



**CLINTON CITY COUNCIL
COMMITTEE OF THE WHOLE**

August 9, 2016

CITY HALL COUNCIL CHAMBER

ROLL CALL:

- 1. Presentation of Alternative Energy Study at the RWRF – Caleb Gibson**
- 2. Discussion of 19th Avenue as a Truck Route**
- 3. Augustana Stormwater Report – Jessica Kinser/Jason Craft/Bob Milroy**
- 4. CIP Project List Review – Jessica Kinser**
- 5. Parks Master Plan RFP – Jessica Kinser**
- 6. Draft Urban Chicken Ordinance – Jessica Kinser**
- 7. Mayor & Council Member Update**

Committee of the Whole Summary Sheet

August 9, 2016

1. Alternative Energy Presentation

Caleb Gibson has completed an internship with the City of Clinton RWRF where he examined alternative energy options for the Regional Wastewater Reclamation Facility.

ACTION REQUESTED

None; presentation only at this time.

2. 19th Avenue North Truck Route

This item was tabled to the first Committee of the Whole in August for further discussion after an ordinance prohibiting trucks on 19th Avenue North was moved out of the COW.

ACTION REQUESTED

Move forward with a first ordinance reading.

3. Augustana Stormwater Report

Two courses at Augustana studied the impact of cross connections (sump pumps and downspouts) into the sanitary sewer system and ways to incentivize disconnections. This is an issue in many areas of Clinton and is a step many cities have taken to help eliminate unnecessary inflow into the sanitary sewer system.

ACTION REQUESTED

To direct staff to bring back a Clinton specific disconnection program with Council input.

4. CIP Project List

The CIP project list has been compiled and is ready to prepare for the CIP Committee to consider.

ACTION REQUESTED

Direct staff to move forward with the CIP Committee process.

5. Parks Master Plan RFP

A parks master plan is an approved expenditure in the FY17 budget, and an RFP has been drafted and supported by the Parks and Rec Advisory Board to secure a firm to complete this work.

ACTION REQUESTED

Direct staff to issue the RFP.

6. Draft Urban Chicken ORD

An ordinance to allow urban chickens has been drafted for consideration. No changes are being made to Chapter 91, with this being a zoning regulation amendment.

ACTION REQUESTED

To move to the Planning Commission for a recommendation.



July 27, 2016

To: Honorable Mayor and City Council

From: Robert D. Milroy
Water Quality Superintendent

Subj: Presentation of Alternative Energy Study

Several months ago, the City Council passed a resolution authorizing the City to take part in the Iowa DNR Pollution Prevention Intern Program. The intern, whose name is Caleb Gibson, was tasked with doing a feasibility study for the potential use of Wind and Solar Energy at the new RWRf facility.

Caleb is going to be senior this coming year at St Ambrose University majoring in Mechanical Engineering.

The reason I asked to participate in this program is there has always been a lot questions on why we did not look at alternative energy when the plant was built, and I honestly did not have the answer to those questions. I felt this program was the ideal way to address these concerns without spending a lot of money. This program was free to the city.

Caleb will be doing a PowerPoint presentation and a copy of his summary report will be included in your packets. I will have a copy of the full report, if anyone is interested in reading it I will be more than happy to provide it to you. We are trying to keep the presentation to 15 or 20 minutes.

We will not be requesting any action at this time. This presentation is intended to satisfy the council's desire for information on wind and solar energy.

POLLUTION PREVENTION SERVICES
REPORT TO THE COMMITTEE OF THE WHOLE
CITY OF CLINTON
CALEB GIBSON
AUGUST 9TH, 2016



DISCLAIMER

This report is provided for informational purposes only. The State of Iowa makes no warranties in regard to the accuracy of the data or its fitness for any use. An independent evaluation should be conducted prior to the implementation of any proposals contained herein. The State of Iowa shall not be liable for the acts or omissions of any intern participating in this program.

Environmental and Economic Savings Chart

Project	Annual Cost Savings	Annual Environmental Results	Status
500 kW Solar Array	\$ 12,400	657,000 kWh	Recommended

Background

The Clinton Regional Water Reclamation Facility (RWRF) is responsible for the collection, transport, and treatment of wastewater for the cities of Clinton, Camanche and Low Moor. As the Clinton RWRF strives to meet sustainability goals, it also seeks potential methods to diminish the cost of electricity needed to run blowers and pumps, such as supplementing their electrical usage with alternative energy. Over the last few years changes in policy and practice in the state of Iowa has made alternative energy, especially solar, a possibility for non-tax paying municipalities. Electricity prices are posed to increase substantially over time. In recent history industrial electricity prices have been estimated to increase by an average of 2.5% a year since 2006, from the U.S Energy Information Agency and is projected to increase by 2.9% in 2017.

Current Baselines

Of the main processes, the BNR system, effluent pumps, and digesters consume a sizeable amount of electricity, demanding 500-800 kW of the 550-1100 kW full facility demand. The annual kilowatt hour consumption of the facility is projected at 5,485,840 kWh from invoice data.

List	Current baseline	Current Cost per	Annual Cost
Electric consumption	6,246,900 kWh	\$0.066/kWh	\$432,883.21

The Electricity charges at the RWRF have two major components: a kWh consumption charge and a peak demand charge. Demand charge accounts for an average 50% of the average \$36,000/month RWRF electricity bill. Demand is determined as the highest kilowatt draw from the facility for a 15 minute interval during peak hours of 7am to 8pm Monday-Friday. This charge is a limitation to alternative energy projects.

Wind and Solar Feasibility

Wind energy was investigated and determined not a feasible energy source at the RWRF. For small turbines a speed of 12 mph is needed for reliable power production. DA Solar gave an average wind speed in the area of the RWRF at 10.3 mph, data from the Clinton Municipal Airport reports it at 4.4m/s (9.8 mph), and the NREL's wind speed map shows 4.5 m/s (10.08 mph). Upon further investigation, as the size of turbines increases the minimum speed increases also. The eastern part of Iowa has a better solar potential, of 3.8 kWh/m²/day (158 Watt/m²). There is not a threshold value as there is with wind. The upfront cost for solar tends to be less expensive than wind. The \$350/kWh cost of

batteries, along with a life time of 5-10 years makes them prohibitive if utility connection is available. It is because of this that battery backup is not considered as viable.

Proposed Solar Array

It is recommended that if an alternative energy system is pursued, a ground mounted, fix tilt, 500 kW aggregate capacity solar array be installed in a City of Clinton owned field directly north of the secondary clarifiers. This array would be best financed through a power purchase agreement with a third party lender. A secondary option is the installation of a 2000 kW solar array. This option is only viable if it is determined that the local grid has the capacity for a potential additional 1.5 megawatts without major modification.

Size	500 kW	2000 kW system
Annual energy production	657,000	2,645,000 kWh
% total electrical Usage	12%	30%
% annual production Put on grid	39%	39%
# of panels	1800-2200	6000-9000
Est. land area	2.4-3.3 Acres	9.5-12 Acres

Projected results

The proposed 500 kW array is estimated to produce almost 657,000 kWh of electricity a year, estimated by the National Renewable Energy Laboratory’s (NREL) System Advisor Model (SAM). This amounts to 12% of projected yearly electrical usage. A 500 kW array is not projected to create any more electricity than is consumed by equipment at the RWRH. A larger 2000 kW system could be explored. A 2000 kW array is projected to require 1,043,834 kWh (38.6%) of electricity to be put back on the grid. When adjusted for excess, amount of electricity offset is 1,624,000 which is 30% of projected yearly electrical usage.

Excess Power Considerations

Excess electricity produced by a solar array would not be sold at the \$/kWh rate that the city of Clinton pays for electricity. Due to the RWRH being on the Large General Service electricity tariff, it therefore has a demand charge for electricity. As of an Iowa Utilities Board decision July 19, 2016, systems of 1000 kW of size or smaller must be Allowed Net-Metering. This new rule set is also extended to Large General Service tariffs. Net-metering still does not account for demand charges. If the practice of net metering was granted, the facility could be credited at the estimated average price of \$0.0380/kWh. If net metering was not granted, the purchase rate for excess generation was roughly estimated at \$0.025/kWh.

Annual Environmental Results

Environmental estimates were made from a Carnegie Mellon environmental calculator. The value of the unintended environmental and medical impacts are estimated at \$42,282. The estimated diverted pollutants are as follows:

Estimated Conventional Air Pollutants Diverted in Metric Tons						
Total for all Sectors						
CO	NH ₃	NO _x	PM-10	PM-2.5	SO ₂	VOC
364.31	0.004	0.70	0.10	0.078	1.43	0.03
Estimated Greenhouse Gases Diverted in Metric Tons						
Total for all Sectors						
MTCO ₂ E	CH ₄	N ₂ O	CFC			
409.29	13.45	2.24	2.19			

Healthcare Energy Impact Calculator			
Annual kWh Use	Societal Value	Direct Medical Costs	Unintended Impact
676,000	\$ 36,830	\$ 4,320	\$ 41,150

Power Purchase Agreement

As of a 2014 Iowa Supreme Court ruling, purchasing power produced by an onsite solar array through a third party has been a legal way to financially plan a solar instalment. These power purchase agreements, (PPA), begins with allows a third party developer designing, permitting, financing and installing a solar energy system on the desired users property. With this method, the developer not the municipality handles the procurement and financing. This allows the user to purchase the generated power at a determined rate, without the large upfront costs that come with a solar installation. Agreements have various possible structures, with an expected agreement length of 20 years. The exact terms of a PPA would be determined with the investor chosen.

Economic Considerations

Because the estimated rate of a PPA cannot be known until an agreement has been made with an investor, the financial analysis of compares the total avoided utility costs to the expected installation and life costs. These calculations were made with conservative estimated values. It should be reiterated that the upfront cost would be minimal for the City of Clinton under a PPA and the cost of installation is used as a benchmark. If a third party method is not pursued, the tax credits are ignored. While this analysis may show that a 2000 kW array has better returns, the likely grid modifications are not included. Possible grid modifications are posed to potentially surpass these savings. A study would is required by Alliant Energy to put a number to this cost.

	800 kW Array	2000 kW Array
Installation	\$ 250,000.00	\$ 3,000,000.00
Tax credits	\$ (355,000.00)	\$ (1,100,000.00)
lifetime cost	\$ 513,241	\$ 2,470,200
Total costs	\$ 1,156,241	\$ 4,918,206
Est. Bill savings (30 yr.)	\$ 1,528,828	\$5,544,954.61
Life time savings	\$ 372,587	\$ 626,748
saving per bill	\$ 1,035	\$ 1,741
Savings per year	\$ 12,420	\$ 20,892
% energy cost saved	3.023%	5.056%
Return on Investment	32.22%	12.74%

Next Steps

If a solar array system is to be pursued for installation:

- Assessment from Alliant Energy
- Hire consultant or assemble team
- Issue a Request for Proposal (RFP)
- Contract Development
- Permitting

CHAPTER NO.

AN ORDINANCE AMENDING CHAPTER 76, TRAFFIC CODE, SUBSECTION .05 TRUCK ROUTE OF THE CODE OF ORDINANCES OF THE CITY OF CLINTON, IOWA

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF CLINTON, IOWA:

Section 1. Purpose. The purpose of this Ordinance is to amend and replace Chapter 76, Section .05, to designate truck routes for the City of Clinton, Iowa

Section 2. Amendment. The Code of Ordinances of the City of Clinton, Iowa Chapter 76 Traffic Code is amended by deleting and replacing Section .05, Truck Route - to read as follows:

§ 76.05 TRUCK ROUTE.

(A) Trucks registered for a gross weight limit exceeding 10,000 pounds (five tons) shall travel over marked highways when operating in the city and shall not depart from such marked highways, except that any truck whose destination or local delivery is in the city may depart from such highway at that point on the highway nearest to its destination and then proceed directly to such destination. The following shall be designated as marked highways:

- (1) Highway 67
- (2) Highway 136
- (3) Highway 30
- (4) Mill Creek Parkway

(5) South Second Street from the intersection of 7th Avenue South heading South to 15th Avenue South and then west on 15th Avenue South to South 3rd Street then South to 17th Avenue South and then west on 17th Avenue South

(B) Trucks whose trips originate within the city shall travel by the most direct route to the point on a marked highway nearest to such point of origin.

(C) Trucks entering the city on an unmarked highway shall proceed to the nearest marked highway by the most direct route and then proceed to their destination, except when the destination lies between the point of entry into the city and the marked highway.

