CITY OF FAIRBORN

Five-YearCapital Improvements Plan 2019 - 2023

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Community Growth Trends
May 2018 - 2022

Economic and Community Development

Overview

This report is prepared annually to examine trends in service demand, residential and commercial growth, and external economic indicators which may affect the City's decisions on capital investment over the next five (5) years. Both must be reasonably balanced to insure the City is able to meet the future needs of its residents. The information provides an update of the economic conditions experienced locally and compares those to National and State trends. It also examines the amount of new construction, remodeling, and expansion with its impact on the overall economic health of the city.

Economic Outlook Generally

Over the past few years the City of Fairborn has taken significant steps to increase its economic vitality within the Dayton region. As a matter of fact, 2014 marked the first full year of a dedicated economic development effort for the City. As the Miami Valley continues to grow itself out of the last national multi-year recession, the City feels it can capitalize on the competitive advantage Fairborn has within the Dayton Metropolitan Service Area (MSA). The basis for this outlook includes a variety of foundational facts including:

1. Proximity to Wright-Patterson Air Force Base, and future growth in Area A and B.
2. Proximity to Wright State University (WSU) and the growth of education around key centers of excellence.
3. An abundance of buildable land with easy access to transportation infrastructure.
4. Development potential due to a variety of transportation options including an active rail corridor, key interstate highways I-675/I-70, and proximity to air access.
5. A new, more aggressive internal approach to economic development.
6. Improving residential development throughout the city with increasing price points.
7. Aggressive redevelopment and infrastructure efforts within strategic corridors of the community designed to provide a catalyst to new development.

Economic Development Strategies

State of Ohio

The State of Ohio continues to support economic growth through the Ohio Development Services Agency (ODSA) and JobsOhio, a nonprofit business development organization designated as the lead business recruitment/retention organization for the state. Fairborn continues to actively engage the state and regional organizations frequently to stay up to date on the alterations to support services, programs, and resources available for economic development efforts.

Although the programs seem to change frequently and the service providers are in a constant state of flux, one notable constant is the change in philosophy at the State level. Given the fact that grants have historically been used within the field quite frequently, today the State focuses heavily on low interest loans and job creation income tax rebates through the Job Creation Tax Credit program.

The State is more focused on leveraging its national competitiveness by reducing its tax burden, increasing its support of the workforce system, and acting quicker with regard to business assistance using the JobsOhio network. Thus far this strategy seems to be working as Ohio continues to experience a faster than average rebound to its economy. Nearly all industries have grown significantly, including manufacturing, and statewide unemployment is well below the national average and even pre-recession levels.

Regional and County Cooperation

Fairborn is very active with its regional economic development partners including, but not limited to, the Dayton Development Coalition (DDC) and Jobs Ohio West. Additionally, the City participates in the regional *Business First Program* that focuses on business retention and the partnerships needed to help businesses grow in our communities. Lastly, the City works with the Greene County Department of Development frequently on business recruitment projects as well as a number of business retention activities.

Local Efforts

Business development activity continues to be a major priority in 2018. Business recruitment and retention efforts still remain as part of the overall economic development strategy for the City. In 2017 and moving forward business development efforts will also focus on attracting startup businesses and entrepreneurs to the Fairborn community. In order to encourage more small business development and investment, the department has created incentive programs and services for the small business community including the *First Steps Construction Assistance Prog*ram, updating its *Business Resource Guide*, creating a strong partnership with the Small Business Development Center (SBDC) at Wright State University and providing space, services and programs for startup businesses and entrepreneurs to connect and grow their businesses. We are also working to market the Fairborn Community and its assets in the digital marketing arena. We have updated both the City's website and the Fairborn Development Corporation's (FDC) website to include more useful information for our business community and residents. We are also utilizing social media more with regular posts to our social media sites. Videos have been created to help market our new programs and services. Other partnership events continue in and around Fairborn to spur economic activity including the Greene County Business Expo and Job Fair that the Fairborn Development Corporation sponsors, the WPAFB Developers Forum, and Dayton Startup Week in which the City of Fairborn has become a title sponsor.

Significant Partners

The City works closely with Wright-Patterson Air Force Base (WPAFB). Although national sequestration actions have taken a toll on the military and the region as a whole, WPAFB has much to be optimistic about moving forward long-term. WPAFB is the region's largest employer and the State's largest, single site employer with over 26,000 direct employees.

Lastly, the City is working closely with Wright State University (WSU). WSU has grown significantly over the years as well and now has over 19,000 students. More programs have been created that correlate with many of the regional economic development efforts in human performance, sensor technology, and commercialization activities thus illustrating the university's importance to the regional development landscape as a whole.

Unemployment Trends

Employment is one of many economic indicators. Fairborn's unemployment consistently follows the general trends seen at the Federal, State, County, and Greater Dayton MSA. Significant

recovery seems to be taking place as rates are now below pre-recession levels. The 2017 unemployment rate for the city hovered near 4%.

Long-Term Economic Development Initiatives

As the Fairborn economic development effort matures so does the strategy moving forward. In 2018, the Economic Development Department and the Community Development Department will merge into the Development Services Department so that a coordinated effort can be made on five core areas.

The *Development Services Department* will focus on five core areas.

- First, the department will focus on enhancing business development activity. To accomplish this staff will actively lead efforts within the business attraction, business retention and expansion, and small business development functions. Staff plans to create or alter business assistance tools and strengthen our partnership with local and state partners.

- Second, marketing and public relations activities will get increased attention as staff works to create a local and national marketing presence focusing more on enhancing our digital marketing and social media presence. Special event promotion will also get attention. In addition, the City will look to partner with local property owners in order to cross market property and fill vacant space.

- Third, increasing real estate development through site availability and awareness will be a key to commercial development. The newly created property database and property search tool that is available on the new FDC website will help market available commercial property and land in the community. This is the same property search tool used by the State of Ohio and our information and resources are linked for both sites. Continued utility improvements including the creation of a new Fiber Network Master Plan will add to the cities competitive advantage. Lastly, Fairborn Spark Kitchen Incubator, a business incubator and additional CoShare workspace for startup businesses and entrepreneurs will be open in August of 2018.

- Finally, the newly formed Development Services team will work on creating or altering a number of internal programs and policies in order to drive new investment and create a business friendly environment. The City is currently updating multiple planning documents. A revision to the 30-year old Comprehensive Land Use Plan has been completed and the City adopted a new Zoning Code that went into effect on December 7, 2017. With the purchase of new tracking software, EnerGov by Tyler Technology, an online permitting program is expected to help facilitate the application process and address the speed of permitting for faster development. This online permitting should be available to the public by January 1, 2019. Lastly, new incentive programs are in place now that can be utilized by either City Council and/or the Fairborn Development Corporation.

Segment Analysis

Construction Activity – Investment

Construction is another measure of economic vitality. Fairborn has mirrored much of the Dayton region which unfortunately was dealt some significant hurdles over the past number of years, including the 2008-2011 Recession followed by the Federal Sequestration. From 2001 to 2009, total construction increased from $29.3 million to $36.4 million excluding activity at Wright State University (which totals $90M in the past two years.). In 2014, the City realized $19.3 million in construction. The redevelopment of the Valle Greene Retail Center anchored by the new Kroger Marketplace, and the expansion/reinvestment of a number of commercial, industrial and office buildings were completed in 2017.

Residential Development

Residential development is becoming more diverse in the City of Fairborn with single-family home sites available as well as condominium opportunities for every age group. While 2015 was a steady year for Fairborn in this market, the outlook for 2018 continues to be strong as the expansion of the Waterford Landing single-family home development continues as well as continued development in the Bluffs on Trebein (185 single-family homes valued at over $40 million) and Fairfield Oakes (105 luxury rental homes valued at over $ 10 million).

Commercial Development

Commercial investment plummeted during the recession. Small renovations and ancillary buildings have been approved since 2009. However, Fairborn's efforts by economic development staff to identify and redefine its competitive advantage in the Miami Valley is expected to put us on the right path for positive future growth.

Throughout 2017 the City continued its efforts to push for more commercial growth by improving/expanding infrastructure to strategic corridors and aggressively taking on the redevelopment of blighted/abandoned commercial property. We created a definite buzz around our historic downtown, created more events and space for entertainment and use in our community's core. The City is also exploring new financial tools to facilitate the City's participation in redevelopment and potential incentive programs to encourage desired investment.

Housing Redevelopment and Property Maintenance Code Enforcement

The Development Services Department has streamlining their processes and strengthening their resolve for improved permitting services and stronger property maintenance enforcement.

Neighborhood Property Stabilization

While new housing construction is very important to the City, our existing housing stock is an asset to the community. Through property maintenance enforcement efforts, the City works to maintain the quality of existing homes and enhance neighborhoods.

Through funding from the U.S. Department of Housing and Urban Development (HUD), the Community Development Block Grant Program (CDBG) provides resources for the City to address the housing needs of our income eligible residents including housing repairs, home repair tool lending, and resources regarding landlord/tenant issues.

The Ohio Development Services Agency offers a competitive grant that the City has been successful in receiving since 2000. These funds also assist income eligible homeowners with

addressing the structural integrity of the home from electric upgrades, HVAC repair or replacement to water line replacements. These funds have been instrumental in assisting our residents with the maintenance of the homes and giving them peace of mind knowing these items have been addressed.

Nuisance Abatement Program
In cooperation with the Fairborn Police, City Council adopted a nuisance abatement program that addresses illegal activities in our residential neighborhoods. Once identified through arrest, the City has the ability to evict tenants and board up properties that continue to foster illegal activity. By actively addressing this type of activity in our community, the City can provide a safer quality of life which also stabilizes property values.

In addition to the above mentioned nuisance abatement program, the City also began to re-utilize Chapter 1339 – Public Nuisance Determination of the City of Fairborn Zoning Code. This is a section of the code that has been underutilized since its establishment in 1976. This section states that any commercial structure that has not been occupied as an operating business in six (6) or more months can be deemed a nuisance commercial property. The code requires that the City of Fairborn Fire Department and Greene County Health Department inspect the property and agree with the City's Zoning Administrator that the commercial property in question is a blighting influence on the city, and that for the health, safety and welfare of the community the building should be demolished. All laws pertaining to proper notification and appeal time for owners of these properties are in effect to ensure their due process. To date, over a half dozen properties have begun this process.

Property Maintenance Code Enforcement
Since 2013, a renewed emphasis on economic development within the City has been the driving force behind changes in the Code Enforcement Division. Currently, the City has three (3) full-time code enforcement specialists and one (1) seasonal tall grass property maintenance inspector.

The City is committed to insuring the building department and code enforcement specialists are utilizing the current National Property Maintenance Code. Every other year, City Council adopts the latest version of the code so that the City can continue to upgrade the quality of the residential neighborhoods and commercial areas.

Code Enforcement continues to focus on a proactive, customer service driven approach to combating blight and neglect in the City. Within their assigned inspection zones, Code Enforcement addresses not only property maintenance issues, but zoning and right-of-way matters. Code Enforcement continues to respond to citizen complaints, but efforts are focused on addressing problems before they become so prominent that residents call in complaints. In FY2017, the Code Enforcement Division handled 5,386 cases.

Future enforcement will target areas adjacent to the economic zones identified in the economic development strategy.

Vacant Property Registration
For the past six (6) years, the City has utilized a Vacant Property Registration program. This program requires that any property which has been vacated or abandoned due to foreclosure be registered with the City to ensure the identification of a responsible entity. There is a $100 registration fee which provides resources for staff to inspect the property to ensure it is properly

secured and that all safety issues are addressed. Currently, there are 47 active properties on the list. Since its inception, over 400 properties have been registered with the City. The program helps identify properties for the abandoned and blighted program.

Abandoned and Blighted Property Removal Program
For the third fiscal year in a row, City Council appropriated $250,000 for the demolition of abandoned/blighted properties throughout the city. These funds will be used primarily for residential demolition, but also for commercial demolition when appropriate. The removal of abandoned/blighted properties stabilizes neighborhood property values, and deters vandalism and criminal activities. The average cost for demolition for a single family residential home including asbestos abatement is approximately $12,000. To date, the City has demolished 120 properties since 2011.

Utilizing Fairborn Codified Ordinance Chapter 1315-Nuisance Abatement; Demolition of Structures, the City can put a property owner on notice that if corrective actions are not taken to make their blighted properties structurally sound, secure and maintained, the City will demolish the structure and bill them for the demolition costs. Any remaining costs for demolition that go unpaid will be assessed to the property taxes for that address.

In cases where the City purchased the property prior to demolition, these newly vacant lots can be reused for new homes, sold to adjoining properties or be given to non-profits such as Habitat for Humanity for new construction.

Conclusion

The City has recently taken on a renewed interest in development. This new focus will bring with it a number of new activities aimed at increasing the overall development activity within Fairborn and help revitalize and reshape the community for many years to come.

Commercial interest in Fairborn has been strong and staff will continue to work with developers to locate and/or consider Fairborn for their next location whether it be in our central business district downtown or along Broad Street, or new development opportunities in Valle Greene North, Commerce Center or our Five-Points area.

Residential development is diverse in the City of Fairborn with single-family home sites available as well as condominium opportunities for every age group. Development and redevelopment opportunities are plentiful and the City is committed to seizing these opportunities to ensure Fairborn remains a vibrant community into the future.

The City of Fairborn remains confident that growth in commercial and industrial development will continue. Therefore, the planned improvements listed in this five-year capital plan will be necessary to support the economic growth of our community.

City of Fairborn
Active Housing Developments

Development	*Zoning*	*Price Range*	*Total Lots*
Sanctuary	SR	$250,000 plus	43
The Bluffs at Trebein	PD	$200,000 - $400,000	185
Waterford Landing	PD	$200,000 - $400,000	372

ZONING DISTRICTS

SR Characterized by single family dwellings or duplexes situated on medium-sized lots with a gross density of 3 to 6 dwelling units per acre. Streets should include sidewalks and street trees, and be designed to promote a walkable environment with short blocks.

UER Represents the historic residential heart of Fairborn including a compact, walkable development type at a gross density between 5 and 10 dwelling units per acre with an emphasis on traditional architectural styles and materials.

MDR Housing options at a range of price points and styles, including condominiums, townhomes, row houses, and mid-rise multi-tenant buildings at an average gross density between 10 and 20 dwelling units per acre.

MHP Intended to allow development of manufactured home parks on land identified as appropriate for moderate population residential use.

PD Planned Development encourages ingenuity, imagination and flexibility in planning and designing land areas.

May 2018

5-YEAR CAPITAL IMPROVEMENT PLAN FUNDING SOURCES

- **Motor Vehicle License Tax Fund** (Fund 2104) – Monies are collected through the following sources:

  (1) The 10-year, one quarter of one percent income tax levy is utilized for repair and resurfacing of local residential streets and thoroughfares.
  (2) A $5 permissive license tax (R.C. 4504.02) is collected on motor vehicles registered to Fairborn residents and distributed to the County, where it is held in escrow. This money is then drawn down by the City on a project basis (R.C. 4504.05(B)(1)).
  (3) An additional $5 permissive license tax (R.C. 4504.172) is collected on motor vehicles registered to Fairborn residents and distributed directly to the City. Monies collected are used on street improvements.
  (4) The City receives an additional 50% ($2.50) of the $5 permissive motor vehicle license tax (R.C. 4504.05(B)(2)(a)) which is distributed directly to the City to be used on street improvements.
  (5) Grants.
  (6) Interest earnings.
  (7) Developers' fees

- **Building & Land Depreciation Reserve Fund** (Fund 2404) - 3% of net income tax receipts collected annually by the City and debt proceeds.

- **General Capital Improvement Fund** (Fund 4301) - 2% of net income tax receipts collected annually by the City and interest.

- **Parks and Recreation Capital Improvement Fund** (Fund 4302) - Monies are collected through the following sources:

  (1) The first $150,000 of the City's annual hotel tax collections and 100% of any collection in excess of $450,000.
  (2) Lease payments from the AT&T cell tower site adjacent to bikeway.
  (3) Interest earnings.
  (4) Vending machine commissions.
  (5) Payments in lieu of park land donations by developers.

- **Water Construction Fund** (Fund 4303) – Transfers from the Water Fund (the water operating fund), water tap and connection fees, debt proceeds, and interest earnings on fund balance.

- **Sewer Construction Fund** (Fund 4305) – Transfers from the Sewer Fund (the sewer operating fund), sewer tap and connection fees, debt proceeds, and interest earnings on fund balance.

5-YEAR CAPITAL IMPROVEMENT PLAN FUNDING SOURCES (continued)

- **Water Depreciation Reserve Fund** (Fund 6401) – Transfers from the Water Fund as needed.

- **Sewer Depreciation Reserve Fund** (Fund 6402) - Transfers from the Sewer Fund as needed.

- **Sanitation Depreciation Reserve Fund** (Fund 6403) - Monies received from transfers from Sanitation Fund to purchase a street sweeper every 10 years.

- **Tax Increment Financing Fund** (Fund 8455) – Tax increment financing is a financing mechanism to provide funding for infrastructure improvements within a designated area, where payments-in-lieu-of property taxes are utilized to pay for the public improvements. The source of revenue in this fund is payments-in-lieu-of-taxes.

- **Public Safety Police/Fire Fund** (Fund 4323) - Monies received from the 10-year, one quarter of one percent income tax levy approved by voters in 2014, to be collected in 2015-2024, is utilized for police, fire, and EMS operations, RITA refund of administrative fees, and transfers from the General Fund.

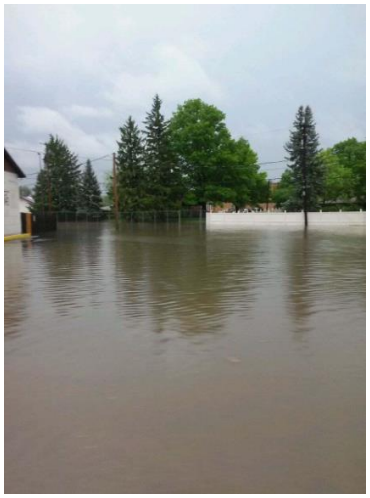
SECTION 3

Stormwater Management

Statement of Strategic Function

To capture and manage stormwater in a manner that minimizes flooding, reduces the impact to the environment, safeguards our citizens and infrastructure and complies with the Ohio Environmental Protection Agency (EPA) policies and regulations.

3.1 Introduction



The City of Fairborn's storm sewer collection system is composed of over 115 miles of main storm sewer piping, more than 3,000 catch basins and a network of ditches and creeks. Even with this substantial system, there are still many areas where storm sewers are minimal or even non-existent due to having been built many years ago prior to more stringent stormwater requirements and less development than seen today.

3.2 Long Range Planning

In the 1980's a Storm Drainage Master Plan was developed and updated on an annual basis. Many of the smaller projects identified in this plan were undertaken to address regionalized flooding issues. However, due the budgetary constraints of an already taxed General Fund the majority of the larger projects were never undertaken and efforts were scaled back to those that could be performed in-house. Recent Stormwater Management Capital Plans have reflected this methodology with typically only two projects identified in each year of the plan (catch basin repair and storm sewer repair) and all other projects from the original master plans and areas of known concern carried as "Other Year" projects.

Over the past twenty years, many communities have adopted a Stormwater Utility Fund as a way to finance stormwater projects. Stormwater issues have been growing every year due to increased population and development, producing more impervious surface. Impervious surfaces create higher runoff rates since the water does not have a chance to permeate into the ground. Increased construction and increased motor vehicles have created more contaminated water runoff draining to our rivers and streams. This is evident from the increased rules and permits implemented by the Ohio EPA to regulate stormwater discharge and water quality.

In 2015 a new stormwater master plan was completed. Using hydraulic modeling, field evaluation, review of past studies and complaints resulted in an appropriate list of

projects in today's dollars and a recommended sequence for installation to assure that one project doesn't just cause a problem downstream. One project from the Stormwater Master Plan was funded for 2016 and is currently underway – a study of the Beavercreek flood plain. As it appears it may positively impact residents in the area by potentially reducing the number required to carry flood insurance. Action on the remaining recommendations of the master plan will depend on Council's determination of the best means of funding identified projects.

Goal: Develop a means for funding stormwater efforts without taxing the general budget.

Long Range Target Objective: Secure adequate funding for required projects by way of developing a stormwater utility program, similar to other utility funds, whereby property equivalent units of impervious surface area, contributing to the stormwater runoff, could be charged a determined rate. See sections below for further detail.

3.3 Stormwater Management

Stormwater management provides for design of surface drainage, flood controls and improved water quality discharging to our streams and lakes. Surface drainage and flood controls are necessary to provide safe transportation along our streets and protection of life and property. Storms occur at various frequencies, durations and intensities. For these reasons, designing for the worst case scenario would be very impractical and very expensive. Instead, engineers use statistical means, good design principles and best management practices to manage stormwater runoff.

Surface drainage systems consist of constructing catch basins, detention/retention basins, all connected by storm sewer pipes. Basically, catch basins and piping capture surface water runoff from impervious areas and convey it to larger surface basins for detention (dry basin) or retention (wet basin). The basins are typically designed as holding basins where the water is released at a slower, designed rate. This helps prevent an overwhelming amount of stormwater to flood downstream properties.

Flood control systems include construction of reservoirs, levees, detention basins and channel improvements to retain large volumes of water in an effort to significantly reduce the potential for personal injury and property damage.

The City's creeks and ditches are necessary to convey drainage to points of discharge, called outfalls. However, many creeks and ditches in the City are on private property and have no easement for access. Maintenance, design improvements and enforcing regulations become very difficult, as there is no clear ownership of these waterways. Obtaining easements can help ensure the City's ability to better manage stormwater drainage.

As areas develop within the City, potential stormwater problems increase as development brings with it more impervious surfaces, i.e., streets, parking lots, driveways, roofs, etc. which do not allow for the natural absorption of water into the soil. With greater impervious surfaces, there is a significant increase in runoff during and after a rain storm which must then be collected and conveyed to a detention pond, creek or other holding area. The increased intensity and peak flows greatly impact our sewers and creeks, overloading the system at times. This overload results in flooding of property. In addition, this increased development brings more soil erosion from construction and oil based fluids spilled onto pavements from vehicles. This source of contamination flushes through our drainage ways and storm sewers into streams and rivers, significantly reducing water quality. The contaminated water has a detrimental effect on our ecology.

The City of Fairborn has seven natural drainage areas where stormwater collects:

A. Fairfield – Includes Mitman Park, Peebles Estates, Lang Plat and North Broad Street (south of Central Avenue to Vanderbilt Drive).

B. Hebble Creek – Extreme NE portion of the City, including Rona Hills, Hidden Hills and adjacent areas along Yellow Springs-Fairfield Road.

C. Redbank Ditch - Osborn View, Pleasant View and Del Ray Plats.

D. Beaver Creek – SE portion of the City.

E. Ironwood – Area adjacent to Ironwood Drive. This area drains into a trunk sewer that empties into Redbank Ditch, west of Kauffman Avenue.

F. Kauffman Avenue – Area adjacent to Kauffman Avenue, Wright View and the area immediately east of Wright View.

G. Wright State University – Extreme SW portion of City. Stormwater runoff from this area transits WSU lands.

Goal: Maintain existing storm infrastructure and install new as needed to address areas of concern.

Long Range Target Objective: Address all projects identified in the new Stormwater Master Plan.

Long Range Target Objective: Procure easements for all major storm sewers and waterways.

Long Range Target Objective: Develop and implement a plan to address areas with inadequate storm sewer systems.

3.4 Ohio Environmental Protection Agency (OEPA) Requirements

Since 2002, the City has been required to meet the Phase II regulations of the Ohio Environmental Protection Agency's National Pollutant Discharge Elimination Program (NPDES). Phase II systems are systems having a population of less than 100,000. Requirements of the NPDES-Ph II permit, issued by OEPA, include:

A. Stormwater Public Education
B. Public Involvement
C. Illicit Discharge Detection and Elimination Program (IDDE)
D. Construction Site Stormwater Runoff Controls
E. Post Construction Stormwater Management
F. Pollution Prevention

The City currently has undertaken efforts to address each of the requirements, however many have been stalled awaiting funding sources that had been anticipated when the Stormwater Utility was being considered.

Fairborn will continue to work with other Dayton area municipalities to develop implementation procedures which address the management of stormwater for an entire watershed. This approach will lessen the impact of implementation for individual municipalities. Fairborn is actually located in two different watersheds; the Great Miami Watershed that receives drainage from Hebble Creek via the Mad River and the Little Miami Watershed that receives drainage from Beaver Creek.

Goal: Comply with the requirements of OEPA NPDES Phase II permit.

Routine Target Objective: Conduct annual educational and public involvement activities.

Routine Target Objective: Oversee and enforce construction and post-construction Best Management Practices through the Engineering Division.

Routine Target Objective: Implement and provide training to City employees on Best Management Practices to prevent stormwater pollution.

Long Range Target Objective: Undertake a program to provide an initial and annual inspection of each City Public Works facility to determine compliance with OEPA good housekeeping requirements.

Long Range Target Objective: Conduct a dry weather screening of all stormwater outfalls. This may require additional personnel and/or use of an outside consultant.

3.5 Storm Sewer Utility

As part of the NPDES-Phase II program, the City developed a Stormwater Management Plan. A major component of the plan is development of a stormwater utility. The utility would primarily provide a funding source for the various needed storm related projects and activities, including increased maintenance, storm sewer and relief sewer construction, easement acquisition, culvert construction, ditch maintenance and other NPDES permit requirements.

In 2006, the consulting firm CDM was contracted to perform a feasibility study which resulted in the creation of the *Stormwater Needs Analysis Summary Policy Paper*. The report outlined existing stormwater issues, methods for funding the utility and a utility rate analysis. It was followed by the undertaking in 2008 of a rate structure development by Stantec Engineering which was revisited in 2012 in conjunction with the formation of the Stormwater Advisory Committee.

The SWAC met routinely throughout 2013 to evaluate current known issues, regulations, best management practices, possible fee structures, and implementation processes with a goal of making a recommendation to Council regarding implementation of a utility. While the consensus recommendation of the SWAC was to move forward with the utility, a management decision was made to not pursue the program in light of other important fiscal priorities the city faces in the near future. There is a commitment to retain this issue on the planning horizon for future consideration.

The need for a stormwater utility was further emphasized in the 2015 Stantec planning document which noted it was “crucial to the successful funding of the Stormwater Master Plan.”

Goal: Implement a stormwater utility to provide for appropriate funding of storm system maintenance, infrastructure construction and regulatory compliance.

Long Range Target Objective: Develop and implement a utility program that would bill and collect monthly Stormwater fees from all property owners to allow for implementation of the Stormwater Master Plan.

SECTION 2A

Street Construction, Maintenance and Rehabilitation

Statement of Strategic Function

To provide the citizens with transportation facilities that are safe, well maintained and efficient while utilizing funding resources in a cost effective manner.

2A.1 Introduction

The City of Fairborn's transportation network consists of over 135 centerline miles of concrete and asphalt streets, and represents a replacement value of over $88,000,000.

Proper design, construction, and maintenance of our transportation facilities are critical to the safety and efficient travel of our motorists, cyclists, and pedestrians.

2A.2 Long Range Planning

The City's Thoroughfare Plan, Comprehensive Land Use Plan, and Pavement Management Plan provide the basis for the construction of new streets and major improvements to existing streets.

Additionally, the Engineering Division conducts traffic studies that assist in determining current and future roadway use, recommended traffic control improvements, and future development.

Goal: Develop a five year plan that provides the high quality infrastructure needed to support current and future roadway use.

> **Long Range Target Objective:** Determine transportation needs and establish appropriate projects based on projected growth to accommodate those needs.
>
> **Long Range Target Objective:** Secure adequate funding for required projects.

2A.3 Existing Streets

The initial investment for roadway construction is only one element of the life cycle cost. Maintenance, repairs, and eventually full replacement are other important elements of the pavement life cycle cost which must be considered. The life of a roadway is contingent on many factors, including but not limited to, quality of initial construction, subbase soils, water drainage, traffic loading (volume and weight), weather impacts, and level of maintenance.

Engineers attempt to control many of these factors through proper design, construction, and maintenance. However, no construction material can hold up forever against these factors. Proper planning and funding for maintenance is necessary to prolong the life of the road

which helps fight against the wear and tear.

It is less expensive over the roadway's life cycle to fund periodic maintenance work rather than reconstruct a roadway when it fails completely. Also, periodic maintenance provides a smoother and safer riding surface for motorists. The City utilizes multiple types of maintenance treatments to extend pavement life including asphalt rejuvenators, crack sealing, microsurfacing, and partial depth and full depth pavement repairs.

When a roadway has failed to a point where maintenance treatments are no longer cost effective, it is important to commit to a full replacement. This is the most expensive treatment, but anything less would be wasting money.

In 1992, a Pavement Management Plan (PMP) was developed for the City that ranks streets based upon their condition, using a Pavement Condition Index (PCI). In 2007, a newer technology was employed using laser equipment to better rate the condition of streets and to produce more accurate PCI's. The PCI ratings are taken every three years by a consultant hired by the Engineering Division. It serves as an important and objective tool needed to prioritize streets for treatment.

The City of Fairborn aggressively pursues outside funding for resurfacing and repair of streets from several sources. The Engineering Division has been recently successful in funding eligible projects using State, County, and Federal funds. However, these outside funding sources require a minimum local fund amount be committed to the project.

In November 2014, voters renewed a Street Levy for ten years which is estimated to generate approximately $2,300,000 per year. Approximately two-thirds of these funds are used for local streets and the remaining third is used for thoroughfare improvements. Also, Fairborn receives approximately $200,000/year from the Municipal $5 License Fee and $135,000/year from the County License Fee for road work.

Goal: Provide a safe, efficient, and comfortable transportation system that is sustainable and fiscally responsible.

Routine Target Objective: Conduct routine assessment of existing streets to determine needed repairs.

Routine Target Objective: Perform in-house maintenance work including crack sealing, pavement repairs, and pothole repairs.

Routine Target Objective: Provide a five-year projected road work list to accommodate utility repair and replacements prior to street paving.

Routine Target Objective: Administer the annual Street Program as efficiently as possible to maximize the lifespan of Fairborn's pavements.

Long Range Target Objective: Seek additional funding options for roadway work.

SECTION 2B

Fairborn ADA Handicap Ramp Program

Statement of Strategic Function

To construct new and bring existing handicap curb ramps into compliance with the Federal Americans with Disabilities Act (ADA) Standards and Guidelines within the City Right-Of-Way.

