

ALLEGANY COUNTY, MD  
WATER RESOURCES  
ELEMENT

OCTOBER 2010

AN AMENDMENT TO THE 2002 COMPREHENSIVE PLAN UPDATE

## Acknowledgements

The Planning & Zoning Commission of Allegany County has developed the 2010 Allegany County Water Resources Element, as an addendum to the 2002 Allegany County Comprehensive Plan Update.

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# 1 Executive Summary

## 1.1 Water Resources

The Water Resources Element (WRE) is an amendment to the Allegany County Comprehensive Plan and is required by State legislation passed in 2006. The intent of the WRE is to address the relationship of planned growth to water resources for waste disposal, safe drinking water, stormwater management and suitable receiving waters.

The Water Resources Element amendment incorporates and updates relevant Goals, Objectives and Policies from the 2002 Comprehensive Plan Update and adds new Objectives and Policies. Proper management of Allegany County's water resources will ensure the conservation, protection and restoration of health to local and regional waters as the County continues to grow.

In this document the County identifies development scenarios that may be considered somewhat robust. The County believes that it is prudent to utilize an aggressive scenario for the future. The primary purpose of the Water Resources Element (WRE) is to create a linkage between the Water and Sewerage Plan and other county planning efforts to ensure that water and wastewater are adequate to meet the future demands that are placed upon them. In other words, we need to be sure to dig our well before we are thirsty.

In the event that the optimistic projections forecasted by the County do not materialize, the assessments performed as part of this plan will ensure adequate water and wastewater capacities for the future. In this instance, it is appropriate to overestimate demand rather than underestimate it.

HB 1141 came about largely because planners and engineers did not adequately plan – in advance – for the level of growth that materialized in their jurisdictions. It is important to note that development patterns in Allegany County are more compact and dense compared to the jurisdictions to east. The County's landscape acts as a natural deterrent to sprawl, thus minimizing inadequately supported development and other unsustainable development patterns.

Growth that is appropriately supported by infrastructure is generally characterized as "development". Unsupported and/or poorly planned growth is typically referred to as "sprawl" or "Unsustainable" growth. This type of growth tends to be a drain on the economy of a local jurisdiction, rather than an economic benefit. These are the fundamental tenants of "Smart Growth". It is interesting to note that approximately eighty-five percent of the County's existing homes are connected to public water and wastewater systems. Very few Maryland jurisdictions can make such a claim. The future development scenario, as identified herein, projects that seventy-five percent of the County's future development will occur in central and western Allegany County. With very few exceptions, this new development will occur via public water and wastewater systems.

Allegany County supports appropriate advance planning to ensure that water and wastewater capacity shortfalls are a thing of the past, rather than a continuously repeated process.

This document is designed to complement other existing and/or ongoing planning efforts, including: the *2007 Water and Sewer Plan*, the draft *2011 Water and Sewerage Plan*, the *2002 County Comprehensive Plan*, the 12 watershed-based comprehensive plans, and *the Comprehensive Water and Sewer Study* (2011). This planning element is not a “stand-alone” document, it is clearly part of a larger comprehensive plan and a component of an even larger planning process – a process that includes each and every one of the previously-mentioned plans. As such, it is not designed or intended to replace the Water and Sewerage Plan or the County’s TMDL/WIP response plan. The same planners, engineers and consultants who developed/are developing the referenced plans are also the same individuals who prepared this element. With the development of this document, the HB1141 objectives of coordination and integrated planning have definitely reached fruition in Allegany County.

While the intuitive nature of these plans and the joint nature of their development is a familiar concept to Planning and Public Works staff and other County officials, it is perhaps not as easily recognized by reviewers and readers unfamiliar with the County. To address this consideration, the WRE is including, by reference, an additional appendix that incorporates the *2007 Water and Sewer Plan* and the draft *2011 Water and Sewerage Plan*.

## 2 Introduction

### 2.1 Plan Visions

The 2002 Comprehensive Plan Update states that all County plans should be consistent with and supportive of the Visions, Goals, Objectives and Policy Framework as they relate to policies of Land Use, environmental and growth. Visions from the 2002 Plan Update that support and provide a foundation for the Goals, Objectives and Policies of the WRE include:

- ✦ **Development is concentrated in suitable areas;** the investment in infrastructure such as water supply and wastewater treatment facilities will support new growth in existing communities or in areas specifically designated for growth.
- ✦ **Sensitive areas are protected;** streams and their buffers, 100-year floodplain and water impoundment areas are to be protected from the adverse impacts of development.
- ✦ **Conservation of resources and their efficient use are intricately entwined;** within the context of economic growth, resource protection, and growth management, water resources conservation policies must be developed which work in concert with land development and land preservation programs.
- ✦ **Adequate public facilities and infrastructure under the control of the County or a municipal corporation are available or planned in areas where growth is to occur;** assure that public water and sewer facilities are either in place or proposed in conjunction with new development in support of with the County's Priority Funding Area Map.
- ✦ **Funding mechanisms are addressed to achieve Plan visions;** long-term financial benefits to the County government can be achieved through a logical and efficient development pattern. In the short-term, existing infrastructure construction, maintenance, and related services needs must be met to make the achievement of those efficient development patterns a reality. Existing and innovative mechanisms to provide adequate funds must be explored and implemented.

### 2.2 Goals and Objectives

In order to achieve the Plan Visions within the 2002 Comprehensive Plan Update, Allegany County established a number of goals and objectives. The goals and objectives are part of the framework for the Comprehensive Plan, and were designed to fit the character of the County and its service areas. Goals and objectives from the 2002 Comprehensive Plan Update that relate directly to and become components of the WRE include:

**Goal 1****Develop a sound, balanced, diversified economy**

- A. Provide ample supply of physically suitable and effectively located industrial and related employment sites, which are served by adequate water and sewer service facilities, and are near existing population centers.

**Goal 2****Promote the wise use and management of the County's natural resources and for the protection of Sensitive Areas**

- A. Ensure the compatibility between man-made development and the natural environment;
- B. Protect Sensitive Areas and conserve water.

**Goal 3****Provide a quality living environment for the citizens of the County**

- A. Provide and maintain the necessary utilities and services to existing communities, as well as to newly developing communities.

**Goal 4****Ensure well-coordinated, efficient local Governments**

- A. Encourage intergovernmental cooperation in research and planning and Land Use decision-making;
- B. Develop Capital Improvement Plan and Program for major government improvement projects and ensure consistency of those projects with the Comprehensive Plan;
- C. Ensure intergovernmental cooperation and coordination among the various levels of government in the provision, operation, and maintenance of services.

**2.3 Water and Sewerage Plan**

The first Master Plan for Water and Sewerage for the County was adopted in October 1970 by the Allegany County Commissioners. Since that time the document has been revised and updated numerous times. The most recent adopted Plan is the *2007 Allegany County Water and Sewer Plan*, which is slated for another update in 2011.

The overall goal of the County related to water and sewer has been to provide public water and sewer to each of the communities identified in need of such services. The County has been consistently working towards this goal as demonstrated by the continual increase of the total population served with public water and sewer. In fact, in 1970 the water and sewer

infrastructure serviced as little as 35,000 residents; however, by the year 2000 approximately 85% of the total population was serviced by County infrastructure. According to USGS 2005 Water Use Estimates, the population served by public water is 63,650, which equates to approximately 87% of the total population.

## 2.4 Linking Master Water and Sewer Plan & Water Resources Element

Linking the Comprehensive Plan, which includes the WRE and the County's Master Water and Sewerage Plan is not explicitly addressed in HB 1141, Land Use Planning-Local Government Planning, nor does Article 66B of the Annotated Code of Maryland, the local planning and zoning enabling statute. However, the Master Water and Sewer Plan (MWSP) statute does require the MWSP to be consistent with local comprehensive plans. Therefore, it is critical that the WRE supports the MWSP and is consistent.

The technical information necessary to complete both the WRE and the County's Master Water and Sewer Plan substantially overlap owing to the fact that both must operate within the context of water resource regulations and the physical capabilities and limitations of water resources. The differences between the two documents are related to policy and content. As stated in the publication *Managing Maryland's Growth, The Water Resources Element: Planning for Water Supply and Stormwater Management*, the comprehensive plan sets out broad land use and development policies for the jurisdiction, whereas the Master Water and Sewerage Plan must follow and help to implement, not make, local land use policy. The Master Water and Sewer Plan should contain more technical data and analysis than the comprehensive plan and it identifies the capital programs for water and sewer facilities that are necessary to fulfill the comprehensive plan.

## 2.5 The Water Resources Element

The WRE provides guidance to the County's Master Water and Sewer Plan in the following manner:

- ✚ Countywide and small area population projections;
- ✚ Maps detailing the limits of community service areas, showing stages for the current, the ten-year projected and ultimate build-out;
- ✚ Maps depicting the relationships among jurisdictional watersheds, service areas, Priority Funding Area(s), growth areas (including those shown in the municipal growth elements) and other relevant boundaries;
- ✚ Policies that support the requirement in the Master Water and Sewerage Plan law that the capacities of water and sewerage facilities may not be exceeded, and ensure that the

locations, amounts and staging of growth, development and service areas must be within the capacities of both the support infrastructure and water resources;

- ✚ Actions recommended: to obtain needed water resources information; evaluate alternate measures; and adopt new or revised ordinances and regulations to ensure the protection of water resources.

In addition, the WRE is intended to improve the protection of water resource goals within the context of local and State Smart Growth policies.

## 2.6 Designated Growth Areas Projections

Due to the nature of Allegany County's terrain, most urban development is concentrated in a figure eight pattern between Cumberland, LaVale, Mt. Savage, Frostburg, Georges Creek Communities, Westernport, McCoole, Danville, Rawlings, Cresaptown and Bowling Green. This development pattern tends to follow the Potomac Valley, the Georges Creek Valley, the Braddock Run Valley and the Jennings/Wills Creek Valley in a circular pattern around Dans Mountain and Wills Mountain. Projected future growth is expected to stay within this general pattern minimizing the need for significant extension of substantial new infrastructure and other services. As such, proposed residential and general urban development as depicted in the 2002 Comprehensive Plan Update (Plate 45) indicates urban growth continuing outward from Cumberland through LaVale and Cresaptown towards Rawlings, and with the Frostburg area developing satellites north and south. This urban development conforms with the policies and guidelines outlined in the 2002 Comprehensive Plan by avoiding sensitive areas and staying either within existing developed areas or adjacent to them.

### 2.6.1 Phased Development

#### Phase 1

The first phase of new development should occur in the following areas: Frostburg and its satellite communities; the Wills Creek Valley between Corriganville and Ellerslie; the vicinity of Cash Valley Road; the Winchester Road area; Bedford Road; Baltimore Pike; Valley Road; and the Route 51/ Mexico Farms area. Redevelopment should occur in Cumberland, Frostburg, Mt. Savage, the Georges Creek communities, and in Cresaptown.

#### Phase 2

The second phase of new development should occur in the Potomac Valley between Bel Air and Rawlings as water and sewer is extended in this area. A modest amount of new development should also occur in Flintstone and Oldtown areas as water and sewer improvements are made in those communities. At the same time, redevelopment efforts should continue in the older communities.

### Phase 3

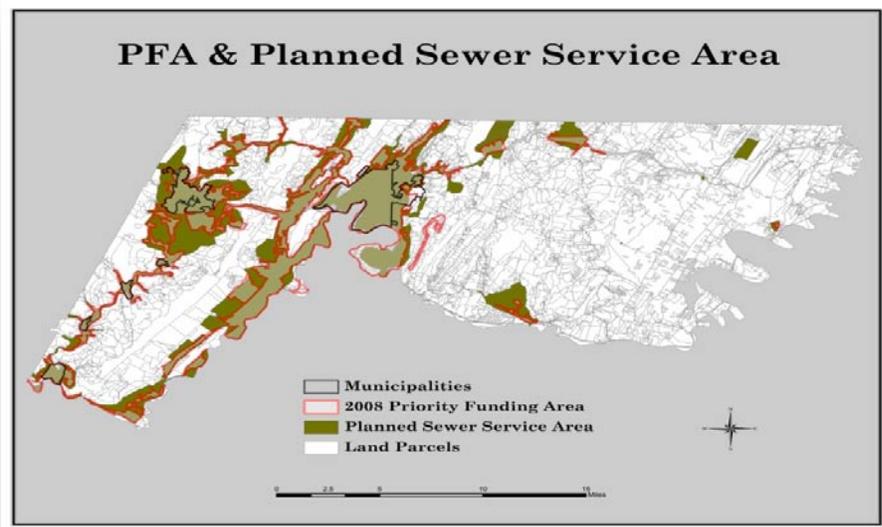
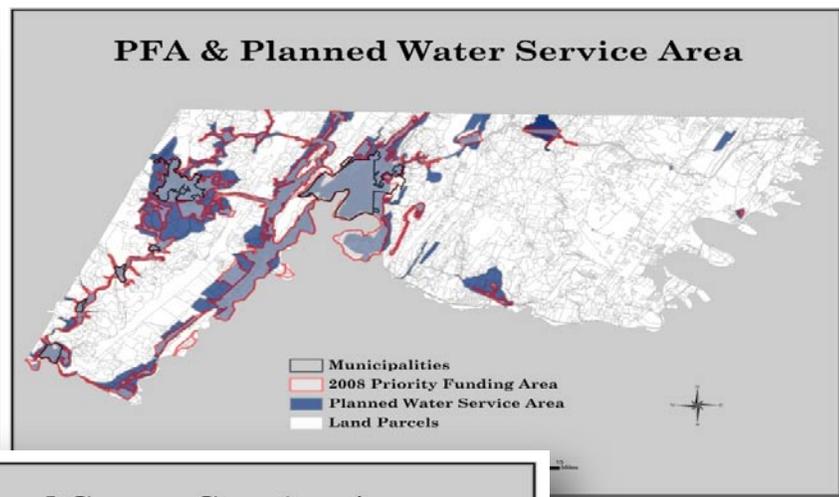
The third phase of new development should occur in the triangle between Frostburg, Clarysville and Midland as water and sewer service is extended and improved in this area.

## 2.7 Planned Service Area and Priority Funding Area

The 2007 Allegany County Water and Sewer Plan indicates a priority schedule for both Water System Development and Sewer System Development which together comprise the Planned Service Areas (PSA). Included in the PSA are failing private water & sewer systems that are slated for upgrades and incorporation into the public water & sewer system.

The Planned Water Service Area and the Planned Sewer Service Area currently extends past the Priority Funding Area outlined in red on the corresponding maps in several areas of the County including: the area surrounding the City of Frostburg, the Bowling Green-Cresaptown area along the Route 220 South Corridor, Baltimore Pike, Rocky Gap State Park area, Flintstone, and Oldtown area.

Map 1



Map 2

## 2.8 Growth Projections

Based upon the 2007 Allegany County Water and Sewer Plan and the Maryland Department of Planning Population Projections by Jurisdiction (February 2009) growth projections for Allegany County indicate a small upturn in population projected between 2000 and the year 2030.

**Table 1: Population Projections**

Source	2000	2005	2010	2015	2020	2025	2030
<b>2007 Water &amp; Sewer Plan Population Projections</b>	74,930	74,250	73,570	73,684	74,739	N/A	N/A
<b>MDP February 2009 Population Projections</b>	74,930	72,950	73,100	74,250	75,300	75,750	75,900

## 2.9 Household Size

The decline of average household size in Allegany County since 1970 coupled with a relatively unchanged total population figure, shown in Table 1, is one of the factors contributing to the need for additional housing in Allegany County.

**Table 2: Historical & Projected Household Size**

	1970	1980	1990	2000	2010	2020	2030
<b>Allegany County</b>	2.95	2.63	2.43	2.35	2.27	2.22	2.16

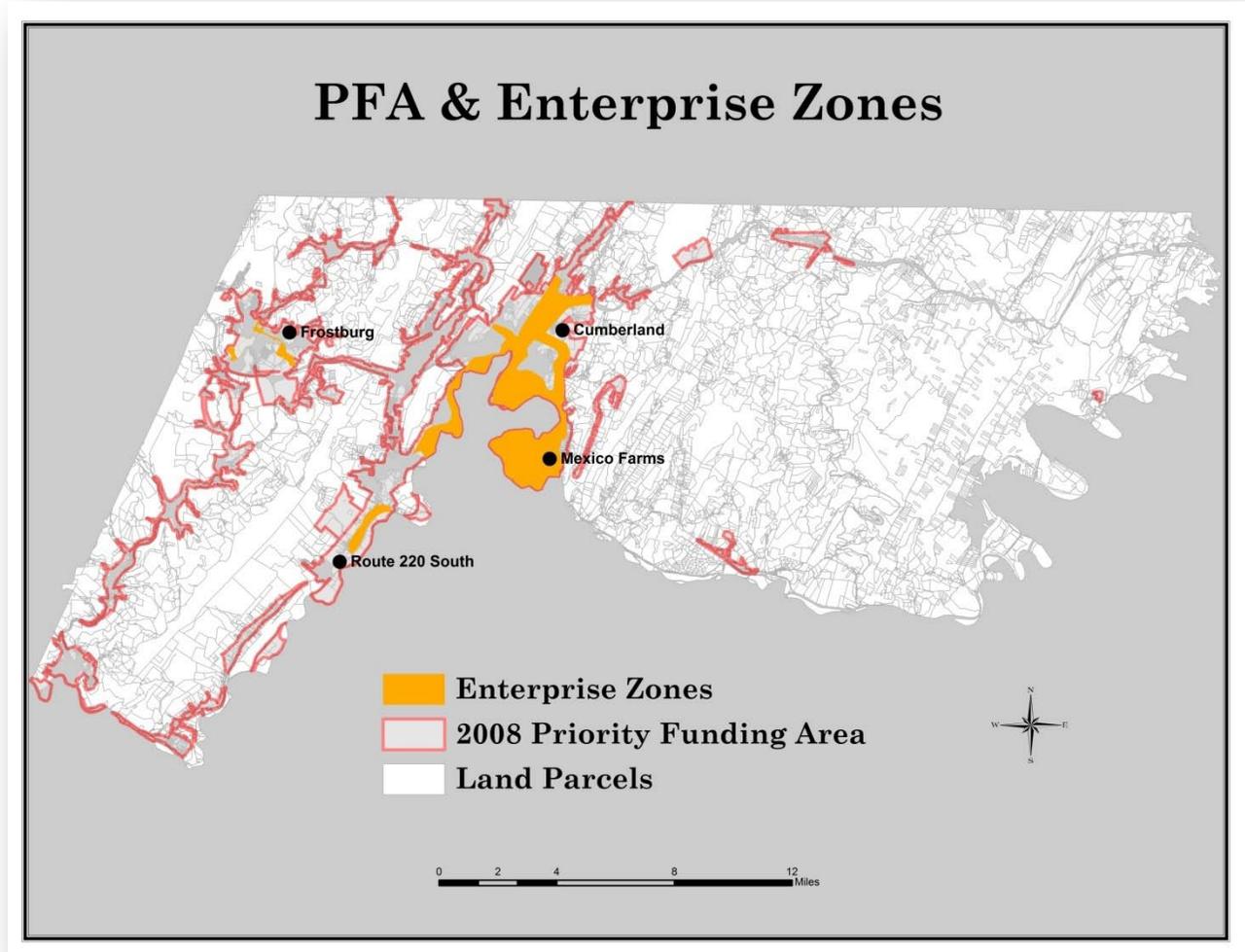
Source: Maryland Department of Planning, Planning Data Services, February 2009

## 2.10 Economic Development

Allegany County continues to offer abundant, available labor, below market real estate costs, and growing technology education resources. The county has developed a series of business parks tailored to a diverse economy including information technology, biotechnology and advanced manufacturing. New projects include the Allegany Business Center at Frostburg State University, a technology-based business park located on university land and offering the resources of Frostburg State and the University System of Maryland. Also just completed is the Barton Business Park for Advanced Manufacturing, located south of Cumberland and adjacent to the Robert C. Byrd Institute for Advanced Flexible Manufacturing. Allegany County has three State Enterprise Zones and participates in the One Maryland Tax Credit program which offers significant tax credits for new capital investments and job creation.

The Enterprise Zones are located within the Priority Funding Area (PFA). The Enterprise Zones include the following: Frostburg, Cumberland, the Mexico Farms area, specifically PPG Road and U.S. Route 220 South, specifically the Barton Business Park.

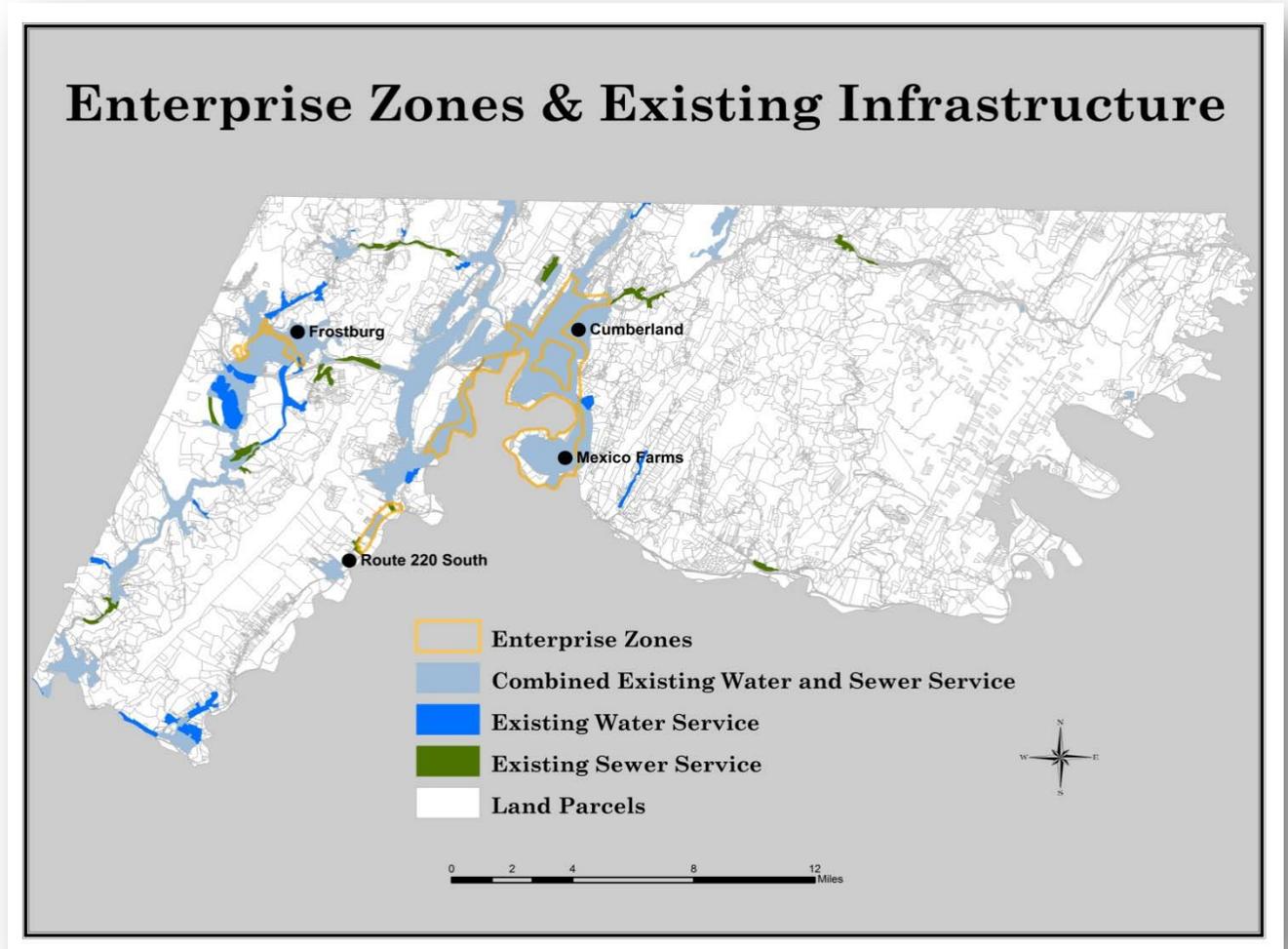
Map 3



Portions of the Enterprise Zones are aligned with the existing infrastructure, with the following exceptions: a small section located on the western boundary of the City of Frostburg, both the northern and southern portions of the U.S. Route 220 South, and an outlining margin around the western portion of the Mexico Farms area.

