# Capital Improvements Program 2018-2024

City of Independence, Missouri





## 2018-2024 Capital Improvements Program



## City of Independence, Missouri March 2018

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Capital Improvements Program

#### **TABLE OF CONTENTS**

•	Introduction	Page 2
•	Energy	Pages 3-7
•	Parks, Recreation and Tourism	Pages 9-16
•	Sanitary Sewer	Pages 17-20
•	Streets & Sidewalks	Pages 21-24
•	Storm Water	Pages 25-28
•	Water	Pages 29-34
•	2018-2019 Project Map	Page 35
•	Project Funding Source Spreadsheet	Pages 37-41

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#### Capital Improvements Program 2018-2024

The Capital Improvements Program (CIP) is one of the primary programs that implements the long-range plan for city infrastructure development. Article 12, Section 2 of the City Charter lists one of the Planning Commission's duties as preparing and delivering to the City Manager a report of recommended public improvements by April 1st of each fiscal year. The Planning Commission's role in the CIP process is to provide a recommendation of public improvements to the City Manager that further implements the Vision, Values and Priorities of the community.

The intention of the report is to inform the public of plans for the future development or redevelopment of city infrastructure by identifying trends, recognizing issues, and providing an opportunity for discussion by the Planning Commission, the public and department staff regarding such projects.

The CIP sets forth proposed projects for constructing, maintaining, upgrading and replacing the City's physical infrastructure necessary for continued operations and providing City services during the next six fiscal years beginning in July 2018 through June 2024.

CIP infrastructure projects address one, or more of the three focus areas of infrastructure planning:

- 1. Future Needs—focus on new areas of development in Independence
- 2. Maintenance—focus on existing, stable areas of Independence
- 3. Revitalization—focus on existing, though less stable areas of Independence

The CIP is structured to include different topics including Energy, Sanitary Sewer, Streets & Sidewalks, Storm Water, and Water. The CIP program identifies 40 projects for fiscal year 2018-19 with descriptions and photos. The last segment lists 118 projects for the remaining five years.

Projects listed in the CIP report are not necessarily listed in priority order and are not be construed as a promise to any person or group that it will be completed within a specific time frame. The report is a planning document and not intended to be financially or operationally binding. Opportunities may emerge depending on constantly changing circumstances that will accelerate or delay the completion of any project.

Introduction



#### **Energy**

#### Vision:

To provide reliable and affordable electric energy services in a customer-oriented and environmentally-responsible manner, while participating organizationally in the growth and enhancement of the community.

#### Goals:

To provide the necessary improvements to existing facilities and future additions to ensure efficient, environmentally safe and the most economical operation of the electric energy system.

#### • Priority Projects:

City's Strategic Plan Categories—All Priority Projects support the goal of Financial Sustainability.

CIP Goals—All Priority Projects respond to CIP-Goal 3 by meeting the safety and welfare needs of residents and businesses by effectively administering property maintenance compliance, infrastructure construction and repairs, and public safety.

- Blue Valley 3 Turbine/Generator Major Inspection—Contingent on Master Plan Results
- H6 Combustion Turbine Major Inspection/Maintenance—Contingent on Master Plan Results.
- ♦ Advanced Metering Infrastructure (AMI)—Pending City Council Approval
- ⋄ Fiber Optic Expansion to Independence School District
- ♦ Substation K Switchgear Replacement
- Missouri City Divestiture (Ownership transfer complete, dismantling on-going)
- Primary System Operations Center Upgrade



### Blue Valley 3 Turbine/Generator Major Inspection

Major Turbine/Generator inspections are required based on time and usage that has been experienced since the last overhaul. The BV-3 Turbine/Generator [21500 E. Truman Rd] is due for this inspection. This project is contingent on Master Plan recommendations that support this activity.



### H6 Combustion Turbine Major Inspection/Maintenance

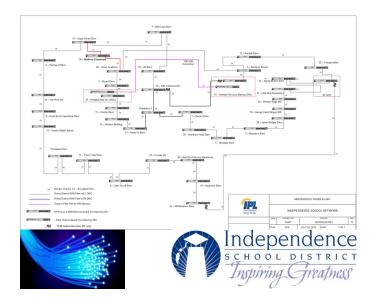
Similar to BV-3, this Major Inspection is required due to the elapsed time and operating hours accumulated on the H-6 Combustion Turbine since the last major overhaul [located at Substation H; M-291 and Salisbury Rd.]. This project is contingent on Master Plan recommendations that support this activity.



### AMI-Advanced Metering Infrastructure

Installation of system-wide automated, digital smart meters including the associated telecommunication network and data management system. This is a joint effort with the Water and Water Pollution Control Divisions to replace electric and water meters. These meters will allow for staff reallocation by eliminating the need for field personnel to visually record usage, allow automated turn on/turn off, offer a wide array of billing and rate alternatives, automate collection of outage information, and provide for future technology changes in the industry. This Project is contingent upon approval by the City Council.

2018-2019 Energy



### Fiber Optic System Upgrade to Independence School District

Project will enhance the Fiber Optic Service with new network equipment, increasing bandwidth speeds to 10 gigabits, bringing current and future network advantages, increasing capacity, improved reliability, streamlining operations, and replacing end of life equipment for the school district.



### Substation K Transformers and Switchgear Replacement

The age and condition of this Substation's Switchgear dictate the need for replacement [39<sup>th</sup> and Arrowhead].



### Missouri City Decommissioning & Ownership Transfer

Ownership transfer is complete. For FYE 2019, this project provides removal of all IPL facilities on the site, remediation of known environmental concerns, and provides Liability insurance against future Environmental issues. Site is not located within the City Limits.

2018-2019 Energy



#### **Operations Center Upgrade**

Primary Operations Center Upgrade [21500 E. Truman Road]. The System Operations Center monitors the Transmission, Substation, Generation assets and Distribution Systems on a real-time basis as well as monitoring Transmission ties with IPL's interconnected Utilities. The Operations Center was installed over 25 years ago, since then the NERC Standards have been implemented and IPL joined the SPP Integrated Market, which places more emphasis on tracking real-time system parameters, situational awareness as well as physical security of key facilities.

2018-2019 Energy

Project Name: Substation E Switchgear replacement

Location: Western Independence

Project Name: Blue Valley Units 1 and 2 major turbine inspections and overhauls

Location: Eastern Independence

2019-2024 Energy





## Parks Recreation and Tourism

#### Vision:

To provide quality leisure, recreational and educational opportunities that elevate the quality of life for residents and enhance visitor experience.