2B.1 Introduction

The Federal Americans with Disabilities Act (ADA) began requiring the installation of handicap accessible curb ramps in 1991.

The City began constructing curb ramps in the 1990's in conjunction with the Annual Curb and Sidewalk Program, and along the main thoroughfares. There were no federal construction specifications for curb ramps available at the time.

In 2001, the Federal government began requiring the use of tactile warning devices at each ramp to signal those individuals with low or no vision that they were entering a roadway.

The City developed specifications and began constructing ADA compliant ramps in 2004. The City also began requiring ADA compliant curb ramps be installed in new developments in 2004. The Engineering Department updates the standards as necessary to conform to Federal guidelines.

2B.2 Long Range Planning

The ADA Curb Ramp Program addresses needs on the same streets scheduled for capital roadway improvements each year. Ramps are not required on streets receiving maintenance treatments including crack sealing, joint repair, microsurfacing, or chip sealing. If a request for a ramp at a specific location is received, Engineering will evaluate it for installation in the next program year.

2B.3 Goal

The goal of the ADA ramp program is to install ADA compliant ramps throughout the City right-of-way wherever needed to remove mobility barriers.

SECTION 2C

Fairborn Curb-Sidewalk-Approach (CSA) Program

Statement of Strategic Function

To provide a safe environment for the community utilizing the public curbs, sidewalks, and drive approaches and to comply with the Federal Americans with Disability Act (ADA) Standards and Guidelines for this infrastructure.

2C.1 Introduction

The Americans with Disabilities Act began federal regulations in 1991 to insure equal access to all persons, including those with disabilities. It requires that all sidewalks be maintained to meet those standards when capital street treatments occur. Similarly, deteriorated curbs and drive approaches are also replaced to ensure proper drainage and safe accessible entrances to properties.

The CSA Program costs are fully assessed to the property owners in accordance with Fairborn Codified Ordinance Section 903.01. They are given the opportunity to hire their own contractor for construction, or be added to the City-managed construction contract. Competitive bids are received by the City to ensure competitive pricing. All construction work associated with the CSA Program is inspected by Fairborn Engineering personnel.

2C.2 Long Range Planning

The Annual CSA Program precedes the Asphalt Street Repair Program. This is done in order to repair or replace concrete on those streets scheduled for resurfacing prior to the paving work taking place. This approach provides a more complete infrastructure improvement that encompasses pedestrian safety and access, improved street drainage, improved pavement, and adequate entrance ways to properties.

Long range planning calls for continuing the annual CSA Program to achieve the goal of improving safety for pedestrians and property owners. Sidewalk improvements are needed to fix broken, heaved, and severely cracked sections of sidewalks.

2C.3 Goals

Fairborn's Engineering Division will strive to improve the longevity and safety of newly installed curbs, sidewalks, and approaches by utilizing the best design standards, high quality construction materials, sound construction practices, and thorough inspection services. This approach will ensure the new infrastructure is long lasting, which will reduce the long term costs to property owners.


16

SECTION 2D

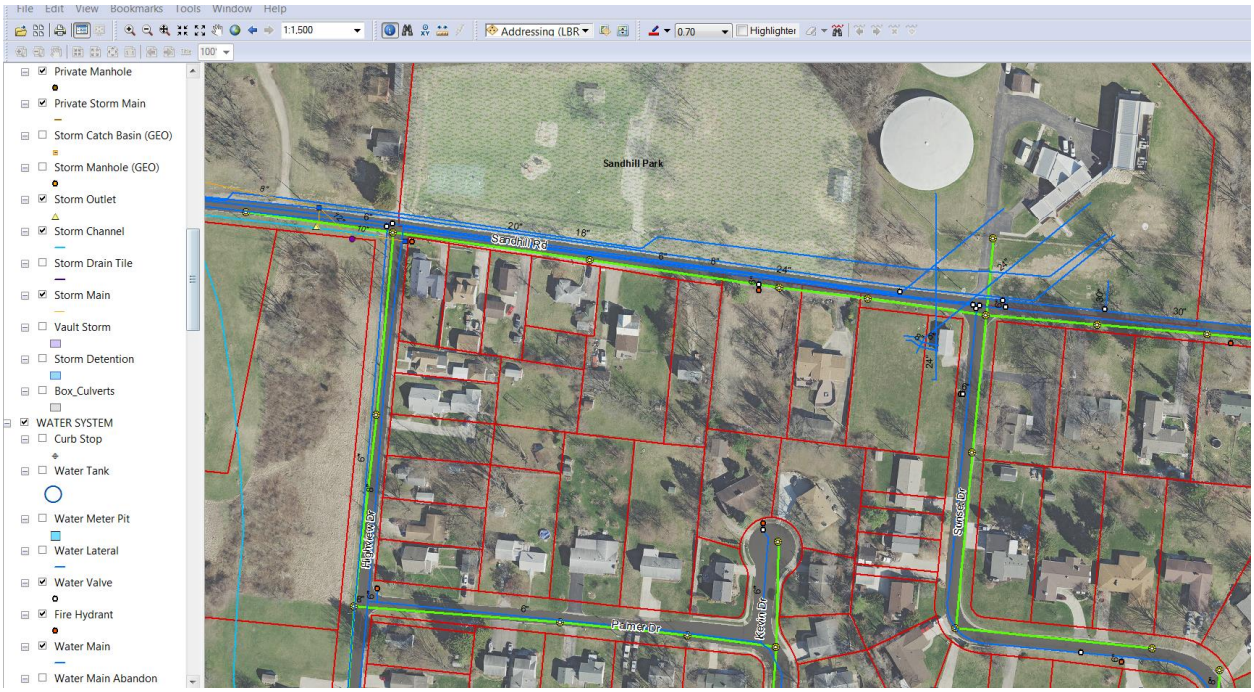
Fairborn Geographic Information Systems (GIS)

Statement of Strategic Function

To more efficiently and understandably organize, manage, and distribute City of Fairborn information.

2D.1 INTRODUCTION

A Geographic Information System (GIS) is used to spatially store and access various types of information. Data stored in a GIS system is referred to as geospatial data because it is tied to a point, line, or area on a map. Location-based data is important to managing a municipal government efficiently. GIS helps city staff to manage property information, infrastructure systems, land use, zoning, materials, and maintenance activities. GIS makes accessing, evaluating, mapping, and reporting on data easy and efficient.



ArcGIS software is in use on thirty computer stations in various City departments. This map-based software allows easy, intuitive access to the geospatial data needed for mapping and analysis. A free version of this software called *ArcReader* makes this data accessible from any city computer or tablet.

2D.2 LONG RANGE PLANNING

Infrastructure data is in the process of being collected and recorded into separate GIS layers for more efficient management and planning. Entry of storm sewer, sanitary sewer, waterline, and roadway data is continuing. From 2015 to 2018, two interns have been hired each year to work on this data entry. Interns will continue to be hired for the foreseeable future until the initial data capture is complete. The types of data categories that will be entered into and managed through GIS are expected to grow. After all of the existing data is entered, it is very important to continue to update GIS as maintenance and capital projects dictate.

GIS usage is expected to increase with the coming implementation of a city-wide GIS-based work management, permitting, and finance system. The Engineering Division will help get the new system up and keep it running.

2D.3 GOALS

- Continue to enter all relevant existing data into GIS, including water, storm sewer, sanitary sewer, traffic, bridges, and roadway.
- Expand the GIS database by adding infrastructure updates and new layers such as property easements, tax records, and historical data.
- Continue to use GPS field collection equipment for accurate locating.

SECTION 4

Buildings and Lands

Statement of Strategic Function

To proactively operate and maintain City-owned buildings and grounds.

4.1 Introduction

Plant Maintenance: The Plant Maintenance staff is responsible for appropriate physical upkeep and improvements of all City-owned property including the Government Center, Library, four Fire Stations, and all other buildings funded through the general fund. Their duties include landscaping, irrigation, mowing, and trimming of all grounds, including street easements and city well fields; maintenance and preparation of all sports fields, courts, playgrounds, exercise areas, shelters, and other service facilities. The staff assists and provides maintenance support for all annual special events. The staff consists of five full-time employees - Parks Crew Leader, Maintainer (two), Building Mechanical Specialist, and Foreman. Seasonally, approximately 15-18 laborers throughout the spring, summer and fall months supplement the division.

Cemetery Operations: The City of Fairborn owns and maintains Fairfield Cemetery as well as Cost, Highview, and Hall Cemeteries. Daily operations are handled by one full-time Cemetery Sexton and one summer seasonal worker. Fairfield Cemetery is the only cemetery in the system where active burials are being done and cemetery lots remain available for purchase. The Cemetery Sexton is responsible for the sale of lots, opening and closing of graves, complete maintenance of gravesites, pouring forms for monuments, and formal record keeping for all sites in all four cemeteries. The City of Fairborn is responsible for the burial of the indigent and in recent years this has become a routine request. The City handles approximately 20 indigent burials per year. Indigent applications have risen steadily over the past 3 years within our community. The Cemetery Sexton continues to input grave information and historical records in to the Legacy Mark software program with the intent to offer online search capabilities by the end of 2018.

4.2 Long Range Planning

Annually, Public Works Director, the Assistant City Manager, Parks and Recreation Superintendent, Buildings and Lands Foreman, and the Building Mechanical Specialist get together and review the five-year capital improvement project list. At that time, other needed projects are added to the already extensive list of pending projects. Each project is evaluated and reprioritized based on need and available funding levels. Other general fund departments that have specific building and land concerns are consulted and asked for project needs. There are always far more projects requested than available funding.

Because funding is extremely limited in this budget, projects have been generally limited to extremely poor facility conditions. It is the desire of the project managers to become

more proactive when planning future projects. Unfortunately, much of the funding is currently being used to pay off past projects that were bonded leaving only a small amount for current projects.

Goal: Prioritize projects based on criteria including condition of existing facility, safety and security issues, productivity issues, technology improvements including "green" initiatives and preventive maintenance measures to extend the life of current facilities.

4.3 Financial Overview of Buildings and Lands Capital Improvement Fund

The Buildings and Lands Fund was established to provide a funding resource for necessary buildings and lands improvements for those operations funded from the general fund. This fund does not pay for the building and land improvements for enterprise accounts. The Buildings and Lands Fund is funded by 3% of the net income tax proceeds collected annually by the City. Therefore, it is projected that the fund will produce revenues of $250,000 in 2019 with an estimated small increase each year. Additional revenues included in the Buildings and Lands Fund come from the sale of bonds and capital lease programs for the payment of buildings and lands capital projects. A $50,000 fund balance is the target ending balance set for this fund.

A number of recurring payments for past projects are consuming much of the buildings and lands fund. These recurring payments include:

- General Building Repairs - ~$35,000 annually.
- Preventive Maintenance Agreement - $20,000 annually.
- Public Works Facility Debt Service - ~$400,000

Depending on the beginning fund balance, some years have far less to be spent, and the ending balance may drop below the desired $50,000. Within this 5-year span, the fund balance at this time does not decrease below the $50,000 line.

All of the buildings that serve the many Divisions throughout the Public Services Department(s) are in various states of disrepair. Most all of them have exceeded their useful life and nearly all when built were not meant to serve the purpose in which they are currently being used. In 2014, a feasibility study was completed for the purpose of preparing conceptual design drawings, preliminary plans and renderings, site selection, and budgetary construction estimates for the development of a consolidated City of Fairborn Public Services facility. Once constructed, the new facility will consolidate current and future needs of the Street Division, Fleet Maintenance, Parks & Recreation and Water and Sewer Utilities Divisions.

The new Public Services facility design is being conducted this year, along with recurring debt payments for the facility design beginning in 2019 and debt for construction beginning in 2020. Funding for both the design and construction of this facility would be a combined effort by all four divisions of Public Administrative Services: Parks & Recreation (including Plant Maintenance), Water & Sewer, Street, and Equipment Maintenance and also include funding from other divisions who utilize equipment

maintenance services. Construction would likely begin in 2019 or 2020, producing a significant adjustment to the Building and Lands Fund. Although there are numerous projected savings by retiring outdated and non-suitable facilities, this fund will bear the task of supplying the general fund operational expenditures for this specific capital project.

SECTION 5

Parks and Recreation

Statement of Strategic Function

To improve the quality of life for the citizens of Fairborn through the availability of recreational and cultural opportunities as well as to proactively operate and maintain City-owned buildings, grounds, and cemeteries.

5.1 Introduction

The Parks and Recreation Superintendent oversees the complete operation of the Parks and Recreation and the Plant Maintenance Division. Each Division must interact together and impact the way each function. Both divisions have an impact on the parks and recreation capital projects and the planning for the future.

When determining what makes a community a desirable place to live, parks and recreation areas are at or near the top of the list. The City of Fairborn Parks and Recreation Division provides a perfect mix of active and passive park areas, diverse recreational programs for all age groups and many cultural and special events throughout the year. With 22 parks, including a 6 mile bikeway and over 750 acres of parkland, there is plenty of room to explore natural areas, fish, go for a hike or simply relax and enjoy some of nature's wonders. If it is activity you desire, the City Parks offer a state of the art skate park, softball fields, baseball diamonds, soccer fields, and basketball, tennis and volleyball courts to meet you or your family's needs. The Fairborn Parks are also home to four nature reserves, a wetland "Story-book Trail" located at Valle View Reserve; a Dog Park located at Sandhill Park; a historic log home and homestead, and two performing arts pavilions.

The City of Fairborn Parks boast of clean, safe and newer playground equipment in most of the active parks. The City also offers nineteen picnic shelters throughout the park system that can be reserved for family picnic, birthday parties, reunions, company gatherings or church events.

Each summer, the City hosts it's "Free on Friday" concert series at the Atherton Amphitheater at Community Park. In 2018, the 5th Annual Community Movie Night occurred at Central Park. The City's partnership with the YMCA provides an indoor space if necessary as well as additional staff to expand the pre-movie event. Central Park also provides the event to be more reachable via walking and biking as compared to Community Park. The Community Movie Night is the kick-off to summer, including the Free-on-Friday Concert Series, which will begin the following Friday each year. The 1st Annual "Bluegrass & Brew" Festival on Main Street and the 5/3rd Event Lot was held in 2017 and will continue in 2018 and beyond. This new festival will be the grand closing of the summer music series on Friday, August 3, 2018.

The Parks and Recreation staff works hard to offer fun, entertaining and rewarding recreational programs for all ages. A variety of camps and general programs are offered throughout the summer with topics such as: Aloha Summer; Art Adventures; Outdoor Skills; Park Adventures; Mammal Mania; Holiday Craze; Field of Flowers; and, H_2O Adventures. Adult tennis leagues, youth tennis lessons, girl's fast pitch leagues, and adult softball leagues are also very popular programs.

A new and improved Farmers' Market takes place every Wednesday in the Fifth Third Commons Parking lot on Main Street in downtown Fairborn. Farmers from all over the Miami Valley descend on Fairborn to sell their produce, plants and homemade baked goods. Increased marketing efforts and street signage hope to entice more visitors than ever before. This year, featured food trucks will join the market each week. Local wineries will be offering tastings and selling bottles of wine. In 2018, an evening market is being planned to offer fresh food to those who cannot make it to the market during the day. Activities for kids are being planned for both the day and evening markets.

The Parks and Recreation Division plans, coordinates, implements and assists with over ten special community events a year including an annual Easter Egg Hunt, Memorial Day events, concerts at Community Park, Fishing Derby, Fairborn's Heritage Days events, Fairborn Family Block Party on July 3rd, the 4th of July Parade and Fireworks, Annual Bluegrass and Brew Festival, Sweet Corn Festival, Halloween Parade, Veteran's Day events, and a Christmas Holiday Parade and Tree lighting. Continuing from the huge success of the 2017 Lighted Holiday Horse Parade, 2018 will see this event return with only higher expectations for participation and increased attendance above the estimated 2000 from 2017.

In 2015 Updated Parks and Recreation Master Plan was adopted by City Council, which determines the appropriate development and use of City parks and nature areas throughout the city for the next five years. This Master Plan utilized community input through 18 community focus groups and an analysis of current park land use to base its recommendations. All of the projects listed in this document have been discussed and approved by the Parks and Recreation staff as well as the fifteen member Parks and Recreation Advisory Board through the master planning process or subsequent revisions. These park improvements are contracted or done in-house using Plant Maintenance Division staff. From this plan, the desired goal for connectivity via trail or bikeway was reached through the negotiation with Oberer Corporation and BW Greenway. In 2017, the 21st and 22nd park was added to the inventory. The Garland Wetland Reserve at the corner of Garland Avenue and Commerce Center Boulevard was added and will provide a highly sought after north-south pathway paralleling I-675 on the east side of the highway along the back of the Commerce Center development corridor. The second acquisition was completed when the Strautman Family donated their family property located at the NE quadrant of the 235/675 interchange. This land connects to the existing Oakes Quarry and guarantees the continued preservation of the area. The addition of these parks brings our park acreage to over 750 acres. A Parks and Recreation Master Plan Update is being planned for 2018 and modifications to the capital plan will be reflected in the 2019 report.

Parks and Recreation staff spend their time not only planning the needed capital items, but also coordinating and presenting concerts and special recreation events in the Summer Park Series, coordinating and assisting with all youth and adult general recreation programs and sports leagues, coordinating park shelter and facility reservations, and planning, coordinating and implementing city-wide special events. Due to the limited size of the city staff, intense coordination and utilization of park system volunteers is used for almost every activity.

5.2 Long Range Planning

The creation of the Parks and Recreation Master Plan has reprioritized many of the park facility needs. The focus of the Master Plan is about identifying land for acquisition in high growth areas, while revitalizing existing park facilities and integrating new recreational trends throughout the system. The Park Master Plan and the upcoming Master Plan Update is an integral tool in planning the five year capital projects and developing a priority system for needed capital projects. The five year capital plan will be extremely aggressive when it comes to maintenance of our existing park facilities, equipment and surfacing while this extra funding stream remains available.

The 2015 Parks and Recreation Master Plan is based on the identification of all existing recreational facilities within the City's park system. The plan evaluated the condition of each facility and determined the replacement value and the lifespan of each item. Then based on project priority, each item was assigned a replacement date. New capital needs were also addressed in the Master Plan and included in the replacement matrix. The plan also identifies needed maintenance equipment and a replacement schedule. Finally the plan addresses the lack of maintenance and programmatic staff in the Division.

The Parks and Recreation Master Plan was the culmination of 3 months of gathering public input through 18 focus group sessions and numerous interviews. The final report was delayed to gather additional analysis with the completion of the 2014 Fairborn Park Land Use Analysis Study. The now comprehensive Masterplan was presented to City Council and adopted in early 2015.

In 2014 the division received a permanent full-time Recreation Coordinator. This addition has proven to be a huge asset for the development of year-round adult, youth and family recreation programs. In 2014 over 41 new programs were coordinated for the Fairborn community; and, was responsible for increasing new visitors to the area. Over 1000 persons participated in recreation programs including adult softball and tennis leagues. Each year since the addition of recreation staff, participation in programs has grown tremendously.

The results listed in the following tables are from the 2013 Community Needs Assessment. The analysis produced a "top ten" for each category of recreational programming and park development: These have been updated to correspond with the 2019-2023 Park Capital Plan. The focus of the Master Plan Update planned for 2018 will re-evaluate community needs for facilities and programs.

Continuing to meet community needs, the updates are below:

Final Top Five -- Question #1 -- Park Development			
	Points	%	RANK
Outdoor Pool (achieved w/ WPAFB 2014, renewed in 2016)	367	21%	1
Community Recreation Center	220	13%	2
Trail Connectivity (new trail & plan update 2015)* *Valle View-Garland Trail 2016	128	7%	3
Dog Park completed 2017	118	7%	4
Indoor Sports Courts	85	5%	5
BMX Course (in discussion – Cold Springs Reserve)	65	4%	6
Community Multi-Use Stadium	55	3%	7
Amphitheater Cover (considered as an Additional Project)	49	3%	8
2nd Sprayground (downtown Broad Street Park development)	49	3%	9
More Trees / Shade at Parks (60 each year)	47	3%	10

* New Xenia-Central Ave Bikeway Connector was completed in 2015, which added .718 miles of new pathway bringing the total to 5.02 miles of paved pathway within Fairborn.

Final Top Five -- Question #2 -- Recreation Development			
	Points	%	RANK
Country/Jazz/Rock Event (Jazz Festival 2013-2016) (Bluegrass & Brew Festival 2017+)	251	13%	**1**
Adventure Programs/Hiking (2013-2016+)	149	8%	**2**
Nature Education (2013, expanded in 2015/2016)	143	8%	**3**
Community Movie Nights (expanded in 2015)	122	6%	**4**
Paint Ball	107	6%	**5**
Archery Classes (working with the FHS)	66	3%	**6**
Community Music/Drama Group Caesar's Ford Theater Group – began 2016	66	3%	**7**
Gardening Programs (continued expansion)	49	3%	**8**
Teen Center Type Programs	49	3%	**9**
Su' Playground/Camp Program (expanded 2016)	49	3%	**10**
Adult Education	49	3%	**11**

Within the scope of Recreation Program Development, one of the main goals is to expand to include the complete community. Expanding in 2016 was the addition of cultural arts programs held within our local business district, as well as Nature Education programs and monthly hikes throughout the parks. These programs not only offer youth and family outdoor opportunities, but bring new visitors and spending to our

local business that host these programs. Some of the new CYO (Create Your Own) programs were: flower arranging, scrapbooking and painting. The program participation for these CYO art classes have tripled through 2016 and 2017, and look to become even more popular in 2018 and beyond.

An additional impactful outcome from the Master Plan process was the importance of maintaining our quality park system, as well as continuing to build on its successes. As new developments occur within the city, including new annexation, park land will be addressed to service these new residents both passive and active needs. The addition of trail connectivity from existing park amenities to new areas will also become a priority as the future unfolds.

Goal: Implement projects in the Adopted and Updated Master Plan.

Routine Target Objective: Evaluate projects in Master Plan and compare to current community needs.

Long Range Target Objective: Implement a recreational strategic plan to meet the needs of the community.

5.3 Financial Overview of Parks and Recreation Capital Improvement Fund

The vast majority of all Parks and Recreation Capital Improvement projects are funded through six main sources. The City collects a Hotel/Motel Tax, which provides approximately $400,000 of revenue to the City annually. The Parks Capital Improvement Fund receives approximately $150,000 (guaranteed initial funding with the possibility of additional funds) from the Hotel/Motel Tax. The Parks Capital Improvement Fund also receives 100% of the proceeds of a cellular tower along Fairborn's Wright Brothers Huffman Prairie Bikeway and 16.67% of the proceeds from a Clearwire Cell Tower Lease. A total of $18,251 annually is collected from both locations. New development within the City produces approximately $5,000 per year – although this increased drastically in 2017 due to an amended parkland dedication ordinance and the demand for homes growing in the area.

The interest earned on the Parks Capital Improvement Fund is allocated back into the fund. Annually, the fund generates around $1,000 in interest income. Finally, revenue from vending machines produces about $3,500 annually. The total annual Parks and Recreation Capital Improvement revenue will be approximately $177,751. Some of the revenue streams are fixed while others fluctuate with the economy and interest rates.

For the purpose of the five year capital projections, the total is held at a constant while the fund balance may change annually due to increases in revenue or the remaining excess funds from previous capital projects. Any additional permanent funding changes, such as another new tower lease, would be added at that time.

The City of Fairborn continues to see many improvements in its parks and recreation system. A non-profit 501(c)3 corporation was formalized in 1996 to solicit, generate and collect donations, endowments and bequests for the sole purpose of promoting and enhancing our parks. Although this status was lost in 2010, the return to full non-profit

status was realized in March 2015. The Parks Foundation dollars supplement the Parks and Recreation Capital Fund, primarily toward improvements within Community Park. Many of the Foundation's assets come from fundraising. The Parks Foundation actively participates in the CFC (Combined Federal Campaign). Future emphasis will be on endowments, bequests, and annual memberships.

An example of their dedicated efforts was the replacement of a metal roof on an existing shelter in the new dog park at Sandhill Park. Funding from the Parks Foundation, Park Advisory Board and a received bequeath was combined to develop an outdoor Circuit Training Facility holding 10 pieces of exercise apparatus. This new facility totaled nearly $20,000 and would not have been possible without the Foundation's existence.

The creation of the Fairborn Parks Foundation is only one way of supplementing City funding for Parks and Recreation purposes. In addition, every effort is made to utilize outside funding sources from organizations such as the Ohio Department of Natural Resources (ODNR) and Greene County. Recent federal actions indicate that the Land and Water Conservation Fund (LWCF) will remain to be funded every other year beginning in 2014. These funds were used originally to develop upper and lower Community Park and several other parks in the system. Many of these available grant dollars are limited in scope and eligibility, but represent an excellent way of stretching limited recreation resources.

The new 4' x 8' double-sided color LED digital display board was constructed in partnership with the Fairborn School District for Community Park and the Fairborn High School. The sign is located on the high school property directly adjacent to the south-east corner of the park boundaries. This new display will be able to list all of the upcoming events for both the City and Fairborn Schools. Operational costs will be acquired through the sale of advertising on the display itself. There has been a noticeable increase in person's stating that they have seen program messages on the sign and called to find out more information.

An important 2017 project was the addition of Pickelball Courts at Fairfield Park. In 2018, softball field lights are being added to field #3 at Fairfield Park. This park is quickly growing into a regional sports park attracting participants and spectators from many miles around to recreate and spend their money in Fairborn.

As always, there are more recreational and cultural needs than available financial resources. In addition to all of the scheduled projects, there is a list attached of unbudgeted projects. Efforts will continue to seek additional funding sources for these vital park and community projects.

SECTION 6A

Water Treatment

Statement of Strategic Function

To provide clean, safe drinking water that meets the requirements of the Ohio Environmental Protection Agency (OEPA) and aesthetic needs of our citizenry.

6A.1 Introduction

The Water Treatment Plant, located at 301 Sandhill Road, treats over 1 billion gallons of groundwater each year to meet the needs of our residential and business customers. This filtration plant is designed for iron and manganese removal and was originally built in 1975 with major upgrades in 1990 and 2011. Following the most recent renovations, the available Ohio Environmental Protection Agency approved capacity was increased from 5.4 million gallons per day to 6.5 million gallons per day.

Water treated by the plant is taken from two well fields collectively known as the Mad River Well Fields.

6A.2 Long Range Planning

Long range planning for the Water Treatment Plant is driven not only by anticipated growth, but also by OEPA rules and mandates, advances in treatment and contamination detection technology, aging facilities and the aesthetic demands of our citizens. We must consider not only the treatment plant itself, but also our source water resources and plant finished water storage.

We have tools that assist us in determining the best methods for meeting these demands which include the recently completed Water Master Plan and the 2008 Water Treatment Plant Hydraulic Study. They outline recommended improvements to meet anticipated growth for the coming years and to further improve the plant's capabilities.

Goal: Develop a five year plan that assures source water in adequate quantity allows for continued improvement of water quality and addresses needs of an aging plant.

Current Target Objective: Implement the findings of the Water Master Plan through capital planning, operational assessment and budgeting.

Long Range Target Objective: Determine needs and establish appropriate projects based on projected growth, OEPA regulations, water quality concerns and infrastructure age/condition.

Long Range Target Objective: Secure funding for required projects.

6A.3 Facilities

The water treatment process includes the collection of raw water from the well fields, conveyance to the Water Treatment Plant, chemical and physical treatment of the water, and storage of the finished product in ground storage tanks. The following paragraphs explain in more detail the primary processes and facilities utilized in this process.

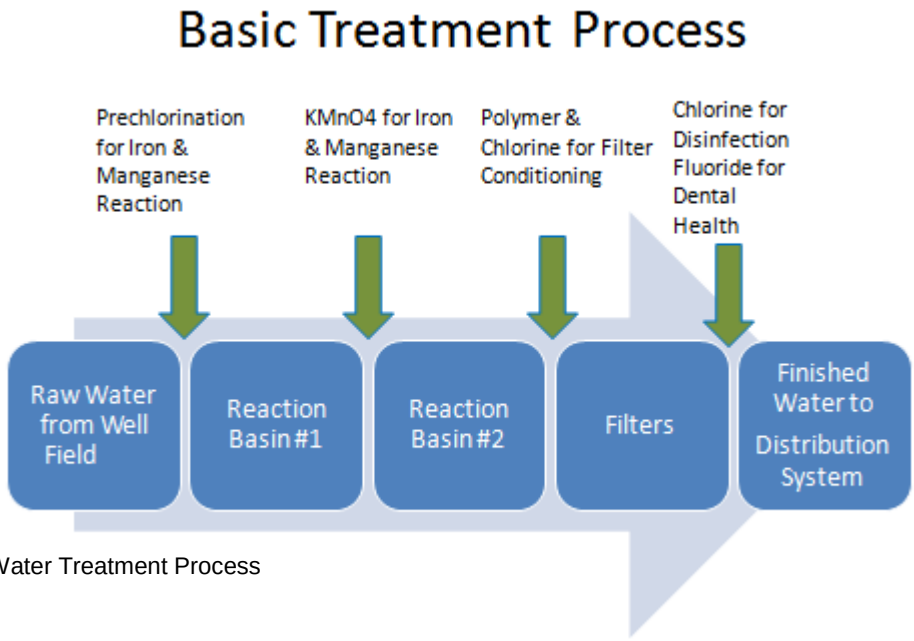


Figure 6A.1 Water Treatment Process

WELLFIELDS

Water treated by the plant is taken from two well fields located off Osborn Road which are collectively known as the Mad River Well Fields. The original well field was constructed in 1975 at the same time as the plant and has had two additional wells installed for a current total of five wells. The newer well field was completed in 2009 and currently features two wells. All of these wells are located in a high yielding aquifer that should support city needs well into the future. Like most groundwater, it does contain naturally occurring elements that can impact water quality. In our case the primary concerns are iron, manganese and hardness. Discussion of the treatment processes used to counter these aesthetic issues is contained in the following section.

Both well fields are equipped with stationary generators capable of automatically and fully operating the well fields for up to three days in the event of loss of commercial power.

Until 2016, all water from the Mad River Well Fields was conveyed to the Water Treatment Plant via a single raw water supply line built in 1975. That line passes beneath the Mad River and travels 2 miles to the plant. As recommended in the Water Master Plan, a secondary line was constructed that parallels

the existing line from the wellfield to the plant to provide both redundancy and additional conveyance capacity.

