

CHAPTER 2 SEWER SYSTEMS

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6-2-1 DEFINITIONS. The following words and phrases whenever used in the ordinances of the City, shall be construed as defined in this section unless, from the context, a different meaning is intended or unless different meaning is specifically defined and more particularly directed to the use of such words or phrases:

1. "Act" means the Federal Water Pollution Control Act, as amended, 33U.S.C., et seq.
2. "Administrator" means the Administrator of the U.S. Environmental Protection Agency.
3. "Approving Authority" shall mean the City Council of the City of Maquoketa: acting by and through the City Manager being their duly authorized agent or representative.
4. "BOD" (denoting Biochemical Oxygen Demand) shall mean the quantity of oxygen utilized in the biochemical oxidation of organic matter under standard laboratory procedure in five (5) days at twenty degrees (20°) Centigrade, expressed in milligrams per liter.
5. "Building Inspector" shall mean the Building Inspector of the City of Maquoketa.
6. "Building Drain" shall mean that part of the lowest horizontal 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 sewer or other approved point of discharge, beginning five feet (5') (1.5 meters) outside the inner face of the building wall.
7. "Building Sewer" shall mean the extension from the building drain to the public sewer or other place of disposal.
8. "City" shall mean the City of Maquoketa, and any reference to "within the City" shall mean all territory within the perimeter of the City of Maquoketa boundaries.
9. "Combined Sewer" shall mean a sewer receiving both surface runoff and sewage.
10. "Compatible Pollutant" means biochemical oxygen demand, suspended solids, pH and fecal coliform bacterial.
11. "Control Manhole" shall mean a structure located on a site from which industrial wastes are discharged. Where feasible, the manhole shall have an interior drop. The purpose of a "Control Manhole" is to provide access for a City representative to sample and/or measure discharges.

12. “Director” means the chief administrative officer of a state water pollution control agency or interstate agency. In the event responsibility for water pollution control and enforcement is divided among two (2) or more state or interstate agencies, the term “Director” means the administrative officer authorized to perform the particular procedure to which reference is made.
13. “Easement” shall mean an acquired legal right for the specific use of land owned by others.
14. “Federal Grant” shall mean the U.S. government participation in the financing of the construction of treatment works as provided by Title II, Grants for Construction of Treatment Works of the Act.
15. “Floatable Oil” is oil, fat, or grease in a physical state such that it will separate by gravity from wastewater by treatment in an approved pretreatment facility. A wastewater shall be considered free of floatable fat if it is properly pretreated and the wastewater does not interfere with the collection system.
16. “Garbage” shall mean solid wastes from the domestic and commercial preparation, cooking and dispensing of food, and the handling, storage, and sale of produce.
17. “Incompatible Pollutant” means any pollutant which is not a compatible pollutant as defined in subsection 9.
18. “Industrial 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 sewage.
19. “Major Contributing Industry” shall mean an industrial user of the publicly owned treatment works that: a) has a flow of fifty thousand (50,000) gallons or more per average work day; b) has a flow greater than five percent (5%) of the flow carried by the Municipal system receiving the waste; c) has in its waste, a toxic pollutant in toxic amounts as defined in standards issued under Section 307 (a) of the Act; or d) is found by the permit issuance authority, in connection with the issuance of an NPDES permit to the publicly owned treatment works receiving the waste, to have significant impact, either singly or in combination with other contributing industries, on that treatment works on upon the quality of effluent from that treatment works.
20. “User Types”:
 - a. “User Class” shall mean the type of user of wastewater facilities, either “residential or commercial” (non-industrial) or “industrial” as defined herein.
 - b. “Residential or Commercial” or “Non-industrial” user, shall mean any user of the wastewater facilities not classified as an industrial user or excluded as an industrial user as provided for in this Section.
 - c. “Industrial User” shall mean any non-governmental user of publicly owned wastewater facilities identified in the Standard Industrial Classification Manual, 1972, Office of Management and Budget as the same may now or hereafter be amended and supplemented, under the following divisions:
 - i. Division A-- Agriculture, Forestry, and Fishing

- ii. Division B—Mining
 - iii. Division D—Manufacturing
 - iv. Division E-- Transportation, Communications, Electric, Gas and Sanitary Services
 - v. Division I—Services
 - vi. A user in the divisions listed may be excluded as an industrial user if it is determined by the Director that such user will introduce into the wastewater system primarily segregated domestic wastes or wastes from sanitary conveniences rather than industrial wastes.
21. “Milligrams Per Liter” shall mean a unit of the concentration of water or wastewater constituent. It is one one-thousandth (0.001) gram of the constituent in one thousand (1,000) milliliters of water. It has replaced the unit formerly used commonly, parts per million, to which it is approximately equivalent, in reporting the results of water and wastewater analysis.
 22. “Natural Outlet” shall mean any outlet into a watercourse, pond, ditch, lake, or other body of surface or groundwater.
 23. “NPDES Permit” means any permit or equivalent document or requirements issued by the Administrator, or, where appropriate, by the Director, after enactment of the Federal Water Pollution Control Amendments of 1972, to regulate the discharge of pollutants pursuant to Section 402 of the Act.
 24. “Person” shall mean any and all persons, natural or artificial including any individual, firm, company, Municipal or private corporation, association, society, institution, enterprise, governmental agency, or other entity.
 25. “PH” shall mean the logarithm (base 10) of the reciprocal of the hydrogen-ion concentration expressed in grams per liter of solution. It shall be determined by one of the procedures outlined in “Standard Methods.”
 26. “PPM” shall mean parts per million by weight.
 27. “Population Equivalent” is a term used to evaluate the impact of industrial or other waste on a treatment works or stream. One population equivalent is one hundred (100) gallons of sewage per day, containing seventeen-hundredths (0.17) pound of BOD and twenty-hundredths (0.20) pound of suspended solids. The impact on a treatment works is evaluated as the equivalent of the highest of the three (3) parameters. Impact on a stream is the higher of the BOD and suspended solids parameters.
 28. “Pretreatment” shall mean the treatment of wastewaters from sources before introduction into the wastewater treatment works.
 29. “Properly Shredded Garbage” shall mean 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 (½") (1.27 centimeters) in any dimension.