(D) The city engineer is authorized to designate and establish by appropriate signs alternate motor truck routes and to post signs limiting trucks registered with a gross weight limit exceeding 10,000 pounds (five tons) from operating on non-highway streets. Notwithstanding provisions for local delivery above, truck traffic is prohibited from any street so marked. Further, the following streets are prohibited from travel by trucks in excess of 10,000 pounds (five tons) unless making delivery to a location on that street:

- (1) Harrison Drive from South 14th Street to South 21st Street
- (2) 8th Avenue South from 3rd Street/Hwy 67 to South 2nd Street
- (3) 12th Avenue North from North 11th St., East to parking lot termination
- (4) 16th Street N.W.
- (5) 15th Avenue South from South 3rd Street to South 4th Street

- (6) Springdale Drive from 13th Avenue North to 19th Avenue North
- ** (7) 19th Avenue North from North 2nd Street to Randall Court
- ** (8) 19th Avenue Northwest from Randall Court to Main Avenue

(E) The provisions of this section governing the travel of trucks on residential streets shall not apply to city buses, emergency vehicles, public or private carriers of passengers on tour, fixed or demand response vehicles, school or church buses.

(F) Any person who violates a section of this chapter shall be fined in the amount of \$50.00.

Section 3. Repealer. All other sections of this Ordinance in conflict with these provisions shall be repealed.

Section 4. Severability. If any section, provisions or part of this Ordinance shall be adjudged invalid or unconstitutional, such adjudication shall have no effect on the validity of the Ordinance as a whole or any section, provision or part thereof not adjudged invalid or unconstitutional.

Section 5. Effective Date. This Ordinance shall be in full force and effect from and after its adoption and publication as provided by law.

Mark S. Vulich, Mayor

Attest: _____
Patricia Van Loo, City Clerk

ADOPTED:



City Administrator

Phone: 563-242-2144 Fax: 563-244-3426
611 South Third Street
P. O. Box 2958
Clinton, IA 52733-2958
www.cityofclintoniowa.us

To: Mayor Vulich and the City Council
From: Jessica Kinser, City Administrator
Date: August 3, 2016
RE: Augustana Stormwater Report

Attached with this memo and distributed in early July is a copy of a report prepared by two different courses at Augustana College as part of the 2015-16 Sustainable Working Landscapes Initiative. A fall course completed a survey of residents in a specific basin area to determine if cross connects into the sanitary sewer system existed and at what level. The findings show that in a sampling of this area, cross connections exist.

It has been previously mentioned that the City forced all property owners with a sump pump connection to disconnect. After looking back into previous Council records, we cannot find anything related to sump pumps specifically. There was a great deal of discussion related to downspouts in 1993, which resulted in the present regulations we have in place.

The second part of the report was completed by a group of students in a winter term environmental policy course. Eliminating cross connections into the sanitary sewer is not new nationwide and is one step to take in order to prevent combined sewer overflows. This group found some incentive programs utilized by other cities, with the recommendation to have Finance and Engineering develop a possible program that could be affordable to the City.

At this time, we would like to have a discussion about where the Council would like to proceed with the issue of cross connections into the sanitary sewer system and get direction on how you would like staff to proceed.

Augustana College



Clinton, IA Stormwater Inflow Survey: An Educational Assessment of the City of Clinton through Partnership with Augustana College

Fall 2015 • Sustainable Working Landscapes Initiative

Laura Morris • Environmental Studies and Geography

Dr. Reuben Heine • Associate Professor • Department of Geography

Acknowledgements

We would like to thank Dr. Reuben Heine and his Water Resource Management course, including Marissa Iverson, Alyssa Szymanski, Barrie Chileen, Courtney Chouinard, Erienne Davis, Jodie Kirschner, Katrina Ponder, Kristin Schoenecker, Madison Vandersee, Zachary Carlson, Zoe Robb, and Nick Riojas for aiding in data collection and analyzation of the data for this project. We are also very appreciative of Augsburg College's River Semester for participating in the door-to-door survey collection with the Water Resource Management course. A special thanks to the City of Clinton and its cooperative officials for this research, including City Engineer Jason Craft, Water Quality Superintendent Robert Milroy, and City Manager Jessica Kinser. Finally, a thank you to the Sustainable Working Landscapes Initiative, Director of UMC and Sustainable Working Landscape Initiative Dr. Michael Reisner and Sustainable Working Landscape Program Manager Tara Cullison.

Table of Contents

Introduction.....	4
Background.....	5
Study Area	Error! Bookmark not defined.
Methodology	7
Appendix 1	13
Appendix 2.....	19

The Sustainable Working Landscapes Initiative (SWLI)

The partnership between Augustana College and the City of Clinton, Iowa is a part of the Sustainable Working Landscape Initiative. This initiative was created and supported by the Upper Mississippi Center (UMC) and its supervisors, Director of UMC and Sustainable Working Landscape Initiative Dr. Michael Reisner and Sustainable Working Landscape Program Manager Tara Cullison. Overall, this partnership was created to benefit both the students of Augustana College and the City of Clinton administration. Various courses at Augustana College throughout the 2015- 2016 school year will participate in the Sustainable Working Landscape Initiative (SWLI), including Dr. Reuben Heine's Water Resource Management course. The students participating in these projects pertaining to Clinton, IA are receiving a real-world experience that will be a grand addition to their resumes and portfolios; the knowledge gained from this experience can be applied in these students' future endeavors. The administration of Clinton, Iowa will be receiving advice and management plans from the various courses, ranging from the analysis of the recreational trail systems to an aid plan designed for small businesses (Clinton (Iowa) Partnership, 2015).

The concept of the Upper Mississippi Center for Sustainable Communities (UMC) came from exploratory meetings with more than 125 on and off-campus community stakeholders between January and August of 2013. The need was clear: our area's urban and rural communities have identified many environmental and economic sustainability issues and do not have the staff, expertise, time or funding to address them. The vision of the UMC was to mobilize Augustana's faculty and students to help communities solve the social, economic, and environmental challenges facing the rural and urban landscapes of the Upper Mississippi region by integrating the study of these current, local issues into coursework taught on campus. After two pilot years, the UMC implemented a unique collaborative learning model named the Sustainable Working Landscapes Initiative.

The Sustainable Working Landscapes Initiative is modeled after the Sustainable Cities Year Program at the University of Oregon. Augustana College is the only exclusively undergraduate institution in the country to adapt this highly successful program to a residential liberal

arts setting. The model creates a full one-year partnership between Augustana and a city/county partner, matching existing courses from multiple departments and other learning experiences (independent study, senior inquiry, internships) with community-identified and driven sustainability problems. The SWLI also helps cities and counties achieve their economic, social, and environmental sustainability goals while working with limited resources.

The Sustainable Working Landscapes Initiative represents a paradigm shift for service learning experiences in higher education. Instead of asking groups and communities to participate in initiatives that originate in academia, the UMC asks communities to identify their most pressing social, economic, and sustainability challenges. It then provides these groups and communities with the human and academic resources of Augustana College faculty and students to help them address the challenges. This is not a one-time group of volunteers. SWLI student and faculty participants commit to supplying three, 10 week terms of sustained research, study and work in the classroom and in the field. The UMC is establishing enduring relationships between Augustana and these constituents so they can continue to work together to find creative solutions, test and evaluate their effectiveness, and try again as challenges and problems change.

The Mississippi River city of Clinton, Iowa (pop. 26,473) was chosen as Augustana's 2015-16 SWLI partner. Students and faculty are collaborating with Clinton officials and community stakeholders to complete 15 community-identified projects. Throughout the year, these projects are being worked on by 150 students in 15 courses in the humanities, social, and natural sciences. Because these projects are community-driven priorities, the fresh ideas, designs and products students generate address critical but unmet needs and have real-world impact.

Introduction

The members of Dr. Reuben Hoine's Water Resource Management course worked closely with City Engineer, Jason Craft, and Water Quality Superintendent, Robert Milroy, to develop a class project idea that would meet the learning objectives of the course and create knowledge that would be useful for the City of Clinton. The initial project idea came from City Engineer, Jason Craft, who was aware of a gap in knowledge about a phenomenon called "private cross connections". Like sewers in other U.S. cities, the municipal sanitary water system of Clinton becomes overwhelmed during times of snow melt or rainfall which can send untreated sewage to surface water. While the city can prevent rainwater from entering the sanitary sewers on city-owned property, private cross connections are more difficult to address because these connections occur in private homes and businesses. As Mr. Craft and the water resources class discussed possible course projects, it was decided that the most useful and doable project would focus on: 1) citizen's understanding of the city stormwater systems and 2) homeowner's awareness of whether cross connections were present in their own home. While cross connections can take multiple forms within a home or business, it was decided that the class would primarily concentrate on cross connects that result from sump-pumps being directly connected (plumbed) to the sanitary sewers of the home.

The class created a door-to-door educational survey that assessed the understanding of the sanitary and stormwater systems west of Bluff Boulevard in Clinton. This was designed to anonymously determine the amount of cross connections into the sanitary sewer system while helping to educate residents the study area about proper home connections. The results of the fall-term water resources class survey were intended to inform Dr. David Denhel's winter-term policy course. Dr. Denhel's class discussed different policy mechanisms to incentivize disconnections in the city. The project details were determined by the Sustainable Working Landscape Initiative at Augustana College and the City of Clinton, IA, which is seen in the scope of work agreement and the scope of work (see Appendix 1, Figure 1).

Through the SWLI water inflow project, the City of Clinton and the participating students created a pilot project with educational prints, web-based material and questionnaires for other

neighborhoods of Clinton. This project's resources also could be used for cities facing similar problems and could be used as an educational platform for water inflow.

Background

Established in 1836, the City of Clinton, IA, has about 26,000 residents and is located directly on the Mississippi River (Clinton City Data, 2010). Because it is a larger and older city, Clinton has an urban watershed with two different systems that accompany it. In the United States and across the world, these systems are common and include the sanitary and stormwater systems. These systems are vital to the city, but are also negatively impacting the surrounding environment. Specifically, the City of Clinton is responsible for large overflows of polluted sewage reaching and combining with the Mississippi River (Craft, 2015).

The sanitary line removes raw sewage away from residents and businesses and takes it to the wastewater treatment plant for treating. The Clinton Regional Wastewater Reclamation Facility is located at 4025 South 30th Street, Clinton, IA 52732. Appendix 2, Figure 1 explains the process of sewage treatment; however, once the wastewater is treated in Clinton it is pumped into the Mississippi River. Water Quality Superintendent Robert Milroy, gave Dr. Reuben Heine's Water Resource Management course a tour of the new facility in Clinton and explained that most residents of Clinton do not understand where their wastewater is going once they flush their toilets (Milroy, 2015). The class also saw the various pump stations that send the sewage to the treatment plant, which are contributors to some of the problems Clinton faces. These pump stations oftentimes can become overwhelmed when there is an excess amount of rain or snow melt, eventually leading towards pollution into the Mississippi River (Craft, 2015).

The stormwater system takes rain water and snow melt away from homes usually using gravity, storm drains and pipes. This water is then infiltrated into the water table, but most of it eventually ends up in the Mississippi River. This water does not need to be treated so it is important that it does not end up in the sanitary line. Appendix 2, Figure 2 shows just how simple the stormwater system should be and that all of the water should most likely end up in

the Mississippi River. The main problem in the City of Clinton is that some residents have their stormwater systems connected to the sanitary lines, which results in an excess inflow of water to be treated. These connections are called cross connections. Jason Craft, the City Engineer in Clinton, states "Why are we treating water that doesn't need to be treated?" (Craft, 2015).

When Clinton first installed their sanitary and stormwater systems they were combined (Craft, 2015). Today there are both regions with combined and separate systems. It is required to have separate systems by the Environmental Protection Agency because it can reduce the amount of combined sewer overflows into the environment. Appendix 2, Figure 3 shows both combined and separate systems and how they act within an urban setting. Recently the City of Clinton is under a consent decree by the Environmental Protection Agency (EPA), which is a legal agreement between a municipality, such as Clinton, and the federal government to cease illegal activity within a strict timeframe (Consent Decree, 2015). This decree was created in Clinton, Iowa in order to limit the number of combined sewer overflows to under ten by 2037 (Appendix 1, Figure 2). The EPA describes combined sewer overflow as sewer pipes that are designed to also collect stormwater runoff; during wet weather events, the volume of water and sewage exceeds the sewage treatment plant capacity and wastewater is then overflowed into nearby streams, rivers or other bodies of water (EPA, 2015). Clinton's combined sewer overflows run directly into the Mississippi River and results in a highly polluted area of river water; these normally occur at the pumping stations because they can only hold so much water. Jason Craft believes that the City of Clinton has hundreds of combined sewer overflows a year (Craft, 2015). For this reason, the EPA was forced to step in.