The division maintains a single backup well field. The North Well Field was developed over a period of time from the 1930's to 1960's and has four low yield wells. There have been past issues at this site of volatile organic chemical detection that was below the OEPA maximum contaminant levels (MCL's) but recent testing has not shown detection. This reduction may be due to a combination of reduced pumpage of the well field combined with groundwater remediation efforts at Wright-Patterson Air Force Base on land abutting the well field property.

Water from the North Well Field receives no treatment other than on-site chlorination. In a typical year, these wells account for less than 1 percent of the city's annual usage. The North Well Field is typically exercised by WTP staff monthly to assure that it is functioning properly. .

Well	Pumping Capacity (gallons per minute)	Year Installed
Mad River 1	1600	1975
Mad River 2	1600	1975
Mad River 3	800	1976
Mad River 5	1500	1990
Mad River 6	1600	1994
Mad River 8	2000	2009
Mad River 9	2000	2009
North Well Field 7	500	1954
North Well Field 8	350	1966
North Well Field 9	500	1966
North Well Field 11	500	1931
Total Capacity	18 MGD	

Figure 6A.2 Well Information

Goal: Assure ability to provide adequate quantities of water for treatment.

Routine Target Objective: Conduct redevelopment of wells on a routine basis to assure longevity.

Long Range Target Objective: Construct additional wells to meet future demand.

WATER TREATMENT PLANT

Over 3 million gallons of water are treated on an average day by the Water Treatment Plant. On high demand days such as during hot summer weather, major fires, or winter water breaks the plant may produce over 5 million gallons. Water is routinely analyzed to assure that it complies with all OEPA regulations and

plant standards. The plant is manned 8-hours a day but monitored and controlled 24-hours a day by a Supervisory Control and Data Acquisition System (SCADA) that has the ability to contact on-call personnel in the event of a potential problem.

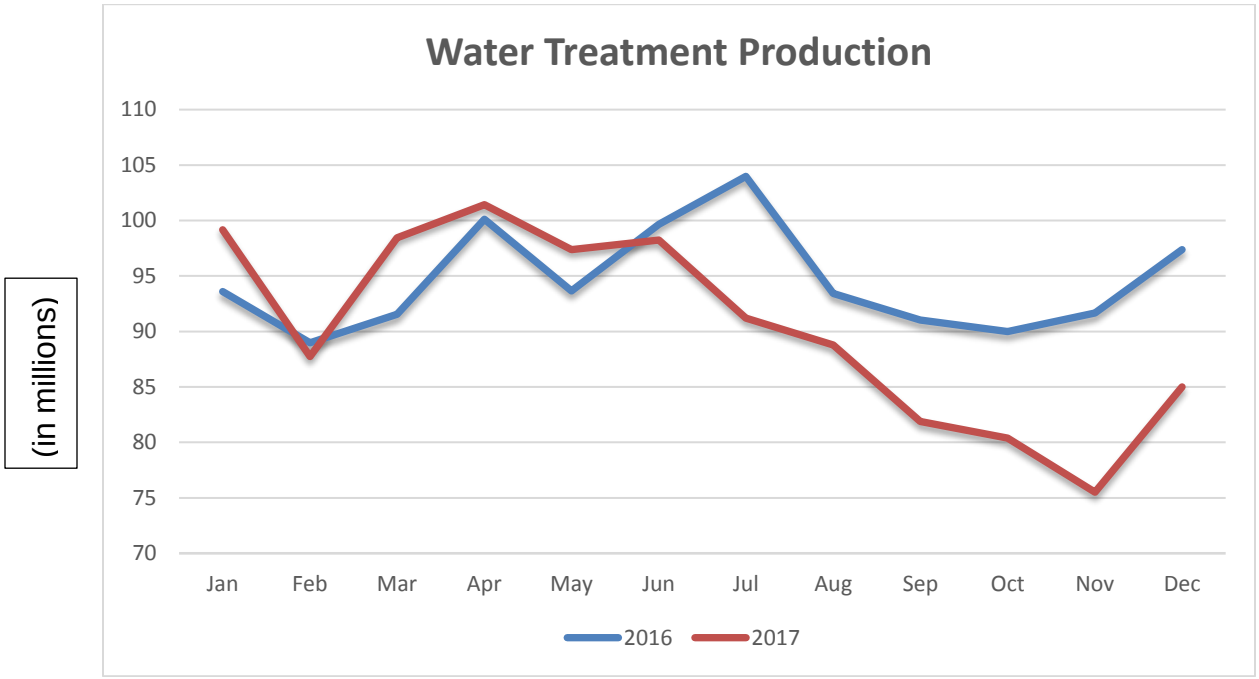


Figure 6A.3 Water Treatment Plant Production

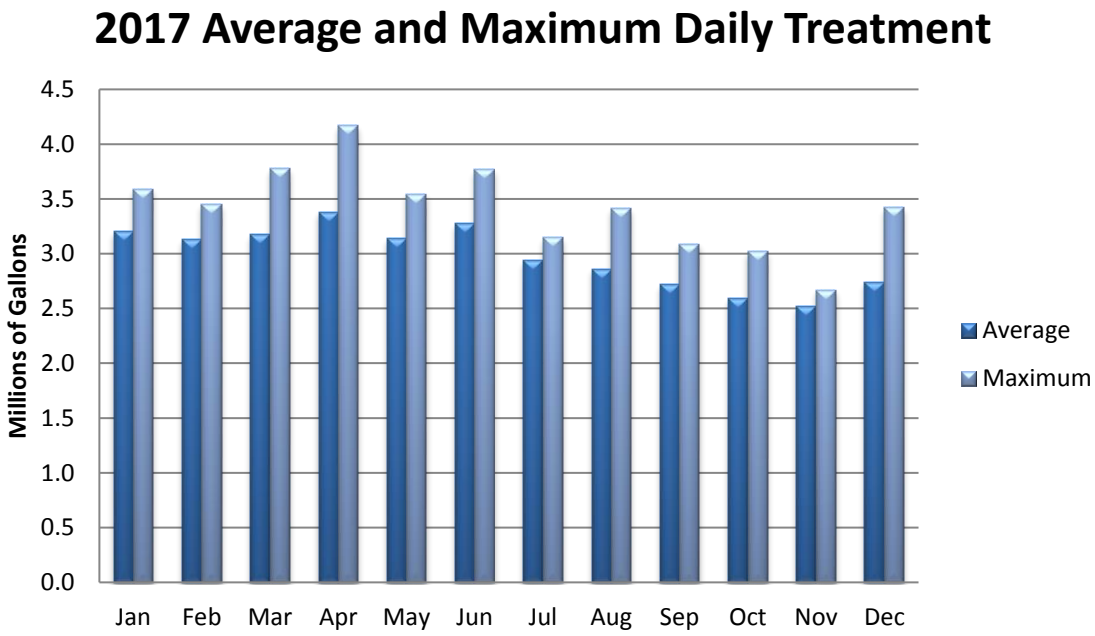


Figure 6A.4 Average and Maximum Daily Usage

The WTP SCADA system was upgraded in 2017. It monitors not only the treatment plant and well fields but also the water towers, booster stations, and lift stations. In 2014, remote capabilities were implemented to allow SCADA access throughout the plant and by off-site, on-call personnel through use of a tablet. This has improved operator efficiency and allows for monitoring of system conditions without necessitating a physical site visit.

Water enters the plant via the raw water line where it starts the treatment process in a reaction basin. Within the basin the oxidizing chemicals, chlorine and potassium permanganate (KMnO4), are added to react with the naturally occurring iron and manganese present in the groundwater. While not considered a health problem, both iron and manganese can cause aesthetic concerns in the water including suspended particulates and discolored water so it is desirable to remove them in the treatment process. Once the water leaves the reaction basin, it enters one of eight filters where the precipitated iron and manganese are removed. Fluoride for dental health and chlorine for disinfection purposes are added before the water leaves the plant. A schematic showing plant flow through is provided in Figure 6A.3

A chemical and bacteriological laboratory is maintained at the Water Treatment Plant to provide for process control and OEPA compliance. Operators are certified by the state to conduct basic laboratory procedures. Additionally, samples are analyzed for a fee for other entities requiring such services on an emergency basis. Required analysis that is more time consuming or that necessitates the use of hazardous material or expensive equipment is contracted out to private labs.

In support of the treatment process there is a wide array of piping, valves, process meters, chemical feed systems, and the SCADA system. Each has to be maintained in accordance to manufacturer's recommendations, OEPA requirements and/or industry standards.

The 2011 upgrade project included upsizing of influent and effluent piping, installation of a chlorine building which allows for additional chemical storage, and installation/replacement of pumps to allow for the higher pumpage. These efforts complemented an earlier study that resulted in OEPA approval of higher flow through the filters. In 2015, a stationary generator capable of running all aspects of the plant for up to three days was installed to provide for emergency operation in the event of the loss of commercial power.

In 2016, new roofing was installed on all areas of the plant which addressed major leakage issues that were experienced during rain events. Several large decorative windows original to the plant that served no useful purpose were replaced with insulated metal panels. It is anticipated that both improvements will improve the energy efficiency of the building. In 2018, the filter building windows will be replaced to further improve the energy efficiency of the building.

While the quality of water leaving the plant is greatly improved and OEPA standards are routinely met, there is still one major issue that could be addressed to further serve our citizens – softening. When the plant was originally built and again when it was expanded in the 1980's, the idea of softening was discussed but not pursued because it was a costly, labor intensive process. However, since that time, there have been improvements in

treatment techniques that offer not only softening, but also improved contaminant removal while still allowing for minimal plant manning. In this vein, it is the division's intent to consider membrane filtration or other technology as part of the next plant expansion. It is anticipated that undertaking this process may reduce our citizens' use of home softening devices, make the city more attractive to businesses considering locating here and improve our ability to meet future OEPA regulations for contaminant removal. A study was started in 2017 to analyze our water makeup, pilot test treatment methods, and assess potential costs and implementation considerations to assist in determining the best methodology for future plant upgrades. The study will be complete in 2018. The ensuing report will outline potential improvements that will be implemented into the five-year capital improvements plan.

Goal: Provide high quality finished water that meets all OEPA requirements.

Routine Target Objective: Assess and update existing infrastructure as needed to comply with OEPA requirements, meet current demands, and operate plant as efficiently as possible.

Current Target Objective: Complete a water treatment options study to assist in determining scope of future upgrades.

Long Range Target Objective: Improve water quality and quantity through plant expansion to include the use of state of the art treatment techniques that will enhance water aesthetics and meet future OEPA regulations.

Goal: Maintain the facility to ensure protection of treatment processes and longevity of asset

Routine Target Objective: Conduct routine facility maintenance.

Long Range Target Objective: Install an ADA Compliant Restroom to replace a single fixture facility with the next building upgrade.

Long Range Target Objective: Renew facility through replacement of original equipment

CLEARWELLS

There are two 1.5 million gallon ground storage tanks known as clearwells located at the Water Treatment Plant. The older unit was installed in 1989 and the newer unit in 2003. These tanks provide for storage of treated water to help meet high demand as well as providing contact time for the chlorine added for disinfection purposes. The clearwells are designed to operate in parallel although when needed, they can be operated singularly to allow for maintenance. In order to assure longevity, the tanks must be periodically internally cleaned and the exterior painted.

Goal: Provide for storage of finished water prior to being discharged to the distribution system.

Routine Target Objective: Maintain longevity of the clearwells through routine cleaning and painting.

SECTION 6B

Water Distribution

Statement of Strategic Function

To convey and store treated potable water in sufficient quantities and at adequate pressures to meet residential and business demands for both domestic and firefighting purposes.

6B.1 Introduction

Water is distributed to almost 13,000 homes and businesses for domestic purposes through a complex array of piping, valves, booster stations, water towers and water meters. Additionally this same system supplies and stores surplus water for firefighting purposes. The system must meet Ohio Environmental Protection Agency (OEPA) requirements for a wide variety of regulated parameters including adequate pressure, disinfection, and backflow prevention. In addition, the system is evaluated by the Insurance Services Office (ISO) to assure its ability to provide adequate water needed to suppress fires. The most recent evaluations by both the OEPA and ISO showed that Fairborn's distribution system consistently meets or exceeds the standards set by these organizations.

6B.2 Long Range Planning

Long range planning for the distribution system is not an exact science as there are outside factors that impact how and when the system should grow. These include but are not limited to: growth projections versus actual growth, OEPA mandates, aging infrastructure, and monetary restraints. Additionally, if facilities are built too early they may experience underuse that can lead to water stagnation, but if they are built too late the ability to meet new demand can be hampered.

However, we do have tools that help to guide us in developing these plans. In 2016, a Water System Master Plan was completed that outlines recommended improvements to meet anticipated growth for the next 20 years. As part of this effort, the distribution model was also updated. The model helps identify areas of concern as well as providing a computer based means of evaluating the impact of future development on the existing system. It is also important to work closely with Community Development, Economic Development and Engineering in determining potential development areas.

Goal: Develop a five year plan that provides potable water in adequate quantity and pressure to meet growth demands.

Current Target Objective: Implement the findings of the Water Master Plan through capital planning, operational assessment and budgeting.

Long Range Target Objective: Determine needs and establish appropriate projects based on projected growth.

Long Range Target Objective: Secure funding for required projects.

6B.3 Facilities

The water distribution system has three pressure zones (low, medium and high). Each zone has its own pumping and storage facilities. These facilities are monitored 24 hours a day via a Supervisory Control and Data Acquisition (SCADA) system. When operation deviates from set standards, the SCADA is connected to an automatic notification system that contacts the appropriate personnel who have the ability to remotely access the SCADA system via ipads. All system components are described more fully in the following paragraphs.

BOOSTER STATIONS

Pumps in these facilities increase pressure in the distribution system or supply water to elevated storage tanks. The city has four pumping stations.

Low Service Booster Station

This station is located at the City's Water Treatment Plant. It pumps treated water from the plant's clearwells into a 24-inch diameter transmission line that carries the water to the low service area. Its automatic control is from the level of water in the Fairfield Park storage tank. This station shares the Water Treatment Plant generator to automatically provide electricity in the event there is an interruption in DP&L's service. A fifth pump was added in 2015 to provide additional pumping capacity and redundancy.

Pump No.	Pumping Capabilities
1	950 gpm
2	950 gpm
3	950 gpm
4	950 gpm
5	950 gpm
	4550 GPM
TOTAL	6.55 MGD

Figure 6B.1 Low Service Booster Station

Plant Medium Service Booster Station

This station is located across the street from the City's Water Treatment Plant on Sandhill Road. It pumps treated water from the plant's clearwells into a 30-inch diameter transmission line which carries the water to the medium service area of the system. Its automatic control is from the level of water in the Rona Hills storage tank. In 2011, as part of the Water Treatment Plant improvement project, a fourth pump was added to increase the station's capacity and provide redundancy. In 2015, a diesel stationary generator was installed that allows for automatic transfer in the event of the loss of commercial power. This replaced the need for deployment of a manually connected portable generator during such situations.

Pump No.	Pumping Capabilities
1	900 gpm
2	750 gpm
3	750 gpm
4	1000 gpm
TOTAL	2400 GPM
	4.89 MGD

Figure 6B.2 Plant Medium Booster Station

South Maple Booster (System Medium Service) Booster Station

This station is located in a former fire station on South Maple Avenue, just north of Doris Drive. It pumps water from the low service area to the medium service area of the system. It helps to maintain adequate water levels in the Five Points storage tanks. Because of this station's configuration, it is not possible to house a stationary generator on site but a portable generator capable of fully operating the station was purchased in 2016. This station is controlled automatically from the water level in the Five Points storage tanks. A roofing and window replacement project was completed in 2017 to address age and leak conditions.

Pump No.	Pumping Capabilities
1	650 gpm
2	650 gpm
TOTAL	1300 GPM
	1.87 MGD

Figure 6B.3 S. Maple Booster Station

Kauffman Booster

This station is located on Kauffman Avenue adjacent to the Wright State University campus. It pumps water from the medium service area to the high service area. It is automatically controlled by the level of water in the Southwest storage tank. Stand-by power is provided by a stationary natural gas generator.

Pump No.	Pumping Capabilities
1	550 gpm
2	550 gpm
3	650 gpm
TOTAL	1750 GPM
	2.52 MGD

Figure 6B.4 Kauffman Booster Station

Rona Village Booster Station

Because of its elevation and proximity to the Rona Hills ground storage tank, the Rona Village area had historically had pressure that met OEPA standards but not the aesthetic desires of the residents. To address this concern, this station was built in 2013. It boosts pressure approximately 15 psi bringing the area's pressure to a better level for domestic and firefighting purposes.

Goal: Assure ability to pump quantities needed to meet demands of each pressure area and maintain facilities to prolong useful life.

Routine Target Objective: Conduct routine maintenance on each station to assure longevity of equipment.

Routine Target Objective: Assess station equipment and facilities and budget/plan for replacement/renovation as needed.

Long Range Target Objective: Assess pumping capabilities and design/construct station additions and/or new facilities as needed.

Long Range Target Objective: Install a stationary generator at Rona Village Booster Station to allow for automatic operation during commercial power loss.

SYSTEM STORAGE TANKS


Water towers provide the ability to store large quantities of water to meet domestic and firefighting demands. Additionally, because of their height they also provide pressure to the distribution system. The City has five water towers as illustrated in Figure 6B.5. Routine painting and maintenance of the towers, typically on a 15-20 year cycle, is necessary to maintain their life. In 2014, both Fairfield Park and Rona Hills Tanks were painted and in 2016 Southwest Tank was painted including incorporation of the city's new logo. Five Points Tanks are scheduled to be drained, inspected, and painted in 2018. As recommended by the Water Master Plan, another storage tank in the low service area will be designed in 2018.

Tank Name	Location	Type	Year Built	Capacity
Rona Hills (Medium Service)	Adjacent to Rona Hills Condominiums	Ground	1976	2 MG
Five Points – Large (Medium Service)	Adjacent to Fairborn Primary School	Elevated	1988	0.75 MG
Five Points – Small (Medium Service)	Adjacent to Fairborn Primary School	Elevated	1968	0.25 MG
Fairfield Park Tank (Low Service)	Fairfield Park	Elevated	1993	0.5 MG
Southwest Tank (High Service)	Wright Office Park adjacent to I-675	Elevated	1986	0.5 MG

Figure 6B.5 Water Storage Tanks

Goal: Assure adequate storage is available to meet domestic and firefighting demands.

Routine Target Objective: Assess each water tower every five years to determine condition and need for maintenance to assure continued use.

Current Target Objective: Design a second low service water tower in Fairfield Park to allow for additional storage and redundancy.

Current Target Objective: Paint the Five Points Water Towers ahead of the new primary school construction.

Long Range Target Objective: Design and construct a second high service water tower to allow for additional storage and redundancy.

Long Range Target Objective: Undertake painting and maintenance for each tower based on results of condition assessment. Generally this will follow a 15 to 20 year cycle for each tank. Although this maintenance needs to occur on a fairly regular schedule, because of its cost it is included in long range planning.

Long Range Target Objective: Assess storage capabilities and design/ construct additional storage when warranted.

FIRE HYDRANTS

Water for firefighting purposes is accessed by way of fire hydrants installed throughout the system. There are currently close to 1500 fire hydrants in place of varying ages (see Figure 6B.6). Hydrants are flushed each year to assure they are operational, determine need for repair and/or replacement and to improve water quality. This endeavor takes over a month with crews working 24 hours a day, 5 days a week.

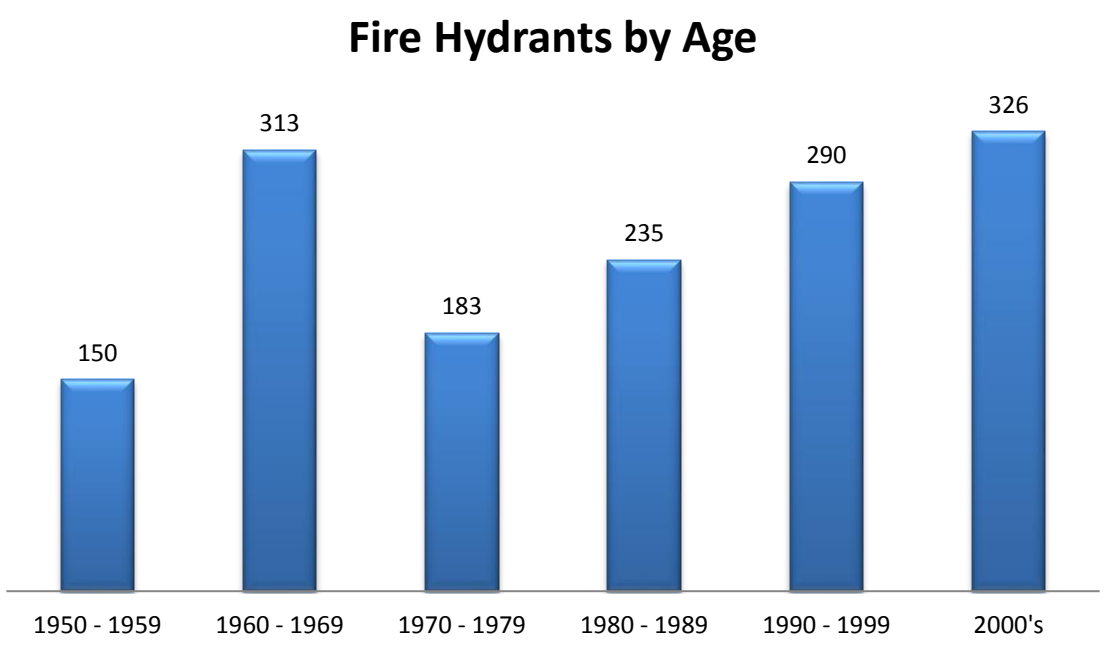


Figure 6B.6 Fire Hydrant Ages

In the past the Fire Department would follow behind the flushing crew to perform flow testing in a targeted area. The data gathered is important for City fire planning and private design of fire suppression systems. It is, however, a very labor intensive undertaking as it requires the use of two hydrants with each being closely monitored at the same time for an extended period of time so at least two employees are needed for each test.

The Fire Department no longer performs this function as they have found that it is not currently required by the Insurance Services Office (ISO) for public protection classification, a system used in determining fire insurance rates for a community. With normal and emergency maintenance demands, an aggressive rehabilitation program on streets targeted under the City's street program, 14 facilities to maintain and other division initiatives, the Water and Sewer Division does not have the personnel to undertake the labor intensive program either. With so many newer areas of town, a long range planning goal would be to have a hydrant flow testing program with an emphasis on new developments. Such a program would either require additional personnel, use of summer interns or contracting out to a firm that does such work. Additionally, the division desires to use GPS to get physical data for each hydrant so that it can be included in the city's GIS system.

Goal: Assure fire hydrants are operational.

Routine Target Objective: Assess each hydrant on an annual basis to determine maintenance needs.

Routine Target Objective: Follow up on all hydrants found to be deficient during hydrant flushing by repair and/or replacement.

Routine Target Objective: Repair all hydrants damaged by vehicular accidents, misuse or other events.

Current Target Objective: Locate all hydrants using GPS and integrate data into the GIS system.

Long Range Target Objective: Flow test hydrants on a routine basis.

Long Range Target Objective: Replace fire hydrants that are more than 50 years old.

WATER VALVES

There are over 4,000 water main valves in the distribution system. These are used to regulate flow, isolate systems for maintenance, and provide water to each fire hydrant. In addition, there are almost 12,000 service valves located in the right of way used to shut water on and off to customers for start/stop of service, customer repairs and non-payment issues. Valve ages range from greater than 60 years old to brand new.

While the division repairs defective valves when found (see figure 6B.7 for a summary of recent repairs), it is likely that there are many more problematic units based on the age of the system. In recent years in conjunction with the street program, each water main valve on a street targeted for repair is operated to determine functionality and if needed, repaired or replaced prior to commencement of the street program work.

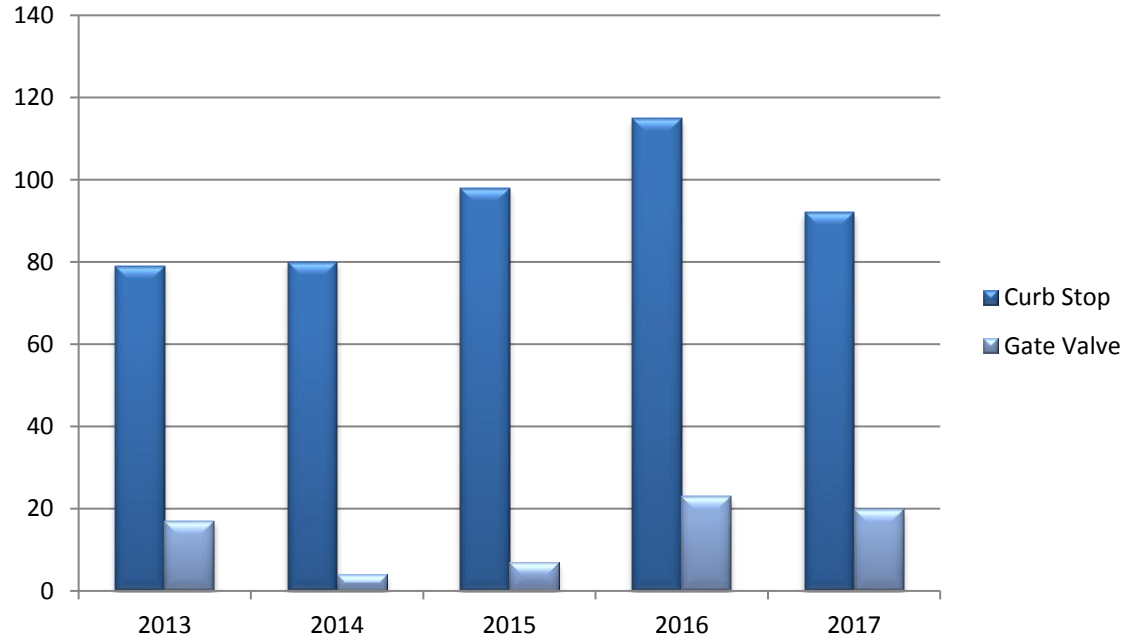


Figure 6B.7 Valve Repairs

The division maintains records on each valve location. Currently these are based on measurements from physical markers (such as buildings, edge of road, etc.) so if changes occur (such as building demolition, road re-profiling, etc.) our measurements are no longer valid. It is the intent to perform in-house GPS locating of valves using service workers as part of the identified reorganization goals. This information will then be integrated into the GIS mapping system for improved field locating.

Goal: Assure water valves are operational.

Routine Target Objective: Replace defective valves when found.

Long Range Target Objective: Install additional valves to provide for better isolation in areas with limited valving.

Current Target Objective: Locate valves using GPS technology and integrate into the GIS system.

Current Target Objective: Undertake a comprehensive valve operation program.

Current Target Objective: Replace valve turning machine.

WATER MAINS

There are approximately 155 miles of water main in the distribution system. Because our city, like most, has developed over a long period of time, there is a variety of pipe material (See Figure 6B.8) and pipe sizes (3” to 30”) in place. Today, the preferred material is ductile iron pipe at a minimum size of 6”. Additionally, when areas are developed, the City will pay to oversize the pipe if it will make future development in the area easier.

Having undersized pipes can pose a problem in providing water during high demand situations such as a structure fire. As part of our long range planning, we work with the Engineering Division to identify those areas of concern and replace them with larger pipe.

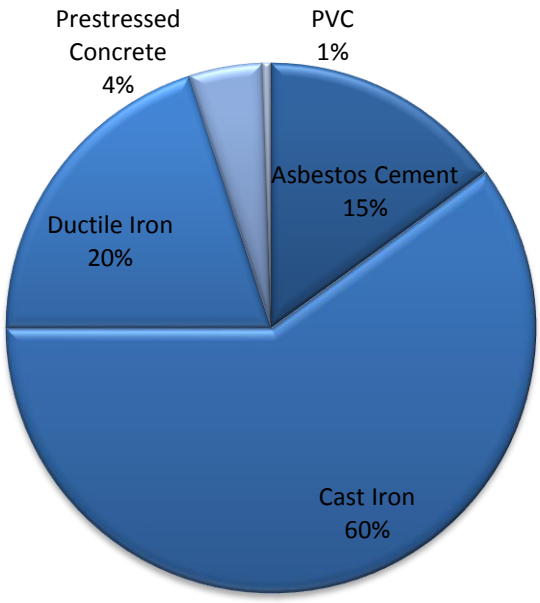


Figure 6B.8 Water Main Pipe Material

Since they are buried, it is difficult to assess the condition of water mains until an actual problem surfaces - normally in the form of a water main break. Every year there are a number of water main breaks associated with deteriorated pipe and ground shifts caused by freezing and thawing or droughts. This number fluctuates annually depending on conditions, but in an average year the division responds to more than 40 emergency events. However, not all breaks surface by themselves and may go undetected. In 2017, a whole system leak detection survey was performed. It identified approximately 300,000 gallons of unsurfaced water system leaks. As a result division personnel repaired water main breaks, fire hydrants and service leaks during normal work hours rather than on an emergency basis. A similar survey is planned for 2019

Because of age and material types, future planning will need to look at replacement of older cast iron and asbestos cement pipes with hardier ductile iron pipe. As you can see from Figure 6B.3 this could be a very costly and time consuming endeavor and may have to be undertaken based on failure rates (i.e. water main breaks) of particular lines. In recent years, efforts have been undertaken to replace water mains that have experienced frequent failures. This has resulted in projects on Funderburg, Sunset, Oakhill, Blossom, Ohio and Ramona. Future projects are being planned (such as Xenia and Maple Ave.) to coincide with major street renovation projects.

The hydrant flushing mentioned earlier not only allows us to check the operation of each fire hydrant, it also helps improve water quality in the mains by removing naturally occurring build-up from the sides of the pipe. It is also one of the standards checked during ISO surveys.

In an effort to enhance the City's ability to support residential and commercial growth, monies are identified in the capital plan annually for upsizing of water mains associated with developments. In addition, in areas of anticipated or potential growth projects are identified to groom these areas for successful outcomes.

Goal: Assure water mains are adequately sized and in good repair.

Routine Target Objective: Repair water main breaks when found.

Routine Target Objective: Provide funding for water main upsizing.

Current Target Objective: Construction phase of Rona Hills Looping project.

Long Range Target Objective: Replace 4" and smaller water mains.

Long Range Target Objective: Continue replacing cast iron and asbestos cement water mains.

Long Range Target Objective: Support future growth through expansion of the distribution system as appropriate.

