



Sewer Rules and Regulations

Prepared By:

**TOWN OF WINCHESTER
CITY OF WINSTED**



Water and Sewer Commission

Acting in their capacity as the Town's

Water Pollution Control Authority

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The Town of Winchester is an equal opportunity provider, employer and lender

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Article 1 – Intent, Purpose, Applicability, and Enforcement of Regulations

§ 101 – Intent

The Winchester Water and Sewer Commission established these regulations to:

- a) Inform the public as to the technical and administrative procedures to be followed in expanding and/or connecting to the Town of Winchester sanitary sewer system
- b) Prevent the introduction of pollutants into the sanitary sewer system which will interfere with the collection and/or treatment system.
- c) Prevent the introduction of pollutants into the treatment system which will pass through the system, inadequately treated, into the waters of the state, or the atmosphere, or otherwise be incompatible with the system;
- d) Improve the opportunity to recycle and reclaim wastewaters and sludge from the system;
- e) Establish responsibility for maintenance of public and private facilities.

§ 102 – Purpose

These Regulations:

- a) Delineate inspection powers and authority of for Town of Winchester personnel.
- b) Define the terms used throughout the Regulations.
- c) Mandate connection to the Town of Winchester sanitary sewer system in certain cases.
- d) Allow the use of private, on-site subsurface sewage disposal systems in certain cases.
- e) Regulate the construction of building sewers and connections to the Town of Winchester sanitary sewer system.
- f) Establish procedures for expanding and/or making connections to the Town of Winchester sanitary sewer system.
- g) Establish specific limits for pollutant discharges which, by their nature or by their interaction with sewage, will be detrimental to the public health, cause damage to the public sewer or the water pollution control facility, pollute the waters of the state, or otherwise create a public nuisance.
- h) Forbid malicious, willful, or negligent damage to the Town of Winchester sanitary sewer system and establish a penalty for each violation.
- i) Establish penalties for violations of the regulations.
- j) Establish provisions for the Water and Sewer Commission to lien properties in cases where persons fail to comply with orders issued by the Commission.
- k) Establish rates and charges for the connection to and use of the Town of Winchester sanitary sewer system.

§ 103 - Applicability

This regulation shall apply to the Town of Winchester and to persons outside the Town who are users of the public sewer.

§ 104 – Enforcement

Except as provided otherwise herein, the Winchester Water and Sewer Commission shall implement and enforce the provisions of these Rules and Regulations.

Article 2 – Power, Authority, and Duties

§ 201 – Water and Sewer Commission

1) Origin of Sewer Authority:

On January 4, 1965, the Town of Winchester created a Sewer Authority by ordinance, which became effective on January 20, 1965. The ordinance conferred all of the powers, purposes, and objectives set forth in Chapter 103 of the Connecticut General Statutes – Revision of 1958 to the new Sewer Authority.

2) Conversion of Sewer Authority to Water Pollution Control Authority:

Chapter 103 Section 7-246 Subsection (c) of the Connecticut General Statutes re-designated Sewer Authorities in existence as of October 1, 1978 as Water Pollution Control Authorities and deemed said Water Pollution Control Authorities as the successors to the Sewer Authorities for all the purposes of Chapter 103.

3) Empowerment by Town of Winchester Charter:

Article VI - Section 605 of the Town of Winchester Charter (as amended – 2001) designates the Water and Sewer Commission as the Water Pollution Control Authority for the Town of Winchester, and delegates all powers accorded to Water Pollution Control Authorities by the Connecticut General Statutes to the Water and Sewer Commission.

§ 202 – Department of Public Works

1) Operation and Maintenance of Wastewater Treatment System:

The Winchester Water and Sewer Commission (hereinafter referred to as the Commission) utilizes the Winchester Department of Public Works to operate and maintain the Town of Winchester wastewater treatment system.

§ 203 – Inspectors

1) Access to Records and Properties:

- A. The Commission and duly authorized employees of the Commission, bearing proper credentials and identification, shall have, at reasonable times, access to and copy any records or information pertaining to any effluent that is being monitored in accordance with the provisions of these Rules and Regulations.
- B. Commission and duly authorized employees of the Commission, bearing proper credentials and identification, shall be permitted to enter upon all properties for the purpose of effluent record inspection and/or transcribing, surveying, inspection, observation, measurement, sampling and

testing of all wastewater treatment works under the management of the Commission, in accordance with the provisions of these Rules and Regulations. The Commission and other duly authorized employees of the Commission shall be allowed access to dwelling units upon reasonable notice to determine the appropriate assessment and sewer user rate based on existing facilities. If the Commission or other duly authorized representatives of the Commission are not allowed access, the Commission may charge the owner based on the highest rate and the highest allowable assessment.

2) Duty to Observe Safety Rules; Indemnifications:

- A. While performing the necessary work in private properties referred to in Section 203, the Commission and other duly authorized employees of the Commission shall observe all safety rules applicable to the premises as established by the user.
- B. The user shall be held harmless for injury or death to the Commission's employees and the Commission shall indemnify the user against loss or damage to its property by Commission employees and against liability claims and demands for personal injury or property damage asserted against the user and growing out of the gauging and sampling operation, except as such may be caused by negligence or failure of the user to maintain safe conditions.

3) Access to Wastewater Treatment Systems Covered by Easements:

The Commission and duly authorized employees of the Commission, bearing proper credentials and identification, shall be permitted to enter all private properties, through which a proper easement is on record, for the purpose of effluent record inspection and/or transcribing, surveying, inspection, maintenance, operation, repair and reconstruction of any portion of the wastewater treatment system under the management of the Commission subject to the terms of the easement. All activities and work conducted within said easement shall be performed in full accordance with the terms of the duly-negotiated easement pertaining to the private property.

4) Authority to Issue and Enforce Notices of Violation, Orders, and Penalties:

The Commission and duly authorized employees of the Commission, bearing proper credentials and identification, shall have the authority to serve notices of violations of these Rules and Regulations. The Commission shall be responsible for the enforcement of these Rules and Regulations and shall have authority to issue orders and impose penalties as authorized therein, assess and require payment for consequential damages, to establish limits for the discharge of toxic or objectionable substances and shall have any other powers or authority necessary and proper for the enforcement and the achievement of the goals of these Rules and Regulations.

Article 3 – Definitions and Abbreviations

Unless the context specifically indicates otherwise, the meaning of terms and abbreviations in these Rules and Regulations shall be as follows. Any term or abbreviation not specifically defined shall be deemed to mean the standard industry definition.

§ 301 – Definitions

Act - See "Clean Water Act".

Act of God - shall mean an unusual or unforeseeable manifestation of the forces of nature that could not be prevented.

Analytical Testing - shall mean all methods of sample collection, preservation and analysis as prescribed in 40 CFR 136, "Test Procedures for the Analysis of Pollutants."

Approval Authority - shall mean the Director in a NPDES state with an approved state pretreatment program and the administrator of the E.P.A. in a non-NPDES state or NPDES state without an approved state pretreatment program.

Assessment Projects - shall mean new sewer line extension projects where the latest version of the Commission's "Guidelines and Procedures for Extension of Sanitary Sewer Facilities into Previously Un-served Areas through the Assessment of Costs to Property Owners" are used.

Auxiliary Meter - shall mean:

- (a) A meter or meters used on a primary water supply other than a municipal water supply.
- (b) A meter or meters used to supplement the meter or meters measuring a municipal water supply and considered necessary in the determination of the sewage service charge and/or surcharge.

Authorized Representative - shall mean:

- (a) A user who is:
 - 1) A principal executive officer of at least the level of vice-president, if the industrial user is a corporation;
 - 2) A general partner or proprietor if the user is a partnership or proprietorship, respectively;
 - 3) A duly authorized representative of the individual designated above if such representative is responsible for the overall operation of the facilities from which the indirect charge originates.
- (b) Any person designated by the Commission to act on its behalf.

Baseline Monitoring Report - shall mean a report submitted by categorical industrial users within 180 days after the effective date of a categorical standard which indicates the compliance status of the user with the applicable categorical standard [40 CFR 403.12(b)].

Beneficial Uses - shall mean uses of the waters of the state that may be protected against quality degradation, including but not limited to, domestic, municipal, agricultural and industrial water supply, power generation, recreation, aesthetic enjoyment, navigation and the preservation and enhancement of fish, wildlife and other aquatic resources or reserves, and other uses, both tangible or intangible as specified by federal or state laws.

Biochemical Oxygen Demand (BOD) - shall mean the amount of oxygen utilized in the biochemical oxidation of organic matter in five (5) days at 20 degrees Celsius, expressed in milligrams per liter. The determination of BOD shall be performed in accordance with the methods approved pursuant to the Code of Federal Regulations, Part 136 of Title 40 (40 CFR 136). The values shall be as determined by the methods of analytical testing, except that when the BOD value is to be used in determining wastewater treatment system charges, and the BOD test does not produce an accurate measure of the oxygen demand actually exerted by the waste when undergoing treatment, then for use in determining said charges the BOD shall be calculated by whichever of the following formulas give the more accurate measure of oxygen demand actually exerted.

$$\text{BOD} = (F1) (\text{COD}) \text{ or } \text{BOD} = (F2)(\text{TVR})$$

Wherein F1 and F2 are constants to be determined for each wastewater treatment plant and TVR is the total volatile residue in milligrams per liter as determined by the methods of analytical testing.

Building – Any structure used or intended for supporting or sheltering any use of occupancy

Building Drain - shall mean that part of the lowest horizontal piping of a building's plumbing system, which receives the discharge from soil, waste and other drainage pipes inside the walls of a building and conveys it to the building sewer. The building drain shall extend to five (5) feet outside the inner face of the building wall.

Building Drain - Sanitary - A building drain that conveys sewage only.

Building Drain - Storm - A building drain that conveys storm water or other drainage, but no sewage.

Building Pump Connection - shall mean a pump or pneumatic ejector and a discharge pipe connecting a building or septic tank with a sewer main and used in instances where a standard gravity "building sewer" cannot be utilized because the elevation of the first floor is too low. Pumps that are required for lower levels of buildings and which discharge into a gravity building sewer which handles the remainder of the building are not classified as building pump connections.

Building Sewer - shall mean the extension from the building drain to the public sewer or other places of disposal may also be called a "house connection or service lateral".

(a) **Building Sewer - Sanitary** - A building sewer that conveys sewage only.

(b) **Building Sewer - Storm** - A building sewer that conveys storm water or other drainage, but no sewage.

CFR - shall mean Code of Federal Regulation.

Capacity – shall mean the maximum amount of sewage that can be carried by part or all of the sewage collection system. Said capacity shall be determined by actual field measurements of flows or by use of a suitable computer model. If field measurements are used, they must not be more than twelve (12) months old, and they must be compared to flows at the WPCF during the same time period. If computer modeling is used, the following parameters shall be used:

Peaking Factor	Based on current TR-16 curves
Pipe n = value	Existing = 0.015 to 0.0175 Proposed = 0.013
Minimum Velocity	2.0 feet per second at design flow (check at start-up for adequacy)
Maximum Velocity	12.0 feet per second
Infiltration Allowance:	Use TR-16 allowances
Gallons per capita per day	70 gallons per capita per day

Categorical Industrial User - shall mean an industrial user subject to categorical pretreatment standards, which have been promulgated by the Environmental Protection Agency.

Categorical Standards – shall mean the National Categorical Pretreatment standards or pretreatment standards.

Chemical Oxygen Demand (COD) - shall mean the oxygen equivalent of that portion of the organic matter that is susceptible to oxidation by a strong chemical oxidant. The determination of COD shall be performed in accordance with the methods approved pursuant to the Code of Federal Regulations, Part 136 of Title 40 (40 CFR 136).

Clean Water Act- shall mean the Federal Water Pollution Control Act, enacted by Public Law PL 92-500 and any amendments thereto; as well as any guidelines, limitations and standards promulgated by the Environmental Protection Agency pursuant to the Act.

Combined Sewer - shall mean a sewer, which is intended to receive both sewage and storm- or surface water. These are expressly forbidden within the Town of Winchester and in areas outside of the city tributary to the Winchester Sanitary Sewer System.

Commission - shall mean the Winchester Water and Sewer Commission, acting in their capacity as the Town's Water Pollution Control Authority.

Commissioner - shall mean the Commissioner of Environmental Protection for the State of Connecticut.

Compatible Pollutant – shall mean the biochemical oxygen demand, suspended solids, pH and fecal coliform bacteria, plus any additional pollutants identified in the water pollution control facilities NPDES permit, where the water pollution control facility is designed to treat such pollutants and, in fact, does treat such pollutants to the degree required by its NPDES permit.

Composite Sample – shall mean a mixture of aliquot samples obtained at regular intervals over a time period. The volume of each aliquot is proportional to the discharge flow rate for the sampling interval. The minimum time period for composite sampling shall be four (4) hours.

Connection Permit - shall mean a permit issued by the Authority to connect to a sewer owned and maintained by the Authority may also be called "sewer connection permit".

Contamination - shall mean an impairment of the quality of the waters of the state by waste to a degree, which creates a hazard to the public health, e.g., through poisoning or through the spread of disease. Contamination shall include any equivalent effect resulting from the disposal of wastewater, whether or not waters of the state are affected.

Cooling Water - shall mean the cleaned wastewaters discharged from any system of heat transfer such as condensation, air conditioning, cooling or refrigeration in which the only pollutant added is heat and which has such characteristics that it may be discharged to a natural outlet in accordance with federal and state laws and regulations.

Daily Maximum - shall mean the maximum allowable value for any single observation in a given day.

DEP – shall mean the State of Connecticut Department of Environmental Protection.

Director or Director of Public Works shall mean the Director of Public Works of the Town of Winchester or his authorized agent, assistant or representative.

Domestic Sewage – shall mean sewage that consists of water and human excretions or other waterborne wastes incidental to the occupancy of a residential building or nonresidential building but not including wastewater from water-softening equipment, commercial laundry wastewater and blow down from heating and cooling equipment or other industrial or commercial process wastewater.

Dwelling Unit – shall mean a single unit providing completely independent living facilities for one (1) or more persons, including permanent provisions for living, sleeping, eating, cooking and sanitation.

EPA - Shall mean the United States Environmental Protection Agency.

Easement - shall mean an acquired legal right for the specific use of land owned by others.

Effluent - shall mean the liquid overflow of any facility designed to treat, convey or retain wastewater.

Equipment - shall mean all movable, non-fixed items necessary to the wastewater treatment process.

Equivalent Dwelling Unit (also referred to as EDU) – shall mean the daily discharge of sewage from a typical residence in the Town of Winchester. For the purposes of these Rules and Regulations and EDU shall be assumed to be 250 gallons of sewage per day.

Federal Act – See: Clean Water Act.

Fee Schedule - shall mean the latest resolution fixing rates charged by the Commission for services rendered as approved or amended by the Commission.

Floatable Oil – shall mean fats, oil, or grease in a physical state such that it will separate by gravity from sewage by treatment in an approved pretreatment facility.

FOG (Fats, Oils, and Grease) – shall mean animal and plant derived substances that may solidify or become viscous between the temperatures of 32°F and 150°F (0°C to 65°C), and that separate from wastewater by gravity. Melted animal fat, any edible substance identified as grease per the most current EPA method as listed in CFR 136.3.

Garbage - shall mean the animal and vegetable waste resulting from the handling, preparation, cooking, and serving of foods.

Grab Sample – shall mean a sample that is taken from a waste stream on a one-time basis with no regard to the flow in the waste stream and without consideration of time.

Holding Tank Waste - shall mean any sanitary waste from holding tanks or chambers such as are used in connection with boats, chemical toilets, campers, trailers or other isolated facilities from which sanitary waste emanate. This definition includes sanitary wastes from septic tanks and grease interceptors.

Incompatible Pollutant – shall mean all pollutants other than compatible pollutants as defined above.

Industrial Wastewater - shall mean the wastes admissible to the wastewater treatment system from industrial manufacturing processes, trade or business or from the development, recovery or processing of natural resources, as distinct from sanitary sewage.

Interference - shall mean inhibition or disruption of the Authority's sewer system, treatment processes, or operations, which contributes to a violation of any requirement of the wastewater treatment system NPDES Permit. The term includes prevention of sewage sludge use or disposal by the Authority in accordance with Section 405 of the Act, or any criteria guidelines or regulations developed pursuant to the Solid Waste Disposal Act (SWDA), the Clean Air Act, the Toxic Substance Control Act or more stringent state criteria (including those contained in any state sludge management plan prepared pursuant to Title IV of SWDA) applicable to the method of disposal or use employed by the Authority.

Maintenance - shall mean keeping the wastewater treatment works in a state of repair and shall include expenditures necessary during the service life of the treatment works to maintain in the capacity (capability) for which said works were designed and constructed.

May - is permissive (see "shall").

Medical Waste - shall mean isolation wastes, infectious agents, human blood products, pathological wastes, sharps, body parts, contaminated bedding, surgical wastes, potentially contaminated laboratory wastes, and dialysis wastes.

Mg/L - shall mean milligrams per liter.

Natural Outlet - shall mean any outlet into a waterway, pond, ditch, lake or other body of surface or groundwater.

New Source - shall mean any building, structure, facility or installation from which there is or may be a discharge of pollutants, the construction of which commenced after the publication of proposed Pretreatment Standards under Section 307(c) of the Act which will be applicable to such source if such standards are thereafter promulgated in accordance with that section, and subject to the other provisions as found at 40 CFR 403.3(k).

Normal Strength Sewage - shall mean sewage having daily average concentration values of not more than the following in the pollutant categories indicated:

Constituent	Concentration
Biochemical Oxygen Demand	250 mg/L
Suspended Solids	300 mg/L
Total Phosphorus as P	20.0 mg/L
Total Nitrogen as N	25.0 mg/L
Biodegradable oils and greases	in less than floating amounts

NPDES Permit - shall mean National Pollutant Discharge Elimination System Permit issued pursuant to Section 402 of the Act (33 USC § 1342).

Nuisance - shall mean anything which is injurious to health, or is indecent or offensive to the senses, or is an obstruction to the free use of property so as to interfere with human comfort or enjoyment of life or property, whether affecting individual interests per se or affecting at the same time an entire community or neighborhood of any considerable number of persons, although the extent of the annoyance, interference or damage may not be inflicted equally upon the persons therein.

Operation and Maintenance (O&M) Costs - shall mean all costs incidental to the complete operation and maintenance of the treatment works, including replacement.

Pass Through - shall mean a discharge, which exits the POTW into waters of the United States in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES Permit (including an increase in the magnitude or duration of a violation).

Persons, Establishment or Owner – shall mean any individual, partnership, co-partnership, firm, company, corporation, association, joint-stock company, trust, estate, governmental entity or any other legal entity or their legal representatives, agents or assigns. The masculine gender shall include the feminine, and the singular shall include the plural where indicated by the context.

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.

Phosphorus - shall mean total phosphorus content in wastewater as determined by the methods of analytical testing.

Pollutant - shall mean any dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical, wrecked or discharged equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water, including medical wastes, chemical wastes, biological materials, radioactive materials, heat, and certain characteristics of wastewater (e.g., pH, temperature, TSS, turbidity, color, CBOD, COD, toxicity, or odor).

Pollution - shall mean an alteration of the quality of the water of the state by waste to a degree, which affects such waters for beneficial uses or facilities, which serve such beneficial uses. Pollution may include contamination.