30. “Public Sewer” shall mean a sewer provided by or subject to the jurisdiction of the City of Maquoketa. It shall also include sewers within or outside the City boundaries that serve one or more persons and ultimately discharge into the City sanitary or combined sewer system, even though those sewers may not have been constructed with City funds.
31. “Replacement” shall mean expenditures for obtaining and installing equipment, accessories, or appurtenances which are necessary during the service life of the treatment works to maintain the capacity and performance for which such works were designed and constructed. The term “operation and maintenance” includes replacement.
32. “Sanitary Sewer” shall mean a sewer that conveys sewage or industrial wastes or a combination of both, and into which storm, surface, and groundwaters or unpolluted industrial wastes are not intentionally admitted.
33. “Sewage” shall mean a combination of the water-carried wastes from residences, business buildings, institutions, and industrial establishments, together with such ground, surface, and storm waters as may be present.
34. “Sewage Treatment Plant” shall mean any arrangement of devices, structures, and equipment for treating sewage.
35. “Sewage Works” shall mean all facilities for collecting, pumping, treating, and disposing of sewage as well as the sewage treatment facilities.
36. “Sewer” shall mean a pipe or conduit for conveying sewage or any other waste liquids, including storm, surface, and groundwater drainage.
37. “Sewerage” shall mean the system of sewers and appurtenances for the collection, transportation and pumping of sewage.
38. “Shall” is mandatory: “may” is permissible.
39. “Slug” shall mean any discharge of water, sewage, or industrial waste which in concentration of any given constituent or in quantity of flow exceeds for a period of duration longer than fifteen (15) minutes more than five (5) times the average twenty-four (24) hour concentration and /or flows during normal operations.
40. “Standard Methods” shall mean the examination and analytical procedures set forth in the most recent edition of “Standard Methods for the Examination of Water, Sewage, and Industrial Wastes,” published jointly by the American Public Health Association and American Water Works Association and the Federal of Sewage and Industrial Wastes Associations.
41. “Storm Sewer” shall mean a sewer that carries storm, surface and groundwater drainage but excludes sewage and industrial wastes other than unpolluted cooling water.
42. “Stormwater Runoff” shall mean that portion of the rainfall that is drained into the sewers.

43. “Superintendent” shall mean the Chief licensed operator of the Maquoketa Waste Treatment System.
44. “Suspended Solids” 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 suspended solids shall be made in accordance with procedures set forth in “Standard Methods.”
45. “Unpolluted Water” is water of quality equal to or better than the effluent criteria in effect or water that would not cause violation of receiving water quality standards and would not be benefited by discharge to the sanitary sewers and wastewater treatment facilities provided.
46. “Wastewater” shall mean the spent water of a community. From this standpoint of course, it may be a combination of the liquids and water-carried wastes from residences, commercial buildings, industrial plants, and institutions, together with any groundwater, surface water, and stormwater that may be present.
47. “Wastewater Facilities” shall mean the structures, equipment, and processes required to collect, carry away and treat domestic and industrial wastes and dispose of the effluent.
48. “Wastewater Treatment Works” shall mean an arrangement of devices and structures for treating wastewater, industrial wastes, and sludge. Sometimes used as synonymous with “waste treatment plant” or “wastewater treatment plant” or “pollution control plant.”
49. “Watercourse” shall mean a channel in which flow of water occurs, either continuously or intermittently.

6-2-2 USE OF PUBLIC SEWERS REQUIRED.

1. Unlawful Discharge of Wastes: It shall be unlawful to discharge to any natural outlet, watercourse or storm sewer within the City or in any area under the jurisdiction of said City, any sewage or other polluted waters, except where suitable treatment has been provided in accordance with the following Sections.
2. Unlawful Construction of Sewage Facilities: Except as hereinafter provided, it shall be unlawful to construct or maintain any privy, privy vault, septic tank, cesspool, or other facility intended for the disposal of sewage.
3. Mandatory Sewer Hook-up: The owner of all houses, buildings, or properties used for human occupancy, employment, recreation, or other purposes, situated within the City and abutting on any street, alley, or right-of-way in which there is now located or may in the future be located a public sanitary or combined sewer of the City, is hereby required at his/her expense to install suitable toilet facilities therein, and to connect such facilities directly with the proper public sewer within ninety (90) days after the official notice to do so, provided that said public sewer is within two hundred feet (200') (61 meters) of the property line.
4. Variances: The City Council hereby reserves the authority to vary the strict application of the provisions of this article herein contained, but such variance shall be granted under the following conditions:

- a. The Jackson County Sanitarian or appropriate City or County Health Official has inspected the applicant's private disposal system and has declared in writing that such system meets the minimum requirements of the County's Private Sewage Disposal Standards. (Jackson County Ordinance No. 29)
- b. The length of such variance is limited to a period of ten (10) years or when the applicant's private sewage disposal system no longer meets the minimum requirements of the County's Private Sewage Disposal Standards, whichever comes first. The applicant at that time shall be required at his expense to connect such facilities directly with the proper public sewer within ninety (90) days after the official notice to do so.
- c. The granting of the variation will not be detrimental to public safety, health, or welfare or injurious to other property or improvements in the area in which the property is located.
- d. The appropriate official of the Jackson County Health Department shall re-inspect the applicant's private sewage disposal system every two years after the variance has been granted and every two years thereafter.

6-2-3 PRIVATE SEWAGE DISPOSAL.

