

October 1, 2018
 Mayor & City Council Members
 City of Waverly

EXECUTIVE SUMMARY OF THE
2017-18
PUBLIC WORKS DEPARTMENT
ANNUAL REPORT

Highlights of the 2017-18 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	-
1 st Street SE Water Main Extension 2017	Dec. 2016	Sept. 2017	\$ 174,245
Cedar River Parkway (East) 2018	Jan. 2018	not final	-
Bituminous Seal Coat Program 2017	March 2017	Sept. 2017	\$ 191,135
39 th Street SE Slurry Sealing Project 2017	March 2017	Aug. 2017	\$ 36,323
Sanitary Sewer Manhole Rehab 2017	March 2017	Nov. 2017	\$ 25,671
SE Waverly Flood Protection 2017 (final report only)	June 2017	Oct. 2017	\$ 27,000
Citywide Ped Ramp Construction 2017	March 2017	July 2017	\$ 95,501
City Hall Parking Lot Improvements 2017	March 2017	Aug. 2017	\$ 35,030
Library Parking Lot Repair 2017	March 2017	Oct. 2017	\$ 69,329
Downtown Alley Reconstruction 2017	March 2017	Sept. 2017	\$ 35,298
Crack Cleaning and Filling Project 2017	March 2017	Sept. 2017	\$ 15,622
Citywide Sidewalk Repairs 2017	June 2017	Dec. 2017	\$ 115,085
Airport Bulk Hangar Improvements 2018	March 2017	not final	-
Airport Runway 29 Extension 2018	Aug. 2017	not final	-
Bituminous Seal Coat Program 2018	Feb. 2018	not final	-
Slurry Seal Project 2018	Feb. 2018	not final	-

Projects (Cont'd)	Initiated	Finalized	Cost
Downtown Alley Reconstruction 2018	March 2018	not final	-
Sanitary Sewer Manhole Rehab 2018	March 2018	June 2018	\$ 25,032
Asphalt Patching – Spring 2018	March 2018	June 2018	\$ 31,363
Adams Pkwy Bridge Repair & Horton Rd. 2018	June 2018	not final	-
WPC Facility Improvements 2020	March 2018	not final	-

Total value of work **finalized** between July 2017 thru June 2018 **\$ 876,634**

Subdivision w/ Public Infrastructure	Final Plat Approved	Public Improve. Accepted	Lots	Streets (Feet)
Highpoint 2 nd Addition	Oct. 2015	Nov. 2017	15	1,142
Omni Lot 40 Development (Sanitary Sewer)	n/a	not final	1	0

Total Completed for **July 2017 thru June 2018** 16 1,142
 Newly Accepted Streets = 0.22 mi

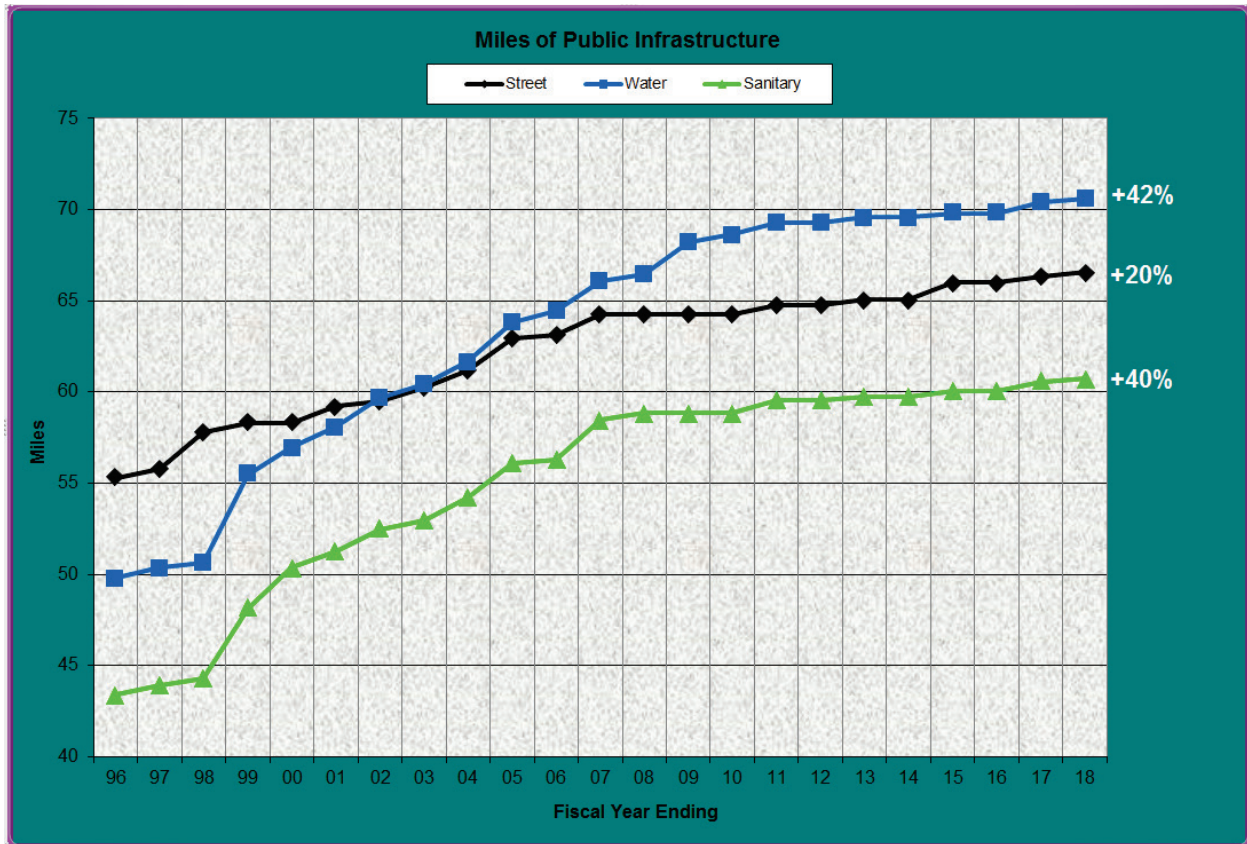
Public Works Administration is also responsible for coordinating and overseeing the general operations and budgets of 10 divisions. Division leaders are responsible for the daily operations and report to the Public Services Superintendent or the Director of Public Works. The 2016-17 actual and the 2017-18 budgeted division expenditures were:

Division	2016-17 Actual	2017-18 Budget
Public Works Administration	\$ 243,945	\$ 259,841
Engineering	243,026	294,846
General Infrastructure Maintenance	397,353	368,760
Equipment Services	300,055	308,319
Street RUT (+ Transfer)	1,193,450	1,448,396
Water (Service, Misc., Int.)	1,298,936	1,454,020
Water Pollution Control (Service, Misc., Int.)	1,149,251	1,181,539
Sanitary & Storm Sewer Maintenance	223,281	277,404
Solid Waste	1,258,379	1,423,410
Airport	80,916	77,590
	\$ 6,388,592	\$ 7,094,125

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 2017-18 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 22 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.

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

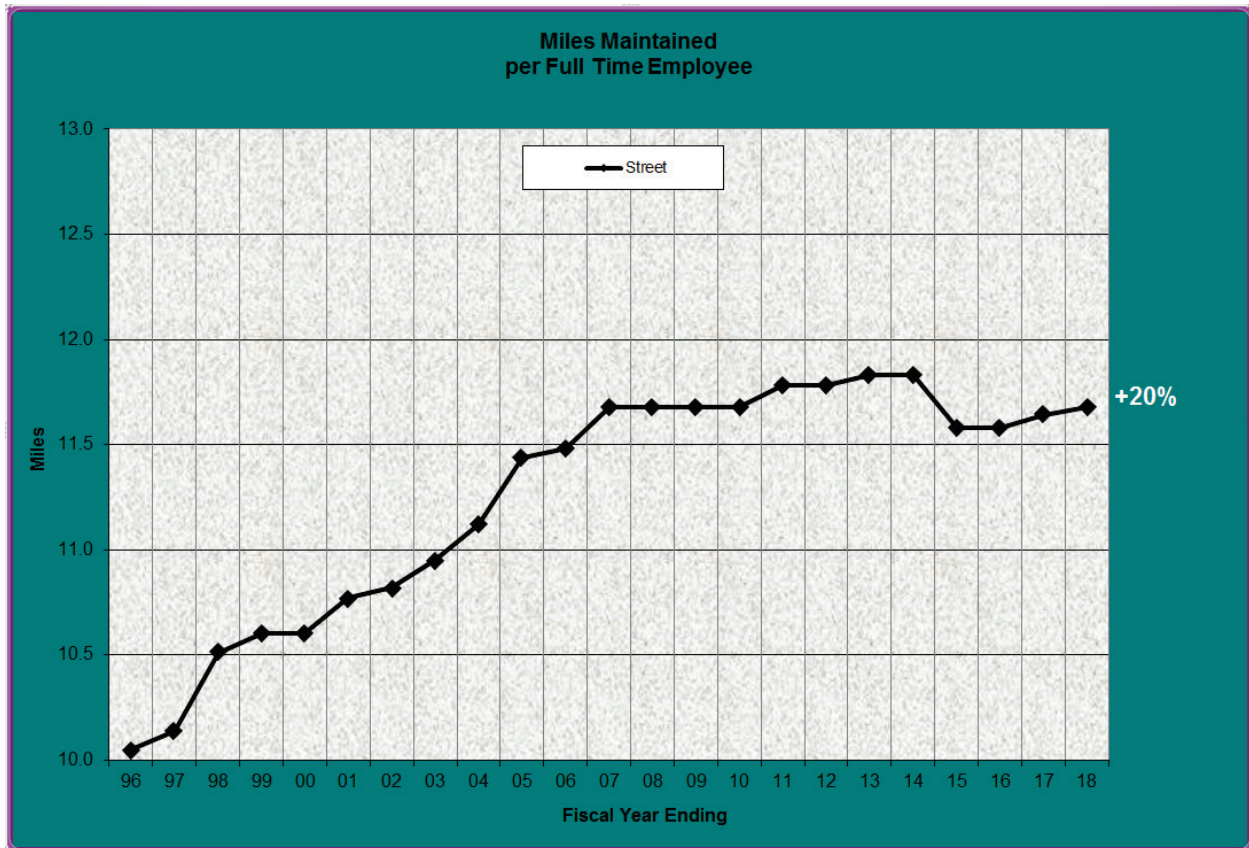
This division is responsible for the routine maintenance and repairs of City vehicles. A five-year equipment replacement schedule forecast is maintained allowing for the timely and economical replacement of vehicles and major items of equipment.

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 2017-18 the City officially accepted 0.22 miles of new streets that developers built. 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 second year the City performed a slurry seal project with work on 12th Street NW and in the JadeStone Subdivision in northwest Waverly.

Maintenance efforts are directed to asphalt patching, seal coating, vegetation management, street sweeping, sign 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 2018 Vern Sebilsky the Street & Sanitation Foreman retired. In June 2018, Gary Brandt, a Light Equipment Operator in the Street Division, was hired as the Street & Sanitation Foreman. Additionally, in March 2018 Darrel Petersen, a Light Equipment Operator in the Street Division, retired. In June 2018, Al Leerhoff, Chris Miller, Bryce

McKenzie and Tyler Schellhorn transferred from Refuse Collectors in the Solid Waste Division to Light Equipment Operators in the Street Division.

Looking to the Future

- Vegetation management of roadsides, detention basins, trees with the right-of-way, and open channel waterways is adversely impacting core services related to repairing and maintaining pavements, signage, etc.

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 1,879 Iowa One-Call locates for water mains, sanitary sewer and storm sewers.

On average 982,507 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 August 2017 Shane Pothast, the Senior Water Operator, took a position in the Leisure Services Department. In October 2017 Justin McGlaun was hired as the Water & Sewer Line Maintenance Superintendent. Justin's new position as a Superintendent replaced Shane's position as Senior Water Operator.

In 2013 the City installed (ERTs) electronic remote transmitters on approximately 4,000 water meters.

Looking to the Future

- Replacement and installation of approximately two miles of water main along Bremer Avenue from 20th Street West to 8th Street East began in April 2017 and is expected to be completed in October 2018. Work is being performed as part of the Iowa DOT's Iowa Highway 3 Reconstruction project.
- 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 December 2017 Glen VanderKolk retired as the Wastewater Operator (Lab Technician) in the Water Pollution Control Division. In April 2018 Grant Benschoter was hired as a Wastewater Operator (Lab Technician).

A consultant, WHKS & Co., was hired to perform the Iowa DNR required nutrient reduction strategy study. Work was completed and submitted to the Iowa DNR in December 2016.

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.

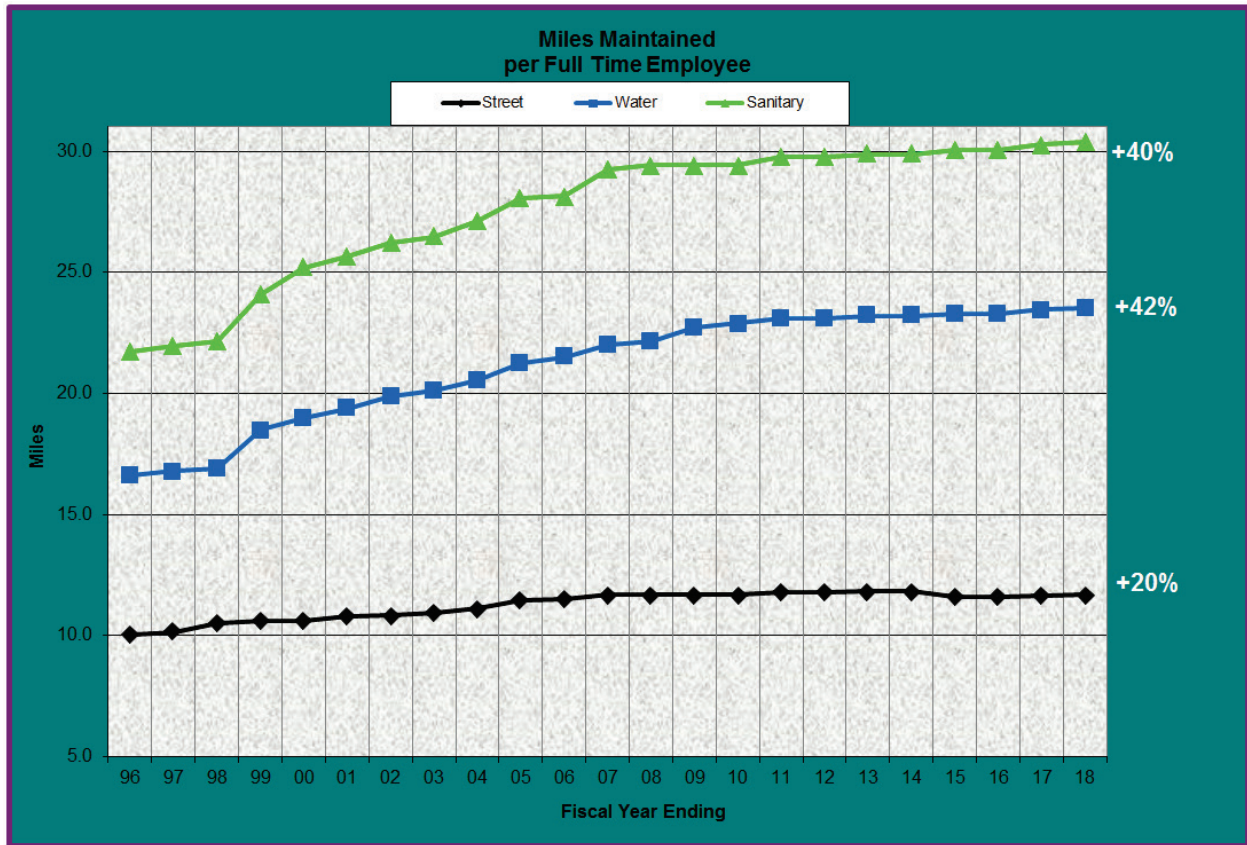
Looking to the Future

- 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 2012 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.

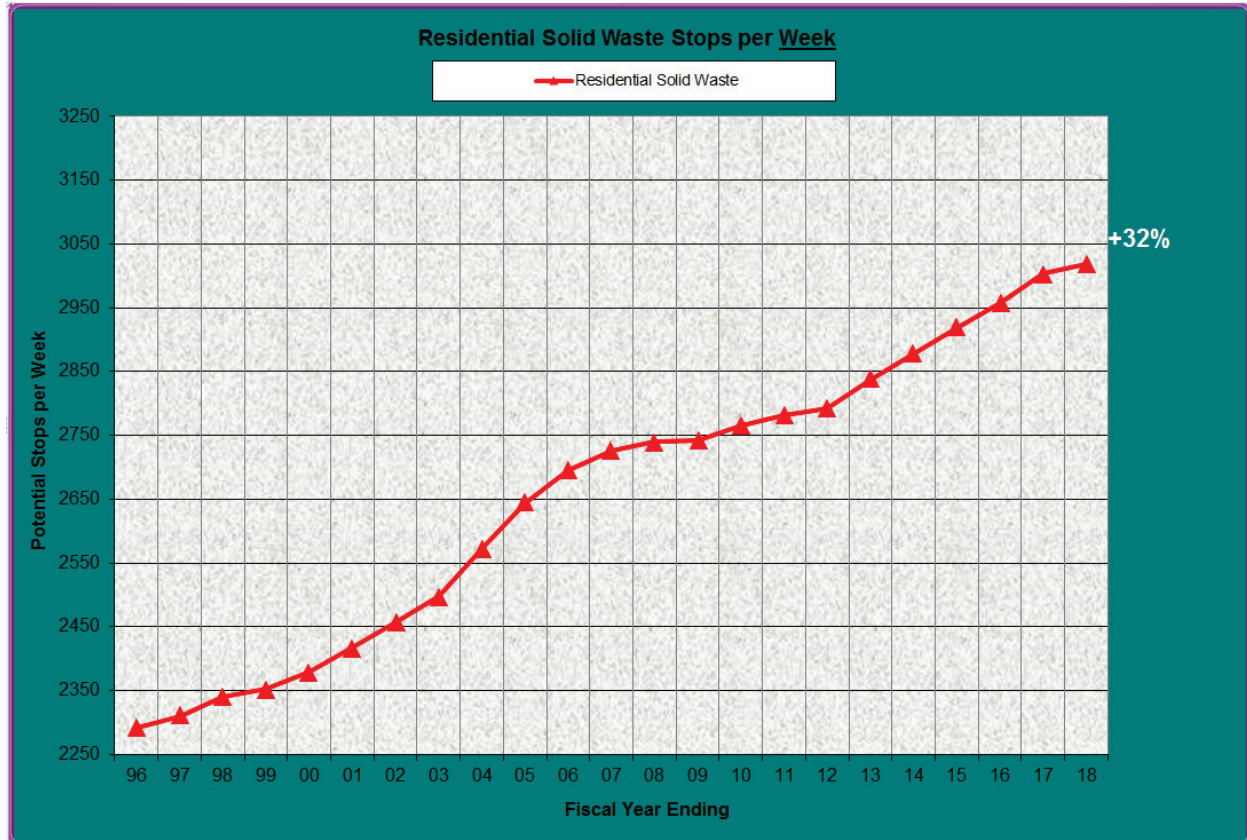


Looking to the Future

- 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 along with maintaining ditches and detention basins.

In March 2018 Kevin Russell retired from the Sewer Line Maintenance Division. In June 2018 Mike Gabe was hired as the new Senior Sewer Line Operator. Mike's new position as Senior Sewer Line Operator replaced Kevin's position as Sewer Maintenance Worker to better define the chain of command. In June 2018 Corey Buss transferred from a Light Equipment Operator in the Street Division to a Sewer Maintenance Operator in the Sewer Line Maintenance Division.

Division 9 - Solid Waste/Recycling Division



In the spring of 2016 the two semi-automated side-loading trucks (purchased in 2007) were replaced with fully automated trucks for residential garbage collection. No additional staff was required for the change, but the change did require all residents to use city-supplied garbage containers.

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.

In June 2018 Al Leerhoff, Chris Miller, Bryce McKenzie and Tyler Schellhorn transferred from Refuse Collectors in the Solid Waste Division to Light Equipment Operators in the Street Division.

In June 2018 Steve Ameling, Mike Seehusen, Brad Swarts, and Paul Jones 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. This past summer wood mulch delivery was made available to rural residents near Waverly in an effort to draw down the stockpile.

Division 10 – Waverly Municipal Airport

Cedar Valley Aviation is the fixed-based operator who manages the airport facility for the City. In recent years projects were completed to maintain and repair the runway apron area, construct a new entrance road and parking facilities. In the spring of 2016 the 11/29 Runway and lighting system was totally rebuilt.

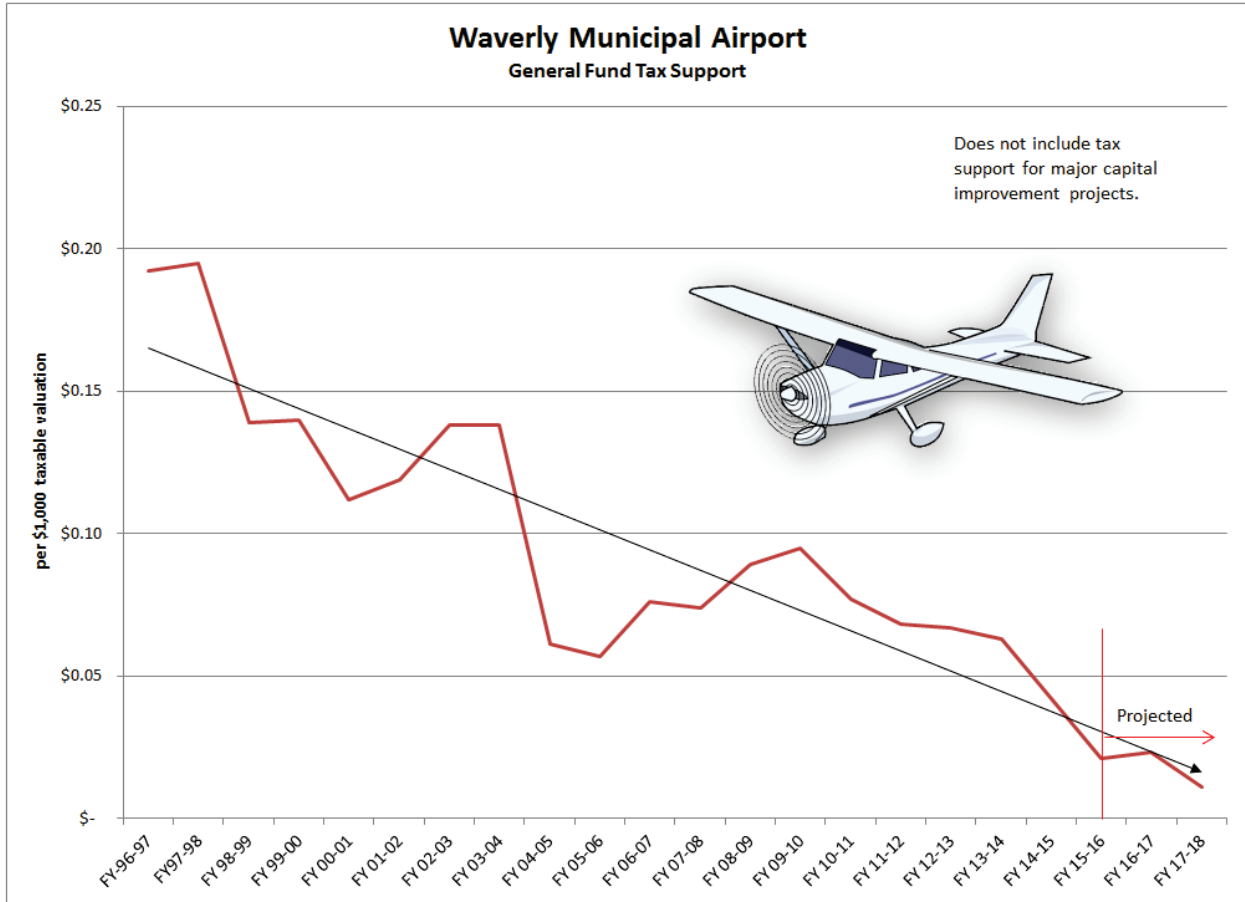
Much discussion continues to take place regarding the expansion of the runway safety area and extension of the landing strip at the Waverly Municipal Airport. Work is on-going to acquire the last remaining parcel. Acquisition of the remaining parcel is necessary to allow for 2019 construction of the runway extension that is now under final design.