#### Goals:

To adhere to the Parks Master Plan key objective of "taking care of what we have" by providing the necessary improvements to existing spaces and facilities; and, to plan for future additions to ensure that the structures, grounds and amenities effectively and efficiently support the delivery of quality parks, recreation and tourism related programming and services.

#### Priority Projects:

- ♦ Beckett Park replace site amenities and renovate the playground
- ♦ Fairmount Park renovate the playground and overlay the existing trail
- George Owens Nature Park install ADA parking loop, repair Bullhead Lake overflow, replace park shelter
- ♦ Glendale Park replace playgrounds and overlay the existing trail
- ♦ McCoy Park renovate the sprayground
- Santa Fe Trail Park renovate tennis courts
- ♦ Sycamore Hills Park resurface trail, renovate playground, install new site amenities
- ♦ Adventure Oasis Water Park repair pool tanks
- ♦ Waterfall Park resurface existing trails and install accessible dock



### Becket Park Playground and Site Amenities

The current condition of the playground located at Becket Park necessitates repairs to the structure and replacement of several play elements associated with the playground. In addition, many of the site amenities in the park will be replaced; trash receptacles, benches and picnic tables.

This project has been identified as a need in the Parks and Recreation Master Plan.



#### **Fairmount Park**

The current condition of the playground located at Fairmount Park necessitates repairs to the structure and replacement of several play elements associated with the playground. In addition, the loop trail within the park and the connection to Davis Park is in need of repair and will receive an asphalt overlay.

These projects are identified as a need in the Parks and Recreation Trails Master Plan.



#### **George Owens Nature Park**

Several repair and replacement projects are slated for George Owens Nature Park.

The overflow system associated with Lake Loraine must be rebuilt. The lake was drained this past winter so that work can begin as soon as possible next FY.

A turn-around circle and several ADA parking spots are planned to be constructed near the lakes and a new picnic shelter is scheduled to be purchased and installed to replace the old shelter that was recently removed.

2018-2019



#### **Glendale Park**

The current plan calls for the 5-and-older playground section located at Glendale Park to be removed and replaced with a new, age appropriate play structure. In addition, the loop trail within the park is in need of repair and will receive an asphalt overlay.

These projects are identified as a need in the Parks and Recreation Trails Master Plan.



#### **McCoy Park Sprayground Renovation**

As a continuation of the recent work done in McCoy Park, it is time to renovate the sprayground located in the park. This project will feature new spray/play elements that are consistent with the Three Trails theme established by both inclusive playgrounds recently built at McCoy.

In addition, several components of the filtration system are due for replacement to ensure proper and safe operation well into the future.

This project has been identified as a need in the Parks and Recreation Master Plan.



#### Santa Fe Trail Park

As part of the routine maintenance and repair schedule associated with asphalt tennis courts in our system, six of the twelve tennis courts at Santa Fe Park are scheduled to be repaired, sealed and color coated next FY. The remaining six will receive the same treatment in the following fiscal year.

This project has been identified as a need in the Parks and Recreation Master Plan.

2018-2019



#### **Sycamore Hills Park**

Several repair and replacement projects are slated for Sycamore Hills Park.

The current condition of the playground located at this park necessitates repairs to the structure and replacement of several play elements associated with the playground. In addition, many of the site amenities in the park will be replaced (trash receptacles, benches and picnic tables) and the loop trail within the park will receive an asphalt overlay.

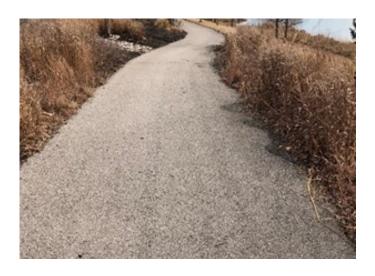
This project has been identified as a need in the Parks and Recreation Master Plan.



#### **Adventure Oasis Water Park**

As part of the routine maintenance and repair schedule associated with pool tanks at the water park, the lazy river was sandblasted, caulked, and painted in the spring of 2018. The remaining tanks are slated to receive the same treatment in the fall of 2018.

This project has been identified as a need in the Parks and Recreation Master Plan.



#### Waterfall Park

The loop trail within the Waterfall Park site will be repaired and capped with a new layer of asphalt next FY.

In addition, an additional dock or short boardwalk style pier suitable for fishing is being planned to increase accessibility and usability of the lake. If successful, similar structures will be added in future years.

This project has been identified as a need in the Parks and Recreation Master Plan.

2018-2019

Project Name: Beckett Park Loop Trail

Location: 2701 S. Cherokee St.

Project Name: Benton Park Backstop Replacement

Location: 707 S. Crane St.

Project Name: Benton Park Infield Renovation

Location: 707 S. Crane St.

Project Name: Benton Park Trail Overlay

Location: 707 S. Crane St.

Project Name: Benton Park Fence Line Replacement

Location: 707 S. Crane St.

Project Name: Benton Park Playground Replacement

Location: 707 S. Crane St.

Project Name: Blackburn Park Tennis Courts Overlay

Location: 17302 E. RD Mize Rd.

Project Name: Blackburn Park Connecting Trail

Location: 17302 E. RD Mize Rd.

Project Name: Blackburn Park Ballfield Renovation

Location: 17302 E. RD Mize Rd.

Project Name: Blackburn Park Site Amenities Replacement

Location: 17302 E. RD Mize Rd.

Project Name: Blackburn Park Site Backstop Renovation

Location: 17302 E. RD Mize Rd.

Project Name: Bund-Jack Park Property Fence Line Replacement

Location: 1001 N. Jackson Dr.

Project Name: Bund-Jack Park Amenities Replacement

Location: 1001 N. Jackson Dr.

Project Name: Bund-Jack Park Playground Replacement

Location: 1001 N. Jackson Dr.

Project Name: Bundschu Park Trail Resurfacing

Location: 11400 E. 9<sup>th</sup> St. S

Project Name: Bundschu Park Parking Lot Overlay

Location: 11400 E. 9<sup>th</sup> St. S

2019-2024

Project Name: Carriage Hills Park Playground Replacement

Location: 16841 E. 41st St. S

Project Name: Carriage Hills Park Site Amenities

Location: 16841 E. 41st St. S

Project Name: Carriage Hills Park Trail Resurfacing

Location: 16841 E. 41st St. S

Project Name: Choplin Hood Park 24 Hwy Access Development Parking

Location: 15919 E. Cogan Ln.