Long Target Objective: Conduct whole system leak surveys on a regular basis

WATER METERS

Water meters provide a means of measuring how much water is used by customers to allow for appropriate billing for both water and sewer usage. The size of the meter installed is based on the amount of water needed to service the location. There are currently over 13,000. As demonstrated in Figure 6B.5, the majority of meters installed are 5/8" x 3/4" as this is the typical meter used for a single family home installation. While our commercial customers typically have a higher administrative cost based on the size of their meter, the rate per 1000 cubic feet is the same for all customers. Unlike some larger cities with either very large industrial customers with extreme usage or a higher percentage ratio of commercial to residential customers, Fairborn is unable to offset the residential customer usage rate.

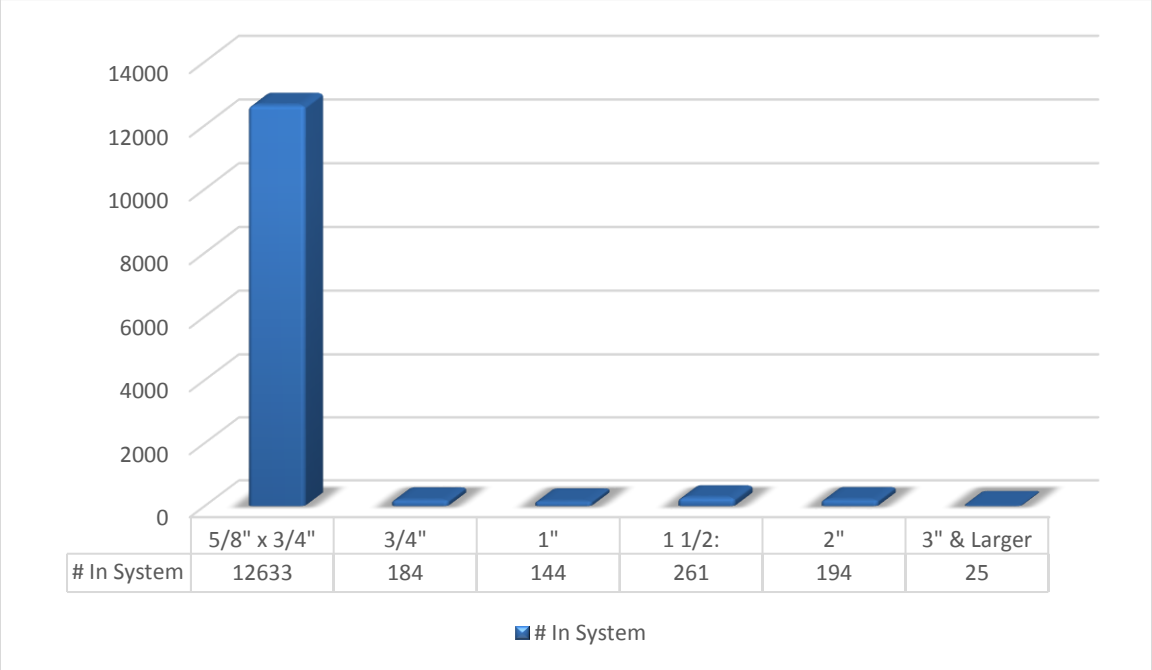


Figure 6B.9 Meter Sizes

In 1999, the City installed a mobile meter reading system. It replaced labor-intensive and inefficient manual reading with a drive-by system. It was estimated that prior to these improvements only 29% of bills were based on actual readings with many meters going unread for a year or more. With the mobile system, every meter could be read every month without the meter serviceman ever having to leave the van.

Even with the long life batteries installed in the meter interface units that send the data to the mobile collection unit, they have reached the end of their projected useful life and failures were starting to occur on a routine basis. With this in mind, a project was developed to upgrade the system to address this concern and to update the reading equipment to newer technology. As part of that effort, a cross section of meters were tested and found to still be within industry standards for accuracy so they will be maintained with the current upgrade.

Implementation of the new system started in early 2017 and will be complete by June of 2018. The new system will migrate reading from a mobile system to a fixed base system. It will allow for more frequent readings which will help identify potential problems such as leaks, theft of service, and backward usage; capture of on demand readings for start and stop of service; availability of usage information to users through a customer portal, and a variety of reports that will be beneficial for gauging overall distribution system conditions.

Goal: Accurately measure quantity of water used by each customer and provide a monthly bill based on an actual reading.

Routine Target Objective: Troubleshoot and replace meters and/or reading technology as needed.

Routine Target Objective: Attain readings for all meters to allow for monthly billing.

Current Target Objective: Complete migration to a fixed based system that will allow for completely automated meter reading and customer service improvements.

Long Range Target Objective: Plan for meter replacement in 15-20 years.

SECTION 7A

Water Reclamation Center

Statement of Strategic Function

Reclaiming environmentally unsuitable water received from domestic and commercial activities in accordance with Ohio Environmental Protection Agency (OEPA) regulations by separating water borne material and discharging the cleansed water to the Mad River; converting the separated water borne material into usable products to the maximum extent practical and ensuring they are productively used; appropriate disposal of resulting waste material; and carrying out all functions at minimum cost.

7A.1 Introduction

The Fairborn Water Reclamation Center (WRC) is an advanced secondary treatment activated sludge system with biological nutrient removal (BNR) and ultraviolet (UV) disinfection. The system has a 6 million gallon per day (MGD) average daily flow capacity designed to treat 9,558 lbs/day biological oxygen demand (BOD_5) and 1201 lbs/day ammonia (NH_4) and has a 16 MGD peak hydraulic capacity to treat large rain events. The WRC reclaims more than a billion gallons of wastewater per year. That's enough to make a circular lake a mile across and eight feet deep. The material removed from the water produces approximately 3500 tons of nutrient rich, organic material that is currently transferred to Renergy (renewable energy) facilities to convert the material to natural gas and soil amendments that are applied to farm fields.

The plant is staffed 9-hours a day Monday through Friday and 4-hours a day on Saturday and Sunday but monitored and controlled 24-hours a day by a Supervisory Control and Data Acquisition System (SCADA) that has the ability to contact on-call personnel in the event of a potential problem. The current SCADA system was put in place in 2003. It monitors the treatment plant, the Influent Pump Station, and as of 2016, the Northwest Pump Station. In 2012, remote capabilities were implemented to allow SCADA access by off-site, on-call personnel through use of an I-Pad. The I-Pad access allows the on call person to assess an alarm(s), in some instances to take corrective actions from his/her current position, and to assess whether or not someone has to report to the plant after hours or if the issue can wait until normal duty hours to be addressed. Additional improvements are in progress to combine the entire water treatment, collections, and wastewater treatment systems into one compatible system and includes upgrades to the

current WRC SCADA to provide additional real time data during off duty hours. The update will upgrade the software to a current Windows application.

7A.2 Long Range Planning

Long range planning for the wastewater reclamation treatment system is based on the most current estimate of Fairborn's growth, coordination with Community Development and Engineering, current and anticipated Ohio EPA rules and mandates, recommendations from the 2015 WRC Master Plan, and the age and condition of existing infrastructure. The planning takes into account the long lead times associated with the design and construction of system modifications and expansions to ensure appropriately configured systems with sufficient capacity are on line in time to meet growth demands and/or more stringent State and Federal regulations.

Goal: Develop a five year plan to ensure the WRC can treat wastewater generated by our present and future residential and commercial customers, ensure the level of treatment complies with current regulations as well as preparing for future, more stringent regulatory requirements, and do so at the lowest practical cost.

Current Target Objective: Implement the findings of the Wastewater Master Plan through capital planning, operational assessment and budgeting.

Long Range Target Objective: Determine needs, assess new technology, and establish appropriate projects based on projected growth, regulatory requirements, and life cycle cost considerations. Develop an implementation schedule and secure funding for required projects.

7A.3 Facilities

Water reclamation is a 24 hours/day, 365 days/year process that consists of both mechanical removal of material from wastewater and biological treatment. Wastewater is conveyed via sewer mains and lift stations to the plant where it enters the Screening Building/Grit Channels which remove trash. The wastewater proceeds via gravity to an influent splitter box where it is inoculated with naturally present soil and water bacteria before flowing into oxidation tanks where the bacteria reproduce and use the contaminants as a food source. The flow then goes to clarifier tanks where the bacteria adhere to each other forming organic masses that sink to the tank bottom and are removed. The clean water overflows the top of the tank, flows through an ultraviolet (UV) disinfection process, and ultimately discharges to the Mad River. The various steps are described more fully in the following paragraphs.

EMERGENCY ELECTRICAL GENERATOR

The WRC treatment system includes a stationary diesel generator capable of running the entire WRC (including future expansions) in the event of loss of power from DP&L.

Goal: Maximize longevity.

Routine Target Objective: Conduct preventative maintenance.

WASTEWATER PUMP STATIONS

Pump stations pump the wastewater until it reaches a height to allow gravity to convey it to the next phase of travel or treatment. One pump station (Northwest Pump Station) is located in close proximity to the WRC and another (Influent Pump Station) is located on site. Both are covered in this Section. The remaining four stations are located within the neighborhoods they service and are discussed in Section 7B. All stations are primarily maintained by WRC personnel.

Northwest Pump Station

This station is located at 4600 Upper Valley Road in Bath Township about one mile south of the WRC and pumps wastewater from the southern portion of the City. The wastewater is pumped to a force main and into the Screening Building where treatment begins.

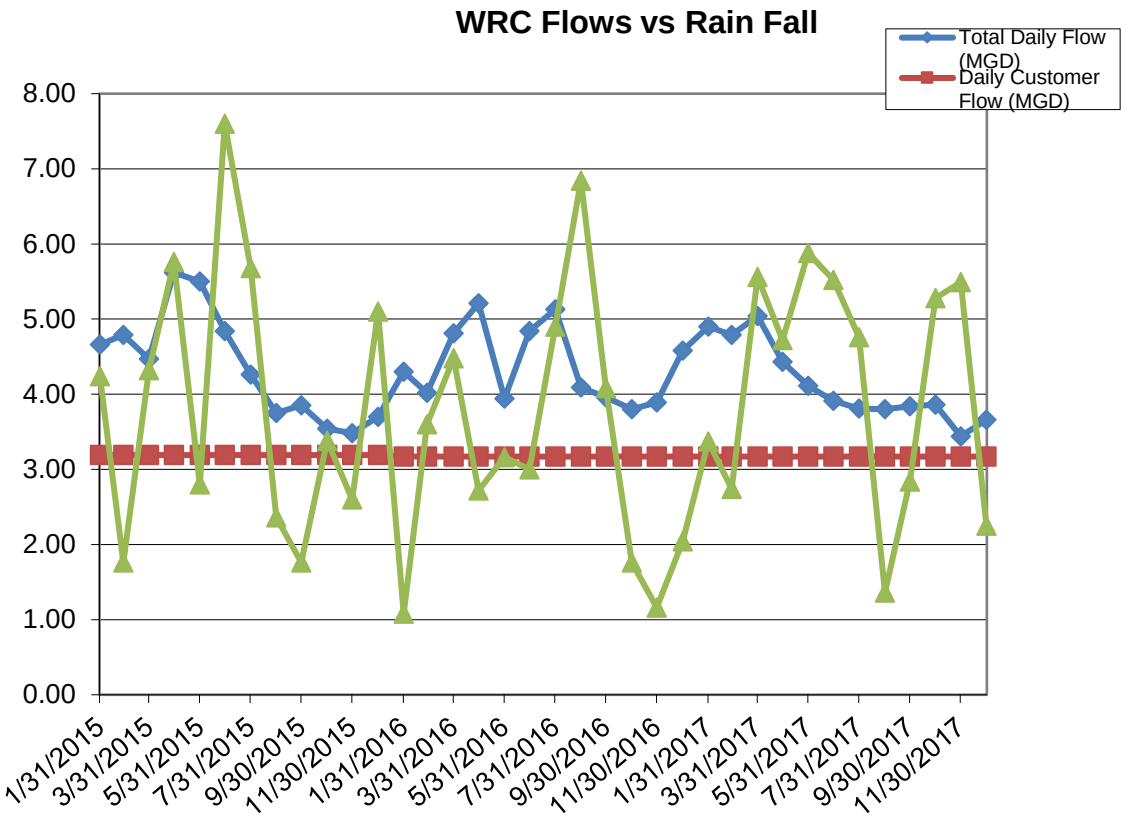
This facility went on line in the early 1970's. Although the structure is sound many components were approaching the end of their operational lives as well as being energy inefficient, and the station periodically exceeded its rated capacity to cope with rain events. In addition, the force main that conveys wastewater from the station to the WRC had experienced significant pipe failures requiring emergency repairs and was nearing capacity. In 2016 construction was completed that included renovation of the station (high capacity, energy efficient pumps, automated controls, etc.), the addition of a new, 24 inch force main, and fiber optic connectivity to the WRC to allow for communication with the WRC SCADA System. These improvements increased the station's peak pumping capacity from 6.5 MGD to 15.8 MGD. In addition, a non-functioning emergency generator was replaced with a new diesel unit capable of fully operating the station. These improvements ensure the station will meet Fairborn's needs for the foreseeable future.

Influent Pump Station

This station is located at the WRC and pumps wastewater from the northern portion of the City. The wastewater is pumped directly into the Screening Building where treatment begins. This pump station became operational in July 2009 and has a projected 50 year operational life. A diesel generator capable of fully operating the station as well as the rest of the WRC is in place.

The stations are designed to pump the normal daily flow discharged by Fairborn's customers as well as peak flows that can occur as a result of inflow from rain events or infiltration from excess groundwater. The following figure derived from actual measurements recorded at the WRC demonstrates how rain events affect the flow entering the WRC for treatment. The actual daily customer flow in

2017 averaged about 4.36 MGD. However, the total daily flow (averaged by calendar month) has been as high as 5.75 MGD and the highest flow ever documented for a 24 hour period (May 3, 2011) was 12.52 MGD. Large rain events can cause the daily flow to triple.



Goal: Assure ability to pump and treat both dry and wet weather wastewater flows.

Routine Target Objective: Conduct preventative maintenance on each station to assure longevity of equipment.

Current Target Objective: Assess operation of the upgraded Northwest Pump Station to ensure programming is such that pumps are operating in their optimum range.

Long Range Target Objective: Assess pumping capabilities and design or construct station additions and/or new facilities as needed.

SCREEN BUILDING/GRIT CHANNELS

The mechanical trash removal consists of two fine screen vertical conveyor devices that collect trash (paper, pieces of wood, plastic, bits of cloth, etc.) as the flow passes, lift the material up out of the flow allowing excess water to drain back into the incoming flow, and drop the material onto a horizontal screw conveyor that squeezes out excess water and dumps the dewatered material into a trash receptacle. The flow then enters two aerated grit channels where the air bubbles and flow velocity keep organic, biodegradable material in suspension while sand, pebbles, bits of glass and metal, etc. settle to the bottom of the channels and are removed, drained of water, and dumped into a trash receptacle. Both processes are fully automated. The trash is hauled to a landfill and the wastewater flows, via gravity, to the influent diversion box.

One of the fine screens was approaching the end of its operational life. It has been replaced in conjunction with the NW Lift Station improvement project with a new, improved technology screen that removes more trash, requires less maintenance, and has a lower life cycle cost. Installation was completed in 2016. The other fine screen has been in operation for more than 10 years and though it is still fully functional it is in need of an overhaul to extend its operational life. The overhaul will be completed in 2018.

The concrete structure of the grit channels is need of repair due to age and the harsh operational environment. Repairs will completed in 2018.

Goal: Remove trash and grit as effectively and efficiently as practical.

Routine Target Objective: Conduct preventative maintenance to assure longevity of equipment.

Current Target Objective: Refurbish 10+ year old screen and repair grit channel concrete structures to ensure proper operation and extend operational life.

Long Range Target Objective: Monitor performance and equipment condition to maximize operation and ensure capacity exists to treat peak flows.

INFLUENT SPLITTER BOX

After trash removal, the influent splitter box mixes incoming wastewater with naturally occurring soil and water bacteria, referred to as return activated sludge (RAS) and then discharges the mixture to one, two, or all three primary oxidation tanks, depending on flow volume. To reduce costs the minimum number of units required to treat incoming flow are put on line. The flow is apportioned to the tanks via vertical adjustments of the gates inside the splitter box.

Goal:

Routine Target Objective: Conduct preventative maintenance to assure longevity of equipment.

Long Range Target Objective: Address conditions of concrete splitter box.

Long Range Target Objective: Ensure capacity exists to direct peak flows.

OXIDATION TANKS

The system has the capacity to treat up to 6 MGD. There are three primary oxidation tanks (referred to as Oxidation Tanks 1, 2, and 3) that take flow from the splitter box and discharge to one larger secondary oxidation tank (referred to as Oxidation Tank 4). Tanks 1 – 3 are approximately 50 years old and Tank 4 is approximately 30 years old. The Wastewater Master Plan identified areas of structural concern. The design effort to address these issues is complete and construction will be completed in 2018.

Air input adjustments to create the environments needed in the various areas of the tanks are controlled by the SCADA system. A limited number of SCADA integrated sensors measure nutrient levels and collect data used by the Operators to ensure current permit limits are not exceeded. Additional sensors to control dissolved oxygen (DO) concentrations in the different channels of the tanks as well as a backup nutrient removal system will be needed to meet anticipated 2021 Ohio EPA nutrient limits. The Wastewater Master Plan identifies recommended improvements that will optimize performance and energy consumption as well as meet future regulatory requirements.

Goal: Meet treatment criteria specified in the Ohio EPA discharge permit.

Routine Target Objective: Conduct preventative maintenance to assure longevity of equipment.

Current Target Objective: Complete structural improvements to assure continued longevity and operator safety.

Long Range Target Objective: Upgrade sensors/automation to ensure regulatory requirements are met.

Long Range Target Objective: Ensure capacity exists to treat peak flows.

CLARIFIER SPLITTER BOX

Flow from Oxidation Tank 4 is directed to one or both of the two clarifier tanks, depending on flow volume. Flow is controlled via vertical gates that can be raised or lowered as required.

Goal: Maximize longevity.

Routine Target Objective: Conduct preventative maintenance to assure longevity of equipment.

Long Range Target Objective: When appropriate, replace existing gates with better designed, lower life cycle cost replacements.

CLARIFIER TANKS

The flow entering the clarifier tanks is not agitated or disturbed thus allowing most water currents to dissipate. In this calm environment the organic biomass grown in the oxidation tanks settles to the bottom and the cleansed water that flows off the tank top is collected in the circular trough around each clarifier and discharged to the UV disinfection system.

The settled organic biomass is then split into two streams: a portion is pumped to the Influent Splitter Box to inoculate incoming wastewater and a portion is pumped to aerobic digesters for removal from the treatment system.

The drive motors and rake arms on both clarifiers have been replaced thus extending operational life at least 2035. In 2019 metal surfaces will have old paint removed, perforations repaired, and the surfaces will be coated with a protective coating to extend their operational life.

Anticipated future Ohio EPA regulatory changes requiring increased phosphorus and nitrogen removal indicate the potential need for a third clarifier. The Wastewater Master Plan suggests that the unit may be needed in the 5-10 year planning period.

Goal: Ensure capacity exists to cope with peak flows.

Routine Target Objective: Conduct preventative maintenance to assure longevity of equipment.

Current Target Objective: Extend useful life of metal surfaces by having a third party apply a protective coating.

Current Target Objective: Complete construction phase of Oxidation Ditch Improvements Project.

Long Range Target Objective: Add a third clarifier when required to meet more restrictive EPA directed biological nutrient removal requirement and/or to accommodate City growth.

RETURN PUMP BUILDING

The Return Pump Building houses the 3 pump system that pumps the organic biomass (as described above). The building also houses the non-potable water system that provides groundwater for the treatment process and reduces the cost of the process water that would otherwise be purchased from Huber Heights.

Goal: Maximize longevity.

Routine Target Objective: Conduct preventative maintenance to assure longevity of equipment.

Long Range Target Objective: Ensure sufficient pumping capacity.

Ultraviolet (UV) DISINFECTION SYSTEM

The UV disinfection system consists of a number of modules that contain numerous side by side UV lamps (similar in appearance to fluorescent bulbs) oriented vertically and perpendicular to the direction of flow. The UV light is at a specific wavelength chosen for its capability to damage bacterial and viral genetic material rendering them incapable of reproduction and, therefore, harmless.

Given operational life, hydraulic capacity considerations and flood vulnerability, the UV system is recommended for improvements in conjunction with other effluent improvements in the 2019 – 2023 planning period.

Goal: Maximize longevity.

Routine Target Objective: Conduct preventative maintenance to assure longevity of equipment.

Long Range Target Objective: Design and install a new system to assure ability to meet demands and reduce vulnerability to river flooding.

AEROBIC DIGESTER COMPLEX

The complex consists of the four digester tanks, the aeration/mixing systems, and the building housing the blowers, pumps, and associated equipment. The organic biomass removed from the bottom of the clarifiers is pumped into these tanks and electrically powered blowers/mixers sequence as required to blow atmospheric air through the mixture to reduce the mass of the organic material present (they consume themselves) or stop to allow solids to settle and clear liquid to return to the treatment system. This is done to reduce the cost of transporting biomass to other facilities for beneficial reuse.

New blowers, associated electrical controls, and building climate control are in the process of being replaced on Digesters 1 and 2 to address age and efficiency concerns. The two new units are high efficiency to reduce operational costs and improve maintainability.

Goal: Maximize longevity.

Routine Target Objective: Conduct preventative maintenance to assure longevity of equipment.

Current Target Objective: Complete replacement of the digester blowers.

Long Range Target Objective: Ensure sufficient treatment capacity.

CONCENTRATION BUILDING/BELT PRESS/CONVEYOR SYSTEM

The Concentration Building houses the belt press and associated sub-systems. The belt press removes as much water from the biomass as possible to allow for further processing and to further reduce processing costs. The conveyor system moves the biomass into the Biosolids Processing/Storage Building for further processing, for landfill disposal, or for further processing at another facility (whichever is most cost effective). The current most cost effective approach is transfer to another facility for further processing.

The current belt press was purchased in 2003 and has experienced significant operational issues. The dewatered material from the belt press previously went to a cleated belt conveyor that was required with a previously used process. This unit had a catastrophic failure and is currently replaced with a portable conveyer belt. A construction project will be completed in late 2018 that includes removing obsolete/inoperative equipment, adding a new higher capacity belt press, replacing obsolete pumps with new high efficiency pumps, replacing the conveyance system, and adding piping to allow for the simultaneous transfer of biomass to and from Digesters 3 and 4.

Goal: Ensure sufficient processing capacity.

Routine Target Objective: Conduct preventative maintenance to assure longevity of equipment.

Current Target Objective: Complete design/construction project to upgrade solids dewatering and conveyance systems.

Long Range Target Objective: Monitor technological advances and regulatory requirements and upgrade as required.

BIOSOLIDS PROCESSING/STORAGE BUILDING

A section of this building contains a variety of equipment that was associated with a previously used process that produced a product called N-Viro Soil and the remainder of the building stores dewatered solids until they are hauled away for final processing. Due to rising lime costs as well as increased transportation costs coupled with the promulgation of more restrictive regulations, the product became more expensive than other disposal options. As a result the N-Viro process was abandoned in 2005 in favor of more cost effective options. As mentioned in the previous section a construction effort is in progress for the removal and disposal of the N-Viro related equipment (silos, blending unit, and conveyor). The space currently occupied by the N-Viro processing equipment will be enclosed to house a new belt press capable of meeting processing needs for the foreseeable future as well as needed conveyor improvements discussed in the previous section. Construction will be completed in late 2018.

Goal: Maximize longevity.

Routine Target Objective: Conduct preventative maintenance.

Current Target Objective: Complete solids dewatering and conveyance project.

Long Range Target Objective: Maintain structure optimize operational life.

BIOSOLIDS STORAGE PAD

This is a large asphalt surface for storing up to 6 months' worth of biosolids production as required by Ohio EPA. The surface is configured such that storm runoff is collected and returns to the treatment system.

Goal: Maximize longevity.

Routine Target Objective: Conduct preventative maintenance.

ANCILLARY FACILITIES

Several buildings are located within the WRC compound that are not part of the treatment process, but which provide support to the mission of the plant. These include the equipment garage, workshop, UV workshop, and administrative building which includes the plant laboratory. In addition, there is infrastructure in place to service the entire compound such as lighting, fencing, parking lots, etc.

Goal: Maximize longevity.

Routine Target Objective: Conduct preventative maintenance.

SECTION 7B

Sewer Collection

Statement of Strategic Function

To collect wastewater from all residential and commercial buildings, convey it to the Water Reclamation Center for treatment, and minimize the potential for sewer surcharges through system maintenance and the reduction of stormwater inflow and groundwater infiltration.

7B.1 Introduction

The City of Fairborn wastewater collection system transports over a billion gallons of wastewater per year from approximately 13,000 residential and commercial services to the Water Reclamation Center (WRC) located on Route 4 in Huber Heights.

7B.2 Long Range Planning

Long range planning for the wastewater collection system is based on anticipated growth, Ohio Environmental Protection Agency (OEPA) rules and mandates, and age and condition of existing infrastructure. This planning is often a delicate balance between meeting projected demands while not building infrastructure that will be underused which can impact the operability of the collection system.

An updated Wastewater Master Plan for the sewer collection system was completed in 2015 which provides a guide for planning of system improvements for a 20-year planning horizon. This effort included working with Community Development, Economic Development, and Engineering to determine potential focus areas for planned and future development opportunities.

Goal: Develop a five year plan that assures our ability to collect wastewater generated by our present and future residential and commercial customers, convey it to the WRC, limit the impact of external waters and address improvements needed to aging infrastructure.

Current Target Objective: Implement the recommendations of the updated sewer collection master plan through capital planning; operational assessment and budgeting.

Long Range Target Objective: Determine needs and establish appropriate projects based on projected growth, OEPA regulations, system trouble spots and infrastructure age/condition.

Long Range Target Objective: Secure funding for required projects.

7B.3 Facilities

In general, the collection system operates via gravity. However, for those areas without sufficient slope to allow for gravity flow to the WRC, pump stations have been placed to physically lift the wastewater to a level that will allow for continued passage through the system. These facilities are monitored 24 hours a day via a Supervisory Control and Data Acquisition (SCADA) system. When operation deviates from set standards, the SCADA is connected to an automatic notification system that contacts the appropriate personnel who have the ability to remotely access the SCADA system via ipads. All system components are described more fully in the following paragraphs.

SEWAGE LIFT STATIONS

Lift stations, as the name implies, lift the sewage to a height sufficient to allow gravity to once again convey it through the collection system. The Division of Water and Sewer oversees four lift stations directly associated with the collection system. Stations have to be designed to handle not only normal daily flow, but also peaks that can occur as a result of inflow from rain events or infiltration from excess groundwater.

Southeast Lift Station

This station is located in the southeastern area of the city and collects wastewater from a large portion of the city which is discharged to a 16-inch, 2 mile long force main. In 2017, construction was undertaken to upgrade this station within its existing footprint. The project almost doubled the station capacity, utilized energy efficient equipment, provided a 500 kW stationary diesel generator capable of operating the station for multiple days, and eliminated a chokepoint that impeded flow leaving the station. The station now has four 125 horsepower pumps with variable frequency drives which are capable of moving 5.7 million gallons per day. On site is a chemical treatment system that applies a calcium nitrate product to the wastewater for odor control and pretreatment purposes. SCADA system improvements included user interface units to allow for improved on-site control capabilities.

As recommended in the Collection System Master Plan, a design effort will take place in 2018 to improve the capacity of the SE Lift Station discharge force main.

Current Target Objective: Design improvements to the Southeast Lift Station discharge force main to provide additional conveyance capacity.

Long Range Target Objective: Assess pumping capabilities and design/ construct station additions and/or new facilities as needed.

Kauffman Lift Station

A new station was completed in 2013 to replace two older problematic stations. It handles wastewater from the south central portion of Fairborn and can be directed to discharge into force mains that enter either the south or north interceptors. The new station features variable frequency drives; SCADA monitoring and control capabilities; larger, more efficient pumping equipment and is built to a flood proof standard. A 125 KW stationary natural gas generator provides standby electricity in the event of loss of power from DP&L.

Peppertree Lift Station - This station was originally built in the early 1990's as a private station to handle a condominium development. When the developer went bankrupt, the City inherited the station as-is. It is located in what is now the Peppertree housing area and serves a small area in the southwestern part of Fairborn. In 2015, the two 20 horsepower pumps were replaced with new units to assure longevity of the station. A 40 kW stationary natural-gas generator is maintained on site to provide backup in the event of loss of power from DP&L.

Chapelgate Lift Station - This station is located in the Chapelgate housing development which it services. It has two 5-horsepower pumps. A stationary 18 KW natural gas generator is available for emergency electricity in the event of power loss.

Goal: Assure ability of all stations to pump both dry and wet weather wastewater within each collection area.

Routine Target Objective: Conduct routine maintenance on each station to assure longevity of equipment.

Long Range Target Objective: Install two new pumps to replace 20+ year old units to assure station operability and address OSHA standards.

SANITARY SEWER MANHOLES

There are over 2900 sanitary sewer manholes located at an average distance of 250' apart. These structures allow access for cleaning, televiewing and assessment of the sewer system. All new manholes are either precast or cast-in-place concrete units. However, some of the older manholes, especially those installed prior to the 1950's, are brick and mortar construction which tends to allow groundwater infiltration. Manholes may be located in a roadway or an easement. Both types of locations present unique maintenance challenges. Those located in roadways are subject to traffic wear and tear, impacted by road maintenance, and may be damaged during snow removal efforts. Those located in easements may be harder to access, subject to being covered over by landscaping efforts of well-meaning residents, are less in the public eye so may only be viewed during division checks and can become overgrown when located in undeveloped areas.

Goal: Assure ability to access manholes for maintenance purposes.

Routine Target Objective: Conduct checks of manholes located in easements to assess condition and assure accessibility.

Routine Target Objective: Assess manholes in response to citizen complaints, in areas targeted for street repair and as part of a routine inspection program and make needed repairs.

Long Range Target Objective: Undertake a lining program for all brick and mortar and deteriorated manholes to improve structural integrity and reduce inflow and infiltration.

SANITARY SEWER MAINS

There are 139 miles of sanitary sewer main in the collection system. The system is composed of a variety of pipe materials, size and age, including some lines that date back to the 1920's. Today, we prefer to use PVC or reinforced concrete pipe at a minimum size of 8". When areas are developed, we will pay to oversize the main if it will enhance our ability to service future development in the area. In addition, when areas of anticipated or potential growth are identified sewer system design is undertaken to prepare these sites for successful outcomes.

