

November 1, 2021
Mayor & City Council Members
City of Waverly

EXECUTIVE SUMMARY OF THE
2020-21
PUBLIC WORKS DEPARTMENT
ANNUAL REPORT

Highlights of the 2020-21 fiscal year for the Public Works Department are summarized for quick review. The following 10 divisions represent the Public Works Department's primary areas of responsibility. This executive summary is not meant to be inclusive of all activities, but rather a snapshot of the highlights over the past year. Detailed information is provided in the attached annual report.

Division 1 – Public Works Administration

Public Works Administration is responsible for coordinating and overseeing public improvement projects. Over the past year many projects were either under construction or in the study phase. (Cost includes employee charges to project.) Projects include:

<u>Projects</u>	<u>Initiated</u>	<u>Finalized</u>	<u>Cost</u>
20 th Street NW Recon. – Ph. 1 RR Crossing Impr. At 20 th St. NW & 5 th Ave. NW 2018	Jan. 2017	Oct. 2020	\$1,545,270
Airport Runway 29 Extension 2018	Aug. 2017	Jan. 2021	\$1,624,073
WPC Facility Improvements 2020	March 2018	not final	-
4 th St. SW & 10 th St. SW Improvements 2020	Aug. 2018	not final	-
20 th Street NW Improvements 2020	June 2019	Oct. 2020	\$749,280
Business 218 North Resurfacing 2020	May 2019	Feb. 2021	\$851,882
Rolling Prairie Trail Extension 2021	March 2019	not final	-
Cedar River Park (Youth Ballfields)	Sept. 2019	not final	-
GIS Data Collection 2019	June 2019	Nov. 2020	\$211,564
Bituminous Seal Coat 2020	Jan. 2020	Aug. 2020	\$206,963
Downtown Alley Reconstruction 2020	March 2020	July 2020	\$49,769
Crack Cleaning & Filling 2020	March 2020	Sept. 2020	\$9,431
Asphalt Patching – Spring 2020	April 2020	June 2020	\$21,871
Old WPC Dome Demolition	April 2020	Dec. 2020	\$102,500
Traffic Study 2020	Sept. 2019	not final	-
Public Services – North Addition 2021	Dec. 2019	not final	-
1 st Street NW Reconstruction 2021	July 2020	not final	-
Adams Parkway Bridge – Force Main Inspection and Repair 2020	Aug. 2020	Dec. 2020	\$17,500

<u>Projects</u> (Cont'd)	<u>Initiated</u>	<u>Finalized</u>	<u>Cost</u>
3 rd Street SE Bridge Removal 2021	July 2020	not final	-
Asphalt Patching – Fall 2020	Sept. 2020	Nov. 2020	\$25,852
Cedar Lane Reconstruction – Phase 2 2021			
Culvert Replacements	Dec. 2020	not final	-
Cedar River Park – Phase 2 Ball Diamonds 2021	Jan. 2021	not final	-
Bituminous Seal Coat 2021	Feb. 2021	not final	-
Eagle Ridge Drive & Cul-De-Sac Extension 2021	Dec. 2020	not final	-
Crack Cleaning and Filling 2021	April 2021	Contractor a no show	
Asphalt Patching Spring 2021	April 2021	June 2021	\$21,103

Total value of work **finalized** between July 2020 thru June 2021 **\$ 5,437,058**

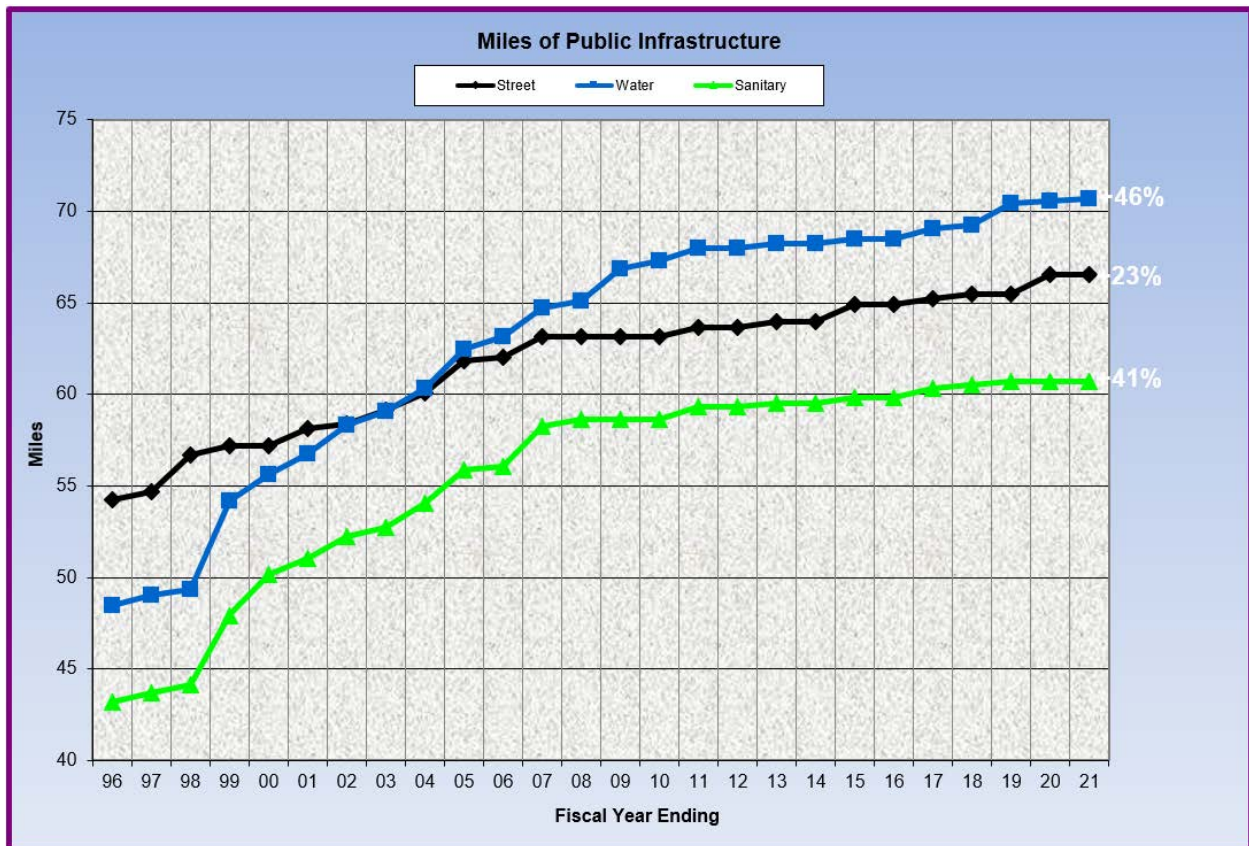
<u>Subdivision w/ Public Infrastructure</u>	<u>Final Plat Approved</u>	<u>Public Improve. Accepted</u>	<u>Lots</u>	<u>Streets (Feet)</u>
Whitetail Bluff (35 Lots & 1,821 LF Street)	July 20, 2020	not final	35	1,932
Eagle Ridge Drive & Cul-De-Sac Extension	Dec. 2020	not final	14	750
Total Completed for July 2020 thru June 2021			0	0
Newly Accepted Streets			=	0 mi

Public Works Administration is also responsible for coordinating and overseeing the general operations and budgets of 10 divisions. Division leaders are responsible for the daily operations and report to the Public Services Superintendent or the Director of Public Works. The 2019-20 actual and the 2020-21 budgeted division expenditures were:

Division	2019-20 Actual	2020-21 Budget
Public Works Administration	\$ 282,762	\$ 357,306
Engineering	266,560	260,663
General Infrastructure Maintenance	351,460	420,305
Equipment Services	343,033	343,071
Street RUT	1,368,444	1,287,402
Airport	\$ 82,766	\$ 79,954
Water (<i>Service, Misc., Int.</i>)	2,112,841	2,045,075
Water Pollution Control (<i>Service, Misc., Int.</i>)	1,131,126	1,193,508
Sewer Line Maintenance	286,729	301,217
Solid Waste	<u>1,501,269</u>	<u>1,596,590</u>
	\$ 7,726,990	\$ 7,885,091

Due to the complexity of City budgeting and financing, the above table is intended to only be a snapshot. The timing of various equipment purchases or projects absorbed into the annual operating budgets can distort year-to-year comparisons. Detailed information is available in the City's FY 2020-21 annual audit.

The increasing amount of public infrastructure has and will create maintenance challenges in coming years. The graph below shows how the total miles of streets, water mains and sanitary sewer mains have increased over the last 26 years. The maintenance needs of the new infrastructure will increase with age. To date the full-time staffing levels within these areas have remained unchanged for over three decades. A proactive equipment replacement schedule and technological advances are allowing the City to maintain excellent service. However, continued growth will inevitably require that additional staff is hired in order to maintain an acceptable and expected level of service to the community.



In an effort to increase public awareness a Public Works quarterly newsletter is mailed to every address within Waverly. The public response to the newsletter is very favorable. Articles highlight the services provided to the public and information on public works projects. Additionally, since January 2014 the Director of Public Works has joined the Mayor on KWAY Radio 99.3 every Monday morning the day of a council meeting. The Mayor highlights topic of interest on the Council's agenda the Director discusses active public works projects and current Public Services operations such as

leaf collection in the fall or special collection week in the spring. In March 2019 the radio updates by the Director were ended due to the COVID-19 pandemic.

Division 2 – Engineering Division

The Engineering Division continues to prepare plans and specifications for smaller scale projects. Inspection and administration of projects are performed on all sizes and types of work as the staffing schedule allows. The design or review of construction drawings are the responsibility of the City Engineer. Consultants continue to fulfill an important role and are utilized for large projects or to design work requiring specialized expertise.

Division 3 – General Infrastructure Maintenance

A primary responsibility of the General Infrastructure Maintenance Division is to finance and/or inspect the following infrastructure:

- Inspect and perform routine maintenance on the dam.
- Inspect trail bridges every four years.
- Finance the USGS Cedar River Gage on Adams Parkway Bridge.
- Finance community-wide street lighting, entrance signs and traffic signals.

Additionally, the local property tax support of the Waverly Municipal Airport is shown as an expense and transfer of monies to the Airport Fund.

Division 4 – Equipment Services Division

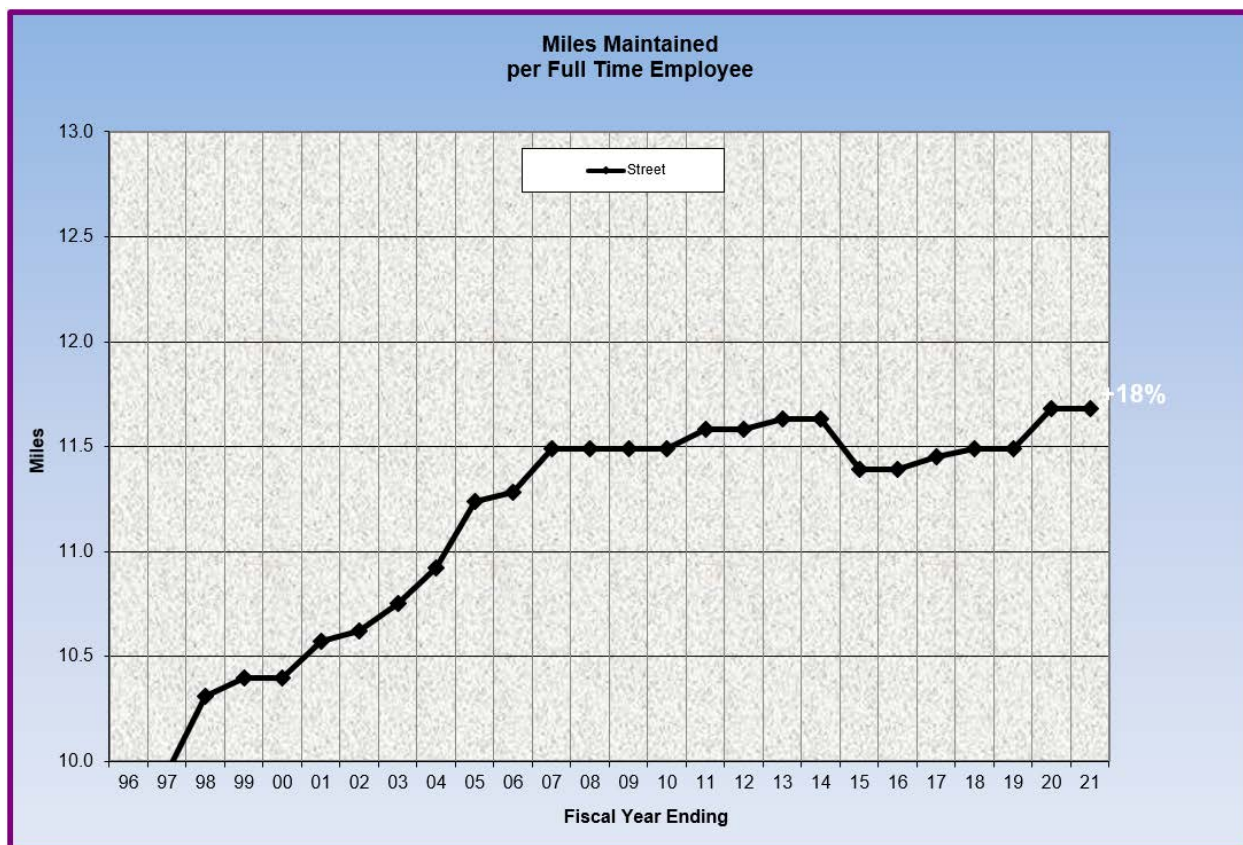
This division is responsible for the routine maintenance and repairs of City vehicles. A five-year equipment replacement schedule forecast is maintained allowing for the timely and economical replacement of vehicles and major items of equipment.

Looking to the Future

- Continuing education is important to staying knowledgeable on vehicle technology advances.

Division 5 – Street - RUT Division

The City owns 66.6 miles of roads, has 2.0 miles of joint jurisdiction (city/county roads) and there are 7.0 miles of state roads through Waverly. Of the 75.6 total miles, the City is responsible for maintaining 69.6 miles. In the fiscal year 2020-21 the City officially added 0.0 miles. However, in the fall of 2021 there will be 0.51 miles added. The number of miles of city, county and state roadways was recalculated in September 2006. In the coming years, as time permits, we hope to develop and maintain a detailed breakdown of the number of miles of arterial, collector and residential streets and alleys. The detail would also show the number of miles that are paved or unpaved and curbed or ditched.



The graph above illustrates the community's growth with new subdivisions increasing the average miles of streets per employee. While the new streets have a low initial maintenance cost, they do immediately impact street sweeping and snow removal efforts. In FY 2014-15 the Streets & Sanitation Foreman had his allocation of time revised from 50/50 to 70/30 to more accurately reflect where his time was spent. This resulted in an adjustment to the average miles of street maintained per full-time employee.

Again, this year the City contracted the seal coating of an estimated 110 blocks in an effort to cover the entire City every 7 years which is the average life of a seal coat. City crews continue to asphalt surface patch in advance of the seal coating.

Maintenance efforts are directed to asphalt patching, seal coating, street sweeping, sign maintenance, aggregate shoulder and alley maintenance, and painting pavement markings. During the winter months the department is primarily responsible for snow removal and helps the Division of Vegetation Management with tree trimming and removal of dead, dying or diseased trees from the public right-of-ways.

In March 2019, a new Division of Vegetation Management in the Leisure Services Department took over the maintenance of vegetation in roadsides, detention basins, open channel waterways, and trees with the right-of-way.

Looking to the Future

- Work continues on defining and refining the Street Division's core services related to repairing and maintaining pavements, signage, pavement markings, aggregate shoulders and alleys. Additional core services include snow plowing, street sweeping and assisting the new Vegetation Management Division with tree removal and maintenance.

Division 6 – Water Division

The Water Division continues to monitor water quality and perform routine maintenance on valves, hydrants and water main leaks. The Water Division performed 1,565 Iowa One-Call locates for water mains, sanitary sewer and storm sewers.

On average 1,053,075 gallons of water per day were pumped with 74% of it accounted for through customer billing or known uses like hydrant flushing. The remaining 26% is likely lost through leaks. A leak detection program has helped reduce the unaccounted water by identifying targeted repair work. Our goal is to have over 80% accountability for the water pumped into the water distribution system.

In the fall of 2020 the City completed the reconstruction 4th Street SW from near 2nd Avenue SW to 8th Avenue SW and the 20th Street NW RR – Xing project. These projects resulted in the addition of approximately 609 lineal feet of new water main.

January 2020 – Completed the 2020 Water Distribution Modeling and Evaluation by WHKS & Co.

Fall 2020 – Completing the GIS mapping of the water distribution system by Midland GIS.

Looking to the Future

- December 2021 – Completion of the Public Services Center for Operations & Disaster Response – North Addition allows for the relocation of the Water and Line Maintenance Divisions.

Division 7 – Water Pollution Control

In March 2018 WHKS & Co. was hired to develop and design the wastewater treatment improvements as described in the Engineer's Report for Nutrient Reduction Strategy dated December 7, 2016. The recommended improvements in Alternative No. 2- Conversion to an EBNR A20 Process with Oxidation Ditches include the construction of an oxidation ditch system, main lift station improvements, primary clarifier improvements, demolition of trickling filter and RBCs, conversion of the intermediate clarifier to a fourth final clarifier, installation of a chemical feed system to supplement phosphorus removal, biosolids storage improvements, and associated site work.

Looking to the Future

- The schedule for the improvements described above is to complete construction by the end of 2022.

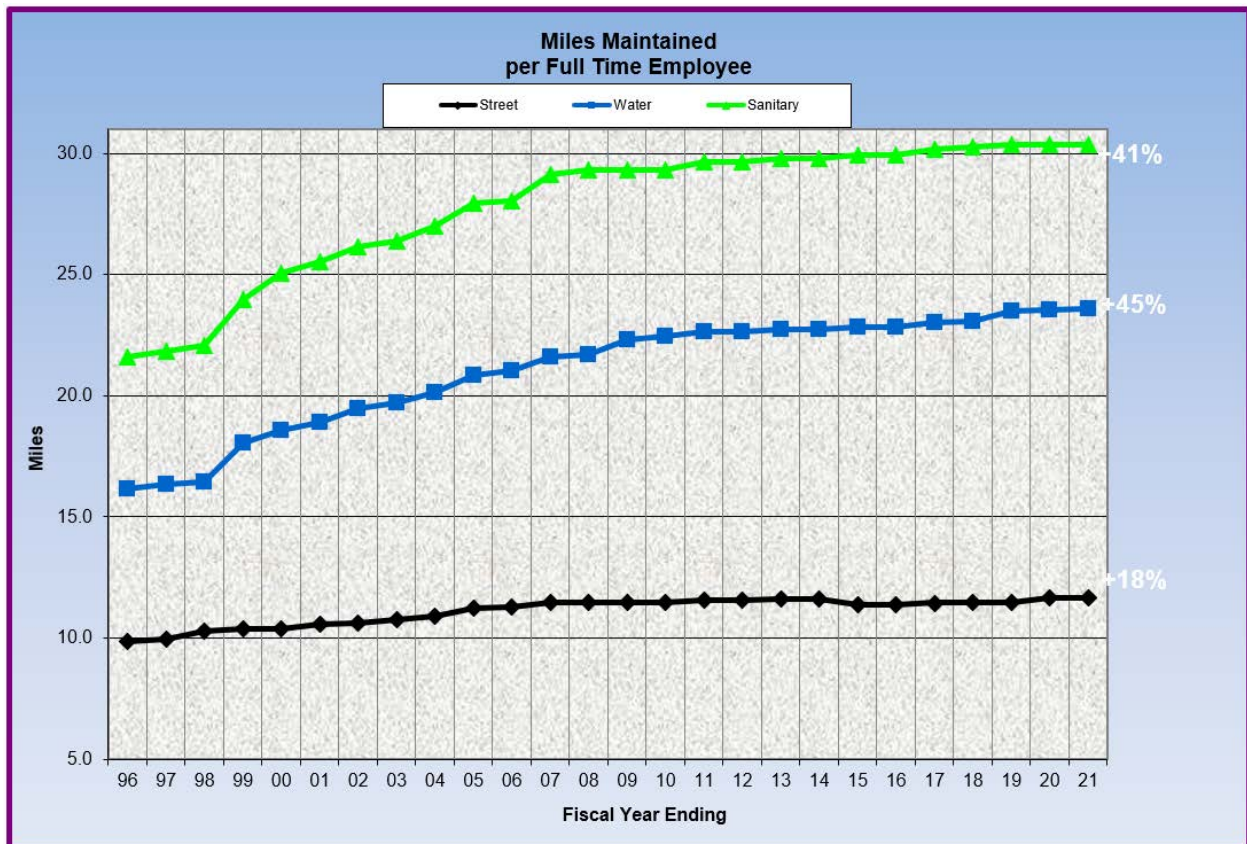
Division 8 – Storm & Sanitary Sewer Line Maintenance Division

This division continued to primarily maintain, clean and televise sanitary and storm sewer lines. Starting in March 2012 the Water Division started performing the utility locates. Additional work included catch basin and manhole repair, sewer taps, and the repair of sewer mains.

The updated Sanitary Sewer Capacity Analysis was completed in January 2020 and helps identify weaknesses within the existing system and the impact of future development on the system. The report determined that there are no “fatal flaws” within the existing system, but there are areas of concern identified for future upgrades.

January 2020 – Completed the 2020 Sanitary Collection System Modeling and Evaluation by WHKS & Co.

Fall 2020 – Complete GIS mapping of the sanitary sewer and storm sewer collection systems by Midland GIS.



Looking to the Future

- Improving upon the current 7-year inspection, cleaning and televising program. Core duties and responsibilities are being reassessed to achieve the preferred 4 to 5-year schedule. Manhole and storm intake fixture adjustments are now a core function of the Streets Division.
- Completion of the Public Services Center for Operations & Disaster Response final phase in December 2021 remains a top priority and allows for the relocation of the Water and Line Maintenance Divisions.

Division 9 - Solid Waste/Recycling Division

The yard waste and recycling programs remain very successful. Usage of the Yard Waste Site and Recycling Center is stable without significant changes in vehicle count or volume. The Recycling Center is open Monday-Friday from 7:00 a.m. – 5:30 p.m. and every Saturday from 8:00 a.m. – 4:00 p.m., except holidays.

In April of 2014 the City began commingled curbside collection of recyclables. The rapid increase in cost to dispose of the commingled recyclables is concerning. In March 2017 the cost was \$30 per ton and in by March 2019 the cost had risen to \$124 per ton. The cost to landfill solid waste is \$42.25 per ton.



Looking to the Future

- In the coming years, as the community continues to grow, the volume of commercial waste (dumpsters) may exceed the capacity of the existing resources. Options would include adding a commercial truck and additional personnel or allowing private haulers cover the additional accounts.
- The processing and accumulation of wood mulch remains a concern. The additional amount is likely the result from the removal of ash trees. Beginning in the summer of 2018 wood mulch delivery was made available to rural residents near Waverly in an effort to draw down the stockpile.

Division 10 – Waverly Municipal Airport

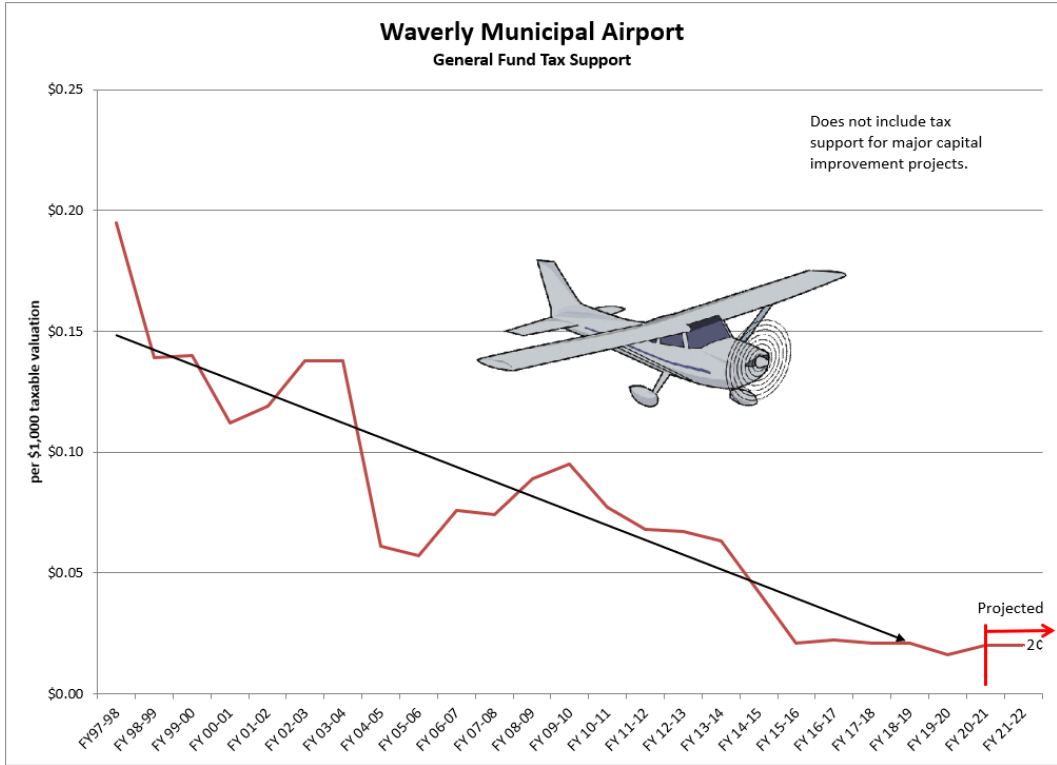
In November 2018 the Waverly Municipal Airport welcomed Waverly Air Services as the contract Airport Manager and Swieter Aircraft Services as the contract Fixed-Base Operator. The City entered into 5-year renewable contract for FBO and Airport Manager services.

The annual property tax support for the Airport continues to decrease and by the year 2021 the routine operations and maintenance of the facility is leveling off at a property tax rate of 2¢ as seen in the graph below. Major capital projects would continue to need the City's financial support.

Fall 2020 – Completed 400-ft Runway 29 Extension Project
Spring 2021 – Replaced Obsolete Security Cameras

Looking to the Future

- Construct New Taxiway Connector on the West End
- Upgrade Electrical Power Supply to T-Hangars and Individual Hangars
- Reconstruct Hangar Taxiways
- Rehab/Reconstruct Hangar Apron
- Expand Hangar Apron
- Construct New T-Hangars



Conclusion

As a department we continue to strive for excellence in community service and efficiency of operations. In the coming years we hope to see the infrastructure and operational recommendations implemented to better serve the citizens of Waverly, our customers, and meet the needs of a growing community.

