

November 8, 2019
Mayor & City Council Members
City of Waverly

EXECUTIVE SUMMARY OF THE
2018-19
PUBLIC WORKS DEPARTMENT
ANNUAL REPORT

Highlights of the 2018-19 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>
Airport Land Acquisition (1 property left to purchase)	June 2012	not final	-
IA Hwy 3 (Bremer Ave.) Reconstruction 2017 & 2018	April 2016	not final	-
20 th Street NW Recon. – Ph. 1 RR Crossing Impr. At 20 th St. NW & 5 th Ave. NW 2018	Jan. 2017	not final	-
Cedar River Parkway (East) 2018	Jan. 2017	not final	-
Airport Bulk Hangar Improvements 2018	March 2017	July 2018	\$ 77,196
Airport Runway 29 Extension 2018	Aug. 2017	not final	-
Bituminous Seal Coat Program 2018	Feb. 2018	Sept. 2018	\$ 256,139
Slurry Seal Project 2018	Feb. 2018	July 2018	\$ 250,293
Downtown Alley Reconstruction 2018	March 2018	July 2018	\$ 46,838
Adams Pkwy Bridge Repair & Horton Rd. 2018	June 2018	not final	-
WPC Facility Improvements 2020	March 2018	not final	-
2 nd Ave. NE Storm Sewer Replacement 2018	July 2018	Dec. 2018	\$ 66,395
Citywide Sidewalk & Ped Ramp Repairs 2018	July 2018	Dec. 2018	\$ 71,167
Cedar Lane Reconstruction 2019	Aug. 2016	not final	-
Water Main Replacement 2019	Oct. 2018	not final	-
Asphalt Patching – Fall 2018	Sept. 2018	Dec. 2018	-
Bituminous Seal Coat Program 2019	Jan. 2019	not final	-
Slurry Seal Program 2019	Jan. 2019	not final	-
Crack Cleaning & Filling Project 2019	March 2019	not final	-

<u>Projects</u> (Cont'd)	<u>Initiated</u>	<u>Finalized</u>	<u>Cost</u>
Sanitary Sewer Manhole Rehab 2019	March 2019	not final	-
Asphalt Patching – Spring 2019	March 2019	not final	-
Dog Park Sidewalk 2019	March 2019	not final	-
4 th Street SW Improvements 2020	Aug. 2018	not final	-
10 th Street SW Improvements 2020	June 2019	not final	-
20 th Street NW Improvements 2020	June 2019	not final	-
Downtown Alley Reconstruction 2019	July 2019	not final	-
E. Bremer Ave. San. Sewer Main Ext. 2019	July 2019	not final	-
Infrastructure Modeling – Water & Sewer	June 2019	not final	-
Airport Avionics Room 2020	April 2019	not final	-
Airport Obstruction Removal 2020	April 2019	not final	-
Business 218 North Resurfacing 2020	May 2019	not final	-
Rolling Prairie Trail Extension 2021	March 2019	not final	-

Total value of work **finalized** between July 2018 thru June 2019 **\$ 768,028**

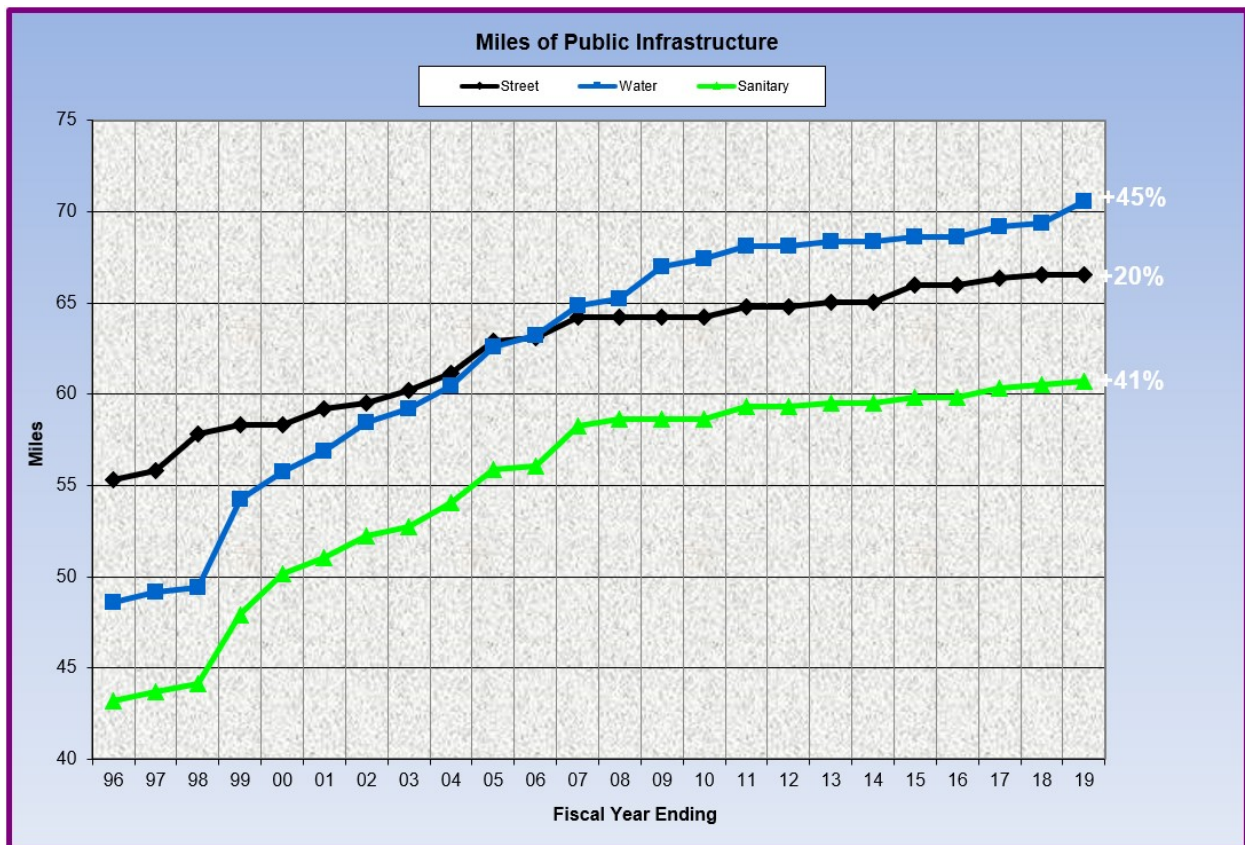
<u>Subdivision w/ Public Infrastructure</u>	<u>Final Plat Approved</u>	<u>Public Improve. Accepted</u>	<u>Lots</u>	<u>Streets (Feet)</u>
Omni Lot 40 Development (Sanitary Sewer)	n/a	Oct. 2018	1	0
Total Completed for July 2017 thru June 2018			1	<u>0</u>
Newly Accepted Streets			=	0.0 mi

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 2017-18 actual and the 2018-19 budgeted division expenditures were:

Division	2017-18 Actual	2018-19 Budget
Public Works Administration	\$ 259,041	\$ 279,491
Engineering	260,968	306,820
General Infrastructure Maintenance	361,914	343,375
Equipment Services	306,204	287,331
Street RUT (+ Transfer)	1,356,378	1,253,216
Airport	81,710	75,440
Water (Service, Misc., Int.)	1,561,838	1,945,918
Water Pollution Control (Service, Misc., Int.)	1,119,913	1,092,731
Sewer Line Maintenance	277,404	243,508
Solid Waste	1,392,430	1,455,397
	\$ 6,977,800	\$ 7,283,227

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 2018-19 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 23 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.

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

This division had previously been called “Streets General” with the name change occurring in FY 2016-17.

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 communitywide street lighting, entrance signs and traffic signals.
- Finance uniforms and some training and conferences for employees in the Streets Division.

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.

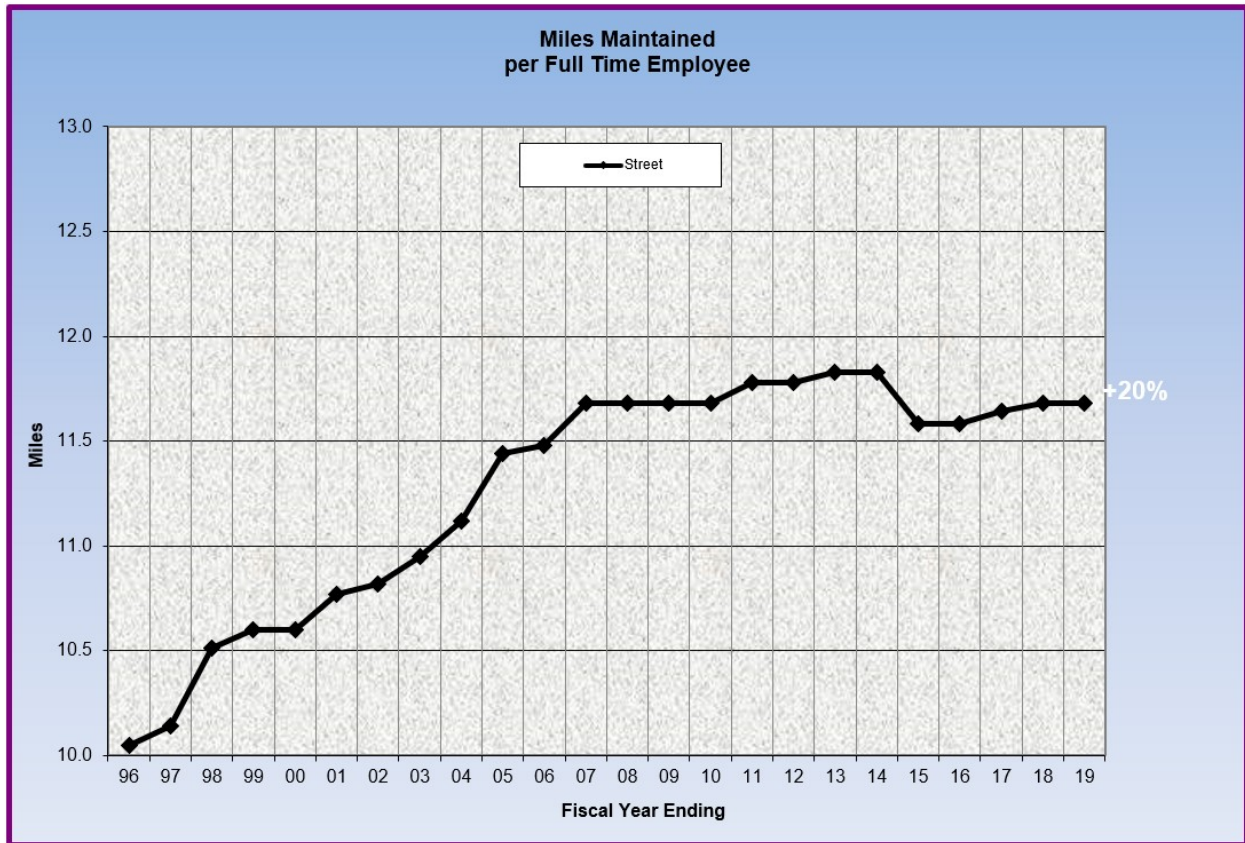
Looking to the Future

- 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 2018-19 the City did not officially add any streets. 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 100 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. In addition to seal coating streets, for the third year the City performed a slurry seal project with work in the 1st Avenue SE Parking Lot, 11th Street SW, 2nd Ave SW, Park 2nd Avenue and in the Rieger Addition on 4th Avenue NW and 17th Street NW.

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, tree trimming and removal of ash 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 1,721 Iowa One-Call locates for water mains, sanitary sewer and storm sewers.

On average 936,583 gallons of water per day were pumped with 75% of it accounted for through customer billing or known uses like hydrant flushing. The remaining 25% 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 October 2018 the Iowa DOT completed the reconstruction Bremer Avenue (IA 3). The roadway reconstruction project also included the replacement or addition of approximately two miles of water main along Bremer Avenue from 20th Street West to 8th Street East.

Looking to the Future

- Fall 2019 - GIS mapping of the water distribution system by Midland GIS.
- Fall 2019 – Update the 2010 Water Distribution Modeling and Evaluation by WHKS & Co.
- Completion of the Public Services Center for Operations & Disaster Response final phase in 2021 remains a top priority and 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.

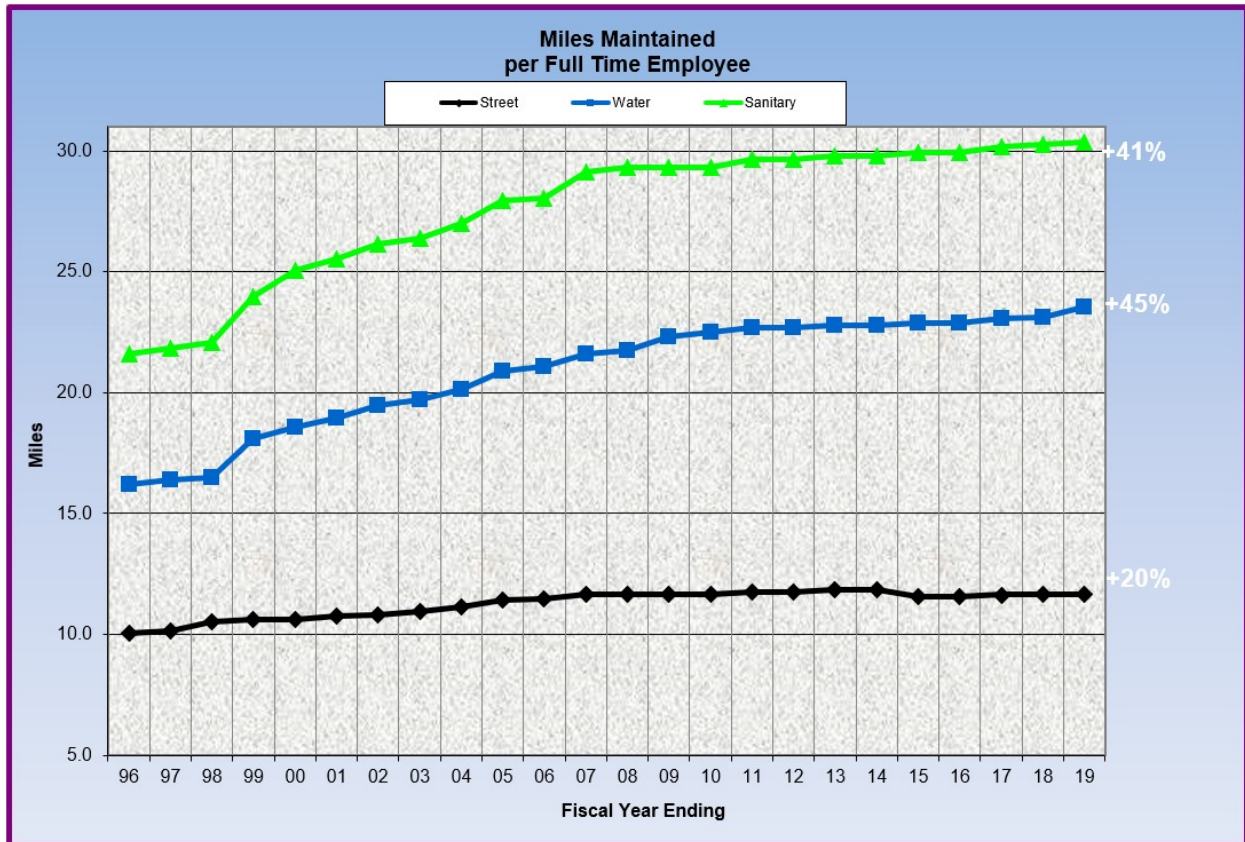
Looking to the Future

- The schedule for the improvements described above is to complete design by the fall of 2020 and 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.

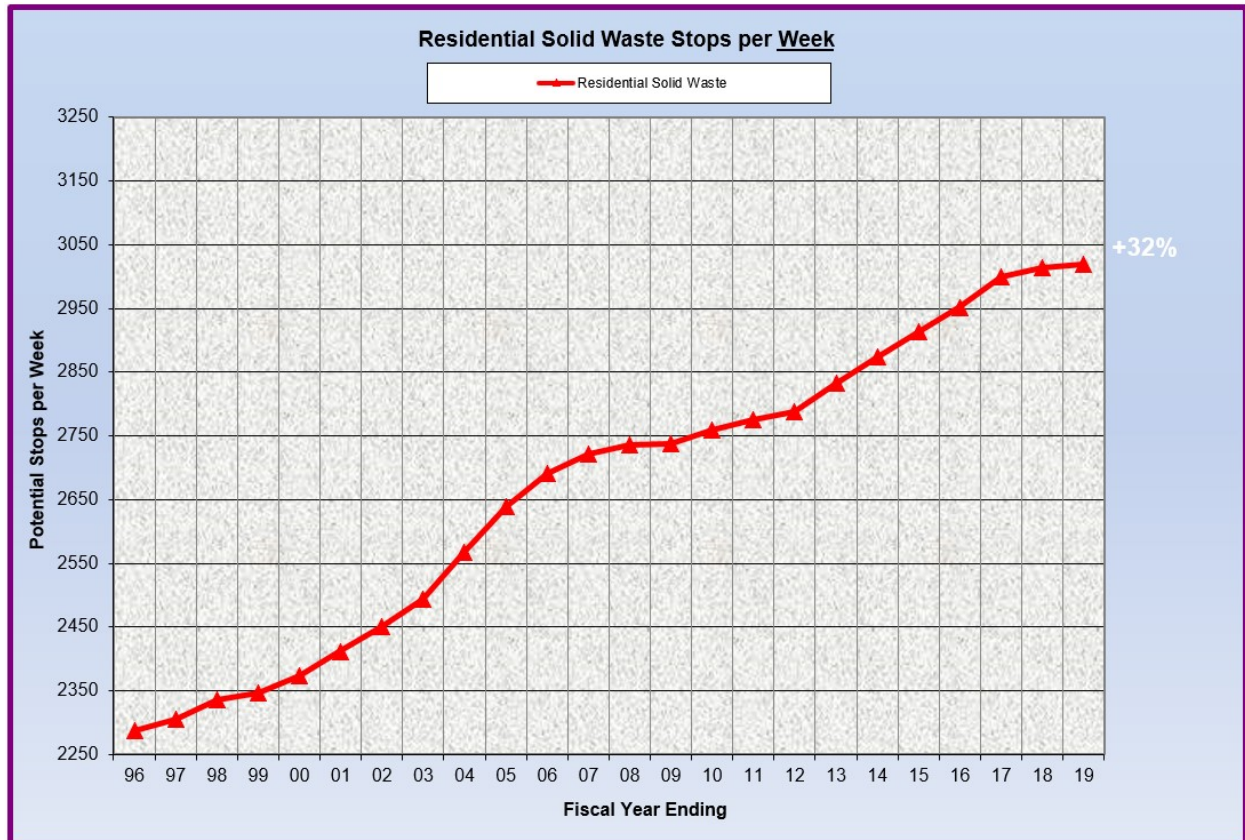
The Sanitary Sewer Capacity Analysis was completed in 2010 and helps identify weaknesses within the existing system and the impact of future development on the system. The report determined that there are no “fatal flaws” within the existing system, but there are areas of concern identified for future upgrades.



Looking to the Future

- Maintaining an acceptable 7-year inspection, cleaning and televising have not been achieved for many years. Core duties and responsibilities are being reassessed to achieve the 7-year schedule. Manhole and storm intake fixture adjustments are now a core function of the Streets Division.
- Fall 2019 - GIS mapping of the water distribution system by Midland GIS.
- Fall 2019 – Update the 2010 Water Distribution Modeling and Evaluation by WHKS & Co.
- Completion of the Public Services Center for Operations & Disaster Response final phase in 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 \$44 per ton.

In March and June 2019 Billy Munchoff and Brett Bright were hired as Refuse Collectors in the Solid Waste Division.

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.

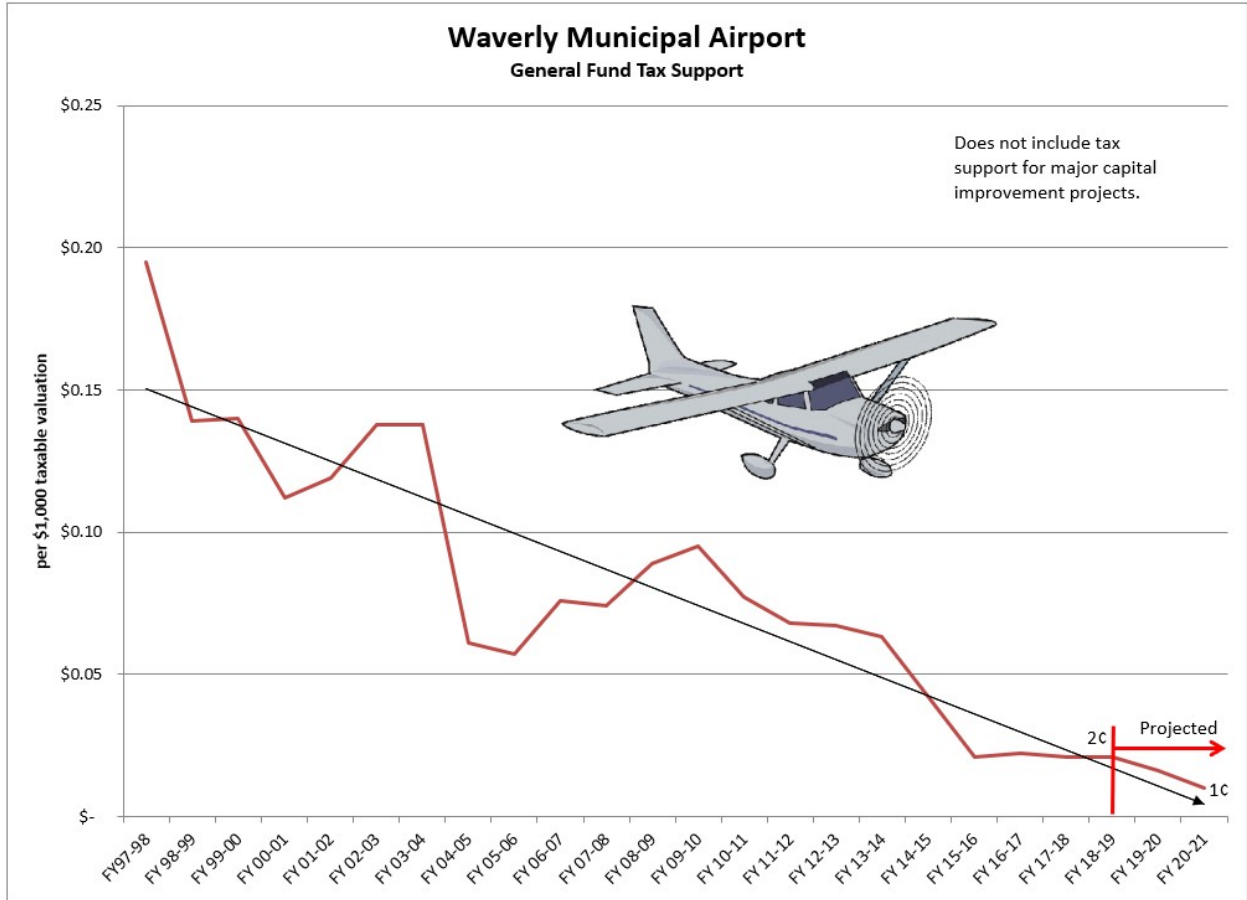
Division 10 – Waverly Municipal Airport

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 may be self-sufficient. Major capital projects would continue to need the City's financial support.

