

## ORDINANCE NO. 14-2

### RAPID VALLEY SANITARY DISTRICT - WATER SERVICE RAPID CITY, SOUTH DAKOTA

An ordinance regulating the use of public sewers and drains, waste-water disposal, the installation and connection of building sewers, and the discharge of waters and wastes into the public sewer system(s); and providing penalties for violations thereof: in the Rapid Valley Sanitary District - Water Service, County of Pennington, South Dakota.

Where the Rapid Valley Sanitary District Sewer Ordinance is silent or conflicts with the City of Rapid City, South Dakota Sewer System Ordinance, the City of Rapid City's Ordinance, as receiver of the District's sewage, will supercede, govern and have priority over any sewer use ordinance of the District.

(Originally, Ordinance 77-1, as amended by Ordinance 86-1, approved on October 6, 1986, and as amended by Resolution, approved on September 17, 1990. and approved as Ordinance 95-2 in 1995. Ordinance 14-2 was approved on May 12, 2014 and replaces Ordinance 06-2)

Be it ordained and enacted by the Rapid Valley Sanitary District - Water Service, Pennington County, South Dakota, as follows:

Rates and charges may be adopted by Resolution which is indicated in the Sewer Use Resolution Attachment B.

#### ARTICLE I

#### GENERAL PROVISIONS

##### Section 1. Title.

This Ordinance shall be known as the "Sewers, Sewage Works, and Wastewater System Ordinance of the Rapid Valley Sanitary District - Water Service."

##### Section 2. Purpose.

The purpose of this Ordinance shall be to set forth the rules and regulations concerning the operation and maintenance of the wastewater collection system within the boundaries of the Rapid Valley Sanitary District - Water Service (hereinafter the "District"). This Ordinance shall also have the purpose of generating sufficient revenue to pay all costs for the operation and maintenance of the complete wastewater collection system. The costs shall be distributed equitably to all users of the wastewater system.

### Section 3. Definitions.

The following words, terms, and phrases are hereby defined and shall be interpreted as such throughout this Ordinance. Terms not herein defined shall have the meaning customarily assigned to them.

- a. “Biochemical Oxygen Demand” (BOD) shall mean the quantity of oxygen utilized in the biochemical oxidation of organic matter under standard laboratory procedure in five (5) days at 20 degrees Centigrade, expressed in milligrams per liter.
- b. “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, beginning five (5) feet (1.5 meters) outside the inner face of the building wall.
- c. “Building sewer” shall mean the extension from the building drain to the public sewer or other place of disposal, also called house connection.
- d. “Chairman” shall mean the Chairman of the Board of Trustees of the District, or his or her duly authorized deputy, agent, or representative.
- e. “City” shall mean the City of Rapid City, a municipal corporation of the State of South Dakota.
- f. “Combined sewer” shall mean a sewer intended to receive both wastewater and storm or surface water.
- g. “Commercial or Institutional use” applies to all trailer parks, mobile home courts, or entities metered by one meter or where service is given and monetary payment is received for that service. All accounts not covered by the term residential use or industrial use shall also be considered as commercial. It also applies to all nonresidential use which introduces only domestic wastewater or primarily segregated domestic wastes into a building sewer.
- h. “Director” shall mean the Director of Public Works of the City of Rapid City, or his or her duly authorized deputy, agent, or representative.
- i. “District” shall mean the Rapid Valley Sanitary District - Water Service, Rapid City, South Dakota, incorporated in the State of South Dakota.
- j. “Easement” shall mean an acquired legal right for the specific use of land owned by others.
- k. “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.

Wastewater shall be considered free of floatable fat if it is properly pretreated and the wastewater does not interfere with the collection system.

- l. “Garbage” shall mean the animal and vegetable waste resulting from the handling, preparation, cooking, and serving of foods.
- m. “Industrial use” Any commercial, institutional or industrial operation that introduced industrial wastewaters into the District’s wastewater facilities.
- n. “Industrial wastes or Industrial wastewaters” The water-carried wastes from commercial, institutional and industrial operations as distinct from domestic wastewater discharged from dwellings. Industrial wastes shall include, but not be limited to, the trade wastes produced by restaurants, food processing and bottling plants, food manufacturing plants, slaughtering plants, tallow works, plating works, disposal services, industrial cleaning plants, fertilizer plants, car and truck washing operations, laundries, cleaning establishments, cooling plants, industrial plants, factories and hospitals.
- o. “Manager” shall mean the Manager of the District, or his or her duly authorized deputy, agent, or representative.
- p. “May” is permissive (See "shall," Sec. cc. below).
- q. “Minor Industrial User” Those industrial uses discharging wastes which can be pretreated by simple gravity separation processes. Minor industrial use may include car washing facilities, restaurants and service stations.
- r. “Natural outlet” shall mean any outlet, including storm sewers and combined sewer overflows, into a watercourse, pond, ditch, lake, or other body of surface or groundwater.
- s. “Owner or Occupant” shall mean the persons using or owning the lot, parcel of land, building, or premises connected to and discharging sewage into the sewage system of the District, and who pays or is legally responsible for the payment of water rates or charges made against the said lot, parcel of land, building, or premises, if connected to the sewage system, or who would pay or be legally responsible for such payment.
- t. “Person” shall mean any individual, firm, company, association, society, corporation, or group.
- u. “pH” shall mean the logarithm of the reciprocal of the hydrogen-ion concentration. The concentration is the weight of hydrogen-ions, in grams, per liter of solution. Neutral water, for example, has a Ph value of 7 and a hydrogen-ion concentration of 10.

- v. "Premises" shall mean all the parcels of land included in the District and served by a single billing from the District.
- w. "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 1/2 inch (1.27 centimeters) in any dimension.
- x. "Public sewer" shall mean a common sewer controlled by a governmental agency or public utility.
- y. "Residential use" applies to a single-family dwelling, or to each separately metered unit in a mobile home court, duplex, or a multiple dwelling.
- z. "Sanitary sewer" shall mean a sewer that carries liquid and water-carried wastes from residences, commercial buildings, industrial plants, and institutions together with minor quantities of ground, storm, and surface waters that are not admitted intentionally.
- aa. "Sewage" is the spent water of a community. The preferred term is "wastewater," Sec. jj below.
- bb. "Sewer" shall mean a pipe or conduit that carries wastewater or drainage water.
- cc. "Shall" is mandatory (See "may," Sec. p. above).
- dd. "Slug" shall mean any discharge of water or wastewater which in concentration of any given constituent or in quantity of flow exceeds for any period of duration longer than fifteen (15) minutes more than five (5) times the average twenty-four (24) hour concentration or flows during normal operation and shall adversely affect the collection system and/or performance of the wastewater treatment works.
- ee. "Storm drain" (sometimes termed "storm sewer") shall mean a drain or sewer for conveying water, groundwater, subsurface water, or unpolluted water from any source.
- ff. "Board of Trustees" shall mean the Board of Trustees of the Rapid Valley Sanitary District - Water Service, or their authorized deputy, agent, or representative.
- gg. "Suspended Solids" shall mean total suspended matter that either floats on the surface of, or is in suspension in, water, wastewater, or other liquids, and that is removable by laboratory filtering as prescribed in "Standard Methods for the Examination of Water and Wastewater" and referred to as non-filterable residue.
- hh. "Unpolluted water" is water of a 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.

- ii. “Wastewater” shall mean the spent water of a community. From the standpoint of source, it may be a combination of the liquid and water-carried wastes from residences, commercial buildings, industrial plants, and institutions, together with any groundwater, surface water, and storm water that may be present.
- jj. “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.
- kk. “Wastewater Superintendent” shall mean the Superintendent of the wastewater system of the City of Rapid City, or his or her authorized deputy, agent, or representative.
- ll. “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 “water pollution control plant.”
- mm. “Watercourse” shall mean a natural or artificial channel for the passage of water either continuously or intermittently.

## ARTICLE II

### USE OF PUBLIC SEWERS REQUIRED

- Sec. 1 It shall be prohibited, subject to civil and/or criminal penalties, for any person to place, deposit, or permit to be deposited in any unsanitary manner on public or private property within the District, or in any area under the jurisdiction of said District, any human or animal excrement, garbage, or other objectionable waste.
- A. If sump pump discharge creates an icing issue during freezing weather, the preferred discharge location is to the storm sewer system if located immediately adjacent to the property. If storm sewer is immediately adjacent to a property, discharge to the sanitary sewer will not be allowed. Edge drain connections will not be allowed. The sump pump discharge piping from the building to the public storm sewer shall be at the sole expense of the property owner.
  - B. The District Manager or his or her designee may issue seasonal sump pump discharge permits. The permit will allow sump pump discharge to the District’s sanitary sewer system during freezing weather where the sump pump discharge cannot be delivered to a storm sewer collection system immediately adjacent to the property.
    - 1. Sump pump discharge into the District’s sanitary sewer system will only be allowed between November 1<sup>st</sup> and April 1<sup>st</sup> of each year. Coverage under the permit will be continuous until canceled.

2. All interior work shall be performed in compliance with the District's currently adopted Sewer Ordinance. The sump pump connection to the sanitary sewer shall be constructed at the sole expense of the property owner.
3. Diversion valves and permanent piping shall be installed per the District's detail titled "Sump Pump Bypass to Sanitary Sewer". The District shall be solely responsible for opening and closing the valve connecting the sump pump discharge pipe to the District's sanitary sewer system. The District will provide a locking mechanism to prohibit valve operation by anyone but the District.
4. The property owner shall grant the District periodic access to the facility in order to ensure compliance with the requirements of the permit in addition to any other remedies provided for violation of this Policy, including but not limited to shutting off District water service.
5. The permit fee shall be per the District's currently approved fee schedule. If the fee does not appear in the District's fee schedule it shall be 0 (zero) dollars.
6. The District may cancel the permit at any time if the terms of the permit are not complied with, if the sewer system cannot handle additional flow, if storm sewer is made available, or for other good cause.

Sec. 2           It shall be prohibited, subject to civil and/or criminal penalties, to discharge to any natural outlet within the District, or in any area under the jurisdiction of said District, any sewage or other polluted water, except where suitable treatment has been provided in accordance with subsequent provisions of this ordinance.

Sec. 3           It shall be prohibited, subject to civil and/or criminal penalties, to construct or maintain any privy, privy vault, septic tank, cesspool, or other facility intended or used for the disposal of wastewater unless authorized by the District.

Sec. 4           The owner(s) of all houses, buildings, or properties used for human occupancy, employment, recreation, or other purposes, situated within the District 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 District, is hereby required, at the owner(s) expense, to install suitable toilet facilities therein, and to connect such facilities directly with the proper public sewer in accordance with the provisions of this ordinance, within 180 days after date of official notice to do so, provided that said public sewer is within 200 feet of the property line unless specifically authorized by the District in accordance with SDCL-9-48-53 – Each building in which plumbing fixtures are installed shall connect to a public water sewer system if available. A public sewer system is available to a premise used for human occupancy if the property line of the premise is within two hundred feet of the system.), Administrative Rule 74:53:01:07, **On-site wastewater systems prohibited when public wastewater systems are available.** No person may construct, install, or operate an on-site wastewater system where a public wastewater system is available. A public wastewater system is considered available to premises under the following circumstances:

- (1) The structure or wastewater system is located within the jurisdictional boundaries of a municipality or sanitary district;

- (2) The sewer collection system of the public entity exists within 400 feet of the home, trailer court, commercial establishment, business, park, or institution; and
- (3) The municipality or sanitary district requests to provide service to the premises.

Sec. 5           It shall be prohibited, subject to civil and/or criminal penalties, for any person, as owner or agent, to rent for use as a residence any property, and it shall also be prohibited, subject to civil and/or criminal penalties, for any person or persons to occupy as a residence, any property as herein defined without said resident having a connection to the District's sewer system by which all waste from the human body can be disposed of through the connection to said sewer.

### ARTICLE III

#### SANITARY SEWERS, BUILDING SEWERS, AND CONNECTIONS

Sec. 1           No unauthorized person(s) shall uncover, make any connections with or opening into, use, alter, or disturb any public sewer or appurtenance thereof without first obtaining permission from the District.

Sec. 2           There shall be three (3) classes of building sewer permits: (a) for residential service, (b) for commercial service, and (c) for industrial service. In any case, the owner(s), or his or her agent(s), shall make application on a special form furnished by the District. The permit application shall be supplemented by any plans, specifications, or other information considered pertinent in the judgment of the Manager. All building sewer permit applications shall show the type of service sought, the street address and legal description, with directional signs, of all building sewers, the size and type of materials to be used, the name and address of the contractor, and the amount of the fee. By signing the application, the applicant agrees to assume responsibility for any damage resulting to the District's property, any damage to the streets, under which the sewer is placed, and any damage or injuries to other property or people caused by the installation of the building sewer and/or its connection to the public sewer. All applicants also agree to pay such user fees as the Board of Trustees may set, regardless of whether such property is actually connected to a public sewer, unless the Board of Trustees passes a specific resolution waiving all or some portion of such fees. The fees for the building sewer permits described above shall be set by the Board of Trustees. The current fees are shown on Attachment "A." Property not assessed for, or not having been fixed by, special Ordinance of the Sanitary District shall pay the District as a special tapping fee such sum as such property should be justly assessed on account of the construction of such sewer, had such property been in the district taxed, said amount to be determined by the Board of Trustees prior to the granting of any such permit. The applicant for such permit described above shall set forth in said written application the legal description of the property facing or abutting upon the street where such sanitary sewer service is to be

connected, and state whether such connecting sewer runs to a residence, an apartment house, or a commercial or industrial building.

- Sec. 3 All costs and expenses incidental to the installation and connection of the building sewer shall be borne by the owner(s). The owner(s) shall indemnify the District from any loss or damage that may, directly or indirectly, be occasioned by the installation of the building sewer. The owners shall incur all costs for maintenance and repair or replacement of their entire sewer service from sewer main connection to the building or residence. Residential services are able to be repaired by the District with no cost to the owner if service is collapsed or a physical separation is evident from the sewer main to the property boundary after the resident verifies with a District representative video showing the location of defect. This does not include plugged sewer services due to flushing materials or objects that create blockages. A repair authorization form is required to be signed by the owner of the property. The owners shall indemnify the District from any loss or damage from sewer main backups, unless clear and convincing evidence of direct result of negligence on the District's part.
- Sec. 4 A separate and independent building sewer shall be provided for every building; except where one building stands at the rear of another or on an interior lot, and no private sewer is available or can be constructed to the rear building through an adjoining alley, court, yard, or driveway, the building sewer from the front building may be extended to the rear building and the whole considered as one building sewer. But, the District does not, and will not, assume any obligation or responsibility for damage caused by, or resulting from, any such single connection aforementioned.
- Sec. 5 Old building sewers may be used in connection with new buildings only when they are found, on examination and tested by the District, to meet all requirements of this ordinance.
- Sec. 6 The size, slope, alignment, and materials of construction of all sanitary sewers, including building sewers, and the methods to be used in excavating, placing of the pipe, jointing, testing, and backfilling the trench, shall all conform to the requirements of the City's building, plumbing, and utility codes, and any other applicable rules and regulations of the District, the City, and the State of South Dakota. In the absence of suitable code provisions, or in amplification thereof, the materials and procedures set forth in appropriate specifications of the A.S.C.E. manuals and Reports on Engineering Practice No. 60 or current edition shall apply.
- Sec. 7 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 public sewer. The owner shall be responsible for all installation, operation, and



maintenance costs. Private lift stations for multi-density residential buildings shall be prohibited, unless special provisions are approved by the Board of Trustees.

- Sec. 8 No person(s) shall make any type of connection of roof downspouts, 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 public sanitary sewer, or is in conflict of county nuisance ordinances, unless such connection is approved by the Board of Trustees for purposes of disposal of polluted surface drainage.
- Sec. 9 The connection of a building sewer into the public sewer shall conform to the requirements of the City's building, plumbing, and utility codes, and any other applicable rules and regulations of the District, the City, and the State of South Dakota, and the procedures set forth in appropriate specifications of the A.S.T.M. and W.P.C.F. Manual of Practice No. 9. All such connections shall be made water tight and verified by proper testing. Any deviation from the prescribed procedures and materials must be approved by the Manager before installation.
- Sec. 10 The applicant for the building sewer permit shall notify the Manager when the building sewer is ready for inspection and connection to the public sewer. The connection and testing shall be made under the supervision of the Manager or his or her representative.
- Sec. 11 All excavations for building sewer installation shall be adequately guarded with barricades and lights so as to protect the public from hazard. Streets, sidewalks, parkways, and other public property disturbed in the course of the works shall be restored in a manner satisfactory to the District.
- Sec. 12 The maximum size tap which may be installed into any sewer line shall be determined in accordance with the City's Building and Plumbing Codes and District specifications. Any sewer connection greater than six inches (6") must be made by means of a manhole. All manholes must be constructed to any applicable City requirements and District specifications as required on new sewer lateral construction.
- Sec. 13 All sewer connections from public sewer to the user's property shall be laid and constructed by a licensed master plumber, a licensed plumbing contractor, or a licensed sewer and water installer contractor.
- Sec. 14 No person except a licensed and insured master plumber, licensed and insured plumbing contractor, licensed and insured sewer and water installer contractor, or employee of the District, shall be permitted to lay or do any work on public sewers and sewer service lines within the boundary limits of the District.
- Sec. 15 Pipe materials and specifications for sewer service lines and sewer main

lines shall be in accordance with the City's Building and Plumbing Codes and/or the District's design criteria. In the event of a conflict, the District's design criteria take precedence.

- Sec. 16      Sewer mains shall be installed a minimum distance of ten feet (10') from the water service mains.
- Sec. 17      No one may construct, operate, or dig any type of sewer line or water line within the boundaries of the District without first obtaining permission from the District.
- Sec. 18      Design and Construction Standards for Water and Wastewater Piping and Appurtenances will be governed by the additional provisions in Attachment "B."

#### ARTICLE IV

##### USE OF THE PUBLIC SEWERS

- Sec. 1      No person(s) shall discharge, or cause to be discharged, any unpolluted waters, such as storm water, surface water, groundwater, roof runoff, subsurface drainage, or cooling water, to any sewer; except, storm water runoff from limited areas, which storm water may be polluted at times, may be discharged to the sanitary sewer with the permission of the District.
- Sec. 2      No person(s) shall discharge, or cause to be discharged, any of the following described water or wastes to any public sewers:
- (a)      Any gasoline, benzene, naphtha, fuel oil, or other flammable or explosive liquid, solid, or gas. Any paint/paint products.
  - (b)      Any waters 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, constitute a hazard to humans or animals, create a public nuisance, or create any hazard in the receiving waters of the wastewater treatment plant.
  - (c)      Any waters or wastes having a pH lower than 5.5, or having any other corrosive property capable of causing damage or a hazard to structures, equipment, and personnel of the wastewater 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 wastewater facilities, such as, but not limited to, ashes, cinders, sand, mud, straw, shavings, metal, glass, rags, feathers, tar, plastics, wood, underground garbage, whole blood, paunch manure, hair and

fleshings, entrails, and paper dishes, cups, milk containers, etc., either whole or ground by garbage grinders.

Sec. 3. The following described substances, materials, waters, or waste shall be limited in discharges to municipal systems to concentrations or quantities which will not harm either the sewers, wastewater treatment process, or equipment, will not have an adverse effect on the receiving stream, or will not otherwise endanger lives, limb, public property, or constitute a nuisance. The Manager and the Director may set limitations lower than the limitations established in the regulations below if, in their opinion, such more severe limitations are necessary to meet the above objectives. In forming their opinion as to the acceptability, the Manager and the Director will give consideration to such factors as the quantity of subject waste in relation to flows and velocities in the sewers, materials of construction of the sewers, the wastewater treatment process employed, capacity of the wastewater treatment plant, degree of treatability of the waste in the wastewater treatment plant, and other pertinent factors. The limitations or restrictions on materials or characteristics of waste or wastewaters discharged to the sanitary sewer which shall not be violated without approval of the Manager and the Director are as follows:

- (a) Wastewater having a temperature higher than 150 degrees Fahrenheit (65 degrees Celsius).
- (b) Wastewater containing more than 25 milligrams per liter of petroleum oil, nonbiodegradable cutting oils, or product of mineral oil origin.
- (c) Wastewater from industrial plants containing floatable oils, fat, or grease.
- (d) Any garbage that has not been properly shredded (See Article 1, Section x). Garbage grinders may be connected to sanitary sewers from homes, hotels, institutions, restaurants, hospitals, catering establishments, or similar places where garbage originates from the preparation of food in kitchens for the purpose of consumption on the premises or when served by caterers.
- (e) Any waters or wastes containing iron, chromium, copper, zinc, and similar objectionable or toxic substances to such degree that any such material received in composite wastewater at the wastewater treatment works exceeds the limits established by the Board of Trustees and/or the Director.
- (f) Any waters or wastes containing odor-producing substances exceeding limits which may be established by the Manager and/or the Director.
- (g) Any radioactive wastes or isotopes of such half-life or concentration as may exceed limits established by the Manager and/or the Director in compliance with applicable state or federal regulations.

- (h) Quantities of flow, concentrations, or both which constitute a "slug" as defined herein.
- (i) Waters or wastes containing substances which are not amenable to treatment or reduction by the wastewater treatment process employed, or are amenable to treatment only to such degree that the wastewater treatment plant effluent cannot meet the requirements of other agencies having jurisdiction over discharge to the receiving waters.
- (j) Any water or wastes which, by interaction with other water or wastes in the public sewer system, release obnoxious gases, form suspended solids which interfere with the collection system, or create a condition deleterious to structure and treatment processes.

Sec. 5 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 4 of this Article, and which, in the judgment of the Manager and/or the Director, may have a deleterious effect upon the wastewater facilities, processes, equipment, or receiving waters, or which otherwise create a hazard to life or constitute a public nuisance, the Manager and/or the Director may:

- (a) Reject the wastes;
- (b) Require pretreatment to an acceptable condition for discharge to the public sewers;
- (c) Require control over the quantities and rates of discharge; and/or,
- (d) Require payment of such amount as may be determined by the Board of Trustees and the Director, which amount shall be at least sufficient to cover the added cost of handling and treating the wastes not covered by existing taxes or sewer charges under the other provisions of this Article.

When considering the above alternative, the District and the Director shall give consideration to the economic impact of each alternative on the discharger. If the District and the Director permit 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 Board of Trustees and the Director.

Sec. 6 Grease, oil, and sand interceptors shall be provided when, in the opinion of the Manager or the Director, they are necessary for the proper handling of liquid wastes containing floatable grease in excessive amounts as specified in Section 4(c), or any flammable wastes, sand, or other harmful ingredients; except that such interceptors shall not be required for private living quarters or dwelling units. All interceptors shall be of a type and capacity approved by the Manager and the Director, and shall be located as to be readily and easily accessible for cleaning and inspection. In the

maintaining of these interceptors, the owner(s) shall be responsible for the proper removal and disposal, by appropriate means, of the captivated material and shall maintain records of the dates and means of disposal, which are subject to review by the Manager and the Director. Any removal and hauling of the collected materials not performed by owner(s) personnel, must be performed by currently licensed waste disposal firms.

- Sec. 7       Where pretreatment or flow-equalizing facilities are provided, or required, for any waters or wastes, they shall be maintained continuously in satisfactory and effective operation by the owner(s) at his or her expense.
- Sec. 8       When required by the Manager or the Director, the owner(s) of any property serviced by a building sewer carrying industrial wastes shall install a suitable structure, together with such necessary meters and other appurtenances, in the building sewer to facilitate observation, sampling, and measurement of the wastes. Such structures, when required, shall be accessible and safely located, and shall be constructed in accordance with plans approved by the Manager and the Director. The structure shall be installed by the owner at his or her expense, and shall be maintained by him or her so as to be safe and accessible at all times.
- Sec. 9       The Manager or the Director may require a user of sewer services to provide information needed to determine compliance with this ordinance. These requirements may include:
- (1)       Wastewaters discharge peak rate and volume over a specified time period.
  - (2)       Chemical analyses of wastewaters.
  - (3)       Information on raw materials, processes, and products affecting wastewater volume and quality.
  - (4)       Quantity and disposition of specific liquid, sludge, oil, solvent, or other materials important to sewer use control.
  - (5)       A plot plan of sewers on the user's property showing sewer and pretreatment facility location.
  - (6)       Details of wastewater pretreatment facilities.
  - (7)       Details of systems to prevent and control the losses of materials through spills to the municipal sewer.
- Sec. 10       All measurements, test, and analyses of the characteristics of waters and wastes to which reference is made in this ordinance shall be determined in accordance with the latest edition of "Standard Methods for the Examination of Water and Wastewater," published by the American Public Health Association. Sampling methods, locations,

times, durations, and frequencies are to be determined on an individual basis subject to approval by the Manager and the Director. All such costs and expenses shall be paid by the owner or the occupant.

- Sec. 11 No statement contained in this Article shall be construed as preventing any special agreement or arrangement between the District, the City, and any industrial concern whereby an industrial waste of unusual strength or character may be accepted by the District and the City of Rapid City for treatment.
- Sec. 12 Rates and related issues shall be set by the Board of Trustees and/or the Director, and are shown on Attachment "A" incorporated herein by reference.
- Sec. 13 No sewer connection permit shall be issued after the effective date of this Ordinance to serve any property located outside the boundary limits of the Rapid Valley Sanitary District - Water Service, except with specific approval of the Board of Trustees. Such connections shall be authorized by resolution and shall be subject to such terms, conditions, and fees as the Board of Trustees finds necessary or appropriate.

## ARTICLE V

### DESTRUCTION OF FACILITIES

No person(s) shall maliciously, willfully, or negligently break, damage, destroy, uncover, deface, or tamper with any structure, appurtenances, or equipment which is a part of the wastewater facilities.

## ARTICLE VI

### POWERS AND AUTHORITY OF INSPECTORS

- Sec. 1 The Manager, the District and their duly authorized employees bearing proper credentials and identification, shall be permitted to enter all private properties for the purposes of inspection, observation, measurement, sampling, and testing pertinent to discharge to the community system in accordance with the provisions of this ordinance.
- Sec. 2 The Manager, the District and their duly authorized employees are authorized to obtain information concerning industrial processes which have a direct bearing on the kind and source of discharge to the wastewater collection system. The industry may withhold information considered confidential. The industry must establish that the revelation to the public of the information in question might result in an advantage to competitors.

Sec. 3 While performing the necessary work on private properties referred to in Article VI, Section I, above, the Manager, the Director and their duly authorized employees shall observe all safety rules applicable to the premises established by the company.

Sec. 4 The Manager, the Director and their duly authorized employees bearing proper credentials and identification shall be permitted to enter all private properties through which the District holds a duly negotiated easement or duly executed facilities agreement, including, but not limited to, for the purposes of inspection, observation, measurement, sampling, repair and maintenance of any portion of the wastewater facilities appurtenant to said easement or facilities, if any, on said easement, all of which shall be done in full accordance with the terms of the duly negotiated easement or other agreement pertaining to the private property involved.

## ARTICLE VII

### ARBITRATION

Sec. 1 The District or their designee, shall arbitrate differences between the Manager, the Director and their duly authorized employees and sewer users on matters concerning interpretation and execution of the provisions of the District's ordinances.

## ARTICLE VIII

### PENALTIES

Sec. 1 Any person found to be violating any provision of this ordinance, except Article V, shall be served by the District with written notice stating the nature of the violation and providing a reasonable time limit for the satisfactory correction thereof. The offender shall, within the period of time stated in such notice, permanently cease all violations.

Sec. 2 Any person violating any of the provisions of this ordinance shall become liable to the District for any expense, loss, cost, or damage occasioned by the District by reason of such violation (including, but not limited to, attorney's fees incurred in enforcing this ordinance).

## ARTICLE IX

### VALIDITY

Sec. 1 All ordinances or parts of ordinances in conflict herewith are hereby repealed.

Sec. 2 The invalidity of any section, clause, sentence, or provision of this ordinance shall not affect the validity of any other part of this ordinance which can be given effect without such invalid part or parts.

ARTICLE X

ORDINANCE IN FORCE

Sec. 1        This ordinance shall be in full force and effect from and after its passage, approval, recording, and publication as provided by law.

Sec. 2        Passed and adopted by the Rapid Valley Sanitary District - Water Service, State of South Dakota on the day of the month, year, by the following vote:

This Sewer Use Ordinance was enacted by the Rapid Valley Sanitary District - Water Service with the First Reading on April 14, 2014 and the Second Reading on May 12, 2014, and publication on June 18, 2014.

Ayes 9 : namely Clyde Elwood, Shirley Haines, Richard Hensley, Patrick Judge, Duane Lassegard, Diana Nelson, Connie Olson, Dwight Peterson, and Jack Tomac.

Nays 0 : namely \_\_\_\_\_

Approved this 12 day of May 2014.

(Signed) \_\_\_\_\_ (Chairman of the Board of Trustees)

Attest:

(Signed) \_\_\_\_\_ (District Clerk)



# Attachment "A"

## Sewer Use Ordinance

### Rapid Valley Sanitary District - Water Service

**Pretreatment Permit Fee:** Each user providing pretreatment in accordance with this Ordinance shall pay an annual fee in an amount to be set from time to time by the Board of Trustees.

**Minimum Rate and Monthly Charge:** The occupant of every dwelling or business establishment which conveys sewage to the wastewater facilities will pay a minimum monthly as determined by the Board of Trustees. This minimum rate shall include the first 1,000 gallons of sewage. Sewer use in excess of 1,000 gallons will be charged at a rate per 1,000 gallons. Rates may be changed as market conditions are justified by the Board of Trustees.

**Rate Determination:** The methods used to determine the sewer use charge shall be as follows:

1. Residential Users: The amount of sewage flow from residential connections of property to which sewer service is available shall be determined yearly by averaging the water meter during the winter months of December, January, and February approximately. The monthly sewer rate will be determined by the rate set by the Board of Trustees. This use charge is for twelve (12) months, running from April 1st to April 1st of the following year. New residential users, or intermittent users, shall pay a sewer use charge based on the average residential water used for the District in the prior year.
2. Commercial and Institutional Users: The sewer use charge for commercial and institutional connections shall be determined by the rate set by the Board of Trustees. The sewage volume shall be determined from the monthly metered water, unless special allowances are made or authorized in writing by General Manager, or the sewage is metered as provided herein.
3. Industrial Users: The sewer use charge for industrial connections shall be determined by the rate set by the Board of Trustees
4. Special Arrangements: All commercial, industrial, and institutional user receiving metered water for use resulting in portions of the water not going in the wastewater facility may have its sewer use charge adjusted by having, at the owner's expense, a separate meter installed showing how much water is used outside. In the discretion of the District, the amount may be estimated by using the average used by said user during the winter time months.
5. Monitoring: Those industrial users declared major industrial users shall, at their own expense, perform monitoring to determine their industrial classification rate. Any industrial user choosing to monitor its discharge may do so at their own expense.
6. Exempt from Monitoring: All minor industries shall be exempt from self-monitoring.

## 7. Sewage Volume Measurement:

- a. Any commercial, institutional, or industrial user may choose to measure the actual sewage flow in lieu of basing the sewer use charge on the metered water. In such cases, the condition set forth herein shall apply.
- b. Any commercial, institutional, or industrial user receiving nonmetered water shall either install water meters for all nonmetered sources, or provide sewage flow measurement in accordance with the conditions set forth herein.
- c. All meters for nonmetered water sources and sewage flow measurement devices shall be installed in accordance with the plans and specifications approved by the Manager. All costs for design and installation shall be borne by the owner. The owner shall guarantee the District access to the meter or meters for monthly meter readings.

**Late Charges:** The sewer account will be charged a late charge (see Attachment B) which may be in addition to any charges made to the water account. The District's billing cycle consists of two billing areas (the first billing area and the second billing area). The water and sewer bills will be sent out on or about the 1st day of the month (first billing area) and on or about the 15th day of each month (second billing area) for amounts due from the preceding month. Payment shall be due on or before the 10<sup>th</sup> (first billing area) and the 25<sup>th</sup> (second billing area) days of each month. Those consumers in the first billing area: the water and sewer bills become delinquent after the 10th of the month. Payments received after 10 am on the first business day following the 10<sup>th</sup> day of the month will be assessed a late charge. However, notwithstanding the above, when the 10th day of the month falls on Saturday, Sunday, or a holiday, those payments received by 10 am the next working day, will not be charged a late charge. Those consumers in the second billing area: the water and sewer bills become delinquent after the 25th of the month. Payments received by 10 am on the first business day following the 25<sup>th</sup> day of the month will be assessed a late charge. However, notwithstanding the above, when the 25th day of the month falls on Saturday, Sunday, or a holiday, those payments received by 10 am the next working day, will not be charged a late charge.

**Delinquent Accounts:** Water and sewer billings thirty (30) days past due will be mailed a shutoff notice. An automatic service charge is added to each account that is mailed such notice. If the account is not paid in full by the date stated on the notice, water service will be disconnected and a disconnection and/or reconnection charge will be added to the account. Payment arrangements may be approved by District to prevent service being disconnected.

**Unpaid Sewer Bills:** The District shall be entitled to collect unpaid sewer and water bills in accordance with the procedures set forth in this Ordinance, the District's Water Use Ordinance, and the South Dakota Codified Laws.

**SEWER USE RESOLUTION  
ATTACHMENT B  
RAPID VALLEY SANITARY DISTRICT**

**RESIDENTIAL  
EXTENSION/TAP FEES**

Per Lot (extension of main) \$350.00

**RESIDENTIAL  
CONNECTION FEES**

Connection to sewer stub \$400.00

approved 8/9/21

**OTHER CHARGES**

Late Charge \$9.00

**RESIDENTIAL SEWER RATES**

Minimum Charge \$24.03

Per 1,000 gallons \$5.88

effective 1/1/22

**COMMERCIAL  
EXTENSION/TAP FEES**

Fees by size of service

4" \$2,000.00

6" \$3,000.00

8" \$4,000.00

10" \$6,000.00

**COMMERCIAL  
CONNECTION FEES**

Commercial connection fees

will be charged per dwelling unit

See figure S-1

1 to 2 units \$500.00

3 + units \$200 x units

All other Commercial Buildings will be charged 1.5 times the commercial extension fees

sewer main jetting/camera \$1.00/ft

**COMMERCIAL SEWER RATES**

rate determined by size of water meter

METER SIZE	MINIMUM	PER/1000
3/4"	\$24.57	\$6.12
1"	\$37.77	\$6.12
1.5"	\$42.38	\$6.12
2"	\$57.32	\$6.12
3"	\$80.73	\$6.12
4"	\$113.72	\$6.12
6"	\$141.92	\$6.12
8"	\$166.36	\$6.12

Attachment "C"

WATER USE ORDINANCE and SEWER USE ORDINANCE  
RAPID VALLEY SANITARY DISTRICT - WATER SERVICE

MAINTENANCE/REPAIR/ REPLACEMENT AUTHORIZATION

The undersigned Owner(s) of the property located at \_\_\_\_\_  
("Property") hereby authorize Rapid Valley Sanitary District - Water Service (hereafter "District") to secure a qualified contractor to enter upon the premises serviced by the District to make such necessary maintenance, repair and/or replacement of service lines (water/sewer) as it deems necessary to maintain said service lines in a state of good repair in accordance with its ordinances and applicable law.

Except as otherwise provided herein (check the box below agreed upon by the District), the undersigned hereby acknowledges that the cost of any work relating to the maintenance, repair and/or replacement of the service line (water or sewer) to the above-described property shall be at the sole cost of the Owner(s). Owner(s) hereby agrees to save and hold the District harmless from any liability or costs arising out of such maintenance, repair and/or replacement of service lines to the property.

Unless other arrangements have been made by Owner(s) with the District prior to commencement of the work, Owner(s) acknowledges and agrees that upon receipt of the District's invoice, the Owner(s) shall remit payment in full to the District's office at 4611 Teak Drive, Rapid City, South Dakota 57703. Provided, however, if Owner(s) has made prior arrangements with the District, the District will schedule payments (plus a one-time service charge of ten percent [10%] of the total of the contractor's invoice) in equal monthly installments (without interest), in accordance with payment schedule to be determined by District. The plumbing on the effluent side of the meter will be the responsibility of the property owner. Owner(s) understands and agrees that in the event the District schedules a plumber to perform any plumbing on the effluent side of the meter for the homeowner and the homeowner does not remit payment of the total of the plumbing contractor's invoice, the District will apply the total of the contractor's invoice (plus a one-time charge of ten percent [10%] of the total of the contractor's invoice) to the owner(s) water and sewer account with the District. \*Mark box below relevant to payment schedule.

Owner(s) understands and agrees that in the event he/she does not remit payments in accordance with the terms of this agreement, then in that event the District, upon thirty (30) days written notice, may terminate all further services to the above referenced property until payment in full is remitted to the District for the services rendered.

The District (except in case of an emergency) will give Owner(s) twenty-four (24) hour notice before entering upon Owner(s)' property to make any such maintenance, repair and/or replacement of service lines; however, the advance notice may be waived by the undersigned or other occupant of the premises if such maintenance, repair and/or replacement is necessary to avoid damage, contamination or interruption of services to the above referenced property.

\_\_\_\_\_  
Signature of Owner(s)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature of Owner(s)

ACKNOWLEDGED AND AFFIRMED

\_\_\_\_\_  
Authorized Representative of the District

☐ Check box if **no** charge for water/sewer service maintenance repair and/or replacement.

☐ Check box if Owner(s) will make payment in full upon receipt of invoice.

\* ☐ Check box if charges will be applied to owner's account. Terms: \$ \_\_\_\_\_ x \_\_\_\_\_ months.

**Water Use Ordinance No. 14-1, Article VI, Section H.**

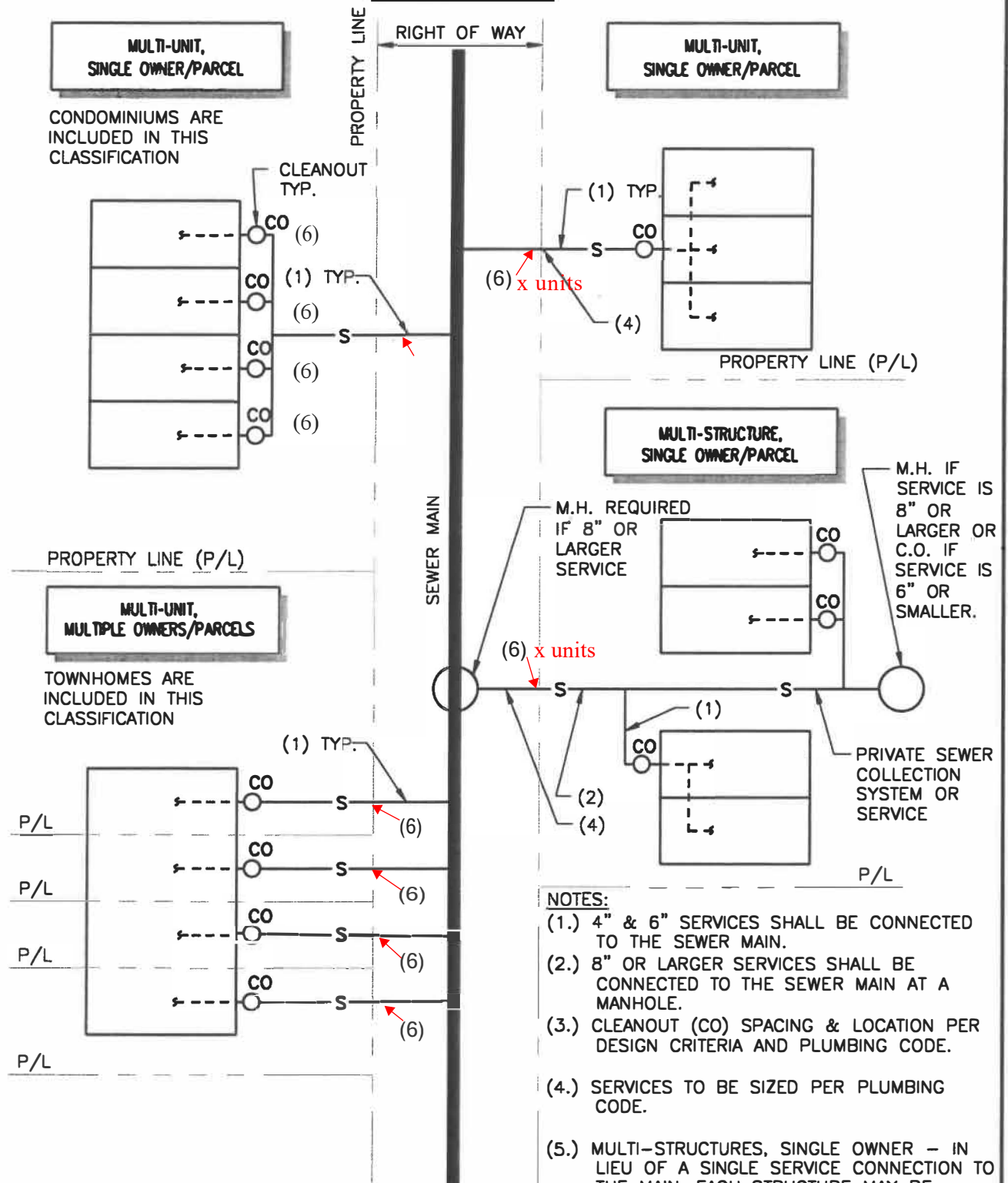
The District at their discretion may replace or repair non-functioning or damaged water service lines that are a maximum of 1" inch in diameter from curb stop to the meter for single family dwellings within Rapid Valley Sanitary District. (Commercial properties are not included). The property owner or consumer is required to sign a repair/replacement authorization form (Water Ordinance No. 14-2 Attachment C) in order for the District to perform this service. The replacement and/or repair will be done in accordance with established District criteria and the location of the meter inside the home or within the meter pit will be at the discretion of authorized personnel of the District. This may require relocating the meter. If homeowner requests for alternate location, this additional cost and responsibility for this work will be borne by homeowner. The District will replace up to a maximum of one hundred (100) feet of service line, if replacement of service line is required. The District will not be responsible for the repair or replacement of a meter pit. The plumbing on the effluent side of the meter will be the responsibility of the property owner. The consumer is responsible for proper protection of the service line up to and including the District's meter to keep from freezing.

The District shall not be responsible for settling of the surface over the consumer's water line (without charge to property owner) after the expiration of ninety (90) days from date of completion of new installation. Not included, nor shall the District be responsible for cost of replacing sod, grass, shrubs, trees or the reclamation of other landscaping, decks, patios, driveways, concrete, or any structures if removal of such is required for installation, or be held responsible for any damage to property in accordance with Article VI, Section E.

**Sewer Use Ordinance No. 14-2, Article III, Section 3**

All costs and expenses incidental to the installation and connection of the building sewer shall be borne by the owner(s). The owner(s) shall indemnify the District from any loss or damage that may, directly or indirectly, be occasioned by the installation of the building sewer. The owners shall incur all costs for maintenance and repair or replacement of their entire sewer service from sewer main connection to the building or residence. Residential services are able to be repaired by the District with no cost to the owner if service is collapsed or a physical separation is evident from the sewer main to the property boundary after the resident verifies with a District representative video showing the location of defect. This does not include plugged sewer services due to flushing materials or objects that create blockages. A repair authorization form is required to be signed by the owner of the property. The owners shall indemnify the District from any loss or damage from sewer main backups, unless clear and convincing evidence of direct result of negligence on the District's part.

# TYPICAL SANITARY SEWER SERVICE LINE LAYOUTS



## RVSD DESIGN CRITERIA

NOT TO SCALE

- NOTES:**
- (1.) 4" & 6" SERVICES SHALL BE CONNECTED TO THE SEWER MAIN.
  - (2.) 8" OR LARGER SERVICES SHALL BE CONNECTED TO THE SEWER MAIN AT A MANHOLE.
  - (3.) CLEANOUT (CO) SPACING & LOCATION PER DESIGN CRITERIA AND PLUMBING CODE.
  - (4.) SERVICES TO BE SIZED PER PLUMBING CODE.
  - (5.) MULTI-STRUCTURES, SINGLE OWNER - IN LIEU OF A SINGLE SERVICE CONNECTION TO THE MAIN, EACH STRUCTURE MAY BE CONNECTED TO THE MAIN.
  - (6.) CONNECTION FEES REQUIRED FOR COMMERCIAL OR RESIDENTIAL

## **Resolution No. 2020-01**

### **Rapid Valley Sanitary District - Water Service**

#### **A RESOLUTION ESTABLISHING A POLICY FOR ALLOWING DISCHARGE OF A SUMP PUMP INTO THE DISTRICT'S SANITARY SEWER SYSTEM**

WHEREAS, Article IV Section 1 of the Rapid Valley Sanitary District - Water Service Sewer Ordinance prohibits discharging water from a sump pump into the District's sanitary sewer system; and

WHEREAS, sump pumps often discharge to the ground surface in areas where storm sewer collection systems are not immediately available; and

WHEREAS, discharging water to the ground surface during freezing weather creates a safety hazard for pedestrians and motorists, and contributes to the deterioration of streets; and

WHEREAS, the District has determined allowing limited disposal of sump pump waste water into the District's sanitary sewer system during winter months is not likely to overload, or cause damage to, the District's sanitary sewer system; and

WHEREAS, the Board of Trustees of the Rapid Valley Sanitary District - Water Service finds that it is in the District's best interests to allow disposal of sump pump discharge into the sanitary sewer system in certain circumstances and approves a policy regulating such disposal.

NOW THEREFORE, BE IT RESOLVED by the Rapid Valley Sanitary District - Water Service that the following policy be adopted:

#### **Sump pump or unpolluted water disposal.**

- A. If sump pump discharge creates an icing issue during freezing weather, the preferred discharge location is to the storm sewer system if located immediately adjacent to the property. If storm sewer is immediately adjacent to a property, discharge to the sanitary sewer will not be allowed. Edge drain connections will not be allowed. The sump pump discharge piping from the building to the public storm sewer shall be at the sole expense of the property owner.
- B. The District Manager or his or her designee may issue seasonal sump pump discharge permits. The permit will allow sump pump discharge to the District's sanitary sewer system during freezing weather where the sump pump discharge cannot be delivered to a storm sewer collection system immediately adjacent to the property.

1. Sump pump discharge into the District's sanitary sewer system will only be allowed between November 1st and April 1st of each year. Coverage under the permit will be continuous until canceled.
2. All interior work shall be performed in compliance with the District's currently adopted Sewer Ordinance . The sump pump connection to the sanitary sewer shall be constructed at the property owner's sole expense.
3. Diversion valves and permanent piping shall be installed per the District's detail titled "Sump Pump Bypass to Sanitary Sewer". The District shall be solely responsible for opening and closing the valve connecting the sump pump discharge pipe to the District's sanitary sewer system. The District will provide a locking mechanism to prohibit valve operation by anyone but the District.
4. The property owner shall grant the District periodic access to the facility in order to ensure compliance with the requirements of the permit. Failure to provide reasonable access to inspect will result in the cancellation of the permit in addition to any other remedies provided for violation of this Policy, including but not limited to shutting off District water service.
5. The permit fee shall be per the District's currently approved fee schedule. If the fee does not appear in the District's fee schedule it shall be 0 (zero) dollars.
6. The District may cancel the permit at any time if the terms of the permit are not complied with, if the sewer system cannot handle additional flow, if storm sewer is made available, or for other good cause.

Dated this \_\_\_\_\_ day of \_\_\_\_\_, 2020

Rapid Valley Sanitary District - Water  
Service

\_\_\_\_\_  
\_ Rusty Schmidt, Manager

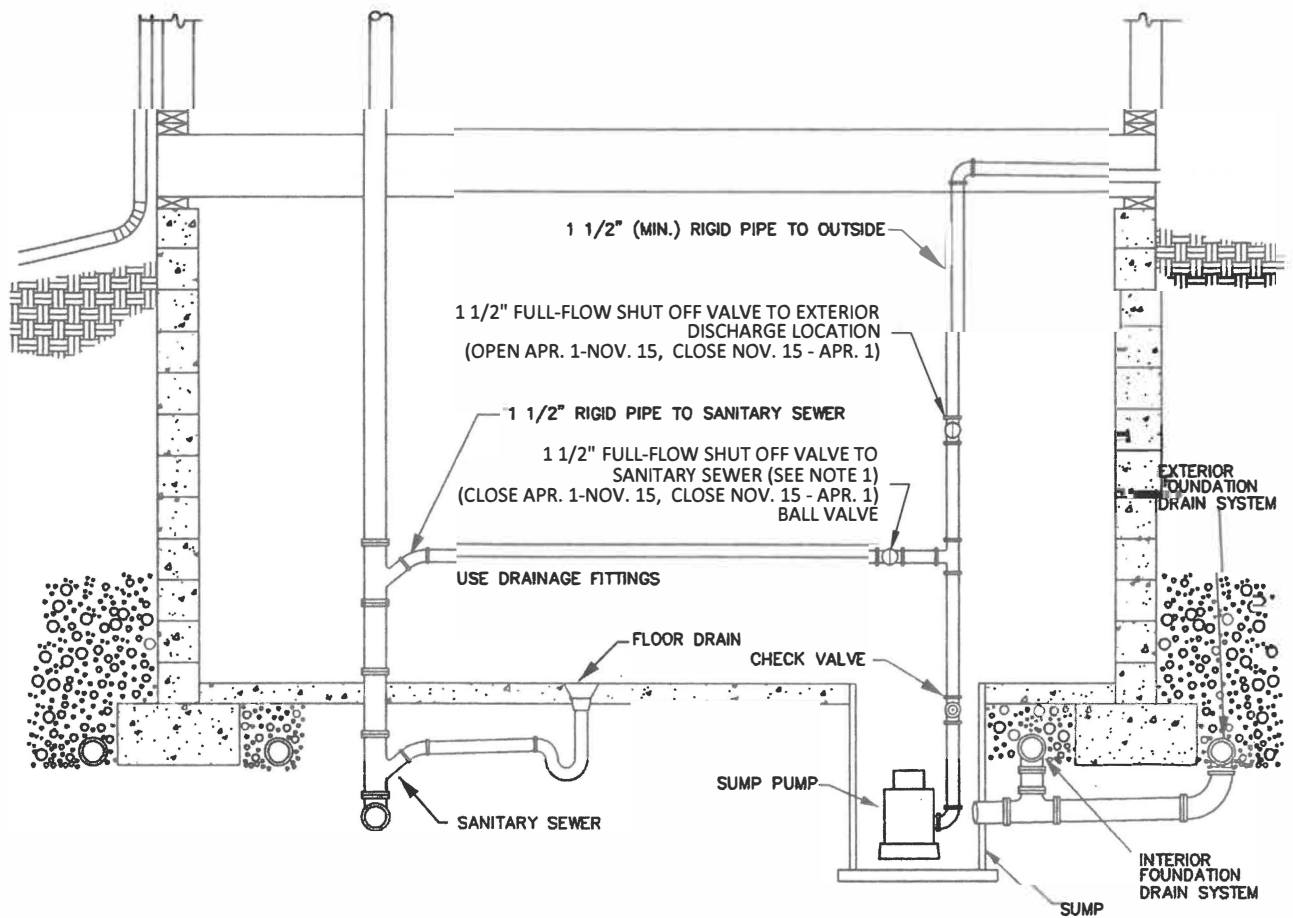
Attest

\_\_\_\_\_  
Marty Garwood, District Clerk

(Seal)



## Sewer Ordinance Attachment C



### GENERAL NOTES:-

1. A PERMIT FROM RAPID VALLEY SANITARY DISTRICT - WATER SERVICE IS REQUIRED TO DISCHARGE TO THE DISTRICT'S SANITARY SEWER SYSTEM.
2. A VALVE COVER WILL BE SUPPLIED WITH A LOCK BY THE DISTRICT AND SHALL BE LOCKED AND UNLOCKED BY THE DISTRICT PERSONNEL ONLY AT THE APPROPRIATE TIMES OF THE YEAR. DISTRICT PERSONNEL WILL OPEN (FALL) AND CLOSE (SPRING) THE LOCKING COVER OF THE VALVE AT THE BEGINNING AND END OF EACH SEASON. THE DATES LISTED ON THIS SHEET ARE ONLY APPROXIMATE DATES AND THEY WILL VARY EACH YEAR BASED ON WEATHER AND CREWS AVAILABILITY. THE VALVES WILL BE CLOSED TO THE SANITARY SEWER IN THE SPRING NO LATER THAN APRIL 1.
3. THE SUMP PUMP DISCHARGE SHALL CONFORM TO THE REQUIREMENTS OF THE SEWER ORDINANCE OF THE RAPID VALLEY SANITARY DISTRICT.
4. UNIFORM PLUMBING CODE APPLIES.

## Rapid Valley Sanitary District - Water Service

# SUMP PUMP BYPASS TO SANITARY SEWER

Date Jan. 21, 2020

# **Rapid Valley Sanitary District - Water Service Attachment B**

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4611 Teak Drive, Rapid City, SD 57703  
Phone (605) 393-1050 | Fax (605) 393-1051

## **Design and Construction Standards For Water and Wastewater Piping and Appurtenances**

### **PART 1 - GENERAL**

#### **1.1 Description**

- A. This document applies to all underground potable water and wastewater systems and appurtenances installed within the jurisdictional boundaries of the Rapid Valley Sanitary District - Water Service (RVSD).

#### **1.2 Design Criteria and Standards Specified Elsewhere**

- A. City of Rapid City, South Dakota, Infrastructure Design Criteria Manual, 2012 Edition or current edition shall apply unless Rapid Valley Sanitary District standards issued in this document are more restrictive.
- B. Recommended Design Criteria Manual for Wastewater Collection and Treatment Facilities, South Dakota Department of Water and Natural Resources, current edition.
- C. Recommended Standards for Water Works, "Ten States Standards", current edition.
- D. National Standard Plumbing Code Illustrated, current edition.
- E. American Water Works Association, Applicable Manuals of Water Supply Practices, current editions.
- F. Uniform Fire Code, current edition.
- G. Handbook of PVC Pipe Design, Unibell, current edition.
- H. Gravity Sanitary Sewer Design and Construction, ASCE Manuals and Reports on Engineering Practice – No. 60 or current edition.
- I. Recommended Standards for Wastewater Facilities, "Ten States Standards", current edition.
- J. Rapid Valley Sanitary District – Water Service Sewer Use Ordinance, current edition.
- K. Rapid Valley Sanitary District – Water Service Water Use Ordinance, current edition.

#### **1.3 Enforcement and Authority**

- A. The General Manager of RVSD has the authority to interpret and enforce criteria, standards and construction requirements. Conflicts between specifications, design criteria manuals, codes and standards shall be resolved by the General Manager.
- B. Administrative Rules of South Dakota, ARSD 74.53.05 and 74.53.04.
- C. This document is approved by the RVSD Board of Trustees and is included as an attachment to the current Water Use and Sewer Use Ordinances.

- D. The General Manager, District staff, and their designated Engineer will provide review and enforcement of the requirements.

#### 1.4 Specifications and Details

- A. City of Rapid City Standard Specifications for Public Works Construction, 2012 or current edition. These specifications shall apply unless Rapid Valley Sanitary District standards issued in this document are more restrictive. Changes, additions and/or clarifications are listed in Part 2 and Part 3 of this document.
- B. City of Rapid City Standard Plates. Specifically Sections 8, 9, and 11.

#### 1.5 Review and Plan Submittal

- A. Two sets (2) of construction plans and associated documentation for proposed water and wastewater piping and improvements shall be submitted to the General Manager of RVSD for review by the Engineer and staff. Plan submittals shall be made directly by the developer to RVSD and shall not be made from other agencies.
- B. As-built drawings including plan and profiles shall be prepared by the developer and submitted to RVSD for review upon completion of the construction. The as-built plan drawings shall also be submitted in Autocad electronic format. The electronic drawings shall include lot layouts, right-of-way, easements, water and sewer mains and services and associated appurtenances.
- C. Plans will be reviewed and returned within ten (10) working days of submittal. Review comments will be made by the District Engineer and staff. Plans shall be resubmitted for review and comment after modification. Comments made on the original submittal shall be returned with the new plan submittal.
- D. The submittals shall include complete construction plans, profiles, details, detailed specifications, general notes, reports and other information concerning the work. The submittals shall be prepared by a Registered Professional Engineer in the State of South Dakota. Such documents shall be complete, clear, neat, legible, detailed and in a form acceptable to RVSD and other local, city, county, state or federal review agencies.
- E. The report shall include a water and/or sewer planning report for the ultimate development to be served. The report shall cover the proposed full-build out of the proposed development and it shall also review how the surrounding areas will be affected. The reports shall also include wastewater design flows, pipe capacities, existing conditions, hydraulic network, available fire flows at peak day demands, projected water usage, system pressures and other information required.
- F. RVSD will approve the proposed water and sewer plans after all requirements of the development have been fulfilled.
- G. RVSD review and approval applies only to water and sewer facilities. The project must be reviewed and approved by all appropriate local, county and state governing agencies prior to any construction.
- H. The Rapid Valley Volunteer Fire Department will also review all water projects and will make review comments available to RVSD. This review will add 3 working days to the review process for a total review duration of 13 working days.
- I. Plans shall be submitted to the South Dakota Environment and Natural Resources by the Developer for review and approval prior to construction

## 1.6 Construction

- A. Construction of the proposed water and sewer facilities must be constructed by a Contractor holding a current City of Rapid City Water and Sewer Installer's License.
- B. RVSD personnel shall be given access to the work at all times to make inspections of the work.
- C. RVSD will not accept facilities not in conformance with specified standards.
- D. Construction may not proceed until RVSD approves the final plans.
- E. Locations: Water and sewer facilities shall be located within the street, alley or right-of-ways unless topography dictates otherwise. Easements are required where the water and sewer facilities will be located outside of the right-of-ways.
- F. All water and sewer appurtenances such as manholes, cleanouts, valves and fire hydrants shall be accessible by motorized vehicle.
- G. The project will be accepted into the RVSD system upon the following:
  - 1. Construction is complete and facilities can be placed into service for their intended use.
  - 2. All testing has been completed and the required results have been achieved.
  - 3. As-built plans and electronic files are provided to RVSD.
  - 4. Facilities are in conformance with plans, specifications and RVSD standards.

## 1.7 Quality Control

- A. Source Quality Control: Materials shall be clearly marked with size, class, type, test pressure and manufacturer's name.
- B. Regulatory Agencies: Pipe for potable water service shall bear the National Sanitation Foundation Seal. AWWA and ASTM standards shall be followed where applicable.

## 1.8 Product Submittals

- A. Shop Drawings and Product Data:
  - 1. Dimensional data for all pipe, fittings and appurtenances.
  - 2. Material description and conformance with standards.
  - 3. Affidavit certifying compliance with applicable standards and specifications.
  - 4. Other items required to review product conformance with standard specifications.

# PART 2 - WASTEWATER PIPING AND APPURTENANCES

## 2.1 Sewer Mains and Services

- A. Minimum sewer main size is 8" which shall have a minimum slope of .6%. If larger diameter pipe is required or is shown in the RVSD Master Plan, the Developer/Contractor will incur the cost of up-sizing. Pipe material shall be ASTM D-3034, SDR-35 or SDR-26 gasket sewer pipe. All sewer mains will have access downstream by means of a manhole at all connection points to city trunk sewers.

