATER PULL/TRUCK (Pg. 83)

Project Number: CIPLF78522

Project Description:

This project funds the replacement of the larger primary water truck in 2021. Project funding in FY22 is carry over funding.

Justification:

The primary water truck is a critical piece of support equipment for reducing dust and maintaining compliance with the existing air quality permit. Upgrading this truck better prepares the operation for the north cell expansion.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6110 – Landfill	\$3,000					\$1,563,000	\$1,566,000



AUXILIARY EQUIPMENT(Pg. 85)

Project Number: CIPLF78532

Project Description:

This project funds the replacement of auxiliary equipment needed by the landfill. This includes light towers, air compressors, skid steers, and a lube trailer. FY 22 includes security and other cameras; FY23 will include replacing a light tower and skid steer tractor. FY26 includes replacing a forklift.

Justification:

This funding is intended to replace equipment that has met or exceeded its serviceable life or is not economical to rebuild. This equipment performs a multitude of critical functions that are required to maintain landfill operations efficiently and effectively to meet the landfill regulatory permit requirements.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6110 – Landfill	\$173,712	\$66,000			\$50,000		\$289,712



LANDFILL GPS SYSTEM EQUIPMENT

(Pg. 74)

Project Number: CIPLF21029

Project Description:

GPS systems are utilized on the landfill equipment to assist the operators in developing the landfill per engineering designs.

Justification:

It is necessary to upgrade the current outdated GPS equipment that is no longer supported. The GPS equipment is critical for managing airspace efficiencies and operator safety. Efficiency and safety are realized by eliminating unnecessary operation of landfill equipment, allowing the operators to build the landfill by design the first time in a much safer manner.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6110 – Landfill	\$225,000			\$65,000			\$290,000



LANDFILL CLOSURE - SOUTH (Pg. 78)

Project Number: CIPLF78503

Project Description:

Project provides for closure of the south area of the landfill as its permitted air space approaches capacity.

Justification:

The south area of the landfill is required by federal and state law to be closed with a final cover system to include a vegetative layer, compacted soil layer, gas wells, and storm water control. Maintenance of the south area will be ongoing as the north cell is developed. Slope stability, stormwater retention, and erosion control are part of managing the landfill to maintain regulatory compliance.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6110 – Landfill	\$572,065	\$505,000	\$126,250	\$151,500	\$151,500	\$454,500	\$1,960,815



LF PHASE CONSTRUCTION- NORTH (Pg. 79)

Project Number: CIPLF78505

Project Description:

This project is for soil excavation and other construction activities required for the phased construction of the North Cell of the landfill.

Justification:

This activity includes stockpiling of dirt as required for the construction of the North Cell and operation of the South Cell, haul roads, and embankments until final closure. Mandated per regulatory agency requirements for the continued development of the landfill.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6110 – Landfill	\$1,253,810	\$2,514,200	\$2,937,200		\$101,000	\$4,609,200	\$11,415,410



NORTH CELL LINER (Pg. 70)

Project Number: CIPLF19025

Project Description:

This project is for design and construction of the liner for the North Cell at the landfill.

Justification:

This liner provides a protective barrier to prevent potential groundwater contamination and is a permit requirement with the Arizona Department of Environmental Quality.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6110 – Landfill	\$7,812,400	\$157,200			\$3,114,000	\$30,000	\$11,113,600



SITE PAVING AND MARKINGS (Pg. 77)

Project Number: CIPLF22006

Project Description:

This project funds the landfill site paving and markings required as a result of repairs to paved surfaces.

Justification:

The Transportation Department recommends paved surfaces be maintained on a prescribed schedule. The entrance and roads should be repaired by performing a micro-seal approximately every 7 years.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6110 – Landfill				\$229,600			\$229,600



SCALE HOUSE PEDESTRIAN LANDING

(Pg. 73)

Project Number: CIPLF20040

Project Description:

A pedestrian landing is being constructed for the Scale House, so drivers can safely access the scale house building from the scale to complete transactions at the scale house service window.

Justification:

The construction of the landing will mitigate the safety concern at the scale house.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6110 – Landfill	\$59,322						\$59,322



MRF PROCESS LINE IMPROVEMENTS

(Pg. 76)

Project Number: CIPLF22005

Project Description:

The Materials Recovery Facility opened in 2000. The facility has many moving components that have worn over the years. The system needs major renovations and upgrades in order to process incoming materials.

Justification:

In FY22, installation of a metering drum will feed the system with a more consistent flow of material creating a better separation rate for sorters. FY23 installation of an optical sorter will improve overall capture rate for different plastics.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6110 – Landfill	\$277,500	\$555,000					\$832,500



CLOSED LANDFILLS (Pg. 75)

Project Number: CIPLF21030

Project Description:

This project funds closed landfills that require ongoing maintenance including grading, drainage, fencing, landscaping, and gas management. Part of this funding is for work at the closed landfill site located at 103rd Ave. and the Butler Dr. alignment.

Justification:

Closed landfills may require maintenance from time to time. Improvements can include grading, drainage, fencing, landscaping, and gas management.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6110 – Landfill	\$820,122	\$50,000	\$50,000	\$50,000	\$50,000	\$250,000	\$1,270,122



LANDFILL GAS EXTRACTION SYSTEM

(Pg. 87)

Project Number: CIPLF78535

Project Description:

This project funds modifications to the gas extraction system includes vertical wellheads, new laterals, and horizontal collectors, which are required to provide the collection of landfill gas created from the placement of trash.

Justification:

Modifications and improvements to the gas extraction system are required to meet the regulatory permit requirements for the landfill.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6110 – Landfill	\$713,360	\$504,500	\$302,600	\$282,400	\$1,211,000	\$536,770	\$3,550,630



STORMWATER CONTROLS (Pg. 86)

Project Number: CIPLF78534

Project Description:

This project provides funding for stormwater controls for the landfill include berms, culvert down drains, and channels required to stabilize the landfill footprint.

Justification:

Construction and maintenance of these stormwater controls is mandated by the landfill's regulatory permit with the Arizona Department of Environmental Quality.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6110 – Landfill	\$1,370,159	\$301,520	\$312,000	\$312,000	\$883,600	\$1,560,000	\$4,739,279



NORTHERN AVE IMPROVEMENTS (MCDOT)

(Pg. 84)

Project Number: CIPLF78528

Project Description:

This project provides funding for block wall that will extend west along the landfill property at 115th Ave. & Northern. The relocation of approximately 20 existing cacti that are to be removed due to Northern Ave. Parkway project. There are currently forty cacti along the right-of-way that were sold to MCDOT. 20 of the cacti will be donated to the Northern Ave. project, 20 will be relocated landfill property at Glendale's expense.

Justification:

This is an approximate carry forward amount for the landfill fence along the Northern Avenue alignment.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6110 – Landfill	\$250,322						\$250,322



QUESTIONS?