Looking to the Future

- Fall 2019 / Spring 2020 - 400-ft Runway 29 Extension Project
- Spring 2020 - Obstruction Removal Project
- Winter 2020 - Addition of Credit Card Fueling (by FBO)
- Add Avionic Maintenance Room
- Replace Obsolete Security Cameras
- Upgrade Electrical Power Supply to T-Hangars and Individual Hangars
- Reconstruct Hangar Taxiways
- 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 2018-19

ADMINISTRATION

The Administration consists of the Director and 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 2018-19

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.

Airport Land Acquisition

Initiated: June 2012
Location: Waverly Municipal Airport - 1710 35th Street NW
Description: This is a land acquisition project for the expansion of the runway safety zone and extension of the runway.
Engineer: McClure Engineering Co.
Cost: \$
Finalized: not final - the last parcel (Schmidt) was purchased on July 15, 2019.

IA Highway 3 (Bremer Avenue) Reconstruction 2017 & 2018

Initiated: April 2016
Location: IA Highway 3 (Bremer Avenue) from 8th Street NE to 20th Street NW
Description: The Iowa DOT reconstructed IA Highway 3 (Bremer Avenue) through Waverly in 2017 & 2018. The City of Waverly’s expense will be for the installation of the new water main (100%), the new storm sewer (50%), and the parking lanes (100%).
Engineer: WHKS & Co, Mason City, Iowa (City’s water main and streetscaping)
Contractor: Skyline Construction (IDOT’s contractor)
Total Project Cost: \$???
Total City Expense: \$??? (through June 30, 2019 > \$1,942,500)
Finalized: not final

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

Initiated: January 2017
Location: 20th Street NW at railroad crossing and 5th Avenue NW railroad crossing.
Description: Reconstruction of RR crossings at 20th Street NW & 5th Avenue NW. Crossing gates will be installed at 20th Street NW.
Engineer: McClure Engineering
Contractor: Croell, Inc.
Total Cost: \$
Finalized: not final - As of Sept. 2019 the City is still waiting for approval from the CN RR to bore the watermain under the RR tracks. Also, the crossing lights & gates have not yet been installed.

Cedar River Parkway (East) Improvement 2018

Initiated: January 2017
Location: From the intersection of Cedar River Parkway and 8th Street SE eastward to East Bremer Avenue (Hwy. 3)
Description: Construction of new bridge and 1-mile roadway. Currently under construction.
Engineer: Stanley Consultants (with WHKS & Co. as a sub-engineering firm for the bridge.)
Contractor: Cramer & Associates
Total Cost: \$
Finalized: not final

Airport Bulk Hangar Improvements 2018

Initiated: March 2017
Location: Waverly Municipal Airport
Description: Installed new insulation over the deteriorating insulation in the bulk hangar and installed LED Lighting
Engineer: McClure Engineering
Contractor: Insulation - Modern Builders, Janesville, Iowa
Contractor: Lighting - Dean's Light Box, Waverly, Iowa
Total Cost: Insulation \$67,090 (GAVI Grant 45% - \$22,950)
Total Cost: Lighting \$10,106 (MidAmerican Energy Rebate \$661)
Finalized: July 2, 2018 (See attached final Agenda Memo.)

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
Contractor: J.B. Holland
Total Cost: \$
FAA Design Grant: \$ 137,637
FAA Construction Grant: \$1,357,031
Finalized: under construction

Bituminous Seal Coat Program 2018

Initiated: February 2018
Location: Southwest Waverly (between 4th St. SW & 1st St. SW), SE Waverly (south of river), Crestwood, 8th St. SE, 17th Ave. SE, 11th St. SE, 29th Ave. SE and east side of Harlington Cemetery.
Description: Seal Coating of about 100 City blocks and east portion of Harlington Cemetery.
Engineer: City
Contractor: Blacktop Services, Humbolt, Iowa
Total Cost: \$256,139
Finalized: September 10, 2018 (See attached final Agenda Memo.)

Slurry Seal Project 2018

Initiated: February 2018
Location: Jadestone Addition and 12th Street NW
Description: Placement of a thin asphaltic surface treatment, similar to seal coating. Chips are pre-coated with oil, in lieu of placing chips over oiled road surface.
Engineer: City
Contractor: Fahrner Asphalt Sealers, Dubuque, Iowa
Total Cost: \$250,293
Finalized: July 16, 2018 (See attached final Agenda Memo.)

Downtown Alley Reconstruction 2018

Initiated: March 2018
Location: South-side alley in the 200 block of West Bremer Ave.
Description: Reconstruction of alley with concrete paving. An abandoned fuel tank was discovered under the alley which increased the expenses due to testing and removal.
Engineer: City
Contractor: Barry Smith Grading & Excavating, Waverly, Iowa
Total Cost: \$46,838
Finalized: July 2, 2018 (See attached final Agenda Memo.)

Adams Parkway Bridge Repair & Horton Road Impr. 2018

Initiated: June 2019
Location: Adams Parkway Bridge & ~~Horton Road~~ (Horton Rd. repairs were removed from the project to keep costs down.)
Description: Adam's Parkway bridge deck overlay, deck repairs, etc. and milling, joint repair and overlay. ~~reshaping shoulders of Horton Road (approximately 1,300 linear feet from City limits to south).~~
Engineer: WHKS & Co., Mason City, Iowa
Contractor: Cramer & Assoc., Grimes, Iowa
Total Cost: \$
Finalized: under construction

WPC Facility Improvements 2020

Initiated: March 2018
Location: WPC Facility
Description: Currently under design with anticipated construction in 2021. Project to 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.
Engineer: WHKS & Co., Mason City, Iowa
Contractor:
Total Cost: \$
Finalized: under design

2nd Avenue NE Storm Sewer Replacement 2018

Initiated: July 2018
Location: 2nd Avenue NE & Cedar Lane
Description: Emergency repair/replacement of a segment of brick storm sewer that had collapsed.
Engineer: City
Contractor: Lodge Construction, Clarksville, IA
Total Cost: \$66,395
Finalized: December 17, 2018 (See attached final Agenda Memo.)

Citywide Sidewalk & Ped Ramp Repairs 2018

Initiated: July 2018
Location: Southwest Waverly – District 1 (west of 4th Street SW)
Description: Repair of sidewalk and construction of ped ramps.
Engineer: City
Contractor: Lodge Construction, Clarksville, Iowa
Total Cost: \$71,167
Finalized: December 17, 2018 (See attached final Agenda Memo.)

Cedar Lane Reconstruction 2019

Initiated: August 2016
Location: Cedar Lane, between Brown Lane & 2nd Avenue NE
Description: Phase 1 of 2 – Reconstruction of Cedar Lane with full-depth concrete pavement. (Phase 2 from Brown Lane to Horton Rd. is scheduled for 2021.)
Engineer: VJ Engineering, Cedar Falls, Iowa
Contractor: K. Cunningham, Cedar Falls, Iowa
Total Cost: \$
Finalized:

Water Main Replacement 2019

Initiated: October 2018
Location: CUNA Mutual's solar panel field and 3rd Avenue NE
Description: Relocate a portion of the City's water main that has a leak and is located in CUNA's solar panel field. Also, replace a distressed 4-inch water main under 3rd Avenue NE and reconstruct the overlying street from the intersection of 4th Street NE to the intersection Ashbury Drive.
Engineer: VJ Engineering, Cedar Falls, Iowa
Contractor:
Total Cost: \$
Finalized:

Asphalt Patching – Fall 2018

Initiated: September 2018
Location: Various streets in Waverly
Description: Repair of utility street cuts with full-depth asphalt.
Engineer: City
Contractor: Kluesner Construction, Farley, Iowa
Total Cost: \$30,330
Finalized: December 3, 2018 (See attached final Agenda Memo.)

Bituminous Seal Coat Program 2019

Initiated: January 2019
Location: Southwest Waverly
Description: Seal coating of streets in southwest Waverly, including double-sealing of park's parking lots.
Engineer: City
Contractor: Blacktop Services, Humboldt, Iowa
Total Cost: \$
Finalized:

Slurry Seal Program 2019

Initiated: January 2019
Location: 11th Street SW & 2nd Avenue SW at RR tracks; Park 2nd Avenue NW & Park 26th Street NW, 4th Avenue NW & 17th Street NW, and parking lot south of Cobblestone Inn.
Description: Slurry sealing of portions of a few streets and the parking lot south of Cobblestone Inn.
Engineer: City
Contractor: Fahrner Asphalt Sealers, Dubuque, Iowa (NOTE: Had lots of issues with Fahrner this year. They started about 3 weeks past the completion date and were charged 19 days of liquidated damages. They also used the wrong oil when starting the slurry sealing the parking lot.
Total Cost: \$
Finalized:

Crack Cleaning & Filling Project 2019

Initiated: March 2019
Location: 12th Street NW (between W. Bremer & 5th Avenue NW), 5th Avenue NW (between 12th Street NW and 1st Street NW), and 2nd Avenue NE and Impala Subd.
Description: Cleaning of cracks in streets and sealing.
Engineer: City
Contractor: Kluesner Const., Farley, Iowa
Total Cost: \$
Finalized:

Sanitary Sewer Manhole Rehab 2019

Initiated: March 2019
Location: Portions of southwest and northwest Waverly
Description: Repair and installation of a protective liner inside sanitary sewer manholes that are deemed to be in poor condition or have stormwater infiltration issues.
Engineer: City
Contractor: Josh's Construction, Dubuque, Iowa
Total Cost: \$
Finalized:

Asphalt Patching – Spring 2019

Initiated: March 2019
Location: Various streets in Waverly
Description: Repair of utility street cuts with full-depth asphalt.
Engineer: City
Contractor: Heartland Asphalt, Mason City, Iowa
Total Cost: \$
Finalized:

Dog Park Sidewalk 2019

Initiated: March 2019
Location: City's Dog Park on 8th Street SE (east of WPC)
Description: Construction of a sidewalk loop within the Dog Park.
Engineer: City
Contractor: Feldman Concrete, Farley, Iowa
Total Cost: \$ - Donation by Brian Harvey
Finalized:

4th Street SW Improvements 2020

Initiated: August 2018
Location: 4th Street SW between 2nd Avenue SW and 8th Avenue SW
Description: Reconstruction and widening the roadway from 2 lanes to 3 lanes. Improvements will include roadway reconstruction, water main & services, sanitary sewer main & services, storm sewer replacement, and improved street lighting. This construction project will be completed with the 10th Street SW Improvements 2020 project engineering and construction contracts.
Engineer: Snyder & Associates, Cedar Rapids, Iowa
Contractor:
Total Cost: \$
Finalized:

10th Street SW Improvements 2020

Initiated: June 2019
Location: 10th Street SW between 2nd Avenue SW and W. Bremer Ave.
Description: Improvements will include roadway reconstruction, water main & services, sanitary sewer main & services, and 2 intake replacements. This construction project will be completed with the 4th Street SW Improvements 2020 project engineering and construction contracts.
Engineer: Snyder & Associates, Cedar Rapids, Iowa
Contractor:
Total Cost: \$
Finalized:

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:
Total Cost: \$
Finalized:

Downtown Alley Reconstruction 2019

Initiated: July 2019
Location: South-side alley in the 100 block of East Bremer Avenue
Description: reconstruction of alley with concrete
Engineer: City
Contractor: Feldman Concrete, Dyersville, Iowa
Total Cost: \$
Finalized:

E. Bremer Ave. Sanitary Sewer Main Extension 2019

Initiated: July 2019
Location: North side of E. Bremer Avenue to 39th Street NE
Description: Approximately 1,500 feet of 8-inch sanitary sewer extension improvements along the north side of E. Bremer Avenue to 39th Street NE for the Titan Machinery relocation site.
Engineer: WHKS & Co., Mason City, Iowa
Contractor:
Total Cost: \$
Finalized:

Infrastructure Modeling – Water Distribution System and San. Sewer Collection System

Initiated: June 2019
Location: Entire Waverly
Description: Updating the 2010 Water Distribution and Sanitary Sewer Collection reports
Engineer: WHKS & Co., Mason City, Iowa
Total Cost: \$
Finalized:

Airport Avionics Room 2020

Initiated: April 2019 – Applied for GAVI Grant, but did not receive
Location: Waverly Municipal Airport - 1710 35th Street NW
Description: Construction of an Avionic's Room on the west side of the bulk hangar.
Engineer:
Contractor:
Total Cost: \$
Finalized:

Airport Obstruction Removal 2020

Initiated: April 2019
Location: Waverly Municipal Airport - 1710 35th Street NW
Description: The Clan and Schmidt properties have structures and trees that are deemed obstructions and compromise the safety of airport operations. Both properties have been purchased by the City and now need to be cleared of the obstructions.
Engineer: McClure Engineering, Clive, Iowa
Contractor:
Total Cost: \$
Finalized:

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 will be added from West Bremer Avenue to 35th Street NW.
Engineer: WHKS & Co., Mason City, Iowa
Contractor:
Total Cost: \$
Finalized:

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. Will re-apply for SRT again in 2020. (Applied for SRT funds in 2019 and did not receive funding.) If the City receives the SRT funds, the TAP fund will not be accepted because the SRT funds pay a higher percentage of the construction project.
Engineer:
Contractor:
Total Cost: \$
Finalized:

SUBDIVISIONS

Omni Lot 40 Development

Approved: Construction docs approved March 2018
Location: Southeast quadrant of intersection of 4th Street SW & Cedar River Parkway
Description: Project consists of the extension of sewer improvements for a commercial development.
Engineer: Design – Clapsaddle-Garber Associates (CGA) of Cedar Falls, Iowa
Developer: Panther Farms, LLC, Cedar Falls, Iowa
Accepted: Accepted October 15, 2018 (See attached final Agenda Memo.)

Deerfield Subdivision

Approved:
Location:
Description: *Potential New Subdivision – Located at west of Waverly Utilities.*
Engineer:
Developer:
Accepted:

Final Agenda Memos from Public Improvement Projects



AGENDA MEMORANDUM

July 2, 2018

SUBJECT: Waverly Airport – Bulk Hangar Improvements
Finalize Hangar Insulation Improvements

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

Recommended Airport Commission and City Council Action

- Accept the Hangar Insulation Improvements project as complete.
Approve Change Order No. 1
Approve Pay Estimate No. 4 in the amount of \$8,024.00 as the final payment to Modern Builders of Janesville, Iowa.

Summary Statement

Modern Builders has completed the Hangar Insulation Improvements project in accordance with the contract documents. The total cost of the completed work is \$58,430.00.

As the work was being performed it was learned that additional framing around the wheels for the sliding hangar door was necessary to properly install and secure the new insulation (\$850). Also, there were several leaks discovered in the roof and the eave of the south sidewall that required repairs (\$2,610). The cost of the additional work \$3,460.

The GAVI grant provides 45% state funding, up to a maximum of \$22,950.00, for eligible project costs associated with the bulk hangar insulation improvements.

Expenditure Required

Project No. 1- Hangar Insulation Improvements

Table with 2 columns: Description and Amount. Rows include Design & Insp., McClure Engineering – Lump Sum (\$ 6,160), Construction Cost, Modern Builders, Inc. - Final (54,970), Modify Hangar Door and Repair Leak – CO #1 (3,460), Project Admin., Public Works Admin. – Estimate (2,500), and Total Estimated Cost of Project No. 1 (\$ 67,090).

Project No. 2 - LED Lighting Improvements

Table with 2 columns: Description and Amount. Rows include Design & Insp., McClure Engineering – Lump Sum (\$ 4,000), Construction, Dean’s Light Box, Bid (5,106), Project Admin., Public Works Admin. – Estimate (1,000), and Total Estimated Cost of Project No. 2 (\$ 10,106).

Source of Funds

Table with 2 columns: Description and Amount. Rows include IDOT GAVI Grant Request (45% of \$51,000) (\$ 22,950), MidAmerican Energy Rebate (661), CIP Acct. #342 FY2017-18 (55,000), and Total Financing for the Project (\$ 78,611).

Policy

The Bulk Hangar Insulation Project follows recommendations cited in the following document for the maintenance and preservation of public infrastructure and facilities:

- Waverly Comprehensive Plan Update – October 24, 2011

Project Concern

None.

Alternative

NA

Background Information

The existing exposed insulation inside the bulk hangar facility at the Waverly Municipal Airport has reached the end of its useful life and has deteriorated to the point where the powder coatings are physically falling out of the facing, creating a "snowfall" effect. The falling debris is creating safety hazards and makes it extremely difficult to service aircraft. In May 2013, 2014, and 2016 the City applied for an Iowa DOT GAVI application to fund 30-50% of the project cost. The City was not awarded funding until 2017.

March 9, 2017	Airport Commission reviewed and approved GAVI application
April 17, 2017	City Council approves GAVI application for insulation improvements
April 28, 2017	Deadline for filing Iowa DOT GAVI application
September 2017	Notice of GAVI grants awarded
October 2, 2017	Approve Iowa DOT GAVI Grant Agreement
October 2, 2017	Approve Agreement for Engineering Services – Task No. 2
December 29, 2017	Bidding – Hangar LED Lighting Improvements
January 11, 2018	Award – Hangar LED Lighting Improvements – Airport Commission
January 30, 2018	Bidding – Hangar Insulation Improvements
February 8, 2018	Award – Hangar Insulation Improvements – Airport Commission
February 19, 2018	Award – Hangar Insulation Improvements – City Council
February, 2018	Construction Widow – Hangar LED Lighting Improvements
March, 2018	Construction Widow – Hangar Insulation Improvements
June 14, 2018	Finalize – Hangar Insulation Improvements – Airport Commission
July 2, 2018	Finalize – Hangar Insulation Improvements – City Council

Respectfully submitted,

James Bronner
City Administrator

Attachment: McClure's Statement of Completion
Change Order #1
Pay Application No. 4 - Final



AGENDA MEMORANDUM
City Council Meeting
September 10, 2018

SUBJECT: 2018 Bituminous Seal Coat Program
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 \$1,845.41 increase.
• Accept the 2018 Bituminous Seal Coat Program as complete.
• Approve Pay Estimate No. 2 in the amount of \$9,295.72 as the final payment to Blacktop Service Co. of Humboldt, Iowa.

Summary Statement

Blacktop Services Co. has completed the 2018 Bituminous Seal Coat Program in accordance with the contract documents. The total cost of the completed work is \$185,914.41. Change Order No. 1 – Final Adjustment of Quantities is for a net increase of \$1,845.41 to the contract sum.

This project involved the seal coating of approximately 100 City blocks.

Expenditure Required

Table with 2 columns: Description and Amount. Rows include Construction Cost - Bituminous Seal Coat - Roads (\$156,658), Cemetery (\$29,257), Slurry Seal - 12th Street NW and Slurry Seal - Jadestone Subdivision (\$61,224), Project Design, Adm. & Insp. Est. (\$9,000), and Total Cost of the Project (\$256,139).

Source of Funds

Table with 2 columns: Account and Amount. Rows include Account #306 FY 2018-19 (\$200,000), Account #342 FY 2017-18 for Cemetery Improvements (\$150,000), and Total Financing for the Project (\$350,000).