1. Where a sanitary or combined sewer is not available under the provisions of Section 6-2-2 (3) of this Chapter, the building sewer shall be connected to a private sewage disposal system complying with the provisions of this Section.
2. Before commencing of construction of a private sewage disposal system the owner shall first obtain a written permit signed by the Superintendent. The application for such permit shall be made on a form furnished by the City, which the applicant shall supplement by any plans, specifications, and other information as are deemed necessary by the Superintendent. A permit and inspection fee of twenty-five dollars (\$25.00) shall be paid to the City at the time the application is filed.
3. A permit for a private sewage disposal system shall not become effective until the installation is completed to the satisfaction of the Superintendent. He/she shall be allowed to inspect the work at any stage of construction and, in any event, the applicant for the permit shall notify the Superintendent when the work is ready for final inspection, and before any underground portions are covered. The inspection shall be made within forty-eight (48) hours of the receipt of notice by the Superintendent.
4. The type, capacities, location, and layout of a private sewage disposal system shall comply with all recommendations of the County and City Health Officers and the Iowa Department of Environmental Quality. No permit shall be issued for any private sewage disposal system employing subsurface soil absorption facilities where the area of the lot is less than fifteen thousand (15,000) square feet. No septic tank or cesspool shall be permitted to discharge to any public sewer or natural outlet.
5. At such time as a public sewer becomes available to a property served by a private sewage disposal system as provided in Section 6-2-2 (3), a direct connection shall be made to the public sewer in compliance with this Ordinance, and any septic tanks, cesspools, and similar private sewage disposal facilities shall be abandoned, cleaned, and filled with suitable material.

6. The owner shall operate and maintain the private sewage disposal facilities in a sanitary manner at all times, at no expense to the City.
7. No statement contained in this Section shall be construed to interfere with any additional requirements that may be imposed by the approving authority.

6-2-4 BUILDING SEWERS AND CONNECTIONS.

1. Permit Required. No unauthorized person shall uncover, make any connection with or opening into, use, alter, or disturb any public sewer or appurtenance thereof without first obtaining a written permit from the Superintendent.
2. There shall be two (2) classes of building sewer permits: a) for residential and commercial services, and b) for service to establishments producing industrial wastes. In either case, the owner or his/her agent shall make application on a special form furnished by the City. The permit application shall be supplemented by any plans, specifications, or other information considered pertinent in the judgment of the Superintendent. An inspection fee of twenty-five dollars (\$25.00) shall be paid to the City at the time the application is filed. This inspection fee is in addition to any connection fee or user fees.
1. All service connections and backflow preventers shall be inspected by the wastewater superintendent or their designee before said connection is covered up or same shall be unearthed for proper inspection at the contractor's expense. All inspections will take place during normal working hours (8am – 3pm) Monday – Friday.
(Amended during 2019 codification)
2. Cost Borne by Owner. All costs and expenses incidental to the installation and connection of the building sewer shall be borne by the owner. The owner shall indemnify the City for any loss or damage that may directly or indirectly be occasioned by the installation of the building sewer.
3. Prohibited Connections. Every house, store, or other building connected with the public sewer must have a direct connection therewith. In no case shall two (2) or more buildings be allowed to make such connections through one pipe. In no case shall a building be connected to the public sewer through a pipe laid beneath or through property owned by another person. In no case shall any person be permitted to maintain, without the consent of the approving authority, any sewer connection connecting a building owned by him/her to the public sewer across or under the property of another.
4. Variances, General. The City Council hereby reserves the authority to vary the strict application of the provisions of this article herein contained, but such variance shall be granted under the following conditions:
 - a. The purpose of the variation is not based exclusively upon a desire for financial gain: and
 - b. The conditions creating the need for a variance are unique and are not applicable generally to other property and have not been created by any person having an interest in the property: and
 - c. Because of the particular physical surroundings, shape or topographical conditions of the specific property involved, a particular hardship to the owner

would result, as distinguished from a mere inconvenience, if the strict letter of the regulations were adhered to and

- d. The granting of the variation will not be detrimental to public safety, health, or welfare or injurious to other property or improvements in the area in which the property is located.

5. Building Sewer, Materials-- Construction. Methods to be used in excavating, placing of the pipe, jointing, testing, and backfilling the trench, shall all conform to the requirements of the Building and Plumbing Code or other applicable rules of the City.

- a. Existing wyes shall be used to connect building sewers to public sanitary or combined sewers. Except for lined concrete sanitary sewers, the Building Inspector may approve a sewer tap at a location where no wye was originally installed. The person making the connection shall make an opening in the Main Sewer similar to the interior diameter of the "Y" branch and then properly cement and attach a saddle in place. The saddle shall have a suitable curvature to conform to the outside diameter of the public sewer.
- b. Building sewers shall not be less than four inches (4") nor more than six inches (6") in internal diameter of cast iron schedule 40 PVC equal in quality to the best pipe laid in the public sewers. Where vitrified clay pipe and cast iron is used, it shall have a minimum diameter of four inches (4").

(Amended during 2019 codification)

- c. Building sewers between the public sewer and curb line shall be laid on a grade of not less than one foot to ninety-six feet (1/96'). No deviation will be permitted from this grade unless by special permission of the approving authority.
- d. Whenever the grade from the curb to the house connection is less than one foot to ninety-six feet (1/96'), all discharge pipes leading from kitchen sinks, laundry and stationary wash tubs, or any other receptacles likely to contain grease in any form, shall make direct connection with and discharge their contents into receiving basins: and in all cases bath tubs, water closets, hand basins, and other such receptacles shall connect directly with the main drain.
- e. Every person using the public sewers of the City shall provide such fixtures as will allow a sufficient quantity of water to flow into the lateral drain or private sewer and shall keep such private sewer at all times unobstructed.
- f. All connections with sewers or drains used for the purpose of carrying off refuse from water closets, or slops from kitchens, shall be provided with fixtures allowing for sufficient water flow to properly carry off such matter.
- g. Old building sewers may be used in connection with new buildings only when they are found, on examination and test by the Building Inspectors to meet all requirements of this Ordinance.
- h. Whenever possible, the building sewer shall be brought to the building at an elevation below the basement floor. In all buildings in which any building drain is too low to permit gravity flow to the public sewer, sanitary sewage carried by such building drain shall be lifted by an approved means and discharged to the building sewer.
- i. No person shall make connection of roof downspouts, exterior foundation drains, areaway drains, or other sources of surface runoff or groundwater to a building sewer or building drain which in turn is connected directly or indirectly to a sanitary sewer.
- j. The connection of the building sewer into the public sewer shall conform to the requirements of the Building and Plumbing Code or other applicable rules and

regulations of the City. Any deviation from the prescribed procedures and materials must be approved by the Building Inspector before installation.