Recently completed projects at the airport include replacing the florescent lights with LED lighting in the office area, mechanics room and bulk hangar. Additionally, insulation with a new fabric finish was added to the bulk hangar ceiling and upper sidewalls.

The annual property tax support for the Airport continues to decrease and by the year 2020 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

- Acquire the remaining parcel of land for FAA compliance with the runway safety area.
- Renegotiate or solicit proposals for the FBO / Airport Manager contract that expires on October 31, 2018.
- Extend runway 400' to the east.
- Relocate airport entrance sign.
- Expand the apron (airplane parking lot) to the west.
- Allow for private hangar construction.



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 2017-18

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, Water, Water Pollution Control, Storm & Sanitary Sewer Line Maintenance, Solid Waste, & Airport).

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 2017-18

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: 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 (one last property to purchase – Schmidt)

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 will reconstruct 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%) and the new storm sewer (50%).
Engineer: WHKS & Co, Mason City, Iowa (City’s water main and streetscaping)
Contractor: Skyline Construction (IDOT’s contractor)
Total Project Cost: \$
Total City Expense: \$
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 to Knight Ave. at Eisenach Village.
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

1st Street SE Water Main Extension 2017

Initiated: December 2016
Location: 1st Street SE from East Bremer Ave. south to 2nd Avenue SE.
Description: Replacement of an old 4" water main with an 8" water main. This new water main was need for the old CUNA building that will be required to be sprinkled in the near future.
Engineer: Fehr-Graham, West Union, Iowa
Contractor: Denver Underground & Grading, Denver, Iowa
Total Cost: \$174,245
Finalized: September 11, 2017 *(See attached final agenda memo for more info.)*

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 roadway. Currently under construction.
Engineer: Stanley Consultants, Des Moines, Iowa
Contractor: Cramer & Associates
Total Cost: \$
Finalized: not final

Bituminous Seal Coat Program 2017

Initiated: March 2017
Location: SE Waverly, Bremer Road and all streets to the east of Bremer Road to the east City Limits (NE & SE Waverly).
Description: Seal Coating of about 100 City blocks.
Engineer: City
Contractor: Blacktop Services, Humbolt, Iowa
Total Cost: \$191,135
Finalized: September 11, 2017

39th Street SE Slurry Sealing Project 2017

Initiated: March 2017
Location: 39th Street SE
Description: In lieu of seal coating 39th Street SE, the City had 39th Street SE slurry sealed. This was the first slurry sealed street in Waverly.
Engineer: City
Contractor: Fort Dodge Asphalt Co., Fort Dodge, Iowa
Total Cost: \$36,323
Finalized: August 7, 2017 *(See attached final agenda memo for more info.)*

Sanitary Sewer Manhole Rehab 2017

Initiated: March 2017
Location: Various locations NE & SE Waverly
Description: Repairing and installing a protective liner inside sanitary sewer manholes that are deemed to be in poor condition or have storm water infiltration issues.
Engineer: City
Contractor: Visu-Sewer, Inc., Pewaukee, Wisconsin
Total Cost: \$25,671
Finalized: November 20, 2017 *(See attached final agenda memo for more info.)*

SE Wavery Flood Protection 2017

Initiated: June 2017
Location: Southeast Waverly
Description: This project consists of updating the 2011 Southeast Waverly Flood Protection Feasibility Study to include updated FEMA Flood Insurance Maps and recent aerial photography. Updated cost estimates for the options listed in this study will also be completed. In addition, the project will review the possibility of raising 7th Avenue SE to provide access during a 50-year flood event, and either raising 4th Street SE or construction of a levee along 4th Street SE to provide improved protection during flood events.
Engineer: AECOM, Waterloo, Iowa
Total Cost: \$27,000
Finalized: Presentation of Final Report – October 23, 2017 *(See attached agenda memo for more info.)*

Citywide Ped Ramp Construction 2017

Initiated: March 2017
Location: Southwest Waverly
Description: Reconstruction of pedestrian ramps in Zone 7 as part of the Sidewalk Repair Program.
Engineer: City
Contractor: Midwest Concrete, Peosta, Iowa
Total Cost: \$95,501
Finalized: July 10, 2017 *(See attached final agenda memo for more info.)*

City Hall Parking Lot Improvements 2017

Initiated: March 2017
Location: Waverly City Hall, 200 1st Street NE
Description: Replacing bad sections of concrete at the north end of the parking lot and adding concrete/new parking stalls where the Burr Oak tree once lived.
Engineer: City
Contractor: Feldman Concrete, Dyersville, Iowa
Total Cost: \$35,030
Finalized: August 21, 2017 *(See attached final agenda memo for more info.)*

Library Parking Lot Repair 2017

Initiated: March 2017
Location: Waverly's Municipal Library, 1500 West Bremer Avenue
Description: Replacing the bad sections of concrete (very north end and the section east of front door)
Engineer: City
Contractor: Feldman Concrete, Dyersville, Iowa
Total Cost: \$69,329
Finalized: October 16, 2017 *(See attached final agenda memo for more info.)*

Downtown Alley Reconstruction 2017

Initiated: March 2017
Location: Alley in 100 block of East Bremer Avenue (between 1st Street NE and 2nd Street NE)
Description: Reconstruction of the alley with concrete.
Engineer: City
Contractor: Feldman Concrete, Dyersville, Iowa
Total Cost: \$35,298
Finalized: September 18, 2017 *(See attached final agenda memo for more info.)*

Crack Cleaning and Filling Project 2017

Initiated: March 2017
Location: 1st Street NW & Horton Road and 12th Street NW
Description: This project involves cleaning the cracks with compressed air and then sealing them with bituminous oil.
Engineer: City
Contractor: Fahrner Asphalt Sealers, Dubuque Iowa
Total Cost: \$15,622
Finalized: September 11, 2017 *(See attached final agenda memo for more info.)*

Citywide Sidewalk Repairs 2017

Initiated: June 2017
Location: Southwest Waverly
Description: Reconstruction of sidewalk in District 7 as part of the Sidewalk Repair Program.
Engineer: City
Contractor: Feldman Concrete, Dyersville, Iowa
Total Cost: \$115,085
Finalized: December 18, 2017 *(See attached final agenda memo for more info.)*

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: not final

Airport Runway 29 Extension 2018

Initiated: August 2017
Location: Waverly Municipal Airport
Description: Extension of runway by 400 feet.
Engineer: McClure Engineering
Contractor:
Total Cost: \$
FAA Design Grant: \$137,637
Finalized: under design

Bituminous Seal Coat Program 2018

Initiated: February 2018
Location: SW 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: \$
Finalized: not final

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: \$
Finalized: not final

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.
Engineer: City
Contractor: Barry Smith Grading & Excavating
Total Cost: \$
Finalized: not final

Sanitary Sewer Manhole Rehab 2018

Initiated: March 2018
Location: Southwest Waverly
Description: Repair and installation of a protective liner inside sanitary sewer manholes that were deemed in poor condition or have stormwater infiltration issues.
Engineer: City
Contractor: Josh's Construction, Dubuque, Iowa
Total Cost: \$25,032
Finalized: June 18, 2018

Asphalt Patching – Spring 2018

Initiated: March 2018
Location: Various locations in Waverly
Description: Permanent asphalt repair of utility cuts within City streets.
Engineer: City
Contractor: Blacktop Service Co., Humbolt, Iowa
Total Cost: \$31,363
Finalized: June 4, 2018

Adams Parkway Bridge Repair & Horton Road Impr. 2018

Initiated: June 2019
Location: Adams Parkway Bridge & Horton Road
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:
Total Cost: \$
Finalized: under design

WPC Facility Improvements 2020

Initiated: March 2018
Location: WPC Facility
Description: Currently under design with anticipated construction in 2020. 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

SUBDIVISIONS

Highpoint 2nd Addition

Approved: Construction docs approved October 2015
Location: Extension 2nd Avenue NE to 10th Street SE
Description: Project consists of the extension of street, water and sewer improvements.
Engineer: Design – Larry Buchholz, Cedar Falls, Iowa
Developer: Waverly Real Estate, LLC (Steve Darrah) of Waverly, Iowa
Accepted: November 6, 2017

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: under construction (accepted October 15, 2018)

Final Agenda Memos from Public Improvement Projects

Final Agenda Memos from Public Improvement Projects



AGENDA MEMORANDUM

City Council Meeting
September 11, 2017

SUBJECT: 1st Street SE Water Main Extension 2017
Finalize Project

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

Recommended City Council Action

- Approve Change Order No. 1 for the final adjustment of quantities in the amount of a \$6,037.20 decrease.
- Accept the 1st Street SE Water Main Extension 2017 project as complete.
- Approve Pay Estimate No. 3 in the amount of \$13,918.64 as the final payment to Denver Underground & Grading of Denver, Iowa.

Summary Statement

Denver Underground & Grading of Denver, Iowa, has completed the 1st Street SE Water Main Extension 2017 project in accordance with the construction documents. The cost of the completed work is \$157,608.80 and Change Order No. 1 in the amount of a \$6,037.20 decrease is for the final adjustment of contract quantities.

Expenditure Required

Design, Fehr-Graham – Lump Sum.....	\$ 8,000	
Construction, Denver Underground & Grading, Final.....	157,608	
Utility Equipment (additional 4” gate valves).....	1,137	
Project Administration and Inspection, City.....	<u>7,500</u>	
Total Cost of the Project.....		\$ 174,245

Source of Funds

TIF in FY 2017-18.....	\$ <u>176,646</u>	
Total Financing for the Project.....		\$ 176,646

Policy

The installation of a larger water main from East Bremer Avenue to 201 1st Street SE is consistent with the following planning document:

- Water Distribution and Modeling Report - April 2010 (replace undersized water mains)

Project Concern

n/a

Alternative

n/a

Background Information

The CUNA building at 201 1st Street SE has been vacant for several years and during this time there have been inquiries on the ability to provide a cost effective interior fire suppression system. Unfortunately the City's water distribution system that serves the building is a 4-inch diameter main that is too small to supply the necessary flow rate needed to sprinkle the building. The 2017-18 reconstruction of Bremer Avenue is providing for the installation of larger diameter water main along the north and south sides of Bremer Avenue that is capable of providing sufficient fire flows. By July 2017 the new Bremer Avenue water main was available to be extended southward under 1st Street SE to the CUNA building.

Important Dates

December 2016	.....	Consultant Selection
January 9, 2017	.....	Council Approves Engineering Services Agreement
January 2017?	.....	Council Approves TIF Boundary Amendment
Feb. – April 2017	.....	Design Work
May 1, 2017	.....	Council Sets Public Hearing Date
May 18, 2017	.....	Bid Letting
June 5, 2017	.....	Council Holds Public Hearing
June 5, 2017	.....	Council Awards Project
July 10, 2017	.....	Council Approves Contract Documents
July 11 – Aug. 11 2017	.....	Actual Construction Window
September 11, 2017	.....	Finalize Project

Respectfully submitted,

James Bronner
City Administrator

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



AGENDA MEMORANDUM
City Council Meeting
September 11, 2017

SUBJECT: 2017 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 \$7,517.04 decrease.
- Accept the 2017 Bituminous Seal Coat Program as complete.
- Approve Pay Estimate No. 2 in the amount of \$8,614.25 as the final payment to Blacktop Services Co. of Humboldt, Iowa.

Summary Statement

Blacktop Services Co. has completed the 2017 Bituminous Seal Coat Program in accordance with the contract documents. The total cost of the completed work is \$151,112.26. Change Order No. 1 – Final Adjustment of Quantities is for a net decrease of \$7,517.04 to the contract sum.

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

Expenditure Required

Seal Coating Construction Cost – Blacktop Services.....	\$ 151,112	
Slurry Seal Construction Cost – Fort Dodge Asphalt.....	34,323	
Project Design, Adm. & Insp. Est. – Seal Coating.....	3,700	
Project Design, Adm. & Insp. Est. – Slurry Seal.....	<u>2,000</u>	
Total Cost of the Project.....		\$ 191,135

Source of Funds

Bituminous Seal Coating – CIP Fund #306.....	\$ <u>200,000</u>	
Total Financing for the Project.....		\$ 200,000

Policy

The 2017 Bituminous Seal Coat Program follows recommendations cited in the following documents for the preservation of City streets and infrastructure:

- Waverly Strategic Planning Report – September 2014
- Waverly Comprehensive Plan Update – October 24, 2011

Policy Concern

None noted to date.

Alternative

Not applicable.

Background Information:

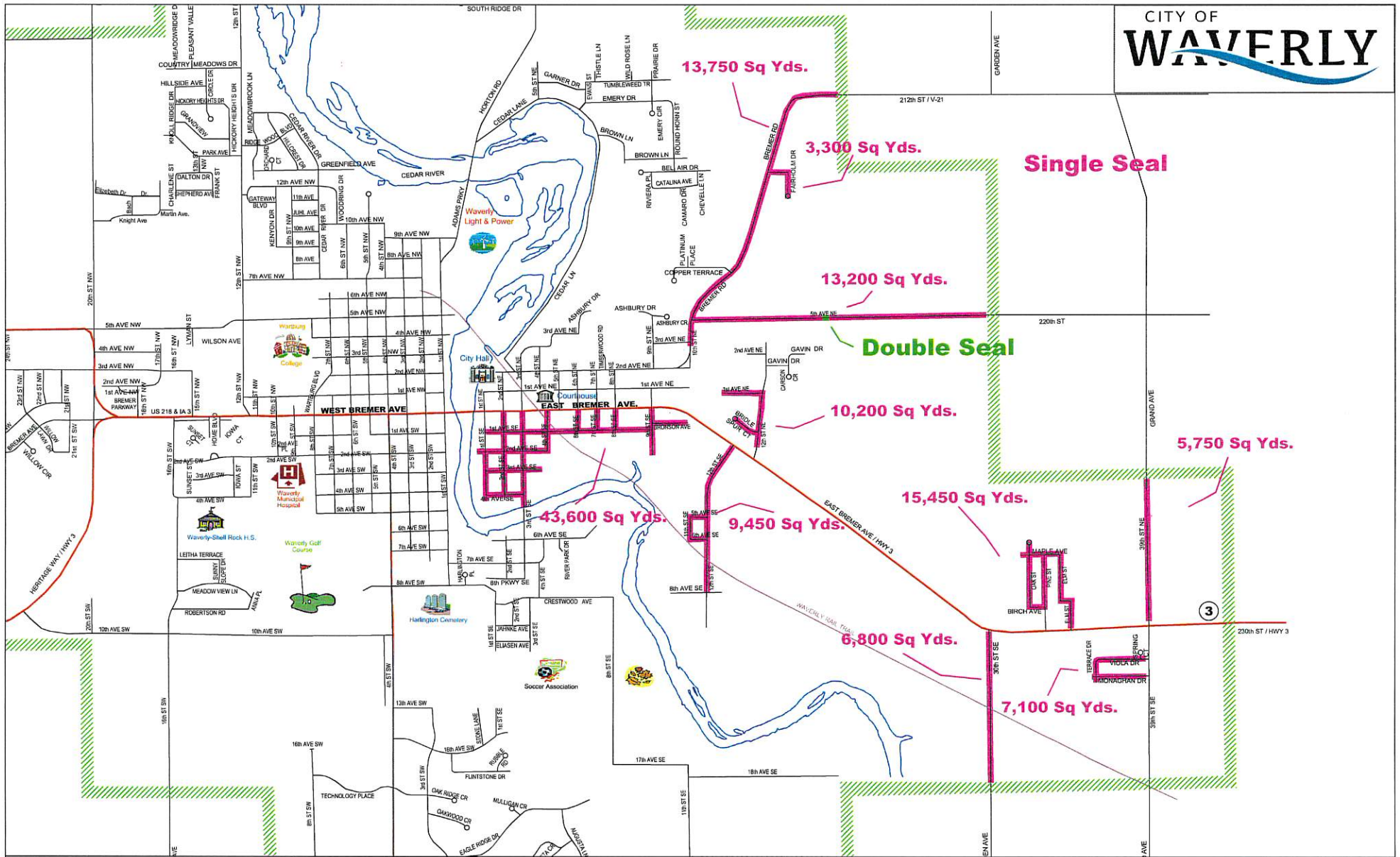
The Bituminous Seal Coat Program is part of the City’s annual improvement plan for maintaining the residential street system. City crews perform roadway repairs and patching prior to the hired contractor applying the bituminous seal coat. Seal coating is a thin surface treatment that helps to improve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

March 6, 2017..... Set Public Hearing Date – Seal Coating
March 9, 2017..... Bid Letting – Seal Coating
March 20, 2017..... Hold Public Hearing – Seal Coating
March 20, 2017..... Award Project – Seal Coating
April 17, 2017..... Approve Contract, Bonds and Insurance – Seal Coating
June 5 – Aug. 18, 2017..... Construction Window – Seal Coating
September 11, 2017..... Finalize – Seal Coating

Respectfully submitted,

James Bronner
City Administrator

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



SCALE:

LOCATION: City of Waverly

Bremer County

PROJECT: Bituminous Seal Coat Program - 2017

SHEET NUMBER: D.1



AGENDA MEMORANDUM
City Council Meeting
August 7, 2017

Subject: 39th Street SE Slurry Sealing Project 2017
Finalize Project

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

Recommended City Council Action

- Accept the 39th Street SE Slurry Sealing Project 2017 as complete.
Approve Pay Estimate No. 2 in the amount of \$1,716.14 as the final payment to Fort Dodge Asphalt Co. of Fort Dodge, Iowa.

Summary Statement

Fort Dodge Asphalt Co. of Fort Dodge, Iowa, has completed the 39th Street SE Slurry Sealing Project 2017 in accordance with the construction documents. The cost of the completed work is \$34,322.72.

Expenditure Required

Table with 2 columns: Description and Amount. Rows include Seal Coating Construction Cost, Slurry Seal Construction Cost, Pavement Markings, Project Design, and Total Cost of the Project (\$199,952).

Source of Funds

Table with 2 columns: Description and Amount. Rows include Bituminous Seal Coating and Total Financing for the Project (\$200,000).

Policy Issues

None

Alternatives

n/a

Background Information

This project involved 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.

March 22, 2017 Bid Letting
April 3, 2017 Award Project
May 1 - Sept. 29, 2017 Construction Window
August 7, 2017 Finalize Project

Respectfully submitted,

James Bronner
City Administrator

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



AGENDA MEMORANDUM

City Council Meeting

November 20, 2017

SUBJECT: Sanitary Sewer Manhole Rehabilitation 2017
Finalize Project

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

Recommended City Council Action

- Accept the Sanitary Sewer Manhole Rehabilitation 2017 project as complete.
- Approve Pay Estimate No. 1 in the amount of \$23,671.10 as the final payment to Visu-Sewer, Inc. of Pewaukee, Wisconsin.

Summary Statement

Visu-Sewer, Inc. of Pewaukee, Wisconsin, has completed the Sanitary Sewer Manhole Rehabilitation 2017 project in accordance with the construction documents. The cost of the completed work is \$23,671.10.

Expenditure Required

Construction Cost, Visu-Sewer’s final.....	\$ 23,671	
Project Design, Admin. & Inspection Est.....	2,000	
Total Cost of the Project.....		\$ 25,671

Source of Funds

Sanitary Sewer Improvement – CIP Fund #437 362.....	\$ 40,000	
Total Financing for the Project.....		\$ 40,000

Policy Issues

n/a

Alternatives

n/a

Background Information

This project involved repairing and installing a protective liner inside sanitary sewer manholes that are deemed to be in poor condition or have storm water infiltration issues.

March 22, 2017.....Bid Letting
 April 3, 2017.....Award Project
 May – Sept. 2017.....Construction Window
November 20, 2017.....Finalize Project

Respectfully submitted,

James Bronner
City Administrator

Attachment: Pay Application No. 1 (Final)



AGENDA MEMORANDUM

City Council Meeting

October 23, 2017

SUBJECT: SE Waverly Flood Protection Feasibility Study Update 2017
Presentation of Final Report

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

Recommended City Council Action

Following the presentation of the SE Waverly Flood Protection Feasibility Study Update 2017, the City Council can review and discuss the options.

Summary Statement

This project consisted of updating the 2011 SE Waverly Flood Protection Feasibility Study to include updated FEMA Flood Insurance Maps and recent aerial photography. Updated cost estimates for the options listed in this study were also completed. In addition, the project reviewed the possibility of raising 7th Avenue SE to provide access during a 50-year flood event, and either raising 4th Street SE or constructing a levee along 4th Street SE to provide improved protection during flood events.

The study used the updated Federal Emergency Management Agency (FEMA) Flood Insurance Study Cedar River Flood Profiles and associated flood plain and floodway mapping for the City of Waverly. In addition, the latest aerial photography from Bremer County was used to update the figures in the report.

Expenditure Required

Phase 1 – Study Update – AECOM (N.T.E.).....	\$ 25,000	
Phase 2 – Final Design.....	TBD	
Phase 2 – Construction.....	TBD	
Phase 3 – Construction Observation Services.....	TBD	
Phase 3 – Construction Observation Services.....	2,000	
Total Estimated Cost of the Project.....		\$ 27,000

Source of Funds

Local Funding (Account #301 FY 2017-18).....	\$ 30,000	
Additional Local Funding for Construction.....	TBD	
Total Financing for the Project.....		\$ 30,000

Policy

The SE Waverly Flood Protection Feasibility Study Update is consistent with the following official planning documents:

- City of Waverly Comprehensive Plan Update, 2017
- City of Waverly Hazard Mitigation Plan Update, 2017
- Waverly Flood Mitigation Study, April 2011

Project Concern

None.

Alternative

None needed.

Background Information

June 19, 2017.....City Council approves Agreement for Engineering Services with AECOM.

October 23, 2017.....Presentation of Final Report to Council

Respectfully submitted,

James Bronner
City Administrator

Attachments: None



AGENDA MEMORANDUM
City Council Meeting
July 10, 2017

SUBJECT: Citywide Ped Ramp Construction 2017 – Finalize Project

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

Recommended City Council Action

- Approve Change Order No. 1 for the final adjustment of quantities in the amount of an \$8,568.80 increase.
• Accept the Citywide Ped Ramp Construction 2017 project as complete.
• Approve Pay Estimate No. 3 in the amount of \$7,326.04 as the final payment to Midwest Concrete, Inc. of Peosta, Iowa.

Summary Statement

Midwest Concrete of Peosta, Iowa, has completed the Citywide Ped Ramp Reconstruction 2017 project in accordance with the construction documents. The cost of the completed work is \$88,000.80 and Change Order No. 1 in the amount of an \$8,568.80 increase is for the final adjustment of contract quantities.

Expenditure Required

Table with 2 columns: Description and Amount. Rows include Pedestrian Ramp Const. – Midwest Concrete, Final (\$ 88,001), Project Administration & Inspection Cost Estimate (7,500), and Total Estimated Cost of the Project (\$ 95,501).