Pretreatment - shall mean the reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater to a less harmful state prior to or in lieu of discharging or otherwise introducing such pollutants into a water pollution control facility. The reduction or alteration can be obtained by physical, chemical or biological processes or process change(s), or other means, except as prohibited by 40 CFR 403.6(d).

Pretreatment Program - shall mean a program administered by a POTW that meets the criteria established by the Federal Pretreatment Regulations, specifically 40 CFR 403.8 and 403.9, and which has been approved by a regional administrator or state director in accordance with 40 CFR 403.11.

Pretreatment Standard or National Pretreatment Standard - shall mean any regulation containing pollutant discharge limits promulgated by the E.P.A. in accordance with Section 307 (b) of the Act, which applies to industrial users.

Private Disposal System – shall mean a privately owned sewer and treatment system.

Privately-Owned Sewer or Private Sewer - shall mean a sanitary sewer which is not controlled by a governmental agency or public utility.

Process Wastewater - shall mean any water and liquid waste discharged from any trade or process carried on in the establishment, including pretreated wastes and polluted cooling water which during manufacturing or processing, comes into direct contact with or results from the production of or use of any raw material, intermediate product, finished product, by-product, or waste product.

Production-Based Standard - shall mean a discharge limitation expressed in terms of allowable pollutant mass discharge rate per unit of production and is applied directly to an industrial user's manufacturing process.

Properly Shredded Garbage – shall mean the wastes from the preparation, cooking and dispensing of food that has been shredded to such a degree that all particles will be carried freely under the flow conditions normally prevailing in public sewers, with no particle greater than one-half (1/2) inch [one and twenty-seven hundredths (1.27) centimeters] in any dimension.

Public Authority - shall mean any government entity having jurisdiction.

Publicly Owned Treatment Works (POTW) - shall mean a treatment works as defined by Section 212 of the Act, (33 U.S.C. 1292) which is owned by the Commission. This definition includes any public sewer that conveys wastewater to the POTW and wastewater treatment plant, but does not include pipes, sewers, or other conveyances not connected to a facility providing treatment. For the purpose of these Rules and Regulations, "POTW" shall also include any sewers that convey wastewaters to the POTW from persons outside the Commission's established sewer service area who are, by contract or agreement with the Commission, users of the Commission's POTW.

Public Corporation - shall mean any city, county, school authority, water authority and any other governmental agency or political subdivision clothed with the power of levying taxes or issuing bonds payable from special funds.

Public Sewer - shall mean a common sanitary sewer, which is controlled, owned, operated and maintained by the Commission or other public authority.

Regional Administrator - shall mean the appropriate E.P.A. Regional Administrator or their designated representative.

Sanitary Sewage - shall mean sewage containing water-carried wastes contributed from premises by reason of human occupancy and free from storm, surface water and industrial wastes.

Sanitary Sewer - shall mean a sewer, which collects and conveys domestic sewage from residences, public buildings, commercial establishments, industries and institutions. A sanitary sewer may also collect and convey permitted industrial wastewater and storm, surface and ground waters not intentionally admitted.

Septage – shall mean the liquids and solids that are removed from a tank used to treat domestic sewage that is separate from a public sewer.

Sewage - shall mean human and animal excretions and all domestic and such manufacturing waste as may tend to be detrimental to public health.

Sewer - shall mean any pipe or conduit for conveying wastewater or drainage water.

Sewer Use Fee - shall mean the charge, based upon the amount of water supplied to the user or the number of units, that they must pay for the uses of and the services rendered by the Wastewater Treatment System and facilities of the Commission.

Sewerage System - shall mean any device, equipment, appurtenance, facility and method of collecting, transporting, receiving, treating, disposing of or discharging sewage to the treatment facilities.

Shall - is mandatory – (see "may").

Significant Industrial User - shall mean: (a) all industrial users subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR Chapter I, Subchapter N; and (b) any other industrial user that; discharges an average of 25,000 gallons per day or more of process wastewater to the POTW (excluding sanitary, non-contact cooling and boiler blow-down wastewater); contributes a process waste stream which makes up five percent (5%) or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant; or is designated as such by the Commission as defined in 40 CFR 403.12(a) on the basis that the industrial user has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement [in accordance with 40 CFR 403.8(f)(6)].

Slug Loading - shall mean the discharge of any pollutant, including oxygen demanding pollutants (BOD, etc.) released in a discharge at a flow rate and/or pollutant concentration which will cause interference with the wastewater treatment system.

Special Meter - shall mean the term applied to an approved meter designed for measurement of water and used specifically for the sole purpose of measuring the amount of water which does not enter the sewage system and for which a user expects to receive a reduction in their sewage service charge.

Standard Methods - shall mean the publication entitled: Standard Methods for the Examination of Water and Wastewater, latest edition, American Public Health Association, American Water Works Association, Water Environment Federation.

State - shall mean State of Connecticut.

Storm Sewer or Storm Drain - shall mean a sewer which carries storm waters, surface runoff, street wash waters and drainage, but which excludes sanitary sewage and industrial wastes, other than unpolluted cooling water.

Storm Water - shall mean any flow occurring during or following any form of natural precipitation and resulting there from.

Surcharge - shall mean the charge, which the user must pay in addition to the sewer use fee if the sewage which is discharged into the Commission's sewerage system exceeds the specifications for the normal strength sewage.

Total Kjeldahl Nitrogen - shall mean the sum of free-ammonia and organic nitrogen compounds, which are converted to ammonium sulfate $(\text{NH}_4)_2\text{SO}_4$, under test conditions. The value shall be as determined by the methods of analytical testing.

Total Suspended Solids (TSS) or Suspended Solids (SS) - shall mean the solid matter that either float on the surface of, or are in suspension in water, sewage or other liquids and which are removable by laboratory filtering, expressed in milligrams per liter. The value shall be as determined by the methods of analytical testing as approved pursuant to the Code of Federal Regulations, Part 136 of Title 40 (40 CFR 136).

Toxic Organic Management Plan - shall mean a written plan submitted by industrial users as an alternative to TTO monitoring, which specifies the toxic organic compounds used, the method of disposal used and procedures for assuring that toxic organics do not routinely spill or leak into wastewater discharged to the POTW.

Town - shall mean the Town of Winchester in the County of Litchfield in the State of Connecticut.

Toxic Pollutant – shall mean any pollutant or combination of pollutants listed as toxic in regulations promulgated by the Administrator of the Environmental Protection Agency under the provisions of § 307(a) of the Act or other acts.

User - shall mean any person that discharges, causes or permits the discharge of wastewater into a public sewer.

User Classification - shall mean the identification of a user as to the type of premises from which wastewater is discharged. Such classification shall be assigned by the Authority and shall include residential, industrial, public and commercial users.

- (a) **Residential User** - shall mean any contributor to the Authority's wastewater treatment works whose lot, parcel, or real estate, or building is used for domestic dwelling purposes only.
- (b) **Industrial User** - shall mean any user, which discharges industrial wastes.
- (c) **Public User** - shall mean and include any public or parochial school, college or university, churches, public parks, public or governmental buildings, charitable institutions and other similar users of an eleemosynary nature.
- (d) **Commercial User** - shall mean any and all users of the wastewater treatment system not otherwise classified.

Waste - shall mean sewage and any and all other waste substances (liquid, solid, gaseous, or radioactive) associated with human habitation, or of human or animal origin, or from any production, manufacturing, or processing operation of whatever nature, including such wastes placed within containers of whatever nature prior to, and for purposes of, disposal.

Wastewater - shall mean a combination of the liquid and water-carried wastes from premises.

Wastewater Constituents and Characteristics - shall mean the individual chemical, physical, bacteriological and radiological parameters, including volume and flow rate, and such other parameters that serve to define, classify or measure the contents, quality, quantity and strength of wastewater.

Wastewater Discharge Permit - shall mean a permit issued to industrial users, which authorizes discharges to the public sewer.

Wastewater Treatment Plant or Water Pollution Control Facility (WPCF) - shall mean any arrangement of devices and structures used for treating sewage and sludge.

Wastewater Treatment System - shall mean all of the connected treatment works necessary to meet the requirements of Title III of the federal act and involved in: (a) the transport of wastewaters from premises to a plant or facility wherein treatment of the wastewater is accomplished; (b) the treatment of the wastewaters to remove pollutants; (c) the ultimate disposal, including recycling or reuse of the treated wastewater and residues resulting from the treatment process.

Wastewater Treatment System (WTS) Service Charge - Refer to "Sewer Use Fee."

Wastewater Treatment System (WTS) Surcharge - Refer to "Surcharge."

Water Pollution Control Authority (WPCA) – (See: Commission)

Waterway or Watercourse - shall mean a channel in which waters of the state flow either continuously or intermittently.

Waters of the State - shall mean all streams, lakes, ponds, marshes, watercourses, waterways, wells, springs, reservoirs, aquifers, irrigation systems, drainage systems and all other bodies or accumulations of water, surface or underground, natural or artificial, public or private, which are contained within, flow through, or border upon the state or any portion thereof.

§ 302 – Abbreviations

BOD-Biochemical Oxygen Demand

CBOD-Carbonaceous Biochemical Oxygen Demand

C°-Celsius

CCF-Capacity Connection Fee

CFR-Code of Federal Regulations

CN, A-Cyanide, Amenable

CN, T-Cyanide, Total

COD-Chemical Oxygen Demand

EDU – Equivalent Dwelling Unit

ERP-Enforcement Response Plan

EPA-United States Environmental Protection Agency

F°-Fahrenheit

GPM-Gallons per Minute

LEL-Lower Explosive Limit

LPS – Low Pressure Sewer

MGD-Million Gallons per Day

Mg/L-Milligrams per Liter

N-Nitrogen

NOV-Notice of Violation
NEMA-National Electrical Manufacturers Association
NPDES-National Pollutant Discharge Elimination System
O&M-Operation and Maintenance
P-Phosphorus
pH - Negative Log of Hydrogen Ion Concentration
POTW-Publicly Owned Treatment Works
PVC-Polyvinyl Chloride
SNC-Significant Noncompliance
SPCC-Spill Prevention Control and Countermeasure Plan
SU-Standard Units
SWDA-Solid Waste Disposal Act, 42 U.S.C. 6901, et. seq.
TKN-Total Kjeldahl Nitrogen
TOMP-Toxic Organic Management Plan
TRC-Technical Review Criteria
TSS-Total Suspended Solids
TTO-Total Toxic Organics
TVR-Total Volatile Residue
USC-United States Code
USGS-United States Geological Survey
WTS-Wastewater Treatment System

Article 4 – Use of Public Sewers Required

§ 401 – Sewer Service Area

- 1) The Town of Winchester Sanitary Sewer Service Area shall be as delineated on Map known as “Sewer Service Area, Town of Winchester Sewerage System”. For additional information and requirements refer to the Water Pollution Control Plan.

§ 402 - Use of Public Sewers Required

- 1) It shall be unlawful to discharge from any source within the Town of Winchester, any sanitary sewage, garbage, industrial wastes, or other polluted waters except in accordance with the provisions of these Rules and Regulations.
- 2) Except as hereinafter provided, it shall be unlawful to construct or maintain any privy, privy vault, septic tank, cesspool or other facility intended or used for the disposal of sewage.
- 3) The owners of all houses, buildings, or properties within the Town of Winchester that are used for human occupancy, employment, recreation, or other purposes and that are bordering or abutting upon street, alley, sewer easement, or sewer right-of-way within said Town in which there is now constructed or in which there may hereafter be constructed a public sanitary sewer, is hereby required at their expense to

install suitable toilet facilities therein, and to connect to the public sewer in accordance with these Rules and Regulations within ninety (90) days after official written notice to do so; provided, however, that no such connection to the public sewer shall be required where the building sewer would exceed three hundred (300) feet in length and other acceptable means of disposal are available.

- 4) At such time as a public sanitary sewer becomes available for use by property served by an individual private sewage disposal system, and connection is required by this Section, a direct connection shall be made to the public wastewater treatment system by and at the expense of the property owner. Any septic tanks, cesspools or similar individual private sewage disposal facility shall be abandoned to the satisfaction of the appropriate public authority.

Article 5 - Private Sewage Disposal*

§ 501 – Private Sewage Disposal Systems Allowed

Where a public sanitary sewer is not available to the premises or where no connection to any public sewer shall be required as set forth in Article 4, Section 402, Paragraph 3, the building sewer may connect to a private, on-site subsurface sewage disposal system that is properly permitted, constructed, and maintained in accordance requirements of the appropriate public authority.

§ 502 – Connection of Private Sewage Disposal System to Public Sewers Prohibited

It shall be unlawful for any individual private residential sewage disposal facility to be connected to any public sanitary, storm or combined sewer.

** Note: Enforcement of the Rules and Regulations contained in Article 5 is the responsibility of one or more public authorities other than the Commission. Reference to these Rules and Regulations is for informational purposes only.*

Article 6 - Building Sewer Permit, Connection, Inspection, & Authorization to Discharge

§ 601 – Building Sewer Permit

- 1) No person shall uncover, make connection with or opening into, use, alter, or disturb any part of the public sewer or appurtenance thereof without first obtaining a written permit from the Commission or its designated agent.
- 2) There shall be three classes of building sewer permits:
 - Class 1: Residential and Commercial Uses
 - Class 2: Service to Industrial Establishments Producing Industrial Wastes
 - Class 3: Developer's Permit for Sewer Extension
- 3) Any customer with a valid Class 1 or Class 2 permit who proposes to substantially increase the daily volume or instantaneous rate of sewage discharge by more than 10% in aggregate over a five year period shall apply for an amended building sewer permit at least 45 days prior to commencement of increases the discharge rate. The customer shall submit plans and a technical report that summarizes discharge estimates (average-daily and peak-hourly discharge rates) to the Commission for review. The Commission's shall not levy a new connection fee against the customer; however, the Commission will invoice the customer for the cost of any outside consultants required to review plans and technical reports

submitted in support of the amendment request. The Commission must approve the amendment prior to commencement of the increase.

- 4) Any customer with a valid Class 2 permit who proposes to substantially alter the characteristics of their industrial waste discharge shall apply for an amended building sewer permit at least 45 days prior to alteration of the waste characteristics. The customer shall submit plans, technical reports, and a copy of the customer's current state or federal discharge permit to the Commission for review and approval. The Commission's shall not levy a new connection fee against the customer; however, the Commission will invoice the customer for the cost of any outside consultants required to review plans and technical reports submitted in support of the amendment request. The Commission must approve the amendment prior to commencement of the alteration.
- 5) For all new connections, the owner or his agent shall make application on a form furnished by the Commission. The permit application shall be supplemented by any plans, specifications, or other information relating to the building or quantity or quality of wastes to be discharged as may be considered pertinent in the judgment of the Commission.
- 6) The Commission will consider issuance of a building sewer permit only after receipt of:
 - A. Completed application form signed by the owner of the premises to be served or his authorized agent. Note: the contractor who has been chosen to perform the work of installing and connecting the building drain to the public sewer shall be identified in the permit application form.
 - B. Connection fee, per the Commission's fee schedule in effect on the date of the applications (the Commission may waive the connection fee at its discretion)
 - C. Estimate of average-daily and peak-hour discharge rates (not required for Class 1 permits that involve one single-family residential sewer connection)
 - D. Technical report addressing waste characteristics (only required for Class 2 permit applications)
 - E. Plans, specifications, discharge estimates, or other information (only if required by the Commission)
 - F. Certificate of insurance for the contractor-of-record, with the Town of Winchester and Winchester Water and Sewer Commission named as additional insured
 - G. Performance bond, in amount to be determined by the Commission
 - H. Copy of licenses for the contractor's sewer tappers and drain layers (minimum requirement: P-7)
 - I. Sufficient evidence that a building permit has been issued by the Winchester Building Official
- 7) A separate building sewer permit must be obtained for each building sewer connection and/or each equivalent unit. No authorized person or public corporation shall uncover, make any connections with or opening into, use, alter or disturb any Commission sewer or appurtenances thereof without first obtaining a written permit from the Commission at least three working days before commencing work.
- 8) The Commission's staff will issue the building sewer permit with a designated capacity allocation for said property only after the Commission's staff has reviewed the application and determined that:
 - A. The application and associated submittals are complete
 - B. The connection fee payment has been received
 - C. All necessary easements have been obtained.
- 9) Upon approval of the application and associated submittals, the Commission shall issue a permit to have the work performed by the contractor identified on the permit application. In the event the premises changes ownership before the work is completed, or if another contractor is chosen to perform or finish

the work, the original permit becomes void and a new permit must be obtained by the new parties in interest.

- 10) The Commission may revoke and annul a building sewer permit for such identified cause and at such times as may be deemed sufficient. The property owner shall hold the Town of Winchester and the Commission as a consequence of said revocation or the cause thereof. All other parties in interest shall be held to have waived the right to claim damages from the Town of Winchester and the Commission or its agents on account of said revocation.