Two Enterprise Zones are located in Frostburg; a small section of the Enterprise Zone in Frostburg is adjacent to the Allegheny Business Center. Additionally, the main section of the Enterprise Zone is aligned with and encompasses Main Street, U.S. Route 40. The Enterprise Zone located along Route 220 South encompasses the Barton Business Park, while the Zone located around Mexico Farms is concentrated around PPG Road.

Map 4



### 3 Water Distribution, Wastewater Collection and Treatment Systems

#### 3.1 Introduction

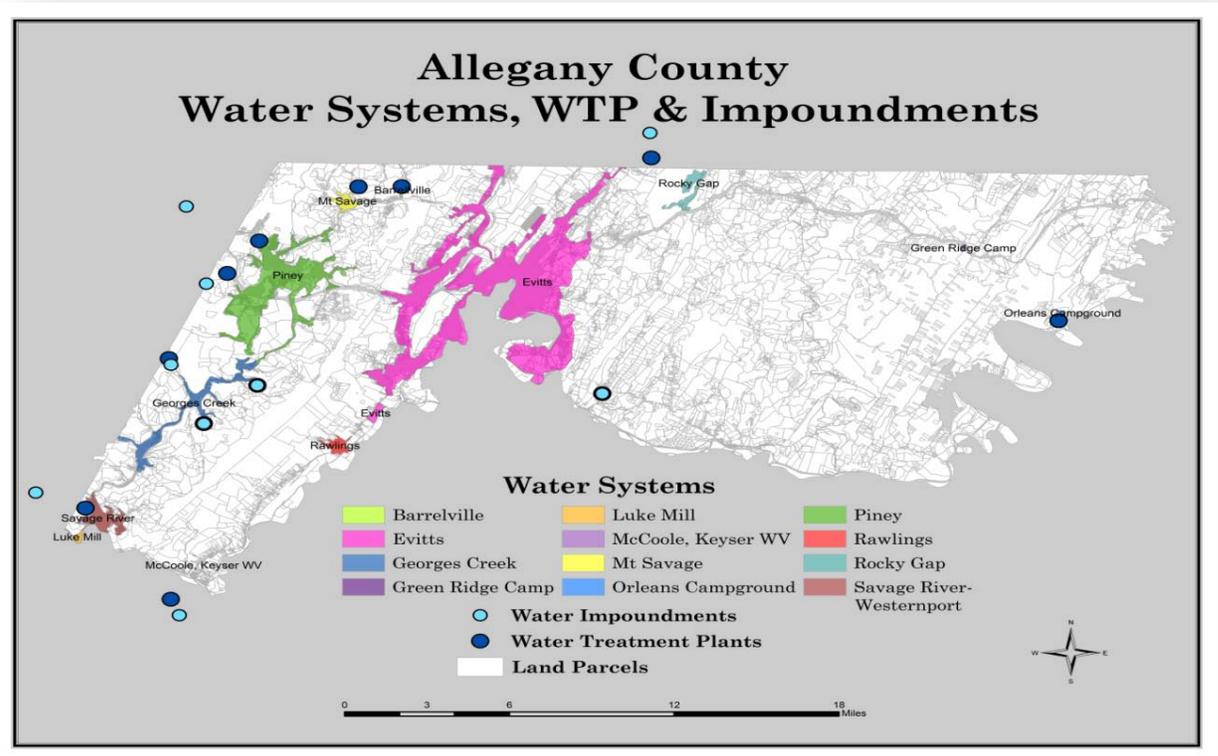
Public Water and Sewer Service Areas are made up of public- and privately-owned water and sewer systems. The Allegany County Department of Public Works-Utilities Division is responsible for maintenance and operation of the water distribution system, wastewater collection system and wastewater treatment systems owned by the County. The County has approximately 185 miles of sewer line and 197 miles of water line with a total of approximately 14,000 customers. Allegany County coordinates the distribution and assists in the maintenance of the supply systems.

#### 3.2 Water Distribution

##### 3.2.1 Water Supply

Water Systems/Service Areas in Allegany County are operated by several different organizations, which work together to provide County residents with treated water. Areas currently served with public water, in addition to water treatment plants and impoundments, are shown on Map 5.

Map 5



### 3.2.2 Impoundments/Reservoirs

The source for the water supply for the municipalities of Cumberland, Frostburg, Westernport and Lonaconing comes from outside of the jurisdiction. The water also is stored in reservoirs located outside of these jurisdictions.

**Table 3: Public Water Supply & Location**

Public Water Supply	Impoundment Name	Location
Cumberland Supply City of Cumberland	Lake Koon and Gordon on Evitts Creek	Bedford County, PA
Frostburg Supply City of Frostburg	Piney Creek; Piney Dam	Garrett County, MD
Westernport Supply Upper Potomac River Commission	Savage River Dam; Savage River State Forest	Garrett County, MD
Lonaconing Supply Town of Lonaconing	Koontz Run	Garrett County, MD

As noted in the 2007 *Allegany County Water and Sewer Plan*, Allegany County is ultimately dependent upon other local governments in adjoining jurisdictions for water quality protection. As such, Allegany County coordinates the review and update process with Mineral County, West Virginia; Bedford County, Pennsylvania; and Garrett County, Maryland.

Private community water supplies within Allegany County include Lake Habeeb at Rocky Gap State Park and the Rawlings Heights Water Company Mill Run Pond. In addition, the community of McCoole is served by the Keyser, West Virginia System, which is supplied by New Creek, a tributary to the North Branch of the Potomac River.

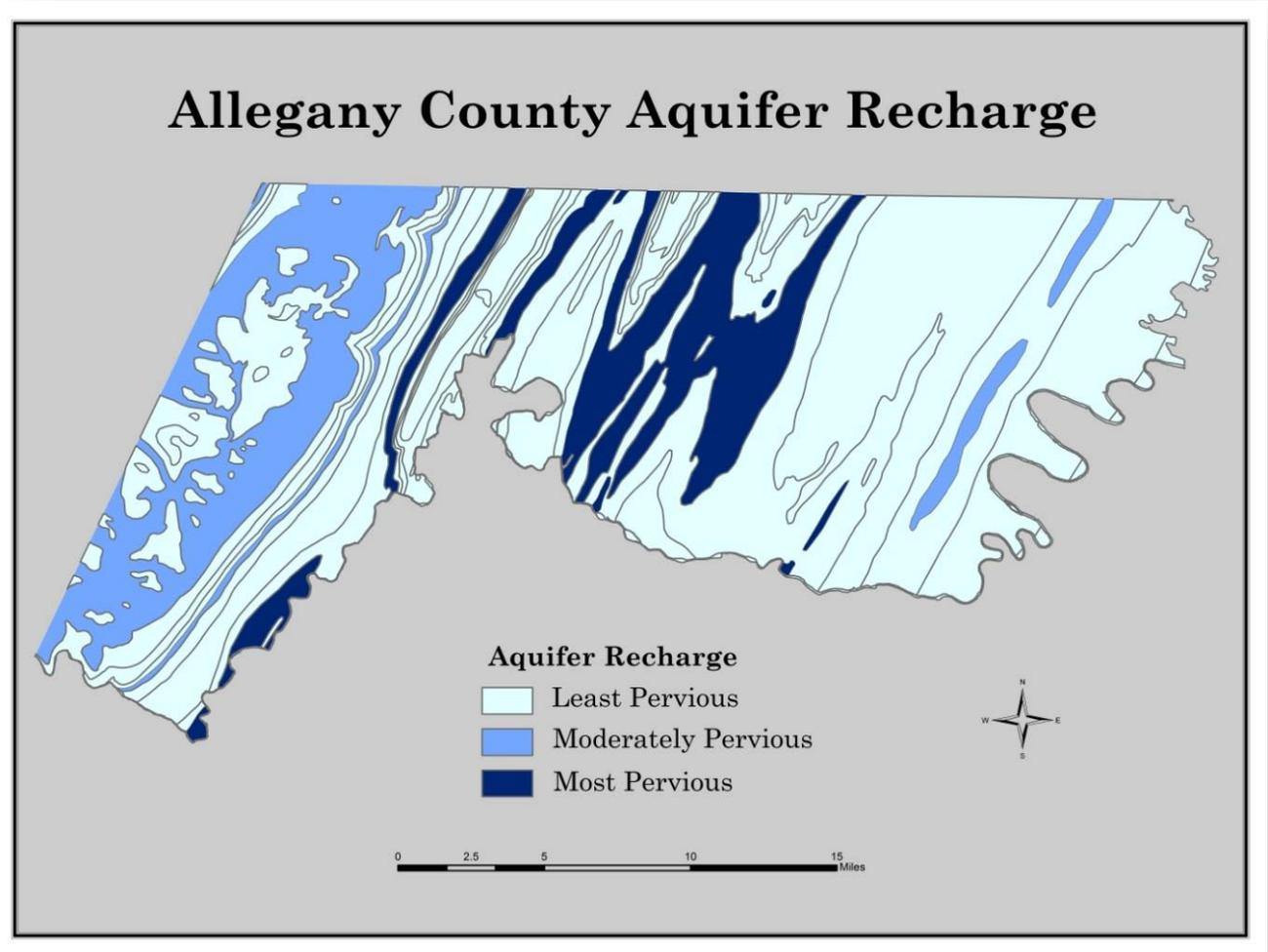
**Table 4: Existing Impoundment Supplies**

List of Owners	Capacity of Impoundment	Safe Yield (MGD)	Average Daily Flow Withdrawal (MGD)
Evitts Creek Water Co. (City of Cumberland)	10,434 ac-ft	15	9
City of Frostburg	1,228 ac-ft	2.3	0.7
Town of Lonaconing Jackson Run	10.9 ac-ft	1.4	0.1
Town of Lonaconing Koontz Run	5.6 ac-ft	2.8	0.1
Town of Lonaconing Elk Lick Run	12.4 ac-ft	2.2-2.5	0.175
Upper Potomac River Commission	18,500 ac-ft	15	65
<b><u>Private Companies</u></b>			
Rawlings Height Water Co.	0.18 ac-ft	0.1	0.06-0.07
Rocky Gap State Park	N/A	0.239	0.142

### 3.2.3 Wells

The ground water sources for the community water systems are confined to the fractured-rock aquifers of the Appalachian Plateaus and the Ridge and Valley physiographic provinces. Typically most of the aquifer recharge areas in the County are not highly pervious; some of the sandstone and limestone units are capable of producing limited domestic and commercial water supplies through groundwater appropriations. Aquifers are found in three rock formations: Pocono, Conemaugh and the Greenbrier formations.

Map 6



Public surface supply sources (Piney, Koon & Gordon, Savage River Dam impoundments) and Jackson, Koontz, and Elklick Runs are supplemented by a number of community wells.

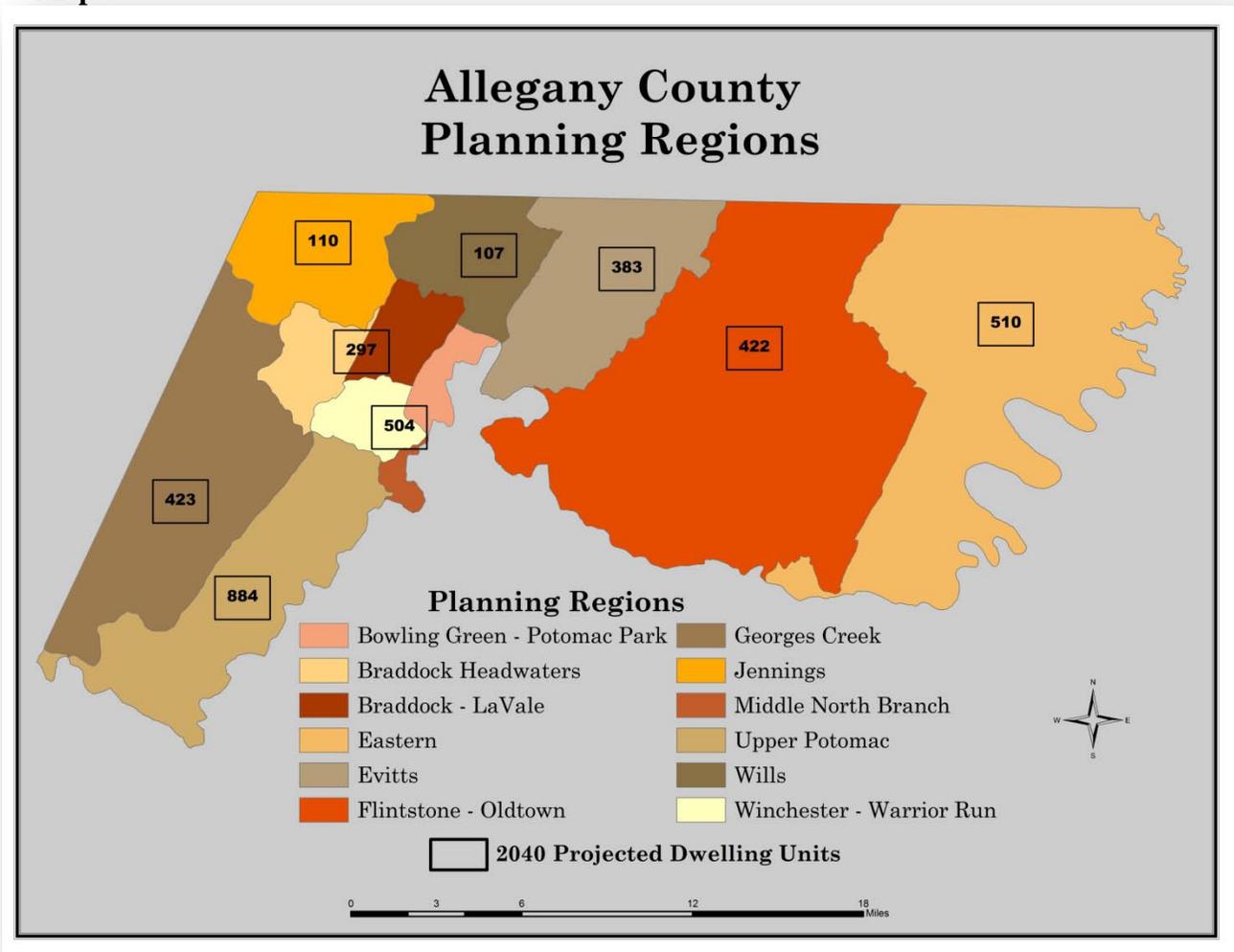
**Table 5: Existing Community System Wells**

Water Service Area	Well Name or Number	Depth of Well	Diameter of Well	Pumping Capacity	Water Quality
Frostburg	Frostburg Savage Pumping Station	200 ft	8 in	100,000 gpd wells/200,000 gpd springs	Excellent
Midlothian	AL-88-0230	150 ft	6 in	100,800 gpd	Fair-Good
Midlothian	AL-81-0820	150 ft	6 in	72,000 gpd	Fair-Good
Lonaconing	Charlestown #2	505 ft	6 in	30,000 gpd	Good
Lonaconing	Koontz #1	400 ft	6 in	43,200 gpd	Fair
Lonaconing	Koontz #2	505 ft	6 in	No Pump	Fair
Lonaconing	Koontz #3	1276 ft	6 in	Artesian	Fair
Lonaconing	Gilmore #1	1354 ft	6 in	90,000 gpd, max 200,000 gpd	Good
Lonaconing	Gilmore #2	200 ft	6 in	90,000 gpd, max 200,000 gpd	Good
LaVale	LaVale #1	250 ft avg	8 in	35,000 gpd	Good
LaVale	LaVale #2	250 ft avg	8 in	35,000 gpd	Good
LaVale	LaVale #3	250 ft avg	8 in	35,000 gpd	Good
LaVale	LaVale #4	250 ft avg	8 in	35,000 gpd	Fair
LaVale	LaVale #5	250 ft avg	8 in	35,000 gpd	Fair
Little Orleans Campground	L.O. Well A	325 ft	6 in	14,400 gpd	Good
Little Orleans Campground	L.O. Well B	200 ft	6 in	14,400 gpd	Good
Little Orleans Campground	L.O. Well C	90 ft	6 in	14,400 gpd	Good
Green Ridge Youth Center	G.R. #1	100 ft	6 in	13,000 gpd	Good
Green Ridge Youth Center	G.R. #2	200 ft	6 in	14,400 gpd	Good
Green Ridge Youth Center	G.R. #3	Unknown	Unknown	n/a	Poor

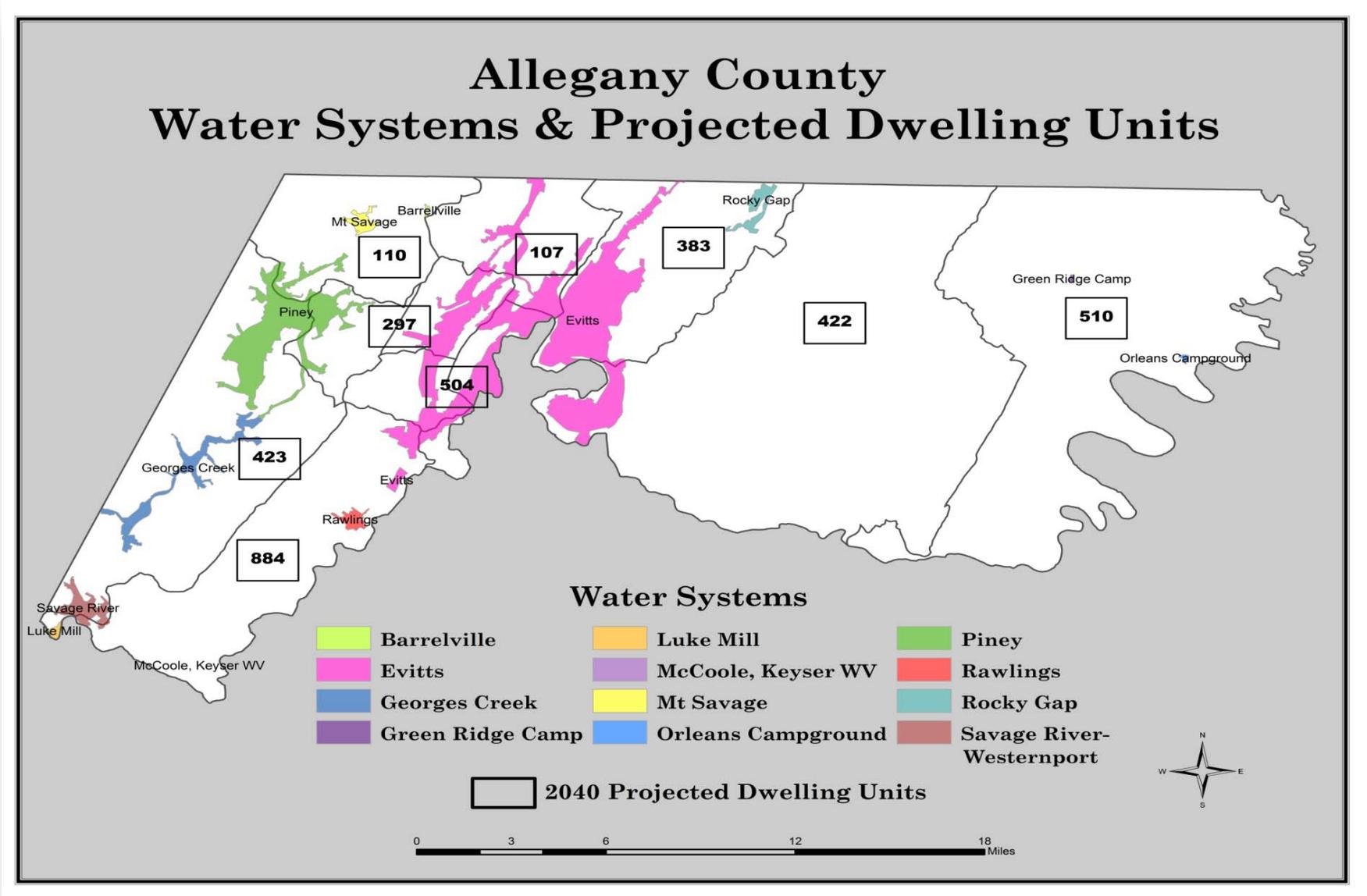
### 3.3 Water Systems & Future Demand

Allegheny County currently is comprised of twelve Planning Regions and twelve Water Systems.

Map 7



Map 8



To calculate future demand, 2040 Projected Dwelling Units by Planning Regions as shown on Map 7, were overlaid on the Water Systems depicted on Map 8, and areas slated for development discussed on page 6, Phased Development. This analysis identifies future water supply quantities for demand.

*Note: The future non-residential demand uses that support residential growth shown below in the column Projected Dwelling Units, are factored into the future water service demand calculation utilizing the average of 250 gallons per day multiplier.*

**Table 6: Future Water Demand**

System	Source	Projected Dwelling Units	Capacity		Future Demand MGD	Adequacy
			WTP Permitted Capacity MGD	Avg. Flow MGD 2008-2010		
<b>Evitts</b>	Lake Koon & Gordon	2115	Cumberland		<b>0.529</b>	<b>Yes</b>
			15	7.94		
			LaVale			
			0.3	0.15		
			Total			
			15.3	8.09		
<b>Georges Creek</b>	Wells/Impoundment	64	.576	0.165	<b>0.016</b>	<b>Yes</b>
<b>Luke Mill</b>	North Branch Potomac	0	30	25.1	<b>0</b>	<b>Yes</b>
<b>Savage River-Westernport</b>	Savage River	5	1.0	0.5	<b>0.001</b>	<b>Yes</b>
<b>McCoole</b>	Keyser	30	N/A	N/A	<b>0.007</b>	<b>N/A</b>
<b>Mount Savage</b>	Well/Springs	35	N/A	N/A	<b>0.008</b>	<b>N/A</b>
<b>Rawlings</b>	Pond	40	Rated 0.03 Max Peak Flow 0.085	0.06	<b>0.01</b>	<b>No</b>
<b>Barrelville</b>	Well	0	N/A	N/A	<b>0</b>	<b>N/A</b>
<b>Green Ridge Camp</b>	Well	30	0.063	0.0032	<b>0.007</b>	<b>Yes</b>
<b>Orleans Campground</b>	Well	10	0.006	0.003	<b>0.002</b>	<b>Yes</b>
<b>Rocky Gap</b>	Lake Habeeb	20	0.239	0.057	<b>0.005</b>	<b>Yes</b>
<b>Piney</b>	Piney Run Reservoir	389	Frostburg		<b>0.097</b>	<b>Yes</b>
			3.0	2.0		
			Midlothian			
			0.1	0.026		
			Total			
			3.1	2.026		

<b>Outside of Water Service Areas</b>	Residential Wells	862	N/A	N/A	<b>0.216</b>	<b>N/A</b>
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DU-Dwelling Unit: Utilizing 250 Gallons of Water/Day Note: The Cumberland System also includes the Barton Business Park

### 3.3.1 Existing Water Supply Adequacy

Based upon the 2007 *Allegany County Water and Sewer Plan*, as well as the *Allegany County Water Systems & Projections for Dwelling Units*, the greatest increase in percentage of water usage is forecasted for both the Evitts Water System and Piney Water System.