Project Name: Choplin Hood Park Shelter

Location: 15919 E. Cogan Ln.

Project Name: Choplin Hood Park Playground Replacement

Location: 15919 E. Cogan Ln

Project Name: Choplin Hood Park Trails

Location: 15919 E. Cogan Ln

Project Name: Choplin Hood Park Ballfield Renovation

Location: 15919 E. Cogan Ln

Project Name: Choplin Hood Park Site Amenities Replacement

Location: 15919 E. Cogan Ln

Project Name: Choplin Hood Park Backstop Renovation

Location: 15919 E. Cogan Ln

Project Name: Choplin Hood Park Soccer Practice Area Formalization

Location: 15919 E. Cogan Ln

Project Name: Country Club Park Trail Resurface

Location: 2930 S. Norton Ave.

Project Name: Country Club Park Playground Replacement

Location: 2930 S. Norton Ave.

Project Name: Crysler Stadium Parking Lot Overlay

Location: 2301 S. Crysler Ave.

Project Name: Dickinson Park Playground Renovation

Location: 1700 Dickinson Rd.

Project Name: Dickinson Park Parking Lot Overlay

Location: 1700 Dickinson Rd.

Project Name: Fairmount Park Playground Parking Installation

Location: 300 N. Home Ave.

2019-2024

Project Name: George Owens Nature Park Trail Walking Bridges Replacement

Location: 1601 S. Speck Rd.

Project Name: McCoy Park Parking Lot Overlay

Location: 800 N. Bess Truman Pkwy.

Project Name: McCoy Park Trail Overlay Location: 800 N. Bess Truman Pkwy.

Project Name: McCoy Park Tennis Court Resurfacing

Location: 800 N. Bess Truman Pkwy.

Project Name: Mill Creek Park Resurface Existing Parking Lots

Location: 1717 N. River Blvd.

Project Name: Mill Creek Park Playgrounds Renovation

Location: 1717 N. River Blvd.

Project Name: Mill Creek Park Trail Overlay

Location: 1717 N. River Blvd.

Project Name: Mill Creek Park Tennis Courts Resurfacing

Location: 1717 N. River Blvd.

Project Name: Phil Roberts Park Parking Lot Resurfacing

Location: 3250 S. Blue Ridge Blvd.

Project Name: Phil Roberts Park Trail Resurfacing

Location: 3250 S. Blue Ridge Blvd.

Project Name: Rotary Park Trail Overlay

Location: 10615 E. 24th St. S

Project Name: Rotary Park Playground Renovation

Location: 10615 E. 24<sup>th</sup> St. S

Project Name: Rotary Park Sprayground Renovation

Location: 10615 E. 24th St. S

Project Name: Santa Fe Park Tennis Court Renovations

Location: 2731 S. Santa Fe Rd.

Project Name: Santa Fe Park Playground Replacement

Location: 2731 S. Santa Fe Rd.

Project Name: Santa Fe Park Ballfield Renovation

Location: 2731 S. Santa Fe Rd.

Project Name: Santa Fe Park Trails Overlay/Expansion

Location: 2731 S. Santa Fe Rd.

2019-2024

Project Name: Santa Fe Park Parking Lot & Roads Overlay

Location: 2731 S. Santa Fe Rd.

Project Name: St. Clair Park Amenities Replacement

Location: 8851 E. US 24 Hwy.

Project Name: St. Clair Park Access Trail Resurfacing

Location: 8851 E. US 24 Hwy

Project Name: Young Park Basketball Court Overlay

Location: 405 N. Dodgion Ave.

Project Name: Young Park Playground Renovation

Location: 405 N. Dodgion Ave.

Project Name: Young Park Site Amenities

Location: 405 N. Dodgion Ave.

Project Name: Independence Athletic Complex Trails Overlay

Location: 17800 E. Salisbury Rd.

Project Name: Clothier Park Trail Resurfacing Location: 17201 E. Medical Center Pkwy

Project Name: Hill Park Trails Playground Renovation

Location: 2201 S. Maywood Ave.

Project Name: Hill Park Trails Parking Lot Resurfacing

Location: 2201 S. Maywood Ave.

Project Name: Hill Park Trails Loop Trail Resurfacing

Location: 2201 S. Maywood Ave.

Project Name: Hill Park Selective Site Clearing

Location: 2201 S. Maywood Ave.

Project Name: Waterfall Park Parking Lot Resurfacing

Location: 4501 S. Bass Pro Dr.



### Sanitary Sewer

#### Vision:

To deliver high-quality, reliable sanitary sewer and wastewater treatment services to the customers of the City of Independence.

#### Goal:

The Water Pollution Control Department's Sanitary Sewer Management goal is to promptly, professionally and properly address customer's sewer issues; to protect public health; environmental sustainability; and comply with state and federal regulatory requirements.

### Priority Projects:

- ♦ Rock Creek Treatment Plant Boiler Replacement
- ♦ Rock Creek Effluent Flowmenter/Sampling Structure
- Sugar Creek Pump Station Platform, Stairs, and Railing
- ♦ Arrowhead Project
- ♦ Sermon Center Project
- Sanitary Sewer Neighborhood Projects



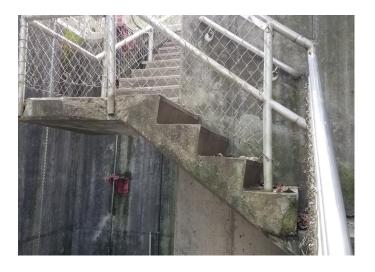
### Rock Creek Treatment Plant Boiler Replacement

This project replaces the existing, 40-year old heat boiler with an energy efficient heating system for the treatment plant, laboratory, and administrative offices.



#### Rock Creek Effluent Flowmenter/ Sampling Structure

The existing Parshall flume is undersized for the increased plant capacity and has created a bottleneck. It was removed to allow for proper flow. The plant's National Pollutant Discharge Elimination System (NPDES) permit requires accurate effluent flow. This project also presents the opportunity to alter how disinfection is operated, provides a checkpoint for influent flow, and provides an effluent discharge value for use in calculations and operations.