§ 602 – Building Sewer Connections

- 1) A separate and independent building sewer shall be provided for every building that is to be occupied unless otherwise approved by the Commission. The minimum size shall be six inches in diameter. Pipe larger than the minimum size specified herein shall be used when the Commission determines that the size of the structure, building sewer gradient, numbers and kinds of fixtures to be drained, or other conditions warrant the use of a larger diameter. Cleanouts to grade shall be furnished in locations deemed appropriate by the Commission.
- 2) All costs and expense incidental to the installation, connection and maintenance of the building sewer shall be borne by the owner of the premises served by a public sewer, and said owner shall be responsible for all maintenance, operation, cleaning, repair and reconstruction of the building sewer from the building to the point of the tee or wye connection with the public sewer. The owner shall indemnify the Town of Winchester and the Commission, as their interests may appear, from any loss or damage that may directly or indirectly be occasioned by the installation or maintenance of the building water.
- 3) Existing building sewers may be used to service new buildings only when they are found by the Commission to meet all of the requirements of these Rules and Regulations.
- 4) Only qualified and licensed sewer tappers / drain layers may connect building sewers to the sanitary sewer system.
- 5) Building sewer connections to a manhole are prohibited unless otherwise approved in writing by the Commission.
- 6) The building sewer shall be constructed of materials meeting the Commission's Technical Standards and requirements of applicable local and state plumbing codes. The building sewer shall be laid at a minimum grade of one-fourth (1/4) inch per lineal foot from the building to the public sewer. In the case of unusual hardship, the Commission may approve a grade as low as one-eighth (1/8) inch per foot.
- 7) Building sewers shall be constructed as part of the improvement to the premises served.
 - A. The building sewer shall be allowed to connect into the existing sewer lateral at the curb or property line, if a service connection sewer is available at this location under the following conditions:
 1. The existing sewer lateral is constructed of a material acceptable to the Commission
 2. Under no circumstances shall vitrified clay pipe or other like material of construction sewer laterals be reused.
 3. Sewer laterals intended to be reused shall be pressure tested from the point of connection to the final connection into the public sewer main. The sewer lateral must pass all required testing.
 - B. Where no service connection is available from the public sewer to the curb or property line, the owner of the building sewer shall extend the building sewer to the public sewer and connect to the nearest wye or tee available on the public sewer. If no wye or tee exists on the public sewer within the immediate vicinity of the frontage of the lot or tract of land that the building sewer is to

- serve, the owner of the building sewer shall have a wye or tee installed on the public sewer in accordance with the Commission's Technical Standards.
- C. No building sewer shall be laid parallel to or within three (3) feet of any bearing wall, which might thereby be weakened. The depth shall be sufficient to afford protection from frost. The building sewer shall be laid at uniform grade and in straight alignment. Changes in direction shall be made only with properly curved pipe and fittings.
 - D. Whenever the public sewer is deep enough to serve basements, all sanitary fixtures should be connected to the public sewer by gravity. This connection should include all laundry facilities.
 - E. In those instances where the public sewer is not of sufficient depth to serve the basement fixtures, the owner will be permitted to install a high-level connection and pump laundry waste to the sanitary sewer by means of an effluent pump approved by the Commission.
 - F. In those instances where sewage cannot be drained by gravity from the building served to the public sewer, the Commission may allow a pumped connection under the following conditions:
 - 1. The applicant for a building sewer permit shall submit plans and specifications for the sewage pumping station, pressure line, and connection to the public sewer for review by the Commission. The system design shall comply with the Commission's technical standards.
 - 2. No other type of water discharge shall be connected to the building sewer.
 - 3. All costs and expenses incidental to the installation, connection, operation, and maintenance of a building pump connection shall be borne by the owner and the issuance of a permit shall be contingent upon the owner indemnifying the Town of Winchester and the Commission as their interest may appear, against any loss or damage that may be caused, directly or indirectly, by the installation of the building pump connection.
 - G. The removal of an existing sump pump shall be at the option of the owner. However, if it is to remain in service to pump sanitary sewage into the building sewer (including laundry waste and/or the basement floor drain), all foundation drains or other groundwater or storm water connections thereto shall be permanently disconnected there from and handled in some other manner. If it is to remain in place to pump groundwater or storm water, all sanitary connections shall be broken and sealed and the discharge from the sump pump shall be piped to a proper storm drain, natural outlet, or drainage field.
 - H. Connections to existing public sewers where wyes or tees are not available shall be made by means and methods acceptable to the Commission. The details and construction of all connections shall be inspected and approved by the authorized representatives of the Commission.
- 8) In the development of residential subdivisions with sanitary sewers, all lots shall be served by connections to the sanitary sewer system either by gravity or by means of a pump or ejector. No individual disposal devices will be permitted. In all buildings in which any building drain is too low to permit gravity flow to the sanitary sewer system, any sanitary sewage carried by such building drain shall be lifted by a means approved by the Commission and discharged to the building sewer.
- 9) The building sewer permit holder will be held responsible for the proper installation of the building sewer in accordance with these Rules and Regulations, subject, however, to the condition that they or it holds the Town of Winchester and the Commission, as their interests may appear, harmless from any loss or damage.
- 10) Any person making connection, either directly or indirectly, to the sanitary sewer without first obtaining a building sewer permit and paying applicable connection fee shall be deemed to have made an illegal connection to the public sewers and shall be liable to the Commission for the amount of the connection fee in effect at the time the illegal connection is discovered by the Commission's personnel, in addition to

any other penalty or action which the Commission may impose or seek to have imposed pursuant to the Connecticut General Statutes or these Rules and Regulations.

- 11) Existing septic tanks shall be abandoned in accordance with requirements of the applicable public authority when the building is connected to the public sewer. No building sewer shall be routed through an existing septic tank in such that the tank may be used for holding of raw sewage.
- 12) No person or public corporation shall make direct connection of roof downspouts, exterior or interior foundation drains, area drains or other sources of surface runoff or groundwater directly or indirectly to a public sanitary sewer. Upon discovery of such improper sources, the Commission shall notify the property owner to remove any improper connections within 30 days of notification and return the public sewer and associated appurtenances to a satisfactory condition. Upon completion of the disconnection, the property owner shall notify the Authority to conduct an inspection of the rehabilitation work.
- 13) When any building, or other structure previously served by a connection to any public sanitary sewer is demolished, destroyed, abandoned, or altered so that any pipe or portion of an abandoned plumbing system which is directly or indirectly connected to any public sanitary sewer is no longer used and is no longer connected to the drainage system of the building or structure, the open end of such pipe which discharges, directly or indirectly into a public sanitary sewer shall be promptly closed and sealed off at the street line so that no water or wastes not otherwise permitted to enter the public sewer shall be so discharged there into. The Commission shall be notified at least one full working day in advance of such abandonment or discontinuance and of the closing and sealing of such pipe, and any such work shall be made only in the presence and according to the instructions of the Commission or its authorized representative. All of said work shall be completed by the person or party who demolishes the building or structure or who alters the drainage of the premises so as to make such closing and sealing necessary, and, in the event of failure of such person or party to do so, shall be done by the owner, lessee, or tenant of the premises to the satisfaction of, and without expense to, the Commission.

§ 603 – Inspections

- 1) No excavation for a building sewer or a building pump connection installation shall be started until all the necessary permits, including any required street opening permits, have been obtained.
- 2) All excavations shall be adequately guarded with suitable barricades, signage, lights, and plating so as to protect the public from hazard. All work in the existing Town streets shall be supervised by Town of Winchester personnel.
- 3) The building sewer shall not be connected to the public sewer until the Town of Winchester Building Official has approved the building's plumbing system.
- 4) The building sewer permit holder or the contractor shall notify the Commission or its designated representative at least one full working day in advance of when the building sewer and/or public sewer connection will be ready for inspection. The Commission shall supervise the connection to the public sewer and the final connection between a building sewer and the building drain.
- 5) The water level in all building sewer excavations shall be maintained at a level below the sewer inverts to accommodate proper construction and appropriate inspections, until such time as the building sewer and related connections have been inspected, approved, and backfilled.
- 6) No trench containing a building sewer shall be backfilled until the Commission or its authorized representative has completed an inspection of and approved the work.
- 7) Connections shall not be allowed on Saturday, Sunday or municipally-recognized holidays.

- 8) Streets, sidewalks, parkways and other public property disturbed in the course of the work shall be restored in a manner satisfactory to the Town of Winchester.

§ 604 – Approval of Construction and Authorization to Discharge to Public Sewer

- 1) A signature on the approval line of the Commission’s building-sewer permit application form, made by an authorized representative of the Commission, shall constitute:
 - A. Approval of completed construction work for the building sewer and related connections
 - B. The Commission’s authorization to discharge to the public sewer

Article 7 Extension of Sanitary Sewer Facilities

§ 701 – Types of Sewer Line Extension Projects

The Commission may extend or allow the extension of sanitary sewer facilities by one or a combination of the following methods:

- 1) Capital Project
- 2) Assessment Project
- 3) Privately-Funded Projects by Developer’s Agreement

§ 702 – Conformance with Water Pollution Control Plan

Regardless of the method used to construct extension of sanitary sewer facilities, the Commission shall approve extensions only in conformance with the Commission’s prevailing Water Pollution Control Plan.

§ 703 – Capital Projects

The Commission, at its discretion, may elect to extend the wastewater treatment system as a capital project and recover costs through grants, loans, and/or future service connection charges.

§ 704 – Assessment Projects

The Commission, at its discretion, may elect to extend sanitary sewer facilities as an assessment project as defined herein, and in a manner consistent with the Connecticut General Statutes. The Commission may, at its discretion, offset assessments with its own capital and/or with grants and loans.

§ 705 – Privately-Funded Projects by Developer’s Agreement

- 1) The Commission may enter into a Developer’s Agreement with private individuals or corporations (hereinafter collectively referred to as Developer) who wish to extend sewers into unsewered parts of the Commission’s designated Sewer Service Area. The Commission may allow a Developer to connect to and extend the wastewater treatment system provided that:
 - A. The proposed extension is consistent with the Commission’s prevailing Water Pollution Control Plan.
 - B. Capacity exists within the wastewater treatment system to accommodate the additional flow.
 - C. The Commission approves the designs, engineering reports, and construction cost estimates for the project.

- D. The Developer secures other local, state, and federal permits and approvals required for the project prior to commencement of construction.
 - E. The Commission and Developer enter into a formal agreement for the construction, inspection, and acceptance of sewer extension improvements.
 - F. The Developer bears the entire cost of the extending the sanitary sewer facilities, unless the Commission agrees to alternate terms.
 - G. The Developer complies with the requirements of these Rules and Regulations.
- 2) The Commission and Developer shall follow a multi-step process during the approval and construction processes for privately-funded extensions of the wastewater treatment system:

Step 1 - Conceptual Design Review

- A. The conceptual design review process may take place prior to or concurrent with the Developer's Planning and Zoning Commission applications for land-use permits.
- B. The Commission will receive applications for conceptual design review at the Winchester Department of Public Works at 189 Rowley Street during normal business hours (Monday through Friday, 7:00 AM to 3:30 PM)
- C. The Commission shall conduct a conceptual design review of the Developer's proposed extension project upon receipt of an application. The Developer's application for conceptual design review shall consist of a letter of intent, preliminary design plans for the development and the proposed extension of the wastewater treatment system, and an application fee as determined by the Commission's prevailing schedule of Assessments, Charges, and Rentals.
 - 1. The letter of intent shall address the following issues:
 - a) Notice that the Developer intends to connect to and extend the Town of Winchester Wastewater Treatment System
 - b) The location of the proposed development, including the Assessor's map-block-lot numbers and street address, if established
 - c) Type of proposed development (e.g. residential, institutional, commercial, industrial, etc.)
 - d) Size of development, estimate of EDU's, and estimate of average-daily and peak-hour sanitary sewer discharge rates with appropriate allowances for inflow and infiltration
 - e) Nature and characteristics of sewage effluent that will be generated by the development
 - f) Anticipated schedule for the development, including a description and estimated duration of individual phases
 - 2. The preliminary design plans shall be prepared at a scale appropriate to depict the general features of the proposed development and extension of the wastewater treatment system, typically at 1"=100' for larger projects and 1"=40' for smaller projects. The preliminary design plans shall address existing and proposed topography, approximate location and elevation of nearby flood plains, street, building, and parking-lot layout, sewer layout with manhole locations, flow-direction arrows, approximate sewer grades, approximate top-of-frame and invert elevations, and location of proposed sewer easements.

- D. Upon receipt of the application materials and deposit fee, the Commission will conduct a review in accordance with timeframes set forth in Section 7-246a of the Connecticut General Statutes. Time frames for the review will commence at the next regularly-scheduled meeting of the Commission following receipt of the application materials and application fee.
- E. Upon review of the application material by the Commission and its staff, the Commission will issue a written statement of findings to the Developer, with a copy distributed to the Chairman of the Winchester Planning and Zoning Commission. The written summary will generally:
 - 1. Render a favorable or unfavorable opinion regarding feasibility of the proposed development and extension of the wastewater treatment system
 - 2. Confirm whether the wastewater treatment plant possesses the capacity to accommodate the additional flow
 - 3. Address potential capacity concerns at downstream collector sewers, interceptors, and pumping stations
 - 4. Address potential concerns regarding the anticipated quality or characteristics of the sewage effluent
 - 5. List requirements for subsequent engineering studies that will be required during the final design review process
 - 6. List other special requirements and/or conditions of approval that will likely be imposed on the Developer during or following the final design review process
 - 7. Authorize the Developer to proceed with final design in cases where the Commission renders a favorable opinion regarding the feasibility of connecting to and extending the wastewater treatment system.

Step 2 - Final Design Approval

- A. The final-design approval process may take place concurrently with or subsequent to the Planning and Zoning Commission approval process.
- B. The Commission will receive applications for final-design approval at the Winchester Department of Public Works at 189 Rowley Street during normal business hours (Monday through Friday, 7:00 AM to 3:30 PM)
- C. The Commission will review the final design of a proposed extension to the wastewater treatment system upon receipt of a complete application. The Developer's application for final design approval shall consist of a letter of transmittal, engineering report, final design plans, technical specifications, construction cost estimate for the proposed improvements, and a deposit fee in accordance with the Commission's prevailing schedule of Assessments, Charges, and Rentals.
- D. The Commission will conduct the final-design approval process in accordance with timeframes set forth in Section 7-246a of the Connecticut General Statutes. Time frames for the review will commence at the next regularly-scheduled meeting of the Commission following receipt of the application materials and application fee.
- E. Application materials for extensions of the wastewater treatment system shall be prepared in accordance with the Commission's Technical Standards by a professional engineer licensed in the State of Connecticut.

- F. The Commission or its authorized representative shall review of the application materials and shall prepare a written recommendation to the Commission for approval, approval with conditions, or denial of the final design application. The Commission may, at its discretion, retain the services of outside engineering consultants and legal counsel to assist with the technical review and preparation of recommendations.
- G. The Developer may opt to amend or revise the final design submission in response to review comments and recommendations offered by the Commission before submission to the Commission for action.
- H. Upon completion of the Commission's review and any amendments or revisions proposed by the Developer in response, the application shall be considered ready for action by the Commission.
 - 1. If the Commission is inclined to approve the application, then they shall refer the application to the Winchester Planning and Zoning Commission for review, as required by Section 8-24 of the Connecticut General Statutes.
 - a) If the Planning and Zoning Commission returns a favorable 8-24 review, the Chairman shall submit the application to the Commission for a vote. The Commission may vote to approve the application or approve the application with conditions.
 - b) If the Planning and Zoning Commission returns an unfavorable review, then the Commission shall refer the application to the Winchester Board of Selectmen for action.
 - 2. The Commission may deny the application, with no further action.
- I. In rendering a decision to approve, approve with conditions, or deny an application for final design approval, the Commission shall take into account the recommendations submitted by its staff, outside engineering consultants, and legal counsel; however, the final decision rests with the Commission.
- J. If the Commission approves the final design application, the Developer shall incorporate any conditions of approval into the final design plans, specifications, and construction cost estimate and submit one set of recordable documents to the Commission. The Chairman of the Commission shall sign the final design documents and cause the same to be filed in the Town Clerk's Office.
- K. The Developer shall be required to pay all costs incurred by the Commission for engineering reviews, legal advice, legal advertisements, and recording fees associated with the final design review and approval process. The Commission shall, from time to time during the review and approval process, provide the Developer with an accounting of charges already incurred and reasonable estimates of remaining charges. If the actual costs incurred by the Commission exceed the deposit fee stipulated above, the Developer shall make up the balance upon demand by the Commission as a condition precedent to a final decision. Failure on the part of the Developer to pay all balances due shall constitute sufficient cause for denial of the final design application by the Commission. If the deposit fee exceeds the costs actually incurred by the Commission, the Commission shall refund the balance to the Developer within 60 days after final accounting of charges has been completed.

Step 3 – Developer's Agreement

- A. Following approval of the final design plans, technical specifications, and cost estimate by the Commission, but prior to commencement of construction, the Developer and Commission shall enter into an agreement for construction of the proposed improvements on a form prescribed and prepared by the Commission. The agreement shall contain the provisions outlined in a document entitled "Terms of Developer's Agreement" as appended to these Rules and Regulations.

Article 8 – Discharge Limitations, Prohibitions, and Permits

§ 801 – Discharge of Storm Water and Unpolluted Drainage

Storm water and all other unpolluted drainage shall be discharged to such sewers as are specifically designated as storm sewers and discharged to a watercourse in accordance with all applicable state and Federal laws and regulations.

§ 802 – Prohibited Non-Pollutant Discharges

No person shall discharge or cause to be discharged any storm water, surface water, groundwater, roof runoff, subsurface drainage or cooling water to any sanitary sewer.

§ 803 – Prohibited Pollutant Discharges

No user shall contribute or cause to be contributed, directly or indirectly, any pollutant or wastewater which will interfere with the operation or performance of WPCF. These general prohibitions apply to all such users of a WPCF whether or not the user is subject to National Categorical Pretreatment standards or any other Federal or state pretreatment standards or requirements. A user shall not contribute the following substances to any WPCF:

- 1) Any Liquids, solids or gases which by reason of their nature or quantity are, or may be, sufficient either alone or by interaction with other substances to cause fire or explosion to be injurious in any other way to the WPCF or to the operation of the WPCF. At no time shall two successive readings on an explosion hazard meter at the point of discharge into the sewage Collection system (or at any point in the system) be more than five percent (5%) nor any single reading over ten percent (10%) of the Lower Explosive Limit (LEL) of the meter.
- 2) Solids or viscous substances which may cause obstruction to the flow in a sewer or other interference with the operation of the WPCF, including substances such as but not limited to grease, garbage with particles greater than 1/2-inch in any dimensions, animal guts or tissues, paunch, manure, bones, cat litter, hair hides or fleshings, entrails, whole blood, feathers, ashes, cinders, sand, spent lime, stone or marble dust, metal, glass, straw, shavings, grass clippings, rags, spent grains, spent hops, waste paper, wood, plastics, gas, tar, asphalt residues, residues from refining or processing of fuel or lubricating oil, mud or glass grinding or polishing wastes.
- 3) Any sewage having a pH lower than 6.0 or higher than 9.0 or having any corrosive property capable of causing damage or hazard to structures, equipment and personnel of the WPCF.
- 4) Any sewage containing toxic pollutants in sufficient quantity, either singly or by interaction with other Pollutants, to injure or interfere with any wastewater treatment process, constitute a hazard to humans or animals, or plant life, create a toxic effect in the receiving waters of the WPCF, or to exceed the limitation set forth in a "Categorical Pretreatment Standard". A toxic pollutant shall include but not be limited to any pollutant identified pursuant to Section 307(a) of the act.
- 5) Any noxious or malodorous sewage, gases or solids which either singly or by interaction with other sewage are sufficient to prevent entry into the public sewers for their maintenance and repair.
- 6) Any sewage which, by interaction with other sewage in the public sewer, releases obnoxious gases, forms suspended solids which interfere with the collection system, or creates a condition which may be deleterious to structures and treatment processes or which may cause the effluent limitations of the WPCF's NPDES permit to be exceeded.
- 7) Any substance which may cause the WPCF's effluent or any other product of the WPCF such as residues, sludge or scums, to be unsuitable for reclamation process where the WPCF is pursuing a reuse

and reclamation program. In no case shall a substance discharge to the WPCF cause the facility to be a noncompliance with sludge Use or disposal criteria, guidelines or regulations developed under Section 405 of the Act; any criteria, guidelines or regulations affecting sludge use or disposal developed pursuant to the Resource Conservation and Recovery Act, Clean Air Act, the Toxic Substance Control Act or State criteria applicable to the sludge management method being used.

- 8) Any substance which will cause a WPCF to violate its NPDES permit or the receiving water quality standards.
- 9) Sewage 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 water pollution control facility effluent cannot meet the limits stipulated in the WPCF's NPDES permit.