SOLID WASTE CAPITAL IMPROVEMENT PROJECTS



SOLID WASTE CIP PROJECTS BY FUNDING SOURCE

FUND	FUND NAME	FY22	FY23	FY24	FY25	FY26	FY27-31	TOTAL
6120	Solid Waste	\$4,787,149	\$4,155,304	\$2,869,542	\$3,048,251	\$4,009,990	\$17,197,358	\$36,067,594
TOTAL		\$4,787,149	\$4,155,304	\$2,869,542	\$3,048,251	\$4,009,990	\$17,197,358	\$36,067,594



SOLID WASTE PROJECTS

PROJECT #	PAGE	PROJECT NAME	FY22	FY23	FY24	FY25	FY26	FY27-31	TOTAL
CIPSW19026	179	SOLID WASTE PROCESS IMPROVEMENT SOFTWARE	\$467,388	\$225,000					\$692,388
CIPSW19027	180	REPLACE STREET SWEEPERS	\$17,354		\$354,376	\$363,235	\$372,316	\$1,221,196	\$2,328,477
CIPSW78001	181	REPLACE ROLLOFF TRUCKS COMMERCIAL	\$232,444				\$254,663	\$600,368	\$1,087,475
CIPSW78002	182	FRONTLOAD TRUCKS COMMERCIAL	\$432,283	\$401,346	\$411,380	\$413,500	\$868,110	\$2,974,109	\$5,500,728
CIPSW78003	183	SIDELOAD TRUCKS RESIDENTIAL	\$2,586,535	\$1,855,070	\$1,140,867	\$1,521,156	\$1,566,042	\$8,376,922	\$17,046,592
CIPSW78004	184	BULK TRASH EQUIPMENT RESIDENTIAL	\$814,787	\$1,538,322	\$862,919	\$750,360	\$909,816	\$3,793,932	\$8,670,136
CIPSW78005	185	REPLACE PICKUPS SERVICE TRUCKS	\$128,827	\$35,566			\$39,043	\$230,831	\$434,267
CIPSW78009	186	ALLEY GATING	\$107,531	\$100,000	\$100,000				\$307,531
TOTAL			\$4,787,149	\$4,155,304	\$2,869,542	\$3,048,251	\$4,009,990	\$17,197,358	\$36,067,594



SOLID WASTE PROCESS IMPROVEMENT SOFTWARE (Pg. 179)

Project Number: CIPSW19026

Project Description:

Solid Waste process systems improve routing efficiency and provide comprehensive solutions for SW operations. Includes software, mobile devices, configuration, training and support.

Justification:

This project will increase operating efficiencies. Funding in FY22-23 is for implementation across all divisions. O&M in FY24 will be evaluated/determined after implementation.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6120 – Solid Waste	\$467,388	\$225,000					\$692,388



REPLACE STREET SWEEPERS (Pg. 180)

Project Number: CIPSW19027

Project Description:

Replacement of large Solid Waste (SW) vehicles. SW has 6 street sweepers with 7-year lifespans requiring replacement over the next 10 years. Replacement plan: FY24-(1), FY25-(1), FY26-(1), FY27-31(3).

Justification:

Mandated by State and Federal agencies as part of PM10 nonattainment areas to improve air quality, reduce particulate emissions and clear streets of road hazards/debris.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6120 – Solid Waste	\$17,354		\$354,376	\$363,235	\$372,316	\$1,221,196	\$2,328,477



REPLACE ROLLOFF TRUCKS – COMMERCIAL

(Pg. 181)

Project Number: CIPSW78001

Project Description:

Replacement of large Solid Waste vehicles. SW has three commercial roll-off trucks requiring replacement over next 10 years. Replacement plan: FY22-(1); FY26-(1); FY27-31-(2).

Justification:

The equipment identified in this project are mandated by State and City code and are utilized for the safe collection and disposal of solid waste. Programmatic replacement of vehicles will reduce overall lifecycle costs, protect public health and safety while aligning resources with the City's strategic priorities.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6120 – Solid Waste	\$232,444				\$254,663	\$600,368	\$1,087,475



FRONTLOAD TRUCKS-COMMERCIAL

(Pg. 182)

Project Number: CIPSW78002

Project Description:

SW has 7 front load trucks & 1 front load bin delivery truck/trailer requiring replacement over next 10 years. Replacement plan: FY22(1), FY23(1), FY24(1), FY25(1), FY26(2) FY27-31(6).

Justification:

Collection/disposal of solid waste is required by County/City code. Ensures safe & efficient operation. Programmatic replacement of vehicles will reduce overall lifecycle costs.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6120 – Solid Waste	\$432,283	\$401,346	\$411,380	\$413,500	\$868,110	\$2,974,109	\$5,500,728



SIDELOAD TRUCKS - RESIDENTIAL

(Pg. 183)

Project Number: CIPSW78003

Project Description:

Replacement of large Solid Waste (SW) vehicles. SW has 26 side load trucks (6-year lifespan) requiring replacement over 10 years. FY22(7), FY23(5), FY24(3), FY25(4), FY26(4), FY27-31(21).

Justification:

Collection/disposal of solid waste is required by State/City code. Replacement of vehicles reduces costs, protects public health/safety, and aligns resources with City strategic priorities.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6120 – Solid Waste	\$2,586,535	\$1,855,070	\$1,140,867	\$1,521,156	\$1,566,042	\$8,376,922	\$17,046,592



BULK TRASH EQUIP.-RESIDENTIAL (Pg. 184)

Project Number: CIPSW78004

Project Description:

15 rear load trucks/8 tractors require replacement over 10 yrs. FY22(2) trucks, FY23(4) trucks/(1) tractor, FY24(2) trucks/(1) tractor, FY26(2) trucks/(1) tractor, FY27-31(10) trucks/(4) tractors.

Justification:

Collection/disposal of solid waste is mandated by State/City code. Replacements reduce overall lifecycle costs, protect public health and safety while aligning resources with City strategic priorities.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6120 – Solid Waste	\$814,787	\$1,538,322	\$862,919	\$750,360	\$909,816	\$3,793,932	\$8,670,136



REPLACE PICKUPS / SERVICE TRUCKS

(Pg. 185)

Project Number: CIPSW78005

Project Description:

Replacement of Solid Waste vehicles. 10 trucks are used to support daily operations and provide customer service to the community. Replacement plan: FY22-(3), FY23-(1), FY26-(1), FY27-31-(5).

Justification:

These trucks are support units that assist in maintaining the safe and efficient operation for a revenue generating enterprise.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6120 – Solid Waste	\$128,827	\$35,566			\$39,043	\$230,831	\$434,267



ALLEY GATING (Pg. 186)

Project Number: CIPSW78009

Project Description:

A program that manages health & safety issues including blocking of vehicular access and difficulty of enforcement due to illegal dumping in alleys. Program can be requested by affected residential residents or city departments. Program includes residential garbage service relocations, blue stake gate location, gate installation, and access key/code.

Justification:

Promotes and enhances quality of life for residents residing near or adjacent to alley ways, providing a safer & cleaner environment. Project includes pre-gated alley clean-up & citizen notification.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6120 – Solid Waste	\$107,531	\$100,000	\$100,000				\$307,531



QUESTIONS?