### Sugar Creek Pump Station Platform, Stairs, and Railing

This project provides for the repair and replacement of the concrete stairs (both above and below grade) at the Sugar Creek pump station. The current stairs have deteriorated to a point where the railing along the stairs and platform is no longer encased in concrete and poses a safety hazard to staff.

2018-2019

Sanitary Sewer



#### Arrowhead Project

This project was designed in fiscal year 2017-2018 and will be constructed in fiscal year 2018-2019. An embankment on the east side of the Arrowhead Shopping Center is sloughing off causing a sanitary sewer main to be crushed. This project will relocate the main outside of the embankment.



#### Sermon Center Project

This design project is being done in conjunction with concrete/paving work being done at the Sermon Center. Sanitary and storm facilities require work that will need to be completed prior to sidewalk replacement. Design work to be completed in 2018.



### Sanitary Sewer Neighborhood Projects

This project consists of three locations and replaces deteriorating sanitary sewer main. This project was designed in 2017-2018 and will be constructed in 2018-2019. Project locations include the following areas:

- Truman Road from Winner to Brookside
- Moore & Spring
- Crackerneck Road from Trail Ridge to Reynolds

2018-2019

Sanitary Sewer

Project Name: Rock Creek Pump Station Raw Pumps & Motors Replacement

Location: 400 N Kentucky Road in the Rock Creek Watershed

Project Name: Rock Creek Treatment Facilities Wet Air Oxidation Grinder Replacement

Location: 9600 Norledge Ave. in the Rock Creek Watershed

Project Name: Sugar Creek Pump Station Elevator Replacement Location: 10600 Hayward in the Rock Creek Watershed

Project Name: Sugar Creek Pump Station Automatic Bar Screen Replacement

Location: 10600 Hayward in the Rock Creek Watershed

Project Name: Rock Creek Treatment Facilities Dissolved Air Flotation Tank Replacement

Location: 9600 Norledge Ave. in the Rock Creek Watershed

Project Name: Rock Creek Treatment Facilities Primary Clarifier Bull Gears Replacement

Location: 9600 Norledge Ave. in the Rock Creek Watershed

Project Name: Trenchless Technology

Location: City-wide locations throughout Independence

Project Name: Sanitary Sewer Evaluation Surveys

Location: City-wide locations throughout Independence

Project Name: Arlington Neighborhood Sanitary Sewer Improvement Project Location: Brookside Avenue from East 14th Street to East 17th Street

Project Name: 25th Street Improvements

Location: Near the intersection of 25th and Scott Street

Project Name: Fairmount Highlands Neighborhood Improvement Project

Location: 9th to 11th Street and Vermont to Scott Street

Project Name: Rock Creek Treatment Plant – Biosolids Handling Location: 9600 Norledge Ave. in the Rock Creek Watershed

Project Name: 24th & Scott Improvements

Location: Near the intersection of 24th and Scott Street



## Streets & Sidewalks

#### Vision:

To provide the citizens of Independence with a safe and efficient transportation system.

#### Goals:

- ♦ Build smooth, long lasting streets
- ♦ Projects that reduce travel delays
- ♦ Improve traffic safety
- ♦ Integrate a complete streets system for multiple modes of travel

### Priority Projects:

- ◊ Noland & Fair Intersection Improvements
- ♦ Englewood Streetscape Phase III
- ♦ 2018 Intersection Improvements
- ♦ Street Overlay Program
- ♦ Sidewalks to Schools and Parks



### Noland & Fair Intersection Improvements

The project will replace decades old signal equipment, improve left-turn lane geometry, and add dedicated left-turn signals on Noland Road at the intersection. Actuated countdown pedestrian signalization will be added to the four corners of the intersection as there are currently none. The project will add concrete pad waiting area for the two transit stops (northbound and southbound on Noland) at the intersection. This project supports CIP Goals 2, 3 and 4 with improved signals and equipment and the support of transit infrastructure.



#### Englewood Streetscape Phase III

This project is the continuation of improvements to the Englewood Arts District. The project is on the south side of Winner from Sterling to Appleton and will construct wider ADA-compliant sidewalks that improve access for bus riders utilizing the two stops in this area. Walkability and visual aesthetics will be greatly increased. The sidewalks will be similar to those on the north side of Winner Road built in Phase II. This project supports CIP Goals 3 and 4 with the enhancement to pedestrian safety and transit use.



#### 2018 Intersection Improvements

This project will be a continuation of the 2017 Intersection Improvements Project that targets intersections with an existing concrete surface for reconstruction and repaving with high strength asphalt at two locations in the city. The Intersection Improvements Project supports CIP Goals 2 and 3 by maintaining infrastructure and contributing to neighborhood revitalization efforts.

2018-2019

Streets and Sidewalks



#### Street Overlay Program

The annual Asphalt Overlay Program consists of milling and resurfacing approximately 40 miles of streets throughout the city. The actual number of miles depends on the estimated cost and projected revenue available for each budget year. Street sections are inspected throughout the entire city each year and are placed on the list of locations to be resurfaced according to the condition of the pavement at the time of inspection. The goal of this program is to provide smoother streets for travel and to reduce the required maintenance costs. The contract is funded through the Street Sales Tax Program. The Street Overlay Program supports CIP Goal 2 by maintaining existing infrastructure.



#### Sidewalks to Schools and Parks

This project is an ongoing program to construct new sidewalks near schools and parks and is funded through the Street Sales Tax Program. Two Sidewalks to Parks projects are in progress; the first includes locations near Glendale Park. Rotary Park, Fairmount Park and Waterfall Park. The second Sidewalks to Parks project is sidewalk improvements and construction near and around the Vaile Mansion. The next Sidewalks to Schools projects are at Korte Elementary School and Three Trails School, and a second Phase for Nativity School. The Sidewalks Program addresses CIP Goals 2 and 3 by maintaining infrastructure and contributing to neighborhood revitalization efforts.