The Cumberland Service Area, located within the Evitts Water System, is capable of handling the forecasted increase in water usage. The City of Cumberland, owner and operator of the Evitts Creek Water Company, concluded in their 2010 *Municipal Water Resources Element* that:

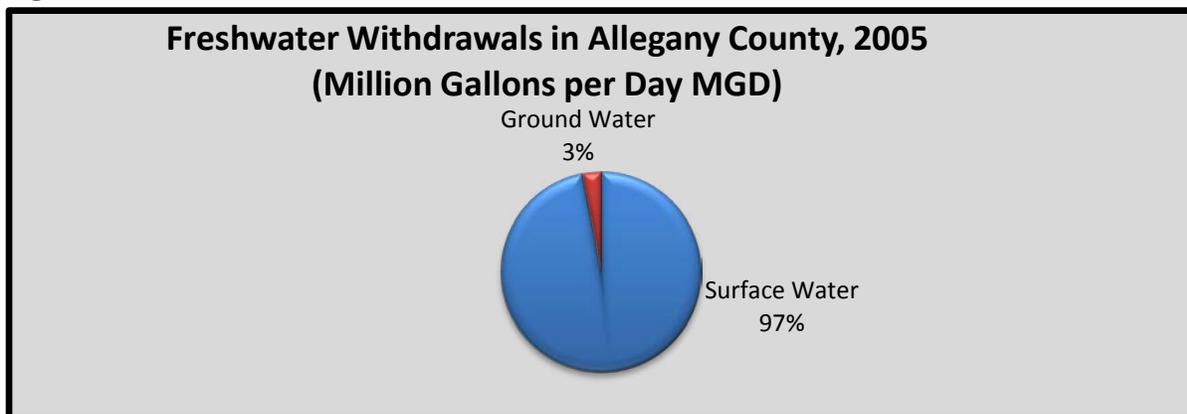
*Therefore, the City concludes that it has ample municipal water supplies to serve existing and projected future growth without major system improvements, other than specific water line extensions.*

As shown on Table 6 for the Evitts System and Cumberland Service Area, both the current and future demand for water is well below the Safe Yield permitted by the State of Pennsylvania for the water treatment plant.

The Frostburg Service Area, located within the Piney Water System, is capable of handling the forecasted increase in water usage. The City of Frostburg, owner and operator of the Piney Water System, concluded in their Draft 2010 *Municipal Water Resources Element* that they have adequate water supply for projected growth.

Allegany County primarily relies on surface water withdrawals; therefore, additional water resources may be available in the aquifers that are not utilized extensively.

**Figure 1**



Source: United States Geological Survey, 2005

### 3.4 Drinking Water Assessment

While Allegany County is not located within the region of Maryland with the largest projected demand for additional water, suburban Washington (Montgomery, Prince George’s and Frederick counties), or the two regions with the highest projected population increase from 2000 to 2030, Southern Maryland and the Eastern Shore, there exists a need to plan for the future to ensure adequate drinking water supplies at the local, comprehensive planning level. Protection of water supply is a critical component of the vision for the comprehensive plan.

### 3.5 Water Quality Issues

#### 3.5.1 Source Water Assessments

The 1996 Amendments to the Safe Drinking Water Act requires that jurisdictions are to develop and implement source water assessment programs to evaluate the safety of all public drinking water systems. Source Water Assessments (SWA) for Allegany County, Maryland prepared by the Maryland Department of the Environment Water Management Administration Water Supply Program are available as follows:

- ✚ SWA for the Town of Westernport, May 2004
- ✚ SWA for the Midland-Lonaconing Water System
- ✚ SWA Piney Creek Reservoir & Savage River Pumping Station for the City of Frostburg, Maryland
- ✚ SWA for the Ground Water Community Systems in Allegany, Co., June 2005
- ✚ SWA for Rocky Gap State Park Water, March 2006
- ✚ SWA Lake Koon and Gordon for the City of Cumberland, Maryland, December 2002

These source water assessments map contributing areas for water supply sources, identify potential contamination risks, and make recommendations for protecting these sources.

**Table 7: Water Problem Service Areas**

Location	Nature of Problem	Owner
<b>Charlestown Road (Upper)</b>	Mine drainage in wells	Lonaconing Water Co.
<b>Midland</b>	Additional storage is needed	Lonaconing Water Co.
<b>LaVale- Johns Lane/ Ore Banks</b>	No water service	LaVale Sanitary Commission
<b>Rocky Gap</b>	WTP is obsolete, replacement recommended; Reduce phosphorus loads by 24%	Maryland Environmental Service

<b>Cumberland-Willowbrook, Williams, Messick Road Corridor</b>	Water-line extensions needed for planned commercial development	City of Cumberland
<b>Town of Westernport</b>	Potential Source Contaminates; High Turbidity Levels	Upper Potomac
<b>Lakes Koon &amp; Gordon</b>	Reduce sedimentation and remove cumulated sediments and pollutants by dredging four areas of Lake Gordon and Lake Koon	Evitts Creek Water Company
<b>Rawlings</b>	Turbidity	Rawlings Water Company and Allegany County Utilities Division
<b>Mount Savage</b>	Inadequate well supplying public water services	Mount Savage Water Company

Planned water projects included in the Allegany County Capital Improvement Program along with corresponding fiscal year allocations are shown on Table 8.

**Table 8: Planned Water Projects**

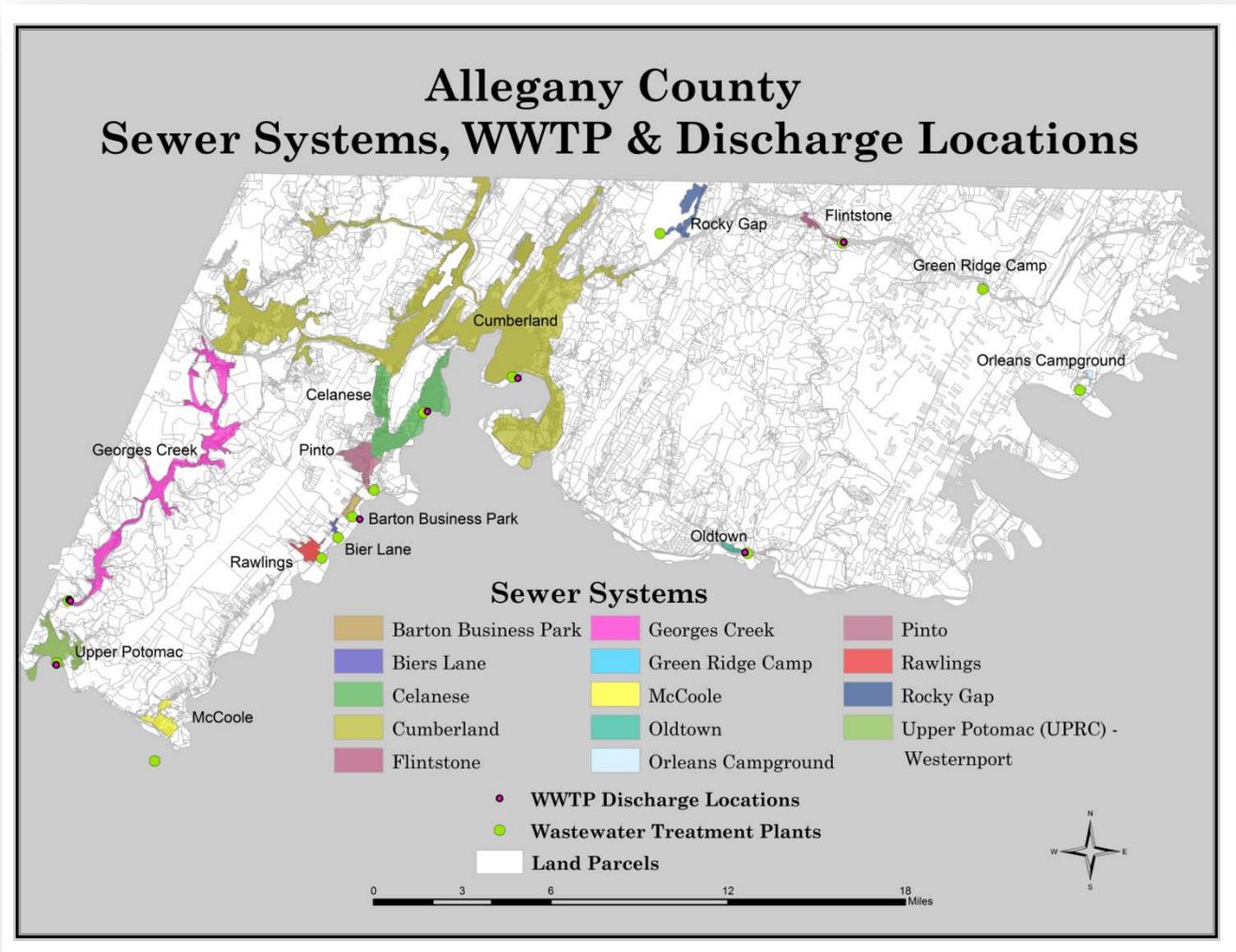
<b><u>Project Description</u></b>	<b><u>Fiscal Year</u></b>	<b><u>Total Cost (in \$1,000's)</u></b>	<b><u>State/Federal</u></b>	<b><u>Local</u></b>
1) Bowmans Addition Water-pH 2	2010	3225	3225	0
2) Mt. Savage Water Distribution System	2011	7000	7000	0
3) Shades Lane Water	2011	300	300	0
4) Vale Summit Water Storage Tank	2010	500	490	10
5) Cresaptown Water System Improvements	2011	1850.4	1850.4	0
6) Potomac River WTP	2013	9944	9944	0
7) Potomac River WTP Study	2010	148	15	133
8) County W & S Study	2010	219.8	100	86.7
9) Rawlings Water Study	2011	33	25	0
10) Town of Luke Waterline	2011	3000	2100	900
11) Rawlings Water System Improvements	2012	Not Available	Not Available	Not Available

### 3.6 Wastewater

#### 3.6.1 Public Sewer System

Sewer systems in the same Sewer System Areas discharge effluent to a common treatment facility. Areas currently provided with public sewer service and wastewater treatment plants along with wastewater treatment plant discharge locations are shown on Map 9.

Map 9



Details pertaining to the various sewer systems and customers served are provided on Table 9.

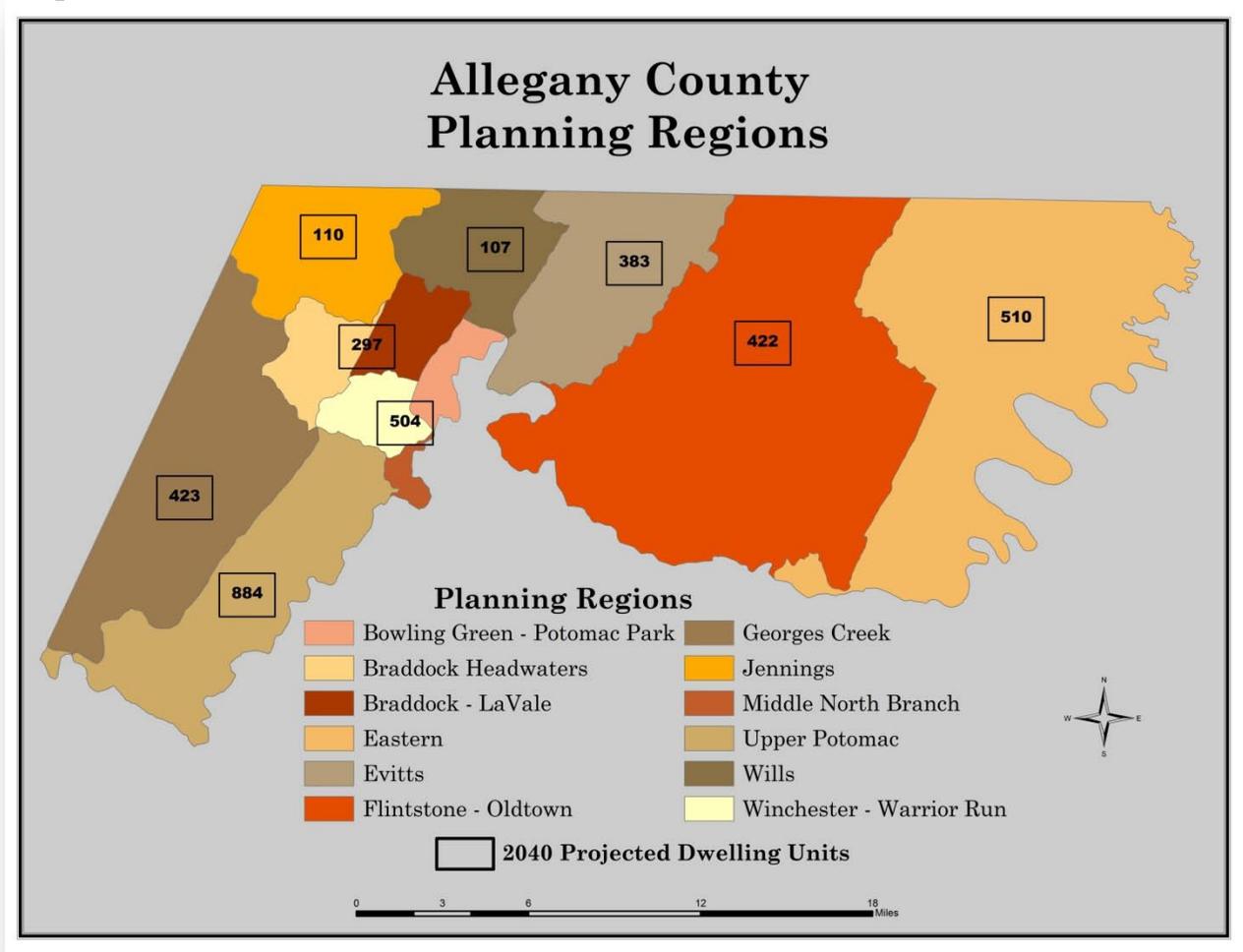
**Table 9: Sewer System & Customers Served**

Service Area	System	Customers	WWTP	Utility
Barton Business Park	Barton Business Park	2	Barton Business Park	ALCO Utilities
Biers Lane	Barton Business Park	32	Barton Business Park	ALCO Utilities
Bowling Green	Celanese	932	Celanese	ALCO Utilities
Cresaptown	Celanese	862	Celanese	ALCO Utilities
LaVale- Winchester Rd.	Celanese	333	Celanese	LaVale Sanitary Commission
Bedford Road	Cumberland	1,275	Cumberland	ALCO Utilities
Braddock Run	Cumberland	1,010	Cumberland	ALCO Utilities
Jennings Run/Wills Creek	Cumberland	1,230	Cumberland	ALCO Utilities
Mexico Farms	Cumberland	152	Cumberland	ALCO Utilities
Oldtown Road	Cumberland	306	Cumberland	ALCO Utilities
Cumberland	Cumberland	8,856	Cumberland	City of Cumberland
Frostburg	Cumberland	2,517	Cumberland	City of Frostburg
LaVale	Cumberland	2,179	Cumberland	LaVale Sanitary Commission
Flintstone	Flintstone	78	Flintstone	ALCO Utilities
Georges Creek	Georges Creek	2,243	Georges Creek	ALCO Utilities
McCoole	McCoole	223	Keyser, WV	ALCO Utilities
Oldtown	Oldtown	52	Oldtown	ALCO Utilities
Pinto, Bel Air & Glen Oaks	Pinto	1,076	Pinto	Maryland Water Service
Rawlings	Rawlings	300	Rawlings	Rawlings Improvement As.
Franklin/Brophytown	Upper Potomac	77	UPRC	ALCO Utilities
Westernport	Upper Potomac	955	UPRC	UPRC
Green Ridge Camp	Green Ridge Camp	40	Green Ridge Camp	Green Ridge Camp
Little Orleans Camp	Little Orleans Camp	N/A	Little Orleans Camp	Little Orleans Camp
Rocky Gap	Rocky Gap	N/A	Rocky Gap	Rocky Gap

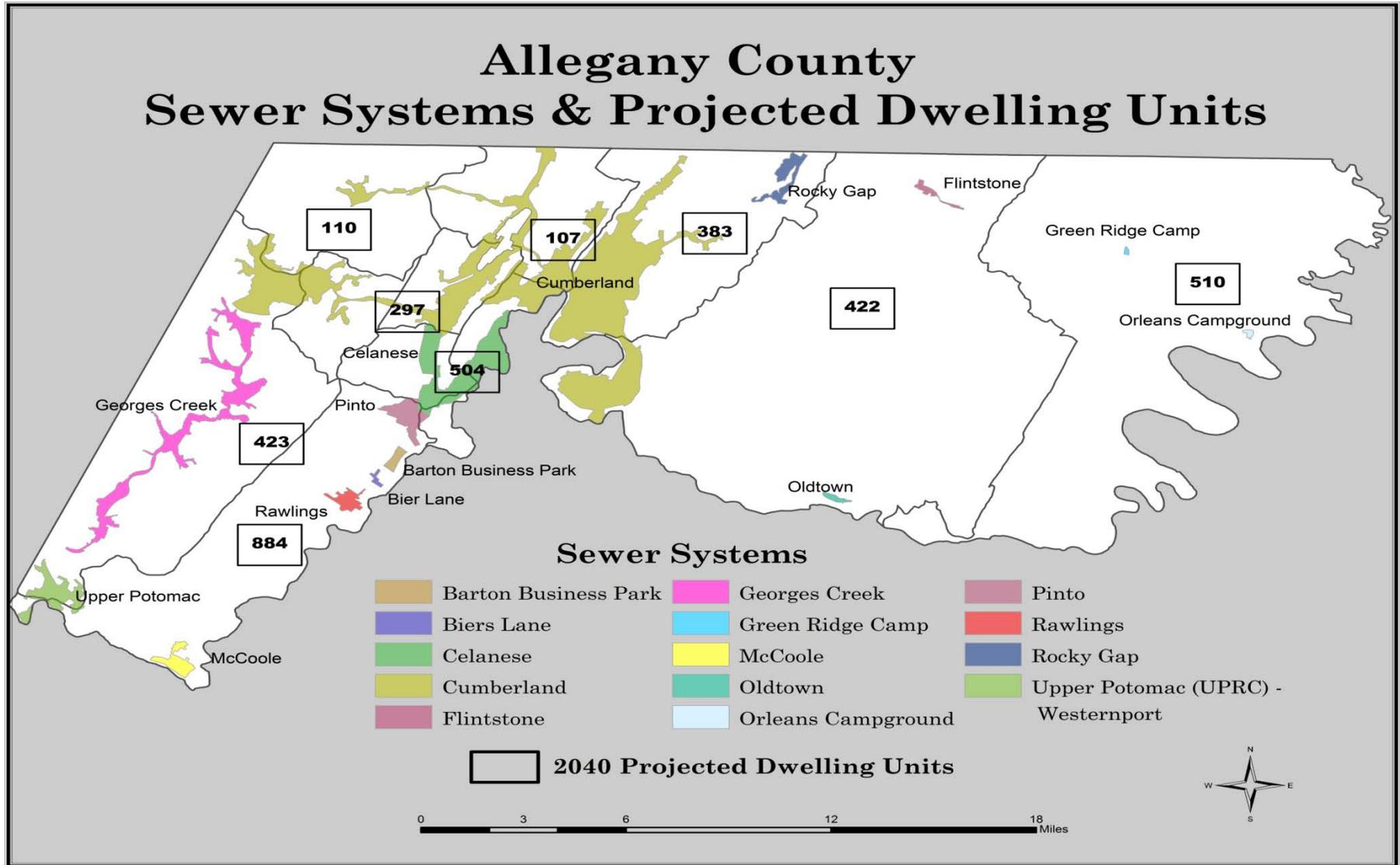
### 3.7 Sewer Service Areas & Future Demand

Allegany County is currently comprised of twelve Planning Regions and twelve primary Sewer Systems serving 56,081 customers.

Map 10



Map 11



To calculate future demand, 2040 Projected Dwelling Units by Planning Regions as shown on Map 10, were overlaid on the Sewer Systems depicted on Map 11, and areas slated for development discussed on page 6, Phased Development. This analysis identifies future quantities for demand.

*Note: The future non-residential demand uses that support residential growth shown below in the column Projected Dwelling Units, are factored into the future sewer service demand calculation utilizing the average of 250 gallons per day multiplier.*

**Table 10: Future Sewer Service Demand**

System	Service Area	Projected Dwelling Units	Capacity		Future Demand MGD	Adequacy
			WWTP Permitted Capacity MGD	Avg. Flow MGD 2008-2010		
<b>Cumberland</b>	Bedford Road Braddock RD Jennings Run/ Wills Mexico Farms & (NBIP) Oldtown RD Cumberland Frostburg LaVale	1,593	15	12.8	<b>0.398</b>	<b>Yes</b>
<b>Celanese</b>	Bowling Green Cresaptown LaVale – Winchester RD	800	2.86	1.54	<b>0.2</b>	<b>Yes</b>
<b>UPRC</b>	Franklin/ Brophytown Westernport Luke Mill	2	22.5	20	<b>0</b>	<b>Yes</b>
<b>Rawlings</b>	Rawlings	45	0.143	0.085	<b>0.0013</b>	<b>Yes</b>
<b>Barton/Pinto</b>	Biers Lane Barton Bel Air Pinto Glen Oaks Barton Business Park	34	0.5	0.037	<b>0.009</b>	<b>Yes</b>
<b>McCoole</b>	McCoole	30		0.081	<b>0.008</b>	
<b>Oldtown</b>	Oldtown	6	0.04	0.007	<b>0</b>	<b>Yes</b>
<b>Flintstone</b>	Flintstone	20	0.045	0.058	<b>50 GPD</b>	<b>No</b>
<b>Georges Creek</b>	Georges Creek - Midland, Lonaconing, Barton	214	0.7	0.554	<b>0.05</b>	<b>Yes</b>
<b>Rocky Gap</b>	Rocky Gap	20	0.12	0.043	<b>50 GPD</b>	<b>Yes</b>
<b>Little Orleans Campground</b>	Little Orleans Campground	75	0.01	0.0016	<b>0.02</b>	<b>Yes</b>
<b>Green Ridge Camp</b>	Green Ridge Camp	0	0.008	0.003	<b>0</b>	<b>Yes</b>
<b>Outside of Sewer Service Areas</b>		891			<b>0.223</b>	

DU-Dwelling Unit: Utilizing 250 Gallons of Water/Day

MGD – Million Gallons per Day; GPD – Gallons per Day

### 3.7.1 Existing Sewer System Adequacy

As forecasted in the *2007 Allegany County Water and Sewer Plan*, as well as the *Allegany County Water Systems & Projections for Dwelling Units*, the greatest projected demand for sewer service will be the Cumberland Sewer System and Celanese Sewer System.

The Cumberland Sewer System handles the following sewer service areas: Bedford Road, Braddock Road, Jennings Run, Wills Creek, Mexico Farms, Oldtown Road, Cumberland, Frostburg, and LaVale. The projected growth in this area is due in part to the continuing development in Allegany Highland Estates, Ashley Heights and The Summit. In addition, the *2010 Municipal Water Resources Element* completed by the City of Cumberland states that sewer capacity to serve desired future growth through the year 2026 is adequate. In fact, the City has been allocated under a MDE Consent Order enough prior and future sewer capacity to serve at least 3,615 new connections.

The Celanese Sewer System handles the following sewer service areas: Bowling Green, Cresaptown, and Winchester Road in LaVale. The projected growth in this area is due in part to the Cumberland Chase Housing Development. This housing development has a build out capacity of 600 dwelling units, and has been factored into the projected dwelling units listed on Table 10.

## 3.8 Infrastructure Maintenance

Maintenance of the existing water and sewer systems is an ongoing concern as portions of each system reach their design life of fifty years. As noted in the *2007 Allegany County Water and Sewer Plan*, the Plan is tied directly to the County Comprehensive Plan and the Capital Improvement Plan (CIP), reflecting the ability of the County to fund projects. Major infrastructure replacements and other associated projects are funded through the capital improvement budget process. The Capital Improvement Plan has a ten year planning horizon, which facilitates planning for major infrastructure projects. The listing of a project in the Water and Sewer Plan and/or the Water Resource Element does not guarantee funding for the project, nor does it commit the County to a specific timeframe for project completion. However, these planning documents guide the County's long-term commitment to provide adequate water and sewer service to its residents.

Planned sewer projects included in the Allegany County Capital Improvement Plan along with corresponding fiscal year allocations are shown on Table 11.