Currently, the City of Clinton administration is trying to reduce the amount of overflows through educating the residents on the problem. They want to strongly enforce that there should be no cross connections of stormwater pipes into the sanitary line; the Water Resource Management course's goal was to gain a general understanding of the amounts of cross connections the City of Clinton has. These cross connections add an inflow of water that both costs more and is detrimental to the environment. While this is true, the study area for Dr. Heino's Water Management Water Inflow Survey had separate systems. The sections each

student was responsible for can be seen in Appendix 2, Figure 4 and my section can be seen in the western portion in purple. The City of Clinton is also working to reach their goal of eventually having the entire city have separate systems.

Study Area

This study was conducted in a portion of the City of Clinton west of Bluff Boulevard from 2nd Avenue South to 13th Avenue North. This area was selected by Mr. Craft as a pilot study area with the idea that the remaining portions of Clinton would be surveyed in future years. The selected pilot study area contained approximately 800 parcels. The surveyed area can be better seen in Appendix 2, Figure 4. In teams of two and three, the fourteen members of the Water Resource Management class each surveyed around 60 parcels of land.

Methodology

This collaborative research effort between city employees and Augustana College included several stages including: goal setting, educational and survey design, survey administration, and data compilation and analysis. In order to help the students understand the city storm- and sanitary-sewer systems, this project started a day-long tour lead by Mr. Craft and Milroy on September 8th, 2015. This tour included information-packed stops at two pumping stations, gravity mains, city-owned cross-connects and ended with a tour of the state-of-the-art sanitary water treatment facility. During this tour and based on class discussions and

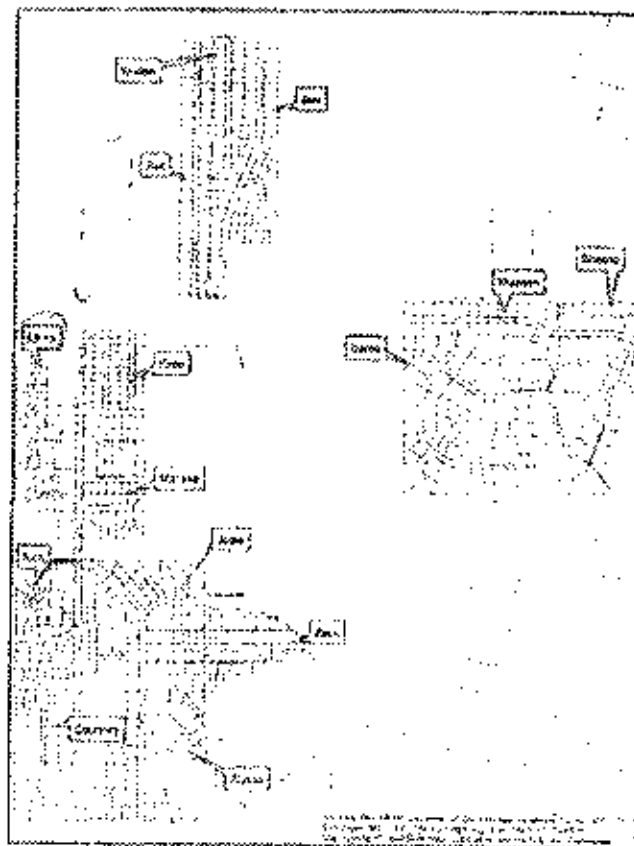


Figure. Study area parcels with names of students who were responsible for surveying each parcel.

readings, the students of the Water Resources Management class learned about municipal wastewater infrastructure (storm- and sanitary-sewer systems), cross connections (both public and private) and relationships between city and EPA regulation. From this background, students gained an understanding and appreciation for how the systems work and challenges faced by the city when it comes to meeting EPA regulations (as articulated in the EPA-City of Clinton Consent Decree). It also became apparent to the students that they could only assist with a small portion of the larger issues.

Following the wastewater-systems tour, city officials met with the members of the water-resources class to brainstorm ideas for a class project. It was determined in this meeting that the class could design a survey tool aimed to generate data about the number and types of private cross-connections in a residential area. Given the amount of students and time available (and logistical considerations), Mr. Craft identified a pilot study area on the west end of the city consisting of approximately 800 residents. He also provided spatial data on parcels and water infrastructure in the study area.

Following the goal-setting meeting, the students of the Augustana water resource management course created: 1) an educational door hanger, 2) a home water system connection survey, 3) an informational webpage, and 4) other material to aid in explaining options for identifying and correcting improper private cross-connections. The educational door hanger (Appendix 1, Figure 3) explained the purpose of Augustana College's involvement with Clinton, when the survey would be conducted, an educational background of the sewer systems in Clinton, and examples of proper connections and improper connections. Appendix 1, Figure 4 also shows the final page of the door hanger, which explains the cost of having proper and improper connections. This was important because many residents did not realize the correlation between connections and money spent and Clinton also has high sewer charges (Craft, 2015). The class also made an educational webpage that was run by Benjamin Payne, who was a member of the Water Resource Management Class. This webpage, which can be found at CleanWaterClinton.org, had both the online survey portion and had all materials made by the class. There was also a questions portion that the residents could ask and would be answered online. The final handout was the Options for Proper Connections (Appendix 1, Figure 5). This gave residents possibilities on where to place their stormwater connections instead of

having a cross connection into the sanitary line. Examples of these proper connections include a rain garden and a rain barrel.

The final portion the class created was a short questionnaire or survey. This survey, entitled Home Water System Connection Survey (Appendix 1, Figure 6), was created by the students in Dr. Reuben Heine's course and was administered on October 3, 2015 with members of the Augsburg College River Semester. The survey was created to gauge a general idea of how many residents had cross connections or were educated on the wastewater systems. Two days before the survey was administered, the door hangers were placed on the residents' doors the class would be surveying. This door hanger also included an option to complete the questionnaire either online or on a handout that they could leave for the students to pick up. The entire day of October 3rd was spent going door-to-door and speaking to the public to both educate them on the problems of their systems and explain alternatives. The survey questions, were as follows:

1. Do you have a sump pump? Yes / No / Unknown
2. If yes, where does it connect?
Lawn / Sanitary System / Stormwater System / Unknown / No Sump Pump
3. Do you have gutters and downspouts?
Yes / No / Unknown
4. Do you know where they are connected?
Lawn / Sanitary System / Stormwater System / Unknown / No Gutters

These were recorded through tallies of each house and parcel of land. There was also a visual survey on whether or not they had downspouts and whether these drained above or below ground, which were also recorded through tallies. The final portion of the class was responsible for was a focus area map (Appendix 2, Figure 4). This map was colored in by each student based on the houses answered and the survey completed, which is signified by blue or green coloring. The houses that did not answer the door on the first attempt were represented by the yellow color and the homeowners that did not answer on the second attempt are orange. My final focus area map can be seen in the right image in Appendix 2, Figure 4. On our return to Augustana, the class compiled all the information on Excel and shared it with one another.

Results

This research yielded data from a total of 253 homes which represents 41 percent of the homes in the study area. The complete dataset are presented in Appendix 2 and Figures 5-9. While nearly every home in the study area has a basement, it was found that only 36 percent of the surveyed residents reported having a sump pump and about one-half of these homes reported that their sump pump was directly connected to the sanitary lines. To be precise, 17% of the homes surveyed reported having a sump pump that is connected to the sanitary sewers (not allowed under the current City ordinances).

Other results of the survey include that 9 percent of residents reported that they connected their sump pumps directly to the stormwater lines and 16 percent of the total parcels tested did not know where their sump pump connected.

Residents were also asked about their roof downspouts. Only one of 254 homeowners surveyed stated that their roof downspouts were connected to the sanitary lines and 95 percent drained onto the lawn. The class visual survey of downspouts found that 89 percent of the downspouts clearly drained to ground level (onto lawn), 10 percent drained below the surface to an unknown location, while 1 percent was not visible or did not have a gutter or downspout. Once the water is connected to below-ground pipes, it was impossible for the class to know whether the water connects to the sanitary or storm drains.

We have also received data from online participants. These online participants were residents of Clinton. Of these participants, 75 percent of them did not own a sump pump. Also, only one of out of these sixteen online participants had an improper connection from their sump pump to the sanitary line. Averaging the door-to-door collection and this online survey, a total of 64 percent of residents that completed these surveys did not have sump pumps. The combined percent of the improper connections is still around 17 percent.

Discussion

For the pilot study area, the class survey data indicates that: 1) a slight majority (54%) of residents possess an understanding of where their roof-gutter downspouts and sump pumps discharge, 2) resident responses and visual surveys indicate that gutter-downspouts are largely discharging to lawns and not to the sanitary infrastructure, and 3) the majority of homes do not have (or need) sump pumps. However, for homes with sump pumps, half of the residents indicated that they connect directly to the sanitary sewers (total of 43 homes).

Only 0.4 percent of the households' gutters and downspouts drain directly to the sanitary system. A majority of the drainage is going onto the lawn which will be absorbed or run off to a stormwater street drain. Between the gutters and downspouts and sump pumps, the sump pumps seem to be of larger significance to the problem. According the households who know they have a sump pump and where it drains to, 15 percent are connected directly to the sanitary system and making an improper connection. The unknowns are also significant because 46 percent, almost half, of the households do not know where their stormwater is draining to. There is a large probability that many will be connected to the sanitary system and contributing to the problem. This unknown factor shows that there are still many citizens that do not have much knowledge about the sewer systems in Clinton and how their households may be affecting them.

The class was pleased with the response rate. We believe that the results of the survey are significant with respect to this specific neighborhood. More results are needed in order to understand other neighborhoods of Clinton that also have a separated sewer system. Also, these results will not help estimate the whole city of Clinton because of the sections that have combined sewer systems. These sections do not have a choice whether they drain to the stormwater system or sanitary system because there is not stormwater sewer system present. With providing more education to the citizens of Clinton about the problems of improper connections and CSOs, more data can be gathered because more voluntary participation should be seen. Also, providing those households who will be given a survey with more notice will be beneficial. Many of the households in this project did not receive the door hangers and were

therefore not available or fully prepared educationally. For future surveys or similar projects, stressing the fact that the city of Clinton wants to work with its residents to create a better community will be beneficial as well.

The members of the water resources class hopes that this project will be beneficial as a base line study in this area of the City of Clinton, IA. It will give the city employees information regarding the number of sump pumps in the area and the residents' knowledge of their water systems. By gaining and understanding the level of education on the sanitary and stormwater systems in the City of Clinton, as well as the anonymous. The City of Clinton will be able to move further on this project. There were a lot of residents that did not know where their properties drained, and I think it will spark an interest in the staff of Clinton to create an educational based system to explain what is happening to their water. I believe that City of Clinton Engineer Jason Craft should use similar materials to access the rest of the city. We were not forceful or intrusive; it made a lot of residents realize how unaware they are of the water systems when they had to answer "unknown". This is something Dr. David Dehnel's Environmental Policy class can contribute to. This material will help the Environmental Policy class by giving them a start to understanding the city's educational level.

Appendix 1

Augustana College - City of Clinton

Sustainable Working Landscapes Initiative

**Stormwater Inflow Study and Report on Alternative
Stormwater Management & Outreach Programs &
Policies**

**Augustana College-City of Clinton
Scope of Work Agreement**

CONTACT INFORMATION

City Project Lead

Bob Milroy, Wastewater Superintendent, bob.milroy@cityofclintonia.org,
(563)559-0663

Jason Craft, City Engineer, jascraft@cityofclintonia.org, (563)244-3423

SWLI Contact

Michael Reiser, SWLI Director, michaelreiser@augustana.edu, (309)794-
3410

Tara Cullison, SWLI Program Manager, tara.cullison@augustana.edu,
(309)794-7483

Augustana Faculty Contact

Dr. Reshen Heine, Geography Department, GEOG 305, GEOG 473,
reshenheine@augustana.edu, (309) 794-7325

Dr. David Dehnke, Political Science, POLS 336; daviddehnke@augustana.edu,
(309) 794-7235

Figure 1: This is the front page of the scope of work agreement that was between the City of Clinton and Augustana College's Sustainable Working Landscapes Initiative for our Stormwater Inflow Educational Study.