Source of Funds

Table with 2 columns: Description and Amount. Rows include CIP Acct. #330 304, Pedestrian Ramp Construction (\$ 100,000) and Total Financing for the Project (\$ 100,000).

Policy

The Citywide Ped Ramp Construction 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 and 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 pedestrian accommodations.

Project Concern

None noted to date.

Alternative

NA

Background Information

In 2011 the City implemented the citywide sidewalk repair program and 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 2017 inspections and work will be completed in District 7.

March 6, 2017.....Set Public Hearing Date
March 9, 2017.....Bid Letting
March 20, 2017.....Hold Public Hearing
March 20, 2017.....Award Project
April 17, 2017.....Approve Contract, Bonds and Insurance
May – June 2017.....Construction Window
July 10, 2017.....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
August 21, 2017

SUBJECT: City Hall Parking Lot Improvements 2017
Finalize Project

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

Recommended City Council Action

- Accept the City Hall Parking Lot Improvements 2017 project as complete.
Approve Change Order No. 1 in the amount of a \$567.60 increase as the final adjustment of project quantities.
Approve Pay Estimate No. 3 in the amount of \$1,651.48 as the final payment to Feldman Concrete of Dyersville, Iowa.

Summary Statement

Feldman Concrete of Dyersville, Iowa, has completed the City Hall Parking Lot Improvements 2017 project in accordance with the construction documents. The cost of the completed work is \$33,029.60.

Expenditure Required

Table with 2 columns: Description and Amount. Rows include Construction Cost, Project Design, Admin. & Inspection Est., and Total Cost of the Project (\$35,030).

Source of Funds

Table with 2 columns: Description and Amount. Rows include G.O. Bond - CIP Fund #342 and Total Financing for the Project (\$50,000).

Policy Issues

n/a

Alternatives

n/a

Background Information

This project involved replacing bad sections of concrete and adding parking stalls where the Burr Oak tree lived.

- March 27, 2017 Review Project with Council (No Quorum)
April 18, 2017 Bid Letting
May 1, 2017 Award Project
June 5, 2017 Approve Performance and Payment Bonds
July 10 - Sept. 29, 2017 Construction Window
August 21, 2017 Finalize Project

Respectfully submitted,

James Bronner
City Administrator

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



AGENDA MEMORANDUM
City Council Meeting
October 16, 2017

SUBJECT: Library Parking Lot Repair 2017
Finalize Project

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

Recommended City Council Action

- Accept the Library Parking Lot Improvements 2017 project as complete.
Approve Change Order No. 1 in the amount of a \$3,091.30 increase as the final adjustment of project quantities.
Approve Pay Estimate No. 2 in the amount of \$6,799.47 as the final payment to Feldman Concrete of Dyersville, Iowa.

Summary Statement

Feldman Concrete of Dyersville, Iowa, has completed the Library Parking Lot Improvements 2017 project in accordance with the construction documents. The cost of the completed work is \$66,829.30.

Change Order No. 1 is the final adjustment of contract quantities. Additionally, upon starting the project it was determined that some additional parking lot would need to be replaced and some sidewalk near the driveway approaches would also need to be replaced. Value engineering discussions with the contractor allowed for the salvaging of curb and gutter in good condition that was adjacent to the bad sections of pavement. Eliminating the need to replace good curb and cutter saved about \$2,100 and eliminated the need for behind the curb restoration and seeding by the city's Parks Division.

Expenditure Required

Table with 2 columns: Description and Amount. Rows include Construction Cost, Final (\$66,829), Project Design, Admin. & Inspection Est. (2,500), and Total Cost of the Project (\$69,329).

Source of Funds

Table with 2 columns: Description and Amount. Rows include G.O. Bond - CIP Fund #304 #342 (\$65,000) and Total Financing for the Project (\$65,000).

Policy Issues

n/a

Alternatives

n/a

Background Information

This project involves replacing bad sections of concrete.

March 27, 2017.....Review Project with Council (No Quorum)
April 18, 2017.....Bid Letting
May 1, 2017.....Award Project
June 5, 2017.....Approve Performance and Payment Bonds
Sept 5 – Oct. 31, 2017.....Construction Window
October 16, 2017.....Finalize Project

Respectfully submitted,

James Bronner
City Administrator

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



AGENDA MEMORANDUM
City Council Meeting
September 18, 2017

SUBJECT: Downtown Alley Reconstruction 2017
Finalize Project

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

Recommended City Council Action

- Accept the Downtown Alley Reconstruction 2017 project as complete.
Approve Change Order No. 1 in the amount of a 4,360.50 increase as the final adjustment of project quantities.
Approve Pay Estimate No. 3 in the amount of \$2,162.23 as the final payment to Feldman Concrete of Dyersville, Iowa.

Summary Statement

Feldman Concrete of Dyersville, Iowa, has completed the Downtown Alley Reconstruction 2017 project in accordance with the construction documents. The west end of the alley was so badly damaged due to spring utility work that it was no longer salvageable and needed to be reconstructed. However, most of the subbase under the old pavement was in good condition and was able to be salvaged. The final cost of the completed work is \$31,798.00.

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 G.O. Bond - CIP Fund #309 and Total Financing for the Project.

Policy Issues

n/a

Alternatives

n/a

Background Information

This project involved rehabbing or reconstructing the north-side alley in the 100 block of East Bremer Avenue.

March 27, 2017.....Review Project with Council (No Quorum)
April 18, 2017.....Bid Letting
May 1, 2017.....Award Project
June 5, 2017.....Approve Performance and Payment Bonds
July 10 – Sept. 29, 2017.....Construction Window
September 18, 2017.....Finalize Project

Respectfully submitted,

James Bronner
City Administrator

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



AGENDA MEMORANDUM

City Council Meeting

September 11, 2017

SUBJECT: Crack Cleaning and Filling Project 2017
Finalize Project

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

Recommended City Council Action

- Accept the Crack Cleaning and Filling Project 2017 as complete.
- Approve Pay Estimate No. 1 in the amount of \$13,622.50 as the final payment to Fahrner Asphalt Sealers of Dubuque, Iowa.

Summary Statement

Fahrner Asphalt Sealers of Dubuque, Iowa, has completed the Crack Cleaning and Filling Project 2017 in accordance with the construction documents. The cost of the completed work is \$13,622.50.

Expenditure Required

Construction Cost, Fahrner’s bid	\$ 13,622	
Project Design, Admin. & Inspection Est.	<u>2,000</u>	
Total Cost of the Project		\$ 15,622

Source of Funds

Road Use Tax Fund – Acct #6761	\$ <u>20,000</u>	
Total Financing for the Project		\$ 20,000

Policy Issues

n/a

Alternatives

n/a

Background Information

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

- March 27, 2017 Review Project with Council (No Quorum)
- April 18, 2017 Bid Letting
- May 1, 2017 Award Project
- July 5 – Sept. 1, 2017 Construction Window
- September 11, 2017 Finalize Project**

Respectfully submitted,

James Bronner
City Administrator

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



AGENDA MEMORANDUM

City Council Meeting

December 18, 2017

SUBJECT: Citywide Sidewalk Repairs 2017
Finalize Project

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

Recommended City Council Action

- Accept the Citywide Sidewalk Repairs 2017 project as complete.
- Approve Change Order No. 1 for a decrease of \$7,675.36.
- Approve Pay Estimate No. 4 in the amount of \$5,546.66 as the final payment to Feldman Concrete of Dyersville, Iowa.

Summary Statement

Feldman Concrete of Dyersville, Iowa has completed the Citywide Sidewalk Repairs 2017 project in accordance with the contract documents. The total cost of the completed work is \$92,085.14. Change Order No. 1 is for a final adjustment of the contracted quantities.

Expenditure Required

Sidewalk Repair Cost, Final.....	\$ 92,085
Project Administration & Inspection Cost Estimate.....	<u>23,000</u>
Total Estimated Cost of the Project.....	\$ 115,085

Source of Funds

CIP Acct. #304, Sidewalk Repair Construction.....	\$ 72,616
Property Owner Payments, Estimate.....	<u>42,469</u>
Total Financing for the Project.....	\$ 115,085

Policy

The Citywide Sidewalk Repair 2017 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 2017 inspections and work was completed in District 7.

June 19, 2017.....Set Public Hearing Date
June 22, 2017.....Bid Letting
July 10, 2017.....Hold Public Hearing
July 10, 2017.....Award Project
August 7, 2017.....Approve Contract, Bonds and Insurance
September - November 2017.....Construction Window
December 18, 2017.....Finalize Project

Respectfully submitted,

James Bronner
City Administrator

Attachments Statement of Project Completion
Change Order No. 1
Pay Application No. 4 (Final)

CITY OF
WAVERLY

AGENDA MEMORANDUM
City Council Meeting
June 18, 2018

SUBJECT: Sanitary Sewer Manhole Rehabilitation 2018
Finalize Project

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

Recommended City Council Action

- Accept the Sanitary Sewer Manhole Rehabilitation 2018 project as complete.
- Approve Pay Estimate No. 1 in the amount of \$21,531.70 as the final payment to Josh's Construction of Dubuque, Iowa.

Summary Statement

Josh's Construction has completed the Sanitary Sewer Manhole Rehabilitation 2018 project in accordance with the contract documents. The total cost of the completed work is \$21,531.70.

Expenditure Required

Construction Cost, Josh's Construction's, final.....	\$ 21,532	
Project Design, Admin. & Inspection Est.....	<u>3,500</u>	
Total Cost of the Project.....		\$ 25,032

Source of Funds

Sanitary Sewer Improvement – CIP Fund #362.....	\$ <u>40,000</u>	
Total Financing for the Project.....		\$ 40,000

Policy Issues

n/a

Alternatives

n/a

Background Information

This project involves repairing and installing a protective liner inside sanitary sewer manholes that are deemed to be in poor condition or have storm water infiltration issues.

March 6, 2018.....	Bid Letting
March 19, 2018.....	Award Project
April – Sept. 2018.....	Construction Window
June 18, 2018.....	Finalize Project

Respectfully submitted,

James Bronner
City Administrator

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



Sanitary Sewer Manhole Rehab 2018

SW / NE Waverly

Manhole No.





AGENDA MEMORANDUM
City Council Meeting
June 4, 2018

SUBJECT: Citywide Asphalt Patching - Spring 2018
Finalize Project

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

Recommended City Council Action

- Accept the Citywide Asphalt Patching - Spring 2018 project as complete.
Approve Pay Estimate No. 1 in the amount of \$29,362.85 as the final payment to Blacktop Service Co. of Humboldt, Iowa.

Summary Statement

Blacktop Service Co. has completed the Citywide Asphalt Patching - Spring 2018 project in accordance with the contract documents. The total cost of the completed work is \$29,362.85.

Expenditure Required

Table with 2 columns: Description and Amount. Rows include Construction Cost, Blacktop Service, Bid (\$29,363); Project Design, Admin. & Inspection Est. (2,000); Total Cost of the Project (\$31,363).

Source of Funds

Table with 2 columns: Description and Amount. Rows include RUT & Utility Company Reimbursements (\$17,000); CIP Fund #304 Sidewalk Repair Program (Rail Trail Repairs) (14,500); Total Financing for the Project (\$31,500).

Policy Issues

n/a

Alternatives

n/a

Background Information

This project involves repairing asphalt paved streets that have had utility cuts. This project will also include the leveling of areas on the Waverly Rail Trail and repairs to the Rail Trail bridge approaches.

March 6, 2018 Bid Letting
March 19, 2018 Award Project
April 30 - June 8, 2018 Construction Window
June 4, 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 2017-18

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
 FY2017-18

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

	2013-14	2014-15	2015-16	2016-17	2017-18
Service Jobs	744	700	564	676	597
New Tires	72	101	86	94	101
Tire Repairs	44	76	33	49	40
Batteries	7	4	3	30	15
Antifreeze (Gals)	72	76	74	67	35
Oil Changes	197	192	194	198	148
Oil (Gals)	639	606	467	496	504
Total Parts (\$)	\$ 104,020	\$ 97,669	\$ 77,076	\$ 115,810	\$ 96,052
Total Labor Charged	\$ 48,512	\$ 48,664	\$ 38,487	\$ 52,308	\$ 51,770

Fuel Purchased

	2013-14	2014-15	2015-16	2016-17	2017-18
Unleaded Fuel (Gals)	26,798	24,824	24,415	22,988	21,010
Unleaded Fuel (\$)	\$ 90,460	\$ 77,494	\$ 53,826	\$ 47,099	\$ 59,116
Diesel Fuel (Gals)	38,579	37,224	44,284	45,910	41,791
Diesel Fuel (\$)	\$ 148,410	\$ 125,838	\$ 185,553	\$ 101,284	\$ 123,358

City of Waverly - Public Works
Equipment Services
Sale of Used City Vehicles & Equipment
FY 2017-18

Division	Vehicles or Equipment Sold	Bid Date	Winning Bidder	Bid \$\$
Solid Waste	Compost Turner	01/08/17	Josh Engel	\$ 2,165.00
Total				\$ 2,165.00

City of Waverly
Department of Public Works
FY 2017-18

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
Streets - RUT
Work Hours Per Core Services
FY 2017-18

<u>Streets</u>	<u>Hours</u>	<u>Painting</u>	<u>Hours</u>
Shoulder Work	<u>378</u>	Line Striping,	
Road Grading	<u>143</u>	Curbs & X-Walks	<u>358</u>
Alleys	<u>68</u>		
Cold Mix Patching /			
Durapatching	<u>1,568</u>	<u>Snow Removal</u>	
Street Sweeping	<u>1,048</u>	Sand Hauling	<u>66</u>
Weed Mowing /		Snow Fence	<u>9</u>
Tree Trimming	<u>1,887</u>	Snow Plowing	<u>476</u>
Rock / Chips Hauling	<u>142</u>	Snow Removal	<u>342</u>
		Sanding	<u>129</u>
<u>Maintenance</u>		<u>Signs</u>	
Catch Basins	<u>241</u>	Repair &/or Replace	<u>103</u>
Bridges	<u>2</u>	New Installations	<u>98</u>
Culverts	<u>0</u>		
Dry Run	<u>3</u>	<u>Special Projects</u>	
Manholes	<u>317</u>	Airport	<u>0</u>
Building Maintenance	<u>88</u>	Yard Waste	<u>128</u>
Equipment Maintenance	<u>968</u>	Fall & Winter Clean-up	<u>76</u>
		Mulch & Compost	
		Deliveries	<u>46</u>
		Water Dept	<u>0</u>
		Solid Waste Dept	<u>486</u>
		Sewer Maintenance	<u>8</u>
		WPC Dept	<u>11</u>
		Recycling Center	<u>11</u>
		Cemetery Dept	<u>1</u>
		Golf Course Dept	<u>14</u>
		Equip Services	<u>1</u>
		Parks Dept	<u>14</u>
		Meetings / Training	<u>81</u>

City of Waverly - Public Works
Streets - RUT
Street Maintenance & Construction
FY 2017-18

MATERIAL COMPARISON REPORT

Fiscal Year	2013-14	2014-15	2015-16	2016-17	2017-18
Asphalt Patch					
Tons	80	136	152	145	154
Cost (\$)	\$8,542	\$14,935	\$16,723	\$15,918	\$16,585
Road Rock					
Tons	312	459	779	509	254
Cost (\$)	\$2,678	\$4,179	\$7,156	\$4,681	\$2,375
3/8" Chips					
Tons	540	253	56	92	173
Cost (\$)	\$6,054	\$3,012	\$665	\$1,116	\$2,106
CRS-2 Oil					
Gallons	10,978	10,370	2,714	1,480	5,474
Cost (\$)	\$21,407	\$20,222	\$4,750	\$2,591	\$8,072

STREET MAINTENANCE (BLOCKS)

Fiscal Year	2013-14	2014-15	2015-16	2016-17	2017-18
Single Seal Coat (Bid)	94	88	75	100	125
Double Seal Coat	0	0	3	0	1
Slurry Seal Coat	0	0	0	8	21.6

STREET RECONSTRUCTION

	Linear Feet	Miles
2013-14		
16th Street SW Reconst. (<i>W. Bremer to 4th St. SW</i>) (<i>W. Bremer to 4th St. SW</i>)	1,626	0.31
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

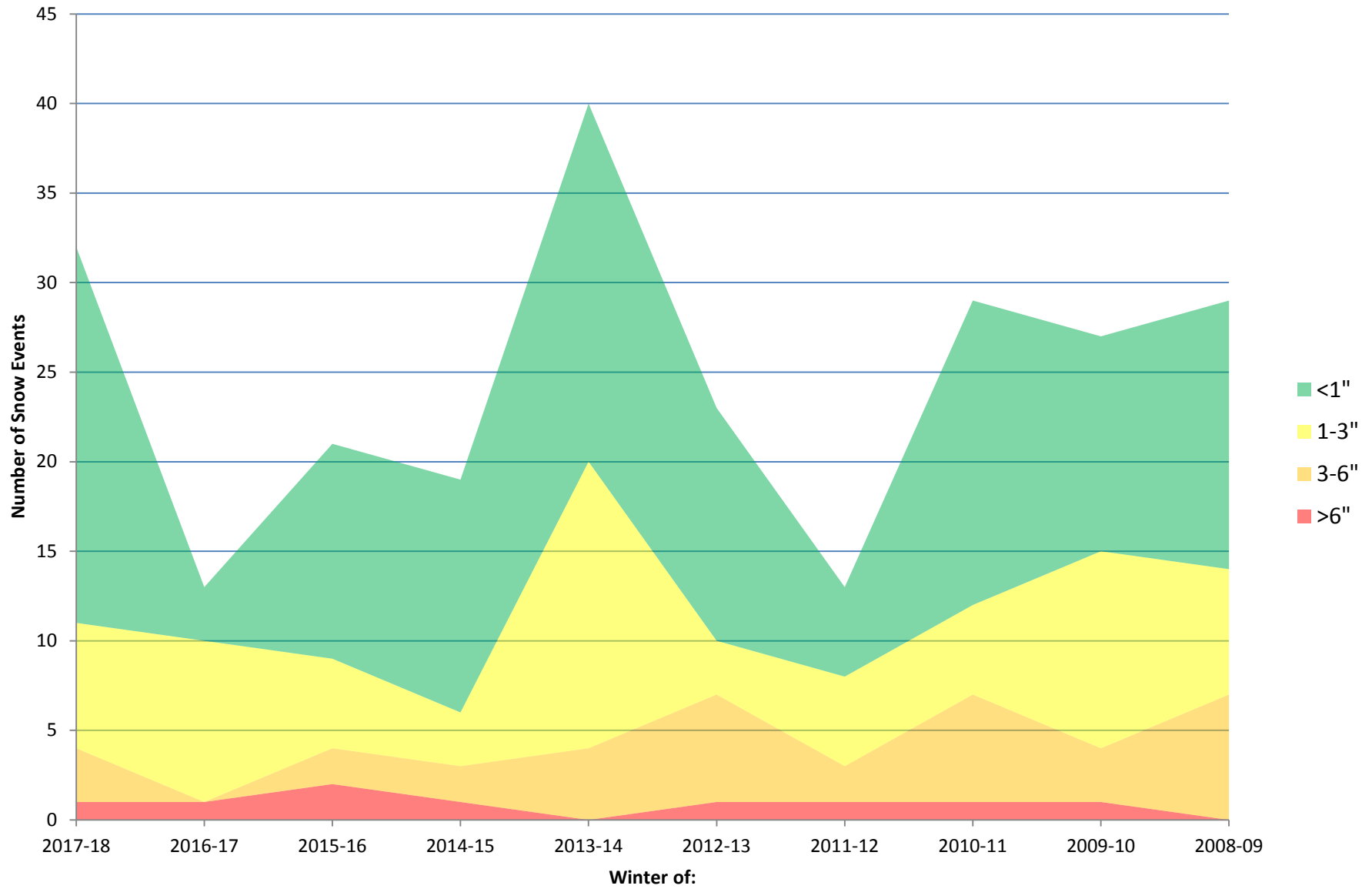
The Iowa Dept of Transportation reconstructed parts of Bremer Avenue last fiscal year 2017-18. The following stretch was completed last fiscal year: Bremer Ave from Home Blvd to 20th Street NW, west of Bremer Ave bridge to 8th Street west, and east of Bremer Ave bridge to almost 2nd Street east.

SNOW REMOVAL MATERIAL COMPARISON

Fiscal Year	2013-14	2014-15	2015-16	2016-17	2017-18
Rock Salt					
Tons	986	630	661	989	821
Cost (\$)	\$70,476	\$53,949	\$54,360	\$79,073	\$61,172
Ice Sand					
Tons	42	23	0	321	30
Cost (\$)	\$328	\$175	\$0	\$1,900	\$270

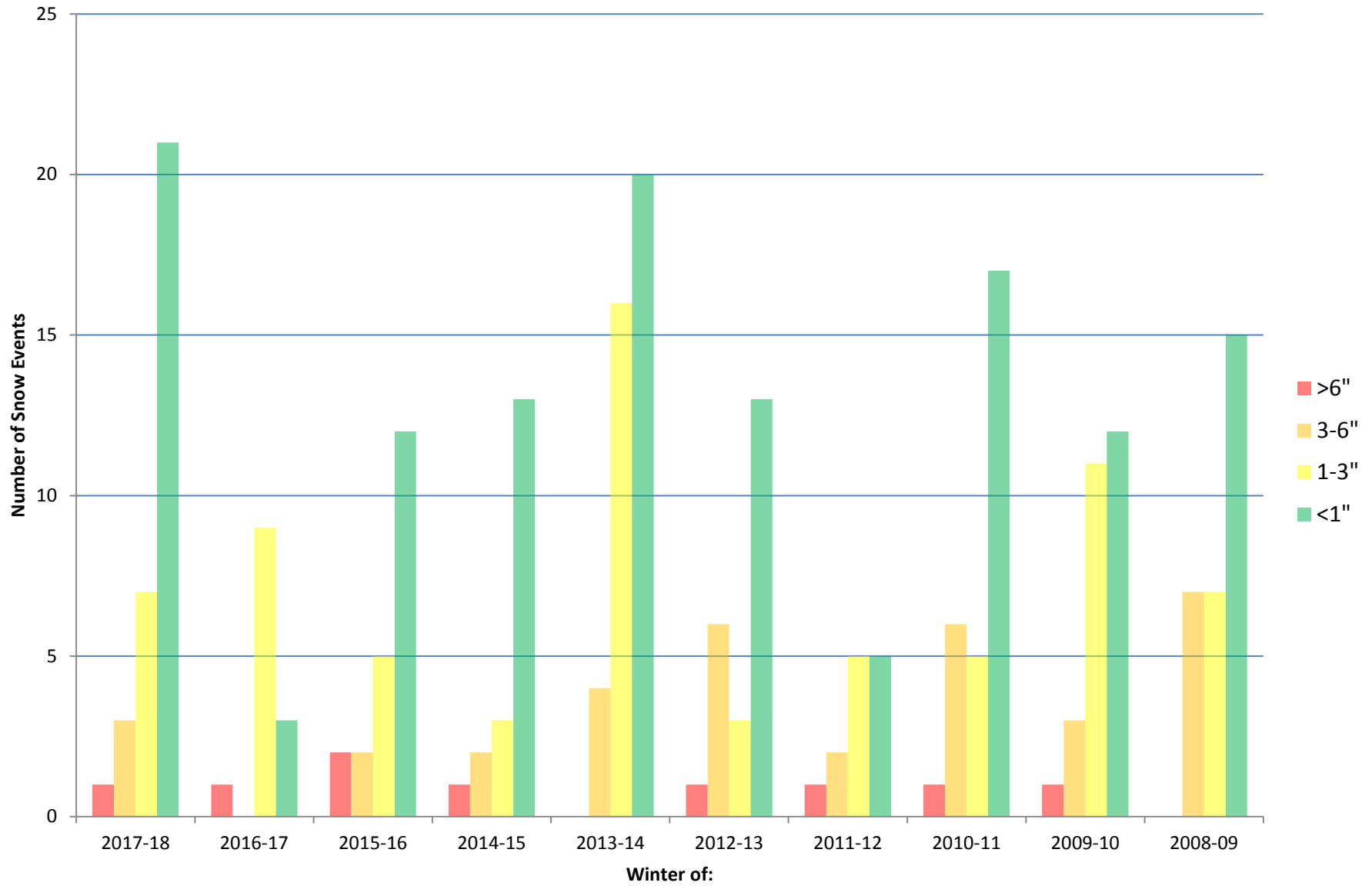
Measurable Snowfall Events

Waterloo, Iowa



Measurable Snowfall Events

Waterloo, Iowa



City of Waverly
Department of Public Works
FY 2017-18

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 4,099 meters. The pumping capacity of the system is approximately 5,100 gallons per minute and total storage of 1,750,000 gallons elevated. The average daily pumpage for FY 2017-18 was 976,583 gallons per day.