§ 804 - Discharge Limitations

The following described substances, materials waters or waste shall be limited in discharges to public sewers to concentrations or quantities which will not harm either the sewers or water pollution control facility will not have an adverse effect on the receiving stream; or will not otherwise endanger public property or constitute a nuisance. The Commission may set lower limitations if more severe limitations are necessary to meet the water quality standards of the receiving stream. The limitations or restrictions on materials or characteristics of sewage discharged to the public sewer are as follows:

- 1) Sewage having a temperature higher than 150 degrees Fahrenheit (65 degrees centigrade).
- 2) Sewage containing fat, wax, grease, petroleum or mineral oil, whether emulsified or not, in excess of 100 mg/l with floatable oil not to exceed 20 mg/l or containing substances Which may solidify or become viscous at temperatures between 32 degrees and 150 degrees Fahrenheit (0 degrees and 65 degrees centigrade).
- 3) Any garbage that has not been properly shredded (see Section 2-24). Garbage grinders may be connected to sanitary sewers only 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.
- 4) Any sewage containing odor producing substances exceeding limits which may be established by the Commissioner.
- 5) Any radioactive wastes or isotopes of such half-life or concentration as may exceed limits established by the Commissioner in compliance with all applicable State and Federal regulations.
- 6) Materials which exert or cause:
 - A. Unusual concentrations of inert suspended solids
 - B. Excessive discoloration (such as, but not limited to, dyes, washes and vegetable tanning solutions)
 - C. Unusual BOD, chemical oxygen demand, or chlorine demand in such quantities as to constitute a significant load or extra operating cost on the water pollution control facility
 - D. Unusual volume of flow or concentrations of wastes constituting a "s1ug" as defined in Section 2-33.
- 7) Overflow from holding tanks or other receptacles storing organic wastes.
- 8) Overflow from holding tanks or other receptacles storing organic wastes.

9) Sewage with a concentration of pollutants in excess of the following limits:

<u>Pollutant</u>	<u>Concentration PPM (mg / liter)</u>
BOD	300
SS	350
Arsenic as As	0.05
Barium as Ba	5.0
Boron as B	5.0
Cyanides as CN (amenable)	0.1
Fluoride as F	20
Chromium (Total)	1.0
Chromium (Cr +6)	0.1
Magnesium as Mg	100
Manganese as MN	5.0
Copper as CU	1.0
Zinc as Zn	1.0
Cadmium	0.7
Lead	0.1
Tin	2.0
Silver	0.1
Mercury	0.01
Nickel	1.0

Note: All metals are to be measured as total metals.

§ 805 – Discretionary Requirements

- 1) The admission of any wastewater discharges to public sewers with the following characteristics shall be subject to the review and approval by the Commission:
 - A. 5-day biochemical oxygen demand greater than 300 parts per million by weight; or
 - B. More than 350 parts per million by weight of suspended solids; or
 - C. Any quantity of substance having the characteristics described in Section 804 (9); or
 - D. Average flow greater than 2% of the average daily sewage flow of the Town,
- 2) The Commission may, at his sole discretion, require any user (at the user's expense) to provide preliminary treatment as may be necessary to:
 - A. Reduce the biochemical oxygen demand to 300 parts per million and the suspended solids to 350 parts per million by weight; or
 - B. Reduce objectionable characteristics or constituents to within the maximum limits provided for in

Section 6-4; or

C. Control the quantities and rates of discharge of such waters or wastes.

Plans, specifications and any other pertinent information relating to proposed preliminary treatment facilities shall be submitted to the Commission.

§ 806 – Connecticut DEP Permits

- 1) In accordance with Section 22a-430 of the Connecticut General statutes as amended, a permit from the Commissioner of Environmental Protection is required prior to the initiation of a discharge of any of the following wastewaters to a public sewer:
 - A. Industrial wastewater of any quantity
 - B. Domestic sewage in excess of 5,000 gallons per day through any individual building sewer to a public sewer
- 2) A potential discharger must submit a permit application to the Department of Environmental Protection not later than 90 days prior to the anticipated date of initiation of the proposed discharge.
- 3) If any sewage is discharged or is proposed to be discharged to the public sewers which contains the substances or possesses the characteristics enumerated in Section 804 of this regulation, and which in the judgment of the Commissioner may have a deleterious effect upon the wastewater facilities, processes, equipment or receiving waters, or which otherwise may create a hazard to life or constitute a public nuisance, the Commissioner may in accordance with Section 22a-430 of the Connecticut General Statutes as amended:
 - A. Reject the discharge of the wastes
 - B. Require pretreatment to an acceptable condition for discharge to the public sewer
 - C. Require control over the quantities and rates of discharge
- 4) If the Commissioner permits the pretreatment or equalization of waste flows, the design and installation of the equipment shall be subject to the review and approval of the Commissioner subject to the requirements of all applicable codes, regulations and laws.
- 5) Where pretreatment or flow equalizing facilities are provided for any sewage, they shall be maintained continuously in satisfactory and effective operation by the owner at his expense.

§ 807 – Right to Refuse or Amend DEP-Permitted Discharges

The Commission shall have the right to reject the discharge of any wastes or require more stringent effluent limitations than required by the user's Section 22a-430 permit, the decisions of the Commissioner notwithstanding.

§ 808 – Grease, Oil and Sand Separators

- 1) Grease, oil and sand interceptors shall be provided when, the opinion of the Commission, they are necessary for the proper handling of liquid wastes containing grease in excessive amounts, or any flammable wastes, sand, and other harmful ingredients; except that such interceptor shall not be required for private living quarters or dwelling units. All interceptors shall be of a type and capacity approved by the Commission 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 captured material and shall maintain records of the dates and means of disposal, which are subject to review by the Commission. Any removal and hauling of the collected materials shall be performed by a waste disposal firm which possesses a valid permit from the Commissioner under Section 22a-429 of the Connecticut General statutes, as amended.

- 2) Grease and oil interceptors shall be constructed of impervious materials capable of withstanding abrupt and extreme changes in temperature. They shall be of substantial construction, watertight, and equipped with easily-removable covers which, when bolted in place, shall be gastight and watertight.
- 3) Where installed, all grease, oil and sand interceptors shall be maintained by the user at his expense in continuously efficient operation at all times.

§ 809 – Sampling Structure Requirements

When required by the Commission, the owner of any property served by a building sewer carrying industrial wastes shall install a suitable control manhole together with such necessary meters and other appurtenances in the building sewer to facilitate observation, sampling and measurement of the wastes. Such manhole, when required, shall be construed in accordance with plans approved by the Commission. The sampling structure shall be located at a point along the industrial waste steam where a representative sample of the industrial wastewater may be obtained prior to its being diluted by domestic sewage in the building sewer. The manhole shall be installed by the owner at his expense, and shall be maintained by him so as to be safe and accessible at all times.

§ 810 – Monitoring Required

All industries discharging into a public sewer shall perform such monitoring of their discharge as required by the Commissioner in any State discharge permit issued pursuant to Section 22a-430 of the Connecticut General Statutes, as amended, including, but not limited to, installation, use and maintenance of monitoring equipment, keeping records and reporting the results to the Commissioner, such records shall be made available upon request of the Commissioner or the Commission.

§ 811 – Sampling and Testing Requirements

All measurements tests and analyses of the characteristics of sewage to which reference is made in this regulation shall be determined in accordance with the latest edition of "Standard Methods for Examination of Water and Wastewater", published by the America Public Health Association. Sampling methods, location, times, durations and frequencies are to be determined on an individual basis subject to the stipulations and general conditions of the discharger's State Discharge Permit.

§ 812 – Special Agreements between the Commission and Industrial Users

No statement contained in this article shall be construed as preventing any special agreement or arrangement between the Commission and any industrial concern whereby an industrial waste of unusual strength or character may be accepted by the Commission for treatment, provided that such agreements do not contravene any requirements of existing State or Federal regulations and are compatible with any user charge system in effect.

§ 813 – Federal Categorical Pretreatment Standard Supersedes Local Standards

Upon the promulgation of the Federal Categorical Pretreatment standard for a particular industrial subcategory, the Federal standard, if more stringent than limitations imposed under this regulation for sources in that subcategory, shall supersede the limitations imposed under this regulation.

§ 814 – Dilution Prohibited

No user shall increase the use of process water in an attempt to dilute a discharge as a partial or complete substitute for adequate treatment to achieve compliance with the limitations contained in the Federal Categorical Pretreatment Standards, or in specific pollutant limitations which may be developed by the Commissioner.

§ 815 – Prevention of Accidental Discharges

Each user shall provide protection from accidental discharge of prohibited materials or other substances regulated by this regulation. Facilities to prevent accidental discharge of prohibited materials shall be provided and maintained at the owner or user's own cost and expense. The Commissioner may require that plans showing facilities and operating procedures be submitted for review and approval prior to construction of the facilities.

- 1) Within five (5) days following an accidental discharge, the user shall submit to the Commission and the Commissioner, a detailed written report describing the cause of the discharge and the measures to be taken by the user to prevent similar future occurrences. Such notification shall not relieve the user of any expense, loss, damage or other liability which may be incurred as a result of damage to the WPCF, fish kills aquatic plants, or any other damage to persons or property; nor shall such notification relieve the user of any fines, civil penalties, or other liability which may be imposed by this regulation or other applicable law.
- 2) A notice shall be permanently posted on the users bulletin board or other prominent place advising employees whom to call in the even of a dangerous discharge. Employers shall insure that all employees are advised of the emergency notification procedure.

Article 9 – Protection from Damage

§ 901 – Damage Prohibited

No unauthorized person shall maliciously, willfully or negligently break, damage, destroy, uncover, deface or tamper with any structure, appurtenance or equipment which is a part of the sewage collection system or water pollution control facility. Any person violating this provision shall be subject to immediate arrest under charge of disorderly conduct and subject to fine of not more than \$1,000.00 for each violation.

Article 10 – Penalties

§ 1001 – Written Notice to Cease and Correct Violations

Any person who shall violate any provisions of this regulation, except those stipulated in Section 901, shall be served with written notice setting forth the nature of the violation and requiring that the same be satisfactorily corrected within a time set forth in said notice, which times shall be reasonable considering the nature and circumstances of the violation. Any person so served shall, within the time state in such notice, permanently cease all violations of this regulation.

§ 1002 – Penalty for Violations

Any person who shall continue any violation beyond the time set forth in any notice served upon him in accordance with the provisions of Section 9-1 of this article shall forfeit and pay to the Commission the sum of \$100.00 for each such violation, and may be prosecuted criminally for such violation and fined not more than \$500.00 for each offense; provided, however, that each day in which any such violation shall continue shall be deemed a separate offense; and, provided further that no person shall be sued in a civil action and

prosecuted criminally by the Town of Winchester for the same offense.

§ 1003 – Liability for Damages

- 1) Any person violating any of the provisions of this regulation shall become liable to the Town for any expense, loss or damage occasioned the Town by reason of such violation.
- 2) Any person who is found to be in violation of Section 22a-430 of the Connecticut General Statutes as amended shall be subject to a monetary penalty or forfeiture under Section 22a-438 of the statutes.

Article 11 – Liens

§ 1101

Whenever any person shall be ordered to make any connection as set forth in Article 4 Section 402 of these Rules and Regulations and when any person shall have been ordered to discontinue any violation as set forth in Article 10, Section 1001, and shall fail to do so within the time set forth in said notice the Commission may cause the same to be done, and collect the expense thereof from such person, and such expense shall become a lien against the property of such person until paid, and all provisions of the General statutes relating to the recording, continuing and releasing of property tax liens shall apply.

§ 1102

The provision of Section 1101 of this article shall be in addition to, and not in derogation of, the provisions of the Charter of the Town of Winchester as amended.

Article 12 – Assessments, Charges, and Rentals

§ 1201 – Connection Fee

- 1) Per action of the Commission on September 16, 2003, the fee for connection to the sewer system shall be \$1,000.00.
- 2) The Commission, at its sole discretion, may reduce or waive the connection fee.

§ 1202 - Sewer Use Fee

- 1) General

The purpose of this Section is to:

- a) Establish fair and reasonable charges for the use of the Winchester wastewater treatment system so that the operation and maintenance of said sewerage system shall be self-supporting. This user charge system is designed to produce sufficient revenues required for the operation and maintenance, including capital replacement of the wastewater treatment system. Each user that discharges wastewaters to said facilities that cause an increase in the cost of operation and maintenance shall pay for such increase.
- b) Provide that each user or user class pays its proportional share of operation and maintenance, including capital replacement, costs of the wastewater treatment system within the Winchester sewer service area, based on the user's proportionate contribution to the total wastewater loading from all users or user classes based on actual or estimated use of wastewater treatment services.

- c) Generate sufficient revenue to offset the cost of all treatment works operation and maintenance, including capital replacement costs.
- 2) The Commission may amend the sewer use fee from time to time, as necessary to meet the objectives of the foregoing paragraph.
- 3) The sewer use fee shall be as established in the Commission's current Water and Sewer Use Rate Schedule.
- 4) In addition to the Commission's sewer use fees, the Commission may also bill and collect charges due to contractual arrangements the Commission may have with cities or organizations within the service area. The charges appear on the regular Commission bill as separate items and are not part of the sewer use fee and/or rates established by the Commission.
- 5) When the sewer is available, it will be presumed that the sewage from the premises is discharged either directly or indirectly into the sewer and the property shall be billed for sewage service. This shall apply to all premises within the jurisdictional boundary of the Commission.
- 6) Where new sanitary sewers are constructed, all premises shall be connected to the new sewer in accordance with these Rules and Regulations and shall be subject to the sewer use fee as soon as connections are made to the new sewer. However, if the making of the connection is delayed, the property shall be subject to the sewer use fee ninety (90) days after the sewer is in operation and/or accepted by the governmental agency having jurisdiction over the sewer. For sewer assessment projects, this time requirement applicable to the sewer use fee shall be reduced to thirty (30) days after the sewer is in operation and/or accepted. This shall apply to all premises within the jurisdictional boundary of the Commission.
- 7) Claims for exemption from the sewer use fee because of non-availability of sewers may be made in writing to the Commission giving the public water supplier account and meter numbers. Exemptions from the charge will be effective only from and after such application has been investigated and approved by the Commission.
- 8) Wells or sources of water supply other than municipal water supplies shall be registered in writing with the Commission, giving name of individuals or firm, address, source and amount of water supply other than that from the public water supplies, together with a sketch to a scale showing plan of property, water distribution system, sewer layout and existing meters. All sources of water that enter the sewer system shall be properly metered and subject to the sewer use fee.
- 9) Any customer who is found to be connected to the sewer system but has not been billed shall be billed back three years from time the connection is discovered.
- 10) Payment for Services:
 - A. The sewer use fee and surcharge, if any, shall be billed and collected by the Tax Collector of the Town of Winchester.
 - B. Payment of the sewer use fee and surcharge must be made to the Town of Winchester according to the Winchester Tax Collector's current policies and requirements.
 - C. In case of failure of any user to pay for services rendered, the Winchester Tax Collector will pursue past-due balances using the Town's prevailing collection process.
 - D. Residential property with no public water service will be billed a flat rate according to the current approved rate schedule and will be rendered to the registered owner of the property.

- E. For all past due accounts, the Commission may, at its sole discretion, shut off the water service to such user's premises until such time as all delinquent charges, plus a charge of \$25.00 for turning the water service off and a separate and additional charge of \$25.00 to restore water service against such user, are paid in full or have acceptable payment arrangements made. The Commission may institute actions in a court having jurisdiction for the recovery of such delinquent bills.
- F. Upon full payment of such delinquent account plus a reasonable charge for turning off and on the water service, the water service can again be provided to said user's premises.
- G. Payment of the sewer use fee can be made by check. Customers who pay by check assume all responsibility for insuring there are sufficient funds to cover the check issued for payment of sewer use fees. When paying by check, payment is considered to be made only when the funds are transferred from the customer's bank account to the Commission's account or its agent's account.
- H. Any service fee levied by the Winchester Tax Collector for returned checks is in addition to all other charges and penalties as described in the Commission's Rules and Regulations.

3) Reduced Sewer Use Fee

Requests for reduction in the sewer use fee (as determined and described hereinbefore and after) will be allowed for water not entering the sewer system if measured with a special meter and approved in accordance with the procedures described hereinafter. All meters shall be installed in accordance with the standards, rules and regulations of the applicable public water supplier.

Reduction in the sewer use fee may be allowed when water that is not measured by a special meter does not enter the sewer system. A letter must be submitted to the Commission clearly indicating the reason for the water not reaching the system along with technical data supporting the quantity of water that does not enter the sewer system. The Commission may send an inspector to verify the information submitted.

Requested reductions or credits to a user's sewer use fee, other than refunds for special meters, will not be less than a minimum bill per current approved rates, for the applicable billing period. No refund checks will be issued for less than five dollars (\$5.00) unless approval of Commission is received.

4) Auxiliary and Special Meters

A. General

- 1. Auxiliary or special meters shall be installed at the expense of the owner. No meter shall be installed before the Commission grants approval of the installation. All meters shall be installed in accordance with the Commission's Technical Standards and these Rules and Regulations.
- 2. Meters to be used as auxiliary meters or special meters which will be approved are as follows:
 - a) Meters purchased from any municipality, or the person, firm or corporation, which furnished water to, said user's premises and meters similar to and equal to those specified by said water supplier and tested by the water supplier.
 - b) Crest or turbine type meters of two (2) inch size and over, to be used where it is established the particular meter is under a full head at all times, provided such meters are tested and passed for large constant flows by an independent testing laboratory or a water department and certified by same.
 - c) Meters used currently for tax purposes by the United States Government will be accepted without tests.

3. Existing private meters now in place may be continued in use on conditional basis. If such meters are suspected of faulty registration, they are subject to a test when so ordered by the Commission.

B. Auxiliary Meters

1. The Commission shall have the authority to permit or to require additional meter(s) to be installed at the applicant's expense, so as to measure the quantity of water actually entering the wastewater treatment system and to determine the sewer use fee or surcharge.
2. Auxiliary meters for determining the sewer use fee or surcharge shall be installed, owned and maintained by the property owner. However, following the installation of such meters and approval of the installation by the Commission, meters may not be removed without the prior approval of the Commission.
3. When an auxiliary meter is so located that it is not read by the public water supplier, it shall be the responsibility of the user to make reports of meter readings before each billing period. Meter reading forms are available from the Commission. If the required meter reading reports for auxiliary meters are not received at the Commission before each billing period, the Commission shall compute the user's sewer use fee by using an estimated consumption total based on consumption history.
4. Where private meters are used on wells, or in an industrial, commercial or private water distribution system and such meters are set behind the meters used to register the primary water supply to a lot, land or premises, the installation is subject to the inspection and approval of the Commission.
5. Where total sanitary wastewater flow is to be measured, the auxiliary meter(s) must be installed to measure all flow streams discharging to the sewer.
6. If the Commission finds that it is not practical to measure the quantity of wastewater by meters, it shall determine the quantity of wastewater entering the wastewater treatment system in any manner or by any method found reasonable and practical. The quantity so determined shall be the quantity of wastewater to which the Sewer Use Fee charges shall be applied.

C. Special Meters

1. All requests for installation of special meters and reductions in sewer service charge must be in writing, using the special meter installation form, to the Commission.
2. **Special Meter Requirements** - An approved, permanently installed special meter (no hose connections or portable meters) designed for measurement of water flows must be used to measure all water that does not enter the sewage system. All special meters must register in the same units (gallons or cubic feet) as the public water supply meter that serves the user.
3. **Meter Approval** - All special meters must be approved by the Commission to receive credit. It shall be the responsibility of the user to verify that the water does not enter the sewage system. Only water measured with the approved special meter shall qualify for a reduction in sewer service charges. Where a portion of the special metered water discharges to the sewer system, only partial credit will be given based on information supplied by the user and as determined by the Commission. No refunds, credits, reductions or allowances will be given covering any period prior to the date the Commission approves the request for installation of a special meter.