Policy

The 2018 Bituminous Seal Coat Program 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:

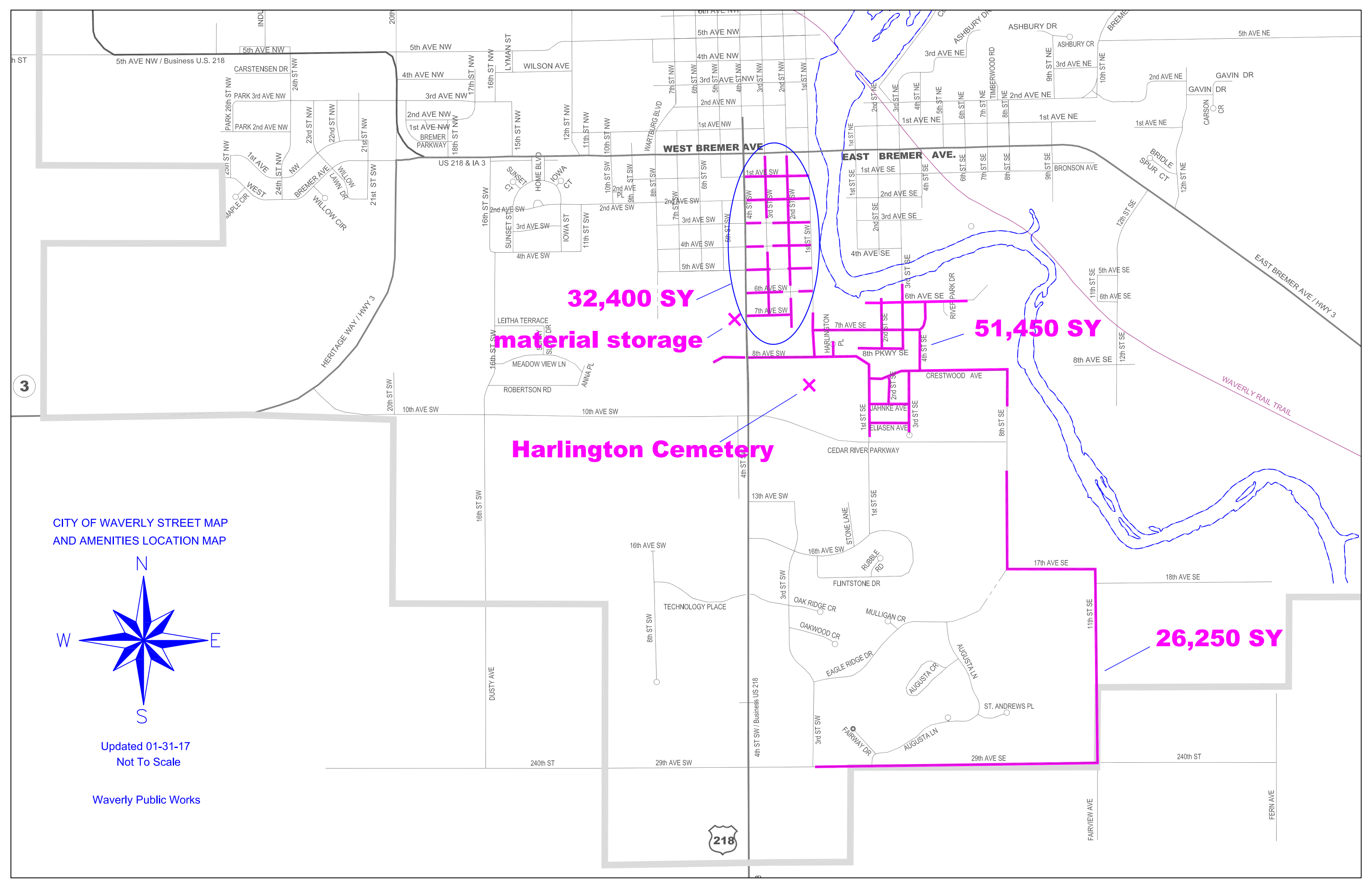
The Bituminous Seal Coat Program is part of the City’s annual improvement plan for maintaining the residential street system. City crews perform roadway repairs and patching prior to the hired contractor applying the bituminous seal coat. Seal coating is a thin surface treatment that helps to improve the longevity of an asphaltic pavement. This year’s project involves the seal coating of approximately 100 City blocks.

- February 19, 2018..... Set Public Hearing Date
- March 6, 2018..... Bid Letting
- March 19, 2018..... Hold Public Hearing
- March 19, 2018..... Award Project
- April 16, 2018..... Approve Contract, Bonds and Insurance
- June 4 – Aug. 17, 2018..... Construction Window
- September 10, 2018..... Finalize – Seal Coating Project**

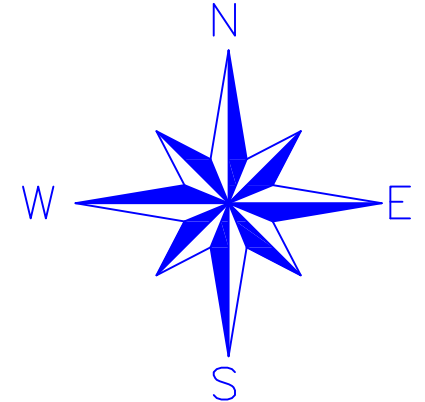
Respectfully submitted,

James Bronner
City Administrator

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



CITY OF WAVERLY STREET MAP
AND AMENITIES LOCATION MAP



Updated 01-31-17
Not To Scale

Waverly Public Works

32,400 SY
material storage

51,450 SY

Harlington Cemetery


26,250 SY



Harlington Cemetery Road Sealcoating

Write a description for your map.

Legend

 Cemetery



Google Earth

© 2017 Google

400 ft



AGENDA MEMORANDUM
City Council Meeting
July 16, 2018

SUBJECT: Slurry Seal Program 2018 - Approve Contract Documents Finalize

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

Recommended City Council Action

- Approve Change Order No. 1 in the amount of a \$42.05 decrease.
• Accept the Slurry Seal Program 2018 project as complete.
• Approve Pay Estimate No. 2 in the amount of \$3,061.20 as the final payment to Fahrner Asphalt Sealers of Dubuque, Iowa.

Summary Statement

Fahrner Asphalt Sealers of Dubuque, Iowa, has completed the Slurry Seal Program 2018 project in accordance with the construction documents. The cost of the completed work is \$61,223.90.

Expenditure Required

Table with 2 columns: Description and Amount. Rows include Construction Cost - Bituminous Seal Coat - Roads (\$138,850), Cemetery (\$45,219), Slurry Seal - 12th Street NW and Slurry Seal - Jadestone Subdivision, Final Cost (\$61,224), Project Design, Adm. & Insp. Est. (\$5,000), and Total Cost of the Project (\$250,293).

Source of Funds

Table with 2 columns: Description and Amount. Rows include Account #306 FY 2018-19 (\$200,000), Account #342 FY 2017-18 for Cemetery Improvements (\$150,000), and Total Financing for the Project (\$350,000).

Policy

The Slurry Seal Program 2018 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:

This project involves placing a thin asphaltic surface treatment similar the seal coating. However, rather than sprinkling aggregate chips on bituminous oil, the aggregate chips are pre-coated with oil prior to placing.

February 19, 2018.....Set Public Hearing Date
March 6, 2018.....Bid Letting
March 19, 2018.....Hold Public Hearing
March 19, 2018.....Award Project
April 16, 2018.....Approve Contract, Bonds and Insurance
July 16, 2018.....Finalize Slurry Seal Program 2018
June 4 – Aug. 17, 2018.....Construction Window

Respectfully submitted,

James Bronner
City Administrator

Attachments: Change Order No. 1
Statement of Project Completion
Pay Application No. 2, Final



AGENDA MEMORANDUM
City Council Meeting
July 2, 2018

SUBJECT: Downtown Alley Reconstruction 2018
Finalize Project

Updated Expenditures

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

Recommended City Council Action

- Accept the Downtown Alley Reconstruction 2018 project as complete.
Approve Pay Estimate No. 2 in the amount of \$2,379.59 as the final payment to Barry Smith Grading & Excavating of Waverly, Iowa.

Summary Statement

Barry Smith Grading & Excavating has completed the Downtown Alley Reconstruction 2018 project in accordance with the contract documents. The total cost of the completed work is \$31,979.12.

As the work was being performed, an underground fuel storage tank (UST) was discovered projecting into the alley right-of-way. The testing and removal of the tank will take time so the paving of a 20-foot section of alley was skipped over and is effectively deleted from this project. Upon removal of the UST, the unpaved section will be paved.

Expenditure Required

Table with 2 columns: Description and Amount. Rows include Construction Cost, Abandoned Tank Removal, Concrete Patch of Alley, Project Design, and Total Cost of the Project.

Source of Funds

Table with 2 columns: Description and Amount. Rows include G.O. Bond - CIP Fund #309 and Total Financing for the Project.

Policy Issues

n/a

Alternatives

n/a

Background Information

This project involves rehabbing or reconstructing the south-side alley in the 200 block of West Bremer Avenue.

- March 6, 2018 Bid Letting
March 19, 2018 Award Project
April 3 - June 29, 2018 Construction Window
July 2, 2018 Finalize Project

Respectfully submitted,

James Bronner
City Administrator

Attachment: Statement of Completion; Pay Application No. 2, Final



AGENDA MEMORANDUM

City Council Meeting

December 17, 2018

SUBJECT: 2nd Avenue NE Storm Sewer Replacement 2018
Finalize Project

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

Recommended City Council Action

- Accept the 2nd Avenue NE Storm Sewer Replacement 2018 project as complete.
- Approve Change Order No. 1 for an increase of \$687.34.
- Approve Pay Estimate No. 2 in the amount of \$8,112.64 as the final payment to Lodge Construction of Clarksville, Iowa.

Summary Statement

Lodge Construction of Clarksville, Iowa has completed the 2nd Avenue NE Storm Sewer Replacement 2018 project in accordance with the contract documents. The total cost of the completed work is \$51,077.34. Change Order No. 1 is for a final adjustment of the contracted quantities.

Expenditure Required

Construction Cost, Lodge Construction's final.....	\$ 51,077	
Asphalt Patch, By Others, Fall Patching.....	12,118	
Project Design, Admin. & Inspection Est.....	<u>3,200</u>	
Total Cost of the Project.....		\$ 66,395

Source of Funds

Storm Drainage Improvement – CIP Fund #361.....	\$ 20,000	
Future LOST Transfers to CIP Fund #361.....	<u>46,400</u>	
Total Financing for the Project.....		\$ 66,400

Policy Issues

The Public Works Department deemed this project to be an emergency repair/replacement of a segment of brick storm sewer. Earlier this summer the Sewer Line Maintenance Division attempted to make repairs but the pipe failure and sinkhole in the street reappeared. The failing segment of storm sewer is located under the intersection of 2nd Avenue NE and Cedar Lane. This was an unplanned project and the financing must come from the fund balance in CIP Fund #361 and future transfers from the LOST account.

Alternatives

Attempt additional patching of the storm sewer and delay the repair/replacement until funds can be budgeted.

This was not recommended because one patch was already unsuccessful and additional failures may cause significant roadway settlement and closure of the street before a traditional project could be designed, scheduled and financed with construction beginning after July 2019.

Background Information

The Public Works Department deemed this project to be an emergency repair/replacement of a segment of brick storm sewer. Earlier this summer the Sewer Line Maintenance Division attempted to make repairs but the sinkhole reappeared. The failing segment of storm sewer is located under the intersection of 2nd Avenue NE and Cedar Lane. One patch was already unsuccessful and additional patches and failures may cause significant roadway settlement and closure of the streets and intersection. Another failure and sinkhole did occur a few weeks after the project was bid in August 2018.

- August 7, 2018..... Bid Letting
- August 20, 2018..... Award Project
- Sep. 10 – Oct. 5, 2018..... Construction Window
- December 17, 2018..... Finalize Project**

Respectfully submitted,

James Bronner
City Administrator

- Attachments: Statement of Project Completion
- Change Order No. 1
- Pay Application No. 2, Final

Project Location





AGENDA MEMORANDUM

City Council Meeting

December 17, 2018

SUBJECT: Citywide Sidewalk & Ped Ramp Repairs 2018
Finalize Project

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

Recommended City Council Action

- Accept the Citywide Sidewalk & Ped Ramp Repairs 2018 project as complete.
- Approve Change Order No. 1 for an increase of \$856.80.
- Approve Pay Estimate No. 3 in the amount of \$2,238.34 as the final payment to Lodge Construction of Clarksville, Iowa.

Summary Statement

Lodge Construction of Clarksville, Iowa has completed the Citywide Sidewalk & Ped Ramp Repairs 2018 project in accordance with the contract documents. The total cost of the completed work is \$56,166.80. Change Order No. 1 is for a final adjustment of the contracted quantities.

Expenditure Required

Sidewalk & Ped Ramp Repair Cost, Lodge Final	\$ 56,167	
Project Administration & Inspection Cost Estimate	<u>15,000</u>	
Total Estimated Cost of the Project		\$ 71,167

Source of Funds

CIP Acct. #304, Sidewalk Repair Construction	\$ 64,500	
Property Owner Payments, Estimate	<u>6,787</u>	
Total Financing for the Project		\$ 71,287

Policy

The Citywide Sidewalk & Ped Ramp Repairs 2018 project is part of the ongoing citywide program to develop and maintain a pedestrian friendly community for all citizens with or without disabilities. The City's efforts include inspecting and repairing sidewalks and the construction of pedestrian ramps at curbed street crossings. To ensure compliance, the City of Waverly follows recommendations and requirements cited in federal and state documents for the design and construction of sidewalks and pedestrian accommodations.

Project Concern

None noted to date.

Alternative

NA

Background Information

In 2011 the City implemented the Citywide Sidewalk Repair Program and the Citywide Pedestrian Ramp Construction Program. Waverly is divided into 7 districts for sidewalk repairs and pedestrian ramp construction and one district is completed each year. In 2018 the second round of sidewalk inspections and repairs will be completed starting with District 1 again. Since the sidewalk repair work and ped ramp repairs have significantly decreased, these two projects will be combined into one project.

July 24, 2018.....Bid Letting
August 6, 2018.....Award Project
August 20, 2018.....Approve Bonds
September – October 2018.....Construction Window
December 17, 2018.....Finalize Project

Respectfully submitted,

James Bronner
City Administrator

Attachments Statement of Project Completion
Change Order No. 1
Pay Application No. 3 (Final)



AGENDA MEMORANDUM
City Council Meeting
December 3, 2018

SUBJECT: Citywide Asphalt Patching - Fall 2018
Finalize Project

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

Recommended City Council Action

- Accept the Citywide Asphalt Patching - Fall 2018 project as complete.
Approve Pay Estimate No. 1 in the amount of \$28,030.14 as the final payment to Kluesner Construction of Farley, Iowa.

Summary Statement

Kluesner Construction has completed the Citywide Asphalt Patching - Fall 2018 project in accordance with the contract documents. The total cost of the completed work is \$28,030.14.

Expenditure Required

Table with 2 columns: Description and Amount. Rows include Construction Cost, 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.

September 18, 2018 Bid Letting
October 1, 2018 Award Project
Oct. 2 - Oct. 31, 2018 Construction Window
December 3, 2018 Finalize Project

Respectfully submitted,

James Bronner
City Administrator

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



AGENDA MEMORANDUM
City Council Meeting
October 15, 2018

SUBJECT: Omni Lot 40 Development

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

Recommended City Council Action

City Council action is requested to accept the public infrastructure for the Omni Lot 40 Development.

Summary Statement

Artesian Earthworks of Waverly, Iowa, has completed the public infrastructure for the Omni Lot 40 Development. Public improvements encompassed the installation of sanitary sewer main. Relevant construction documents are the original plans dated March 7, 2018, and approved by the City Council on March 19, 2018. The City Engineer has reviewed the completed project and determined that work performed is within reasonable conformance with the approved construction documents.

Expenditure Required

NA

Source of Funds:

NA

Policy Issue

None

Alternative

NA

Background Information

The Omni Lot 40 Development is located near the southeast quadrant of the intersection of 4th Street SW & Cedar River Parkway. The Omni First Addition in 2016 was for 27 lots and extended 1st Street SE from the Cedar River Parkway south to the Stone Haven Subdivision. The Omni Second Addition was for 8 lots and extended a shared private drive east-northeast from the intersection of 13th Avenue & 3rd Street SW.

March 19, 2018..... City Council Approves Construction Documents, Performance and
Maintenance and Guaranties
Spring - Summer 2018..... Construction Window
Open Ended Gu..... Expiration of Performance Guaranty
Summer 2018..... City Council Accepts Dedication of Public Improvements
October 15, 2018..... City Council Accepts Dedication of Sanitary Sewer Improvements
October 15, 2022..... Expiration of Maintenance Guaranty

Respectfully submitted,

James Bronner
City Administrator

Attachment:

Maintenance Guaranty
Sanitary Sewer Easement
Location Map

City of Waverly
Department of Public Works
FY 2018-19

GENERAL INFRASTRUCTURE MAINTENANCE

This division had previously been called “Streets General”.

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.
- Finance uniforms and some training and conferences for employees in the Streets Division.

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
 FY2018-19

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

	2014-15	2015-16	2016-17	2017-18	2018-19
Service Jobs	700	564	676	597	386
New Tires	101	86	94	101	102
Tire Repairs	76	33	49	40	30
Batteries	4	3	30	15	12
Antifreeze (Gals)	76	74	67	35	26
Oil Changes	192	194	198	148	117
Oil (Gals)	606	467	496	504	638
Total Parts (\$)	\$ 97,669	\$ 77,076	\$ 115,810	\$ 96,052	\$ 99,832
Total Labor Charged	\$ 48,664	\$ 38,487	\$ 52,308	\$ 51,770	\$ 55,864

Fuel Purchased

	2014-15	2015-16	2016-17	2017-18	2018-19
Unleaded Fuel (Gals)	24,824	24,415	22,988	21,010	25,936
Unleaded Fuel (\$)	\$ 77,494	\$ 53,826	\$ 47,099	\$ 59,116	\$ 66,793
Diesel Fuel (Gals)	37,224	44,284	45,910	41,791	46,500
Diesel Fuel (\$)	\$ 125,838	\$ 185,553	\$ 101,284	\$ 123,358	\$ 140,020

City of Waverly - Public Works
 Equipment Services
Sale of Used City Vehicles & Equipment
 FY 2018-19

Division	Vehicles or Equipment Sold	Bid Date	Winning Bidder	Bid \$
Streets (RUT)	2004 Ford F550 4x4 Bucket Truck	05/22/19	Eric Hoy (EH Electric) Ionia, IA	\$ 12,225.00
Total				\$ 12,225.00

City of Waverly
Department of Public Works
FY 2018-19

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

Ditch Cleaning

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 2018-19

<u>Streets</u>	<u>Hours</u>	<u>Painting</u>	<u>Hours</u>
Shoulder Work/Recon	<u>1,384</u>	Line Striping,	
Road Grading	<u>45</u>	Curbs & X-Walks	<u>540</u>
Alleys	<u>122</u>		
Cold Mix Patching /			
Durapatching	<u>1,045</u>	<u>Snow Removal</u>	
Street Sweeping	<u>986</u>	Sand Hauling	<u>17</u>
Weed Mowing /		Snow Fence	<u>9</u>
Tree Trimming	<u>1,493</u>	Snow Plowing	<u>680</u>
Rock / Chips Hauling	<u>335</u>	Snow Removal	<u>1,004</u>
		Sanding	<u>219</u>
<u>Maintenance</u>		<u>Signs</u>	
Catch Basins	<u>324</u>	Repair &/or Replace	<u>223</u>
Bridges	<u>18</u>	New Installations	<u>122</u>
Culverts	<u>67</u>		
Dry Run	<u>0</u>	<u>Special Projects</u>	
Manholes	<u>326</u>	Airport	<u>65</u>
Building Maintenance	<u>108</u>	Yard Waste	<u>303</u>
Equipment Maintenance	<u>919</u>	Spring Clean-up &	
		Fall & Winter Clean-up	<u>95</u>
		Mulch & Compost	
		Deliveries	<u>83</u>
		Water Dept	<u>0</u>
		Solid Waste Dept	<u>625</u>
		Sewer Maintenance	<u>8</u>
		WPC Dept	<u>0</u>
		Recycling Center	<u>18</u>
		Cemetery Dept	<u>3</u>
		Golf Course Dept	<u>0</u>
		Equip Services	<u>7</u>
		Parks Dept	<u>61</u>
		Meetings / Training	<u>143</u>

City of Waverly - Public Works
Streets - RUT
Street Maintenance & Construction
FY 2018-19

MATERIAL COMPARISON REPORT

Fiscal Year	2014-15	2015-16	2016-17	2017-18	2018-19
Asphalt Patch					
Tons	136	152	145	154	161
Cost (\$)	\$14,935	\$16,723	\$15,918	\$16,585	\$18,300
Road Rock					
Tons	459	779	509	254	994
Cost (\$)	\$4,179	\$7,156	\$4,681	\$2,375	\$9,446
3/8" Chips					
Tons	253	56	92	173	64
Cost (\$)	\$3,012	\$665	\$1,116	\$2,106	\$795
CRS-2 Oil					
Gallons	10,370	2,714	1,480	5,474	1,665
Cost (\$)	\$20,222	\$4,750	\$2,591	\$8,072	\$3,163

STREET MAINTENANCE (BLOCKS)

Fiscal Year	2014-15	2015-16	2016-17	2017-18	2018-19
Single Seal Coat (Bid)	88	75	100	125	60
Double Seal Coat	0	3	0	1	0
Slurry Seal Coat	0	0	8	21.6	10

STREET RECONSTRUCTION

	Linear Feet	Miles
2014-15		
4th St NW Reconst. (<i>Bremer Ave. to 5th Ave. NW</i>) (<i>included 1st, 2nd, 3rd & 4th Aves between 4th & 5th Sts NW</i>)	3,013	0.57
2015-16		
2nd Avenue SW Reconst. (<i>10th Ave. SW to 4th St. SW</i>)	1,056	0.2
2nd Street NW Reconst. (<i>Bremer Ave. to 3rd Ave. NW</i>)	298	0.06
Cedar River Parkway Const. (<i>4th St. SW to 8th St. SE</i>)	4,456	0.84
2016-17		
16th Street SW (<i>4th Ave. SW to Meadow View</i>)	1,420	0.27
2017-18		
no street project	0	0
2018-19		
no street project	0	0

Note: The Cedar River Parkway has been under construction since 2018 and will be in the 2019-20 Annual Report.

SNOW REMOVAL MATERIAL COMPARISON

Fiscal Year	2014-15	2015-16	2016-17	2017-18	2018-19
Rock Salt					
Tons	630	661	989	821	852
Cost (\$)	\$53,949	\$54,360	\$79,073	\$61,172	\$69,367
Ice Sand					
Tons	23	0	321	30	8
Cost (\$)	\$175	\$0	\$1,900	\$270	\$188

City of Waverly
Department of Public Works
FY 2018-19

AIRPORT

Airport Commission Members (Since)

Eric Bagelmann (January 2018)	Active
Von Blunt (May 2017)	Inactive (as of September 2018)
Kris Glaser (December 2014)	Active
Dennis Hansen (May 2006)	Active
Lee Hinrichs (September 2018)	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
Dale Guimond, Cedar Valley Aviation – FBO & Airport Manager (January 2003 through October 2018)
Tim Kangas, Council Liaison (March 2015)
Mike Cherry, City Engineer (April 1997)

Highlights for July 2018 - June 2019

Land Acquisition

The Airport Land Acquisition 2012 project requires acquisition of real property and easements in order to expand the safety zone and also lengthen the runway 400 feet. The following parcels have been purchased or an easement (E) has been obtained (see attached drawing):

Parcels #2, 4 & 7 – William Lowe - \$570,000
Parcels #3 & 10 – James & Sandra Janssen - \$155,500
Parcels #6 & 6E – Glen & Kathy Burkle - \$150,000
Parcel #8E – Mueller Farms - \$6,965
Parcels #1 & 9 – Eugene & Jolene Miller (Clan Properties, LLC) - \$393,856
Parcel #5 – Marvin & Margene Schmidt - \$251,220

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 will extend the runway eastward by 400 feet.