- k. The applicant for the building sewer permit shall notify the Wastewater Superintendent when the building sewer is ready for inspection and connection to the public sewer. The connection shall be made under the supervision of the Wastewater Superintendent or his/her representative. The fee for such connection shall be one hundred dollars (\$100.00).
- l. Any person filling in an excavation without first having received the written approval of the Sewer or Building Inspector as provided in this Chapter, shall, in addition to suffering the fine herein imposed, expose the sewer for inspection by the Sewer or Building Inspector at no cost to the City, during normal work hours from 8:00am to 3:00 pm Monday through Friday. In any case where the Inspector finds the work on any sewer not done in a satisfactory manner as herein provided he shall serve a written notice on the person to whom the permit is issued, stating wherein such work is deficient, and ordering said person to remedy such defect within seventy-two (72) hours. In the event such person fails to comply therewith, the Inspector shall cause such defect to be corrected at the expense of the person to whom the permit was issued. The sum of twenty-five dollars (\$25.00) as herein provided shall be paid the City as a fee for the performance of the Inspector, and it shall be the duty of the Inspector to inspect any sewer connection or sewer pipe within the City during normal work hours from 8:00am to 3:00 pm Monday through Friday. It shall also be the duty of said Inspector to inform the approving authority of any violation of this Section, and to assist in the prosecution of offenders. (Amended during 2019 codification)
- m. All excavations for building sewer installation shall be adequately protected with barricades and lights according to City and State regulations. Streets, sidewalks, parkways, and other public property disturbed in the course of the work shall be restored to its original condition.
- n. All excavations shall be properly shored or an applicable protective system in place before a City agent or employee can enter to perform work or an inspection. (Amended during 2019 codification)
- o. All building sewer connections to the City's sanitary sewers shall be equipped with a check valve or some equivalent type of device which will prevent the backflow of wastewater or drainage water from the public sanitary sewer into the building sewer.
- p. Property owners are required, at the owner's expense, to immediately and completely replace any Orangeburg tile whenever it is encountered during the course of any excavation of any public right-of-way or public utility easement. Orangeburg tile must be replaced with suitable materials as identified by the City's Standard Specifications. (Ord. 1003, 05-16-2005)
- q. Connection Fee. If the property described in the application has not been assessed or is not subject to an assessment of special tax for the payment of the cost of construction of the sewer or portions of the sewer including interceptor sewers, lift stations, cross sewers or lateral sewers to which connection is made, a connection fee shall be collected by the Superintendent before a permit shall be issued. The connection fee shall be equal to the special tax that would have been assessed against the property, had the outlet sewer for the property been a cross sewer, lateral sewer, interceptor sewer or lift station. The amount of this fee shall be determined by the Superintendent on an estimate of the cost of construction of such lateral.

- r. The following schedule of fees for connection charges has been established in certain areas and has been determined to be established in certain areas reasonable and equitable and therefore shall be paid to the City by every person whose premises will be served by connecting to the City sewer system in the following areas:
 - i. Fees: \$100.00 each connection.

- 6. Area Description:
 - a. Starting at a point 298.1 feet west of the west line of Western Avenue, thence south 1470 feet to a point 150 feet south of the northwest corner of O.L. 51, thence west to the present corporation line, then north along this said corporation line to a point 1641 feet north of Platt Street, then northeasterly to a point 2150 feet north of Platt Street and 167 feet east of the west line of Lot 41, then southeast to a point 217.5 feet west of Arcade Street extended and 1750 feet north of Platt Street, thence south to Platt Street, thence west on the centerline of Platt Street to the point of beginning.

- 7. City Participation on Extensions: The City may construct or authorize construction of sewer extensions within the service area, but the City shall not be required to make such extensions.
 - a. All sewer extensions to new subdivision developments shall be done in accordance with Chapter 3, Subdivisions, of Title V, Land Use Regulations, of this Code of Ordinances and the City's Standard Specifications. Customers and/or developers of subdivisions shall be responsible for the entire cost of the installation.
 - b. Sewer extensions to previously platted and recorded sections or areas within the corporate limits of the City shall be the responsibility of the customer. However, the City Council may approve the payment of a portion of the cost of such extensions.
 - c. The City may reimburse the customer for the additional cost to increase the size of the sewer from the standard four inch (4") lateral connection to an eight inch (8") sanitary sewer for only that portion of the sewer line that is located within the City's right-of-way or easement. Such extensions shall be installed in accordance with the City's Standard Specifications. The City's portion shall be for material costs only and shall not include labor for installation. The City may designate a sanitary sewer greater than eight inches.
 - d. All sewer line extensions shall be evidenced by a contract signed by the City and the customer for such extension. Such contracts shall be approved by the City Council.
 - e. All decisions in connection with the method of installation of any extension in the public right-of-way or easement and the maintenance thereof shall remain the exclusive control of the City. Such extension shall be the property of the City and shall be maintained by the City and no other person shall have any right, title, or interest therein.
 - f. The City may refuse service to persons not presently customers, when in the opinion of the City Council the capacity of the municipal sewer system will not permit such service.

- 8. Sanitary sewer will be abandoned by:

- a. If the original lateral connection was made with a factory “wye” and the “wye” is intact and undamaged shall be sealed appropriately to prevent material or water intrusion.
- b. If the original lateral connection was made in any other fashion besides a factory “wye” or the factory “wye” is damaged, then the active sewer main section shall be replaced to eliminate the existing connection point in order to adequately seal the main. (Amended during 2019 codification)

6-2-5 USE OF PUBLIC SEWERS.