During FY 2017-18, the Water Division continued to locate and correct water leaks. Our billing to pumpage accountability has been calculated at 75.4%.

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 such a plan.

City of Waverly - Public Works
Water
Core Services
 FY 2017-18

Water Meters	Totals
New Meter Installations	85
Meters Replaced	31
Seasonal In	57
Seasonal Out	53
ERTs	40
Meters Tested & Repaired	51
Hyd. Meters / Hose Bib Meter	53

Water Service Lines	Totals
Capped Services	6
Service Line Taps	32
Sound Detection	26

Water Mains	Totals
Repaired	24
Replaced	0
Sound Detection	25
Large Taps (4"-6"-8")	0

Water Valves	Totals
Valves Operated	394
Valves Installed	4
Valves Repaired	15
Valves Replaced	1

Water Valve Boxes	Totals
Boxes Repaired	18
Boxes Installed	3
Boxes Cleaned	15
Boxes Raised	10
Boxes Lowered	2

Number of Locates	Totals
Iowa One Call Tickets	1,879
Structures Located from IOC Tickets	6,547
Responses Entered	1,879

Hydrants	Totals
Flushed	503
Repaired	32
Replaced	4
Installed	1
Painted	10
Flagged	17

Water Towers	Visits
Interior	152
Exterior	152
Exterior Maintenance (hours)	26

Wells	Visits
Interior	1,114
Exterior	1,114
Exterior Maintenance (hours)	25

Other Projects	Total
Contractors	350
Other City Departments	58

Service Center	Hours
Record Keeping (# of Hours)	618
Equipment Maintenance (Hrs)	185
Building Maintenance (Hrs)	118
Customer Care	111
Call Outs (Law Center/SCADA Alarms)	*

Number of Samples Taken	Totals
Bacteria	144
Chlorine	1,570
Fluoride	1,580
Nitrate	32

* no records were kept for this FY

City of Waverly - Public Works
Water
Operational Data & Gallons Pumped
FY 2017-18

Operational Data for Water System Repairs

	2013-14	2014-15	2015-16	2016-17	2017-18
Main Lines	49	31	14	12	24
Service Lines	16	16	12	13	32
4" Valves Installed	2	2	2	1	2
6" Valves Installed	2	2	2	1	1
8" Valves Installed	1	3	1	1	1
12" Valves Installed	n/a	1	0	0	0
Service Lines Capped	14	14	8	4	6
3/4" Taps Made	4	14	3	5	2
1"-2" Taps Made	15	22	13	15	30
4" Taps Made	1	1	1	0	0
6" Taps Made	1	2	8	5	0
8" Taps Made	1	3	2	4	0

Gallons Pumped Versus Gallons Billed

	Gallons Pumped	Estimated Unmetered Gallons*	Gallons Billed	Percent Accountable
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%
2013-14	386,675,000	59,198,000	270,427,000	85%

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

Water Consumption

Salesman Gallons	135,800
Salesman Revenue	\$679.00
City Consumption Gallons	19,672,000
Highest Pumping Day	1,685,000
Lowest Pumping Day	659,000
Average Pumping Day	979,583
Total Gallons Pumped	358,615,000

City of Waverly
Department of Public Works
FY 2017-18

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 2017-18 was 1,154,000 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, 2017

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.	1.300					0.86												
2	Sun.	1.300					0.86												
3	Mon.	1.270	97	6.96	375	2070	0.89											7.4	59
4	Tues.	1.240	97	6.94			0.92											7.4	60
5	Wed.	1.320	97	6.94			0.84	137	1508	3.32	36.55	20.80	228.98	13.80	151.92	207	2279	7.4	60
6	Thurs.	1.350	97	6.94			0.81											7.4	60
7	Fri.	1.270	97	6.93	360	2150	0.89	90	953							156	1652	7.5	60
8	Sat.	1.060					1.10												
9	Sun.	1.270					0.89												
10	Mon.	1.320	97	6.94	360	2170	0.84											7.5	61
11	Tues.	1.230	97	6.93			0.93											7.4	61
12	Wed.	1.250	97	6.93			0.91	82	855	6.77	70.58	19.90	207.46	17.80	185.57	125	1303	7.4	61
13	Thurs.	1.200	97	6.93			0.96											7.5	61
14	Fri.	1.160	97	6.91	338	2200	1.00	172	1664							282	2728	7.5	61
15	Sat.	1.070					1.09												
16	Sun.	1.130					1.03												
17	Mon.	1.170	97	6.91	353	2180	0.99											7.5	61
18	Tues.	1.110	97	6.90			1.05											7.5	61
19	Wed.	1.210	97	6.90			0.95	153	1544	5.27	53.18	25.40	256.32	21.10	212.93	262	2644	7.4	61
20	Thurs.	1.210	97	6.91			0.95											7.4	62
21	Fri.	1.450	97	6.92	360	2180	0.71	145	1753							208	2515	7.4	61
22	Sat.	1.680					0.48												
23	Sun.	1.930					0.23												
24	Mon.	1.680	97	6.90	360	2170	0.48											7.4	62
25	Tues.	1.310	97	6.89			0.85											7.4	62
26	Wed.	1.470	97	6.90			0.69	169	2072	58.00	711.07	19.10	234.16	17.00	208.42	248	3040	7.0	62
27	Thurs.	1.400	97	6.90			0.76											7.3	61
28	Fri.	1.290	97	6.89	345	2070	0.87	115	1237							178	1915	7.4	61
29	Sat.	1.160					1.00												
30	Sun.	1.150					1.01												
31	Mon.	1.070	97	6.89	353	2090	1.09											7.4	60

TOTAL AVERAGE	40.030						26.930	1063.0	11587		871.38		926.92		758.83	1666.0	18077		
MAX	1.291	97.0	6.9				0.869	132.9	1448		217.84		231.73		189.71	208.3	2260	7.4	60.9
MIN	1.930	97.0	7.0				1.100	172.0	2072		711.07		256.32		212.93	282.0	3040	7.5	62.0
	1.060	97.0	6.9				0.230	82.0	855		36.55		207.46		151.92	125.0	1303	7.0	59.0

7 DAY AVERAGE																			
WEEK 1	1.293						0.867	113.5	1231		36.55		228.98		151.92	181.5	1966	7.4	59.8
WEEK 2	1.213						0.947	127.0	1259		70.58		207.46		185.57	203.5	2016	7.5	59.8
WEEK 3	1.193						0.967	149.0	1649		53.18		256.32		212.93	235.0	2580	7.4	59.8
WEEK 4	1.537						0.623	142.0	1655		711.07		234.16		208.42	213.0	2478	7.3	61.6

Signature: _____
 Certification Number: **3989**

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

Date: July, 2017

Facility Number 0990001
 Note: 0.0 = <MDL of 0.5

DAY OF MONTH	DAY OF WEEK	MGD GOLF COURSE FLOW	EFF. FLOW MGD	CBOD 5 DAY 20 °C		EFF. PHOS. MG/L	EFF. PHOS. LBS/DAY	EFF. TOTAL N (as N) MG/L	EFF. TOTAL N (as N) LBS/DAY	EFF. Cu MG/L	EFF. Cu LBS/DAY	TOTAL SUSPENDED SOLIDS		AMMONIA NITROGEN		EFF. ph	EFF. TEMP. °F.	E. COLI #/100 ML
				EFF. MG/L	EFF. LBS/DAY							EFF. MG/L	EFF. LBS/DAY	FINAL MG/L	FINAL LBS/DAY				FINAL MG/L	FINAL LBS/DAY
1	Sat.		1.300															
2	Sun.		1.300															
3	Mon.		1.270													8.2	63	
4	Tues.		1.240													8.1	64	
5	Wed.		1.320	4	44	2.52	27.74	21.50	236.69	0.0246	0.2708	5	55	<0.50	0	8.2	64	
6	Thurs.		1.350													8.2	64	
7	Fri.	0.1937	1.076	7	63							6	54	1.00	9	8.1	64	
8	Sat.	0.2431	0.817															
9	Sun.	0.2611	1.009															
10	Mon.	0.0359	1.284													8.1	65	
11	Tues.		1.230													8.0	65	
12	Wed.		1.250	6	63	4.76	49.62	19.90	207.46	0.0274	0.2856	8	83	1.00	10	8.0	66	
13	Thurs.		1.200													8.0	66	
14	Fri.		1.160	5	48							5	48	<0.50	0	8.0	66	
15	Sat.		1.070															
16	Sun.		1.130															
17	Mon.	0.1863	0.984													8.0	67	
18	Tues.	0.2476	0.862													8.1	67	
19	Wed.	0.2783	0.932	6	47	4.20	32.64	27.00	209.80	0.0589	0.4577	8	62	<0.50	0	8.0	67	
20	Thurs.	0.2812	0.929													8.0	67	
21	Fri.	0.2431	1.450	6	73							9	109	<0.50	0	8.0	67	
22	Sat.	0.0037	1.676															
23	Sun.		1.930															
24	Mon.		1.680													8.1	65	
25	Tues.		1.310													8.0	65	
26	Wed.	0.0299	1.440	42	504	5.76	69.18	25.80	309.87	0.2580	3.0987	80	961	<0.50	0	7.8	66	
27	Thurs.	0.2521	1.148													8.0	66	
28	Fri.	0.2872	1.003	5	42							4	33	1.00	8	8.0	66	
29	Sat.	0.2057	0.954															
30	Sun.	0.2431	0.907															
31	Mon.	0.2708	0.799													8.0	66	

TOTAL	3.2628	37.010	81.0	883		179.18		963.82		4.1128		125.0	1406	3.0	27.8			0.0
AVERAGE	0.2039	1.194	10.1	110		44.80		240.95		1.0282		15.6	176	1.0	3.5	8.0	66	0.0
MAX	0.2872	1.930	42.0	504		69.18		309.87		3.0987		80.0	961	1.0	10.4	8.2	67	0.0
MIN	0.0037	0.799	4.0	42		27.74		207.46		0.2708		4.0	33	1.0	0.0	7.8	63	0.0

7 DAY AVERAGE																		
WEEK 1	0.1937	1.265	5.5	53		27.74		236.69		0.2708		5.5	54	1.0	4.5	8.2	64	0.0
WEEK 2	0.1800	1.136	5.5	55		49.62		207.46		0.2856		6.5	66	1.0	5.2	8.0	66	0.0
WEEK 3	0.2473	1.051	6.0	60		32.64		209.80		0.4577		8.5	86	0.0	0.0	8.0	67	0.0
WEEK 4	0.1432	1.455	23.5	273		69.18		309.87		3.0987		42.0	497	1.0	4.2	8.0	66	0.0

City of Waverly

MONTHLY MONITORING REPORT

Date: August, 2017

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			INF. MG/L	INF. LBS/DA Y
		1	Tues.	1.210	97	6.87										0.95	144			1453	
2	Wed.	1.170	97	6.88			0.99			4.51	44.01	24.10	235.16	17.90	174.66			7.5	62		
3	Thurs.	1.220	97	6.86	338	1940	0.94	98	997							156	1587	7.3	62		
4	Fri.	1.100	97	6.88			1.06									0	0	7.4	63		
5	Sat.	1.000					1.16									0	0				
6	Sun.	1.040					1.12									0	0				
7	Mon.	1.040	96	6.90	330	1960	1.12									0	0	7.3	63		
8	Tues.	1.050	96	6.88			1.11									0	0	7.3	63		
9	Wed.	1.050	96	6.87			1.11	210	1839	6.05	52.98	20.00	175.14	15.20	133.11	249	2180	7.3	63		
10	Thurs.	1.090	97	6.88			1.07									0	0	7.3	63		
11	Fri.	0.970	97	6.90	308	1800	1.19	125	1011							231	1869	7.4	62		
12	Sat.	0.970					1.19									0	0				
13	Sun.	0.960					1.20									0	0				
14	Mon.	1.070	96	6.90	308	1840	1.09									0	0	7.4	62		
15	Tues.	1.000	97	6.90			1.16									0	0	7.4	62		
16	Wed.	1.050	96	6.89			1.11	146	1279	7.46	65.33	29.20	255.70	24.10	211.04	279	2443	7.4	62		
17	Thurs.	1.070	97	6.89			1.09									0	0	7.4	62		
18	Fri.	0.990	96	6.89	323	1780	1.17	119	983							212	1750	7.4	62		
19	Sat.	0.920					1.24									0	0				
20	Sun.	0.980					1.18									0	0				
21	Mon.	1.080	97	6.88	315	1810	1.08									0	0	7.4	63		
22	Tues.	1.000	96	6.87			1.16									0	0	7.3	63		
23	Wed.	1.010	96	6.88			1.15	156	1314	7.66	64.52	26.90	226.59	21.90	184.47	178	1499	7.4	63		
24	Thurs.	0.980	96	6.86			1.18									0	0	7.4	64		
25	Fri.	1.020	96	6.86	323	1750	1.14	137	1165							196	1667	7.4	64		
26	Sat.	0.940					1.22									0	0				
27	Sun.	0.960					1.20									0	0				
28	Mon.	1.000	96	6.87	323	1780	1.16									0	0	7.4	64		
29	Tues.	0.990	97	6.88			1.17									0	0	7.4	64		
30	Wed.	1.010	96	6.87			1.15	209	1760	7.67	64.61	28.50	240.07	24.20	203.85	262	2207	7.3	64		
31	Thurs.	1.010	97	6.89			1.15									0	0	7.3	64		

TOTAL AVERAGE	31.950					35.010	1344.0	11802		291.45		1132.66		907.13	1957.0	17161		
MAX	1.031	96.5	6.9			1.129	149.3	1311		58.29		226.53		181.43	217.4	572	7.4	62.9
MIN	1.220	97.0	6.9			1.240	210.0	1839		65.33		255.70		211.04	279.0	2443	7.5	64.0
	0.920	96.0	6.9			0.940	98.0	983		44.01		175.14		133.11	156.0	0	7.3	62.0

7 DAY AVERAGE																		
WEEK 1	1.111					1.049	121.0	1225		44.01		235.16		174.66	175.0	591	7.4	62.4
WEEK 2	1.023					1.137	167.5	1425		52.98		175.14		133.11	240.0	578	7.3	62.6
WEEK 3	1.013					1.147	132.5	1131		65.33		255.70		211.04	245.5	599	7.4	62.8
WEEK 4	0.987					1.173	146.5	1240		64.52		226.59		184.47	187.0	452	7.4	63.6

Signature: _____
 Certification Number: 3989

**City of Waverly
MONTHLY MONITORING REPORT**

Date: August, 2017

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	Tues.	0.2281	0.982	7	57							12	98	<0.50	0	8.1	66	
2	Wed.	0.2483	0.922			4.54	34.90	21.30	163.73	0.0277	0.2129					8.1	66	5.20
3	Thurs.	0.0030	1.217	5	51							7	71	<0.50	0	8.1	66	
4	Fri.		1.100													8.1	66	
5	Sat.		1.000															
6	Sun.		1.040															
7	Mon.		1.040													8.2	66	
8	Tues.	0.1765	0.874													8.1	65	
9	Wed.	0.2558	0.794	5	33	6.44	42.66	30.00	198.71	0.0316	0.2093	6	40	<0.50	0	8.2	66	1.00
10	Thurs.	0.2782	0.812													8.2	66	
11	Fri.	0.2715	0.699	6	35							8	47	<0.50	0	8.1	66	
12	Sat.	0.2513	0.719															
13	Sun.	0.2640	0.696															
14	Mon.	0.2730	0.797													8.1	66	
15	Tues.	0.2760	0.724													8.2	66	
16	Wed.	0.2438	0.806	5	34	5.36	36.04	24.00	161.37	0.0304	0.2044	9	61	<0.50	0	8.2	67	1.00
17	Thurs.	0.2798	0.790													8.2	67	
18	Fri.	0.0598	0.930	5	39							7	54	<0.50	0	8.2	67	
19	Sat.		0.920															
20	Sun.		0.980															
21	Mon.		1.080													8.2	68	
22	Tues.		1.000													8.2	68	
23	Wed.		1.010	7	59	5.42	45.65	19.50	164.26	0.0289	0.2434	10	84	<0.50	0	8.1	67	30.50
24	Thurs.		0.980													8.1	67	
25	Fri.		1.020	7	60							7	60	<0.50	0	8.1	67	
26	Sat.		0.940															
27	Sun.		0.960															
28	Mon.	0.1671	0.833													8.1	67	
29	Tues.	0.2543	0.736													8.2	67	
30	Wed.	0.2700	0.740	5	31	5.81	35.86	24.60	151.82	0.0203	0.1253	5	31	<0.50	0	8.1	67	12.00
31	Thurs.	0.2820	0.728													8.1	67	

TOTAL AVERAGE MAX MIN	4.0825	27.867	52.0	398		195.11		839.89		0.9954	71.0	545	0.0	0.0				49.7
	0.2268	0.899	5.8	44		39.02		167.98		0.1991	7.9	61	0.0	0.0	8.1	67		9.9
	0.2820	1.217	7.0	60		45.65		198.71		0.2434	12.0	98	0.0	0.0	8.2	68		30.5
	0.0030	0.696	5.0	31		34.90		151.82		0.1253	5.0	31	0.0	0.0	8.1	65		1.0

7 DAY AVERAGE																		
WEEK 1	0.1598	1.043	6.0	54		34.90		163.73		0.2129	9.5	85	0.0	0.0	8.1	66		5.2
WEEK 2	0.2529	0.770	5.5	34		42.66		198.71		0.2093	7.0	43	0.0	0.0	8.1	66		1.0
WEEK 3	0.2149	0.890	5.0	36		36.04		161.37		0.2044	8.0	57	0.0	0.0	8.2	67		1.0
WEEK 4	0.1671	0.963	7.0	59		45.65		164.26		0.2434	8.5	72	0.0	0.0	8.1	67		30.5

City of Waverly

MONTHLY MONITORING REPORT

Date: September, 2017

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	Fri	0.960	97	6.83	330	1880	1.20	134	1073							216	1729	7.3	63
2	Sat	0.900					1.26												
3	Sun	0.850					1.31												
4	Mon	0.980	96	6.84			1.18											7.3	62
5	Tues	0.950	96	6.85	315	1830	1.21											7.4	62
6	Wed	0.950	97	6.85			1.21	149	1181	8.36	66.24	28.80	228.18	24.70	195.70	230	1822	7.4	62
7	Thurs	0.960	97	6.84			1.20											7.4	62
8	Fri	0.950	96	6.87	285	1900	1.21	127	1006							202	1600	7.4	62
9	Sat	0.940					1.22												
10	Sun	0.940					1.22												
11	Mon	0.950	96	6.82	300	1910	1.21											7.6	64
12	Tues	1.010	97	6.92			1.15											7.4	62
13	Wed	0.990	97	6.91			1.17	163	1346	9.53	78.69	38.20	315.40	33.50	276.60	226	1866	7.5	62
14	Thurs	1.040	97	6.89			1.12											7.5	62
15	Fri	1.010	97	6.89	293	1960	1.15									249	2097	7.5	63
16	Sat	1.020					1.14												
17	Sun	0.870					1.29												
18	Mon	0.970	96	6.91	293	1970	1.19											7.6	66
19	Tues	1.030	96	6.89			1.13											7.3	65
20	Wed	1.030	97	6.97			1.13	156	1340	9.18	78.86	29.60	254.27	25.20	216.47	245	2105	7.5	66
21	Thurs	1.100	97	6.96			1.06											7.4	66
22	Fri	1.060	97	6.90	175	1870	1.10	137	1211							222	1963	7.4	66
23	Sat	0.990					1.17												
24	Sun	0.950					1.21												
25	Mon	1.260	97	6.91	285	1900	0.90											7.6	66
26	Tues	1.040	97	6.98			1.12											7.5	65
27	Wed	0.970	97	6.90			1.19	157	1270	9.68	78.31	31.30	253.21	25.90	209.53	292	2362	7.5	63
28	Thurs	1.010	97	6.89			1.15											7.5	63
29	Fri	0.960	97	6.87	278	1850	1.20	117	937							196	1569	7.5	63
30	Sat	0.840					1.32												

TOTAL AVERAGE	29.480					35.320	1140.0	9363		302.09		1051.07		898.29	2078.0	17114			
MAX	0.983	96.7	6.9			1.177	142.5	1170		75.52		262.77		224.57	230.9	1902		7.5	63.6
MIN	1.260	97.0	7.0			1.320	163.0	1346		78.86		315.40		276.60	292.0	2362		7.6	66.0
MIN	0.840	96.0	6.8			0.900	117.0	937		66.24		228.18		195.70	196.0	1569		7.3	62.0

7 DAY AVERAGE																			
WEEK 1	0.936					1.224	141.5	1127		66.24		228.18		195.70	223.0	1776		7.4	62.2
WEEK 2	0.974					1.186	145.0	1176		78.69		315.40		276.60	214.0	1733		7.5	62.0
WEEK 3	1.004					1.156	156.0	1340		78.86		254.27		216.47	247.0	2101		7.5	62.0
WEEK 4	1.040					1.120	147.0	1241		78.31		253.21		209.53	257.0	2162		7.5	64.6

Signature: _____
 Certification Number: 3989

City of Waverly
MONTHLY MONITORING REPORT

Date: September, 2017

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	Fri.	0.2693	0.691	6	35							6	35	<0.50	0	8.1	66	4.10
2	Sat.	0.2386	0.661															
3	Sun.	0.2356	0.614															
4	Mon.	0.2424	0.738													8.2	66	
5	Tues.	0.2536	0.696													8.1	66	
6	Wed.	0.2356	0.714	5	30	5.14	30.62	33.50	199.60	0.0231	0.1376	9	54	1.00	6	8.1	66	2.00
7	Thurs.	0.2438	0.716													8.2	65	
8	Fri.	0.2281	0.722	6	36							8	48	<0.50	0	8.2	65	
9	Sat.	0.2528	0.687															
10	Sun.	0.2192	0.721															
11	Mon.	0.2760	0.674													7.9	66	
12	Tues.	0.1892	0.821													8.0	67	
13	Wed.	0.2394	0.751	10	63	6.02	37.69	28.40	177.78	0.0263	0.1646	8	50	2.00	13	8.2	67	111.00
14	Thurs.	0.2558	0.784													7.9	68	
15	Fri.	0.2596	0.750	7	44							9	56	<0.50	0	8.2	69	
16	Sat.	0.2289	0.791															
17	Sun.	0.2648	0.605															
18	Mon.	0.0000	0.970													7.7	68	
19	Tues.	0.0000	1.030													7.9	68	
20	Wed.	0.0000	1.030	5	43	7.24	62.19	28.30	243.10	0.0281	0.2414	8	69	<0.50	0	8.1	71	1.00
21	Thurs.	0.0000	1.100													7.8	70	
22	Fri.	0.2214	0.839	5	35							5	35	<0.50	0	8.1	72	
23	Sat.	0.2229	0.767															
24	Sun.	0.2902	0.660															
25	Mon.	0.2416	1.018													8.0	71	
26	Tues.	0.2581	0.782													8.0	70	
27	Wed.	0.0501	0.920	5	38	5.62	43.12	28.00	214.82	0.0256	0.1964	12	92	<0.50	0	8.1	67	1.00
28	Thurs.	0.0000	1.010													8.1	66	
29	Fri.	0.0000	0.960	7	56							8	64	<0.50	0	8.2	66	
30	Sat.	0.0000	0.840															
			0.000															