The Runway 29 Extension project was approved by the FAA and the cost will be funded 90% by the Federal Aviation Trust Fund and funded 10% locally through the city's urban renewal authority.

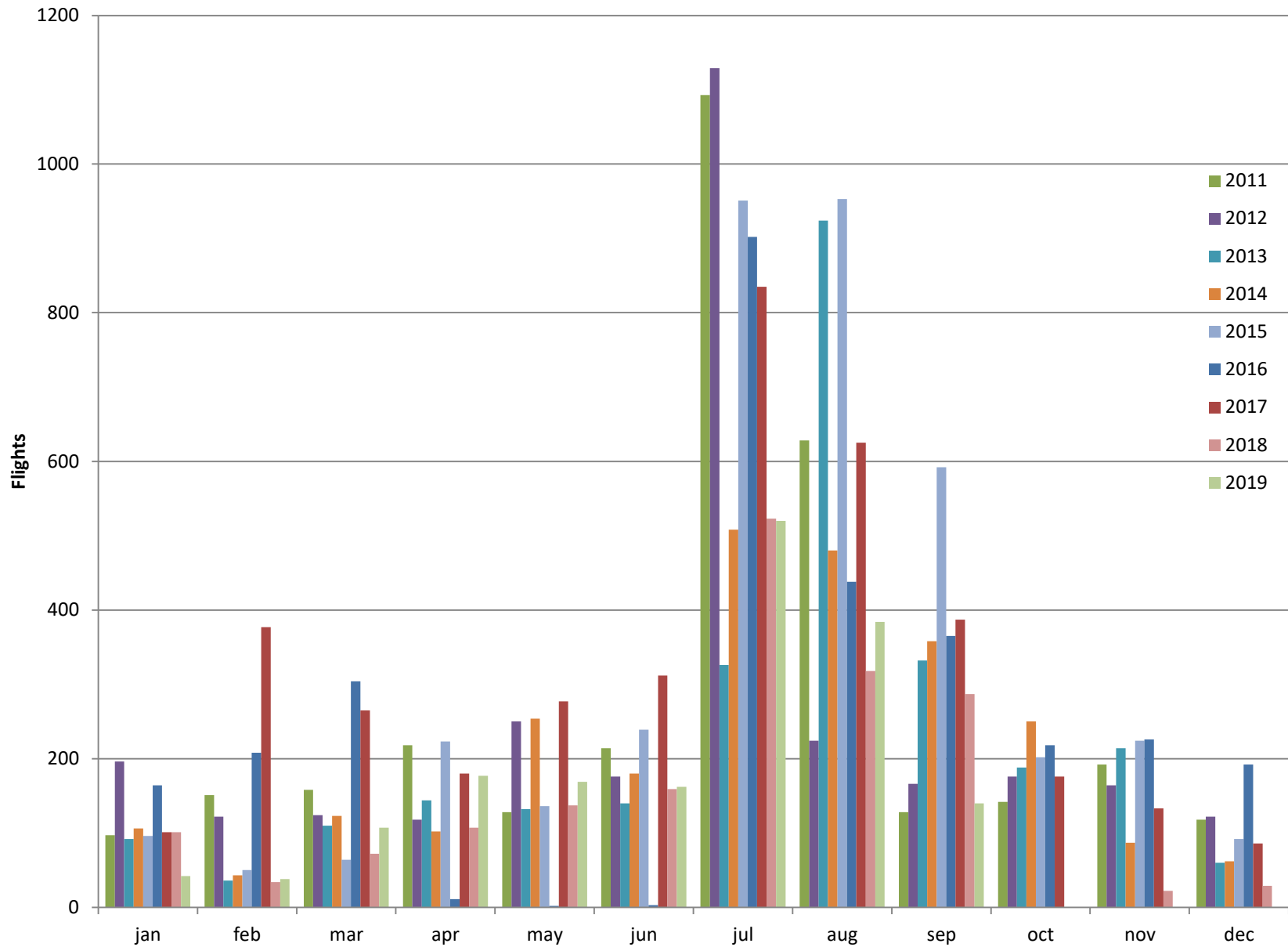
Looking to the Future:

- Fall 2019 / Spring 2020 - 400-ft Runway 29 Extension Project
- Spring 2020 - Obstruction Removal Project
- Winter 2020 - Addition of Credit Card Fueling (by FBO)
- Add Avionic Maintenance Room
- Replace Obsolete Security Cameras
- Upgrade Electrical Power Supply to T-Hangars and Individual Hangars
- Reconstruct Hangar Taxiways
- Construct New T-Hangars

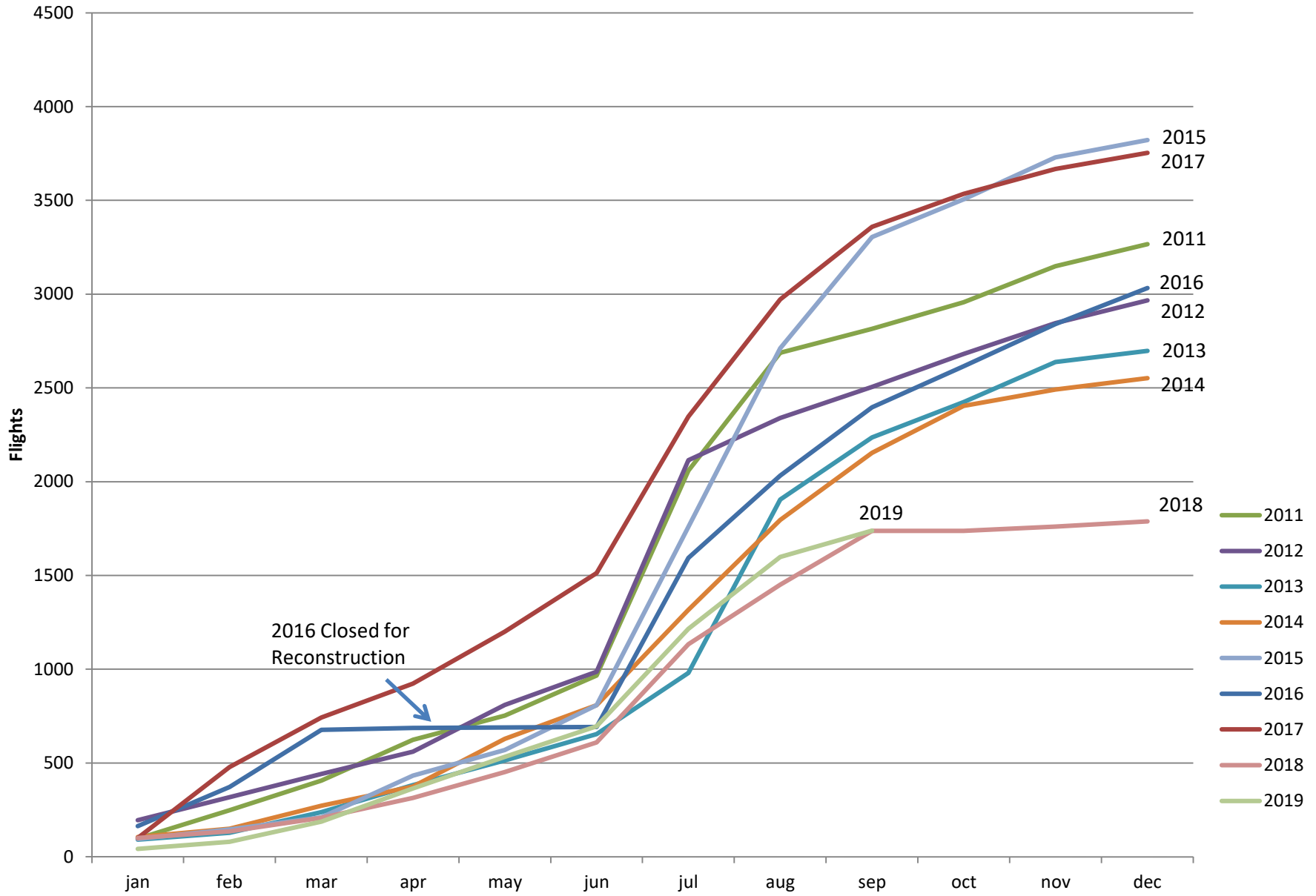
Report Summary:

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.

Flight Report



Total Flights Per Year



2016 Closed for Reconstruction



2019

2018

- 2011
- 2012
- 2013
- 2014
- 2015
- 2016
- 2017
- 2018
- 2019

City of Waverly
Department of Public Works
FY 2018-19

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 74 miles of water main. This includes 639 fire hydrants, 880 water main valves, over 552 hydrant valves, and 4,231 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 2018-19 was 936,583 gallons per day.

During FY 2018-19, the Water Division continued to locate and correct water leaks. Our billing to pumpage accountability has been calculated at 75%.

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.

City of Waverly - Public Works
Water
Core Services
 FY 2018-19

Water Meters	Totals
New Meter Installations	132
Meters Replaced	21
Seasonal In	54
Seasonal Out	49
ERTs	62
Meters Tested & Repaired	20
Hyd. Meters / Hose Bib Meter	43

Water Service Lines	Totals
Capped Services	3
Service Line Taps	5
Sound Detection	31

Water Mains	Totals
Repaired	14
Replaced	1
Sound Detection	28
Large Taps (4"-6"-8")	0

Water Valves	Totals
Valves Operated	290
Valves Installed	3
Valves Repaired	8
Valves Replaced	9

Water Valve Boxes	Totals
Boxes Repaired	22
Boxes Installed	6
Boxes Cleaned	20
Boxes Raised	12
Boxes Lowered	5

Number of Locates	Totals
Iowa One Call Tickets	1,721
Structures Located from IOC Tickets	5,800
Responses Entered	1,721

Hydrants	Totals
Flushed	286
Repaired	26
Replaced	5
Installed	1
Painted	12
Flagged	15

Water Towers	Visits
Interior	120
Exterior	120
Exterior Maintenance (hours)	20

Wells	Visits
Interior	1,120
Exterior	1,120
Exterior Maintenance (hours)	64

Other Projects	Total
Contractors	158
Other City Departments	93

Service Center	Hours
Record Keeping (# of Hours)	653
Equipment Maintenance (Hrs)	102
Building Maintenance (Hrs)	91
Customer Care	106
Call Outs (Law Center/SCADA Alarms)	*

Number of Samples Taken	Totals
Bacteria	127
Chlorine	1,550
Fluoride	1,580
Nitrate	62

* no records were kept for this FY

City of Waverly - Public Works
Water
Operational Data & Gallons Pumped
FY 2018-19

Operational Data for Water System Repairs

	2014-15	2015-16	2016-17	2017-18	2018-19
Main Lines	31	14	12	24	14
Service Lines	16	12	13	32	11
4" Valves Installed	2	2	1	2	2
6" Valves Installed	2	2	1	1	1
8" Valves Installed	3	1	1	1	0
12" Valves Installed	1	0	0	0	0
Service Lines Capped	14	8	4	6	3
3/4" Taps Made	14	3	5	2	2
1"-2" Taps Made	22	13	15	30	3
4" Taps Made	1	1	0	0	0
6" Taps Made	2	8	5	0	0
8" Taps Made	3	2	4	0	0

Gallons Pumped Versus Gallons Billed

	Gallons Pumped	Estimated Unmetered Gallons*	Gallons Billed	Percent Accountable
2018-19	341,884,000	13,058,000	243,332,000	75%
2017-18	358,615,000	19,588,000	250,852,000	75.4%
2016-17	356,489,000	46,187,000	247,064,000	82.3%
2015-16	352,702,000	46,184,000	254,403,000	85%
2014-15	375,445,000	59,502,000	260,622,000	85%

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

Water Consumption

Salesman Gallons	125,200
Salesman Revenue	\$ 826.45
City Consumption Gallons	13,058,000
Highest Pumping Day	1,845,000
Lowest Pumping Day	555,000
Average Pumping Day	936,583
Total Gallons Pumped	341,884,000

City of Waverly
Department of Public Works
FY 2018-19

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 2018-19 was 2,064,000 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 Trickling 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

Date: July, 2018

DISCHARGE SERIAL # 001 - # 002

Facility Number 0990001

Note: 0.0 = <MDL of 0.5

DAY OF MONTH	DAY OF WEEK	MGD GULF COURSE FLOW	EFF. FLOW MGD	CBOD 5 DAY 20 °C		EFF. PHOS. MG/L	EFF. PHOS. LBS/DA Y	EFF. TOTAL N (as N) MG/L	EFF. TOTAL N (as N) LBS/DA	EFF. Cu MG/L	EFF. Cu LBS/DA Y	TOTAL SUSPENDED SOLIDS		AMMONIA NITROGEN		EFF. ph	EFF. TEMP. °F.	E. COLI #/100 ML
				EFF. MG/L	EFF. LBS/DAY							EFF. MGL	EFF. LBS/DA Y	FINAL MG/L	FINAL LBS/DA Y			
1	Sun.		1.770		0		0.00		0.00		0.0000		0		0			
2	Mon.		1.760		0		0.00		0.00		0.0000		0		0			
3	Tues.		1.750	13	190	1.74	25.40	18.6	271.47	0.0276	0.4028	12	175	<0.50	0	7.9	63	
4	Wed.		1.740		0		0.00		0.00		0.0000		0		0	7.9	63	
5	Thurs.		1.760		0		0.00		0.00		0.0000		0		0	7.9	63	
6	Fri.		1.630	8	109		0.00		0.00		0.0000	14	190	<0.50	0	8.0	64	
7	Sat.		1.560		0		0.00		0.00		0.0000		0		0	8.2	64	
8	Sun.		1.690		0		0.00		0.00		0.0000		0		0			
9	Mon.		1.460		0		0.00		0.00		0.0000		0		0			
10	Tues.		1.460		0		0.00		0.00		0.0000		0		0	7.9	64	
11	Wed.		1.450	9	109	2.56	30.96	27.1	327.72	0.0419	0.5067	10	121		0	7.8	65	
12	Thurs.	0.229	1.211		0		0.00		0.00		0.0000	10	121	2.46	30	8.2	65	
13	Fri.	0.286	1.094	9	82		0.00		0.00		0.0000		0		0	8.0	65	
14	Sat.	0.341	0.969		0		0.00		0.00		0.0000	10	91	<0.50	0	8.3	66	
15	Sun.	0.215	1.115		0		0.00		0.00		0.0000		0		0			
16	Mon.	0.297	1.073		0		0.00		0.00		0.0000		0		0			
17	Tues.	0.275	1.065		0		0.00		0.00		0.0000		0		0	7.9	66	
18	Wed.	0.078	1.262	8	84	2.47	26.00	24.1	253.65	0.0271	0.2852	10	105	<0.50	0	8.0	65	
19	Thurs.		1.400		0		0.00		0.00		0.0000		0		0	8.3	65	
20	Fri.		1.290	7	75		0.00		0.00		0.0000	10	108	<0.50	0	8.1	66	
21	Sat.		1.260		0		0.00		0.00		0.0000		0		0	8.3	65	
22	Sun.		1.200		0		0.00		0.00		0.0000		0		0			
23	Mon.	0.174	1.076		0		0.00		0.00		0.0000		0		0			
24	Tues.	0.280	0.940		0		0.00		0.00		0.0000		0		0	7.9	65	
25	Wed.	0.265	0.945	9	71	2.60	20.49	23.9	188.36	0.0272	0.2144	10	79	<0.50	0	8.0	66	
26	Thurs.	0.115	1.105		0		0.00		0.00		0.0000		0		0	8.3	66	
27	Fri.		1.060	7	62		0.00		0.00		0.0000	8	71	<0.50	0	8.0	67	
28	Sat.		1.040		0		0.00		0.00		0.0000		0		0	8.3	65	
29	Sun.		1.040		0		0.00		0.00		0.0000		0		0			
30	Mon.		1.100		0		0.00		0.00		0.0000		0		0			
31	Tues.		1.080		0		0.00		0.00		0.0000		0		0	7.9	66	

TOTAL AVERAGE MAX MIN	2.6	40.355	70.0	782	102.84	1041.20	1.4091	84.0	940	2.5	29.7							
	0.2	1.302	8.8	25	3.32	33.59	0.0455	10.5	30	2.5	1.0	8.1	65	0.0				
	0.3	1.770	13.0	190	30.96	327.72	0.5067	14.0	190	2.5	29.7	8.3	67	0.0				
	0.1	0.940	7.0	0	0.00	0.00	0.0000	8.0	0	2.5	0.0	7.8	63	0.0				

7 DAY AVERAGE																		
WEEK 1	0.0	1.710	10.5	43	3.63	38.78	0.0575	13.0	52	0.0	0.0	8.1	63	0.0				
WEEK 2	0.3	1.333	9.0	27	4.42	46.82	0.0724	10.0	30	2.5	4.2	8.0	65	0.0				
WEEK 3	0.2	1.209	7.5	23	3.71	36.24	0.0407	10.0	30	0.0	0.0	8.1	65	0.0				
WEEK 4	0.2	1.052	8.0	19	2.93	26.91	0.0306	9.0	21	0.0	0.0	8.1	66	0.0				

City of Waverly

MONTHLY MONITORING REPORT

Date: August, 2018

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/DA Y	INF. TOTAL N (as N)	INF. TOTAL N (as N)	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/DA Y							INF. MG/L	INF. LBS/DA Y			
1	Wed.	1.130	97	7.04			1.03	149	1404	5.32	50.14	30.5	287.44	26.6	250.68	232	2186	7.5	62	
2	Thurs.	1.120	97	7.02			1.04											7.4	63	
3	Fri.	1.080	97	7.07	293	2950	1.08	109	982								240	2162	7.5	62
4	Sat.	1.000					1.16													
5	Sun.	1.710					0.45													
6	Mon.	1.810	97	6.98	315	2980	0.35												7.4	66
7	Tues.	1.270	97	6.99			0.89												7.4	64
8	Wed.	1.230	97	6.97			0.93	72	739	5.37	55.09	27.3	280.05	22.8	233.89	210	2154	7.4	64	
9	Thurs.	1.240	97	6.99			0.92												7.4	64
10	Fri.	1.190	97	6.99	315	3010	0.97	177	1757								248	2461	7.3	64
11	Sat.	1.090					1.07													
12	Sun.	1.090					1.07													
13	Mon.	1.130	97	7.02	330	3050	1.03												7.4	62
14	Tues.	1.100	97	7.02			1.06												7.5	65
15	Wed.	1.130	97	7.07			1.03	162	1527	5.22	49.19	26.3	247.86	22.5	212.04	260	2450	7.5	64	
16	Thurs.	1.150	97	7.02			1.01												7.4	64
17	Fri.	1.100	97	7.06	293	3070	1.06	151	1385								244	2238	7.4	64
18	Sat.	1.030					1.13													
19	Sun.	1.030					1.13													
20	Mon.	2.020	97	7.00	278	2990	0.14												7.4	63
21	Tues.	1.410	97	7.01			0.75												7.5	64
22	Wed.	1.240	97	7.04			0.92	137	1417	4.32	44.68	18.3	189.25	14.2	146.85	192	1986	7.5	64	
23	Thurs.	1.300	97	7.00			0.86												7.5	63
24	Fri.	1.150	97	7.06	308	3070	1.01	133	1276										7.5	64
25	Sat.	1.270					0.89										184	1765	7.5	64
26	Sun.	1.620					0.54													
27	Mon.	1.620	97	7.02			0.54												7.4	64
28	Tues.	2.050	97	7.04	278	2910	0.11												7.4	64
29	Wed.	1.970	97	7.04			0.19	250	4107	5.78	94.96	31.9	524.11	28.5	468.25	440	7229	7.5	65	
30	Thurs.	1.750	97	7.00			0.41												7.4	63
31	Fri.	1.700	97	7.04			0.46	122	1730								190	2694	7.5	64

TOTAL AVERAGE MAX MIN	41.730					25.230	1462.0	16323		294.06		1528.71		1311.72	2440.0	27326			
	1.346	97.0	7.0			0.814	146.2	1632		58.81		305.74		262.34	244.0	2733	7.4	63.7	
	2.050	97.0	7.1			1.160	250.0	4107		94.96		524.11		468.25	440.0	7229	7.5	66.0	
	1.000	97.0	7.0			0.110	72.0	739		44.68		189.25		146.85	184.0	1765	7.3	62.0	

7 DAY AVERAGE																			
WEEK 1	1.303					0.857	129.0	1193		50.14		287.44		250.68	236.0	2174	7.4	63.4	
WEEK 2	1.153					1.007	124.5	1248		55.09		280.05		233.89	229.0	2308	7.4	63.8	
WEEK 3	1.267					0.893	156.5	1456		49.19		247.86		212.04	252.0	2344	7.4	64.0	
WEEK 4	1.464					0.696	135.0	1346		44.68		189.25		146.85	188.0	1875	7.5	63.8	

Signature: _____
 Certification Number: 3989

City of Waverly
MONTHLY MONITORING REPORT

Date: August, 2018

Facility Number 0990001

DISCHARGE SERIAL # 001 - # 002

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/DA Y	EFF. TOTAL N (as N) MG/L	EFF. TOTAL N (as N) LBS/DA	EFF. Cu MG/L	EFF. Cu LBS/DA Y	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/DA Y	FINAL MG/L	FINAL LBS/DA Y			
1	Wed.	0.269	0.861	8	57	3.34	23.98	27.5	197.47	0.0320	0.2298	8	57	<0.50	0	8.3	67	1.00
2	Thurs.	0.304	0.816													8.1	67	
3	Fri.	0.300	0.780	4	26							7	46	<0.50	0	8.3	67	
4	Sat.	0.245	0.755															
5	Sun.	0.233	1.477															
6	Mon.		1.810													7.8	68	
7	Tues.		1.270													8.0	67	
8	Wed.		1.230	4	41	2.53	25.95	21.9	224.65	0.0211	0.2164	9	92	<0.50	0	8.1	66	<1.00
9	Thurs.		1.240													8.1	66	
10	Fri.		1.190	7	69							10	99	<0.50	0	7.9	67	
11	Sat.		1.090															
12	Sun.		1.090															
13	Mon.	0.190	0.940													7.8	68	
14	Tues.	0.263	0.837													7.9	68	
15	Wed.	0.283	0.847	7	49	3.39	23.95	20.5	144.81	0.0282	0.1992	8	57	<0.50	0	8.2	69	5.10
16	Thurs.	0.213	0.937													7.8	69	
17	Fri.		1.100	9	83							6	55	<0.50	0	8.1	68	
18	Sat.		1.030															
19	Sun.		1.030															
20	Mon.		2.020													7.8	68	
21	Tues.		1.410													7.8	68	
22	Wed.		1.240	9	93	2.33	24.10	14.2	146.85	0.0224	0.2317	9	93	<0.50	0	8.2	67	3.10
23	Thurs.		1.300													7.8	67	
24	Fri.		1.150	10	96							7	67	<0.50	0	8.2	68	
25	Sat.		1.270															
26	Sun.		1.620															
27	Mon.		1.620													7.9	69	
28	Tues.		2.050													7.9	70	
29	Wed.		1.970	8	131	2.46	40.42	16.9	277.66	0.0240	0.3943	14	230	<0.50	0	8.2	68	921.0
30	Thurs.		1.750													8.0	66	
31	Fri.		1.700	8	113							10	142	0.67	9	8.3	66	

