



To: City Council Infrastructure Committee
From: Bruce Jacobs
Subject: WPCF Odor Control Upgrades
Date: June 21, 2016

Background:

The Water Pollution Control Facility (WPCF) is a significant source of odorous gasses. Several processes have been added to the facility to treat odorous air to reduce odors to nearby residents, and to mitigate the onsite dangers of hydrogen sulfide. The most significant portion of the odorous air treatment process occurs within two onsite Bioscrubbers, originally constructed in 1998. Loadings to the Bioscrubbers have increased since their initial construction, while removal efficiencies have decreased.

An evaluation of the existing odor control equipment at the WPCF was performed by CH2M HILL Engineers, Inc. in the fall of 2014. A final report was received documenting the onsite odor sources and treatment processes, providing recommendations to optimize existing treatment processes, and recommendations for additional odor control equipment. A design report for the project was completed in fall of 2015.

The goal of the project is to repair elements of, and provide increased capacity to, the odor control system at the WPCF.

Project Description:

The project consists of odor control improvements for several areas of the Water Pollution Control Facility. This will include the replacement of the lava rock media in the existing Bioscrubbers, repair of structural deficiencies within the existing Bioscrubber vessels, replacement or repair of existing odor control ductwork and fans, re-purposing of existing wet chemical scrubber, and the installation of two new high rate Biotowers.

Update:

The update will consist of a PowerPoint presentation describing the project that will be filing in the near future.

Requested time on agenda: 10 min

Water Pollution Control Facility Odor Control Upgrades

CIP Project 615233

Project Objectives

- Increase odor control capacity of existing bioscrubbers with added biotrickling filter
- Replace odor control capacity for Solids Handling Building with biotrickling filter (lower operating cost than existing wet chemical scrubber)
- Sludge storage tank (if in service) ventilation routed to wet chemical scrubber.

Project Scope

- Odor sources treated in bioscrubbers and biotrickling filter No. 1:
 - Roughing Filter exhaust
 - Primary clarifier weir exhaust
 - Anaerobic pre-treatment exhaust
 - Dissolved Air Flotation Thickeners (DAFTs)
 - Gravity Belt Thickener Building
- Odor sources treated in biotrickling filter No. 2
 - Solids Dewatering Building

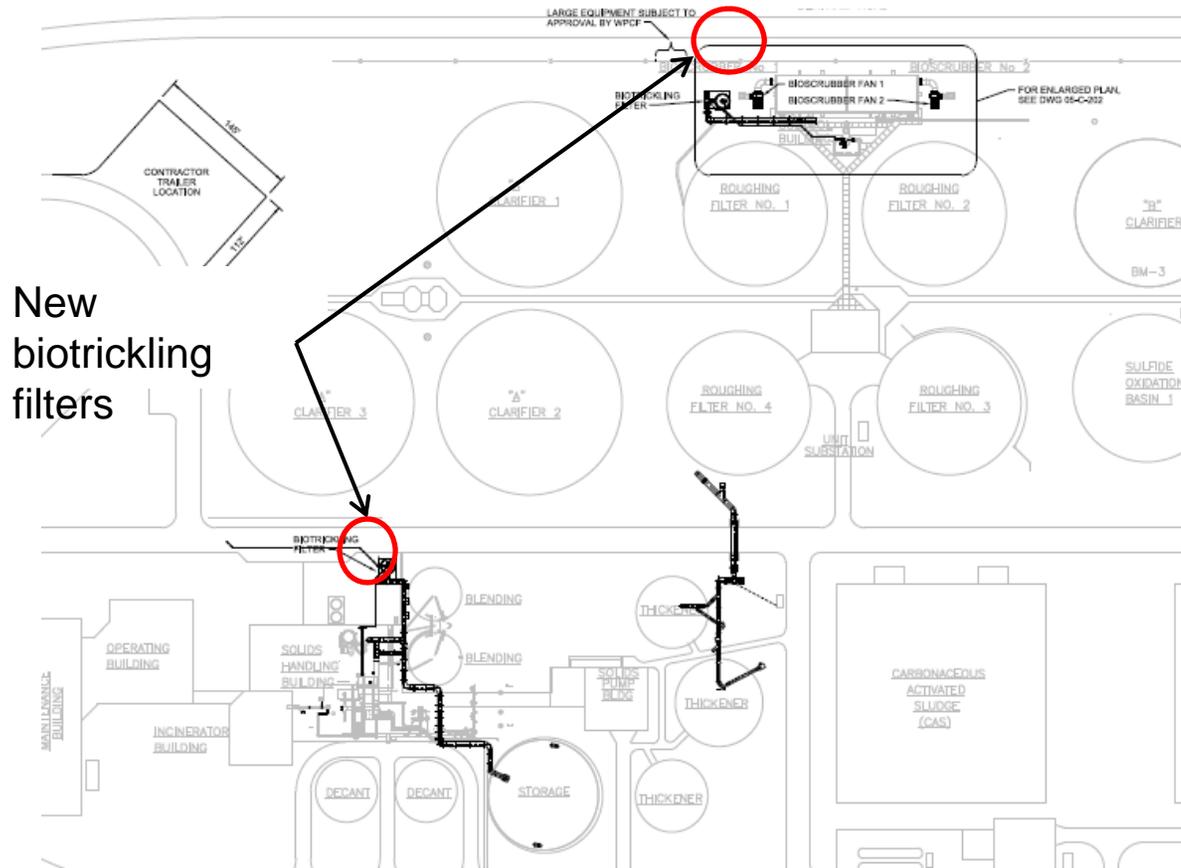
Project Scope

- Existing Bioscrubber Improvements
 - Media Replacement
 - Fan Replacement
 - Irrigation System
 - New Biotrickling Filter No. 1
 - DAFT ventilation modifications
- Existing DAFT exhaust ductwork and fan to be replaced.
- Sludge Storage Tank Ventilation to existing Wet Chemical Scrubber
- New Ductwork

Budget

\$7.1 million distributed through
FY16, FY17 and FY18 budgets.