TOTAL AVERAGE MAX MIN	5.4170	24.063	56.0	379		173.62		835.30		0.7401	73.0	503	3.0	18.5				119.1
	0.18057	0.776	6.2	42		43.40		208.82		0.1850	8.1	56	1.5	2.1	8.1	68	23.8	
	0.29020	1.100	10.0	63		62.19		243.10		0.2414	12.0	92	2.0	12.5	8.2	72	111.0	
	0.00000	0.000	5.0	30		30.62		177.78		0.1376	5.0	35	1.0	0.0	7.7	65	1.0	

7 DAY AVERAGE																		
WEEK 1	0.24556	0.690	5.5	32		30.62		199.60		0.1376	7.5	44	1.0	3.0	8.1	66	3.1	
WEEK 2	0.23721	0.737	8.0	49		37.69		177.78		0.1646	8.0	49	2.0	6.3	8.0	67	111.0	
WEEK 3	0.10761	0.897	6.0	43		62.19		243.10		0.2414	8.5	63	0.0	0.0	7.9	69	1.0	
WEEK 4	0.18347	0.857	5.0	37		43.12		214.82		0.1964	8.5	64	0.0	0.0	8.1	69	1.0	

City of Waverly

MONTHLY MONITORING REPORT

Date: October, 2017

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			INF. MG/L	INF. LBS/DA Y
		1	Sun.	0.850												1.31					
2	Mon.	1.070	97	6.89	285	1870	1.09											7.5	62		
3	Tues.	1.060	97	6.87			1.10											7.4	62		
4	Wed.	0.990	97	6.87			1.17	125	1032	7.63	63.00	26.80	221.28	21.60	178.34	204	1684	7.5	62		
5	Thurs.	1.040	97	6.90			1.12											7.5	62		
6	Fri.	1.410	97	6.86	180	1900	0.75	125	1470							200	2352	7.5	62		
7	Sat.	1.720					0.44														
8	Sun.	1.280					0.88														
9	Mon.	1.340	97	6.88	293	1920	0.82											7.5	62		
10	Tues.	1.510	97	6.87			0.65											7.5	62		
11	Wed.	1.370	97	6.89			0.79	98	1120	5.63	64.33	23.90	273.08	17.30	197.67	205	2342	7.5	62		
12	Thurs.	1.350	97	6.91	170	1890	0.81	97	1092							109	1227	7.5	62		
13	Fri.	1.200	97	6.90			0.96											7.5	63		
14	Sat.	1.290					0.87														
15	Sun.	1.170					0.99														
16	Mon.	1.180	97	6.89	285	1960	0.98											7.5	62		
17	Tues.	1.200	97	6.90			0.96											7.5	63		
18	Wed.	1.170	97	6.91			0.99	108	1054	4.82	47.03	23.90	233.21	18.70	182.47	159	1551	7.5	62		
19	Thurs.	1.200	97	6.89			0.96											7.5	62		
20	Fri.	1.130	97	6.88	175	1920	1.03	86	810							150	1414	7.6	63		
21	Sat.	1.210					0.95														
22	Sun.	1.260					0.90														
23	Mon.	1.160	97	6.89	180	1910	1.00											7.6	63		
24	Tues.	1.140	97	6.88			1.02											7.5	63		
25	Wed.	1.110	97	6.89			1.05	118	1092	6.24	57.77	26.90	249.02	19.60	181.45	173	1602	7.5	62		
26	Thurs.	1.130	97	6.88			1.03											7.5	62		
27	Fri.	1.170	97	6.86	276	1950	0.99	95	927							133	1298	7.5	62		
28	Sat.	0.830					1.33														
29	Sun.	1.020					1.14														
30	Mon.	1.030	97	6.86	160	1960	1.13											7.6	58		
31	Tues.	0.950	97	7.00			1.21											7.8	59		

TOTAL AVERAGE	36.540						30.420	852.0	8598		232.12		976.59	739.92	1333.0	13470			
MAX	1.179	97.0	6.9				0.981	106.5	1075		58.03		244.15	184.98	166.6	1684	7.5	61.9	
MIN	1.720	97.0	7.0				1.330	125.0	1470		64.33		273.08	197.67	205.0	2352	7.8	63.0	
	0.830	97.0	6.9				0.440	86.0	810		47.03		221.28	178.34	109.0	1227	7.4	58.0	

7 DAY AVERAGE																			
WEEK 1	1.163						0.997	125.0	1251		63.00		221.28	178.34	202.0	2018	7.5	62.0	
WEEK 2	1.334						0.826	97.5	1106		64.33		273.08	197.67	157.0	1785	7.5	62.0	
WEEK 3	1.180						0.980	97.0	932		47.03		233.21	182.47	154.5	1483	7.5	62.0	
WEEK 4	1.114						1.046	106.5	1010		57.77		249.02	181.45	153.0	1450	7.5	62.4	

Signature: _____
 Certification Number: 3989

City of Waverly
MONTHLY MONITORING REPORT

Date: October, 2017

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	Sun.	0.0000	0.850															
2	Mon.	0.0000	1.070													8.2	64	
3	Tues.	0.0000	1.060													8.1	64	
4	Wed.	0.0000	0.990	5	41	6.41	52.92	26.40	217.97	0.0266	0.2196	11	91	<0.50	0	8.2	64	
5	Thurs.	0.0000	1.040													8.2	64	
6	Fri.	0.0000	1.410	6	71							10	118	<0.50	0	8.2	64	
7	Sat.	0.0000	1.720															
8	Sun.	0.0000	1.280															
9	Mon.	0.0000	1.340													8.2	64	
10	Tues.	0.0000	1.510													8.2	63	
11	Wed.	0.0000	1.370	8	91	3.88	44.33	21.70	247.94	0.0179	0.2045	10	114	<0.50	0	8.3	63	
12	Thurs.	0.0000	1.350	7	79							9	101	1.00	11	8.2	63	
13	Fri.	0.0000	1.200													8.2	62	
14	Sat.	0.0000	1.290															
15	Sun.	0.0000	1.170															
16	Mon.	0.0000	1.180													8.2	61	
17	Tues.	0.0000	1.200													8.2	61	
18	Wed.	0.0000	1.170	7	68	3.66	35.71	29.10	283.95	0.0228	0.2225	8	78	<0.50	0	8.2	61	
19	Thurs.	0.0000	1.200													8.2	61	
20	Fri.	0.0000	1.130	5	47							9	85	1.00	9	8.2	61	
21	Sat.	0.0000	1.210															
22	Sun.	0.0000	1.260															
23	Mon.	0.0000	1.160													8.2	61	
24	Tues.	0.0000	1.140													8.2	60	
25	Wed.	0.0000	1.110	5	46	4.01	37.12	28.10	260.13	0.0210	0.1944	6	56	<0.50	0	8.3	60	
26	Thurs.	0.0000	1.130													8.3	59	
27	Fri.	0.0000	1.170	4	39							7	68	<0.50	0	8.3	59	
28	Sat.	0.0000	0.830															
29	Sun.	0.0000	1.020															
30	Mon.	0.0000	1.030													8.0	57	
31	Tues.	0.0000	0.950													8.2	56	

TOTAL AVERAGE MAX MIN	0.0000	36.540	47.0	483		170.09		1010.00		0.8410	70.0	711	2.0	20.7				0.0
	0.0000	1.179	5.9	60		42.52		252.50		0.2103	8.8	89	1.0	2.6	8.2	61	0.0	
	0.0000	1.720	8.0	91		52.92		283.95		0.2225	11.0	118	1.0	11.3	8.3	64	0.0	
	0.0000	0.830	4.0	39		35.71		217.97		0.1944	6.0	56	1.0	0.0	8.0	56	0.0	

7 DAY AVERAGE																		
WEEK 1	0.0000	1.163	5.5	56		52.92		217.97		0.2196	10.5	104	0.0	0.0	8.2	64	0.0	
WEEK 2	0.0000	1.334	7.5	85		44.33		247.94		0.2045	9.5	108	1.0	5.6	8.2	63	0.0	
WEEK 3	0.0000	1.180	6.0	58		35.71		283.95		0.2225	8.5	81	1.0	4.7	8.2	61	0.0	
WEEK 4	0.0000	1.114	4.5	43		37.12		260.13		0.1944	6.5	62	0.0	0.0	8.3	60	0.0	

City of Waverly

MONTHLY MONITORING REPORT

Date: **November, 2017**

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	Wed.	1.010	98	6.87			1.15	117	986	4.63	39.00	31.00	261.13	23.60	198.79	177	1491	7.5	59
2	Thurs.	1.050	98	6.94			1.11											7.5	59
3	Fri.	1.050	97	6.95	145	1990	1.11	109	955							162	1419	7.4	58
4	Sat.	0.930					1.23												
5	Sun.	0.940					1.22												
6	Mon.	0.980	97	7.23	145	2040	1.18											7.5	59
7	Tues.	0.940	97	6.91			1.22											7.5	59
8	Wed.	0.970	96	6.93			1.19	141	1141	5.46	44.17	29.00	234.60	23.20	187.68	207	1675	7.5	59
9	Thurs.	0.950	98	6.96			1.21											7.2	58
10	Fri.	0.940	97	6.93	150	2210	1.22	102	800							158	1239	7.3	58
11	Sat.	0.860					1.30												
12	Sun.	1.030					1.13												
13	Mon.	0.870	94	6.94	160	2210	1.29											7.5	58
14	Tues.	1.000	97	6.99			1.16											7.3	58
15	Wed.	0.920	97	7.04			1.24	159	1220	4.31	33.07	35.00	268.55	33.80	259.34	208	1596	7.4	59
16	Thurs.	0.900	97	6.94			1.26											7.6	58
17	Fri.	1.000	96	7.14	315	1880	1.16	134	1118							197	1643	7.3	58
18	Sat.	0.830					1.33												
19	Sun.	0.960					1.20												
20	Mon.	0.910	97	7.05	300	1860	1.25											7.4	58
21	Tues.	0.920	99	7.14			1.24	274	2102							593	4550	7.3	57
22	Wed.	0.880	97	6.92	175	2260	1.28	116	851	4.08	29.94	37.00	271.55	26.50	194.49	273	2004	7.3	57
23	Thurs.	0.810	97	6.95			1.35											7.3	57
24	Fri.	0.870					1.29												
25	Sat.	0.880					1.28												
26	Sun.	0.900					1.26												
27	Mon.	0.930	91	6.90	175	2270	1.23											7.4	56
28	Tues.	1.010	99	6.98			1.15											7.4	57
29	Wed.	0.830	95	7.10			1.33	110	761	5.17	35.79	45.40	314.27	36.20	250.58	275	1904	7.3	56
30	Thurs.	0.950	97	7.11			1.21											7.3	56

TOTAL AVERAGE	28.020						36.780	1262.0	9933		181.97		1350.10		1090.89	2250.0	17519		
MAX	0.934	96.7	7.0				1.226	140.2	1104		36.39		270.02		218.18	250.0	1947	7.4	57.8
MIN	1.050	99.0	7.2				1.350	274.0	2102		44.17		314.27		259.34	593.0	4550	7.6	59.0
	0.810	91.0	6.9				1.110	102.0	761		29.94		234.60		187.68	158.0	1239	7.2	56.0

7 DAY AVERAGE																			
WEEK 1	0.986						1.174	113.0	970		39.00		261.13		198.79	169.5	1455	7.5	58.8
WEEK 2	0.946						1.214	121.5	970		44.17		234.60		187.68	182.5	1457	7.4	58.8
WEEK 3	0.920						1.240	189.0	1480		33.07		268.55		259.34	332.7	2596	7.4	58.6
WEEK 4	0.897						1.263	116.0	851		29.94		271.55		194.49	273.0	2004	7.3	56.8

Signature: _____
 Certification Number: **3989**

City of Waverly
MONTHLY MONITORING REPORT

Date: November, 2017

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.		1.010	5	42	4.15	34.96	30.50	256.91	0.0291	0.2451	13	110	<0.50	0	8.2	55	
2	Thurs.		1.050													8.1	57	
3	Fri.		1.050	5	44							8	70	<0.50	0	8.2	56	
4	Sat.		0.930															
5	Sun.		0.940															
6	Mon.		0.980													8.1	55	
7	Tues.		0.940													8.1	56	
8	Wed.		0.970	6	49	4.53	36.65	27.00	218.42	0.0309	0.2500	10	81	<0.50	0	8.2	55	
9	Thurs.		0.950													8.1	56	
10	Fri.		0.940	5	39							10	78	<0.50	0	8.1	53	
11	Sat.		0.860															
12	Sun.		1.030															
13	Mon.		0.870													8.0	55	
14	Tues.		1.000													8.1	55	
15	Wed.		0.920	15	115	3.95	30.31	19.60	150.39	0.0466	0.3576	25	192	<0.50	0	8.2	58	
16	Thurs.		0.900													8.1	54	
17	Fri.		1.000	5	42							19	158	<0.50	0	8.2	54	
18	Sat.		0.830															
19	Sun.		0.960															
20	Mon.		0.910													8.2	54	
21	Tues.		0.920									16	123	<0.50	0	8.2	56	
22	Wed.		0.880	16	117	4.01	29.43	29.20	214.30	0.0390	0.2862	18	132	<0.50	0	8.2	52	
23	Thurs.		0.810													8.2	53	
24	Fri.		0.870															
25	Sat.		0.880															
26	Sun.		0.900															
27	Mon.		0.930													8.0	55	
28	Tues.		1.010													8.1	56	
29	Wed.		0.830	14	97	4.29	29.70	33.20	229.82	0.0341	0.2360	12	83	<0.50	0	8.1	55	
30	Thurs.		0.950													8.0	54	
			0.000															

TOTAL AVERAGE	0.0	28.020	71.0	545		161.04		1069.85		1.3749		131.0	1027	0.0	0.0			0.0
MAX	0.0	0.904	8.9	68		32.21		213.97		0.2750		14.6	114	0.0	0.0	8.1	55	0.0
MIN	0.0	1.050	16.0	117		36.65		256.91		0.3576		25.0	192	0.0	0.0	8.2	58	0.0
MIN	0.0	0.000	5.0	39		29.43		150.39		0.2360		8.0	70	0.0	0.0	8.0	52	0.0

7 DAY AVERAGE																		
WEEK 1	0.0	0.986	5.0	43		34.96		256.91		0.2451		10.5	90	0.0	0.0	8.1	56	0.0
WEEK 2	0.0	0.946	5.5	44		36.65		218.42		0.2500		10.0	80	0.0	0.0	8.1	55	0.0
WEEK 3	0.0	0.920	10.0	78		30.31		150.39		0.3576		20.0	158	0.0	0.0	8.2	55	0.0
WEEK 4	0.0	0.897	16.0	117		29.43		214.30		0.2862		18.0	132	0.0	0.0	8.1	54	0.0

City of Waverly

MONTHLY MONITORING REPORT

Date: December, 2017

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.	0.900	97	7.05	165	2280	1.26	64	480								127	953	7.1	56
2	Sat.	0.820					1.34													
3	Sun.	0.950					1.21													
4	Mon.	0.870	97	6.96	160	2250	1.29												7.4	56
5	Tues.	0.880	97	6.96			1.28												7.3	56
6	Wed.	0.870	97	6.95			1.29	93	675	3.59	26.05	37.0	268.46	26.6	193.00		226	1640	7.2	56
7	Thurs.	0.870	97	6.96			1.29												7.2	56
8	Fri.	0.830	97	6.93	278	2200	1.33	95	658								142	983	7.2	55
9	Sat.	0.780					1.38													
10	Sun.	0.880					1.28													
11	Mon.	0.850	97	6.93	160	2220	1.31												6.9	55
12	Tues.	0.800	97	6.93			1.36												7.3	55
13	Wed.	0.900	97	6.94			1.26	75	563	3.85	28.90	31.8	238.69	22.3	167.38		117	878	7.3	55
14	Thurs.	0.880	97	6.96			1.28												7.5	55
15	Fri.	0.790	97	7.00	315	2340	1.37	53	349								80	527	7.2	54
16	Sat.	0.770					1.39													
17	Sun.	0.820					1.34													
18	Mon.	0.830	97	6.94	285	2360	1.33												7.5	55
19	Tues.	0.830	97	6.98			1.33												7.6	55
20	Wed.	0.800	97	6.98			1.36	145	967	4.58	30.56	33.9	226.18	30.3	202.16		173	1154	7.4	55
21	Thurs.	0.800	97	7.01	175	2370	1.36	145	967								183	1221	7.4	54
22	Fri.	0.790	97	6.95			1.37												7.7	55
23	Sat.	0.750					1.41													
24	Sun.	0.720					1.44													
25	Mon.	0.600	97	6.93	160	2270	1.56												7.5	54
26	Tues.	0.720	97	6.97			1.44												7.7	47
27	Wed.	0.720	97	6.97			1.44	190	1141	5.20	31.22	36.9	221.58	32.8	196.96		256	1537	7.4	52
28	Thurs.	0.830	97	6.97			1.33												7.5	53
29	Fri.	0.810	97	6.98	150	2210	1.35	157	1061								183	1236	7.4	54
30	Sat.	0.810					1.35													
31	Sun.	0.620					1.54													

TOTAL AVERAGE	25.090					41.870	1017.0	6861		116.73		954.91	759.51	1487.0	10130				
MAX	0.809	97.0	7.0			1.351	113.0	762		29.18		238.73	189.88	165.2	1126			7.4	54.4
MIN	0.950	97.0	7.1			1.560	190.0	1141		31.22		268.46	202.16	256.0	1640			7.7	56.0
	0.600	97.0	6.9			1.210	53.0	349		26.05		221.58	167.38	80.0	527			6.9	47.0

7 DAY AVERAGE																			
WEEK 1	0.880					1.280	78.5	578		26.05		268.46	193.00	176.5	1297			7.2	56.0
WEEK 2	0.846					1.314	85.0	610		28.90		238.69	167.38	129.5	931			7.2	55.8
WEEK 3	0.806					1.354	114.3	761		30.56		226.18	202.16	145.3	967			7.4	55.8
WEEK 4	0.733					1.427	190.0	1141		31.22		221.58	196.96	256.0	1537			7.6	52.2

Signature: _____
 Certification Number: 3989

**City of Waverly
MONTHLY MONITORING REPORT**

Date: December, 2017

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.		0.900	15	113							11	83	<0.50	0	8.1	54	
2	Sat.		0.820															
3	Sun.		0.950															
4	Mon.		0.870													8.1	56	
5	Tues.		0.880													8.0	54	
6	Wed.		0.870	16	116	3.64	26.41	35.1	254.68	0.0323	0.2344	10	73	1.00	7	8.1	52	
7	Thurs.		0.870													8.0	50	
8	Fri.		0.830	9	62							10	69	<0.50	0	8.0	50	
9	Sat.		0.780															
10	Sun.		0.880															
11	Mon.		0.850													8.0	52	
12	Tues.		0.800													8.0	50	
13	Wed.		0.900	14	105	3.86	28.97	31.8	238.69	0.0405	0.3040	11	83	<0.50	0	8.2	50	
14	Thurs.		0.880													8.0	50	
15	Fri.		0.790	12	79							10	66	<0.50	0	8.1	50	
16	Sat.		0.770															
17	Sun.		0.820															
18	Mon.		0.830													8.0	51	
19	Tues.		0.830													8.2	52	
20	Wed.		0.800	12	80	4.21	28.09	33.1	220.84	0.0371	0.2475	11	73	<0.50	0	8.2	51	
21	Thurs.		0.800	10	67							11	73	<0.50	0	8.2	50	
22	Fri.		0.790													8.1	51	
23	Sat.		0.750															
24	Sun.		0.720															
25	Mon.		0.600													8.1	48	
26	Tues.		0.720													8.1	45	
27	Wed.		0.720	9	54	3.55	21.32	41.7	250.40	0.0289	0.1735	8	48	<0.50	0	8.2	46	
28	Thurs.		0.830													8.1	47	
29	Fri.		0.810	9	61							11	74	<0.50	0	8.2	47	
30	Sat.		0.810															
31	Sun.		0.620															

TOTAL AVERAGE	0.0	25.090	106.0	737		104.79		964.61		0.9594	93.0	642	1.0	7.3				0.0
MAX	0.0	0.809	11.8	82		26.20		241.15		0.2399	10.3	71	1.0	0.8	8.1	50		0.0
MIN	0.0	0.950	16.0	116		28.97		254.68		0.3040	11.0	83	1.0	7.3	8.2	56		0.0
	0.0	0.600	9.0	54		21.32		220.84		0.1735	8.0	48	1.0	0.0	8.0	45		0.0

7 DAY AVERAGE																		
WEEK 1	0.0	0.880	15.5	114		26.41		254.68		0.2344	10.5	78	1.0	3.6	8.1	53		0.0
WEEK 2	0.0	0.846	11.5	84		28.97		238.69		0.3040	10.5	76	0.0	0.0	8.0	50		0.0
WEEK 3	0.0	0.806	11.3	75		28.09		220.84		0.2475	10.7	71	0.0	0.0	8.1	51		0.0
WEEK 4	0.0	0.733	9.0	54		21.32		250.40		0.1735	8.0	48	0.0	0.0	8.1	47		0.0

City of Waverly

MONTHLY MONITORING REPORT

Date: January, 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	Mon.	0.610	97	6.97	150	2150	1.55											7.7	51
2	Tues.	0.850	97	6.95			1.31											7.6	53
3	Wed.	0.830	97	7.04			1.33	168	1163	4.22	29.21	35.2	243.66	33.4	231.20	203	1405	7.2	53
4	Thurs.	0.850	97	6.96			1.31											7.6	53
5	Fri.	0.790	97	6.95	155	2100	1.37	158	1041							184	1212	7.4	53
6	Sat.	0.840					1.32												
7	Sun.	0.890					1.27												
8	Mon.	0.890	97	6.94	160	2050	1.27											7.9	54
9	Tues.	0.910	97	6.91			1.25											7.9	55
10	Wed.	0.910	97	6.88			1.25	165	1252	5.76	43.71	34.2	259.56	32.8	248.93	220	1670	7.4	54
11	Thurs.	0.870	98	6.93			1.29											7.6	54
12	Fri.	0.870	97	6.90	155	2040	1.29	163	1183							194	1408	7.4	53
13	Sat.	0.810					1.35												
14	Sun.	0.910					1.25												
15	Mon.	0.920	97	6.90	155	2060	1.24											7.6	54
16	Tues.	0.940	105	6.91			1.22											7.5	52
17	Wed.	0.910	103	6.90			1.25	>340	>2580	4.12	31.27	33.1	251.21	32.1	243.62	243	1844	7.4	52
18	Thurs.	0.970	102	6.95			1.19											7.6	53
19	Fri.	0.980	102	6.99	180	2070	1.18	169	1381							228	1863	7.4	53
20	Sat.	0.980					1.18												
21	Sun.	1.460					0.70												
22	Mon.	1.560	97	6.90	165	2140	0.60											7.5	50
23	Tues.	1.090	96	6.95			1.07											7.7	51
24	Wed.	1.060	96	6.95			1.10	143	1264	4.47	39.52	29.6	261.68	26.3	232.50	230	2033	7.4	52
25	Thurs.	1.100	97	6.93			1.06											7.6	54
26	Fri.	1.020	97	6.97	170	2180	1.14	149	1268							208	1769	7.4	52
27	Sat.	0.960					1.20												
28	Sun.	0.870					1.29												
29	Mon.	0.900	97	6.91	165	2170	1.26											7.6	51
30	Tues.	0.890	97	6.86			1.27											7.7	52
31	Wed.	0.890	97	6.97			1.27	167	1240	4.93	36.59	35.6	264.24	34.2	253.85	244	1811	7.4	52