TOTAL AVERAGE	2.3	39.430	74.0	760		138.40		991.45		1.2714	88.0	938	0.7	9.5				930.2
MAX	0.3	1.272	7.4	76		27.68		198.29		0.2543	8.8	94	0.7	0.9	8.0	68		232.6
MIN	0.2	0.755	4.0	26		40.42		277.66		0.3943	14.0	230	0.7	9.5	8.3	70		921.0
						23.95		144.81		0.1992	6.0	46	0.7	0.0	7.8	66		1.0

7 DAY AVERAGE																		
WEEK 1	0.3	1.110	6.0	42		23.98		197.47		0.2298	7.5	51	0.0	0.0	8.1	67		1.0
WEEK 2	0.2	1.088	5.5	55		25.95		224.65		0.2164	9.5	96	0.0	0.0	8.0	67		<1.0
WEEK 3	0.2	1.196	8.0	66		23.95		144.81		0.1992	7.0	56	0.0	0.0	7.9	68		5.1
WEEK 4	0.0	1.464	9.5	94		24.10		146.85		0.2317	8.0	80	0.0	0.0	8.0	68		3.1

City of Waverly

MONTHLY MONITORING REPORT

Date: September, 2018

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								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/DA Y	INF. PHOS. MG/L	INF. PHOS. LBS/DA Y	INF. TOTAL N (as N)	INF. TOTAL N (as N)	INF. TKN (as N) MG/L	INF. TKN (as N) LBS/DAY	INF. MG/L	INF. LBS/DA Y		
1	Sat.	5.570					-3.41												
2	Sun.	6.730					-4.57												
3	Mon.	6.800	97	6.98			-4.64												
4	Tues.	5.170	97	6.99	270	2800	-3.01											7.3	66
5	Wed.	7.500	97	7.01			-5.34	73	4566	2.84	177.64	14.5	906.98	9.17	573.58	124	7756	7.6	67
6	Thurs.	4.880	97	6.95			-2.72											7.3	64
7	Fri.	4.490	97	6.98	293	2750	-2.33	59	2209							108	4044	7.6	64
8	Sat.	4.050					-1.89												
9	Sun.	3.610					-1.45												
10	Mon.	3.290	97	6.97	285	2770	-1.13											7.3	63
11	Tues.	3.080	96	6.99			-0.92											7.3	63
12	Wed.	2.840	97	7.07			-0.68	78	1847	2.72	64.42	15.1	357.65	10.3	243.96	148	3505	7.6	63
13	Thurs.	2.700	97	7.03			-0.54											7.4	64
14	Fri.	2.530	97	7.06	330	3140	-0.37	68	1435							116	2448	7.7	63
15	Sat.	2.370					-0.21												
16	Sun.	2.340					-0.18												
17	Mon.	2.210	97	7.05			-0.05											7.5	63
18	Tues.	2.660	97	7.04			-0.50											7.5	63
19	Wed.	4.200	97	7.09	323	3100	-2.04	161	5640	4.07	142.56	21.4	749.60	17.6	616.49	296	10368	7.6	63
20	Thurs.	5.220	96	7.08			-3.06											7.3	65
21	Fri.	5.230	96	7.10	323	3210	-3.07	54	2355							114	4972	7.6	64
22	Sat.	5.310					-3.15												
23	Sun.	5.950					-3.79												
24	Mon.	4.760	97	7.06	338	3300	-2.60											7.3	64
25	Tues.	4.540	97	7.06			-2.38											7.3	63
26	Wed.	4.020	97	7.12			-1.86	62	2079	2.39	80.13	14.5	486.14	9.49	318.17	140	4694	7.7	62
27	Thurs.	3.680	97	7.03			-1.52											7.3	63
28	Fri.	3.280	97	7.09	345	3300	-1.12	56	1532							104	2845	7.7	62
29	Sat.	3.090					-0.93												
30	Sun.	3.080					-0.92												

TOTAL AVERAGE	125.180						-60.380	611.0	21663		464.76		2500.37		1752.21	1150.0	40633		
MAX	4.173	96.9	7.0				-2.013	76.4	2708		116.19		625.09		438.05	143.8	5079	7.5	63.8
MIN	2.210	96.0	7.0				-0.050	161.0	5640		177.64		906.98		616.49	296.0	10368	7.7	67.0
							-5.340	54.0	1435		64.42		357.65		243.96	104.0	2448	7.3	62.0

7 DAY AVERAGE																			
WEEK 1	5.877						-3.717	66.0	3388		177.64		906.98		573.58	116.0	5900	7.4	65.4
WEEK 2	3.157						-0.997	73.0	1641		64.42		357.65		243.96	132.0	2977	7.5	65.4
WEEK 3	3.461						-1.301	107.5	3997		142.56		749.60		616.49	205.0	7670	7.5	65.4
WEEK 4	4.506						-2.346	59.0	1805		80.13		486.14		318.17	122.0	3769	7.5	62.8

Signature: _____
 Certification Number: 3989

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

Date: September, 2018

Facility Number 0990001
Note: 0.0 = <MDL of 0.5

DAY OF MONTH	DAY OF WEEK	MGD		CBOD 5 DAY 20 °C		EFF. PHOS. MG/L	EFF. PHOS. LBS/DA Y	EFF. TOTAL N (as N) MG/L	EFF. TOTAL N (as N) LBS/DA	EFF. Cu MG/L	EFF. Cu LBS/DA Y	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/DA Y	FINAL MG/L	FINAL LBS/DA Y			
1	Sat.		5.570															
2	Sun.		6.730															
3	Mon.		6.800														7.9	67
4	Tues.		5.170														8.0	67
5	Wed.		7.500	10	626	1.10	68.81	9.89	618.62	0.0321	2.0079	22	1376	<0.50	0		8.2	68
6	Thurs.		4.880														7.9	66
7	Fri.		4.490	11	412							23	861	<0.50	0		8.3	64
8	Sat.		4.050															
9	Sun.		3.610															
10	Mon.		3.290														8.1	62
11	Tues.		3.080														8.1	63
12	Wed.		2.840	9	213	1.50	35.53	11.4	270.02	0.0217	0.5140	14	332	<0.50	0		8.3	64
13	Thurs.		2.700														8.1	64
14	Fri.		2.530	9	190							12	253	<0.50	0		8.4	64
15	Sat.		2.370															
16	Sun.		2.340															
17	Mon.		2.210														8.1	64
18	Tues.		2.660														8.1	64
19	Wed.		4.200	13	455	1.86	65.15	14.3	500.90	0.0195	0.6830	15	525	0.56	20		8.3	65
20	Thurs.		5.220														7.9	66
21	Fri.		5.230	11	480							21	916	0.56	24		8.2	64
22	Sat.		5.310															
23	Sun.		5.950														8.2	62
24	Mon.		4.760														8.1	62
25	Tues.		4.540														8.3	62
26	Wed.		4.020	11	369	1.12	37.55	10.5	352.03	0.0189	0.6337	15	503	<0.50	0		8.0	63
27	Thurs.		3.680														8.3	62
28	Fri.		3.280	10	274							13	356	<0.50	0		8.0	63
29	Sat.		3.090														8.3	62
30	Sun.		3.080															
			0.000															

TOTAL AVERAGE	0.0	125.180	84.0	3018		207.04		1741.57		3.8385	135.0	5122	1.1	44.0				0.0
MAX	0.0	4.038	10.5	377		51.76		435.39		0.9596	16.9	640	0.6	5.5		8.1	64	0.0
MIN	0.0	7.500	13.0	626		68.81		618.62		2.0079	23.0	1376	0.6	24.4		8.4	68	0.0
	0.0	0.000	9.0	190		35.53		270.02		0.5140	12.0	253	0.6	0.0		7.9	62	0.0

7 DAY AVERAGE																		
WEEK 1	0.0	5.877	10.5	519		68.81		618.62		2.0079	22.5	1119	<0.50	0.0		8.1	66	0.0
WEEK 2	0.0	3.157	9.0	202		35.53		270.02		0.5140	13.0	292	<0.50	0.0		8.2	63	0.0
WEEK 3	0.0	3.461	12.0	468		65.15		500.90		0.6830	18.0	721	0.6	22.0		8.1	65	0.0
WEEK 4	0.0	4.506	10.5	321		37.55		352.03		0.6337	14.0	429	<0.50	0.0		8.2	62	0.0

City of Waverly

MONTHLY MONITORING REPORT

DISCHARGE SERIAL # 001 - # 002

Date: October, 2018

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		INFLUENT						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/DA Y	INF. PHOS. MG/L	INF. PHOS. LBS/DA Y	INF. TOTAL N (as N)	INF. TOTAL N (as N)	INF. TKN (as N) MG/L	INF. TKN (as N) LBS/DAY	INF. MG/L	INF. LBS/DA Y			
1	Mon.	5.370	98	7.07	360	3290	-3.21													
2	Tues.	4.510	98	7.06			-2.35												7.4	62
3	Wed.	4.340	98	7.13			-2.18	55	1991	1.93	69.86	11.8	427.11	7.20	260.61	141	5104	7.4	62	
4	Thurs.	3.890	98	7.06			-1.73											7.7	61	
5	Fri.	3.980	98	7.14	300	3350	-1.82	53	1759									7.4	62	
6	Sat.	3.670					-1.51									120	3983	7.6	62	
7	Sun.	3.970					-1.81													
8	Mon.	4.840	97	7.05	323	3270	-2.68													
9	Tues.	5.590	97	7.05			-3.43											7.3	62	
10	Wed.	7.250	97	7.06			-5.09											7.3	62	
11	Thurs.	6.450	97	7.09			-4.29	39	2098	1.13	60.79	10.7	575.59	7.31	393.23	86	4626	7.3	62	
12	Fri.	6.720	97	7.06	308	3260	-4.56	33	1849							63	3531	7.7	60	
13	Sat.	5.480					-3.32											7.6	59	
14	Sun.	4.760					-2.60													
15	Mon.	4.530	97	7.02	323	3180	-2.37													
16	Tues.	4.250	98	7.09			-2.09	47	1666									7.3	60	
17	Wed.	4.090	98	7.07			-1.93	48	1637	1.24	42.30	11.6	395.68	7.08	241.50	96	3403	7.6	59	
18	Thurs.	3.920	98	7.01			-1.76									92	3138	7.6	58	
19	Fri.	3.800	98	7.05	285	3100	-1.64											7.3	59	
20	Sat.	3.490					-1.33											7.3	59	
21	Sun.	3.490					-1.33													
22	Mon.	3.320	98	7.04	300	3120	-1.16	66	1827											
23	Tues.	3.140	98	6.98			-0.98									88	2437	7.7	59	
24	Wed.	3.070	98	6.97			-0.91											7.4	59	
25	Thurs.	2.930	97	6.98			-0.77											7.4	59	
26	Fri.	2.830	98	7.02	330	3030	-0.67	74	1747	2.03	47.91	15.5	365.83	10.9	257.26	144	3399	7.4	59	
27	Sat.	2.690					-0.53											7.6	60	
28	Sun.	2.670					-0.51													
29	Mon.	2.580	98	6.98	315	3000	-0.42													
30	Tues.	2.370	98	7.02			-0.21											7.5	59	
31	Wed.	2.430	98	6.99			-0.27											7.4	58	
																		7.6	58	

TOTAL AVERAGE	126.420						-59.460	415.0	14575		220.85		1764.21		1152.60	830.0	29620		
MAX	4.078	97.7	7.0				-1.918	51.9	1822		55.21		441.05		288.15	103.8	3703	7.5	60.0
MIN	2.370	97.0	7.0				-0.210	74.0	2098		69.86		575.59		393.23	144.0	5104	7.7	62.0
							-5.090	33.0	1637		42.30		365.83		241.50	63.0	2437	7.3	58.0

7 DAY AVERAGE																			
WEEK 1	4.247						-2.087	54.0	1875		69.86		427.11		260.61	130.5	4543	7.5	61.8
WEEK 2	5.870						-3.710	36.0	1974		60.79		575.59		393.23	74.5	4079	7.4	61.8
WEEK 3	3.939						-1.779	47.5	1652		42.30		395.68		241.50	94.0	3270	7.4	61.8
WEEK 4	2.950						-0.790	70.0	1787		47.91		365.83		257.26	116.0	2918	7.5	59.2

Signature: _____
 Certification Number: 3989

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

Date: October, 2018

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/DA Y	EFF. TOTAL N (as N) MG/L	EFF. TOTAL N (as N) LBS/DA	EFF. Cu MG/L	EFF. Cu LBS/DA Y	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/DA Y	FINAL MG/L	FINAL LBS/DA Y				
1	Mon.			5.370																
2	Tues.			4.510														8.2	61	
3	Wed.			4.340	10	362	1.21	43.80	11.7	423.49	0.0195	0.7058	22	796	<0.50	0	8.1	61		
4	Thurs.			3.890													8.3	62	361.0	
5	Fri.			3.980	8	266							17	564	<0.50	0	8.2	60		
6	Sat.			3.670													8.3	61		
7	Sun.			3.970																
8	Mon.			4.840																
9	Tues.			5.590													8.1	61		
10	Wed.	0.003		7.247													7.9	62		
11	Thurs.			6.450	9	484	0.909	48.90	3.12	167.83	0.0224	1.2050	20	1076	<0.50	0	8.0	62		
12	Fri.			6.720	7	392							19	1065	<0.50	0	8.2	59	299.0	
13	Sat.			5.480													8.3	58		
14	Sun.			4.760																
15	Mon.			4.530																
16	Tues.			4.250	7	248							14	496	<0.50	0	8.2	58		
17	Wed.			4.090	6	205	1.04	35.48	10.2	347.93	0.0168	0.5731	13	443	<0.50	0	8.3	58	58.1	
18	Thurs.			3.920													8.2	57		
19	Fri.			3.800													8.2	59		
20	Sat.			3.490																
21	Sun.			3.490																
22	Mon.			3.320	9	249							11	305	0.56	16	8.3	57		
23	Tues.			3.140													8.0	59		
24	Wed.			3.070													8.1	58		
25	Thurs.			2.930													8.2	58		
26	Fri.			2.830	6	142	1.52	35.88	12.3	290.31	0.0212	0.5004	12	283	<0.50	0	8.3	58	37.9	
27	Sat.			2.690																
28	Sun.			2.670																
29	Mon.			2.580																
30	Tues.			2.370													8.2	57		
31	Wed.			2.430													8.1	58		
																	8.1	58	14.2	

TOTAL AVERAGE	0.003	126.417	62.0	2348		164.04		1229.56		2.9842	128.0	5029	0.6	15.5					770.2
MAX	0.003	4.078	7.8	293		41.01		307.39		0.7461	16.0	629	0.6	1.9	8.2	59			154.0
MIN	0.003	7.247	10.0	484		48.90		423.49		1.2050	22.0	1076	0.6	15.5	8.3	62			361.0
	0.003	2.370	6.0	142		35.48		167.83		0.5004	11.0	283	0.6	0.0	7.9	57			14.2

7 DAY AVERAGE	WEEK 1	WEEK 2	WEEK 3	WEEK 4
	0.0	4.247	9.0	314
			43.80	
			423.49	
			0.7058	
	0.003	5.870	8.0	438
			48.90	
			167.83	
			1.2050	
	0.0	3.939	6.5	226
			35.48	
			347.93	
			0.5731	
	0.0	2.950	7.5	195
			35.88	
			290.31	
			0.5004	
			11.5	294
			0.6	7.8
			8.2	58
			8.2	58
			61	361.0
			60	299.0
			58	58.1
			58	37.9

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

Date: November, 2018

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		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/DA Y	INF. PHOS. MG/L	INF. PHOS. LBS/DA Y	INF. TOTAL N (as N)	INF. TOTAL N (as N)	INF. TKN (as N) MG/L	INF. TKN (as N) LBS/DAY			INF. MG/L	INF. LBS/DA Y
1	Thurs.	2.270	97	7.00			-0.11												
2	Fri.	2.180	98	7.05	465	3030	-0.02	92	1673	2.26	41.09	19.3	350.90	16.1	292.72	160	2909	7.4	60
3	Sat.	2.360					-0.20											7.6	59
4	Sun.	3.130	97	7.01			-0.97												
5	Mon.	2.890					-0.73											7.4	59
6	Tues.	2.690	98	7.02	683	3020	-0.53												
7	Wed.	2.560	97	7.05			-0.40	84	1793	2.23	47.61	17.0	362.96	13.5	288.23	154	3288	7.5	59
8	Thurs.	2.490	98	6.97			-0.33											7.6	58
9	Fri.	2.310	97	7.02	270	3060	-0.15	90	1734							156	3005	7.4	58
10	Sat.	2.220					-0.06											7.6	57
11	Sun.	2.140					0.02												
12	Mon.	2.050	97	7.05	308	3080	0.11												
13	Tues.	1.950	97	7.02			0.21											7.5	58
14	Wed.	1.970	97	7.07			0.19	100	1643	2.82	46.33	19.5	320.38	17.1	280.95	140	2300	7.5	58
15	Thurs.	2.030	97	7.04			0.13											7.6	57
16	Fri.	1.800	97	7.07	278	3090	0.36	96	1441							134	2012	7.4	57
17	Sat.	1.730					0.43											7.6	57
18	Sun.	1.820					0.34												
19	Mon.	1.590	97	7.02	285	3080	0.57												
20	Tues.	1.640	98	6.97			0.52											7.5	58
21	Wed.	1.600	98	6.99	308	3100	0.56	72	961	3.08	41.10	21.1	281.56	19.5	260.21	158	2108	7.6	56
22	Thurs.	1.430					0.73											7.6	56
23	Fri.	1.730	98	7.01			0.43												
24	Sat.	1.590	97	6.99			0.57											7.5	56
25	Sun.	1.590	98	7.05			0.57											7.5	56
26	Mon.	1.510	96	7.09	330	3140	0.65	111	1398									7.6	55
27	Tues.	1.530	97	7.04			0.63									142	1788	7.6	56
28	Wed.	1.510	97	7.08	323	3160	0.65	116	1461	3.29	41.43	23.7	298.46	22.0	277.05	180	2267	7.6	56
29	Thurs.	1.510	97	7.09			0.65											7.6	56
30	Fri.	1.530					0.63											7.6	56

TOTAL AVERAGE	59.350					5.450	761.0	12104		217.56		1614.26		1399.16	1224.0	19678			
MAX	1.978	97.3	7.0			0.182	95.1	1513		43.51		322.85		279.83	153.0	2460	7.5	57.2	
MIN	3.130	98.0	7.1			0.730	116.0	1793		47.61		362.96		292.72	180.0	3288	7.6	60.0	
	1.430	96.0	7.0			-0.970	72.0	961		41.09		281.56		260.21	134.0	1788	7.4	55.0	

7 DAY AVERAGE																			
WEEK 1	2.583					-0.423	88.0	1733		44.35		356.93		290.47	157.0	3098	7.5	59.0	
WEEK 2	2.161					-0.001	95.0	1688		46.33		320.38		280.95	148.0	2653	7.5	58.6	
WEEK 3	1.744					0.416	84.0	1201		41.10		281.56		260.21	146.0	2060	7.5	58.2	
WEEK 4	1.556					0.604	113.5	1429		41.43		298.46		277.05	161.0	2028	7.6	55.8	

Signature: _____
 Certification Number: 3989

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

Date: November, 2018

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/DA Y	EFF. TOTAL N (as N) MG/L	EFF. TOTAL N (as N) LBS/DA	EFF. Cu MG/L	EFF. Cu LBS/DA Y	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/DA Y	FINAL MG/L	FINAL LBS/DA Y			
1	Thurs.		2.270															
2	Fri.		2.180	7	127	1.55	28.18	16.8	305.44	0.0186	0.3382	11	200	<0.50	0	8.0	58	
3	Sat.		2.360													8.2	59	
4	Sun.		3.130															
5	Mon.		2.890													8.0	58	
6	Tues.		2.690															
7	Wed.		2.560	8	171	1.31	27.97	13.4	286.10	0.0254	0.5423	16	342	<0.50	0	8.1	58	
8	Thurs.		2.490													8.2	57	
9	Fri.		2.310	8	154							14	270	0.67	13	8.0	55	
10	Sat.		2.220													8.2	56	
11	Sun.		2.140															
12	Mon.		2.050													8.0	56	
13	Tues.		1.950													8.2	55	
14	Wed.		1.970	9	148	2.11	34.67	16.9	277.66	0.0268	0.4403	14	230	0.67	11	8.3	55	
15	Thurs.		2.030													8.0	55	
16	Fri.		1.800	9	135							12	180	<0.50	0	8.3	56	
17	Sat.		1.730															
18	Sun.		1.820															
19	Mon.		1.590													8.1	54	
20	Tues.		1.640													8.1	53	
21	Wed.		1.600	13	173	2.62	34.96	22.3	297.57	0.0509	0.6792	24	320	1.58	21	7.9	53	
22	Thurs.		1.430															
23	Fri.		1.730													7.9	53	
24	Sat.		1.590													8.0	54	
25	Sun.		1.590													8.1	53	
26	Mon.		1.510	11	139							17	214	<0.50	0	8.2	53	
27	Tues.		1.530													8.0	52	
28	Wed.		1.510	12	151	2.85	35.89	23.7	298.46	0.0447	0.5629	23	290	0.67	8	8.2	53	
29	Thurs.		1.510													8.0	54	
30	Fri.		1.530															
			0.000															