4. **Right to Inspect Meters** - The Commission reserves the right to enter a user's premises, to inspect the installation of all special meters and to verify all readings. If completed forms do not correspond with actual readings, then all reductions will be based on actual meter readings.
5. **Special Meter Responsibility** - The Commission assumes no responsibility for installation, maintenance or mechanical condition of the meter. No reductions will be approved if the meter fails to operate properly. No estimated readings will be acceptable as a basis for reduction in sewer service charges. If a meter is suspected of faulty registration, the Commission may order a test and/or replacement of meter.
6. **Meter Reading Submittal** - The user is responsible for reporting all readings to the Commission. The Commission assumes no responsibility for the readings until received at the Department of Public Works office. All readings must be recorded on the official form provided by the Commission and mailed to the Commission's main office. Forms will be automatically forwarded to the user on a yearly basis. All reductions will be computed based on the Commission's current approved rate schedules in effect at the time the water was used. The Commission at its discretion may perform all meter readings.
7. **Meter Reading Time Limit** - All special meter forms must be received by the Commission before the sewer use fee is processed for each billing period. If the reading is not received before the processing of the sewer use fee, then the total water consumption from the public water supply meter and any auxiliary meter will be used. For annually read special meters, the special meter refund forms must be completed and mailed to the Commission within thirty (30) days of when the Commission mailed the forms to the user. No reductions will be allowed to a user's sewer use fee once the billing has been computed and/or processed. The reduction will be carried forward to the next billing period. No reduction in a user's sewer use fee will be allowed for accounts that have been inactive for a period of twelve (12) months or more since the last form submittal.
8. **Special Meter Refund Limitations** - Requested reductions or credits to a user's sewer use fee will not be greater than a minimum bill per current approved rates, for the applicable billing period. The amount of reduction associated with a special meter credit cannot amount to more than the total sewer use fees associated with the usage from the user's water supply meter(s) for the same period of time.

§ 1203 – Charges for Review of Applications

- 1) Applicants for various permits issued by the Commission shall be required to compensate the Commission for all costs incurred by the Commission for outside engineering reviews, legal advice, legal advertisements, and recording fees associated with the application review and approval process. The Commission shall, from time to time during the review and approval process, obtain advance proposals from outside consultants and provide the applicant with an accounting of charges already incurred and reasonable estimates of remaining charges. If the actual costs incurred by the Commission exceed the deposit fee stipulated below, the applicant shall make up the balance upon demand by the Commission as a condition precedent to a final decision. Failure on the part of the applicant to pay all balances due shall constitute sufficient cause for denial of application by the Commission. If the deposit fee exceeds the costs actually incurred by the Commission, the Commission shall refund the balance to the applicant within 60 days after final accounting of charges has been completed.

2) Schedule of Charges for Review of Applications:

Type of Application	Deposit	Balance of Charges
Class 1 – One to Three Residential Units	\$ 0.00 per EDU	Actual costs incurred (if any)
Class 1 – Multi-Family Residential Development	\$ 50.00 per EDU	Actual costs incurred less deposit
Class 1 – Commercial; 4 EDU or less	\$ 0.00 per EDU	Actual costs incurred (if any)
Class 1 – Commercial; Greater than 4 EDU	\$ 50.00 per EDU	Actual costs incurred less deposit
Class 2 - Industrial	\$ 100.00 per EDU	Actual costs incurred less deposit
Class 3 – Preliminary Design	\$ 25.00 per EDU	Actual costs incurred less deposit
Class 3 – Final Design	\$ 50.00 per EDU	Actual costs incurred less deposit

Article 13 - Low Pressure Sewers

§ 1301 Low Pressure Sewer Service Areas

- 1) The Commission operates and maintains two LPS service areas within the Town of Winchester as single and complete systems:
 - A. Highland Lake LPS Service Area, including:
 1. All lots of record located between Wakefield Boulevard and Highland Lake.
 2. All lots of record completely within a sewer service boundary established as 300 feet from Wakefield Boulevard on the opposite side of Wakefield Boulevard from Highland Lake.
 3. All lots of record intersected by the 300 foot sewer service boundary line will be considered to be in the service area if they contain an existing habitable structure as of August 31, 1991 that falls within or on the 300 foot boundary line.
 4. All future buildings constructed on lots of record intersected by the 300 foot sewer service boundary line will be decided on a case by case basis by the Commission.
 - B. Winchester Ridge LPS Service Area, including Lots 1 through 104 of the Winchester Ridge subdivision on Wallens Hill. This LPS service area covers all building lots fronting on Mountainside Drive, Hayfield Lane, Algonquin Circle, Ridgeview Place North and Ridgeview Place South.
- 2) The Commission constructed the Highland Lake LPS in the early 1990's as an assessment project.
- 3) Construction of the phased Winchester Ridge LPS system commenced circa 2005 and remains in progress as of the date of amendment to these regulations.

§ 1302 Connection Required

- 1) All buildings located within the Highland Lake LPS service area as defined in Section 1301 shall be connected to the Commission's LPS system unless a valid exemption or waiver remains in effect. Most exemptions for connection in the Highland Lake LPS service area expired in 2005. Accordingly, the owner of any building in the Highland Lake LPS service area with an expired exemption that is not connected to the Commission's LPS system is operating a private disposal system in violation of these Rules and Regulations. Upon discovery of such violations, the Commission will order the property owner to connect to the Highland Lake LPS.
- 2) The Commission may waive the prevailing connection fee for new construction on a lot-of-record within the Highland Lake LPS service area for those properties which have already been assessed for the original Highland Lake LPS construction project.
- 3) For new construction on a lot-of-record within the Highland Lake LPS service area that has not been assessed for the original Highland Lake LPS construction project, the Commission requires payment of the assessment, in full, as a prerequisite to connection. The Commission will waive the prevailing connection fee in such cases.
- 4) All buildings located in the Winchester Ridge LPS service area as defined in Section 1301 shall be connected to the Commission's LPS system. The Commission's prevailing connection fee, as stipulated in Section 1201 of these Rules and Regulations shall apply to all connections.

§ 1303 Service Connections within LPS Service Areas

- 1) All service connections within established the LPS service areas defined in Section 1301 shall be a low-pressure sewer system meeting the Commission's Technical Standards.
- 2) All connections to the public LPS system are made upon the express understanding and agreement of the property owner that:
 - A. Neither the Commission nor the Town of Winchester shall be liable for any damage or expense resulting from leaks, stoppages, or defective plumbing or from any other cause occurring to any premises or within any house or structure when such damage or expense is found to have resulted from stoppages, damages or defects in any house connection;
 - B. Neither the Commission nor the Town of Winchester shall be liable for a deficiency or failure of service when occasioned by emergency, required repairs, or failure from any cause beyond its control;
 - C. The Commission reserves the right to restrict the use of sewer service whenever the public welfare may require it;
 - D. The Commission and its duly authorized agents shall have the right of access at all reasonable hours to all parts of any premises connected with the sewer system for the purpose of examining and inspecting the connections and fixtures, or for disconnecting service or for any proper cause;
 - E. Following installation, the Commission will periodically inspect and maintain the LPS service connection at the Commission's expense, provided however, that any damage caused to the LPS service connection as a result of the discharge into the same of prohibited substances or other misuse by the user or any damage caused by the physical collision or impact with appurtenance of the LPS service connection shall be repaired by the Commission at the property owner's expense.
 - F. The property owner shall in all events be responsible for the maintenance and repair of all sewer piping from the house to the pump. The property owner shall also provide electrical power service

facilities from the house to the pump's electrical control and alarm panel.

- G. The use of holding tanks for any purpose is prohibited. No person shall use, construct, or install any holding tank for the purpose of storing sewage effluent and then pumping said effluent into the public LPS main at off-peak times.
 - H. The property owner must give written notice to the Commission upon any change in ownership of any improved property.
- 3) One separate and complete LPS service connection shall be required for each lot-of-record. The Commission may waive this requirement in cases where extreme topography, location of buildings, presence of shallow bedrock, or other features of significant historic, environmental, or social importance renders compliance with this requirement imprudent or infeasible.
- 4) The Commission may waive the requirement one separate and complete LPS service connection for each lot-of-record in the case where separate lots will be merged into one lot-of-record before a LPS service connection is placed into service.
- 5) For all LPS service connections within the LPS service areas defined in Section 1301, the Commission shall:
- A. Provide the property owner with specifications for the acquisition and installation of LPS service piping, curb and check valves, grinder pump and tank, anti-floatation requirements, power requirements, and control and alarm panels.
 - B. Tap the LPS main in the street.
 - C. Supervise and inspect construction of the LPS service connection from the LPS main in the street to and including the LPS grinder pump and holding tank.
 - D. Supervise the testing and startup of the LPS service connection.
 - E. Receive ownership of the LPS service connection and appurtenances upon successful completion of construction and acceptance of the work by the Commission.
 - F. Rent the LPS grinder pump to the property owner at rates established herein.
 - G. Maintain the LPS system from the public sewer to and including the LPS grinder pumping station for the life of the service. The Commission shall also maintain the control and alarm panels mounted on the exterior face of the building served for the life of the service.
- 6) For all LPS service connections within the LPS service areas defined in Section 1301, the property owner shall, at no cost to the Commission:
- A. Apply to the Commission for a building sewer permit (refer to Article 6 for procedure).
 - B. Convey an easement to the Commission, in a form satisfactory to the Commission, for the location and future maintenance of the LPS service connection.
 - C. For connections within the Winchester Ridge LPS service area, Pay the connection fee per the Commission's prevailing schedule of assessments, charges, and rentals.
 - D. For new connections within the Highland Lake LPS service area, pay the sewer assessment, if applicable.

- E. Apply for and acquire a street-opening permit from the Town of Winchester department of Public Works, if work within the public highway is required.
 - F. Apply for and acquire building permits for the required electrical service and building drain construction.
 - G. Furnish and install the LPS service connection, including LPS service piping, valves, grinder pump assembly, anti-floatation concrete, and control and alarm panels as specified by the Commission. Also, furnish and install a gravity building sewer connection from the building served to the LPS grinder pump station. The materials and installation requirements for this work shall comply with the Commission's Technical Standards and applicable local, state and federal building codes. All work shall be performed by qualified and licensed contractors, as identified in the application for building sewer permit.
 - H. Adequately guard construction-related excavations and other hazards within the public right-of-way with adequate barricades, signage, and warning lights, as required by the Town of Winchester Department of Public Works.
 - I. Furnish and install electrical service to the exterior control and alarm panel for the LPS grinder pump station, as specified by the Commission. The electricity must be left on at all times for maintenance reasons. The capacity of the circuits shall be in accordance with specifications furnished by the Commission. Installation of electrical service shall comply with all applicable building codes and shall meet the Commission's Technical Standards. The electrical service shall be installed by a licensed electrician.
 - J. Repair the roadway and shoulder areas of the public highway to the satisfaction of the Town of Winchester Department of Public Works.
 - K. Convey title for LPS infrastructure to the Commission, in a form acceptable to the Commission. LPS infrastructure shall include:
 - 1. The LPS service piping from the public LPS main to LPS grinder pump
 - 2. The LPS grinder pump and holding tank
 - 3. The exterior-mounted control and alarm panels
 - L. Pay for all electricity as needed to power the control and alarm panels and the LPS grinder pump unit throughout the life of the service.
 - M. Maintain and repair the gravity building sewer between the building served and the LPS grinder pump station throughout the life of the service.
 - N. Maintain and repair the electrical and alarm lines between the control and alarm panels and the LPS grinder pump unit throughout the life of the service.
- 7) For any single building under one ownership, that contains separate residential and business uses, the Commission may require one separate and complete LPS sewer connection for each use to individually service the residence and the business.
 - 8) In the case of a single building under separate ownership, the Commission may allow the use of a single pump with greater capacity. In this case, the Commission may adjust the sewer use fee in a manner commensurate with the pump capacity.
 - 9) For any single building with three or more dwelling units under separate ownership, separate and

complete LPS service connections shall be required for each dwelling unit.

Article 14 – Compliance with other Statutes, Codes, Regulations and Standards

§ 1401 - Other Statutes, Codes, Regulations and Standards

- 1) Present and prospective users of the sewage works of the Commission are herewith advised and warned of other existing regulations, codes, ordinances and laws governing the requirements for use and control of sewage systems and the requirements of their compliance.
- 2) Users and plumbers employed by the user are required to comply with any applicable State Building Code, Rules and Regulations issued by the Connecticut Department of Environmental Protection.
- 3) Every person and public corporation desiring to install or enter into a contract for the installation of a public, semi-public or industrial sewage system, or to make additions or alterations in such treatment or pretreatment plant or to alter or extend any such sewer shall comply with all design and construction standards and specifications of the Commission, all rules and regulations of the local board of health in which the facility exists or is to be constructed, and comply with all codes, rules and regulations of the Connecticut Department of Environmental Protection. No such installations, additions or alterations shall begin until the plans and specifications, therefore, have been submitted to and approved by the Commission and/or their authorized representatives.
- 4) No person or public corporation shall install within the Town of Winchester Sewerage System any laterals, trunk lines, interceptors for the collection or discharge of sewage or other liquid wastes, treatment or disposal works, until the plans therefore have been submitted to and approved by the Commission. Any installation contrary to the provisions of this section shall constitute a nuisance and shall be abated upon proper application by anyone aggrieved, including the Commission, the commissioner, the state board of health and local board of health.

Article 15 – Validity

§ 1501 – Validity

- 1) All rules and regulations or parts thereof, in conflict herewith are hereby repealed.
- 2) If the provisions of any paragraph, section or article of these Rules and Regulations are declared unconstitutional or invalid by the final decisions of any court of competent jurisdiction, the provisions of the remaining paragraphs, sections or articles shall continue in full force and effect.

Water Pollution Control Plan

Prepared By:

**TOWN OF WINCHESTER
CITY OF WINSTED**



Water and Sewer Commission

Acting in their capacity as the Town's

Water Pollution Control Authority

The Town of Winchester Water and Sewer Commission

Effective: September 11, 2009

The Town of Winchester is an equal opportunity provider, employer and lender

TOWN OF WINCHESTER
WATER AND SEWER COMMISSION
Acting in their capacity as the Town's
WATER POLLUTION CONTROL AUTHORITY

Water Pollution Control Plan

On January 4, 1965, the Town of Winchester created a Sewer Authority by ordinance, which became effective on January 20, 1965. The ordinance conferred all of the powers, purposes, and objectives set forth in Chapter 103 of the Connecticut General Statutes – Revision of 1958 to the new Sewer Authority.

Chapter 103 Section 7-246 Subsection (c) of the Connecticut General Statutes re-designated Sewer Authorities in existence as of October 1, 1978 as Water Pollution Control Authorities and deemed said Water Pollution Control Authorities as the successors to the Sewer Authorities for all the purposes of Chapter 103.

Article VI - Section 605 of the Town of Winchester Charter (as amended – 2001) designates the Water and Sewer Commission (hereinafter referred to as the Commission) as the Water Pollution Control Authority for the Town of Winchester, and delegates all powers accorded to Water Pollution Control Authorities by the Connecticut General Statutes to the Commission.

The Commission, pursuant to section 7-246 (b) of the Connecticut General Statutes, hereby establishes this Water Pollution Control Plan for the Town of Winchester.

1. **Purpose** – The purpose of this plan is to set forth the Commission's policies and objectives for the control of water pollution. The fundamental purpose of this plan is to implement a water pollution control policy consistent with the following:
 - 1.1. To support and complement the Town of Winchester Plan of Conservation and Development.
 - 1.2. To designate and delineate the boundaries of the areas served by the Town's sanitary sewer collection system.
 - 1.3. To designate areas where sewers are to be avoided.
 - 1.4. To outline the Commission's policy for the effective utilization of existing treatment

plant capacity, and to establish a policy for the proper planning of treatment plant facilities prior to the construction of any new or additional treatment facilities.

- 1.5 To manage the wastewater infrastructure such that it will promote commercial and industrial development, thereby promoting economic growth for the benefit of Town of Winchester as a whole.
 - 1.6 To implement the logical and efficient expansion of the sanitary sewer collection system and treatment system as contemplated by the Wastewater Treatment Facilities Plan dated November 1977.
2. **Sewer Service Area** – The Sewer Service Area includes all properties that were determined to require sewer service currently or in the future during the preparation of the Facilities Study and this Water Pollution Control Plan. The limits of the Sewer Service Area are designated on a certain map entitled “Winchester Sewer Service Area”. The Sewer Service Area is divided into five separate areas as follows:

2.1 Sanitary Future Connections: Certain areas within the Sewer Service Area exist in which sanitary sewer infrastructure may be planned for and constructed in the future. Such areas are included as part of the long-term plan for providing sewer service. These areas constitute all remaining areas within the Sewer Service Area that are not currently sewered, excluding areas designated as conservation areas. The Commission has no immediate plans for the design and construction of new public sewers in these areas. Future sewer improvements within the Sewer Service Area designated as “Sanitary Future Connections” shall be designed and constructed by the private sector pursuant to a sewer/allocation permit issued by the Commission in accordance with the Sewer Use Ordinance, the Town of Winchester Water and Sewer Commission Sewer Rules and Regulations, and applicable Town of Winchester Technical Standards.

The Commission recognizes that certain properties within the portion of the Sewer Service Area designated as “Sanitary Future Connections” are currently developed and served by sub-surface disposal systems. The Commission also recognizes that areas or individual properties within these areas may require remediation of water pollution

resulting from the failure of on-site subsurface sewage disposal systems in the future and anticipates that the current sanitary sewer infrastructure may be extended to serve these currently developed areas. The Commission currently has no plans for providing public sewer to these areas, but will be receptive to sewer extension proposals that are submitted for the sole purpose of remediation of water pollution.

2.2 Sanitary Connected: These are the areas identified within the Sewer Service Area as currently having sanitary sewer infrastructure already installed and in service.

2.3 Sanitary – Likely Connected: These are individual properties located within the Highland Lake low-pressure sewer district that are most likely connected to the municipal sewer system but have not been confirmed as connected during development of this Water Pollution Control Plan.

2.4 Sanitary – No Plumbing: These are individual properties located within the Highland Lake low-pressure sewer district that have no plumbing and are therefore not connected to the sewer system. Future sanitary improvements to such properties shall be connected to the municipal sewer system.

2.5 Sanitary – Not Connected: These are individual properties located within the Highland Lake low-pressure sewer district that are currently developed and served by on-site subsurface sewage disposal systems. The Commission recognizes that these properties will be connected to the municipal sewer system upon termination of waivers or deferrals granted at the time of sewer construction or upon discovery of the need to remediate water pollution resulting from the failure of such systems.

3. Sewer Avoidance – In accordance with the recommendations contained in the January, 1978 report published by the Connecticut Department of Environmental Protection entitled "*A Report to the Joint Standing Committee on the Environment on the Establishment and Administration of a Municipal and Town Sewer Avoidance Program*" the Commission agrees that sewer avoidance is a desirable policy in rural areas where sewers do not currently exist. The Commission therefore adopts a policy of sewer avoidance in all areas outside the boundaries of the Sewer Service Area. The Commission will not extend, nor permit the extension of, its sanitary sewer infrastructure to serve areas or individual properties outside

the boundaries of the Sewer Service Area.