TOTAL	29.330						37.630	1282.0	9791				180.30		1280.35		1210.11	1954.0	15016		
AVERAGE	0.946	98.0	6.9				1.214	160.3	1224				36.06		256.07		242.02	217.1	1668	7.5	52.7
MAX	1.560	105.0	7.0				1.550	>340	>2580				43.71		264.24		253.85	244.0	2033	7.9	55.0
MIN	0.610	96.0	6.9				0.600	143.0	1041				29.21		243.66		231.20	184.0	1212	7.2	50.0

7 DAY AVERAGE																					
WEEK 1	0.809						1.351	163.0	1102				29.21		243.66		231.20	193.5	1309	7.5	52.6
WEEK 2	0.881						1.279	164.0	1217				43.71		259.56		248.93	207.0	1539	7.6	53.2
WEEK 3	1.023						1.137	169.0	1381				31.27		251.21		243.62	235.5	1854	7.5	53.6
WEEK 4	1.094						1.066	146.0	1266				39.52		261.68		232.50	219.0	1901	7.5	51.8

Signature: _____
 Certification Number: 3989

City of Waverly
MONTHLY MONITORING REPORT

Date: January, 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	Mon.		0.610													8.0	44	
2	Tues.		0.850													8.0	45	
3	Wed.		0.830	11	76	3.30	22.84	24.0	166.13	0.0327	0.2264	10	69	<0.50	0	8.1	46	
4	Thurs.		0.850													8.1	47	
5	Fri.		0.790	9	59							7	46	<0.50	0	8.2	48	
6	Sat.		0.840															
7	Sun.		0.890															
8	Mon.		0.890													8.0	50	
9	Tues.		0.910													8.1	50	
10	Wed.		0.910	10	76	3.97	30.13	36.3	275.50	0.0304	0.2307	9	68	0.67	5	8.2	50	
11	Thurs.		0.870													8.0	52	
12	Fri.		0.870	7	51							6	44	0.56	4	8.2	46	
13	Sat.		0.810															
14	Sun.		0.910															
15	Mon.		0.920													8.0	46	
16	Tues.		0.940													8.1	45	
17	Wed.		0.910	>10	>76	2.85	21.63	31.6	239.83	0.0242	0.1837	8	61	1.46	11	8.2	46	
18	Thurs.		0.970													8.1	48	
19	Fri.		0.980	>14	>114							6	49	1.46	12	8.2	49	
20	Sat.		0.980															
21	Sun.		1.460															
22	Mon.		1.560													7.9	50	
23	Tues.		1.090													8.0	49	
24	Wed.		1.060	9	80	2.64	23.34	26.8	236.92	0.0169	0.1494	8	71	<0.50	0	8.2	48	
25	Thurs.		1.100													8.1	49	
26	Fri.		1.020	9	77							7	60	<0.50	0	8.2	51	
27	Sat.		0.960															
28	Sun.		0.870															
29	Mon.		0.900													8.1	47	
30	Tues.		0.890													8.1	47	
31	Wed.		0.890	10	74	3.26	24.20	20.5	152.16	0.0438	0.3251	7	52	<0.50	0	8.3	47	

TOTAL AVERAGE	0.0	29.330	65.0	492		122.14		1070.54		1.1152	68.0	519	4.2	32.2				0.0
MAX	0.0	0.946	9.3	70		24.43		214.11		0.2230	7.6	58	1.0	3.6		8.1	48	0.0
MIN	0.0	1.560	>14	>114		30.13		275.50		0.3251	10.0	71	1.5	11.9		8.3	52	0.0
MIN	0.0	0.610	7.0	51		21.63		152.16		0.1494	6.0	44	0.6	0.0		7.9	44	0.0

7 DAY AVERAGE																		
WEEK 1	0.0	0.809	10.0	68		22.84		166.13		0.2264	8.5	58	0.0	0.0		8.1	46	0.0
WEEK 2	0.0	0.881	8.5	63		30.13		275.50		0.2307	7.5	56	0.6	4.6		8.1	50	0.0
WEEK 3	0.0	1.023	>14	>114		21.63		239.83		0.1837	7.0	55	1.5	11.5		8.1	47	0.0
WEEK 4	0.0	1.094	9.0	78		23.34		236.92		0.1494	7.5	65	0.0	0.0		8.1	49	0.0

City of Waverly

MONTHLY MONITORING REPORT

Date: February, 2018

DISCHARGE SERIAL # 001 - # 002

Facility Number 0990001

Note: 0.0 = <MDL of 0.5

DAY OF MONTH	DAY OF WEEK	DIGESTER CONTENTS					TRICKLIN G 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) M/G/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	Thurs.	0.890	97	6.93			1.27										7.9	52	
2	Fri.	0.870	97	6.95	170	2170	1.29	167	1212							212	1538	7.5	51
3	Sat.	0.800					1.36												
4	Sun.	0.740					1.42												
5	Mon.	0.790	97	6.97	180	2160	1.37										7.6	51	
6	Tues.	0.790	97	6.89			1.37										7.6	51	
7	Wed.	0.820	97	7.00			1.34	209	1429	4.70	32.14	38.6	263.98	36.3	248.25	252	1723	7.3	52
8	Thurs.	0.860	97	6.90			1.30										7.6	51	
9	Fri.	0.840	97	6.94	175	2120	1.32	151	1058							214	1499	7.4	51
10	Sat.	0.800					1.36												
11	Sun.	0.850					1.31												
12	Mon.	0.740	97	6.87	175	2090	1.42										7.7	50	
13	Tues.	0.830	97	6.87			1.33										7.6	50	
14	Wed.	0.960	97	6.92			1.20	223	1785	4.67	37.39	48.0	384.31	45.9	367.49	296	2370	7.5	52
15	Thurs.	0.900	97	6.91			1.26										7.6	52	
16	Fri.	0.850	97	6.88	175	2060	1.31	220	1560							310	2198	7.4	51
17	Sat.	0.790					1.37												
18	Sun.	0.920					1.24												
19	Mon.	1.140	98	6.89	278	2050	1.02										7.6	51	
20	Tues.	1.050	97	6.94			1.11										7.7	49	
21	Wed.	0.890	97	7.01			1.27	163	1210	5.24	38.89	32.9	244.20	30.5	226.39	216	1603	7.4	50
22	Thurs.	1.040	98	6.88			1.12										7.7	50	
23	Fri.	1.020	98	7.01	285	2200	1.14	154	1310							208	1769	7.4	49
24	Sat.	0.970					1.19												
25	Sun.	0.960					1.20												
26	Mon.	1.070	98	6.90	285	2240	1.09										7.6	49	
27	Tues.	1.070	97	6.90			1.09										7.6	53	
28	Wed.	1.080	97	6.92			1.08	169	1522	5.38	48.46	33.1	298.14	30.9	278.32	262	2360	7.4	50

TOTAL	25.330						35.150	1456.0	11086								1970.0	15061		
AVERAGE	0.905	97.2	6.9				1.255	182.0	1386								246.3	1883	7.6	50.8
MAX	1.140	98.0	7.0				1.420	223.0	1785								310.0	2370	7.9	53.0
MIN	0.740	97.0	6.9				1.020	151.0	1058								208.0	1499	7.3	49.0

7 DAY AVERAGE																				
WEEK 1	0.814						1.346	188.0	1321								232.0	1631	7.6	51.4
WEEK 2	0.840						1.320	187.0	1422								255.0	1935	7.6	51.2
WEEK 3	0.934						1.226	191.5	1385								263.0	1900	7.5	51.2
WEEK 4	1.030						1.130	161.5	1416								235.0	2065	7.5	50.2

Signature: _____
 Certification Number: **3989**

City of Waverly MONTHLY MONITORING REPORT

Date: February, 2018

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	Thurs.		0.890													8.1	48	
2	Fri.		0.870	9	65							5	36	<0.50	0	8.3	44	
3	Sat.		0.800															
4	Sun.		0.740															
5	Mon.		0.790													8.0	44	
6	Tues.		0.790													8.0	45	
7	Wed.		0.820	15	103	3.19	21.82	31.4	214.74	0.0369	0.2524	9	62	4.48	31	8.2	47	
8	Thurs.		0.860													7.9	48	
9	Fri.		0.840	6	42							6	42	5.15	36	8.2	48	
10	Sat.		0.800															
11	Sun.		0.850															
12	Mon.		0.740													7.8	47	
13	Tues.		0.830													7.9	47	
14	Wed.		0.960	9	72	3.00	24.02	24.2	193.75	0.0279	0.2234	6	48	5.82	47	8.2	48	
15	Thurs.		0.900													7.9	50	
16	Fri.		0.850	7	50							6	43	4.14	29	8.1	48	
17	Sat.		0.790															
18	Sun.		0.920															
19	Mon.		1.140													7.8	49	
20	Tues.		1.050													7.8	49	
21	Wed.		0.890	10	74	3.53	26.20	20.9	155.13	0.0220	0.1633	7	52	3.70	27	8.1	45	
22	Thurs.		1.040													7.8	47	
23	Fri.		1.020	7	60							7	60	2.80	24	8.1	49	
24	Sat.		0.970															
25	Sun.		0.960															
26	Mon.		1.070													7.8	47	
27	Tues.		1.070													7.8	49	
28	Wed.		1.080	8	72	3.45	31.07	15.6	140.51	0.0208	0.1873	7	63	2.35	21	8.1	50	

TOTAL AVERAGE MAX MIN	0.0	25.330	71.0	537		103.11		704.14		0.8264	53.0	405	28.4	215.1				0.0
	0.0	0.905	8.9	67		25.78		176.03		0.2066	6.6	51	4.1	26.9		8.0	47	0.0
	0.0	1.140	15.0	103		31.07		214.74		0.2524	9.0	63	5.8	46.6		8.3	50	0.0
	0.0	0.740	6.0	42		21.82		140.51		0.1633	5.0	36	2.4	0.0		7.8	44	0.0

7 DAY AVERAGE																		
WEEK 1	0.0	0.814	12.0	84		21.82		214.74		0.2524	7.0	49	4.5	15.3		8.1	46	0.0
WEEK 2	0.0	0.840	7.5	57		24.02		193.75		0.2234	6.0	45	5.5	41.3		8.0	48	0.0
WEEK 3	0.0	0.934	8.5	62		26.20		155.13		0.1633	6.5	47	3.9	28.4		7.9	48	0.0
WEEK 4	0.0	1.030	7.5	66		31.07		140.51		0.1873	7.0	61	2.6	22.5		7.9	48	0.0

City of Waverly

MONTHLY MONITORING REPORT

Date: March, 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	Thurs.	1.090	97	6.90			1.07										7.6	50	
2	Fri.	1.070	97	6.93	278	2220	1.09	154	1374							240	2142	7.4	51
3	Sat.	1.080					1.08												
4	Sun.	1.090					1.07												
5	Mon.	1.080	97	6.92	285	2180	1.08										7.6	50	
6	Tues.	1.210	98	7.02			0.95										7.6	50	
7	Wed.	1.070	98	6.91			1.09	126	1124	3.75	33.46	26.3	234.70	22.0	196.32	180	1606	7.5	50
8	Thurs.	0.990	98	6.99			1.17										7.6	50	
9	Fri.	0.960	98	7.08	175	2190	1.20	130	1041							200	1601	7.4	50
10	Sat.	0.810					1.35												
11	Sun.	0.900					1.26												
12	Mon.	0.900	98	6.88	175	2130	1.26										7.6	51	
13	Tues.	0.900	97	6.95			1.26										7.5	50	
14	Wed.	0.890	97	6.97			1.27	165	1225	5.59	41.49	34.5	256.08	33.0	244.95	237	1759	7.4	50
15	Thurs.	0.920	98	6.90			1.24										7.6	51	
16	Fri.	0.900	98	6.95	175	2100	1.26	176	1321							252	1892	7.4	51
17	Sat.	0.950					1.21												
18	Sun.	0.940					1.22												
19	Mon.	0.940	98	6.90	278	2090	1.22										7.6	51	
20	Tues.	0.890	98	6.91			1.27										7.6	51	
21	Wed.	0.950	98	6.90			1.21	169	1339	4.49	35.57	38.0	301.07	33.5	265.42	250	1981	7.4	50
22	Thurs.	0.990	98	6.91	278	2130	1.17	197	1627							212	1750	7.4	53
23	Fri.	0.900	98	6.84			1.26										7.9	52	
24	Sat.	0.880					1.28												
25	Sun.	0.950					1.21												
26	Mon.	0.990	98	6.85	278	2050	1.17										7.7	50	
27	Tues.	1.000	98	6.86			1.16										7.6	51	
28	Wed.	1.110	98	6.85			1.05	201	1861	6.73	62.30	38.1	352.71	34.9	323.08	300	2777	7.4	51
29	Thurs.	1.130	98	6.87	165	2060	1.03	154	1451							234	2205	7.2	50
30	Fri.	1.190	98	6.89			0.97										7.6	51	
31	Sat.	1.170					0.99												

TOTAL	30.840						36.120	1472.0	12363		172.83		1144.56		1029.77	2105.0	17714		
AVERAGE	0.995	97.8	6.9				1.165	163.6	1374		43.21		286.14		257.44	233.9	1968	7.5	50.6
MAX	1.210	98.0	7.1				1.350	201.0	1861		62.30		352.71		323.08	300.0	2777	7.9	53.0
MIN	0.810	97.0	6.8				0.950	126.0	1041		33.46		234.70		196.32	180.0	1601	7.2	50.0

7 DAY AVERAGE																			
WEEK 1	1.099						1.061	140.0	1249		33.46		234.70		196.32	210.0	1874	7.5	50.2
WEEK 2	0.907						1.253	147.5	1133		41.49		256.08		244.95	218.5	1680	7.5	50.2
WEEK 3	0.927						1.233	172.5	1330		35.57		301.07		265.42	251.0	1936	7.5	50.0
WEEK 4	0.974						1.186	199.0	1744		62.30		352.71		323.08	256.0	2264	7.6	51.4

Signature: _____
 Certification Number: **3989**

City of Waverly
MONTHLY MONITORING REPORT

Date: March, 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	Thurs.		1.090													7.8	50	
2	Fri.		1.070	8	71							6	54	<0.50	0	8.2	49	
3	Sat.		1.080															
4	Sun.		1.090															
5	Mon.		1.080													8.1	50	
6	Tues.		1.210													8.1	48	
7	Wed.		1.070	7	62	2.64	23.56	11.6	103.52	0.0445	0.3971	6	54	<0.50	0	8.2	47	
8	Thurs.		0.990													7.9	46	
9	Fri.		0.960	9	72							6	48	<0.50	0	8.2	47	
10	Sat.		0.810															
11	Sun.		0.900															
12	Mon.		0.900													7.9	48	
13	Tues.		0.900													7.8	48	
14	Wed.		0.890	11	82	3.05	22.64	20.9	155.13	0.0458	0.3400	5	37	1.01	7	8.1	48	
15	Thurs.		0.920													7.8	49	
16	Fri.		0.900	9	68							4	30	<0.50	0	8.2	49	
17	Sat.		0.950															
18	Sun.		0.940															
19	Mon.		0.940													7.8	51	
20	Tues.		0.890													7.8	50	
21	Wed.		0.950	8	63	3.84	30.42	24.7	195.70	0.0343	0.2718	4	32	1.79	14	8.1	49	
22	Thurs.		0.990	16	132							5	41	1.12	9	8.1	50	
23	Fri.		0.900													7.8	51	
24	Sat.		0.880															
25	Sun.		0.950															
26	Mon.		0.990													7.8	49	
27	Tues.		1.000													7.8	49	
28	Wed.		1.110	7	65	3.70	34.25	22.2	205.51	0.0265	0.2453	5	46	0.78	7	8.1	49	
29	Thurs.		1.130	9	85							6	57	1.12	11	8.0	50	
30	Fri.		1.190													7.8	50	
31	Sat.		1.170															

TOTAL	0.0	30.840	84.0	700			110.87		659.86		1.2541	47.0	398	5.8	48.7			0.0
AVERAGE	0.0	0.995	9.3	78			27.72		164.97		0.3135	5.2	44	1.2	5.4	8.0	49	0.0
MAX	0.0	1.210	16.0	132			34.25		205.51		0.3971	6.0	57	1.8	14.2	8.2	51	0.0
MIN	0.0	0.810	7.0	62			22.64		103.52		0.2453	4.0	30	0.8	0.0	7.8	46	0.0

7 DAY AVERAGE																		
WEEK 1	0.0	1.099	7.5	67			23.56		103.52		0.3971	6.0	54	<0.50	0.0	8.1	49	0.0
WEEK 2	0.0	0.907	10.0	77			22.64		155.13		0.3400	5.5	43	1.0	3.7	8.0	47	0.0
WEEK 3	0.0	0.927	8.5	65			30.42		195.70		0.2718	4.0	31	1.8	7.1	7.9	50	0.0
WEEK 4	0.0	0.974	11.5	98			34.25		205.51		0.2453	5.0	44	1.0	8.2	7.9	50	0.0

City of Waverly

MONTHLY MONITORING REPORT

Date: April, 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	Sun.	1.130					1.03												
2	Mon.	1.120	98	6.91	285	2080	1.04											7.5	50
3	Tues.	1.150	98	6.91			1.01	173	1659	5.42	51.98	30.6	293.48	25.9	248.41	268	2570	7.4	51
4	Wed.	1.070	98	6.84			1.09											7.9	50
5	Thurs.	1.110	98	6.91	278	2100	1.05	149	1379							200	1851	7.4	50
6	Fri.	1.050	98	6.93			1.11											7.7	51
7	Sat.	0.920					1.24												
8	Sun.	0.960					1.20												
9	Mon.	1.050	98	6.89	285	2190	1.11											7.7	51
10	Tues.	0.960	98	6.88			1.20											7.8	50
11	Wed.	1.070	98	6.91			1.09	181	1615	5.54	49.44	34.8	310.55	30.7	273.96	252	2249	7.5	50
12	Thurs.	1.080	98	6.89			1.08											7.5	50
13	Fri.	1.200	98	6.91	285	2220	0.96	181	1811							272	2722	7.3	50
14	Sat.	1.440					0.72												
15	Sun.	2.000					0.16												
16	Mon.	2.150	98	6.94	338	2500	0.01											7.6	49
17	Tues.	1.730	98	6.96			0.43											7.5	48
18	Wed.	1.560	98	7.05			0.60	122	1587	4.02	52.30	24.8	322.66	19.8	257.61	216	2810	7.4	50
19	Thurs.	1.730	98	7.00			0.43											7.5	50
20	Fri.	1.530	98	6.93	345	2590	0.63	138	1761							206	2629	7.4	51
21	Sat.	1.410					0.75												
22	Sun.	1.490					0.67												
23	Mon.	1.580	98	6.99	360	2680	0.58											7.6	51
24	Tues.	1.900	98	6.93			0.26											7.7	52
25	Wed.	1.790	98	6.95			0.37	113	1687	4.25	63.45	24.6	367.24	18.7	279.16	200	2986	7.5	51
26	Thurs.	1.630	98	6.95			0.53											7.4	51
27	Fri.	1.460	98	6.98	360	2820	0.70	92	1120							140	1705	7.4	52
28	Sat.	1.350					0.81												
29	Sun.	1.380					0.78												
30	Mon.	1.330	98	6.96	368	2880	0.83											7.5	51

TOTAL	41.330					23.470	1149.0	12621		217.17		1293.93		1059.14	1754.0	19522			
AVERAGE	1.378	98.0	6.9			0.782	143.6	1578		54.29		323.48		264.78	219.3	2440	7.5	50.4	
MAX	2.150	98.0	7.1			1.240	181.0	1811		63.45		367.24		279.16	272.0	2986	7.9	52.0	
MIN	0.920	98.0	6.8			0.010	92.0	1120		49.44		293.48		248.41	140.0	1705	7.3	48.0	

7 DAY AVERAGE																			
WEEK 1	1.079					1.081	161.0	1519		51.98		293.48		248.41	234.0	2211	7.6	50.4	
WEEK 2	1.109					1.051	181.0	1713		49.44		310.55		273.96	262.0	2485	7.6	50.4	
WEEK 3	1.730					0.430	130.0	1674		52.30		322.66		257.61	211.0	2719	7.5	50.6	
WEEK 4	1.600					0.560	102.5	1404		63.45		367.24		279.16	170.0	2345	7.5	51.4	

Signature: _____
 Certification Number: 3989

City of Waverly
MONTHLY MONITORING REPORT

Date: April, 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	Sun.		1.130															
2	Mon.		1.120													7.9	48	
3	Tues.		1.150	9	86	2.62	25.13	18.1	173.60	0.0227	0.2177	6	58	<0.50	0	8.2	49	
4	Wed.		1.070													7.9	46	
5	Thurs.		1.110	8	74							5	46	0.56	5	8.1	48	
6	Fri.		1.050													7.8	49	
7	Sat.		0.920															
8	Sun.		0.960															
9	Mon.		1.050													7.8	48	
10	Tues.		0.960													7.8	49	
11	Wed.		1.070	10	89	3.03	27.04	20.4	182.05	0.0665	0.5934	7	62	<0.50	0	8.1	50	
12	Thurs.		1.080													7.8	51	
13	Fri.		1.200	7	70							6	60	<0.50	0	8.1	52	
14	Sat.		1.440															
15	Sun.		2.000															
16	Mon.		2.150													7.9	47	
17	Tues.		1.730													7.8	47	
18	Wed.		1.560	10	130	1.89	24.59	14.2	184.75	0.0323	0.4202	11	143	<0.50	0	8.1	48	
19	Thurs.		1.730													7.8	49	
20	Fri.		1.530	9	115							9	115	0.56	7	8.1	50	
21	Sat.		1.410															
22	Sun.		1.490															
23	Mon.		1.580													7.8	51	
24	Tues.		1.900													7.8	52	
25	Wed.		1.790	10	149	2.05	30.60	16.2	241.84	0.0281	0.4195	10	149	<0.50	0	8.2	52	
26	Thurs.		1.630													7.8	52	
27	Fri.		1.460	9	110							8	97	0.56	7	8.2	52	
28	Sat.		1.350															
29	Sun.		1.380															
30	Mon.		1.330													7.9	52	

TOTAL AVERAGE MAX MIN	0.0	41.330	72.0	823		107.36		782.23		1.6509	62.0	731	1.7	19.1				0.0
	0.0	1.378	9.0	103		26.84		195.56		0.4127	7.8	91	0.6	2.4	7.9	50	0.0	
	0.0	2.150	10.0	149		30.60		241.84		0.5934	11.0	149	0.6	7.1	8.2	52	0.0	
	0.0	0.920	7.0	70		24.59		173.60		0.2177	5.0	46	0.6	0.0	7.8	46	0.0	

7 DAY AVERAGE																		
WEEK 1	0.0	1.079	8.5	80		25.13		173.60		0.2177	5.5	52	0.6	2.6	8.0	48	0.0	
WEEK 2	0.0	1.109	8.5	80		27.04		182.05		0.5934	6.5	61	0.0	0.0	7.9	50	0.0	
WEEK 3	0.0	1.730	9.5	122		24.59		184.75		0.4202	10.0	129	0.6	3.6	7.9	48	0.0	
WEEK 4	0.0	1.600	9.5	129		30.60		241.84		0.4195	9.0	123	0.6	3.4	8.0	52	0.0	