TOTAL AVERAGE MAX MIN	0.0	59.350	77.0	1198		161.67		1465.24		2.5629	131.0	2045	3.6	53.4				0.0
	0.0	1.915	9.6	150		32.33		293.05		0.5126	16.4	256	0.9	6.7	8.1	55		0.0
	0.0	3.130	13.0	173		35.89		305.44		0.6792	24.0	342	1.6	21.1	8.3	59		0.0
	0.0	0.000	7.0	127		27.97		277.66		0.3382	11.0	180	0.7	0.0	7.9	52		0.0

7 DAY AVERAGE																		
WEEK 1	0.0	2.583	7.5	149		28.07		295.77		0.4402	13.5	271	<0.50	0.0	8.1	58		0.0
WEEK 2	0.0	2.161	8.5	151		34.67		277.66		0.4403	14.0	250	0.7	12.0	8.1	55		0.0
WEEK 3	0.0	1.744	11.0	154		34.96		297.57		0.6792	18.0	250	1.6	10.5	8.1	54		0.0
WEEK 4	0.0	1.556	11.5	145		35.89		298.46		0.5629	20.0	252	0.7	4.2	8.1	53		0.0

City of Waverly

MONTHLY MONITORING REPORT

Date: December, 2018

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		INFILTRATION						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/DA Y	INF. PHOS. MG/L	INF. PHOS. LBS/DA Y	INF. TOTAL N (as N)	INF. TOTAL N (as N)	INF. TKN (as N) MG/L	INF. TKN (as N) LBS/DAY	INF. MG/L	INF. LBS/DA Y		
1	Sat.	1.580					0.58												
2	Sun.	1.620					0.54												
3	Mon.	1.510	97	7.02	308	3100	0.65											7.6	56
4	Tues.	1.520	97	7.02			0.64											7.3	56
5	Wed.	1.690	97	7.06			0.47	136	1917	3.72	52.43	26.8	377.74	24.1	339.68	192	2706	7.6	55
6	Thurs.	1.280	97	7.00			0.88											7.5	55
7	Fri.	1.350	97	7.05	323	3100	0.81	115	1295							180	2027	7.5	55
8	Sat.	1.330					0.83												
9	Sun.	1.350					0.81												
10	Mon.	1.400	97	6.98	360	3030	0.76											7.6	55
11	Tues.	1.360	97	6.98			0.80											7.6	55
12	Wed.	1.370	95	7.03			0.79	145	1657	4.06	46.39	29.3	334.78	27.8	317.64	204	2331	7.6	55
13	Thurs.	1.340	97	7.00			0.82											7.7	56
14	Fri.	1.320	97	7.05	315	3170	0.84	128	1409							188	2070	7.5	55
15	Sat.	1.240					0.92												
16	Sun.	1.270					0.89												
17	Mon.	1.260	97	7.05	353	3240	0.90											7.6	55
18	Tues.	1.300	97	7.06			0.86											7.6	55
19	Wed.	1.190	97	7.09			0.97	117	1161	3.86	38.31	25.9	257.05	24.5	243.15	176	1747	7.5	55
20	Thurs.	1.260	97	7.14			0.90											7.5	54
21	Fri.	1.240	97	7.09	330	3310	0.92	153	1582							204	2110	7.5	55
22	Sat.	1.170					0.99												
23	Sun.	1.170					0.99												
24	Mon.	1.210	97	7.05	323	3250	0.95											7.5	54
25	Tues.	1.090		7.10			1.07											7.9	
26	Wed.	1.670	97	7.08			0.49	111	1546	3.82	53.20	25.7	357.94	24.2	337.05	125	1741	7.6	53
27	Thurs.	2.130	98	7.06			0.03											7.6	50
28	Fri.	1.800	98	7.09	338	3250	0.36	80	1201							144	2162	7.7	52
29	Sat.	1.760					0.40												
30	Sun.	1.820					0.34												
31	Mon.	1.590	97	7.06	398	3290	0.57											7.7	53

TOTAL AVERAGE MAX MIN	44.190					22.770	985.0	11768		190.33		1327.50		1237.52	1413.0	16892			
	1.425	97.0	7.1			0.735	123.1	1471		47.58		331.88		309.38	176.6	2112	7.6	54.5	
	2.130	98.0	7.1			1.070	153.0	1917		53.20		377.74		339.68	204.0	2706	7.9	56.0	
	1.090	95.0	7.0			0.030	80.0	1161		38.31		257.05		243.15	125.0	1741	7.3	50.0	

7 DAY AVERAGE																			
WEEK 1	1.507					0.653	125.5	1606		52.43		377.74		339.68	186.0	2366	7.5	55.4	
WEEK 2	1.353					0.807	136.5	1533		46.39		334.78		317.64	196.0	2200	7.6	55.4	
WEEK 3	1.251					0.909	135.0	1372		38.31		257.05		243.15	190.0	1928	7.5	55.4	
WEEK 4	1.463					0.697	95.5	1373		53.20		357.94		337.05	134.5	1951	7.7	52.3	

Signature: _____
 Certification Number: 3989

City of Waverly

MONTHLY MONITORING REPORT

Date: December, 2018

Facility Number 0990001

DISCHARGE SERIAL # 001 - # 002

Note: 0.0 = <MDL of 0.5

DAY OF MONTH	DAY OF WEEK	MGD GULF COURSE FLOW	EFF. FLOW MGD	CBOD 5 DAY 20 °C		EFF. PHOS. MG/L	EFF. PHOS. LBS/DA Y	EFF. TOTAL N (as N) MG/L	EFF. TOTAL N (as N) LBS/DA	EFF. Cu MG/L	EFF. Cu LBS/DA Y	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/DA Y	FINAL MG/L	FINAL LBS/DA Y			
1	Sat.		1.580															
2	Sun.		1.620															
3	Mon.		1.510													8.0	53	
4	Tues.		1.520													8.0	53	
5	Wed.		1.690	9	127	2.49	35.10	21.9	308.67	0.0318	0.4482	18	254	<0.50	0	8.2	53	
6	Thurs.		1.280													8.0	53	
7	Fri.		1.350	8	90							12	135	<0.50	0	8.2	52	
8	Sat.		1.330															
9	Sun.		1.350													8.0	53	
10	Mon.		1.400													8.0	53	
11	Tues.		1.360													8.0	53	
12	Wed.		1.370	9	103	2.84	32.45	23.2	265.08	0.0344	0.3930	12	137	<0.50	0	8.2	53	
13	Thurs.		1.340													8.0	53	
14	Fri.		1.320	8	88							12	132	<0.50	0	8.2	53	
15	Sat.		1.240															
16	Sun.		1.270													8.0	54	
17	Mon.		1.260													8.0	53	
18	Tues.		1.300													8.2	54	
19	Wed.		1.190	9	89	2.96	29.38	23.4	232.24	0.0338	0.3355	12	119	<0.50	0	8.0	54	
20	Thurs.		1.260													8.0	54	
21	Fri.		1.240	7	72							10	103	<0.50	0	8.2	53	
22	Sat.		1.170															
23	Sun.		1.170													8.1	52	
24	Mon.		1.210													7.6		
25	Tues.		1.090													8.1	51	
26	Wed.		1.670	6	84	3.13	43.59	24.8	345.41	0.0285	0.3969	8	111	<0.50	0	7.9	51	
27	Thurs.		2.130													8.2	48	
28	Fri.		1.800	10	150							18	270	<0.50	0			
29	Sat.		1.760															
30	Sun.		1.820															
31	Mon.		1.590													8.1	52	

TOTAL AVERAGE MAX MIN	0.0	44,190	66.0	803	140.52	1151.40	1.5736	102.0	1262	0.0	0.0	8.1	53	0.0
	0.0	1,425	8.3	100	35.13	287.85	0.3934	12.8	158	0.0	0.0	8.2	54	0.0
	0.0	2,130	10.0	150	43.59	345.41	0.4482	18.0	270	0.0	0.0	7.6	48	0.0
	0.0	1,090	6.0	72	29.38	232.24	0.3355	8.0	103	0.0	0.0	8.0	51	0.0

7 DAY AVERAGE														
WEEK 1	0.0	1.507	8.5	108	35.10	308.67	0.4482	15.0	194	0.0	0.0	8.1	53	0.0
WEEK 2	0.0	1.353	8.5	95	32.45	265.08	0.3930	12.0	135	0.0	0.0	8.1	53	0.0
WEEK 3	0.0	1.251	8.0	81	29.38	232.24	0.3355	11.0	111	0.0	0.0	8.1	54	0.0
WEEK 4	0.0	1.463	8.0	117	43.59	345.41	0.3969	13.0	191	0.0	0.0	8.0	51	0.0

City of Waverly

MONTHLY MONITORING REPORT

Date: January, 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. LBS/DA Y						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/DA Y	INF. PHOS. MG/L	INF. PHOS. LBS/DA Y	INF. TOTAL N (as N)	INF. TOTAL N (as N)	INF. TKN (as N) MG/L	INF. TKN (as N) LBS/DAY	INF. MG/L	INF. LBS/DA Y		
1	Tues.	1.440	97	6.98			0.72											7.3	53
2	Wed.	1.440	97	7.08			0.72	99	1189	2.74	32.91	22.3	267.81	18.8	225.78	138	1657	7.6	53
3	Thurs.	1.520	97	6.95			0.64											7.3	53
4	Fri.	1.430	97	7.05	345	3290	0.73	100	1193							156	1860	7.5	53
5	Sat.	1.410					0.75												
6	Sun.	1.530					0.63												
7	Mon.	1.430	97	7.04	398	3260	0.73											7.5	53
8	Tues.	1.350	97	6.98			0.81											7.5	54
9	Wed.	1.260	98	7.08			0.90	110	1156	3.10	32.58	25.8	271.12	22.7	238.54	164	1723	7.6	53
10	Thurs.	1.370	97	7.04			0.79											7.5	53
11	Fri.	1.300	97	7.06	330	3270	0.86	104	1128							150	1626	7.5	53
12	Sat.	1.250					0.91												
13	Sun.	1.300					0.86												
14	Mon.	1.230	97	7.01	160	3250	0.93											7.8	53
15	Tues.	1.230	97	7.01			0.93											7.7	53
16	Wed.	1.190	97	7.06			0.97	120	1191	3.47	34.44	25.4	252.08	22.3	221.32	152	1509	7.5	53
17	Thurs.	1.270	97	7.03	160	3230	0.89											7.6	53
18	Fri.	1.200	97	7.05			0.96	147	1471							196	1962	7.4	53
19	Sat.	1.110					1.05												
20	Sun.	1.010					1.15												
21	Mon.	1.130	97	7.03	150	3220	1.03											7.6	52
22	Tues.	1.250	97	7.04			0.91											7.5	53
23	Wed.	0.960	97	7.06			1.20	133	1065	3.79	30.34	28.5	228.18	25.5	204.16	182	1457	7.5	53
24	Thurs.	1.050	97	7.03			1.11											7.6	52
25	Fri.	1.080	97	7.06	170	3230	1.08	149	1342							192	1729	7.5	52
26	Sat.	1.060					1.10												
27	Sun.	1.140					1.02												
28	Mon.	1.060	97	7.02	270	3220	1.10											7.5	52
29	Tues.	1.180	97	7.00			0.98											7.8	52
30	Wed.	1.080	97	7.01			1.08											7.5	52
31	Thurs.	1.200	97	7.02			0.96											7.7	52

TOTAL AVERAGE MAX MIN	38.460					28.500	962.0	9734		130.26		1019.20		889.80	1330.0	13524				
	1.241	97.0	7.0			0.919	120.3	1217		32.57		254.80		222.45	166.3	1691	7.5	52.7		
	1.530	98.0	7.1			1.200	149.0	1471		34.44		271.12		238.54	196.0	1962	7.8	54.0		
	0.960	97.0	7.0			0.630	99.0	1065		30.34		228.18		204.16	138.0	1457	7.3	52.0		

7 DAY AVERAGE																				
WEEK 1	1.457					0.703	99.5	1191		32.91		267.81		225.78	147.0	1759	7.4	53.0		
WEEK 2	1.294					0.866	107.0	1142		32.58		271.12		238.54	157.0	1675	7.6	53.2		
WEEK 3	1.163					0.997	133.5	1331		34.44		252.08		221.32	174.0	1735	7.6	53.2		
WEEK 4	1.086					1.074	141.0	1203		30.34		228.18		204.16	187.0	1593	7.5	52.4		

Signature: _____
 Certification Number: 3989

City of Waverly
MONTHLY MONITORING REPORT

Date: January, 2019

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/DA Y	EFF. TOTAL N (as N) MG/L	EFF. TOTAL N (as N) LBS/DA	EFF. Cu MG/L	EFF. Cu LBS/DA Y	TOTAL SUSPENDED SOLIDS		AMMONIA NITROGEN		EFF. pH	EFF. TEMP. °F.	E. COLI #/100 ML
				EFF. MG/L	EFF. LBS/DA Y							EFF. MG/L	EFF. LBS/DA Y	FINAL MG/L	FINAL LBS/DA Y			
1	Tues.		1.440													8.0	52	
2	Wed.		1.440	7	84	2.07	24.86	20.2	242.59	0.0294	0.3531	10	120	<0.50	0	8.1	50	
3	Thurs.		1.520													7.9	51	
4	Fri.		1.430	7	83							11	131	<0.50	0	8.1	52	
5	Sat.		1.410															
6	Sun.		1.530															
7	Mon.		1.430															
8	Tues.		1.350													8.1	53	
9	Wed.		1.260	7	74	2.41	25.33	23.9	251.15	0.0321	0.3373	12	126	<0.50	0	8.2	50	
10	Thurs.		1.370													8.0	50	
11	Fri.		1.300	8	87							13	141	<0.50	0	8.2	51	
12	Sat.		1.250															
13	Sun.		1.300															
14	Mon.		1.230															
15	Tues.		1.230													8.1	51	
16	Wed.		1.190	7	69	2.82	27.99	22.7	225.29	0.0320	0.3176	11	109	<0.50	0	8.2	52	
17	Thurs.		1.270													8.1	52	
18	Fri.		1.200	8	80							11	110	<0.50	0	8.2	51	
19	Sat.		1.110															
20	Sun.		1.010															
21	Mon.		1.130															
22	Tues.		1.250													8.0	48	
23	Wed.		0.960	7	56	2.92	23.38	25.2	201.76	0.0275	0.2202	10	80	<0.50	0	8.2	48	
24	Thurs.		1.050													8.1	48	
25	Fri.		1.080	7	63							13	117	<0.50	0	8.2	50	
26	Sat.		1.060															
27	Sun.		1.140															
28	Mon.		1.060															
29	Tues.		1.180													8.1	47	
30	Wed.		1.080													8.1	47	
31	Thurs.		1.200													8.1	45	
																8.0	46	

TOTAL AVERAGE MAX MIN	0.0	38.460	58.0	596		101.55		920.79		1.2282	91.0	935	0.0	0.0			0.0
	0.0	1.241	7.3	75		25.39		230.20		0.3070	11.4	117	0.0	0.0	8.1	50	0.0
	0.0	1.530	8.0	87		27.99		251.15		0.3531	13.0	141	0.0	0.0	8.2	53	0.0
	0.0	0.960	7.0	56		23.38		201.76		0.2202	10.0	80	0.0	0.0	7.9	45	0.0

7 DAY AVERAGE																	
WEEK 1	0.0	1.457	7.0	84		24.86		242.59		0.3531	10.5	126	<0.50	0.0	8.0	52	0.0
WEEK 2	0.0	1.294	7.5	80		25.33		251.15		0.3373	12.5	134	<0.50	0.0	8.1	51	0.0
WEEK 3	0.0	1.163	7.5	75		27.99		225.29		0.3176	11.0	110	<0.50	0.0	8.1	51	0.0
WEEK 4	0.0	1.086	7.0	60		23.38		201.76		0.2202	11.5	99	<0.50	0.0	8.1	49	0.0

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

Date: February, 2019

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								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/DA Y	INF. PHOS. MG/L	INF. PHOS. LBS/DA Y	INF. TOTAL N (as N)	INF. TOTAL N (as N)	INF. TKN (as N) MG/L	INF. TKN (as N) LBS/DAY	INF. MG/L	INF. LBS/DA Y					
1	Fri.	1.170	97	7.06	160	3220	0.99	117	1142													
2	Sat.	1.430					0.73											168	1639	7.4	52	
3	Sun.	2.310					-0.15															
4	Mon.	1.340	97	7.04	270	3200	0.82														7.6	49
5	Tues.	1.460	97	7.03			0.70														7.6	51
6	Wed.	1.450	97	7.07			0.71	106	1282	3.37	40.75	22.0	266.05	18.3	221.30		136	1645	7.4	52		
7	Thurs.	1.180	97	7.05			0.98														7.5	52
8	Fri.	1.200	97	7.09	170	3180	0.96	108	1081												7.5	52
9	Sat.	1.160					1.00														144	1441
10	Sun.	1.220					0.94															
11	Mon.	1.160	97	7.07	270	3180	1.00															
12	Tues.	1.110	97	7.06			1.05														7.6	52
13	Wed.	1.140	97	7.05			1.02														7.6	51
14	Thurs.	1.200	97	7.03			0.96	113	1131												7.7	51
15	Fri.	1.150	97	7.05	130	2720	1.01	105	1007	3.08	30.82	26.6	266.21	22.0	220.18		138	1381	7.5	51		
16	Sat.	1.130					1.03														136	1304
17	Sun.	1.080					1.08															
18	Mon.	1.000	97	6.99	145	2600	1.16															
19	Tues.	1.110	97	6.97			1.05														7.7	50
20	Wed.	1.110	97	6.98			1.05	143	1324	4.43	41.01	30.3	280.50	26.8	248.10					7.6	50	
21	Thurs.	1.120	97	6.97			1.04														7.4	50
22	Fri.	1.100	97	6.95	120	2440	1.06	156	1431												7.5	50
23	Sat.	1.140					1.02														216	1982
24	Sun.	1.060					1.10															
25	Mon.	1.000	96	6.90	120	2310	1.16															
26	Tues.	1.060	97	6.88			1.10														7.8	49
27	Wed.	1.010	97	6.92			1.15														7.6	49
28	Thurs.	1.050	97	6.88			1.11	146	1230	4.80	40.43	33.9	285.55	31.2	262.81		196	1651	7.4	48		
																					7.7	50

TOTAL AVERAGE MAX MIN	33.650					26.830	994.0	9627		153.02		1098.31		952.39	1326.0	12821						
	1.202	97.0	7.0			0.958	124.3	1203		38.26		274.58		238.10	165.8	1603	7.5	50.5				
	2.310	97.0	7.1			1.160	156.0	1431		41.01		285.55		262.81	216.0	1982	7.8	52.0				
	1.000	96.0	6.9			-0.150	105.0	1007		30.82		266.05		220.18	136.0	1304	7.4	48.0				

7 DAY AVERAGE																						
WEEK 1	1.477					0.683	111.5	1212		40.75		266.05		221.30	152.0	1642	7.5	51.2				
WEEK 2	1.170					0.990	110.5	1106		30.82		266.21		220.18	141.0	1411	7.6	51.2				
WEEK 3	1.100					1.060	124.0	1165		41.01		280.50		248.10	164.0	1541	7.5	51.2				
WEEK 4	1.060					1.100	151.0	1330		40.43		285.55		262.81	206.0	1816	7.6	49.2				

Signature: _____
Certification Number: 3989

City of Waverly
MONTHLY MONITORING REPORT

Date: February, 2019

Facility Number 0990001

DISCHARGE SERIAL # 001 - # 002

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/DA Y	EFF. TOTAL N (as N) MG/L	EFF. TOTAL N (as N) LBS/DA	EFF. Cu MG/L	EFF. Cu LBS/DA Y	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/DA Y	FINAL MG/L	FINAL LBS/DA Y			
1	Fri.		1.170	7	68							11	107	<0.50	0	8.2	49	
2	Sat.		1.430															
3	Sun.		2.310															
4	Mon.		1.340													7.7	50	
5	Tues.		1.460													7.9	47	
6	Wed.		1.450	6	73	2.35	28.42	21.7	262.42	0.0314	0.3797	12	145	<0.50	0	8.1	50	
7	Thurs.		1.180													7.8	50	
8	Fri.		1.200	7	70							12	120	<0.50	0	8.2	46	
9	Sat.		1.160															
10	Sun.		1.220															
11	Mon.		1.160													7.8	50	
12	Tues.		1.110													7.8	50	
13	Wed.		1.140													7.9	48	
14	Thurs.		1.200	7	70	2.86	28.62	27.3	273.22	0.0345	0.3453	10	100	<0.50	0	8.1	50	
15	Fri.		1.150	5	48							9	86	<0.50	0	8.1	48	
16	Sat.		1.130															
17	Sun.		1.080															
18	Mon.		1.000													7.8	48	
19	Tues.		1.110													7.8	48	
20	Wed.		1.110	5	46	3.03	28.05	27.7	256.43	0.0384	0.3555	8	74	<0.50	0	8.1	48	
21	Thurs.		1.120													7.8	48	
22	Fri.		1.100	4	37							6	55	0.78	7	8.1	48	
23	Sat.		1.140															
24	Sun.		1.060															
25	Mon.		1.000													7.8	44	
26	Tues.		1.060													7.8	47	
27	Wed.		1.010	9	76	2.80	23.59	25.0	210.59	0.0361	0.3041	5	42	0.56	5	8.0	45	
28	Thurs.		1.050													7.7	47	

TOTAL AVERAGE	0.0	33.650	50.0	488		108.68		1002.65		1.3846	73.0	730	1.3	11.9				0.0
MAX	0.0	2.310	6.3	61		27.17		250.66		0.3461	9.1	91	0.7	1.5	7.9	48		0.0
MIN	0.0	1.000	4.0	37		28.62		273.22		0.3797	12.0	145	0.8	7.2	8.2	50		0.0
	0.0	1.000	4.0	37		23.59		210.59		0.3041	5.0	42	0.6	0.0	7.7	44		0.0