Respectfully submitted,

Michael J. Cherry, P.E.
Director Public Works & City Engineer

City of Waverly
Department of Public Works
FY 2020-21

ADMINISTRATION

The Administration consists of the Director and the Office Coordinator. The major functions related to Administration are direction of present and future work programs, budget preparation and control, centralized record maintenance, inter/intra departmental coordination, billing and purchasing, and problem solving relevant to personnel and public relations. All of these areas relate to the ten Divisions of the Public Works Department (Administration, Engineering, General Infrastructure Maintenance, Equipment Services, Streets-RUT, Airport, Water, Water Pollution Control, Storm & Sanitary Sewer Line Maintenance, & Solid Waste).

We utilize the City's web site (www.waverlyia.com), Cable 82 TV announcements, newspaper articles and releases, radio announcements, Facebook, and personal communication to inform the citizens of Waverly pertaining to the work performed by our department, when and where the work is to be accomplished, and the priorities with which work will be performed.

City of Waverly
Department of Public Works
FY 2020-21

ENGINEERING

The Engineering Division oversees all public works improvements, which include designs, inspections, surveys, and final certification of projects. Various types of work include the following:

Projects – Sewer, Water, Street, Subdivisions

Planning
Design
Inspection
Project Administration
Review

Mapping

Water
Storm Sewer
Sanitary Sewer
Streets
Subdivisions
Zoning

PUBLIC IMPROVEMENT PROJECTS

“Total Cost” includes all pay apps, invoices & employee charges.

20th Street NW Recon. – Ph. 1 RR Crossing Improvements at 20th St. NW & 5th Ave. NW 2018

Initiated: January 2017
Location: 20th Street NW railroad crossing and 5th Avenue NW railroad crossing.
Description: Reconstruction of RR crossings at 20th Street NW & 5th Avenue NW. Crossing gates installed at 20th Street NW.
Engineer: McClure Engineering
Contractor: Croell, Inc., New Hampton, Iowa
Total Cost: \$1,545,270
Finalized: October 2020

Airport Runway 29 Extension 2018

Initiated: August 2017
Location: Waverly Municipal Airport - 1710 35th Street NW
Description: Extension of runway by 400 feet.
Engineer: McClure Engineering, Clive, Iowa
Contractor: J.B. Holland, Decorah, Iowa
Total Cost: \$1,624,073
FAA Design Grant: \$ 137,637
FAA Construction Grant: \$1,357,031
Finalized: January 2020, Project Closeout April 2021

WPC Facility Improvements 2020

Initiated: March 2018
Location: WPC Facility
Description: Currently under construction with anticipated completion in fall 2022. Project includes the construction of an oxidation ditch system, main lift station improvements, primary clarifier improvements, demolition of trickling filter and RBCs, conversion of the intermediate clarifier to a fourth final clarifier, installation of a chemical feed system to supplement phosphorus removal, biosolids storage improvements, and associated site work.
Engineer: WHKS & Co., Mason City, Iowa
Contractor: Gridor Construction
Total Cost: \$
Finalized: Not final, under construction

4th Street SW & 10th Street SW Improvements 2020

Initiated: August 2018
Location: 4th Street SW between 2nd Avenue SW & 8th Avenue SW and 10th Street SW between W. Bremer & 2nd Avenue SW.
Description: Reconstruction of both roadways with 4th Street slightly widened and changed to a 3-lane roadway. Improvements include roadway reconstruction, water main & services, sanitary sewer main & services, storm sewer replacement, and improved street lighting.
Engineer: Snyder & Associates, Cedar Rapids, Iowa
Contractor: Wicks Construction, Decorah, Iowa
Total Cost: \$
Finalized: Not yet final

20th Street NW Improvements 2020

Initiated: June 2019
Location: 20th Street NW between 5th Avenue NW and RR tracks.
Description: Reconstruction of roadway and replacement of some storm sewer. (This portion of the roadway was initially to have been completed with the railroad section, but was pulled out due to budget constraints.)
Engineer: McClure Engineering, Clive, Iowa
Contractor: Baker Enterprises, Waverly, Iowa
Total Cost: \$749,280
Finalized: October 2020

Business 218 North Resurfacing 2020

Initiated: May 2019
Location: Business 218 North from West Bremer Avenue to the City Limits
Description: Asphalt resurfacing of Business 218 North from the intersection of West Bremer Avenue north to the City Limits. Additionally, two-foot wide paved shoulders were added from West Bremer Avenue to 35th Street NW.
Engineer: WHKS & Co., Mason City, Iowa
Contractor: Heartland Asphalt, Mason City, Iowa
Total Cost: \$851,882
Finalized: February 2021

Rolling Prairie Trail Extension 2021

Initiated: March 2019
Location: Along 10th Avenue SW from Heritage Way to 16th Street SW.
Description: Construction of the final section of the bike/pedestrian trail that will complete a 40-mile hard-surface trail system from Bristow to Readlyn.
Funding: Received TAP funds of \$184,000
Engineer: WHKS & Co., Mason City, Iowa
Contractor:
Total Cost: \$
Finalized: Not final.

Cedar River Park (Youth Ballfields) – Phase 1 Grading Project

Initiated: September 2019
Location: North of Soccer Fields
Description: Construction and development of a youth ballfield sports complex.
Engineer: Hall & Hall Engineering, Hiawatha, Iowa
Contractor: Mehmert Tiling, Lime Springs, Iowa
Total Cost: \$
Finalized: Not final as the engineering agreement carries through to Phases 2 & 3.

GIS Data Collection 2019

Initiated: June 2019
Location: Citywide
Description: Collection of water valve & hydrant locations; sanitary sewer manhole locations and depths; storm sewer manhole and intake locations and depths.
Engineer: Midland GIS Solutions (Later purchased by SAM), Maryville, Missouri
Total Cost: \$211,564
Finalized: November 2020

Bituminous Seal Coat 2020

Initiated: January 2020
Location: West Waverly (District 2)
Description: Seal coating of approximately 110 city blocks.
Engineer: City
Contractor: Blacktop Service Co., Humboldt, Iowa
Total Cost: \$206,963
Finalized: August 2020

Downtown Alley Reconstruction 2020

Initiated: March 2020
Location: South-side alley in the 300 block of West Bremer Avenue
Description: Reconstruction of alley.
Engineer: City
Contractor: Feldman Concrete, Farley, Iowa
Total Cost: \$49,769
Finalized: July 2020

Crack Cleaning & Filling 2020

Initiated: March 2020
Location: 2nd Ave. SW (from 4th St. SW to 16th St. SW), 12th Street NW (from Park Ave. to City Limits) and Augusta Lane (south end)
Description: Cleaning and filling cracks in streets.
Engineer: City
Contractor: Kluesner Construction, Farley, Iowa
Total Cost: \$9,431
Finalized: September 2020

Asphalt Patching – Spring 2020

Initiated: April 2020
Location: Various streets in Waverly
Description: Repair of utility street cuts with full-depth asphalt.
Engineer: City
Contractor: Kluesner Construction, Farley, Iowa
Total Cost: \$21,871
Finalized: June 2020

Old WPC Dome Demolition 2020

Initiated: April 2020
Location: Brookwood Park
Description: Demolition of old concrete trickling filter structure from the original WPC site in SE Waverly (Brookwood Park).
Engineer: WHKS & Co., Rochester, Minnesota
Contractor: Elder Corporation, Des Moines, Iowa
Total Cost: \$102,500
Finalized: December 2020

Traffic Study 2020

Initiated: September 2019
Location: Citywide
Description: The study will primarily focus on 15 signalized intersections and 18 non-signalized intersections.
Engineer: Snyder & Associates, Cedar Rapids, Iowa
Total Cost: \$
Finalized: Not final. Project was delayed for a year due to COVID-19 pandemic-related decreases in traffic. Also the closure and reconstruction of 4th Street SW and 10th Street SW changed traffic patterns.

Public Services – North Addition 2021

Initiated: December 2019
Location: 2900 5th Avenue NW
Description: Construction of final phase or north addition of Public Services which will house the Street Division's vehicles and equipment. The Water and Sewer Line Maintenance Divisions will move into the first phase of building that is currently occupied by the Street Division.
Engineer: Farnsworth Group, Waukee, Iowa
Contractor: Cresco Building Service, Cresco, Iowa
Total Cost: \$
Finalized: Not final, construction in progress.

1st Street NW Reconstruction 2021

Initiated: July 2020
Location: North side of Bremer Avenue to the south side of 5th Avenue NW
Description: Reconstruction involves new concrete pavement, new storm intakes and some ancillary work on the City's sidewalk, water distribution and sanitary sewer collection service. There are also an estimated 13 water services that will be replaced and switched from the old 4-inch water main to the newer existing 12-inch water main.
Engineer: WHKS & Co., Rochester, MN
Contractor: Lodge Construction, Clarksville, Iowa
Total Cost: \$
Finalized: Not final, construction in progress.

Adams Parkway Bridge – Force Main Inspection and Repair 2020

Initiated: August 2020
Location:
Description: Inspection and repairs including replacing broken hangar straps, adding a wide-support plate to some straps.
Engineer: WHKS & Co., Rochester, Minnesota
Contractor:
Total Cost: \$17,500
Finalized: December 2020

3rd Street SE Bridge Removal 2021

Initiated: July 2020
Location: 3rd Street SE
Description: Removal of the 3rd Street SE Bridge over the Cedar River.
Engineer: WHKS & Co., Rochester, Minnesota
Contractor:
Total Cost: \$
Finalized: Not final.

Asphalt Patching – Fall 2020

Initiated: September 2020
Location: Various streets in Waverly
Description: Repair of utility street cuts with full-depth asphalt.
Engineer: City
Contractor: Kluesner Construction, Farley, Iowa
Total Cost: \$25,852
Finalized: November 2020

Cedar Lane Reconstruction – Phase 2 2021

Initiated: December 2020
Location: Cedar Lane as described below
Description: New/replacement box culverts by Pelikan Park and between the intersections with Evans Street and Brown Lane.
Engineer: Snyder & Associates, Cedar Rapids, Iowa
Contractor: Peterson Contractors, Inc., Reinbeck, Iowa
Total Cost: \$
Finalized: Not final.

Cedar River Park – Phase 2 Ball Diamonds 2021

Initiated: January 2021
Location:
Description: Ball field installation and paving.
Engineer: Hall & Hall Engineering, Hiawatha, Iowa
Contractor: Cardinal Construction, Inc., Waterloo, Iowa
Total Cost: \$
Finalized: Not final, construction in progress.

Bituminous Seal Coat 2021

Initiated: April 2021
Location: Various streets in Waverly
Description: Seal coating of approximately 108 city blocks.
Engineer: City
Contractor: Blacktop Service Co., Humboldt, Iowa
Total Cost: \$
Finalized: Not final.

Eagle Ridge Drive & Cul-De-Sac Extension 2021

Initiated: December 2020
Location: Eagle Ridge Drive
Description: City street, water and sewer infrastructure for the extension of Eagle Ridge Drive to join 8th Street SE.
Engineer: ISG
Contractor: Baker Enterprises, Waverly, Iowa
Total Cost: \$
Finalized: Not final, construction in progress.

Crack Cleaning & Filling 2021

Initiated: April 2021
Location: Various streets in Waverly
Description: Cleaning cracks with compressed air and then sealing them with bituminous oil.
Engineer: City
Contractor: Wolverine Sealcoating
Total Cost: \$
Finalized: Contractor was a no-show.

Asphalt Patching - Spring 2021

Initiated: April 2021
Location: Various streets in Waverly
Description: Repair of utility street cuts with full-depth asphalt.
Engineer: City
Contractor: Heartland Asphalt
Total Cost: \$21,103
Finalized: June 2021

SUBDIVISIONS

Whitetail Bluff Addition

Final Plat Approved: July 20, 2020
Location: Southwest corner of Adams Parkway and the Cedar River. (Between Waverly Utilities and Waverly Area Veterans Post)
New Street: 2,087 feet
New Water Main: 2,365 feet (Plastic water main and services was approved.)
New Sanitary Sewer: 2,870 feet -- 17 new manholes
New Storm Sewer: 815 feet -- 12 new manholes & intakes
No. of Lots: 35
Engineer: Matthew Shock, STS Civil
Developer: JDM Property Holdings (Steve Kerian)
Accepted:

Final Agenda Memos from Public Improvement Projects



AGENDA MEMORANDUM

City Council Meeting

January 4, 2020

Subject: Airport Runway 29 Extension 2018
Finalize Project

Prepared By: Mike Cherry, Director of Public Works & City Engineer

Recommended City Council Action

- Accept the Airport Runway 29 Extension 2018 project as complete.
Approve Change Order No. 1 in the amount of a \$50,605.92 deduct.
Approve Pay Application No. 6 in the amount of \$55,851.52 as the pre-final payment to JB Holland Construction, Inc. of Decorah, Iowa.
Approve Pay Application No. 7 in the amount of \$63,302.83 as the final payment to JB Holland Construction, Inc. of Decorah, Iowa.

Summary Statement

JB Holland Construction, Inc. of Decorah, Iowa, has completed the Airport Runway 29 Extension 2018 project in accordance with the contract documents. The total cost of the completed work is \$1,266,056.68.

Expenditure Required

Table with 2 columns: Description and Amount. Rows include Engineering Design Services, Geotechnical Services, Material Testing Services, Construction, Change Order No. 1, Part 1-3, Bury Powerline, FAA Flight Inspection, and Total Cost of the Project.

Source of Funds

Table with 2 columns: Description and Amount. Rows include Federal Grant Request (90%), Acct. #330 Extend Runway 29, FY18, Acct. #330 Extend Runway 29, FY20, Acct. #331 Extend Runway 29, FY21, Proposed, Acct. #333 Obstruction Removal, FY21, Proposed, and Total Financing for the Project.

Policy

The repair, renovation and safety improvements to the airport facilities and the 400-foot extension of Runway 29 follows recommendations cited in the following documents for the maintenance and construction of infrastructure at the Waverly Municipal Airport:

- Waverly Strategic Planning Report – November 12, 2013
Waverly Comprehensive Plan Update – October 24, 2011
Airport Layout Plan Update – February 19, 2007

Policy Concern

n/a

Alternative

n/a

Background Information

Runway 11/29 is 2,800 feet by 60 feet wide. The existing length does not meet dimensional requirements for current and forecasted demand. As a result, a 400-foot runway extension to the Runway 29 end will meet the current and forecasted demand. Anticipated project benefits include the longer runway and development of an Instrument Approach procedure to accommodate B-I aircraft during poor visibility conditions.

March 9, 2017..... Airport Commission Unanimously Recommended McClure Engineering Company for On-Call Engineering Services
April 3, 2017..... 5-Year On-Call Agreement for Engineering Services Approved by Council
August 7, 2017..... Approve Task Order No. 1 for Engineering Design Services to Extending Runway 29
August 7, 2017..... Approve CMT's Quote for Geotechnical Investigation Services
Nov. 20, 2017..... Council Approves Application for Federal Assistance
Aug. 20, 2018..... Council Approves FAA Grant Agreement
Aug. 2017- Feb. 2019..... Design Work
March 4, 2019..... Set Public Hearing Date
March 19, 2019..... Pre-bid Contractors Meeting
April 2, 2019..... Bid Opening
April 11, 2019..... Bid Review with Airport Commission
April 15, 2019..... Hold Public Hearing
April 15, 2019..... City Council Awards Contract Contingent upon FAA Funding Project
May 6, 2019..... Approve Construction Services Agreement with McClure Engineering Company
June 3, 2019..... Approve the FAA Application for Federal Assistance SF-424
June 3, 2019..... Approve Contract Documents with J.B. Holland
June 3, 2019..... Approve Construction Testing Services Quote with CMT
July 15, 2019..... Approve FAA Grant Agreement (for Construction & Project Administration)
Fall 2019..... Construction Grading to Extend Runway 29
Spring 2020..... Construction Paving to Extend Runway 29
July 6, 2020..... Approve MidAmerican Agreement (bury powerline)
Aug. 3, 2020..... Approve FAA Agreement for Flight Inspection
January 4, 2020..... Finalize Runway 29 Extension Project (Part 1)
Jan. 2021..... Finalize GIS Mapping (Part 2)
April 2021..... Project Closeout (Part 3)

Respectfully submitted,

James Bronner
City Administrator

Attachment: Statement of Project Completion – McClure Engineering
Change Order No. 1 – Final
Pay Application No. 6 – Pre-final
Pay Application No. 7 – Final



AGENDA MEMORANDUM
City Council Meeting
June 15, 2020

SUBJECT: Asphalt Patching - Spring 2020
Finalize Project

Prepared By: Mike Cherry, Director of Public Works & City Engineer

Recommended City Council Action

- Accept the Asphalt Patching - Spring 2020 project as complete.
Approve Pay Estimate No. 1 in the amount of \$21,870.53 as the final payment to Kluesner Construction of Farley, Iowa.

Summary Statement

Kluesner Construction has completed the Asphalt Patching - Spring 2020 project in accordance with the bid documents. The total cost of the completed work is \$21,870.53.

Expenditure Required

Table with 2 columns: Description and Amount. Rows include Construction Cost, Kluesner, Bid (\$10,766), Additional Quantity (11,105), and Total Cost of the Project (\$21,871).

Source of Funds

Table with 2 columns: Description and Amount. Rows include RUT & Utility Company Reimbursements (\$21,871) and Total Financing for the Project (\$21,871).

Policy Issues

n/a

Alternatives

n/a

Background Information

This project involves repairing asphalt paved streets that have had utility cuts. This project will also include the leveling of an area on 8th Street SW in the Waverly Business Park.

April, 21, 2020.....Bid Letting
May 4, 2020.....Award Project
May 2020.....Construction Window
June 15, 2020.....Finalize Project

Respectfully submitted,

James Bronner
City Administrator

Attachment: Statement of Project Completion
Pay Application No. 1, Final



AGENDA MEMORANDUM
City Council Meeting
July 6, 2020

SUBJECT: Downtown Alley Reconstruction 2020
Finalize Project

Prepared By: Mike Cherry, Director of Public Works & City Engineer

Recommended City Council Action

- Accept the Downtown Alley Reconstruction 2020 project as complete.
Approve Change Order No. 1 in the amount of a \$1,615.90 decrease as the final adjustment of project quantities.
Approve Pay Estimate No. 3 in the amount of \$2,156.63 as the final payment to Feldman Concrete of Dyersville, Iowa.

Summary Statement

Feldman Concrete of Dyersville, Iowa, has completed the Downtown Alley Reconstruction 2020 project in accordance with the construction documents. The final cost of the completed work is \$38,235.10.

This project involved rehabbing or reconstructing the south-side alley in the 300 block of West Bremer Avenue. Additionally, there was extensive curb and gutter replacement on the west side of 3rd Street SW to correct poor drainage.

Expenditure Required

Table with 2 columns: Description and Amount. Rows include Construction Cost, Asphalt Street Patch, Project Design, and Total Cost of the Project (\$49,769).

Source of Funds

Table with 2 columns: Description and Amount. Rows include G.O. Bond - CIP Fund #309 (FY2018-19), G.O. Bond - CIP Fund #309 (FY2019-20), and Total Financing for the Project (\$109,371).

Policy Issues

n/a

Alternatives

n/a

Background Information

This project involves rehabbing or reconstructing the south-side alley in the 300 block of West Bremer Avenue.

March 2, 2020.....Set Public Hearing Date
March 24, 2020.....Bid Letting
April 6, 2020.....Hold Public Hearing
April 6, 2020.....Award Project
May 4, 2020.....Approve Contract, Bonds and Insurance
May – August, 2020.....Construction Window
July 6, 2020.....Finalize Project

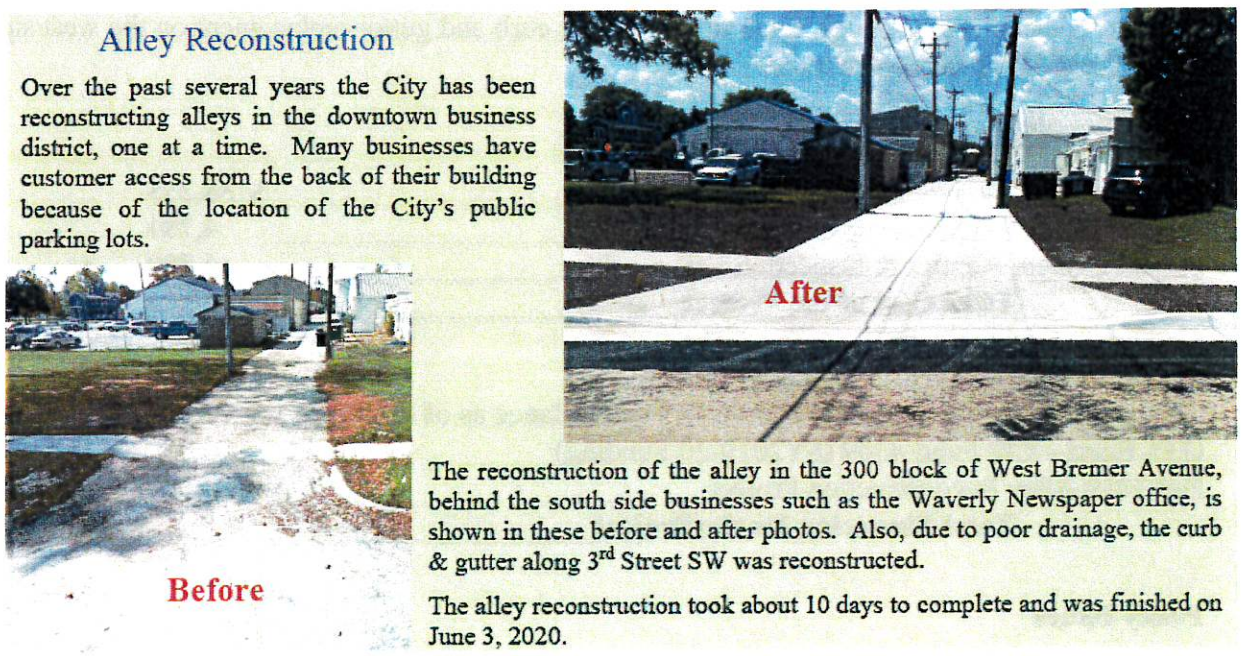
Respectfully submitted,

James Bronner
City Administrator

Attachments: Statement of Project Completion
Change Order No. 1
Pay Application No. 3

Alley Reconstruction

Over the past several years the City has been reconstructing alleys in the downtown business district, one at a time. Many businesses have customer access from the back of their building because of the location of the City's public parking lots.



The reconstruction of the alley in the 300 block of West Bremer Avenue, behind the south side businesses such as the Waverly Newspaper office, is shown in these before and after photos. Also, due to poor drainage, the curb & gutter along 3rd Street SW was reconstructed.

The alley reconstruction took about 10 days to complete and was finished on June 3, 2020.

The image contains two photographs side-by-side. The left photograph, labeled 'Before' in red text at the bottom, shows a narrow, unpaved alleyway with a rough, uneven surface. The right photograph, labeled 'After' in red text at the bottom, shows the same alleyway after reconstruction, now paved with smooth concrete and featuring a clean curb and gutter. The background of both photos shows residential buildings and utility poles under a blue sky.



AGENDA MEMORANDUM
City Council Meeting
August 3, 2020

SUBJECT: Adams Parkway Bridge –
Sanitary Sewer Force Main Inspection and Repair 2020

Prepared By: Mike Cherry, Director of Public Works & City Engineer

Recommended City Council Action

- Approve the proposed inspection and repair of the sanitary sewer force main located on the Adams Parkway Bridge.
- Approve snooper truck rental from Equipment Rental Company of Duluth, Minnesota for the estimated cost of \$6,000.00.
- Approve Professional Services Agreement with WHKS & Co. of Rochester, Minnesota for the force main inspection for the not-to-exceed fee of \$8,500.00.

Summary Statement

This spring a concerned boater brought to the City’s attention that there may be issues with the brackets securing the sanitary sewer force main to the Adams Parkway Bridge. Upon investigating, City staff confirmed the presence of broken hanger straps, missing bolts and other items of concern.

Proposed repairs by City personnel include replacing broken hanger straps, adding a wide-support plate to some straps. WHKS will perform a thorough inspection and preparing a formal report documenting the concerns, repairs and future improvements.

Expenditure Required

Snooper Truck Rental.....	\$ 6,000
Inspection and Report, WHKS, N.T.E.....	8,500
Repair Work, Estimate.....	<u>3,000</u>
Total Cost of the Project.....	\$ 17,500

Source of Funds

Sewer Fund Cash Reserves, FY 2020-21	\$ <u>17,500</u>	
Total Financing for the Project.....		\$ 17,500

Policy

The proposed Adams Parkway Bridge – Force Main 2020 are consistent with one or more of the following planning documents:

- Waverly Strategic Planning Report – November 21, 2013
- Waverly Comprehensive Plan Update – October 24, 2011

Project Concern

Failure to act and repair the sanitary sewer main hangers before winter may result in a catastrophic disaster.

Alternative

Nylon straps are helping to secure the force main temporarily, but should not be considered a long-term solution.

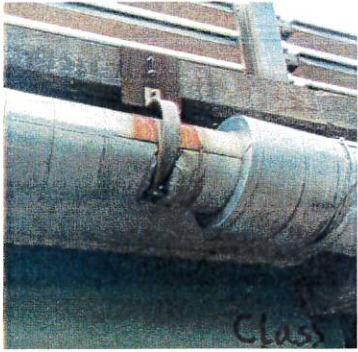
Background Information

July 20, 2020 Review Adams Parkway Bridge –San. Sewer Force Main Inspection & Repair 2020
Aug. 3, 2020 **Approve Inspection & Repair, Snooper Truck Rental, and WHKS Agreement**
Sept. 2020 Completed Force Main Inspection and Repairs

Respectfully submitted,

James Bronner
City Administrator

Attachments: Quote from Equipment Rental Company
Professional Services Agreement from WHKS & Co.



Sanitary Sewer Force Main with Broken Hanger Straps





AGENDA MEMORANDUM
City Council Meeting
August 17, 2020

SUBJECT: Bituminous Seal Coat Program 2020 – Finalize Project

Prepared By: Mike Cherry, Director of Public Works & City Engineer

Recommended City Council Action

- Approve Change Order No. 1 in the amount of a \$3,815.84 decrease.
- Accept the Bituminous Seal Coat Program 2020 as complete.
- Approve Pay Estimate No. 2 in the amount of \$21,516.18 as the final payment to Blacktop Service Co. of Humboldt, Iowa.

Summary Statement

Blacktop Services Co. has completed the Bituminous Seal Coat Program 2020 in accordance with the contract documents. The total cost of the completed work is \$201,962.66. Change Order No. 1 – Final Adjustment of Quantities is for a net decrease of \$3,815.84 to the contract sum.