RESOLUTION NO. 2014-531

RESOLUTION APPROVING THE SECOND AMENDMENT TO THE CONSENT ORDER, JUDGMENT, AND DECREE BETWEEN THE STATE OF IOWA, IOWA DEPARTMENT OF NATURAL RESOURCES, AND THE CITY OF CLINTON IOWA

WHEREAS, the City of Clinton, Iowa had previously entered into a Consent Order, Judgment, and Decree on March 24, 2009 with the State of Iowa, ex rel., Iowa Department of Natural Resources; and,


WHEREAS, the City of Clinton, Iowa had previously consented to entry of an Amendment to the Consent Order, Judgment, and Decree on August 17, 2012 with the State of Iowa, ex rel., Iowa Department of Natural Resources, for the purpose of incorporating a long term control plan and schedule of compliance for the same; and,

WHEREAS, the parties hereto now desire to amend said Consent Order, Judgment, and Decree to revise certain interim deadlines for implementation of the long term schedule of compliance for the remainder of the activities to be performed by the City of Clinton concerning Combined Sewer Overflows (CSOs); and,

WHEREAS, the City Council for the City of Clinton, Iowa accepts and approves the terms of the Second Amendment to the Consent Order, Judgment, and Decree with the State of Iowa and the Iowa Department of Natural Resources; and,

THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF CLINTON, IOWA, that the Mayor and the City Clerk are authorized to sign this Resolution to accept the terms of the Amendment to Consent Order, Judgment, and Decree and the Mayor, City Clerk, and legal representative are hereby authorized and directed to execute the Second Amendment to the Consent Order, Judgment, and Decree as attached.

 MAYOR

ATTEST:

CITY CLERK

ADOPTED: December 18, 2014

Figure 2: This image is the front page of the consent decree between the Environmental Protection Agency and the City of Clinton.

Augustana College



Dear Citizen of Clinton,

This letter comes to you from the students of an Augustana College water resources management class. As you may know, the City of Clinton has partnered with Augustana for the entire year to accomplish 18 city-initiated projects. This partnership is a great opportunity for Clinton to get needed work done and it also allows us Augustana students to apply what we are learning to address real and pressing needs - a true win-win partnership.

The water resources class is one of nine classes working on research projects in Clinton this term. The first half of our class is focused on municipal water systems and how they function. Clinton's water systems are unique and interesting but they suffer from the same problems that other cities deal with including combined sewer overflows and cross connects. The purpose of our class project is to: (1) learn more about how homes are connected to the sanitary and storm sewers and (2) raise awareness about the problems associated with proper and improper residential plumbing connections. After reading the rest of this letter, please take a few minutes to fill out the included questionnaire. Also, visit our course webpage CleanWaterClinton.org to learn more about the issues (you could also opt to fill out an on-line survey rather than the paper survey at our page).

We also want to let you know that student groups will be visiting homes in your neighborhood on **Sunday, October 4th**. If you are home that day, we would enjoy the opportunity to share with you what we are learning and answer questions that you might have. We will collect the questionnaire forms on the 4th; so either have them ready or please leave them in a place near your front door where we can find them if you do not plan to be home on Sunday. You can also take the survey online by visiting CleanWaterClinton.org.

Background, Sewers Systems in Clinton: There are two systems that transport water away from your home and city: the sanitary sewer and the stormwater sewer. Any water that goes down your house drains is wastewater, which flows through the sanitary sewer system to the wastewater treatment plant. Water generated by rainfall and snowmelt is stormwater which is carried in the storm sewers which flows directly to small creeks or to the Mississippi River. Because stormwater results from rainfall and snowmelt, it is relatively clean and does not require treatment. While some parts of Clinton rely on a single set of pipes to carry wastewater and stormwater, your neighborhood is equipped with two separate sets of pipes and it is important to only send wastewater down the sanitary sewer pipes.

Why is this important? While the Clinton wastewater treatment plant is a state-of-the-art facility that is very technology efficient, treating water is always expensive because of the electricity needed to pump and filter water. While your neighborhood is equipped with separate sewers, large volumes of stormwater enter the sanitary sewers during rain events because of improper cross connects within some homes.

Cross connects are defined as places in the pipes where sanitary waste and storm water mix. Residential cross connects occur when gutter downspouts, foundation drains, or sump pump drains tie to the sanitary sewers. It is called a cross connect because water that should be treated as stormwater is connecting to the sanitary sewers. Why is this an issue? When Clinton experiences rainfall, the excess water overwhelms the sanitary sewer system. When too much inflow overwhelms the sanitation system, combined sewer overflows (CSOs) result, causing untreated sewage to flow into the Mississippi River. Rain water should be able to drain directly into the river or be used as water for plants because it does not need to be treated like

Figure 3: This figure is the first page of the door hanger that Augustana College's Water Resource Management course created. It details educational information about storm and sanitary water systems and explains the survey process to the residents.

Sump Pumps and Gutter Downspouts Is Your Home Connected Properly?

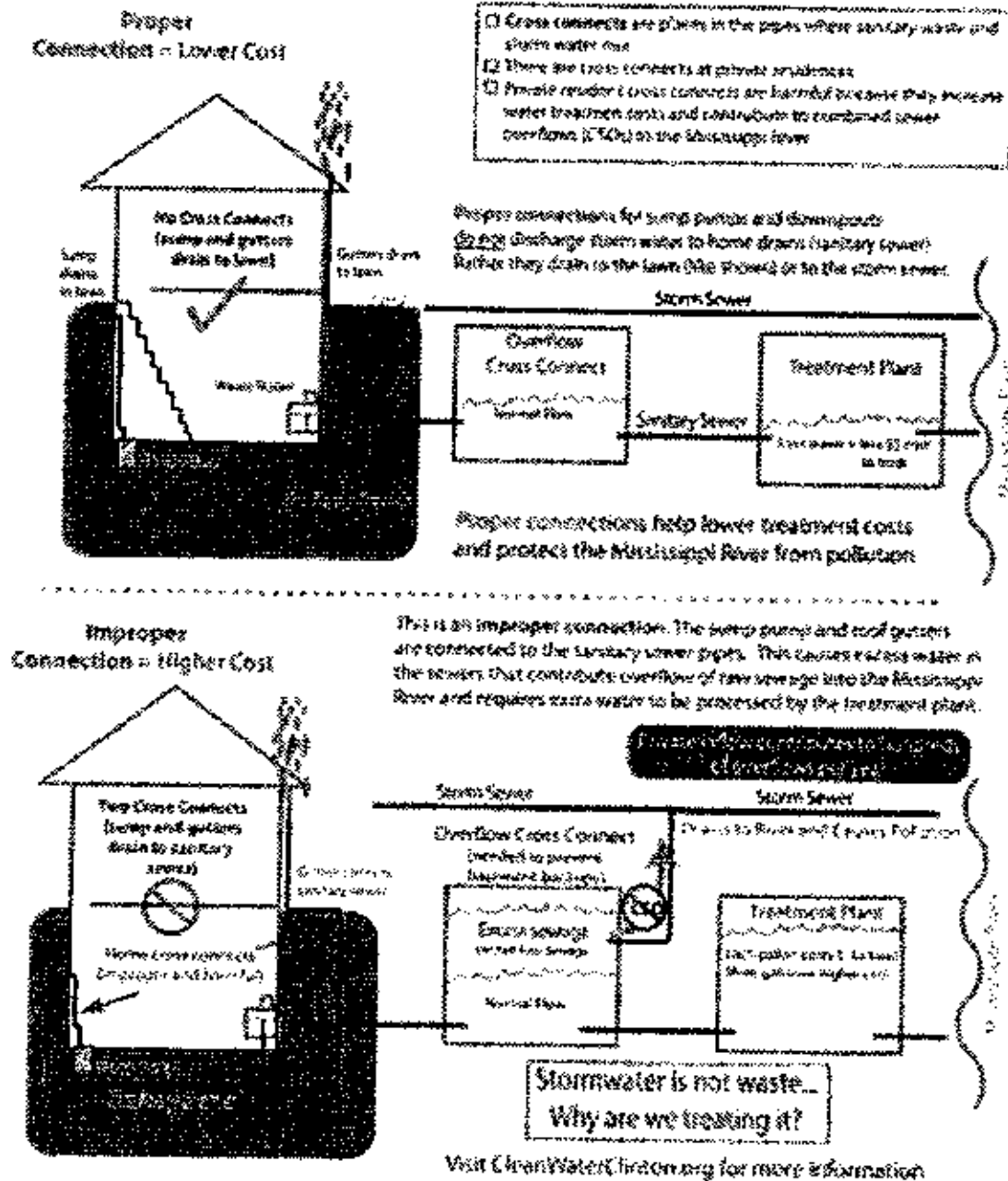
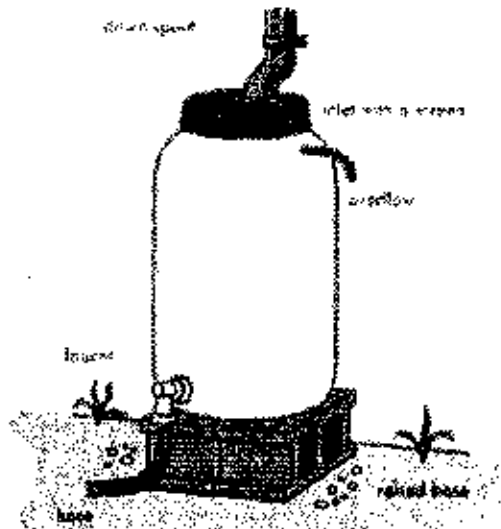


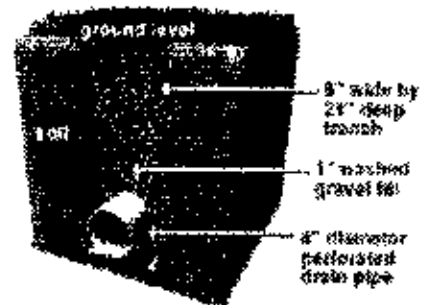
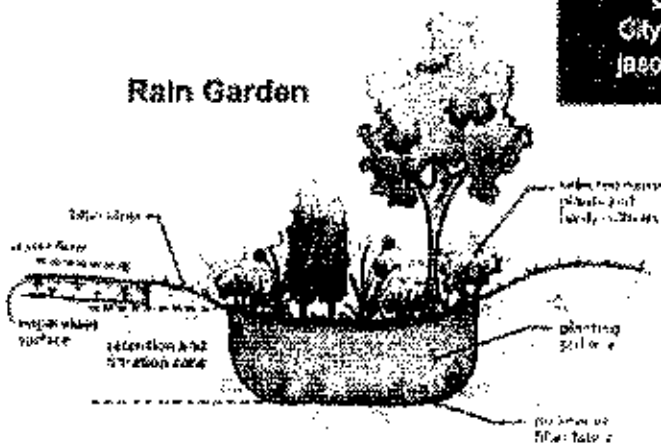
Figure 4: This figure shows the last page of the door hanger. It explains how a proper connection would result in less combined sewer overflows, causing less money spend by the residents. The bottom part of the image shows that more cross connections will lead to more excess inflow water and will cause the residents to spend more money through taxes.

Options for Proper Connections



Rain Barrel

Rain Garden



French/Rock Drain

While proper connections will help the sanitary sewers, homeowners often wonder what to do with the stormwater. Here are some suggestions:

- 1) Build a Rain Barrel
- 2) Create a simple native plant Rain Garden
- 3) Build a French/Rock Drain

This was brought to you by Augustana College and the City of Clinton. For more information on the benefits of these alternatives, please visit CleanWaterClinton.org OR reach City of Clinton Engineer Jason Craft at jasoncraft@cityofclinton.us or 563-244-

<http://www.askthebuilder.com/a-simple-french-drain/>
<http://www.cornishod.org/rain-gardens/>
<http://nhhelab.com/tag/california-drought/>

Figure 5: This figure is the Options for Proper Connections handout that was given to residents. It has both City Engineer Jason Craft's contact information, as well as more information that can be accessed online.

Augustana College Home Water System Connection Survey

Please circle the most appropriate response for each question, and leave this card in a visible location near your front door to be collected by students on October 4, 2015 or visit cleanwaterclinton.org to complete online.

	Question	Response (circle one)		
1	Have you already completed this survey at cleanwaterclinton.org ?	Yes	No	
2	Do you have a sump pump?	Yes	No	Unknown
3	If yes, where does it drain to?	Lawn	Storm sewer	Unknown Sanitary sewer
4	Do you have roof gutters and downspouts?	Yes	No	Unknown
5	If yes, where do your gutter and downspouts drain to?	Lawn	Storm sewer	Unknown Sanitary sewer
Do you wish to know more about this project and the water treatment systems in the City of Clinton? If yes, please write your contact information on the back side of this sheet.				

Figure 6: These are the survey questions of the Augustana College Home Water System Connection Survey. We tallied these results on a separate sheet.