1. Storm and Unpolluted Waters Not Allowed. No person shall discharge or cause to be discharged any stormwater, surface water, groundwater, roof runoff, subsurface drainage, uncontaminated cooling water, or unpolluted industrial process waters to any sanitary sewer.
2. Discharge of Storm and Unpolluted Waters. Stormwater and all other unpolluted drainage shall be discharged to such sewers as are specifically designated as storm sewers, or to a natural outlet approved by the Superintendent, industrial cooling water or unpolluted process waters may be discharged, on approval of the Superintendent, to a storm sewer, or natural outlet.
3. Prohibited Waste. No person shall discharge or cause to be discharged into any public sewer the following described substances, materials, waters, or wastes:
 - a. Any gasoline, benzene, naphtha, fuel oil, or other flammable or explosive liquid, solid or gas.
 - 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 injure or interfere with any sewage treatment process, or constitute a hazard to humans or animals, or create a public nuisance, or create any hazard in the receiving waters of the sewage treatment plant: and, any waters or wastes that would result in the contamination of the City sewage treatment plant sludge which would limit sludge uses or disposal practices.
 - c. Any waters or wastes having a pH lower than six and five-tenths (6.5) or in excess of nine and five-tenths (9.5), or having any other corrosive property capable of causing damage to structures, equipment or personnel of the sewage works.
 - 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 sewage works such as, but not limited to, ashes, cinders, sand, mud, straw, shavings metal, glass, rags, feathers, tar, plastics, wool, underground garbage, whole blood, paunch manure, hair and fleshing, entrails and paper dishes, cups, milk containers, etc., either whole or ground by garbage grinders.
4. 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 from the Superintendent. A permit will not be granted if it appears likely in the opinion of the Superintendent that such discharges can harm either the sewers, sewage treatment process, or equipment, have an adverse effect on the receiving stream, or otherwise endangered life, limb, public property, or constitute a nuisance. In forming his/her opinion as to the acceptability of these discharges, the Superintendent will give

consideration to such factors as the quantities of subject wastes in relation to flows and velocities in the sewers, materials of construction of the sewers, nature of the sewage treatment process, capacity of the sewage treatment plant, degree of treatability of wastes in the sewage treatment plant, and other pertinent factors. The substances prohibited are:

- a. Any liquid or vapor having a temperature higher than one hundred fifty degrees (150°) Fahrenheit, sixty-five degrees (65°) Centigrade.
- b. Any water or waste containing fats, wax, grease, oils, or other substances that may solidify or become viscous at temperatures between thirty-two degrees (32°) Fahrenheit and one hundred fifty degrees (150°) Fahrenheit and zero degrees (0°) Centigrade and sixty-five degrees (65°) Centigrade.
- c. Any garbage that has not been properly shredded. The installation and operation of any garbage grinder equipped with a motor of three-fourths (3/4) horsepower and seventy-six hundredths (0.87) horsepower metric or greater shall be subject to the review and approval of the Superintendent.
- d. Any waters or wastes containing acid iron pickling wastes, or concentrated plating solutions, whether neutralized or not that exceed the acceptable concentration of substances as established in Paragraph 4(e) below.
- e. The City Manager and/or Wastewater Treatment Plant Superintendent as authorized by the City Council is hereby authorized to establish maximum acceptable concentrations of waste or chemical substances for discharge into the City sewers:

| Waste or Chemical Substance | Concentration - mg/l |
|--------------------------------------|----------------------|
| ○ Arsenic (total) | 0.25 |
| ○ Barium(total) | 2.0 |
| ○ Boron | 1.0 |
| ○ Cadmium (total) | 0.15 |
| ○ Chlorine | 5.0 |
| ○ Chromium (hexavalent) | 0.3 |
| ○ Chromium (trivalent) | 1.0 |
| ○ Copper (total) | 1.0 |
| ○ Cyanide | 0.05 |
| ○ Fluoride (total) | 2.5 |
| ○ Iron (total) | 2.0 |
| ○ Iron (dissolved) | 0.5 |
| ○ Lead (total) | 0.1 |
| ○ Manganese (total) | 1.0 |
| ○ Mercury (total) | 0.0005 |
| ○ Nickel (total) | 1.0 |
| ○ Oil (hexane soluble or equivalent) | 15.0 |
| ○ Phenols | 0.3 |
| ○ Selenium (total) | 1.0 |
| ○ Silver | 0.1 |
| ○ Zinc (total) | 1.0 |

- 5. ANY OTHER WASTES OR SUBSTANCES NOT ENUMERATED ABOVE: which are similarly objectionable or toxic substances or wastes exerting an excessive chlorine requirement to such a degree that any such material received in the composite sewage of the sewage treatment works would exceed the maximum concentration allowed by the

City Manager and/or Wastewater Treatment Plant Superintendent as authorized by City Council.

6. Substances which are objectionable under this sub-section include:
 - a. waste or water containing fats, wax, grease or oils, whether emulsified or not, in excess of 100 mg/l which are discharged to the sewer system downstream from a grease trap or other pretreatment installation required under the terms of this code section.
7. Any person, partnership, cooperation, or business entity that intends to discharge any of the above named substances into the City sewers: and, any such person or business entity that has been notified by the Superintendent that it is in fact discharging one of the above substances into the City sewers shall make application to the Superintendent of the Maquoketa Waste Treatment System for a permit to discharge such substances and shall apply for a determination by the City Manager and/or Wastewater Treatment Plant Superintendent as authorized by City Council of the maximum acceptable concentration of the substances to be discharged.
8. Upon receipt of the Application by the person or business entity for a permit to discharge a substance named above and for a determination of the maximum acceptable concentration of that substance to be discharged to the City's sewers, the Superintendent shall first make a determination whether or not the waste discharged or to be discharged may have a deleterious effect upon the sewage works, processes, equipment or receiving waters: or, that the waste discharged or to be discharged will create a hazard to life or constitute a public nuisance. The City manager and/or Wastewater Treatment Plant Superintendent as authorized by City Council shall then determine upon a remedy set forth in Title VI, Chapter 2, Paragraph 5: and, if the wastes are not rejected and a permit is to be granted, the City Manager and/or Wastewater Treatment Plant Superintendent as authorized by City Council shall determine a maximum acceptable concentration of the substance as allowed in the standards promulgated by the Environmental Protection Agency of the United States of America and approved by the Department of Natural Resources of the State of Iowa.

