



FREDERICK COUNTY PLANNING COMMISSION

February 10, 2016

TITLE:

**Fall 2016 Cycle of Water
and Sewerage Plan Amendments**

REQUEST:

Finding of Consistency

PROJECT INFORMATION:

WS 15-12 Division of Planning and Permitting

1) Text Amendment to Section III (County Community Systems) of Chapter 3 to include additional data about the New Design Road Water Treatment Plant as required by MDE and several factual clarifications to descriptions of the County's water systems.

2) Infrastructure Amendment to add a discharge symbol to the Sewer Map to address the water treatment process at the County's New Design Road Water Treatment Plant.

STAFF:

Tim Goodfellow, Principal Planner II

RECOMMENDATION:

Refer to Staff Reports

ATTACHMENTS:

Exhibit 1 Staff Report

Exhibit 2 Text Amendment for Case WS 15-12

Frederick County Division of Planning and Permitting
Staff Report

Frederick County
Water and Sewerage Plan Amendments

Planning Commission Review – February 10, 2016

Fall 2015 Cycle Amendment Requests

WS 15-12 Division of Planning and Permitting

ISSUE

The Planning Commission is requested to review the amendment requests for a finding of consistency with the County Comprehensive Plan or a municipal comprehensive plan.

BACKGROUND

The purpose of the Planning Commission's review is to determine whether each amendment request is consistent with the County Comprehensive Plan. The Land Use Article of the Annotated Code of Maryland defines consistency with the comprehensive plan as addressing the location, character, and extent of the request. A finding with regards to consistency may reference the comprehensive plan map and the text document, specifically the goals and policies. For properties located within a municipality the municipal comprehensive plan and municipal land use plan designation is referenced.

A finding of consistency does not reference whether a case meets the specific criteria, described in the Water and Sewerage Plan, for the requested classification. That determination is made by the County Council in their review.

If the Planning Commission finds a request to be inconsistent with the comprehensive plan then the request is not forwarded to the County Council.

RECOMMENDATION

Staff recommendation is noted in the individual case description.

IV. COUNTY WATER AND SEWERAGE PLAN CLASSIFICATION SYSTEM

A. General

A classification system has been established for properties that will be served by publicly owned community water and sewer systems. The classification system reflects a progression toward the attainment of public water and sewer service so as to implement the County Water and Sewerage Plan, as well as County or municipal Comprehensive Plans.

The classification system is designed to show need and intent of the County, its municipalities and the private developer for establishing or extending publicly-owned community water and sewer systems.

Classifications which indicate anticipated improvements within the next six (6) years should be part of an action plan to be implemented within the constraints of funding and various required agreements and approvals. The classification system is not intended to prevent development of publicly-owned community water and/or sewerage systems or facilities prior to or later than the time periods indicated; rather it is the best estimate at the time of adoption as to when such development may be expected to occur. Every effort should be made by the County, municipalities, and developers to progress with water and sewer projects to the point that construction may occur in accordance with the Plan. However, after having achieved one level, there is no guarantee that the next level classification will be granted.

B.. Water and Sewerage Plan Classifications:

Tracts of land where publicly-owned community water and/or sewer facilities are proposed to be extended by developers or where the County or municipalities anticipate that development may occur within 20 years may be assigned a classification with the suffix "Development" or "Dev.". A "Dev." designation means that the extension or construction of publicly-owned community systems or facilities is dependent upon developer or land owner action and funding.

The year of adoption of a piecemeal Water and Sewerage Plan amendment is noted within the water and sewer classification designations for properties in 4 and 3 categories, (e.g. 90-S-3 means the sewer priority classification of S-3 was approved by the County in 1990).

NPS – No Planned Service:

A classification assigned during the Comprehensive Planning Process to land, which is not planned or projected to be served by publicly-owned community water or sewer systems within the timeframe of the current County Comprehensive Plan.

PS – Planned Service:

A classification assigned during the Comprehensive Planning Process to an area shown on the Comprehensive Plan for growth utilizing publicly-owned community water and/or sewer systems, or within the Community Growth boundary of a community to be served by public water and sewer in the adopted County Comprehensive Plan, within the 11-20 year time period. Properties within this classification have designations other than Agricultural/Rural or Natural Resource on the County Comprehensive Plan.