7 DAY AVERAGE																		
WEEK 1	0.0	1.477	6.5	70		28.42		262.42		0.3797	11.5	126	<0.50	0.0	7.9	49		0.0
WEEK 2	0.0	1.170	7.0	70		28.62		273.22		0.3453	11.0	110	<0.50	0.0	8.0	49		0.0
WEEK 3	0.0	1.100	5.0	47		28.05		256.43		0.3555	8.5	80	<0.50	0.0	7.9	48		0.0
WEEK 4	0.0	1.060	6.5	56		23.59		210.59		0.3041	5.5	49	0.7	5.9	7.9	46		0.0

City of Waverly

MONTHLY MONITORING REPORT

Date: March, 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								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/DA Y	INF. PHOS. MG/L	INF. PHOS. LBS/DA Y	INF. TOTAL N (as N)	INF. TOTAL N (as N)	INF. TKN (as N) MG/L	INF. TKN (as N) LBS/DAY	INF. MG/L	INF. LBS/DA Y			
1	Fri.	1.040	97	6.92	105	2180	1.12	138	1197								196	1700	7.4	50
2	Sat.	1.000					1.16													
3	Sun.	0.710					1.45													
4	Mon.	0.910	97	6.88	115	2080	1.25												7.7	49
5	Tues.	1.000	97	6.90			1.16												7.5	49
6	Wed.	0.940	97	6.91			1.22	154	1207	4.74	37.16	32.7	256.35	29.0	227.35	228	1787	7.5	49	
7	Thurs.	1.030	97	6.85			1.13												7.5	50
8	Fri.	0.990	97	6.89	110	2000	1.17	115	950							180	1486	7.4	50	
9	Sat.	1.050					1.11													
10	Sun.	1.200					0.96													
11	Mon.	1.220	97	6.86	105	1930	0.94												7.6	47
12	Tues.	1.670	97	6.86			0.49												7.7	47
13	Wed.	3.650	97	6.87			-1.49	47	1431	4.51	137.29	24.4	742.76	21.6	657.53	256	7793	7.4	46	
14	Thurs.	3.150	97	6.84			-0.99												7.4	43
15	Fri.	2.970	96	6.91	167	1690	-0.81	47	1164							102	2527	7.5	42	
16	Sat.	3.220					-1.06													
17	Sun.	3.420					-1.26													
18	Mon.	3.320	96	6.86			-1.16												7.6	47
19	Tues.	3.170	97	6.88			-1.01												7.5	47
20	Wed.	2.970	97	6.88	157	1520	-0.81	52	1288	2.67	66.14	17.9	443.38	13.9	344.30	105	2601	7.5	48	
21	Thurs.	2.940	97	6.83			-0.78												7.6	48
22	Fri.	2.990	97	6.85			-0.83	51	1272							90	2244	7.5	47	
23	Sat.	2.910					-0.75													
24	Sun.	3.080					-0.92													
25	Mon.	2.580	97	6.85	115	1580	-0.42												7.5	49
26	Tues.	2.550	97	6.85			-0.39												7.6	49
27	Wed.	2.350	97	6.91			-0.19	73	1431	2.49	48.80	19.0	372.38	11.2	219.51	136	2665	7.5	49	
28	Thurs.	2.250	97	6.85			-0.09												7.7	50
29	Fri.	2.070	97	6.89	105	1570	0.09	70	1208							132	2279	7.5	51	
30	Sat.	1.960					0.20													
31	Sun.	1.820					0.34													

TOTAL AVERAGE	66.130					0.830	747.0	11148		289.39		1814.88		1448.68	1425.0	25082			
MAX	2.133	96.9	6.9			0.027	83.0	1239		72.35		453.72		362.17	158.3	2787	7.5	48.0	
MIN	0.710	97.0	6.9			1.450	154.0	1431		137.29		742.76		657.53	256.0	7793	7.7	51.0	
		96.0	6.8			-1.490	47.0	950		37.16		256.35		219.51	90.0	1486	7.4	42.0	

7 DAY AVERAGE																			
WEEK 1	0.947					1.213	146.0	1202		37.16		256.35		227.35	212.0	1744	7.5	49.4	
WEEK 2	1.847					0.313	81.0	1190		137.29		742.76		657.53	218.0	4640	7.5	49.4	
WEEK 3	3.144					-0.984	49.5	1226		66.14		443.38		344.30	103.5	2564	7.5	49.4	
WEEK 4	2.673					-0.513	62.0	1351		48.80		372.38		219.51	113.0	2455	7.6	48.8	

Signature: _____
 Certification Number: 3989

City of Waverly MONTHLY MONITORING REPORT

Date: March, 2019

DISCHARGE SERIAL # 001 - # 002

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/DA Y	EFF. TOTAL N (as N) MG/L	EFF. TOTAL N (as N) LBS/DA	EFF. Cu MG/L	EFF. Cu LBS/DA Y	TOTAL SUSPENDED SOLIDS		AMMONIA NITROGEN		EFF. pH	EFF. TEMP. °F.	E. COLI #/100 ML	
				EFF. MG/L	EFF. LBS/DAY							EFF. MGL	EFF. LBS/DA Y	FINAL MG/L	FINAL LBS/DA Y				
1	Fri.		1.040	6	52							4	35	1.01	9	8.0	48		
2	Sat.		1.000																
3	Sun.		0.710																
4	Mon.		0.910																
5	Tues.		1.000													7.8	45		
6	Wed.		0.940	5	39	3.23	25.32	24.8	194.42	0.0292	0.2289	3	24	0.67	5	7.8	45		
7	Thurs.		1.030													8.1	46		
8	Fri.		0.990	3	25											7.7	48		
9	Sat.		1.050									3	25	0.56	5	8.1	48		
10	Sun.		1.200																
11	Mon.		1.220																
12	Tues.		1.670													7.7	47		
13	Wed.		3.650	6	183	2.83	86.15	20.3	617.95	0.0342	1.0411	5	152	0.84	26	7.8	48		
14	Thurs.		3.150													8.0	48		
15	Fri.		2.970	6	149											7.5	44		
16	Sat.		3.220									8	198	1.36	34	7.7	44		
17	Sun.		3.420																
18	Mon.		3.320																
19	Tues.		3.170													7.8	46		
20	Wed.		2.970	4	99	1.37	33.93	10.7	265.04	0.0173	0.4285	6	149	1.39	34	7.8	48		
21	Thurs.		2.940													7.7	49		
22	Fri.		2.990	4	100											7.9	49		
23	Sat.		2.910									5	125	1.12	28	7.8	49		
24	Sun.		3.080																
25	Mon.		2.580																
26	Tues.		2.550													7.8	49		
27	Wed.		2.350	9	176	1.41	27.63	8.21	160.91	0.0222	0.4351	15	294	3.14	62	7.8	50		
28	Thurs.		2.250													8.1	50		
29	Fri.		2.070	9	155											7.6	52		
30	Sat.		1.960									14	242	3.58	62	8.1	51		
31	Sun.		1.820																

TOTAL AVERAGE MAX MIN	0.0	66.130	52.0	978		173.04		1238.32		2.1336	63.0	1242	13.7	263.6					
	0.0	2.133	5.8	109		43.26		309.58		0.5334	7.0	138	1.5	29.3		7.8	48		0.0
	0.0	3.650	9.0	183		86.15		617.95		1.0411	15.0	294	3.6	61.8		8.1	52		0.0
	0.0	0.710	3.0	25		25.32		160.91		0.2289	3.0	24	0.6	4.6		7.5	44		0.0

7 DAY AVERAGE																			
WEEK 1	0.0	0.947	5.5	46		25.32		194.42		0.2289	3.5	29	0.8	7.0		7.9	46		0.0
WEEK 2	0.0	1.847	4.5	104		86.15		617.95		1.0411	4.0	88	0.7	15.1		7.8	47		0.0
WEEK 3	0.0	3.144	5.0	124		33.93		265.04		0.4285	7.0	173	1.4	34.1		7.8	47		0.0
WEEK 4	0.0	2.673	6.5	138		27.63		160.91		0.4351	10.0	209	2.1	44.7		7.8	50		0.0

Date: April, 2019

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

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/DA Y	EFF. TOTAL N (as N) MG/L	EFF. TOTAL N (as N) LBS/DA	EFF. Cu MG/L	EFF. Cu LBS/DA Y	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/DA Y	FINAL MG/L	FINAL LBS/DA Y			
1	Mon.		1.830															
2	Tues.		1.760													7.7	51	
3	Wed.		1.770	13	192	2.27	33.51	10.6	156.48	0.0215	0.3174				7.8	52		
4	Thurs.		1.780									14	207	5.88	87	8.1	53	
5	Fri.		1.670	12	167							12	167	5.38	75	7.8	53	
6	Sat.		1.600												8.1	54		
7	Sun.		1.700															
8	Mon.		1.760															
9	Tues.		1.660												7.8	53		
10	Wed.		1.800												7.8	54		
11	Thurs.		1.780	10	148	2.78	41.27	13.1	194.47	0.0247	0.3667				7.8	52		
12	Fri.		1.640	9	123							13	193	4.76	71	8.2	51	
13	Sat.		1.560									11	150	4.26	58	8.2	52	
14	Sun.		1.690															
15	Mon.		1.660															
16	Tues.		1.700												7.9	52		
17	Wed.		1.880	7	110	2.53	39.67	11.1	174.04	0.0206	0.3230				7.9	54		
18	Thurs.		1.650	10	138							8	125	3.25	51	8.2	54	
19	Fri.		1.900									12	165	4.37	60	8.2	54	
20	Sat.		1.450												7.8	56		
21	Sun.		2.360															
22	Mon.		1.650															
23	Tues.		1.620												7.8	58		
24	Wed.		1.540	9	116	3.02	38.79	11.4	146.42	0.0268	0.3442				7.8	55		
25	Thurs.		1.360									13	167	1.85	24	8.1	55	
26	Fri.		1.480	5	62										7.8	55		
27	Sat.		1.850									10	123	1.01	12	8.1	54	
28	Sun.		1.750															
29	Mon.		1.720															
30	Tues.		1.920												7.9	53		
			0.000												8.0	54		

TOTAL	0.0	51.490	75.0	1055		153.23		671.40		1.3513	93.0	1298	30.8	438.0				
AVERAGE	0.0	1.661	9.4	132		38.31		167.85		0.3378	11.6	162	3.8	54.7	7.9	54	0.0	
MAX	0.0	2.360	13.0	192		41.27		194.47		0.3667	14.0	207	5.9	86.8	8.2	58	0.0	
MIN	0.0	0.000	5.0	62		33.51		146.42		0.3174	8.0	123	1.0	12.5	7.7	51	0.0	

7 DAY AVERAGE																		
WEEK 1	0.0	1.730	12.5	180		33.51		156.48		0.3174	13.0	187	5.6	80.9	7.9	53	0.0	
WEEK 2	0.0	1.699	9.5	136		41.27		194.47		0.3667	12.0	172	4.5	64.5	8.0	52	0.0	
WEEK 3	0.0	1.800	8.5	124		39.67		174.04		0.3230	10.0	145	3.8	55.5	8.0	54	0.0	
WEEK 4	0.0	1.607	7.0	89		38.79		146.42		0.3442	11.5	145	1.4	18.1	7.9	55	0.0	

City of Waverly

MONTHLY MONITORING REPORT

DISCHARGE SERIAL # 001 - # 002

Date: May, 2019

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		INFILTRATION						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/DA Y	INF. PHOS. MG/L	INF. PHOS. LBS/DA Y	INF. TOTAL N (as N)	INF. TOTAL N (as N)	INF. TKN (as N) MG/L	INF. TKN (as N) LBS/DAY	INF. MG/L	INF. LBS/DA Y		
1	Wed.	1.780	97	7.02			0.38	110	1633	4.00	59.38	25.1	372.61	17.2	255.34	198	2939	7.5	52
2	Thurs.	1.760	97	7.00			0.40											7.6	54
3	Fri.	1.690	97	7.04	285	2700	0.47	109	1536							180	2537	7.5	53
4	Sat.	1.830					0.33												
5	Sun.	1.520					0.64												
6	Mon.	1.620	97	7.02	293	2840	0.54											7.6	53
7	Tues.	1.570	97	7.03			0.59											7.5	53
8	Wed.	3.050	97	7.07			-0.89	117	2976	3.56	90.56	24.6	625.75	17.3	440.06	184	4680	7.5	53
9	Thurs.	1.510	97	7.03			0.65											7.5	53
10	Fri.	1.790	97	7.06	278	2920	0.37	118	1762							190	2836	7.5	53
11	Sat.	1.830					0.33												
12	Sun.	1.900					0.26												
13	Mon.	1.820	97	7.02	308	2890	0.34											7.7	54
14	Tues.	1.750	97	7.02			0.41											7.6	54
15	Wed.	1.760	97	7.08			0.40	110	1615	3.60	52.84	20.7	303.84	14.2	208.43	160	2349	7.5	54
16	Thurs.	1.720	97	7.00			0.44											7.5	54
17	Fri.	1.610	97	7.13	323	3020	0.55	112	1504							164	2202	7.5	54
18	Sat.	2.190					-0.03												
19	Sun.	1.570					0.59												
20	Mon.	2.180	97	7.03	300	3030	-0.02											7.5	53
21	Tues.	2.190	97	7.02			-0.03											7.5	54
22	Wed.	2.090	97	7.04			0.07	110	1917	3.07	53.51	24.2	421.82	15.8	275.40	180	3138	7.5	54
23	Thurs.	2.500	97	7.04			-0.34											7.5	53
24	Fri.	3.160	97	7.01	300	3060	-1.00	124	3268							208	5482	7.5	54
25	Sat.	2.610					-0.45												
26	Sun.	2.460					-0.30												
27	Mon.	2.460	97	7.06			-0.30											7.5	55
28	Tues.	2.340	97	7.04	315	3090	-0.18											7.5	54
29	Wed.	2.710	97	7.07			-0.55			3.06	69.16	19.1	431.69	12.6	284.78	152	3435	7.6	55
30	Thurs.	3.020	97	7.04			-0.86											7.4	55
31	Fri.	2.730	97	7.04			-0.57											7.5	54

TOTAL AVERAGE MAX MIN	64.720					2.240	910.0	16211		325.45		2155.71		1464.01	1616.0	29598			
	2.088	97.0	7.0			0.072	113.8	2026		65.09		431.14		292.80	179.6	3289	7.5	53.7	
	3.160	97.0	7.1			0.650	124.0	3268		90.56		625.75		440.06	208.0	5482	7.7	55.0	
	1.510	97.0	7.0			-1.000	109.0	1504		52.84		303.84		208.43	152.0	2202	7.4	52.0	

7 DAY AVERAGE																			
WEEK 1	1.681					0.479	109.5	1585		59.38		372.61		255.34	189.0	2738	7.5	53.0	
WEEK 2	1.950					0.210	117.5	2369		90.56		625.75		440.06	187.0	3758	7.6	53.2	
WEEK 3	1.889					0.271	111.0	1559		52.84		303.84		208.43	162.0	2275	7.5	53.0	
WEEK 4	2.517					-0.357	117.0	2593		53.51		421.82		275.40	194.0	4310	7.5	54.0	

Signature: _____
 Certification Number: 3989

Date: May, 2019

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

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/DA Y	EFF. TOTAL N (as N) MG/L	EFF. TOTAL N (as N) LBS/DA	EFF. Cu MG/L	EFF. Cu LBS/DA Y	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/DA Y	FINAL MG/L	FINAL LBS/DA Y			
1	Wed.		1.780	5	74	2.89	42.90	17.5	259.79	0.0299	0.4439	18	267	<0.50	0	8.2	54	57.6
2	Thurs.		1.760													8.0	54	
3	Fri.		1.690	5	70							16	226	<0.50	0	8.2	54	
4	Sat.		1.830															
5	Sun.		1.520															
6	Mon.		1.620													8.0	55	
7	Tues.		1.570													8.0	55	
8	Wed.		3.050	6	153	2.87	73.00	17.0	432.43	0.0283	0.7199	16	407	<0.50	0	8.2	55	2.0
9	Thurs.		1.510													8.0	54	
10	Fri.		1.790	6	90							20	299	0.56	8	8.2	54	
11	Sat.		1.830															
12	Sun.		1.900															
13	Mon.		1.820													8.1	54	
14	Tues.		1.750													8.0	55	
15	Wed.		1.760	4	59	2.57	37.72	20.5	300.91	0.0249	0.3655	15	220	<0.50	0	8.2	56	1.0
16	Thurs.		1.720													8.0	57	
17	Fri.		1.610	4	54							16	215	<0.50	0	8.2	58	
18	Sat.		2.190															
19	Sun.		1.570															
20	Mon.		2.180													8.2	54	
21	Tues.		2.190													8.1	55	
22	Wed.		2.090	7	122	2.48	43.23	20.1	350.36	0.0347	0.6048	24	418	<0.50	0	8.3	55	7.5
23	Thurs.		2.500													8.1	55	
24	Fri.		3.160	5	132							19	501	<0.50	0	8.3	55	
25	Sat.		2.610															
26	Sun.		2.460															
27	Mon.		2.460													8.1	57	
28	Tues.		2.340													8.1	56	
29	Wed.		2.710			2.14	48.37	18.1	409.09	0.0350	0.7910	23	520	<0.50	0	8.3	56	8.5
30	Thurs.		3.020													8.0	56	
31	Fri.		2.730													8.2	56	

TOTAL AVERAGE	0.0	64.720	42.0	753		245.23		1752.57		2.9251	167.0	3072	0.6	8.4				76.6
MAX	0.0	2.088	5.3	94		49.05		350.51		0.5850	18.6	341	0.6	0.9	8.1	55		15.3
MIN	0.0	3.160	7.0	153		73.00		432.43		0.7910	24.0	520	0.6	8.4	8.3	58		57.6
	0.0	1.510	4.0	54		37.72		259.79		0.3655	15.0	215	0.6	0.0	8.0	54		1.0

7 DAY AVERAGE																		
WEEK 1	0.0	1.681	5.0	72		42.90		259.79		0.4439	17.0	246	0.0	0.0	8.1	54		57.6
WEEK 2	0.0	1.950	6.0	121		73.00		432.43		0.7199	18.0	353	0.6	4.2	8.1	54		2.0
WEEK 3	0.0	1.889	4.0	56		37.72		300.91		0.3655	15.5	218	0.0	0.0	8.1	56		1.0
WEEK 4	0.0	2.517	6.0	127		43.23		350.36		0.6048	21.5	460	0.0	0.0	8.2	56		7.5

City of Waverly

MONTHLY MONITORING REPORT

Date: June, 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.						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/DA Y	PHOS. MG/L	PHOS. LBS/DA Y	TOTAL N (as N)	TOTAL N (as N)	TKN (as N) MG/L	TKN (as N) LBS/DAY	INF. MG/L	INF. LBS/DA Y		
1	Sat.	2.480					-0.32												
2	Sun.	2.370					-0.21												
3	Mon.	2.170	95	7.02			-0.01											7.6	57
4	Tues.	2.260	95	7.02			-0.10											7.5	57
5	Wed.	2.210	94	7.05			-0.05											7.5	58
6	Thurs.	2.060	92	6.93	346	3260	0.10	60	1031	3.50	60.13	19.9	341.89	13.6	233.65	148	2543	7.5	57
7	Fri.	1.970	98	7.02	256	3160	0.19	53	871							110	1807	7.5	55
8	Sat.	1.880					0.28												
9	Sun.	1.830					0.33												
10	Mon.	1.790	97	7.02	420	3150	0.37											7.5	56
11	Tues.	1.790	97	7.04			0.37											7.4	55
12	Wed.	1.690	97	7.07			0.47	129	1818	3.47	48.91	18.6	262.16	10.6	149.40	202	2847	7.6	56
13	Thurs.	1.670	97	7.05			0.49											7.5	55
14	Fri.	1.640	97	7.11	353	3180	0.52	105	1436									7.6	56
15	Sat.	1.710					0.45									208	2845		
16	Sun.	1.730					0.43												
17	Mon.	1.770	97	7.04	383	3160	0.39											7.5	57
18	Tues.	1.880	97	7.04			0.28											7.6	57
19	Wed.	1.830	97	7.07			0.33	118	1801	3.31	50.52	20.4	311.35	14.5	221.30	212	3236	7.6	57
20	Thurs.	1.720	97	7.03			0.44											7.4	56
21	Fri.	1.690	97	7.07	330	3160	0.47	117	1649									7.6	56
22	Sat.	1.590					0.57									220	3101		
23	Sun.	1.980					0.18												
24	Mon.	1.770	97	7.02	360	3150	0.39											7.4	59
25	Tues.	1.700	97	7.02			0.46											7.4	57
26	Wed.	1.710	97	7.08			0.45	105	1497	2.69	38.36	17.0	242.44	12.2	173.99	146	2082	7.6	58
27	Thurs.	1.800	97	7.02			0.36											7.5	59
28	Fri.	4.180	97	7.05	300	2990	-2.02	115	4009									7.6	59
29	Sat.	2.330					-0.17									176	6136		
30	Sun.	2.110					0.05												

TOTAL AVERAGE	59.310					5.490	802.0	14112		197.92		1157.84		778.35	1422.0	24596		
MAX	1.977	96.5	7.0			0.183	100.3	1764		49.48		289.46		194.59	177.8	3075	7.5	56.9
MIN	1.590	92.0	6.9			0.570	129.0	4009		60.13		341.89		233.65	220.0	6136	7.6	59.0
						-2.020	53.0	871		38.36		242.44		149.40	110.0	1807	7.4	55.0

7 DAY AVERAGE																		
WEEK 1	2.217					-0.057	56.5	951		60.13		341.89		233.65	129.0	2175	7.5	56.8
WEEK 2	1.756					0.404	117.0	1627		48.91		262.16		149.40	205.0	2846	7.5	56.8
WEEK 3	1.761					0.399	117.5	1725		50.52		311.35		221.30	216.0	3168	7.5	56.8
WEEK 4	2.104					0.056	110.0	2753		38.36		242.44		173.99	161.0	4109	7.5	58.4