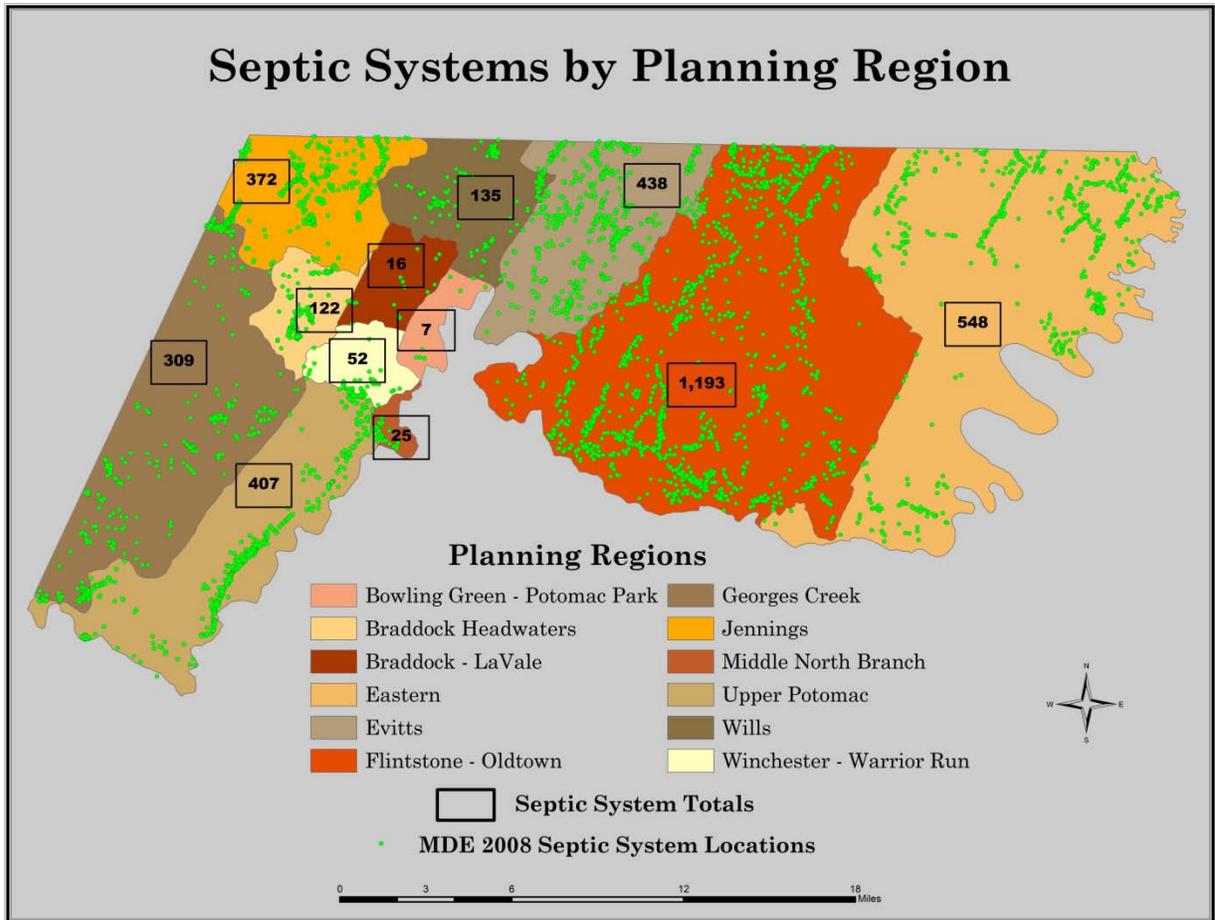
**Table 11: Planned Sewer Projects**

<b><u>Project Description</u></b>	<b><u>Fiscal Year</u></b>	<b><u>Total Cost (in \$1,000's)</u></b>	<b><u>State/Federal</u></b>	<b><u>Local</u></b>
Braddock Run Interceptor	2010	1520	1520	0
Bedford Road Sewer Rehabilitation Project	2011	745	745	0
Jennings Run Sewer Rehabilitation Project	2011	3000	3000	0
Braddock Run Sanitary District Improvements	2011	3200	3200	0
Evitts Creek Interceptor	Beyond 2015	2300	2300	0
Replace Clarifier – Celanese WWTP	2012	1500	1500	0
Utilities – SCADA	2010	250	0	250
Wrights Crossing Pump Station Improvements	2010	1350	1335	0
Rawlings Sewer Study	2011	33	25	0
Rawlings Sewer System Improvements	2012	?	?	?
Cumberland WWTP ENR Upgrade	2011	37000	?	?
Braddock Run Interceptor Upgrade	2011	1400	?	?
CSO Separation	2011	?	?	?
Flintstone WWTP Improvement Project	Beyond 2015	?	?	?

### 3.9 Septic Systems

Individual septic systems serve 3,624 households within Allegany County. Map 12 depicts septic system locations by Planning Region and provides the total number of septic systems within each Planning Region.

Map 12



As shown on Map 12, the Flintstone-Oldtown Planning Region contains 1,193 septic systems, the highest concentration of septic systems of any of the twelve Planning Regions. As listed on *Table 11: Planned Sewer Projects*, the Flintstone Wastewater Treatment Plant is slated for water capacity improvements, thereby providing a potential opportunity for the expansion of the Flintstone Sewer Service Area, which could eliminate some existing septic systems and potentially reduce the number of future homes utilizing on-site resources.

### 3.9.1 Current & Future Loads

Using the National Estuary Program Nitrogen Loading Calculator, it is estimated that approximately 72,480 lbs/year of nitrogen have the potential to reach Allegany County streams due to existing septic systems. The Allegany County Health Department identifies septic system failures. The County has been and will continue to work on prioritizing chronic problems and/or those septic systems with multiple failures for upgrade projects. These projects will include denitrifying capabilities.

Sewer systems and projected dwelling units shown on Map 11, indicate that the majority of projected dwelling units are located in Planning Regions that are currently served by public sewer. As listed on Table 10, there are 891 projected dwelling units outside of the Sewer Service Areas. Future nitrogen loads from septic systems outside the Sewer Service Areas have the potential to contribute a nitrogen load of up to 17,820 lbs/year. However, capacity improvements to wastewater treatment plants resulting in the expansion of sewer service areas would offset this potential septic system nitrogen load estimate.

### 3.10 Water Conservation

The identification of water system leaks and subsequent repair work is a crucial component in the effort to promote water conservation and reduce wastewater within water systems. Replacement of old water mains and service lines are priority projects when funding is available.

Homeowners may also contribute to water conservation by making improvements in the home or by modifying behavior. The amount of water savings depends on current water consumption habits, water, sewer and energy costs, current flow rates of fixtures and flush volumes of toilets, system pressure and the amount of leakage through fittings and toilets.

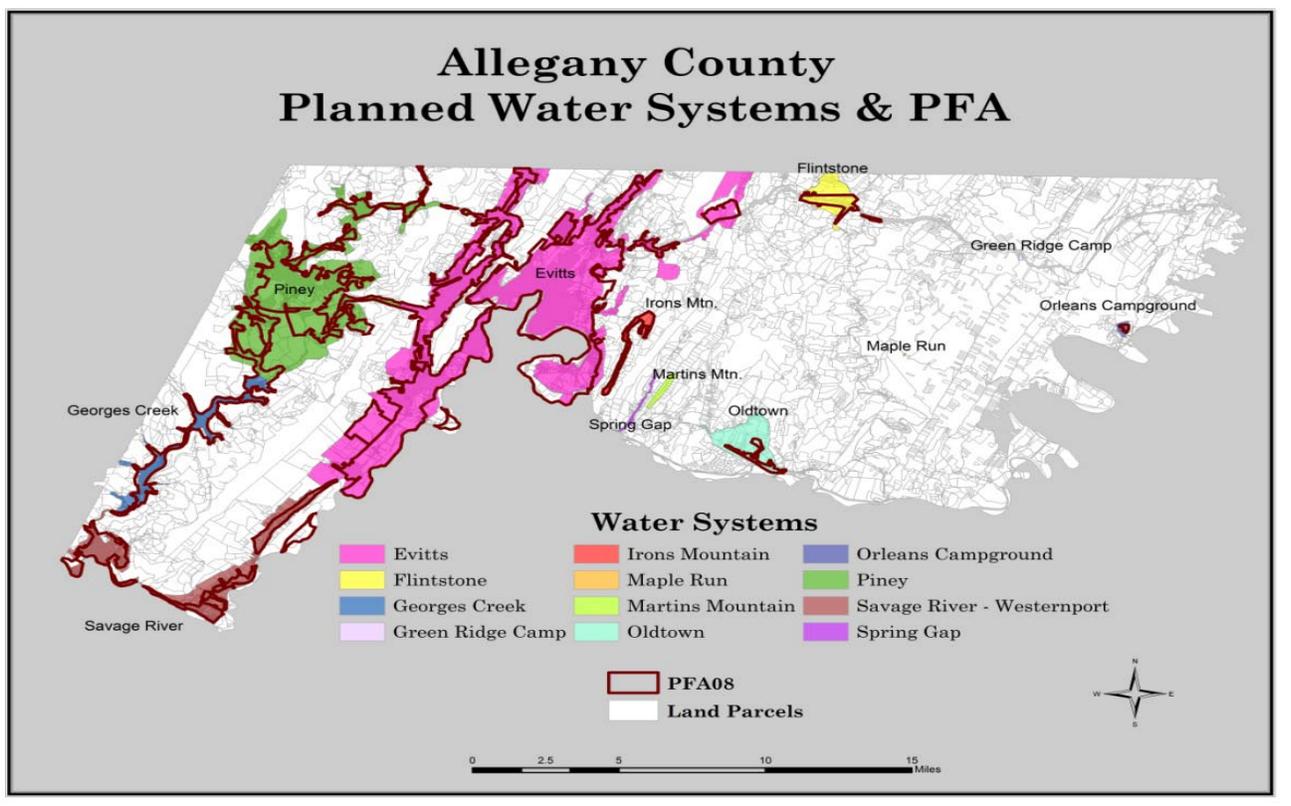
Water saving devices are both economical and practical. Low-flow showerheads and faucet aerators save valuable water and energy used to heat water without requiring changes in personal water use habits. Additionally, homeowners should repair all leaks. Even small leaks can waste a significant amount of water. For instance, leaks inside a toilet can waste up to 200 gallons of water a day. According to Water Wiser's© drip calculator, 10 drips of water per minute from one leaking faucet equates to 43 gallons of water waste per month and 516 gallons of water waste per year.

### 3.11 Redevelopment within / Expansion of the Planned Service Areas

The 2007 *Allegany County Water and Sewer Plan* designates and prioritizes water and sewer system projects that should be completed over the next ten years.

Existing and planned water systems as designated in the 2007 *Allegany County Water and Sewer Plan* are shown on Map 13. In terms of the current Priority Funding Area (PFA) within Allegany County, the existing and planned water systems closely match the PFA; however a few exceptions do exist. For instance, the area surrounding the City of Frostburg does not match the current PFA. The City of Frostburg has designated growth areas within the *City of Frostburg Municipal Growth Element* and have examined water supply adequacy in the *City of Frostburg Water Resources Element*. Given the fact that the area in and around the City of Frostburg has been designated for growth and has adequate water supply, the PFA may need to be expanded in this area. As noted in the 2007 *Allegany County Water and Sewer Plan*, isolated areas of residential development are located in Flintstone and Oldtown. The PFA designation in these two areas does not match the water service areas. The PFA boundary should be modified slightly to correct this alignment discrepancy.

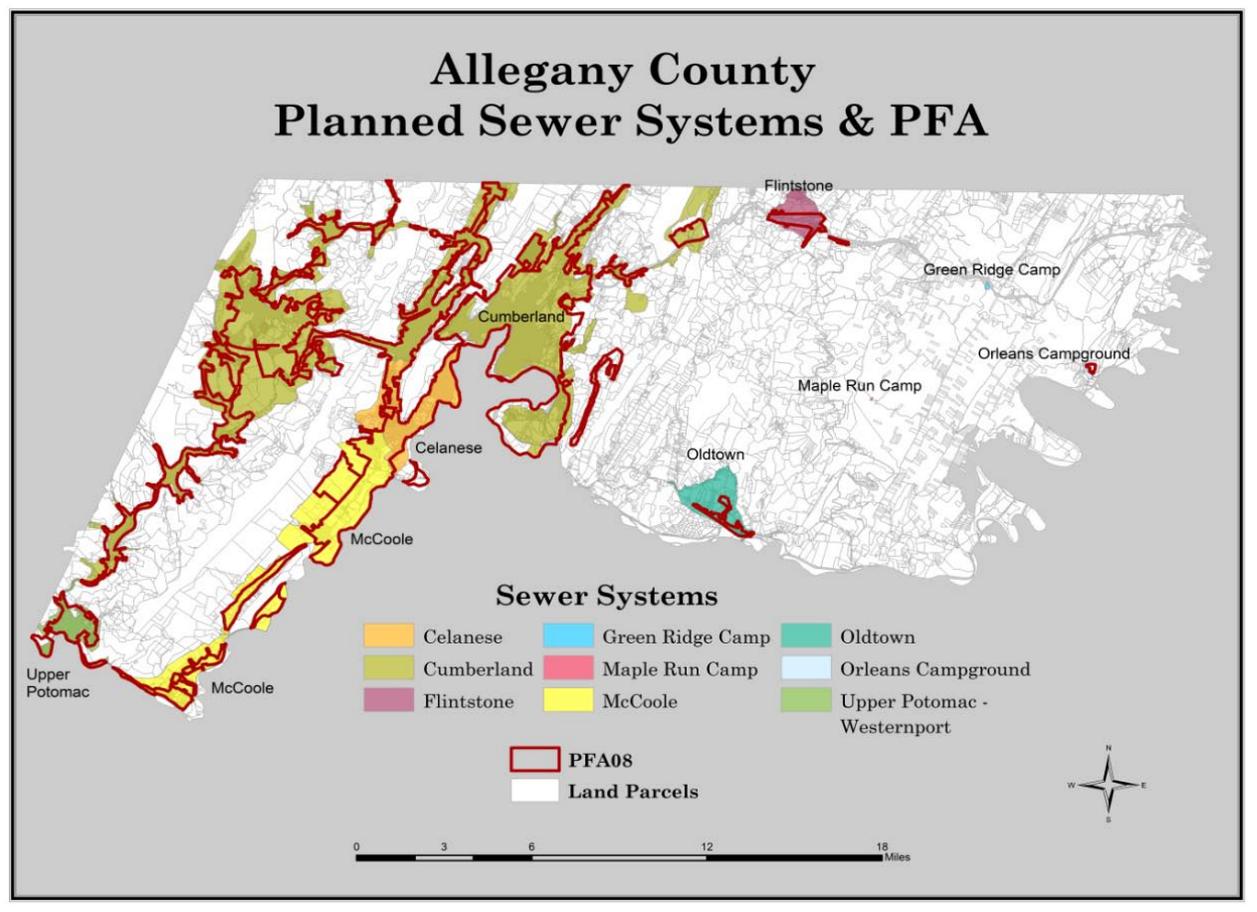
**Map 13**



Existing and planned sewer systems as designated in the 2007 *Allegany County Water and Sewer Plan* are shown on Map 14. In terms of the current Priority Funding Areas (PFA) within Allegany County, the existing and planned sewer systems closely match the PFA; however, a few exceptions do exist. For instance, the area surrounding the City of Frostburg does not match the current PFA. The City of Frostburg has designated growth areas within their Municipal Growth Element and have examined sewer supply adequacy in their Water Resources Element.

Given the fact that the area in and around the City of Frostburg has been designated for growth and has adequate sewer capacity with recent upgrades made to the system, the PFA may need to be expanded in this area. As noted in the 2007 *Allegany County Water and Sewer Plan*, isolated areas of minor urban development are located in Flintstone and Oldtown. Wastewater Treatment Plants are located in both the Oldtown and Flintstone areas.

Map 14



### 3.12 Policies and Actions

Policies and Actions to address public water and sewer service are based on the goals and objectives established in *2.1 Plan Visions*.

Policy 1: Ensure the adequacy of the drinking water supply, and promote water conservation and reuse.

- 1.1 Increase funding and support for water system upgrades and implementation projects through the Capital Improvement Program;

- 1.2 Support infrastructure improvements and maintenance efforts, especially those that will reduce I&I.
- 1.3 Promote greywater reuse for nonpotable uses;
- 1.4 Conduct public outreach and education to encourage water conservation in homes, gardens and businesses;
- 1.5 Provide incentives for property owners to install water-conserving fixtures and appliances.
- 1.6 Provide future extensions to Water Service Areas within designated growth areas, especially within the Priority Funding Area(s).
- 1.7 Work with MDP to adjust PFA alignments to facilitate: greater agreement between and among water service areas, designated growth areas and developed areas or areas under development.
- 1.8 Replace aging water lines in Cumberland, Bowling Green, Cresaptown, and Westernport.

Policy 2: Ensure the adequacy of wastewater treatment capacity.

- 2.1 Accommodate flows from projected growth in both the Frostburg and Cumberland Service Areas;
- 2.2 Upgrade Rocky Gap WWTP to coincide with the upgrades to the Rocky Gap WTP.
- 2.3 Remove sludge from lagoons in the McCool-Keyser Sewer Service Area.
- 2.4 Provide future extensions to Wastewater Service Areas within designated growth areas, especially within the Priority Funding Area(s).

Policy 3: Protect source water utilized in Allegany County.

- 3.1 Develop source water protection plans for all source waters, specifically, the Piney Run Service Area and the Savage River Service Area.
- 3.2 Review, prioritize and implement recommendations detailed within completed Source Water Assessments.

Policy 4: Reduce non-point and point source pollution.

- 4.1 Utilize grant funding to annually upgrade septic systems. Upgrades should include denitrifying capabilities.
- 4.2 Utilize technology such as Enhanced Nutrient Removal (ENR) for public sewer systems to reduce the concentration of nitrogen and phosphorous levels in treated water discharge.

Policy 5: Continue efforts to protect the quality of receiving waters.

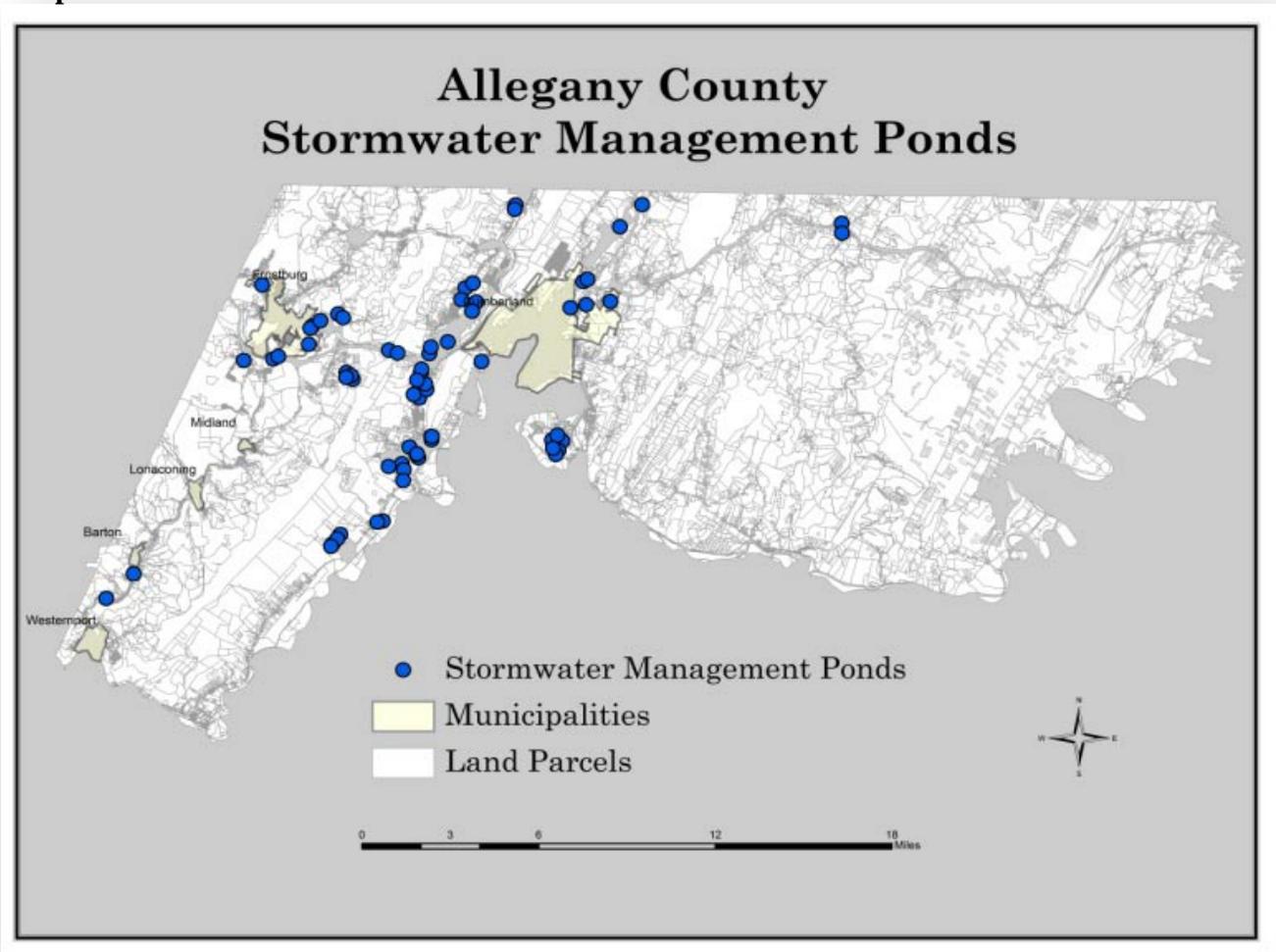
- 5.1 Complete I&I upgrades currently underway.
- 5.2 Prioritize planning and design for new I&I projects.
- 5.3 Complete CSO upgrades currently underway.
- 5.4 Prioritize planning and design for new CSO projects.

## 4 Stormwater Management, Impervious Cover, and TMDL's

### 4.1 Stormwater Management

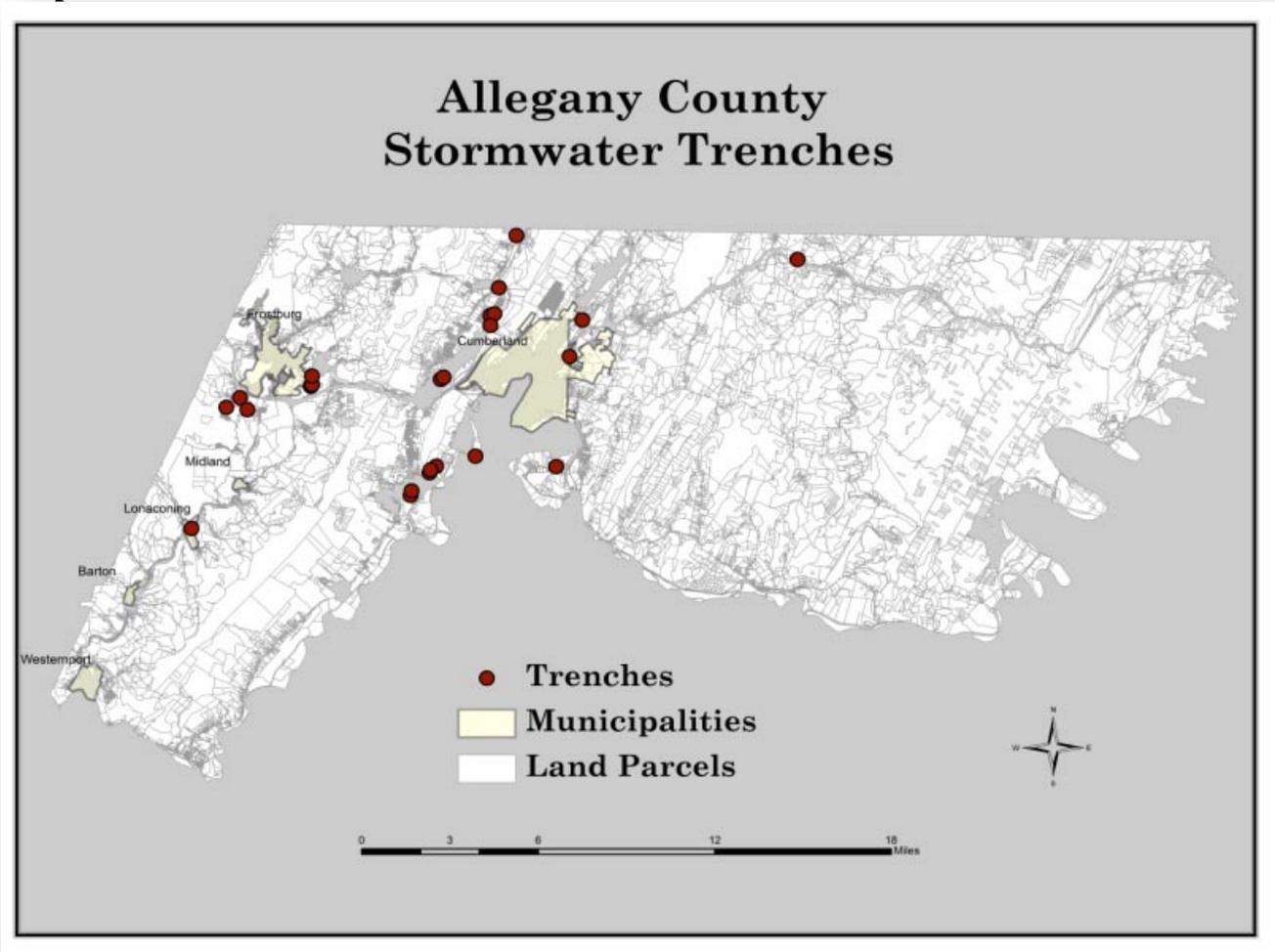
According to the Stormwater Management Database provided by Allegany County Planning Services, Allegany County contains 70 stormwater management ponds located primarily in the central and western portions of the County.