WATER SERVICES CAPITAL IMPROVEMENT PROJECTS



Capital Improvement Plan

Needs to:

- Provide continuous service (24/7/365) to all customers
- Provide multiple water supply sources
- Provide back-up to critical components
- Allow adjustments to perform changing priorities
- Meet all Federal and State regulations
- Focus on rehabilitation of existing infrastructure



Risks and Impact

Lack of rehabilitation of infrastructure:

- Increases unplanned service disruptions
- Increases emergency repair cost of project
- Cost escalates for delayed projects

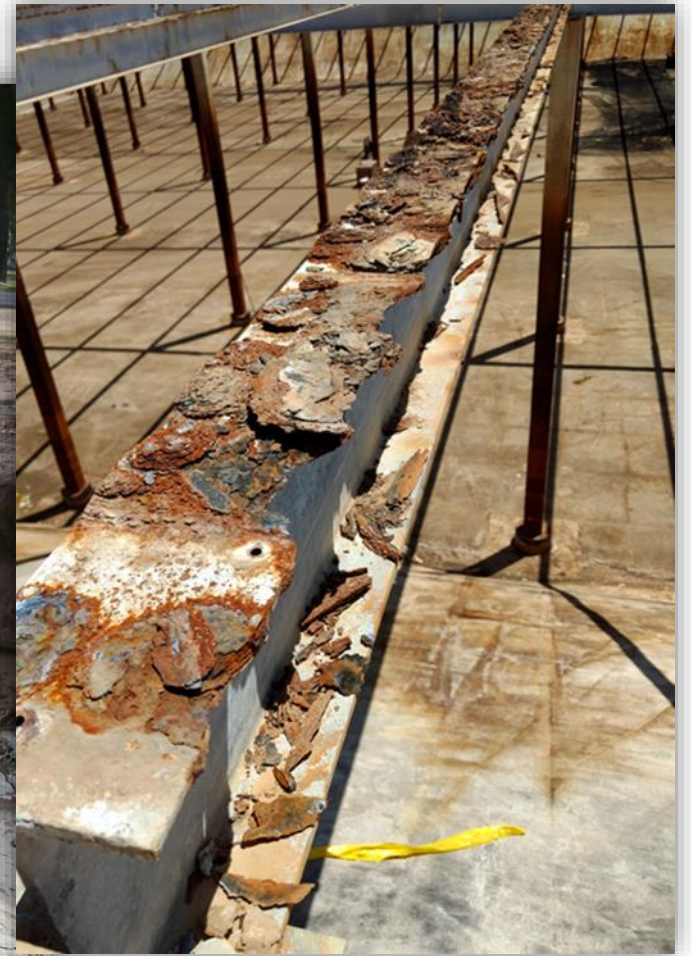
Risks and Impact Pyramid Peak Water Treatment Plant



Risks and Impact Arrowhead Reclamation Facility



Risks and Impact Water Lines and Cholla Reservoir



Risks and Impact Waste Activated Sludge Force Main





Risks and Impact Sewer Lines



Risks and Impact Groundwater Wells and Recharge Well





WATER SERVICES CIP PROJECTS BY FUNDING SOURCE

FUND	FUND NAME	FY22	FY23	FY24	FY25	FY26	FY27-31	TOTAL
6020	WATER	50,286,901	22,462,000	23,829,000	21,970,000	17,872,000	97,498,000	233,917,901
6030	SEWER	31,556,949	19,951,000	14,766,000	15,751,000	18,930,000	54,200,000	155,154,949
6101	2019-SEWER DIF EAST	320,000	160,000	160,000	160,000	160,000	480,000	1,440,000
6071	2019-WATER DIF EAST		500,000	3,500,000	150,000	150,000	700,000	5,000,000
	TOTAL	82,163,850	43,073,000	42,255,000	38,031,000	37,112,000	152,878,000	395,512,850

The blue indicates a change from the February 10, 2021 [FY2022-2031 Capital Improvement Program](#) report.



WATER SERVICES CIP PROJECTS BY CAPITAL CATEGORY

CATEGORY	FY22	FY23	FY24	FY25	FY26	FY27-31	TOTAL
WATER RESOURCES & OTHER	7,155,129	5,875,000	11,252,000	7,840,000	6,065,000	26,230,000	64,417,129
WASTEWATER COLLECTION	15,809,445	6,711,000	5,461,000	10,051,000	11,690,000	20,230,000	69,952,445
WATER DISTRIBUTION	7,007,595	12,577,000	10,947,000	5,980,000	3,857,000	20,268,000	60,636,595
RECLAMATION FACILITIES	15,967,504	13,300,000	9,465,000	5,860,000	7,400,000	34,450,000	86,442,504
WATER TREATMENT PLANTS	36,224,177	4,610,000	5,130,000	8,300,000	8,100,000	51,700,000	114,064,177
TOTAL	82,163,850	43,073,000	42,255,000	38,031,000	37,112,000	152,878,000	395,512,850

The blue indicates a change from the February 10, 2021 [FY2022-2031 Capital Improvement Program report](#).



WATER RESOURCES AND OTHER

PROJECT NUMBER	PAGE	PROJECT TITLE	FY22	FY23	FY24	FY25	FY26	FY27-31	TOTAL
WW21028	269	UNDERGROUND STOR FAC PRMT	100,000	100,000	0	0	0	0	200,000
WA19018	287	WHITE MTN APACHE WTR RIGHTS	0	0	3,500,000	875,000	875,000	1,750,000	7,000,000
WA19021	289	STORAGE & RECOVERY WELLS	500,000	400,000	400,000	400,000	400,000	2,000,000	4,100,000
WA19022	290	WATER SUPPLY REDUNDANCY	2,652,607	2,625,000	4,582,000	4,915,000	3,140,000	14,130,000	32,044,607
WA21031	295	ASSURED WATER SUPPLY OBLIG	300,000	0	0	0	0	0	300,000
WA60017	304	INTEGRATED WATER MSTR PLAN	310,638	0	0	0	0	0	310,638
WA60018	305	LABORATORY EQUIPMENT	227,767	180,000	100,000	0	0	0	507,767
WA60019	306	VEHICLE REPLACEMENT	887,077	750,000	750,000	1,000,000	1,000,000	4,000,000	8,387,077
WA61023	309	WATER SYSTEM SECURITY	179,500	150,000	150,000	150,000	150,000	350,000	1,129,500
WA61048	314	GROUNDWATER WELL REHAB	1,382,826	1,370,000	1,270,000	500,000	500,000	4,000,000	9,022,826
WA61051	316	ACCRUAL OF LT STOR CREDITS	614,714	300,000	500,000	0	0	0	1,414,714
		TOTAL	7,155,129	5,875,000	11,252,000	7,840,000	6,065,000	26,230,000	64,417,129



UNDERGROUND STORAGE FACILITY PERMIT (page 269)

Project Number: CIPWW21028

Project Description:

Conduct required analysis to prepare application for Underground Storage Facility (USF) permit issued by the ADWR.

Justification:

USF permit is required to store reclaimed effluent in the ground. The ADWR issues the permit. USF permit for West Area expires 2023. The USF permit for Arrowhead expires 2024. Permits must be renewed before the expiration date.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6030 -SEWER	100,000	100,000					200,000



WHITE MTN APACHE WATER RIGHTS

(page 287)

Project Number: CIPWA19018

Project Description:

100-year lease of water rights pursuant to the White Mountain Apache Tribe settlement for 2,363 acre-feet annually. The settlement agreement is in the negotiation/approval process. Payment to follow in future years.