Site Plan

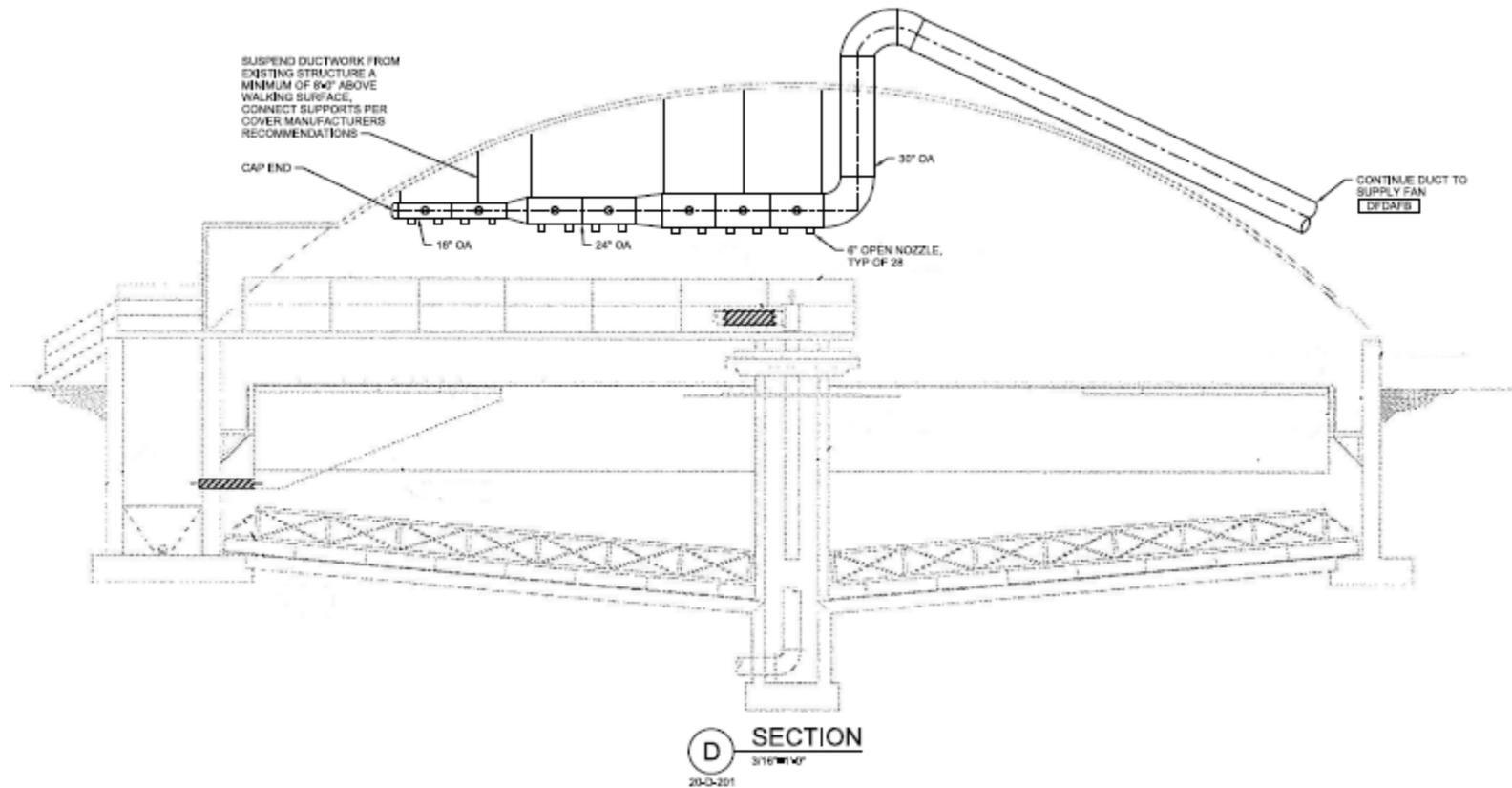


New
biotrickling
filters

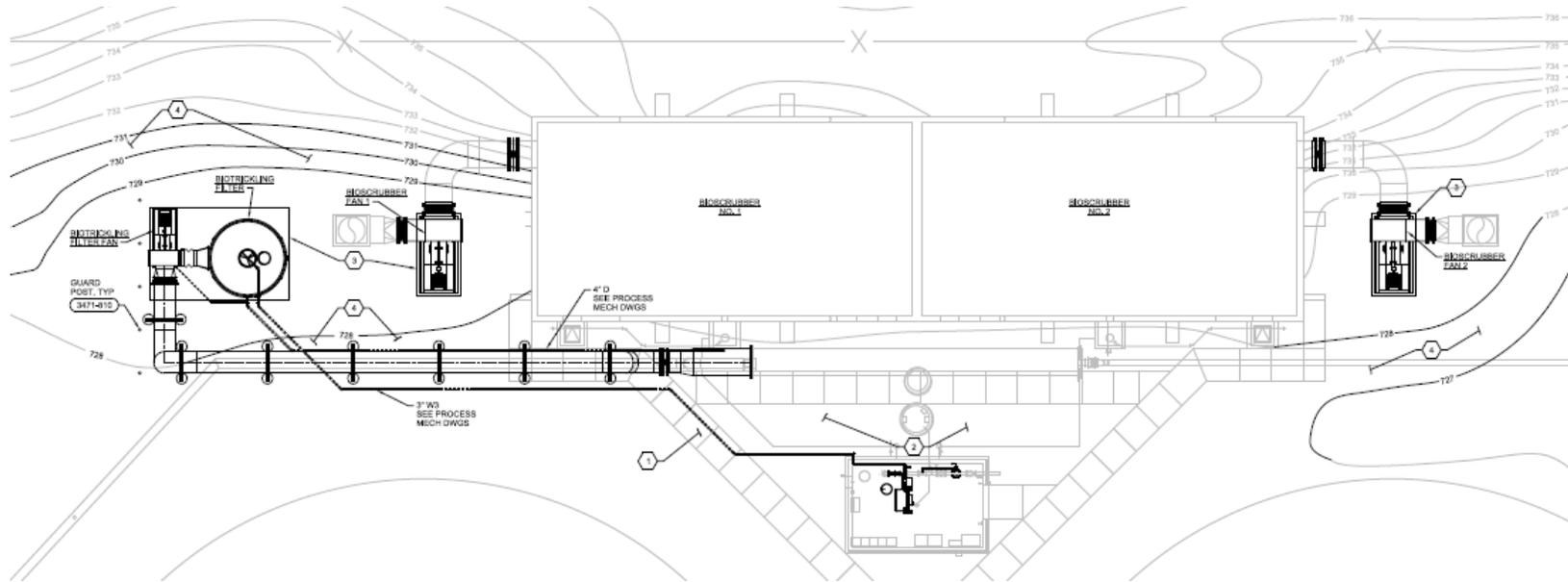


CEDAR RAPIDS
City of Five Seasons®

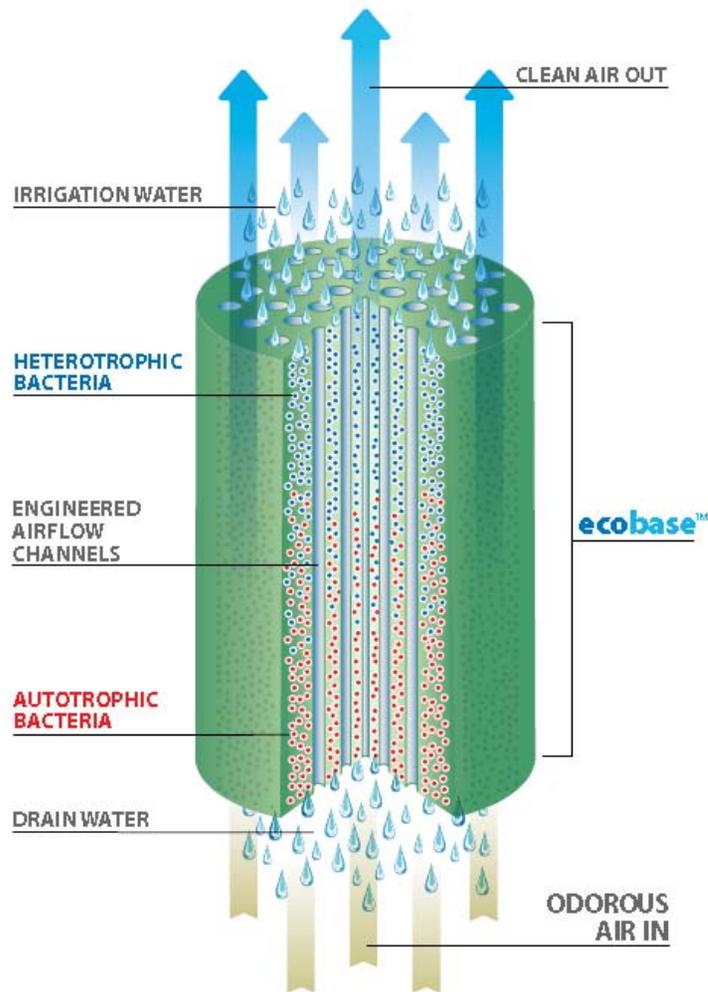
DAFT Improvement



BioScrubber Area



Biotrickling Filter Operating Principle



99% hydrogen sulfide removal
(or less than 0.5 ppm by
volume, whichever is greater)

85% or more odor removal (or
1:3000 dilution to threshold,
whichever is greater)

Biotrickling filters

47 feet tall

15 feet in diameter

25,000 cfm airflow

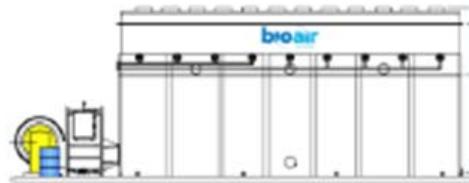


Existing Installations



Utility:	JEA Buckman
Odor Source:	Biosolids Disposal Building
Location:	Jacksonville, FL
Equipment:	EcoFilter EF1242
Airflow:	15,500 cfm / 26,335 m ³ /hr
H₂S:	150 ppmv
Case Study	Click Here

Projects Under Construction



Utility	Green Bay WWTP
Location:	Green Bay, WI, USA
Equipment:	EcoPure EP10323/EP8323
Airflow:	19,000/14,400 cfm
Carbon Volume:	950/758 ft ³
Design Inlet H₂S:	25-50 ppmv
H₂S Removal Efficiency:	>99% Overall > 99.5% (>90% odor)
Expected Delivery:	September 2016

Airflow: 7,100 cfm
H₂S: 30 ppm
Start-up: 2013



at WWTP – Headworks Area odor control system



Customer:	Delaware County Regional Water Quality Control Authority
Odor Source:	WWTP Headworks
Location:	Chester, PA
Equipment:	EcoFilter EF1262
Airflow:	11,500 cfm / 1,954 m ³ /hr
H₂S:	49 ppmv

Upcoming Utilities Department Projects Anticipated To Have Plans
and Specifications Filed – July, August, September
Report to Council Infrastructure Committee on 6-21-2016

Filing Plans and Specifications

Water and WPC Plant Projects

Filing September 13 – WPCF Sludge Screen Replacement (615212). The existing primary sludge screen at the WPCF is undersized for some loading conditions, lacks redundancy, and has reached the end of its expected life. The project will include the installation of a new screen and associated appurtenances. The existing screen will be left in place to serve as a backup unit to the new screen. The Engineers opinion of probable cost was \$800,000 at the preliminary design stage.

Water Main Projects

The following water main work has been planned in conjunction with Paving for Progress projects or other Public Works projects. Bid Dates:

July 13 – 3012115 / 2014093 Northwood Dr NE from South of Brookland D to 42nd Street NE Ph-1, (PfP)
Water Main Replacement Construction Budget \$305,000.

July 19 – 301240 / 2011022 1st Ave East from 27th St to 34th St (DOT Letting Ph-3 Roadway Improvements)
Water Main Replacement Construction Budget \$180,000

Sept. 28 – 3012155 / 2016041 3rd Ave SW from 6th Street SW to 1st Street SW (PfP)
Water Main Replacement Construction Budget \$191,000

Upcoming Public Hearings

September 27 – WPCF Sludge Screen Replacement



To: City Council Infrastructure Committee
From: Steve Hershner
Subject: Chapter 13 Ordinance Update
Date: June 16, 2016

Background:

Chapter 13 of the Municipal Code for City of Cedar Rapids governs the use of Wastewater Facilities. The Chapter explains basis of sewer use charges, prohibited discharges, connection requirements and details on other requirements that must be met for use of the sanitary sewer system.

Project Description:

Other than annual rate adjustments, the balance of Chapter 13 (Wastewater Facilities) has not been updated for several years. In this update to Chapter 13 the titles and operation of City government have been changed to reflect current City organization terms for leadership. This update will also update key parts of the Industrial Pretreatment section to explain Local Limits regulation required by EPA under the Clean Water Act.

Update:

City Staff have been working on the updates for several months. The changes proposed have been reviewed by the City Attorney's office and key industrial stakeholders. The updated Chapter 13 Ordinance is now ready for Infrastructure Committee review and comment.

Requested time on agenda: 5 min

CHAPTER 13 WASTEWATER FACILITIES

[13.01 DEFINITIONS.](#)

[13.02 UTILITIES DIRECTOR.](#)

[13.03 \(Repealed by 68-93\).](#)

[13.04 SEWER USE REQUIREMENTS.](#)

[13.05 ON-SITE WASTEWATER TREATMENT AND DISPOSAL SYSTEMS \(ADOPTION OF LINN COUNTY ORDINANCE\).](#)

[13.06 SEWER CONNECTIONS.](#)

[13.07 USE OF PUBLIC SEWERS.](#)

[13.08 PERMITS.](#)

[13.09 SAMPLING MANHOLE.](#)

[13.10 FLOW MEASUREMENT.](#)

[13.11 TESTING WASTES.](#)

[13.12 POWERS AND AUTHORITY FOR INSPECTION.](#)

[13.13 WATER POLLUTION CONTROL FACILITIES FINANCING.](#)

[13.14 USER GROUP.](#)

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[13.16 MONITORING.](#)

[13.17 SERVICE CHARGES.](#)

[13.18 BILLING; PAYMENT; COLLECTION.](#)

[13.19 ENFORCEMENT.](#)

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13.01 DEFINITIONS.

Unless the context specifically indicates otherwise, the meaning of terms used in this chapter shall be as follows:

(a) **Federal Government.**

1. The Act: The Federal Water Pollution Control Act, also known as the Clean Water Act, as amended, 33 U.S.C. 1251 et seq.
2. Administrator. The Administrator of the U.S. Environmental Protection Agency.
3. Federal Grant. The U.S. government participation in the financing of the construction of treatment works as provided for by Title II—Grants for Construction of Treatment Works of the Act and implementing regulations.
4. CFR—Code of Federal Regulations.