- 3.1. The only exception to this sewer avoidance policy is when municipal sewers are the only means of mitigating water pollution problems caused by the failure of multiple subsurface disposal systems in the same geographic area.
 - 3.2. New development and construction outside the boundaries of the Sewer Service Area shall not exceed the capacity of the land on which it is located to adequately support a sub-surface disposal system. The Commission expects that appropriate municipal agencies such as, but not limited to, the Planning and Zoning Commission, Building Department, and Torrington Area Health District will incorporate policies that will ensure the long-term reliability of subsurface disposal systems.
4. **Capacity Management** – Wastewater treatment and collection capacity will be made available to existing and proposed users of the system within the Sewer Service Area. Allocation of treatment and collection capacity shall be made in a manner that is consistent with the Commission's policies. The Commission hereby adopts the following priorities for the allocation of treatment and collection capacity:

Priority	Capacity Allocation Max. 30-Day Average	Capacity Allocation 365-Day Average	Description
1	700,000 GPD	700,000 GPD	Capacity allocated to existing development within Areas Currently Sewered
2	1,500,000 GPD	600,000 GPD	Capacity allocation for non-excessive infiltration / inflow (includes allowances for additional infiltration / inflow generated by additions to the sewage collection system and increased deterioration over time of existing, non-rehabilitated sewers).
3	150,000 GPD	150,000 GPD	Capacity allocated to potential increased demand within Areas Currently Sewered
4	40,000 GPD	40,000 GPD	Capacity allocated to Winchester Ridge Subdivision (approved by PZC but not yet constructed)
5	240,000 GPD	240,000 GPD	Capacity allocated to Highland Ridge Estates and Aurora Estates residential developments (approved by PZC but not yet constructed)

Priority	Capacity Allocation Max. 30-Day Average	Capacity Allocation 365-Day Average	Description
6	205,000 GPD	205,000 GPD	Capacity allocated to existing residential, commercial, and industrial development on Rowley Street and potential future commercial / industrial development on Rowley Street and Torrington Road (SR 800)
7	580,000 GPD	580,000 GPD	Capacity allocated to potential future development meeting current zoning densities within the Sewer Service Area and for existing developed areas currently connected to sub-surface disposal systems within the Sewer Service Area.
8	35,000 GPD	35,000 GPD	Capacity allocated to the Town of Barkhamsted; specifically for commercial development on U.S. Route 44 (New Hartford Road) near the Winchester town line
9	50,000 GPD	50,000 GPD	Capacity allocated to abatement of water pollution from existing residential development lying within the Town of Winchester but outside of the established Sewer Service Area
Total:	3,500,000 GPD	2,600,000 GPD	Total Treatment Plant Capacity

- 4.1 With respect to the capacity allocations set forth in the foregoing table under Priorities 3, 6, and 7, priority shall be given to non-residential uses that will strengthen the tax and employment base of the Town.
- 4.2 Residential development capacity allocation shall be limited to such density of development as is permitted by the zoning regulations for the zoning district in which the property is located.
- 4.3 Allocation of treatment and collection capacity shall lie solely with the Commission.
- 4.4 Under no circumstances will allocation be authorized that will cause the treatment capacity to exceed a maximum 30-day average of 3,500,000 GPD or a 365-day average of 2,600,000 GPD.
- 4.5 Under no circumstances will allocation be authorized that will cause the exceedence of the collection capacity at the point of connection or in any downstream segment of the

wastewater collection system, without a capacity-reduction or capacity-increasing project being undertaken by the developer that will reduce the volume by a ratio of 4:1 or increase the carrying capacity of the affected segments.

5. **Community Sewerage Systems** – Community Sewerage System shall mean any sewerage system serving one or more residences in separate structures which is not connected to a municipal sewerage system or which is connected to a municipal sewerage system as a distinct and separately managed district or segment of such system.
 - 5.1 Community Sewerage Systems shall not be used as a method to extend sewer service for new construction beyond the limits of the Sewer Service Area.
 - 5.2 Unless necessary to abate or mitigate an existing water pollution problem, no "Community Sewerage Systems" including but not limited to package treatment plants, pumping stations, or sub-surface disposal systems shall be permitted in the Town of Winchester Sewer Service Area.

Terms of Developer's Agreement

Prepared By:

**TOWN OF WINCHESTER
CITY OF WINSTED**



Water and Sewer Commission

Acting in their capacity as the Town's

Water Pollution Control Authority

Adopted: October 18, 2011

Effective Date: November 1, 2011

The Town of Winchester is an equal opportunity provider, employer and lender

The Town of Winchester Water and Sewer Commission (hereinafter referred to as the Commission) will allow privately-funded extensions of the Town's wastewater treatment system only through a formal contract known as a Developer's Agreement.

Following approval of the final design plans, technical specifications, and cost estimate by the Commission, but prior to commencement of construction, the Developer and Commission shall enter into an agreement for construction of the proposed improvements on a form prescribed and prepared by the Commission. Unless modified by mutual consent, the agreement between Developer and Commission shall include the following attributes:

- 1) The agreement shall spell out the terms, conditions, duties, and obligations of the Developer and the Commission in regard to the construction, maintenance, and acceptance of sanitary sewers into the Commission's wastewater treatment system, pursuant to the Commission's approval of plans, specifications, and cost estimate for the work.
- 2) The agreement shall identify the operative construction documents by title and date.
- 3) The agreement shall identify the scope of improvements and project phases.
- 4) The agreement shall be for a term of five (5) years and may be renewed for additional periods by majority vote at a regular meeting of the Commission upon the written request of the Developer.
- 5) The approved construction documents used by the Developer for construction shall be the same as those approved by the Commission and recorded in the office of the Winchester Town Clerk.
- 6) The Developer shall provide the Commission with at least seven (7) calendar-days written notice prior to initiating any construction activities that require inspection or acceptance by the Commission or its designated representatives.
- 7) The sanitary sewers, pumping stations, and related components constructed under the terms of the agreement shall be considered private systems until such time as they are accepted into the Town's public sanitary sewer system by action of the Commission.
- 8) The Commission shall not allow sewer service connections to the Developer's proposed facilities until all proposed facilities within each phase are completed and determined operational in accordance with the terms of the agreement. The Town of Winchester will not issue Certificates of Occupancy for any dwellings or buildings within a development prior to the Commission's certification of completion of all proposed sanitary sewers, sewage pumping stations, and related components within each phase.
- 9) The Commission shall provide for reviews, construction inspection, and all other necessary technical services associated with the Developer's proposed sanitary sewers, sewage pumping stations, and related components. The Developer shall reimburse the Commission for all costs associated with reviews, construction inspection, and all other necessary technical services provided by the Commission.
- 10) The Developer shall provide the Commission with security for each phase of the project, in the form of cash or surety bond for the value of the work in each phase to insure that sanitary sewers, sewage pumping stations, and related components are constructed in accordance with construction documents approved by the Commission. Companies issuing surety bonds to the Commission shall possess the following qualifications:
 - A. Listed in the U.S. Department of the Treasury Circular 570;
 - B. Licensed and admitted surety covered by the Connecticut Insurance Guaranty Association.

C. Secure Best's Rating of A or A- (Excellent) or better as published by A.M. Best Company;

- 11) The form of the security shall be reviewed and approved by the Commission's attorney, the Town's insurance agent, and the Winchester Finance Officer/Treasurer. The amount of security shall be reviewed and adjusted if necessary to protect the limits of the Town, and reviewed and approved by the Commission as requested.
- 12) The Developer and its contractors, design professionals, and subcontractors shall maintain the following minimum insurance coverage for the term of the Agreement. The insurance coverage shall contain a provision for thirty (30) days notice to the Commission in the event of cancellation. The Developer shall provide certificates of insurance to the Commission and the Town at the time of the execution of the Agreement and within ten (10) days of the renewal of the insurance policies. The Town and its agents shall be named as additional insured on the insurance policies (Items b., c., d., and e.) as described below. Insurance companies issuing policies for this Agreement shall be licensed by the State of Connecticut. Insurance coverage shall include:
 - A. Workmen's Compensation in the amounts required by law.
 - B. Automobile and Truck Liability, Bodily Injury, and Property Damage insurance in the amount of \$1,000,000.
 - C. Umbrella Insurance in the amount of \$1,000,000.
 - D. Pollution Insurance – Not Required
 - E. Comprehensive General Liability Insurance in the amount of \$1,000,000.
 - F. Errors and Omissions insurance in the amount of \$1,000,000 (design professionals only).
- 13) The Developer shall pay all taxes, liens, and encumbrances against the property such that any conveyance to the Town is free and clear.
- 14) The Developer shall pay the Connection Charge for each individual connection to the sewer prior to the time of physical connection to the sewer system. Verification that the fee has been paid must be provided prior to the Commission's inspection of the connection.
- 15) During the term of the agreement, the Commission, its officers, employees, and agents shall have a right of entry upon the Developer's property during normal business hours to observe construction in progress or in place, to make measurements, and conduct tests to insure compliance with the agreement.
- 16) The Developer shall replace or repair any damage caused by its activities to Town facilities. In the event that municipal facilities are damaged, and upon notice to the Developer are not repaired or replaced within ten (10) days, the Commission or the Town of Winchester may make such repairs or replacements and collect the expense of the same from the Security.
- 17) The Developer shall document by text, drawings, photographs, video tape, or other means, of known damage to municipal facilities that occurred prior to the start of the construction of the improvements. This documentation shall be provided to the Commission in the form of a report. The Developer shall not be responsible for the repair or replacement of damage to municipal facilities documented in the report upon review and approval of this report by the Commission and the Town of Winchester.
- 18) The Commission understands that it may be necessary to make field changes to the approved construction documents to accommodate unforeseen or unusual conditions without having to delay the construction of the improvements. The Developer shall receive the written approval of the Commission and/or its authorized representatives prior to executing a field change.

- 19) Prior to the start of construction of sanitary sewers, sewage pumping stations, and related components, the Developer shall acquire, for the benefit of the Town, temporary and permanent easements or rights to install the sanitary sewer as follows:
 - A. All portions of sanitary sewers, sewage pumping stations, and related components that are proposed to be constructed on private lands shall be centered within a thirty (30) foot wide easement obtained by the Developer.
 - B. Such easements and rights shall provide for entry, passage, access, maintenance, repair, operation, replacement, and enlargement of the sanitary sewer.
 - C. The forms and language of the easement or right shall be reviewed and approved by the Commission or its designated representative and the Commission's attorney prior to conveyance from Developer to the Commission.
- 20) The Developer's contractor for construction of sanitary sewers shall be licensed by the State of Connecticut as a Drain Layer. The Commission reserves the right to approve the Contractor hired by the Developer for the purpose of constructing the proposed sewer facilities.
- 21) The Developer shall provide to the Commission with monies in the initial amount of \$10,000.00, which shall be placed in an escrow fund. The escrow fund shall be used to reimburse the Commission for expenses such as, but not limited to, technical reviews, studies, administration, engineering, management, inspection, quality assurance testing, land surveying, and legal fees associated with this Agreement. The Developer shall provide additional monies to the escrow fund as may be required to maintain a minimum escrow fund balance of \$5,000.00.
- 22) Failure of the Developer to maintain the minimum escrow fund balance shall result in the suspension of sanitary sewer construction and approval of any further sewer construction. No building permits or certificates of occupancy will be issued by the Winchester Building Official until such time as the minimum escrow balance is restored.
- 23) Upon completion of the warranty period, any unexpended monies shall be returned to the Developer upon approval of the Commission.
- 24) The Commission shall accept sanitary sewers, sewage pumping stations, and related components into the Town's public sanitary sewer system according to the following procedure:
 - A. The work authorized by the agreement shall be completed by the Developer in accordance with the terms and conditions contained therein.
 - B. The Commission shall inspect and test the completed work and prepare a written report that documents that the improvements have been constructed in accordance with the terms and condition of the Agreement.
 - C. The Developer shall warranty the work authorized by the agreement for a period of one (1) year after the Commission concurs that the work is complete and operational.
 - D. The Developer shall provide a maintenance bond for each phase of the project in the form required by the Town's Finance Officer / Treasurer, in the percentage of the estimated cost of the sanitary sewer facilities construction as determined by the Commission for a minimum of a one (1) year period after completion of the work authorized by this Agreement to insure correction of any defects that may be found in the work. The Commission shall re-evaluate and adjust, if necessary, this amount at the time of completion.

- E. Upon completion of the one year warranty period and at the request of the Developer, the Commission shall inspect and test the completed work and prepare a written report confirming that no defects have been found and the work is recommended to be accepted.
 - F. The Developer shall provide easements, as-built drawings, operations and maintenance manuals, product warranties, construction field books, and other such information to the Commission prior to acceptance of the facilities.
 - G. The Commission, by majority vote at a regular meeting, shall accept the work authorized by the Agreement into the public sanitary sewer system based upon the recommendation of the Commission's designated representatives after the one (1) year warranty period.
- 25) The Developer shall indemnify and hold the Commission, the Town of Winchester, and their officers, agents, and employees harmless from and against any claim of liability or loss from personnel injury or property damage resulting from or arising out of the use and occupancy of the property, including without limitation, the construction of the improvements, excepting such claims or damage as may be due to the gross negligence or willful misconduct of the Commission, the Town, and their officers, agents, or employees.
- 26) The Developer shall comply with all applicable laws, enactments, and regulations of any governmental authority relating to its possession and use of the property. "All applicable laws" includes, without limitation, any and all environmental laws, including any regulations, and written, final guidelines, standards, or policies of a governmental authority regulating or imposing standards of liability or standards of conduct with regard to any environmental conditions or concerns as may now or at any time hereafter be in effect.
- 27) The Developer shall not introduce or use any substance in violation of any applicable law that is identified as hazardous, toxic, or dangerous in any applicable federal, state, or local law or regulation on the property.
- 28) In the event of an uncontrolled release of any such substance on the property, the Developer shall notify the Commission and the Town of Winchester in addition to other regulatory authorities.
- 29) Prior to the transfer of any property or rights thereto to the Town of Winchester, the Developer shall provide title insurance, insuring that title is free and clear of defects rendering the title unmarketable from an insurer in a form acceptable to the Town's Attorney.
- 30) Prior to the transfer of any property or rights thereto to the Town of Winchester, the Developer shall conduct and provide to the Town for review and approval, as a minimum, a Phase I Preliminary Site Assessment ("Assessment"). The Assessment shall be conducted in accordance with the American Society of Civil Engineers Manuals and Reports on Engineering Practice No. 83 Environmental Site Investigation Guidance Manual Copyright 1996. The results of the Assessment may recommend, or the Commission or Town may, at their sole discretion require, that the Developer to conduct additional investigations or remediation prior to transfer of property to the Town.
- 31) The agreement shall not be sold, assigned, or transferred by the Developer to any other party without the written consent of the Commission and Town of Winchester, which shall not be unreasonably withheld, delayed, or conditioned.
- 32) The agreement and the performance thereof shall be governed, interpreted, construed, and regulated by the laws and customs of the State of Connecticut. Any action brought under this Agreement shall be to Superior Court of the Litchfield Judicial District.

- 33) In the event of a dispute that can not be resolved within sixty (60) days between the parties of this Agreement and prior to the filing of a complaint with the Superior Court, the parties shall utilize the services of the American Arbitration Association to attempt to mediate the dispute. The cost of such mediation shall be shared equally by the parties to the Agreement.
- 34) Failing successful mediation of the dispute, the parties to the agreement shall agree to make a best effort to resolve the dispute through the use of the Litchfield Judicial District's Dispute Resolution process prior to trial.
- 35) Any provision of this agreement later held to be unenforceable for any reason shall be deemed void, and all remaining provisions shall continue in full force and effect. All obligations arising prior to the termination of the agreement and provisions of the agreement allocating responsibility or liability between the Commission, Town of Winchester, and the Developer shall survive the termination of the agreement.
- 36) The Agreement may be amended by the written consent of both parties.
- 37) All notices concerning the agreement shall be in writing sent by certified mail and return receipt to the addresses listed in the agreement.

DRAFT No. 5

Technical Standards

**TOWN OF WINCHESTER
CITY OF WINSTED**



Water and Sewer Commission

Acting in their capacity as the Town's

Water Pollution Control Authority

Effective Date of Latest Revision: _____

I. APPROVAL

A. General

- 1) No sanitary sewer which discharges either directly or indirectly into the wastewater treatment system under the management of the Winchester Water and Sewer Commission (hereinafter referred to as the Commission), wastewater lift stations, or wastewater treatment plants shall be constructed without prior written approval by the Commission of the plans therefore, as to concept and detail.
- 2) The Commission's preferred method for conveyance of sanitary sewage is by gravity sewers.
- 3) If approved, the construction of new pump station facilities shall be in accordance with the following rules and guidelines. The purpose of this policy is to provide equitable distribution of the cost for the transport and treatment of municipal wastewater.
 - a) The Commission has the authority to require the installation of a gravity sewer, in lieu of a pump station, and shall have authority to recoup any additional expenses.
 - b) The Commission shall prohibit the construction of pump stations serving less than forty homes, unless payment is provided in accordance with section (3)(d)(1) and (3)(d)(2) below.
 - c) Pressure sewers with house pumps discharging into a common lateral are prohibited.
 - d) As provided the Commission may establish a surcharge or other rate, fee or charge to be made applicable to users in areas where facilities are to be acquired, constructed or established. The Commission shall identify the cost to each user, in accordance with the procedures in the Connecticut General Statutes Section 7-249, and set a rate based upon the operating cost of the proposed pump station. For any pump stations constructed that serves less than forty homes, or the equivalent flow of 12,000 gallons per day from commercial and/or industrial facilities, the Commission shall require one of the following payment options:
 1. An initial lump sum payment for operating and maintaining the pump station over a twenty (20) year life expectancy. The payment shall be based on a present worth cost analysis.
 2. A surcharge on the users' annual sewer usage bill to recoup operations and maintenance costs. This surcharge shall provide the Commission with a reasonable rate of return (not to exceed ten percent) during the finance period.
- 4) All proposed sanitary sewer extensions shall be approved by the Commission in advance of any construction.
 - a) A developer's agreement for sewer extension must be executed by the Commission and developer prior to commencement of construction.
 - b) Proposed sanitary sewer extensions shall be designed such that the extension shall connect to the existing sanitary sewer system at a point designated by the Commission and extend to a point that is halfway between the frontage footage of the property to be served. (Frontage footage shall be designated as the widest point of a lot that is parallel to the proposed sanitary sewer extension).

B. Reservation of Flow Capacity at Existing Pump Stations or Sanitary Sewers

Upon receiving a written request from a developer for reserving sanitary sewer and wastewater treatment plant allocation, the following guidelines shall be followed:

- 1) All written requests for the reservation from a developer for reserving flow capacity at an existing pump station or sanitary sewer must be approved by the Commission. The written request shall include the number of homes or buildings in the proposed development and the projected time schedule for constructing the homes or buildings on an annual basis. The developer shall be required to perform a capacity evaluation from the point of connection to the existing system to the point of discharge to the appropriate interceptor. If the analysis reveals deficient capacity, the developer will be required to perform a rehabilitation project designated by the Commission.
- 2) The Commission shall determine the final amount of flow capacity that may be reserved. This may vary from the requested amount.
- 3) The Commission will only permit the reservation of flow capacity for a period of one year. The date of the Commission's approval shall begin the one-year period.
- 4) The developer must submit to the Commission design plans for approval within the one-year period.
- 5) Failure to submit design plans within the one-year period will result in the capacity being available for assignment to other interested developers.
- 6) Any request for an extension to the one-year time period must be submitted in writing to the Commission. A time extension, if approved by the Commission, will be for an additional 90 calendar days. (*Note: Any subsequent time extension, if approved by the Commission, will also be 90 calendar-day periods.*)
- 7) In the event that the developer has not started construction on the project within one year after receiving approval, the Commission reserves its right to revoke the reservation of capacity and reassign the capacity to another developer.
- 8) Once approval is received the developer will be required to comply with the projected annual building schedule as stated in the original request letter. If the developer fails to meet this schedule, the Commission will require payment of capacity connection fees for lots scheduled to be constructed during the calendar year. In addition, these same lots will be placed on the Commission's billing system and charged the normal sewage rate for un-metered or unit service.
- 9) Proposed projects that connect to the existing sewer system by gravity flow will be given priority over projects that use a pump station to connect to the system.
- 10) Under no circumstances will an allocation be issued that will cause the wastewater treatment plant to exceed its design capacity, that will cause the mainline sewer or any downstream segment to be surcharged or exceed its capacity, or cause any pumping station to exceed its design capacity.