2018-2019

Streets and Sidewalks

Project Name: Truman & Winner Road Project

Location: Truman & Winner Roads in western Independence

Project Name: Bundschu Road

Location: E. Susquehanna Drive to N. Jackson Drive

Project Name: 35th Street and Phelps Road Intersection Improvements

Location: E. 35th Street S. and S. Phelps Road

Project Name: 32nd Street

Location: S. M-291 Highway to Van Hook Park

Project Name: U.S. 24 Highway Complete Streets & Trail Bridge

Location: M-291 Highway to Lee's Summit Road

Project Name: U.S. 40 Highway Complete Streets Location: Blue Ridge Cutoff to Sterling

Project Name: Truman Connect Multi-Use Trails

Location: Various locations throughout Independence



### **Stormwater**

#### Vision:

To provide the residents of the City of Independence with a safe and reliable storm drainage system that is effective, manageable, environmentally responsible, and considerate of the surroundings.

#### Goals:

The Water Pollution Control Department's Stormwater Management goal is to properly address and mitigate drainage issues and concerns.

### Priority Projects:

- ♦ Walnut Gardens Phase II
- ♦ Leslie to Crane & Hereford Stormwater Project
- Crescent Meadows Stormwater Project
- ♦ Noland Road Culvert Replacement
- ♦ Raymond, Harkless to Mill Drainage Improvements
- ♦ Ralston Storm Drainage Improvements



#### Walnut Gardens - Phase II

This project will address neighborhood-wide drainage issues between E 28th Terrace Court S and E 27th Terrace S in the in the Crackerneck Watershed. Design and construction will be completed in 2018-2019.



#### Leslie to Crane & Hereford Stormwater Project

Located in the Crackerneck watershed, this two-phase project will address drainage issues along Leslie Avenue north of Albert Avenue to Fair, then south to Pope Avenue. The second phase will continue on from Hereford at Pope Avenue to Logan Avenue to S Crane Street. Design will be completed in 2018-2019.



#### Crescent Meadows Stormwater Project

This project will address surface drainage issues in Crescent Meadows along S Crescent Avenue and S Arlington Avenue in the vicinity of E 25th St. Design was completed in 2017-2018 with construction to be completed in 2018-2019.

2018-2019 Stormwater



#### Noland Road Culvert Replacement

The existing reinforced concrete box culvert under Noland Road south of the 44th Street intersection and immediately east of the street has structurally failed. This project will remove and replace approximately 100 linear feet of the Adair Creek Watershed structure.



### Raymond, Harkless to Mill Drainage Improvements

Located in the Springbranch watershed, this project will address drainage issues on the area bounded by Raymond on the west, Sea Avenue on the south, and Mill Street on the east. Design and construction to be completed in 2018-2019.



#### Ralston Storm Drainage Improvements

This Rock Creek Watershed project is situated along Winner Road to Ralson Avenue ending on Northern Avenue. Design will be completed in 2018 with construction planned for 2019.

2018-2019 Stormwater

Project Name: Trenchless Technology Location: City-wide locations

Project Name: Bundschu Regional Stormwater Detention Basin

Location: Bundschu Road west of Ponca in the Bundschu Watershed

Project Name: Rockwood Storm Drainage Improvements

Between 25th Terrace and 28th Terrace and between Hardy Ave. and Northern Location:

Ave.

Project Name: Ellison Way Stormwater Project

S Ellison Way north of E 23rd Street S in the Springbranch Watershed Location:

Project Name: Pearl to Crane Street at Hereford Avenue Drainage Improvements Phases 1 & 2 S Pearl Street to S Crane Street at E Hereford Avenue in the Crackerneck Water-Location:

shed

Project Name: Wedgewood Neighborhood Drainage Improvements

Location: Crysler Ave and 46th Street to Willis Avenue in the Chapel Road Watershed

Project Name: 8th Street Neighborhood Storm Drainage Improvements

Location: 8th Street west of Sterling

Project Name: 40th Terrace & Spring Drainage Improvements

Intersection of 40th Ter and Spring St. Location:

Project Name: Brittany Ridge Channel and Floodplain Modifications Location: North of E 50th Ter Dr. in the Tapawingo watershed

Project Name: Highway 40 & Pittman Drainage Improvements

Location: Round Grove watershed

Project Name: Fairmont Highland Drainage Improvements

Location: Sugar Creek watershed

2019-2024 Stormwater



#### **Water**

#### Vision:

To provide to the citizens of Independence and wholesale customers a plentiful supply of safe drinking water that exceeds all Federal and State regulations at a reasonable cost.

#### Goals:

- ♦ Ensure that our facilities and infrastructure are well maintained and operating efficiently at all times.
- Plan, construct and operate our water system in a way that will accommodate and provide for future development.

### · Priority Projects:

- ♦ High Service Pumps No. 2 & 4 VFD's
- ♦ Filter Valve House Roof Improvements
- ♦ Main Replacement: 40 Hwy (Washington St. Noland Ave.)
- ♦ Main Replacement: Ellison Way/Queens Ridge (S. of 23rd St.)
- ♦ Main Replacement: James Downey Rd. (Sunset Dr. 23rd St.)
- ♦ 30" Steel Transmission Main Assessment



### High Service Pump No. 2 & 4 VFD's - FUNDED

This project will replace the existing variable frequency drive units that currently operate High Service Pumps No. 2 and 4 at the Courtney Bend Water Plant. These pumps can provide as much as 15 million gallons of water per day each to the water distribution system. The variable frequency drive units on these pumps have become somewhat unreliable and more and more difficult to service. The new units will help ensure that these pumps will be available when needed. This project addresses the improvement of existing infrastructure.



### Filter Valve House Roof Improvements - FUNDED

The roofs of two of the seven filter valve houses at the Courtney Bend Water Plant have developed leaks and are needing to be replaced. This project will address the leaks and provide a better environment for the staff to work in and the equipment that is housed in them. This project addresses the maintenance and improvement of existing infrastructure.



### Main Replacement – 40 Hwy - Noland - FUNDED

This project will replace approximately 1,300 feet of 8" water main which is currently in the west bound lanes of 40 Hwy. This section of main installed in 1954 has experienced several large breaks causing costly repairs. The new main will be installed along the shoulder of 40 Hwy outside of the pavement reducing the number of breaks and provide a more reliable source of water for the customers in the surrounding area. This project addresses the improvement of existing infrastructure.

2018-2019 Water



### Main Replacement: Ellison Way/Queens Ridge (S. of 23rd) - FUNDED

This project will replace approximately 5,000 feet of 6" water main which was installed in 1954 and has experienced an excessive amount of breaks. The new main will provide a more reliable source of water for the customers in the surrounding area. This project addresses the improvement of existing infrastructure.