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5. USC—United States Code.
- (b) **State Government.**
1. State Act: Chapter 455B of the Code of Iowa as the same now exists or may hereafter be amended.
 2. Director. The Director of the Iowa Department of Natural Resources.
- (c) **Local Government.**
1. Chapter: [Chapter 13](#) of the Municipal Code of the City of Cedar Rapids, Iowa.
 2. City. The City of Cedar Rapids, Iowa and/or its authorized agents.
 3. Utilities Director. The Utilities Director of the City of Cedar Rapids, Iowa.
- (d) **Person.** Any and all persons, natural or artificial, including any individual, firm, company, municipal or private corporation, association, society, institution, enterprise, political subdivision, governmental agency, trust estate or other legal entity or their legal representatives, agents or assigns.
- (e) **National Pollutant Discharge Elimination System or NPDES Permit.** Any permit or equivalent document or requirements issued by the Administrator, or, where appropriate, by the Director to regulate the discharge or pollutants pursuant to Section 1402 of the Act (33 USC 1342).
- (f) **Clarification of Wordage.** "Shall" imposes a duty; "must" states a requirement; "may" confers a power.
- (g) **Wastewater and Its Characteristics.**
1. "Wastewater" shall mean the spent water of a community. It may be liquid or a combination of liquid and water-carried wastes from residences, commercial buildings, industrial plants, and institutions, It may contain ground, surface or storm water, if approved by the Utilities Director or authorized representative.
 2. "Sewage" is used interchangeably with "wastewater."
 3. "Effluent criteria or discharge limits" are defined in any applicable "NPDES Permit."
 4. "Water quality standards" are defined in the Iowa Department of Natural Resources Rules.
 5. Unpolluted water: Water of quality equal or better than the applicable effluent criteria in effect under the State or Federal Act or water that would not cause violation of receiving water quality standards under the applicable act and would not be benefited by discharge to the sanitary sewers and wastewater treatment facilities provided.
 6. Milligrams per liter: A unit of the concentration of water or wastewater constituent. It is 0.001 g of the constituent in 1,000 ml of water.
 7. "TSS" denotes "total suspended solids" and shall mean solids that either float on the surface of, or are in suspension in water, sewage or industrial waste, and which are removable by a laboratory filtration device. Quantitative determination of total suspended solids shall be made in accordance with procedures set forth in "Standard Methods or other approved method."
 8. "CBOD" denotes "Carbonaceous Biochemical Oxygen Demand" and shall mean the quantity of oxygen utilized in the biochemical oxidation of organic matter under standard laboratory procedure in 5 days at 20 degrees C., expressed in milligrams per liter. Quantitative determination of carbonaceous biochemical oxygen demand shall be made in accordance with procedures set forth in "Standard Methods or other approved method".
 9. "TKN" denotes "Total Kjeldahl Nitrogen," the concentration of ammonia and organic nitrogen expressed in milligrams per liter. Quantitative determination of total kjeldahl

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nitrogen shall be made in accordance with procedures set forth in "Standard Methods or other approved method".

10. "pH": The logarithm (base 10) of the reciprocal of the hydrogen-ion concentration expressed by one of the procedures outlined in "Standard Methods or other approved method."
 11. Standard Methods: The examination and analytical procedures set forth in the most recent edition of "Standard Methods for the Examination of Water and Wastewater" published jointly by the American Public Health Association, the American Water Works Association and the Water Environment Federation.
 12. Garbage: Solid animal and vegetable wastes from the domestic and commercial preparation, cooking, and dispensing of food, and from the handling, storage and sale of produce.
 13. Properly shredded garbage: The wastes from the preparation, cooking, and dispensing of food that have been shredded to such a degree that all particles will be carried freely under the flow conditions normally prevailing in public sewers, with no particle greater than one-half inch (1.27 centimeters) in any dimension.
 14. Slug: Any discharge of water, sewage or industrial waste which in concentration of any given constituent or in quantity of flow exceeds for any period of duration more than five times the average 24-hour concentration or flows during normal operation and may adversely affect the collection system or performance of the wastewater treatment facilities.
 15. Sanitary wastes: Any solid, liquid or gaseous substance discharged from residences, business buildings, institutions, commercial and industrial establishments contributed by reason of human occupancy.
 16. "Industrial waste" or "process waste" shall mean any solid, liquid or gaseous substance discharged, permitted to flow or escaping from any industrial, manufacturing, commercial or business establishment or process or from the development, recovery or processing of any natural resource as distinct from sanitary wastes.
 17. Pollutant of Concern (POC): Any pollutant that might reasonably be expected to be discharged to the POTW in sufficient amounts to pass through or interfere with the works, contaminate sludge, cause problems in its collection system, or jeopardize its workers.
 18. Maximum Allowable Headworks Loading (MAHL): The estimated maximum loading of a pollutant that can be received at a POTW's headworks without causing pass through or interference. The most protective (lowest) of the AHLs estimated for a pollutant.
 19. Maximum Allowable Industrial Loading (MAIL): The estimated maximum loading of a pollutant that can be received at a POTW's headworks from all permitted industrial users and other controlled sources without causing pass through or interference.
- (h) **Sewer Types and Appurtenances.**
1. "Sewer" shall mean a pipe or conduit for conveying sewage or any other waste liquids, including storm, surface and groundwater drainage.
 2. "Public sewer" shall mean a sewer owned by and subject to the jurisdiction of the city. It shall also include sewers within or outside the city boundaries that serve one or more persons and ultimately discharge into the city sewer system, even though these sewers may not have been constructed with city funds.
 3. "Sanitary sewer" shall mean a public sewer that conveys wastewater, and into which storm, surface, ground, and unpolluted waters are not intentionally admitted, unless expressly permitted by the Utilities Director or authorized representative.

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4. "Storm sewer" shall mean a public sewer that carries storm, surface and groundwater drainage but excludes wastewater other than unpolluted water.
 5. "Building lateral" shall mean the extension from the building sewer, beginning 5 feet (1.5 meters) outside the inner face of the building wall and extending to the public sewer or other place of disposal.
 6. "Building sewer" shall mean that part of the lowest piping of a drainage system which receives the discharge from soil, waste, and other drainage pipes inside the walls of the building and conveys it to the building lateral.
- (i) **Treatment.**
1. "Pretreatment" shall mean the treatment of wastewaters from sources before introduction into the public sewer.
 2. "Water pollution control plant" shall mean a publicly owned arrangement of devices and structures for treating wastewater. Sometimes used as synonymous with "wastewater treatment plant".
 3. "Water pollution control facilities," "wastewater system," or "Publicly Owned Treatment Works (POTW)" shall mean the publicly owned structures, equipment, and processes required to collect, convey, and treat wastewaters.
- (j) **Watercourse and Connections.**
1. "Watercourse" shall mean a channel in which a flow of water occurs, either continuously or intermittently.
 2. "Natural outlet" shall mean any outlet into a watercourse, pond, ditch, lake, or other body or surface or groundwater.
- (k) **User Types.**
1. Residential user: Any user of the water pollution control facilities where permanent residency is established and only sanitary wastes are discharged.
 2. Commercial user: Any user of the water pollution control facilities where business or commercial trade is conducted and not classified as an industrial user.
 3. Industrial user: Any nonresidential user of a publicly owned treatment works which discharges process wastes to the POTW.
 4. Any user of a publicly owned treatment works which discharges wastewater to the treatment works which contains toxic pollutants or poisonous solids, liquids or gases in sufficient quantity either singly or by interaction with other wastes, to contaminate the sludge of any municipal system or to injure or to pass through or interfere with any sewage treatment process, or which constitutes a hazard to humans or animals, creates a public nuisance, or creates any hazard in or has an adverse effect on the waters receiving any discharge from the treatment works.
- (l) **Sampling Manhole.** "Sampling manhole" shall mean a structure located on a building lateral for the purpose of providing access to sample or measure representative wastewater discharges.
- (m) **User Charges.**
1. "Wastewater service charge" shall be the charge per quarter or month levied on all users of the water pollution control facilities.
 2. "Pretreatment Program Costs" shall mean the amount expended to administer the pretreatment program.
 3. "Operation and Maintenance" (O&M) shall mean all annual expenditures, including replacement costs, for materials, labor utilities, and other items which are necessary for

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managing and maintaining the wastewater system to achieve the design capacity and performance.

4. "Replacement" shall mean expenditures for obtaining and installing equipment, accessories, or appurtenances which are necessary during the service life of the water pollution control plant to maintain the capacity and performance for which such plant was designed and constructed.
 5. "Useful life" shall mean the estimated period during which the water pollution control facilities will be operated and shall be 30 years from the date of start-up of any water pollution control facilities constructed with a federal grant.
- (n) **Authorized Representative of Industrial User.** An authorized representative of an industrial user may be: (1) a principal executive officer of at least the level of vice-president, if the industrial user is a corporation; (2) a general partner or proprietor if the industrial user is a partnership or proprietorship, respectively; (3) a duly authorized representative of the individual designated above if such representative is responsible for the overall operation of the facilities from which the indirect discharge originates.
 - (o) **Categorical Standards.** National Categorical Pretreatment Standards or Pretreatment Standard.
 - (p) **Grab Sample.** A sample which is taken from a waste stream on a one-time basis with no regard to the flow in the waste stream and without consideration of time.
 - (q) **Pass Through or Interference.** The term pass through means a discharge which exits the POTW into water of the United States in quantities or concentrations which, alone or in conjunction with the discharges from other sources, causes a violation of any requirement of the POTW's NPDES permit, and interference means the inhibition or disruption of the treatment processes or operations which contributes to a violation of any requirement of the city's NPDES permit. The term includes prevention of sewage sludge use or disposal by the POTW in accordance with Section 405 of the Act, (33 USC 1345) or any criteria, guidelines, or regulations developed pursuant to the Solid Waste Disposal Act (SWDA), the Clean Air Act, the Toxic Substances Control Act, or more stringent state criteria, (including those contained in any state sludge management plan prepared pursuant to Title IV of SWDA) applicable to the method of disposal or use employed by the POTW.
 - (r) **National Categorical Pretreatment Standard or Pretreatment Standard.** Any regulation containing pollutant discharge limits published by the EPA in accordance with Section 307(b) and (c) of the Act (33 USC 1347) which applies to a specific category of industrial users.
 - (s) **National Prohibitive Discharge Standard or Prohibitive Discharge Standard.** Any regulation developed under the authority of section 307(b) of the Act and 40 CFR, Section 403.5.
 - (t) **New Source.** Any source that commences construction after the publication of the regulations prescribed in Section 307(c) (33 USC 1317) Categorical Pretreatment Standard will be classified as a new source and must comply with the regulations. When a new standard is promulgated, a new source means any source that commences construction after the date of promulgation of the standard.
 - (u) **Pretreatment Requirements.** Any substantive or procedural requirement related to pretreatment, other than a National Pretreatment Standard imposed on an industrial user.
 - (v) **Standard Industrial Classification (SIC).** A classification pursuant to the Standard Industrial Classification Manual issued by the Executive Office of the President, Office of Management and Budget, 1972.
 - (w) **Toxic Pollutant.** Any pollutant or combination of pollutants listed as toxic in regulations promulgated by the Administrator of the Environmental Protection Agency under the provision of CWA 307(a) or other Acts.