S-5/W-5 – Mid-Range Plan Phase:

A classification assigned through the Comprehensive Planning Process where improvements to, or construction of, publicly-owned community sewerage or water systems are planned within the 7-10 year time period. Properties classified S-5/W-5 are not required to, but may, connect to the community system. Properties requesting this classification shall meet the following criteria:

- a. Have a land use plan designation other than Agricultural/Rural or Natural Resource on the County Comprehensive Plan.
- b. Have zoning other than Agricultural or Resource Conservation.
- c. If located within a municipality where the municipality provides community water and sewer, the property shall be designated in the municipal plan to be provided services in the 7-10 year time frame.
- d. Be located within a Planned Service Area as shown on the Frederick County Water and Sewerage Plan map.
- e. Demonstrate that there is sufficient capacity planned in the systems serving the property within the 7-10 year period.

This classification may be assigned through the piecemeal application process to property:

- 1) Annexed into a municipal corporation; or
- 2) Granted a Planned Unit Development (PUD) or Mixed Use Development (MXD) floating zone classification; or
- 3) Zoned Agricultural, if all the criteria set forth above and in Section II (E)(8) are satisfied; or if applicable, Section II (E)(7) are satisfied; or
- 4) To provide public water and/or sewer service to Public Service Facilities, if applicable criteria in Section II(E)(8) are satisfied.

S-4/W-4 – Concept Evaluation Phase:

A classification assigned through the piecemeal application process to properties having an S-5/W-5 classification, and designated residential, commercial, or industrial, or in general, a category other than Agricultural/Rural or Natural Resource on the most recently adopted County Comprehensive Plan, and where improvements to, or construction of, publicly-owned community sewerage or water systems are planned within the 4-6 year time period. Properties classified S-4/W-4 shall connect to the public system when service lines abut the property. Properties requesting this classification shall meet the following criteria:

- a. The criteria required for the S-5/W-5 classification have been met.
- b. The application shall include documents that show conceptually how the applicant plans extensions of water and sewer lines to serve the property, including topographic information from appropriate sources and an estimate of construction costs. Water concept submissions shall consider the County's water pressure zones to develop the concept, e.g., water booster pumping stations or pressure reducing valves. Sewerage concepts shall consider gravity service as the preferred method (see II (E) (5)(E)). All concept plans shall distinguish between County planned and developer provided facilities.
- c. Adequate capacity shall exist or be programmed within the County or a municipal CIP for the system, which will serve the site. If adequate capacity does not exist, the property owner will either wait for public improvements to be programmed or propose how such service can be provided by the developer/applicant.
- d. After a S-4/W-4 classification has been granted, an application may be submitted to the Maryland Department of the Environment for Water and/or Sewerage construction permits, as applicable.

S-3/W-3 – Preliminary Design Phase:

A classification assigned through the piecemeal application process to properties where improvements to, or construction of, publicly-owned community sewer or water systems are planned to be completed and operational within 3 years. If applicant has not obtained approved water and sewer improvement plans for onsite work within three years or the Preliminary Plan/Site Plan/Phase II Plan expires, they may lose their “3” classification and revert to the “4” classification at the next amendment cycle. Properties classified S-3/W-3 shall connect to the public system when service lines abut the property. Properties requesting this classification shall meet the following criteria:

- a. Criteria required for the S-4/W-4 classification have been complied with.
- b. Applicant shall provide a study of the components of the existing water and wastewater system and identify inadequacies that may result from the development of the property. This study may be performed in conjunction with the *Adequate Public Facilities Ordinance* (APFO) studies.
- c. A preliminary subdivision plan, site plan, or Phase II Plan (in the case of PUDs and MXDs) has been approved by the Planning Commission.
- d. A discharge permit, where appropriate, has been approved by all appropriate State agencies.
- e. A hydrogeologic study, where appropriate, supports the establishment of a community water system, which will not be detrimental to adjoining wells or surface waters. The hydrogeologic study is typically required to appropriate both ground (well) or surface waters. A Water

Appropriation and Use Permit, where appropriate, has been approved by all appropriate State agencies.