Justification:

Council approved the lease settlement on February 24, 2009 and approved the amended and restated WMAT Water Quantification agreement on February 12, 2013.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6020 – WATER				875,000	875,000	1,750,000	3,500,000
6071 – 2019 WATER DIF			3,500,000				3,500,000



STORAGE & RECOVERY WELLS REHAB

(page 289)

Project Number: CIPWA19021

Project Description:

Rehabilitate four (4) Aquifer Storage and Recovery wells (two at the Arrowhead WRF & two at Oasis Lake) and eight (8) vadose zone recharge wells (six at the AWRF and two at Oasis Lake) on a 10-year cycle.

Justification:

Based on evaluation, need to rehabilitate one well every year to maintain the system's resiliency. These recharge wells need to recharge effluent to various groundwater levels to maximize groundwater storage credits.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6020 – WATER	500,000	400,000	400,000	400,000	400,000	2,000,000	4,100,000



WATER SUPPLY REDUNDANCY

(page 290)

Project Number: CIPWA19022

Project Description:

Study, design and construct new groundwater supply wells and other sources to create supply redundancy city wide. First source is inter-connects with adjacent cities.

Justification:

Water supply redundancy from multiple sources at times of restricted supply is critical to providing an on-demand response to all customers. Groundwater wells can provide water during water supplier restrictions or during drought management, plant shut-down, or transmission failure.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6020 – WATER	2,652,607	2,625,000	4,582,000	4,915,000	3,140,000	14,130,000	32,044,607



ASSURED WATER SUPPLY OBLIGATION

(page 295)

Project Number: CIPWA21031

Project Description:

Conduct a study of city' s water supply to prepare the renewal application to the Arizona Department of Water Resources. Permit scheduled to expire in 2023.

Justification:

The city must demonstrate that sufficient supplies of water are physically, continuously and legally available for at least 100 years. The application to modify/renew the designation is due to ADWR by December 31, 2023.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6020 – WATER	300,000						300,000



INTEGRATED WATER MASTER PLAN

(page 304)

Project Number: CIPWA60017

Project Description:

Update Integrated Master Plan to include the plans for water, sewer, reclaimed water, and stormwater systems.

Justification:

This project provides needed planning to ensure necessary infrastructure is available, and water resources are available to meet anticipated demands to support future development.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6020 – WATER	310,638						310,638



LABORATORY EQUIPMENT REPLACEMENT

(page 305)

Project Number: CIPWA60018

Project Description:

Upgrade or replace capital laboratory test equipment. Includes water de-ionizer, ICP-MS, IC-ESI-MS/MS, two GC-MS over three years.

Justification:

Critical laboratory test equipment is at the end of useful life. Maintenance is becoming costly versus replacement or using outside laboratory services. Water quality testing is mandatory to the treatment of water.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6020 – WATER	227,767	180,000	100,000				507,767



VEHICLE REPLACEMENT (page 306)

Project Number: CIPWA60019

Project Description:

Replacement of vehicles, heavy trucks, and excavation equipment. Replacement is based on service life, usage, condition, and cost to maintain.

Justification:

Mobility is critical to effectively and efficiently perform work required. The fleet is comprised of over 165 units for a cost to replace of more than \$10 million. Units range in value from \$50,000 to \$500,000 with service life of 10 to 20 years.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6020 – WATER	887,077	750,000	750,000	1,000,000	1,000,000	4,000,000	8,387,077



WATER SYSTEM SECURITY (page 309)

Project Number: CIPWA61023

Project Description:

Installation of equipment citywide to further enhance security of city's water supply, treatment plants, and distribution systems.

Justification:

Replace cameras and equipment at Water Services facilities to further enhance security of city's water supply, treatment plants and distribution systems. Required to ensure the city complies with the federal homeland security requirements.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6020 – WATER	179,500	150,000	150,000	150,000	150,000	350,000	1,129,500



GROUNDWATER WELL REHABILITATION

(page 314)

Project Number: CIPWA61048

Project Description:

Assess water production and water quality at sixteen groundwater wells. Rehabilitate and replace well components as needed.

Justification:

Wells need rehabilitation every 5-10 years to maintain high production and water quality levels. Rehabilitation reduces risk of equipment failure and loss of service as well as the decrease in water quality.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6020 – WATER	1,382,826	1,370,000	1,270,000	500,000	500,000	4,000,000	9,022,826



ACCRUAL OF LONG-TERM WATER STORAGE CREDITS (page 316)

Project Number: CIPWA61051

Project Description:

Using the Groundwater Saving Facilities, purchase Central Arizona Project water to store and accrue long-term water storage credits for use during supply shortages.

Justification:

Accrued long-term water storage credits (LTWC) can be recovered during a time of drought. LTWC adds to city’s water portfolio needed for the ADWR 100-year Assured Water Supply designation. This program adds resiliency to the city water supply.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6020 – WATER	614,714	300,000	500,000				1,414,714



WASTEWATER COLLECTION

PROJECT NUMBER	PAGE	PROJECT TITLE	FY22	FY23	FY24	FY25	FY26	FY27-31	TOTAL
WW19086	262	GLENDALE AVE SEWER LINE	1,729,429	0	0	0	3,250,000	0	4,979,429
WW63006	276	ARROWHEAD SEWER LINES - PH 1	1,402,850	2,600,000	0	0	0	0	4,002,850
WW19087	263	ARROWHEAD SEWER LINES - PH 2	0	0	0	900,000	3,800,000	1,000,000	5,700,000
WW19088	264	ARROWHEAD SEWER LINES - PH 3	0	0	0	0	2,650,000	3,050,000	5,700,000
WW20030	266	LUKE AFB WASTEWATER CONNECT	3,927,662	0	0	0	0	0	3,927,662
WW63003	275	99TH AVE INTERCEPTOR LINE	643,400	481,000	71,000	3,291,000	0	1,310,000	5,796,400
WW63016	278	SEWER LINE - PHASE V	3,239,504	300,000	0	0	0	0	3,539,504
WW22076	270	SEWER LINE - REHAB PROGRAM	520,000	2,300,000	3,350,000	4,920,000	1,050,000	10,490,000	22,630,000
WW63030	280	LIFT STATION - 67th AVE & ACDC	2,823,922	100,000	0	0	0	0	2,923,922
WW22077	271	LIFT STATION REHAB PROGRAM	0	0	1,100,000	0	0	1,400,000	2,500,000
WW22078	272	SEWER LINE EXTENSION	320,000	160,000	160,000	160,000	160,000	480,000	1,440,000
WW63024	279	SEWER MANHOLE REHABILITATION	650,000	470,000	480,000	480,000	480,000	2,500,000	5,060,000
WW63032	282	WASTEWATER COLLECTION IMPRV	552,678	300,000	300,000	300,000	300,000	0	1,752,678
		Total	15,809,445	6,711,000	5,461,000	10,051,000	11,690,000	20,230,000	69,952,445

The blue indicates a change from the February 10, 2021 [FY2022-2031 Capital Improvement Program report](#).



GLENDALE AVE SEWER LINE

(page 262)

Project Number: CIPWW19086

Project Description:

Assess, design and construct ~~new 24"~~ sewer line in Glendale Avenue from 91st to ~~99th~~ Avenues.