### Main Replacement: James Downey Rd. (Sunset to 23rd St.) - FUNDED

This project will replace approximately 2,900 feet of 6" water main which was installed in 1946 and has experienced an excessive amount of breaks. The new main will reduce the number of breaks and provide a more reliable source of water for the customers in the surrounding area. This project addresses the improvement of existing infrastructure.



### 30" Steel Transmission Main Assessment - FUNDED

The 30" steel transmission main is one of four of our largest transmission mains from the Courtney Bend Water Plant. This main was installed in 1962 and has experienced several breaks recently. This project will provide the resources to properly assess the condition of the pipe. The information collected from the assessment will determine if further action is necessary to ensure the reliability of the transmission main. This project will improve the condition of existing infrastructure.

2018-2019 Water



#### Fuel Site Improvements - FUNDED

A portion of the fuel site equipment located at 420 N. Forest was installed in 1975 and is not compatible with today's fuel containing ethanol additives. Some of this equipment will need to be updated or replaced depending upon its condition. This project will provide those improvements and help to ensure that the site will remain in compliance with all Federal, State and local regulations. This project will improve the condition of existing infrastructure.

2018-2019 Water

Project Name: Main Replacement

Location: Throughout the Distribution System

Project Name: Security Upgrades

Location: Throughout the Water Department Facilities

Project Name: Treatment Plant Discharge Engineering

Location: Courtney Bend Water Plant

Program Name: Future Production Wells Location: Courtney Bend Water Plant

Program Name: Lagoon Cleanout

Location: Courtney Bend Water Plant

Project Name: Distribution System Improvements
Location: Throughout Water Department Facilities

Project Name: Filter Backwash

Location: Courtney Bend Water Plant

Project Name: SB Drive Improvements Location: Courtney Bend Water Plant

Project Name: Courtney Bend Basin Catwalk Improvements

Location: Courtney Bend Water Plant

Project Name: Lime Silo

Location: Courtney Bend Water Plant

Project Name: New Financial Management System Location: Throughout Water Department Facilities

Project Name: Geographical Information System

Location: Throughout Water Department Facilities

Project Name: Filter Backwash Basin Location: Courtney Bend Water Plant

Program Name: HSPS HVAC Improvements Location: Throughout City Facilities

Program Name: 39th St. Reservoir Location: 39th St. Reservoir

Program Name: High Service Pump No. 6 Location: Courtney Bend Water Plant

2019-2024 Water

Program Name: Treatment Plant Discharge Handling

Location: Courtney Bend Water Plant

Program Name: Main Replacement: Walnut St. (Leslie Ave. – Lee's Summit Rd.)

Location: Walnut St. (Leslie Ave. – Lee's Summit Rd.)

Program Name: Main Replacement: Salisbury Rd. (Peck – Geospace Dr.)

Location: Salisbury (Peck Dr. – Geospace Dr.)

Program Name: Main Replacement: 3rd St (E. of Gilbert St.)

Location: 3rd St (E. of Gilbert St.)

Program Name: Main Replacement: Jennings Rd. (3rd St. - Salisbury Rd.)

Location: Jennings (3rd St. – Salisbury Rd.)

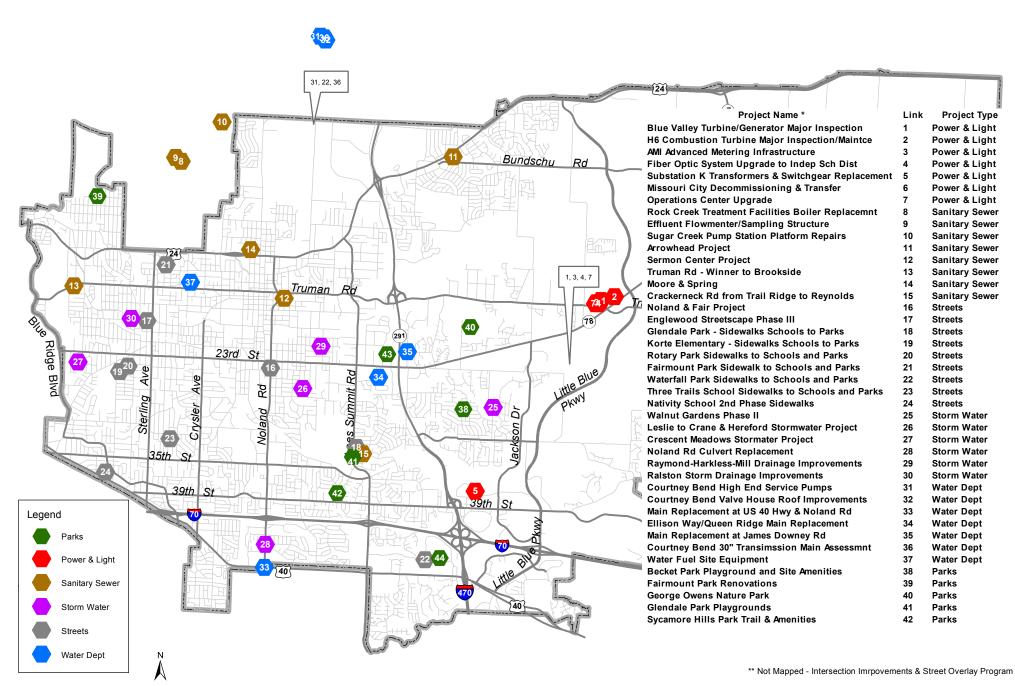
Program Name: Main Replacement: Gudgell St. (Dodgion Ave. - Kings Hwy)

Location: Gudgell St. (Dodgion Ave. – Kings Hwy)