City of Waverly

MONTHLY MONITORING REPORT

Date: May, 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	Tues.	1.350	98	6.98			0.81											7.5	52
2	Wed.	1.430	97	7.03			0.73	152	1813	5.29	63.09	30.0	357.79	26.2	312.47	244	2910	7.4	52
3	Thurs.	1.830	98	6.95			0.33											7.6	52
4	Fri.	2.400	98	7.00	360	2900	-0.24	154	3082							244	4884	7.5	53
5	Sat.	2.610					-0.45												
6	Sun.	2.450					-0.29												
7	Mon.	1.920	97	6.98	375	3000	0.24											7.5	54
8	Tues.	2.080	98	6.99			0.08											7.5	55
9	Wed.	1.660	97	7.04			0.50	183	2534	4.35	60.22	25.7	355.80	20.8	287.96	296	4098	7.5	52
10	Thurs.	1.690	98	7.00			0.47											7.5	53
11	Fri.	1.840	98	7.01	360	3010	0.32	191	2931							298	4573	7.4	54
12	Sat.	1.630					0.53												
13	Sun.	1.850					0.31												
14	Mon.	1.860	97	7.03	368	3000	0.30											7.5	53
15	Tues.	1.780	97	7.01			0.38											7.6	54
16	Wed.	1.720	97	7.05			0.44	221	3170	7.66	109.88	38.2	547.97	33.3	477.68	480	6886	7.5	55
17	Thurs.	1.640	97	7.00			0.52											7.5	54
18	Fri.	1.520	97	7.01	323	3010	0.64	141	1787							240	3042	7.4	54
19	Sat.	1.590					0.57												
20	Sun.	1.250					0.91												
21	Mon.	1.400	97	6.99	353	3070	0.76											7.6	54
22	Tues.	1.400	97	7.00			0.76											7.5	54
23	Wed.	1.420	97	7.04			0.74	141	1670	4.24	50.21	26.4	312.65	21.2	251.07	208	2463	7.4	55
24	Thurs.	1.270	97	7.02			0.89											7.5	55
25	Fri.	1.310	98	7.05	390	3100	0.85	129	1409							192	2098	7.4	56
26	Sat.	1.260					0.90												
27	Sun.	1.340					0.82												
28	Mon.	1.120	98	7.03			1.04											7.5	58
29	Tues.	1.130	98	7.00	375	3080	1.03											7.5	58
30	Wed.	1.190	97	7.03			0.97	157	1558	5.28	52.40	36.5	362.25	32.8	325.53	240	2382	7.5	56
31	Thurs.	1.230	97	7.00			0.93											7.4	58

TOTAL	50.170					16.790	1469.0	19955		335.81		1936.46		1654.71	2442.0	33336		
AVERAGE	1.618	97.4	7.0			0.542	163.2	2217		67.16		387.29		330.94	271.3	3704	7.5	54.4
MAX	2.610	98.0	7.1			1.040	221.0	3170		109.88		547.97		477.68	480.0	6886	7.6	58.0
MIN	1.120	97.0	7.0			-0.450	129.0	1409		50.21		312.65		251.07	192.0	2098	7.4	52.0

7 DAY AVERAGE																		
WEEK 1	1.999					0.161	153.0	2448		63.09		357.79		312.47	244.0	3897	7.5	52.6
WEEK 2	1.801					0.359	187.0	2732		60.22		355.80		287.96	297.0	4335	7.5	53.2
WEEK 3	1.557					0.603	181.0	2479		109.88		547.97		477.68	360.0	4964	7.5	53.2
WEEK 4	1.303					0.857	135.0	1540		50.21		312.65		251.07	200.0	2280	7.5	55.6

Signature: _____
 Certification Number: 3989

City of Waverly
MONTHLY MONITORING REPORT

Date: May, 2018

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	Tues.		1.350													7.9	54	
2	Wed.		1.430	7	83	2.81	33.51	17.3	206.32	0.0272	0.3244	8	95	<0.50	0	8.2	55	1.0
3	Thurs.		1.830													7.8	54	
4	Fri.		2.400	7	140							12	240	<0.50	0	8.2	54	
5	Sat.		2.610															
6	Sun.		2.450															
7	Mon.		1.920													7.9	55	
8	Tues.		2.080													8.0	55	
9	Wed.		1.660	15	208	1.79	24.78	13.5	186.90	0.0445	0.6161	8	111	<0.50	0	8.3	54	<1.0
10	Thurs.		1.690													8.0	55	
11	Fri.		1.840	17	261							8	123	<0.50	0	8.3	55	
12	Sat.		1.630															
13	Sun.		1.850															
14	Mon.		1.860													8.0	55	
15	Tues.		1.780													8.1	56	
16	Wed.		1.720	10	143	2.30	32.99	15.0	215.17	0.0395	0.5666	11	158	<0.50	0	8.3	56	1.0
17	Thurs.		1.640													8.0	57	
18	Fri.		1.520	7	89							11	139	<0.50	0	8.3	57	
19	Sat.		1.590															
20	Sun.		1.250															
21	Mon.		1.400													8.1	56	
22	Tues.		1.400													8.1	57	
23	Wed.		1.420	9	107	2.74	32.45	20.2	239.22	0.0342	0.4050	12	142	<0.50	0	8.3	59	<1.0
24	Thurs.		1.270													8.1	60	
25	Fri.	0.180	1.130	8	75							11	104	<0.50	0	8.3	61	
26	Sat.	0.280	0.980															
27	Sun.	0.310	1.030															
28	Mon.	0.179	0.941													8.1	61	
29	Tues.		1.130													7.9	62	
30	Wed.		1.190	9	89	2.92	28.98	22.1	219.33	0.0340	0.3374	13	129	<0.50	0	8.1	62	3.1
31	Thurs.		1.230													7.8	62	

TOTAL AVERAGE	0.9	49.221	89.0	1196		152.72			1066.95		2.2495	94.0	1241	0.0	0.0			5.1
	0.2	1.588	9.9	133		30.54			213.39		0.4499	10.4	138	0.0	0.0	8.1	57	1.7
MAX	0.3	2.610	17.0	261		33.51			239.22		0.6161	13.0	240	0.0	0.0	8.3	62	3.1
MIN	0.2	0.941	7.0	75		24.78			186.90		0.3244	8.0	95	0.0	0.0	7.8	54	1.0

7 DAY AVERAGE																		
WEEK 1	0.0	1.999	7.0	112		33.51			206.32		0.3244	10.0	168	<0.5	0.0	8.0	54	1.0
WEEK 2	0.0	1.801	16.0	234		24.78			186.90		0.6161	8.0	117	<0.5	0.0	8.1	55	<1.0
WEEK 3	0.0	1.557	8.5	116		32.99			215.17		0.5666	11.0	149	<0.5	0.0	8.2	56	1.0
WEEK 4	0.2	1.167	8.5	91		32.45			239.22		0.4050	11.5	123	<0.5	0.0	8.2	60	<1.0

City of Waverly

MONTHLY MONITORING REPORT

Date: June, 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/DAY	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/DAY							INF. MG/L	INF. LBS/DAY			MG/L	LBS/DAY
1	Fri.	1.160	96	7.01	360	3050	1.00	147	1422							224	2167	7.4	59	
2	Sat.	1.140					1.02													
3	Sun.	1.170					0.99													
4	Mon.	1.130	97	7.03	398	3110	1.03	250	2356							560	5278	7.5	61	
5	Tues.	1.200	97	7.02			0.96											7.5	57	
6	Wed.	1.100	97	7.03			1.06			3.52	32.29	19.6	179.81	12.9	118.34			7.5	57	
7	Thurs.	1.150	97	7.02			1.01											7.5	57	
8	Fri.	1.190	97	7.03	383	3130	0.97	116	1151							176	1747	7.4	61	
9	Sat.	1.870					0.29													
10	Sun.	2.570					-0.41													
11	Mon.	2.630	97	7.01	383	3120	-0.47											7.4	62	
12	Tues.	2.690	97	7.02			-0.53											7.4	60	
13	Wed.	2.430	97	7.10			-0.27	90	1824	3.38	68.50	18.0	364.79	11.9	241.17	196	3972	7.5	60	
14	Thurs.	2.220	97	7.04			-0.06											7.4	59	
15	Fri.	1.830	97	7.08	390	3100	0.33	80	1221							152	2320	7.5	59	
16	Sat.	1.600					0.56													
17	Sun.	1.570					0.59													
18	Mon.	1.630	97	7.04	390	3290	0.53											7.5	58	
19	Tues.	1.550	97	7.03			0.61											7.4	61	
20	Wed.	1.650	97	7.06			0.51	109	1500	3.95	54.36	21.5	295.86	15.8	217.42	196	2697	7.5	58	
21	Thurs.	1.690	97	7.02			0.47											7.5	59	
22	Fri.	1.920	97	7.07	383	3200	0.24	127	2034							186	2978	7.5	59	
23	Sat.	2.070					0.09													
24	Sun.	2.180					-0.02													
25	Mon.	2.130	97	7.04	443	3370	0.03											7.4	59	
26	Tues.	2.150	97	7.04			0.01											7.3	61	
27	Wed.	1.760	97	7.06			0.40	87	1277	3.10	45.50	19.3	283.29	13.5	198.16	164	2407	7.6	59	
28	Thurs.	1.740	97	7.04			0.42											7.5	59	
29	Fri.	1.600	97	7.09	330	3330	0.56	124	1655							224	2989	7.5	59	
30	Sat.	2.650					-0.49													

TOTAL AVERAGE	53.370					11.430	1130.0	14440		200.65		1123.76		775.09	2078.0	26555				
MAX	1.779	97.0	7.0			0.381	125.6	1604		50.16		280.94		193.77	230.9	2951		7.5	59.2	
MIN	2.690	97.0	7.1			1.060	250.0	2356		68.50		364.79		241.17	560.0	5278		7.6	62.0	
	1.100	96.0	7.0			-0.530	80.0	1151		32.29		179.81		118.34	152.0	1747		7.3	57.0	

7 DAY AVERAGE																				
WEEK 1	1.150					1.010	198.5	1889		32.29		179.81		118.34	392.0	3722		7.5	58.2	
WEEK 2	2.229					-0.069	103.0	1488		68.50		364.79		241.17	186.0	2859		7.4	58.6	
WEEK 3	1.646					0.514	94.5	1360		54.36		295.86		217.42	174.0	2509		7.5	58.6	
WEEK 4	1.993					0.167	107.0	1655		45.50		283.29		198.16	175.0	2693		7.5	59.4	

Signature: _____
 Certification Number: 3989

City of Waverly
MONTHLY MONITORING REPORT

Date: June, 2018

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/DAY	EFF. TOTAL N (as N) MG/L	EFF. TOTAL N (as N) LBS/DAY	EFF. Cu MG/L	EFF. Cu LBS/DAY	TOTAL SUSPENDED SOLIDS		AMMONIA NITROGEN		EFF. pH	EFF. TEMP. °F.	E. COLI #/100 ML
				EFF. MG/L	EFF. LBS/DAY							EFF. MG/L	EFF. LBS/DAY	FINAL MG/L	FINAL LBS/DAY			
1	Fri.	0.023	1.137	7	66							8	76	0.67	6	8.1	62	
2	Sat.		1.140															
3	Sun.		1.170															
4	Mon.		1.130	6	57							10	94	<0.50	0	8.1	59	
5	Tues.	0.205	0.995													7.9	61	
6	Wed.	0.274	0.826			3.29	22.66	26.2	180.49	0.0343	0.2363					8.2	62	
7	Thurs.	0.292	0.858													7.9	62	
8	Fri.	0.035	1.155	9	87							11	106	<0.50	0	8.2	63	
9	Sat.		1.870															
10	Sun.		2.570															
11	Mon.		2.630													7.8	61	
12	Tues.		2.690													7.9	62	
13	Wed.		2.430	10	203	1.72	34.86	17.5	354.66	0.0501	1.0153	25	507	<0.50	0	8.1	62	
14	Thurs.		2.220													7.8	61	
15	Fri.		1.830	11	168							19	290	<0.50	0	8.2	61	
16	Sat.		1.600															
17	Sun.		1.570															
18	Mon.		1.630													7.9	64	
19	Tues.		1.550													7.8	63	
20	Wed.		1.650	8	110	2.38	32.75	19.2	264.21	0.0309	0.4252	10	138	<0.50	0	8.2	63	
21	Thurs.		1.690													7.9	61	
22	Fri.		1.920	9	144							9	144	<0.50	0	8.2	61	
23	Sat.		2.070															
24	Sun.		2.180															
25	Mon.		2.130													7.9	62	
26	Tues.		2.150													7.9	62	
27	Wed.		1.760	9	132	1.81	26.57	18.8	275.95	0.0278	0.4081	14	205	<0.50	0	8.2	62	
28	Thurs.		1.740													7.8	63	
29	Fri.		1.600	8	107							12	160	<0.50	0	8.2	63	
30	Sat.		2.650															

TOTAL	0.8	52.541	77.0	1073		116.84		1075.31		2.0849		118.0	1720	0.7	6.4			0.0
AVERAGE	0.2	1.751	8.6	119		29.21		268.83		0.5212		13.1	191	0.7	0.7	8.0	62	0.0
MAX	0.3	2.690	11.0	203		34.86		354.66		1.0153		25.0	507	0.7	6.4	8.2	64	0.0
MIN	0.0	0.826	6.0	57		22.66		180.49		0.2363		8.0	76	0.7	0.0	7.8	59	0.0

7 DAY AVERAGE																		
WEEK 1	0.2	1.037	6.5	61		22.66		180.49		0.2363		9.0	85	0.7	3.2	8.0	61	0.0
WEEK 2	0.0	2.224	9.5	145		34.86		354.66		1.0153		18.0	306	0.0	0.0	8.0	62	0.0
WEEK 3	#DIV/0!	1.646	9.5	139		32.75		264.21		0.4252		14.5	214	0.0	0.0	8.0	62	0.0
WEEK 4	#DIV/0!	1.993	9.0	138		26.57		275.95		0.4081		11.5	175	0.0	0.0	8.0	62	0.0

City of Waverly
Department of Public Works
FY 2017-18

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 2017-18. This is not a total summary, but does give an idea of the versatility of this division and the expertise required. Several hundred feet of sanitary 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.

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 2017-18

	<u>2015-16*</u>	<u>2016-17</u>	<u>2017-18**</u>	<u>2018-19</u>	<u>2019-20</u>
<u>Sanitary Sewer Maintenance</u>					
Lines Flushed	25,182	97,579	61,503		Feet
Manholes Cleaned		217	3		Each
<u>Storm Sewer Maintenance</u>					
Lines Flushed		384	6578		Feet
Intakes & MH Cleaned		28	21		Each
<u>Televising Lines</u>					
Sanitary Sewer	2,405	8,707	7,689		Feet
Storm Sewer		33	120		Feet
<u>Jetting Sewer Mains</u>					
Water Used	26,500	260,937	133,200		Gallons
<u>Lines Repaired</u>					
Sanitary Sewer		1	0		Each
Storm Sewer		3	7		Each
<u>Intakes Repaired</u>					
		0	0		Each
<u>Manholes Repaired</u>					
		2	18		Each
<u>Sewer Call-Outs</u>					
<i>During & after hours</i>		27	10		Each
<u>IA One Call Locates</u>					
	3,575	3,093	1,886		Each
<u>Other Division Work</u>					
Streets - Snow Plowing		69.8	36.6		Hours
Water - Leak Repairs		126.7	100.4		Hours
WPC - Lift Stations		19.6	16.6		Hours
Leisure Serv. - Cem. Graves	8	1	13		Each
Leisure Serv. - Golf Course		0	0		Hours
Engineering - Inspections		1	0		Hours

Miscellaneous:

Cleaned out waterways, detention areas & Dry Run. Assisted in Bremwood's water project. Repaired sinkholes on Round Horn & Gabel Lane. Installed 52" of new storm sewer sewer in Harlington Cemetary. Cleaned drains for Water Dept., Law Center & Bike Trail bathrooms. Reviewed & documented tapes of televised sewers.

**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.*

City of Waverly
Department of Public Works
FY 2017-18

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 267. 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 133.

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 2017-18

Recycling Center Car Count

Total: 40,092 Daily Average: 133

Recycling Saturday Car Count

Total: 9,658 Monthly Average: 805

Curbside Recycling Stops

Total: 34,535 Monthly Average: 2,878

Total Weight of the Recycled Products from the Recycling Center and Curbside Recycling Route: 992 tons

Total Weight of the Recycled Products from the Curbside Recycling Route:
782,960 pounds (391 tons)

Revenue from the recycled products: \$45,565

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) and Jendro Sanitation in Charles City
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:

- 5-10 tons of steel, old sewer castings, signs, poles, plow blades, and miscellaneous pieces
- 60 tires
- 437 appliances
- 2,375 gallons of oil
- 322 Electronics (computers, televisions, monitors, and printers)

Yard Waste Site car count:

(July - Dec 2017 and April – June 2018): 20,767

Monthly average: 2,596

Busiest months were November 2017 and May 2018

517 tons of yard waste were turned into compost.

2,558 tons of brush and trees were ground up to make wood mulch.

City of Waverly - Public Works
Solid Waste Division
Solid Waste Employee Hours

FY 2017-18

<u>Refuse Collections</u>	<u>Hours</u>
Residential	<u>2,312</u>
Commercial	<u>2,441</u>
Black Hawk Co. Landfill	<u>1,282</u>
Temporary Dumpsters	<u>345</u>
Corrugated Collection	<u>392</u>
Curb-Side Recycling Pick-up	<u>858</u>
Recycle Center Duties	<u>447</u>
Building/Vehicle/Dumpster Maintenance	<u>547</u>
Misc Activity (training, etc)	<u>32</u>
<u>Other Divisions</u>	
Street Division	
Snow Plowing & Removal	<u>294</u>
Other (Patching, Mowing, Tree Trimming, Etc)	<u>74</u>
Water Division Projects	<u>0</u>
Sewer Maintenance Projects	<u>0</u>
Leisure Service Depts Projects	<u>4</u>

City of Waverly
Solid Waste Division

Car Count
Recycling Center and Yard Waste Site

FY 2017-18

Recycling Center

Month	# of Days	Mornings			Afternoons		Monthly Total	Daily Average
		7a-12:30p	Saturdays	% of Total	12:30-5:30p	% of Total		
July '17	25	1261	877	60%	1398	40%	3,536	141
Aug '17	27	1296	667	57%	1458	43%	3,421	127
Sep '17	25	1123	797	61%	1207	39%	3,127	125
Oct '17	26	1105	663	59%	1229	41%	2,997	115
Nov '17	24	1266	792	61%	1302	39%	3,360	140
Dec '17	24	1037	1002	62%	1266	38%	3,305	138
Jan '18	26	1279	788	62%	1281	38%	3,348	129
Feb '18	24	971	854	61%	1167	39%	2,992	125
Mar '18	26	1218	694	63%	1117	37%	3,029	117
Apr '18	25	1650	824	66%	1275	34%	3,749	150
May '18	25	1139	852	61%	1290	39%	3,281	131
Jun '18	25	1725	848	65%	1374	35%	3,947	158
Total							40,092	

Recycling Center - Car Count History

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

Yard Waste Site - Car Count History

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

City of Waverly
Solid Waste Division

Curbside Recycling
Number of Residential/Commercial Stops

FY 2017-18

<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>
07/03/17	<u>271</u>	<u>234</u>	<u>276</u>	<u>306</u>	<u>238</u>	<u>1,325</u>	
07/17/17	<u>282</u>	<u>229</u>	<u>291</u>	<u>293</u>	<u>230</u>	<u>1,325</u>	
07/31/17	<u>227</u>	<u>275</u>	<u>315</u>	<u>245</u>	<u>227</u>	<u>1,289</u>	<u>3,939</u>
08/14/17	<u>295</u>	<u>195</u>	<u>263</u>	<u>360</u>	<u>281</u>	<u>1,394</u>	
08/28/17	<u>336</u>	<u>253</u>	<u>304</u>	<u>320</u>	<u>237</u>	<u>1,450</u>	<u>2,844</u>
09/11/17	<u>277</u>	<u>233</u>	<u>309</u>	<u>354</u>	<u>281</u>	<u>1,454</u>	
09/25/17	<u>315</u>	<u>237</u>	<u>316</u>	<u>364</u>	<u>234</u>	<u>1,466</u>	<u>2,920</u>
10/09/17	<u>285</u>	<u>247</u>	<u>293</u>	<u>346</u>	<u>271</u>	<u>1,442</u>	
10/23/17	<u>311</u>	<u>236</u>	<u>304</u>	<u>326</u>	<u>234</u>	<u>1,411</u>	<u>2,853</u>
11/06/17	<u>298</u>	<u>223</u>	<u>324</u>	<u>364</u>	<u>285</u>	<u>1,494</u>	
11/20/17	<u>310</u>	<u>224</u>	<u>304</u>	<u>326</u>	<u>234</u>	<u>1,398</u>	<u>2,892</u>
12/04/17	<u>292</u>	<u>235</u>	<u>300</u>	<u>328</u>	<u>250</u>	<u>1,405</u>	
12/18/17	<u>294</u>	<u>239</u>	<u>303</u>	<u>330</u>	<u>254</u>	<u>1,420</u>	<u>2,825</u>
01/01/18	<u>326</u>	<u>264</u>	<u>327</u>	<u>330</u>	<u>278</u>	<u>1,525</u>	
01/15/18	<u>292</u>	<u>238</u>	<u>301</u>	<u>355</u>	<u>252</u>	<u>1,438</u>	
01/29/18	<u>300</u>	<u>267</u>	<u>313</u>	<u>328</u>	<u>279</u>	<u>1,487</u>	<u>4,450</u>
02/12/18	<u>306</u>	<u>220</u>	<u>281</u>	<u>359</u>	<u>248</u>	<u>1,414</u>	
02/26/18	<u>312</u>	<u>242</u>	<u>316</u>	<u>364</u>	<u>260</u>	<u>1,494</u>	<u>2,908</u>
03/12/18	<u>307</u>	<u>234</u>	<u>279</u>	<u>328</u>	<u>248</u>	<u>1,396</u>	
03/26/18	<u>281</u>	<u>193</u>	<u>308</u>	<u>600</u>	<u>269</u>	<u>1,651</u>	<u>3,047</u>
04/09/18	<u>284</u>	<u>245</u>	<u>329</u>	<u>410</u>	<u>302</u>	<u>1,570</u>	
04/23/18	<u>366</u>	<u>345</u>	<u>355</u>	<u>499</u>	<u>326</u>	<u>1,891</u>	<u>3,461</u>
05/17/18	<u>293</u>	<u>242</u>	<u>313</u>	<u>359</u>	<u>269</u>	<u>1,476</u>	
05/21/18	<u>294</u>	<u>244</u>	<u>314</u>	<u>359</u>	<u>268</u>	<u>1,479</u>	<u>2,955</u>
06/04/18	<u>293</u>	<u>216</u>	<u>502</u>	<u>426</u>	<u>466</u>	<u>1,903</u>	
06/18/18	<u>294</u>	<u>241</u>	<u>313</u>	<u>359</u>	<u>270</u>	<u>1,477</u>	<u>3,380</u>
Total for the FY 2017-18							<u>34,535</u>

City of Waverly - Public Works
Solid Waste Division
Recycling Quantities
FY 2017-18