Map 15



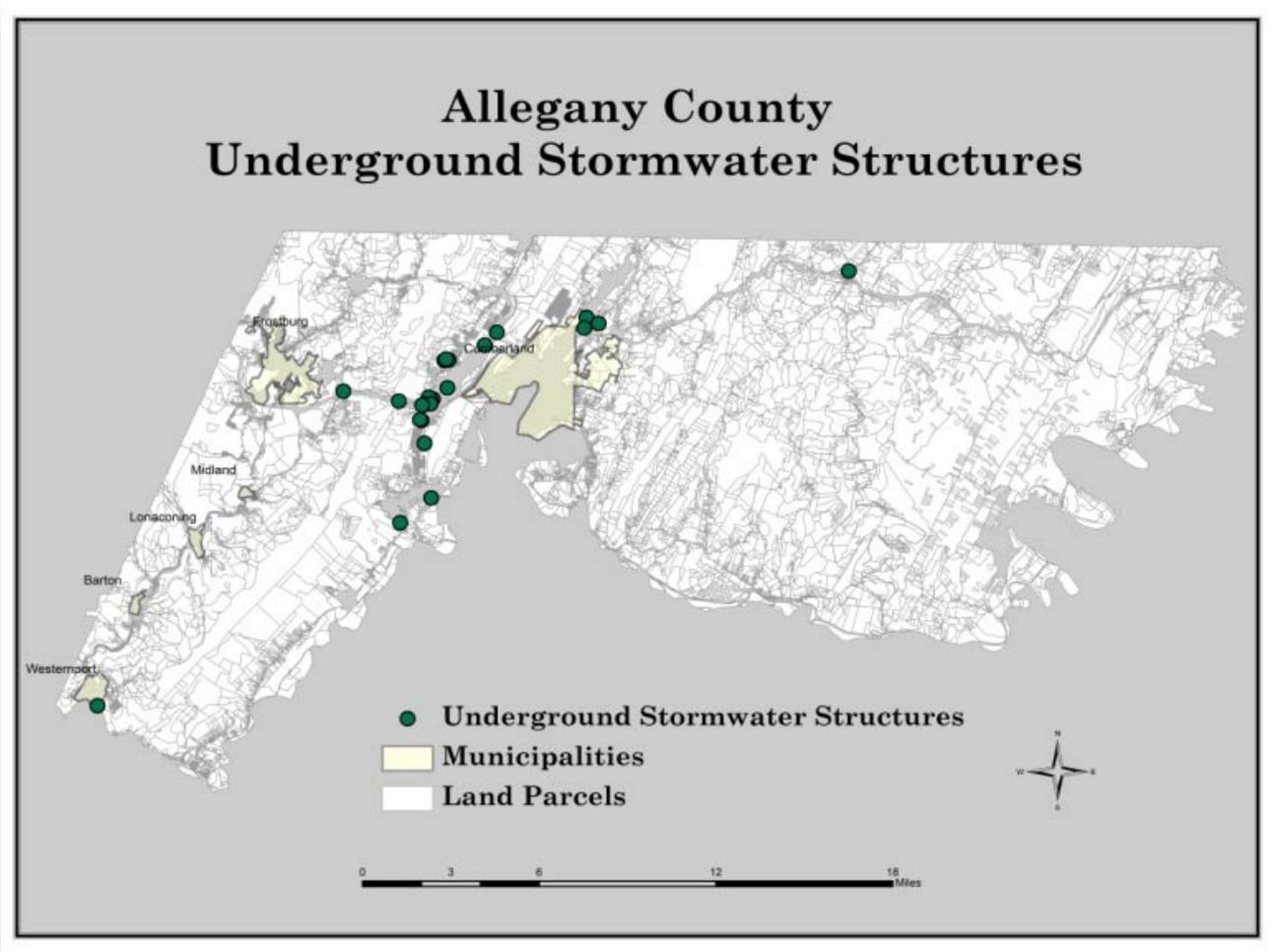
In addition, there are 28 stormwater trenches located primarily in the central and western portions of the County.

Map 16



Finally, there are 25 underground stormwater structures located primarily in the central portion of the County.

**Map 17**



### 4.1.1 Stormwater Management Ordinance

Allegany County’s revised Stormwater Management Ordinance was developed in response to the State of Maryland’s Stormwater Management Act of 2007. The revised ordinance was approved by the Maryland Department of the Environment in January 2010, adopted by the Allegany County Commissioners on March 11, 2010, and became effective May 5, 2010 as required by state law.

The purpose of the Stormwater Management Ordinance is to protect, maintain, and enhance the public health, safety, and general welfare by establishing minimum requirements and procedures that control the adverse impacts associated with increased stormwater runoff. The goal is to manage stormwater by using Environmental Site Design (ESD) to the Maximum Extent

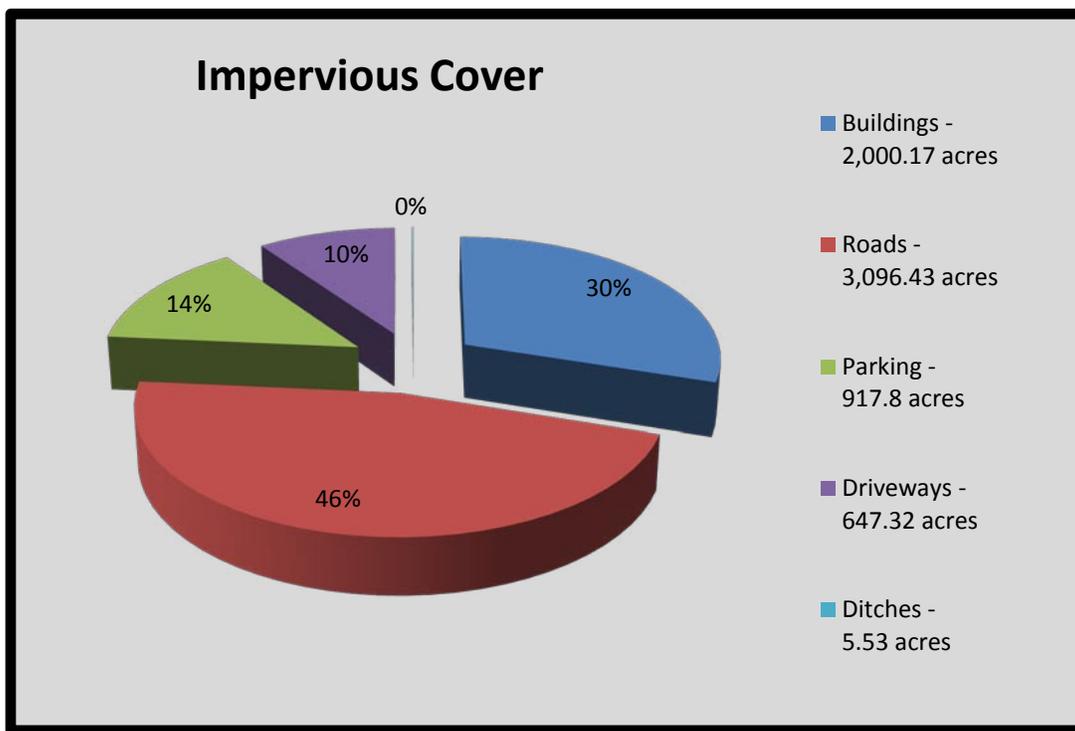
Practicable (MEP) to maintain after development as nearly as possible, the predevelopment runoff characteristics, and to reduce stream channel erosion, pollution, siltation, sedimentation, and local flooding, and use appropriate structural Best Management Practices (BMPs) only when necessary. These actions will restore, enhance, and maintain the chemical, physical, and biological integrity of streams, minimize damage to public and private property, and reduce the impacts of land development.

## 4.2 Impervious Cover

Impervious cover is defined as areas of unnatural surface, such as pavement areas and roof tops that water cannot permeate. One indicator of overall watershed health is impervious cover. Impervious cover prohibits stormwater from entering the ground naturally and therefore stormwater enters stream systems at an accelerated rate causing increases in erosion, sedimentation, flash flooding and stream destabilization. In addition, untreated stormwater from impervious cover contains toxins affecting watershed health.

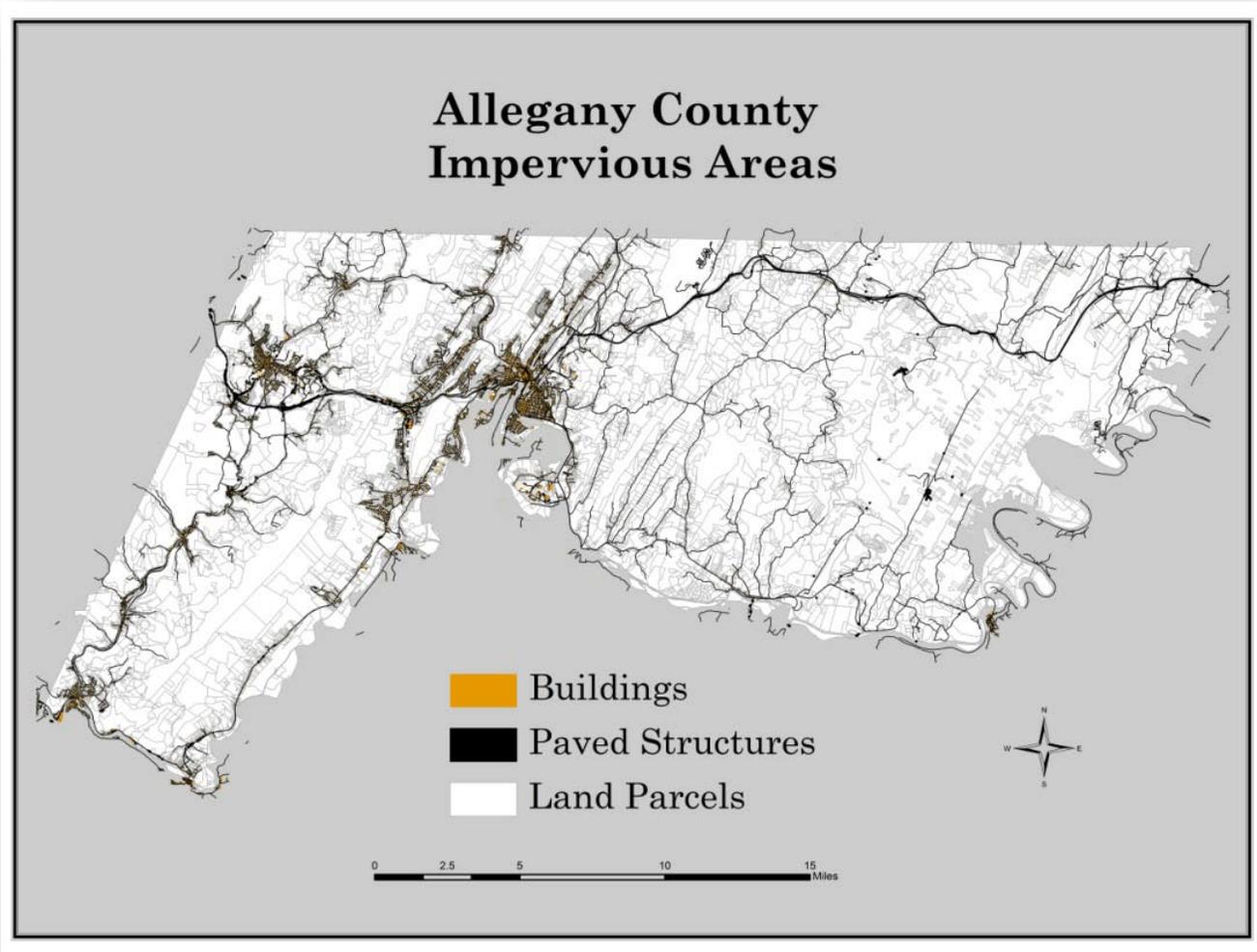
Impervious cover GIS layers from 2005 planimetrics provided by Allegany County Planning Services included: paved ditches, buildings, paved driveways, paved parking lots and paved roads. Based on the data provided, Allegany County has 6,667.25 acres (approximately 3% of its total area) of impervious cover.

Figure 2



Roads and bridges contribute the most impervious cover within Allegany County. Urbanized areas such as the City of Cumberland and the City of Frostburg shown on Map 18 possess the largest areas of impervious cover within the County.

### Map 18



The Center for Watershed Protection developed a model on the relationship between impervious cover and stream quality in 1998. The Impervious Cover Model suggests the following:

0-10% Impervious Cover – Sensitive Watershed

11-25% Impervious Cover – Impacted Watershed

>25% Impervious Cover – Non-Supporting Watershed

The Impervious Cover Model predicts potential rather than actual stream quality. It is a tool for watershed evaluation and management purposes. Allegany County falls within the *Sensitive*

*Watershed* category on the Impervious Cover Model. A sensitive watershed has a greater likelihood of having clean water courses that support healthy populations of benthic invertebrates and other aquatic dependent species.

### 4.3 TMDL

With the establishment of Section 303(d)(1)(C) of the Federal Clean Water Act, each state is required to develop a Total Maximum Daily Load (TMDL) for each impaired water quality limited segment (WQLS) on the Section 303(d) List. A TMDL details the total pollutant loading of the impairing substance a water body can receive and still meet water quality standards. Water quality standards are a combination of designated use, swimming, drinking water supply, protection of aquatic life, and shellfish propagation and harvest, for a particular water body and the water quality criteria designed to protect that use. Additionally, upon development of a TMDL, seasonal variations and a protective margin of safety (MOS) to account for uncertainty must be taken in consideration. The maximum allowable pollutant load established in the TMDL is determined based on the relationship between pollutant sources and in-stream water quality. A TMDL provides the scientific basis for a state to establish water quality-based controls to reduce pollution from both point and nonpoint sources to restore and maintain the quality of the state's water resources (USEPA 1991).

**Table 12: Current Status of TMDL's in Allegany County, Maryland**

Basin Name	8 Digit Number	Impairment	Approval Date
<b>Big Piney Reservoir</b>	05020204	Mercury	February 18, 2004
Big Piney Reservoir is an impoundment located in northeastern Garrett County. The impoundment, which is owned by the City of Frostburg, lies on Big Piney Run. The dam was constructed in 1950. Big Piney Reservoir was identified on the State of Maryland's 2002 list of Water Quality Limited Segments [303(d) list] as impaired by mercury contamination, based on data for mercury concentrations in fish tissue. Concentrations in the water are well below the threshold for concern in regard to drinking water.			
<b>Evitts Creek</b>	02141002	Low pH	December 16, 2005
Evitts Creek (basin code 02141002), located in portions of Allegany County, Maryland and Bedford County, Pennsylvania, was identified on the State's list of WQLSs as impaired by low pH (1996 listing), nutrients (1996 listing) and sediments (1996 listing). Overall, this analysis demonstrates that the applicable aquatic life criteria for pH and the aquatic life designated uses supported by these criteria are being met in Evitts Creek 8-digit basin.			

<b>Evitts Creek</b>	02141002	Nutrients	March 15, 2010
<p>Nutrients typically do not have a direct impact on aquatic life; rather, they mediate impacts through excessive algal growth leading to low dissolved oxygen. Therefore, the evaluation of potentially eutrophic conditions due to nutrient over-enrichment will be based on whether nutrient-related parameters (i.e., dissolved oxygen levels and chlorophyll a concentrations) are found to impair designated uses in the Evitts Creek watershed (in this case, protection of aquatic life and wildlife, fishing, and swimming). The analysis supports the conclusion that a TMDL for nutrients is not necessary to achieve water quality standards in the Evitts Creek watershed. Although the waters of the Evitts Creek watershed do not display signs of eutrophication, the State reserves the right to require future controls in the watershed if evidence suggests that nutrients from the basin are contributing to downstream water quality problems. For instance, reductions may be required by the forthcoming Chesapeake Bay TMDL, which is currently under development and scheduled to be completed by the EPA at the end of 2010.</p> <p>Barring the receipt of contradictory data, the report will be used to support a revision of the nutrients (i.e., phosphorus) listing for the Evitts Creek watershed, from Category 5 (“waterbody is impaired, does not attain the water quality standard, and a TMDL is required”) to Category 2 (“waterbodies meeting some [in this case nutrients-related] water quality standards, but with insufficient data to assess all impairments”) when MDE proposes the revision of the Integrated Report.</p>			
<b>Evitts Creek</b>	02141002	Sediment	January 16, 2007
<p>The designated use of Evitts Creek is Use IV-P (Recreational Trout Waters and Public Water Supply) for the mainstem only and Use I (Water Contact Recreation and Protection of Aquatic Life) for all other tributaries (COMAR, 2006a and 2006b). A TMDL of sediment was established for Evitts Creek to allow for the attainment of the above mentioned designated uses. The objective of the sediment TMDL established in the document is to ensure that there will be no sediment impacts affecting aquatic health, when aquatic health is evaluated based on Maryland’s biocriteria, thereby establishing a sediment load that supports the Use I/IV-P designation for the Evitts Creek watershed. The watershed sediment load includes the potential effect for water clarity and erosional and depositional impacts, thus accounting for all of the sediment impacts that indicate a sediment impairment per the Maryland 303(d) listing methodology.</p>			
<b>Georges Creek</b>	02141004	Bacteria	September 20, 2007 Revised Final Submittal August 20, 2009
<p>The Georges Creek watershed encompasses 47,694 acres (75 square miles) in Allegany and Garrett Counties. The headwaters of Georges Creek begin in Frostburg, Maryland. The mainstem of Georges Creek flows southwest until its confluence with the North Branch Potomac River below the town of Westernport, Maryland. Several tributaries feed the mainstem of Georges Creek including Ellick Run, Mill Run, Winebrenner Run and Koontz Run. The Maryland Department of the Environment (MDE) has identified the mainstem of Georges Creek a designated Use IP waterbody (Water Contact Recreation, Protection of Aquatic Life and Public Water Supply) and all its tributaries as designated Use I waterbodies (Water Contact Recreation and Protection of Aquatic Life) [Code of Maryland Regulations (COMAR) 26.08.02.08R(b)] in the State’s 303(d) List as impaired by sediments (1996), bacteria (fecal coliform) (2002), low pH (1998 &amp; 2002) and impacts to biological communities (2002). A TMDL for fecal bacteria was established for Georges Creek and its tributaries that will allow for the attainment of the designated use primary contact recreation.</p>			
<b>Georges Creek</b>	02141004	Low pH	April 17, 2008 Revised Final Submittal August 16, 2010
<p>The Georges Creek 8-digit Basin (basin code - 02141004) is impaired by impacts on biological communities (2002 listing) and low pH (1998 listing). The pollutant loadings were classified by source, including acid mine drainage (AMD) and atmospheric deposition, and organic sources. In addition, a segment could be classified as having chronic or episodic acidification, with no identified source. The TMDLs for Georges Creek (Mill Run) and Savage River (Aarons Run) are currently under revision. In the revision to these TMDLs, discharges from the incorporation of two additional mining operations will increase flow and iron loading into the system without causing a violation of the pH water quality standard.</p>			

<b>Georges Creek</b>	02141004	Sediment	December 27, 2006
The watershed sediment load includes the potential effect for both water clarity and erosional and depositional impacts, thus accounting for all of the sediment impacts that indicate a sediment impairment per the Maryland 303(d) listing methodology.			
<b>Georges Creek</b>	02141004	BOD	Accepted as information February 26, 2002
Georges Creek was identified on Maryland’s 1996 list of WQLSs due to excess nutrients and suspended sediment, and on the 1998 Additions to the 303(d) list for low pH; however, recent data showed neither a nutrient nor dissolved oxygen impairment. Despite the presence of other impairing substances, this data indicates that the dissolved oxygen characteristics of Georges Creek are significantly better than the water quality standards established for this water body and these characteristics should be maintained under Code of Maryland Regulations (COMAR) §26.08.02.04. The Department is considering whether Georges Creek will be designated as a Tier II waterbody for dissolved oxygen pursuant to Maryland’s Antidegradation Policy (COMAR §26.08.02.04). If Tier II designation is pursued, a more stringent review will be required before biochemical oxygen demand (BOD) loadings are allowed to increase. Reductions in ambient dissolved oxygen (DO) could occur in the future with increases in carbonaceous biological oxygen demand (CBOD) and nitrogenous biochemical oxygen demand (NBOD). Therefore, based on the available data, Maryland Department of the Environment (MDE) concluded that CBOD and NBOD are the principal threat to water quality in Georges Creek. A report is available which documents the establishment of TMDLs for Georges Creek to maintain present and future dissolved oxygen concentrations. MDE believes that these CBOD and NBOD TMDLs will completely address the original 303(d) listing for nutrients. A sediment TMDL was completed in 2006. The pH impairment will be addressed in separate TMDL documents.			
<b>Lake Habeeb</b>	021411002	Phosphorus	March 2, 2000
Lake Habeeb is an impoundment located in Rocky Gap State Park, in Allegany County, Maryland. The impoundment lies on Rocky Gap Run, a tributary of the Evitts Creek. The watershed lies in a valley between Evitts and Martin Mountains. Lake Habeeb is a highly used recreational facility, with a major resort, conference center and Jack Nicklaus-designed golf course at the south end of the lake. On the basis of water quality problems associated with nutrients, Lake Habeeb in the Evitts Creek watershed (02141002) was identified on Maryland’s 1998 list of water quality limited segments (WQLSs) as being impaired. The document establishes a Total Maximum Daily Load (TMDL) for the nutrient phosphorus entering Lake Habeeb.			
<b>Savage River Reservoir</b>	02141006	Mercury	January 29, 2004
Savage River Reservoir was identified on the draft State of Maryland’s 2002 list of Water Quality Limited Segments [303(d) list] (submitted October 4, 2002) as impaired by mercury contamination, based on data for mercury concentrations in fish tissue. Mercury concentrations in the water are well below the threshold for concern in regard for drinking water. The Maryland water quality standards Surface Water Use Designation [Code of Maryland Regulations (COMAR 26.08.02.07)] for Savage River Reservoir is Use III-P – <i>Natural Trout Waters and Public Water Supply</i> .			
<b>Town Creek</b>	02150512	Nutrients	August 10, 2006
The study demonstrates that both applicable criterion for nutrients and the designated uses supported by this criterion are being met in the Town Creek 8-digit basin; therefore, a TMDL is not required. Barring the receipt of any contradictory future data, this report will be used to support the removal of the Town Creek 8-digit basin from Maryland’s 303(d) list for nutrients. Although the waters of Town Creek do not display signs of eutrophication, the State reserves the right to require future controls in the Town Creek watershed if evidence suggests nutrients from the basin are contributing to downstream water quality problems. Other substances not addressed at this time, but identified on Maryland’s 303(d) list as impairing the Town Creek 8-digit basin, will be addressed in the future.			