- f. If County funded CIP project(s) are needed to provide service, then construction funds for each project must be contained in the first or second year of the County's approved CIP.
- g. If service is to be provided by developer initiated and funded projects, the developer must have approved and signed water/sewer improvement plans and an approved cost proposal for all improvements required to bring adequate water and sewer service to the site. This "service to the site" requirement is considered "met" if adequate water and sewer lines abut the site and are located within a public right-of-way or a public water/sewer easement which abut the site.
- h. Satisfaction of Items f. and g. will create a rebuttable presumption in favor of the applicant that service will be available within 3 years.

S-2/W-2 – Engineering Phase:

This classification is not mapped. Properties are assigned this category by County staff and shall meet the following criteria:

- a. All criteria required for the S-3/W-3 classification have been complied with.
- b. Improvement plans for water and sewer lines and preliminary design of treatment plants and other infrastructure, as appropriate, have been approved.
- c. Location of facilities, i.e. tanks, pumping stations, treatment plants have been located on the Water and Sewerage Map by prior amendment.
- d. Properties classified S-2/W-2 shall connect to the publicly owned system when service lines abut the property.

During the S-2/W-2 phase, final construction design drawings and documents are prepared, rights-of-way are determined and the necessary acquisitions are pursued, various construction related permits are applied for and obtained, a public works agreement, allocation of taps including multi-year tap agreements and improvement guarantees are approved. Final plats may then be recorded, where appropriate.¹

S-1/W-1 – Existing Service:

A classification assigned to properties where publicly-owned community sewer or water systems are existing and are connected to and serving a structure on the property. Properties are assigned this classification by County staff to reflect projects recently completed or structures connected to the public water or sewer system. The County Water and Sewerage Plan map will be revised to reflect this status at regular updates.

¹ See Sec. 1-16-106 of the County Code for additional requirements.

Multi-Use Water System:

A classification assigned during the piecemeal application process to a single parcel or lot utilizing a water supply system having the capacity to supply more than 5,000 gallons of water per day and serves a number of individuals.

Multi-Use Sewerage System:

A classification assigned during the piecemeal application process to a single parcel or lot having a maximum discharge or output capacity in excess of 5,000 gallons per day.

WATER & SEWERAGE PLAN AMENDMENTS
Fall 2015 Cycle

STAFF REPORT

Case # WS-15-12

APPLICANT: Division of Planning and Permitting

REQUEST: Text Amendment to Section III (County Community Systems) of Chapter 3 to include additional data about the New Design Road Water Treatment Plant; factual clarifications to County Water System descriptions; and an Infrastructure Amendment to add a discharge symbol to the Sewer Map

BACKGROUND:

Chapter 3 (Water Systems) of the Water and Sewerage Plan contains information about water treatment capacities and processes and other data about each community water supply system in the County and the municipalities. Last year, the Maryland Department of the Environment (MDE) notified the County that additional information about the New Design Road Water Treatment Plant was needed. The new data required for the Plan includes a short description of the treatment and discharge of process water and wastewater generated at the New Design Road Plant. Other text changes to Chapter 3 include updates to the population size served by County water systems and revisions to Water Appropriation and Use Permit data. All of these revisions are shown on accompanying pages 3-1 and 3-2 of the Water and Sewerage Plan.

A discharge symbol is proposed for addition to the Sewer Map to reflect the physical location of the outfall point for residuals treatment connected with operations at the New Design Road Water Treatment Plant.

STAFF RECOMMENDATION:

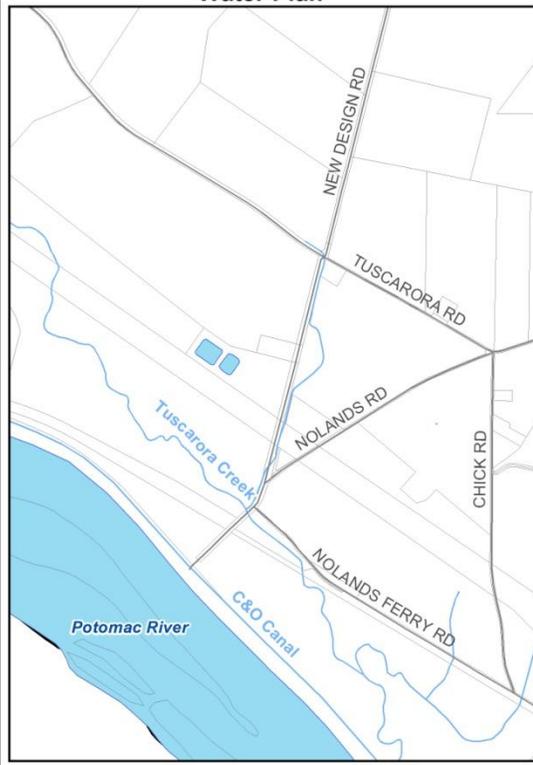
Staff recommends a finding of consistency with the Comprehensive Plan for Case WS 15-12, as the case consists simply of factual clarifications and additional data required by the MDE.