Sorted Recycling Collected at Recycling Center

		July	Aug	Sept	Oct**	Nov	Dec*	Jan	Feb	March	April	May	June	TOTAL
Paper, Bond	lbs.	-	9,800	-	7,180	9,600	-	4,860	4,855	6,725	5,005	14,455	1,055	63,535
Slick Paper / Magazines	lbs.	-	17,020	-	7,060	14,460	-	8,080	6,270	6,180	4,815	4,650	-	68,535
Newsprint	lbs.	9,580	9,820	4,820	10,020	10,440	12,480	6,400	6,795	7,255	6,870	18,645	16,245	119,370
Corrugation/Chipboard	lbs.	68,080	90,720	65,080	83,180	101,240	60,360	84,420	65,885	63,840	87,485	91,770	77,740	939,800
#3, 4, 5, 6, 7 Plastics	lbs.	5,200	10,060	5,160	5,320	5,280	10,360	5,260	5,580	5,340	5,780	-	12,280	75,620
Steel / Alum	lbs.	-	420	-	100	420	-	120	85	305	100	305	-	1,855
Styrofoam**	lbs.	-	-	-	280	180	160	880	380	540	440	840	140	3,840
Clear Glass	lbs.	8,600	4,060	4,140	4,800	4,720	4,260	4,780	3,960	3,880	10,060	4,640	4,880	62,780
Totals - Sorted Recycling		91,460	141,900	79,200	117,940	146,340	87,620	114,800	93,810	94,065	120,555	135,305	112,340	1,335,335
													Total Tons	668

*City started getting charged by Republic Services for taking glass; City now takes 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.	61,440	71,560	67,900	62,520	70,200	63,560	71,800	50,920	52,940	79,580	72,260	58,280	782,960
													Total Tons	391

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.	152,900	213,460	147,100	180,460	216,540	151,180	186,600	144,730	147,005	200,135	72,660	170,620	1,983,390
													Total Tons	992

Motor Oil Collected at Recycling Center

		July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	June	TOTAL
Motor Oil	gal.	175	225	125	225	125	175	625	75	75	200	275	75	2,375

City of Waverly - Public Works

Solid Waste Division

Solid Waste and Recycling Revenues

FY 2017-18

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	Plastic	Metro Redemption	Recycled Bulky Items		
Jul-17	108,358.95	2,057.50	75.83	110,492.28	3,497.97		-65.00	345.00	1,275.60	5,053.57	115,545.85
Aug-17	109,585.67	1,256.50	100.00	110,942.17	5,069.18	42.00	-125.75	242.85	5,121.92	10,350.20	121,292.37
Sep-17	114,564.31	195.00	277.93	115,037.24	3,344.38		-64.50	199.95	1,327.80	4,807.63	119,844.87
Oct-17	114,037.42	2,165.00	951.73	117,154.15	2,394.53	10.00	-66.50	193.20	1,218.00	3,749.23	120,903.38
Nov-17	112,924.06	1,180.00	353.98	114,458.04	2,209.31	42.00	-66.00	229.90	1,197.00	3,612.21	118,070.25
Dec-17	113,379.89	215.00	200.83	113,795.72	1,467.31		-129.50	232.40	712.00	2,282.21	116,077.93
Jan-18	113,146.19	209.00	648.05	114,003.24	1,855.45	9.00	-69.75	213.20	429.60	2,437.50	116,440.74
Feb-18	111,756.04	3,140.00	479.31	115,375.35	1,458.95	8.50		262.85	436.00	2,166.30	117,541.65
Mar-18	111,295.97	8.00	100.00	111,403.97	1,237.72	359.40	-66.75	181.45	432.00	2,143.82	113,547.79
Apr-18	112,549.18	1,391.00	905.86	114,846.04	1,332.59	10.00	-72.25	209.55	1,055.00	2,534.89	117,380.93
May-18	114,289.89	4,109.00	355.41	118,754.30	362.09	1,220.90		294.10	2,019.50	3,896.59	122,650.89
Jun-18	112,682.89	2,151.00	50.00	114,883.89	324.78	349.85		233.45	1,623.00	2,531.08	117,414.97
TOTALS	1,348,570.46	18,077.00	4,498.93	\$ 1,371,146.39	24,554.26	2,051.65	-726.00	2,837.90	16,847.42	45,565.23	\$ 1,416,711.62
Received from Black Hawk County Landfill to assist with funding of recycling & waste reduction											\$ 3,565.52
TOTAL REVENUES											\$ 1,420,277.14

City of Waverly - Public Works
Solid Waste Division
Landfill Disposal Quantities
FY 2017-18

		2013-14	2014-15	2015-16	2016-17	2017-18
		Tons	Tons	Tons	Tons	Tons
July	<i>Residential:</i>	102.49	158.17	163.76	140.32	158.78
	<i>Commercial:</i>	197.63	199.22	204.42	182.66	209.73
		300.1	357.4	368.2	323.0	368.5
August	<i>Residential:</i>	144.43	111.16	146.22	168.91	176.28
	<i>Commercial:</i>	226.89	186.66	198.73	250.92	232.62
		371.3	297.8	345.0	419.8	408.9
September	<i>Residential:</i>	136.37	128.83	135.54	160.31	148.59
	<i>Commercial:</i>	173.7	155.88	222.66	268.05	223.61
		310.1	284.7	358.2	428.4	372.2
October	<i>Residential:</i>	114.26	130.03	152.11	139.67	159
	<i>Commercial:</i>	224.65	246.25	216.92	232.5	248.32
		338.9	376.3	369.0	372.2	407.3
November	<i>Residential:</i>	137.75	132.54	146.87	148.88	155.13
	<i>Commercial:</i>	192.28	178.65	208.55	224.95	216.51
		330.0	311.2	355.4	373.8	371.6
December	<i>Residential:</i>	119.01	155.2	140.09	145.38	142.86
	<i>Commercial:</i>	185.39	204.38	213.52	204.83	178.67
		304.4	359.6	353.6	350.2	321.5
January	<i>Residential:</i>	152.42	146.17	124.32	144.19	155.33
	<i>Commercial:</i>	145.97	180.99	170.93	204.74	233.55
		298.4	327.2	295.3	348.9	388.9
February	<i>Residential:</i>	100.5	114.4	125.26	123.59	122.64
	<i>Commercial:</i>	177.45	166.41	202.23	189.45	196.97
		278.0	280.8	327.5	313.0	319.6
March	<i>Residential:</i>	112.61	185.93	121.91	152.79	144.68
	<i>Commercial:</i>	196.4	188.14	210.67	217.11	214.08
		309.0	374.1	332.6	369.9	358.8
April	<i>Residential:</i>	128.2	125.3	138.18	133.45	132.94
	<i>Commercial:</i>	253.56	211.46	223.63	221.03	242.11
		381.8	336.8	361.8	354.5	375.1
May	<i>Residential:</i>	150.96	127.76	134.23	166.26	157.53
	<i>Commercial:</i>	249.33	193.09	246.73	252.42	266.98
		400.3	320.9	381.0	418.7	424.5
June	<i>Residential:</i>	95.89	147.24	154.59	162.94	134.14
	<i>Commercial:</i>	191.57	221.27	236.56	228.16	220.81
		287.5	368.5	391.2	391.1	355.0
TOTAL		3,909.7	3,995.1	4,238.6	4,463.5	4,471.9

City of Waverly - Public Works
Solid Waste Division
Bulky Items Collection
FY 2017-18

	2017						2018						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	6	8	14	5	12	4	3	2	2	4	4	1	3	68
Freezers	2	0	1	1	1	0	0	1	2	0	1	3	4	16
Air Conditioners	2	5	3	4	1	0	0	0	0	0	0	2	3	20
Dehumidifiers	6	14	6	2	2	3	3	1	3	3	1	8	10	62
Appliances w/out Freon														
Water Heater/Furnace	2	4	4	1	1	1	1	0	0	2	0	3	2	21
Water Softener	0	2	1	2	0	1	0	0	0	4	0	0	8	18
Stove	1	3	2	4	1	0	0	1	0	4	1	2	1	20
Washer	3	5	3	2	6	1	0	0	2	4	4	5	4	39
Dryer	1	3	1	0	3	1	0	0	1	1	1	2	2	16
Dishwasher	1	2	1	5	1	1	1	0	1	1	1	2	1	18
Humidifier	0	0	0	0	1	0	0	0	1	3	0	1	0	6
Gas Grill	7	3	1	2	3	1	0	0	1	5	9	7	6	45
Microwave	11	12	5	3	10	3	4	0	1	12	3	16	8	88
Electronics														
Televisions	27	25	26	31	28	27	8	8	8	29	12	44	30	303
Monitors	0	0	0	0	0	0	0	0	2	0	0	1	0	3
Printers	2	0	0	1	1	0	2	0	0	2	0	5	1	14
Computers	0	0	0	0	0	0	0	0	0	2	0	0	0	2
Tires														
Car	11	16	1	6	0	1	0	0	0	6	5	2	11	59
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	82	102	70	69	71	44	22	13	24	82	42	104	94	819

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

City of Waverly
Department of Public Works
FY 2017-18

AIRPORT

Airport Commission Members (Since)

Eric Bagelmann (January 2018)	Active
Von Blunt (May 2017)	Active
Kris Glaser (December 2014)	Active
Dennis Hansen (May 2006)	Active
Jane Wollenzien (May 2014)	Active

Dale Guimond, Cedar Valley Aviation – FBO (January 2015)
Tim Kangas, Council Liaison (March 2015)
Mike Cherry, City Engineer (April 1997)

Highlights for July 2017 - June 2018

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

The following parcel has not yet been obtained:

Parcel 5E – Marvin & Margene Schmidt

Airport Runway 29 Extension 2018

- On August 7, 2017, Council approved an engineering contract with McClure Engineering for the design and bidding of this 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:

- The completion of the land acquisition for the runway safety area remains a high priority for the Waverly Airport Commission. The Schmidt property is the last parcel that needs to be acquired.

- McClure Engineering Company's 5-year on-call contract with the City was renewed by Council on April 3, 2017. The City followed the FAA approved procurement process for on-call services in order to avoid repeating the procurement process for each individual FAA funded project over the next 5 years.
- The FBO / Airport Manager contract with Cedar Valley Aviation will expire on October 31, 2018.

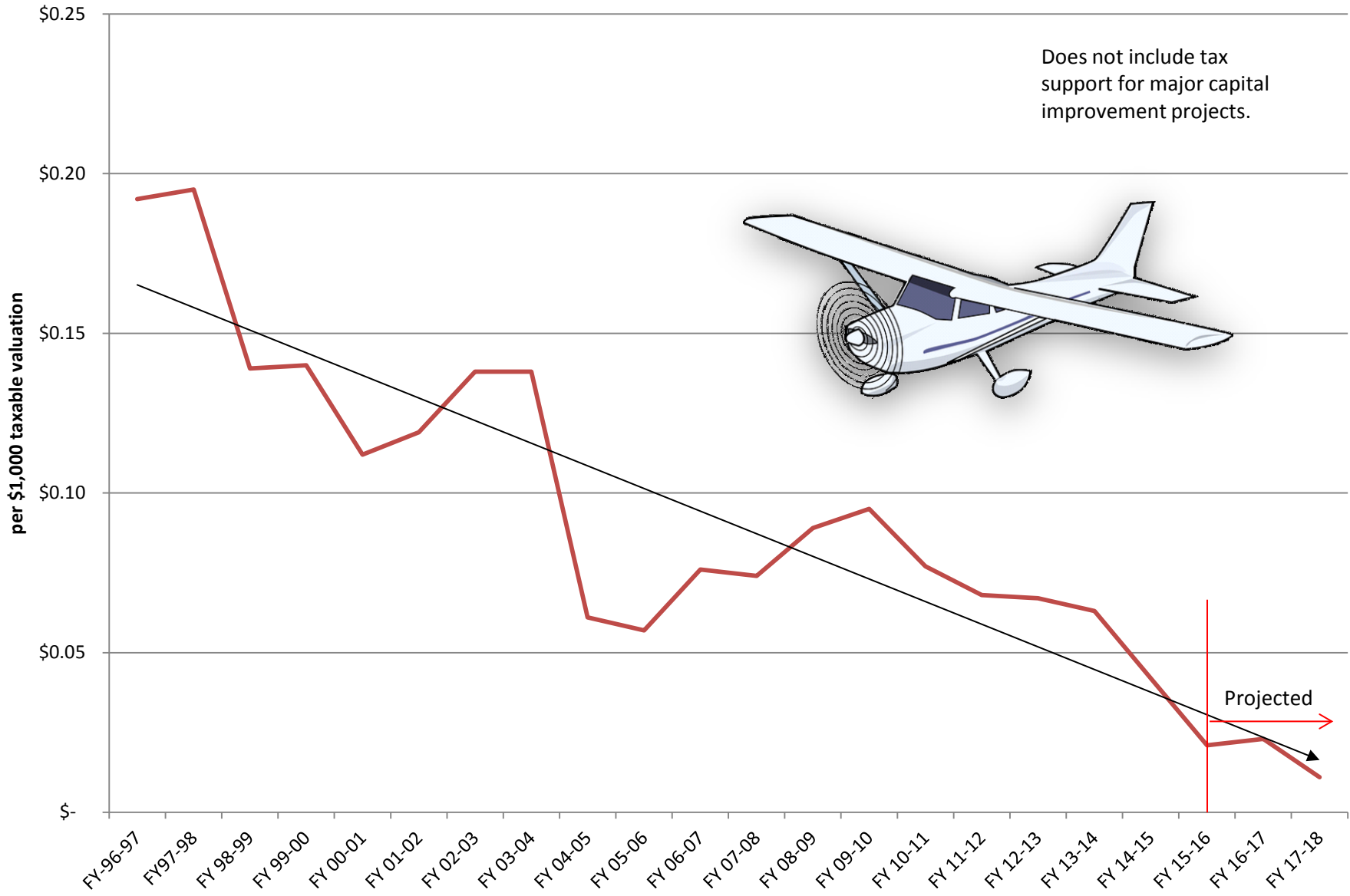
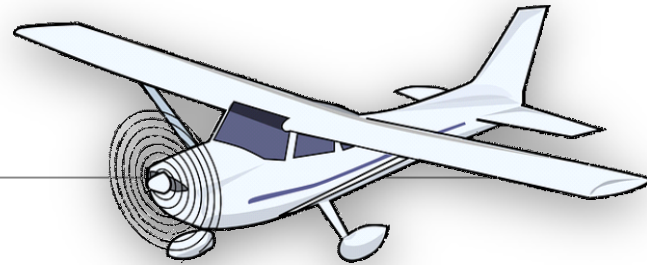
Report Summary:

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.

Waverly Municipal Airport

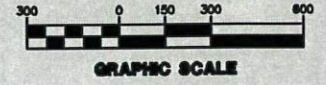
General Fund Tax Support

Does not include tax support for major capital improvement projects.

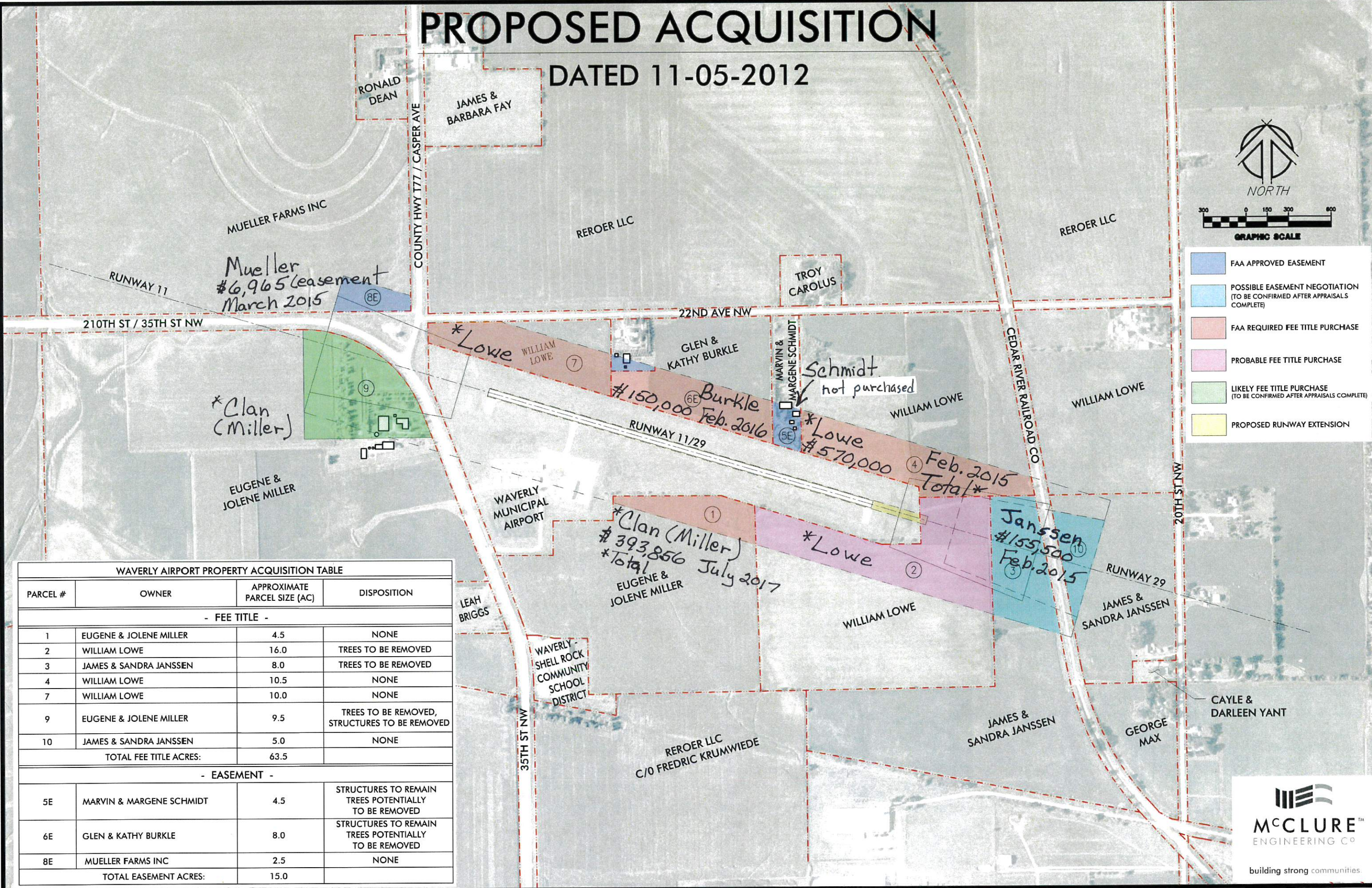


PROPOSED ACQUISITION

DATED 11-05-2012



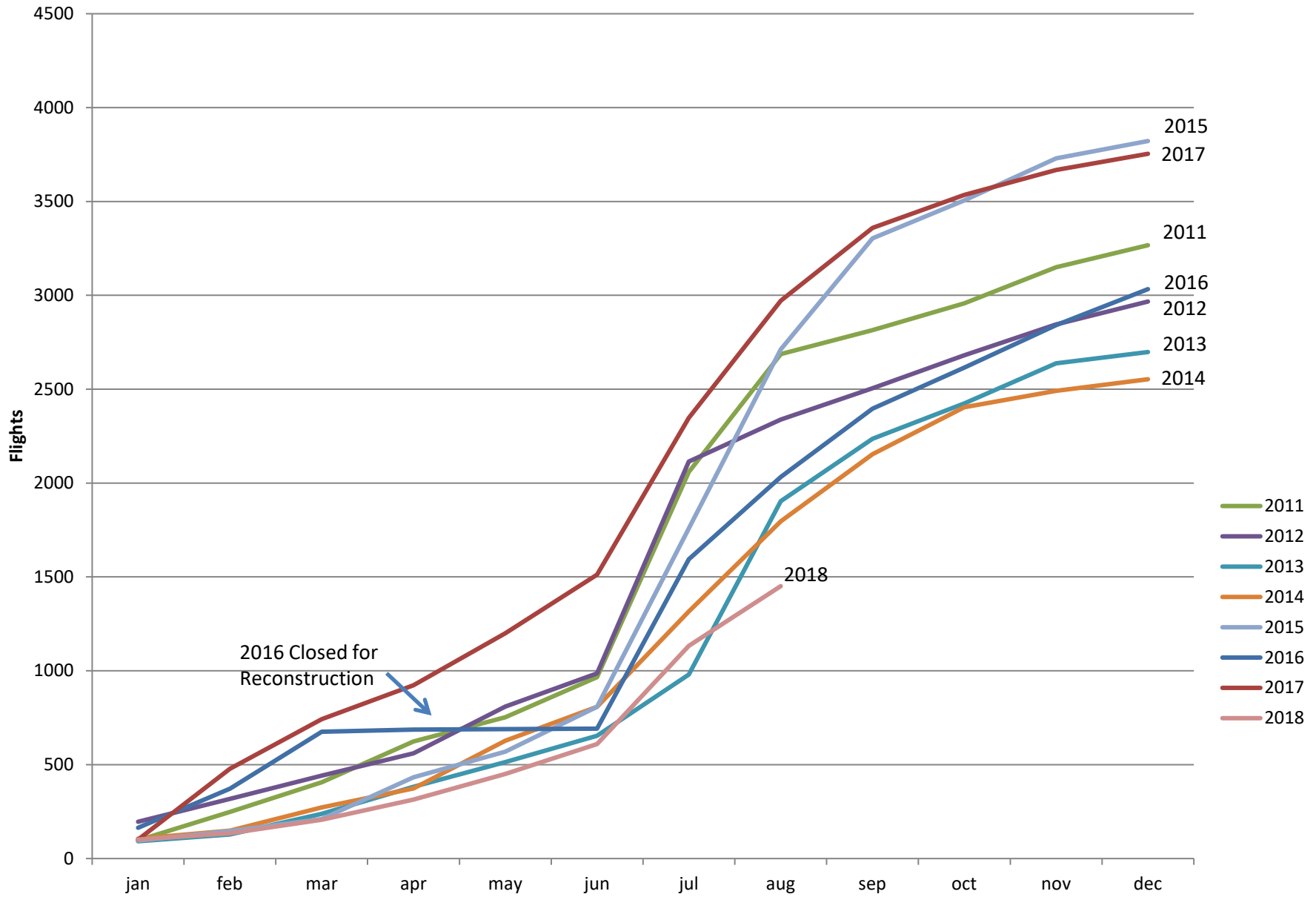
- FAA APPROVED EASEMENT
- POSSIBLE EASEMENT NEGOTIATION (TO BE CONFIRMED AFTER APPRAISALS COMPLETE)
- FAA REQUIRED FEE TITLE PURCHASE
- PROBABLE FEE TITLE PURCHASE
- LIKELY FEE TITLE PURCHASE (TO BE CONFIRMED AFTER APPRAISALS COMPLETE)
- PROPOSED RUNWAY EXTENSION



WAVERLY AIRPORT PROPERTY ACQUISITION TABLE			
PARCEL #	OWNER	APPROXIMATE PARCEL SIZE (AC)	DISPOSITION
- FEE TITLE -			
1	EUGENE & JOLENE MILLER	4.5	NONE
2	WILLIAM LOWE	16.0	TREES TO BE REMOVED
3	JAMES & SANDRA JANSSEN	8.0	TREES TO BE REMOVED
4	WILLIAM LOWE	10.5	NONE
7	WILLIAM LOWE	10.0	NONE
9	EUGENE & JOLENE MILLER	9.5	TREES TO BE REMOVED, STRUCTURES TO BE REMOVED
10	JAMES & SANDRA JANSSEN	5.0	NONE
TOTAL FEE TITLE ACRES:		63.5	
- EASEMENT -			
5E	MARVIN & MARGENE SCHMIDT	4.5	STRUCTURES TO REMAIN TREES POTENTIALLY TO BE REMOVED
6E	GLEN & KATHY BURKLE	8.0	STRUCTURES TO REMAIN TREES POTENTIALLY TO BE REMOVED
8E	MUELLER FARMS INC	2.5	NONE
TOTAL EASEMENT ACRES:		15.0	



Total Flights Per Year



Flight Report