This project involved the seal coating of approximately 110 City blocks.

Expenditure Required

Construction Cost, Blacktop Service, Final.....	\$ 201,963	
Project Design, Adm. & Insp. Est.....	<u>5,000</u>	
Total Cost of the Project.....		\$ 206,963

Source of Funds

Account #306 FY 2020-21.....	\$ 200,000	
Account #306 FY 2019-20 (fund balance).....	<u>61,112</u>	
Total Financing for the Project.....		\$ 261,112

Policy

The Bituminous Seal Coat Program 2020 follows recommendations cited in the following documents for the preservation of city streets and infrastructure:

- Waverly Strategic Planning Report – November 12, 2013
- Waverly Comprehensive Plan Update – October 24, 2011

Background Information:

The Bituminous Seal Coat Program is part of the City’s annual improvement plan for maintaining the residential street system. City crews perform roadway repairs and patching prior to the hired contractor applying the bituminous seal coat. Seal coating is a thin surface treatment that helps to improve the longevity of an asphaltic pavement. This year’s project involves the seal coating of approximately 110 City blocks.

January 20, 2020..... Set Public Hearing Date
March 3, 2020..... Bid Letting
March 16, 2020..... Hold Public Hearing
March 16, 2020..... Award Project
April 6, 2020..... Approve Contract, Bonds and Insurance
June 8 – Aug. 21, 2020..... Construction Window
August 17, 2020..... Finalize Project

Respectfully submitted,

James Bronner
City Administrator

Attachments: Statement of Project Completion
Change Order #1
Pay Estimate #2 - final



AGENDA MEMORANDUM

City Council Meeting

September 14, 2020

SUBJECT: Crack Cleaning and Filling Project 2020
Finalize Project

Prepared By: Mike Cherry, Director of Public Works & City Engineer

Recommended City Council Action

- Accept the Crack Cleaning and Filling Project 2020 as complete.
- Approve Pay Estimate No. 1 in the amount of \$8,180.96 as the final payment to Kluesner Construction Inc. of Farley, Iowa.

Summary Statement

The final cost of \$8,180.96 is about \$4,219 lower than the original project bid of \$12,400. The lower cost is the result of a reduction in quantity due to conflicts with other ongoing City projects.

Expenditure Required

Construction Cost, Kluesner, Final.....	\$ 8,181	
Project Design, Admin. & Inspection Est.....	1,250	
Total Cost of the Project.....		\$ 9,431

Source of Funds

RUT Fund – Acct #6761.....	\$ 10,000	
Total Financing for the Project.....		\$ 10,000

Policy Issues

None

Alternatives

N/A

Background Information

This project involves cleaning the cracks with compressed air and then sealing them with bituminous oil.

March 24, 2020..... Bid Letting
 April 6, 2020..... Award Project
 July – August 2020..... Construction Window
September 14, 2020..... Finalize Project

Respectfully submitted,

James Bronner
City Administrator

Attachment: Statement of Project Completion
Pay Application No. 1 (Final)



AGENDA MEMORANDUM

City Council Meeting

October 19, 2020

Subject: 20th Street NW Improvements 2020
Finalize Project

Prepared By: Mike Cherry, Director of Public Works & City Engineer

Recommended City Council Action

- Approve Change Order No. 1 in the amount of a \$31,419.16 decrease as the final adjustment of contract quantities.
• Accept the 20th Street NW Reconstruction 2020 project as complete.
• Approve Pay Application No. 3 in the amount of \$83,850.39 as the final payment to Baker Enterprises of Waverly, Iowa.
• Approve Supplemental Agreement with Baker Enterprises in the amount of \$3,175 for the completion of an intake top and the associated pavement and behind the curb restoration work.

Summary Statement

Baker Enterprises has completed the 20th Street NW Reconstruction 2020 project in accordance with the contract documents. The total cost of the completed work is \$631,105.09. Change Order No. 1 – Final Adjustment of Quantities is for a net decrease of \$31,419.16 to the contract sum.

The Supplemental Agreement is for completing the top of a storm intake and the associated pavement and restoration work. The intake can not be completed until Windstream completes the relocation of a buried fiber optic line.

Expenditure Required

Table with 2 columns: Description and Amount. Rows include Design, McClure, Completed (\$ 64,000), Project Administration - Public Works Admin., Estimate (8,000), Construction - 20th Street NW, Baker's Bid (662,524), Change Order No. 1 ((31,419)), Supplemental Agreement (3,175), Const. Obs. & Admin., McClure (N.T.E.) (43,000), and Total Estimated Cost of the Project (\$ 749,280).

Source of Funds

Table with 2 columns: Description and Amount. Rows include Account #319 (new), FY 2018-19 Bond Proceeds (\$ 770,201), FY 2020-21 Transfer in from Acct. 308 (-25,923), and Total Financing for the Project (\$ 770,201).

Policy

The repair and maintenance of transportation structures and facilities follows recommendations cited in the following documents for the maintenance and construction of infrastructure:

- Waverly Strategic Planning Report – November 12, 2013
- Waverly Comprehensive Plan Update – October 24, 2011

Project Concern

Windstream still needs to relocate a buried fiber optic line that is in conflict with a new storm intake.

Alternative

The storm intake can be secured and made reasonably safe (even thru the winter) until the fiber line is relocated.

Background Information

The original 20th Street NW Roadway Improvements 2017 study involved developing 30% preliminary engineering plans for costing, scoping and right-of-way acquisition from 5th Avenue NW to 205th Street. Due to budget constraints, the initial 2018 project was limited to railroad crossing improvements and associated roadway work at 20th Street NW and 5th Avenue NW.

The second project is for roadway reconstruction in 2020 from 5th Avenue NW to ~1,250 feet north, where it connects into the initial railroad crossing improvement project.

Feb. 10, 2017.....Request for qualification sent to consultants.
March 29, 2017.....Selection Committee interviews and unanimously selects and recommends McClure Engineering.
April 17, 2017.....City Council approves Agreement for Engineering Services with McClure Engineering.
Dec. 4, 2017.....Approve PSA Amendment #1 for Railroad Crossing Improvements 2018 Final Design
May 7, 2018.....Approve PSA Amendment #2 for Railroad Crossing Improvements 2018 Construction Services
June 17, 2019.....Approve PSA Amendment #3 for final design of 20th Street NW Improvements 2020; from 5th
Ave NW to ~1,250 feet north
July – Dec., 2019.....Design Work
Jan. 20, 2020.....Set Public Hearing Date
Feb. 11, 2020.....Bid Project
March 2, 2020.....Public Hearing
March 2, 2020.....Award Project to Baker Enterprises
March 2, 2020.....Award Construction Services Agreement with McClure Engineering
April 6, 2020.....Approve Contract, Bonds & Insurance
Jun. – Sep., 2020.....Construction Window
October 19, 2020.....Finalize Project

Respectfully submitted,

James Bronner
City Administrator

Attachments: Statement of Project Completion (McClure)
Change Order No. 1, Final
Pay Estimate No. 3, Final
Supplemental Agreement with Baker



AGENDA MEMORANDUM

City Council Meeting

November 16, 2020

Subject: Asphalt Patching – Fall 2020
Finalize Project

Prepared By: Mike Cherry, Director of Public Works & City Engineer

Recommended City Council Action

- Accept the Asphalt Patching - Fall 2020 project as complete.
- Approve Pay Estimate No. 1 in the amount of \$24,351.98 as the final payment to Kluesner Construction of Farley, Iowa.

Summary Statement

Kluesner Construction has completed the Asphalt Patching - Fall 2020 project in accordance with the bid documents. The total cost of the completed work is \$24,351.98.

Expenditure Required

Construction Cost, Kluesner, Final.....	\$ 24,352	
Project Design, Admin. & Inspection Est.....	<u>1,500</u>	
Total Cost of the Project.....		\$ 25,852

Source of Funds

RUT, Projects & Utility Company Reimbursements.....	\$ <u>25,852</u>	
Total Financing for the Project.....		\$ 25,852

Policy Issues

n/a

Alternatives

n/a

Background Information

This project involves repairing asphalt paved streets that have had utility cuts.

Sept. 22, 2020.....Bid Letting
 Oct. 5, 2020.....Award Project
 Oct. 6 – 30, 2020.....Construction Window
November 16, 2020.....Finalize Project

Respectfully submitted,

James Bronner
City Administrator

Attachment: Statement of Project Completion
Pay Application No. 1, Final



AGENDA MEMORANDUM
City Council Meeting
December 21, 2020

SUBJECT: Old WPC Dome Demolition 2020
Finalize Project

Prepared By: Mike Cherry, Director of Public Works & City Engineer

Recommended City Council Action

Accept the Old WPC Dome Demolition 2020 project as complete. Approve Pay Application No. 2 in the amount of \$2,925.00 as the final payment to Elder Corporation of Des Moines, Iowa.

Summary Statement

Elder Corp. of Des Moines, Iowa, has completed the Old WPC Dome Demolition 2020 project in accordance with the construction documents. The final cost of the completed work is \$58,500.00.

This project involved demolition of the Old WPC Dome and required the contractor to crush the demolished concrete and stockpile it on site. The concrete from the old trickling filter demolition is intended to be utilized as the parking lot subbase at the nearby Cedar River Park ballfield complex. Hauling to the ballfield will be accomplished by a different contractor.

Expenditure Required

Table with 2 columns: Description and Amount. Rows include Design & Project Observation, Demolition Cost, Final Site Restoration, Project Administration, and Total Cost of the Project (\$102,500).

Source of Funds

Table with 2 columns: Description and Amount. Row includes CIP Acct. #365 Old WPC Dome Demolition FY 2020-21 (\$200,000) and Total Financing for the Project (\$200,000).

Policy Issues

n/a

Alternatives

n/a

Background Information

In 1980 the old Water Pollution Control Facility was relocated to the current site. In an effort to reduce the project cost, many of the old structures were abandoned without removing. In 2008 several of the abandoned structures were removed due to public safety concerns, and an opportunity emerged to repurpose the site with a trail system and trailhead parking. Since the 1980's the dome has been used for storing aggregate used as backfill material when fixing water main breaks during the winter months. The concrete ceiling in the structure was spalling and becoming a safety concern. Additionally, other concrete critical to the structural integrity of the dome is beginning to show signs of significant deterioration. Therefore, the structure is no longer a viable storage facility and needs to be demolished.

April 20, 2020..... Approve WHKS Engineering Design Agreement
May-July 2020..... Design Work
September 8, 2020..... Release Plans to Contractors and MBI
September 14, 2020..... Set Public Hearing Date
October 6, 2020..... Letting
October 19, 2020..... Hold Public Hearing
October 19, 2020..... Award Contract
November 16, 2020..... Approve Contract Documents
Nov. 2020 to Feb. 2021..... Demolition Window
December 21, 2020..... Finalize Project
Spring 2021..... Final Site Restoration & Seeding (by others)

Respectfully submitted,

James Bronner
City Administrator

Attachments: Statement of Project Completion
Pay Application No. 2 - Final



AGENDA MEMORANDUM
City Council Meeting
February 15, 2021

SUBJECT: Business 218 North HMA Resurfacing 2020
- Finalize Project

Prepared By: Mike Cherry, Director of Public Works & City Engineer

Recommended City Council Action

- Accept the Business 218 North HMA Resurfacing 2020 project (from Bremer Avenue to the City Limits) as complete.
Approve Pay Estimate No. 4 in the amount of \$23,253.32 as the final payment to Heartland Asphalt of Mason City, Iowa.

Summary Statement

Heartland Asphalt of Mason City, Iowa, has completed the Business 218 North HMA Resurfacing 2020 project (from Bremer Avenue to the City Limits) in accordance with the contract documents. The total cost of the completed work is \$775,110.61.

This project involved the asphalt resurfacing of Business 218 North from the intersection of West Bremer Avenue north to the City Limits. Additionally, two-foot wide paved shoulders were added from West Bremer Avenue to the City Limits.

Expenditure Required

Table with 2 columns: Description and Amount. Rows include Design, WHKS & Co., Final (\$ 44,088), Construction, Heartland Asphalt, Final (775,111), Construction & Lab Testing Services, TEAM Services, Final (7,226), Construction Staking, WHKS & Co., Final (2,457), Project Administration & Inspection by City, Estimate (23,000), and Total Cost of the Project (\$ 851,882).

Source of Funds

Table with 2 columns: Description and Amount. Rows include Local Funding, CIP Debt Proceeds FY 2019-20 (\$ 462,121), Federal Aid (STBG Funding) FY 2019-20 (360,000), Local Funding, as necessary, LOST, RUT or Other FY 2020-21 (29,761), and Total Financing for the Project (\$ 851,882).

Policy

The proposed 2020 improvement project is consistent with one or more of the following planning documents:

- Waverly Strategic Planning Report - November 12, 2013
City Council's Goal Setting - August 25, 2014
Waverly Comprehensive Plan Update - October 24, 2011

Project Concern

None

Alternative

N/A

Background Information

This 2020 asphalt project is part of the City’s five-year capital improvement plan for maintaining high traffic streets.

In 1998 the City and Iowa DOT agreed to the transfer of ownership and in 1999 the Iowa DOT repaired and resurfaced the roadway.

- November 7, 2016..... Approve INRTA STP Programming Agreement
- May 6, 2019..... Approve WHKS Engineering Design Agreement
- Summer 2019..... Design Work
- April 6, 2020..... Approve IDOT Agreement for Federal-Aid Funding
- June 1, 2020..... Set Public Hearing Date
- June 16, 2020..... IDOT Letting
- July 6, 2020..... Hold Public Hearing
- July 6, 2020..... Award Contract
- August 3, 2020..... Approve Contract Documents and TEAM Services Agreement
- Late Summer / Fall 2020..... Construction Window
- February 15, 2021..... Finalize Project**

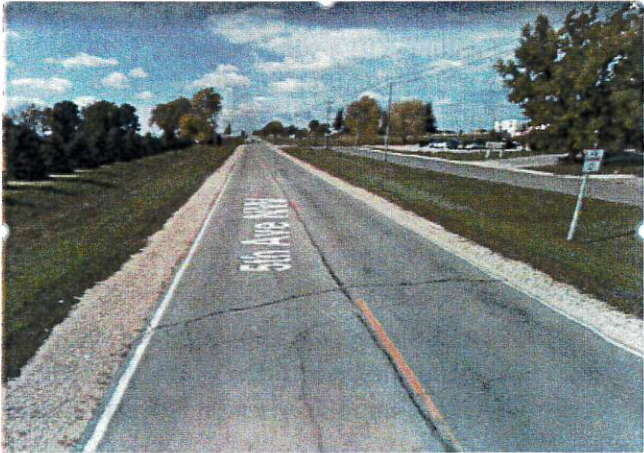
Respectfully submitted,

James Bronner
City Administrator

Attachments: Statement of Project Completion
Pay Application No. 4, Final



New: Final Pavement.

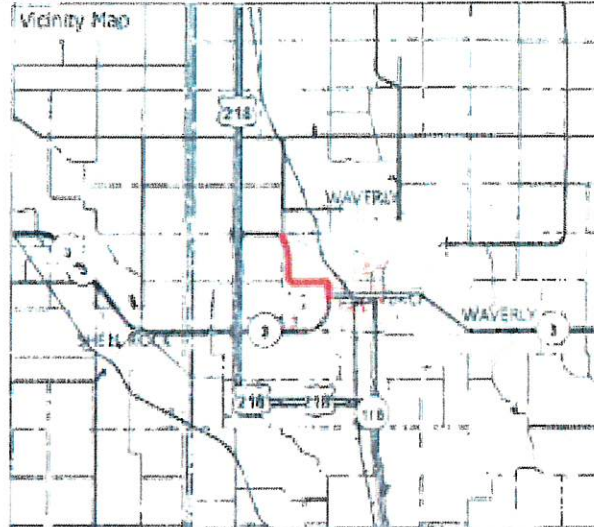


Old: Business 218 North without paved shoulders.

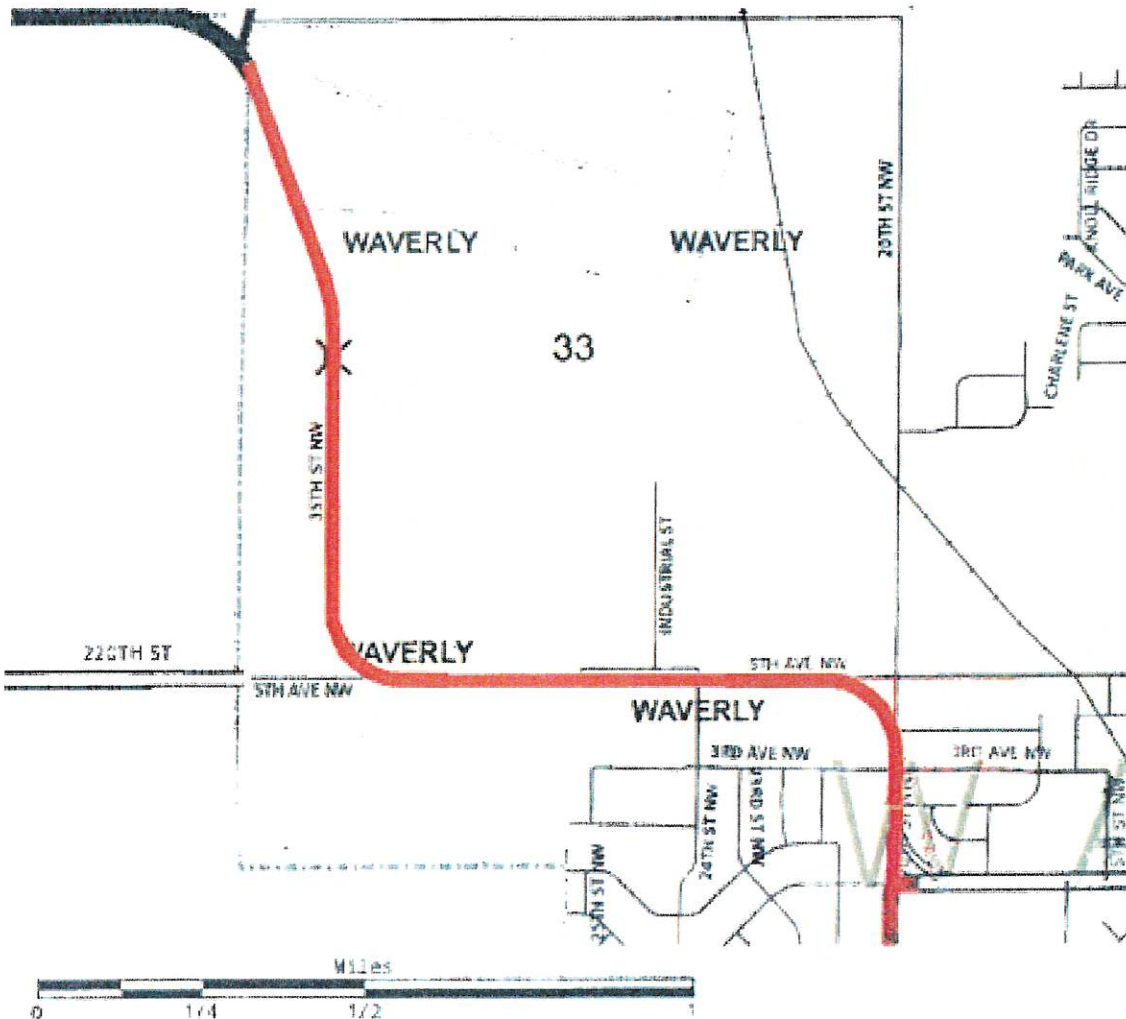
Iowa TPMS project map

10:25 AM 10-10-2016

Sponsor Waverly
Identity STP-U-8190()--70-09
 TPMS# 35033
 TIP# --
Location In the city of Waverly, On 20th St NW/5th Ave NW/35th St NW, from IA-3 north and west 2.0 Miles to T-77/NCL.
Characteristics Minor Arterial / 2 MI / 2350 - 4320
Type of Work Pavement Widening, Pavement Rehab



Project Site





AGENDA MEMORANDUM

City Council Meeting

June 21, 2021

SUBJECT: Asphalt Patching - Spring 2021
Finalize Project

Prepared By: Mike Cherry, Director of Public Works & City Engineer

Recommended City Council Action

- Accept the Asphalt Patching - Spring 2021 project as complete.
Approve Pay Estimate No. 1 in the amount of \$18,102.74 as the final payment to Heartland Asphalt of Mason City, Iowa.

Summary Statement

Heartland Asphalt has completed the Asphalt Patching - Spring 2021 project in accordance with the bid documents. The total cost of the completed work is \$18,102.74.

Expenditure Required

Table with 2 columns: Description and Amount. Rows include Construction Cost, Additional Quantity, Project Design, Admin. & Inspection Est., and Total Cost of the Project.

Source of Funds

Table with 2 columns: Description and Amount. Rows include RUT & Utility Company Reimbursements and Total Financing for the Project.

Policy Issues

n/a

Alternatives

n/a

Background Information

This project involves repairing asphalt paved streets that have had utility cuts.

Timeline table with 2 columns: Date and Event. Rows include April 6, 2021 (Bid Letting), April 19, 2021 (Award Project), May 2021 (Construction Window), and June 21, 2021 (Finalize Project).

Respectfully submitted,

James Bronner
City Administrator

Attachment: Statement of Project Completion
Pay Application No. 1, Final

City of Waverly
Department of Public Works
FY 2020-21

GENERAL INFRASTRUCTURE MAINTENANCE

A primary responsibility of the General Infrastructure Maintenance Division is to finance and/or inspect the following infrastructure:

- Inspect and perform routine maintenance on the dam.
- Pay for traffic signal maintenance.
- Inspect trail bridges every four years.
- Finance the USGS Cedar River Gage on Adams Parkway Bridge.
- Finance community wide street lighting, entrance signs and traffic signals.

Additionally, the local property tax support of the Waverly Municipal Airport is shown as an expense and transfer of monies to the Airport Fund.

City of Waverly
Department of Public Works
 FY2020-21

EQUIPMENT SERVICES

The Equipment Services Division is responsible for routine maintenance and repairs for City vehicles; purchases parts utilized and inventoried for vehicles; and performs welding or fabrications that may be needed.

Equipment Services also prepares the specifications and bid documents for the purchasing of new equipment and vehicles and the sale of used equipment and vehicles.

Vehicle Repairs

	2016-17	2017-18	2018-19	2019-20	2020-21
Service Jobs	676	597	386	561	727
New Tires	94	101	102	115	130
Tire Repairs	49	40	30	32	46
Batteries	30	15	12	18	18
Antifreeze (Gals)	67	35	26	20	25
Oil Changes	198	148	117	102	193
Oil (Gals)	496	504	638	667	699
Total Parts (\$)	\$115,810	\$ 96,052	\$ 99,832	\$103,337	\$130,882
Total Labor Charged	\$ 52,308	\$ 51,770	\$ 55,864	\$ 54,362	\$ 68,794

Fuel Purchased

	2016-17	2017-18	2018-19	2019-20	2020-2021
Unleaded Fuel (Gals)	22,988	21,010	25,936	26,833	26,169
Unleaded Fuel (\$)	\$ 47,099	\$ 59,116	\$ 66,793	\$ 63,161	\$ 64,755
Diesel Fuel (Gals)	45,910	41,791	46,500	44,026	44,453
Diesel Fuel (\$)	\$101,284	\$ 123,358	\$140,020	\$119,452	\$116,314

City of Waverly - Public Works
 Equipment Services
Vehicles & Equipment Purchased
 FY 2020-21

Department / Division	Vehicle or Equipment Purchased & Make / Model	Bid Date	Low Bidder	Low Bid \$	Trade-In \$	Net Bid \$	Trade-In	Date Received
Public Works / Water, Sewer, RUT & Cemetery	John Deere 50G Compact Excavator	9/22/2020	Murphy Tractor	\$61,985		\$61,985		2/9/2021
Public Works / Public Services, WPC	2 Dodge Ram 1/2 Ton Pick-Up Trucks	10/21/2020	Krueger Auto	\$53,904	\$11,000 \$13,500	\$29,404	2011 Silverado 2013 Silverado	2/11/2021
Public Works / Streets	Hook Lift & Accessories for Freightliner / Swaploader & Beau-Roc	11/12/2019	TriState Truck Equipment	\$98,779		\$98,779		10/23/2021

City of Waverly - Public Works

Sale of Used City Vehicles & Equipment

FY 2020-21

Division	Vehicles or Equipment Sold	Bid Date	Winning Bidder	Bid \$
ES	Wheel Loader Tires	08/07/20	Vernon Sebilsky	\$ 453.00
SW	Snow Box for Hook Lift Truck	03/31/21	Kilburg Equipment	\$ 2,896.00
Streets	Flat Rack	03/31/21	Jamie Panning	\$ 450.00
SW	Recycling Containers for Hook Lift Truck	03/31/21	Kilburg Equipment	\$ 2,406.00
Streets	2011 Silverado Pickup	02/11/21	Krueger Auto	\$ 11,000.00
WPC	2013 Silverado Pickup	02/11/21	Krueger Auto	\$ 13,500.00

**EQUIPMENT SERVICES MONTHLY REPORT
(WORKSHEET FOR ANNUAL REPORT)**

	2021						2020						TOTALS
	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	
Service Jobs	79	71	52	59	47	63	50	68	49	75	47	67	727
Oil Changes	19	14	14	19	12	12	18	28	13	15	10	19	193
Tire Repairs	4	-	1	3	3	10	3	2	3	4	3	10	46
Batteries	-	1	-	-	3	2	2	7	-	3	-	-	18
New Tires	14	-	4	11	9	23	3	12	4	13	22	15	130
Antifreeze (Gals)	2	10	3	1	1	1	1	1	2	2	-	1	25
Oil (Gals)	56	62	41	65	48	45	65	90	33	44	45	105	699
Total Parts (\$)	\$ 10,818	\$ 15,345	\$ 7,920	\$ 12,489	\$ 10,942	\$ 12,261	\$ 11,005	\$ 10,251	\$ 4,511	\$ 8,874	\$ 10,648	\$ 15,818	\$ 130,882
Total Labor (\$)	\$ 6,987	\$ 5,213	\$ 3,867	\$ 5,257	\$ 7,799	\$ 5,788	\$ 6,485	\$ 6,311	\$ 4,311	\$ 3,791	\$ 5,754	\$ 7,231	\$ 68,794

FUEL PURCHASED

	2021						2020						TOTALS
	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	
Unleaded Fuel (Gals)	1,924	1,965	2,163	2,134	2,256	2,632	2,662	2,279	2,034	2,220	1,845	2,055	26,169
Unleaded Fuel (\$)	\$4,492	\$4,962	\$6,241	\$6,214	\$ 6,693	\$ 7,923	\$ 6,043	\$ 4,967	\$ 4,489	\$ 4,671	\$ 3,605	\$ 4,455	\$ 64,755
Diesel Fuel (Gals)	4,061	4,485	3,807	3,236	3,123	3,812	4,001	3,232	3,493	3,988	2,994	4,221	44,453
Diesel Fuel (\$)	\$10,309	\$12,108	\$11,900	\$9,720	\$ 9,336	\$ 11,549	\$ 9,870	\$ 7,910	\$ 8,539	\$ 8,655	\$ 6,449	\$ 9,969	\$ 116,314

City of Waverly
Department of Public Works
FY 2020-21

STREETS - RUT

The Street Division involves many diverse areas. These areas will be summarized individually to overview the annual events. The Street Division maintains approximately 75+ miles/ 1,162 blocks of primary streets, 10 miles of gravel roads and alleys, and numerous municipal-owned parking lots.