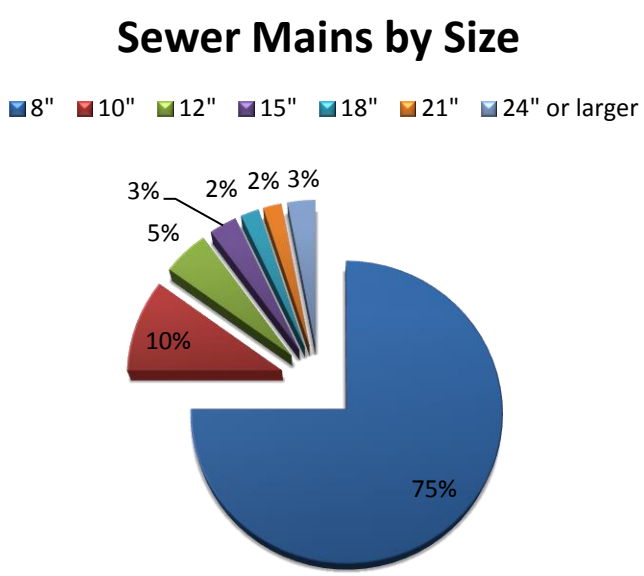


Figure 7B.1 Sewer Main Pipe Material

Although they are buried, we do have the ability to assess our sanitary sewer mains using the division's sewer televiewing system. A new televiewing system was purchased in 2017. The new unit has features that have drastically improved our ability to assess sewer mains and make operation safer for the technicians. Each year we target areas scheduled for street renovation, those that have experienced a backup situation and problem areas found during our routine cleaning program. A long range goal would be to hire a contractor to perform a whole system televiewing evaluation to assist us in planning future replacement needs.

Rehabilitation of sanitary sewer mains can be accomplished by either conventional excavation or no-dig methods. Generally, emergency and limited area repairs are performed in-house using excavation.

For mains that are intact but in a highly deteriorated state, we have had great success using a no-dig method known as cured-in-place lining. The lined pipe performs like new and at the same time reduces infiltration problems caused by pipe cracks and leaking joints. In 2017, almost 5,000 feet of sewer mains were rehabilitated. Additional areas are slated for rehabilitation in 2018. These areas are typically identified through in-house televiewing efforts.

Cleaning of the sanitary sewer helps to assure that it remains functional. We routinely clean one third of the city's main using a sewer jet truck. We currently have two units, one purchased in

2010 which features enhanced cleaning and safety features and a 16-year old unit maintained as a backup and for storm sewer cleaning functions. The 16-year old unit is due to be replaced in 2019.

In spite of our best efforts, we do experience occasional backups. Generally we can attribute these incidents to either the type of materials that are being put into our collection system such as grease, shop towels, diapers, etc. or extremely high amounts of surface or groundwater entering the system during heavy rain events. We continue to pursue means to both educate our customers on correct use of the sewers and make improvements to decrease inflow and infiltration to reduce these events.

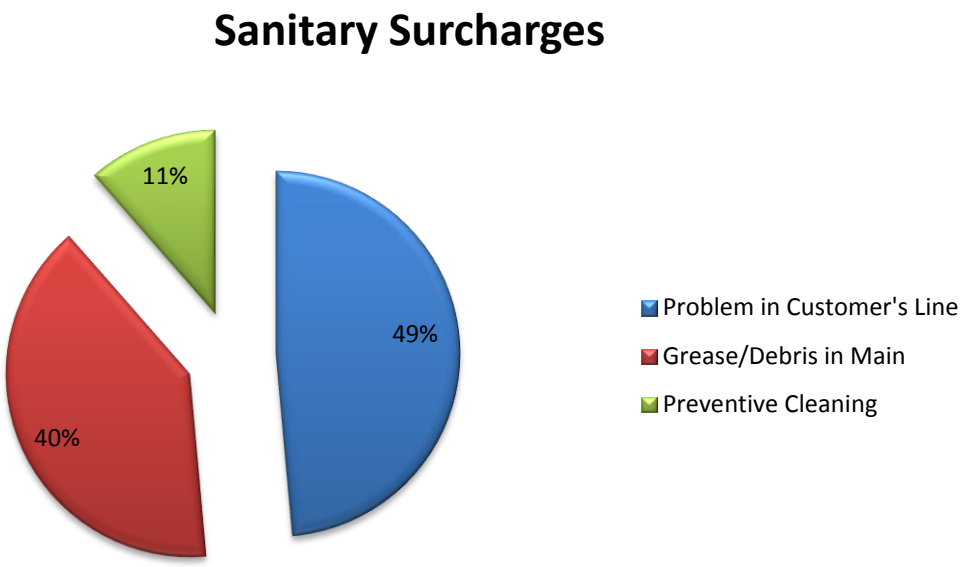


Figure 7B.2 Sewer Surcharge Complaints

Goal: Assure sanitary sewer mains are functional and limit inflow and infiltration.

Routine Target Objective: Repair sewer main failures when found.

Routine Target Objective: Conduct routine cleaning of 1/3 of the City annually.

Routine Target Objective: Perform televiewing in areas that have experienced backup, have been identified as problematic or are on streets targeted for repair.

Current Target Objective: Oversize sanitary sewer mains installed as part of new developments to allow for future growth in the area.

Current Target Objective: Undertake renovation through lining of problematic areas identified during 2017 televiewing efforts.

Long Range Target Objective: Continue to rehabilitate older and/or deteriorated sewer mains using lining process.

Long Range Target Objective: Contract to have a full televiewing assessment conducted of the sewer collection system.

Long Range Target Objective: Upgrade Southeast Lift Station effluent line as outlined in the 2015 Sewer Master Plan.

Five Year Capital Improvement Plan, 2019-2023

Storm Water

Project Year *2019*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Catch Basin Repair Repair and/or rebuild deteriorated catch basins throughout the City to facilitate storm drainage and reduce street base erosion.	$40,000	In-House Contract Repair	General Capital (4301)	$40,000 $0 $0
Storm Sewer Repair General repairs needed to storm sewers and related appurtenances throughout the City. Repairs made to headwalls, drain tiles and ditch lines, or new sewers with catch basins may be constructed to facilitate storm drainage.	$40,000	In-House Contract Repair	General Capital (4301)	$40,000 $0 $0
Storm System Nuisance Control Annual spraying of the Dayton-Yellow Springs Road corridor by a third party utilizing an approved weed killer for waterways, beaver control and removal of trees and other debris impacting creek flows.	$10,000	In-House Contract Maintenance	General Capital (4301)	$10,000 $0 $0

Total Estimated Cost for: ***Storm Water*** **Project Year:** ***2019*** **$90,000**

Five Year Capital Improvement Plan, 2019-2023

Storm Water

Project Year *2020*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Catch Basin Repair Repair and/or rebuild deteriorated catch basins throughout the City to facilitate storm drainage and reduce street base erosion.	$40,000	In-House Contract Repair	General Capital (4301)	$40,000 $0 $0
Storm Sewer Repair General repairs needed to storm sewers and related appurtenances throughout the City. Repairs made to headwalls, drain tiles and ditch lines, or new sewers with catch basins may be constructed to facilitate storm drainage.	$40,000	In-House Contract Repair	General Capital (4301)	$40,000 $0 $0
Storm System Nuisance Control Annual spraying of the Dayton-Yellow Springs Road corridor by a third party utilizing an approved weed killer for waterways, beaver control and removal of trees and other debris impacting creek flows.	$10,000	In-House Contract Maintenance	General Capital (4301)	$10,000 $0 $0

Total Estimated Cost for: ***Storm Water*** **Project Year:** ***2020*** **$90,000**

Five Year Capital Improvement Plan, 2019-2023

Storm Water

Project Year *2021*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Catch Basin Repair Repair and/or rebuild deteriorated catch basins throughout the City to facilitate storm drainage and reduce street base erosion.	$40,000	In-House Contract Repair	General Capital (4301)	$40,000 $0 $0
Storm Sewer Repair General repairs needed to storm sewers and related appurtenances throughout the City. Repairs made to headwalls, drain tiles and ditch lines, or new sewers with catch basins may be constructed to facilitate storm drainage.	$40,000	In-House Contract Repair	General Capital (4301)	$40,000 $0 $0
Storm System Nuisance Control Annual spraying of the Dayton-Yellow Springs Road corridor by a third party utilizing an approved weed killer for waterways, beaver control and removal of trees and other debris impacting creek flows.	$10,000	In-House Contract Maintenance	General Capital (4301)	$10,000 $0 $0

Total Estimated Cost for: ***Storm Water*** **Project Year:** ***2021*** **$90,000**

Five Year Capital Improvement Plan, 2019-2023

Storm Water

Project Year *2022*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Catch Basin Repair Repair and/or rebuild deteriorated catch basins throughout the City to facilitate storm drainage and reduce street base erosion.	$40,000	In-House Contract Repair	General Capital (4301)	$40,000 $0 $0
Storm Sewer Repair General repairs needed to storm sewers and related appurtenances throughout the City. Repairs made to headwalls, drain tiles and ditch lines, or new sewers with catch basins may be constructed to facilitate storm drainage.	$40,000	In-House Contract Repair	General Capital (4301)	$40,000 $0 $0
Storm System Nuisance Control Annual spraying of the Dayton-Yellow Springs Road corridor by a third party utilizing an approved weed killer for waterways, beaver control and removal of trees and other debris impacting creek flows.	$10,000	In-House Contract Maintenance	General Capital (4301)	$10,000 $0 $0

Total Estimated Cost for: ***Storm Water*** **Project Year:** ***2022*** **$90,000**

Five Year Capital Improvement Plan, 2019-2023

Storm Water

Project Year *2023*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Catch Basin Repair Repair and/or rebuild deteriorated catch basins throughout the City to facilitate storm drainage and reduce street base erosion.	$40,000	In-House Contract Repair	General Capital (4301)	$40,000 $0 $0
Storm Sewer Repair General repairs needed to storm sewers and related appurtenances throughout the City. Repairs made to headwalls, drain tiles and ditch lines, or new sewers with catch basins may be constructed to facilitate storm drainage.	$40,000	In-House Contract Repair	General Capital (4301)	$40,000 $0 $0
Storm System Nuisance Control Annual spraying of the Dayton-Yellow Springs Road corridor by a third party utilizing an approved weed killer for waterways, beaver control and removal of trees and other debris impacting creek flows.	$10,000	In-House Contract Maintenance	General Capital (4301)	$10,000 $0 $0

Total Estimated Cost for: ***Storm Water*** **Project Year:** ***2023*** **$90,000**

Five Year Capital Improvement Plan, 2019-2023

Storm Water

Project Year	*Other*	*Estimated Total Cost*	*Engineering Performed by* / *Construction Performed by* / *Project Type*	*Funding*	
Central Avenue Storm Sewer Improvements *Design* Upsize existing storm sewer on Central Avenue, Whittier Avenue and West Hebble Avenue, and provide downstream storage area.		$86,000	Consultant Contract Replacement	General Capital (4301)	$86,000 $0 $0
Central Avenue Storm Sewer Improvements *Construction* Upsize existing storm sewer on Central Avenue, Whittier Avenue and West Hebble Avenue, and provide downstream storage area.		$859,000	Consultant Contract Replacement	General Capital (4301)	$859,000 $0 $0
Circle Drive Area Drainage *Design* Construct new storm along Circle Drive and outfall under Central Avenue to address issues caused by underground springs and topography.		$50,000	Consultant Contract New Construction	General Capital (4301)	$50,000 $0 $0
Circle Drive Area Drainage *Construction* Construct new storm along Circle Drive and outfall under Central Avenue to address issues caused by underground springs and topography.		$449,000	Consultant Contract New Construction	General Capital (4301)	$449,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Storm Water

Project Year *Other*

	Estimated Total Cost	*Engineering Performed by* / *Construction Performed by* / *Project Type*	*Funding*	
Colonel Glenn Storm Conveyance Improvement *Design* Replace existing main on Funderburg Road and Colonel Glenn Highway (from Funderburg to Daytonia) to increase peak flow capabilities to downstream storage.	$26,000	Consultant Contract New Construction	General Capital (4301)	$26,000 $0 $0
Colonel Glenn Storm Conveyance Improvement *Construction* Replace existing main on Funderburg Road and Colonel Glenn Highway (from Funderburg to Daytonia) to increase peak flow capabilities to downstream storage.	$383,000	Consultant Contract New Construction	General Capital (4301)	$383,000 $0 $0
Dayton-Yellow Springs Road Storm Ditch *Design* Improve storm ditch to allow for more efficient storm sewer maintenance, eliminate current guardrails, improve mowing operations and increase peak downstream flow capabilities.	$300,000	Consultant Contract Rehabilitation	General Capital (4301)	$300,000 $0 $0
Dayton-Yellow Springs Road Storm Ditch *Construction* Improve storm ditch to allow for more efficient storm sewer maintenance, eliminate current guardrails, improve mowing operations and increase peak downstream flow capabilities.	$4,367,000	Consultant Contract Rehabilitation	General Capital (4301)	$4,367,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Storm Water

Project Year *Other*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Fairfield Park *Drainage Improvements - Design* Proper drainage needed to allow year round use of recreational area and reduce potential flooding of water and sewer facilities located on Pierce Drive.	$30,000	Consultant Contract New Construction	General Capital (4301)	$30,000 $0 $0
Fairfield Park *Drainage Improvements - Construction* Proper drainage needed to allow year round use of recreational area and reduce potential flooding of water and sewer facilities located on Pierce Drive.	$220,000	Consultant Contract New Construction	General Capital (4301)	$220,000 $0 $0
Fairfield Park *Parking Lot Improvements - Design* Rehabilitation plan to correct flooding problem in the parking lots. No storm sewers are available so other remedies will be investigated.	$15,000	Consultant Contract Rehabilitation	General Capital (4301)	$15,000 $0 $0
Fairfield Park *Parking Lot Improvements - Construction* Rehabilitate parking lots to facilitate storm drainage.	$135,000	Consultant Contract Rehabilitation	General Capital (4301)	$135,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Storm Water

Project Year *Other*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Floodplain Preservation Study Conduct study of floodplain area of Hebble Creek, Beaver Creek and Redbank Ditch to identify where critical storage is needed to prevent loss through development.	$20,000	Consultant Contract Other	General Capital (4301)	$20,000 $0 $0
Forest Street Storm Sewer Improvements Upsize section of 15" pipe to 24" to match other existing main.	$60,000	In-House In-House Rehabilitation	General Capital (4301)	$60,000 $0 $0
Hebble Creek Channel Widening *Design* Replace and upsize culverts under Central Avenue and Elm Street, and widen channel. Modify railroad headwall to maintain upstream storage.	$150,000	Consultant Contract Rehabilitation	General Capital (4301)	$150,000 $0 $0
Hebble Creek Channel Widening *Construction* Replace and upsize culverts under Central Avenue and Elm Street, and widen existing channel. Modify railroad headwall to maintain upstream storage.	$1,993,000	Consultant Contract Rehabilitation	General Capital (4301)	$1,993,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Storm Water

Project Year *Other*

	Estimated Total Cost	*Engineering Performed by* / *Construction Performed by* / *Project Type*	*Funding*	
Highview Drive Storm Sewer Improvements *Design* Replace and upsize existing storm sewers and extend to two new outfall locations near Palmer Drive and Sandhill Road. Regrade or install surface channels to existing storage area.	$43,000	Consultant Contract New Construction	General Capital (4301)	$43,000 $0 $0
Highview Drive Storm Sewer Improvements *Construction* Replace and upsize existing storm sewers and extend to two new outfall locations near Palmer Drive and Sandhill Road. Regrade or install surface channels to existing storage area.	$595,000	Consultant Contract New Construction	General Capital (4301)	$595,000 $0 $0
Ironwood Drainage Improvements *Design* Daylight existing storm sewer and construct in-line detention basin.	$61,000	Consultant Contract New Construction	General Capital (4301)	$61,000 $0 $0
Ironwood Drainage Improvements *Construction* Daylight existing storm sewer and construct in-line detention basin.	$919,000	Consultant Contract New Construction	General Capital (4301)	$919,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Storm Water

Project Year *Other*	*Estimated Total Cost*	*Engineering Performed by* / *Construction Performed by* / *Project Type*	*Funding*	
Lincoln Drive Storm Sewer Improvements *Design* Replace and upsize existing storm sewers and provide offline dry storage areas.	$599,000	In-House In-House New Construction	General Capital (4301)	$599,000 $0 $0
Lincoln Drive Storm Sewer Improvements *Construction* Replace and upsize existing storm sewers and provide offline dry storage areas.	$8,579,000	In-House In-House New Construction	General Capital (4301)	$8,579,000 $0 $0
Maple Avenue Storm Sewer Improvements *Design* Replace and upsize storm main on Maple Avenue from Frahn to Redbank Drive.	$78,000	Consultant Contract New Construction	General Capital (4301)	$78,000 $0 $0
Maple Avenue Storm Sewer Improvements *Construction* Replace and upsize storm main on Maple Avenue from Frahn to Redbank Drive.	$1,062,000	Consultant Contract New Construction	General Capital (4301)	$1,062,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Storm Water

Project Year *Other*

	Estimated Total Cost	*Engineering Performed by* / *Construction Performed by* / *Project Type*	*Funding*	
Mark Lane Ditch Improvements *Design* Improvements to address erosion issues and increase peak flow capabilities including upsizing the Mark Lane ditch culvert and upsizing mains feeding to it.	$17,000	Consultant Contract Replacement	General Capital (4301) 	$17,000 $0 $0
Mark Lane Ditch Improvements *Construction* Improvements to address erosion issues and increase peak flow capabilities including upsizing the Mark Lane ditch culvert and upsizing mains feeding to it.	$241,000	Consultant Contract Replacement	General Capital (4301) 	$241,000 $0 $0
Mitman Park Drainage Improvement *Design* Replace and upsize storm sewers on Mitman and School. Construct new storm infrastructure on Van Tress, Lohnes, Lewis, McIntre, Wayne, and Margaret. Provide downstream storage.	$287,000	Consultant Contract New Construction	General Capital (4301) 	$287,000 $0 $0
Mitman Park Drainage Improvement *Construction* Replace and upsize storm sewers on Mitman and School. Construct new storm infrastructure on Van Tress, Lohnes, Lewis, McIntre, Wayne and Margaret. Provide downstream storage.	$4,175,000	Consultant Contract New Construction	General Capital (4301) 	$4,175,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Storm Water

Project Year *Other*	*Estimated Total Cost*	*Engineering Performed by* / *Construction Performed by* / *Project Type*	*Funding*	
Pleasant View Drainage *Phase 1 - Design* Construct parallel box trunk to provide subsurface detention from Dellwood Drive to South Maple Avenue.	$269,000	Consultant Contract New Construction	General Capital (4301) 	$269,000 $0 $0
Pleasant View Drainage *Phase 1 - Construction* Construct parallel box trunk to provide subsurface detention from Dellwood Drive to South Maple Avenue.	$4,029,000	Consultant Contract New Construction	General Capital (4301) 	$4,029,000 $0 $0
Pleasant View Drainage *Phase 2 - Design* Replace and upsize storm sewer on Dellwood, Westport and East Doris Drive to connect to work performed in Phase 1.	$65,000	Consultant Contract Replacement	General Capital (4301) 	$65,000 $0 $0
Pleasant View Drainage *Phase 2 - Construction* Replace and upsize storm sewer on Dellwood, Westport and East Doris Drive to connect to work performed in Phase 1.	$970,000	Consultant Contract Replacement	General Capital (4301) 	$970,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Storm Water

Project Year *Other*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Pleasant View Drainage *Phase 3 - Design* Construct new storm sewer along Kirkwood Drive and Diana Lane to redirect flows to daylight storage area. Replace and upsize sewers upstream of Erie Drive.	$108,000	Consultant Contract New Construction	General Capital (4301)	$108,000 $0 $0
Pleasant View Drainage *Phase 3 - Construction* Construct new storm sewer along Kirkwood Drive and Diana Lane to redirect flows to daylight storage area. Replace and upsize sewers upstream of Erie Drive.	$1,616,000	Consultant Contract New Construction	General Capital (4301)	$1,616,000 $0 $0
Pleasant View Drainage *Phase 4 - Design* Replace and upsize culverts under Central Avenue and Kauffman Avenue. Construct floodplain detention.	$125,000	Consultant Contract New Construction	General Capital (4301)	$125,000 $0
Pleasant View Drainage *Phase 4 - Construction* Replace and upsize culverts under Central Avenue and Kauffman Avenue. Construct floodplain detention.	$1,838,000	Consultant Contract New Construction	General Capital (4301)	$1,838,000 $0

Five Year Capital Improvement Plan, 2019-2023

Storm Water

Project Year *Other*

	Estimated Total Cost	*Engineering Performed by* / *Construction Performed by* / *Project Type*	*Funding*	
Pleasant View Drainage *Phase 5 - Design* Replace and upsize storm sewers on Florence from Redbank Drive to Erie Drive to connect to work done in earlier phases.	$125,000	Consultant Contract New Construction	General Capital (4301)	$125,000 $0 $0
Pleasant View Drainage *Phase 5 - Construction* Replace and upsize storm sewers on Florence from Redbank Drive to Erie Drive to connect to work done in earlier phases.	$1,838,000	Consultant Contract New Construction	General Capital (4301)	$1,838,000 $0 $0
Pleasant View Drainage *Phase 6 - Design* Construct new storm sewer along Regina Drive and direct flow to the Beavercreek watershed.	$87,000	Consultant Contract New Construction	General Capital (4301)	$87,000 $0 $0
Pleasant View Drainage *Phase 6 - Construction* Construct new storm sewer along Regina Drive and direct flow to the Beavercreek watershed.	$1,300,000	Consultant Contract New Construction	General Capital (4301)	$1,300,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Storm Water

Project Year *Other*

	Estimated Total Cost	*Engineering Performed by* / *Construction Performed by* / *Project Type*	*Funding*	
Redbank Ditch *Enclosure - Design* Enclose Redbank ditch between Kauffman Avenue and Maple Avenue with storm pipe to improve storm drainage, and reduce mosquito breeding ground, and safety hazard.	$176,000	Consultant Contract New Construction	General Capital (4301)	$176,000 $0 $0
Redbank Ditch *Enclosure - Construction* Enclose Redbank ditch between Kauffman Avenue and Maple Avenue with storm pipe to improve storm drainage, and reduce mosquito breeding ground, and safety hazard.	$2,541,000	Consultant Contract New Construction	General Capital (4301)	$2,541,000 $0 $0
Second Street Storm Sewer Improvements *Design* Replace and upsize storm sewer on Second Street and route to a new detention area.	$150,000	Consultant Contract Replacement	General Capital (4301)	$150,000 $0 $0
Second Street Storm Sewer Improvements *Construction* Replace and upsize storm sewer on Second Street and route to a new detention area.	$2,530,000	Consultant Contract Replacement	General Capital (4301)	$2,530,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Storm Water

Project Year *Other*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Upper Orville Street Storm Improvements *Design* Replace and upsize storm sewer on Orville Street, including provision of dry detention area.	$41,000	Consultant Contract New Construction	General Capital (4301)	$41,000 $0 $0
Upper Orville Street Storm Improvements *Construction* Replace and upsize storm sewer on Orville Street, including provision of dry detention area.	$608,000	Consultant Contract New Construction	General Capital (4301)	$608,000 $0 $0
Wright Park Storm Sewer Improvements *Design* Complete remaining storm sewer branches from trunk line of Wright Park system built in 1986-1987. Storm sewer goes entire length of Daytonia Avenue. It is needed to complete Zimmerman Road from Osborn Road to Funderburg Road, and Fairfield Avenue from North Boulevard to the east plat line.	$20,000	Consultant Contract New Construction	General Capital (4301)	$20,000 $0 $0
Wright Park Storm Sewer Improvements *Construction* Construct storm sewer branches from trunk line of Wright Park system built in 1986 - 1987. Storm sewer goes entire length of Daytonia Avenue. It is needed to complete Zimmerman Road from Osborn Road to Funderburg Road, and Fairfield Avenue from North Boulevard to the east plat line.	$175,000	Consultant Contract New Construction	General Capital (4301)	$175,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Storm Water

Project Year *Other*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Zimmer Drive Storm Sewer Improvements *Design* Construct parallel storm sewer trunk along Zimmer Drive. Replace and upsize existing outfall to the Beaver Creek.	$35,000	Consultant Contract New Construction	General Capital (4301)	$35,000 $0 $0
Zimmer Drive Storm Sewer Improvements *Construction* Construct parallel storm sewer trunk along Zimmer Drive. Replace and upsize existing outfall to the Beaver Creek.	$526,000	Consultant Contract New Construction	General Capital (4301)	$526,000 $0 $0

Total Estimated Cost for: ***Storm Water*** **Project Year:** ***Other*** **44,971,000**

Five Year Capital Improvement Plan, 2019-2023

Project Year *2019*

Streets

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
ADA Curb Ramp Program Retrofit and construct new curb ramps to meet current ADA regulations where required.	$60,000	In-House Contract New Construction	Municipal $5 License Fee (2104)	$60,000 $0 $0
City Share of Sidewalk Program Annual repair/replacement program for curbs, sidewalks and approaches (CSA). City incurs cost for corners of streets and other areas outside of property owners' responsibility.	$35,000	In-House Contract Replacement	General Capital (4301)	$35,000 $0 $0
Development Inspection Services Construction inspection for new City infrastructure associated with development. Fees are paid by the developers.	$50,000	Consultant Contract New Construction	Developer Fee (2104)	$50,000 $0 $0
Local Street Improvements Construction of street repairs and preventative maintenance. Steets are identified primarily based on a City-wide condition survey and assigned a Pavement Condition Index (PCI) number. Two-thirds of the Street Levy funds go to local streets and one-third to thoroughfares.	$580,000	In-House Contract Repair	Street Levy (2104)	$580,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Streets

Project Year *2019*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Ohio Street and Wright Avenue *Ohio Public Works Commission Loan Repayment - Payment 2 of 30* Second of 30 payments to pay back $340,107 zero interest loan from the Ohio Public Works Commission for the 2016 Reconstruction and Waterline Replacements on Ohio Street and Wright Avenue.	$11,210	Other	Street Levy (2104) 	$11,210 $0 $0
Ali Road *Expansion - Construction* Construction contract for new public street off Xenia Drive opposite of Chapelgate Drive. Design in 2018. Street improvements include new pavement, drainage structures and sidewalk/drive approaches. Additional funding sources from Water and Sewer and assessment being considered.	$485,000	Consultant Contract New Construction	Street Levy (2104) Ohio 629 Grant ODOT JAC Grant	$150,000 $224,000 $111,000
Broad Street *Sandhill Road to Spangler Road - Construction* Widen Broad Street and improve intersections from Sandhill Road to Spangler Road due to anticipated industrial/commercial development in the area. Other improvements include sidewalk, curb and gutter, and turn lanes. This would improve safety and traffic flow. Includes construction engineering.	$1,598,943	Consultant Contract Rehabilitation	STP Grant OPWC Loan Street Levy (2104)	$959,365 $400,000 $239,578
Colonel Glenn Highway *Phase 1 Enhancement - Design* Design services to update the existing completed design for any changes and to meet ODOT plan requirements.	$75,000	Consultant Contract	Municipal $5 License Fee (2104) 	$75,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Streets

Project Year *2019*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Colonel Glenn Highway/Kauffman Avenue *Realignment - Construction* Install a modern roundabout at the intersection of Colonel Glenn Highway and Kauffman Avenue to improve safety and efficiency for all users.	$1,190,000	Consultant Contract Replacement	Street Levy (2104) STP Grant ODOT Safety Grant	$553,306 $336,694 $300,000
Dayton-Yellow Springs Road *Gateway to Commerce Center* Construction contract for asphalt resurfacing and storm drainage improvements.	$350,000	In-House Contract Repair	Street Levy (2104)	$350,000 $0 $0
Kauffman Avenue *Lindberg to Colonel Glenn Highway - Construction* Construct a new thru lane for southbound traffic on Kauffman Avenue/SR 444. Upgrades will include new curb and gutter, extending an existing culvert for the new lane, signal modifications at Garland, concrete pavement repairs and resurfacing. Includes construction enginerring.	$2,900,000	Consultant Contract New Construction	Street Levy (2104) STP Grant OPWC Grant	$789,222 $1,110,778 $1,000,000
Maple Avenue *Phase 2 - Design and Right-of-Way* Provide new asphalt pavement, replace all curb and gutter, waterline, and some sidewalk, add bike facilities. Water and Sewer Division has budgeted funds for waterline design.	$350,000	Consultant Contract	Street Levy (2104)	$350,000

Five Year Capital Improvement Plan, 2019-2023

Project Year *2019*

Streets

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Xenia Drive	$586,630	Consultant	Street Levy (2104)	$279,240
Broad Street to Dayton Drive - Construction		Contract	ODOT Urban Paving	$307,390
Construction contract for asphalt resurfacing and storm drainage improvements. The Water and Sewer Division has budgeted funds for waterline construction.				$0

Total Estimated Cost for: ***Streets*** **Project Year:** ***2019*** **$8,271,783**

Five Year Capital Improvement Plan, 2019-2023

Project Year *2020*

Streets

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
ADA Curb Ramp Program Retrofit and construct new curb ramps to meet current ADA regulations where required.	$60,000	In-House Contract New Construction	Municipal $5 License Fee (2104)	$60,000 $0 $0
City Share of Sidewalk Program Annual repair/replacement program for curbs, sidewalks and approaches (CSA). City incurs cost for corners of streets and other areas outside of property owners' responsibility.	$35,000	In-House Contract Replacement	General Capital (4301)	$35,000 $0 $0
Development Inspection Services Construction inspection for new City infrastructure associated with development. Fees are paid by the developers.	$50,000	Consultant Contract New Construction	Developer Fee (2104)	$50,000 $0 $0
Local Street Improvements Construction of street repairs and preventative maintenance. Steets are identified primarily based on a City-wide condition survey and assigned a Pavement Condition Index (PCI) number. Two-thirds of the Street Levy funds go to local streets and one-third to thoroughfares.	$800,000	In-House Contract Repair	Street Levy (2104)	$800,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Streets