Justification:

This project will provide additional sewer line capacity in the area along Glendale Avenue from 91st to 99th Avenue as new development occurs. ~~Current line is 15" diameter.~~

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6030 - SEWER	1,729,429				3,250,000		4,979,429



ARROWHEAD SEWER LINES - PHASE 1

(page 276)

Project Number: CIPWW63006

Project Description:

Replacement or rehabilitation of sewer lines in the Arrowhead Ranch area to improve sewer flow conditions and reduce odor - phase 1 from 79th Ave under loop 101 to ARWRF.

Justification:

The sewer line and manhole systems are over 32 years old, and the segments need rehabilitation condition assessments. In addition, this is the only sewer main that conveys sewage to the ARWRF for treatment. Reduce risk of sewer line collapse and sewerage overflows.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6030 -SEWER	1,402,850	2,600,000					4,002,850



ARROWHEAD SEWER LINES - PHASE 2

(page 263)

Project Number: CIPWW19087

Project Description:

Replacement or rehabilitation of sewer lines in the Arrowhead Ranch area to improve sewer flow conditions and reduce odor - phase 2 in Union Hills from 67th Ave to 79th Ave.

Justification:

The sewer line and manholes that collect wastewater flow to the Arrowhead Water Reclamation Facility are over 30 years old. This is the only sewer line that conveys sewage to the ARWRF for treatment.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6030 -SEWER				900,000	3,800,000	1,000,000	5,700,000



ARROWHEAD SEWER LINES - PHASE 3

(page 264)

Project Number: CIPWW19088

Project Description:

Replacement or rehabilitation of sewer lines in the Arrowhead Ranch area to improve sewer flow condition and reduce odor - phase 3 in 67th Ave from Union Hills to Utopia.

Justification:

The sewer line and manholes that collects wastewater flow to the Arrowhead Water Reclamation Facility are over 30 years old. This is the only sewer line that conveys sewage to the ARWRF for treatment.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6030 -SEWER					2,650,000	3,050,000	5,700,000



LUKE AFB WASTEWATER CONNECTION

(page 266)

Project Number: CIPWW20030

Project Description:

Design & construct new wastewater line and lift station from Luke AFB to Glendale's treatment system. To coincide with Glendale Ave reconstruct.

Justification:

Luke AFB intends to cease their wastewater treatment operations by October 2021. Glendale has the treatment capacity. Capital will be reimbursed by Luke AFB through outside funding or repayment charges over 10 years.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6030 -SEWER	3,927,662						3,927,662



99TH AVE INTERCEPTOR LINE (page 275 & 265)

Project Number: CIPWW63003 CIPWW20011

Project Description:

99th Ave interceptor rehabilitation of manholes and interior lining.

Justification:

The 99th interceptor conveys sewage from the Cities of Glendale, Sun City, Peoria, and Phoenix to the 91st Avenue WWTP for treatment. The interceptor system is over 35 years old and is rehabilitated in phases based on condition assessments. Cities share in costs based on ownership.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6030 -SEWER	643,400	481,000	71,000	3,291,000		1,310,000	5,796,400



SEWER LINE - PHASE V (page 278)

Project Number: CIPWW63016

Project Description:

Rehabilitate or replace sewer lines in segments. Design and construct based on condition assessments. Includes construction of ARWRF waste activated sludge (WAS) line by-pass.

Justification:

This project will rehabilitate the Waste Activate Sludge (WAS) line from the AWRF. It is important that sewage from residential and business within the City be reliably and safely conveyed through the sewer systems. Project is needed to reduce risk of sewer line collapse and system overflows.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6030 -SEWER	3,239,504	300,000					3,539,504



SEWER LINE - REHAB PROGRAM (page 270)

Project Number: CIPWW22076

Project Description:

Program to rehabilitate or replace sewer lines in segments. Design and construct based on condition assessments. Includes rehab of phase VI, Union Hills by-pass, phase VII.

Justification:

It is important that sewage from residential and business within the city be reliably and safely conveyed through the sewer systems. Project is needed to reduce risk of sewer line collapse and overflows in the system.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6030 -SEWER	520,000	2,300,000	3,350,000	4,920,000	1,050,000	10,490,000	22,630,000



LIFT STATION REHABILITATION - 67TH AVE & ACDC (page 280)

Project Number: CIPWW63030

Project Description:

Assess condition and rehabilitate Lift Station #2 at 67th Avenue and the Arizona Canal Diversion Channel.

Justification:

It is important to ensure the lift stations are in good operational conditions and meet safety requirements. Potential equipment failure would cause system overflows.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6030 -SEWER	2,823,922	100,000					2,923,922



LIFT STATION REHAB PROGRAM (page 271)

Project Number: CIPWW22077

Project Description:

Assess condition and rehabilitate lift stations and related force mains citywide.

Justification:

It is important to ensure the lift stations are in good operational conditions and meet safety requirements. Potential equipment failure would cause system overflows.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6030 -SEWER			1,100,000			1,400,000	2,500,000



SEWER LINE EXTENSION (page 272)

Project Number: CIPWW22078

Project Description:

Sewer line extension and oversizing in the city to the east of 115th Avenue.

Justification:

Provide funding for oversizing and extension of sewer line for new development. Project included in 2019 Infrastructure Improvement Plan (IIP).

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6030 -SEWER	320,000	160,000	160,000	160,000	160,000	480,000	1,440,000



SEWER MANHOLE REHABILITATION

(page 279)

Project Number: CIPWW63024

Project Description:

Manhole rehabilitation throughout the city. Construction performed in phases.

Justification:

Manholes are in a very corrosive environment. It is important that sewage from residential homes and businesses can be reliably conveyed in sewer lines that have structural integrity. Rehabilitation reduces the risk of sewer line collapse.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6030 -SEWER	650,000	470,000	480,000	480,000	480,000	2,500,000	5,060,000



WASTEWATER COLLECTION IMPROVEMENTS

(page 282)

Project Number: CIPWW63032

Project Description:

Study, design and construct improvements to wastewater collection system. Includes air relief valves, odor control, and force mains.

Justification:

As equipment at the wastewater collection system reaches the end of service-life, it is replaced. It is critical to ensure city's collection system is in good operational condition to meet demands and regulatory requirements.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6030 -SEWER	552,678	300,000	300,000	300,000	300,000		1,752,678



WATER DISTRIBUTION

PROJECT NUMBER	PAGE	PROJECT TITLE	FY22	FY23	FY24	FY25	FY26	FY27-31	TOTAL
WA61013	308	WATER LINE REPLACEMENT 2014	493,826	2,096,000	2,096,000	2,096,000	2,096,000	10,480,000	19,357,826
WA21025	294	WATER LINE - PACK 2 REHAB	645,000	2,100,000	1,050,000	0	0	0	3,795,000
WA21032	296	67TH AVE TRANS LINE IMPROV	1,107,000	0	0	0	0	0	1,107,000
WA22079	302	WATER LINE - BETHANY HOME 43RD TO 51	470,000	2,685,000	1,645,000	0	0	0	4,800,000
WA22071	298	WATER LINE - 59TH AVE GLENN TO NORTH	0	694,000	1,750,000	0	0	0	2,444,000
WA22072	299	WATER LINE - CAMELBACK 51 TO 59 AVE	0	0	0	0	0	5,000,000	5,000,000
WA22075	301	WATER LINE EXTENTION	0	500,000	0	150,000	150,000	700,000	1,500,000
WA61001	307	LARGE WATER VALVES	798,751	798,000	798,000	798,000	798,000	4,088,000	8,078,751
WA22070	297	WATER VALVE REPLACE - ARTERIAL	436,000	908,000	547,000	0	0	0	1,891,000
WA61047	313	METER VAULT REPLACEMENT	1,333,370	736,000	736,000	736,000	313,000	0	3,854,370
WA61049	315	DISTRIBUTION IMPROV - ZONE 2&3	219,026	1,260,000	1,050,000	0	0	0	2,529,026
WA61054	317	DISTRIBUTION SYSTEM IMPROV	1,161,517	500,000	500,000	500,000	500,000	0	3,161,517
WA61062	321	TRANSMISSION LINE & VALVE ASMT	343,105	0	0	0	0	0	343,105
WA61045	312	THUNDERBIRD RESERVOIR IMPROV	0	300,000	775,000	1,700,000	0	0	2,775,000
		Total	7,007,595	12,577,000	10,947,000	5,980,000	3,857,000	20,268,000	60,636,595

The blue indicates a change from the February 10, 2021 FY2022-2031 Capital Improvement Program report.