Street Maintenance and Reconstruction

- Seal Coat Program
- Pothole Repair
- Crack Sealing

Snow Removal

Painting

- Line Striping
- Curb Painting
- School Crossing Signs
- Dry Run Walk Bridges

Special Collection Week (Furniture, Appliances, Tires, Yard Waste, & Brush)

Fall Leaf Pickup

Mowing

Street Sweeping

Road Grading

Alley Maintenance

Street Signs

- Maintenance
- Replacement

Emergency Response

- Flash Flooding
- Storm Damage Cleanup
- Other Manpower Needs

Parking Lot Maintenance

City of Waverly - Public Works
Streets - RUT
Work Hours Per Core Services
FY 2020-21

<u>Streets</u>	<u>Hours</u>
Shoulder Work/Recon	<u>1,271</u>
Road Grading	<u>32</u>
Alleys	<u>49</u>
Cold Mix Patching / Durapatching	<u>1,088</u>
Street Sweeping	<u>976</u>
Weed Mowing / Tree Trimming	<u>159</u>
Rock / Chips Hauling	<u>205</u>

<u>Painting</u>	<u>Hours</u>
Line Striping, Curbs & X-Walks	<u>170</u>
<u>Snow Removal</u>	
Sand Hauling	<u>76</u>
Snow Fence	<u>88</u>
Snow Plowing	<u>349</u>
Snow Removal	<u>560</u>
Sanding	<u>42</u>

<u>Maintenance</u>	
Catch Basins	<u>200</u>
Bridges	<u>7</u>
Culverts	<u>47</u>
Manholes	<u>584</u>
Dry Run	<u>0</u>
Building Maintenance	<u>60</u>
Equipment Maintenance	<u>561</u>

<u>Signs</u>	
Repair &/or Replace	<u>104</u>
New Installations	<u>18</u>

<u>Special Projects</u>	
Airport	<u>0</u>
Yard Waste	<u>191</u>
Spring Clean-up & Fall & Winter Clean-up	<u>27</u>
Mulch & Compost Deliveries	<u>133</u>
Water Dept	<u>8</u>
Solid Waste Dept	<u>405</u>
Sewer Maintenance	<u>12</u>
WPC Dept	<u>0</u>
Recycling Center	<u>17</u>
Cemetery Dept	<u>0</u>
Golf Course Dept	<u>112</u>
Equip Services	<u>0</u>
Parks Dept	<u>112</u>
Hospital	<u>0</u>
Meetings / Training	<u>40</u>

City of Waverly - Public Works
Streets - RUT

Street Maintenance & Construction

2020-21

MATERIAL COMPARISON REPORT

Fiscal Year	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Asphalt Patch						
Tons	152	145	154	161	192	79
Cost (\$)	\$16,723	\$15,918	\$16,585	\$18,300	\$22,464	\$8,753
Road Rock						
Tons	779	509	254	994	1,147	373
Cost (\$)	\$7,156	\$4,681	\$2,375	\$9,446	\$11,123	\$3,686
3/8" Chips						
Tons	56	92	173	64	151	96
Cost (\$)	\$665	\$1,116	\$2,106	\$795	\$1,502	\$1,258
CRS-2 Oil						
Gallons	2,714	1,480	5,474	1,665	3,308	2,492
Cost (\$)	\$4,750	\$2,591	\$8,072	\$3,163	\$5,956	\$4,486

STREET MAINTENANCE (BLOCKS)

Fiscal Year	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Single Seal Coat (Bid)	75	100	125	60	53	110
Double Seal Coat	3	0	1	0	0	6
Slurry Seal Coat	0	8	21.6	10	7	0

SNOW REMOVAL MATERIAL COMPARISON

Fiscal Year	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Rock Salt						
Tons	661	989	821	852	729	805
Cost (\$)	\$54,360	\$79,073	\$61,172	\$69,367	\$64,195	\$6,158
Ice Sand						
Tons	0	321	30	8	120	7
Cost (\$)	\$0	\$1,900	\$270	\$188	\$1,082	\$175

City of Waverly
Department of Public Works
FY 2020-21

AIRPORT

Airport Commission Members (Since)

Eric Bagelmann (January 2018)	Active
Dennis Hansen (May 2006)	Active
Lee Hinrichs (September 2018)	Active
Mike Sherer (December 2019)	Active
Jane Wollenzien (May 2014)	Active

Irvin Swieter, Swieter Aircraft Services – FBO (November 2018 – October 2023) 5-yr Agreement
Irvin Swieter, Waverly Air Services – Airport Manager (November 2018 – October 2023) 5-yr Agreement

Julie Meyers, Council Liaison (June 2021)

Kris Glaser, Council Liaison (January 2020 – May 2021)

Mike Cherry, City Engineer (April 1997)

Highlights for July 2020 - June 2021

Airport Runway 29 Extension 2018

- On April 15, 2019 Council approved a contract with J.B. Holland of Decorah, Iowa for the construction of the Runway 29 Extension project. This project extended the runway eastward by 400 feet. The project was finalized in January 2021.
- In spring 2021 the obsolete security cameras were replaced.

Looking to the Future:

- Construct New Taxiway Connector on the West End
- Upgrade Electrical Power Supply to T-Hangars and Individual Hangars
- Reconstruct Hangar Taxiways
- Rehab/Reconstruct Hangar Apron
- Expand Hangar Apron
- Construct New T-Hangars

Report Summary:

The Waverly Airport continues providing valued services to the community and the surrounding region. The Airport Commission is proud of the advancements that have been made and appreciate the City's support and help in those efforts. Waverly is a steadily growing community and the Airport continues to provide a significant economic benefit at minimal cost to the City's tax payers.

MONTHLY FLIGHT TOTALS

	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec
2011	97	151	158	218	128	214	1093	628	128	142	192	118
2012	196	122	124	118	250	176	1129	224	166	176	164	122
2013	92	36	110	144	132	140	326	924	332	188	214	60
2014	106	43	123	102	254	180	508	480	358	250	87	62
2015	96	50	64	223	136	239	951	953	592	202	224	92
2016	164	208	304	11	2	3	902	438	365	218	226	192
2017	101	377	265	180	277	312	835	625	387	176	133	86
2018	101	34	72	107	137	159	523	318	287	0	22	29
2019	42	38	107	177	169	162	520	384	140	224	124	83
2020	45	74	147	112	4	28	449	179	228	130	127	271
2021	55	39	135	103	251	312	625	540	112	270		

CUMULATIVE FLIGHTS THROUGH YEAR

	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec
2011	97	248	406	624	752	966	2059	2687	2815	2957	3149	3267
2012	196	318	442	560	810	986	2115	2339	2505	2681	2845	2967
2013	92	128	238	382	514	654	980	1904	2236	2424	2638	2698
2014	106	149	272	374	628	808	1316	1796	2154	2404	2491	2553
2015	96	146	210	433	569	808	1759	2712	3304	3506	3730	3822
2016	164	372	676	687	689	692	1594	2032	2397	2615	2841	3033
2017	101	478	743	923	1200	1512	2347	2972	3359	3535	3668	3754
2018	101	135	207	314	451	610	1133	1451	1738	1738	1760	1789
2019	42	80	187	364	533	695	1215	1599	1739	1963	2087	2170
2020	45	119	266	378	382	410	859	1038	1266	1396	1523	1794
2021	55	94	229	332	583	895	1520	2060	2172	2442		

City of Waverly
Department of Public Works
FY 2020-21

WATER

The Water Division is responsible for the operation and maintenance of the total water system including wells, towers, piping, pumps, controls, hydrants, and other equipment within the City of Waverly. This division performs or provides programs as follows: replacement of older system valves and hydrants, valve box raising and replacement, valve turning, hydrant flushing and flow testing, water main repair, water main testing and installation, water quality testing, answers customer complaints on taste, smell, usage, or questions regarding water quality as per articles that appear in the newspapers.

The Water Division supplies water to Waverly residents and industry utilizing four wells, three towers, and approximately 76 miles of water main. This includes 727 fire hydrants, 1,427 water main valves, over 552 hydrant valves, and 4,380 meters. The pumping capacity of the system is approximately 5,300 gallons per minute and total storage of 1,750,000 gallons elevated. The average daily pumpage for FY 2020-21 was 1,053,075 gallons per day.

During FY 2020-21, the Water Division continued to locate and correct water leaks. The Water Division also responded to 1,565 Iowa One Calls and located underground utilities for water, sanitary sewer and storm sewer. Our billing to pumpage accountability has been calculated at 73.9%.

FUTURE PROJECTS

1. Continue replacement of older system valves and hydrants.
2. Continue education on the ever-changing regulations set forth by the IDNR and USEPA to insure a safe drinking water system.
3. Continue with the Source Water Protection Plan to reduce or eliminate certain contaminants from entering our ground water source and to educate the public on the importance of such a plan.
4. Work on updating the accuracy of the GIS mapping system by acquiring data in the field.

City of Waverly - Public Works
Water
Core Services
FY 2020-21

Water Meters	Totals
New Meter Installations	170
Meters Replaced	74
Seasonal In	72
Seasonal Out	106
ERTs	108
Meters Tested & Repaired	124
Hyd. Meters / Hose Bib Meter	132

Water Service Lines	Totals
Capped Services	2
Service Line Taps	3
Sound Detection	25

Water Mains	Totals
Repaired	16
Replaced	0
Sound Detection	25
Large Taps (4"-6"-8")	0

Water Valves	Totals
Valves Operated	228
Valves Installed	4
Valves Repaired	6
Valves Replaced	4

Water Valve Boxes	Totals
Boxes Repaired	26
Boxes Installed	2
Boxes Cleaned	55
Boxes Raised	20
Boxes Lowered	11

Number of Locates	Totals
Iowa One Call Tickets	1,565
Structures Located from IOC Tickets	4,928
Responses Entered	1,565

Hydrants	Totals
Flushed	295
Repaired	245
Replaced	0
Installed	1
Painted	98
Flagged	6

Water Towers	Visits
Interior	92
Exterior	92
Exterior Maintenance (hours)	15

Wells	Visits
Interior	1,120
Exterior	1,120
Exterior Maintenance (hours)	35

Other Projects	Total
Contractors	312
Other City Departments	185

Service Center	Hours
Record Keeping (# of Hours)	605
Equipment Maintenance (Hrs)	105
Building Maintenance (Hrs)	40
Customer Care	148
Call Outs (Law Center/SCADA Alarms)	53

Number of Samples Taken	Totals
Bacteria	126
Chlorine	2,820
Fluoride	1,580
Nitrate	220

City of Waverly - Public Works
Water

Operational Data & Gallons Pumped

FY 2020-21

Operational Data for Water System Repairs

	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Main Lines	14	12	24	14	12	16
Service Lines	12	13	32	11	4	5
4" Valves Installed	2	1	2	2	1	1
6" Valves Installed	2	1	1	1	2	1
8" Valves Installed	1	1	1	0	0	2
12" Valves Installed	0	0	0	0	0	0
Service Lines Capped	8	4	6	3	3	2
3/4" Taps Made	3	5	2	2	2	0
1"-2" Taps Made	13	15	30	3	1	0
4" Taps Made	1	0	0	0	0	0
6" Taps Made	8	5	0	0	0	0
8" Taps Made	2	4	0	0	0	0

Gallons Pumped Versus Gallons Billed

	Gallons Pumped	Estimated Unmetered Gallons*	Gallons Billed	Percent Accountable
2020-21	384,774,000	16,065,000	268,223,000	74%
2019-20	349,624,000	9,521,000	250,099,000	74%
2018-19	341,884,000	13,058,000	243,332,000	75%
2017-18	358,615,000	19,588,000	250,852,000	75%
2016-17	356,489,000	46,187,000	247,064,000	82%
2015-16	352,702,000	46,184,000	254,403,000	85%

* Estimated Unmetered Gallons are for hydrant flushing, watermain flushing, sewer jet machine, street sweeper, Fire Department, water leaks, etc.

Water Consumption

Salesman Gallons	113,600
Salesman Revenue	\$568
City Consumption Gallons	7,455,000
Highest Pumping Day	2,458,000
Lowest Pumping Day	724,000
Average Pumping Day	1,053,075
Total Gallons Pumped	384,774,000

City of Waverly
Department of Public Works
FY 2020-21

WATER POLLUTION CONTROL

The Water Pollution Control Division operates and maintains the wastewater treatment facilities for the City. These facilities are the treatment plant, main lift station, and nine smaller lift stations. The testing and monitoring of industrial discharges plus disposal of biosolids are also the responsibility of the WPC Division. The efficient operation and maintenance of these facilities are required by permits and monitored by State and Federal agencies, DNR and EPA. The daily average treatment of wastewater for fiscal year 2020-21 was 1,054,400 gallons.

The WPC Facility and staff conducted several tours throughout the school year to elementary, high school, and Wartburg College classes. Staff has also made classroom or site presentations to different classes or interested groups.

This completes a brief overview of the past fiscal year. Although not a complete summary, it does not represent the knowledge and expertise needed to operate and maintain an efficient WPC Facility. It is our method of recycling the very precious resource of water. This is one reason that some cities are referring to their waste treatment facilities as Water Reclamation Facilities.

CURRENT PROJECTS

1. Upgrade of WPC Plant to Activated Sludge Process (from Tricking Filter/RBC Process), for Nutrient Reduction.

FUTURE PROJECTS

1. Eastgate Lift Station
2. Flow measurement at each outfall as well as influent.

PROBLEM AREAS OR AREAS OF CONCERN

1. Shortage of qualified and accessible land for biosolids application.
2. The need to upgrade process controls.
3. Budgets must continue to reflect the need to upgrade lift stations and aging equipment.

City of Waverly
MONTHLY MONITORING REPORT
DISCHARGE SERIAL # 001 - # 002

Date: June, 2021

Facility Number 0990001
Note: 0.0 = <MDL of 0.5

DAY OF MONTH	DAY OF WEEK	MGD		CBOD 5 DAY 20 °C		EFF. PHOS.		EFF. TOTAL N		EFF. Cu		TOTAL SUSPENDED SOLIDS		AMMONIA NITROGEN		EFF. pH	EFF. TEMP. °F.	E. COLI #/100 ML
		GOLF COURSE FLOW	EFF. FLOW MGD	EFF. MG/L	EFF. LBS/DAY	MG/L	LBS/DAY	(as N) MG/L	(as N) LBS/DAY	MG/L	LBS/DAY	EFF. MG/L	EFF. LBS/DAY	FINAL MG/L	FINAL LBS/DAY			
1	Tues.		1.160													8.1	60	
2	Wed.		1.110	6	56	3.49	32.31	26.3	243.47	0.0366	0.3388	12	111	<0.50	0	8.1	60	1.0
3	Thurs.		1.150													8.1	61	
4	Fri.		1.090	5	45							11	100	<0.50	0	8.1	62	
5	Sat.		1.000															
6	Sun.	0.352	0.698															
7	Mon.	0.301	0.769													8.1	63	
8	Tues.	0.245	0.805	6	40							7	47	<0.50	0	8.0	65	
9	Wed.	0.261	0.799	5	33	3.86	25.72	23.9	159.26	0.0230	0.1533	6	40	<0.50	0	7.9	65	1.0
10	Thurs.	0.274	0.836													8.0	66	
11	Fri.	0.271	0.719															
12	Sat.	0.325	0.785													8.0	65	
13	Sun.	0.191	0.629															
14	Mon.	0.276	0.664													8.0	64	
15	Tues.	0.243	0.747													8.0	65	
16	Wed.	0.266	0.704	7	41	3.69	21.67	32.9	193.17	0.0352	0.2067	9	53	<0.50	0	7.9	64	1.0
17	Thurs.	0.246	0.734													7.9	65	
18	Fri.	0.264	0.706	8	47							9	53	<0.50	0	8.0	68	
19	Sat.	0.239	0.611															
20	Sun.	0.260	0.690															
21	Mon.	0.252	0.628													8.0	64	
22	Tues.	0.257	0.673													8.1	62	
23	Wed.	0.247	0.693	7	40	3.79	21.90	29.6	171.08	0.0353	0.2040	8	46	<0.50	0	8.1	64	14.0
24	Thurs.	0.013	0.977													8.0	66	
25	Fri.		1.040	6	52							9	78	<0.50	0	7.9	67	
26	Sat.		0.900															
27	Sun.		0.970															
28	Mon.	0.186	0.854													7.8	67	
29	Tues.	0.239	0.761													8.0	67	
30	Wed.	0.258	0.762			3.67	23.32	31.7	201.46	0.0339	0.2154	10	64	<0.50	0	7.9	67	19.0

TOTAL	5.5	24.664	50.0	355		124.92		968.43		1.1182	81.0	592	0.0	0.0				36.0
AVERAGE	0.2	0.822	6.3	44		24.98		193.69		0.2236	9.0	66	<0.50	0.0		8.0	64	7.2
MAX	0.4	1.160	8.0	56		32.31		243.47		0.3388	12.0	111	<0.50	0.0		8.1	68	19.0
MIN	0.0	0.611	5.0	33		21.67		159.26		0.1533	6.0	40	<0.50	0.0		7.8	60	1.0

7 DAY AVERAGE																		
WEEK 1	0.3	0.997	5.5	50		32.31		243.47		0.3388	11.5	106	<0.50	0.0		8.1	61	1.0
WEEK 2	0.3	0.748	5.5	37		25.72		159.26		0.1533	6.5	43	<0.50	0.0		8.0	65	1.0
WEEK 3	0.3	0.689	7.5	44		21.67		193.17		0.2067	9.0	53	<0.50	0.0		8.0	65	1.0
WEEK 4	0.2	0.872	6.5	46		21.90		171.08		0.2040	8.5	62	<0.50	0.0		8.0	65	14.0

City of Waverly
MONTHLY MONITORING REPORT

Date: June, 2021

DISCHARGE SERIAL # 001 - # 002

Facility Number 0990001
Note: 0.0 = <MDL of 0.5

DAY OF MONTH	DAY OF WEEK	DIGESTER CONTENTS					TRICKLING FILTER RECIRC. FLOW MGD	BOD 5 DAY 20 °C		INF. PHOS. MG/L	INF. PHOS. LBS/DAY	TOTAL N (as N) MG/L	INF. TOTAL N (as N) LBS/DAY	INF. TKN (as N) MG/L	INF. TKN (as N) LBS/DAY	TOTAL SUSPENDED SOLIDS		RAW ph	RAW TEMP °F
		FLOW MGD	TEMP °F	ph	VOL. ACID MG/L	ALKALIN. MG/L		INF. MG/L	INF. LBS/DAY							INF. MG/L	INF. LBS/DAY		
1	Tues.	1.160	96	6.85	420	2200	1.00											7.7	58
2	Wed.	1.110	96	6.91			1.05	134	1240	6.20	57.40	25.2	233.29	21.4	198.11	244	2259	7.4	56
3	Thurs.	1.150	96	6.92			1.01											7.7	59
4	Fri.	1.090	96	6.91			1.07	137	1245							242	2200	7.4	57
5	Sat.	1.000					1.16												
6	Sun.	1.050					1.11												
7	Mon.	1.070	96	6.93	413	2530	1.09											7.6	58
8	Tues.	1.050	96	6.95			1.11	184	1611							316	2767	7.4	58
9	Wed.	1.060	96	6.91			1.10	137	1211	3.91	34.57	24.8	219.24	17.4	153.82	220	1945	7.4	59
10	Thurs.	1.110	96	6.92			1.05											7.5	58
11	Fri.	0.990					1.17												
12	Sat.	1.110	97	6.91			1.05											7.6	58
13	Sun.	0.820					1.34												
14	Mon.	0.940	96	6.97	458	2750	1.22											7.5	58
15	Tues.	0.990	96	6.90			1.17											7.6	60
16	Wed.	0.970	96	6.96			1.19	273	2209	9.79	79.20	36.2	292.85	32.7	264.54	446	3608	7.3	59
17	Thurs.	0.980	96	6.96			1.18											7.5	61
18	Fri.	0.970	96	6.92			1.19	151	1222							272	2200	7.4	60
19	Sat.	0.850					1.31												
20	Sun.	0.950					1.21												
21	Mon.	0.880	96	6.93	443	2900	1.28											7.3	61
22	Tues.	0.930	97	6.95			1.23											7.5	61
23	Wed.	0.940	96	6.96			1.22	192	1505	7.23	56.68	30.2	236.76	26.3	206.18	288	2258	7.3	59
24	Thurs.	0.990	96	6.96			1.17											7.5	61
25	Fri.	1.040	96	6.94			1.12	160	1388							268	2325	7.4	61
26	Sat.	0.900					1.26												
27	Sun.	0.970					1.19												
28	Mon.	1.040	96	6.96	383	2750	1.12											7.4	62
29	Tues.	1.000	96	6.94			1.16											7.5	60
30	Wed.	1.020	96	6.91			1.14			6.57	55.89	25.5	216.92	20.3	172.69	244	2076	7.4	61

TOTAL AVERAGE	30.130					34.670	1368.0	11631		283.73		1199.06		995.34	2540.0	21637			
MAX	1.004	96.1	6.9			1.156	171.0	1454		56.75		239.81		199.07	282.2	2404		7.5	59.3
MIN	1.160	97.0	7.0			1.340	273.0	2209		79.20		292.85		264.54	446.0	3608		7.7	62.0
	0.820	96.0	6.9			1.000	134.0	1211		34.57		216.92		153.82	220.0	1945		7.3	56.0

7 DAY AVERAGE																			
WEEK 1	1.090					1.070	135.5	1243		57.40		233.29		198.11	243.0	2229		7.6	57.6
WEEK 2	1.011					1.149	160.5	1411		34.57		219.24		153.82	268.0	2356		7.5	57.6
WEEK 3	0.941					1.219	212.0	1715		79.20		292.85		264.54	359.0	2904		7.4	58.2
WEEK 4	0.973					1.187	176.0	1446		56.68		236.76		206.18	278.0	2291		7.4	60.8

Signature: _____
Certification Number: 3989

City of Waverly
MONTHLY MONITORING REPORT

Date: May, 2021

Facility Number 0990001
Note: 0.0 = <MDL of 0.5

DISCHARGE SERIAL # 001 - # 002

DAY OF MONTH	DAY OF WEEK	MGD	EFF. FLOW MGD	CBOD 5 DAY 20 °C		EFF. PHOS. MG/L	EFF. PHOS. LBS/DAY	EFF. TOTAL N (as N) MG/L	EFF. TOTAL N (as N) LBS/DAY	EFF. Cu MG/L	EFF. Cu LBS/DAY	TOTAL SUSPENDED SOLIDS		AMMONIA NITROGEN		EFF. ph	EFF. TEMP. °F.	E. COLI #/100 ML
				EFF. MG/L	EFF. LBS/DAY							EFF. MG/L	EFF. LBS/DAY	FINAL MG/L	FINAL LBS/DAY			
1	Sat.	0.224	0.706															
2	Sun.	0.232	0.798															
3	Mon.	0.097	0.883														7.9	60
4	Tues.		0.970	7	57							12	97	0.62	5		8.0	59
5	Wed.		0.960	10	80	4.15	33.23	36.2	289.83	0.0528	0.4227	10	80	<0.50	0		8.0	58
6	Thurs.		1.020														8.1	58
7	Fri.		0.900														8.1	56
8	Sat.		1.020															
9	Sun.		0.990														8.1	57
10	Mon.		0.960														8.0	57
11	Tues.		0.980														8.0	57
12	Wed.		0.980	8	65	3.75	30.65	31.4	256.64	0.0536	0.4381	14	114	<0.50	0		8.0	58
13	Thurs.		1.020														8.0	58
14	Fri.		0.950	9	71							10	79	<0.50	0		8.0	58
15	Sat.		0.920															
16	Sun.		0.990															
17	Mon.		0.990														7.9	60
18	Tues.		1.110														8.0	61
19	Wed.		1.070	7	62	4.35	38.82	31.1	277.53	0.0376	0.3355	11	98	<0.50	0		8.0	60
20	Thurs.		1.240														8.0	61
21	Fri.		1.150	7	67							9	86	<0.50	0		8.1	62
22	Sat.		1.000															
23	Sun.		1.110															
24	Mon.		1.110														8.0	63
25	Tues.		1.140														8.1	64
26	Wed.		1.140	5	48	3.80	36.13	28.3	269.07	0.0320	0.3042	10	95	<0.50	0		8.1	63
27	Thurs.		1.360														8.1	60
28	Fri.		1.170	6	59							10	98	<0.50	0		8.0	58
29	Sat.		1.080															
30	Sun.		1.130															
31	Mon.		0.990														8.0	60

TOTAL AVERAGE	0.6	31.837	59.0	509		138.82		1093.07		1.5006	86.0	748	0.6	5.0		8.0	60	0.0
MAX	0.2	1.027	7.4	64		34.71		273.27		0.3751	10.8	93	0.6	0.6		8.1	64	0.0
MIN	0.1	0.706	5.0	48		30.65		256.64		0.3042	9.0	79	0.6	0.0		7.9	56	0.0

7 DAY AVERAGE																		
WEEK 1	0.2	0.891	8.5	68		33.23		289.83		0.4227	11.0	89	0.6	2.5		8.0	58	0.0
WEEK 2	0.0	0.986	8.5	68		30.65		256.64		0.4381	12.0	97	<0.50	0.0		8.0	58	0.0
WEEK 3	0.0	1.067	7.0	65		38.82		277.53		0.3355	10.0	92	<0.50	0.0		8.0	61	0.0
WEEK 4	0.0	1.147	5.5	53		36.13		269.07		0.3042	10.0	96	<0.50	0.0		8.1	62	0.0