II. PLANS AND TECHNICAL SPECIFICATIONS

A. General

- 1) The design and construction of all sanitary sewers connected either directly or indirectly to the wastewater treatment system managed by the Commission shall, at a minimum, meet all of the Commission's published technical standards prevailing at the time of application.
- 2) Plans for all applications shall be prepared by a Connecticut-licensed professional engineer. The Commission may waive this requirement, on a case-by-case basis, if circumstances warrant.
- 3) When sewer construction is to be part of a new subdivision or site plan, the sewer design shall be shown as part of the overall site development plans.
- 4) All plans for sewage works shall be drawn to scales that permit all necessary information to be plainly shown. In general, the size of the plans should not be larger than twenty-four (24) inches by thirty-six (36) inches.
- 5) Design plans shall consist of plan views, elevations, sections and supplementary views which, together with the specifications and general layouts, provide the working information required to adequately contract and construct the works.

B. Plan Requirements for Sewer Mains, Building Connections, and Pumping Stations

The level of detail required for plans submitted in support of Class 1, 2, and 3 sewer connection applications will vary, depending on the size, nature, and complexity of the application. The Commission expects applicants to submit plans that are prepared to an appropriate level of detail for the task at hand. During the review process, the Commission reserves the right to require additional design information from applicants when conditions warrant.

The following criteria apply to plans submitted in support of Class 1, 2, and 3 permit applications:

- 1) All plans for sewage works shall include the following information:
 - a) Title sheet on which must appear the project name and site address, applicant name and contact information, vicinity map showing location of sewer, a comprehensive legend, an index drawing showing orientation of plan sheets contained in the set, and name and contact information of the engineer-of-record, along with his or her license number and imprint of registration seal.
 - b) North point on all plan views
 - c) Numeric and graphic scales on all plan, profile, and detail drawings.
 - d) Locations and logs of test borings, if applicable
 - e) Dimensions and relative elevations of structures, the location and outline form of equipment, location and size of piping, water levels and ground elevations.
- 2) Conceptual design plans used for preliminary informal discussions with the Commission or for the conceptual design review of a Class 3 sewer extension project shall be prepared at a scale appropriate to depict the general features of the proposed development and extension of the wastewater treatment system, typically at 1"=100' for larger projects and 1"=40' for smaller projects. These plans should depict:

- a) Property line information
 - b) Existing and proposed topography
 - c) Approximate location and elevation of nearby regulated flood plains
 - d) Location of regulated wetlands and watercourses
 - e) Preliminary street, building, and parking-lot layout (i.e. general features of proposed site development)
 - f) Preliminary sewer layout with manhole locations, flow-direction arrows, approximate sewer grades, and approximate top-of-frame and invert elevations
 - g) Preliminary location of proposed sewer easements
 - h) Point of connection to the Commission's existing wastewater treatment system
- 3) Final Design plans for sewer lines and building connections prepared in support of Class 1, 2, and 3 permit applications should contain the following elements:

a) Site Development Plan:

Provide a subdivision plan or site plan for the project that clearly depicts:

1. Property lines
2. Municipal boundaries (if located within 500 feet of the project site)
3. Phase lines
4. Existing and proposed contours
5. Existing and proposed streets
6. Existing and proposed drainage systems and utilities
7. Regulated wetlands and watercourses
8. Location, size and direction of flow for all existing and proposed sanitary sewers draining to the treatment works concerned.
9. Point of connection to the Commission's existing wastewater treatment system

b) Sewer Plan and Profile Drawings:

Profiles should have a horizontal scale of not more than forty feet to the inch and a vertical scale of not more than four feet to the inch. Plan views should be drawn to a corresponding horizontal scale and shall be shown on the same sheet. Plans and profiles shall depict:

1. Location of streets and sewers
2. Location of easements
3. Base line stationing
4. Profile of ground surface
5. Location of test borings
6. Profile of groundwater
7. Profile of bedrock

8. Size and type of pipe
9. Distance between manholes
10. Invert and surface elevation at each manhole
11. Grade of sewer between each two adjacent manholes
12. Where there is any question of the sewer being sufficiently deep to serve any residence, the elevations and locations of the basement floors shall be plotted on the profile of the sewer which is to serve the building(s) in question. The plans shall acknowledge where sewers are sufficiently deep to serve adjacent basements except where otherwise noted on the plans.
13. Location of all special features such as concrete encasements, stream crossings, elevated sewers, trench drainage interrupters, etc.
14. All known existing structures and utilities, both above and below ground, which might interfere with the proposed construction, particularly water mains, gas mains, storm drains and telephone and power conduits. All utility crossings shall be shown in the profile.

c) Construction Details:

Detail drawings shall be prepared for typical and special construction items to a scale required to clearly and adequately show the nature of the design. Details of the following design features shall be furnished for:

1. Soil boring logs (if applicable)
2. Typical trench sections for sewer main and laterals
3. Man holes
4. Connection to the public sewer
5. Stream crossings, with elevations of the streambed, rock profile (if applicable) and normal and extreme high and low water levels
6. Utility crossings
7. Special sewer joints (if any)
8. Clean outs
9. Trench drainage interrupters
10. Trench dewatering facilities
11. Pavement restoration within the public highway (subject to requirements of the applicable highway jurisdiction)
12. Traffic control requirements (subject to requirements of the applicable highway jurisdiction)
13. Soil erosion and sediment control measures (subject to requirements of land-use jurisdictions)

- 4) Final Design plans for sewage pumping stations and force mains prepared in support of Class 1, 2, and 3 permit applications should contain the following elements:

a) Location Plan:

Provide a general location plan for the project that clearly depicts:

1. The location and extent of the tributary area
2. Municipal boundaries within the tributary area
3. The location of the pumping station and force main and pertinent elevations
4. Connection point to the public wastewater treatment system

b) Pumping Station Plan:

Provide comprehensive pumping station plans that that clearly depict:

1. Property and/or easement lines
2. Municipal boundaries (if located within 500 feet of the project site)
3. Existing and proposed yard piping, including location, type, size, and direction of flow
4. Existing and proposed contours
5. Existing and proposed site features
6. Existing and proposed drainage systems and utilities
7. Regulated wetlands and watercourses
8. Architectural plans for the pumping station building
9. Mechanical plans, elevations, and sections of the proposed pumping station, including provisions for installation of future pumps and standby power generation.
10. Electrical plan
11. Elevation of high water at the site and maximum elevation of sewage in the collection system upon occasion of power failure.
12. Maximum hydraulic gradient in downstream gravity sewers when all installed pumps are in operation.
13. Tests borings and groundwater elevations

c) Force Main Plan and Profile Drawings:

Profiles should have a horizontal scale of not more than forty feet to the inch and a vertical scale of not more than four feet to the inch. Plan views should be drawn to a corresponding horizontal scale and shall be shown on the same sheet. Plans and profiles shall depict:

1. Location of street lines
2. Base line stationing
3. Profile of ground surface
4. Location of test borings

5. Profile of groundwater
6. Profile of bedrock
7. Size and type of pipe
8. Distance between manholes
9. Clean-outs at low points
10. Air-release mechanisms at high points
11. Invert and surface elevation at each manhole
12. Location of all special features such as concrete encasements, stream crossings, elevated sewers, bridge crossings, trench drainage interrupters, etc.
13. All known existing structures and utilities, both above and below ground, which might interfere with the proposed construction, particularly water mains, gas mains, storm drains and telephone and power conduits. All utility crossings shall be shown in the profile.

d) Construction Details:

Detail drawings shall be prepared for typical and special construction items to a scale required to clearly and adequately show the nature of the design. Details of the following design features shall be furnished for:

1. Soil boring logs (if applicable)
2. Typical trench sections for yard piping and force main
3. Man holes
4. Connection to the public sewer
5. Stream crossings, with elevations of the streambed, rock profile (if applicable) and normal and extreme high and low water levels
6. Utility crossings
7. Bridge crossings
8. Special sewer joints (if any)
9. Clean outs
10. Air-release mechanisms
11. Trench drainage interrupters
12. Trench dewatering facilities
13. Pavement restoration within the public highway (subject to requirements of the applicable highway jurisdiction)
14. Traffic control requirements (subject to requirements of the applicable highway jurisdiction)
15. Soil erosion and sediment control measures (subject to requirements of land-use jurisdictions)

C. Specifications

- 1) All applications for Class 1, 2, and 3 permits shall include technical specifications.
- 2) The content of all technical specifications shall comply with the Commission's prevailing technical standards unless specifically waived by the Commission
- 3) At a minimum, the technical specifications shall describe the various materials, method of construction, and testing requirements for all construction items.
- 4) Technical specifications shall follow the Construction Specification Institute Three-part Format or other format acceptable to the Commission. For small Class 1 permit applications, the Commission, at its sole discretion, may waive the requirement for formal, three-part technical specifications and instead, allow the use of outline specifications.

D. Revisions to Approved Plans during Construction

- 1) Any deviations from approved plans or specifications affecting capacity, flow, operation of units, or point of discharge shall be approved, in writing, before such changes are made.
- 2) Plans or specifications so revised shall be submitted well in advance of any construction work, which will be affected by such changes to permit sufficient time for review and approval.
- 3) Structural revisions or other minor changes not affecting capacities, flows or operation will be permitted during construction without approval.

E. As-Built Drawings

- 1) Following completion of construction activities, permit holders shall retain the services of a Connecticut-licensed land surveyor to locate completed improvements (horizontally and vertically) and plot the same in the form of an as-built drawing. The as-built drawing may be a new and independent drawing or it may take the form of clearly-legible markups to the approved design drawings.
- 2) For small Class 1 permits, the Commission, at its sole discretion, may waive the requirement for formal as-built drawings and instead accept record drawings prepared and marked-up by the contractor to reflect as-built conditions.
- 3) The permit holder shall submit three hard copies and one digital copy (AutoCAD format) of as-built drawings to the Commission within 30 days after completion of construction.

III. DESIGN OF SEWERS

A. Approval of Sewer Construction

In general, the Commission will approve plans for new systems, extensions to new areas or replacement of sanitary sewers within its Service Area as delineated in the Water Pollution Control Plan of the Town of Winchester so long as capacity exists.

B. Design Flow

The Commission requires that the sewers be sized and placed on a grade that will provide adequate carrying capacity to serve the total upstream watershed, at full development and at peak flow conditions, based upon the following guidelines:

- 1) Unit Sewage generation Rates
 - a) For residential areas, new sewer systems shall be designed on the basis of an average per capita flow of sewage of not less than 75 gallons per day and 150 gallons per day per bedroom in a single-family residence (excludes allowances for inflow and infiltration).
 - b) For commercial and industrial areas, unit flow rates shall be estimated based on historical water demands for similar areas in the Town of Winchester and on published data.
- 2) Peak Design Flow
 - a) Sanitary sewers shall be designed on a peak design flow basis using current TR-16 curves.
 - b) The Commission will consider the use of an alternate method of estimating peaking factors if justified on the basis of extensive documentation.
- 3) Additional Factors to be Considered
 - a) Additional peak flows of industrial and commercial wastes
 - b) Reasonable allowances for inflow and infiltration
 - c) Topography of immediate area
 - d) Difficulty of installation
- 4) Design Period
 - a) In general, sewers should be designed for a life span of 50 years.
 - b) The Commission will consider the use of an alternate design period if justified on the basis of extensive documentation.

C. Details of Design and Construction

- 1) No gravity sewer conveying raw sewage shall be less than eight (8) inches in diameter.
- 2) In general, gravity sewers should be sufficiently deep to receive sewage from basements and to prevent freezing. Minimum cover shall be three feet over PVC pipe. Where cover is less than three feet, pipe shall be ductile iron. Minimum cover in streets or other vehicular traveled areas shall be six feet unless otherwise approved by the Commission.
- 3) Where high groundwater conditions are anticipated, the buoyancy of sewers shall be considered and the floatation of pipe shall be prevented with appropriate construction.
- 4) All gravity sewers shall be designed and constructed to induce mean velocities, when flowing full, of not less than 2.0 feet per second, based on Manning's formula using an "n" value of 0.013. The following minimum gradients should be provided; however, gradients greater than these are desirable:

<u>Diameter</u>	<u>Min. Gradient (FT/FT)</u>
8 inch	0.40
10 inch	0.28
12 inch	0.22
15 inch	0.15
18 inch	0.12
21 inch	0.10
24 inch	0.08
27 inch	0.067
30 inch	0.058
36 inch	0.046

- 5) Sewers shall be laid with uniform gradient between manholes.
- 6) Where velocities greater than 12.0 feet per second are attained, special provision shall be made to protect against displacement by erosion and shock. Ductile iron pipe shall be used.
- 7) Sewers on twenty percent (20%) gradients or greater shall be anchored securely with concrete anchors or equivalent means, spaced as follows:
 - a) 36 feet maximum center-to-center spacing on grades between 20% and 34.99%
 - b) 24 feet maximum center-to-center spacing on grades between 35% and 49.99%
 - c) 16 feet maximum center to center spacing on grades 50% and greater
 - d) Sewers on 35% gradient or greater shall be ductile iron pipe
- 8) Sewers 30 inches in diameter or less shall be laid with straight alignment between manholes. The alignment shall be checked using a laser beam. Curvilinear alignment of sewers larger than 30 inches may be considered on a case-by-case basis provided the specific pipe manufacturers maximum allowable pipe joint deflection limits is not exceeded.
- 9) When a smaller sewer joins a larger one, the invert of the larger sewer should be lowered sufficiently to maintain the same energy gradient. An approximate method for securing these results is to place the 0.8 depth point of both sewers at the same elevation.
- 10) Sewer extensions shall be designed based on projected capacity to serve development and upstream drainage area.
- 11) Materials for sanitary sewers shall be PVC or ductile iron pipe. Concrete pipe may be used when special conditions warrant with prior approval of the Commission. Ductile iron pipe shall be required at:
 - a) Areas with less than three feet of cover
 - b) Stream crossings, state highway crossings, or other crossings as may be designated by the Commission
 - c) Cover depth equals or exceeds 20 feet

12) Testing, Inspection, and Locating:

All sewers shall be tested, inspected and provide for future locating. All reports relative to testing and inspection shall be submitted to the Commission prior to acceptance of sewer.

a) Deflection

1. Deflection tests shall be performed on all flexible pipes. The test shall be conducted after final backfill has been in place at least 30 days to permit stabilization of the pipe system.
2. No pipe shall exceed a deflection of five percent. If deflection exceeds five percent, the pipe shall be replaced.
3. The rigid ball or mandrel used for the deflection test should have a minimum diameter of not less than 95 percent of the base inside diameter or the average inside diameter of the pipe as specified by ASTM. The pipe shall comply with ASTM D 2122 Standard Test Method of Determining Dimensions of Thermoplastic Pipe and Fittings. The tests shall be performed without the use of mechanical pulling devices.

b) Leakage tests shall be performed on all sewers, the appropriate testing method either water or low pressure air testing, shall be as designated by the Commission. Leakage shall not exceed 100 gallons per inch of pipe diameter per mile per day for any section of the pipe system. The test shall be performed with a minimum positive head of two feet.

c) All sanitary sewers shall be televised and recorded. Recordings of all sewers shall be submitted to the Commission for review prior to acceptance of the sewer improvements. Copies of submitted materials will not be returned.

d) Metalized plastic locating tape shall be installed on all sewer installations. Tape shall be "Lineguard Detectable" tape or equal. The color shall be green and shall be lettered "SEWER". The tape shall be placed in the trench between 12 to 18 inches above the sewer main/lateral and approximately between 24 to 30 inches below finished grade. A 10 Gauge copper tracing wire shall be laid the full length of the pipe(s) the wire shall be attached at the exterior crown of the pipe. Tracing wire shall be one continuous piece; the terminations of the wire shall be located in manholes.

13) All public sewers shall be constructed within a public right-of-way or on a separate easement when crossing private property (requires special approval from the Commission). Minimum easement width shall be twenty feet, centered on the sanitary sewer pipe.

14) Manholes

a) Location - Manholes shall be installed at the end of each line, at all changes in grade, size or alignment at all intersections, and at distances not greater than three hundred feet unless otherwise approved by the Commission. Cleanouts may be used only for special conditions and shall not be substituted for manholes or installed at the end of laterals greater than 150 feet in length.

b) The Commission may allow drop-style manholes on a case-by-case basis. Where the difference in elevation between the incoming sewer and the manhole invert is less than 24 inches, the invert should be filleted to prevent solids deposition.

c) The minimum diameter of manholes shall be 48 inches for sewer diameters of 8 to 18 inches. Sewers greater than 18 inches in diameter require at least 60-inch diameter manholes.

d) A minimum access diameter of 24 inches shall be provided on all manholes.

- e) Manholes shall be pre-cast concrete with barrel-section, cones, and bases manufactured in compliance with ASTM C 478 and shall have an O-Ring or bituminous-based gasket joints. Other types are allowed subject to prior approval of the Commission.
- f) The flow channel through manholes should be made to conform in shape and slope to that of the sewers. Minimum angle between inlet and outlet pipes shall be 90° and provide a minimum of 0.2' drop across all manhole inverts.
- g) A bench shall be provided on each side of the flow channel in every manhole. The bench shall have a slope of not less than 0.5 inch per foot or greater than 1.0 inch per foot. No lateral sewer, service connection, or drop manhole pipe shall discharge onto the surface of the bench.
- h) Where high groundwater conditions are anticipated, the buoyancy of manholes shall be considered and the floatation of pipe shall be prevented with appropriate construction.
- i) Inlet and outlet pipes shall be joined to the manhole with a gasketed flexible watertight connection. Watertight manhole covers are to be used whenever the manhole tops may be flooded by street runoff or high water. All manholes shall be fitted with an external infiltration shield which shall extend overlapping from the frame bottom-flange to 12" below the joint where the frame and the manhole chimney meet.
- j) Standard cover shall be Campbell Foundry #1009 or equal. Standard watertight cover shall be R-1916E or equal. Frames shall be bolted to cone section with four (4) - 5/8-inch diameter concrete bolts. All covers that are to be fitted for manholes that are located in off-street areas shall be fitted with a cam-lock mechanism.
- k) All manholes shall be inspected for damage prior to acceptance. All manholes shall be tested for leakage. Leakage tests may include appropriate water or vacuum tests as designated by the Commission
 - 1. Water (Hydrostatic) Testing: The exfiltration rate should not exceed one gallon per vertical foot of manhole section for a 24-hour period. A period of time may be permitted prior to the beginning of the test to allow for the absorption of water into the manhole concrete.
 - 2. Vacuum Testing: Conduct vacuum tests on a sealed manhole at an initial test pressure of 10 inches of mercury. The vacuum drop shall not exceed one inch of mercury over a period of time as follows:
 - 1-10 foot deep manholes – 2.0 minutes
 - 10-15 foot deep manholes – 2.5 minutes
 - > 15 foot deep manholes - 3.0 minutes
- 15) The Commission, at its sole discretion, may allow Inverted siphons on a case-by-case basis. Special conditions for inverted siphons may be required. These conditions may include, but are not limited to, air jumpers and biofilters. Inverted siphons approved by the Commission shall have not less than two barrels with minimum pipe size of eight inches and shall be provided with the necessary appurtenances for convenient flushing and maintenance. Manholes shall have adequate clearances for cleaning equipment and for inspection and flushing. The design shall provide for sufficient heads and pipe sizes to sustain velocities of at least 3.0 feet per second for average flows under initial conditions. The inlet and outlet details shall be arranged so that the normal flow is diverted to one barrel and so that either barrel may be taken out of service for maintenance.