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- (x) **SWDA.** Solid Waste Disposal Act, 42 USC 6901, et seq.
- (y) **Environmental Violation.** An environmental violation is a violation of Chapter 455B or a violation of a standard established by the city in consultation with the Department of Natural Resources, or both. The discharge of airborne residue from grain, created by the handling, drying, or storing of grain by a person, shall not be an environmental violation, unless the person is engaged in industrial production or manufacturing of grain products. The discharge of airborne residue from grain, created by the handling, drying or storing of grain by a person engaged in industrial production or manufacturing of grain products shall not be an environmental violation, if the discharge occurs from September 15 to January 15.

13.02 UTILITIES DIRECTOR.

- (a) **Appointment and Term.** The Utilities Director shall be appointed by the City Manager and shall hold office as provided in [Section 5.19](#) of this code.
- (b) **Duties.** The Utilities Director shall have complete charge of the operation of the Water Pollution Control Facilities under the general supervision of the City Manager and subject to such rules and regulations as the Council may prescribe. He shall have direct charge of all employees of the Water Pollution Control Facilities.
- (c) **Accounts and Reports.** The Utilities Director shall keep an accurate and complete record of the transactions of the Water Pollution Control Facilities, including all receipts and disbursements. He shall cooperate with the City of Cedar Rapids City Services Director in the preparation of an accurate list of all general and special rentals to be collected as hereinafter provided.
- (d) **Separate Sewer Fund.** All moneys received by the City Treasurer from any source on account of the Water Pollution Control Facilities shall be kept in a separate fund and shall be paid out by him only upon legal warrants of the city.

13.03 (Repealed by 68-93).

13.04 SEWER USE REQUIREMENTS.

- (a) **Prohibited Discharge of Wastewater.** It shall be unlawful to discharge to any natural outlet within the City of Cedar Rapids or in any area under the jurisdiction of said city, any wastewater, except where suitable treatment has been provided in accordance with other provisions of this chapter.
- (b) **Connection Requirements.** Every structure wherein persons reside, congregate or are employed which abuts a street or alley in which there is a public sanitary sewer available or which is within 250 feet of an existing available sanitary sewer from the nearest point of the lot line, shall be connected to the sewer by the owner of the premises in the most direct manner and with a separate connection for each structure. Structures not covered under this requirement shall be governed by [Section 13.05](#) (Private Sewage Disposal Systems).
- (c) **Sewer Connection Charge.** In those areas of the city where the City has previously constructed sanitary sewers at no expense to abutting property owners, a maximum charge shall be made of \$35.00 per lineal foot to that portion of property served by the connection. Payment for such services shall be made to the City Treasurer at the time a permit is issued to connect to the sanitary sewer in the amount to be determined by the City Engineer or his authorized representative. The connection shall not be made until the payment has been made to the City Treasurer.

In those areas of the city where a private developer has previously constructed sanitary sewers at no expense to either the city or abutting property owners, and said sewer has been accepted as a city facility, a connection charge as set out in the preceding paragraph shall be required. The city shall collect said charge as required in the aforementioned paragraph. Said charge will, on an annual basis, be reimbursed to the developer for the sewer installation. The City shall have no liability for

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any failure to collect and turn over any of said charges and any litigation against a property owner to collect them shall be brought by the private developer at his own expense. This reimbursement practice shall terminate five years from the date of the final acceptance of the sewer by the City. Connection charges collected after the five-year period shall remain with the City.

(d) **Minimum Lot Size.**

1. No tract of land within the city which is served by public sanitary sewer facilities shall be used for residence construction unless said tract conforms to the area and width requirements of the zoning district in which the property is located. If a lot has less area or width than required and was of record on May 24, 1955, that lot or tract may be occupied by a use permitted in the zoning district.
2. After August 16, 1954 no tract of land within the city which is not served by public sanitary sewer facilities shall be used for residence construction unless said tract shall have adequate area as determined by the Linn County Health Department for the installation of a private waste disposal system. In no case, however, shall said tract contain less than 15,000 square feet and have less than 75 feet of frontage and less than 130 feet of depth.
3. In no event shall the minimum area or the minimum frontage of any tract of land referred to in this section be less than the minimum requirements provided for the zoning district in which said tract is located.
4. For the purpose of this section the words "tract of land" shall mean a lot which is part of a subdivision, the plat of which is recorded in the office of the County Recorder, or a parcel of land, the deed of which is recorded in the office of the County Recorder.
5. If an owner of a tract of land is aggrieved by the provisions of this section, appeal may be had to the Board of Adjustment which shall have the power to vary the requirements of this section to avoid practical difficulties or unnecessary hardship.

(15-94, 19-04, 21-05, 17-06, 017-07, 005-08, 014-09, 017-10)

13.05 ON-SITE WASTEWATER TREATMENT AND DISPOSAL SYSTEMS (ADOPTION OF LINN COUNTY ORDINANCE).

The provisions of [Chapter 24](#) of the Linn County Code of Ordinances and Section 69.1, Title 561 of Iowa Administrative Code, as amended from time to time, are hereby adopted in their entirety and incorporated herein by reference as though fully set forth.

(010-12)

13.06 SEWER CONNECTIONS.

- (a) No unauthorized person shall uncover, make any connection with, or opening into; use; alter; or disturb any public sewer or appurtenances thereof without first obtaining a written permit from the city.
- (b) Any connection to a public sewer within the jurisdiction of the city shall be subject to the rules and regulations of the city and to the charges, rates, rents, fees and assessments which are or may be established by the city as being applicable, and shall be made under permits issued by the city.
- (c) The construction of sewers which are to be connected to and become a part of the public sewer system shall be done in conformance with the city's specifications. Plans shall be submitted to and approved by the City Engineer, and a letter requesting permission to build shall be filed with and approved by the city council prior to commencement of work. Construction of said sewers shall be conducted in the presence of the City Engineer or his authorized representative. A two year maintenance bond shall be placed on file upon completion and prior to acceptance of the work.

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- (d) No person shall tap any public sewer at any other place than at the regular junction "tee" or "wye" built into the sewer, without specific authority from the City Engineer, nor shall any connection be made with the public sewer except in the presence of the City Engineer or his authorized representative. Connections shall be made in accordance with the specifications of the city.
- (e) No connections shall be made to a public sewer for any facility located outside of the corporate limits of the city unless permission is specifically granted by resolution of the City Council.
- (f) The construction of and use of combined sewers is hereby prohibited.
- (g) When any building or structure is razed or moved, and the sewer service is discontinued, all sewer connections shall be properly stopped or cut off at the curb line, according to the specifications of the city and as approved by an inspector of the city.
- (h) Grease, oil or sand interceptors shall be provided upstream from the connection to a public sewer when determined by the director they are necessary for the proper handling of liquid wastes containing grease, any inflammable wastes, sand or other harmful ingredients; except that such interceptors shall not be required for private living quarters or dwelling units.
- (i) With the filing of the application for a building permit as required by [Chapter 33](#), the applicant shall provide sufficient information for the director to determine whether an interceptor is required. A permit shall not be issued until such time as the Director makes the determination.

All interceptors shall be of a type and capacity, and installed as required by the City Plumbing Code.

13.07 USE OF PUBLIC SEWERS.

- (a) **Purpose and Policy.** This chapter sets forth uniform requirements for direct and indirect contributors into the wastewater collection and treatment system for the city and enables the city to comply with all applicable state and federal laws required by the Clean Water Act of 1977 and the General Pretreatment Regulations (40 CFR, Part 403).

The objectives of this chapter are:

1. To prohibit the introduction of pollutants into the municipal wastewater system which will interfere with the operation of the system or contaminate the resulting sludge; (38-89)
2. To prohibit the introduction of pollutants into the municipal wastewater system which will pass through the system inadequately treated, into receiving waters or the atmosphere or otherwise be incompatible with the system; (38-89)
3. To improve the opportunity to recycle and reclaim wastewaters and sludge from the system; and
4. To provide for equitable distribution of the cost of the municipal wastewater system.

This chapter provides for the regulation of direct and indirect contributors to the municipal wastewater system through the issuance of permits to certain nondomestic users and through enforcement of general requirements for the other users, authorizes monitoring and enforcement activities, requires user reporting, assumes that all customer's capacity allocations are based on actual needs and available plant capacities, and provides for the setting of fees for the equitable distribution of costs resulting from the program established herein.

This chapter shall apply to the city and to persons outside the city who are, by contract or agreement with the city, users of the city POTW. Except as otherwise provided herein, the Utilities Director or authorized representative of the city POTW shall administer, implement and enforce the provisions of this chapter.

- (b) **Discharge Prohibited.** No person shall discharge or cause to be discharged any of the following described substances, materials, waters and/or wastes into the designated sewers:
 1. **Public Sewers.**

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- A. Pollutants which create a fire or explosion hazard in the POTW including, but not limited to, waste streams with a closed cup flashpoint of less than 140 degrees Fahrenheit or 60 degrees Centigrade using the test methods specified in 40 CFR 261.21, for example: gasoline, benzene, naphtha, fuel oil, or other inflammable or explosive liquid, solid or gas. (20-92)
- B. Any waters or wastes containing toxic or poisonous solids, liquids, or gases in sufficient quantity, either singly or by interaction with other wastes, to deteriorate any public sewer, injure or interfere with any sewage treatment process, constitute a hazard to humans or animals, create a public nuisance or create any hazard in the receiving waters of the sewage treatment plant, including but not limited to the following list in maximum concentrations established by Categorical Pretreatment Standards, or an industrial wastewater discharge permit, or Table 4-2 of the City of Cedar Rapids Industrial Pretreatment Program adopted October 1983:

Arsenic

Beryllium

Cadmium

Chromium

Copper

Cyanide

Lead

Mercury

Molybdenum

Nickel

Selenium

Silver

Zinc

Identifiable chlorinated hydrocarbons

- C. Any waters or wastes having a pH lower than 5.5 for greater than 15 consecutive minutes, or having any other corrosive property capable of causing damage or hazard to the public sewer or structures, equipment, and personnel of the Water Pollution Control Facilities, or operation thereof.
- D. Solid or viscous substances in quantities or of such size capable of causing obstruction to the flow in sewers, or other interference with the proper operation of the Water Pollution Control Plant such as, but not limited to, grease, paper products, sand, mud, plastics, garbage whole or ground by garbage grinders.
- E. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause workers acute health and safety problems.