The determinations of the City Manager and/or Wastewater Treatment Plant Superintendent as authorized by City Council made under this Section shall be communicated in writing to the applicant not less than 10 days following the date that the Iowa DNR makes its determination regarding the substance to be discharged.

If the applicant feels that he/she wishes to appeal any determination of the Superintendent, City Manager and City Council under this paragraph, the applicant shall have twenty (20) days to serve a Notice in Writing of his Appeal on the City Manager at City Hall in Maquoketa, Iowa. The Appeal shall be entitled: APPEAL FROM THE DETERMINATION OF THE CITY MANAGER AND/OR WASTEWATER TREATMENT PLANT SUPERINTENDENT AS AUTHORIZED BY CITY COUNCIL, and it shall state what errors the Superintendent has made in his/her determination upon the application. The City Manager shall have a period of thirty (30) days from the receipt of the appeal to place the matter on the agenda for the City Council. Upon review by the City Council of the application and the determination of the Superintendent and all matters presented on behalf of applicant and the Superintendent, the City Council shall by Resolution uphold the determination of the Superintendent or

reverse the determination of the Superintendent with instructions for the Superintendent to reconsider the application.

Upon receiving a resolution upholding the determination of the Superintendent, the applicant may seek relief in the courts of the State of Iowa in such manner as may seem appropriate.

The City Manager and/or Wastewater Treatment Plant Superintendent as authorized by City Council is also authorized to redetermine maximum acceptable concentrations of substances discharged to the City's sewers and to revoke a permit to discharge a specific concentration of a substance named above which revocation shall become effective upon ten (10) days' Notice in writing to the person or business entity discharging the substance. A person or entity aggrieved by a redetermination of the Superintendent, City Manager and City Council or any action taken by the City Manager and/or Wastewater Treatment Plant Superintendent as authorized by City Council under this Chapter to enforce the redetermined acceptable concentration may appeal to the Council and the Courts of Iowa as set forth in this Chapter.

9. It shall be a violation of this Ordinance to discharge a substance described in 6-2-5(e) above unless the person or entity responsible for the discharge has obtained a permit for the discharge and a determination of the acceptable concentration of the substance discharged as set forth in (e) above.
10. Any radioactive wastes or isotopes of such half-life or concentration as may exceed limits established by the Superintendent in compliance with applicable State or Federal regulations.
11. Any waters or wastes having a pH in excess of nine and five-tenths (9.5).
12. Materials which exert or cause:
 - a. Unusual concentrations of inert suspended solids (such as, but not limited to, Fullers earth, lime slurries, and lime residues) or of dissolved solids (such as, but not limited to, sodium chloride and sodium sulfate).
 - b. Excessive discoloration (such as, but not limited to, dye wastes and vegetable tanning solutions).
 - c. Unusual BOD, chemical oxygen demand, or chlorine requirements in such quantities as to constitute a significant load on the sewage treatment works.
 - d. Unusual volume of flow or concentration of wastes constituting "slugs" as defined herein.
 - e. Waters or wastes, containing substances which are not amenable to treatment processes employed, or are amenable to treatment only to such degree that the sewage treatment plant effluent cannot meet the requirements of other agencies having jurisdiction over discharge to the receiving waters.
 - f. All exhaust from steam engines and all blow offs from steam boilers shall be first connected with a proper catch basin and shall not be allowed to connect directly with the public sewers without special permission from the approving authority.
13. Deleterious Waste. If any waters or wastes are discharged, or are proposed to be discharged to the public sewers, which waters contain the substances or possess the

characteristics enumerated in section 6-2-5(4), and which in the judgment of the Superintendent, may have a deleterious effect upon the sewage works, processes, equipment or receiving waters, or which otherwise create a hazard to life or constitute a public nuisance, the Superintendent may:

- a. Reject the wastes.
- b. Require pretreatment to an acceptable condition for discharge to the public sewers.
- c. Require control over the qualities and rates of discharge.
- d. Surcharge extra strength discharges to cover the added costs of handling and treating of such discharges not covered by existing taxes of sewer charges.

If the Superintendent permits the pretreatment or equalization of waste flows, the design and installation of the plants and equipment shall be subject to the review and approval of the Superintendent, and subject to the requirements of all applicable codes, ordinances, and laws.

14. A grease trap that complies with the requirements of this section shall be installed in the waste line leading from sinks, drains, and other fixtures or equipment in the following establishments: restaurants, cafes, lunch counters, cafeterias, bars, taverns and clubs, hotel, hospital, sanitarium, factory or school kitchens, or other establishments where food is prepared for distribution to the public or is prepared for sale or for compensation. A grease trap shall be installed in any other building at which grease or oil may be introduced into the drainage or sewage system in quantities that can affect line stoppage or hinder sewage treatment or private sewage disposal. A grease trap is not required for individual dwelling units or for any private living quarters. A grease trap required by this section shall be installed and its operation and maintenance shall be according to the requirements of Chapter 10 and Appendix H of the Uniform Plumbing Code 1994 as adopted by the Iowa Building Code Commissioner and as that code may from time to time be amended by the Iowa Building Code Commissioner.
 - a. The use of enzymes to clean or flush a grease trap is prohibited and any means of cleaning a grease trap other than the means required by this ordinance is prohibited.
15. Predischarge Facilities Maintenance. Where preliminary treatment of flow-equalizing facilities is provided for any waters or wastes, they shall be maintained continuously in satisfactory and effective operation by the owner at his expense.
16. Sampling Control Manhole. Each industrial user shall be required to install a sampling control manhole, and when required by the Superintendent, the owner of any property serviced by an existing building sewer carrying industrial or commercial wastes shall install a suitable sampling control manhole, together with such necessary meters and other appurtenances in the building sewer to facilitate observation, sampling, and measurement of the wastes, The industry's sampler shall be a unit which can be set to gather a minimum of four (4) samples per hour and have the capability to gather flow proportioned samples. The industry's wastewater flow meter shall have the capability of pacing a flow proportion sampler, said flow meter will be calibrated by a qualified technician yearly. The sampling control manhole, when required, shall be accessible and safely located, and shall be constructed in accordance with plans approved by the

Superintendent. The manhole and equipment shall be installed by the owner at his expense and shall be maintained by him so as to be safe and accessible at all times.