<b>Town Creek</b>	02140512	Sediment	December 27, 2006
Town Creek (basin code 02140512) was identified on the State's 1996 list of WQLSs as impaired by nutrients and sediments. In 2002 and 2004, Town Creek was also listed for impacts to biological communities. The sediment impairment in Town Creek and the nutrient impairment were addressed in separate reports and biological impairments will be addressed at a future date. Barring the receipt of contradictory data, the report will be used to support the sediment listing change for the Town Creek watershed from Category 5 ("waterbodies impaired by one or more pollutants requiring a TMDL") to Category 2 ("surface watersheds that are meeting some standards and have insufficient information to determine attainment of other standards") when MDE proposes the revision of Maryland's 303(d) List for public review in the future. Although the waters of Town Creek do not display signs of a sediment impairment, the State reserves the right to require future controls in the Town Creek watershed if evidence suggests sediments from the basin are contributing to downstream water quality problems.			
<b>Wills Creek</b>	02141003	Cyanide (CN)	August 16, 2006
Aquatic life criteria and designated uses associated with CN are being met in the Wills Creek watershed, and that the 303(d) impairment listings associated with CN are not supported by the analyses contained herein. The analyses support the conclusion that a TMDL for CN is not necessary to achieve water quality standards. Barring the receipt of contradictory data, this report will be used to support a CN listing change for the Wills Creek from Category 5 ("waterbodies impaired by one or more pollutants requiring a TMDL") to Category 2 ("Surface waters that are meeting some standards and have insufficient information to determine attainment of other standards"), when the Maryland Department of the Environment (MDE) proposes the revision of Maryland's 303(d) list for public review in the future.			
<b>Wills Creek</b>	02141003	Low pH	April 17, 2008
The Wills Creek watershed (basin code 02141003) (2008 Integrated Report Assessment Unit ID: MD-02141003) was identified in Maryland's 2008 Integrated Report as impaired by cyanide (1996 listing), nutrients (1996 listing), sediment (1996 listing), pH (1998, 2002, 2004 and 2006 listings), fecal bacteria (2002 listing), and impacts to biological communities (2002 listing) (MDE 2008a). The listing for cyanide and the 1998 and 2004 pH listings have been addressed by Water Quality Analyses (WQAs) completed in 2005 and 2006, respectively, showing no impairment.			
<b>Wills Creek</b>	02141003	Non-Tidal Bacteria	November 6, 2007
Establishes a TMDL for fecal bacteria in Wills Creek that will allow for attainment of the beneficial use designation, primary contact recreation.			
<b>Wills Creek</b>	02141003	Nutrients	March 15, 2010
The analysis supports the conclusion that a TMDL for nutrients is not necessary to achieve water quality standards in the Wills Creek watershed. Although the waters of the Wills Creek watershed do not display signs of eutrophication, the State reserves the right to require future controls in the watershed if evidence suggests that nutrients from the basin are contributing to downstream water quality problems. For instance, reductions may be required by the forthcoming Chesapeake Bay TMDL, which is currently under development and scheduled to be completed by EPA at the end of 2010. Barring the receipt of contradictory data, the report will be used to support a revision of the nutrients (i.e., phosphorus) listing for the Wills Creek watershed, from Category 5 ("waterbody is impaired, does not attain the water quality standard, and a TMDL is required") to Category 2 ("waterbodies meeting some [in this case nutrients-related] water quality standards, but with insufficient data to assess all impairments") when MDE proposes the revision of the Integrated Report.			
<b>Wills Creek</b>	02141003	Non-tidal Sediments	January 16, 2007
The designated use of Wills Creek is Use IV-P (Recreational Trout Waters and Public Water Supply) for the mainstem only and Use I (Water Contact Recreation and Protection of Aquatic Life) for all other tributaries. A TMDL of sediment was established in Wills Creek to allow for the attainment of the above mentioned designated uses. The objective of the sediment TMDL established in this document is to ensure that there will be no sediment impacts affecting aquatic health, when aquatic health is evaluated based on Maryland's biocriteria, thereby establishing a sediment load that supports the Use I/IV-P designation for the Wills Creek watershed. The watershed sediment load includes the potential effects of water clarity and erosional and depositional impacts, thus accounting for all of the sediment impacts that indicate a sediment impairment per the Maryland 303(d) listing methodology.			

## 4.4 Water Quality Standards

The Maryland Department of Environment (MDE) sets water quality standards in order to protect, maintain and improve the quality of surface waters. Three components comprise the water quality standards: Stream Use Designation, Water Quality Criteria and Antidegradation Policy.

### 4.4.1 Stream Use Designation

The state of Maryland created stream use designations within the Code of Maryland Regulations (COMAR) in order to identify and classify Maryland streams into designated uses. The following are the use classifications and their designated uses:

-  Use I & I-P: Water Contact, Recreation, Protection of Aquatic Life
-  Use II: Shell Fish Harvesting Waters
-  Use III & III-P: Natural Trout Waters
-  Use IV & IV-P: Recreational Trout Waters

*Any designated use shown with a “P” is additionally classified as a public water supply.*

Allegany County is situated within two (2) Maryland six digit sub-basin watersheds, the Upper Potomac River Basin (02-14-05) and the North Branch Potomac River Basin (02-14-10). Table 13 provides the designated stream uses within Allegany County.

**Table 13: Stream Use Designations in Allegany County, Maryland**

Sub-Basin	Stream Use Designation	Waters of MD
Upper Potomac River Basin	Use I-P	Potomac River and all Maryland Tributaries, except those identified as Use III-P or IV-P
	Use III-P	Town Creek Tributaries
	Use IV-P	Town Creek Fifteen Mile Creek and all Tributaries Sideling Hill Creek and all Tributaries
North Branch Potomac River Basin	Use I-P	North Branch Potomac River Mainstem Georges Creek Mainstem Mill Run and its Tributaries in Allegany County An unnamed Tributary near Pinto
	Use III-P	All Maryland Tributaries to the North Branch Potomac River except for those identified as I-P or IV-P
	Use IV-P	Wills Creek Evitts Creek

#### 4.4.2 Water Quality Criteria

The water quality criteria outline the numerical minimum water quality standards for toxics, dissolved oxygen, turbidity, bacteria and temperature to be met for that particular designated use. A number of tributaries found within Allegany County have not been able to meet the criteria established for their designated use; however, TMDLs for the region have been developed and adopted in the effort to improve the water quality of the streams.

#### 4.4.3 Antidegradation

The antidegradation policy assures that water quality continues to support the designated uses and is divided into three tiers of protection; Tier I, II, and III. Tier I specifies the minimum standard that must be met in order to support a balanced indigenous aquatic population and support contact recreation. Tier II protects water that is better than the minimum specified standard for the designated use. Tier III protection is in development and is called Outstanding National Resource Water. In 2007, Elklick Run Stem I was added to the list as Tier II water by having water quality characteristics better than the minimum requirements specified by quality standards. Elklick Run is the source water for one of the Lonaconing reservoirs utilized as a public water supply. Additional tributaries included on the list include: Town Creek 1 & 2, Murley Branch, Fifteenmile Creek 1-5, White Sulphur Run, Black Sulphur Run, Mudlick Hollow and Sideling Hill Creek. A map illustrating the locations of Tier II Waters can be found in Appendix A, A-8.

### 4.5 Water Resources Protection

Stream and wetland buffers are critical to the protection of water resources; the effectiveness of a buffer to protect the resource depends on the buffer width, vegetation type, and the type of land management within that buffer. Forested buffers provide the greatest protection by providing shading to reduce thermal impacts, greater root mass in streambanks reduce erosion, and the maximum filtering potential of both nutrients and pollutants. Current development regulations require stream buffers in order to protect the County's water resources.

### 4.6 Restoration

Many of the rivers, streams, and tributaries within Allegany County either are currently in a state of disequilibrium or have already undergone physical changes due to land use changes within the watershed. Stream health is directly correlated to land use. For example, forest clear cutting and surface mining can result in deleterious effects to downstream stream channels. Stream restoration projects are implemented in order to stabilize stream channels, improve in-stream habitat, and return the resource to a state of equilibrium. Where possible, natural channel design

should be utilized to provide long-term stability and improve the aesthetics of the restoration project. Additional restoration projects within the watershed could include:

- ✚ Constructing new stormwater management facilities for uncontrolled runoff;
- ✚ Retrofitting existing stormwater management facilities;
- ✚ Increasing buffer widths through changes to development regulations;
- ✚ Enhancing forested buffers through streambank & floodplain plantings;
- ✚ Creating or restoring wetland;
- ✚ Conducting Watershed Assessment Studies and Developing Watershed Management Plans.

## 4.7 Policies and Actions

Policies and Actions to address stormwater, impervious cover, and TMDL's are based on the goals and objectives established in *2.1 Plan Visions*.

Policy 6: Eliminate the problem of Combined Sewer Overflow's (CSO's).

- 6.1 Disconnect stormwater outlets from sewer systems.
- 6.2 Continue to implement the County Utility Use Regulation. This regulation provides the authority to fine and penalize residents who are non-compliant.

Policy 7: Continue to monitor impervious cover in an effort to ensure that impervious cover remains under 10% of the total land within Allegany County.

- 7.1 Maintain the impervious cover database.
- 7.2 Track cumulative increases in impervious surfaces as land uses change.

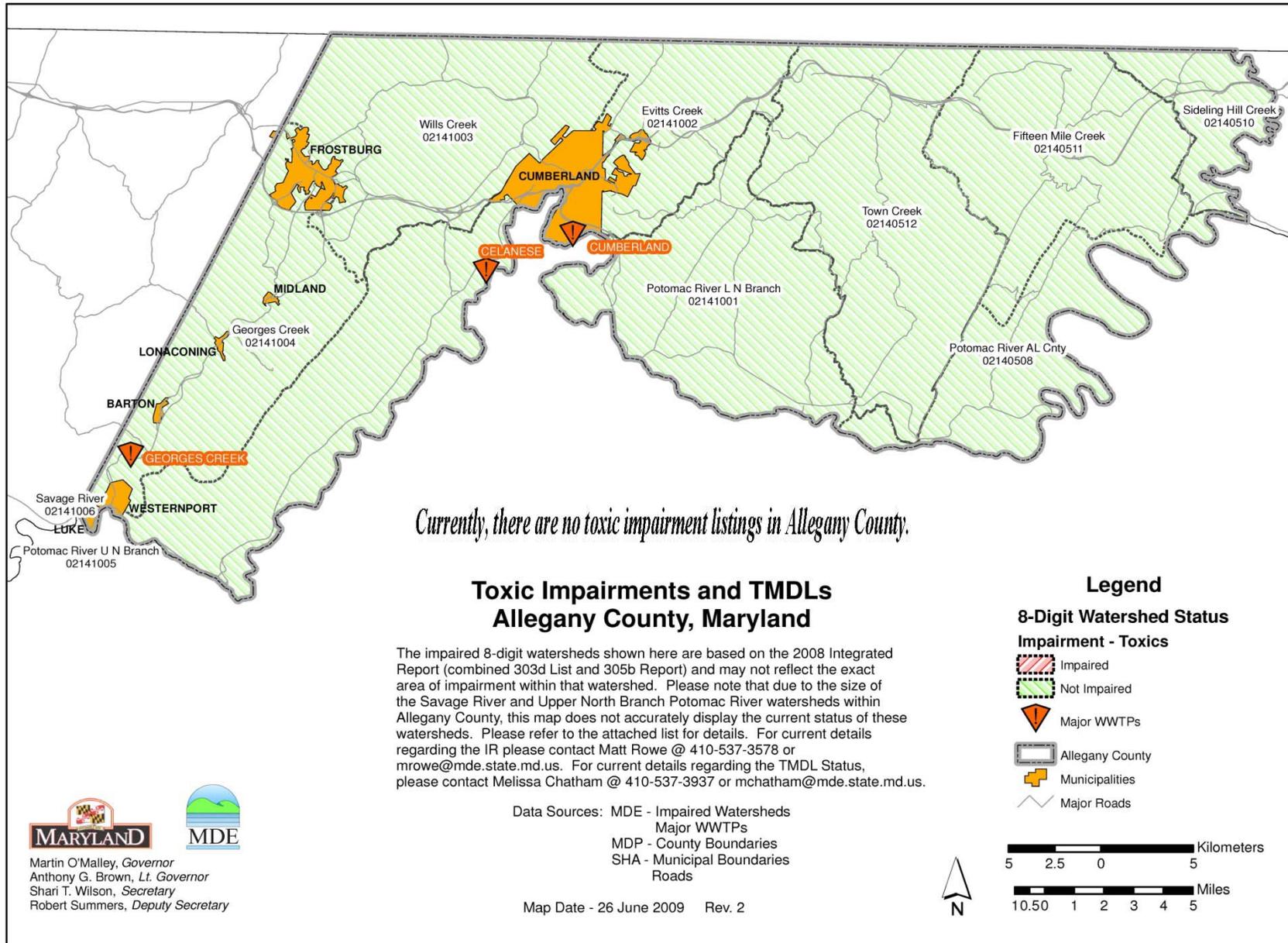
Policy 8: Reduce sedimentation and improve pH levels within Allegany County's watersheds.

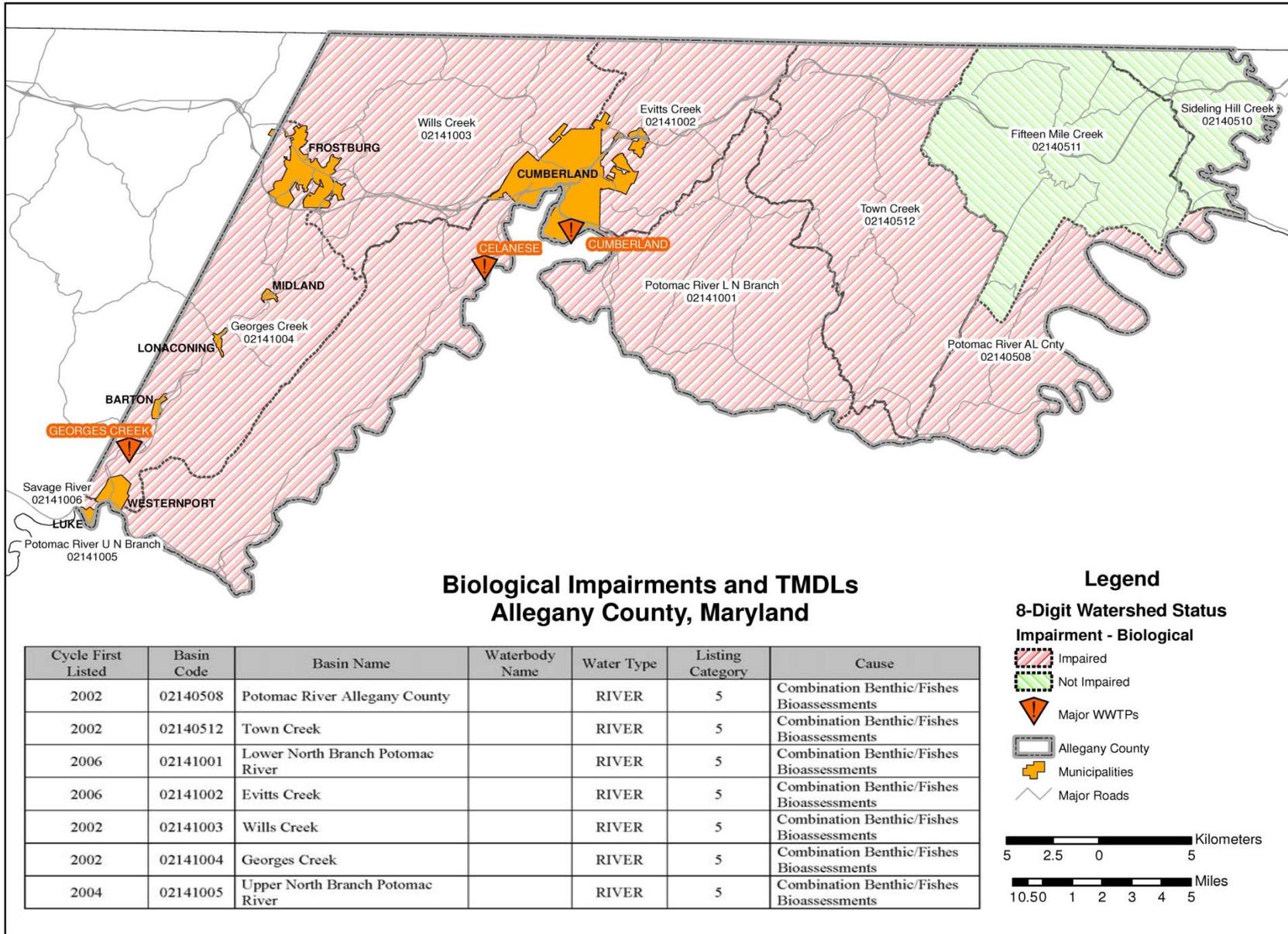
- 8.1 Discourage erosion and sedimentation from mining and timbering activities within designated impaired watersheds.
- 8.2 Continue the use of lime dosers to improve pH levels. Prioritize the following streams for pH improvement: Mill Run, Jackson Run, Matthews Run, Staub Run, Winebrenner Run, and an unnamed tributary to Jackson Run.
- 8.3 Conduct stream corridor assessments in order to catalog problem areas that contribute to sedimentation and poor water quality.