City of Waverly

MONTHLY MONITORING REPORT

Date: **May, 2021**

DISCHARGE SERIAL # 001 - # 002

Facility Number **0990001**

Note: 0.0 = <MDL of 0.6

DAY OF MONTH	DAY OF WEEK	DIGESTER CONTENTS					TRICKLING FILTER RECIRC. FLOW MGD	BOD 5 DAY 20 °C		TOTAL SUSPENDED SOLIDS						RAW ph	RAW TEMP. °F		
		FLOW MGD	TEMP °F	ph	VOL. ACID MG/L	ALKALIN. MG/L		INF. MG/L	INF. LBS/DAY	INF. PHOS. MG/L	INF. PHOS. LBS/DAY	TOTAL N (as N) MG/L	INF. TKN (as N) MG/L	INF. TKN (as N) LBS/DAY	INF. MG/L			INF. LBS/DAY	
1	Sat.	0.930					1.23												
2	Sun.	1.030					1.13												
3	Mon.	0.980	96	6.88	323	1990	1.18										7.6	57	
4	Tues.	0.970	96	6.84			1.19	181	1464						300	2427	7.5	55	
5	Wed.	0.960	96	6.79			1.20	157	1257	3.92	31.39	30.2	241.79	25.5	204.16	244	1954	7.5	56
6	Thurs.	1.020	96	6.79			1.14											7.5	55
7	Fri.	0.900	96	6.77			1.26											7.9	56
8	Sat.	1.020					1.14												
9	Sun.	0.990					1.17												
10	Mon.	0.960	96	6.75	345	1820	1.20											7.8	57
11	Tues.	0.980	96	6.77			1.18											7.6	56
12	Wed.	0.980	96	6.78			1.18	241	1970	7.94	64.90	41.0	335.10	37.8	308.95	468	3825	7.5	56
13	Thurs.	1.020	96	6.77			1.14											7.7	57
14	Fri.	0.950	96	6.78			1.21	166	1315							240	1902	7.5	56
15	Sat.	0.920					1.24												
16	Sun.	0.990					1.17												
17	Mon.	0.990	96	6.81	285	1760	1.17											7.7	57
18	Tues.	1.110	96	6.73			1.05											7.6	56
19	Wed.	1.070	96	6.76			1.09	240	2142	6.78	60.50	35.4	315.90	34.2	305.19	356	3177	7.5	56
20	Thurs.	1.240	96	6.75			0.92											7.6	57
21	Fri.	1.150	96	6.80			1.01	134	1285							228	2187	7.4	57
22	Sat.	1.000					1.16												
23	Sun.	1.110					1.05												
24	Mon.	1.110	96	6.81	300	1810	1.05											7.4	57
25	Tues.	1.140	96	6.80			1.02											7.4	58
26	Wed.	1.140	96	6.80			1.02	156	1483	6.02	57.24	26.6	252.90	24.5	232.94	236	2244	7.4	57
27	Thurs.	1.360	96	6.82			0.80											7.6	59
28	Fri.	1.170	96	6.83			0.99	133	1298							248	2420	7.5	56
29	Sat.	1.080					1.08												
30	Sun.	1.130					1.03												
31	Mon.	0.990	96	6.87			1.17											7.6	58

TOTAL AVERAGE	32.390						34.570	1408.0	12214		214.02		1145.70		1051.24	2320.0	20134		
MAX	1.045	96.0	6.8				1.115	176.0	1527		53.50		286.42		262.81	290.0	2517	7.6	56.6
MIN	1.360	96.0	6.9				1.260	241.0	2142		64.90		335.10		308.95	468.0	3825	7.9	59.0
	0.900	96.0	6.7				0.800	133.0	1257		31.39		241.79		204.16	228.0	1902	7.4	55.0

7 DAY AVERAGE																			
WEEK 1	0.970						1.190	169.0	1361		31.39		241.79		204.16	272.0	2190	7.6	55.8
WEEK 2	0.986						1.174	203.5	1642		64.90		335.10		308.95	354.0	2863	7.6	55.8
WEEK 3	1.067						1.093	187.0	1713		60.50		315.90		305.19	292.0	2682	7.6	55.8
WEEK 4	1.147						1.013	144.5	1390		57.24		252.90		232.94	242.0	2332	7.5	57.4

Signature: _____
 Certification Number: **3989**

City of Waverly
MONTHLY MONITORING REPORT

Date: April, 2021

DISCHARGE SERIAL # 001 - # 002

Facility Number 0990001

Note: 0.0 = <MDL of 0.5

DAY OF MONTH	DAY OF WEEK	DIGESTER CONTENTS					TRICKLING FILTER RECIRC. FLOW MGD	BOD 5 DAY 20 °C		INF. PHOS. MG/L	INF. PHOS. LBS/DAY	TOTAL N (as N) MG/L	INF. TOTAL N (as N) LBS/DAY	INF. TKN (as N) MG/L	INF. TKN (as N) LBS/DAY	TOTAL SUSPENDED SOLIDS		RAW ph	RAW TEMP. °F
		FLOW MGD	TEMP °F	ph	VOL. ACID MG/L	ALKALIN. MG/L		INF. MG/L	INF. LBS/DAY							INF. MG/L	INF. LBS/DAY		
1	Thurs.	1.040	96	6.87			1.12	112	971							180	1561	7.5	53
2	Fri.	1.070	96	6.92			1.09											7.5	53
3	Sat.	1.300					0.86												
4	Sun.	0.760					1.40												
5	Mon.	1.150	96	6.89	278	2100	1.01											7.7	54
6	Tues.	1.130	96	6.86			1.03											7.6	54
7	Wed.	1.160	96	6.87			1.00	193	1867	6.27	60.66	29.9	289.26	25.3	244.76	312	3018	7.5	53
8	Thurs.	1.120	96	6.84			1.04											7.8	54
9	Fri.	1.080	93	6.85			1.08	173	1558							304	2738	7.5	53
10	Sat.	0.980					1.18												
11	Sun.	1.070					1.09												
12	Mon.	1.050	96	6.86	458	2090	1.11											7.8	54
13	Tues.	1.000	96	6.81			1.16											7.8	54
14	Wed.	1.020	96	6.85			1.14	183	1557	7.15	60.82	34.3	291.78	30.4	258.61	356	3028	7.6	53
15	Thurs.	1.080					1.08												
16	Fri.	1.040	96	6.83			1.12	179	1553							328	2845	7.5	54
17	Sat.	0.930	97	6.88			1.23											7.8	54
18	Sun.	1.040					1.12												
19	Mon.	0.960	96	6.86	300	2150	1.20											7.7	55
20	Tues.	0.940	96	6.85			1.22											7.8	55
21	Wed.	0.990	96	6.88			1.17	178	1470	6.97	57.55	34.5	284.85	31.1	256.78	272	2246	7.5	54
22	Thurs.	1.020	96	6.82			1.14											7.7	54
23	Fri.	0.980	96	6.81			1.18	162	1324							360	2942	7.5	54
24	Sat.	0.860					1.30												
25	Sun.	0.920					1.24												
26	Mon.	1.040	96	6.87	308	1980	1.12											7.8	56
27	Tues.	0.990	96	6.81			1.17	140	1156	5.37	44.34	29.3	241.92	24.4	201.46	234	1932	7.6	55
28	Wed.	0.980	96	6.81			1.18											7.7	56
29	Thurs.	0.940					1.22												
30	Fri.	0.940	96	6.79			1.22											7.5	55

TOTAL AVERAGE	30.580					34.220	1320.0	11456		223.37		1107.82		961.61	2346.0	20311			
MAX	1.019	95.9	6.8			1.141	165.0	1432		55.84		276.95		240.40	293.3	2539		7.6	54.1
MIN	1.300	97.0	6.9			1.400	193.0	1867		60.82		291.78		258.61	360.0	3028		7.8	56.0
	0.760	93.0	6.8			0.860	112.0	971		44.34		241.92		201.46	180.0	1561		7.5	53.0

7 DAY AVERAGE																			
WEEK 1	1.087					1.073	152.5	1419		60.66		289.26		244.76	246.0	2290		7.6	53.4
WEEK 2	1.046					1.114	178.0	1557		60.82		291.78		258.61	330.0	2883		7.7	53.6
WEEK 3	0.997					1.163	178.5	1511		57.55		284.85		256.78	300.0	2545		7.7	53.6
WEEK 4	0.970					1.190	151.0	1240		44.34		241.92		201.46	297.0	2437		7.7	56.0

Signature: _____
Certification Number: 3989

City of Waverly
MONTHLY MONITORING REPORT
DISCHARGE SERIAL # 001 - # 002

Date: April, 2021

Facility Number 0990001
Note: 0.0 = <MDL of 0.5

DAY OF MONTH	DAY OF WEEK	MGD		CBOD 5 DAY 20 °C		EFF. PHOS.		EFF. TOTAL N (as N)		EFF. Cu		TOTAL SUSPENDED SOLIDS		AMMONIA NITROGEN		EFF. ph	EFF. TEMP.°F.	E. COLI #/100 ML
		GOLF COURSE FLOW	EFF. FLOW MGD	EFF. MG/L	EFF. LBS/DAY	MG/L	LBS/DAY	MG/L	LBS/DAY	MG/L	LBS/DAY	MG/L	LBS/DAY	FINAL MG/L	FINAL LBS/DAY			
1	Thurs.		1.040	5	43							10	87	<0.50	0	8.1	52	4.1
2	Fri.		1.070													8.1	53	
3	Sat.		1.300															
4	Sun.		0.760															
5	Mon.		1.150													8.0	56	
6	Tues.		1.130													8.0	57	
7	Wed.		1.160	5	48	3.51	33.96	28.5	275.72	0.0319	0.3086	15	145	<0.50	0	8.0	58	4.1
8	Thurs.		1.120													8.0	57	
9	Fri.		1.080	5	45							9	81	<0.50	0	8.0	57	
10	Sat.		0.980															
11	Sun.		1.070															
12	Mon.		1.050													8.1	55	
13	Tues.		1.000													8.1	54	
14	Wed.		1.020	4	34	3.48	29.60	31.5	267.96	0.0275	0.2339	8	68	<0.50	0	8.1	53	1.0
15	Thurs.		1.080															
16	Fri.		1.040	4	35							8	69	<0.50	0	8.1	54	
17	Sat.	0.253	0.677													8.0	55	
18	Sun.	0.231	0.809															
19	Mon.	0.248	0.712													8.0	55	
20	Tues.	0.231	0.709													8.1	53	
21	Wed.	0.247	0.743	4	25	3.60	22.31	32.2	199.53	0.0272	0.1685	9	56	<0.50	0	8.1	53	7.5
22	Thurs.	0.252	0.768													8.2	53	
23	Fri.	0.251	0.729	5	30							9	55	<0.50	0	8.1	55	
24	Sat.	0.236	0.624															
25	Sun.	0.262	0.658															
26	Mon.	0.253	0.787													8.1	54	
27	Tues.	0.258	0.732	5	31	4.40	26.86	34.3	209.40	0.0379	0.2314	11	67	<0.50	0	8.1	55	1.0
28	Wed.	0.232	0.748													8.1	58	
29	Thurs.	0.248	0.692															
30	Fri.	0.251	0.689													8.0	58	

TOTAL	3.5	27.127	37.0	291		112.73		952.61		0.9425		79.0	628	0.0	0.0			17.7
AVERAGE	0.2	0.904	4.6	36		28.18		238.15		0.2356		9.9	79	<0.50	0.0	8.1	55	3.5
MAX	0.3	1.300	5.0	48		33.96		275.72		0.3086		15.0	145	<0.50	0.0	8.2	58	7.5
MIN	0.2	0.624	4.0	25		22.31		199.53		0.1685		8.0	55	<0.50	0.0	8.0	52	1.0

7 DAY AVERAGE	WEEK 1	WEEK 2	WEEK 3	WEEK 4
	0.0	1.087	5.0	46
			33.96	275.72
			0.3086	
	12.5	116	<0.50	0.0
	8.0	55	4.1	
	0.0	1.046	4.5	40
			29.60	267.96
			0.2339	
	<0.50	0.0	8.1	55
	1.0			
	0.2	0.824	4.0	30
			22.31	199.53
			0.1685	
	<0.50	0.0	8.1	54
	7.5			
	0.2	0.721	5.0	30
			26.86	209.40
			0.2314	
	10.0	61	<0.50	0.0
	8.1	55	1.0	

City of Waverly
MONTHLY MONITORING REPORT
DISCHARGE SERIAL # 001 - # 002

Date: March, 2021

Facility Number: 0990001
Note: 0.0 = <MDL of 0.5

DAY OF MONTH	DAY OF WEEK	MGD	EFF. FLOW MGD	CBOD 5 DAY 20 °C		EFF. PHOS. MG/L	EFF. PHOS. LBS/DAY	EFF. TOTAL N (as N) MG/L	EFF. TOTAL N (as N) LBS/DAY	EFF. Cu MG/L	EFF. Cu LBS/DAY	TOTAL SUSPENDED SOLIDS		AMMONIA NITROGEN		EFF. ph	EFF. TEMP. °F.	E. COLI #/100 ML
				EFF. MG/L	EFF. LBS/DAY							EFF. MG/L	EFF. LBS/DAY	FINAL MG/L	FINAL LBS/DAY			
1	Mon.		0.990													8.0	49	
2	Tues.		1.140													8.1	49	
3	Wed.		1.080	6	54	3.16	28.46	25.4	228.78	0.0275	0.2477	6	54	<0.50	0	8.0	50	
4	Thurs.		1.140													8.0	51	
5	Fri.		1.040	5	43							8	69	<0.50	0	8.0	51	
6	Sat.		1.040															
7	Sun.		1.190															
8	Mon.		1.170													8.1	52	
9	Tues.		1.250													8.0	54	
10	Wed.		1.500	8	100	3.57	44.66	21.8	272.72	0.0247	0.3090	9	113	<0.50	0	8.0	54	
11	Thurs.		1.330													8.1	52	
12	Fri.		1.130	7	66							8	75	<0.50	0	8.0	52	
13	Sat.		1.010															
14	Sun.		1.030															
15	Mon.		0.990													8.0	52	
16	Tues.		1.050															
17	Wed.		1.130	5	47							8	75	<0.50	0	8.1	50	
18	Thurs.		1.120			2.93	27.37	18.9	176.54	0.0201	0.1878					8.2	50	
19	Fri.		1.040	5	43							8	69	<0.50	0	8.1	51	
20	Sat.		1.050															
21	Sun.		1.150															
22	Mon.		1.120													8.0	51	
23	Tues.		1.330													8.0	54	
24	Wed.		1.260	7	74	3.68	38.67	21.9	230.13	0.0358	0.3762	13	137	<0.50	0	8.0	54	
25	Thurs.		1.240													8.0	52	
26	Fri.		1.200	6	60							10	100	<0.50	0	8.0	53	
27	Sat.		1.150															
28	Sun.		1.190															
29	Mon.		1.190													8.1	53	
30	Tues.		1.150													8.1	54	
31	Wed.		1.080	5	45	3.01	27.11	25.7	231.49	0.0318	0.2864	10	90	<0.50	0	8.1	52	

TOTAL AVERAGE	0.0	35.480	54.0	533		166.27		1139.66		1.4071	80.0	783	0.0	0.0		8.0	52	0.0
MAX	0.0	1.145	6.0	59		33.25		227.93		0.2814	8.9	87	<0.50	0.0		8.0	52	0.0
MIN	0.0	0.990	5.0	43		27.11		176.54		0.1878	6.0	54	<0.50	0.0		8.0	49	0.0

7 DAY AVERAGE																		
WEEK 1	0.0	1.089	5.5	49		28.46		228.78		0.2477	7.0	62	<0.50	0.0		8.0	50	0.0
WEEK 2	0.0	1.203	7.5	83		44.66		272.72		0.3090	8.5	94	<0.50	0.0		8.0	53	0.0
WEEK 3	0.0	1.076	5.0	45		27.37		176.54		0.1878	8.0	72	<0.50	0.0		8.1	51	0.0
WEEK 4	0.0	1.213	6.5	67		38.67		230.13		0.3762	11.5	118	<0.50	0.0		8.0	53	0.0

City of Waverly

MONTHLY MONITORING REPORT

Date: March, 2021

DISCHARGE SERIAL # 001 - # 002

Facility Number 0990001

Note: 0.0 = <MDL of 0.5

DAY OF MONTH	DAY OF WEEK	DIGESTER CONTENTS					TRICKLING FILTER RECIRC. FLOW MGD	BOD 5 DAY 20 °C		INF. PHOS. MG/L	INF. PHOS. LBS/DAY	TOTAL N (as N) MG/L	INF. TOTAL N (as N) LBS/DAY	INF. TKN (as N) MG/L	INF. TKN (as N) LBS/DAY	TOTAL SUSPENDED SOLIDS		RAW ph	RAW TEMP. °F	
		FLOW MGD	TEMP °F	ph	VOL. ACID MG/L	ALKALIN. MG/L		INF. MG/L	INF. LBS/DAY							INF. MG/L	INF. LBS/DAY			INF. MG/L
1	Mon.	0.990	96	6.82	360	1740	1.17										7.8	51		
2	Tues.	1.140	96	6.82			1.02										7.8	52		
3	Wed.	1.080	96	6.85			1.08	165	1486	6.28	56.57	34.8	313.45	30.8	277.42	272	2450	7.6	52	
4	Thurs.	1.140	96	6.84			1.02										7.9	52		
5	Fri.	1.040	97	6.85			1.12	243	2108							432	3747	7.7	51	
6	Sat.	1.040					1.12													
7	Sun.	1.190					0.97													
8	Mon.	1.170	96	6.85	265	1810	0.99										7.9	51		
9	Tues.	1.250	96	6.84			0.91										7.5	51		
10	Wed.	1.500	96	6.84			0.66	187	2339	5.00	62.55	36.8	460.37	30.4	380.30	415	5192	7.7	53	
11	Thurs.	1.330	96	6.86			0.83										7.7	53		
12	Fri.	1.130	96	6.90			1.03	95	895							264	2488	7.6	51	
13	Sat.	1.010					1.15													
14	Sun.	1.030					1.13													
15	Mon.	0.990	96	6.90			1.17										7.7	53		
16	Tues.	1.050					1.11													
17	Wed.	1.130	97	6.76			1.03	88	829							230	2168	8.0	51	
18	Thurs.	1.120	97	6.75			1.04			6.32	59.03	32.8	306.38	27.4	255.94			7.9	50	
19	Fri.	1.040	97	6.77			1.12	84	729							193	1674	7.8	51	
20	Sat.	1.050	97	6.75			1.11												8.0	51
21	Sun.	1.150					1.01													
22	Mon.	1.120	96	6.68			1.04										7.8	51		
23	Tues.	1.330	91	6.85	915	2200	0.83										7.6	53		
24	Wed.	1.260	96	6.93			0.90	175	1839	5.39	56.64	30.3	318.40	26.4	277.42	300	3153	7.5	52	
25	Thurs.	1.240	96	6.92			0.92												7.7	53
26	Fri.	1.200	96	6.94			0.96	135	1351							242	2422	7.6	52	
27	Sat.	1.150					1.01													
28	Sun.	1.190					0.97													
29	Mon.	1.190	96	6.92	308	2340	0.97												8.0	54
30	Tues.	1.150	96	6.87			1.01												7.9	54
31	Wed.	1.080	96	6.87			1.08	143	1288	5.08	45.76	29.5	265.71	24.2	217.97	252	2270	7.6	53	

TOTAL AVERAGE	35.480						31.460	1315.0	12865		280.55		1664.31		1409.06	2600.0	25562		
MAX	1.145	96.0	6.8				1.015	146.1	1429		56.11		332.86		281.81	288.9	2840	7.8	52.0
MIN	1.500	97.0	6.9				1.170	243.0	2339		62.55		460.37		380.30	432.0	5192	8.0	54.0
	0.990	91.0	6.7				0.660	84.0	729		45.76		265.71		217.97	193.0	1674	7.5	50.0

7 DAY AVERAGE																			
WEEK 1	1.089						1.071	204.0	1797		56.57		313.45		277.42	352.0	3098	7.8	51.6
WEEK 2	1.203						0.957	141.0	1617		62.55		460.37		380.30	339.5	3840	7.7	51.6
WEEK 3	1.076						1.084	86.0	779		59.03		306.38		255.94	211.5	1921	7.9	51.4
WEEK 4	1.213						0.947	155.0	1595		56.64		318.40		277.42	271.0	2787	7.6	52.2

Signature: _____
 Certification Number: 3989

City of Waverly
MONTHLY MONITORING REPORT
DISCHARGE SERIAL # 001 - # 002

Date: February, 2021

Facility Number 0990001
 Note: 0.0 = <MDL of 0.5

DAY OF MONTH	DAY OF WEEK	MGD		CBOD 5 DAY 20 °C		EFF. PHOS.		EFF. TOTAL N (as N)		EFF. Cu		TOTAL SUSPENDED SOLIDS		AMMONIA NITROGEN		EFF. pH	EFF. TEMP. °F.	E. COLI #/100 ML
		GOLF COURSE FLOW	EFF. FLOW MGD	EFF. MG/L	EFF. LBS/DAY	MG/L	LBS/DAY	MG/L	LBS/DAY	MG/L	LBS/DAY	MG/L	LBS/DAY	FINAL MG/L	FINAL LBS/DAY			
1	Mon.		0.920													8.0	50	
2	Tues.		0.900													8.1	49	
3	Wed.		0.940	6	47	3.65	28.61	33.9	265.76	0.0320	0.2509	7	55	<0.50	0	8.0	50	
4	Thurs.		0.840													8.1	50	
5	Fri.		0.870	5	36							7	51	<0.50	0	8.1	48	
6	Sat.		0.760															
7	Sun.		0.840															
8	Mon.		0.810													8.0	46	
9	Tues.		0.830													8.0	47	
10	Wed.		0.860	7	50	3.75	26.90	30.9	221.63	0.0295	0.2116	6	43	<0.50	0	8.0	48	
11	Thurs.		0.800													8.0	48	
12	Fri.		0.820	4	27							7	48	<0.50	0	8.0	47	
13	Sat.		0.760															
14	Sun.		0.810															
15	Mon.		0.820													8.0	45	
16	Tues.		0.830													8.0	45	
17	Wed.		0.860	5	36	3.56	25.53	31.8	228.08	0.0299	0.2145	8	57	<0.50	0	8.0	47	
18	Thurs.		0.850													8.0	48	
19	Fri.		0.850	8	57							7	50	<0.50	0	8.0	48	
20	Sat.		0.830															
21	Sun.		0.930															
22	Mon.		0.920													8.0	50	
23	Tues.		1.040													8.0	51	
24	Wed.		1.070	7	62	4.03	35.96	29.7	265.04	0.0314	0.2802	7	62	<0.50	0	8.0	51	
25	Thurs.		1.010													8.0	50	
26	Fri.		0.980	5	41							7	57	<0.50	0	8.0	50	
27	Sat.		0.970															
28	Sun.		1.090															

TOTAL	0.0	24,810	47.0	357		117.01		980.51		0.9571	56.0	423	0.0	0.0				0.0
AVERAGE	0.0	0.886	5.9	45		29.25		245.13		0.2393	7.0	53	<0.50	0.0		8.0	48	0.0
MAX	0.0	1.090	8.0	62		35.96		265.76		0.2802	8.0	62	<0.50	0.0		8.1	51	0.0
MIN	0.0	0.760	4.0	27		25.53		221.63		0.2116	6.0	43	<0.50	0.0		8.0	45	0.0

7 DAY AVERAGE																		
WEEK 1	0.0	0.867	5.5	42		28.61		265.76		0.2509	7.0	53	<0.50	0.0		8.1	49	0.0
WEEK 2	0.0	0.813	5.5	39		26.90		221.63		0.2116	6.5	45	<0.50	0.0		8.0	47	0.0
WEEK 3	0.0	0.853	6.5	46		25.53		228.08		0.2145	7.5	54	<0.50	0.0		8.0	47	0.0
WEEK 4	0.0	1.011	6.0	52		35.96		265.04		0.2802	7.0	60	<0.50	0.0		8.0	50	0.0

City of Waverly
MONTHLY MONITORING REPORT

Date: February, 2021

DISCHARGE SERIAL # 001 - # 002

Facility Number 0990001

Note: 0.0 = <MDL of 0.5

DAY OF MONTH	DAY OF WEEK	DIGESTER CONTENTS					TRICKLING FILTER RECIRC. FLOW MGD	BOD 5 DAY 20 °C		INF. PHOS. MG/L	INF. PHOS. LBS/DAY	TOTAL N (as N) MG/L	INF. TOTAL N (as N) LBS/DAY	INF. TKN (as N) MG/L	INF. TKN (as N) LBS/DAY	TOTAL SUSPENDED SOLIDS		RAW ph	RAW TEMP. °F
		FLOW MGD	TEMP °F	ph	VOL. ACID MG/L	ALKALIN. MG/L		INF. MG/L	INF. LBS/DAY							INF. MG/L	INF. LBS/DAY		
1	Mon.	0.920	96	6.71	435	1570	1.24										7.6	53	
2	Tues.	0.900	97	6.74			1.26										7.8	53	
3	Wed.	0.940	96	6.68			1.22	182	1427	6.78	53.15	36.9	289.28	32.7	256.35	304	2383	7.5	53
4	Thurs.	0.840	97	6.70			1.32										7.8	53	
5	Fri.	0.870	96	6.67			1.29	157	1139							234	1698	7.5	53
6	Sat.	0.760					1.40												
7	Sun.	0.840					1.32												
8	Mon.	0.810	96	6.68	938	1620	1.35										7.9	54	
9	Tues.	0.830	96	6.71			1.33										7.9	53	
10	Wed.	0.860	96	6.78			1.30	154	1105	6.37	45.69	38.1	273.27	32.5	233.10	228	1635	7.5	53
11	Thurs.	0.800	96	6.79			1.36										7.8	53	
12	Fri.	0.820	97	6.81			1.34	169	1156							232	1587	7.5	52
13	Sat.	0.760					1.40												
14	Sun.	0.810					1.35												
15	Mon.	0.820	96	6.81	293	1730	1.34										8.0	53	
16	Tues.	0.830	96	6.79			1.33										7.9	52	
17	Wed.	0.860	96	6.81			1.30	193	1384	5.73	41.10	33.8	242.43	27.5	197.24	278	1994	7.5	52
18	Thurs.	0.850	96	6.82			1.31										7.5	52	
19	Fri.	0.850	96	6.84			1.31	183	1297							276	1957	7.6	52
20	Sat.	0.830					1.33												
21	Sun.	0.930					1.23												
22	Mon.	0.920	97	6.81	338	1730	1.24										7.9	53	
23	Tues.	1.040	96	6.81			1.12										7.8	53	
24	Wed.	1.070	95	6.84			1.09	186	1660	6.86	61.22	31.2	278.42	27.8	248.08	312	2784	7.4	53
25	Thurs.	1.010	93	6.84			1.15										8.0	52	
26	Fri.	0.980	96	6.81			1.18	147	1201							256	2092	7.5	52
27	Sat.	0.970					1.19												
28	Sun.	1.090					1.07												