2019-2024 Water

#### 2018-2024 Capital Improvements Prority Projects General Locations by Department





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				Project (	Cost		
	<b>Funding Source</b>	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024
Community Improvements							
Beckett Park	PRST	84,000	30,000				
Benton Park	PRST		111,000	17,300			24,000
Blackburn School Park	PRST				90,000		63,500
Bund-Jack Park	PRST						56,500
Bundschu Park	PRST				58,000		
Carriage Hills Park	PRST		16,000				88,500
Choplin Hood Park	PRST				259,000	85,200	
Country Club Park	PRST		87,000				
Crysler Stadium	PRST		57,000				
Dickinson Park	PRST			111,000			
Fairmount Park	PRST	103,000					19,500
George Owens Nature Park	PRST	165,000					135,000
Glendale Park	PRST	101,000					
McCoy Park	PRST	50,000		163,000			
Mill Creek Park	PRST		73,500	261,000			89,000
Roberts Park	PRST			28,000			
Rotary Park	PRST		30,000	100,000	28,000		
Santa Fe Trail Park	PRST	150,000	310,000			289,800	108,200
St. Clair Park	PRST				16,300		
Sycamore Hills Park	PRST	104,000					
Young Park	PRST				101,500		
Independence Athletic Complex	PRST					222,000	
Adventure Oasis Water Park	PRST	143,467					
Clothier Park	PRST				14,000		
Hill Park	PRST					153,000	
Waterfall Park	PRST	49,000		17,000			
Mobile Equipment for Parks	PRST	150,000	175,000	175,000	100,000	100,000	75,000
Farmers Market	PRST	189,225	196,853	207,214	207,214	207,214	207,214
Community Improvements Totals		1,288,692	1,086,353	1,079,514	874,014	1,057,214	866,414

#### **Facility Improvements**

Communication Center	Police PSST	4,800,000					
Fleet & Street Maintenance Facility Study	General Fund			100,000			
Facility Improvements Totals		4,800,000	0	100,000	0	0	0

				Project (	Cost		
	<b>Funding Source</b>	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024
Public Safety Improvements							
Vehicle Replacement & Maintenance	Police PSST	1,006,583	1,056,912	1,109,757	1,165,245	1,223,507	1,284,683
Radio Replacements	Police PSST	150,000	150,000	150,000	150,000	50,000	50,000
In-car Cameras	Police PSST	78,540	80,111	81,713	83,347	85,014	86,715
MDT Replacements	Police PSST	98,880	101,846	20,000	20,000	20,000	20,000
Taser Replacement Program	Police PSST	34,455	34,455	34,455	34,455		
Station Remodeling/Refurbishment	Fire PSST	50,000	55,000	65,000	65,000	100,000	100,000
Major Station Repairs	Fire PSST	50,000	55,000	65,000	65,000	65,000	75,000
Driveway Repair	Fire PSST	150,000	75,000	50,000	50,000	50,000	100,000
Pumper w/ Equipment	Fire PSST		420,000	430,000	425,000	450,000	500,000
Staff Vehicles	Fire PSST			80,000	160,000		
Rescue Vehicle w/ Equipment	Fire PSST	170,000		400,000			
Aerial w/ Equipment	Fire PSST	1,200,000				1,300,000	
Quint w/ Equipment	Fire PSST		800,000				
Mobile Command Vehicle	Fire PSST				500,000		
Tablets	Fire PSST	30,000					
Extrication Tools	Fire PSST		60,000				
Portable Radios	Fire PSST		270,000				
Computers/Technology	Fire PSST	15,000			15,000		20,000
Thermal Imaging Camera	Fire PSST				20,000		
SCBA	Fire PSST	450,000					
Breathing Air Compressor	Fire PSST			150,000		150,000	
Public Safety Totals		3,483,458	3,158,324	2,635,925	2,753,047	3,493,521	2,236,398

#### **Street & Bridges Improvements**

Street & Bridges improvements							
Street Overlay	SST	5,207,500	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000
Sidewalks to Parks	SST	800,000					
Sidewalks to Schools	SST	300,000					
Intersection Improvements	SST	590,025	750,000	750,000	375,000	375,000	375,000
Noland & Fair Intersection	SST/CMAQ	580,000					
Englewood Streetscape Ph 3	SST/TAP	400,000					
Alley Rehabilitation	SST	150,000	100,000	100,000	100,000	100,000	100,000
Bridge Program	SST			500,000	1,500,000	1,500,000	1,500,000
Sidewalk Program	SST		150,000	300,000	500,000	500,000	500,000
Traffic Signal Controllers & Equipment Program	SST		75,000	75,000	25,000	25,000	25,000
Concrete Curb & Gutter Repair	SST		125,000	300,000	500,000	500,000	500,000
US 24 Highway Complete Streets - Lee's Summit Rd to MO 291	SST/STP	380,000	3,788,000				
US 40 Highway Complete Streets - Blue Ridge to Sterling	SST/STP	410,000		4,016,000			
Operation Greenlight Controller Upgrades	SST/CMAQ	120,000					
Truman Connect Multi-Use Trail	SST/PRST/STP/CMAQ/TAP				3,400,000	3,400,000	
Truman & Winner Intersection	SST/STP					1,900,000	

#### **Project Cost**

	Funding Source	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024
23rd Street Sidewalks	SST/TAP				1,900,000		
39th Street Complete Streets - Blue Ridge to Sterling	SST/STP						3,000,000
35th Street Complete Streets - to Sterling	SST/STP						4,000,000
Crysler - North of 23rd to Lexington	SST/STP						4,000,000
Street & Bridges Improvements Total	als	8,937,525	9,988,000	11,041,000	13,300,000	13,300,000	19,000,000

#### **Power & Light Fund**

Power & Light Fund							
Misc Service Center Improvements	Power & Light	150,000	150,000	150,000	150,000	150,000	150,000
Misc T&D Improvements	Power & Light	150,000	150,000	150,000	150,000	150,000	400,000
Plant Miscellaneous Projects	Power & Light		750,000				750,000
Fiber Optic Network	Power & Light	126,000	125,000	125,000	125,000	185,000	160,000
69 KV Substation Facilities	Power & Light	480,000	480,000	480,000	304,838	260,000	300,000
Substation J Upgrade/Improvement	Power & Light	56,110					
Substation Security	Power & Light	200,400	150,000	155,000	160,000	175,000	175,000
Blue Valley 1 & 2 Turbines & Generators Major Inspections	Power & Light		2,400,000				
Cityworks	Power & Light	250,000	250,000	250,000	250,000	250,000	250,000
BV Generator Hydrogen System Replace/Upgrade	Power & Light	25,000					
69 KV Transmission Line Rebuild (Sub E to Sub F)	Power & Light	330,000	422,000				
System Operations Office Renovation	Power & Light	1,350,000					
New Financial Management System	Power & Light	400,000					
BV 3 Turbine & Generator Major Inspections	Power & Light	1,200,000	300,000				
Production Facilities Improvements	Power & Light	50,000					
BV Ground Water Sample Wells and Monitoring	Power & Light	120,000	100,000	50,000	50,000	50,000	50,000
Substation K Switchgear & Transformer Replacement	Power & Light	3,100,000					
Missouri City Divestiture	Power & Light	1,542,500					
Svc Center Addition - Building to House Trucks	Power & Light	650,000					
Fiber Optic Network - ISD 10G Network	Power & Light	1,050,000					
Sub M T1 Transformer repair	Power & Light	200,000					
H6 Major Internal Inspection/Mtnce	Power & Light	2,000,000					
Substation E Switchgear Replacement	Power & Light	200,000	3,100,000				
AMI Implementation (pending Council approval)	Power & Light	3,380,872	3,536,047	2,377,508			
Power & Light Totals	·	17,010,882	11,913,047	3,737,508	1,189,838	1,220,000	2,235,000