Signature: _____
 Certification Number: 3989

City of Waverly
MONTHLY MONITORING REPORT

Date: June, 2019

DISCHARGE SERIAL # 001 - # 002

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		TOTAL SUSPENDED SOLIDS						AMMONIA NITROGEN		EFF. pH	EFF. TEMP. °F.	E. COLI #/100 ML	
				EFF. MG/L	EFF. LBS/DAY	EFF. PHOS. MG/L	EFF. PHOS. LBS/DA Y	EFF. TOTAL N (as N) MG/L	EFF. TOTAL N (as N) LBS/DA	EFF. Cu MG/L	EFF. Cu LBS/DA Y	EFF. MG/L	EFF. LBS/DA Y				FINAL MG/L
1	Sat.		2.480														
2	Sun.		2.370														
3	Mon.		2.170														
4	Tues.		2.260												8.0	59	
5	Wed.		2.210												8.0	59	
6	Thurs.		2.060	4	69	2.11	36.25	18.6	319.56	0.0211	0.3625	13	223	<0.50	0	8.0	59
7	Fri.		1.970	7	115									<0.50	0	8.0	60
8	Sat.		1.880									11	181	<0.50	0	8.1	59
9	Sun.		1.830														
10	Mon.		1.790														
11	Tues.		1.790												8.1	58	
12	Wed.		1.690	5	70	2.40	33.83	21.3	300.21	0.0352	0.4961	16	226	<0.50	0	8.0	58
13	Thurs.		1.670												8.2	58	
14	Fri.		1.640	6	82										8.1	58	
15	Sat.		1.710									14	191	<0.50	0	8.2	58
16	Sun.		1.730														
17	Mon.		1.770														
18	Tues.		1.880												8.0	59	
19	Wed.		1.830	5	76	2.06	31.44	19.3	294.56	0.0374	0.5708	16	244	<0.50	0	8.1	59
20	Thurs.		1.720												8.2	59	
21	Fri.		1.690	6	85										8.0	59	
22	Sat.		1.590									15	211	<0.50	0	8.3	60
23	Sun.		1.980														
24	Mon.		1.770														
25	Tues.		1.700												8.0	61	
26	Wed.		1.710	5	71	2.08	29.66	19.6	279.52	0.0327	0.4663	11	157	<0.50	0	8.0	60
27	Thurs.		1.800												8.2	60	
28	Fri.		4.180	5	174										8.0	61	
29	Sat.		2.330									12	418	<0.50	0	8.3	60
30	Sun.		2.110														
			0.000														

TOTAL AVERAGE	0.0	59.310	43.0	743		131.18		1193.85		1.8958	108.0	1852	0.0	0.0			0.0
MAX	0.0	1.913	5.4	93		32.80		298.46		0.4739	13.5	231	<0.5	0.0	8.1	59	0.0
MIN	0.0	4.180	7.0	174		36.25		319.56		0.5708	16.0	418	<0.5	0.0	8.3	61	0.0
	0.0	0.000	4.0	69		29.66		279.52		0.3625	11.0	157	<0.5	0.0	8.0	58	0.0

7 DAY AVERAGE																	
WEEK 1	0.0	2.217	5.5	92		36.25		319.56		0.3625	12.0	202	<0.5	0.0	8.0	59	0.0
WEEK 2	0.0	1.756	5.5	76		33.83		300.21		0.4961	15.0	209	<0.5	0.0	8.1	58	0.0
WEEK 3	0.0	1.761	5.5	80		31.44		294.56		0.5708	15.5	228	<0.5	0.0	8.1	59	0.0
WEEK 4	0.0	2.104	5.0	123		29.66		279.52		0.4663	11.5	288	<0.5	0.0	8.1	60	0.0

City of Waverly
Department of Public Works
FY 2018-19

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 2018-19. This is not a total summary, but does give an idea of the versatility of this division and the expertise required. Several thousand feet of sanitary and storm sewers were televised. Several problem areas are being scheduled for repair or replacement as time and funds become available.

FUTURE PROJECTS

1. Complete an inventory and inspection report of all sanitary and storm sewer structures and place into a computerized Storm/Sanitary Sewer Maintenance program.
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. Identify focus areas for Sewer Lining Project.

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 storm water collection system.

Storm and Sanitary Sewer Line Maintenance

Fiscal Year 2018-19

	<u>2015-16*</u>	<u>2016-17</u>	<u>2017-18**</u>	<u>2018-19</u>	<u>2019-20</u>	<u>Units</u>
<u>Sanitary Sewer Maintenance</u>						
Lines Flushed	25,182	97,579	61,503	29,698	****	Feet
Manholes Cleaned		217	3	5		Each
<u>Storm Sewer Maintenance</u>						
Lines Flushed		384	6,578	5,287		Feet
Intakes & MH Cleaned		28	21	57		Each
<u>Televising Lines</u>						
Sanitary Sewer	2,405	8,707	7,689	3,450		Feet
Storm Sewer		33	120	360		Feet
<u>Jetting Sewer Mains</u>						
Water Used	26,500	260,937	133,200	95,925		Gallons
<u>Lines Repaired</u>						
Sanitary Sewer		1	0	1		Each
Storm Sewer		3	7	3		Each
<u>Intakes Repaired</u>						
		0	0	2		Each
<u>Manholes Repaired</u>						
		2	18	0		Each
<u>Sewer Call-Outs</u>						
<i>During & after hours</i>		27	10	12		Each
<u>IA One Call Locates</u>						
	3,575	3,093	1,886	250	***	Each
<u>Other Division Work</u>						
Streets - Snow Plowing		69.8	36.6	18.2		Hours
Water - Leak Repairs		126.7	100.4	200.6		Hours
WPC - Lift Stations		19.6	16.6	19		Hours
Leisure Serv. - Cem. Graves	8	1	13	40		Each
Leisure Serv. - Golf Course		0	0	0		Hours
Engineering - Inspections		1	0	0		Hours

**For 2015-16 the Line Maintenance crew did not keep good records; hence the many blanks.*

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

****All requested locates previously done by SLM. . . . most now located by Water Div. instead.*

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

Storm and Sanitary Sewer Line Maintenance

Fiscal Year 2018-19

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. Installed sewer and water, poured concrete pad and built road for RV sewer dump. Helped move fire hydrants along Cedar Lane. Started root-treating problem sewer mains ourselves (over 2,500 done last year). Installed two 48" culverts behind CMI (12th Street SE) to access sewer mains.

City of Waverly
Department of Public Works
FY 2018-19

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
Special Collection Weeks – Spring
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 310. 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.

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 144.

Yard Waste Site

Along with the Recycling Center, the City also operates a Yard Waste Site from April through November. Four part-time employees also 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.

City of Waverly – Public Works
Solid Waste Division
Recycling Statistics
FY 2018-19

Recycling Center Car Count

Total: 43,080 Daily Average: 144

Recycling Saturday Car Count

Total: 10,241 Monthly Average: 3,590

Curbside Recycling Stops

Total: 40,271 Monthly Average: 3,356

Total Weight of the Recycled Products from the Recycling Center and Curbside Recycling Route: 1,118 tons

Total Weight of the Recycled Products from the Curbside Recycling Route:
817,760 pounds (409 tons)

Revenue from the recycled products: \$24,933.82

- At the end of April 2019, the City no longer received revenue from paper products recycled. This included: office paper (white and colored), cardboard, magazines, newspapers, and books.

Estimated cost for recycling program:

1. \$55,000 in wages for part-time employees at the Recycling Center and the Yard Waste Site, full-time employees doing the curbside route and hauling product to Republic Services (north of Cedar Falls)
2. \$15,000 to \$20,000 in utilities, building maintenance, equipment, fuel, and contracted work.

Other items or material recycled by the City of Waverly:

- 78 tons of steel, old sewer castings, signs, poles, plow blades, and miscellaneous pieces
- 65 tires
- 416 appliances
- 2,975 gallons of oil
- 345 electronics (computers, televisions, monitors, and printers)

Yard Waste Site car count: 22,123

(July - Nov 2018 and March – June 2019):

Monthly average: 2,765

Busiest months were October 2018 and June 2019

450 tons of yard waste were turned into compost.

2,607 tons of brush and trees were ground up to make wood mulch.

City of Waverly - Public Works
Solid Waste Division
Employee Hours

FY 2018-19

<u>Refuse Collections</u>	<u>Hours</u>
Residential	<u>1,954</u>
Commercial	<u>2,362</u>
Black Hawk Co. Landfill	<u>1,103</u>
Temporary Dumpsters	<u>464</u>
Corrugated Collection	<u>478</u>
Curbside Recycling Pick-up	<u>849</u>
Recycle Center Duties	<u>301</u>
Building/Vehicle/Dumpster Maintenance	<u>1,049</u>
Misc. Activity (training, etc)	<u>56</u>
<u>Other Divisions</u>	
Street Division	
Snow Plowing & Removal	<u>545</u>
Other (Patching, Mowing, Tree Trimming, Etc)	<u>31</u>
Water Division Projects	<u> </u>
Sewer Maintenance Projects	<u> </u>
Leisure Service Depts Projects	<u>61</u>

City of Waverly
Car Count
Recycling Center and Yard Waste Site
 FY 2018-19

Recycling Center

Month	# of Days	Mornings			Afternoons		Monthly Total	Daily Average
		7a-12:30p	Saturdays	% of Total	12:30-5:30p	% of Total		
July '18	25	1833	677	67%	1260	33%	3,770	151
Aug '18	27	997	794	60%	1176	40%	2,967	110
Sep '18	25	977	701	58%	1203	42%	2,881	115
Oct '18	26	1096	756	61%	1188	39%	3,040	117
Nov '18	24	1089	680	60%	1178	40%	2,947	123
Dec '18	24	1323	715	61%	1330	39%	3,368	140
Jan '19	24	1560	778	66%	1192	34%	3,530	147
Feb '19	23	1210	978	68%	1029	32%	3,217	140
Mar '19	26	1470	1071	65%	1343	35%	3,884	149
Apr '19	25	1745	882	66%	1380	34%	4,007	160
May '19	26	2181	1085	68%	1560	32%	4,826	186
Jun '19	25	2094	1124	69%	1425	31%	4,643	186
Total							43,080	

Recycling Center - Car Count History

Fiscal Year	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Weekdays	21,044	25,449	23,953	27,733	29,126	30,434	32,839
Saturdays	7,171	8,110	7,968	8,479	8,858	9,658	10,241
Totals	28,215	33,559	31,921	36,212	37,984	40,092	43,080

Yard Waste Site - Car Count History

Fiscal Year	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Totals	18,362	21,663	22,521	23,400	25,010	20,767	22,123

City of Waverly - Public Works

Solid Waste Division

Curbside Recycling

Number of Residential/Commercial Stops

FY 2018-19 - *revised 2/5/20*

<u>Week Beginning</u>	<u>Mon</u>	<u>Tues</u>	<u>Wed</u>	<u>Thurs</u>	<u>Fri</u>	<u>Weekly Totals</u>	<u>Total</u>
07/02/18	349	294	353	365	332	1,693	
07/16/18	345	313	346	387	321	1,712	3,405
08/01/18	347	303	350	376	327	1,703	
08/13/18	351	342	322	391	330	1,736	
08/27/18	352	346	349	422	339	1,808	5,247
09/10/18	355	358	387	420	384	1,904	
09/24/18	379	371	388	416	386	1,940	3,844
10/08/18	325	332	352	372	349	1,730	
10/22/18	351	361	371	417	383	1,883	3,613
11/05/18	400	372	343	423	410	1,948	
11/19/18	335	360	358	401	359	1,813	3,761
12/03/18	376	374	418	382	343	1,893	
12/17/18	355	373	361	398	355	1,842	3,735
12/31/18	366	363	349	415	375	1,868	
01/14/19	337	304	355	403	380	1,779	
01/28/19	287	343	351	409	291	1,681	5,328
02/11/19	330	377	352	409	350	1,818	
02/25/19	282	292	390	380	340	1,684	3,502
03/11/19	309	332	316	369	316	1,642	
03/25/19	376	346	389	417	347	1,875	3,517
04/08/19	351	339	352	393	327	1,762	
04/22/19	375	386	389	406	367	1,923	3,685
05/06/19	402	374	394	411	340	1,921	
05/20/19	417	392	493	434	382	2,118	4,039
06/03/19	389	345	384	447	392	1,957	
6/17/2019	402	376	397	432	382	1,989	3,946
Total for the FY 2018-19							47,622
Average Daily Stops							366

City of Waverly

Recycling Quantities

FY 2018-19

Sorted Recycling Collected at Recycling Center

		July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	June	TOTAL
Paper, Bond	lbs.	4,355	5,250	8,125	15,760	3,385	2,795	3,970	3,190	2,155	6,440	1,985	2,065	59,475
Slick Paper / Magazines	lbs.	6,475	5,215	12,020	5,890	5,730	6,640	7,595	4,775	5,220	10,645	21,335	15,555	107,095
Newsprint	lbs.	9,065	9,280	3,580	10,425	4,860	9,420	7,840	4,180	6,780	9,330	4,320	9,055	88,135
Corrugation/Chipboard	lbs.	73,675	95,905	81,660	98,040	72,415	78,940	60,835	77,535	91,915	74,695	91,465	74,150	971,230
#3, 4, 5, 6, 7 Plastics	lbs.	5,180	4,680	11,640	4,660	9,180	4,140	4,520	4,460	4,820	4,460	9,780	5,720	73,240
Steel / Alum	lbs.	11,400	8,915	5,795	6,870	9,340	63,445	9,011	65	9,370	6,767	16,110	9,475	156,563
Books	lbs.	2,560	2,950	7,450	3,675	1,560	1,345	835	1,685	2,655	1,680	750	9,055	33,495
Styrofoam**	lbs.	680	900	420	600	580	600	410	220	760	520	660	540	6,890
Clear Glass*	lbs.	9,760	4,800	5,280	9,360	5,180	4,500	5,220	5,940	5,360	6,420	10,680	3,920	76,420
Totals - Sorted Recycling		123,150	137,895	135,970	155,280	112,230	171,825	100,236	102,050	129,035	120,957	157,085	129,535	1,575,248
													Total Tons	788

*City takes glass to City of Cedar Falls and they recycle at no cost to us.

**City takes styrofoam to City of Cedar Falls and they recycle at no cost to us.

Commingled Recycling Picked up Curbside

		July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	June	TOTAL
Totals - Commingled Recycling	lbs.	69,780	67,660	83,620	63,280	62,920	72,200	67,440	64,100	67,000	64,000	72,040	63,720	817,760
													Total Tons	409

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.	192,930	205,555	219,590	218,560	175,150	244,025	167,676	166,150	196,035	184,957	229,125	193,255	2,393,008
													Total Tons	1,197

Motor Oil Collected at Recycling Center

		July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	June	TOTAL
Motor Oil	gal.	175	250	275	150	675	100	125	75	150	225	625	150	2,975

City of Waverly

Solid Waste and Recycling Revenues

FY 2018-19

Date	Solid Waste				Recyclables Collected at Recycling Center & YWS				Total Recyclable Revenue	Total SOLID WASTE & RECYCLABLE REVENUE
	Utility Billing	Sticker Sales	Temp. Dumpsters & Misc.	Total Solid Waste Revenue	Paper Products	Steel & Aluminum	Metro Redemption	Recycled Bulky Items		
Jul-18	83,133.54	416.00	250.59	83,800.13	491.44	313.50	242.95	1,201.14	2,249.03	86,049.16
Aug-18	114,734.42	235.00	629.88	115,599.30	591.14	241.60	249.90	1,065.26	2,147.90	117,747.20
Sep-18	186,176.52	1,180.00	350.00	187,706.52	401.19	160.90	271.10	1,115.00	1,948.19	189,654.71
Oct-18	120,608.78	1,976.00	851.28	123,436.06	753.57	132.90	366.35	1,095.00	2,347.82	125,783.88
Nov-18	111,594.48	205.00	478.68	112,278.16	668.43	263.10	242.90	1,262.63	2,437.06	114,715.22
Dec-18	118,202.31	2,149.00	375.60	120,726.91	670.53	22.00	216.95	946.36	1,855.84	122,582.75
Jan-19	120,937.45	1,277.50	280.10	122,495.05	604.51	1,753.75	217.85	549.00	3,125.11	125,620.16
Feb-19	106,890.35	1,170.00	128.68	108,189.03	374.13		165.50	361.00	900.63	109,089.66
Mar-19	117,706.58	2,250.50	330.78	120,287.86	204.15	262.50	394.25	482.00	1,342.90	121,630.76
Apr-19	117,168.49	1,970.00	952.48	120,090.97	115.05	187.05	107.80	2,068.90	2,478.80	122,569.77
May-19	117,637.74	223.00	252.85	118,113.59		441.10	336.15	1,433.72	2,210.97	120,324.56
Jun-19	111,933.24	0.00	250.00	112,183.24		140.10	256.60	1,492.87	1,889.57	114,072.81
TOTALS	1,426,723.90	13,052.00	5,130.92	\$ 1,444,906.82	4,874.14	3,918.50	3,068.30	13,072.88	24,933.82	\$ 1,469,840.64
Received from Black Hawk County Landfill to assist with funding of recycling & waste reduction									8/1/2018	\$ 3,601.90
TOTAL REVENUES										\$ 1,473,442.54

City of Waverly
Solid Waste Landfill Disposal Quantities

		2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
		Tons	Tons	Tons	Tons	Tons	Tons	Tons
July	<i>Residential:</i>	124.12	102.49	158.17	163.76	140.32	158.78	164.02
	<i>Commercial:</i>	186.55	197.63	199.22	204.42	182.66	209.73	234.22
		310.7	300.1	357.4	368.2	323.0	368.5	398.2
August	<i>Residential:</i>	127.4	144.43	111.16	146.22	168.91	176.28	173.3
	<i>Commercial:</i>	183.58	226.89	186.66	198.73	250.92	232.62	257.79
		311.0	371.3	297.8	345.0	419.8	408.9	431.1
September	<i>Residential:</i>	107.27	136.37	128.83	135.54	160.31	148.59	148.84
	<i>Commercial:</i>	191.05	173.7	155.88	222.66	268.05	223.61	234.61
		298.3	310.1	284.7	358.2	428.4	372.2	383.5
October	<i>Residential:</i>	122.7	114.26	130.03	152.11	139.67	159	156.12
	<i>Commercial:</i>	212.43	224.65	246.25	216.92	232.5	248.32	266.49
		335.1	338.9	376.3	369.0	372.2	407.3	422.6
November	<i>Residential:</i>	112.57	137.75	132.54	146.87	148.88	155.13	165.1
	<i>Commercial:</i>	194.81	192.28	178.65	208.55	224.95	216.51	222.06
		307.4	330.0	311.2	355.4	373.8	371.6	387.2
December	<i>Residential:</i>	103.44	119.01	155.2	140.09	145.38	142.86	146.1
	<i>Commercial:</i>	140.49	185.39	204.38	213.52	204.83	178.67	209.3
		243.9	304.4	359.6	353.6	350.2	321.5	355.4
January	<i>Residential:</i>	140.4	152.42	146.17	124.32	144.19	155.33	138.16
	<i>Commercial:</i>	88.79	145.97	180.99	170.93	204.74	233.55	188.87
		229.2	298.4	327.2	295.3	348.9	388.9	327.0
February	<i>Residential:</i>	92.34	100.5	114.4	125.26	123.59	122.64	144
	<i>Commercial:</i>	131.21	177.45	166.41	202.23	189.45	196.97	195.31
		223.6	278.0	280.8	327.5	313.0	319.6	339.3
March	<i>Residential:</i>	115.31	112.61	185.93	121.91	152.79	144.68	138.02
	<i>Commercial:</i>	188.59	196.4	188.14	210.67	217.11	214.08	223.63
		303.9	309.0	374.1	332.6	369.9	358.8	361.7
April	<i>Residential:</i>	128.3	128.2	125.3	138.18	133.45	132.94	158.3
	<i>Commercial:</i>	221.8	253.56	211.46	223.63	221.03	242.11	258.12
		350.1	381.8	336.8	361.8	354.5	375.1	416.4
May	<i>Residential:</i>	121.1	150.96	127.76	134.23	166.26	157.53	173.41
	<i>Commercial:</i>	276.48	249.33	193.09	246.73	252.42	266.98	266.61
		397.6	400.3	320.9	381.0	418.7	424.5	440.0
June	<i>Residential:</i>	122.12	95.89	147.24	154.59	162.94	134.14	152.17
	<i>Commercial:</i>	217.48	191.57	221.27	236.56	228.16	220.81	220.18
		339.6	287.5	368.5	391.2	391.1	355.0	372.4
TOTAL		3,650.3	3,909.7	3,995.1	4,238.6	4,463.5	4,471.9	4,634.7

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

FY 2018-19

	2018						2019						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	4	9	2	6	9	3	8	3	2	0	8	8	6	68
Freezers	1	0	1	2	1	1	3	2	0	1	1	2	2	17
Air Conditioners	6	3	1	2	1	1	0	0	0	0	0	3	2	19
Dehumidifiers	5	4	6	11	5	0	1	0	0	0	5	5	8	50
Appliances w/out Freon														
Water Heater/Furnace	2	1	2	2	1	0	0	0	1	3	2	6	2	22
Water Softener	2	1	1	2	0	1	3	1	0	1	1	0	0	13
Stove	0	1	1	5	5	2	1	0	1	1	1	1	2	21
Washer	4	1	2	3	2	1	0	2	0	3	2	5	2	27
Dryer	2	2	2	1	0	1	2	1	0	2	2	5	1	21
Dishwasher	3	2	1	2	3	4	1	1	2	0	4	3	3	29
Humidifier	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Gas Grill	5	1	2	8	1	0	0	1	0	0	12	8	6	44
Microwave	7	10	6	10	8	7	9	0	2	5	9	6	5	84
Electronics														
Televisions	22	32	35	25	27	22	14	3	16	35	21	27	40	319
Monitors	0	0	2	1	0	3	0	0	0	0	0	1	0	7
Printers	1	0	1	3	0	0	2	0	1	2	0	2	1	13
Computers	0	0	3	0	0	0	0	0	1	0	0	1	1	6
Tires														
Car	3	7	34	3	0	0	0	0	4	4	0	2	7	64
Truck	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Tractor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	68	74	103	86	63	46	44	14	30	57	68	85	88	826

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