TOTAL AVERAGE	24.810					35.670	1371.0	10369		201.16		1083.40		934.78	2120.0	16130			
MAX	0.886	96.0	6.8			1.274	171.4	1296		50.29		270.85		233.70	265.0	2016		7.7	52.7
MIN	1.090	97.0	6.8			1.400	193.0	1660		61.22		289.28		256.35	312.0	2784		8.0	54.0
	0.760	93.0	6.7			1.070	147.0	1105		41.10		242.43		197.24	228.0	1587		7.4	52.0

7 DAY AVERAGE																			
WEEK 1	0.867					1.293	169.5	1283		53.15		289.28		256.35	269.0	2041		7.6	53.0
WEEK 2	0.813					1.347	161.5	1130		45.69		273.27		233.10	230.0	1611		7.7	53.2
WEEK 3	0.853					1.307	188.0	1341		41.10		242.43		197.24	277.0	1975		7.7	53.2
WEEK 4	1.011					1.149	166.5	1431		61.22		278.42		248.08	284.0	2438		7.7	52.6

Signature: _____
Certification Number: 3989

City of Waverly
MONTHLY MONITORING REPORT

Date: January, 2021

Facility Number 0990001

DISCHARGE SERIAL # 001 - # 002

Note: 0.0 = <MDL of 0.5

DAY OF MONTH	DAY OF WEEK	MGD	EFF. FLOW MGD	CBOD 5 DAY 20 °C		EFF. PHOS. MG/L	EFF. PHOS. LBS/DAY	EFF. TOTAL N (as N) MG/L	EFF. TOTAL N (as N) LBS/DAY	EFF. Cu MG/L	EFF. Cu LBS/DAY	TOTAL SUSPENDED SOLIDS		AMMONIA NITROGEN		EFF. pH	EFF. TEMP. °F.	E. COLI #/100 ML
				EFF. MG/L	EFF. LBS/DAY							EFF. MG/L	EFF. LBS/DAY	FINAL MG/L	FINAL LBS/DAY			
1	Fri.		0.820															
2	Sat.		0.840															
3	Sun.		0.850														8.0	51
4	Mon.		0.850														8.0	50
5	Tues.		0.880														8.1	51
6	Wed.		0.870	7	51	3.67	26.63	32.3	234.36	0.0368	0.2670	11	80	<0.50	0	8.0	52	
7	Thurs.		0.910	7	53							5	38	<0.50	0	8.1	52	
8	Fri.		0.840	8	56							5	35	<0.50	0	8.0	52	
9	Sat.		0.840															
10	Sun.		0.870															
11	Mon.		0.880														8.0	51
12	Tues.		0.890														8.1	51
13	Wed.		0.910	8	61	4.09	31.04	32.4	245.90	0.0279	0.2117	7	53	<0.50	0	8.0	52	
14	Thurs.		0.940														8.1	52
15	Fri.		0.900	5	38							6	45	<0.50	0	8.1	52	
16	Sat.		0.840															
17	Sun.		0.900															
18	Mon.		0.900														7.8	53
19	Tues.		0.860														8.0	51
20	Wed.		0.900	10	75	3.86	28.97	33.6	252.20	0.0294	0.2207	8	60	<0.50	0	8.0	49	
21	Thurs.		0.940														8.1	50
22	Fri.		0.840															
23	Sat.		0.790														7.9	48
24	Sun.		0.880															
25	Mon.		0.860														8.0	49
26	Tues.		0.840	6	42							8	56	<0.50	0	8.0	48	
27	Wed.		0.850	7	50	3.83	27.15	36.2	256.62	0.0313	0.2219	8	57	<0.50	0	8.0	48	
28	Thurs.		0.900														8.0	49
29	Fri.		0.880														8.0	49
30	Sat.		0.850															
31	Sun.		0.910															

TOTAL	0.0	27.030	58.0	425		113.79		989.08		0.9213		58.0	424	0.0	0.0			0.0
AVERAGE	0.0	0.872	7.3	53		28.45		247.27		0.2303		7.3	53	<0.50	0.0			0.0
MAX	0.0	0.940	10.0	75		31.04		256.62		0.2670		11.0	80	<0.50	0.0			0.0
MIN	0.0	0.790	5.0	38		26.63		234.36		0.2117		5.0	35	<0.50	0.0			0.0

7 DAY AVERAGE																		
WEEK 1	0.0	0.860	7.0	52		26.63		234.36		0.2670		8.0	59	<0.50	0.0			0.0
WEEK 2	0.0	0.881	8.0	58		31.04		245.90		0.2117		6.0	44	<0.50	0.0			0.0
WEEK 3	0.0	0.891	7.5	56		28.97		252.20		0.2207		7.0	53	<0.50	0.0			0.0
WEEK 4	0.0	0.851	6.5	46		27.15		256.62		0.2219		8.0	56	<0.50	0.0			0.0

City of Waverly
MONTHLY MONITORING REPORT

Date: January, 2021

DISCHARGE SERIAL # 001 - # 002

Facility Number 0990001

Note: 0.0 = <MDL of 0.5

DAY OF MONTH	DAY OF WEEK	DIGESTER CONTENTS					TRICKLING FILTER RECIRC. FLOW MGD	BOD 5 DAY 20 °C		INF. PHOS. MG/L	INF. PHOS. LBS/DAY	TOTAL N (as N) MG/L	INF. TOTAL N (as N) LBS/DAY	INF. TKN (as N) MG/L	INF. TKN (as N) LBS/DAY	TOTAL SUSPENDED SOLIDS		RAW ph	RAW TEMP. °F
		FLOW MGD	TEMP °F	ph	VOL. ACID MG/L	ALKALIN. MG/L		INF. MG/L	INF. LBS/DAY							INF. MG/L	INF. LBS/DAY		
1	Fri.	0.820					1.34												
2	Sat.	0.840					1.32												
3	Sun.	0.850	94	6.84			1.31											7.5	54
4	Mon.	0.850	96	6.88	130	1860	1.31											7.5	55
5	Tues.	0.880	96	6.88			1.28											7.6	55
6	Wed.	0.870	97	6.84			1.29	211	1531	7.62	55.29	38.6	280.07	33.5	243.07	324	2351	7.4	55
7	Thurs.	0.910	97	6.83			1.25	148	1123							224	1700	7.5	54
8	Fri.	0.840	97	6.81			1.32	157	1100							236	1653	7.4	55
9	Sat.	0.840					1.32												
10	Sun.	0.870					1.29												
11	Mon.	0.880	96	6.77	140	1410	1.28											7.8	54
12	Tues.	0.890	97	6.75			1.27											7.8	54
13	Wed.	0.910	97	6.77			1.25	154	1169	6.47	49.10	33.9	257.28	30.1	228.44	246	1867	7.5	54
14	Thurs.	0.940	97	6.77			1.22											7.8	55
15	Fri.	0.900	96	6.78			1.26	131	983							220	1651	7.5	54
16	Sat.	0.840					1.32												
17	Sun.	0.900					1.26												
18	Mon.	0.900	96	6.80	270	1550	1.26											7.7	53
19	Tues.	0.860	96	6.78			1.30											7.5	54
20	Wed.	0.900	96	6.76			1.26	198	1486	6.73	50.52	35.8	268.71	32.4	243.19	276	2072	7.5	53
21	Thurs.	0.940	97	6.78			1.22											7.8	54
22	Fri.	0.840					1.32												
23	Sat.	0.790	97	6.80			1.37											7.6	53
24	Sun.	0.880					1.28												
25	Mon.	0.860	96	6.81	170	1580	1.30											7.8	54
26	Tues.	0.840	96	6.79			1.32	177	1240							238	1667	7.5	53
27	Wed.	0.850	96	6.78			1.31	168	1191	4.54	32.18	33.0	233.94	28.4	201.33	272	1928	7.5	53
28	Thurs.	0.900	97	6.77			1.26											7.7	53
29	Fri.	0.880	96	6.78			1.28											7.5	53
30	Sat.	0.850					1.31												
31	Sun.	0.910					1.25												

TOTAL	27.030					39.930	1344.0	9823		187.09		1040.01		916.03	2036.0	14890			
AVERAGE	0.872	96.3	6.8			1.288	168.0	1228		46.77		260.00		229.01	254.5	1861	7.6	53.9	
MAX	0.940	97.0	6.9			1.370	211.0	1531		55.29		280.07		243.19	324.0	2351	7.8	55.0	
MIN	0.790	94.0	6.8			1.220	131.0	983		32.18		233.94		201.33	220.0	1651	7.4	53.0	

7 DAY AVERAGE																			
WEEK 1	0.860					1.300	179.5	1327		55.29		280.07		243.07	274.0	2025	7.5	54.6	
WEEK 2	0.881					1.279	155.5	1134		49.10		257.28		228.44	241.0	1760	7.7	54.7	
WEEK 3	0.891					1.269	164.5	1235		50.52		268.71		243.19	248.0	1861	7.6	54.7	
WEEK 4	0.851					1.309	172.5	1215		32.18		233.94		201.33	255.0	1798	7.6	53.2	

Signature: _____
Certification Number: 3989

City of Waverly
MONTHLY MONITORING REPORT

Date: December, 2020

Facility Number 0990001
Note: 0.0 = <MDL of 0.5

DISCHARGE SERIAL # 001 - # 002

DAY OF MONTH	DAY OF WEEK	MGD		CBOD 5 DAY 20 °C		EFF. PHOS.		EFF. TOTAL N (as N)		EFF. Cu		TOTAL SUSPENDED SOLIDS		AMMONIA NITROGEN		EFF. pH	EFF. TEMP. °F.	E. COLI #/100 ML
		GOLF COURSE FLOW	EFF. FLOW MGD	EFF. MG/L	EFF. LBS/DAY	EFF. MG/L	EFF. LBS/DAY	EFF. MG/L	EFF. LBS/DAY	EFF. MG/L	EFF. LBS/DAY	EFF. MG/L	EFF. LBS/DAY	FINAL MG/L	FINAL LBS/DAY			
1	Tues.		0.870													8.0	52	
2	Wed.		0.930	3	23	3.48	26.99	31.5	244.32	0.0527	0.4088	20	155	<0.50	0			
3	Thurs.		0.870													8.1	54	
4	Fri.		0.850	6	43							14	99	<0.50	0	8.2	55	
5	Sat.		0.850													8.1	54	
6	Sun.		0.840															
7	Mon.		0.860													8.1	55	
8	Tues.		0.860													8.1	54	
9	Wed.		0.870	8	58	3.76	27.28	34.1	247.42	0.0450	0.3265	11	80	<0.50	0	8.1	55	
10	Thurs.		0.890													8.0	55	
11	Fri.		0.850	8	57							12	85	<0.50	0	8.0	56	
12	Sat.		0.800															
13	Sun.		0.790															
14	Mon.		0.780													8.0	52	
15	Tues.		0.730													8.0	52	
16	Wed.		0.780	8	52	3.64	23.68	31.8	206.87	0.0392	0.2550	10	65	0.56	4	8.0	52	
17	Thurs.		0.840													8.0	52	
18	Fri.		0.820	7	48							11	75	<0.50	0	8.0	53	
19	Sat.		0.680															
20	Sun.		0.950															
21	Mon.		0.830													8.0	53	
22	Tues.		0.870	6	44							8	58	0.73	5	8.0	53	
23	Wed.		0.750	7	44	3.27	20.45	30.0	187.65	0.0313	0.1958	8	50	0.67	4	8.1	53	
24	Thurs.		0.790															
25	Fri.		0.770													8.1	47	
26	Sat.		0.820													8.0	48	
27	Sun.		0.890															
28	Mon.		0.860													8.0	50	
29	Tues.		0.880													7.9	51	
30	Wed.		0.850													8.0	51	
31	Thurs.		0.820													8.0	50	

TOTAL AVERAGE	0.0	25.840	53.0	368		98.41		886.26		1.1860	94.0	668	2.0	13.1		8.0	52	0.0
MAX	0.0	0.834	6.6	46		24.60		221.56		0.2965	11.8	83	0.7	1.6		8.0	52	0.0
MIN	0.0	0.950	8.0	58		27.28		247.42		0.4088	20.0	155	0.7	5.3		8.2	56	0.0
MIN	0.0	0.680	3.0	23		20.45		187.65		0.1958	8.0	50	0.6	0.0		7.9	47	0.0

7 DAY AVERAGE	DAY OF WEEK	GOLF COURSE FLOW	EFF. FLOW MGD	EFF. MG/L	EFF. LBS/DAY	EFF. PHOS. MG/L	EFF. PHOS. LBS/DAY	EFF. TOTAL N (as N) MG/L	EFF. TOTAL N (as N) LBS/DAY	EFF. Cu MG/L	EFF. Cu LBS/DAY	EFF. MG/L	EFF. LBS/DAY	FINAL MG/L	FINAL LBS/DAY	EFF. pH	EFF. TEMP. °F.	E. COLI #/100 ML
WEEK 1		0.0	0.867	4.5	33		26.99		244.32		0.4088	17.0	127	<0.50	0.0	8.1	54	0.0
WEEK 2		0.0	0.834	8.0	57		27.28		247.42		0.3265	11.5	82	<0.50	0.0	8.0	54	0.0
WEEK 3		0.0	0.804	7.5	50		23.68		206.87		0.2550	10.5	70	0.6	1.8	8.0	52	0.0
WEEK 4		0.0	0.821	6.5	44		20.45		187.65		0.1958	8.0	54	0.7	4.7	8.0	50	0.0

City of Waverly
MONTHLY MONITORING REPORT

Date: December, 2020

DISCHARGE SERIAL # 001 - # 002

Facility Number 0990001

Note: 0.0 = <MDL of 0.5

DAY OF MONTH	DAY OF WEEK	DIGESTER CONTENTS					TRICKLING FILTER RECIRC. FLOW MGD	BOD 5 DAY 20 °C		INF. PHOS. / INF. TKN / INF. TOTAL N						TOTAL SUSPENDED SOLIDS		RAW pH	RAW TEMP. ° F.
		FLOW MGD	TEMP °F	ph	VOL. ACID MG/L	ALKALIN. MG/L		INF. MG/L	INF. LBS/DAY	INF. PHOS. MG/L	INF. PHOS. LBS/DAY	INF. TOTAL N (as N) MG/L	INF. TOTAL N (as N) LBS/DAY	INF. TKN (as N) MG/L	INF. TKN (as N) LBS/DAY	INF. MG/L	INF. LBS/DAY		
1	Tues.	0.870	98	6.92			1.29											7.8	57
2	Wed.	0.930					1.23	105	814	6.21	48.17	35.7	276.90	30.5	236.56	262	2032	7.6	58
3	Thurs.	0.870	97	6.88			1.29											7.5	57
4	Fri.	0.850	97	6.96			1.31	184	1304							258	1829	7.7	58
5	Sat.	0.850	95	6.81			1.31												
6	Sun.	0.840					1.32												
7	Mon.	0.860	97	6.90	270	2420	1.30											7.8	58
8	Tues.	0.860	97	6.93			1.30											7.8	57
9	Wed.	0.870	97	6.92			1.29	173	1255	5.32	38.60	35.1	254.68	28.0	203.16	316	2293	7.5	57
10	Thurs.	0.890	96	6.88			1.27											7.9	58
11	Fri.	0.850	97	6.90			1.31	144	1021							240	1701	7.4	56
12	Sat.	0.800					1.36												
13	Sun.	0.790					1.37												
14	Mon.	0.780	95	6.94	315	2380	1.38											7.7	57
15	Tues.	0.730	94	6.87			1.43											7.9	57
16	Wed.	0.780	97	6.88			1.38	164	1067	6.08	39.55	30.2	196.46	23.9	155.47	282	1834	7.5	56
17	Thurs.	0.840	97	6.88			1.32											7.7	56
18	Fri.	0.820	97	6.95			1.34	161	1101							284	1942	7.3	56
19	Sat.	0.880					1.48												
20	Sun.	0.950					1.21												
21	Mon.	0.830	95	6.86	600	2250	1.33											7.7	56
22	Tues.	0.870	97	6.90			1.29	135	980							216	1567	7.4	55
23	Wed.	0.750	97	6.90			1.41	135	844	3.93	24.58	28.8	180.14	20.5	128.23	218	1364	7.5	55
24	Thurs.	0.790					1.37												
25	Fri.	0.770	97	6.93			1.39											7.5	55
26	Sat.	0.820	97	6.89			1.34											7.9	55
27	Sun.	0.890					1.27												
28	Mon.	0.860	97	6.95	150	2050	1.30											7.7	55
29	Tues.	0.880	97	6.91			1.28											7.6	54
30	Wed.	0.850	96	6.89			1.31											7.8	56
31	Thurs.	0.820	97	6.86			1.34											7.5	54

TOTAL AVERAGE	25.840						41.120	1201.0	8387		150.90		908.18		723.43	2076.0	14563		
MAX	0.834	96.6	6.9				1.326	150.1	1048		37.73		227.04		180.86	259.5	1820	7.6	56.2
MIN	0.950	98.0	7.0				1.480	184.0	1304		48.17		276.90		236.56	316.0	2293	7.9	58.0
	0.680	94.0	6.8				1.210	105.0	814		24.58		180.14		128.23	216.0	1364	7.3	54.0

7 DAY AVERAGE																			
WEEK 1	0.867						1.293	144.5	1059		48.17		276.90		236.56	260.0	1931	7.7	57.6
WEEK 2	0.834						1.326	158.5	1138		38.60		254.68		203.16	278.0	1997	7.7	57.6
WEEK 3	0.804						1.356	162.5	1084		39.55		196.46		155.47	283.0	1888	7.6	57.5
WEEK 4	0.821						1.339	135.0	912		24.58		180.14		128.23	217.0	1465	7.6	55.0

Signature: _____
Certification Number: 3989

City of Waverly
MONTHLY MONITORING REPORT
DISCHARGE SERIAL # 001 - # 002

Date: November, 2020

Facility Number 0990001
Note: 0.0 = <MDL of 0.5

DAY OF MONTH	DAY OF WEEK	MGD		CBOD 5 DAY 20 °C		EFF. PHOS.		EFF. TOTAL N (as N)		EFF. Cu		TOTAL SUSPENDED SOLIDS		AMMONIA NITROGEN		EFF. pH	EFF. TEMP. °F.	E. COLI #/100 ML
		GOLF COURSE FLOW	EFF. FLOW MGD	EFF. MG/L	EFF. LBS/DAY	MG/L	LBS/DAY	MG/L	LBS/DAY	MG/L	LBS/DAY	EFF. MG/L	EFF. LBS/DAY	FINAL MG/L	FINAL LBS/DAY			
1	Sun.		0.870															
2	Mon.		0.920													8.0	56	
3	Tues.		0.950													8.0	58	
4	Wed.		0.940	8	63	4.42	34.65	32.2	252.44	0.0388	0.3042	13	102	<0.50	0	8.2	62	
5	Thurs.		0.960													7.9	62	
6	Fri.		0.940	6	47							14	110	<0.50	0	8.1	62	
7	Sat.		0.940															
8	Sun.		0.990															
9	Mon.		0.990													8.0	63	
10	Tues.		1.150													8.0	61	
11	Wed.		0.910	11	83	4.97	37.72	31.3	237.55	0.0792	0.6011	18	137	<0.50	0	8.1	57	
12	Thurs.		0.960													8.0	57	
13	Fri.		0.900	12	90							18	135	<0.50	0	8.2	57	
14	Sat.		0.880															
15	Sun.		0.920															
16	Mon.		0.880													8.1	56	
17	Tues.		0.930													8.0	55	
18	Wed.		0.960													8.0	56	
19	Thurs.		1.030	12	103	4.21	36.16	30.7	263.72	0.0500	0.4295	20	172	0.51	4	8.2	58	
20	Fri.		0.800	8	53							19	127	<0.50	0	8.1	60	
21	Sat.		0.880															
22	Sun.		0.900															
23	Mon.		0.910													8.0	56	
24	Tues.		1.020	7	60							14	119	<0.50	0	8.2	58	
25	Wed.		0.880	8	59	3.38	24.81	31.1	228.25	0.0348	0.2554	13	95	<0.50	0	8.2	58	
26	Thurs.		0.830													8.0	57	
27	Fri.		0.850													8.0	58	
28	Sat.		0.810															
29	Sun.		0.850															
30	Mon.		0.820													7.9	53	

TOTAL AVERAGE	0.0	27.570	72.0	558		133.34		981.95		1.5902	129.0	996	0.5	4.4				0.0
MAX	0.0	1.150	12.0	103		37.72		263.72		0.6011	20.0	172	0.5	4.4				0.0
MIN	0.0	0.800	6.0	47		24.81		228.25		0.2554	13.0	95	0.5	0.0				0.0

7 DAY AVERAGE	WEEK 1	WEEK 2	WEEK 3	WEEK 4
	0.0	0.931	7.0	55
				34.65
				252.44
				0.3042
	13.5	106	<0.50	0.0
	8.0	60	0.0	0.0
	0.0	0.969	11.5	87
				37.72
				237.55
				0.6011
	18.0	136	<0.50	0.0
	8.1	59	0.0	0.0
	0.0	0.914	10.0	78
				36.16
				263.72
				0.4295
	19.5	149	0.5	2.2
	8.1	57	0.0	0.0
	0.0	0.886	7.5	59
				24.81
				228.25
				0.2554
	13.5	107	<0.50	0.0
	8.1	57	0.0	0.0

City of Waverly

MONTHLY MONITORING REPORT

Date: November, 2020

DISCHARGE SERIAL # 001 - # 002

Facility Number 0990001

Note: 0.0 = <MDL of 0.5

DAY OF MONTH	DAY OF WEEK	DIGESTER CONTENTS					TRICKLING FILTER RECIRC. FLOW MGD	BOD 5 DAY 20 °C		INF. PHOS. MG/L	INF. PHOS. LBS/DAY	TOTAL N (as N) MG/L	INF. TOTAL N (as N) LBS/DAY	INF. TKN (as N) MG/L	INF. TKN (as N) LBS/DAY	TOTAL SUSPENDED SOLIDS		RAW ph	RAW TEMP. °F
		FLOW MGD	TEMP °F	ph	VOL. ACID MG/L	ALKALIN. MG/L		INF. MG/L	INF. LBS/DAY							INF. MG/L	INF. LBS/DAY		
1	Sun.	0.870					1.29												
2	Mon.	0.920	97	6.89			1.24											7.8	62
3	Tues.	0.950	97	6.91	278	2380	1.21											7.7	61
4	Wed.	0.940	97	6.99			1.22	200	1568	6.31	49.47	33.8	264.98	28.8	225.78	300	2352	7.5	61
5	Thurs.	0.960	97	6.91			1.20											7.8	61
6	Fri.	0.940	97	6.97			1.22	168	1317							256	2007	7.5	61
7	Sat.	0.940					1.22												
8	Sun.	0.990					1.17												
9	Mon.	0.990	97	6.91	300	2390	1.17											7.6	61
10	Tues.	1.150	97	6.92			1.01											7.4	60
11	Wed.	0.910	97	6.91			1.25	174	1321	7.37	55.93	32.7	248.17	28.2	214.02	284	2155	7.5	59
12	Thurs.	0.960	97	6.93			1.20											7.5	60
13	Fri.	0.900	97	7.02			1.26	152	1141							264	1982	7.5	59
14	Sat.	0.880					1.28												
15	Sun.	0.920					1.24												
16	Mon.	0.880	97	7.04	175	2620	1.28											7.8	60
17	Tues.	0.930	97	6.95			1.23											7.6	60
18	Wed.	0.960	97	6.99			1.20											7.6	60
19	Thurs.	1.030	97	7.04			1.13	166	1426	5.24	45.01	32.7	280.90	24.3	206.74	280	2405	7.5	59
20	Fri.	0.800	97	7.01			1.36	156	1041							274	1828	7.4	59
21	Sat.	0.880					1.28												
22	Sun.	0.900					1.26												
23	Mon.	0.910	97	6.96	330	2620	1.25											7.8	60
24	Tues.	1.020	97	7.00			1.14	159	1353							236	2008	7.5	59
25	Wed.	0.880	97	7.00			1.28	120	881	3.97	29.14	27.3	200.36	20.7	151.92	200	1468	7.5	58
26	Thurs.	0.830	97	6.98			1.33											7.6	58
27	Fri.	0.850	97	6.93			1.31											7.5	59
28	Sat.	0.810					1.35												
29	Sun.	0.850					1.31												
30	Mon.	0.820	97	7.01	270	2440	1.34											7.8	58

TOTAL AVERAGE	27.570						37.230	1295.0	10047				179.55		994.41		800.46	2094.0	16205			
MAX	0.919	97.0	7.0				1.241	161.9	1256				44.89		248.60		200.12	261.8	2026		7.6	59.8
MIN	0.800	97.0	6.9				1.010	120.0	881				29.14		200.36		151.92	200.0	1468		7.4	58.0

7 DAY AVERAGE																						
WEEK 1	0.931						1.229	184.0	1442				49.47		264.98		225.78	278.0	2179		7.7	61.2
WEEK 2	0.969						1.191	163.0	1231				55.93		248.17		214.02	274.0	2068		7.5	61.2
WEEK 3	0.914						1.246	161.0	1233				45.01		280.90		208.74	277.0	2117		7.6	61.0
WEEK 4	0.886						1.274	139.5	1117				29.14		200.36		151.92	218.0	1738		7.6	58.8

