Garrett County Water and Sewerage Master Plan 2014 Revision

Adopted December 9, 2014

Amendment 6 March # 2026

Revision Table

Amendment	County Adoption	Resolution	MDE Approval	Revision Notes	Pages
	December 9, 2014	2014-15	March 19, 2015	Original Plan	
	June 6, 2016	2016-7	May 25, 2023	See Exhibit 1, Text & map 4-4	Exhibit 1
1	November 22, 2016	2016-2	March 27, 2017	Map updates: Deep Creek Sewer Service Area, Thayerville Water Service Area, Deer Park Water Service, Mt Lake Park/LochLynn Water Service Area	Amendment 1
2	February 21 2017	2017-1	May 26 2017	Exhibit 1: EMR Revisions February 2016: Planned & recommended Improvements Text. Table 3-4 Table 3-6	Amendment 2
3	August 22, 2017	2017-5		Map update Deep Creek Lake Water Service Area	
3	April 2, 2021	2021-2		Rosedale Sewer Service Area Map	
3	April 20, 2021	2021-3		Paradise Heights Water Expansion Glendale Road Sewer Service Expansion Pysell Road Sewer Service Expansion Map Mountainside Sewer Service Expansion Map Maple Street Friendsville Sewer Service Map Madison Street Water Service Map	
3	March 21, 2023	2023-2	May 25, 2023	Grantsville Water Service text and map	Amendment 3
4	December 19, 2023	2023-8	March 13, 2024	Add Wisp Mountain Tank Project.	Amendment 4
5	April 7, 2025	2025-5	June 20, 2025	Update Water & Sewer Planning Areas along Hemlock Dr, Grantsville from FSP to W1 and S1 respectively. Gorman Well replacement, Chestnut Ridge Pump Station upgrades replacement, Jennings Sewer upgrades	Amendment 5
6	March 7, 2026	2026-		Friendsville Water Supply and Treatment Improvement Plans, Gorman Water System Supply Plans, Friendsville	Amendment 6

				Sewer System Planned Improvements	

Garrett County Water & Sewer Plan Amendment 6 Summary

Friendsville Water System Improvements Water Extension

Text Amendment 3.2.8.2 Friendsville – Planned and Recommended Improvements

Adds the Friendsville Water Improvements Study project which includes exploration of a new water source, (groundwater well or other source), associated treatment, and distribution to existing service areas. This study address system deficiencies of the Friendsville water treatment plant. Improvements will not expand the service area, but will provide redundant supply, safeguard public health, and enhance system sustainability.

A map amendment (Figure 3-14) shows water supply study area.

Gorman Water Improvements

Text Amendment 3.2.6 North Branch Potomac River Watershed – Problem Areas and Future Needs, Planned and Recommended Improvements

The Gorman community lost one of its primary water sources in 2023 when Mountain Road Well #2 collapsed. This left the system without a backup, placing strain on the remaining well. If another failure occurs, the entire community could face water shortages or service disruptions.

To ensure long-term water security, in the Plan's Amendment 5 included the development and construction of a new groundwater well. Amendment 6 add the study to an alternative to provide a redundant supply and distribution of that supply to the Gorman water system, from the existing Mountain Lake Park Water Treatment Plant on Landons Dam Road. This does not expand the service area.

A map amendment (Figure 3-16) shows the location of the proposed supply connection to existing Landon's Dam Water Treatment Plant, and alternative water sources.

Friendsville Sewer System Amendment

Text Amendment 4.1.8. Friendsville– Problem Areas and Future Needs,

Add the Study to evaluate upgrades or replacement of the existing Friendsville Wastewater Treatment Plant, through engineering and environmental review, to support regulatory compliance, operational reliability, and long-term service needs.

3. Water system

3.2.8.2.1 Friendsville

Existing System

Friendsville is an incorporated town in northwest Garrett County, located on the Youghiogheny River and on both sides of I-68. The Town's population in 2010 was 491.

In 1974, the Town of Friendsville purchased the holdings of the City Water Company, a privately owned utility which formerly supplied water to Friendsville. The system had water quality and quantity problems. In 1976 a completely new water system was placed in operation. This system was rehabilitated in the early 1990s. In 1996, the town turned the system over to the Sanitary District which now owns and operates it.