#### **Water Improvements**

Main Replacement	WATER	200,000	200,000	200,000	200,000	200,000	200,000
Security Upgrades	WATER		25,000	25,000			
Treatment Plant Discharge Engineering	WATER		1,000,000	1,000,000	3,000,000		
Future Production Wells	WATER	450,000	450,000	500,000	500,000		
Sludge House Roofs	WATER	150,000					
Lagoon Cleanout	WATER		125,000				
Distribution System Improvements	WATER	50,000	50,000	50,000	75,000	75,000	75,000
Truman Rd Booster Station Upgrades	WATER	500,000				·	

#### **Project Cost**

	<b>Funding Source</b>	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024
Filter Backwash	WATER		50,000				
SB Drive Improvements	WATER			75,000	75,000		
Courtney Bend Basin Catwalk Improvements	WATER		25,000				
Lime Silo	WATER			1,300,000			
Lighting Improvements	WATER		25,000				
HSP No. 2 & 4 VFD's	WATER	600,000					
Filter Valve House Roof Improvements	WATER	75,000					
Main Replacement: 40 Hwy (Washington - Noland)	WATER	450,000					
Main Replacement: Ellison Way/Queens Ridge (S. of 23rd)	WATER	800,000					
Main Replacement: James Downey (Sunset - 23rd)	WATER	500,000					
30" Steel Transmission Main Assessment	WATER	175,000					
Fuel Site Improvements	WATER	100,000					
39th St. Resv.	WATER		1,200,000				
Main - Replacement: Walnut (Leslie - Lee's Summit)	WATER		850,000				
Main Replacement Salisbury (Peck - Geospace)	WATER		400,000				
Main Replacement: 3rd St (E. of Gilbert)	WATER			200,000			
Main Replacement: Jennings (3rd St Salisbury)	WATER			200,000			
Main Replacement: Gudgell (Dodgion - Kings Hwy)	WATER			900,000			
HSPS HVAC Improvements	WATER				50,000		
High Service Pump No. 6	WATER				500,000		
Filter Backwash Basin	WATER				650,000		
Treatment Plant Discharge Handling	WATER					7,500,000	7,500,000
Water Improvements Totals	<u> </u>	4,050,000	4,400,000	4,450,000	5,050,000	7,775,000	7,775,000

#### Sanitary Sewer

Sanitary Sewer Totals			880,000	2,020,000	550,000	900,000	855,000
Sermon Center	Sewer	75,000	210,000				
24th & Scott	Sewer				150,000		
Trenchless Technology	Sewer		250,000	250,000	250,000	250,000	250,000
Arlington Improvements	Sewer		100,000	700,000			
Fairmount Highlands Phase 2	Sewer						455,000
Fairmount Highlands	Sewer		170,000	420,000			
Neighborhood Projects	Sewer	750,000	150,000	650,000	150,000	650,000	150,000
Arrowhead Center	Sewer	630,000					

				Project (	Cost		
	Funding Source	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024
Storm Water							
Crescent Meadows	SWST	300,000					
Rockwood-25th Terrace to 28th Terrace	SWST		210,000	1,510,000			
Trenchless Technology	SWST		50,000	50,000	50,000	50,000	50,000
Ralston Storm Drainage Improvements	SWST	90,000	550,000				
Regional Detention Basin-Leanne's PI/Bundschu	SWST			150,000	800,000		
Walnut Gardens, E 27th Street	SWST	300,000					
Raymond/Harkless/Mills Drainage	SWST	480,000					
Wedgewood Drainage, South Crylser	SWST				110,000	830,000	
40th Terrace & Spring	SWST					75,000	500,000
2205 Ellison Way	SWST					300,000	
Brittany Ridge Channel/Floodplain Modifications	SWST						90,000
Leslie to Crane & Hereford	SWST	60,000	800,000		700,000		
Noland Rd. Culvert Replacement	SWST	150,000					
Emergency Construction	SWST	100,000	100,000	100,000	100,000	100,000	100,000
Highway 40 & Pittman	SWST				50,000	250,000	
Faimont Highlands	SWST					90,000	550,000
Whitte Farms	SWST						90,000
Nace's Meadows	SWST						50,000
Woodbury at E 25th Drainage	SWST						60,000
Storm Water Totals		1,480,000	1,710,000	1,810,000	1,810,000	1,695,000	1,490,000
					•		
Water Pollution Control Improvements							
RCTP Heat Boiler Replacement	WPC	250,000					
RCPS Raw Pumps & Motors	WPC		500,000				
Wet Air Oxidation Grinder	WPC		50,000				
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RCTP Heat Boiler Replacement	WPC	250,000					
RCPS Raw Pumps & Motors	WPC		500,000				
Wet Air Oxidation Grinder	WPC		50,000				
SCPS Elevator Replacement	WPC			150,000			
Effluent Flowmeter/Sampling Structure	WPC	375,000					
SCPS Automatic Bar Screen Replacement	WPC				100,000		
Fence Restoration, RCTP & RCPS	WPC				500,000		
RCTP Dissolved Air Flotation Tank Replacement	WPC					400,000	
SCPS Platform, Stairs, and Railing		150,000					
Biosolids Handling			2,000,000	3,000,000			
Primary Clarifier Bull Gears Replacement						300,000	
Water Pollution Control Totals		775,000	2,550,000	3,150,000	600,000	700,000	0

#### Legend

PRST - Parks & Recreation Sales Tax	
PSST - Public Safety Sales Tax	
SST - Street Sales Tax	
SWST -Stormwater Sales Tax	
STP, CMAQ, & TAP - Federal Grant Programs	