Signature: _____
 Certification Number: 3989

City of Waverly
MONTHLY MONITORING REPORT

Date: February, 2019

DISCHARGE SERIAL # 001 - # 002

Facility Number 0990001

Note: 0.0 = <MDL of 0.5

DAY OF MONTH	DAY OF WEEK	MGD		CBOD 5 DAY 20 °C		TOTAL SUSPENDED SOLIDS						AMMONIA NITROGEN		EFF. ph	EFF. TEMP. °F.	E. COLI #/100 ML		
		GOLF COURSE FLOW	EFF. FLOW MGD	EFF. MG/L	EFF. LBS/DAY	EFF. PHOS. MG/L	EFF. PHOS. LBS/DAY	EFF. TOTAL N (as N) MG/L	EFF. TOTAL N (as N) LBS/DAY	EFF. Cu MG/L	EFF. Cu LBS/DAY	EFF. MG/L	EFF. LBS/DAY				FINAL MG/L	FINAL LBS/DAY
1	Thurs.	0.000	0.970												7.8	63		
2	Fri.	0.000	0.960	6	48							9	72	0.90	7	8.2	62	
3	Sat.	0.000	0.880															
4	Sun.	0.000	0.980															
5	Mon.	0.000	1.020												7.9	61		
6	Tues.	0.000	1.050												7.9	63		
7	Wed.	0.000	1.070	7	62	4.06	36.23	31.4	280.21	0.0298	0.2659	15	134	<0.50	0	7.9	64	
8	Thurs.	0.000	1.070												8.0	64		
9	Fri.	0.000	1.040	5	43							11	95	<0.50	0			
10	Sat.	0.000	0.940												7.8	66		
11	Sun.	0.000	1.030												7.7	64		
12	Mon.	0.025	0.945															
13	Tues.	0.221	0.749												8.0	63		
14	Wed.	0.260	0.730	9	55	4.03	24.54	32.0	194.62	0.0364	0.2216	15	91	<0.50	0	8.2	63	
15	Thurs.	0.239	0.701												8.1	60		
16	Fri.	0.218	0.672	8	45							12	67	<0.50	0	8.2	60	
17	Sat.	0.313	0.787															
18	Sun.	0.213	0.567															
19	Mon.	0.233	0.667												8.1	59		
20	Tues.	0.257	0.653												8.0	57		
21	Wed.	0.244	0.716	11	66	4.33	25.86	30.2	180.34	0.0326	0.1947	16	96	<0.50	0	8.2	60	
22	Thurs.	0.000	1.230	7	72							13	133	0.56	6	8.2	61	
23	Fri.	0.000	1.000												7.9	59		
24	Sat.	0.000	0.880															
25	Sun.	0.000	0.900															
26	Mon.	0.000	0.920												7.9	56		
27	Tues.	0.000	0.880	9	66	4.76	34.93	34.8	255.40	0.0499	0.3662	23	169	0.56	4	8.1	57	
28	Wed.	0.000	0.950												7.9	57		
29	Thurs.	0.000	0.930															
30	Fri.	0.000	0.910	6	46							20	152	0.55	4	8.1	58	
31	Sat.	0.000	0.780															

TOTAL	2.2	27.577	68.0	503		121.56		910.77		1.0484	134.0	1009	2.6	21.3				0.0
AVERAGE	0.1	0.890	7.6	56		30.39		227.69		0.2621	14.9	112	0.6	2.4	8.0	61		0.0
MAX	0.3	1.230	11.0	72		36.23		280.21		0.3662	23.0	169	0.9	7.2	8.2	66		0.0
MIN	0.0	0.567	5.0	43		24.54		180.34		0.1947	9.0	67	0.6	0.0	7.7	56		0.0

7 DAY AVERAGE																		
WEEK 1	0.0	0.990	6.5	55		36.23		280.21		0.2659	12.0	103	0.9	3.6	7.9	63		0.0
WEEK 2	0.1	0.929	7.0	49		24.54		194.82		0.2216	13.0	93	<0.50	0.0	7.9	64		0.0
WEEK 3	0.2	0.680	9.5	55		25.86		180.34		0.1947	14.0	81	<0.50	0.0	8.1	59		0.0
WEEK 4	0.0	0.966	8.0	69		34.93		255.40		0.3662	18.0	151	0.6	4.9	8.0	58		0.0

City of Waverly
MONTHLY MONITORING REPORT

Date: **February, 2019**

DISCHARGE SERIAL # 001 - # 002

Facility Number **0990001**
Note: 0.0 = <MDL of 0.5

DAY OF MONTH	DAY OF WEEK	DIGESTER CONTENTS					TRICKLING FILTER RECIRC. FLOW MGD	BOD 5 DAY 20 °C		INF. PHOS. MG/L	INF. PHOS. LBS/DAY	INF. TOTAL N (as N) MG/L	INF. TOTAL N (as N) LBS/DAY	INF. TKN (as N) MG/L	INF. TKN (as N) LBS/DAY	TOTAL SUSPENDED SOLIDS		RAW ph	RAW TEMP. ° F.
		FLOW MGD	TEMP °F	ph	VOL. ACID MG/L	ALKALIN. MG/L		INF. MG/L	INF. LBS/DAY							INF. MG/L	INF. LBS/DAY		
1	Thurs.	0.970	97	6.96			1.19										7.6	65	
2	Fri.	0.960	97	7.05			1.20	121	969							278	2226	7.5	62
3	Sat.	0.880					1.28												
4	Sun.	0.980					1.18												
5	Mon.	1.020	97	6.95	270	2560	1.14										7.6	63	
6	Tues.	1.050	97	6.91			1.11										7.4	65	
7	Wed.	1.070	98	6.92			1.09	133	1187	6.04	53.90	33.9	302.52	29.6	264.14	265	2365	7.6	64
8	Thurs.	1.070	98	6.91			1.09										7.7	64	
9	Fri.	1.040					1.12	50	434							274	2377		
10	Sat.	0.940	97	6.94			1.22										7.5	65	
11	Sun.	1.030	97	6.95			1.13										7.6	64	
12	Mon.	0.970					1.19												
13	Tues.	0.970	97	7.00	293	2550	1.19										7.7	64	
14	Wed.	0.990	97	7.06			1.17	195	1610	6.61	54.58	35.8	295.59	30.7	253.48	276	2279	7.5	63
15	Thurs.	0.940	97	6.95			1.22										7.5	64	
16	Fri.	0.890	97	6.98			1.27	179	1329							264	1960	7.5	62
17	Sat.	1.100					1.06												
18	Sun.	0.780					1.38												
19	Mon.	0.900	97	6.99			1.26										7.7	61	
20	Tues.	0.910	97	6.91			1.25										7.7	62	
21	Wed.	0.960	97	7.02			1.20	276	2210	7.92	63.41	38.9	311.45	35.3	282.63	460	3683	7.5	61
22	Thurs.	1.230	97	7.02	170	2600	0.93	158	1621							268	2749	7.6	61
23	Fri.	1.000	97	6.97			1.16										7.8	62	
24	Sat.	0.880					1.28												
25	Sun.	0.900					1.26												
26	Mon.	0.920	97	7.01	293	2630	1.24										7.8	61	
27	Tues.	0.880	97	7.05			1.28	180	1321	5.93	43.52	36.6	268.61	30.4	223.11	280	2055	7.6	61
28	Wed.	0.950	97	6.93			1.21										7.5	61	
29	Thurs.	0.930					1.23												
30	Fri.	0.910	97	7.03			1.25	223	1692							368	2793	7.3	60
31	Sat.	0.780					1.38												

TOTAL AVERAGE	29,800	0.961	97.1	7.0			37.160	1515.0	12372		215.41		1178.17		1023.36	2733.0	22486		
MAX	1.230	98.0	7.1				1.380	168.3	1375		63.41		311.45		282.63	460.0	3683	7.8	65.0
MIN	0.780	97.0	6.9				0.930	50.0	434		43.52		268.61		223.11	264.0	1960	7.3	60.0

7 DAY AVERAGE																			
WEEK 1	0.990						1.170	127.0	1078		53.90		302.52		264.14	271.5	2295	7.5	63.8
WEEK 2	1.001						1.159	122.5	1022		54.58		295.59		253.48	275.0	2328	7.6	63.6
WEEK 3	0.926						1.234	227.5	1769		63.41		311.45		282.63	362.0	2821	7.6	64.0
WEEK 4	0.966						1.194	169.0	1471		43.52		268.61		223.11	274.0	2402	7.7	61.2

Signature: _____
Certification Number: **3989**

City of Waverly
MONTHLY MONITORING REPORT
DISCHARGE SERIAL # 001 - # 002

Date: September, 2020

Facility Number 0990001
 Note: 0.0 = <MDL of 0.5

DAY OF MONTH	DAY OF WEEK	MGD	GOLF COURSE FLOW	EFF. FLOW MGD	CBOD 5 DAY 20 °C		EFF. PHOS. MG/L	EFF. PHOS. LBS/DAY	EFF. TOTAL N (as N) MG/L	EFF. TOTAL N (as N) LBS/DAY	EFF. Cu MG/L	EFF. Cu LBS/DAY	TOTAL SUSPENDED SOLIDS		AMMONIA NITROGEN		EFF. ph	EFF. TEMP. °F.	E. COLI #/100 ML
					EFF. MG/L	EFF. LBS/DAY							EFF. MG/L	EFF. LBS/DAY	FINAL MG/L	FINAL LBS/DAY			
1	Tues.	0.214	0.866														7.8	67	
2	Wed.	0.230	0.880	8	59	3.98	29.21	28.6	209.90	0.0401	0.2943	14	103	0.78	6		8.2	68	11.0
3	Thurs.	0.245	0.795														7.9	68	
4	Fri.	0.260	0.720	9	54							9	54	<0.50	0		8.2	67	
5	Sat.	0.188	2.632																
6	Sun.	0.000	2.640																
7	Mon.	0.000	1.220														7.7	68	
8	Tues.	0.000	1.370														7.9	64	
9	Wed.	0.000	1.750	13	190	3.28	47.87	23.3	340.06	0.0392	0.5721	15	219	1.18	17		8.2	64	2400.0
10	Thurs.	0.000	1.520														7.8	64	
11	Fri.	0.000	2.200	11	202							13	239	1.01	19		8.2	65	
12	Sat.	0.000	1.800																
13	Sun.	0.000	1.500																
14	Mon.	0.000	1.300														7.8	66	
15	Tues.	0.000	1.320														7.8	67	
16	Wed.	0.000	1.220	15	153	3.38	34.39	23.6	240.13	0.0329	0.3348	9	92	1.91	19		8.1	68	68.0
17	Thurs.	0.000	1.180														7.8	66	
18	Fri.	0.000	1.120	8	75							8	75	0.90	8		8.1	65	
19	Sat.	0.000	1.020																
20	Sun.	0.000	1.170																
21	Mon.	0.000	1.120														7.8	65	
22	Tues.	0.000	1.160														7.8	66	
23	Wed.	0.187	0.963	7	56	3.42	27.47	26.6	213.64	0.0272	0.2185	7	56	0.84	7		8.1	67	12.0
24	Thurs.	0.197	0.953														7.8	67	
25	Fri.	0.218	0.882	9	66							8	59	1.12	8		8.1	68	
26	Sat.	0.194	0.826																
27	Sun.	0.223	0.867																
28	Mon.	0.248	0.772														7.7	65	
29	Tues.	0.200	0.830														7.9	63	
30	Wed.	0.004	1.066	7	62	4.21	37.43	28.1	249.82	0.0275	0.2445	9	80	0.90	8		8.2	65	33.0

TOTAL AVERAGE	2.6	37.662	87.0	916		176.37		1253.55		1.6641	92.0	976	8.6	92.3			8.0	66	2524.0
MAX	0.1	1.255	9.7	102		35.27		250.71		0.3328	10.2	108	1.1	10.3			8.0	66	504.8
MIN	0.3	2.640	15.0	202		47.87		340.06		0.5721	15.0	239	1.9	19.4			8.2	68	2400.0
MIN	0.0	0.720	7.0	54		27.47		209.90		0.2185	7.0	54	0.8	0.0			7.7	63	11.0

7 DAY AVERAGE																			
WEEK 1	0.2	1.393	8.5	56		28.21		209.90		0.2943	11.5	78	0.8	2.9			8.0	68	11.0
WEEK 2	0.0	1.634	12.0	196		47.87		340.06		0.5721	14.0	229	1.1	17.9			8.0	65	2400.0
WEEK 3	0.0	1.164	11.5	114		34.39		240.13		0.3348	8.5	83	1.4	13.9			7.9	66	68.0
WEEK 4	0.2	0.918	8.0	61		27.47		213.64		0.2185	7.5	58	1.0	7.5			7.9	67	12.0

City of Waverly

MONTHLY MONITORING REPORT

Date: September, 2020

DISCHARGE SERIAL # 001 - # 002

Facility Number 0990001

Note: 0.0 = <MDL of 0.5

DAY OF MONTH	DAY OF WEEK	DIGESTER CONTENTS					TRICKLING FILTER RECIRC. FLOW MGD	BOD 5 DAY 20 °C		INF. PHOS. MG/L	INF. PHOS. LBS/DAY	TOTAL N (as N) MG/L	INF. TOTAL N (as N) LBS/DAY	INF. TKN (as N) MG/L	INF. TKN (as N) LBS/DAY	TOTAL SUSPENDED SOLIDS		RAW ph	RAW TEMP. °F
		FLOW MGD	TEMP °F	ph	VOL. ACID MG/L	ALKALIN. MG/L		INF. MG/L	INF. LBS/DAY							INF. MG/L	INF. LBS/DAY		
1	Tues.	1.080	97	6.84			1.08											7.6	66
2	Wed.	1.110	97	6.91			1.05	161	1490	6.19	57.30	34.1	315.68	30.6	283.28	258	2388	7.5	64
3	Thurs.	1.040	97	6.89			1.12											7.5	67
4	Fri.	0.980	97	6.90	175	2300	1.18	146	1193							208	1700	7.5	63
5	Sat.	2.820					-0.66												
6	Sun.	2.640					-0.48												
7	Mon.	1.220	98	6.86			0.94											7.5	65
8	Tues.	1.370	97	6.89	160	2290	0.79											7.5	65
9	Wed.	1.750	97	6.92			0.41	134	1956	5.42	79.10	29.5	430.55	23.0	335.69	260	3795	7.6	64
10	Thurs.	1.520	97	6.93			0.64											7.4	65
11	Fri.	2.200	97	6.95			-0.04	87	1596							132	2422	7.5	64
12	Sat.	1.800					0.36												
13	Sun.	1.500					0.66												
14	Mon.	1.300	97	6.91	175	2300	0.86											7.7	65
15	Tues.	1.320	97	6.89			0.84											7.4	65
16	Wed.	1.220	97	6.92			0.94	146	1486	4.81	48.94	32.5	330.68	27.1	275.74	216	2198	7.6	64
17	Thurs.	1.180	97	6.91			0.98											7.7	66
18	Fri.	1.120	97	7.00			1.04	154	1438							224	2092	7.5	63
19	Sat.	1.020					1.14												
20	Sun.	1.170					0.99												
21	Mon.	1.120	97	6.98	175	2650	1.04											7.6	65
22	Tues.	1.160	97	6.98			1.00											7.6	66
23	Wed.	1.150	97	7.00			1.01	160	1535	4.63	44.41	29.1	279.10	24.9	238.82	234	2244	7.5	64
24	Thurs.	1.150	97	6.97			1.01											7.4	65
25	Fri.	1.100	97	7.00			1.06	164	1505							244	2238	7.5	64
26	Sat.	1.020					1.14												
27	Sun.	1.090					1.07												
28	Mon.	1.020	97	6.98	293	2610	1.14											7.8	65
29	Tues.	1.030	97	6.98			1.13											7.7	65
30	Wed.	1.070	97	7.02			1.09	170	1517	5.73	51.13	32.8	292.70	27.0	240.94	276	2463	7.6	63

TOTAL AVERAGE	40.270					24.530	1322.0	13716		280.89		1648.71		1374.46	2052.0	21541			
MAX	1.342	97.0	6.9			0.818	146.9	1524		56.18		329.74		274.89	228.0	2393	7.6	64.7	
MIN	0.980	97.0	6.8			-0.660	87.0	1193		44.41		279.10		238.82	132.0	1700	7.4	63.0	

7 DAY AVERAGE																			
WEEK 1	1.556					0.604	153.5	1342		57.30		315.68		283.28	233.0	2044	7.5	65.0	
WEEK 2	1.634					0.526	110.5	1776		79.10		430.55		335.69	196.0	3108	7.5	64.8	
WEEK 3	1.164					0.996	150.0	1462		48.94		330.68		275.74	220.0	2145	7.6	64.8	
WEEK 4	1.099					1.061	162.0	1520		44.41		279.10		238.82	239.0	2241	7.6	64.8	

Signature: _____
 Certification Number: 3989

City of Waverly
MONTHLY MONITORING REPORT

Date: August, 2020

Facility Number 0990001
Note: 0.0 = <MDL of 0.5

DISCHARGE SERIAL # 001 - # 002

DAY OF MONTH	DAY OF WEEK	MGD		CBOD 5 DAY 20 °C		TOTAL SUSPENDED SOLIDS						AMMONIA NITROGEN		EFF. ph	EFF. TEMP. °F.	E. COLI #/100 ML	
		GOLF COURSE FLOW	EFF. FLOW MGD	EFF. MG/L	EFF. LBS/DAY	EFF. PHOS. MG/L	EFF. PHOS. LBS/DAY	EFF. TOTAL N (as N) MG/L	EFF. TOTAL N (as N) LBS/DAY	EFF. Cu MG/L	EFF. Cu LBS/DAY	EFF. MG/L	EFF. LBS/DAY				FINAL MG/L
1	Sat.	0.252	0.908														
2	Sun.	0.239	0.941														
3	Mon.	0.241	0.859													8.1	66
4	Tues.	0.237	0.903													8.1	65
5	Wed.	0.241	0.879	7	51	2.96	21.70	26.7	195.73	0.0357	0.2617	11	81	<0.50	0	8.3	66
6	Thurs.	0.249	0.891													8.1	66
7	Fri.	0.224	0.896	5	37							10	75	<0.50	0	8.3	67
8	Sat.	0.245	0.885														
9	Sun.	0.220	0.930														
10	Mon.	0.231	0.929													7.9	69
11	Tues.	0.219	0.911													8.0	69
12	Wed.	0.233	0.937	7	55	3.04	23.76	24.1	188.33	0.0373	0.2915	11	86	<0.50	0	8.3	67
13	Thurs.	0.220	0.910													8.0	68
14	Fri.	0.209	0.931	7	54							11	85	<0.50	0	8.3	69
15	Sat.	0.254	0.806														
16	Sun.	0.213	0.907														
17	Mon.	0.216	0.894													7.8	68
18	Tues.	0.215	0.855													7.9	67
19	Wed.	0.222	0.868	7	51	3.69	26.71	23.7	171.57	0.0323	0.2338	10	72	<0.50	0	8.2	68
20	Thurs.	0.243	0.837													7.9	67
21	Fri.	0.217	0.873	7	51							9	66	<0.50	0	8.2	68
22	Sat.	0.194	0.956														
23	Sun.	0.301	0.899														
24	Mon.	0.007	1.173													7.8	69
25	Tues.	0.000	1.140													7.9	69
26	Wed.	0.000	1.130	6	57	3.54	33.36	25.9	244.09	0.0337	0.3176	8	75	<0.50	0	8.2	70
27	Thurs.	0.000	1.160	7	68							8	77	0.78	8	8.2	70
28	Fri.	0.000	1.050													7.8	70
29	Sat.	0.000	1.020														
30	Sun.	0.000	1.070														
31	Mon.	0.123	0.897													7.7	68

TOTAL AVERAGE	5.5	29.245	53.0	424		105.53	799.72		1.1046	78.0	617	0.8	7.5				0.0	
MAX	0.2	0.943	6.6	53		26.38	199.93		0.2762	9.8	77	0.8	0.9			8.0	68	0.0
MIN	0.3	1.173	7.0	68		33.36	244.09		0.3176	11.0	86	0.8	7.5			8.3	70	0.0
MIN	0.0	0.806	5.0	37		21.70	171.57		0.2338	8.0	66	0.8	0.0			7.7	65	0.0

7 DAY AVERAGE																		
WEEK 1	0.2	0.897	6.0	44		21.70	195.73		0.2617	10.5	78	<0.50	0.0			8.2	66	0.0
WEEK 2	0.2	0.919	7.0	55		23.76	188.33		0.2915	11.0	86	<0.50	0.0			8.1	68	0.0
WEEK 3	0.2	0.863	7.0	51		26.71	171.57		0.2338	9.5	69	<0.50	0.0			8.0	68	0.0
WEEK 4	0.1	1.073	6.5	62		33.36	244.09		0.3176	8.0	76	0.8	3.8			8.0	70	0.0

City of Waverly
MONTHLY MONITORING REPORT

Date: August, 2020

DISCHARGE SERIAL # 001 - # 002

Facility Number 0990001

Note: 0.0 = <MDL of 0.6

DAY OF MONTH	DAY OF WEEK	DIGESTER CONTENTS					TRICKLING FILTER RECIRC. FLOW MGD	BOD 5 DAY 20 °C		INF. PHOS. MG/L	INF. PHOS. LBS/DAY	TOTAL N (as N) MG/L	INF. TOTAL N (as N) LBS/DAY	INF. TKN (as N) MG/L	INF. TKN (as N) LBS/DAY	TOTAL SUSPENDED SOLIDS		RAW ph	RAW TEMP. °F
		FLOW MGD	TEMP °F	ph	VOL. ACID MG/L	ALKALIN. MG/L		INF. MG/L	INF. LBS/DAY							INF. MG/L	INF. LBS/DAY		
1	Sat.	1.160					1.00												
2	Sun.	1.180					0.98												
3	Mon.	1.100	97	6.92	155	2180	1.06											7.3	64
4	Tues.	1.140	97	6.85			1.02											7.5	62
5	Wed.	1.120	97	6.90			1.04	142	1326	4.40	41.10	31.0	289.56	25.6	239.12	248	2317	7.6	62
6	Thurs.	1.140	97	6.92			1.02											7.7	65
7	Fri.	1.120	97	6.90	130	1990	1.04	114	1065							196	1831	7.5	64
8	Sat.	1.130					1.03												
9	Sun.	1.150					1.01												
10	Mon.	1.160	97	6.92	145	2340	1.00											7.4	66
11	Tues.	1.130	97	6.90			1.03											7.4	66
12	Wed.	1.170	97	6.94			0.99	124	1210	4.73	46.15	26.9	262.48	22.7	221.50	204	1991	7.6	63
13	Thurs.	1.130	97	6.89			1.03											7.4	66
14	Fri.	1.140	97	6.94	170	2340	1.02	176	1673							348	3309	7.5	64
15	Sat.	1.060					1.10												
16	Sun.	1.120					1.04												
17	Mon.	1.110	98	6.94	150	2430	1.05											7.5	65
18	Tues.	1.070	97	6.94			1.09											7.4	63
19	Wed.	1.090	97	6.90			1.07	175	1591	5.73	52.09	30.4	276.35	25.9	235.45	304	2764	7.6	64
20	Thurs.	1.080	97	6.89			1.08											7.5	67
21	Fri.	1.090	97	6.95	155	2360	1.07	155	1409							258	2345	7.5	64
22	Sat.	1.150					1.01												
23	Sun.	1.200					0.96												
24	Mon.	1.160	97	6.87	308	2250	0.98											7.5	68
25	Tues.	1.140	97	6.86			1.02											7.6	66
26	Wed.	1.130	97	6.91			1.03	150	1414	5.42	51.08	30.0	282.73	26.0	245.03	228	2149	7.6	65
27	Thurs.	1.160	97	6.92	285	2280	1.00	135	1306							240	2322	7.5	65
28	Fri.	1.050	98	6.91			1.11											7.4	67
29	Sat.	1.020					1.14												
30	Sun.	1.070					1.09												
31	Mon.	1.020	97	6.95	170	2320	1.14											7.5	67

TOTAL AVERAGE	34.710						32.250	1171.0	10994		190.42		1111.13		941.10	2026.0	19026		
MAX	1.200	98.0	7.0				1.040	146.4	1374		47.61		277.78		235.28	348.0	3309	7.5	64.9
MIN	1.020	97.0	6.9				0.960	114.0	1065		41.10		262.48		221.50	196.0	1831	7.3	62.0

7 DAY AVERAGE																			
WEEK 1	1.137						1.023	128.0	1196		41.10		289.56		239.12	222.0	2074	7.5	63.4
WEEK 2	1.144						1.016	150.0	1442		46.15		262.48		221.50	276.0	2650	7.5	63.4
WEEK 3	1.089						1.071	165.0	1500		52.09		276.35		235.45	281.0	2554	7.5	63.4
WEEK 4	1.144						1.016	142.5	1360		51.08		282.73		245.03	234.0	2235	7.5	66.2

Signature: _____
Certification Number: 3989

City of Waverly
MONTHLY MONITORING REPORT
DISCHARGE SERIAL # 001 - # 002

Date: July, 2020

Facility Number 0990001
Note: 0.0 = <MDL of 0.5

DAY OF MONTH	DAY OF WEEK	MGD	GOLF COURSE FLOW	EFF. FLOW MGD	CBOD 5 DAY 20 °C		EFF. PHOS. MG/L	EFF. PHOS. LBS/DAY	EFF. TOTAL N (as N) MG/L	EFF. TOTAL N (as N) LBS/DAY	EFF. Cu MG/L	EFF. Cu LBS/DAY	TOTAL SUSPENDED SOLIDS		AMMONIA NITROGEN		EFF. pH	EFF. TEMP. °F.	E. COLI #/100 ML
					EFF. MG/L	EFF. LBS/DAY							EFF. MG/L	EFF. LBS/DAY	FINAL MG/L	FINAL LBS/DAY			
1	Wed.	0.000	1.980	8	132	2.03	33.52	16.3	269.17	0.0270	0.4459	16	297	<0.50	0	8.3	63	7.5	
2	Thurs.	0.264	1.526	8	102							15	191	<0.50	0	8.2	64		
3	Fri.	0.203	1.507																
4	Sat.	0.224	1.306																
5	Sun.	0.280	1.400													8.1	64		
6	Mon.	0.266	1.274													8.1	64		
7	Tues.	0.282	1.288													8.1	65		
8	Wed.	0.233	1.317	8	88	2.32	25.48	18.1	198.81	0.0263	0.2889	14	154	<0.50	0	8.3	65	7.5	
9	Thurs.	0.052	1.798													8.1	66		
10	Fri.	0.000	1.620	8	108							16	216	0.67	9	8.2	66		
11	Sat.	0.000	1.500																
12	Sun.	0.000	1.580																
13	Mon.	0.000	1.440													8.0	64		
14	Tues.	0.000	1.810													8.1	65		
15	Wed.	0.000	1.550	9	116	2.33	30.12	18.4	237.86	0.0270	0.3490	16	207	<0.50	0	8.3	65	27.0	
16	Thurs.	0.000	1.530													8.0	64		
17	Fri.	0.000	1.490	6	75							14	174	<0.50	0	8.2	65		
18	Sat.	0.000	1.400																
19	Sun.	0.000	1.410																
20	Mon.	0.000	1.440													8.0	65		
21	Tues.	0.000	1.450													8.0	65		
22	Wed.	0.000	1.380	7	81	2.46	28.31	20.3	233.64	0.0317	0.3648	12	138	<0.50	0	8.2	66	33.0	
23	Thurs.	0.000	1.350													8.0	65		
24	Fri.	0.000	1.360	7	79							12	136	<0.50	0	8.2	66		
25	Sat.	0.000	1.270																
26	Sun.	0.000	1.370																
27	Mon.	0.200	0.990													8.1	67		
28	Tues.	0.225	1.035													8.1	66		
29	Wed.	0.247	0.993	7	58	2.75	22.77	21.1	174.74	0.0495	0.4099	13	108	<0.50	0	8.3	68	12.0	
30	Thurs.	0.253	0.987													8.1	67		
31	Fri.	0.253	0.917	7	54							12	92	<0.50	0	8.3	67		