The system currently serves approximately 235 ERUs. The Town's current appropriation permit allows an average daily withdrawal of up to 73,000 gpd. Average daily water use in 2012 was approximately 65,000 gpd (Table 3-3).

The Friendsville water system consists of:

- Intake structure on the Youghiogheny River.
- A treatment plant (sand filter) located at 849 First Avenue with design and production capacity of 120,000 gpd.
- A 322,000-gallon steel water storage tank located off of Ross Avenue.
- Water distribution lines.

Service Areas

Figure 3-15 shows the existing service area of the Friendsville water service area. No service area expansions are currently planned.

Problem Areas and Future Needs

With an average daily flow of 65,000 gpd, the Friendsville system has a current unused capacity of 8,000 gpd (Table 3-3). The projected demand through 2023 is approximately 1,800 gpd therefore no increase in capacity will be needed. However, projected new demand through 2033 (65,000 gpd plus 10,648 gpd) will exceed the current appropriation of 73,000 gpd so that an increased appropriation from the Youghiogheny River or from groundwater sources may be needed and increased appropriations cannot be guaranteed. Compared to other systems in the County, Friendsville's flow of 65,000 gpd is high for its number of ERUs. Until April 2013, approximately 26,000 gpd of finished water was used in the wastewater treatment process. This use has been discontinued therefore the reduction will be reflected in the average daily flow in future years. High flows may also be attributable to leaks in the system which are common due to the hard river rock in the local soils. Historically these leaks have been difficult to locate.

Planned and Recommended Improvements

- Continue investigating and repair water leaks and monitor demand.
- Complete repairs on the two water filtration units (bottoms of the units are leaking due to deterioration).
- Investigate replacement of the insulation on the water line on the Maple Street bridge.
- The Friendsville Water Improvement Project is planned to address intake screening deficiencies and provide associated treatment, storage, and distribution system improvements necessary to support regulatory compliance and long-term system reliability.
- Explore new water sources, such as ground water wells or other sources, and study and design the optimal water treatment and distribution system options for additional water source for system.
- Ongoing improvements will provide reliable waste treatment to replace aging infrastructure to safeguard public health, enhance system reliance, and increase systems sustainability.

3.2.6 North Branch Potomac River Watershed

3.2.6.2 Gorman Service Areas ,Problem Areas and Future Needs & Planned and Recommended

Existing System

Gorman is a small, unincorporated community along the North Branch Potomac River, at the intersection of MD 560 and US 50. The community developed as a component of three mining communities that were settled along the Western Maryland Railroad (the other two communities were in West Virginia). The 2008 Comprehensive Plan designates Gorman as a rural village.

The Gorman water system was originally built in 1982 to serve approximately 55 homes and businesses. The water source for the system was in West Virginia, but in 1996-97 the Sanitary District developed its own well water supply for the system. The service area included the community of Gorman and properties along US 50 westward from the river to the Wilson-Corona Road intersection.

In 2003 a water line was extended along Wilson Corona Road (to approximately 35 customers) due to problems with private water supplies.

In 2007 a water line was extended along Table Rock Road and a portion of Fairview Church Road to serve approximately 26 residences in the area that experienced a reduction and/or loss of water supply due to deep mining activity. The extension consisted of approximately 25,000 linear feet of 6-inch water line with fire protection. Sizing of the extension also allows for future connections along Table Rock Road and Fairview Church Road and further expansion of the system to serve the remaining portion of Fairview Church and Wilson Corona Roads to the current termination of the water system on Wilson Corona Road. Financing of the project was provided by Mettiki Coal, LLC and a MDE grant.

The system currently serves approximately 146 ERUs. The system's water appropriation permit allows withdrawal of up to 40,500 gpd. Average daily demand in 2012 was approximately 35,000 gpd (Table 3-3).