(20-92)

- 2. **Storm Sewers.** No wastewaters except unpolluted waters and wastewater allowed by a NPDES permit shall be discharged to storm sewers. Storm waters and other unpolluted water and wastewater allowed by a NPDES permit shall be discharged into such sewers as are

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specifically designed and designated as storm sewers or to a natural outlet approved by the city. [CHAPTER 72 STORMWATER MANAGEMENT ORDINANCE](#)

3. **Sanitary Sewers.** No storm waters, surface water, groundwater, roof runoff, subsurface drainage, cooling water, or unpolluted water shall be discharged to any sanitary sewer. Where a storm sewer or natural outlet is not available, such unpolluted water may be discharged to a sanitary sewer only after written approval of the Utilities Director or authorized representative. No person constructing a sanitary sewer, building, or house connection, shall leave same open, unsealed or incomplete in such a fashion to permit storm, surface or subsurface water to enter the sanitary sewer.

4. **Illegal Connections.** Any connections made before or after the effective date of this chapter, which discharge prohibited materials, shall be considered illegal and shall be subject to immediate removal by owner of the premise so connected and at such owner's expense.

Should the owner of such an illegally connected premise fail to remove the connection within 60 days, the city may cause the connection to be removed and the cost shall be billed to the owner of the premises.

5. **Accidental Discharges.** The accidental discharge of any prohibited liquid, gaseous or solid material into any public sewer or natural outlet, either directly or indirectly, shall be reported to the Utilities Director or authorized representative immediately by the person responsible for the discharge.

Penalties for accidental discharges shall be reviewed by the Utilities Director or authorized representative on a case-by-case basis. It shall be understood that the person responsible for the discharge shall not be relieved of its responsibilities and shall be liable for any expense, loss or damage occasioned by the city by reason of such accidental discharge.

(c) **Discharge Prohibited Except by Permit.** No person shall discharge or cause to be discharged, the following described substances, materials, waters, or wastes without a permit issued pursuant to [Section 13.08](#)

1. Any waters or wastes excluding sanitary wastes having:
 - A. 5-day CBOD greater than 42 lbs/day or,
 - B. Total Suspended solids greater than 52 lbs/day or,
 - C. Total Kjeldahl nitrogen greater than lbs/day, or,
 - D. Average daily flow greater than 25,000 gallons/day (excluding sanitary wastes).
2. Any liquid or vapor having a temperature higher than 120 degrees Fahrenheit (48 degrees Centigrade).
3. Any water or wastes which contain grease, fats, wax, or oil, whether emulsified or not, in excess of 100 mg/l, or other substances that will solidify or become discernibly viscous at temperatures between 32 degrees and 150 degrees Fahrenheit (0 degrees to 65 degrees Centigrade).
4. Any garbage that has not been properly shredded. The installation and operation of any garbage grinder equipped with a motor of $\frac{3}{4}$ horsepower (0.75 hp metric) or greater shall be subject to the review and approval of the Director.
5. Any water or wastes containing non-edible type oil or grease such as petroleum, mineral oil or grease in amounts that could cause interference or pass-through.
6. Any water or wastes that contain more than 0.2 parts per million by weight of hydrogen sulfide, or more than 2 parts per million by weight of dissolved sulfides.
7. Any water or wastes that contain phenols or other taste and odor producing substances, in excess of 0.5 parts per million by weight.

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8. Any water or wastes, acid or alkaline in reaction, and having corrosive properties capable of causing damage or hazard to structures, equipment and personnel of the city.
 9. Any water or wastes containing any of the constituents listed in subsection [13.07\(b\)1.B](#), or any other objectionable or toxic substances.
 10. Any noxious or malodorous gas or substances, which either singly or by interaction with other wastes, is capable of creating a public nuisance or hazard to life or of preventing entry into sewers for their maintenance and repair.
 11. Any radioactive wastes or isotopes of such half-life or concentration as may exceed limits established by the Utilities Director or authorized representative in compliance with applicable state and federal regulations.
 12. Materials which exert or cause:
 - Unusual concentrations of inert suspended solids such as, but not limited to, diatomaceous earth, fuller's earth, lime slurries, and lime residues or of dissolved solids (such as, but not limited to, sodium chloride and sodium sulfate).
 - Excessive discolorations such as, but not limited to, dye wastes and vegetable tanning solutions.
 13. Any wastes, which in the opinion of the Utilities Director or authorized representative, may harm either the public sewers, Water Pollution Control Plant, treatment process, equipment, or have an adverse effect on the receiving stream, or can otherwise endanger life, limb, public property, or constitute a nuisance. In forming his opinion as to the acceptability of these wastes, the Utilities Director shall give consideration to such factors as the quantities of subject wastes in relation to flows and velocities in the sewers, materials of construction in the sewers, nature of the treatment processes, capacity of the water pollution control facilities, degree of treatability of wastes in question, and other pertinent factors. Factors influencing this ruling and known conditions at the time of this ruling shall be recorded by the Utilities Director or authorized representative in the plant file at the time the ruling is made.
 14. Any trucked or hauled pollutants, except at discharge points designated by Cedar Rapids Water Pollution Control Facilities subject to authorization from the Utilities Director or authorized representative.
- (d) **Federal Categorical Pretreatment Standards.** Upon the promulgation of the Federal Categorical Pretreatment Standards for a particular industrial subcategory, the Federal Standard, if more stringent than limitations imposed under this chapter for sources in that subcategory, shall immediately supersede the limitations imposed under this chapter. The Director shall notify all affected users of the applicable reporting requirements under 40 CFR, Section 403.12.
- (e) **State Requirements.** State requirements and limitations on discharges shall apply in any case where they are more stringent than federal requirements and limitations or those in this chapter.
- (f) **City's Right of Revision.** The city reserves the right to establish by ordinance more stringent limitations or requirements on discharges to the wastewater disposal system if deemed necessary to comply with the objectives presented in [Section 13.07\(a\)](#) of this chapter.
- (g) **Dilution.** No user shall increase the use of process water or, in any way, attempt to dilute a discharge as a partial or complete substitute for adequate pretreatment to achieve compliance with the limitations contained in the Federal Categorical Pretreatment Standards, or in any other pollutant-specific limitation developed by the city or state, without specific approval by permit.

(20-92, 61-94)

13.08 PERMITS.

- (a) **Requirements.** Any person desiring to discharge the described substances, materials, waters or wastes as defined in subsection [13.07\(c\)](#) shall file an Application for a Discharge Permit with the Utilities Director or authorized representative.
- (b) **Application.** The application shall contain the following information:
 - 1. Name and address of owner.
 - 2. Title of official authorized representative making such application.
 - 3. Location of plant.
 - 4. The nature of business conducted in such plant.
 - 5. The volume of industrial waste mixture and sewage discharged by each plant.
 - 6. The average daily number of employees employed in each plant by shifts.
 - 7. The source of water supply of each plant and the volume of water used by each such plant daily, specified separately as to each source or process subject to categorical pretreatment standards.
 - 8. Such additional information as is deemed applicable to ascertain the volume, nature and composition of industrial waste to be discharged.
- (c) **Choice of Action by Utilities Director.** Upon application for a permit, the Utilities Director or authorized representative may:
 - 1. Accept the wastes;
 - 2. Reject the wastes;
 - 3. Require pretreatment to an acceptable condition for discharge to the public sewers;
 - 4. Require control over the quantities and rates of discharge; and/or
 - 5. Require payment to cover the added cost of handling and treating the wastes not covered by wastewater service charges under the provisions of [Section 13.17](#)
- (d) **Permit Classes.** There shall be three classes of permits issued by the Utilities Director or authorized representative, as follows:
 - Class I
 - (a) Any waste which is affected by subsection [13.07\(b\)\(2—16\)](#) and
 - (b) Has all quantities (excluding sanitary wastes) less than:

Flow	25,000 gpd
CBOD	42 lbs/day (~ 200 mg/L)
Total Suspended Solids	52 lbs/day
TKN	6 lbs/day

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Class II

Any wastes after excluding sanitary wastes which have any one quantity that is greater than Class I (b) above but less than:

Flow	1,500,000 gpd
CBOD	13,000 lbs/day
Total Suspended Solids	8,000 lbs/day
TKN	3,000 lbs/day

Class III

Any wastes after excluding sanitary wastes which have a quantity that is greater than:

Flow	1,500,000 gpd
CBOD	13,000 lbs/day
Total Suspended Solids	8,000 lbs/day
TKN	3,000 lbs/day

(108-87)

(e) Terms and Conditions of Discharge Permit.

1. Terms. All wastewater discharge permits shall be expressly subject to all provisions of this chapter and rates and charges established by the City.