WS 15-12

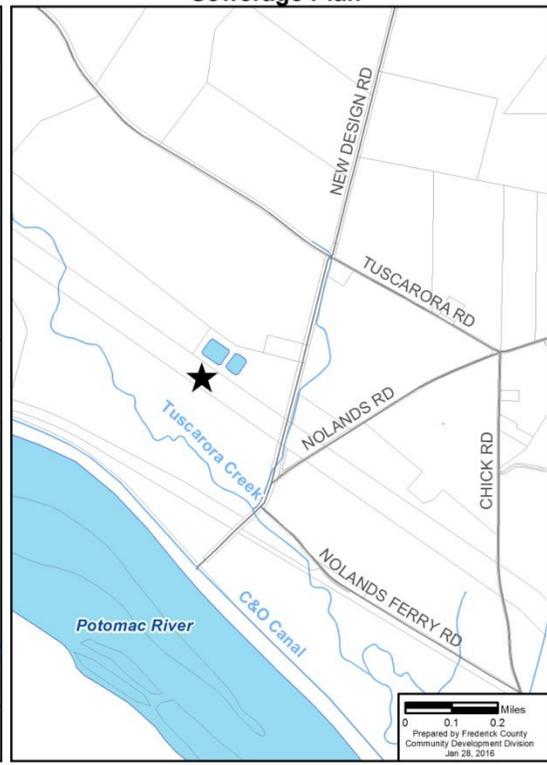
Comprehensive Plan



Water Plan



Sewerage Plan



0 0.1 0.2 Miles
Prepared by Frederick County
Community Development Division
Jan 28, 2016

III. COUNTY COMMUNITY SYSTEMS

A. FREDERICK COUNTY (DUSWM) WATER SYSTEMS

Frederick County, through its Division of Utilities and Solid Waste Management (DUSWM), operates ~~14~~ **13** separate water systems located throughout Frederick County. The County water systems serve approximately ~~43,000~~ **56,000** people located in several defined services areas. Currently, the County's ground water supply systems serve approximately ~~18%~~ **8%** of this population.

1. Frederick County Surface Water Supplies

The DUSWM's largest water supply system, the New Design Road Water Treatment Plant (WTP), which withdrawals water from the Potomac River, has the greatest source capacity of all the water supplies in Frederick County. The New Design Road WTP Potomac River intake is located 2.5 miles upstream of the confluence of the Potomac and Monocacy Rivers. The New Design Water System serves the following Community Growth Areas:

- Adamstown
- Ballenger Creek
- Buckeystown
- Eastalco (although this facility is not in operation, the agreement to supply this property with 2MGD is still in effect)
- Frederick Southeast
- Holly Hills
- Linganore
- Monrovia
- New Market
- Point of Rocks
- Spring Ridge/Bartonsville
- Urbana
- City of Frederick (via PRWSA)
- Fort Detrick (via agreement)

The Potomac River is the most abundant water supply in Frederick County. All of the land in Frederick County drains to the Potomac River, providing significant quantities of water not just for Frederick County but also its downstream neighbors. Additionally Frederick County's large land area represents a major source of water for the Potomac River. The Maryland Geologic Survey (MGS) estimates that total annual runoff associated with Frederick County's land area is approximately 419 billion gallons per year. This represents an average daily volume of water of approximately 1.15 Billion Gallons per Day (BGD). The DUSWM's use of the Potomac River as a water supply is basically non-consumptive. Water withdrawal and wastewater return flow data, during the two most recent drought years (1999 and 2002); reflect relatively low consumptive use during drought, compared to that of other large (downstream) users of the Potomac.