WATER LINE REHABILITATION PROGRAM

(page 308)

Project Number: CIPWA61013

Project Description:

Design and construct waterline replacement. Work is performed in phases based on condition assessments. [As segments are scheduled, budget will be separated into single project from this placeholder.](#)

Justification:

The average age of the water distribution system is over 35 years old. Rehabilitation or replacement is performed based on evaluation of the condition of the line segment to reduce risk of failure.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6020 – WATER	493,826	2,096,000	2,096,000	2,096,000	2,096,000	10,480,000	19,357,826



WATER LINE - **PACK 2 REHAB** (page 294)

Project Number: CIPWA21025

Project Description:

Design and construct waterline replacement. Work is performed in phases based on condition assessments. ~~Includes line replacement in Camelback Rd & Bethany Home Rd in conjunction with street replacement and future segment replacements.~~ **Includes segments in 54th Avenue, Maryland, Northern and Lamar.**

Justification:

The average age of the water distribution system is over 35 years old. Rehabilitation or replacement is performed based on evaluation of the condition of the line segment to reduce risk of failure.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6020 – WATER	645,000	2,100,000	1,050,000				3,795,000



67TH AVE ~~ZONE 3~~ TRANS LINE IMPROV (page 296)

Project Number: CIPWA21032

Project Description:

Design and install access points to multiple manholes in 67th Ave transmission line from PPWTP to Deer Valley Road. Project includes emergency repair parts and fittings.

Justification:

Need to assess the condition of large transmission line interior.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6020 – WATER	1,107,000						1,107,000



WATER LINE - BETHANY HOME 43RD TO 51ST (page 302)

Project Number: CIPWA22079

Project Description:

Design and construct new water line and associated appurtenances. Includes 6,100'-water line, 81-valves, 38-service lines, and 20-fire hydrants in Bethany Home Rd - 43 to 300' west of 51 Ave under Grand Ave.

Justification:

Street segments have been identified in the Arterial Reconstruction Program due to the low critical Pavement Condition Index (PCI) for replacement. Need to replace water line and valves 9-12 months ahead of construction start.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6020 – WATER	470,000	2,685,000	1,645,000				4,800,000



WATER LINE - 59TH AVE GLENN TO NORTHERN (page 298)

Project Number: CIPWA22071

Project Description:

Design and construct new water line and associated appurtenances. Includes 4,900'-water line, 48-valves, 16-service lines, and 5-fire hydrants in 59 Ave - Glenn to Northern Ave.

Justification:

Street segments have been identified in the Arterial Reconstruction Program due to the low critical Pavement Condition Index (PCI) for replacement. Need to replace water line and valves 9-12 months ahead of construction start.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6020 – WATER		694,000	1,750,000				2,444,000



WATER LINE - CAMELBACK 51ST TO 59TH (page 299)

Project Number: CIPWA22072

Project Description:

Design and construct new water line and associated appurtenances in Camelback Road from 51 Ave to 58 Ave.

Justification:

Street segments have been identified in the Arterial Reconstruction Program due to the low critical Pavement Condition Index (PCI) for replacement. Need to replace water line and valves 9-12 months ahead of construction start.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6020 – WATER						5,000,000	5,000,000



~~BALL PARK BLVD LOOP~~ **WATER LINE** **EXTENSION** (page 301)

Project Number: CIPWA22075

Project Description:

Water line extension and oversizing in the city to the east of 115th Avenue. Next project (FY23) is to extend Ballpark Blvd water line loop to Glendale Ave.

Justification:

Provide funding for oversizing and extension of water line. Funding included in 2019 Infrastructure Improvement Plan (IIP).

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6071 – 2019 WATER DIF		500,000		150,000	150,000	700,000	1,500,000



LARGE WATER VALVE REPLACEMENT PROGRAM (page 307)

Project Number: CIPWA61001

Project Description:

Replace 6" to 18" water main valves, related water lines and fire hydrants to maintain the operational reliability of the city's water distribution and fire suppression systems. Depending on size and condition, 150 to 200 valves are replaced annually.

Justification:

Age of main valves vary, with many of them over 25 years old. Replacement is required along with any attached fire hydrants and service lines to reduce the risk of equipment failure.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6020 – WATER	798,751	798,000	798,000	798,000	798,000	4,088,000	8,078,751



WATER VALVE REPLACEMENT - ARTERIAL

(page 297)

Project Number: CIPWA22070

Project Description:

Replace large water valves ahead of Arterial (streets) Reconstruction Program (ARP). Nine arterial segments are identified.

Justification:

Street segments have been identified in the Arterial Reconstruction Program due to the low critical Pavement Condition Index (PCI) for replacement. Need to replace valves 9-12 months ahead of construction start.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6020 – WATER	436,000	908,000	547,000				1,891,000



METER VAULT REPLACEMENT (page 313)

Project Number: CIPWA61047

Project Description:

Replace large in-ground meter vaults. Work will be contracted in phases.

Justification:

There are 206 vaults city wide. Over the last four years, more than 75 vaults have been replaced. The ages of meter vaults vary. Many of them are over 25 years old and need repair and upgrades to meet safety and maintenance standards.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6020 – WATER	1,333,370	736,000	736,000	736,000	313,000		3,854,370



DISTRIBUTION SYSTEM IMPROV- **ZONE 2 & 3**

(page 315)

Project Number: CIPWA61049

Project Description:

Make operating improvements between Zone 2 and Zone 3 water distribution system to increase service resiliency. Includes improvements to Hillcrest Ranch booster station (HRBS).

Justification:

This booster station was constructed in 1992 and is being upgraded to provide emergency water supply to northern portion of Glendale if there is an event of reduced production. Project adds redundancy to the system.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6020 – WATER	219,026	1,260,000	1,050,000				2,529,026



DISTRIBUTION SYSTEM IMPROV PROGRAM

(page 317)

Project Number: CIPWA61054

Project Description:

Design and construct water distribution system improvements city-wide. Includes Pressure reducing valves (PRV), water instrumentation, flow meters, sub-zone splitting.

Justification:

PRV and process control systems have reached the end of useful life. It is very important to ensure the PRVs are functional to move water between different pressure zones to meet water demand and manage water pressure.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6020 – WATER	1,161,517	500,000	500,000	500,000	500,000		3,161,517



TRANSMISSION LINE & VALVE ASSESSMENT

(page 321)

Project Number: CIPWA61062

Project Description:

Assess condition of water transmission line and valves. Assessment includes 48" to 108" diameter line.