Appendix 2

HOW IT WORKS

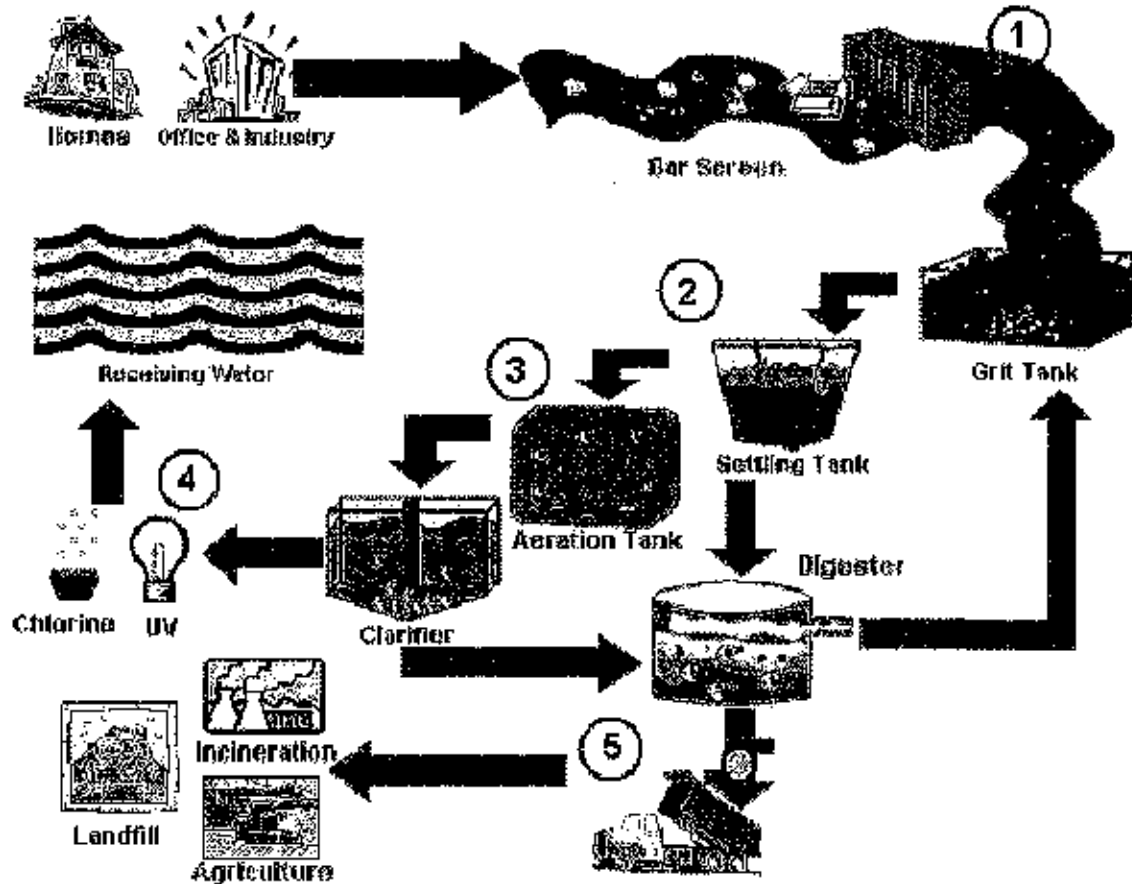


Figure 1: This figure shows the sanitary treatment plant, as explained by Water Quality Superintendent Robert Milroy. This shows all of the steps taken to clean the water; in the case of Clinton, IA, the water is taken from the plant and pumped to the Mississippi River. < <http://cityofclintonia.gov/wastewatertreatmentplant.html> >

DIAGRAM OF STORM DRAIN SYSTEM



Figure 2: This figure shows how simple the stormwater system should be. The water should be taken away from homes and storm drains and running into a larger area of the watershed, usually the Mississippi River in the case of Clinton, IA. In instances of extreme rainfalls sump pumps in homes should take that water and drain it to the lawn and not to the sanitary lines. <<http://www2.monroecounty.gov/des-stormwater-coalition>>

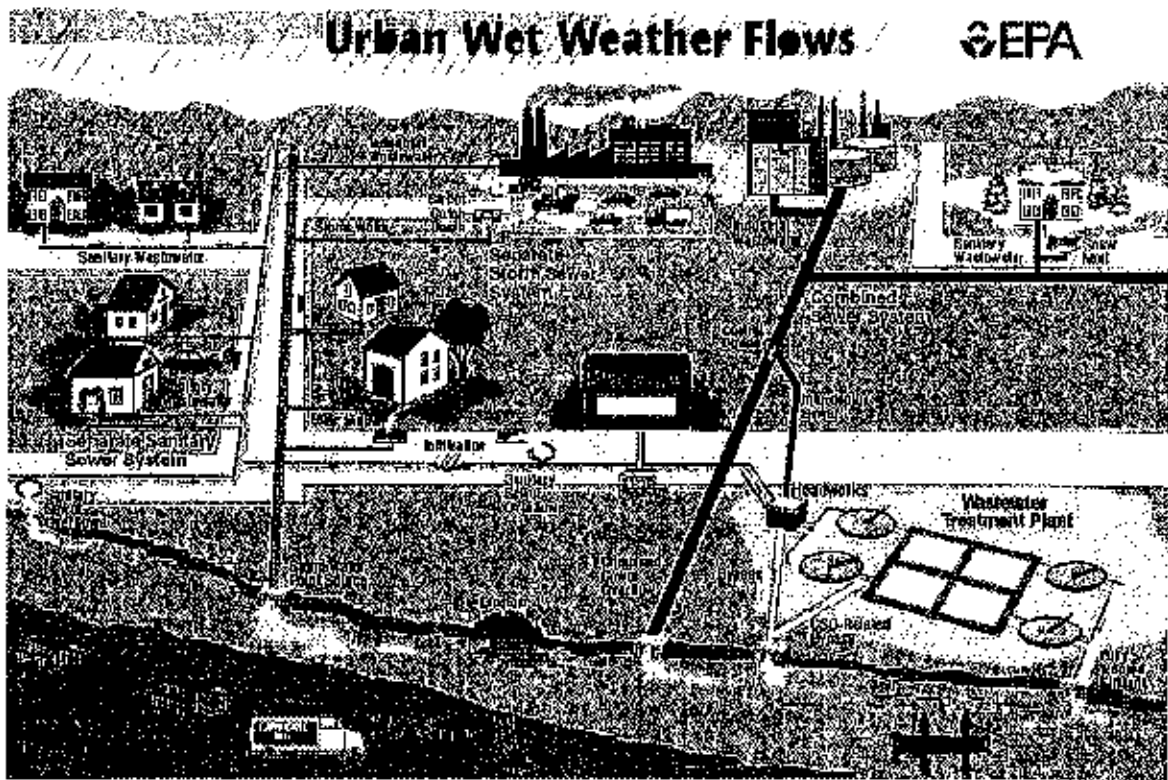


Figure 3: This figure shows both combined and separate systems. The two systems on the left show the separate systems and one on the right is the combined systems. The separate systems in this figure are still not perfect, but are not resulting in the combined sewer overflow in the river, as seen in the river. <<http://www.ci.springfield.oh.us/swu/wwwso.htm>>

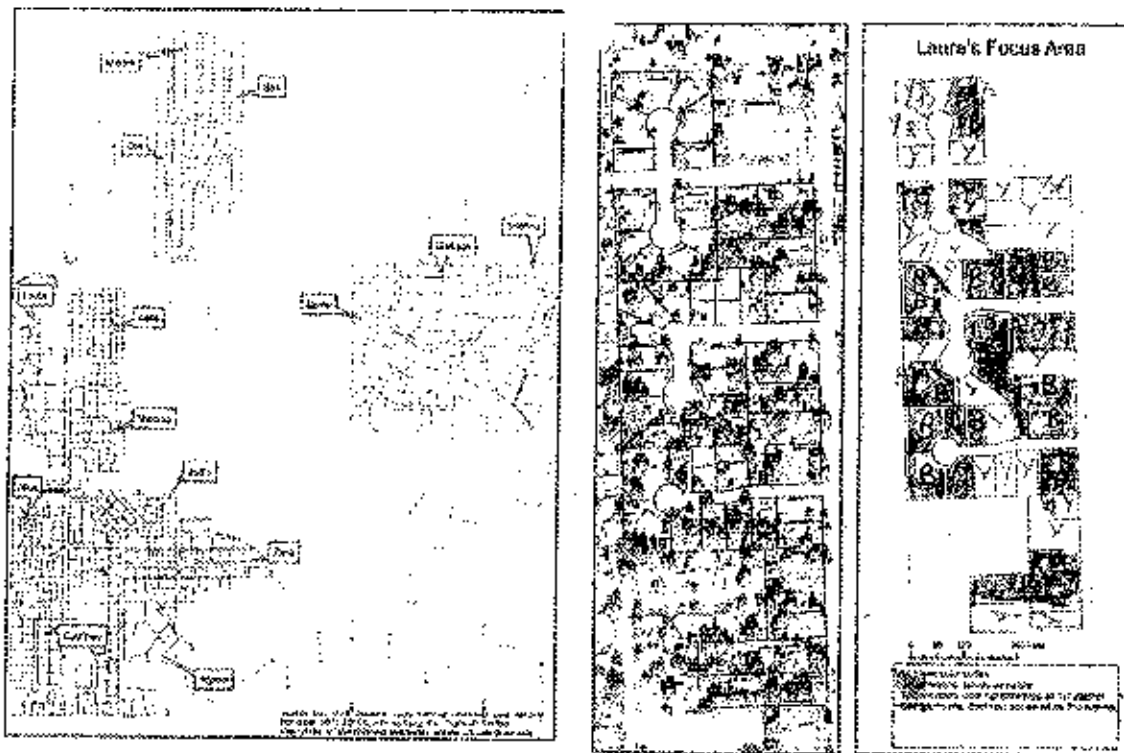


Figure 4: These figures show the parcels of land that Dr. Reuben Heine's Water Resource Management Course tested. The left image shows the entire section of land; these sections all had separate systems. The right image is the section I was responsible for.

Entire Class	Sump pump? Yes/No/Un- known	Connected to? Lawn	Connected to? Sanitary Sys- tem	Connected to? Stormwater System	Connected to? Unknown	Connected to? No sump pump/gutters
Sump Pump	78/149/27	26	13	7	39	147
Gut- ters/Down- spout	253/2/0	243	1	6	6	2

Figure 5: This is the compiled data of Dr. Reuben Heine's Water Resource Management course.

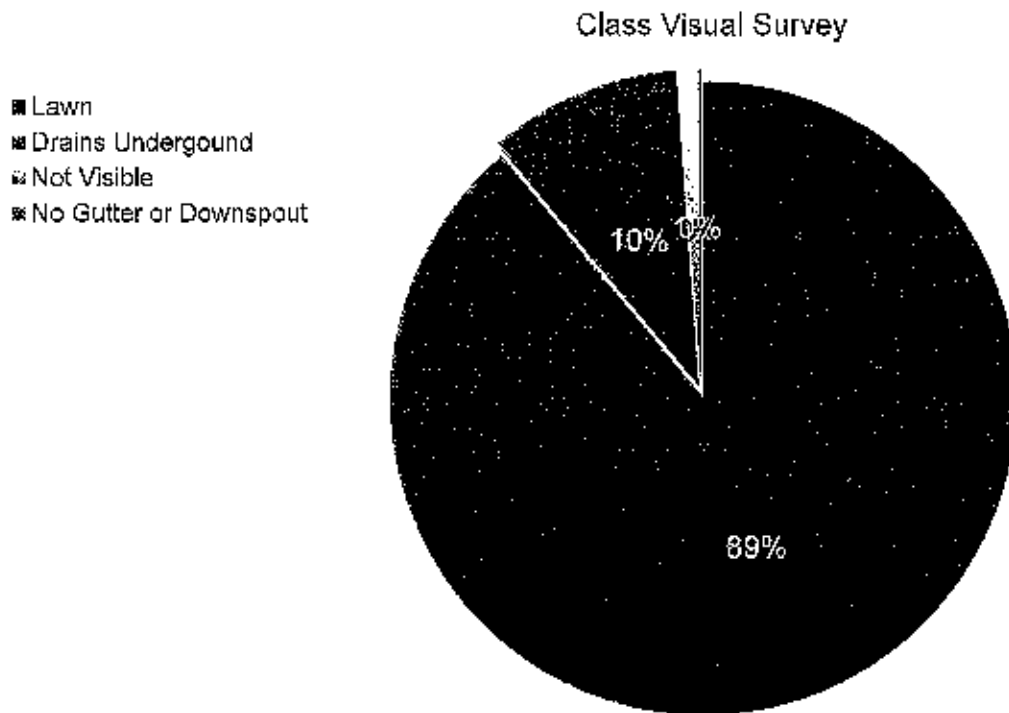


Figure 6: This pie chart shows the total class data collected. Again, many homeowners did not have sump pumps or were unsure where it was connected to.