Project Year *2020*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Kauffman Avenue *Ohio Public Works Commission Loan Repayment - Payment 1 of 30* Pay back $800,000 zero interest loan from the Ohio Public Works Commission for the 2018 Kauffman Avenue widening project.	$26,667	Other	Street Levy (2104) 	$26,667 $0 $0
Ohio Street and Wright Avenue *Ohio Public Works Commission Loan Repayment - Payment 3 of 30* Pay back $340,107 zero interest loan from the Ohio Public Works Commission for the 2016 Reconstruction and Waterline Replacements on Ohio Street and Wright Avenue.	$11,210	Other	Street Levy (2104) 	$11,210 $0 $0
Central Avenue *Lindberg Drive to Dayton Drive - Construction* Full depth reconstruction of pavement including full curb replacement, some sidewalk replacement, and new striping.	$1,500,000	Consultant Contract Replacement	Street Levy (2104) ODOT Urban Paving OPWC Loan	$650,000 $350,000 $500,000
Maple Avenue *Phase I - Construction* Provide new asphalt pavement, replace all curb and gutter, waterline, and some sidewalk; add bike facilities; upgrade traffic signals at Doris Drive and Redbank Drive, if warranted, and add pedestrian rapid flashing beacons at non-signalized crosswalks. Water and Sewer has budgeted funds for waterline construction.	$2,200,000	Consultant Contract Replacement	County $5 Lic Fee Draw (2104) STP Grant OPWC Grant	$102,656 $1,297,344 $800,000

Five Year Capital Improvement Plan, 2019-2023

Project Year *2020*

Streets

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Yellow Springs-Fairfield Road *Improvements - Construction* Mill and resurface the existing pavement, add curb and gutter on both sides, multi-use path on one side and sidewalk on the other, pedestrian crossings at Black Lane and Roehner Drive, and drainage improvements.	$2,000,000	Consultant Contract Replacement	Street Levy (2104) STP Grant	$836,255 $1,163,745

Total Estimated Cost for: ***Streets*** **Project Year:** ***2020*** **$6,682,877**

Five Year Capital Improvement Plan, 2019-2023

Project Year *2021*

Streets

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
ADA Curb Ramp Program Retrofit and construct new curb ramps to meet current ADA regulations where required.	$60,000	In-House Contract New Construction	Municipal $5 License Fee (2104)	$60,000 $0 $0
City Share of Sidewalk Program Annual repair/replacement program for curbs, sidewalks and approaches (CSA). City incurs cost for corners of streets and other areas outside of property owners' responsibility.	$40,000	In-House Contract Replacement	General Capital (4301)	$40,000 $0 $0
Development Inspection Services Construction inspection for new City infrastructure associated with development. Fees are paid by the developers.	$50,000	Consultant Contract New Construction	Developer Fee (2104)	$50,000 $0 $0
Local Street Improvements Construction of street repairs and preventative maintenance. Steets are identified primarily based on a City-wide condition survey and assigned a Pavement Condition Index (PCI) number. Two-thirds of the Street Levy funds go to local streets and one-third to thoroughfares.	$800,000	In-House Contract Repair	Street Levy (2104)	$800,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Project Year *2021*

Streets

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Kauffman Avenue *Ohio Public Works Commission Loan Repayment - Payment 2 of 30* Pay back $800,000 zero interest loan from the Ohio Public Works Commission for the 2018 Kauffman Avenue widening project.	$26,667		Street Levy (2104) 	$26,667 $0 $0
Ohio Street and Wright Avenue *Ohio Public Works Commission Loan Repayment - Payment 4 of 30* Pay back $340,107 zero interest loan from the Ohio Public Works Commission for the 2016 Reconstruction and Waterline Replacements on Ohio Street and Wright Avenue.	$11,210	Other	Street Levy (2104) 	$11,210 $0 $0
Broad Street *South Street to Pierce Drive Phase 2 - Design and Right-of-Way* Add and widen sidewalks, install new curb, asphalt resurfacing, restripe to three vehicle lanes and bike lances, and add decorative elements such as street trees, street lighting and planters.	$420,000	Consultant Contract Replacement	 Street Levy (2104) 	$420,000 $0 $0
Colonel Glenn Highway *Pedestrian Improvements - Construction* Enhancements to a portion of the corridor between North Fairfield Road and University Boulevard. Includes a new sidewalk on the south side of the road, new pedestrian crossings, signal infrastructure, retaining walls, pedestrian curb ramps, pedestrian lighting and drainage.	$1,165,000	Consultant Contract New Construction	Street Levy (2104) CMAQ Funds (MVRPC)	$244,651 $920,349

Five Year Capital Improvement Plan, 2019-2023

Project Year *2021*

Streets

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Colonel Glenn Highway *Phase 1 Enhancement - Construction* Construction contract for a portion of the corridor enhancements between North Fairfield Road and University Boulevard. Includes a new multi-use path on the north side of the road, decorative lighting, landscaping, trees, drainage improvements and brick columns.	$1,100,000	Consultant Contract New Construction	General Capital (4301) TA Grant County $5 Lic Fee Draw (2104)	$500,000 $350,000 $250,000
Maple Avenue *Phase 2 - Construction* Provide new asphalt pavement, replace all curb and gutter, waterline, and some sidewalk, and add bike facilities. Water and Sewer has budgeted funds for waterline design.	$2,923,908	Consultant Contract Replacement	Street Levy (2104) STP Grant OPWC Grant	$369,564 $1,754,344 $800,000
Traffic Signal Upgrades *Replacement* Replace all signal infrastructure including poles, signals, equipment and wiring at Broad Street and Highview Drive, Maple Avenue and Whittier Avenue, and Kauffman Avenue and Wright State Road.	$400,000	Consultant Contract Replacement	Municipal $5 License Fee (2104) Street Levy (2104)	$300,000 $100,000 $0

Total Estimated Cost for: ***Streets*** **Project Year:** ***2021*** **$6,996,785**

Five Year Capital Improvement Plan, 2019-2023

Project Year 2022

Streets

	Estimated Total Cost	Engineering Performed by / Construction Performed by / Project Type	Funding	
ADA Curb Ramp Program Retrofit and construct new curb ramps to meet current ADA regulations where required.	$60,000	In-House Contract New Construction	Municipal $5 License Fee (2104)	$60,000 $0 $0
City Share of Sidewalk Program Annual repair/replacement program for curbs, sidewalks and approaches (CSA). City incurs cost for corners of streets and other areas outside of property owners' responsibility.	$40,000	In-House Contract Replacement	General Capital (4301)	$40,000 $0 $0
Development Inspection Services Construction inspection for new City infrastructure associated with development. Fees are paid by the developers.	$50,000	Consultant Contract New Construction	Developer Fee (2104)	$50,000 $0 $0
Local Street Improvements Construction of street repairs and preventative maintenance. Steets are identified primarily based on a City-wide condition survey and assigned a Pavement Condition Index (PCI) number. Two-thirds of the Street Levy funds go to local streets and one-third to thoroughfares.	$1,000,000	In-House Contract Repair	Street Levy (2104)	$1,000,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Streets

Project Year *2022*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Central Avenue *Ohio Public Works Commission Loan Repayment - Payment 1 of 30* Pay back $500,000 zero interest loan from the Ohio Public Works Commission for the 2020 Central Avenue reconstruction project.	$16,667	Other	Street Levy (2104) 	$16,667 $0 $0
Kauffman Avenue *Ohio Public Works Commission Loan Repayment - Payment 3 of 30* Pay back $800,000 zero interest loan from the Ohio Public Works Commission for the 2018 Kauffman Avenue widening project.	$26,667	Other	Street Levy (2104) 	$26,667 $0 $0
Ohio Street and Wright Avenue *Ohio Public Works Commission Loan Repayment - Payment 5 of 30* Pay back $340,107 zero interest loan from the Ohio Public Works Commission for the 2016 Reconstruction and Waterline Replacements on Ohio Street and Wright Avenue.	$11,210	Other	Street Levy (2104) 	$11,210 $0 $0
Broad Street *Pierce Drive to Sandhill Road Diet and Enhancement - Design and Right-of-Way* Milling, pavement repairs, resurfacing, striping, new median islands, new storm sewer and retaining walls.	$380,000	Consultant Contract Replacement	Street Levy (2104) 	$380,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Project Year *2022*

Streets

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Colonel Glenn Highway/North Fairfield Road *Paramount to East Corp Line - Design and Right-of-Way* Design services for full depth pavement repairs, resurfacing, new signal poles and signals at North Fairfield Road intersection, and adding curb. Includes paving of North Fairfield Road in Fairborn.	$330,000	Consultant Contract	Street Levy (2104) 	$330,000 $0 $0
Dayton-Yellow Springs Road *Commerce Center to Trebein Road - Construction* Pavement Repairs, cold in-place recycling of existing asphalt pavement and replace striping.	$950,000	Consultant Contract Replacement	County $5 Lic Fee Draw (2104) OPWC Grant 	$200,000 $750,000 $0

Total Estimated Cost for: ***Streets*** **Project Year:** ***2022*** **$2,864,544**

Five Year Capital Improvement Plan, 2019-2023

Project Year *2023*

Streets

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
ADA Curb Ramp Program Retrofit and construct new curb ramps to meet current ADA regulations where required.	$60,000	In-House Contract New Construction	Municipal $5 License Fee (2104)	$60,000 $0 $0
City Share of Sidewalk Program Annual repair/replacement program for curbs, sidewalks and approaches (CSA). City incurs cost for corners of streets and other areas outside of property owners' responsibility.	$40,000	In-House Contract Replacement	General Capital (4301)	$40,000 $0 $0
Development Inspection Services Construction inspection for new City infrastructure associated with development. Fees are paid by the developers.	$50,000	Consultant Contract New Construction	Developer Fee (2104)	$50,000 $0 $0
Local Street Improvements Construction of street repairs and preventative maintenance. Steets are identified primarily based on a City-wide condition survey and assigned a Pavement Condition Index (PCI) number. Two-thirds of the Street Levy funds go to local streets and one-third to thoroughfares.	$1,000,000	In-House Contract Repair	Street Levy (2104)	$1,000,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Streets

Project Year *2023*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Central Avenue *Ohio Public Works Commission Loan Repayment - Payment 2 of 30* Pay back $500,000 zero interest loan from the Ohio Public Works Commission for the 2020 Central Avenue reconstruction project.	$16,667	Other	Street Levy (2104) 	$16,667 $0 $0
Kauffman Avenue *Ohio Public Works Commission Loan Repayment - Payment 4 of 30* Pay back $800,000 zero interest loan from the Ohio Public Works Commission for the 2018 Kauffman Avenue widening project.	$26,667	Other	Street Levy (2104) 	$26,667 $0 $0
Ohio Street and Wright Avenue *Ohio Public Works Commission Loan Repayment - Payment 6 of 30* Pay back $340,107 zero interest loan from the Ohio Public Works Commission for the 2016 Reconstruction and Waterline Replacements on Ohio Street and Wright Avenue.	$11,210	Other	Street Levy (2104) 	$11,210 $0 $0
Broad Street *South Street to Pierce Drive Phase 2 Improvements - Construction* Add and widen sidewalks, install new curb, asphalt resurfacing, restripe to three vehicle lanes and bike lanes, and add decorative elements such as street trees, street lighting and planters.	$2,500,000	Consultant Contract Replacement	Street Levy (2104) TA Grant OPWC Grant ODOT Urban Paving 	$900,000 $350,000 $1,000,000 $250,000 $0

Five Year Capital Improvement Plan, 2019-2023

Streets

Project Year *2023*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
MVRPC 2025 Project to be Determined *Design* Anticipated award of a Miami Valley Regional Planning Commission (MVRPC) grant. Engineering plans to apply for and be awarded at least one project in 2019 or 2020.	$350,000	Consultant Contract	Street Levy (2104) 	$350,000 $0 $0 $0
Xenia Drive *Blanch to East Coro - Repairs and Resurfacing* Repair concrete joints and slabs from Blanch to 550' east of the northbound I-675 exit ramp, and mill and resurface the asphalt from there ot the east corp limit.	$650,000	Consultant Contract Repair	Street Levy (2104) ODOT Urban Paving 	$325,000 $325,000 $0 $0

Total Estimated Cost for: ***Streets*** **Project Year:** ***2023*** **$4,704,544**

Five Year Capital Improvement Plan, 2019-2023

Streets

Project Year *Other*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Broad Street *Pierce Drive to Sandhill Road Diet & Enhancement - Construction* Milling, pavement repairs, resurfacing, striping, new median islands, new storm sewer and retaining walls.	$3,400,000	Consultant Contract Replacement	Street Levy (2104) STP Grant $0	$1,020,000 $2,380,000 $0
Cleary Drive Extension and Marginal Road *Construction* Extend Cleary Drive to Xenia Drive and construct a marginal road connecting Cleary Drive extension to Chapelgate Drive, improving access to the area.	$1,056,300	Consultant Contract New Construction	Street Levy (2104) $0	$1,056,300 $0 $0
Colonel Glenn Highway *Paramount to East Corp Line - Construction* Full depth pavement repairs, resurfacing, new signal poles and signals at North Fairfield intersection, and adding curb. Includes paving all of North Fairfield Road in Fairborn.	$2,000,000	Consultant Contract Replacement	Street Levy (2104) STP Grant $0	$600,000 $1,400,000 $0
Dayton Drive/Schwerman Drive *Connection - Design* Engineering to connect Dayton Drive with Schwerman Drive at Adams Street, take over Schweman Drive as a public road, and reconstruct Schwerman north of Adams. Road widening, intersection reconstruction, curbing and box culvert replacement will create a 4600 LF improved public street.	$330,000	Consultant Contract New Construction	Street Levy (2104) $0	$330,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Project Year *Other*

Streets

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Dayton Drive/Schwerman Drive *Connection - Construction* Engineering to connect Dayton Drive with Schwerman Drive at Adams Street, take over Schweman Drive as a public road, and reconstruct Schwerman north of Adams. Road widening, intersection reconstruction, curbing and box culvert replacement will create a 4600 LF improved public street.	$3,300,000	Consultant Contract New Construction	Street Levy (2104)	$3,300,000 $0 $0
Garland Avenue Extension *Maple Avenue to Meadowlands Drive - Design* Extension of Garland Avenue between its termini points, from Maple Avenue to just west of Meadowlands Drive. This will be a curbed collector street with stormwater infrastructure providing east-west transportation under I-675 to spur development growth in the area.	$150,000	Consultant Contract New Construction	Street Levy (2104)	$150,000 $0 $0
Garland Avenue Extension *Maple Avenue to Meadowlands Drive - Construction* Extension of Garland Avenue between its termini points, from Maple Avenue to just west of Meadowlands Drive. This will be a curbed collector street with stormwater infrastructure providing east-west transportation under I-675 to spur development growth in the area.	$1,350,000	Consultant Contract New Construction	Street Levy (2104)	$1,350,000 $0 $0

Total Estimated Cost for: ***Streets*** **Project Year:** ***Other*** **11,586,300**

Five Year Capital Improvement Plan, 2019-2023

Buildings and Lands

Project Year *2019*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
General Building Repairs This category funds miscellaneous projects and repairs to all General Fund facilities of a minor nature or that were not foreseen at the time of the budget process.	$40,000	In-House In-House Repair	Buildings and Lands (2404)	$40,000 $0 $0
Legal Services	$10,000	Other	Buildings and Lands (2404)	$10,000 $0 $0
Municipal Court *Roof - Debt Payment*	$258,585	Consultant Contract Other	Buildings and Lands (2404)	$258,585 $0 $0
Preventative Maintenance Agreements on HVAC systems	$20,000	Other	Buildings and Lands (2404)	$20,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Buildings and Lands

Project Year *2019*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Public Works Facility *Construction*	$4,746,000	Consultant Contract New Construction	Buildings and Lands (2404)	$4,746,000 $0 $0
Public Works Facility *Debt (Design)*	$27,635	Consultant Contract Other	Buildings and Lands (2404)	$27,635 $0 $0
Public Works Facility/Municipal Court Roof *Note Handling Charges*	$20,000	 Other	Buildings and Lands (2404)	$20,000 $0 $0
Library *Roof Replacement*	$200,000	Consultant Contract Replacement	Buildings and Lands (2404)	$200,000 $0 $0

Total Estimated Cost for: ***Buildings and Lands*** **Project Year:** ***2019*** **$5,322,220**

Five Year Capital Improvement Plan, 2019-2023

Buildings and Lands

Project Year *2020*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
General Building Repairs This category funds miscellaneous projects and repairs to all General Fund facilities of a minor nature or that were not foreseen at the time of the budget process.	$40,000	In-House In-House Repair	Buildings and Lands (2404)	$40,000 $0 $0
Legal Services	$1,000	Other	Buildings and Lands (2404)	$1,000 $0 $0
Municipal Court *Roof - Debt Payment*	$243,285	Consultant Contract Other	Buildings and Lands (2404)	$243,285 $0 $0
Preventative Maintenance Agreements on HVAC systems	$20,000	Other	Buildings and Lands (2404)	$20,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Buildings and Lands

Project Year *2020*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Public Works Facility *Debt (through 2038)*	$301,032	Other	Buildings and Lands (2404) 	$301,032 $0 $0
Public Works Facility/Municipal Court Roof *Note Handling Charges*	$1,000	Other	Buildings and Lands (2404) 	$1,000 $0 $0
City Garage *Roof - Reseal*	$35,000	In-House Contract Replacement	Buildings and Lands (2404) 	$35,000 $0 $0
Government Center *Exterior Parking Lot Light Pole Replacement*	$40,000	Consultant Contract Replacement	Buildings and Lands (2404) 	$40,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Buildings and Lands

Project Year *2020*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Government Center	$60,000	In-House	Buildings and Lands (2404)	$60,000
LED Internal Light Exchange		In-House		$0
		Replacement		$0
Salt Shed Roof	$30,000	In-House	Buildings and Lands (2404)	$30,000
Evaluate, Repair or Replace		In-House		$0
		Replacement		$0

Total Estimated Cost for: ***Buildings and Lands*** **Project Year:** ***2020*** **$771,317**

Five Year Capital Improvement Plan, 2019-2023

Buildings and Lands

Project Year *2021*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
General Building Repairs This category funds miscellaneous projects and repairs to all General Fund facilities of a minor nature or that were not foreseen at the time of the budget process.	$40,000	In-House In-House Repair	Buildings and Lands (2404)	$40,000 $0 $0
Legal Services	$1,000	Other	Buildings and Lands (2404)	$1,000 $0 $0
Municipal Court *Roof - Debt Payment*	$227,985	Consultant Contract Other	Buildings and Lands (2404)	$227,985 $0 $0
Preventative Maintenance Agreements on HVAC systems	$20,000	Other	Buildings and Lands (2404)	$20,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Buildings and Lands

Project Year *2021*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Public Works Facility *Debt (through 2038)*	$301,032	Other	Buildings and Lands (2404) $0 $0	$301,032
Public Works Facility/Municipal Court Roof *Note Handling Charges*	$1,000	Other	Buildings and Lands (2404) $0 $0	$1,000
Government Center *Carpeting*	$40,000	Consultant Contract Replacement	Buildings and Lands (2404) $0 $0	$40,000

Total Estimated Cost for: ***Buildings and Lands*** **Project Year:** ***2021*** **$631,017**

Five Year Capital Improvement Plan, 2019-2023

Buildings and Lands

Project Year *2022*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
General Building Repairs This category funds miscellaneous projects and repairs to all General Fund facilities of a minor nature or that were not foreseen at the time of the budget process.	$50,000	In-House In-House Repair	Buildings and Lands (2404)	$50,000 $0 $0
Legal Services	$1,000	Other	Buildings and Lands (2404)	$1,000 $0 $0
Municipal Court *Roof- Debt Payment*	$212,685	Consultant Contract Other	Buildings and Lands (2404)	$212,685 $0 $0
Preventative Maintenance Agreements on HVAC systems	$25,000	Other	Buildings and Lands (2404)	$25,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Buildings and Lands

Project Year *2022*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Public Works Facility *Debt (through 2038)*	$301,032	 Other	Buildings and Lands (2404) 	$301,032 $0 $0
Public Works Facility/Municipal Court Roof *Note Handling Charges*	$1,000	 Other	Buildings and Lands (2404) 	$1,000 $0 $0
City-Wide Entry Doors *Evaluate, Repair or Replace*	$30,000	In-House In-House Replacement	 	$30,000 $0 $0

Total Estimated Cost for: ***Buildings and Lands*** **Project Year:** ***2022*** **$620,717**

Five Year Capital Improvement Plan, 2019-2023

Buildings and Lands

Project Year *2023*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
General Building Repairs This category funds miscellaneous projects and repairs to all General Fund facilities of a minor nature or that were not foreseen at the time of the budget process.	$50,000	In-House In-House Repair	Buildings and Lands (2404)	$50,000 $0 $0
Legal Services	$1,000	Other	Buildings and Lands (2404)	$1,000 $0 $0
Municipal Court *Roof - Debt Payment*	$197,385	Consultant Contract Other	Buildings and Lands (2404)	$197,385 $0 $0
Preventative Maintenance Agreements on HVAC systems	$25,000	Other	Buildings and Lands (2404)	$25,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Buildings and Lands

Project Year *2023*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Public Works Facility *Debt (through 2038)*	$301,032		Buildings and Lands (2404)	$301,032
				$0
		Other		$0
Public Works Facility/Municipal Court Roof *Note Handling Charges*	$1,000		Buildings and Lands (2404)	$1,000
				$0
		Other		$0
Street & Equipment Maintenance Facility Upgrades to Third Street facility to convert from garage to document storage facility. This will include providing an air-conditioned section and removal of garage doors.	$75,000	In-House	Buildings and Lands (2404)	$75,000
		Contract		$0
		Other		$0

Total Estimated Cost for: ***Buildings and Lands*** **Project Year:** ***2023*** **$650,417**

Five Year Capital Improvement Plan, 2019-2023

Project Year *2019*

Parks

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Various Park Equipment	$30,000	In-House	Parks Capital Improvement (4302)	$30,000
		In-House		$0
		Other		$0
Fairfield Park	$15,000	In-House	Parks Capital Improvement (4302)	$15,000
Concession Building Update		In-House		$0
		Other		$0
Fairfield Park	$75,000	Consultant	Parks Capital Improvement (4302)	$75,000
Tennis Court - Resurface and Fence Replacement		Contract		$0
		Replacement		$0
Community Park	$70,000	Consultant	Parks Capital Improvement (4302)	$70,000
Roof Replacement		Contract		$0
		Replacement		$0

Total Estimated Cost for: ***Parks*** **Project Year:** ***2019*** **$190,000**

Five Year Capital Improvement Plan, 2019-2023

Parks

Project Year *2020*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Mercer Smith House *Continue Preservation*	$10,000	Consultant Contract Replacement	Parks Capital Improvement (4302)	$10,000 $0 $0
Playground Updates *Various - Repair/Maintenance*	$15,000	In-House In-House Other	Parks Capital Improvement (4302)	$15,000 $0 $0
Various Park Equipment	$30,000	In-House In-House Other	Parks Capital Improvement (4302)	$30,000 $0 $0
Sandhill Park *Basketball Court - Resurface*	$35,000	Consultant Contract Replacement	Parks Capital Improvement (4302)	$35,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Parks

Project Year *2020*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Sandhill Park	$80,000	Consultant	Parks Capital Improvement (4302)	$80,000
Permanent Restrooms		Contract		$0
As this park evolves due to the active recreation and the new dog park, restroom facilities (port-o-lets currently) will be needed in the summer.		New Construction		$0

Total Estimated Cost for: ***Parks*** **Project Year:** ***2020*** **$170,000**

Five Year Capital Improvement Plan, 2019-2023

Parks

Project Year *2021*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Mercer Smith House *Continue Preservation*	$10,000	Consultant Contract Replacement	Parks Capital Improvement (4302)	$10,000 $0 $0
Playground Updates *Wedgewood Park and Wright Park*	$30,000	Consultant In-House Replace/Repair	Parks Capital Improvement (4302)	$30,000 $0 $0
Various Park Equipment	$30,000	In-House In-House Other	Parks Capital Improvement (4302)	$30,000 $0 $0
Fairfield Park *Permanent Restrooms Diamonds 4 and 5 - Install* Service necessary due to increase.	$80,000	In-House In-House New Construction	Parks Capital Improvement (4302)	$80,000 $0 $0

Total Estimated Cost for: ***Parks*** **Project Year:** ***2021*** **$150,000**

Five Year Capital Improvement Plan, 2019-2023

Parks

Project Year *2022*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Playground Updates *Various - Repaint/Maintenance*	$30,000	In-House In-House Repair	Parks Capital Improvement (4302)	$30,000 $0 $0
Various Park Equipment	$30,000	In-House In-House Other	Parks Capital Improvement (4302)	$30,000 $0 $0
Osborn Park *Pump Track - Construction*	$145,000	Consultant Contract New Construction	Parks Capital Improvement (4302)	$145,000 $0 $0

Total Estimated Cost for: ***Parks*** **Project Year:** ***2022*** **$205,000**

Five Year Capital Improvement Plan, 2019-2023

Parks

Project Year *2023*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Playground Updates *Various - Repaint/Maintenance*	$30,000	In-House In-House Repair	Parks Capital Improvement (4302)	$30,000 $0 $0
Various Park Equipment	$30,000	In-House In-House Other	Parks Capital Improvement (4302)	$30,000 $0 $0
Park Sidewalks *Repair/Replace*	$40,000	In-House Contract Repair	Parks Capital Improvement (4302)	$40,000 $0 $0
Community Park *Basketball Courts - Add Lights*	$80,000	Consultant Contract New Construction	Parks Capital Improvement (4302)	$80,000 $0 $0

Total Estimated Cost for: ***Parks*** **Project Year:** ***2023*** **$180,000**

Five Year Capital Improvement Plan, 2019-2023

Project Year *Other*

Parks

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Broad Street Park Entertainment venue, food truck area, art sculpture water feature, shading and eating areas.	$600,000	Consultant Contract New Construction	Parks Capital Improvement (4302)	$600,000 $0 $0
Community Park *ADA Accessible Fishing Pier* Construct fishing pier at pond.	$50,000	Consultant Contract New Construction	Parks Capital Improvement (4302)	$50,000 $0 $0
Community Park *Amphitheater - Parking Expansion*	$35,000	In-House Contract New Construction	Parks Capital Improvement (4302)	$35,000 $0 $0
Community Park *Amphitheater Roof*	$100,000	Consultant Contract New Construction	Parks Capital Improvement (4302)	$100,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Project Year *Other*

Parks

	Estimated Total Cost	*Engineering Performed by* *Construction Performed by* *Project Type*	*Funding*	
Community Park *Drainage Swales (Rock) Closure* Close shallow storm water ditch with larger, crushed white limestone, making it easier to cross and maintain.	$75,000	In-House In-House New Construction	Parks Capital Improvement (4302)	$75,000 $0 $0
Community Park *Nature Trail to New Germany-Trebein Road* Create a foot path (wood chip trail) following the Beaver Creek south from lower Community Park to the Corporate Limits on New Germany-Trebein Road.	$20,000	In-House In-House New Construction	Parks Capital Improvement (4302)	$20,000 $0 $0
Emergency Phones Install along the Wright Brothers Huffman Prairie Bikeway.	$12,000	In-House Contract New Construction	Parks Capital Improvement (4302)	$12,000 $0 $0
Fairborn's Wright Brothers Huffman Prairie *Crabapple Tree Planting - Continue* With cooperation of Odd Fellows Lodge, continue planting Profesium Crabapple trees. This project can be staggered over a period of years to defer cost.	$10,000	In-House In-House Other	Parks Capital Improvement (4302)	$10,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Project Year *Other*

Parks

	Estimated Total Cost	*Engineering Performed by* / *Construction Performed by* / *Project Type*	*Funding*	
Fairborn's Wright Brothers Huffman Prairie *Landscaping* Plant 60 pine trees along the Norfolk Southern tracks which will provide a windscreen and visual screen for users of the bikeway.	$10,000	In-House In-House Other	Parks Capital Improvement (4302)	$10,000 $0 $0
Fairfield Park *Add Restroom between Diamonds 4 and 5*	$100,000	Consultant Contract New Construction	Parks Capital Improvement (4302)	$100,000 $0 $0
Ice Skating Facility/Pond Working in cooperation with Martin Marietta Corporation, the City would like to install a new pond in lower Community Park. This will be used for fishing, ice skating, and an educational facility for Fairborn High School students.	$40,000	Consultant Contract New Construction	Parks Capital Improvement (4302)	$40,000 $0 $0
Maplewood Park *Walking Trail Addition* Construct a new eight foot walking trail around the perimeter.	$50,000	In-House In-House New Construction	Parks Capital Improvement (4302)	$50,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Parks

Project Year *Other*

	Estimated Total Cost	*Engineering Performed by* / *Construction Performed by* / *Project Type*	*Funding*	
Osborn Park *Brick Column and Aluminum Fencing - Install*	$25,000	In-House Contract New Construction	Parks Capital Improvement (4302)	$25,000 $0 $0
Osborn Park *Lighting Addition* Light skate park and basketball courts.	$100,000	Consultant Contract New Construction	Parks Capital Improvement (4302)	$100,000 $0 $0
Parks Entrances *Brick Columns*	$6,000	In-House Contract New Construction	Parks Capital Improvement (4302)	$6,000 $0 $0
Patterson Park *Picnic Shelter*	$27,000	In-House In-House New Construction	Parks Capital Improvement (4302)	$27,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Parks

Project Year *Other*

	Estimated Total Cost	*Engineering Performed by* *Construction Performed by* *Project Type*	*Funding*	
Rona Hills Park *Additional Park Sign*	$7,000	In-House Contract New Construction	Parks Capital Improvement (4302)	$7,000 $0 $0
Rona Hills Park *Asphalt Walking Path* Around the +/- .5 mile perimeter.	$45,000	Consultant Contract New Construction	Parks Capital Improvement (4302)	$45,000 $0 $0
Rona Hills Park *Fence - Replace* Add and improve fence with brick column and decorative aluminum.	$20,000	In-House Contract Replacement	Parks Capital Improvement (4302)	$20,000 $0 $0
Shawnee Park *Play Structures - Replace*	$25,000	In-House In-House Replacement	Parks Capital Improvement (4302)	$25,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Parks

Project Year / *Other*	*Estimated Total Cost*	*Engineering Performed by* / *Construction Performed by* / *Project Type*	*Funding*	
Tecumseh Park *Basketball Court - Resurface*	$10,000	In-House Contract New Construction	Parks Capital Improvement (4302)	$10,000 $0 $0
Tecumseh Park *Basketball Goals - Replace*	$10,000	In-House In-House New Construction	Parks Capital Improvement (4302)	$10,000 $0 $0
Tecumseh Park *New Sign*	$4,000	In-House Contract Replacement	Parks Capital Improvement (4302)	$4,000 $0 $0
Tecumseh Park *Play Structures*	$25,000	Consultant Contract Replacement	Parks Capital Improvement (4302)	$25,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Project Year *Other*