The Gorman water system consists of:

- Water from two wells in the Greenbrier and Mauch Chunk formations at depths of 205 and 224 feet located on Mountain Road. In 2023, Mountain Rd Well #2 collapsed leaving the Gorman Water Service Area without a redundant water source. The loss of Well #2 places additional strain on Well #1 due to higher pumping rates.
- Approximately 55,700 linear feet of 4- and 6-inch transmission and distribution lines.
- A treatment plant (chlorination) with design and production capacity of 58,000 gpd located at 4683 George Washington Highway.
- 100,000 gallon concrete ground water storage tank located beside the water treatment plant

Service Areas

Figure 3-12 shows the existing Gorman water service area. The service area is large relative to the local population as it was established to serve homes north and west of the village of Gorman to address water sources impacted by deep mining activity.

No service extensions are planned before 2023. Future planned service areas, beyond 10 years, include "infill" areas within and south of the service area boundaries.

Additionally, a new ~~groundwater well~~ water source will be developed to enhance system reliability and reduce dependency on a single well; ~~This new well will be located within the existing service area~~ and will provide redundancy in case of mechanical failure or source depletion. The project includes new water source, ~~drilling a new well,~~ quality analysis, installing conveyance lines, storage, ~~and production well installation in compliance with MDE permitting requirements.~~ Once operational, the new water source ~~well~~ will support continued service reliability and accommodate anticipated demand growth.

Problem Areas and Future Needs

With an average daily flow of 35,000 gpd, the Gorman system has a current unused capacity of 5,500 gpd (Table 3-3). The projected demand through 2023 is approximately 1,300 gpd therefore no increase in capacity will be needed. However the projected additional demand through 2033 is approximately 17,000 gpd for a total demand of approximately 51,700 gpd. While sufficient production and treatment capacity exist (see Table 3-3 columns F and G) the added demand would put the system above its permitted withdrawals so that an increase in water appropriation, alternate water supply or large reduction in water use after 2023 will be needed to accommodate this system growth.

The original water transmission line constructed in 1982 along US 50 is deteriorating and needs to be replaced.

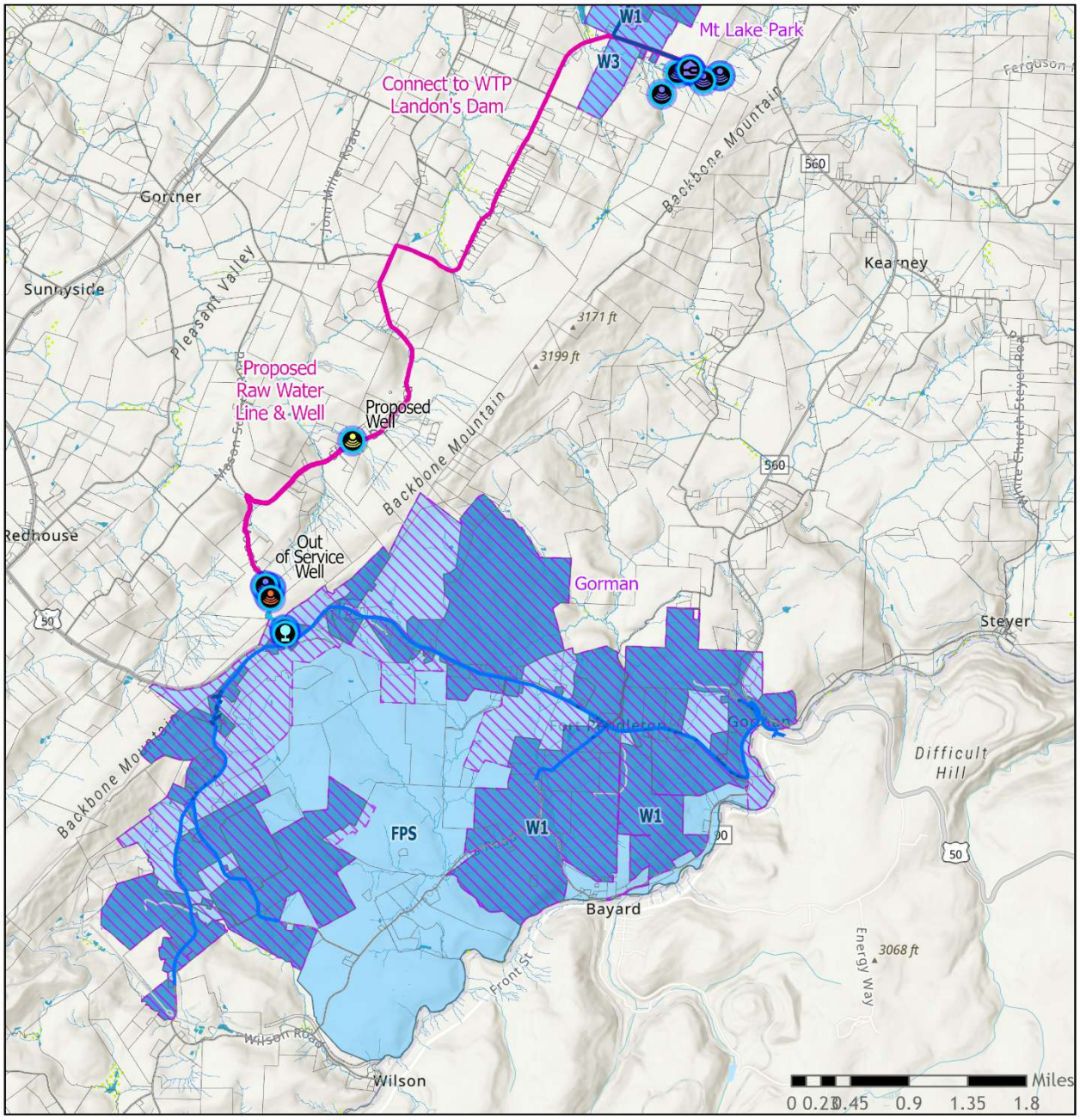
In 2023, Mountain Rd Well #2 collapsed leaving the County without a redundant water source. The loss of Well #2 places additional strain on Well #1 due to higher pumping rates. Additional well capacity is critical to ensure uninterrupted service and address peak demand fluctuations.