Downspouts? Yes/No	Connected to? Drains to Lawn	Connected to? Drains Under- ground	Connected to? Not Visible	Connected to? No Gutter or Down- spout
547/3	492	55	6	1

Figure 7: This is the compiled class data for the visual survey portion pertaining to downspouts and gutters.

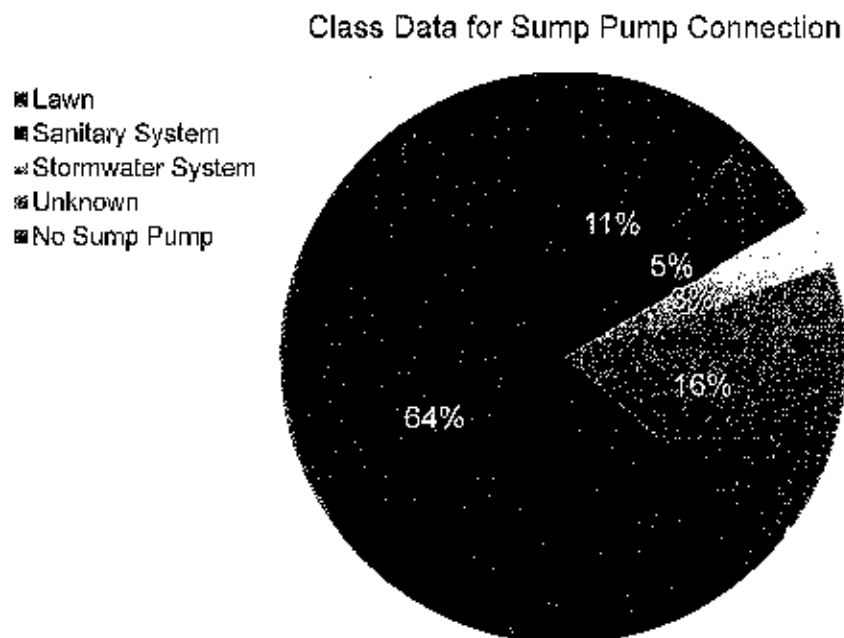


Figure 8: This pie chart shows the visual survey for the entire class. Most downspouts were drained on the lawn, but ten percent was drained underground.

Total Surveyed	Total Parcels of Land
253	619

Figure 9: This small table shows the number of residents that completed the survey and the total number of parcels in the area we surveyed. We surveyed around 41 percent of the total residents in the area.

Work Cited

- "City of Dunbar, West Virginia." *City of Dunbar, West Virginia*. City of Dunbar, West Virginia, 2015. Web. 25 Oct. 2015.
- "City of Springfield; Stormwater Utility - Wet Weather System Overview." *City of Springfield: Stormwater Utility - Wet Weather System Overview*. The City of Springfield, Ohio, 9 Sept. 2015. Web. 25 Oct. 2015.
- "Clinton, Iowa." *City-Data*. City-Data, Onboard Informatics, 2015. Web. 25 Oct. 2015.
- "Clinton (Iowa) Partnership." *Clinion (Iowa) Partnership*. Upper Mississippi Center, n.d. Web. 25 Oct. 2015.
- "Consent decree." Def. 2. *Merriam-Webster Online*. Merriam-Webster, n.d. Web. 25 Sept. 2015.
- Craft, Jason. (2015, September 8-9). (2015, October 3). [Personal communication].
- "DES Stormwater Coalition | Monroe County, NY." *DES Stormwater Coalition | Monroe County, NY*. Monroe County, 2015. Web. 25 Oct. 2015.
- EPA. "Combined Sewer Overflows (CSO) Home." *Combined Sewer Overflows (CSO) Home*. Environmental Protection Agency, 15 Dec. 2014. Web. 25 Oct. 2015.
- Millroy, Robert. 2015, September 8-9). (2015, October 3). [Personal communication].

Incentive Analysis and Recommendations for the City of Clinton, Iowa

Winter 2015 • Sustainable Working Landscapes Initiative

Sophie Bennett, Corbin Delgado, Marissa Iverson, Laura Morris, and Tanner Osing
Dr. David Dehmel • Professor • Department of Political Science

Introduction

Established in 1836, Clinton, Iowa has around 26,000 residents and is located directly on the Mississippi River. The City of Clinton has two systems in its urban watershed. These systems, including the stormwater and sanitary systems, are vital to the city but are also negatively impacting the surrounding environment. Specifically, Clinton is responsible for large overflows of polluted sewage reaching and combining with the Mississippi River.

The stormwater system takes rainwater and snow melt away from homes usually using gravity and is infiltrated into the water table, eventually ending up in the Mississippi River. The sanitary line removes raw sewage away from residents and businesses and takes them to be treated in the wastewater treatment plant and pumped into the Mississippi River. The main problem in Clinton is that the two sewer systems are combined in some areas and cross-connections (Figure 1), stormwater systems connected to the sanitary lines in homes, appear to make the problem worse.

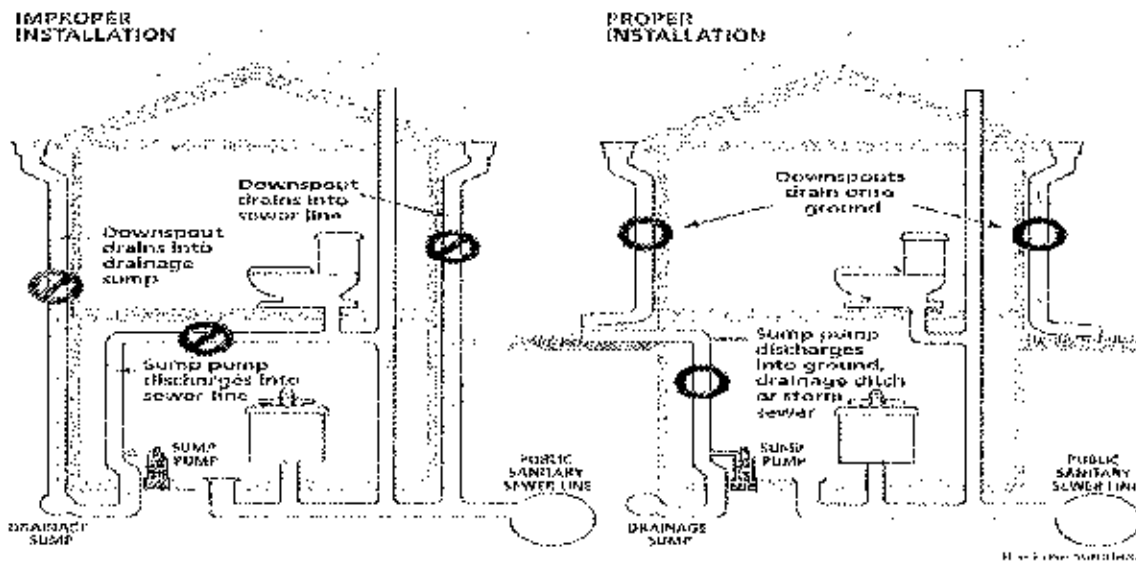


Figure 1: A diagram of cross connections.

Clinton's combined sewer overflows run straight into the Mississippi River and result in a highly polluted area.² Jason Craft believes that the City of Clinton has hundreds of combined sewer overflows a year.² For this reason, the EPA was forced to step in.

Currently the City of Clinton administration is trying to reduce the amount of overflows by educating the residents on the problem. They want to strongly enforce that there should be no cross connections of stormwater pipes into the sanitary line. It is important to understand the various alternatives to eliminating the cross connections in the City of Clinton. This poster discusses various incentives and educational based sump pump and cross connection removal plans that other cities have implemented and creates a recommendation for Clinton, Iowa to achieve the removal of their cross connections; we also discuss various payment plan options Clinton can adopt to pay for these incentive-based programs.

Recommendations

We recommend a compilation of many of the alternatives seen in our reviews and summaries of Florence, Kentucky, Waltham, Massachusetts, South Portland, Maine, and Grand Blanc, Michigan. Initially, we recommend that the City of Clinton engages their community and explains the process by which any policy will be implemented. This should be through an online, governmentally supported and ran website, distributed fliers, a viable timeline explanation, and public forums. The purpose of this community education and outreach program will be to increase awareness and transparency regarding future city projects.

We suggest referencing the example of Waltham, Massachusetts and their zone by zone approach to implementing their sump pump amnesty program. The city officials of Waltham focused on one area of the city, starting with the most important or vital to regulate and moving towards the area of least importance. The City of Waltham, rather than trying to implement changes on a city-wide basis, they focused on "cluster or neighborhood-by-neighborhood basis".

We recommend following this example for implementation because it was both successful and engaged the community in a positively responsive way. Because there are varying areas of importance in the City of Clinton, this zone by zone approach will appeal to the areas of most concern and should result in the removal of the cross connections, thus alleviating some of the improper water inflow problems. Along with this, the city's administrative infrastructure would

be relieved of the undue stress which would come with a city-wide implementation program.

Florence, Kentucky passed a reimbursement program which focused on limited funding, covering all costs up to \$1,000 and fifty percent of all costs afterward capping at \$2,000. An prior example, seen in Florence, Kentucky's cost plan, of this style of reimbursement is listed below.

Example	Total Repair Cost	City's Portion of Cost	Homeowner's Portion of Cost
1	\$1,000	\$1,000	\$0
2	\$1,958	\$1,479	\$479
3	\$2,700	\$1,500	\$1,200

We recommend responsibilities for this decision be placed in the hands of both the financial and engineering departments of Clinton's administration. SPAP's in tandem with our earlier policy suggestions increasing the scope of public engagement should reconcile many of the issues faced by Clinton in regards to implementing any real change.

Alternatives for Removal of Cross Connections

- Waltham, Massachusetts and Florence, Kentucky
 - Sump Pump Amnesty Programs (SPAP) to remove sump pump discharges from the sanitary system
 - Included educational components and incentives
- South Portland, Maine
 - Offered a rebate for homeowners to remove roof drains or sump pumps themselves
 - 58 million gallons per year were redirected through these efforts
- Greater Cincinnati, Ohio
 - Removed stormwater connections
 - Incentive program of up to \$3,000 for private property owners
 - From 1993-1994, 41% of unauthorized storm connections were removed
- Grand Blanc Township, Michigan
 - Inflow & infiltration removal program
 - Televised and inspected all sanitary sewers and made repairs

Funding Opportunities

- Clean Water State Revolving Fund (CWSRF)
- Federal Community Development Block Grant (CDBG)

References

1. "City Clinton Data." *City-Data*. City-Data, Onboard Informatics, 2010. Web. 25 Oct. 2015. <http://www.city-data.com/city/Clinton-Iowa.html>
2. Craft, Jason. (2015 September 8-9), 2015 October 3. [Personal communication].
3. Cale-Finnegan, Patti. "Water Resource Restoration Sponsored Projects." *Iowa State Revolving Fund*. n.d. Web. 17 Dec. 2015. http://www.iowasrf.com/media/cms/Sponsored_Projects_Handout_F1B113A15D660.pdf
4. City of Florence. "City of Florence Sump Pump Amnesty Program." Web. 12 Dec. 2015. http://www.florence-ky.gov/sites/default/files/florence/public-services/Sump%20Pump%20Article1_0.pdf
5. City of Waltham. "City of Waltham Sump Pump Amnesty Program." Web. 12 Dec. 2015. http://www.city.waltham.ma.us/sites/walthamma/files/file/file/sump_pump_faq_13060.pdf
6. EPA. "Combined Sewer Overflows (CSO) Home." *Combined Sewer Overflows (CSO) Home*. Environmental Protection Agency, 15 Dec. 2014. Web. 25 Oct. 2015. <http://www.epa.gov/npdes>
7. EPA. "Learn About the Clean Water State Revolving Fund (CWSRF)." *Environmental Protection Agency*. United States Environmental Protection Agency, 2 Aug. 2015. Web. 11 Dec. 2015. <http://www.epa.gov/cwsrf/learn-about-clean-water-state-revolving-fund-cwsrf#assistance>
8. Narber, Dan. "Opportunities." *IowaGrants.gov*. State of Iowa, 2015. Web. 14 Dec. 2015. <https://www.iowagrants.gov/insideLinkOpps.jsp?documentPk=1314734427224>
9. Niehaus, J. Rainfall-derived infiltration and inflow: An innovative approach to removal. In *Seminar Publication*. National Conference on Sanitary Sewer Overflows, 1995. Web. <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.137.8327&rep=rep1&type=pdf#page=324>
10. Reynolds, J. The roof drain and sump pump removal program: An innovative approach to inflow reduction. In *Seminar Publication*. National Conference on Sanitary Sewer Overflows, 1995. Web. <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.137.8327&rep=rep1&type=pdf#page=331>
11. "Sump Pump and Footing Drain Program." *Sump Pump and Footing Drain Program*. Rowe Professional Services Company. Web. 12 Dec. 2015. <http://www.rowepsc.com/services/clients/gbtwp/index.php>
12. City of Waltham "City of Waltham Sump Pump Amnesty Program" Aug. 2014 Web. 12 Dec. 2015.
13. Wheatley, Jack. (2015 December 17). 2015 December 17. [Personal Communication].
14. Knauss, Tim. "Onondaga County law would ban illegal hook-ups to sanitary sewers," Posted on July 28, 2010 on Syracuse.com.

http://www.syracuse.com/news/index.ssf/2010/07/onondaga_county_law_would_ban.html



City Administrator

Phone: 563-242-2144 Fax: 563-244-3426
611 South Third Street
P. O. Box 2958
Clinton, IA 52733-2958
www.cityofclintonia.us

To: Mayor Vulich and the City Council
From: Jessica Kinser, City Administrator
Date: August 4, 2016
RE: Proposed CIP Project List

During one of the Strategic Plan sessions, it was requested that the Council be able to review the project list in order to add any projects prior to the CIP Committee to take on the task of prioritizing the projects by year. Attached with this list are the projects that remain from the most recent CIP with some new projects added for the prioritization. Those items that are crossed out are those to be funded in the current fiscal year, which would remove them from the list.