Parks

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Walking Trail Development *Wedgewood Park to Community Park* Connect Wedgewood Park to Community Park Trail.	$45,000	In-House Contract New Construction	Parks Capital Improvement (4302)	$45,000 $0 $0
Wright Park *Basketball Goals - Replace*	$3,000	In-House Replacement	Parks Capital Improvement (4302)	$3,000 $0 $0

Total Estimated Cost for: ***Parks*** **Project Year:** ***Other*** **$1,454,000**

Five Year Capital Improvement Plan, 2019-2023

Water

Project Year *2019*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Growth Project Infrastructure Support *Design* Design of infrastructure extensions in support of economic development target areas.	$50,000	Consultant Contract New Construction	Water Construction (4303) 	$50,000 $0 $0
Loop Dead-End Water Mains The proposed construction will connect various dead-end water mains in the City. Completing the projects will improve water quality and fire flows in the affected areas.	$30,000	In-House In-House New Construction	Water Construction (4303) 	$30,000 $0 $0
Mad River Well Field *Well Redevelopment and Pump/Motor Replacement* Redevelop an existing well to assure continued operation at highest yield. Repair or replace pumps and/or motors to assure longevity.	$60,000	In-House Contract Other	Water Depreciation (6401) 	$60,000 $0 $0
Public Works Facility *Construction* Share of construction of a facility to house Public Works functions. Annual debt service payments will be made from the Water/Sewer Debt Service Fund from 2020 - 2044.	$1,271,738	Consultant Contract New Construction	Water Construction (4303) 	$1,271,738 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Water

Project Year *2019*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Water Main Oversizing Upgrade size of water mains as part of property development to help assure the ability to meet needs of adjoining properties as they are developed.	$60,000	In-House Contract New Construction	Water Construction (4303)	$60,000 $0 $0
Water Main Valve/Hydrant Replacement Replace malfunctioning valves/hydrants at various locations throughout the City. High priority will be given to those areas targeted by the Street Program. Address at least 10 1950's vintage hydrants.	$50,000	In-House In-House Replacement	Water Construction (4303)	$50,000 $0 $0
Mad River Well Field *Design and Construction* Replace a failing well to meet current demands as well as future needs.	$900,000	Consultant Contract New Construction	Water Construction (4303)	$900,000 $0 $0
Maple Avenue *Water Line Construction - Phase I*	$600,000	Consultant Contract Replacement	Water Construction (4303)	$600,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Water

Project Year *2019*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Maple Avenue *Water Line Design - Phase II*	$155,000	Consultant	Water Construction (4303)	$155,000
		Contract		$0
		Replacement		$0
Water Main Replacement *Xenia Drive - Construction* Replace 6" cast iron water main and galvanized services from Broad Street to Dayton Drive with 8" ductile iron water main and copper services. Work will be done ahead of a planned paving project.	$750,000	Consultant	Water Construction (4303)	$750,000
		Contract		$0
		Replacement		$0

Total Estimated Cost for: ***Water*** **Project Year:** ***2019*** **$3,926,738**

Five Year Capital Improvement Plan, 2019-2023

Water

Project Year *2020*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Growth Project Infrastructure Support *Design* Design of infrastructure extensions in support of economic development target areas.	$50,000	Consultant Contract New Construction	Water Construction (4303) 	$50,000 $0 $0
Loop Dead-End Water Mains The proposed construction will connect various dead-end water mains in the City. Completing the projects will improve water quality and fire flows in the affected areas.	$30,000	In-House In-House New Construction	Water Construction (4303) 	$30,000 $0 $0
Mad River Well Field *Well Redevelopment and Pump/Motor Replacement* Redevelop an existing well to assure continued operation at highest yield. Repair or replace pumps and/or motors to assure longevity.	$65,000	In-House Contract Other	Water Depreciation (6401) 	$65,000 $0 $0
Public Works Facility *Construction* Share of construction of a facility to house Public Works functions. Annual debt service payments will be made from the Water/Sewer Debt Service Fund from 2020 - 2044.	$73,260	Consultant Contract New Construction	Water Construction (4303) 	$73,260 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Water

Project Year *2020*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Water Main Oversizing Upgrade size of water mains as part of property development to help assure the ability to meet needs of adjoining properties as they are developed.	$60,000	In-House Contract New Construction	Water Construction (4303)	$60,000 $0 $0
Water Main Valve/Hydrant Replacement Replace malfunctioning valves/hydrants at various locations throughout the City. High priority will be given to those areas targeted by the Street Program. Address at least 10 units of 1950's vintage.	$50,000	In-House In-House Replacement	Water Construction (4303)	$50,000 $0 $0
Lang Plat *Water Main Replacement - Design* Replace water lines to address condition concerns for the 1950's vintage cast iron pip that has experienced frequent failures.	$360,000	Consultant Contract Replacement		$360,000 $0 $0

Total Estimated Cost for: ***Water*** **Project Year:** ***2020*** **$688,260**

Five Year Capital Improvement Plan, 2019-2023

Water

Project Year *2021*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Growth Project Infrastructure Support *Design* Design of infrastructure extensions in support of economic development target areas.	$50,000	Consultant Contract New Construction	Water Construction (4303)	$50,000 $0 $0
Loop Dead-End Water Mains The proposed construction will connect various dead-end water mains in the City. Completing the projects will improve water quality and fire flows in the affected areas.	$30,000	In-House In-House New Construction	Water Construction (4303)	$30,000 $0 $0
Mad River Well Field *Well Redevelopment and Pump/Motor - Replacement* Redevelop an existing well to assure continued operation at highest yield. Repair or replace pumps and/or motors to assure longevity.	$65,000	In-House Contract Other	Water Depreciation (6401)	$65,000 $0 $0
Public Works Facility *Construction* Share of construction of a facility to house Public Works functions. Annual debt service payments will be made from the Water/Sewer Debt Service Fund from 2020 - 2044.	$73,260	Consultant Contract New Construction	Water Construction (4303)	$73,260 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Water

Project Year *2021*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Water Main Oversizing Upgrade size of water mains as part of property development to help assure the ability to meet needs of adjoining properties as they are developed.	$60,000	In-House Contract New Construction	Water Construction (4303)	$60,000 $0 $0
Water Main Valve/Hydrant Replacement Replace malfunctioning valves/hydrants at various locations throughout the City. High priority will be given to those areas targeted by the Street Program. Address at least 10 units of 1950's vintage.	$55,000	In-House In-House Replacement	Water Construction (4303)	$55,000 $0 $0
Comprehensive Fire Flow Survey Conduct testing of fire hydrants to determine flow available for domestic and firefighting purposes. This function has not been done since the 1990's when the Fire Department stopped providing the service.	$90,000	In-House Contract Other	Water Construction (4303)	$90,000 $0 $0
Lang Plat *Water Line Replacement - Phase I Construction* Replace water lines in the Lang Plat area to address condition concerns for the 1950's vintage cast iron pipe that has experienced frequent failures.	$300,000	Consultant Contract Replacement	Water Construction (4303)	$300,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Water

Project Year *2021*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Maple Avenue *Water Line Phase II - Construction*	$1,600,000	Consultant Contract Replacement	Water Construction (4303)	$1,600,000 $0 $0
Mad River Well Field *Well #1 - Pitless Adapter - Replace* Replace a 1980's vintage well King unit with a Baker unit. This will address a sealing problem encountered when working on this well.	$100,000	In-House Contract Replacement	Water Depreciation (6401)	$100,000 $0 $0

Total Estimated Cost for: ***Water*** **Project Year:** ***2021*** **$2,423,260**

Five Year Capital Improvement Plan, 2019-2023

Water

Project Year *2022*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Growth Project Infrastructure Support *Design* Design of infrastructure extensions in support of economic development target areas.	$50,000	Consultant Contract New Construction	Water Construction (4303) 	$50,000 $0 $0
Loop Dead-End Water Mains The proposed construction will connect various dead-end water mains in the City. Completing the projects will improve water quality and fire flows in the affected areas.	$30,000	In-House In-House New Construction	Water Construction (4303) 	$30,000 $0 $0
Mad River Well Field *Well Redevelopment and Pump/Motor Replacement* Redevelop an existing well to assure continued operation at highest yield. Repair or replace pumps and/or motors to assure longevity.	$65,000	In-House Contract Other	Water Depreciation (6401) 	$65,000 $0 $0
Public Works Facility *Construction* Share of construction of a facility to house Public Works functions. Annual debt service payments will be made from the Water/Sewer Debt Service Fund from 2020 - 2044.	$73,260	Consultant Contract New Construction	Water Construction (4303) 	$73,260 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Water

Project Year *2022*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Water Main Oversizing Upgrade size of water mains as part of property development to help assure the ability to meet needs of adjoining properties as they are developed.	$60,000	In-House Contract New Construction	Water Construction (4303)	$60,000 $0 $0
Water Main Valve/Hydrant Replacement Replace malfunctioning valves/hydrants at various locations throughout the City. High priority will be given to those areas targeted by the Street Program. Address at least 10 units of 1950's vintage.	$55,000	In-House In-House Replacement	Water Construction (4303)	$55,000 $0 $0
Lang Plat *Water Line Replace - Phase II Construction* Replace water lines in the Lang Plat area to address condition concerns for the 1950's vintage cast iron pipe that has experienced frequent failures.	$300,000	Consultant Contract Replacement	Water Construction (4303)	$300,000 $0 $0
Plant Medium Service Booster Station *Replacement - Design* Replace a 1970's vintage booster station to assure the ability to meet future capacity in the medium service area.	$300,000	Consultant Contract Replacement	Water Construction (4303)	$300,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Water

Project Year *2022*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Rona Hills Booster *Station Generator - Construction* Maintain booster station operation during a loss of utility power.	$150,000	In-House Contract New Construction	Water Construction (4303)	$150,000 $0 $0
Sister Tank in Low Service *Design* Growth will necessitate an elevated storage tank to provide needed capacity and pressure for domestic and fire usage.	$350,000	Consultant Contract New Construction	Water Construction (4303)	$350,000 $0 $0

Total Estimated Cost for: ***Water*** **Project Year:** ***2022*** **$1,433,260**

Five Year Capital Improvement Plan, 2019-2023

Water

Project Year *2023*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Growth Project Infrastructure Support *Design* Design of infrastructure extensions in support of economic development target areas.	$50,000	Consultant Contract New Construction	Water Construction (4303) 	$50,000 $0 $0
Loop Dead-End Water Mains The proposed construction will connect various dead-end water mains in the City. Completing the projects will improve water quality and fire flows in the affected areas.	$30,000	In-House In-House New Construction	Water Construction (4303) 	$30,000 $0 $0
Mad River Well Field *Well Redevelopment and Pump/Motor Replacement* Redevelop an existing well to assure continued operation at highest yield. Repair or replace pumps and/or motors to assure longevity.	$65,000	In-House Contract Other	Water Depreciation (6401) 	$65,000 $0 $0
Public Works Facility *Construction* Share of construction of a facility to house Public Works functions. Annual debt service payments will be made from the Water/Sewer Debt Service Fund from 2020 - 2044.	$73,260	Consultant Contract New Construction	Water Construction (4303) 	$73,260 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Water

Project Year *2023*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Water Main Oversizing Upgrade size of water mains as part of property development to help assure the ability to meet needs of adjoining properties as they are developed.	$60,000	In-House Contract New Construction	Water Construction (4303)	$60,000 $0 $0
Water Main Valve/Hydrant Replacement Replace malfunctioning valves/hydrants at various locations throughout the City. High priority will be given to those areas targeted by the Street Program. Address at least 10 units of 1950's vintage.	$55,000	In-House In-House Replacement	Water Construction (4303)	$55,000 $0 $0
Lang Plat *Water Line Replacement - Phase III - Construction* Replace water lines in the Lang Plat area to address condition concerns for the 1950's vintage cast iron pipe that has experienced frequent failures.	$300,000	In-House Contract Replacement	Water Construction (4303)	$300,000 $0 $0

Total Estimated Cost for: ***Water*** **Project Year:** ***2023*** **$633,260**

Five Year Capital Improvement Plan, 2019-2023

Water

Project Year *Other*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Loop Dead-End Water Mains Proposed construction will connect various dead-end water mains in the City. Completing the projects will improve water quality and fire flows in the affected areas.	$30,000	In-House In-House New Construction	Water Construction (4303) 	$30,000 $0 $0
Mad River Well Field *Well Rehabilitation* Redevelop an existing well to assure continued operation at highest yield. Repair or replace pumping equipment as needed.	$65,000	In-House Contract Other	Water Depreciation (6401) 	$65,000 $0 $0
Public Works Facility *Construction - Debt Service* Share of construction of a facility to house Public Works functions. Annual debt service payments will be made from the Water/Sewer Debt Service Fund from 2020 - 2044. Principle and interest at $96,608/year.4	$2,125,376	Consultant Contract New Construction	Water Construction (4303) 	$2,125,376 $0 $0
Water Main Oversizing Upgrade size of water mains as part of property development to help assure the ability to meet needs of adjoining properties as they are developed.	$60,000	In-House Contract New Construction	Water Construction (4303) 	$60,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Project Year *Other*

Water

	Estimated Total Cost	*Engineering Performed by* *Construction Performed by* *Project Type*	*Funding*	
Water Main Replacement Replace 4" water lines with 6" or 8" lines to improve flow and fire flow or replace failing cast iron pipe. Will address areas with high frequency of water main breaks.	$350,000	In-House Contract Replacement	Water Construction (4303)	$350,000 $0 $0
Water Main Valve/Hydrant Replacement Replace malfunctioning valves/hydrants at various locations throughout the City. High priority will be given to those areas targeted by the Street Program.	$60,000	In-House In-House Replacement	Water Construction (4303)	$60,000 $0 $0
Black Lane Water Main Extension *Broad Street to Armstrong Road* Oversizing of proposed water main to be extended on Black Lane to support development and eventually provide a secondary service loop from the northern area of the water system once water is extended down Broad Street.	$75,000	Consultant Contract New Construction	Water Construction (4303)	$75,000 $0 $0
Clearwell *Design and Construction* Additional clearwell for storage of finished water to meet increased plant capacity and future demand.	$1,500,000	Consultant Contract New Construction	Water Construction (4303)	$1,500,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Water

Project Year *Other*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Medium Service Booster Station Replacement *Design and Construction* Replace 1950's facility, which is limited by footprint, both for capacity increases and operational/efficiency improvements. Associated with the Water Treatment Plant.	$5,500,000	Consultant Contract Replacement	Water Depreciation (6401)	$5,500,000 $0 $0
Sister Tank in High Service *Design* Growth will necessitate an elevated storage tank to provide needed capacity and pressure for domestic and fire usage.	$350,000	Consultant Contract New Construction	Water Construction (4303)	$350,000 $0 $0
Old Yellow Springs Road Extension *Construction* Extend water main to allow for connection of properties in Bath Township. Many are seeing failed water wells in this area.	$375,000	Consultant Contract Other	Water Construction (4303)	$375,000 $0 $0
State Route 235 Water Main Extension Oversizing *Upgrade* Upgrade size of water main to be installed from existing pipe to the I-675 area to allow for further development in this corridor location.	$30,000	Consultant Contract New Construction	Water Construction (4303)	$30,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Water

Project Year *Other*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Trebein/Garland Extension *Construction* Project will provide future capacity to the northeast section of the City.	$2,000,000	Consultant Contract New Construction	Water Construction (4303)	$2,000,000 $0 $0
Water Storage Tank in Low Service *Construction* Construct a second water tower at Fairfield Park to allow for greater system storage and redundancy. Recommended in the Water Master Plan.	$2,300,000	Consultant Contract New Construction	Water Construction (4303)	$2,300,000 $0 $0
Water Storage Tank for Future Expansion *Design & Construction* It is expected that the growth of east Fairborn will necessitate an elevated water storage tank to provide needed capacity and pressure for domestic and fire usage.	$3,600,000	Consultant Contract New Construction	Water Construction (4303)	$3,600,000 $0 $0
Water Treatment Plant *Backwash Equalization Tank - Design and Construction* Provide for interim storage of Water Treatment Plant backwash and process water for slow release to the sewer system reducing impact to the Water Reclamation Center.	$1,700,000	Consultant Contract New Construction	Water Construction (4303)	$1,700,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Water

Project Year *Other*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Water Treatment Plant *Convert Chlorine System* Convert from the use of chlorine gas at the Water Treatment Plant to a safer form of employee safety, reduced regulatory requirements and better feed control.	$500,000	Consultant Contract Replacement	Water Depreciation (6401)	$500,000 $0 $0
Growth Project Infrastructure Support *Design* Design of infrastructure extensions in support of economic development target areas.	$50,000	Consultant Contract New Construction	Water Construction (4303)	$50,000 $0 $0
Water Treatment Plant *Expansion/Construction* Expand to provide softening and iron and manganese removal capabilities, and increase the treatment capacity to 8.3 MGD. Design will include upsizing the generator to assure ability to meet higher energy demands, as well as energy improvements and laboratory upgrades.	$13,300,000	Consultant Contract Other	Water Construction (4303)	$13,300,000 $0 $0
Water Treatment Plant *Design* Expand to provide softening and iron and manganese removal capabilities, and increase the treatment capacity to 8.3 MGD. Design will include upsizing the generator to assure ability to meet higher energy demands, as well as energy improvements and laboratory upgrades.	$1,300,000	Consultant Contract Other	Water Construction (4303)	$1,300,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Water

Project Year *Other*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Water Treatment Plant *Filter to Clearwell Piping Replacement - Design* Upsize filter to clearwell piping to allow for additional effluent capacity.	$20,000	Consultant Contract Replacement	Water Depreciation (6401)	$20,000 $0 $0
Water Treatment Plant *Filter to Clearwell Piping Replacement - Construction* Upsize filter to clearwell piping to allow for additional effluent capacity.	$111,000	Consultant Contract Replacement	Water Depreciation (6401)	$111,000 $0 $0
Water Treatment Plant *Filter Media Replacement* Replace filtering media to ensure continued capability of units to remove iron and manganese at sufficient capacities.	$160,000	In-House Contract Replacement	Water Depreciation (6401)	$160,000 $0 $0
Water Treatment Plant *Raw Water Influent Piping Replacement - Design* Upsize raw water influent piping to allow for additional influent capacity.	$20,000	Consultant Contract Replacement	Water Depreciation (6401)	$20,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Water

Project Year *Other*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Water Treatment Plant *Raw Water Influent Piping Replacement - Construction* Upsize raw water influent piping to allow for additional influent capacity.	$162,000	Consultant Contract Replacement	Water Depreciation (6401)	$162,000 $0 $0
Water Treatment Plant *Storage Barn* Install a building capable of storing plant vehicles.	$115,000	Consultant Contract New Construction	Water Construction (4303)	$115,000 $0 $0
Water Treatment Plant *Two Sand Filters - Addition* Allow for additional filtering capacity.	$1,457,000	Consultant Contract New Construction	Water Construction (4303)	$1,457,000 $0 $0
Well Fields Capacities Increase Install additional wells in both old and new Mad River Well Fields to meet future demands and provide backup.	$1,000,000	Consultant Contract New Construction	Water Construction (4303)	$1,000,000 $0 $0

Total Estimated Cost for: ***Water*** **Project Year:** ***Other*** **38,315,376**

Five Year Capital Improvement Plan, 2019-2023

Project Year *2019*

Sewer

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Growth Project Infrastructure Support *Design* Design of infrastructure extensions in support of economic development target areas.	$50,000	Consultant Contract New Construction	Sewer Construction (4305)	$50,000 $0 $0
Manhole and Sewer Rehabilitation Project will target repairs needed on streets scheduled for the Street Program and those found during routine maintenance.	$15,000	In-House In-House Replacement	Sewer Depreciation (6402)	$15,000 $0 $0
Public Works Facility *Construction* Share of design and construction of a facility to house Public Works functions. Annual debt service payments will be made from the Water/Sewer Debt Service Fund from 2020 - 2044.	$1,210,078	Consultant Contract New Construction	Sewer Construction (4305)	$1,210,078 $0 $0
Sanitary Sewer Rehabilitation Perform point repair to areas of sanitary sewer system to lessen impact of storm events on both the collection and treatment systems and improve underground infrastructure.	$185,000	In-House Contract Replacement	Sewer Depreciation (6402)	$185,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Sewer

Project Year *2019*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Sewer Main Oversizing Upgrade size of sewer mains as part of property development to help assure the ability to meet needs of adjoining properties as they are developed.	$60,000	In-House Contract New Construction	Sewer Construction (4305)	$60,000 $0 $0
Water Reclamation Center *Service/Clean Non-Potable Well* Conduct chemical and mechanical cleaning of wells used for treatment process and dewatering.	$15,000	In-House Contract Other	Sewer Depreciation (6402)	$15,000 $0 $0
Jet Vactor *Replacement*	$385,000	In-House Contract Replacement	Sewer Depreciation (6402)	$385,000 $0 $0
Northwest Lift Station *Paving Improvements* Install a pavement surface to facilitate access to all of the areas within the lift station.	$65,000	In-House Contract New Construction	Sewer Construction (4305)	$65,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Project Year *2019*

Sewer

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Water Reclamation Center *Clarifer 1 and 2 Metal Repair/Protective Coating* Repair perforated metal and apply protective coating to extend operational life.	$220,000	Consultant Contract Other	Sewer Construction (4305)	$220,000 $0 $0
Water Reclamation Center *Oxidation Ditch/Clarifier Performance Assessment* Consultant running models to assess oxidation ditch nutrient removal capacity in preparation for a phosphorus limit and stress testing computational fluid dynamics clarifier modeling to determine settling capacity to know whether or not a third carifier is needed.	$175,000	Consultant Contract Other	Sewer Depreciation (6402)	$175,000 $0 $0

Total Estimated Cost for: ***Sewer*** **Project Year:** ***2019*** **$2,380,078**

Five Year Capital Improvement Plan, 2019-2023

Project Year *2020*

Sewer

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Growth Project Infrastructure Support *Design* Design of infrastructure extensions in support of economic development target areas.	$50,000	Consultant Contract New Construction	Sewer Construction (4305) 	$50,000 $0 $0
Manhole and Sewer Rehabilitation Project will target repairs needed on streets scheduled for the Street Program and those found during routine maintenance.	$15,000	In-House In-House Replacement	Sewer Depreciation (6402) 	$15,000 $0 $0
Public Works Facility *Construction* Share of construction of a facility to house public works functions. Annual debt service payments will be made from the Water/Sewer Debt Service Fund from 2020-2044.	$69,708	Consultant Contract New Construction	Sewer Construction (4305) 	$69,708 $0 $0
Sanitary Sewer Rehabilitation Perform point repair to areas of sanitary sewer system to lessen impact of storm events on both the collection and treatment systems and improve underground infrastructure.	$185,000	In-House Contract Replacement	Sewer Depreciation (6402) 	$185,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Sewer

Project Year *2020*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Sewer Main Oversizing Upgrade size of sewer mains as part of property development to help assure the ability to meet needs of adjoining properties as they are developed.	$60,000	In-House Contract New Construction	Sewer Construction (4305) 	$60,000 $0 $0
Water Reclamation Center *Service/Clean Non-Potable Well* Conduct chemical and mechanical cleaning of wells used for treatment process and dewatering.	$15,000	In-House Contract Other	Sewer Depreciation (6402) 	$15,000 $0 $0
Chapelgate Pump *Replacement* Replace 20 year old pumping equipment and add VFD's to improve pump performance and reduce energy costs.	$50,000	Consultant Contract Replacement	Sewer Construction (4305) 	$50,000 $0 $0
Water Reclamation Center *Chemical Phosphorus/Plant Drain Pump System - Design* A chemical backup for phosphorus removal is recommended in the Master Plan as a backup to biological nutrient removal to ensure permit limits are not violated. The drain pump station will be required to separate process side streams from the Water Reclamation Center influent to allow for influent sampling.	$150,000	Consultant Contract New Construction	Sewer Depreciation (6402) 	$150,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Sewer

Project Year *2020*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Water Reclamation Center *Oxidation Ditch - Aerator and Drive Motor Upgrade* Replace aged units to ensure ability to run process and improve efficiency as recommended in the Wastewater Master Plan.	$450,000	Consultant Contract Replacement	Sewer Construction (4305)	$450,000 $0 $0
Water Reclamation Center *Oxidation Ditch - Instrumentation Upgrade* Chem Scan real-time process monitored system is recommended for rehabilitation in the event a strict phosphorous or nitrogen limit is imposed. Recommended in the Wastewater Master Plan.	$250,000	Consultant Contract Replacement	Sewer Depreciation (6402)	$250,000 $0 $0

Total Estimated Cost for: ***Sewer*** **Project Year:** ***2020*** **$1,294,708**

Five Year Capital Improvement Plan, 2019-2023

Project Year *2021*

Sewer

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Growth Project Infrastructure Support *Design* Design of infrastructure extensions in support of economic development target areas.	$50,000	Consultant Contract New Construction	Sewer Construction (4305) 	$50,000 $0 $0
Manhole and Sewer Rehabilitation Project will target repairs needed on streets scheduled for the Street Program and those found during routine maintenance.	$15,000	In-House In-House Replacement	Sewer Depreciation (6402) 	$15,000 $0 $0
Public Works Facility *Construction* Share of construction of a facility to house public works functions. Annual debt service payments will be made from the Water/Sewer Debt Service Fund from 2020 - 2044.	$69,708	Consultant Contract New Construction	Sewer Construction (4305) 	$69,708 $0 $0
Sanitary Sewer Rehabilitation Perform point repair to areas of sanitary sewer system to lessen impact of storm events on both the collection and treatment systems and improve underground infrastructure.	$185,000	In-House Contract Replacement	Sewer Depreciation (6402) 	$185,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Project Year *2021*

Sewer

	Estimated Total Cost	*Engineering Performed by* / *Construction Performed by* / *Project Type*	*Funding*	
Sewer Main Oversizing Upgrade size of sewer mains as part of property development to help assure the ability to meet needs of adjoining properties as they are developed.	$60,000	In-House Contract New Construction	Sewer Construction (4305) 	$60,000 $0 $0
Water Reclamation Center *Effluent Facility - Design* New facility to provide improved UV disinfection, effluent reaeration, a barrier to prevent river back-up into UV channels, and effluent pumping to pump water over the barrier during periods of high river levels.	$750,000	Consultant Contract New Construction	Sewer Construction (4305) 	$750,000 $0 $0
Water Reclamation Center *Service/Clean Non-Potable Well* Conduct chemical and mechanical cleaning of wells used for treatment process and dewatering.	$15,000	In-House Contract Other	Sewer Depreciation (6402) 	$15,000 $0 $0

Total Estimated Cost for: ***Sewer*** **Project Year:** ***2021*** **$1,144,708**

Five Year Capital Improvement Plan, 2019-2023

Project Year *2022*

Sewer

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Growth Project Infrastructure Support *Design* Design of infrastructure extensions in support of economic development target areas.	$50,000	Consultant Contract New Construction	Sewer Construction (4305) 	$50,000 $0 $0
Manhole and Sewer Rehabilitation Project will target repairs needed on streets scheduled for the Street Program and those found during routine maintenance.	$15,000	In-House In-House Replacement	Sewer Depreciation (6402) 	$15,000 $0 $0
Public Works Facility *Construction* Share of construction of a facility to house public works functions. Annual debt service payments will be made from the Water/Sewer Debt Service Fund from 2020 - 2044.	$69,708	Consultant Contract New Construction	Sewer Construction (4305) 	$69,708 $0 $0
Sanitary Sewer Rehabilitation Perform point repair to areas of sanitary sewer system to lessen impact of storm events on both the collection and treatment systems and improve underground infrastructure.	$185,000	In-House Contract Replacement	Sewer Depreciation (6402) 	$185,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Sewer

Project Year *2022*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Sewer Main Oversizing Upgrade size of sewer mains as part of property development to help assure the ability to meet needs of adjoining properties as they are developed.	$60,000	In-House Contract New Construction	Sewer Construction (4305)	$60,000 $0 $0
Water Reclamation Center *Service/Clean Non-Potable Well* Conduct chemical and mechanical cleaning of wells used for treatment process and dewatering.	$15,000	In-House Contract Other	Sewer Depreciation (6402)	$15,000 $0 $0
Force Main *16" Line* Line the older 16" force main from the Northwest Lift Station to the Water Reclamation Center. This line provides redundency and storm event capacity, but has known condition issues.	$396,000	In-House Contract Replacement	Sewer Construction (4305)	$396,000 $0 $0

Total Estimated Cost for: ***Sewer*** **Project Year:** ***2022*** **$790,708**

Five Year Capital Improvement Plan, 2019-2023

Sewer

Project Year *2023*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Growth Project Infrastructure Support *Design* Design of infrastructure extensions in support of economic development target areas.	$50,000	Consultant Contract New Construction	Sewer Construction (4305) 	$50,000 $0 $0
Manhole and Sewer Rehabilitation Project will target repairs needed on streets scheduled for the Street Program and those found during routine maintenance.	$15,000	In-House In-House Replacement	Sewer Depreciation (6402) 	$15,000 $0 $0
Public Works Facility *Construction* Share of construction of a facility to house public works functions. Annual debt service payments will be made from the Water/Sewer Debt Service Fund from 2020 - 2044.	$69,708	Consultant Contract New Construction	Sewer Construction (4305) 	$69,708 $0 $0
Sanitary Sewer Rehabilitation Perform point repair to areas of sanitary sewer system to lessen impact of storm events on both the collection and treatment systems and improve underground infrastructure.	$185,000	In-House Contract Replacement	Sewer Depreciation (6402) 	$185,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Sewer

Project Year *2023*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Sewer Main Oversizing Upgrade size of sewer mains as part of property development to help assure the ability to meet needs of adjoining properties as they are developed.	$60,000	In-House Contract New Construction	Sewer Construction (4305) 	$60,000 $0 $0
Water Reclamation Center *Service/Clean Non-Potable Well* Conduct chemical and mechanical cleaning of wells used for treatment process and dewatering.	$15,000	In-House Contract Other	Sewer Depreciation (6402) 	$15,000 $0 $0
Kauffman Lift Station *Pump Replacement* Replace 10 year old pumps.	$70,000	Consultant Contract Replacement	Sewer Construction (4305) 	$70,000 $0 $0
Water Reclamation Center *Third Clarifier and Secondary Sludge Building - Design* Install a 3rd clarifier to meet anticipated demand. Add on to the secondary sludge building to allow for additional pumping equipment as recommended in the Wastewater Master Plan.	$600,000	Consultant Contract New Construction	Sewer Depreciation (6402) 	$600,000 $0 $0