TOTAL AVERAGE	3.0	43.268	75.0	892		140.21		1114.21		1.8585	142.0	1713	0.7	9.1				87.0
MAX	0.1	1.396	7.5	89		28.04		222.84		0.3717	14.2	171	0.7	0.9	8.1	65	17.4	
MIN	0.3	1.980	9.0	132		33.52		269.17		0.4459	18.0	297	0.7	9.1	8.3	68	33.0	
	0.0	0.917	6.0	54		22.77		174.74		0.2889	12.0	92	0.7	0.0	8.0	63	7.5	

7 DAY AVERAGE																		
WEEK 1	0.2	1.469	8.0	117		33.52		269.17		0.4459	16.5	244	<0.50	0.0	8.2	64	7.5	
WEEK 2	0.0	1.581	8.0	98		25.48		198.81		0.2889	15.0	185	0.7	4.5	8.1	65	7.5	
WEEK 3	0.0	1.467	7.5	95		30.12		237.86		0.3490	15.0	190	<0.50	0.0	8.1	65	27.0	
WEEK 4	0.1	1.251	7.0	80		28.31		233.64		0.3648	12.0	137	<0.50	0.0	8.1	66	33.0	

City of Waverly
MONTHLY MONITORING REPORT

Date: July, 2020

DISCHARGE SERIAL # 001 - # 002

Facility Number 0990001

Note: 0.0 = <MDL of 0.5

DAY OF MONTH	DAY OF WEEK	DIGESTER CONTENTS					TRICKLING FILTER RECIRC. FLOW MGD	BOD 5 DAY 20 °C		INF. PHOS. MG/L	INF. PHOS. LBS/DAY	TOTAL N (as N) MG/L	INF. TOTAL N (as N) LBS/DAY	INF. TKN (as N) MG/L	INF. TKN (as N) LBS/DAY	TOTAL SUSPENDED SOLIDS		RAW ph	RAW TEMP. °F
		FLOW MGD	TEMP °F	ph	VOL. ACID MG/L	ALKALIN. MG/L		INF. MG/L	INF. LBS/DAY							INF. MG/L	INF. LBS/DAY		
1	Wed.	1,980	97	7.01			0.18	102	1684	3.02	49.87	18.2	300.54	11.3	186.60	172	2840	7.6	60
2	Thurs.	1,790	98	7.02	170	2680	0.37	79	1179							148	2209	7.8	61
3	Fri.	1,710					0.45												
4	Sat.	1,530					0.63												
5	Sun.	1,680	98	6.90			0.48											7.5	61
6	Mon.	1,540	97	6.94	170	2630	0.62											7.5	63
7	Tues.	1,570	97	6.93			0.59											7.5	62
8	Wed.	1,550	97	6.95			0.61	128	1655	3.94	50.93	23.0	297.32	15.5	200.37	228	2947	7.6	61
9	Thurs.	1,850	97	6.92			0.31											7.6	63
10	Fri.	1,620	97	6.97	140	2600	0.54	111	1500							232	3135	7.5	62
11	Sat.	1,500					0.66												
12	Sun.	1,580					0.58												
13	Mon.	1,440	97	6.90	155	2500	0.72											7.3	64
14	Tues.	1,810	97	6.91			0.35											7.5	63
15	Wed.	1,550	97	6.94			0.61	122	1577	3.87	50.03	22.6	292.15	16.6	214.59	228	2947	7.6	62
16	Thurs.	1,530	97	6.88			0.63											7.4	62
17	Fri.	1,490	97	6.93	135	2410	0.67	86	1069							136	1690	7.6	62
18	Sat.	1,400					0.76												
19	Sun.	1,410					0.75												
20	Mon.	1,440	97	6.89	145	2380	0.72											7.5	63
21	Tues.	1,450	97	6.88			0.71											7.7	62
22	Wed.	1,380	97	6.94			0.78	123	1416	4.33	49.83	24.9	286.58	17.5	201.41	216	2486	7.6	62
23	Thurs.	1,350	97	6.86			0.81											7.4	62
24	Fri.	1,360	97	6.87	155	2240	0.80	100	1134							188	2132	7.5	62
25	Sat.	1,270					0.89												
26	Sun.	1,370					0.79												
27	Mon.	1,190	97	6.85	160	2160	0.97											7.4	65
28	Tues.	1,260	97	6.85			0.90											7.4	63
29	Wed.	1,240	97	6.90			0.92	141	1458	4.30	44.47	25.4	262.68	19.0	196.49	240	2482	7.6	63
30	Thurs.	1,240	97	6.87			0.92											7.4	65
31	Fri.	1,170	97	6.89	145	2250	0.99	141	1376							250	2439	7.5	63

TOTAL AVERAGE	46,250						20,710	1133.0	14048		245.13		1439.27		999.46	2038.0	25309		
MAX	1,980	98.0	7.0				0.668	113.3	1405		49.03		287.85		199.89	203.8	2531	7.5	62.4
MIN	1,170	97.0	6.9				0.180	79.0	1069		44.47		262.68		186.60	136.0	1690	7.3	60.0

7 DAY AVERAGE																			
WEEK 1	1,686						0.474	90.5	1432		49.87		300.54		186.60	160.0	2525	7.5	61.4
WEEK 2	1,621						0.539	119.5	1577		50.93		297.32		200.37	230.0	3041	7.5	61.6
WEEK 3	1,467						0.693	104.0	1323		50.03		292.15		214.59	182.0	2319	7.6	62.0
WEEK 4	1,311						0.849	111.5	1275		49.83		286.58		201.41	202.0	2309	7.5	62.8

Signature: _____
Certification Number: 3989

City of Waverly
Department of Public Works
FY 2020-21

STORM AND SANITARY SEWER LINE MAINTENANCE

The Storm/Sanitary Sewer Maintenance Division was established in FY 1990-91. Its function is to maintain the sewer systems and assist the Street, WPC, and Water Divisions as needed with major projects. Its purpose is two-fold: to establish an effective annual maintenance program to control long-term upkeep costs and to establish a more efficient operation of our sewer systems. This will utilize the budgeted money more efficiently, reduce waste water treatment costs, and upgrade instead of maintain our storm/sanitary sewers.

The following is a brief overview of some projects during FY 2020-21. This is not a total summary, but does give an idea of the versatility of this division and the expertise required. Of our 331,500 feet of sanitary sewer mains, over 62,800 feet were cleaned and 5,200 feet were televised. Several problem areas are being scheduled for repair or replacement as time and funds become available.

FUTURE PROJECTS

1. Update sanitary and storm sewer GIS mapping as more discrepancies are found; including cleaning records of all sewer mains.
2. Continue upgrade of existing sanitary manholes to decrease infiltration problems.
3. Continue work on storm sewer intakes and catch basins and replace old brick structures with poured concrete structures.
4. Continue televising of sewer lines to locate problem areas.
5. Continue cleaning and maintaining storm and sanitary sewer lines.
6. Continue routine cleaning of maintenance lines.
7. Maintain a five-year sanitary sewer cleaning schedule.

AREA OF CONCERN

1. Infiltration and inflow problems must continue to be addressed with some major financing.
2. Tree roots in sanitary sewer lines.
3. Undersized/aged storm sewer pipes on 3rd Avenue SW, 2nd Avenue SW and other numerous outfalls to the river.

Storm and Sanitary Sewer Line Maintenance

Fiscal Year 2020-21

	<u>2016-17</u>	<u>2017-18¹</u>	<u>2018-19</u>	<u>2019-20</u>	<u>2020-21</u>	<u>Units</u>
<u>Sanitary Sewer Maintenance</u>						
Lines Flushed	97,579	61,503	29,698 ²	86,403	62,823	Feet
Manholes Cleaned	217	3	5	34	51	Each
<u>Storm Sewer Maintenance</u>						
Lines Flushed	384	6,578	5,287	6,632	1,316	Feet
Intakes & MH Cleaned	28	21	57	29	26	Each
<u>Televising Lines</u>						
Sanitary Sewer	8,707	7,689	3,450	4,169	5,221	Feet
Storm Sewer	33	120	360	2,231	1,175	Feet
<u>Jetting Sewer Mains</u>						
Water Used	260,937	133,200	95,925	189,750	133,510	Gallons
<u>Lines Repaired</u>						
Sanitary Sewer	1	0	1	5	6	Each
Storm Sewer	3	7	3	8	7	Each
<u>Intakes Repaired</u>						
	0	0	2	0	0	Each
<u>Manholes Repaired</u>						
	2	18	0	0	1	Each
<u>Sewer Call-Outs</u>						
<i>During & after hours</i>	27	10	12	18	14	Each
<u>Other Division Work</u>						
Streets - Snow Plowing	69.8	36.6	18.2	20	0	Hours
Water - Leak Repairs	126.7	100.4	200.6	180	165	Hours
WPC - Lift Stations	19.6	16.6	19	4	16	Hours
Leisure Serv. - Cem. Graves	1	13	40	27	12	Each
Leisure Serv. - Golf Course	0	0	0	3	0	Hours
Engineering - Inspections	1	0	0	1	1	Hours

¹ During 2017-18: September, February & March records were missing.

² Designated area of focus was smaller and contains newer lines than prior years.

Note: Removed "IA One Call Locates" line for the FY2019-20 Annual Report. The locates now show up in the Water Division.

Storm and Sanitary Sewer Line Maintenance

Fiscal Year 2020-21

Miscellaneous:

Cleaned out waterways, detention areas & Dry Run. Cleaned drains for Water Dept., Law Center, bike trail bathrooms, hospital pits & drains and pumped Airport septic. Started root-treating problem sewer mains ourselves (over 1,120 LF done last year). Completed 7 different waterway projects including grading, seeding, laying pipe and some concrete work.

City of Waverly
Department of Public Works
FY 2020-21

SOLID WASTE

Recycling

Voluntary Drop-Off Program
Curbside Collection Program

Refuse Collection

Residential
Commercial
Yard Waste – Drop-Off Site

Refuse Container (Dumpster)

Repair

Special Collections

Waverly Horse Sale – Fall & Spring
Chamber – Agriculture Appreciation Day
Bremer County Fair
Wartburg College – Move In / Move Out
Heritage Days
Special Collection Weeks – Spring and Fall
Other Special Events

The Solid Waste Division collects refuse once a week from residential customers and up to five days per week from commercial. Garbage to be pickup in the City of Waverly needs to be in a City-owned garbage container or dumpster. Residential customers are able to rent a 35- or 65-gallon City-owned garbage container. Commercial customers can use either a City dumpster or a city-owned garbage container. Curbside recycling runs every other week. The average stops per day is 387. It is a one-man operation, which one refuse collector runs each month. Consideration needs to be given to weekly curbside recycling.

The Recycling Center is open Monday through Friday from 7:00 a.m. to 5:30 p.m. and from 8:00 a.m. to 4:00 p.m. on Saturdays. Local civil volunteer groups, when available, continue to work during Recycling Saturdays as a community service (this has been put on hold due to Covid).

Two part-time employees operate the Recycling Center each day, each working half a day, including each Saturday. There is a total of four part-time employees who work in the center. The average number of cars through the center each day is 136.

Yard Waste Site

Along with the Recycling Center, the City also operates a Yard Waste Site from April through November. Four part-time employees operate the Yard Waste Site. Leaves, grass clippings, garden waste, trees, and branches are accepted at no charge. Appliances, furniture, tires, and carpeting are also collected here for a fee while it is open. The average number of cars through the center each day is 103.

City of Waverly – Public Works
Solid Waste Division
Recycling Statistics
FY 2020-21

Recycling Center Car Count – Monday - Saturday
Total.....41,097 Daily Average..... 136

Recycling Center Car Count – Saturday only
Total..... 9,257 Monthly Average..... 771

Curbside Recycling Stops
Total.....50,296 Monthly Average..... 4,193

Total Weight of the Recycled Products from the Recycling Center and Curbside
Recycling Route: 1,030 tons

Total Weight of the Recycled Products from the Curbside Recycling Route:
728,500 pounds (364 tons)

Revenue from the recycled products: \$26,244.17

- In April 2020 the City started receiving revenue from the paper products recycled again. This included: office paper (white and colored), cardboard, magazines, newspapers, and books.

Other items or material recycled by the City of Waverly:

- 42 tons of steel, old sewer castings, signs, poles, plow blades, and miscellaneous pieces
- 32 tires
- 469 appliances
- 3,200 gallons of oil
- 444 electronics (computers, televisions, monitors, and printers)

Yard Waste Site car count: 21,156
(July - Nov 2020 and March – June 2021):

Monthly average: 2,116

Busiest months were October 2020 and November 2020

605 tons of yard waste were turned into compost.

1892 tons of brush and trees were ground up to make wood mulch.

City of Waverly - Public Works
Solid Waste Division
Employee Hours
FY 2020-21

<u>Refuse Collections</u>	<u>Hours</u>
Residential	<u>1,719</u>
Commercial	<u>2,900</u>
Black Hawk Co. Landfill	<u>1,040</u>
Temporary Dumpsters	<u>401</u>
Corrugated Collection	<u>518</u>
Special Pickups	<u>85</u>
Curbside Recycling Pick-up	<u>950</u>
Recycle Center Duties	<u>161</u>
Container Exchanges	<u>182</u>
Building/Vehicle Maintenance	<u>299</u>
Dumpster Repairs	<u>461</u>
Misc. Activity (training, etc)	<u>372</u>
<u>Other Divisions</u>	
Street Division	
Snow Plowing & Removal	<u>505</u>
Other (Patching, Mowing, Tree Trimming, Etc)	<u>374</u>
Water Division Projects	<u>3</u>
Sewer Maintenance Projects	<u>0</u>
Other Departments	<u>13</u>

City of Waverly
Car Count
Recycling Center and Yard Waste Site
 FY 2020-21

Recycling Center

Month	# of Days	Weekdays		Saturdays		Monthly Total	Daily Average
		car count	% of Total	car count	% of Total		
Jul-20	25	3,324	86%	558	14%	3,882	155
Aug-20	26	2,686	76%	838	24%	3,524	136
Sep-20	25	2,536	77%	754	23%	3,290	132
Oct-20	27	2,788	73%	1,016	27%	3,804	141
Nov-20	23	2,437	75%	795	25%	3,232	141
Dec-20	25	3,004	81%	718	19%	3,722	149
Jan-21	25	2,363	72%	916	28%	3,279	131
Feb-21	24	1,909	76%	609	24%	2,518	105
Mar-21	27	2,607	76%	810	24%	3,417	127
Apr-21	25	2,721	81%	648	19%	3,369	135
May-21	25	2,469	72%	943	28%	3,412	136
Jun-21	26	2,996	82%	652	18%	3,648	140
Total						41,097	136

Recycling Center - Car Count History

Fiscal Year	2016-17	2017-18	2018-19	2019-20	2020-21
Weekdays	29,126	30,434	32,839	44,718	31,840
Saturdays	8,858	9,658	10,241	8,345	9,257
Totals	37,984	40,092	43,080	53,063	41,097

Yard Waste Site - Car Count History

Fiscal Year	2016-17	2017-18	2018-19	2019-20	2020-21
Totals	25,010	20,767	22,123	22,896	21,156

City of Waverly - Public Works

Solid Waste Division

Curbside Recycling

Number of Residential/Commercial Stops

FY 2020-21

<u>Week Beginning</u>	<u>Mon</u>	<u>Tues</u>	<u>Wed</u>	<u>Thurs</u>	<u>Fri</u>	<u>Weekly Totals</u>
7/13/2020	335	346	352	413	426	1,872
7/27/2020	372	360	388	415	420	1,955
8/10/2020	385	420	400	412	389	2,006
8/24/2020	386	369	392	410	414	1,971
9/7/2020		710	388	411	420	1,929
9/21/2020	355	362	405	415	432	1,969
10/5/2020	381	353	382	409	418	1,943
10/19/2020	361	342	382	415	397	1,897
11/2/2020	359	333	397	443	493	2,025
11/16/2020	390	349	379	417	407	1,942
11/30/2020	402	348	402	425	408	1,985
12/14/2020	375	385	382	412	402	1,956
12/28/2020	402	386	400	427	412	2,027
1/11/2021	352	375	389	423	340	1,879
1/25/2021	356	325	367	417	382	1,847
2/8/2021	361	337	383	429	373	1,883
2/22/2021	355	315	370	412	395	1,847
3/8/2021	403	373	329	437	422	1,964
3/22/2021	373	375	396	435	416	1,995
4/5/2021	387	418	434	433	425	2,097
4/19/2021	383	349	413	432	436	2,013
5/3/2021	401	385	415	426	420	2,047
5/17/2021	425	441	402	420	398	2,086
5/31/2021		787	410	450	420	2,067
6/14/2021	352	392	405	454	402	2,005
6/28/2021	357	352	380			1,089

Total for the FY 2020-21 50,296

Average Daily Stops 387

City of Waverly

Recycling Quantities

2020-21

Sorted Recycling Collected at Recycling Center

	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	June	TOTAL
Paper, Bond	lbs. 14,800		8,525	6,335		5,890		7,105	4,405	5,305		4,625	56,990
Slick Paper / Magazines	lbs. 4,980		8,820	7,110		10,145		7,285	4,860	3,895		6,095	53,190
Newsprint	lbs. 4,895		9,560	8,585		8,585		7,155	7,220	6,695		8,540	61,235
Corrugation/Chipboard	lbs. 73,540	70,520	86,220	64,460	69,020	82,360	58,720	58,860	90,000	78,820	64,800	91,565	888,885
#3, 4, 5, 6, 7 Plastics	lbs. 4,900	1,094	5,140	4,340	6,160	9,260	4,340	3,840	5,180	4,920	4,920	8,900	62,994
Steel / Alum	lbs. 25,320	-	8,640	19,400		4,880	6,840			9,073	4,700	6,509	85,362
Books	lbs. 4,175		6,075	6,665		4,680		6,090	4,335	4,515		2,935	43,835
Styrofoam**	lbs. 560	760	480	680	480	740	500	480	800	980	840	980	8,280
Clear Glass*	lbs. 8,580	4,500	8,580	4,320	8,660	4,260	8,500	4,540	4,520	9,440	4,640	4,360	74,900
Totals - Sorted Recycling	141,750	76,874	142,040	121,895	84,320	130,800	78,900	95,355	121,320	123,643	79,900	134,509	1,331,306
												Total Tons	666

* City takes glass to City of Cedar Falls and they recycle at no cost to us. (Effective Jan. 1, 2021 - \$50 per load)

**City takes styrofoam to City of Cedar Falls and they recycle at no cost to us. (Effective Jan. 1, 2021 - \$50 per load)

Commingled Recycling Picked up Curbside (Jendro)

	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	June	TOTAL
Totals - Commingled Recycling	lbs. 53,400	61,000	70,640	48,580	65,480	52,180	55,620	67,200	65,940	54,000	55,640	78,820	728,500
												Total Tons	364

Aluminum, Cardboard, Slick Paper, Newspapers, Bond Paper, Plastics & Metal Cans

TOTAL RECYCLING

	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	June	TOTAL
TOTALS - Sorted & Commingled Recycling	lbs. 195,150	137,874	212,680	170,475	149,800	182,980	134,520	162,555	187,260	177,643	135,540	213,329	2,059,806
												Total Tons	1,030

Motor Oil Collected at Recycling Center

	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	June	TOTAL
Motor Oil	gal. 275	650	200	200	125	300	125	425	200	150	350	200	3,200
												Total Gallons	3,200

City of Waverly

Solid Waste and Recycling Revenues

FY 2020-21

Date	Solid Waste				Recyclables Collected at Recycling Center & YWS				Total Recyclable Revenue	Total SOLID WASTE & RECYCLABLE REVENUE
	Utility Billing 670-840-4500	Sticker Sales 670-840-4552	Temp. Dumpsters & Misc.	Total Solid Waste Revenue	Paper Products	Steel & Aluminum	Metro Redemption	Recycled Bulky Items		
Jul-20	124,310.81	985.00	610.00	125,905.81	574.06	54.00	512.45	1,385.00	2,525.51	128,431.32
Aug-20	121,982.07	5,792.50	925.00	128,699.57	113.39	189.55	701.70	1,567.00	2,571.64	131,271.21
Sep-20	131,117.18	599.50	825.00	132,541.68	0.00	0.00	308.65	1,475.00	1,783.65	134,325.33
Oct-20	128,687.84	408.00	450.00	129,545.84	333.33	522.90	289.75	1,039.00	2,184.98	131,730.82
Nov-20	128,353.19	975.00	525.00	129,853.19	97.05	0.00	527.85	1,264.00	1,888.90	131,742.09
Dec-20	135,376.42	975.00	200.00	136,551.42	197.95	109.80	244.35	592.00	1,144.10	137,695.52
Jan-21	137,595.92	4,368.00	775.00	142,738.92	481.61	274.90	212.50	532.25	1,501.26	144,240.18
Feb-21	123,057.02	1,394.24	25.00	124,476.26	655.55	95.55	0.00	292.00	1,043.10	125,519.36
Mar-21	153,632.20	1,365.00	350.00	155,347.20	830.75	0.00	367.05	373.00	1,570.80	156,918.00
Apr-21	134,251.26	10.00	550.00	134,811.26	1,599.89	244.10	361.70	1,416.15	3,621.84	138,433.10
May-21	131,990.72	1,773.00	725.00	134,488.72	1,663.11	203.30	288.65	880.00	3,035.06	137,523.78
Jun-21	145,224.59	1,990.00	200.00	147,414.59	1,525.61	246.75	188.60	1,495.00	3,455.96	150,870.55
TOTALS	1,595,579.22	20,635.24	6,160.00	\$ 1,622,374.46	8,072.30	1,940.85	4,003.25	12,310.40	26,326.80	1,648,701.26
Received from Black Hawk County Landfill to assist with funding of recycling & waste reduction									8/1/2020	3,739.08
TOTAL REVENUES										\$ 1,652,440.34

City of Waverly
Solid Waste Landfill Disposal Quantities

		2016-17	2017-18	2018-19	2019-20	2020-2021
		Tons	Tons	Tons	Tons	Tons
July	<i>Residential:</i>	140.32	158.78	164.02	179.52	183.05
	<i>Commercial:</i>	182.66	209.73	234.22	251.84	228.91
		323.0	368.5	398.2	431.4	412.0
August	<i>Residential:</i>	168.91	176.28	173.3	174.43	181.94
	<i>Commercial:</i>	250.92	232.62	257.79	237.82	210.23
		419.8	408.9	431.1	412.3	392.2
September	<i>Residential:</i>	160.31	148.59	148.84	155.87	164.78
	<i>Commercial:</i>	268.05	223.61	234.61	255.85	250.08
		428.4	372.2	383.5	411.7	414.9
October	<i>Residential:</i>	139.67	159	156.12	161.24	165.54
	<i>Commercial:</i>	232.5	248.32	266.49	263.37	236.28
		372.2	407.3	422.6	424.6	401.8
November	<i>Residential:</i>	148.88	155.13	165.1	149.74	162.73
	<i>Commercial:</i>	224.95	216.51	222.06	217.33	197.49
		373.8	371.6	387.2	367.1	360.2
December	<i>Residential:</i>	145.38	142.86	146.1	167.39	174.92
	<i>Commercial:</i>	204.83	178.67	209.3	218.99	201.74
		350.2	321.5	355.4	386.4	376.7
January	<i>Residential:</i>	144.19	155.33	138.16	152.4	151.99
	<i>Commercial:</i>	204.74	233.55	188.87	225.98	183.39
		348.9	388.9	327.0	378.4	335.4
February	<i>Residential:</i>	123.59	122.64	144	120.98	137.68
	<i>Commercial:</i>	189.45	196.97	195.31	198.78	181.67
		313.0	319.6	339.3	319.8	319.4
March	<i>Residential:</i>	152.79	144.68	138.02	136.48	163.92
	<i>Commercial:</i>	217.11	214.08	223.63	224.76	253.53
		369.9	358.8	361.7	361.2	417.5
April	<i>Residential:</i>	133.45	132.94	158.3	174.37	168.61
	<i>Commercial:</i>	221.03	242.11	258.12	187.07	233.48
		354.5	375.1	416.4	361.4	402.1
May	<i>Residential:</i>	166.26	157.53	173.41	173.44	155.09
	<i>Commercial:</i>	252.42	266.98	266.61	212.69	251.99
		418.7	424.5	440.0	386.1	407.1
June	<i>Residential:</i>	162.94	134.14	152.17	172.82	162.4
	<i>Commercial:</i>	228.16	220.81	220.18	250.05	261.38
		391.1	355.0	372.4	422.9	423.8
TOTAL		4,463.5	4,471.9	4,634.7	4,663.2	4,662.8

City of Waverly - Public Works
Solid Waste Division
Bulky Items Collection

FY 2020-21

	2020						2021							Total
	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	Special Collection Week	May	June	
Appliances w/Freon							<i>*Yard Waste Site Closed</i>							
Refrigerators	8	10	8	3	6	3			2	6	5	2	10	63
Freezers	0	3	0	0	2	1			2	3	2	0	3	16
Air Conditioners	4	2	1	0	2					1		1	3	14
Dehumidifiers	18	10	6	3	12				6	8	3	5	9	80
Appliances w/out Freon														
Water Heater/Furnace	5	0	6	0	4				3	5	1	0	3	27
Water Softener	2	2	0	4	4	2	1		2	4	1	0	1	23
Stove	4	1	2	0	1			1	2	0	3	2	1	17
Washer	3	5	3	7	5		1			4	4	2	8	42
Dryer	4	4	3	6	7	1				4	4	1	3	37
Dishwasher	1	3	1	0	4	3				4	4	2	2	24
Humidifier	1	0	0	1	2		2		1	0		0	0	7
Gas Grill	3	5	2	0	3				1	3	10	1	4	32
Microwave	6	9	9	7	13	6	1	2	4	12	4	6	8	87
Electronics														
Televisions	38	43	34	34	38	8	12	8	7	27	16	23	39	327
Monitors	0	0	3	0	3	1	1	2	2	0	10	1	7	30
Printers	1	0	3	2	17	3	4	3	3	4	5	10	6	61
Computers	3	0	7	0	4				2	0	2	4	4	26
Tires														0
Car	2	2	5	1	1		1	1	3	2	2	0	7	27
Truck	0	0	0	2	1	2			0	0		0	0	5
Tractor	0	0	0	0	0				0	0		0	0	0
TOTAL	103	99	93	70	129	30	23	17	40	87	76	60	118	945

**Bulky Items are collected at the Public Services site during the winters months that the Yard Waste Site is closed.*