The DUSWM's Facility Plan for the New Design Road WTP is based on providing an ultimate 45 MGD maximum day capacity. Based on the Facility Plan, the first major increase in treatment capacity provides 25 MGD of maximum daily treatment capacity. The DUSWM's Water Appropriation and Use Permit (WAUP) for the Potomac River supply currently allows the withdrawal of up to 26 MGD, providing the New Design Road WTP with a permitted treatment capacity of 25 MGD to meet maximum day demands. Substantial completion for the WTP upgrade project occurred in April 2011. Completion of the plant upgrade allowed the County to fulfill its 8 MGD (max day) supply obligation to the City of Frederick per the Potomac River Water Supply Agreement (PRWSA).

In conjunction with this project the New Design Transmission Main (Phases 1 thru 5) was completed in 2010. The 42” transmission main conveys water from the New Design WTP to Frederick City via two different points of interconnection and also supplies the eastern part of Frederick County via the East County Water Storage Tank and Booster Station. **THE NEW DESIGN ROAD WTP IS AUTHORIZED TO DISCHARGE TREATED WASTEWATER TO THE POTOMAC RIVER GENERATED FROM THE WATER TREATMENT PROCESS AND RESIDUALS TREATMENT, AND FROM ON-SITE WASTEWATER TREATMENT UNDER NPDES DISCHARGE PERMIT MD0061841 (STATE PERMIT 10-DP-2296A).**

The DUSWM has completed a major expansion and upgrade to its Potomac River water treatment and transmission system to accommodate programmed growth in the County and to supplement the City of Frederick’s water supply.

The DUSWM also has a 2.0 MGD surface water treatment facility located at Lake Linganore. This permanent facility was constructed in 1991 after the County deployed several smaller temporary surface water treatment systems that relied on the Lake as a source of supply. Presently this water appropriation allows the DUSWM to withdraw 0.30 MGD on an average annual basis and 2.0 MGD maximum monthly daily basis. A package filtration plant provides complete treatment of the lake water. Screened intakes located at various depths in the lake provide the WTP with multiple points of withdrawal. Although this area is now served by the New Design treatment plant via the East County pumping station, the Linganore water treatment plant remains in a “ready” state for potential use.

In December 2000, Frederick County, the City of Frederick and the Lake Linganore Association executed a Regional Water System Agreement. This agreement addressed several long-standing issues associated with the use of Lake Linganore as a water supply. In addition to providing public funds to make repairs to the aging private dam and spillway, the agreement also addressed conflicting permit flow-by requirements that are contained in the City of Frederick’s Linganore Creek WAUP and the Lake Linganore Association (LLA) obstruction permit. The agreement requires the LLA to release enough water from the lake to ensure that the City of Frederick can withdraw up to 6.0 MGD and also meet its WAUP permit flow-by requirement of 4.46 MGD. The agreement also requires the County, once it has completed the construction of its Potomac River Water Supply system, including a direct connection to the Linganore Service Area, to cease all water withdrawal from the Lake whenever its pool level (in the lake) is below elevation 308 AMSL (the crest of the dam’s spillway). This requirement effectively prevents the County from continuously relying on Lake Linganore as a source of supply. Once the Potomac River water supply projects are completed, the County’s Lake Linganore water supply will become an un-allocable secondary source, used only to supplement the Potomac River supply, when excess water resources are available in the Linganore basin or if necessary during certain emergencies.

The County’s combined surface water appropriation associated with the New Design Road and Lake Linganore sources allows for the average daily withdrawal of up to ~~16.03~~ **16.3** MGD with a combined maximum daily withdrawal of 28 MGD. However, the provisions of December 2000 agreement regarding the use of Lake Linganore limit the allocation of this surface water to the permitted values provided in the New Design Road WAUP. Table 3.06 Summarizes the County’s current surface water appropriations.

Table 3.06 Frederick County/DUSWM Surface Water Appropriations

Water Supply System	Current Water Appropriation and Use Permits		
	Permit Number	Daily Average	Max Daily Use
Lake Linganore (impoundment of Linganore Creek) (secondary source)	FR 85S002 (09) (10)	1.20 0.3	2.00
New Design Road (Potomac River)	FR 68S005 (06) (09)	16.00	26.00
Total (MGD)		17.20 16.3	28.00