Total Estimated Cost for: ***Sewer*** **Project Year:** ***2023*** **$1,064,708**

Five Year Capital Improvement Plan, 2019-2023

Sewer

Project Year *Other*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Growth Project Infrastructure Support *Design* Design of infrastructure extensions in support of economic development target areas.	$50,000	Consultant Contract New Construction	Sewer Construction (4305) 	$50,000 $0 $0
Manhole and Sewer Rehabilitation Project will target repairs needed on streets scheduled for the Street Program and those found during routine maintenance.	$15,000	In-House In-House Replacement	Sewer Depreciation (6402) 	$15,000 $0 $0
Public Works Facility *Construction - Remaining Debt Service* Share of construction of a facility to house public works functions. Annual debt service payments will be made from the Water/Sewer Debt Service Fund from 2020 - 2044. Principle and interest at $92,140/year.	$2,027,080	Consultant Contract New Construction	Sewer Construction (4305) 	$2,027,080 $0 $0
Sanitary Sewer Rehabilitation Perform point repair to areas of sanitary sewer system to lessen impact of storm events on both the collection and treatment systems and improve underground infrastructure.	$200,000	In-House Contract Replacement	Sewer Depreciation (6402) 	$200,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Sewer

Project Year *Other*

	Estimated Total Cost	*Engineering Performed by* / *Construction Performed by* / *Project Type*	*Funding*	
Sewer Main Oversizing Upgrade size of sewer mains as part of property development to help assure the ability to meet needs of adjoining properties as they are developed.	$75,000	In-House Contract New Construction	Sewer Construction (4305) 	$75,000 $0 $0
Armstrong Road Trunk Sewer *Extension* Design and construct 15" sanitary trunk sewer from the existing 21" trunk line at Hebble Creek. The extension would go northeastward to the Doorley property north line, following along the east side of a drainage channel. This project along with Phase 2 would provide capacity and gravity sewer to serve the area north of Armstrong Road to the Clark County line and eastward to the vicinity of West Enon Road/Wilkerson Road intersection and eliminate the need to have a lift station serve the area.	$2,000,000	Consultant Contract New Construction	Sewer Construction (4305) 	$2,000,000 $0 $0
Hebble Creek Trunk Sewer *Extension* Design and construct continuance of the 21" trunk sanitary sewer that is following the Hebble Creek route. The project would extend the line from near the Mill Race Drive cul-de-sac 3000' southward to Yellow Springs-Fairfield Road at the Byron Road intersection. It would open up service potential to the northeast and southeast quadrants of the intersection plus a smaller area at the southwest quandrant.	$300,000	Consultant Contract New Construction	Sewer Construction (4305) 	$300,000 $0 $0
Old Yellow Springs Road Sewer *Extension* Extend sewer main to allow for connection of properties in Bath Township. Many are seeing failed septic systems in this area.	$500,000	Consultant Contract New Construction	Sewer Construction (4305) 	$500,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Sewer

Project Year *Other*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Roehner Pump Station Upgrade *Design and Construction* As outlined in the Sewer Master Plan, installation of this pump station will be addressed based on need resulting from development of this area.	$1,700,000	Consultant Contract New Construction	Sewer Construction (4305)	$1,700,000 $0 $0
Sewer Collection System - Comprehensive Assessment Utilize televiewing, ultrasonic and sonar equipment to assess condition of all 8" and larger piping.	$900,000	Consultant Contract Other	Sewer Depreciation (6402)	$900,000 $0 $0
State Route 235 Projects *Parallel 235 Interceptor - Construction*	$3,100,000	Consultant Contract New Construction	Sewer Construction (4305)	$3,100,000 $0 $0
State Route 235 Projects *Sewer Main Extension Oversizing* Upgrade size of sewer main to be installed from existing pipe to the I-675 area to allow for further development in this corridor location.	$30,000	Consultant Contract New Construction	Sewer Construction (4305)	$30,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Sewer

Project Year *Other*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
State Route 235 Projects *Trunk Line Restoration - Construction*	$2,250,000	Consultant Contract Other	Sewer Construction (4305)	$2,250,000 $0 $0
Southeast Lift Station *Force Main Discharge Upsizing - Construction* Upsize 1700' of 21" discharge sewer to 27" as recommended by the Master Plan to address future demands.	$1,700,000	Consultant Contract New Construction	Sewer Construction (4305)	$1,700,000 $0 $0
Water Reclamation Center *Chemical Phosphorous Removal System* Install system to reduce phosphorous to acceptable limits if required to do so by new, lower levels mandated by the Ohio Environmental Protection Agency.	$800,000	Consultant Contract New Construction	Sewer Construction (4305)	$800,000 $0 $0
Water Reclamation Center *Effluent Facility - Construction* Includes UV disinfection, effluent re-aeration, and effluent pumping. This was recommended in the Master Plan based on poor condition of existing structure and limited capacity of existing equipment as well as to provide protection from flooding during high river levels.	$5,300,000	Consultant Contract New Construction	Sewer Construction (4305)	$5,300,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Project Year *Other*

Sewer

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Water Reclamation Center *Equalization Basin* Allow for equalization of peaks from wet weather flow. Recommended as an alternative to plant expansion in the Wastewater Master Plan.	$4,400,000	Consultant Contract New Construction	Sewer Construction (4305) 	$4,400,000 $0 $0
Water Reclamation Center *Sludge Concentration Building - Pump Upgrades* Replace pumps to increase capacity. Also replace associated piping and valves recommended in the Wastewater Master Plan.	$600,000	Consultant Contract Replacement	Sewer Depreciation (6402) 	$600,000 $0 $0
Water Reclamation Center *Third Clarifier and Secondary Sludge Building - Construction* Install a third clarifier to meet anticipated demand. Add on to the secondary sludge building to allow for additional pumping equipment as recommended in the Wastewater Master Plan.	$5,600,000	Consultant Contract New Construction	Sewer Construction (4305) 	$5,600,000 $0 $0
Water Reclamation Center *Treatment Facility Upgrade - Design and Construction* Facility will include screening and grit removal improvements and flow splitting to the EQ basin. This will address capacity, condition and redundency concerns. Recommended as an alternative to plant expansion in the Wastewater Master Plan.	$7,000,000	Consultant Contract New Construction	Sewer Construction (4305) 	$7,000,000 $0 $0

Total Estimated Cost for: ***Sewer*** **Project Year:** ***Other*** **38,547,080**

Five Year Capital Improvement Plan, 2019-2023

Project Year *2019*

Police

	Estimated Total Cost	Engineering Performed by / Construction Performed by / Project Type	Funding	
Annual Expenses *Soft Body Armor*	$2,000	Replacement	Public Safety Fund (4323) 	$2,000 $0 $0
Building and Attached Equipment *Building Fitness Equip, Range Renov, Door Repl, Jail Lighting; Bldg Maint* Building Fitness Equipment - $25,000; Range Reno, Door Replacement, Jail Lighting - $21,505; Building Maintenance - $5,000	$51,505	New/Replacement	Public Safety Fund (4323) 	$51,505 $0 $0
Computer & IT Related *Laptops, Scanners, Battery Backup; Fiber Line-Fairborn Apartments Area* Laptops, Scanners and Battery Backup - $8,000; Fiber Line to Fairborn Apartments Area - $100,000	$108,000	New	Public Safety Fund (4323) 	$108,000 $0 $0
Miscellaneous Equipment *800 MHz Radios, Uniforms/Equip, Thermal Camera, Misc Equip* 800 MHz Radios - $22,320; Uniforms and Related Equipment - $5,760; UAS - Thermal Cameras (2) - $8,200; Miscellaneous Equipment - $2,200	$38,480	Replacement	Public Safety Fund (4323) 	$38,480 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Project Year *2019*

Police

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Vehicle & Related Equipment	$219,220		Public Safety Fund (4323)	$219,220
Cruisers, Unmarked, RERT Transport Refurb, ATV w/Upfitting, Vehicle Radars				$0
Patrol Cruisers - $148,320; Unmarked Vehicle - $27,000; RERT Transport Refurbishing - $15,000; ATV Utility Vehicle w/Upfitting - $20,700; Vehicle Radars (4) - $8,200		Replacement		$0

Total Estimated Cost for: ***Police*** **Project Year:** ***2019*** **$419,205**

Five Year Capital Improvement Plan, 2019-2023

Police

Project Year *2020*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Annual Expenses *Soft Body Armor*	$13,940	Replacement	Public Safety Fund (4323) 	$13,940 $0 $0
Building and Attached Equipment *Building Maintenance*	$5,000	New/Replacement	Public Safety Fund (4323) 	$5,000 $0 $0
Computer & IT Related *Technology Upgrades*	$49,979	New/Replacement	Public Safety Fund (4323) 	$49,979 $0 $0
Miscellaneous Equipment *Disp. Desk/Chairs, 800 MHz Portable Radios, Uniforms/Related Equip, Misc Equip* Dispatch Desk and Chairs - $92,000; 800 MHz Radios - $12,000; Uniforms and Related Requipment - $9,000; Miscellaneous Equipment - $5,000	$118,000	New/Replacement	Public Safety Fund (4323) 	$118,000 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Police

Project Year *2020*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Vehicle & Related Equipment	$179,000		Public Safety Fund (4323)	$179,000
Cruisers; Unmarked Vehicle, Mobile Data Computers				$0
Patrol Cruisers - $149,000; Unmarked Vehicle - $25,000; Mobile Data Computers - $5,000		New/Replacement		$0

Total Estimated Cost for: ***Police*** **Project Year:** ***2020*** **$365,919**

Five Year Capital Improvement Plan, 2019-2023

Police

Project Year *2021*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Annual Expenses *Soft Body Armor, Tasers and Components* Soft Body Armor - $6,560; Tasers and Components - $12,000	$18,560	Replacement	Public Safety Fund (4323) 	$18,560 $0 $0
Building and Attached Equipment *Building Maintenance*	$5,000	Replacement	Public Safety Fund (4323) 	$5,000 $0 $0
Computer & IT Related *Covert Public Cameras*	$6,000	New	Public Safety Fund (4323) 	$6,000 $0 $0
Miscellaneous Equipment *Uniforms and Related Equipment, Miscellaneous Equipment* Uniforms and Related Equipment - $9,000; Miscellaneous Equipment - $2,945	$11,945	Replacement	Public Safety Fund (4323) 	$11,945 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Police

Project Year *2021*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Vehicle & Related Equipment	$176,500		Public Safety Fund (4323)	$176,500
Patrol Cruisers, Unmarked Vehicle				$0
Patrol Cruisers - $150,500; Unmarked Vehicle - $26,000		Replacement		$0

Total Estimated Cost for: ***Police*** **Project Year:** ***2021*** **$218,005**

Five Year Capital Improvement Plan, 2019-2023

Police

Project Year *2022*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Annual Expenses *Soft Body Armor, Tasers and Components* Soft Body Armor - $9,522; Tasers and Components - $13,396	$22,918	Replacement	Public Safety Fund (4323) 	$22,918 $0 $0
Building and Attached Equipment *Building Maintenance*	$5,000	Replacement	Public Safety Fund (4323) 	$5,000 $0 $0
Computer & IT Related *Technology Upgrades*	$22,400	New	Public Safety Fund (4323) 	$22,400 $0 $0
Miscellaneous Equipment *Uniforms & Related Equipment, Miscellaneous Equipment* Uniforms and Related Equipment - $9,553; Miscellaneous Equipment - $5,000	$14,553	New/Replacement	Public Safety Fund (4323) 	$14,553 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Police

Project Year *2022*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Vehicle & Related Equipment	$155,015		Public Safety Fund (4323)	$155,015
Patrol Cruisers				$0
		Replacement		$0

Total Estimated Cost for: ***Police*** **Project Year:** ***2022*** **$219,886**

Five Year Capital Improvement Plan, 2019-2023

Police

Project Year *2023*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Annual Expenses *Soft Body Armor, Tasers and Components* Soft Body Armor - $12,563; Tasers and Components - $13,798	$26,361	Replacement	Public Safety Fund (4323) 	$26,361 $0 $0
Building and Attached Equipment *Building Maintenance*	$5,000	Replacement	Public Safety Fund (4323) 	$5,000 $0 $0
Computer & IT Related *Dispatch Software/Consoles, AFIS, Covert Public Camera* Dispatch Software/Consoles - $150,000; Automated Fingerprint Machine (AFIS) - $60,000; Covert Public Camera - $6,500	$216,500	New	Public Safety Fund (4323) 	$216,500 $0 $0
Miscellaneous Equipment *Uniforms & Related Equipment*	$9,840	New/Replacement	Public Safety Fund (4323) 	$9,840 $0 $0

Five Year Capital Improvement Plan, 2019-2023

Police

Project Year *2023*

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Vehicle & Related Equipment	$185,666		Public Safety Fund (4323)	$185,666
Patrol Cruisers, Unmarked Vehicle				$0
Patrol Cruisers - $159,665; Unmarked Vehicle - $26,001		Replacement		$0

Total Estimated Cost for: ***Police*** **Project Year:** ***2023*** **$443,367**

Five Year Capital Improvement Plan, 2019-2023

Police Forfeiture

Project Year *2019*

	Estimated Total Cost	***Engineering Performed by / Construction Performed by / Project Type***	***Funding***	
Alcohol Enforcement/Education *ORC Officer Handbooks, Vehicle Radar* ORC Officer Handbooks - $1,800; Vehicle Radar (1) - $2,000	$3,800	Replacement	Alcohol Fund (2113) 	$3,800 $0 $0
Drug Law Enforcement *Covert Camera Equipment*	$6,000	Replacement	Drug Fund (2108) 	$6,000 $0 $0
Federal Forfeiture *Soft Body Armor*	$7,000	New	Federal (2114) 	$7,000 $0 $0
Law Enforcement State Forfeiture *Computer Software/Hardware*	$15,000	New	State (2107) 	$15,000 $0 $0

Total Estimated Cost for: ***Police Forfeiture*** **Project Year:** ***2019*** **$31,800**

Five Year Capital Improvement Plan, 2019-2023

Project Year *2019*

Fire

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Annual Expenses *Miscellaneous Equip/Hoses, Turnout Gear, Prevention Items* Miscellaneous Fire Equipment - $30,000; Miscellaneous Hoses and Equipment - $20,000; Turnout Gear - $45,000; Fire Prevention Items - $6,000	$101,000	New/Replacement Equipment	Public Safety Fund (4323) 	$101,000 $0 $0
Building and Attached Equipment *Sta 3 & 4 Roofs, Sta Training Equip, Sta/Admin. Maintenance* Roof-Stations 3 & 4 - $190,000; Station Training Equipment - $9,000; Station 2 Training Room Equipment - $25,000; Station/Administration Maintenance - $5,000	$229,000	Station Maintenance	Public Safety Fund (4323) 	$229,000 $0 $0
System and Technical Equipment *EMS Equip, Computer Repl, Technology Upgrades, Traffic Signal Preemption* EMS Equipment - $51,520; Computer Replacements - $5,000; Technology Upgrades - $22,400; Traffic Signal Preemption - $328,000	$406,920	EMS/Apparatus Equipment	Public Safety Fund (4323) 	$406,920 $0 $0

Total Estimated Cost for: ***Fire*** **Project Year:** ***2019*** **$736,920**

Five Year Capital Improvement Plan, 2019-2023

Project Year *2020*

Fire

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Annual Expenses *Miscellaneous Hoses/Equipment, Turnout Gear, Prevention Items* Miscellaneous Fire Equipment - $32,000; Miscellaneous Hoses and Equipment - $21,000; Turnout Gear - $45,000; Fire Prevention Items $6,000	$104,000	New/Replacement Equipment	Public Safety Fund (4323) 	$104,000 $0 $0
Building and Attached Equipment *Station Training Equipment, Furniture/Carpet, Station/Admin Maintenance* Station Training Equipment - $9,000; Furniture/Carpet - $40,000; Station/Administration Maintenance - $5,000	$54,000	Station Maintenance	Public Safety Fund (4323) 	$54,000 $0 $0
System and Technical Equipment *EMS Equip, Computer Repl; LifePak/Lucas Tools, Tech Upgrades* EMS Equipment - $57,040; LifePak w/Access/Lucas Tools - $150,000; Hose Dryer - $5,000; Computer Replacements - $5,000; Technology Upgrades - $10,000	$227,040	EMS/Apparatus Equipment	Public Safety Fund (4323) 	$227,040 $0 $0
Vehicle and Related Equipment *Medic Units*	$290,000	New Appartus/Upfitting	Public Safety Fund (4323) 	$290,000 $0 $0

Total Estimated Cost for: ***Fire*** **Project Year:** ***2020*** **$675,040**

Five Year Capital Improvement Plan, 2019-2023

Project Year *2021*

Fire

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Annual Expenses *Miscellaneous Fire Equipment/Hoses, Turnout Gear, Fire Prevention Items* Miscellaneous Fire Equipment - $34,000; Miscellaneous Hoses and Equipment - $22,000; Turnout Gear - $45,000; Fire Prevention Items - $6,000	$107,000	New/Replacement Equipment	Public Safety Fund (4323) 	$107,000 $0 $0
Building and Attached Equipment *Station Training Equipment, Station/Admin Maintenance* Station Training Equipment - $9,000, Station/Administration Maintenance - $5,000	$14,000	Station Maintenance	Public Safety Fund (4323) 	$14,000 $0 $0
System and Technical Equipment *EMS Equipment, Computer Replacements, 800 MHz Radios* EMS Equipment - $59,560; Computer Replacements - $5,000; 800 MHz Radios - $18,750	$83,310	EMS/Apparatus Equipment	Public Safety Fund (4323) 	$83,310 $0 $0
Vehicle and Related Equipment *Medic Units, Upfitting Costs* Medic Units - $292,000; Upfitting Costs - $10,000	$302,000	EMS/Apparatus Equipment	Public Safety Fund (4323) 	$302,000 $0 $0

Total Estimated Cost for: ***Fire*** **Project Year:** ***2021*** **$506,310**

Five Year Capital Improvement Plan, 2019-2023

Project Year *2022*

Fire

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Annual Expenses *Miscellaneous Fire Equipment/Hoses, Turnout Gear, Fire Prevention Items* Miscellaneous Fire Equipment - $36,000; Miscellaneous Hoses and Equipment - $22,000; Turnout Gear - $110,000; Turnout Gear (including ballistics) - $110,000' Fire Prevention Items - $7,000	$175,000	New/Replacement Equipment	Public Safety Fund (4323) 	$175,000 $0 $0
Building and Attached Equipment *Station Training Equipment, Station/Admin Maintenance, HVAC/Building Systems* Station Training Equipment - $10,000, Station/Administration Maintenance - $5,000; HVAC/Building Systems - $60,000	$75,000	Station Maintenance	Public Safety Fund (4323) 	$75,000 $0 $0
System and Technical Equipment *Computer Repl, EMS Equip, Tech Upgrades, TSP/Equip Repair, Emergency Notification Equip* Computer Replacements - $65,000; EMS Equipment - $61,080; Technology Upgrades - $10,000; TSP Equipment Repair - $5,000; Emergency Notification Equipment - $42,000	$183,080	EMS/Apparatus Equipment	Public Safety Fund (4323) 	$183,080 $0 $0
Vehicle and Related Equipment *Medic Unit, Upfitting, 800 MHz Radios* Medic Unit - $295,000; Upfitting Costs - $20,000; 800 MHz Radios - $18,750	$333,750	EMS/Apparatus Equipment	Public Safety Fund (4323) 	$333,750 $0 $0

Total Estimated Cost for: ***Fire*** **Project Year:** ***2022*** **$766,830**

Five Year Capital Improvement Plan, 2019-2023

Project Year *2023*

Fire

	Estimated Total Cost	***Engineering Performed by*** / ***Construction Performed by*** / ***Project Type***	***Funding***	
Annual Expenses *Equip/Hoses, Turnout Gear, Prevention Items, 800 MHz Radios, Equip Repair Parts* Miscellaneous Fire Equipment - $38,000; Miscellaneous Hoses and Equipment - $23,000; Equipment Repair Parts, TSP - $5,000; Turnout Gear - $45,000; 800 MHz Radios - $18,750; Fire Prevention Items - $7,000	$136,750	New/Replacement Equipment	Public Safety Fund (4323) 	$136,750 $0 $0
Building and Attached Equipment *Station Training Equipment, Station/Admin Maintenance* Station Training Equipment - $11,000, Station/Administration Maintenance - $5,000	$16,000	Station Maintenance	Public Safety Fund (4323) 	$16,000 $0 $0
System and Technical Equipment *EMS Equip, Tech Upgrades, Dispatch/Software (50% share)* EMS Equipment - $63,600; Priority Dispatch Software/Dispatch (50% share) - $150,000	$213,600	EMS/Apparatus Equipment	Public Safety Fund (4323) 	$213,600 $0 $0
Vehicle and Related Equipment *Medic Unit, Thermal Image Camera, Hydraulic Tool, Upfitting* Medic Unit - $300,000; Thermal Image Camera - $20,000; Hydraulic Tool - $40,000; Upffting Costs - $20,000	$380,000	EMS/Apparatus Equipment	Public Safety Fund (4323) 	$380,000 $0 $0

Total Estimated Cost for: ***Fire*** **Project Year:** ***2023*** **$746,350**

Five Year Capital Improvements Plan
Motor Vehicle License Tax Fund (2104)

Revenue Source:

Street Income Tax Levy Funds
Draw from County $5.00 Permissive License Tax Revenue
Municipal $5.00 Permissive License Tax Revenue
Additional $2.50 Permissive License Tax Revenue
Various Federal/State and Local Grants
Interest
Developers' Fees

Projected Growth:

Anticipated 2% Growth Projected in Street Income Tax Levy

Fiscal Year	Beginning Balance	Projected Revenue	Projected Expenditures	Ending Balance
2019	$ 1,412,917	$ 7,164,245	$ 8,129,981	$ 447,181
2020	447,181	6,573,387	6,813,848	206,720
2021	206,720	6,534,991	6,622,756	118,955
2022	118,955	3,458,524	2,993,775	583,704
2023	583,704	4,433,524	4,833,775	183,453

Recurring Expenditures:

Street Levy Program for Local Residential Streets and Thoroughfares
ADA/Retrofit Handicap Ramps

Target Balance: $200,000

Five Year Capital Improvements Plan
Buildings & Land Depreciation Reserve Fund (2404)

Revenue Source:

3% of Net Income Tax Collections (excludes Levy Funds)

Debt Proceeds

Projected Growth:

2% Growth in Income Tax Revenue Per Year

Fiscal Year	Beginning Balance	Projected Revenue	Projected Expenditures	Ending Balance
2019	$ 208,027	$ 5,282,673	$ 5,322,220	$ 168,480
2020	168,480	800,068	771,317	197,231
2021	197,231	790,538	631,017	356,752
2022	356,752	781,118	620,717	517,153
2023	517,153	771,809	650,417	638,545

Recurring Expenditures:

General building repairs

HVAC maintenance agreements

Debt Service:

Municipal Court Roof

Public Works facililty for non-water/sewer depts. beginning in 2019

Target Balance: $50,000

Five Year Capital Improvements Plan
General Capital Improvement Fund (4301)

Revenue Source:

2% of Net Income Tax Collections (excludes Levy Funds)
Interest Earnings
Transfers from General Fund

Projected Growth:

2% Growth in Income Tax Per Year

Fiscal Year	Beginning Balance	Projected Revenue	Projected Expenditures	Ending Balance	Less Reserve	Available Balance
2019	$ 495,795	$ 180,806	$ 125,000	$ 551,601	$ (15,750)	$ 535,851
2020	551,601	184,382	125,000	610,983	(15,750)	595,233
2021	610,983	188,030	630,000	169,013	(15,750)	153,263
2022	169,013	191,751	130,000	230,764	(15,750)	215,014
2023	230,764	195,546	130,000	296,310	(15,750)	280,560

Recurring Expenditures:

City share of Sidewalk Program
Catch basin repair
Storm sewer repair
Storm sewer nuisance control

Fund Balance Reserve:

$15,750 in Years 2019 thru 2023 for future sidewalk improvements to Trebein Road (Res. 119-03)

Target Balance: $100,000

Five Year Capital Improvements Plan
Parks & Recreation Capital Improvements (4302)

Revenue Source:

Hotel Motel Tax
Lease Payments from AT&T Tower @ 100%
Interest Earnings
Vending Machine Commissions
Fees in Lieu of Land Dedications

Projected Growth:

0% Growth in Hotel/Motel Tax

Fiscal Year	Beginning Balance	Projected Revenue	Projected Expenditures	Ending Balance
2019	$ 161,657	$ 177,751	$ 190,000	$ 149,408
2020	149,408	177,751	170,000	157,159
2021	157,159	177,751	150,000	184,910
2022	184,910	177,751	205,000	157,661
2023	157,661	177,751	180,000	155,412

Recurring Expenditures:

Park Equipment at Various Locations

Target Balance: $50,000

Five Year Capital Improvements Plan
Water Construction (4303)

Revenue Source:

Transfer from Water Operating Fund
Water Connection and Tap Fees
Interest Earnings

Projected Growth:

No Increase in Projected Revenue Anticipated

Fiscal Year	Beginning Balance	Projected Revenue	Projected Expenditures	Ending Balance
2019	$ 818,778	$ 3,381,928	$ 3,866,738	$ 333,968
2020	333,968	750,134	623,260	460,842
2021	460,842	2,195,331	2,258,260	397,913
2022	397,913	1,305,532	1,368,260	335,185
2023	335,185	1,305,532	568,260	1,072,457

Recurring Expenditures:

Water Main Oversizing
Water Main Valve/Hydrant Replacement
Loop Dead-End Water Mains
Growth Project Infrastrucutre

Additional Comments:

Debt Service for Bonds is paid from Fund 3205 Water and Sewer Debt Service. BANS and bonds principal and interest is transferred from Water Operating Fund to fund the debt service.

Target Balance: $100,000

Five Year Capital Improvements Plan
Sewer Construction (4305)

Revenue Source:

Transfer from Sewer Operating Fund
Sewer Connection and Tap Fees
Interest Earnings

Projected Growth:

No Increase in Projected Revenue Anticipated

Fiscal Year	Beginning Balance	Projected Revenue	Projected Expenditures	Ending Balance
2019	$ 1,460,765	$ 1,440,078	$ 1,605,078	$ 1,295,765
2020	1,295,765	230,000	679,708	846,057
2021	846,057	430,000	929,708	346,349
2022	346,349	430,000	575,708	200,641
2023	200,641	230,000	249,708	180,933

Recurring Expenditures:

Sewer Main Oversizing
Growth Project Infrastrucutre

Additional Comments:

Debt Service for Bonds is paid from Fund 3205 Water and Sewer Debt Service. BANs and Bonds principal and Interest are transferred from Sewer Operating Fund to fund the debt service.

Target Balance: $100,000

Five Year Capital Improvements Plan
Water Depreciation Reserve (6401)

Revenue Source:

Transfer from Water Fund as needed

Projected Growth:

Only slight growth anticipated for these revenue sources

Fiscal Year	Beginning Balance	Projected Revenue	Projected Expenditures	Ending Balance
2019	$ 140,880	$ 60,058	$ 60,000	$ 140,938
2020	140,938	415,962	65,000	491,900
2021	491,900	164,378	165,000	491,278
2022	491,278	72,619	65,000	498,897
2023	498,897	204,192	65,000	638,089

Recurring Expenditures:

Well Redevelopment

Target Balance: $50,000

Five Year Capital Improvements Plan
Sewer Depreciation Reserve (6402)

Revenue Source:

Transfer from Sewer Fund as needed

Projected Growth:

Only slight growth anticipated for these revenue sources

Fiscal Year	Beginning Balance	Projected Revenue	Projected Expenditures	Ending Balance
2019	$ 427,922	$ 627,380	$ 775,000	$ 280,302
2020	280,302	411,643	615,000	76,945
2021	76,945	291,923	215,000	153,868
2022	153,868	294,222	215,000	233,090
2023	233,090	631,910	815,000	50,000

Recurring Expenditures:

Manhole & Sewer Rehab
Sanitary Sys Rehab - Reduce I&I
Service/Clean Non-potable Wells

Target Balance: $50,000

Five Year Capital Improvements Plan
Sanitation Depreciation Reserve Fund (6403)

Revenue Source:

Transfer from Sanitation Fund

2019 is Year 3 of 10 for Street Sweeper

Projected Growth:

No growth - constant amount transferred

Fiscal Year	Beginning Balance	Projected Revenue	Projected Expenditures	Ending Balance
2019	$ 50,000	$ 25,000	$ -	$ 75,000
2020	75,000	25,000	-	100,000
2021	100,000	25,000	-	125,000
2022	125,000	25,000	-	150,000
2023	150,000	25,000	-	175,000

Additional Comments:

Purchase street sweeper in 2026 estimated at $250,000

Five Year Capital Improvements Plan
Tax Increment Financing Fund (8455)

Revenue Source:

TIF District PILOTs

Projected Growth:

2% Increase in PILOTs Annually

Fiscal Year	Beginning Balance	Projected Revenue	Projected Expenditures	Ending Balance
2019	$ 308,350	$ 200,000	$ 120,493	$ 387,857
2020	387,857	204,000	119,197	472,660
2021	472,660	208,080	122,452	558,288
2022	558,288	212,242	120,608	649,922
2023	649,922	216,487	118,765	747,644

Recurring Expenditures:

Debt Service Payments for Commerce Center Ext and DYS Improvements

Target Balance: $5,000

Five Year Capital Improvements Plan
Public Safety Police & Fire (4323)

Revenue Source:

.25% Municipal Income Tax Levy Funds (2015-2024)
Transfer from the General Fund
RITA Refund of Administrative Fees

Projected Growth:

Anticipated 2% Growth in Income Tax Levy

Fiscal Year	Beginning Balance	Projected Revenue	Projected Expenditures	Ending Balance
2019	$ 116,159	$ 2,387,384	$ 2,140,095	$ 363,449
2020	363,449	2,435,131	2,245,437	553,142
2021	553,142	2,483,834	1,987,180	1,049,796
2022	1,049,796	2,533,510	2,311,893	1,271,413
2023	1,271,413	2,584,180	2,571,401	1,284,192

Recurring Expenditures:

Three police officers, three firefighters, one IT tech. funded annually
MARCs radio system BAN principal paydown
Police complex renovation debt service