17. **Measurements, Tests, and Analyses.** 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 latest edition of "Standard Methods for the Examination of Water and Waste Water," published by the American Public Health Association, American Water Works Association and Water Pollution Control Federation, now named the Water Environment Federation, and shall be determined at the control manhole provided, or upon suitable samples taken at said manhole. The measurements, tests, and analyses of waters and wastes to which is made in this Chapter shall be completed by a laboratory certified by the President of the Iowa Water Pollution Control Association. In the event that no special manhole has been required, the control manhole shall be considered to be the nearest downstream manhole 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 sewage works and to determine the existence of hazards to life, limb and property. (The particular analysis involved will determine whether a twenty-four (24) hour composite of all outfalls of a premise is appropriate or whether a grab sample or samples should be taken.) Normally, but not always BOD and suspended solids analyses are obtained from twenty-four (24) hour composites of all outfalls whereas pH's are determined from periodic grab samples.
 - a. Any person discharging wastes having concentrations greater than the "normal" concentrations as set forth herein shall upon notification by the approving authority install a composite sampler with a compatible pacing (metering) device for monitoring said substances. The pacing and sampling devices shall be of a type approved by the Superintendent.

18. **Right to Contract for Treatment of Industrial Wastes.** No statement contained in this Section shall be construed as preventing any special agreement or arrangement between the City and any industrial concern whereby an industrial waste of unusual strength or character may be accepted by the City for treatment, subject to approval of the industrial wastes characteristics by the City and subject to any payment therefor by the industrial concern. (Ord. 931, 02-21-2000)

6-2-6 **PROTECTION FROM DAMAGE. Prohibited Acts.** No unauthorized person shall break, damage, destroy, uncover, deface, or tamper with any structure, appurtenance, or equipment which is a part of the sewage works.

6-2-7 **POWERS AND AUTHORITY OF INSPECTORS.**

1. **Inspections.** The Superintendent 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, measurements, sampling, and testing in accordance with the provisions of this Ordinance. A key to the industry's sampling building and/or manhole, will be provided to the City for the purpose of entering this area to inspect the sampler, gather and composite the sample and complete all other necessary work to monitor the waste leaving the industry when the sample will be composite, if the

industry requests such notification. The Superintendent or his/her representatives shall have no authority to inquire into any processes including metallurgical, chemical, oil, refining, ceramic, paper, or other industries beyond that point having a direct bearing on the kind and source of discharge to the sewers or waterways or facilities for waste treatment. The Superintendent will be allowed to tour the industry's processing plant, after giving notice and allowing a short time, no more than one day, to schedule such a tour.

2. **Inspection on Easements:** The Superintendent 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 sewage works 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.
3. **Indemnity of User.** While performing the necessary work on private properties referred to in this Chapter, the Superintendent or other authorized representative shall observe all safety rules applicable to the premises established by the user and the user shall be held harmless for injury or death to the City employees and the City shall indemnify the user against loss or damage to its property by City employees and against liability claims and demands for personal injury or property damage asserted against the user and growing out of the gauging and sampling operation, except as any of such as may be caused by negligence of the user, its agents or employees to maintain safe conditions.

6-2-8 ENFORCEMENT.

1. **Notice to Correct.** Any person found to be violating any provisions of this Chapter except Section 6-2-6 shall be served by the Superintendent with written notice stating the nature of the violation 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.
2. **Violation A Municipal Infraction.** Any person who shall violate any provision of this Chapter, shall be guilty of a municipal infraction, and on conviction thereof, shall be fined in an amount not exceeding one hundred dollars (\$100.00) for each violation and shall be subject to any and all other penalties provided for by Maquoketa Ordinance 1-3-1. Each day in which any such violation shall continue shall be deemed a separate offense. (Ord. 1142, 06-02-2018)
3. **Other Remedies for Violations:**
 - a. 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 violation.
 - b. A violation of any of the provisions of this Chapter shall be deemed to be a nuisance and the City Council, after reasonable notice and opportunity for hearing, may:

- i. Order the Superintendent to take necessary measures to correct and abate such violation, and the Superintendent is authorized to enter on private property to do so. A key to the industry's wastewater treatment plant will be provided to the Superintendent to be used to enter and inspect and correct and abate such violation.
 - ii. In the event a violation of the provisions of this Chapter creates an immediate hazard to the wastewater facilities or to the operation thereof, to the health and safety of any person, or to the preservation and protection of any property, the Superintendent is authorized and directed to perform all necessary acts, without prior notice or hearing, to correct and abate such violations and may enter on private property to do so.
- c. The cost of any corrective measures required or permitted under the provisions of this Section shall be a lien on the property served by the wastewater facilities in connection with which such violation has occurred and shall be levied and collected by the City Council as ordinary taxes.
- d. 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.