Planned and Recommended Improvements

- Replace the deteriorating water transmission line from Gorman west along US 50. A funding request to MDE for this project is anticipated in 2027.
- Replace existing pressure-reducing stations to reduce operating pressures of 150 psi or less. This will improve maintenance access, improve confined space access, and mitigate water hammer surges.
- Study water supply line connecting to Landon's Dam WTP for reductant water source for Gorman water system. To maintain existing service.

- Explore the development ~~and install~~ a new ~~production well(s),~~ water source, ~~install a new groundwater treatment plant, pump station~~, and distribution system to ~~pump~~ supply potable water to the existing Gorman ~~potable~~ water tank on Backbone Mountain. This would improve system resilience and redundancy.
- Study utilizing the existing Mountain Lake Park / Loch Lynn Heights, Town water treatment plant on Landon's Dam Road and developing the associated water distribution line to use as a redundant water source for the Gorman Water Service Area.
- Secure a water appropriation permit modification to support increased withdrawals, if necessary.
- Ongoing improvements will provide reliable water sources and replace aging infrastructure to safeguard public health, enhance system reliance, and increase systems sustainability.

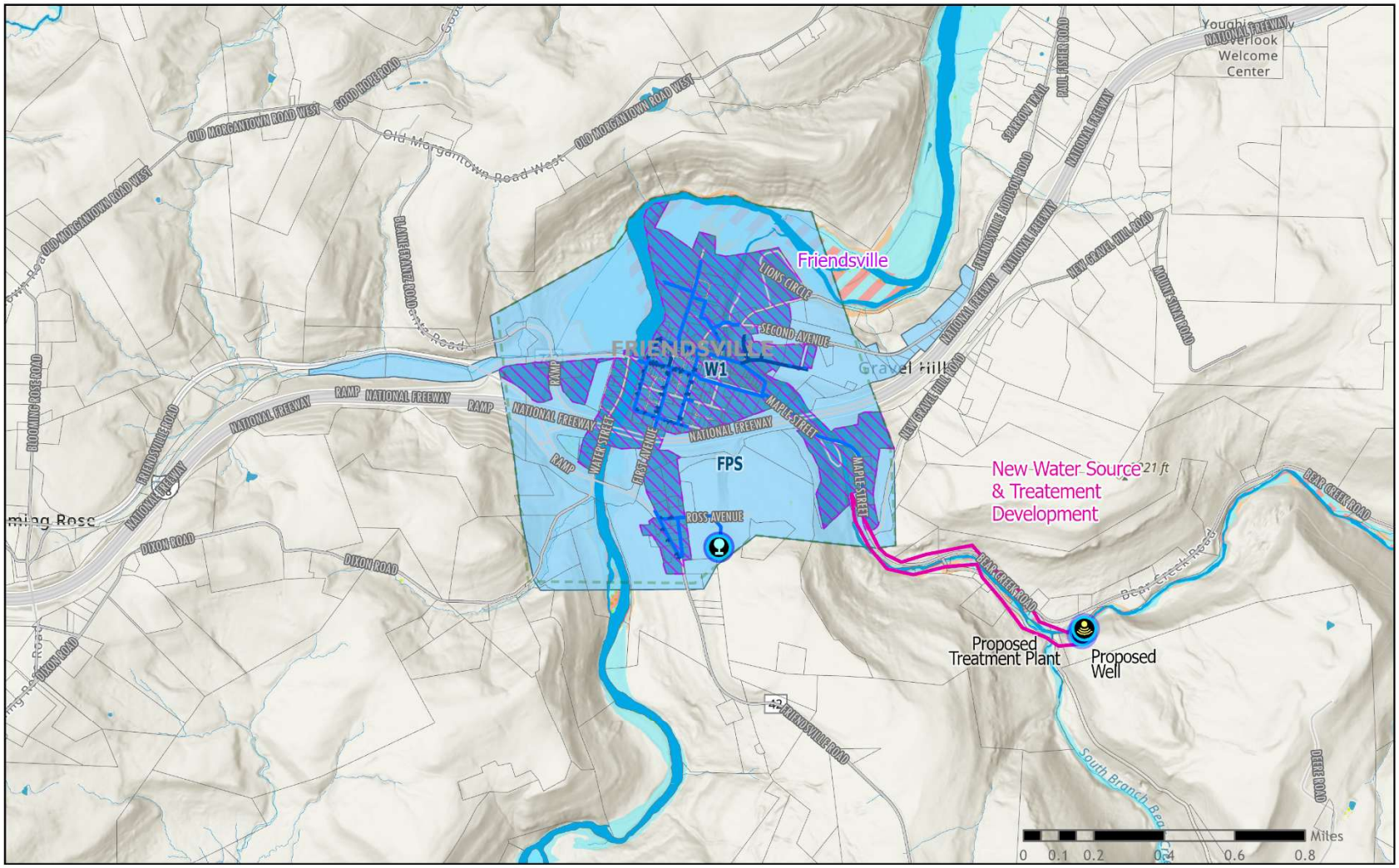
Figure 3-16 – Gorman Water Service Area



Gorman _ Water Service