16) Sewers in Relation to Streams

- a) The top of all sewers entering or crossing streams shall be at a sufficient depth below the natural bottom of the streambed to protect the sewer line. Waterstops shall be used to prevent the infiltration of stream water into bedding material. In general, the following cover requirements must be met:
 1. One foot of cover is required where the sewer is located in rock. In this case, concrete bedding shall be used.
 2. Three feet of cover is required in other substrate material. In major streams, the Commission may require more than three feet of cover at its sole discretion.
 3. In paved stream channels, the top of the sewer line should be placed below the bottom of the channel pavement.
 4. Ductile iron pipe shall be used for all stream crossings.
- b) Sewer lines shall be located at least fifty feet away from a stream which appears as a blue line on a USGS 7.5-minute topographic map except where the sewer alignment crosses the stream. The distance shall be measured from the top of the stream bank to the centerline of the sewer.
- c) The sewer outfalls, headwalls, manholes, gate boxes or other structures shall be located so they do not interfere with the free discharge of flood flows of the stream.
- d) Sewers crossing streams should be designed to cross the stream as nearly perpendicular to the stream flow as possible and shall be free from change in grade. Sewer systems shall be designed to minimize the number of stream crossings.

17) Aerial Crossings

- a) Support shall be provided for all joints in pipes utilized for aerial crossings. The supports shall be designed to prevent frost heave, overturning and settlement, thermal expansion, vibrations, and other loads that may act on the piping.
- b) For aerial stream crossings, the impact of floodwaters and debris shall be considered. The bottom of the pipe should be no lower than the 50-year flood elevation.
- c) Precautions against freezing of the pipe contents shall be provided.
- d) Expansion joints shall be provided between the above-ground and below-ground sewers. Where buried sewers change to aerial crossings, use of special construction techniques shall be required to minimize damage from frost heaves.
- e) Ductile iron pipe with restrained mechanical joints shall be used.

18) Protection of Water Supplies

- a) There shall be no physical connections between a public or private potable water supply system and a sewer, or appurtenances thereto, which would permit the passage of any sewage or polluted water into the potable supply. No water pipe shall pass through or come in contact with any part of a sewer manhole.

b) Relation to Water Mains:

1. Sewers shall be laid at least ten feet horizontally from any existing or proposed water main. The distance shall be measured edge to edge. In cases where it is not practical to maintain a ten-foot separation, the appropriate reviewing agency may allow deviation on a case-by-case basis, if supported by data from the design engineer. Such deviation may allow installation of the sewer closer to a water main, provided that the water is in a separate trench or on an undisturbed earth shelf located on one side of the sewer and at an elevation so that the bottom of the water main is at least eighteen inches above the top of the sewer.
2. Sewers crossing water mains shall be laid to provide a minimum vertical distance of eighteen inches between the outside of the water main and the outside of the sewer. This shall be the case where the water main is either above or below the sewer. The crossing shall be arranged so that the sewer joints will be equidistant and as far as possible from the water main joints. Where a water main crosses under a sewer, adequate structural support shall be provided for the sewer to prevent damage to the water main.
3. When it is impossible to obtain proper horizontal and vertical separation as stipulated above, the sewer shall be designed and constructed equal to water pipe and shall be pressure tested to assure water-tightness prior to backfilling.

19) Building Sewer Laterals

- a) All laterals shall be shown with station and offsets. Each individual subdivided site shall have a separate service lateral.
- b) Service laterals shall have cleanouts located at the property line (Refer to State Building Code).
- c) All Service laterals shall be connected to the mainline with a tee-wye connection.
- d) Connections to manholes are not permitted without prior approval of the Commission.

IV. DESIGN OF WASTEWATER PUMPING STATIONS

A. General

- 1) Sewage pumping station structures and electrical and mechanical equipment shall be protected from physical damage by the one hundred year flood. Sewage pumping stations should remain fully operational and accessible during the twenty-five year flood.
- 2) Pump stations shall be located on a minimum size lot of 60 ft x 60 ft, said lot shall be owned in fee simple by the Town of Winchester. In areas where the lot does not front on an existing public highway, a permanent easement for a driveway shall be provided. The lot shall be fenced with eight-foot tall fence which shall be equipped with a fourteen foot wide gate.
- 3) Where it is necessary to pump sewage prior to grit removal, the design of the wet well and pump station piping shall receive special consideration to avoid operational problems from the accumulation of grit. Discharge piping shall be designed to prevent grit from settling in pump discharge lines of pumps not in operation. Vertical runs of discharge piping shall be kept to a minimum.

- 4) An odor control system approved by the Commission is required for all pumping stations. The odor control system shall include the initial supply of chemicals required for the proposed application.
- 5) The outlet end on all influent lines to pump stations shall discharge flow to the wet well in a submerged condition to reduce odors. Trash bars shall be installed in the inlet channel of the pumping station wet well. An overflow line shall be installed and discharge into the wet well in case trash bars become overloaded.

B. Design

- 1) Wastewater pumping stations shall be of the drywell type. Other types as described herein may be approved where circumstances justify their use.
- 2) Provisions shall be made to facilitate removal of pumps, motors and other mechanical and electrical equipment including provisions for portable or permanent chain lifts.
- 3) Suitable and safe means of access shall be provided to dry and wet wells of pumping stations. Stairways are preferred for dry wells and are required for wet wells containing either bar screens or mechanical equipment requiring inspection or maintenance. For built-in-place pump stations, a stairway with rest landing shall be provided at vertical intervals not to exceed twelve (12) feet. For factory-built pump stations over fifteen feet deep, a rigidly fixed landing shall be provided at vertical intervals not to exceed ten feet. Where a landing is used, a suitable and rigidly fixed barrier shall be provided to prevent an individual from falling past the intermediate landing to a lower level.
- 4) Sewage pump stations shall be designed in accordance with the Commission's. All hardware items (bolts, conduit straps, brackets, etc.) used in the pumping station wet well shall be Type 316 stainless steel.
- 5) References should be made to local, state and federal safety codes which, if they are more stringent, shall govern.
- 6) Electrical service shall be provided by underground service.
- 7) Pumps
 - a) Multiple Units:
 1. At least two pumps shall be provided. A minimum of three pumps shall be provided for stations handling flows greater than 0.5 million gallons per day.
 2. If only two pumps are provided, they should have the same capacity. Each pump shall be capable of handling flows in excess of the expected maximum flow. Where three or more units are provided, they should be designed to fit actual flow conditions and must be of such capacity that with any one unit out of service the remaining units will have capacity to handle maximum sewage flows.
 - b) Pumps shall be capable of passing spheres of at least three inches in diameter and pump suction and discharge piping shall be at least four inches in diameter.
 - c) Where the size of the installation warrants, a mechanically cleaned removable bar screen is recommended. Where screens are located below ground, convenient facilities must be provided for handling screenings. Consideration shall be given to providing screenings

- discharges to ground level. For larger and deeper stations, duplicate units of proper capacity are required.
- d) The pump should be so located such that under normal operating conditions the wet well level will not drop below the centerline of the pump impeller.
 - e) Each pump shall have an individual intake. Wet well design shall be such as to avoid turbulence near the intake.
 - f) **Dry Well Dewatering: A separate sump pump shall be provided in dry wells to remove leakage or drainage with the discharge above the high alarm level of the wet well. All floor and walkway surfaces shall drain to sump.**
 - g) The pumps and controls of main pumping stations and especially pumping stations operated as part of the treatment works shall be selected to operate at varying rates to permit discharging wastewater from the station to the treatment works at approximately the same rate of inflow.
 - h) All pumps shall be equipped with mechanical seals.
- 8) Electrical systems and components (e.g., motors, lights, cables, conduits, switchboxes, control conduits, etc.) in raw sewage wet wells, or in enclosed or partially enclosed spaces where hazardous concentrations of flammable gases or vapors may be present, shall comply with the National Electrical Code requirements for Class I Group D, Division 1 locations. In addition, equipment located in the wet well shall be suitable for use under corrosive conditions. Each flexible cable shall be provided with a watertight seal and separate strain relief. A fused disconnect switch located above ground shall be provided for all pumping stations. When such equipment is exposed to weather, it shall meet the requirements of weatherproof equipment (NEMA 3R). All motors shall be rated for 3-phase operation. All control panels shall be equipped for phase monitoring, phase protection and lightning arresting.
- 9) Controls:
- a) Level:
 - 1. Control systems shall be of the ultrasonic type with encapsulated float type for high water. The electrical equipment shall comply with the National Electrical Code requirements for Class I, Group D, and Division 1 locations.
 - 2. The control system shall be located away from the turbulence of incoming flow and pump suction.
 - 3. Provisions should be made to automatically alternate the pumps in use.
 - 4. Run time meters shall be installed for each pump.
 - b) At pumping stations larger than 0.2 million gallons per day, installation of a suitable device for measuring flow on both inlet and discharge. The preferred device for discharge flow measurement is a magnetic flow meter.
 - c) Alarm systems shall be provided for pumping stations. Pumping station alarms shall be telemetered, including identification of the alarm condition, to the Commission's central telemetry system. The power source for the alarm system shall be independent battery with continuous charge. The installer of each pump station shall pay the current pump

station telemetry fee to the Commission to cover the cost of connecting to and reprogramming of the Commission's telemetry system. Alarms shall be activated for any of the following cases:

1. High Water in Wet Well
2. Low Water in Wet Well
3. Loss of one or more phases of power
4. High water in station pump room sump
5. Loss of alarm communication
6. Loss of echo in level transducer
7. Generator Run
8. Generator Failure
9. Pump Failure
10. Entry Alarm

10) Valves:

- a) Discharge/Suction: Suitable shutoff and check valves shall be placed on the suction line of each pump, except on submersible and vacuum-primed pumps. Suitable shutoff and check valves shall be placed on the discharge lines of each pump. The check valve shall be located between the shutoff valve and the pump. Check valves shall be suitable for the material being handled. Check valves shall not be placed on the vertical portion of discharge piping. Valves shall be capable of withstanding normal pressure and water hammer. Valves will be positioned such that they can be wrench operated from the top of the valve pit.
- b) Location: If the pumping station is to have a separate building, all valves shall be installed inside of building, or valves shall be located in a separate valve pit. Accumulated water shall be drained to the wet well. An effective method shall be provided to prevent sewage from entering the pit to the wet well.

11) Submersible Pump Stations

- a) Submersible pumping stations are not allowed where the design capacity of the pumping station is greater than two hundred and fifty thousand (250,000) gallons per day.
- b) Construction: Submersible pumps and motors shall be designed specifically for raw sewage use, including totally submerged operation during a portion of each pumping cycle. An effective method to detect shaft seal failure or potential seal failure shall be provided and the motor shall be squirrel-cage type design without brushes or other arc-producing mechanisms.
- c) Pump Removal: Submersible pumps shall be readily removable and replaceable without dewatering the wet well or disconnecting any piping in the wet well.
- d) Electrical:
 1. Power Supply and Control: Electrical supply, control and alarm circuits shall be designed to provide strain relief and to allow disconnection from outside the wet well.

Terminals and connectors shall be protected from corrosion by location outside the wet well or through use of watertight seals. If located outside, weatherproof equipment shall be used. Power supply, disconnect and metering shall meet the requirements of the utility which provides the service. Power supply to station shall be underground service.

2. Controls: The motor control center shall be located outside the wet well and be protected by a conduit seal or other appropriate measures meeting the requirements of the National Electrical Code to prevent the atmosphere of the wet well from gaining access to the control center. The seal shall be so located that the motor may be removed and electrically disconnected without disturbing the seal.
3. Power Cord: Pump motor power cords shall be designed for flexibility and serviceability under conditions of extra hard usage and shall meet the requirements of the Mine Safety and Health Administration for trailing cables. Ground fault interruption protection shall be used to de-energize the circuit in the event of any failure in the electrical integrity of the cable. Power cord terminal fittings shall be corrosion-resistant and constructed in a manner to prevent the entry of moisture into the cable, shall be provided with strain relief appurtenances and shall be designed to facilitate field connecting.
4. Electrical – Pumps shall operate on 230/460 volt, 3-phase power. All starters, breakers and other components shall be of American manufacturer such as Square D, Siemens Allis, Allen Bradley or equal. All electrical components shall be manufactured to NEMA Standards. Protective devices shall be provided for over voltage, under voltage, single phasing and lightning surge. Electrical design shall be in accordance with the requirements of the National Electrical Code (latest edition).

12) Wet Wells:

- a) Wet Well Capacity: Wet wells shall be designed so that the capacity from the pump-on elevation to the pump-off elevation shall be approximately ten 10 times the pump's rated capacity (a 300 GPM pump will require a wet well of three thousand 3,000 gallons.)
- b) Divided Wells: Where continuity of pumping station operation is important, the wet well should be divided into two sections, properly interconnected and gated to facilitate repairs and cleaning.
- c) Floor Slope: The wet well floor should have a minimum slope of 1-to-1 to the hopper bottom. The horizontal area of the hopper bottom shall be no greater than necessary for proper installation and function of the inlet.
- d) Channels: Wastewater channels shall be provided with fillets with a minimum slope of 1-to-1 at all locations where the side of the channel intersects the floor of the channel. Non-corrosive grating strong enough to support any expected loads shall be provided over all channels. Channels that may be removed from service and can be expected to be in active for extended periods of time shall be provided with drain valves.

13) Ventilation, Heating and Lighting:

Adequate ventilation, heating and lighting shall be provided for all pumping stations. Where the pump pit is below the ground surface, mechanical ventilation is required, so arranged to independently ventilate the dry well and the wet well if screens or mechanical equipment

requiring maintenance or inspection are located in the wet well. There shall be no interconnection between the wet well and dry well ventilation systems. In pits over 15 feet deep, multiple inlets and outlets are required. Consideration should be given to automatic controls where intermittent operation is used and, when necessary to control odors within the pumping station.

- a) **Wet Wells:** Ventilation may be either continuous or intermittent. For continuous operation, at least 12 complete air exchanges per hour shall be provided. For intermittent operation, at least 30 complete air exchanges per hour shall be provided.
 - b) **Dry Wells:** Ventilation may be either continuous or intermittent. For continuous operation, at least six complete air exchanges per hour shall be provided. For intermittent operation, at least 30 complete air exchanges per hour shall be provided. Heating is required and dehumidification is desirable.
 - c) **Lighting switches** for below ground facilities shall be accessible at ground level. Consideration should be given to automated lighting. Lighting fixtures shall comply with applicable standards. Exterior lighting shall be provided.
- 14) There shall be no physical connection between the any potable water supply and any other piping system or fixture in a pumping station. An outlet or hose bib shall be provided and protected by a double check valve installation or other approved device.
- 15) Sewage pumping stations shall be supplied with six complete sets of operational instructions, including emergency procedures, maintenance schedules, and special tools, as may be necessary.
- 16) A stand-by power generator of sufficient capacity to operate the pump station under peak flow conditions and all related equipment shall be required at all new pump station facilities. This source shall be automatically activated by failure of any phase of the power supply or upon any fluctuation in voltage in an amount and or duration that would cause damage to the motors or other equipment. The complete cost of this power generator with automatic transfer switch shall be the responsibility of the developer and included with the finished pump station. The order of preference to power the stand-by generator shall be natural gas, propane, and diesel. Fuel storage supply shall be provided for a minimum of eight hours of generator run time.
- a) **Alternate:** As an alternate for small pumping stations, wet well storage equal to the maximum amount of wastewater, which can be expected for four hours, may be provided or a portable standby generator may be used or a portable engine driven pump may be supplied which can be readily connected to the force main.
 - b) **Controls:** Provisions shall be made for both automatic and manual startup and cut-in. The controls shall be such that upon automatic start-up under emergency conditions, shut down can be accomplished either manually or upon reestablishment of line power. Conditions, which would damage the generator set, will cause the generator to shut down.
- 17) When chemical addition is incorporated into the pumping station, appropriate safety facilities shall be provided including but not limited to eyewash, safety shower. Consideration should be given to local power lockout controls at all pumps. A lock-out/tag-out kit shall be provided for the pumping station.

V. DESIGN OF FORCE MAINS

A. Velocity

At design average flow, a minimum velocity of at least two feet per second shall be maintained. A minimum velocity of three feet per second is preferred. A maximum velocity of ___ feet per second will be allowed.

B. Air Relief Valve

An automatic air relief valve shall be placed at high points in the force main to prevent air locking.

C. Termination

Force mains should enter the gravity sewer at a point below the flow line of the receiving manhole.

D. Design Pressure

The force main and fittings, including reaction blocking, shall be designed to withstand normal pressure and pressure surges (water hammer).

E. Special Construction

Force main construction near streams or used for aerial crossings shall meet applicable requirements of III-16 and III-17 of these Technical Standards.

F. Design Friction Losses

Friction losses through force mains shall be based on the Hazen - Williams formula or other acceptable method. When the Hazen and Williams formula is used, the following values for "C" shall be used for design: Unlined iron or steel (C=100) and All other (C=120)

When initially installed, force mains will have a significantly high "C" factor. The "C" factor tends to drop with age. The higher "C" factor should be considered only in calculating maximum power requirements for the pumps.

G. Separation from Water Mains

There shall be at least a ten (10) foot horizontal separation between water mains and sanitary sewer force mains. Force mains crossing water mains shall be laid to provide a minimum vertical distance of eighteen (18) inches between the outside of the force main and the outside of the water main. This shall be the case where the water main is either above or below the force main. At crossings, one full length of water pipe shall be located so both joints will be as far from the force main as possible. Special structural support for the water main and the force main may be required.

H. Tapping

Building connections to a force main are prohibited unless otherwise approved in writing by the Commission.

I. Locating

Metalized plastic locating tape shall be installed on all sewer installations. Tape shall be "Lineguard Detectable" tape or equal. The color shall be green and shall be lettered "SEWER". The tape shall be placed in the trench between 12 to 18 inches above the sewer main/lateral and approximately between 24 to 30 inches below finished grade. A 10 Gauge copper tracing wire shall be laid the full length of the pipe(s) the wire shall be attached at the exterior crown of the pipe. Tracing wire shall be one continuous piece; the terminations of the wire shall be located in manholes.