- A. Permits will be granted on the basis of maximum month CRWPCF capacity that is allocated to each class of permits. Capacity allocations will be defined through a local limits study. The local limits study will also define pollutants of concern, the MAHL, the MAIL, and multipliers for calculating Class III permit limits.
- B. Permits may be granted for a period of time not to exceed five years and must be renewed thereafter. The Utilities Director or authorized representative shall establish an expiration date for each permit and such expiration date must be stated in the permit. The permittee shall file with the Utilities Director or authorized representative an application for renewal of the permit at least 30 days prior to the expiration date of the existing permit
- C. Basis of Permit Limits. Permits shall include maximum month and maximum day limits. The maximum month is calculated as the 30-day rolling average discharge. The

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maximum day is the largest single day discharge. The cumulative total of all discharge permits to Class III permittees shall not exceed the rated maximum month CRWPCF capacity allocated for Class III permitted users multiplied by the following factors for each pollutant, calculated in the Cedar Rapids Headworks Local Limits Study, dated December 2011:

<u>Parameter</u>	<u>Multiplier</u>
Maximum Day CBOD	3.5
Maximum Month CBOD	1.4
Maximum Day TSS	6.0
Maximum Month TSS	2.0
Maximum Day TKN	5.0
Maximum Month TKN	1.4
Maximum Day Ammonia	5.0
Maximum Month Ammonia	1.4

2. Conditions. Wastewater discharge permits may contain any or all of the following conditions:

A. For discharges which will require pretreatment to meet the terms of the permit:

- (1) Pretreatment Facilities Approval and Reporting. Users shall provide necessary wastewater pretreatment as required to comply with this chapter and shall achieve compliance with all Federal Categorical Pretreatment Standards within the time limitations as specified by the Federal Pretreatment Regulations. Any facilities required to pretreat wastewater to a level acceptable to the city shall be provided, operated, and maintained at the user's expense. Plans showing the pretreatment facilities and operating procedures shall be submitted to the city for review no later than 90 days before or as soon as possible before construction of the facility. The review of such plans and operating procedures will in no way relieve the user from the responsibility of modifying the facility as necessary to produce an effluent acceptable to the city under the provisions of this chapter. Any subsequent changes in the pretreatment facilities or method of operation shall be reported to the city prior to the user's initiation of the changes.

The Utilities Director or authorized representative shall annually have published in the local newspaper, (1) a list of those industrial/commercial users which during the preceding 12 months were significantly not in compliance with the discharge limitations or other requirements and (2) a list of enforcement activities taken during the same time period.

All records relating to compliance with Pretreatment Standards shall be made available to officials of the EPA or Approval Authority upon proper request.

Information and data on a user obtained from reports, questionnaires, permit applications, permits and monitoring programs and from inspections shall be available to the public or other governmental agency without restriction, subject to local or state law, unless the user specifically requests at the time of the submittal and is able to demonstrate to the satisfaction of the city that the release of such information would divulge information, processes or methods of production entitled to protection as confidential business information of the user.

When requested by the person furnishing a report, the portions of a report which might disclose confidential business information shall not be made available for inspection by the public but shall be made available upon written request to

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governmental agencies for uses related to this chapter, the National Pollutant Discharge Elimination System (NPDES) Permit, State Disposal System Permit and/or the Pretreatment Programs; provided, however, that such portions of a report shall be available for use by the EPA or the state or any state control agency in judicial review or enforcement proceedings involving the person furnishing the report. Wastewater constituents and characteristics will not be recognized as confidential information.

Information accepted by the city as confidential shall not be transmitted to the general public by the city until and unless a ten-day notification is given to the user.

- (2) Facilities Maintenance and Records. Where such facilities are provided, they shall be maintained continuously in satisfactory and effective operation by the owner at his expense and shall be subject to periodic inspection by the city. The owner shall maintain operating records and shall submit to the city a monthly summary report of the character of the effluent to show the performance of the treatment facilities. Records of all information resulting from monitoring activities required by 40 CFR, 403.12 must be retained for a minimum of three years. This retention period is extended indefinitely during the course of any unresolved litigation regarding the industrial user or the POTW, or upon request by the approval authority.
 - (3) Pretreatment Compliance Date Report. Within 90 days following the date for final compliance with applicable pretreatment standards or, in the case of a new source, following commencement of the introduction of wastewater into the POTW, a user subject to pretreatment standards and requirements shall submit to the Utilities Director or authorized representative a report indicating the nature and concentration of all pollutants in the discharge from the regulated process which are limited by pretreatment standards and requirements and the average and maximum daily flow for these process units in the user facility which are limited by such pretreatment standards or requirements. The report shall state whether the applicable pretreatment standards or requirements are being met on a consistent basis and, if not, what additional O&M and/or pretreatment is necessary to bring the user into compliance with the applicable pretreatment standards or requirements. This statement shall be signed and certified to by an authorized representative of the industrial user.
 - (4) Other Required Pretreatment Reports. Other reports required by 40 CFR part, 403.12 are baseline monitoring reports, periodic reports on continued compliance and notices of potential problems. The various reports shall comply with the appropriate subsections of 40 CFR part, 403.12. The baseline monitoring reports and the periodic reports on continued compliance must be signed and certified to by an authorized representative of the industrial user.
- B. Limits on rate and time of discharge or requirements for flow regulations and equalization.
 - C. Requirements for sampling manhole, including city access to such facilities.
 - D. Monitoring program which may include: sampling locations; frequency and method of sampling; number, types and standard of tests; and establishing a reporting schedule. The discharger assigned a monitoring program in conformance with this chapter shall pay all applicable city charges.
 - E. Submission of technical reports or discharge reports.
 - F. Maintenance of plant records relating to wastewater discharges, as specified by the Utilities Director or authorized representative, and affording city access thereto. The city shall also have authority to copy these records while on the premises of the discharger.
 - G. Other conditions as deemed appropriate by the Utilities Director or authorized representative to insure compliance with this chapter or the terms and conditions of the permit.

- (f) **Change of Discharge Permit Terms and Condition.** The Utilities Director or authorized representative may change the terms, conditions or pollutants covered under the industrial wastewater discharge permit, including changing the average or maximum limits on the elements of wastewater strength, from time to time as National Categorical Pretreatment Standards are promulgated in the future, revisions required by NPDES renewal, or as other circumstances may require. The Utilities Director or authorized representative may require the development of a compliance schedule to meet such revised standards and shall allow a discharger reasonable time to comply with any required changes in the permit except that a change in average or maximum limits of wastewater strength shall immediately affect calculation of the sewage service charge. Any significant industrial user or other permittee as defined by federal regulations 40 CFR part, 403.3(t), subject to an industrial wastewater discharge permit, shall have the right to appeal provisions of the permit approved by the Utilities Director within 30 days to the City Council of the City of Cedar Rapids, and thereafter the District Court within 30 days after the Council decision; the Iowa Rules of Civil Procedures shall thereafter apply to all such appeals. Right of appeal shall not apply to changes implemented as required for new or revised National Categorical Pretreatment Standards or local limits.
- (g) **Transfer of Discharge Permit Prohibited.** A wastewater discharge permit shall not be assigned or transferred.
- (h) **Termination.** The Utilities Director may terminate any wastewater discharge permit for violation of the terms and conditions of the permit or the provisions of this chapter. A person whose permit has been terminated shall apply for a new permit within 30 days of notice termination.

Any person whose permit has been terminated shall pay wastewater service charges based upon his former permit until a new permit has been applied for, approved, and issued.

(61-94)

13.09 APPROVED SAMPLING LOCATION.

Pursuant to subsection [13.08\(e\)2C](#) a permittee shall be required to provide a suitable sampling location, unless this condition is waived by the Utilities Director or authorized representative. The approved sampling location shall be located on the building lateral upstream from the connection to the public sewer, and provide for observing, flow measuring, and sampling of all wastes discharged by the permittee.

The approved sampling location shall be provided with such utilities and equipment as required by the Utilities Director or authorized representative. Such sampling location, when required, shall be constructed by the owner in accordance with plans approved by the Utilities Director or authorized representative. The manhole shall be installed by the owner at the owner's expense, and shall be maintained so as to be safe and accessible at all times.

13.10 FLOW MEASUREMENT.

The volume of flow used in computing wastewater service charges shall be based upon actual in situ flow measurements where available.

In the event the Utilities Director or authorized representative finds it is not practical to measure actual wastewater discharge, he/she may at his/her discretion, require and/or approve the use of water meters or some other manner of computing or estimating the amount of wastewater discharged to the public sewer.

A person may request consideration for a reduction in wastewater service charges because of metered water excluded from the sanitary sewer by making written application to the Utilities Director for such consideration.

13.11 TESTING WASTES.

All measurements, tests, and analyses of the characteristics of waters and wastes to which reference is made in this chapter shall be determined in accordance with the procedures set forth in 40 CFR, Part 136, for sampling and analyses performed to determine compliance with pretreatment standards. Samples for testing shall be collected at the approved sampling location. In the event that no approved sampling location has been required, the approved sampling location shall be considered to be the nearest downstream control structure in the public sewer to the point at which the building sewer is connected. Sampling shall be carried out by customarily accepted methods to reflect the effect of constituents upon the water pollution control facilities and to determine the existence of hazards to life, limb and property.

(38-89)

13.12 POWERS AND AUTHORITY FOR INSPECTION.

- (a) **Right of Entry.** The Utilities Director and other duly authorized employees of the city bearing proper credentials and identification shall be permitted to enter all properties for the purposes of inspection, observation, measurement, sampling, and testing in accordance with the provisions of this chapter. The Utilities Director or his representatives shall have no authority to inquire into any processes including metallurgical, chemical, oil, refining, ceramic, paper, or other industries beyond that point having any bearing on the kind and source of discharge to the public sewers, natural outlets or water pollution control facilities and any bearing in the judgment of the Utilities Director or his representatives on the kind and source of discharge.
- (b) **Indemnity.** While performing the necessary work on private properties referred to in subsection [13.12\(a\)](#) above, the Utilities Director or duly authorized employees of the city shall observe all reasonable safety rules applicable to the premises.
- (c) **Easement.** The Utilities Director and other duly authorized employees of the city bearing proper credentials and identification shall be permitted to enter all private properties through which the city holds a duly negotiated easement for the purposes of, but not limited to, inspection, observation, measurement, sampling, repair and maintenance of any portion of the water pollution control facilities lying within said easement. All entry and subsequent work, if any, on said easement, shall be done in full accordance with the terms of the duly negotiated easement pertaining to the private property involved.

13.13 WATER POLLUTION CONTROL FACILITIES FINANCING.

- (a) **General.** The cost and expense of financing the construction, maintenance and the operation of the water pollution control facilities as can be so paid shall be paid from a fund accruing from the collection of wastewater service charges hereinafter stipulated.
- (b) **Comprehensive Wastewater Service Charge.** Every person whose premises are served by a connection to the sanitary sewer of the city either directly or indirectly, shall pay to the city a comprehensive wastewater service charge for the use of and for services supplied by the water pollution control facilities of the city, which charges may consist of:
 - 1. Basic user charge for O&M of the water pollution control facilities and collection system.
 - 2. Basic user charge for maintenance costs of the storm sewer system.
 - 3. Charges or fees for administering the city's pretreatment program.