If there is nothing further to add to the list, I will begin the process of updating the CIP information and convene the CIP Committee. The intent would be to have a final product from the CIP Committee by the end of November.

City of Clinton

Project ID	Project Type	Proposed Capital Improvement Projects
		Project Title
17-1	Other	Replace Airport Fuel Tanks
17-2	Other	Dredging
17-3	Other	North Stadium Parking Lot
17-4	Other	City Hall Parking Lot
17-5	Other	West Stadium Parking Lot
17-6	Other	Downtown Façade Program
17-7	Other	North Loop Track
17-8	Other	Water Service to Railpark
17-9	Sidewalks	ADA Ramp Construction
17-10	Sidewalks	Springdale Drive Sidewalks
17-11	Streets	19th Ave N Phase III
17-12	Streets	Library Entrance Realignment
17-13	Streets	Manufacturing Drive Widening
17-14	Streets	Pavement Management Program
17-15	Streets	South 54th Street Improvements
17-16	Park Improvement	Sewer Connections at RV Park
17-17	Other	Marina Parking Lot Paving
17-18	Buildings	Combined North End Fire Station
17-19	Buildings	Library Interior Upgrades
17-20	Buildings	Police Station
17-21	Buildings	Washington Middle School Gyms
17-22	Park Improvement	Eagle Point Park Shelters
17-23	Park Improvement	Eagle Point Park Stone Structure Repairs
17-24	Park Improvement	Jurgensen Soccer Park Upgrade
17-25	Buildings	Ericksen Center Gymnasium Addition
17-26	Buildings	Ericksen Center Terrace Enclosure
17-27	Park Improvement	Outdoor Recreation & Sports Complex
17-28	Park Improvement	Riverview Pool Improvements
17-29	Park Improvement	Softball Light Replacement
17-30	Buildings	Wastewater Administration Center
17-31	Bridge	West Deer Creek Bridge
17-32	Streets	Anamosa Road/44th Ave South Repaving
17-33	Streets	14th Avenue NW Construction
17-34	Buildings	Boat House/Docking Area
17-35	Buildings	Lyons Fire Renovation
17-36	Buildings	Central Fire Renovation
NEW	Buildings	Showboat Improvements
NEW	Park Improvement	Splash Pad/ice Rink
NEW	Park Improvement	Eagle Point Park Restrooms
NEW	Park Improvement	Eagle Point Park ADA Playground, Shelter Renovations
NEW	Streets	North 3rd Street - Highway 67 Resurfacing
NEW	Bridges	Bridge Replacements/ Removal 28th, 29th, Cleveland
NEW	Streets	Mill Creek Parkway Roundabouts
NEW	Streets	Main Avenue & North 3rd Street Intersection Improvements
NEW	Streets	Highway 30 & Mill Creek Parkway Intersection Improvements
NEW	Streets	Thorwaldsen, Bluff, 7th Ave S Intersection Improvements
NEW	Other	Riverview Pool Parking Lot



City Administrator

Phone: 563-242-2144 Fax: 563-244-3426
611 South Third Street
P. O. Box 2958
Clinton, IA 52733-2958
www.cityofclintoniowa.us

To: Mayor Vulich and the City Council
From: Jessica Kinser, City Administrator
Date: July 28, 2016
RE: Parks Master Plan RFP

The Parks and Recreation Advisory Board reviewed the **attached master plan RFP** and made minimal changes. The request is to direct staff to issue the RFP, which would have a 30 day distribution timeline.

The group to evaluate the responses will include Ann Eisenmann, Mark Schroeder, Julie Allesee, Gregg Obren, Zane Pennock, and myself. This group will then make a recommendation to the Council at a future Committee of the Whole as to the selected response.

REQUEST FOR PROPOSAL

Parks Master Plan



Responses are due by [insert date/time] at 3:00PM CST

To

[insert address/location]

INTRODUCTION/BACKGROUND INFORMATION

The City of Clinton is seeking proposals from qualified firms and individuals with demonstrated experience developing master plans for parks and recreational spaces. The Master Plan will help form the future vision of parks, open spaces, trails and recreational facilities for Clinton in a way that enhances the quality of life, tourism, and economic development of the area. The City of Clinton has not had a comprehensive plan addressing all parks and park lands, but has a master plan for one specific park.

Please carefully review this document. It provides information necessary to aid participating bidders in formulating a thorough response. A formal, comprehensive review period will be conducted to ensure that the City selects the best possible firm that will provide the best value and service.

BIDDING PROCESS

The following is a schedule of events concerning the proposal process:

- Distribution of RFP [Insert date]
- Proposals received [Insert date] by 3:00 p.m. CST
- Notification of Award [Insert date]

One complete original proposal is due no later than [Insert date] by 3:00 p.m. Central Standard Time to [insert address].

Any proposals received after the submission date will be considered void and unacceptable. The City is not responsible for lateness, and the date/time stamp of the email shall be the official date and time of receipt.

There will be no distribution of bids made until the City and the successful vendor have executed a contract. No bid shall be handled so as to permit disclosure of the identity of a bidder or the content of any proposal to competing bidders until the deadline for submission of bids or proposals has expired.

The respondent shall be responsible for the timely delivery of any response.

EVALUATION AND AWARD

An evaluation team consisting of City staff and Parks and Recreation Advisory Board members including the Council liaison, will evaluate the proposals and make a recommendation to the City Council for the award of a contract. The evaluation and award of this proposal shall be rated on the following criteria (not in any relevant order):

- Qualifications and experience of the firm
- Understanding of the project
- Demonstrated performance in past projects
- Proposed schedule for completion
- Proposed pricing

The prices proposed shall be considered firm and cannot be altered after receipt of the proposal by the City per the terms of this proposal. The City may make a determination that the rejection of all proposals is in its best interest.

The successful vendor shall commence work only after the transmittal of a fully executed contract and after receiving written notification to proceed from the City. The successful bidder will perform all services indicated in the proposal packet and in compliance with the negotiated contract.

SUBMISSION REQUIREMENTS

The purpose of the proposal is to demonstrate and clearly articulate the qualifications, service level, cost for services, competence and capacity of the firm seeking to prepare a Parks Master Plan for the City of Clinton. Proposals should contain sufficient information to ensure that the proposed processes are regarded as expert, impartial, legally defensible and fair and utilize benchmark standards supplied by the National Recreation and Parks Association. Each response must contain the following information:

COVER LETTER - Include a signed cover letter with the proposal. The cover letter should contain a) the name, title, phone number, fax number, e-mail address, and street address of the company representative, b) highlight the firm's ability to provide park master planning services, and c) an overview of the company.

PROPOSED WORK PLAN – Provide a detailed overview of the process the firm would utilize to complete the specified scope of work listed below.

QUALIFICATIONS OF PROPOSED STAFF – Provide a listing of resumes or information about the staff which will be working on the Parks Master Plan, including other similar projects/work.

REFERENCES – Provide three references of governmental entities where similar master plans have been completed.

PROPOSED PRICING – Please state pricing based on the scope of work.

MILESTONE SCHEDULE – Please provide a schedule with milestones for completing the Proposed Work Plan.

ADDITIONAL INFORMATION – Include any appropriate additional information that supports your proposal.

SCOPE OF WORK

The primary goal of a Parks Master Plan for the City of Clinton is to provide clear and concise direction to staff, the Parks and Recreation Advisory Board, Mayor and City Council and the general public and other stakeholders for the future development, re-development and enhancements of the City's parks, open spaces, trails and facilities. No comprehensive plan for all of these items exist.

The qualified firm or individual is asked to provide the following elements in a proposed planning process:

- Public involvement and engagement
- Analysis of existing inventory and plans
- Analysis of community needs and existing trends

- Analysis and evaluation of current programs and services in relation to facility condition and needs
- 10-Year Improvement and Development Plan
- Identify funding sources for improvement and development projects

The City of Clinton will appoint an advisory committee to work with the consultant throughout the planning process. The City of Clinton will also provide any relevant plans or data to the consultant which would include but is not limited to the City of Clinton Comprehensive Plan, 2016 Citizen Survey results, all current and past trail-related plans, all past individual park master plans, current and past Capital Improvement Plans and any other data requested by the consultant.

RESERVATION OF RIGHTS

The City reserves the right to reject any and all proposals, to award the agreement to other than the low proposal, to negotiate the terms and conditions of all and any part of the proposals, to waive irregularities and/or formalities, and in general to make an award in the manner as determined to be in the City's best interest. The City may, at its discretion, cancel any proposal or request for proposal or other solicitation and/or reject all proposals in whole or in part.

CHANGES AND ADDENDA TO PROPOSAL DOCUMENTS

Each change or addendum issued in relation to the RFP will be on file at City Hall and sent to each vendor the original RFP was sent to. All such changes or addenda shall become part of the contract and all bidders shall be bound by such changes or addenda.

TAXES, TERMS AND CONDITIONS

The City is exempt from Federal Excise and State Sales Tax. The City's Federal ID number is 42-6004399. Payment Terms are invoices received by first of the month will be paid in that month.

INSURANCE

The Contractor agrees to and shall procure and maintain during the duration of this contract, Contractor's general public liability and property damage insurance, including auto liability and employer's liability coverage, insuring Contractor from all claims from personal injury, including death, and claims for destruction or damage to property arising out of or in connection with any operations under this contract, whether such operations are by the Contractor or a subcontractor of the Contractor, and said insurance shall name as additional insured, waive and hold harmless the City.

Certificates of Insurance shall be filed with the City and shall list the City as additional insured. Include waiver of subrogation in the favor of City. All liability insurance must contain contractual action over claims cause; insurance shall be written with limits of liability of not less than the following:

- A. \$2,000,000 primary limit, for all damages arising out of bodily injury, including death with umbrella coverage of \$4,000,000.

B. \$2,000,000 primary limit for all property damage, with umbrella coverage of \$4,000,000.

Contractor shall provide Workers Compensation Insurance and maintain at its expense during the term of this Contract, in accordance with workers compensation laws of the state, including occupational disease provisions, for all of the Contractor's employees, and in case any work is sublet, Contractor shall require any such subcontractor similarly to provide Workers Compensation Insurance, including occupational disease provisions, for all of the subcontractor's employees unless such employees are covered by the protection afforded by the Contractor. In case employees engaged in hazardous work under this contract are not protected under the Workers Compensation Law, the Contractor shall provide, and shall cause each subcontractor to provide adequate and suitable insurance for the protection of its employees not otherwise protected. Any uninsured subcontractors are hereby deemed to be covered by the Contractor's workers compensation coverage.

PROPRIETARY INFORMATION/PUBLIC DISCLOSURE

Material submitted in response to this RFP shall become the property of the City. In the event a firm desires to claim that portions are exempt from disclosure under the provisions of Iowa law, it is incumbent upon the firm to identify those portions in the firm's proposal transmittal letter. The transmittal letter must identify the page and the particular exception(s) from disclosure upon which it is making its claim. Each page claimed to be exempt from disclosure must be clearly identified by the word "confidential" printed on the lower right hand corner of the page. The City will consider a firm's request(s) for exemption from disclosure; however, the City will make a decision predicated upon applicable laws. An assertion by a firm that an entire volume of its proposal is exempt from disclosure will not be honored.