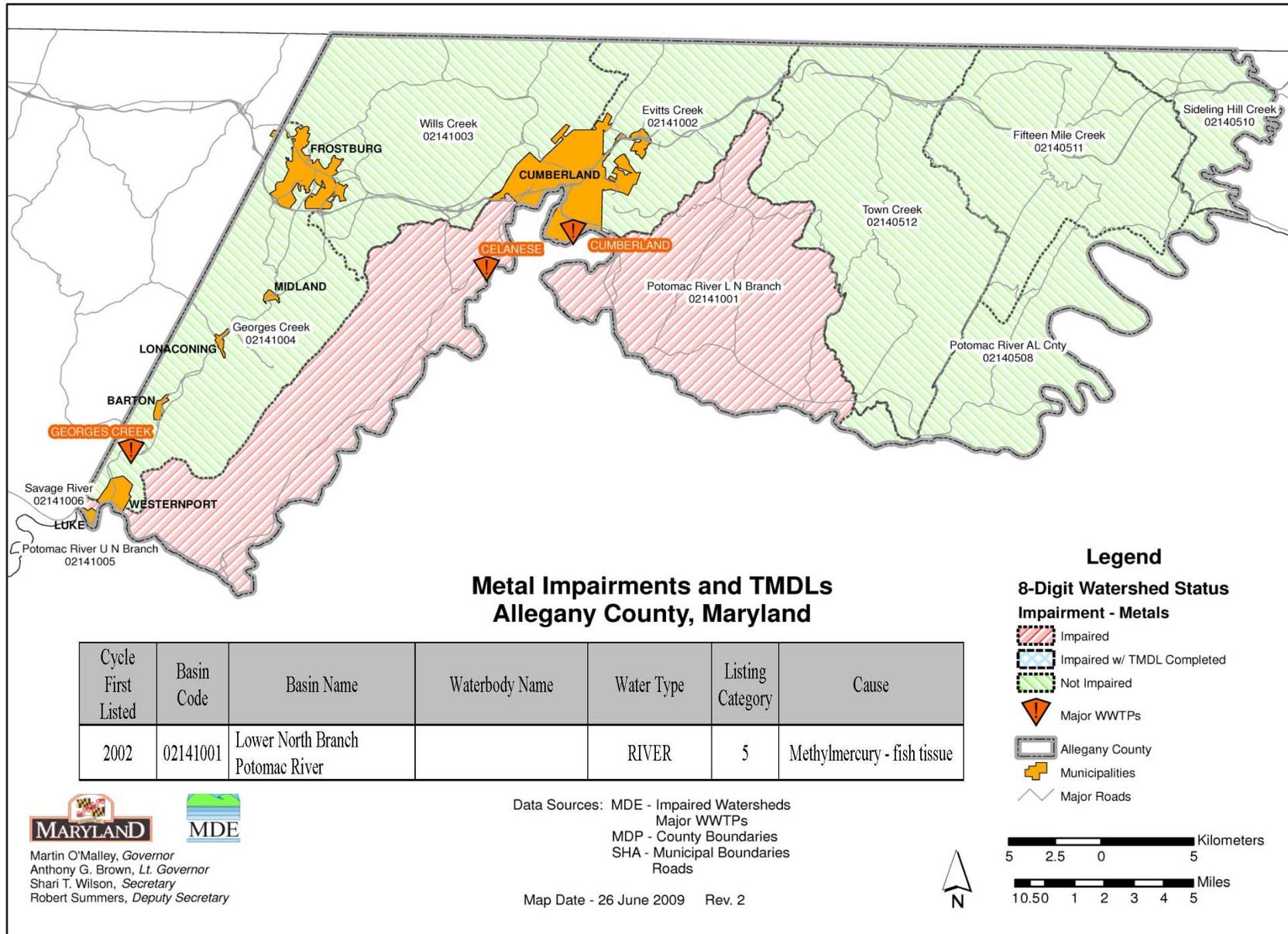
# **Appendix A**

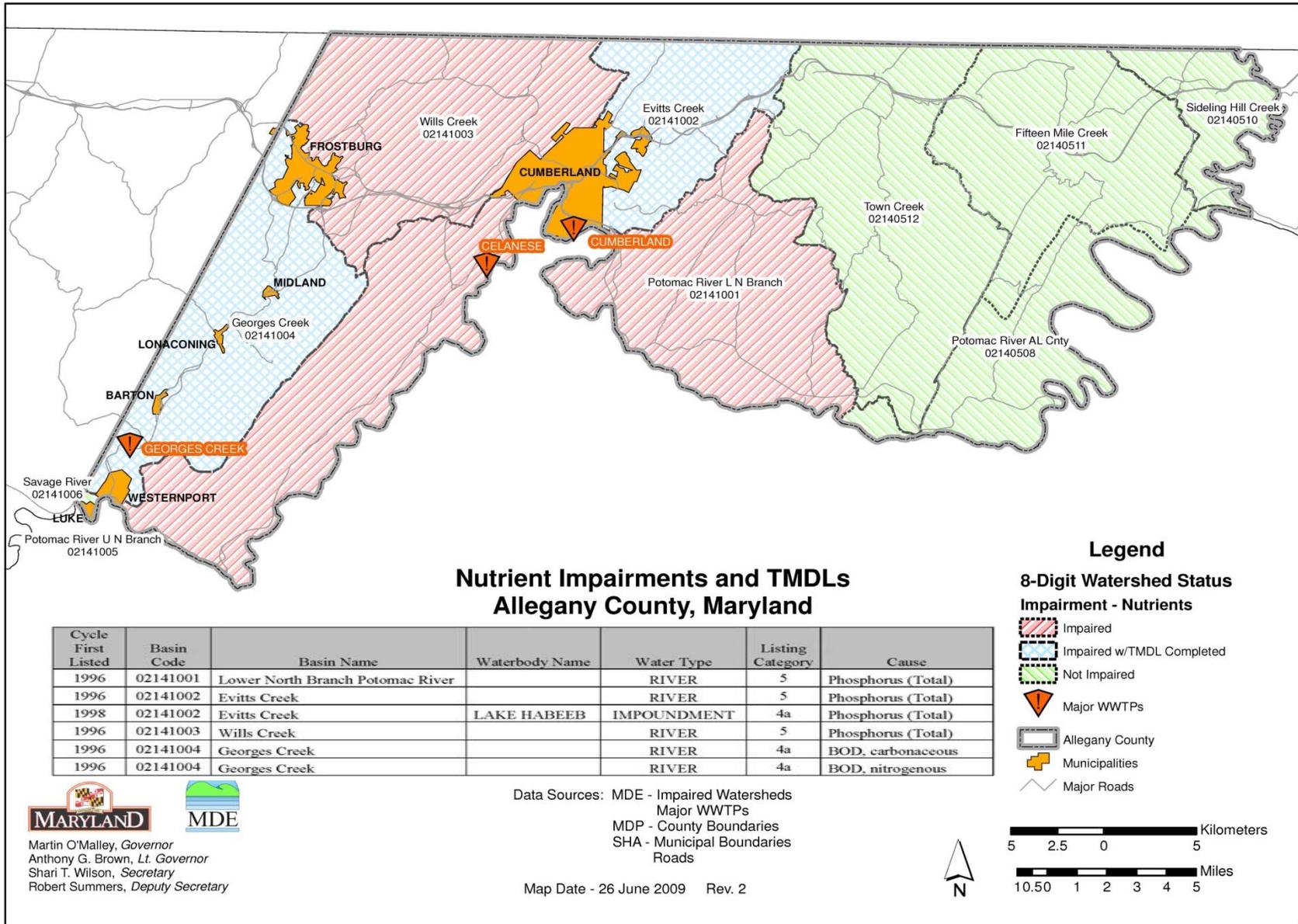
# **MDE Water Quality**

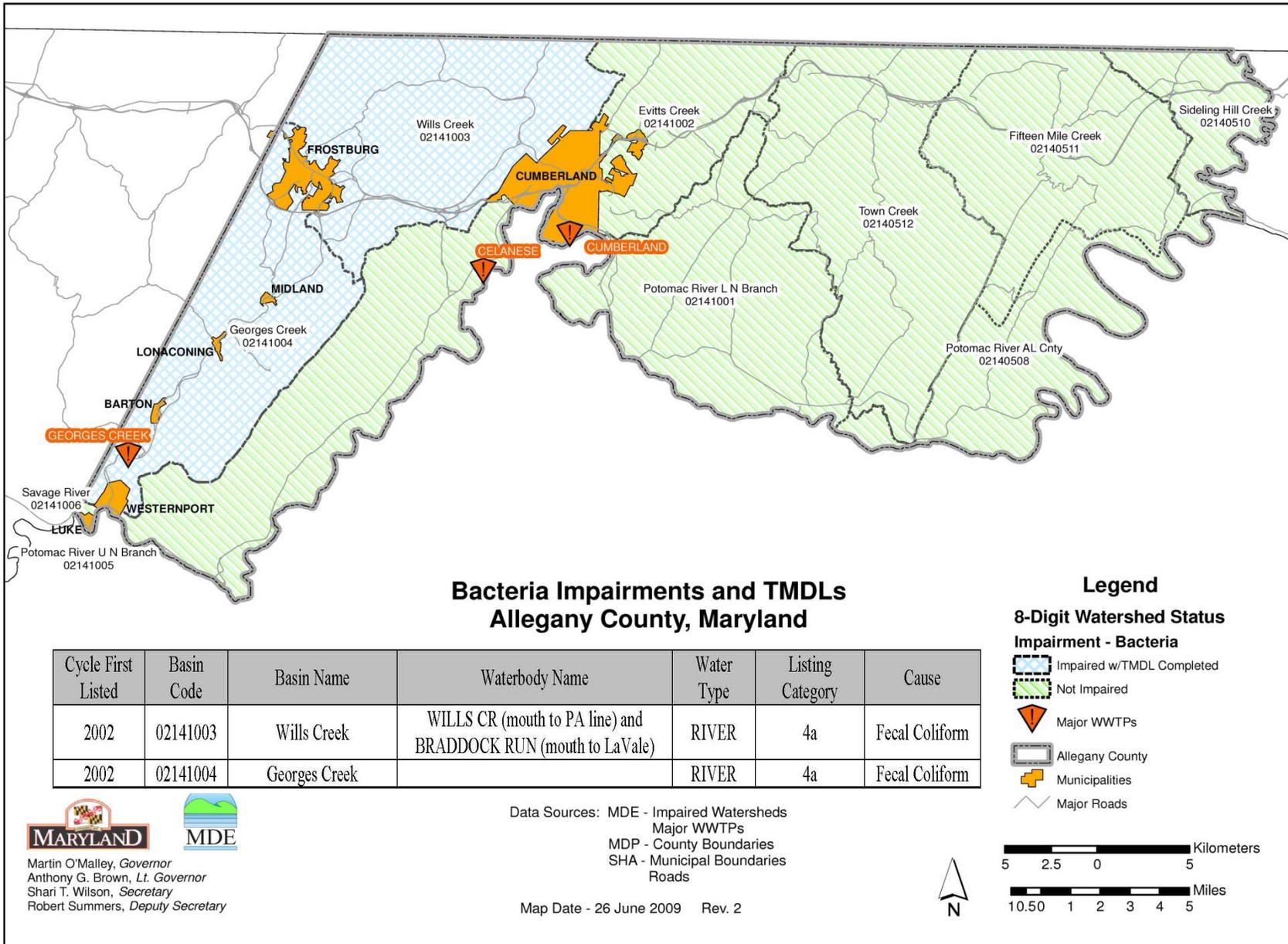
# **Maps**

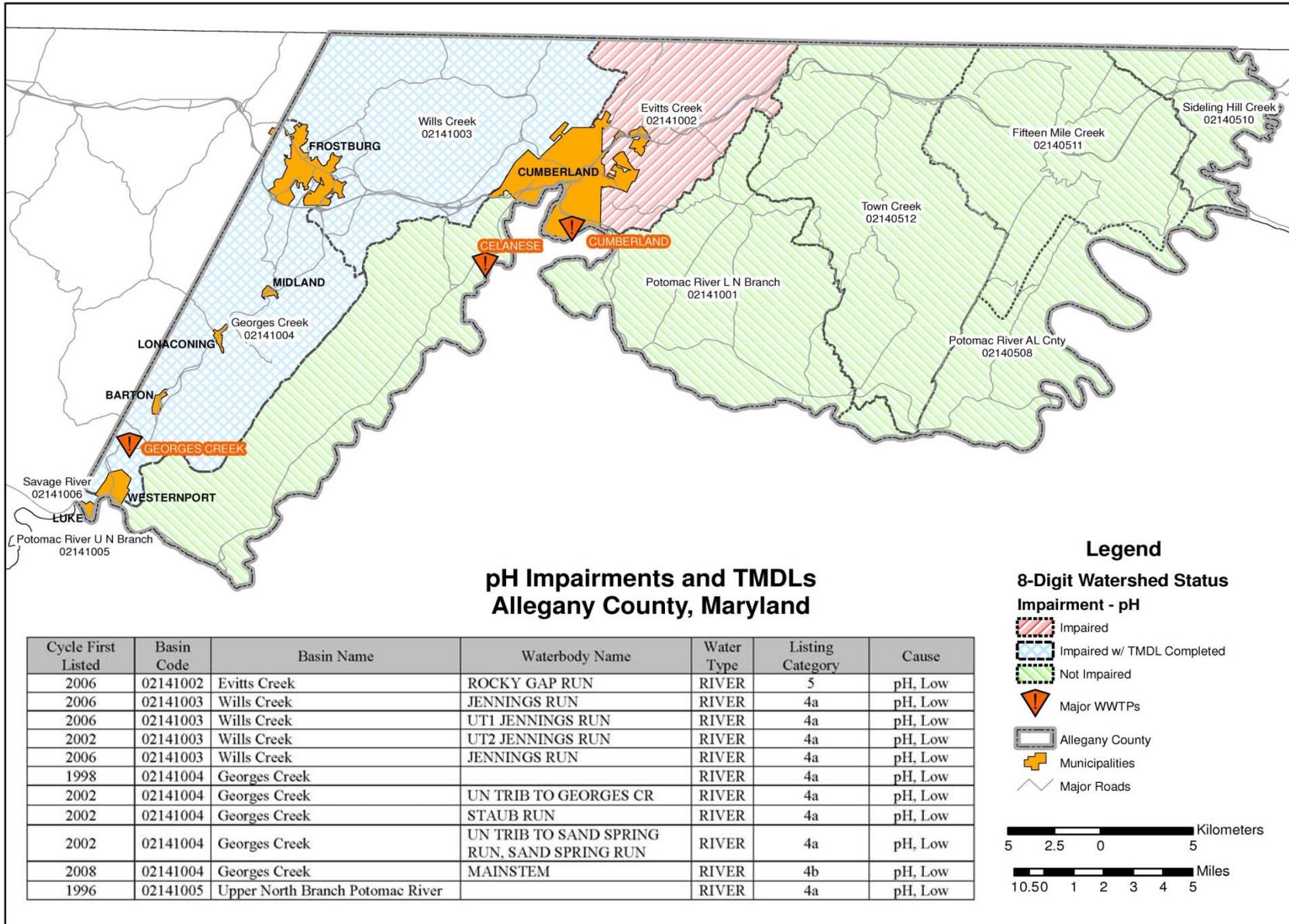


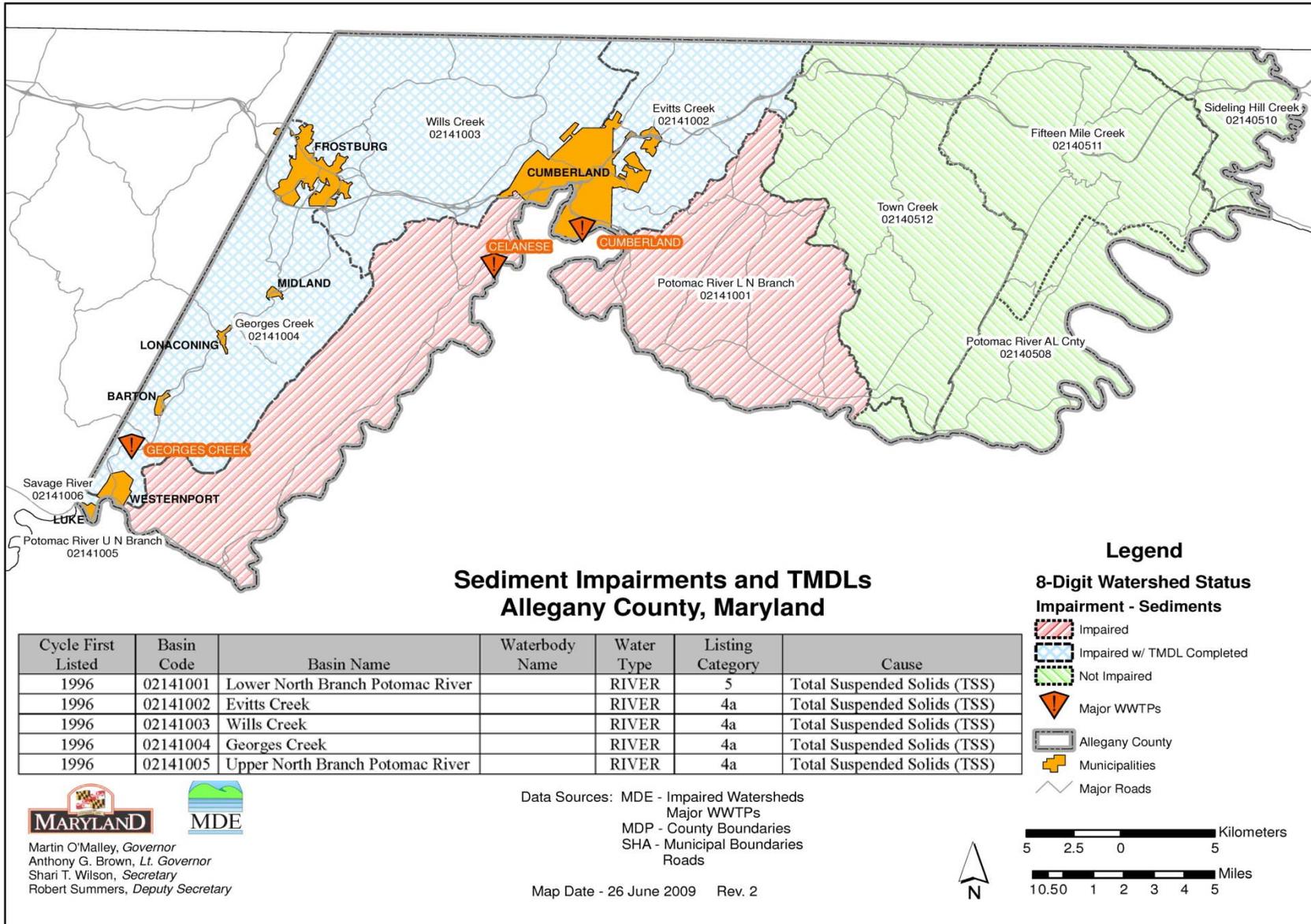






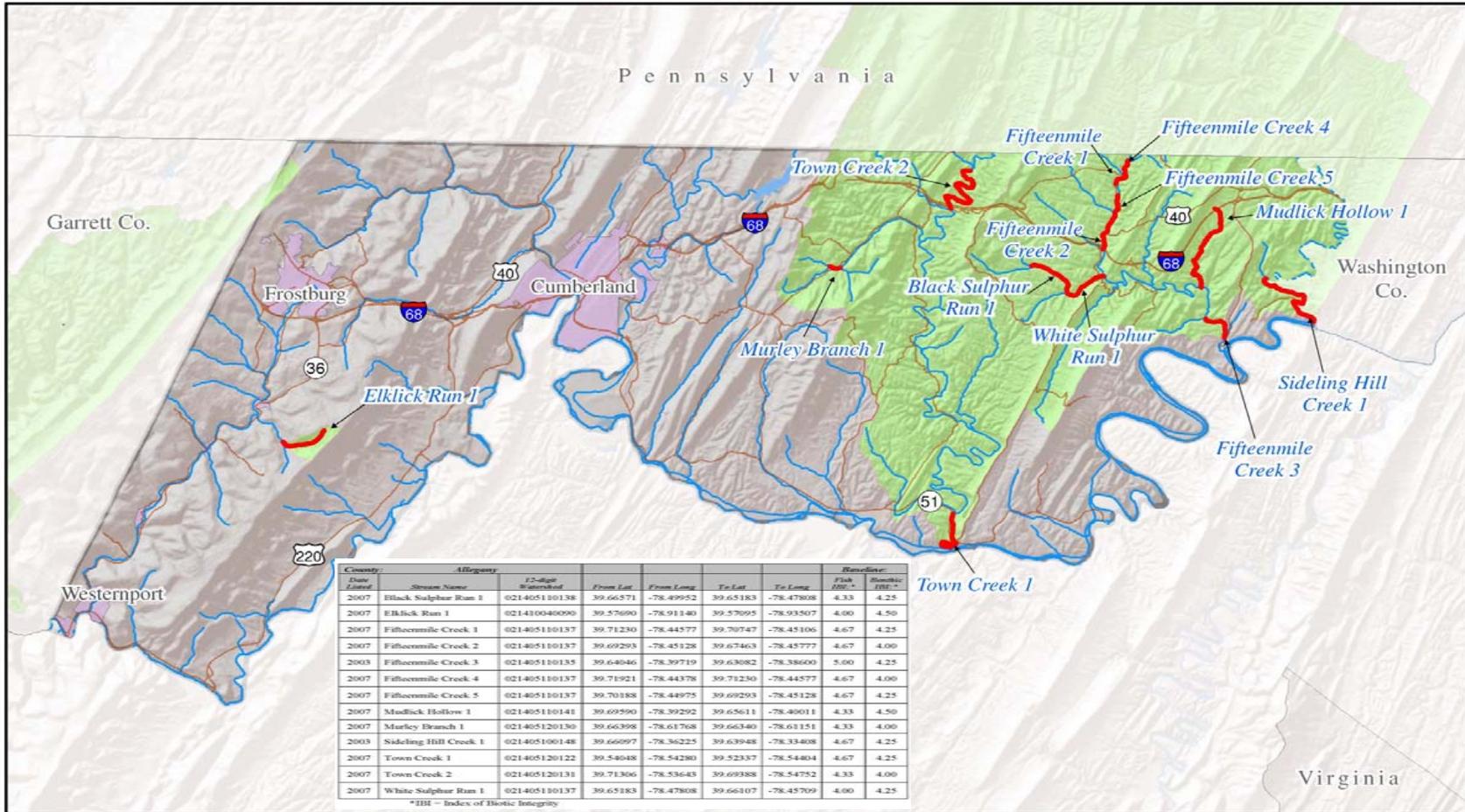






# High Quality (Tier II) Waters in Allegheny County

[Code of MD Regulations 26.08.02.04-1]



**MARYLAND**  
 Martin O'Malley, Governor  
 Anthony G. Brown, Lt. Governor  
 Shari T. Wilson, Secretary  
 Robert M. Summers, Deputy Secretary



- Tier II Waters
- Tier II Watersheds
- Major Roads
- Allegheny County
- Streams/Rivers
- Municipal Boundary



Maryland Department of the Environment  
 Science Services Administration  
 Montgomery Park Business Center  
 1800 Washington Boulevard  
 Baltimore, Maryland 21230-1718  
 Date Map Prepared: March 2010

# **Appendix B**

# **Outreach &**

# **Coordination**

# **Part 1:**

# **Public Comments**

# **Response Letters**



# ALLEGANY COUNTY

## DEPARTMENT OF COMMUNITY SERVICES

701 Kelly Road  
Cumberland, MD 21502  
301-777-2199 FAX 301-722-2467

### BOARD OF COMMISSIONERS

Michael W. McKay, *President*  
Creade V. Brodie, Jr.  
William R. Valentine

David A. Eberly, *County Administrator*

February 2, 2011

Mr. Francis Zumbrun  
608 N. First Street  
LaVale, MD 21502

Dear Mr. Zumbrun:

Thank you for participating in our public hearing on the Countywide Water Resources Element on January 19, 2011. Thank you also for your letter dated January 27, 2011 reiterating the points from your testimony on the 19<sup>th</sup>. Please accept this as formal response to your comments.

1. During our public hearing, you encouraged us to include wastewater treatment plants within existing PFA's and you do not support wastewater treatment plants "as written in the Plan outside an existing PFA area." Please note: no wastewater treatment plants currently exist in Allegany County in any area outside our existing PFA. As drafted, this Plan Element does not call for any new wastewater treatment plants.
2. In your testimony, you were critical of the Plan Element as written for failing to adequately identify public lands. Please note: the Water Resources Element, as written, is an amendment to the 2002 Comprehensive Plan. The 2002 Comprehensive Plan includes extensive maps ("plates") that identify sensitive areas, public lands, etc.
3. As part of your public comments, you expressed concern that the Water Resources Element, as written, fails to adequately represent certain waterbodies, particularly Tier II streams such as Fifteen Mile Creek. As noted in comment #2 above, this Element is an amendment to the 2002 Comprehensive Plan which gives extensive treatment to natural resources and graphically represents watercourses and other critical water resources. Also, please be advised that Appendix A of the Water Resources Element (as written) includes data on TMDL's and Tier II watersheds - such as Fifteen Mile Creek.
4. Additionally, you voiced concerns about sewer treatment plants outside PFA's - specifically within the eastern portion of Allegany County - and you recommended that the WRE include the following language "sewage plants outside PFA's will be funded by private funds only; no public funds will be used or approved." Once again, the Water Resources Element does not call

for any new sewage treatment plants in any portion of the County. Any new WWTPs will be vetted through an update/amendment to the Water and Sewerage Plan.

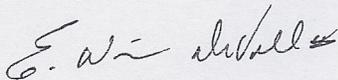
Further, as you are aware, the Allegany County Board of Zoning Appeals approved a Special Exception application for a planned residential development in the eastern portion of Allegany County (Terrapin Run). A condition of this Special Exception mandates that the developer provide appropriate infrastructure (including water and sewer resources). Respectfully, I suggest, therefore, that your recommended language is unnecessary.

On a related note, as I am sure you are aware, the 2002 Comprehensive Plan identified this portion of Allegany County as an area suitable for urban development. Consistent with the 2002 Comprehensive Plan, the 2007 Master Water & Sewer Plan recognized that some level of development would take place in this area. The 2007 Master Water & Sewer Plan devoted substantial narrative treatment to potential development in this area. The map reference on page 6 of the Water Resources Element is not new. It dates from the 2002 Comp Plan and it was further validated by the 2007 Master Water & Sewer Plan. You may also be aware that while the Board of Zoning Appeals approved the applicant's original requests for 4,300 units, the Planning & Zoning Commission, through the development and approval of the 2007 Master Water & Sewer Plan scaled back the scope of this development by approximately 80 percent. Specific provisions within the 2007 Master Water & Sewer Plan further reduced the immediate impact that any such development would create by limiting the overall development to 360 units for the first decade.

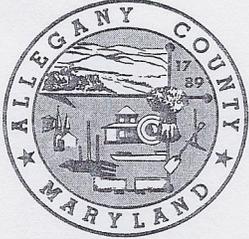
Although it is unclear whether any development will eventually take place at this location, whatever development – if any - that does take place will be a fraction of what might have occurred absent the strong leadership of the Planning & Zoning Commission. It is clear that the Planning & Zoning Commission shares your concerns about the County's vital natural resources and the importance of developing plans that will ensure a sustainable future. The Commission will continue to reflect upon your observations during our deliberations on this and related matters.

Thank you for taking the time to participate in this process. The contributions of interested residents help to improve the quality of our products.

Sincerely,



E. William DuVall, II, Chair  
Planning & Zoning Commission of Allegany County



**ALLEGANY COUNTY**  
**DEPARTMENT OF COMMUNITY SERVICES**

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**BOARD OF COMMISSIONERS**

Michael W. McKay, *President*  
Creade V. Brodie, Jr.  
William R. Valentine

David A. Eberly, *County Administrator*

February 2, 2011

Mr. Robert Paye, Esq.  
21 Prospect Square  
Cumberland, MD 21502

Dear Mr. Paye:

Thank you for participating in our public hearing on the Countywide Water Resources Element on January 19, 2011. Please accept this as formal response to your comments.

In your testimony, you expressed concern over a water moratorium currently in effect involving the Rawlings Water Company. You asked that we increase the priority in this type of planning to specifically recognize an extension of the waterline as one of the intended projects that will clear up a water problem and spur development at the same time.

Please be advised that while your project is not specifically mentioned by name, it is included within the context of *Policies and Actions 1.6* found on page 29 of the WRE. Additionally, Staff have forwarded this comment to the 2011 Water & Sewerage Plan Development Team for treatment/inclusion in the draft of that document, currently under development. Planning staff are not recommending further modification to the "Accepted" Water Resources Element specific to the concerns that you raise, at this time.

Thank you for taking the time to participate in this process. The contributions of interested residents help to improve the quality of our products.

Sincerely,

E. William DuVall, II, Chair  
Planning & Zoning Commission of Allegany County



**ALLEGANY COUNTY**  
**DEPARTMENT OF COMMUNITY SERVICES**

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**BOARD OF COMMISSIONERS**

Michael W. McKay, *President*  
Creade V. Brodie, Jr.  
William R. Valentine

David A. Eberly, *County Administrator*

February 2, 2011

Ms. Jackie Sams  
701 Nemaocolin Avenue  
Cumberland, MD 21502

Dear Ms. Sams:

The Planning Commission has noted your dedication in meeting attendance and your concern for land use planning, especially planning related to water resources. Like you, the Planning Commission supports the smart growth tenants of targeting new development in, and/or adjacent to, existing development centers. Not only is this an example of good planning – it makes sense financially. You expressed concern relative to the amount and the location of future development as identified in the WRE. Please note that under the WRE scenario, 75 percent of the County's future development is projected to occur in central and western Allegany County. With very few exceptions, 100 percent of any new development in these areas will occur on municipal wastewater systems. The remainder of the projected new development will occur in the eastern two regions primarily via onsite wastewater services.

As you know, approximately 85 percent of the County's homes are connected to public water and wastewater systems and, as previously noted, three-fourths of the County's future development is expected to be serviced by public water and wastewater resources. Few Maryland jurisdictions can boast of that level of infrastructure support. This is consistent with the principles of "Smart Growth" and "Visions".

As you observed in your testimony, 932 units are forecast for the two eastern planning regions. That volume and rate of development falls short of mirroring the rate and volume of development that has been occurring in this area over the past 20 years by approximately 657 units or 41 percent. Over the past two decades, the two eastern regions have been growing at an average rate of approximately 53 units per year. If that rate were to continue over the planning horizon, we would see approximately 1,589 new dwellings in these two regions. The WRE assumes a significantly lower rate of growth. As someone who is concerned about the amount of development occurring in this portion of the County, certainly you will agree that a 41 percent reduction in the current rate of growth is a good thing.