(108-87)

13.14 USER GROUP.

Wastewater service charge rates as herein established shall be according to User Group:

Group I	Residential users
	Commercial users
	Small industrial without permits
	Class I Permit users
	Categorical Industries with flow less than 25,000 gal/day
	Wastewater hauled directly to CRWPCF
Group II	Class II Permit users subject to a Permit Surcharge Factor (PSF) invoiced by water meter calculation
	Class II Permit users invoiced for sewer service charges by Water Pollution Control Division-Utilities Department
Group III	Class III Permit user subject to demand charge
Group IV	Special Rates, Waste hauled directly to CRWPCF

(017-10)

13.15 BASIS OF RATES.

The rates for comprehensive sewer service charges are established by ordinance by the City Council and shall be as follows:

- (a) **O & M—Water Pollution Control.** The basic user charge for the O & M cost of the Water Pollution Control Facilities shall be based upon the quantities of flow, CBOD, TSS and TKN discharged by a user.
 - 1. **Unit Flow Cost.** The unit flow cost per 1,000 gallons shall be determined by multiplying the anticipated O & M budget by that percentage attributable to flow-related operations and dividing by the projected yearly total flow to the Water Pollution Control Plant. The unit flow cost per 100 cubic feet of domestic wastewater is obtained by multiplying the unit flow cost by 0.748 gallons.

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2. Unit Carbonaceous Biochemical Oxygen Demand (CBOD) Cost. The Unit CBOD cost per pound shall be determined by multiplying the anticipated O & M budget by that percentage attributable to CBOD related operations and dividing by the projected yearly total CBOD load at the Water Pollution Control Facilities, measured in pounds. The unit CBOD cost per 100 cubic feet of domestic wastewater is obtained by multiplying the unit CBOD cost per pound by 1.25 pounds.
 3. Unit Total Suspended Solids (TSS) Cost. The unit TSS cost per pound shall be determined by multiplying the anticipated O & M budget by that percentage attributable to TSS related operations and dividing by the projected yearly total TSS load at the Water Pollution Control Facilities, measured in pounds. The unit TSS cost per 100 cubic feet of domestic wastewater is obtained by multiplying the unit TSS cost per pound by 1.56 pounds.
 4. Unit Total Kjeldahl Nitrogen (TKN) Cost. Unit TKN cost per pound shall be determined by multiplying the anticipated O & M budget by that percentage attributable to TKN related operations and dividing by the projected yearly total TKN load at the Water Pollution Control Facilities, measured in pounds. The unit TKN cost per 100 cubic feet of domestic wastewater is obtained by multiplying the unit TKN cost per pound by 0.19 pounds.
 5. Demand Charge. A demand charge may be applied to provide a control mechanism against and compensation for large fluctuations of the daily quantities discharged by Group III users.
 6. Infiltration/Inflow Charges. The cost for non-accountable infiltration and inflow shall be determined by multiplying the total flow related O & M costs by a ratio of the unaccounted flow over the total flow and dividing by the accounted for flow of Groups I and II users.
 7. Sanitary Sewer Maintenance. The basic user charge for sanitary sewer maintenance shall be determined by dividing the anticipated budget by the previous year's flow from the Cedar Rapids users only.
- (b) **Storm Sewer Maintenance.** [CHAPTER 72 STORMWATER MANAGEMENT ORDINANCE](#)
- (c) **Debt Service.** RESERVED
- (d) **Pretreatment Program.** Charges or fees for the recovery of costs for the administration of the pretreatment program established herein. The applicable charges or fees which the city may adopt may include:
1. Fees for monitoring, inspections and surveillance procedures.
 2. Fees for reviewing accidental discharge procedures and construction.
 3. Fees for permit applications.
 4. Fees for filing appeals.
 5. Fees for consistent removal by the city of pollutants otherwise subject to Federal Pretreatment Standards.
 6. Other fees as the city may deem necessary to carry out the pretreatment program requirements contained herein.

(108-87, 43-95)

13.16 MONITORING.

All Class I, II and III permit holders connected to the Cedar Rapids sanitary sewer shall have their process waste discharge monitored at the discretion of the City of Cedar Rapids. Monitoring shall occur not less than biennially by the city or according to their permit stipulation.

13.17 SERVICE CHARGES.

(a) **Group I.** The total periodic billing for sewer charges on or after July 1, 2015 shall be the sum of all usage:

1. O & M - A flat charge of \$0.4133 per day during the billing period, which will also provide for two (2) ccf of metered usage per month. A fee of \$1.6691 per ccf will be charged for all water used in excess of two (2) ccf per month.
2. Residences that have two meters, one measuring inside usage and the other outside usage, will be charged year round for the sewer charges for all water used through the inside meter but will not be charged sewer charges for any usage through the outside meter.

(b) **Group II.** The total periodic billing for Group II sewer charges shall be the following, the rate effective on or after July 1, 2015, multiplied if necessary, by a Permit Surcharge Factor (PSF). The PSF shall be determined by the Utilities Director or authorized representative and noted on the Discharge Permit. The PSF shall be calculated by dividing the total O & M charges as set forth in Group III O & M by the O & M charges established in Group I. The PSF shall never be less than 1.0. Minimum monthly invoice charge for any Group II permit user subject to EPA regulation under 40 CFR Part 403 shall be \$25 per month per service agreement. Group II or III Industrial Facility Flat Rate for sanitary sewer service shall be calculated using the following formula: # of employees * 25 gallons per day * 30.4 days per month / 748 * \$1.9815/ccf.

1. O & M	Group I O&M flat charge + all water usage > 2 units or 4 units (depending on billing cycle) *PSF* \$1.9815/ccf
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(c) **Group III.** The total periodic billing for sewer service charges after July 1, 2015, shall be the sum of the items listed in following subsections - 1, 2, 3 (when applicable). Debt Service is only applicable to those industries still paying for reserved capacity as approved by resolution of the City Council.

1. O & M - Each month, an O & M charge will be calculated on the daily average values for the month, obtained from in-situ measurements and samples, multiplied by the monthly rate and multiplied by 60%.

<i>Average Daily Value</i>	<i>Monthly Rate</i>
Flow in 1000s gpd multiplied by	\$19.68
CBOD in lbs. multiplied by	\$4.55
TSS in lbs. multiplied by	\$3.84
TKN in lbs. multiplied by	\$18.24

2. Demand Charge - Each month a three-day average for the daily Flow, CBOD, Total Suspended Solids TSS and TKN quantities shall be calculated for each complete three-day period starting

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with the first day of the month. For all months that have a day or days that exceed either of nine or ten possible three-day periods, all remaining days will be incorporated into the final three-day averaging period of the month. A demand charge will be calculated on the highest three-day average for the month for each parameter, multiplied by the monthly rate and multiplied by 40%.

<i>Highest Three-Day Average</i>	<i>Rate</i>
Flow in 1000s gpd multiplied by	\$19.68
BOD in lbs. multiplied by	\$4.55
SS in lbs. multiplied by	\$3.84
TKN in lbs. multiplied by	\$18.24

3. Basic Service Charges - Cities with contractual treatment agreements shall be calculated based upon the following rates as set out in (d) 4.:

<i>Average Daily Value</i>	<i>Monthly Rate</i>
Flow in 1000s gpd	\$10.60
CBOD in lbs.	\$4.55
TSS in lbs.	\$3.84
TKN in lbs.	\$18.24

(d) **Group IV - Special Rates.** When the Utilities Director determines, based on applicable standards, that special conditions surround the use of city water to the extent that the application of the basic charges provided herein would be inequitable or unfair to either the city or contributor, a special rate may be established by resolution of the Council. Such rates may include, among others, the following cases:

1. Where the nature of the use of city water is such that the resulting sewage or industrial waste has characteristics making it more difficult to process than ordinary domestic waste.
2. Where a major proportion of the city water is not discharged into or does not reach the sanitary sewer. Filling of residential swimming pools will not qualify because of the cost to verify the quantity used and to make the billing adjustment.
3. Where privately produced water supplies are discharged directly or indirectly into the sanitary sewer. Such rates shall be on an equal basis as nearly as may be with the rates, which would

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apply to an equal quantity and character of waste originating through the use of city water. It shall be the duty of every person responsible for the production of such private water supply to report forthwith to the Utilities Director and further, to cooperate with the Utilities Director in the determination of the quantity and character of the waste originating from each such respective private water supply. The Utilities Director shall designate in writing any necessary means of measurement of such private water supply or resulting sewage flow. The meter or other means of measurement shall be installed by and maintained at the expense of the contributor.

4. For cities with contractual treatment agreements with Cedar Rapids, the basic rates for O & M shall be as determined by [Section 13.15\(a\)](#) (1 - 4).
 5. All users of the sanitary sewer system and wastewater treatment facilities, who are not located in the City of Cedar Rapids or one of the cities with a contractual agreement, shall at the option of the city, be required to annex into the city if the property is contiguous or agree to voluntarily do so at such time that it becomes contiguous. While the property remains outside of the City of Cedar Rapids or a contracting city, the user shall pay 50% more than the charges established by Ordinance. Any wastewater discharged to the sanitary sewer system that originates from a permitted storm water or groundwater source is subject to a 50% surcharge.
- (e) **Deposit.** No deposit is required for applicants who have established a credit rating of prompt payment (paid before delinquent) either with the Cedar Rapids Water Department or the Water Pollution Control Facilities, or those who have a credit rating shown in the Credit guide Publication of the Iowa adjustment and Credit Bureau, of up to two months average service may be required. The deposit, if required, shall be paid to the city before a permit to discharge will be issued
- (f) **Penalty for Delinquent Payment.** The above service charges shall apply to bills paid before they become delinquent. After the delinquent date as set out in subsection 13.18(c) all bills up to \$10 will be subject to a penalty of \$1.00 and all bills \$10 and greater will be subject to a 10 percent penalty.

13.18 BILLING; PAYMENT; COLLECTION.

The city shall bill each user of the sanitary sewer on a schedule compatible with the City Water Department.