INDEMNIFICATION

The Contractor shall hold harmless, defend and indemnify the City and its officers, employees, and agents from and against any and all claims, losses, causes of action, judgments, damages and expenses including, but not limited to attorney's fees because of bodily injury, sickness, disease or death, or injury to or destruction of tangible property or any other injury or damage resulting from or arising out of (a) performance or breach of the Contract by Contractor, or (b) any act, error, or omission on the part of the Contractor, or its agents, employees, or subcontractors except where such claims, losses, causes of action, judgments, damages and expenses result solely from the negligent acts or omissions or willful misconduct of the City, its officers, employees or agents.

EQUAL OPPORTUNITY

No Contractor under this RFP shall discriminate against any employee, applicant for employment, or recipient of services on the basis of veteran status, race, religion, color, sex, sexual orientation, age, disability, or national origin.



City Administrator

Phone: 563-242-2144 Fax: 563-244-3426
611 South Third Street
P. O. Box 2958
Clinton, IA 52733-2958
www.cityofclintoniowa.us

To: Mayor Vulich and the City Council
From: Jessica Kinser, City Administrator
Date: August 5, 2016
RE: Draft ORD for Urban Chickens

The Council requested a draft ordinance to review which would allow for urban chickens. As I read through both the current Animal Control and Protection ordinance and the current Zoning Ordinance, it made sense to make all changes to Chapter 159, Zoning. The section 91.006 states that livestock are not allowed unless in compliance with zoning regulations or with written consent of the Council. The urban chickens would be allowed under the zoning regulations, so there would be no reason to change any portions of Chapter 91 as proposed.

The content of the ordinance is taken from the City of Ely. The changes made in the ordinance before you include setting the permit fee at \$30 to cover the costs for a BNS Inspector to review the coop and issue a permit.

The Council cannot take action on this draft ordinance because it is an amendment to the zoning code. Therefore, this would need to be forwarded on to the Planning Commission who must hold a public hearing and then make a recommendation to the City Council. If the Council would choose to do this, the draft ordinance would appear on the September 7th Planning Commission agenda.

ORDINANCE NO.

AN ORDINANCE AMENDING CHAPTER 159, ZONING REGULATIONS, OF THE CODE OF ORDINANCES OF THE CITY OF CLINTON, IOWA TO ALLOW URBAN CHICKENS IN R-1A, R-1B, R-1C, AND R-2 RESIDENTIAL DISTRICTS AND SET FORTH RULES FOR THE KEEPING OF URBAN CHICKENS

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF CLINTON, IOWA:

Section 1. Purpose. The purpose of this Ordinance is to amend Chapter 159 to set forth urban chickens as an allowable use in R-1a, R-1b, R-1c, and R-2 residential districts and promulgate rules and regulations for the keeping of urban chickens in residential districts.

Section 2. Amendment. The Code of Ordinances of the City of Clinton, Iowa is amended by repealing 159.016(A)(2) and replacing it with the following:

(2) Farming, agriculture and other agricultural uses such as domestic gardening, berry or bush crops, tree crops, flower gardening, nurseries, orchards, apiaries including a greenhouse, but not including a sales room or roadside stand. Commercial sales are not permitted on the premises except on farms as defined in this chapter. The keeping of no more than six (6) chickens is considered an allowed use with a valid permit;

Section 3. Amendment. The Code of Ordinances of the City of Clinton, Iowa is amended by adding Section R to Chapter 159.046 Supplemental Regulations:

(R) *Urban Chickens.* The keeping of no more than six (6) chickens for use on a single-family detached residential property for the benefit of the owners of said property is an allowed use in an R-1 One-Family Residential District and R-2 Two-Family Residential District.

(1) **DEFINITIONS.** For the purpose of this section, the following definitions shall apply.

CHICKEN shall mean a member of the subspecies *Gallus gallus domesticus*, a domesticated fowl.

COOP shall mean a cage, enclosure, or structure used for housing and protecting chickens from weather and predators.

SINGLE FAMILY DWELLING shall mean any building that contains only one dwelling unit used, intended, rented, leased, let or hired to be occupied for residential purposes.

TRACTOR shall mean a cage, structure, or similar enclosure capable of movement used for housing and protecting chickens from weather and predators.

URBAN CHICKEN shall mean a chicken kept on a tract of land pursuant to a permit issued under the terms of this chapter.

(2) **PERMIT FOR URBAN CHICKEN(S) REQUIRED.**

- a. **Permit Required.** No person shall raise, harbor or keep chickens on any land not zoned "A-1 Agricultural" within the City of Clinton without a valid permit issued by the Building and Neighborhood Services Department.
- b. **Requirements.** The Building and Neighborhood Services Department shall issue a permit if the following requirements have been met:
 1. The property for which the permit is sought has passed inspection by Building and Neighborhood Services;
 2. The fee of \$25 has been paid;
 3. There are no nuisance conditions, or unresolved violations of nuisance ordinance, on the property;
 4. The parcel of land for which the permit is sought contains only one (1) Single-Family dwelling which is occupied and used as such by the applicant/permittee;
 5. The applicant has provided written verification of the consent of the owner of the parcel of land for which the permit is sought, if the applicant is not the owner, and is instead tenant, lessee or otherwise authorized to reside at and use the property;
 6. The applicant has provided verification they successfully completed an approved class in raising chickens in an urban, or suburban, setting. The City Clerk/Administrator shall maintain a current list of approved classes.
 7. The application is in compliance with all other conditions and prerequisites set out in this ordinance;
- c. **Terms of Permit.** The permit shall contain, and permittee agree to adhere, to the following:
 1. The permittee shall follow the City Code and state law regarding animal care;
 2. The permittee grants the City the right to inspect the coop and pen with due notice;
 3. The permit is a limited license for the specific activity and person named in the permit, and no vested zoning rights arise from the permit being issued. The permit is limited to the party to whom it is issued, and does not run with the land;
 4. The permit will be permanent unless revoked.
- d. **Suspension or Revocation of Permit.** The permit may be suspended or revoked by Building and Neighborhood Services upon hearing and finding evidence that the permittee has violated the conditions of the permit or the terms of this section; or made a false statement or representation on the application form. All chickens must be removed upon revocation of the permit. The permit fee will not be refunded.

(3) GENERAL REQUIREMENTS

- a. **Non-Commercial Use Only.** Permit holder shall not engage in the breeding of chickens or fertilizer production for commercial purposes.
- b. **Single Family-Residential.** Permits will only be granted for parcels with one single-family residential unit. Permits will not be granted for any parcel with more than one residential unit located upon the parcel.
- c. **Private Restrictions Take Precedence.** Private restrictions on the use of the property shall remain enforceable and shall supersede the terms of this chapter and any permit issued. The private restrictions include, but are not limited to: deed restrictions, condominium restrictions, neighborhood association bylaws, covenants and restrictions, and rental agreements.
- d. **Rental Property.** The owner of the parcel must concur with any application for Urban Chickens. Tenants must obtain the written permission from the landlord/property owner to keep chickens or install a coop.
- e. **Slaughter of Chickens.** Any slaughter of chickens not regulated by federal or state law, or regulated otherwise, shall be performed in a humane manner and shall not be done in open view to any public area or adjacent to property owned by another.
- f. **Dead Chickens.** Other than slaughtered chickens, the owner shall dispose of dead chickens in a sanitary manner. Composting does not qualify as proper disposal.
- g. **Hens Only.** Only female chickens (hens) are allowed. Male chickens (roosters) are not allowed and shall be removed immediately by the owner.
- h. **No More than Six (6) Allowed.** No more than six (6) chickens shall be allowed on any parcel.

(4) SITE REQUIREMENTS

- a. **Enclosures Required.** Chickens must be kept in an enclosure or fenced area at all times. Chickens shall be secured within a coop or chicken tractor during non-daylight hours.
- b. **Location and Separation Distances.**
 1. Coops, including tractors, must be at least ten (10) feet from any property lines
 2. Coops must be at least five (5) feet from the principle use residential structure on the applicant's property.
 3. Coops must be in the rear yard of the property.

(5) ENCLOSURE REQUIREMENTS

- a. Enclosures, coops and tractors must be kept in clean, dry, odor free, neat and sanitary conditions at all times.
- b. Coops and tractors shall be well maintained.
- c. Coops and tractors must provide adequate ventilation, sun and shade.
- d. Coops and tractors shall be constructed, maintained and repaired to prevent entry by rodents, wild birds, predators, dogs and cats.
- e. Coops and tractors shall be built of solid materials such as wood, metal or plastic.
- f. Coops and tractors shall be at least eighteen (18) inches in height
- g. Coops and tractors shall be designed to provide safe and healthy living conditions for the chickens which reside therein, with a minimum of sixteen (16) square feet.

Maximum coop size is ninety-six (96) square feet. Coops must allow a minimum of four (4) square feet per chicken.

- h. Coops and tractors shall be enclosed on all sides and shall have a roof and at least one door. Access doors must be able to be shut and locked at night. Opening windows, vents or doors must be covered with predator and bird proof wire of less than one-inch (1") openings.
- i. Materials used for coops or tractors shall be uniform of each element of the structure that the walls are made of the same material, the roof has the same shingles or covering, and any windows or openings are constructed using the same materials. The use of scrap, waste board, sheet metal or similar materials is prohibited.
- j. Well Drained. Enclosures, coops and tractors must be well drained to prevent accumulations of moisture; accumulations of moisture shall be avoided and removed.
- k. Fences. Fences that serve as enclosures for chickens shall consist of sturdy wire fencing of a type customarily designed for and used to enclose chickens and shall be constructed in a sturdy manner so as to contain the chickens and prevent entry by predators, dogs and cats.

(6) PREDATORS, RODENTS, INSECTS AND PARASITES. The permittee shall take necessary action to reduce the attraction of predators and rodents, and the potential for infestation by insects and parasites. Chickens found to be infested with insects or parasites that may result in unhealthy conditions to human habitation shall be removed by the owner and may be removed by the City at the owner's expense.

(7) CHICKENS AT LARGE AND INJURY CAUSED BY OTHER ANIMALS

- a. At Large Prohibited. Permittee shall not allow their chickens to roam off the parcel of land covered by the permit. Any chicken found off the permitted property shall be considered to be "at-large" and subject to the penalties and provisions of the City of Clinton Code for at-large animals.
- b. Dangerous or Vicious Designation. Injury or death to a chicken that is caused by a dog, cat or other domesticated animal shall not be considered sufficient grounds, in and of itself, to designate the animal as dangerous or vicious pursuant to Chapter 91.
- c. City not Liable. The City of Clinton shall not be liable for injury or death of chickens caused by dogs, cats, or other animals domestic or wild, regardless of whether or not licensed by the City.

(8) FEED AND WATER. Chickens shall be provided with access to feed and clean water at all times. All feed and other items associated with keeping chickens shall be protected in a manner to prevent rodents, wild birds, and predators from coming into contact with them.

(9) STORAGE AND REMOVAL OF FECES AND WASTE.

- a. Feces and Waste to Be Removed. Feces and waste shall be removed from enclosures, coops and tractors at least once per week.

- b. **Storage and Disposal of Feces and Waste.** Feces and waste may be stored on the permittees property. Feces and waste must be stored in a fully enclosed unit with a roof or lid. The storage unit may allow sunlight and movement of air so the materials dry, but must be designed, used and maintained in such a manner as to keep the material fully contained so that it does not blow or otherwise erode onto other properties. When stored, feces and waste must be stored in a manner to not attract flies, rodents or other vermin.
- c. **Use as Fertilizer.** Feces and Waste may be used as fertilizer on the permitted property subject to being turned in to the soil completely immediately upon application and there is no noxious odor.

(10) **NUISANCES.** Any violation of this section that constitutes a health hazard or that interferes with the use or enjoyment of neighboring property is a nuisance, subject to sanctions and abatement as set out in the Code of Ordinances.

Section 4. Repealer. All other sections of this Ordinance in conflict with these provisions shall be repealed.

Section 5. Severability. If any section, provisions or part of this Ordinance shall be adjudged invalid or unconstitutional, such adjudication shall have no effect on the validity of the Ordinance as a whole or any section, provision or part thereof not adjudged invalid or unconstitutional.

Section 6. Effective Date. This Ordinance shall be in full force and effect from and after its adoption and publication as provided by law.

Mark S. Vulich, Mayor

Attest: _____

Patricia Van Loo, City Clerk

ADOPTED: