

PUTNAM PUBLIC SERVICE DISTRICT

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Sewer Ordinance #1

PROVIDING FOR THE MANDATORY USE OF PUBLIC SEWER FACILITIES AND THE COLLECTION OF FEES FOR SAID USE, SPECIFYING AND APPROVING CERTAIN METHODS, MATERIAL AND TEST PROCEDURES TO BE USED IN MAKING CONNECTIONS AND CONSTRUCTING A SANITARY SEWER SYSTEM IN THE TERRITORY OF THE PUTNAM PUBLIC SERVICE DISTRICT BY DEVELOPERS FOR PRIVATE DWELLINGS, SMALL COMMERCIAL STORES, AND BUSINESS ESTABLISHMENTS,

WHEREAS the legislature of the State of West Virginia has empowered Public Service Districts to require all owners, tenants, or occupants of any house, dwelling or buildings located near any sewer facility and which can be served by a gravity service line to connect with and use such sewer facility and to cease the use of all other means for the collection, treatment and disposal of sewage and waste matters from such houses, dwellings and buildings, and

WHEREAS the Putnam Public Service District has found that the construction of a service line of reasonable distance is economical compared to other alternative for the disposal of sewage, and

WHEREAS the Teays Valley Public Service District, the predecessor to the Putnam Public Service and the South Putnam Public Service District, adopted a mandatory sewer connection rule on January 8, 1979 and has been enforcing said rule,

WHEREAS the Putnam Public Service District recognizes the importance of constructing an infiltration-free underground sanitary sewer pipe, and

WHEREAS certain procedures and materials are known to contribute serious infiltration problems, thereby imposing extreme maintenance and treatment problems on sanitary sewer collection systems and treatment plant facilities, and

WHEREAS certain material and equipment for use in customer service lines are now available, the use of which can be expected to provide service connections, joints, fittings, and pipe walls which will be completely watertight and of adequate trench strengths,

NOW THEREFORE be it ordained by the Putnam Public Service District:

SECTION I Mandatory Customer Connection

The Putnam Public Service District hereby requires all owners, tenants or occupants of any house, dwellings, and buildings located within such a distance thereof that sewer service is reasonably available to the District's sewer facilities, where sewage will flow by gravity from such houses, dwellings, or buildings into such sewer facilities, to connect with and use such sewer facilities, and to cease the use of all other means for the collections, treatment and disposal of sewage and waste matters from such houses, dwellings and buildings where there is such gravity flow and such houses, dwellings and buildings can be adequately served by the sewer facilities of the District.

Said Connection shall be made within thirty-one (31) days of notice of certifications by the Putnam Public Service District that such sewer facilities are available to and are adequate to service such owner, tenant, or occupant and sewage will flow by gravity from such house, dwelling or building into such sewer facilities. This rule is made pursuant to West Virginia Code, Chapter 16, Article 13A, Section 9, and it is the intention of the Putnam Public Service District to exercise the authority provided therein in enforcing this rule.

The Putnam Public Service District, after certifying the availability of sewer service, shall begin charging for said service thirty-one (31) days after notice has been received by the owner, tenant or occupant of said house, dwelling or building and shall exercise the authority provided it in Chapter 16, Article 13A, of the Code of West Virginia to collect said fees and charges.

SECTION II INSTALLATION OF CUSTOMER SERVICE LINES

Customer service lines are to be inspected and approved by the District or its designated representative before trench backfilling. No taps are to be made into the system other than by District personnel.

Only sewage is to enter the sanitary sewer system. EXPRESSLY PROHIBITED from draining into the system are storm drains, surface and ground water, roof drainage, and any explosive, corrosive, poisonous or otherwise damaging materials.

Construction and material specifications must be complied with, and are defined within, this ordinance.

Customer service lines and appurtenances shall be subject at all times to the inspection and approval of the District or its duly authorized representative who shall have supervision and control over same.

A. SIZE

Service lines shall in no case be less than four (4) inches in diameter. Where double or multiple homes such as apartments or house and mobile homes are permitted to be on a common line under a special connection permit issued by the District. Double or multiple homes will be served by a six (6) inch line, unless a larger line is required by the District's plumbing inspector. An approved adaptor connecting the service line to the lateral sewer must be used. Commercial sites shall be connected with a lateral of six (6) inches or larger.

B. MATERIALS

The following type pipe is approved for service line use between the district's service lateral and the owner's point of connection at the building:

1. SOLID WALL (Gasket) SLIP JOINT PVC-SCHEDULE 35

Every joint in slip point plastic piping shall be made in strict accordance with installation standards. *All bends and service connections shall be gasket compression type slip joint. Glue joints will not be acceptable.*

2. CAST IRON OR DUCTILE IRON SOIL PIPE

Conforming to HS-67, service weight, with a bell and spigot-type compression type joint. The joint shall meet all the applicable requirements of ANSI-A2-11 and AWWA C111 for push-on joints.

C. BEDDING AND BACKFILLING MATERIAL

After digging and trench for service line, the homeowner or his/her contractor shall return only clean earth or stone material (3/4" maximum size), sand or rock dust to the trench. Specifically, backfilling material should be free of unsuitable materials such as large stone, frozen earth, clods, sticks, brush, etc. The bedding material shall be thoroughly tamped by hand or mechanical means. Bedding should be in place under the pipe to be in a stable position for inspection purposes. This will prevent any slippage of the bell joints when backfilling is approved. When rock is present the customer will need six (6) inches of suitable bedding under and six (6) inches suitable backfill over the pipe.

D. SERVICE GRADE LINES

Where the property owner makes his connection to the service lateral from the main at his property line or at the edge of the right-of way, the pipe shall be laid on grade in the following manner: Four (4) inch diameter pipes shall be laid on grade of not less than seven (7) inches per fifty (50) feet; for six (6) inch diameter pipes, grade of not less than five (5) inches per fifty (50) feet is required. The use of FERNCOs™ shall not be an acceptable means of connection unless it is the “strong back” type.

E. SERVICE LINES; DIRECTION AND SIZE CHANGES

Service lines must run as direct as possible from the point of connection at the service lateral to the dwelling making the connection. If changes in directions are required they should be constructed using 45° and 22° bends to grade. Where the four (4) inch lateral lines from multiple dwellings make connections to six (6) inch lateral, approved fittings shall be used. The use of FERNCOs™ shall not be an acceptable means of connection unless it is the “strong back” type.

F. CLEANOUTS

A cleanout shall be constructed immediately outside the building. The cleanout shall consist of a two way sanitary tee aligning the riser pipe to grade. The riser pipe shall be at grade level or an inch or two below the surface. The riser pipe shall have a bell or threaded hub to accommodate a threaded brass plug or a leaded-in ferrule, if required, for the purpose of cleaning or maintenance. Cap for cleanouts on PVC pipe may be threaded inserts of the same material as the cleanout.

G. INSPECTION REQUIREMENTS

Property owners are responsible for notifying the District and requesting an inspection from the District office (Phone: 304-757-6551) when the service lateral and its appurtenances and hardware are completed and ready for inspection. In order to schedule inspection of the work, **an appointment must be made within 24 hours of completions of the work.** All pipes, pipe joints, and hardware must be visible and accessible to the inspector. Bedding under the pipe must be in place to stabilize the pipe for inspection purposes, however, no trench shall be backfilled or any work covered prior to District inspection. If the pipe is covered, the owner will be required to re-excavate the installation in order for the District personnel to inspect the pipe. **If the pipe has been constructed out of compliance with the District’s ordinance, the property owner will be responsible to correct the construction at his own expense.** If upon inspection, the work is found to be satisfactory and approved, authorization will then be given to the owner to properly backfill the service lateral trench. Care should be taken to prevent Damage to the pipe during backfilling as well as to secure a well-compacted and firm trench.

H. FLOOR DRAIN PLUG

The simplest way to stop sewer backup is to plug the opening where it first occurs. This is at the floor drain, the sanitary sewer system’s lowest opening in the house. Commercial plugs are available and can be placed in the floor drain below the grate. Bolts on metal end pieces are tightened causing a rubber gasket to expand and seal the plug in the pipe.

SECTION III Grease Traps

In accordance with the West Virginia Department of Health interpretive Rule 16-1 Series VII, Part X, the Putnam Public Service District requires grease traps on all restaurants where the quality of grease or fats is likely to be large. Such traps shall be designed and constructed in accordance with the Department of Health regulations (see insert below), and approved by the local Health Department.

In all restaurants or other non-residential facilities where food is prepared for public consumption and where the quality of grease or fats is not likely to be large but grease or fats are or may be used in the preparation of such food, the Putnam Public Service District requires all Grease Trap/Interceptors to be engineered for use. Internal Grease Traps must have the proper capacity and be properly installed to allow for maintenance and cleaning. Internal grease traps/interceptors shall **not be** approved for new construction.

Metal septic tanks are not allowed for use as a grease trap/interceptor.

If a food establishment changes its type of business and the quality of grease and fats becomes large, it will be the responsibility of the operator and /or owner of the property to install an outside grease trap in accordance with the Department of Health rules and regulations

Also, it shall be the responsibility of the operator of the facility to assure that all grease traps are properly cleaned and maintained and if the operator fails to do so, he/she will be held financially responsible for any cost the District experiences in cleaning said grease from its sewer lines. The District and Health Department will periodically inspect said grease traps and recommend schedules for their cleaning. If any facility operator/owner fails to properly maintain the grease traps, the District will petition the Public Service Commission of West Virginia for the right to discontinue water and sewer service to the subject property.

Example of How a Grease Trap Works



Board of Health
Interpretive Rule 16-1
Series VII, Part X

Section 1.0 Grease traps

- 1.1 Grease traps shall be provided for all restaurants and similar establishments where the quantity of grease and fats in liquid wastes is likely to be large.
- 1.2 The grease traps shall be located with 30 feet from the fixtures served.
- 1.3 Only those plumbing fixtures into which the grease and fats are to be discharged are to be connected to the grease traps.
- 1.4 **External** grease trap shall be minimum 150 gallons capacity. Larger grease traps may be required depending upon the loading.
- 1.5 The grease trap shall be in an easily accessible place outside the building served.

Section 5.0 Administrative Due Process

Those persons adversely affected by the enforcement of these interpretive rules desiring a contested case hearing to determine any rights, duties, interests, or privileges shall do so in a manner proscribed in the West Virginia Procedural Rules, Board of Health, Chapter 16-1, Series 1, 1981, Rules of Procedure of Contested Case Hearing and Declaratory Rulings. The aforementioned procedural rules are incorporated herein by reference.

Section 6. Severability

If any provisions of these rules or the applications thereof to any person or circumstances shall be held invalid, such invalidity shall not affect the provisions or the applications of these rules which can be given effect without the invalid provisions or application, and to this end the provisions of these rules are declared to be severable.

West Virginia Public Service Commission
Rules for the Government of Sewer Utilities 150 CSR 5

4.8. b.2. Where conditions hazardous to life or property are found to exist on the customer's premises, or where the utility's regulating, measuring or collection equipment or facilities have been tampered with, the water may be shut off without notice in advance.

4.9.a. Non-compliance with rules. -- Any utility may decline to serve an applicant until he has complied with these rules and the utility's rules set forth in a Commission approved tariff governing sewer service.

4.9.b. Applicant's facilities inadequate. -- The utility may refuse to serve an applicant if the applicant's installation of sewer piping is hazardous or of such character that satisfactory service cannot be provided.

4.10.a. The utility shall, at all reasonable times, have access to service connections and other property owned by it on a customer's premises for purpose of inspection, maintenance and operation.

(To view full PSC Rules and Regulations visit The Public Service Commission of West Virginia's website @www.psc.state.wv.us)

SECTION IV.
Detailed Specifications for
“Main Line Extensions”

1. All pipe shall be ductile iron or SDR 35 PVC push joint gasket pipe unless specified by the Putnam PSD or Design Engineer.
 2. In parking and driving areas, sewer mains with less than eighteen (18) inches of coverage must be laid with ductile iron pipe.
 3. Manholes shall be made with XPEX™ additive at 2.5 to 2.8% and dyed pink by the supplier to indicate that XPEX™ has been added to the mixture.
 4. Manholes shall not be designed with splash invert pipes. Designer shall use an inside drop or design the manholes with a concrete trough slide from such inverts to the bottom invert of the manhole.
 5. Manholes shall have non shrink and Hydrogen Sulfide inhibiting mortar around pipes and lift holes.
 6. Manhole frames and lid shall be NEENAH® 1915-S or Equal.
 7. All manhole frames are required to have tar rope (mastic) between frame and manhole. In addition, the frame shall be bolted to the manhole with 1/2 inch x 8 inch Stainless Steel Wedge Anchors.
 8. All creek crossings shall be incased or must be ductile iron pipe.
 9. Manhole seams shall have two (2) rows of 3/4 inch tar rope or mastic between each seam.
 10. The District may require some outside manhole seams to be waterproofed with a layer of tar.
 11. A manhole shall be brought to grade with the difference of elevation not exceeding Twelve (12) inches by one of the following methods:
 - a. 1-six (6) inches or greater concrete riser (may not stack multiple risers). Concrete rings less than six (6) inches in height will not be accepted.
 - b. HDPE Riser Ring
 - c. Steel Riser (Paving Rings)
- Manholes in which the difference of elevation for top grade adjustment is greater than Twelve (12) inches the contractor shall adjust with a manhole riser section.
12. The District may require bedding material of sand or gravel around manholes if the natural soil in which the manhole is situated is not suitable.
 13. SDR 35 Sewer mains must be bedded in gravel. #57 Limestones—four (4) inches minimum under pipe for bedding and six (6) inches minimum over pipe
 14. Pipe installed twelve (12) feet and over in depth shall be ductile iron pipe.
 15. No sewer main shall be constructed within ten (10) feet of a water main when running parallel.
 16. Any sewer main constructed across a high pressure gas main must be constructed in accordance with requirements of the gas utility.
 17. When a sewer and water main cross, a minimum eighteen (18) inch vertical separation is required, and where possible water mains should be on top of sanitary sewer main. If a sewer line must cross over a water main, the sewer main must be encased for a distance of 10 feet on both sides of the water line.

18. Other utilities shall not be constructed over, under, or within three (3) feet parallel.
19. All manholes must be up to grade and all inverts must be completed before the District will release to the Putnam County Office of Planning and Infrastructure.
20. Force mains shall have a minimum of thirty-six (36) inches of coverage. Two (2) inch force main shall be constructed from a 250 class pipe. Force mains larger than two (2) inch should be constructed with a minimum of 200 class pipe. All force mains shall have marking tape at least 18 inches above the top elevation of the pipe and marking wire at the pipe elevation.
21. Sewer lateral fittings shall be Harco® Thickwall SDR 26 with SDR 35 pipe or equal.
22. Metallic Detector Tap six (6) inches wide labeled “CAUTION SEWER MAIN BURIED BELOW” shall be required and installed approximately 12 to 24 inches below the surface and centered above the pipe.
23. Tracer wire #12 AWG solid strain shall be installed with force main at pipe elevation and brought up outside of valve boxes, air/vacuum valves, and cleanouts.
24. Do not alter the ground profile of the land within the easement without the prior written permission of the District.

25. FIELD QUALITY CONTROL—TESTING SEWERS FOR LEAKS, INFILTRATION, AND DEFLECTION

- a. All sewers constructed under this contract shall be tested for leaks and infiltration using methods as hereinafter specified. The sequence and methods of test shall be as follows:
 - i. The cost of all testing of sewer lines and manholes shall be included in the unit price bid for pipe and manholes. The CONTRACTOR shall furnish all materials, equipment and labor required for all types of tests, the ENGINEER being responsible only for directions, recording data, and calculating air losses and /or infiltration rates.
 - ii. Observation of pipe laying and smoke testing shall in no way relieve the CONTRACTOR of the responsibility of conducting the required low pressure air test, infiltration tests, or correcting poor workmanship.

26. SUBSEQUENT TESTING

- a. As soon as it is practicable after installing and back filling sewer, and before putting new sewers into service, low pressure air tests shall be made from manhole to manhole, or up to a maximum of 500 feet of sewer main and 500 feet of sewer laterals at a time as directed by the ENGINEER.

27. LOW PRESSURE AIR TESTING

- a. Air test equipment shall be equal to Cheme Air-Loc Equipment, as manufactured by Cheme Industrial, Inc. of Hopkins, Minnesota.

28. EQUIPMENT USED SHALL MEET THE FOLLOWING REQUIREMENTS:

- a. Pneumatic plugs shall have a sealing length equal to or greater than the diameter of the pipe to be inspected.
- b. Pneumatic plugs shall resist internal test pressures without requiring internal bracing or blocking.