In your comments you observed that the WRE utilizes a figure of 3,640 dwelling units for the planning horizon. You recommended that the WRE use MDP projections. As you know, there is not currently agreement between MDP's forecasts and those of the County. For more than 30 years, MDP has been projecting a population decline for this County. It has only been in the last two years that MDP has been willing to consider a future scenario for Allegany County that is anything other than decline. Even with this new attitude, MDP's projections can best be characterized as "flat." Allegany County's forecasts are more optimistic and suggest that there may be room for some population increase and a slightly more significant growth in dwelling unit construction. The statistical benchmarks for both Allegany County and MDP's projections are somewhat dated and Allegany County, in recent correspondence to MDP, indicated that they are going to wait until new data from the Census Bureau becomes available to finalize the newest round of forecasts.

In the interim, the County believes that it is prudent to utilize a more aggressive scenario for the future. As you know, the primary purpose of the WRE is to create a linkage between the Water and Sewerage Plan and other county planning efforts to ensure that water and wastewater resources are adequate to meet the future demands that are placed upon them. In other words, we need to be sure to dig our well before we are thirsty.

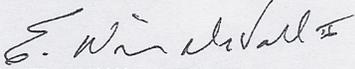
If the optimistic projections forecasted by the County do not materialize, at least the assessments that are performed as part of this plan will ensure adequate water and wastewater capacities for the future. We think you will agree that it is better in this instance to overestimate demand rather than underestimate it.

We also want to point out that there is a difference between households and dwelling units. In your comments, you cite a figure of 1,900 households for Allegany County as being the number projected by MDP. Please be advised that the difference between households and dwelling units in Allegany County ranges from 10% to 11%. If we adjust to compensate for this difference, the forecast discrepancies are not nearly as large.

Your advice to the Planning Commission is to be "realistic" and "use common sense". As forecasts are revised over the next 6 to 24 months, the future scenarios for County growth will become more clear. One would expect that the level of discrepancy between the state's projections and those of the County will be reduced. HB 1141 came about largely because local planners and engineers did not adequately plan - in advance - for the level of growth that materialized in their jurisdictions. The WRE is designed to encourage appropriate advance planning to ensure that water and wastewater capacity shortfalls are a thing of the past, rather than a continuously repeated process. You may be interested in knowing that the actual daily water usage per household is much less than the 250 gpd figure that is utilized throughout this document. MDE has encouraged local jurisdictions to use this consumption statistic in demand calculation analyses. The rationale is self evident; the same holds true for our forecasts. We believe that this represents just the kind of sound planning and common sense that you encourage in your testimony.

Again, thank you for continuing to support this County's planning activities and for taking the time to share your thoughts. People like you who care about our future and who are willing to invest their time help to ensure that our actions and decisions represent the most appropriate course of action.

Sincerely,

A handwritten signature in cursive script, appearing to read "E. William DuVall, II".

E. William DuVall, II, Chair  
Planning & Zoning Commission of Allegany County

**Part 2:**  
**MDP Comment &**  
**Allegany County**  
**Response**



Maryland Department of Planning  
Review Comments  
January 26, 2011

Draft 2010 Allegany County Water Resources Element

The WRE is incomplete, but would meet the requirements of HB1141 with recommended comments added. The most important comments to include are in **bold**. The WRE does not yet effectively address the following purposes of the law and/or State guidance, as follows:

1. • The WRE should, for each watershed, calculate the total forecasted nutrient load, which includes nutrient loads from current and future WWTP discharge, septic tanks, and stormwater runoff (MDP M&G 26, p. 13).

**RESPONSE:** Although referred to in Maryland Department of Planning Models and Guidelines #26, no specific provision is included in House Bill 1141. However, Allegany County has voluntarily incorporated forecasted nutrient loads for septic systems in the WRE: *3.9 Septic Systems* and *3.9.1 Current & Future Loads*.

In Section *3.11 Polices & Actions*, Policy 4 and Actions 4.1 and 4.2 have been added to the WRE. Additionally, impervious cover thresholds for Allegany County are well below the Center for Watershed Protection recommended 10% Impervious Cover – Sensitive Watershed cap. It should be noted that because of Allegany County unique topography, characterized by mountains and valleys, and its other environmental constraints, development patterns are more compact compared to the jurisdictions in the state with less topographical relief. The County's landscape acts as a natural deterrent for sprawl, thus minimizing excessive land consumption. The County's future land use scenarios recognize these constraining factors and, when coupled with infrastructure availability, serve to ensure that nearly all anticipated development will take place in a relatively confined footprint. Not only will this limit sprawl and other inefficient land use practices, but it will reduce impervious surfaces increases and ensure that development activities are concentrated in such a manner as to make infrastructure investments more sustainable.

Additionally, in 2010, Allegany County adopted the *Revised Stormwater Management Ordinance*, which incorporated all of Maryland Department of Environment's recommended provisions to control the adverse impacts associated with increased stormwater runoff including Environmental Site Design (ESD) to the Maximum Extent Practicable (MEP). This is discussed in Section *4.1.1 Stormwater Management Ordinance*.

2. • Does the WRE estimate the future demand for water and sewer by reviewing non-residential demand (pp. 27, 33)

**RESPONSE:** In the absence of State methodological guidance for forecasting industrial and commercial demand, staff assumed a 10% increase in non-residential demand. The preponderance of the County's non-residential uses are clustered within three systems: Barton Business Park, Upper Potomac and Cumberland systems. Little to no new commercial or industrial development has taken place in the past two decades and there has not been a net spatial increase in industrial lands for more than 10 years. Therefore, an assumed growth rate of 10% appeared to be a more than adequate surplus for planning purposes. Non-residential users located in areas other than the three referred systems are captured in the 250 gallons per day factor which was utilized in all capacity calculations. Even with a proposed increase of 10%, the demand still falls well short of the 250 gallons per day multiplier. See inserted note above Table 6 (Water) and Table 10 (Sewer).

3. • Does the WRE identify strategies to meet future water quantity needs (p. 27).

**RESPONSE:** *Table 7: Water Problem Service Areas* and *Table 8: Planned Water Projects* identifies issues and remediation projects. Policy 1 and Actions 1.1 thru 1.8 are specific to drinking water supply and water conservation.

4. • For each watershed, identify current WWTP discharge locations (p. 12).

**RESPONSE:** Discharge locations have been added to Map 9.

5. • Does the WRE describe the actions planned for implementation to ensure that wastewater capacity is adequate (p. 33). In addition, for cases in which the point source cap might be exceeded, identify options for ensuring consistency with the cap, and identify the necessary studies that would be needed to support these alternatives (p. 12).

**RESPONSE:** Wastewater needs have been assessed and have been determined to meet projected demand, Table 11 and Section 3.7 and 3.8. Additionally, state of the art WWTP upgrades have recently been completed for two of the County's largest WWTP's and upgrades for the Flintstone WWTP have been identified for the near term. These improvements will serve to reduce overall nutrient contributions from WWTP point sources.

The City of Cumberland, City of Frostburg and the Town of Westernport have spent millions on CSO projects which have served to reduce (and will continue to reduce) WWTP overflows as a result of the introduction of stormwater into the sewer infrastructure. The County, with State and Federal assistance, has been diligently replacing wastewater transmission lines to reduce Inflow and Infiltration (I&I). Infiltration has been a significant source of increased wastewater flows.

In the past, as much as two times the actual generated wastewater volumes have been transported to WWTP. This volume has been substantially reduced and will continue to be reduced as more of the County's wastewater infrastructure is replaced. This will reduce sediment and nutrient contributions. These actions alone will address point source concerns.

Additionally, this information is addressed through MDE Wastewater Capacity Management Plans and the Allegany County Water and Sewer Plan, and was referenced on p.18 of the WRE.

Overall WRE comments:

6.
  - The County should be commended for including information from the Cumberland and Frostburg Municipal Growth Elements within the County WRE.

**RESPONSE:** A tremendous amount of data gathering, data sharing and coordination have gone into the development of a number of recent and ongoing planning initiatives; including: this document, the *2007 Allegany County Water and Sewer Plan*, *2011 Water and Sewerage Plan*, the City of Cumberland Comprehensive Plan, the City of Frostburg Comprehensive Plan, the ARC-funded Georges Creek Regional Comprehensive Plan, and *the Comprehensive Water & Sewer Study for Allegany County (2011)*.

7.
  - Although the WRE notes that particular systems have adequate water and sewer capacity (pp. 17, 25), the WRE should include a more comprehensive statement that notes which of the County's water and sewer systems will have a surplus or deficit in capacity within the planning period (by 2040).

**RESPONSE:** This data has been graphically displayed in Table 6 for Water and Table 10 for Sewer. The Water and Sewerage Plan analyzes all water and wastewater services and projects demand and capacity; all water and sewer systems are expected to have adequate and/or surplus capacity by 2040.

8.
  - The WRE could include additional tables that translate the 2040 projected dwelling units by planning region (pp. 15, 23) to the projected dwelling units listed for each water and sewer system in Tables 6 (p. 16) and 10 (p. 24). For example, in adding the 2040 projected dwelling units within the planning regions served by the Evitts water system (p. 15), there appears to be only 1,291 future units forecasted ( $297 + 504 + 107 + 383$ ); however, Table 6 indicates 2,115 projected dwelling units for the Evitts water system.

**RESPONSE:** Water Service Areas and Water Systems are independent of planning geography. A significant component of new development within the Upper Potomac Planning Region will utilize capacity from the Evitts Water System.

- 9 • The WRE should clarify the time period of growth represented by the 2040 projected dwelling units (pp. 14, 22). For example, are these units projected from 2010-2040 or from 2000-2040? For example, population projections are listed in the WRE from 2000-2030 (p. 7).

**RESPONSE:** The 2002 Comprehensive Plan utilizes forecast from 2000-2030. The WRE uses newly-developed dwelling unit projections from 2010-2040 as the best available data at the time of the WRE development. This discrepancy is minor, however it will be rectified via the development of the ongoing Water and Sewerage Plan, the 2010 Census Data, and the watershed-based comprehensive plans currently under development.

10. • Tables 6 (p. 16) and 10 (p. 24) should clarify which year (or years) are represented by the “Avg. Daily Production MGD”, which represents an estimate of current demand.

**RESPONSE:** Referenced tables were modified.

11. • The WRE notes that the County water/sewer service areas include areas with failing water and sewer systems planned for future connection to community systems (p. 6). The WRE could include an estimate of the amount of capacity needed from specific systems to serve these areas.

**RESPONSE:** Table 7 & 8 (Water) and Table 11 (Sewer) includes this information.

12. • The County should review its Land Preservation, Parks, and Recreation Plan and identify measures that will implement the Water Resources Element strategies.

**RESPONSE:** This analysis was performed as a function of the WRE’s background studies and was found to have no impact.

13. • The WRE should include the following edits:
- The WRE states that the intent of the WRE is to address the relationship of planned growth to water resources for both waste disposal and safe drinking water. Since the WRE addresses more than drinking water, the language should reference drinking water and “other water resources” (p. 1).

**RESPONSE:** Text has been modified to include stormwater management and receiving waters, as recommended.

14. ○ The first sentence of Section 2.8, Growth Projections (p. 7) should be revised to refer to the Allegany County Water and Sewerage Plan” not the Water and Sewer Plan.

**RESPONSE:** Actual title of the 2007 document was “2007 Allegany County Water and Sewer Plan”.

15. ○ On page 11, Section 3.2.2, since impoundments are not technically source waters, the language could be revised to state, “The source for the water supply for the municipalities of Cumberland, Frostburg, Westernport, and Lonaconing comes from outside of the jurisdiction. The water also is stored in reservoirs located outside of these jurisdictions.”

**RESPONSE:** WRE text has been modified as recommended.

16. ○ For Map 6 (p. 12), provide a footnote that defines the categories within the legend (i.e., least pervious, moderately pervious, and most pervious).

**RESPONSE:** 3.2.3 text defines categories.

Comments on the water demand analysis:

17. ● **Table 6 (p. 16) should be revised to include and separate out future water demand from non-residential uses (e.g., commercial, industrial, institutional) within the planning period (by 2040) and should list the current water treatment capacity (for those systems that require a separate water treatment system) since this presents an additional possible constraint.**

**RESPONSE:** See response to comment #2.

18. ● **A footnote to Table 6 should clarify whether “Safe Yield MGD” refers to the water appropriation permit limit. If not, Table 6 also should include the water appropriation permit limit for each system.**

**RESPONSE:** See response to comment #10.

19. ● **Table 6 indicates that the Rawlings water system does not have adequate capacity to serve future growth. Although Table 8 (p. 19) includes a “Rawlings Water Study” and “Rawlings Water System Improvements”, the WRE should provide details on whether these water projects will resolve the deficit at the Rawlings water system. If not, the WRE should include actions the County will take to resolve this deficit.**

**RESPONSE:** Item 9 on Table 8 calls for a study to determine necessary improvements – including cost. Item 11 on Table 8 is the implementation of the recommendations of Item 9, which is why cost data is not identified for Item 11, Table 8. The purpose of the study is to identify the remedial actions necessary. Until the study is complete, the solution(s) cannot be specified.

Comments on the sewer demand analysis include:

20. • **Table 10 (p. 24) should be revised to include and separate out future sewer demand from non-residential uses within the planning period (by 2040).**

**RESPONSE:** See response to comment #2.

21. • **Table 10 indicates that the Flintstone sewer system does not have adequate capacity to serve future growth. Table 11 (p. 26) does not appear to include a project to resolve the deficit at the Flintstone sewer system. The WRE should describe actions the County will take to resolve this deficit.**

**RESPONSE:** At the time of the initial development of the WRE, remedial action(s) had not been identified. Since that time however, the County Public Utilities Division through the development of the “Comprehensive Water and Sewer Study” and the preparation of the Draft 2011 Water and Sewerage Plan has developed a preliminary plan for improvements. Table 11 was modified to include this project.

22. • **To add clarity, the headings in Table 10 (p. 24) that refer to “Safe Yield MGD” and “Avg. Daily Production MGD” should be revised to read “WWTP Permitted Capacity MGD” and “Avg. Flow MGD 2008-2010”. If the information under these headings does not represent the WWTP permitted capacity and average flow from each WWTP, then they should be replaced with the appropriate information.**

**RESPONSE:** See response to comment #10.

23. • **The WRE should resolve the discrepancy between sewer capacity and sewer demand figures listed for the Rocky Gap WWTP in Table 10 and within Section 3.11 (p. 29). In Table 10, sewer capacity and sewer demand for the Rocky Gap WWTP appears to be 0.12 MGD and 0.043 MGD, respectively, while within Section 3.11, the sewer capacity and sewer demand is listed as 0.239 MGD and 0.3 MGD, respectively.**

**RESPONSE:** Action 2.2 has been modified.

24. • **The WRE should list the Maryland Tributary Strategy point source caps for each of the WWTPs within the County and should compare the caps to 2040 forecasted point source loads. The caps are listed on p. 11 of the *Maryland’s Chesapeake Bay Tributary Strategy Statewide Implementation Plan* at [http://www.dnr.state.md.us/bay/tribstrat/implementation\\_plan.html](http://www.dnr.state.md.us/bay/tribstrat/implementation_plan.html). MDE or MDP can assist the County in forecasting 2040 point source loads.**

**RESPONSE:** Data in the referenced source could not be verified for accuracy and consequently was not included.

Comments on the proposed methods for protecting the county's source water:

25. • The County should be commended for including strong source water protection policies in its WRE (p. 29) and for its discussion of Source Water Assessments (pp. 18-19).

Comments on identifying suitable receiving waters:

26. • The County should be commended for its tracking and mapping of stormwater management facilities and its analysis of impervious surface. The WRE could modify Policy 5 (p. 41) to include impervious surface percentage goals for particular watersheds within the County since this would be more supportive of stream habitat protection than a countywide goal.

**RESPONSE:** See Comment #1.

27. • **The WRE should include an evaluation of the nutrient pollution impact of implementation of the 2002 Allegany County Comprehensive Plan Update through the planning period (2040).** The evaluation should include future nutrient pollution from WWTPs, septic tanks, and stormwater runoff.

**RESPONSE:** No discharge increases are being recommended, therefore, no increases in nutrient pollution from WWTPs will occur. The anticipated reductions in wastewater volume (through CSO and I&I improvements) will significantly reduce nutrient contributions from point sources. The County has fully-implemented the new Stormwater Management Ordinance that prioritizes ESD to the MEP. Approximately 85 percent of the County's existing homes are connected to public water and wastewater systems. The preponderance of the County's future development (75 percent) will be serviced via public wastewater systems, therefore, in all probability, the implementation of the Plan will result in a neutral - if not positive outcome - with regard to nutrient pollution.

The County's TMDL/Watershed Improvement Plan response will result in a comprehensive strategy for nutrient and sediment reduction that will include detailed recommendations which will serve to further improve the quality of receiving waters.

See also response to comment #1.

28. • **The WRE should identify the WWTP discharge locations.** This could be added to Table 9 (p. 21). This information is needed for the nutrient pollution analysis to determine the point source contribution by watershed.

**RESPONSE:** See response to comment #4.

29. • The WRE should include a recommendation (e.g., in Section 4.7 on p. 41) for new procedures to ensure that future nonpoint source and point source loading analyses are instituted within local government planning and decision-making processes. As Allegany County develops its 12 individual, small-area plans, the County should complete nutrient loading analyses as a method to compare the pollution impact of different land use plan options. The result of these analyses and how they inform the choice of land use plan should either be referenced in or included as an appendix to each small area plan. MDE and MDP are available to work with Allegany County to complete these analyses. In addition to reducing future impacts from new development, the analyses can be used to estimate and minimize the amount of nutrient offsets needed to meet the EPA Chesapeake Bay TMDL requirement to account for growth (see Section 10 of the Chesapeake Bay TMDL at <http://www.epa.gov/chesapeakebaytmdl/> and Section 3 of the Full Report of the Maryland Phase I Watershed Implementation Plan at [http://www.mde.state.md.us/programs/Water/TMDL/TMDLHome/Pages/Final\\_Bay\\_WIP\\_2010.aspx](http://www.mde.state.md.us/programs/Water/TMDL/TMDLHome/Pages/Final_Bay_WIP_2010.aspx)).

**RESPONSE:** The County has been and will continue to work with State resource and technical experts in the development of small area plans. Additionally, specific text was added to the Executive Summary on page 1 and 2.

30. • **The WRE does not yet discuss the suitability of receiving waters.** To address this, one option would be to include the following sentences in the WRE: “the presence of a TMDL is a sign that pollution control efforts must outweigh additional pollution impacts from future land use change, septic tanks, and WWTP flows to prevent further degradation of the waterbody. For the receiving waters in Allegany County without a nutrient TMDL, a determination of the suitability of receiving waters cannot be made. However, for the Evitts Creek and Georges Creek watershed, which have nutrient TMDLs (p. A-4), a preliminary assessment can be made. Pollution forecasts, although capable of comparing the relative benefits of different land use plans, are not yet precise enough to allow for a direct comparison to nutrient TMDLs. Allegany County recognizes though that Evitts Creek and Georges Creek, because of the presence of a nutrient TMDL, can only be considered suitable receiving waters if future nutrient impacts are offset. This WRE includes recommendations for pollution control efforts to help achieve that goal.”

**RESPONSE:** On the contrary, the WRE does address receiving waters. The County’s primary strategy for nutrient reduction focuses on a combination of continued CSO and I&I progress. As noted, a large percentage of the County’s current wastewater volumes could be eliminated through the implementation of these upgrades and maintenance, however to clarify, a new policy and action has been added and specific text was incorporated into Executive Summary on page 1 and 2.

Finally, it should be noted that MDE authorizes all point source discharges, such as WWTP. Currently, each of the WWTP’s in Allegany County are operating under a duly issued permit from MDE. Unless MDE plans to terminate these permits and direct the treated effluent from

these plants to be discharged elsewhere, the County is – and will continue to – operate under the assumption that receiving waters are suitable for discharge under the conditions stipulated in the MDE authorization. No new point source discharges are identified in this plan element, therefore no suitability assessment is called for. Additionally, no capacity increases are being recommended, therefore, no increases in nutrient pollution from WWTPs will occur. The anticipated reductions in wastewater volume (through CSO and I&I improvements) will significantly reduce nutrient contributions from point sources. The County has fully-implemented the new Stormwater Management Ordinance that prioritizes ESD to the MEP. Approximately 85 percent of the County’s existing homes are connected to public water and wastewater systems and three-fourths of the County’s future development is expected to be serviced by public water and wastewater resources.

The County’s TMDL/Watershed Improvement Plan response will result in a comprehensive strategy for nutrient and sediment reduction that will include detailed recommendations which will serve to further improve the quality of receiving waters.

Allegany County’s receiving waters will certainly benefit from these ongoing activities as well as the County’s future land use and development visions.

# **Appendix C**

# **Supporting Plan**

# **Initiatives**

# **Appendix D**

# **Sources**

Sources
Prepared by Allegany County Planning Staff. <u>Comprehensive Plan 2002 Update</u> . Allegany County, MD: 2002.
Prepared by Allegany County. <u>Master Water and Sewer Plan</u> . Allegany County, MD: 1970.
Prepared by United States Geological Survey. <u>Estimated Use of Water in the United States in 2005</u> . Available at: <a href="http://water.usgs.gov/watuse/">http://water.usgs.gov/watuse/</a> . September 2010.
Prepared by Maryland Department of Planning. <u>Population Projections by Jurisdiction</u> . February 2009.
Prepared by Allegany County Staff-Elizabeth Stahlman and Dan DeWitt. <u>Water &amp; Sewer Data Table Information</u> . Allegany County, MD: September 2010.
Prepared by Allegany County GIS Staff. <u>GIS Data Layers – Storm Water Management Facility Database</u> . Allegany County, MD: September 2009.
Prepared by Allegany County GIS Staff. <u>GIS Data Layers-Planometrics</u> Allegany County, MD: 2009.
Prepared by Maryland Department of the Environment-Water Supply Program. <u>Source Water Assessment for Lake Koon &amp; Lake Gordon</u> . Maryland: 2002.
Prepared by Maryland Department of the Environment-Water Supply Program. <u>Source Water Assessment for Rocky Gap State Park Water Treatment Plan</u> . Maryland: 2006.
Prepared by Maryland Department of the Environment-Water Supply Program. <u>Source Water Assessment for the Midland-Lonaconing Water System</u> . Maryland: 2004.
Prepared by Maryland Department of the Environment-Water Supply Program. <u>Source Water Assessment for the Piney Creek Reservoir &amp; Savage River Pumping Station</u> . Maryland: 2004.
Prepared by Maryland Department of the Environment-Water Supply Program. <u>Source Water Assessment Plan for the Town of Westernport</u> . Maryland: 2004.
Prepared by the Midland-Lonaconing Source Water Protection Planning Committee. <u>Source Water Protection Plan for Midland-Lonaconing Water System</u> . Maryland: 2004.
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“Water Quality Standards.” Available at: <a href="http://www.mde.state.md.us">http://www.mde.state.md.us</a> . September 2010.
“Maryland’s 2008 Integrated Report Search.” Available at: <a href="http://www.mde.state.md.us/Programs/WaterPrograms/TMDL/Maryland%20303%20dlist/index.asp">http://www.mde.state.md.us/Programs/WaterPrograms/TMDL/Maryland%20303%20dlist/index.asp</a> . July 2009.
“Maryland’s COMAR 26.08.02.01.” Available at: <a href="http://www.dsd.state.md.us/comar/26/26.08.02.01.htm">http://www.dsd.state.md.us/comar/26/26.08.02.01.htm</a> . June 2009.
“Wellhead Protection.” Available at: <a href="http://www.mde.state.us/Programs/WaterPrograms/WaterSupply/wellheadprotectin/index.asp">http://www.mde.state.us/Programs/WaterPrograms/WaterSupply/wellheadprotectin/index.asp</a> . August 2009.