SAMPLE REPLACEMENT SCHEDULE

| Year | Item | Expenditure | Principal | Int.(7%) | Balance |
|------|---|-------------|-----------|----------|---------|
| 1 | | | 29,563 | - | 29,563 |
| 2 | | | 29,563 | 2,069 | 61,195 |
| 3 | | | 29,563 | 4,284 | 95,042 |
| 4 | | | 29,563 | 6,653 | 131,258 |
| 5 | Raw Sewage Pumps Flow Meters Chlorine Feed System Raw Sludge Pumps Sludge Recirculation Pumps Emergency Pump Contingencies | 24,553 | 29,563 | 9,188 | 145,456 |
| 6 | | | 29,563 | 10,182 | 185,201 |
| 7 | | | 29,563 | 12,964 | 227,728 |
| 8 | | | 29,563 | 15,941 | 273,232 |
| 9 | | | 29,563 | 19,126 | 321,921 |
| 10 | Raw Sewage Pumps Flow Meters Chlorine Feed System Raw Sludge Pumps Sludge Recirculation Pumps Emergency Pump Contingencies Grit Collection Comminutor | 209,486 | 29,563 | 22,534 | 164,532 |

| | | | | | |
|----|---|---------|--------|--------|---------|
| | Vacuum Priming System Primary Clarifiers Final Clarifiers Chlorine Mixing System Stormwater Pumps Blowers Digester Cover and Equipment Generator General Equipment | | | | |
| 11 | | | 29,563 | 11,517 | 205,612 |
| 12 | | | 29,563 | 14,393 | 249,568 |
| 13 | | | 29,563 | 17,470 | 296,601 |
| 14 | | | 29,563 | 20,762 | 346,926 |
| 15 | Raw Sewage Pumps Flow Meters Chlorine Feed System Raw Sludge Pumps Sludge Recirculation Pumps Emergency Pump Contingencies Rotating Bio-Disc Unit Lagoon Aeration System | 227,618 | 29,563 | 24,285 | 173,156 |
| 16 | | | 29,563 | 12,121 | 214,840 |
| 17 | | | 29,563 | 15,039 | 259,442 |
| 18 | | | 29,563 | 18,161 | 307,166 |
| 19 | | | 29,563 | 21,502 | 358,231 |
| 20 | Raw Sewage Pumps Flow Meters Chlorine Feed System Raw Sludge Pumps Sludge Recirculation Pumps Emergency Pump Contingencies Grit Collection Comminutor Vacuum Priming System Primary Clarifiers Final Clarifiers Chlorine Mixing System Stormwater Pumps Blowers Digester Cover and Equipment Generator General Equipment | 412,155 | 29,563 | 25,076 | 715 |

CALCULATION OF ANNUAL REPLACEMENT REVENUES TO BE COLLECTED

| | | | | |
|--------------------------|---------|----------|----------|----------|
| Today's Replacement Cost | | | | |
| Item | 5 Years | 10 Years | 15 Years | 20 Years |

| | | | | |
|---|--------|---------|--------|---------|
| Grit Collection - replace | 0 | 7,500 | 0 | 7,500 |
| Comminutor - rebuild | 0 | 6,000 | 0 | 6,000 |
| Raw Sewage Pumps - rebuild | 3,000 | 3,000 | 3,000 | 3,000 |
| Vacuum Priming System - replace | 0 | 2,000 | 0 | 2,000 |
| Primary Clarifiers - replace | 0 | 7,500 | 0 | 7,500 |
| Rotating Bio-Disc Unit – replace | 0 | 0 | 60,000 | 0 |
| Final Clarifiers - replace | 0 | 7,500 | 0 | 7,500 |
| Flow Meters, Samplers & Accessories - rebuild | 2,500 | 2,500 | 2,500 | 2,500 |
| Chlorine Feed System - replace | 1,000 | 1,000 | 1,000 | 1,000 |
| Chlorine Mixing System – rebuild | 0 | 2,500 | 0 | 2,500 |
| Stormwater Pumps - rebuild | 0 | 20,000 | 0 | 20,000 |
| Blowers - rebuild | 0 | 10,000 | 0 | 10,000 |
| Lagoon Aeration System - replace | 0 | 0 | 5,000 | 0 |
| Raw Sludge Pumps – rebuild | 2,000 | 2,000 | 2,000 | 2,000 |
| Digester Cover and Equipment- replace | 0 | 10,000 | 0 | 10,000 |
| Sludge Recirculation Pumps – rebuild | 3,000 | 3,000 | 3,000 | 3,000 |
| Generator, Fuel Tank and Transfer Switch – rebuild | 0 | 10,000 | 0 | 10,000 |
| Emergency Pump - rebuild | 1,000 | 2,000 | 1,000 | 2,000 |
| General Equipment – replace (lab furniture, equipment, etc.) | 0 | 5,000 | 0 | 5,000 |
| Contingencies | 5,000 | 5,000 | 5,000 | 5,000 |
| Today’s Replacement Cost Totals | 17,500 | 106,500 | 82,500 | 106,500 |

| | | | | |
|---|---------|---------|---------|---------|
| Future Replacement Cost (assume 7% inflation) | | | | |
| Present Cost (interest factor) | (1.403) | (1.967) | (2.759) | (3.870) |
| 5-year cycle -\$17,500 | 24,553 | 34,423 | 48,283 | 67,725 |
| 10-year cycle - \$89,000 | 0 | 175,063 | 0 | 344,430 |
| 15-year cycle - \$65,000 | 0 | 0 | 179,335 | 0 |
| 20-year cycle - \$0.00 | 0 | 0 | 0 | 0 |
| Total Future Replacement Cost | 24,553 | 209,486 | 227,618 | 412,115 |

| | | | | |
|---|---------|----------|----------|----------|
| Annual Requirements | | | | |
| | 5 Years | 10 Years | 15 Years | 20 Years |
| Future Replacement Costs | 0 | 209,805 | 227,700 | 412,115 |
| | | -24,556* | -24,556* | -24,556* |
| 5-Yr. @ 7%: (0.17389)**(24,553)= \$4,270.00 | 0 | 185,249 | 203,144 | 387,599 |
| | | -185,249 | -77,106* | -77,106* |
| 10-Yr. @ 7%: (0.07238)**(184,249)=\$13,408 | 0 | 0 | 126,038 | 310,493 |
| | | | -126,038 | -28,840* |
| 15-Yr. @ 7%:(0.03979)**(126,038)=\$5,015 | 0 | 0 | 0 | 281,653 |
| | | | | -281,653 |
| 20-Yr. @ 7%: (0,02439)**(281,653)= \$6,870 | 0 | 0 | 0 | 0 |

Total Annual Requirement = \$29,563

* Value of sinking fund at terminal date (5.75074) X Future Replacement Cost

** Uniform series end-of-period equal to future sum.

TITLE VI PHYSICAL ENVIRONMENT