- B. All new sewer service lines shall have a fabricated pipe wye on the sewer main, GPK gasketed sewer fitting or equal (8"x4" is GPK No. 107-0084). Direct sewer taps are not allowed on new sewer mains.
- C. Sewer services shall be installed to the property line and marked with a 10' x ¾" rebar at the end of each service. Sewer services shall be installed to a maximum depth of 8' at the property line or at the proper depth to provide service to the proposed lot.
- D. Tracer wire is required on all sewer mains and sewer service lines. Tracer wire shall be brought to the surface at cleanouts and manholes.
- E. External or internal chimney seals are required on all manholes.
- F. Minimum sewer main cover depth from the top of the pipe to finished grade shall not be less than 4.0 ft. Provide insulation per the standard detail in cases where minimum cover cannot be provided. Insulation may be required between storm sewer and sanitary sewers.
- G. Minimum sewer service cover depth from the top of the pipe to the finished grade shall not be less than 3.5 ft.
- H. Sewer minimum slopes, 8"=.6/100ft, 10"=.42/100ft, 12"=.33/100ft, 14"=.21/100ft, 16"=.21/100ft, 18"=.18/100ft.

## 2.2 Sewer Testing and Inspection

- A. General:
  - 1. A visual inspection and televising inspection test shall be performed by RVSD or an approved Contractor for all sewer mains and manholes as a condition of acceptance by RVSD. All tests shall be performed after backfill is complete but prior to any surface restoration. In addition, all new sewer main shall undergo a hydrostatic or air pressure test per standard specifications.
  - 2. Prior to pressure testing newly installed sewer pipe, RVSD or an approved Contractor shall jet and remove all accumulated construction debris, rock, sand, gravel, silt, and other foreign matter from the sewer with an appropriately sized cleaning ball or jetting machine.
- B. Closed Circuit Television (CCTV) Inspection.
  - 1. The Contractor shall arrange and pay for internal CCTV inspection of the completed sewer mains.
  - 2. The CCTV inspection shall be performed by RVSD or an approved contractor.
  - 3. A-USB flash drive of completed inspections shall be delivered to RVSD.
  - 4. USB flash drive shall be properly labeled with on screen measurements or voice recorded measurements.

## PART 3 - WATER PIPING AND APPURTENANCES

### 3.1 Water Mains, Fittings, and Appurtenances

- A. Fittings shall be fusion bonded epoxy ductile iron AWWA C-153, Class 350 mechanical joints with retainer glands or approved joint restraining devices shall be used where joint restraint is required by the plans or in this specification. Mechanical joint restraints are required at all fittings and pipe bells within the restraining length.

- B. All ductile iron fittings and joint restraining devices shall be encased in 8 mil polyethylene per the Standard Specifications.
  - C. All metallic water fittings/services in contact with potable water shall be “No Lead” brass alloy and “NL” shall be cast or permanently stamped on the fitting or valve. Fittings and valves shall comply with the USA Safe Drinking Water Act, and US EPA.
  - D. All pipe couplings shall be restrained mechanical joint sleeves with restraints allowing 5 degree deflection.
  - E. The existing mains must remain in-service until the new water main is complete, disinfected, and pressure tested.
- 
- F. Water mains shall be PVC AWWA C-900 or C-905, DR 18, Pressure Class 235. Minimum main size is 8”. If larger diameter is required for fire flow purposes or is shown in the RVSD Master Plan the Developer/Contractor will incur the cost of up-sizing.
  - G. All main valves shall be mechanical joint non-rising stem resilient seat gate valves. Butterfly valves are not allowed.
  - H. Fire hydrants shall be American Darling model B-84, American Flow Control, AVK or Mueller.
  - I. Ductile iron fittings shall be mechanical joint and fusion-bonded epoxy coated. Use of American-made products is recommended.
  - J. Fittings shall be mechanically restrained at all vertical bends, all fittings on lowerings, reducers, tees and valves. Restraints are not required on horizontal bends of 45 degrees or less where properly thrust blocked. Acceptable joint restraining devices shall be EBBA, Uni-Flange, Romac Field Flange or Alpha Fittings. Concrete thrust blocks are required at all other areas not mechanically restrained.
  - K. Pipe joints for PVC water main shall be push-on bell and spigot. Where water main pipe joints are located closer than the restraining length to a restrained valve or fitting, the bell joint shall be restrained with a bell restraint fitting. The designer shall provide restraining length designs.
  - L. Bolts for mechanical joints shall be NSS “Cor-Ten Blue” corrosion resistant type or stainless with a minimum of 304 rating. (Type 304 stainless will be used if soil test is moderate-to-severe for being corrosive)
  - M. Tapping sleeves shall be stainless steel construction with a minimum 150 psi rating. The branch end shall be flanged and stainless-steel bolts and nuts shall be provided. A flange by mechanical joint valve shall be installed on the tapping sleeve.
  - N. All main valves shall be mechanical joint resilient seat gate valves. Butterfly valves are not allowed.
  - O. Testing and disinfection per standard specifications. The Contractor is responsible for all testing, tapping, disinfection and water sampling.
  - P. Tracer wire is required on all water main and locator boxes will be placed at all fire hydrant locations. The Contractor shall coordinate all tracer wire splice locations with RVSD staff.
  - Q. Water mains shall be bedded with limestone crusher fines or type 2 bedding is recommended if ground water is present.

### 3.2 Water Service Lines

#### **Polyethylene Water Service Lines:**

- A. Minimum service line size is 1".
- B. Tapping saddles and corporation stops are required. Tapping and all materials are the responsibility of the Contractor. RVSD shall observe all water main taps. The Contractor shall contact and schedule the proposed tap with RVSD 2 working days prior to anticipated tap.
- C. Tapping saddles shall be solid band 304 stainless steel construction with stainless steel nuts and bolts. Tapered Buna-N ASTM D-2000 rubber gasketed (Ford FS303 or equal).
- D. One inch (1") through two inch (2") diameter shall be iron pipe **size (IPS) poly SIDR 7, 250 psi minimum rating**; with stiffener inserts at each curb stop, fittings, and corporation stop. Tubing shall meet the requirements of AWWA C901, NSF Standards 14 and 61, and shall have the material designation of PE3608 by the Plastic Pipe Institute.
- E. Compression type connections with inserts are required. (No yellow brass allowed. Red brass only).
- F. No service line splices on any section of the line.
- G. Piping over 2" and less than 4" shall be PVC service line pipe and shall comply with ASTM D-2241, 200 psi minimum rating, SDR 21. 4" and larger shall be C-900 PVC per specifications.
- H. Tracer wire shall be installed at each service line and exposed at the curb box. A ¼" hole will be drilled in the lid of the curb box and tracer wire ran through. Do not cut the tracer wire when continuing to house. On new construction of service lines to the house a tracer wire is required from the curb box to the water meter or valve inside the house with a tracer wire exposed at the curb box lid through the ¼" hole or holes that are drilled in the curb box lid.
- I. Curb stops with boxes shall be placed on each new service line at the property line or as shown on the plans.
- J. Curb boxes shall be placed behind the sidewalk and marked with a steel fence post. All curb boxes shall be adjustable and installed to finish grade. Finished grade is defined as the top of finished and graded topsoil. All curb boxes will be wrapped in 8mil plastic.
- K. Curb boxes shall be Minneapolis pattern No. 5622 (1-1/2") or Buffalo style 100E curb box with bushings added to curb stop.
- L. Water services shall be bedded with fines according to bedding specifications for crusher fines with a minimum 3" below the pipe and 3" above the pipe.
- M. Select soil material is required for a minimum of 18" above the pipe and shall include no rocks 2" or larger in nominal diameter.

### 3.3 Design Standards for RVSD Water Systems:

**See City of Rapid City Infrastructure Design Criteria Manual**

Minimum Parameters

RVSD Selected  
Standards

- |   |   |
|---|---|
| 1. Distribution System Minimum Working Pressure at Peak Day | 40 psi  |
| 2. Normal Distribution System Work Pressure                 | 50-80 psi   |
| 3. Distribution System Maximum Working Pressure             | 125 psi   |
| 4. Residential Maximum Working Pressure (in home)           | 80 psi  |
| 5. Minimum Working Pressure at Peak Hour Demand             | 20 psi  |
| 6. Water Main Size  | 8" minimum  |
| 8. Distribution System Valving                              | Valve cluster on all sides of pipe intersections, street intersections with an 800' maximum spacing. 450' max. and all intersections and high points. |
| 9. Fire Hydrant Spacing                                     |   |
| 10. Pipe Cover  | 6' minimum  |
| 11. Pipe looping  | Required.   |

### 3.4 Water Main and Water Service Bedding Specifications

Bedding Spec for Crusher  
Fines

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SIEVES	% Passing
3/8"	100
#4	90-100
#8	50-90
#40	15-40
#200	10-25

Liquid Limit Max- 25

Plasticity Index- 0-3

\*\*\*\* END OF SECTION \*\*\*\*