Justification:

The 67th Ave transmission main was installed in 1987. This line conveys water from Pyramid Peak WTP to Glendale water customers in the northern portions of the city and the City of Peoria Turnout and needs the condition to be assessed.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6020 – WATER	343,105						343,105



THUNDERBIRD RESERVOIR (page 312)

Project Number: CIPWA61045

Project Description:

Design and construct improvements to increase water quality and water delivery during peak demand and construct roof replacement.

Justification:

Thunderbird reservoir 12 million gallon and was installed in 1985. This reservoir plays an important role in meeting peak hourly water demand within the central portion of Glendale. The liner was replaced in 2017. The roof is the next component to be evaluated.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6020 – WATER		300,000	775,000	1,700,000			2,775,000



RECLAMATION FACILITIES

PROJECT NUMBER	PAGE	PROJECT TITLE	FY22	FY23	FY24	FY25	FY26	FY27-31	TOTAL
WW60016	274	WEST AREA WRF IMPROV 2017	11,259,695	10,000,000	6,105,000	0	0	0	27,364,695
WW21026	267	WEST AREA WRF IMPROV 2026	0	0	0	0	1,800,000	10,200,000	12,000,000
WW60007	273	ARROWHEAD WRF IMPROV 2017	319,657	0	0	0	0	0	319,657
WW21027	268	ARROWHEAD WRF IMPROV 2025	0	0	0	2,200,000	2,000,000	8,000,000	12,200,000
WW63010	277	91ST AVENUE WWTP IMPROV	4,091,054	3,050,000	3,110,000	3,410,000	3,350,000	15,000,000	32,011,054
WW63031	281	WASTEWATER CAPITAL EQUIP	297,098	250,000	250,000	250,000	250,000	1,250,000	2,547,098
		Total	15,967,504	13,300,000	9,465,000	5,860,000	7,400,000	34,450,000	86,442,504

The blue indicates a change from the February 10, 2021 [FY2022-2031 Capital Improvement Program report](#).



WEST AREA WRF IMPROVEMENTS 2017

(page 274)

Project Number: CIPWW60016

Project Description:

Study, design and construct improvements to process areas. The project has three phases. GMP 1: fine screens, ultraviolet (UV) system. GMP 2: raw sewage pump station, sedimentation basin and other plant improvements. GMP 2A: clarifiers.

Justification:

West Area was built in 2000 and processes 2.7 billion gallons of wastewater annually. Several of the processes were replaced over the last several years. A condition assessment will be performed first on the components not rehab in 2017 project.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6030 -SEWER	11,259,695	10,000,000	6,105,000				27,364,695



WEST AREA WRF IMPROVEMENTS 2026

(page 267)

Project Number: CIPWW21026

Project Description:

Study, design and construct phase III improvements to process areas.

Justification:

West Area was built in 2000 and processes 2.7 billion gallons of wastewater annually. Several of the processes were replaced over the last several years. A condition assessment will be performed first on the components not rehab in 2017 project.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6030 -SEWER					1,800,000	10,200,000	12,000,000



ARROWHEAD WRF IMPROVEMENTS 2017

(page 273)

Project Number: CIPWW60007

Project Description:

Design and construct replacement filters, headworks, odor control system, clarifier, fiber optic, other civil, mechanical, electrical, and PLC improvements.

Justification:

Arrowhead was built in 1985 and processes 1.5 billion gallons of wastewater annually. The systems being replaced are at the end of the life expectancy and are in poor condition. Improvements to be completed in 2020.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6030 -SEWER	319,657						319,657



ARROWHEAD WRF IMPROVEMENTS 2025

(page 268)

Project Number: CIPWW21027

Project Description:

Design and construct Effluent Reuse Distribution System (ERDS) structure, outlet valves, blowers, and other process rehabilitation and improvements.

Justification:

Arrowhead was built in 1985 and processes 1.5 billion gallons of wastewater annually. Several of the processes were replaced over the last three years. A condition assessment will be performed first on the components not rehab in 2017 project.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6030 -SEWER				2,200,000	2,000,000	8,000,000	12,200,000



91ST AVE WWTP IMPROVEMENTS (page 277)

Project Number: CIPWW63010

Project Description:

Improvements at the 91st Ave WWTP of which Glendale is part owner. Includes GL03 metering station rehabilitation with EPCOR sharing in the cost of this project.

Justification:

Glendale is one of five partner-cities that own the 91st Avenue Wastewater Treatment Plant. Rehabilitation and improvements are on-going. Contribution is based on ownership equity and is mandatory. The City of Phoenix performs the work.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6030 -SEWER	4,091,054	3,050,000	3,110,000	3,410,000	3,350,000	15,000,000	32,011,054



WASTEWATER CAPITAL EQUIPMENT

(page 281)

Project Number: CIPWW63031

Project Description:

Replacement of capital equipment at wastewater facilities. Includes pumps, motors, PLC and VFD.

Justification:

As equipment at the wastewater treatment plants reach the end of service-life, it is replaced. It is critical to ensure city's treatment facilities are in good operational condition to meet demands and regulatory requirements.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6030 -SEWER	297,098	250,000	250,000	250,000	250,000	1,250,000	2,547,098



WATER TREATMENT PLANTS

PROJECT NUMBER	PAGE	PROJECT TITLE	FY22	FY23	FY24	FY25	FY26	FY27-31	TOTAL
WA61043	311	PYRAMID PEAK IMPROV 2017	8,090,795	0	0	0	0	0	8,090,795
WA61058	319	PYRAMID PEAK WTP EXPANSION	17,262,909	0	0	0	0	0	17,262,909
WA21023	292	PYRAMID PEAK IMPROV 2022	300,000	2,080,000	0	2,080,000	2,500,000	16,100,000	23,060,000
WA61024	310	CHOLLA WTP IMPROV 2014	7,738,522	0	0	0	0	0	7,738,522
WA21024	293	CHOLLA WTP IMPROV 2023	0	780,000	3,280,000	2,500,000	4,000,000	19,600,000	30,160,000
WA61055	318	OASIS WTP IMPROV 2017	627,198	0	0	0	0	0	627,198
WA21022	291	OASIS WTP IMPROV 2021	1,050,201	750,000	550,000	3,220,000	1,100,000	16,000,000	22,670,201
WA19020	288	SCADA REPLACEMENT STUDY	200,000	500,000	800,000	0	0	0	1,500,000
WA60015	303	ASSET MANGEMENT PROGRAM	128,995	0	0	0	0	0	128,995
WA22074	300	DATA MANAGEMENT	200,000	0	0	0	0	0	200,000
WA61061	320	WATER CAPITAL EQUIPMENT	625,557	500,000	500,000	500,000	500,000	0	2,625,557
		Total	36,224,177	4,610,000	5,130,000	8,300,000	8,100,000	51,700,000	114,064,177

The blue indicates a change from the February 10, 2021 [FY2022-2031 Capital Improvement Program report](#).



PYRAMID PEAK IMPROVEMENTS 2017

(page 311)

Project Number: CIPWA61043

Project Description:

Study, design, and construct process improvements to the water supply system, wash water system, chemical feed system, electrical system, and HVAC systems. City of Peoria shares in 23% of the costs.