- Water Treatment Plan
- Proposed Well
- Well
- Out of Service
- Storage Tank
- Amendment 6 Changes
- Water Service Areas
- W1: Existing/ Under Construction
- W2: Service Within 3 Years
- W3: Service Within 10 Years
- FPS
- Tax Parcels
- Garrett Town Boundaries
- Roads
- Streams
- Lake or Pond
- Wetlands - Polygon - Department of Natural Resources
- Wetlands

Figure 3-14 Friendsville Wate Service Area



Friendsville Water Service

- Water Treatment Plan
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- Well
- Out of Service
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- Tax Parcels
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Flood Hazard Zones

- 1% Annual Chance Flood Hazard
- Regulatory Floodway
- Special Floodway
- Area of Undetermined Flood Hazard
- 0.2% Annual Chance Flood Hazard
- Future Conditions 1% Annual Chance Flood Hazard
- Area with Reduced Risk Due to Levee
- Area with Risk Due to Levee

Wetlands - Polygon - Department of Natural Resources

- Wetlands

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4.1.8.2 Friendsville

Existing System

Construction of the Town's original sewage collection system and wastewater treatment plant commenced in 1973. The collection system is constructed of vitrified clay (terra-cotta) pipe and has approximately 14,810 LF of 8-inch collection pipe, 1,160 LF of 8-inch outfall sewer from the treatment plant, one pump station, approximately 520 LF of pressure sewer and 69 total manholes.