29. LOW PRESSURE AIR TEST

- a. clean pipe to be tested by propelling snug fitting inflated rubber ball through the pipe with water.
- b. Air shall be introduced into the plugs to the manufactures specifications.
- c. Add air slowly to the portion of the pipe installation under test until the internal air pressure is raised to four (4) psig.
- d. After an internal pressure of four (4) psig is obtained, allow at least two (2) minutes for air temperature to stabilize, adding only the amount of air required to maintain pressure and hold for five (5) minutes. Line segments that drop one (1) psig or more during the five (5) minute test are considered “failed” and must be repaired and retested.

30. DEFLECTION TEST

- a. A deflection test shall be performed on all flexible sewer pipe. The test shall be conducted after the final backfill has been in place at least 30 days. No pipe shall exceed a deflection of five (5) percent. If the deflection test is to be run using a rigid ball or mandrel, it shall have a diameter equal to 95 percent of the inside diameter of the pipe. The test shall be performed without mechanical pulling devices. Pipe deflection shall be measured and recorded by the CONTRACTOR in the presence of the ENGINEER using the appropriate methods approved by the pipe manufacturer and acceptable to the ENGINEER.

31. REPAIRS AND ACCEPTANCE

- a. If the sewer fails to meet the requirements of the leakage and/or infiltration tests, the CONTRACTOR shall, at his/her own expense, determine the source of leakage and/or infiltration and make the necessary repairs or replacements.
- b. If any sewer fails to meet the requirements of the deflection test, the CONTRACTOR shall, at his/her own expense, replace all failed pipe as necessary to comply with the deflection requirements. All replacement pipe shall also be tested for deflection.
- c. On completion of sewer lines, all sewer and manholes will be inspected for foreign matter, including sand brought in by infiltration, and any such matter shall be removed before final acceptance of the lines. Any visible leakage at manholes or into lines shall be corrected regardless of the results of the required tests.

32. VACUUM TESTING

All new manholes installed on the project shall be subjected to a vacuum test to determine the seal of all joints within the manhole. The vacuum test will not be required for existing manholes that are adjusted or partially reconstructed. The following test procedure is required for all new manholes:

- a. Lift holes shall be plugged with an approved non-shrinkable grout prior to testing.
- b. Drop connections shall be installed prior to testing.
- c. The manhole shall be finished and back filled to design elevation prior to testing.
- d. The vacuum test shall include testing of the seal between the cast iron frame and top slab or cone section, slab, barrel sections, and /or grade rings.

33. TESTING PROCEDURE

- a. Temporarily plug (and brace) all pipes entering the manhole at least eight (8) inches into the sewer pipe. The plug shall be inflated at a location beyond the manhole/pipe gasket.
- b. The pressure gauge for the test hood shall be liquid filled, having a 3 1/2 inch face with scale reading from 0 to 30 inches of mercury.
- c. A vacuum of ten (10) inches of mercury shall be drawn on the manhole. Upon reaching ten (10) inches of mercury, closed the valve on the vacuum line to the manhole and disconnect the vacuum line.
- d. For the manhole to be considered as having passed the vacuum test, the time for the vacuum reading to drop from ten (10) inches of mercury to nine (9) inches of mercury must be equal to greater than the following values: or

Time (Minutes)	Manhole Depth	4ft Dia.	5ft Dia.	6ft. Dia.
	20 feet or less	1	2	3
	20.1 feet to 30 feet	2	3	4

- e. Manholes failing the vacuum test shall be repaired with non-shrink grout or other suitable material and tested per the procedure shown previously.
- f. All temporary plugs and braces shall be removed after each test.
- g. The CONTRACTOR shall provide all equipment and labor required for vacuum testing of new manholes. The cost for this procedure shall be incorporated into the price bid for the manhole.
- h. Manhole Testing-- In the event that vacuum testing is not available, a water test may be substituted only after ENGINEER approval.

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SECTION V.
Detail Drawings

1. SANITARY SEWER DETAIL DRAWINGS

a. Drawing sheets S 1 through S 2

2. PUMP STATION DETAIL DRAWINGS

a. Drawing sheets PS 1 through PS 3

3. GRINDER PUMP STATION

a. Conduit Layout

Adopted as amended at the regular meeting of the Putnam Public Service District on this the _____ day of _____, 2018.

PUTNAM PUBLIC SERVICE DISTRICT

Paul D. Callahan, Chairman

Mark L. Smith, Secretary

Stanley Booth, Treasurer