Justification:

Pyramid is a critical water treatment plant. The plant provides 13 billion gallons of water annually to the northern portion of Glendale. Rehabilitation reduces risk of equipment failure, loss of service to citizens and implements new efficiencies.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6020 – WATER	8,090,795						8,090,795



PYRAMID PEAK WTP EXPANSION

(page 319)

Project Number: CIPWA61058

Project Description:

Design and construct of 15 MGD expansion to increase capacity of plant for City of Peoria future growth. City of Peoria to fund 23% of resiliency improvements and 100% of expansion.

Justification:

This project was requested and funded by the City of Peoria to meet Peoria's projected water demand in accordance with the Intergovernmental Agreement (IGA) between the Cities of Glendale and Peoria.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6020 – WATER	17,262,909						17,262,909



PYRAMID PEAK IMPROVEMENTS 2022

(page 292)

Project Number: CIPWA21023

Project Description:

Study, design, and construct process improvements. To include the processes: gate valves, sedimentary basins, lagoon pumps, chlorine generator, and other systems.

Justification:

Pyramid is a critical water treatment plant. The plant provides 13 billion gallons of water annually to the northern portion of Glendale. Rehabilitation reduces risk of equipment failure, loss of service to citizens and implements new efficiencies.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6020 – WATER	300,000	2,080,000		2,080,000	2,500,000	16,100,000	23,060,000



CHOLLA WTP IMPROVEMENTS 2014

(page 310)

Project Number: CIPWA61024

Project Description:

Study, design, and construct improvements to storage reservoirs, chemical feed system, site lighting, electrical feed system, SCADA controls, booster stations and admin building improvements.

Justification:

Cholla is a critical water treatment plant. This plant provides 4 billion gallons of water annually to the central portion of Glendale. Rehabilitation reduces risk of equipment failure, loss of service to citizens and implements new efficiencies.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6020 – WATER	7,738,522						7,738,522



CHOLLA WTP IMPROVEMENTS 2023

(page 293)

Project Number: CIPWA21024

Project Description:

Study, design, and construct process improvements. To include the processes: backwash pumps, centrifuge & solids handling, filters & floc drives, chlorine generator, and other systems.

Justification:

Cholla is a critical water treatment plant. This plant provides 4 billion gallons of water annually to the central portion of Glendale. Rehabilitation reduces risk of equipment failure, loss of service to citizens and implements new efficiencies.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6020 – WATER		780,000	3,280,000	2,500,000	4,000,000	19,600,000	30,160,000



OASIS WTP IMPROVEMENTS 2017

(page 318)

Project Number: CIPWA61055

Project Description:

Evaluate, design, and construct improvements to lagoons, on-site laboratory, and other processes.

Justification:

Oasis WTP was built in 2007 and expanded in 2012. Oasis provides 1.7 billion gallons of water to the southern and western portions of Glendale. After a condition assessment, several systems need rehabilitation.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6020 – WATER	627,198						627,198



OASIS WTP IMPROVEMENTS 2021

(page 291)

Project Number: CIPWA21022

Project Description:

Evaluate, design, and construct improvements brine ponds, chlorine generator, IX plant conveyance, and other processes.

Justification:

Oasis WTP was built in 2007 and expanded in 2012. Oasis provides 1.7 billion gallons of water to the southern and western portions of Glendale. After a condition assessment, several systems need rehabilitation.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6020 – WATER	1,050,201	750,000	550,000	3,220,000	1,100,000	16,000,000	22,670,201



SCADA REPLACEMENT STUDY (page 288)

Project Number: CIPWA19020

Project Description:

Study alternative information and communication systems to develop a plan to upgrade equipment of the Supervisory Control and Data Acquisition (SCADA) system to new technologies. New project will be added for equipment based on recommendations.

Justification:

SCADA controls the treatment processes within the plants and distribution systems. System components are at end of service life. New technologies will reduce risk of failure at critical measurement points and increase resiliency of the systems.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6020 – WATER	200,000	500,000	800,000				1,500,000



ASSET MANAGEMENT PROGRAM (page 303)

Project Number: CIPWA60015

Project Description:

Evaluate and replace asset management system enterprise application for additional functionalities and efficiencies.

Justification:

Establishing an asset management system and replacing work order software will provide governance of how we maintain and replace assets for sustainability and provide real time data for prioritizing CIP Improvements.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6020 – WATER	128,995						128,995



DATA MANAGEMENT (page 300)

Project Number: CIPWA22074

Project Description:

Assess and implement new data management application to manage all department data base apps. Develop dashboard bench-marks.

Justification:

Department data bases are fragmented, out of date, and do not provide centralized management of results. New technology will "mine" all data bases and provide real-time results to manage treatment operations more effective and efficiently.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6020 – WATER	200,000						200,000



WATER CAPITAL EQUIPMENT (page 320)

Project Number: CIPWA61061

Project Description:

Replacement of capital equipment at water facilities. Includes Programmable Logic Controllers (PLC), Variable Frequency Drives (VFD), miscellaneous pumps and motors.

Justification:

As equipment at the water treatment plants reaches the end of service-life, it is replaced. It is critical to ensure city's water treatment facilities are in good operational condition to meet water demands and regulatory requirements.

Funding Source	FY22	FY23	FY24	FY25	FY26	FY27-31	Total
6020 – WATER	625,557	500,000	500,000	500,000	500,000		2,625,557



Rates Study

In order to maintain financial sustainability, the Water and Wastewater Utility is in the process of reviewing its rate requirements:

- Hired rate consultant to review financial plan & options (Jan)
- Will present rate study results to Citizen Utility Advisory Commission (May)
- Will conduct public outreach (June & July)
- Will present rate options for Council to consider (May & August)



QUESTIONS?



Budget Calendar

Item	Date
Budget Overview / Revenues / Five-Year Financial Forecasts	January 12, 2021
CIP Council Workshop #1 – G. O. Bond Funded CIP Projects (Streets, Flood Control, Libraries, Public Safety)	February 2, 2021
CIP Council Workshop #2 – G. O. Bond Funded CIP Projects (Parks, Cultural Facilities, Open Space, Gen.Govt.)	February 16, 2021
CIP Council Workshop #3 – Pay-As-You-Go, Transportation Sales Tax, HURF, DIF, and Grant Funded CIP Projects	March 2, 2021
CIP Council Workshop #4 – Enterprise Funded CIP Projects (Landfill, Solid Waste, Water, Wastewater)	March 16, 2021
<i>CIP Council Workshop #5 – Follow Up Items / DRAFT CIP</i>	<i>March 30, 2021</i>
Materials for All Day Budget Workshops	March 26, 2021
Council Workshop (All Day) – FY22 Operating Budget	April 6, 2021
Council Workshop (All Day) – FY22 Operating Budget	April 8, 2021
Updated DRAFT CIP Binder to Council	April 12, 2021
Final Budget Workshop – Tentative Draft Budget & 10 Year CIP Program	April 20, 2021
Voting Meeting – Tentative Budget Adoption	May 11, 2021
Voting Meeting – Final Budget Adoption / Property Tax Levy	June 8, 2021
Voting Meeting – Property Tax Adoption	June 22, 2021