Garrett County took ownership of the sewerage system in 1996, and continues to own and operate it. It serves approximately 230 ERUs.

[14] Table 4-1 includes the 80% analysis as an indication of potential capacity issues for the County to monitor and plan to address. The 80% figure is drawn from MDE's capacity management planning methodology.

Wastewater flows to the Friendsville WWTP located at 849 First Avenue, Friendsville. The WWTP has current discharge permit effluent limitations based on an average daily flow of up to 125,000 gpd. The plant has a 300,000 gallon flow equalization tank for excessive flows.

Wastewater is treated using activated sludge secondary treatment unit with chlorine disinfection and dechlorination with SO2.

Effluent from the WWTP is discharged into the Youghiogheny River just north of the WWTP. Discharge from the Friendsville WWTP is subject to temperature and dissolved oxygen water quality criteria because the Youghiogheny River is a designated as a Use III-P water. Sludge from the WWTP is transported to the Deep Creek Lake WWTP for treatment.

Average daily flow in 2013 was approximately 80,200 gpd. This is a significant decrease over the 2012 flow of approximately 106,900 gpd when the plant was using an estimated 24,000 to 28,000 gpd of drinking water for chlorination/dechlorination. This practice was discontinued in April 2013 and the operation now uses recycled treated wastewater.

Service Areas

Figure 4-16 shows the existing and proposed Friendsville sewerage service areas. Note that the existing area includes a State Highway Administration rest area on I-68 approximately three miles east of town. This line was constructed in 1992.

During the upcoming three year period (S-2) the County intends to extend service west of town along MD 42, Friendsville Road.

On the east side of Town, the line to the State Highway Administration rest area provides the potential for service east of town along Friendsville Addison Road, north of I-68. This area is shown as S-2. Twelve residences along with a trailer court consisting of seven dwellings are located within the area that presently does not have public sewer service. The Garrett County Health Department Environmental Health Services has identified properties within the area that have failing on-site sewage disposal systems and/or direct discharge into Bear Creek, and has requested that public sewerage service be extended to the area in order to abate public health issues.

Problem Areas and Future Needs

The Friendsville system has suffered from persistent problems with inflow and infiltration (I/I) and several projects have been undertaken in an attempt to understand and address the problem.

In 2004, a study was completed to evaluate the system for and to make corrective recommendations. The study indicated that in the spring and during periods of high groundwater levels, I/ I flows alone exceeded the permitted plant capacity (flows up to 1 MGD during heavy rain events). The study also indicated that infiltration was more of an influence on the system which is consistent with terra-cotta pipe systems in a low area with sandy soil conditions. The proposed project had two components:

- Rehabilitation of four areas of main sewage collection lines which are heavily influenced by infiltration (completed in 2010 using the U –liner process)
- Elimination of inflow into lateral house connections. In 2006, Garrett County conducted smoke

testing of lateral connections in order to identify I/I sources. The testing resulted in the identification of 22 properties with I/I problems. Corrections are ongoing.

Due to average daily flows peaking near treatment plant capacity, a limited number of ERUs only are available for connection to the system. The limitation on available sewer capacity has hindered commercial and residential expansion within the town. Therefore, I/I issues must be corrected to enable the town to grow.

An existing 300,000 gallon steel flow equalization tank has deteriorated; the sides are leaking and the roof was damaged due to snow and ice load, such that it cannot be used. The County proposes to replace the existing steel tank with a 300,000 gallon precast post-tensioned concrete tank. Included in the project would be replacement of the diffusers located inside the tank and the security fencing around the structure.

- Evaluate upgrades or replacement of the existing Friendsville Wastewater Treatment Plant, through engineering and environmental review, to support regulatory compliance, operational reliability, and long-term service needs.
- Ongoing improvements will provide reliable water sources and replace aging infrastrutre to safeguard public health, enhance system reliance, and increase systems sustainability.