- (a) **Collection of Charges.** The Utilities Director or authorized representative shall bill and collect storm water and wastewater service charges in conjunction with billings for other municipal utility service fees and from a schedule of private water supply contributors provided by the Water Pollution Control Facilities. An accurate and complete record of such billings and collections shall be maintained and all such funds collected shall be turned over to the City Treasurer at least once each month. At the end of each month, the total wastewater and storm water service charges for the month shall be reported to the City Council, Utilities Director, and the City Services Director. As approved by the City Council, the Utilities Department cost for billing and collecting the wastewater and storm water service charges may be charged to the Water Pollution Control Facilities and City Services Departments.
- (b) **Operation and Maintenance Billings.** That portion of the user charge collected for O & M may be deposited in at least 2 separate non-lapsing funds, one being called the "EPA Replacement Fund," which is for the specific purpose of ensuring replacement of mechanical equipment over the 30-year life of the treatment works. An amount of \$482,000 shall be deposited in this fund annually from the total O & M collection.
- (c) **Delinquent Date and Penalties.** 1. All wastewater and storm water service charges billed and collected by the Utilities Department shall be subject to the same penalties and rules of delinquency and suspension of service as set out for water service in [Chapter 12](#). 2. All wastewater and storm water service charges billed by the Water Pollution Control Facilities and

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City Services Department shall become delinquent 20 days after the date of the invoice and shall be subject to the same penalties and rules of delinquency and suspension of service as set out for water service in [Chapter 12](#)

- (d) **Failure to Pay Wastewater and Storm Water Service Charges.** In addition to other penalties for delinquencies, the city may initiate a lien upon the property served by such wastewater and storm water services for any and all delinquent service charges in accordance with Section 384.84 of the Code of Iowa. If the delinquent wastewater and storm water charges remain unpaid 30 days after the date of becoming delinquent, the City Clerk may certify to the Linn County Auditor the amount unpaid for the purpose of establishing said lien to be collected in the same manner as taxes.

(15-01)

13.19 ENFORCEMENT.

- (a) **Notice to Correct.** Any person found to be violating any provisions of this chapter, may be served by the Utilities Director or authorized representative with any or all of these provisions and providing a reasonable time limit for the satisfactory correction thereof. Such notice may be given by certified mail or by personal service. If given by certified mail, the notice shall be deemed given when mailed. The offender shall, within the period of time stated in such notice, permanently cease all violations specified therein.
- (b) **Violations.** Any person who shall violate any provision of this chapter, except [Section 13.18](#), shall be subject to the penalties set forth herein. These penalties include the following:
1. Violation a Misdemeanor. Any person who shall violate any provision of this chapter, except [Section 13.18](#), shall be guilty of a misdemeanor, and on conviction thereof, may be imprisoned for a period not exceeding 30 days or fined in an amount not exceeding \$200.00 for each violation. Each day in which such violation shall continue shall be deemed a separate offense.
 2. Violation a Municipal Infraction. Violations of this chapter, including those which arise from noncompliance with a pretreatment standard or requirement referred to in 40 CFR Section 403.8 by an industrial user, or which are environmental violations, constitute municipal infractions as defined by the Code of Iowa. A municipal infraction, which is classified an environmental violation, is punishable by a civil penalty of not more than \$1,000.00 for each occurrence. However, a person committing an environmental violation is not subject to a civil penalty, if all of the following conditions are satisfied:
 - A. The violation results solely from the person conducting an initial start-up, cleaning, repairing, performing scheduled maintenance, testing, or conducting a shutdown, of either equipment causing the violation or the equipment designed to reduce or eliminate the violation.
 - B. The person notifies the city of the violation within 24 hours from the time that the violation begins.
 - C. The violation does not continue in existence for more than 8 hours.

The city shall not enforce this section against a person committing an environmental violation, until the city offers to participate in informal negotiations with the person. If the person accepts the offer, the city and the person shall participate in good faith negotiations to resolve issues alleged to be the basis for the violation. If such good faith negotiations fail to resolve those issues, or the person committing an environmental violation does not participate in such negotiations with good faith, the city shall commence enforcement of this section.

An action brought pursuant to this section for a municipal infraction which is an environmental enforcement action including those which may be brought pursuant to Chapter 455B, 455D or 455E.

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3. Violation a Nuisance. A violation of any of the provisions of this chapter, except [Section 13.18](#), shall be deemed to be a nuisance and the City Council, after reasonable notice and opportunity for hearing, may:
 - A. Order the Utilities Director or authorized representative to take necessary measures to correct and abate such violation, and the Utilities Director or authorized representative is authorized to enter on private property so to do.
 - B. Order the service to the premises involved discontinued and authorize the Utilities Director or authorized representative to disconnect any tapping or connection made to the wastewater systems of the city. In the event a violation of any of the provisions of this chapter creates a danger of injury or damage to the Water Pollution Control Facilities, to the environment, or to the health and safety of any person or interferes with the operation of the said facilities, the Utilities Director or authorized representative is authorized and directed to perform all necessary acts, including disconnection of service, to correct and abate such violations and may enter on private property so to do. The Utilities Director or authorized representative shall provide prior written notice and an opportunity for the discharger to respond, except that where the violation reasonably appears to present an imminent and substantial endangerment to the health or welfare of persons, the Utilities Director or authorized representative may provide informal telephone notice in lieu of written notice.
 - C. The cost of any measures to return any sewer or structure to its condition prior to the corrective acts of the Utilities Director or authorized representative shall be borne by the person seeking to discharge to the sanitary sewer. Any damages to public or private property and damage, whether direct or indirect due to the loss of production, shall be borne by the person whose discharge was alleged to have created an immediate hazard and subsequent corrective action.

Any cost incurred by the city for any corrective measures required or permitted under the provisions of this section, if not paid by the person causing such expenditure, shall constitute a lien on the property served by the Water Pollution Control Facilities in connection with which such violation has occurred if said cost is certified to the Linn County Auditor by the City Clerk in accordance with Section 384.84 of the Code of Iowa.

4. Other Remedies for Violations. Any person violating any of the provisions of this chapter shall be liable to the city for any damage, loss, cost or expense occasioned by reason of such action.

In addition to any other remedies provided for in this chapter, the city may bring suit to collect any sums due it, including user charges and industrial cost recovery charges, from the person or persons incurring the liability for the payment of such charges.

- (c) **Falsifying Information.** Any person who knowingly makes any false statements, representation or certification in any application, record, report, plan or other document filed or required to be maintained pursuant to this chapter, or Wastewater Discharge Permit, or who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required under this chapter, shall, upon conviction, be guilty of a misdemeanor and subject to penalties prescribed under subsection (b).

(73-90)

13.20 APPEALS.

If the findings, order or decision of the Utilities Director or authorized representative made in pursuance of the provisions of [Section 13.19](#) of this chapter are not acceptable to any person, such person may within 30 days from the date of said findings, order or decision, appeal the findings, order or decision to the city, and thereafter the District Court within 30 days after the city's decision. The filing and pendency of an appeal by any person under this section does not affect the validity or viability of any permit or amended permit issued hereunder and does not affect the ability of a permittee to continue to

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operate under the terms of said permit or amended permit during the pendency of the appeal. Any right of appeal available under this section prior to its enactment must be exercised within 30 days of the adoption of the ordinance codified in this section.

(86-05)

13.21 SEVERABILITY.

If any provision, paragraph, word, section or article of this chapter is held unconstitutional or invalidated by any court of competent jurisdiction, the remaining provisions, paragraphs, words, sections, and chapters shall not be affected and shall continue in full force and effect.

(Note: [Chapter 13](#) reenacted by Ordinance No. 55-83, passed September 14, 1983 and published September 19, 1983)



To: City Council Infrastructure Committee
From: Doug Wilson, PE, Paving for Progress Program Manager
Subject: Update – Paving for Progress/ 16th Avenue SE
Date: June 21, 2016

Background:

Monthly update intended to provide status Paving for Progress. Update on 16th Avenue SE.

Project Description:

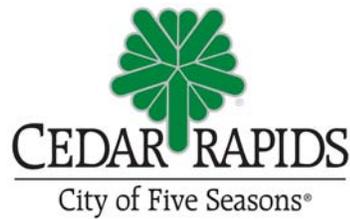
Presentation of List of Paving for Progress projects that have items that will be on upcoming agenda Council Agendas, update on the 16th Avenue extension. List attached.

Update:

The City received twenty-two Statements of Qualifications from area design professionals. We have eleven Paving for Progress projects and have selected eleven area design professionals for this round of project. It is likely we will be doing another group of sections in the Fall.

Update on the 16th Avenue SE from 4th Street to 5th Street project. Project currently planned of construction in 2017.

Requested time on agenda: 5 min



Paving for Progress June Update

Projects beginning design phase this summer –

- 15th Avenue SW from 12th Street SW to C Street SW
- 29th Street NE from 1st Avenue to West of I-380
- 32nd Street NE from 1st Avenue to West of I-380
- 42nd Street NE from Edgewood Road NE to Wenig Road NE
- 8th Avenue SW from 18th Street SW to Rockford Road SW
- C Street SW from Bowling Street SW to Wilson Avenue SW
- Center Point Road NE from J Avenue NE to Coe Road NE
- E Avenue NW from Stoney Point Road NW to 80th Street NW
- E Avenue NW from Wiley Boulevard NW to Jacolyn Drive NW
- Ellis Boulevard NW from I Avenue NW to O Avenue NW
- Forest Drive SE from Grande Avenue SE to Mount Vernon Road SE

Upcoming Council Agenda items –

- 14th Ave SE Public Hearing
- Northwood Dr NE Phase 1 Public Hearing

Other –

- Assessment notification letters for C Ave

Upcoming Bids –

- 14th Ave SE – 6/29
- 66th Ave SW Phase 1 – 6/29 (?) β AFI may need to go to condemnation
- Northwood Phase 1 – 7/13

Recently completed projects –

- Leroy and Spencer



To: City Council Infrastructure Committee
From: Michael Duffy
Subject: Update – Street Maintenance Projects
Date: June 22, 2016

Background:
Provide information regarding Street Maintenance projects.

Project Description:
Maintenance projects at various locations across the City.

Update:
Burch Avenue NW (P4P)
Mansfield Avenue SW (P4P)
Rolling Green Development SW (P4P)
Coral Lane SW
Madison Street NE (P4P)
D Ave SW – Asphalt inlay
Seminole Trail – Seal coat
8th Street NW between H and I Avenue
J Avenue NE Asphalt inlay
Street Sweeping
Planters
Point Asphalt repairs

Requested time on agenda: 5 min



To: City Council Infrastructure Committee
From: Matt Myers
Subject: Update – Striping and Two-Way Conversions
Date: June 22, 2016

Background:

Traffic operations includes signals, roadway markings/signage, pedestrian/cyclist movement, and traffic flow.

Project Description:

Striping of streets and two-way conversions.

Update:

Information on current striping projects and status of two-way conversions will be presented at the meeting.

Requested time on agenda: 5 min