



Proposed Text Amendment to the Comprehensive Water Supply and Sewerage Systems Plan for the Glen Hills Area Sanitary Study

fvb

Frederick Vernon Boyd, Master Plan Supervisor, Area 3, fred.boyd@montgomeryplanning.org, 301 495 4654

RAW

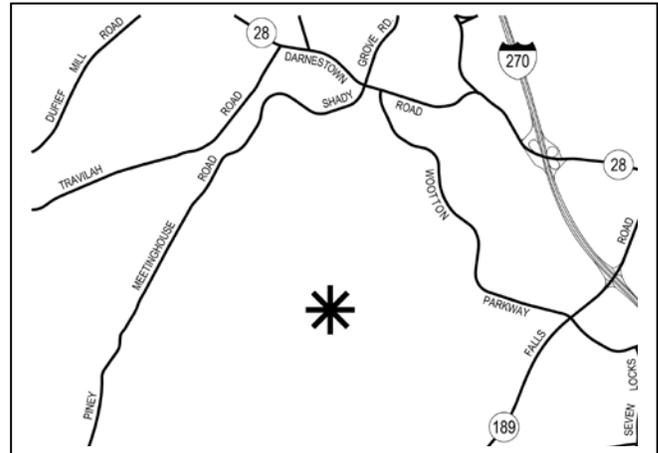
Richard Weaver, Acting Chief, Area 3, richard.weaver@montgomeryplanning.org, 301 495 4544

Date Completed: 9/17/15

Description

Proposed Text Amendment to the Comprehensive Water Supply and Sewerage Systems Plan for the Glen Hills Area Sanitary Study

The County Executive has proposed a text amendment to the Comprehensive Water Supply and Sewerage Systems Plan, following a Department of Environmental Protection study of sanitary conditions in the Glen Hills neighborhood. The 2002 Potomac Subregion Master Plan recommended the study to allow formulation of a wastewater disposal policy for the community, which largely developed using septic systems and has experienced scattered septic system failures.



Summary

The 2002 Potomac Subregion Master Plan recommended a sanitary study for the Glen Hills neighborhood to allow formulation of a wastewater disposal policy for the community, which largely developed using septic systems and has experienced scattered septic system failures. The Master Plan recommended a sewer extension policy that would limit public sewer service to properties that could demonstrate septic system failures and where sewer service could be extended in an environmentally acceptable manner. The Department of Environmental Protection (“DEP”) completed the study in 2013, and the Executive recommended earlier this year that the new wastewater treatment policy establish on-site septic disposal systems as the primary disposal method for Glen Hills. The Executive’s proposal also establishes specific conditions for consideration of public sewer service in Glen Hills. The conditions would allow extension of public service when individual property owners can demonstrate septic system failures; when larger areas with public health problems are formally designated; when properties abutting existing or planned sewer mains meet existing policy standards; and for properties with septic failures that are located in the Piney Branch restricted service area.

The County Council held a public hearing on the proposed amendment on September 17. The Council has agreed to hold the public record open to receive the Planning Board’s recommendation. The Council’s Transportation, Infrastructure, Energy and Environment Committee will discuss the proposed amendment on October 5.

RECOMMENDATION: Approval of the text amendment

BACKGROUND

The 2002 Potomac Subregion Master Plan, in its own words, “is based on environmental principles.” (p 33) The Plan reinforces this concept organizationally by locating the Environmental Resources Plan as the first substantive chapter of the Plan. The Plan recognizes the importance of sewer service policies to the environment by including detailed policy recommendations in the Environmental Resources Plan. The Glen Hills area, an enclave adjacent to the City of Rockville, is one of three areas for which the Plan makes specific policy recommendations.



In Glen Hills, these recommendations center on wastewater treatment. The neighborhood developed with septic systems rather than public sewer service. During the 1950s and 1960s, when much of the community developed, standards for septic systems were significantly less strict than they are now, and,

by the time the 2002 Master Plan development process began, some properties in the neighborhood had suffered septic system failures. In response, the Plan supported “a study of the septic system failures in Glen Hills to develop the measures necessary to ensure the long-term sustainability of septic service for new home construction and existing home renovations, and to address the need for limited sewer extensions if needed.” (p. 23-4)

The Master Plan (p 24) specified six elements to be included in the study:

- “Delineation and possible reasons for known septic failures.
- Groundwater testing if needed.
- Preparation of a logical and systematic plan for providing community sewer service if needed.
- Emphasis on extension of sewer mains within public right-of-way rather than within stream valleys.
- An evaluation and recommendation of the abutting mains policy for this area.
- Exclusion of properties that are environmentally sensitive and cannot be developed in conformance with established environmental guidelines.”

The Master Plan stated that the study should form the basis of “a policy outlining the measures needed to ensure the long-term sustainability of septic service for new home construction and existing home renovation, minimizing the need for future sewer extension.” It went on to state that, under the policy, “the sole basis for providing new sewer service would be well-documented septic failures where extension could be provided consistent with the results of the study and in a logical, economical and environmentally sensitive manner.” (p 24)

The Department of Environmental Protection hired a consulting firm to do the study, which had two phases. The firm, AMT Consulting Engineers, completed the study in 2013. AMT stated in its final Phase 1 report that “the purpose of this study is to gather and assess data to determine the future reliability and sustainability of septic systems within the study area...” (p. 5). AMT collected and analyzed well and septic permit data and GIS information. The firm confirmed the neighborhood’s topography and natural feature locations in the field. Community outreach included public meetings and surveys, as well as the creation of a citizens’ advisory committee made up of local residents with varying levels of experience with septic and public sewer systems in the neighborhood.

Phase I of the study used eight parameters, ranging from the age of a property’s septic system and the rate at which water percolated through its system to the area’s soils classifications and topography. AMT used this information to create maps that it asserted would show areas that were unsustainable for septic systems under any of the eight parameters. The study identified nine failing septic systems in Glen Hills. The study nonetheless concluded that about a third of the study area—36 percent—was unsuitable for septic wastewater disposal under at least one of the eight parameters. It also concluded that half of the operating septic systems in Glen Hills were without reserve drainfields for use when an initial drainfield failed. For these reasons, the Phase I report recommended Phase II to evaluate alternatives for wastewater disposal in the community.

Phase II assumed that satisfying current septic design regulations with a traditional method of septic disposal—deep stone trench systems—could prove problematic. So the study evaluated other types of disposal systems, including shallow stone trench systems, sand mounds and drip disposal systems. The study did not attempt to apply these prospective technologies to specific properties. The study also evaluated 13 conceptual alignments for public sewer throughout Glen Hills. The consultant developed

broad cost estimates for both innovative septic systems and public sewer service, and concluded that septic disposal would cost less than extension of sewer lines.

The study generated considerable controversy. Some residents, in the wake of the study, have advocated for a comprehensive solution to wastewater disposal in Glen Hills, arguing that, while reported septic system failures are few in number, a larger group of property owners have systems that are under considerable stress, leading to problems with odors and difficulties associated with marketing their homes. Opponents of the study coalesced into an informal committee, which was led by Glen Hills residents who had been on the citizens' advisory committee. The group sharply criticized the study's methodology, particularly its reliance on modeling in place of assembling and analyzing information on the actual condition of existing septic systems. The group noted that the Master Plan had recommended both analysis of known septic failures and groundwater testing if needed and asserted that the AMT study had provided neither. The group considered the identification of broad areas as "unsustainable" for septic disposal systems particularly inappropriate, and an illegitimate basis for the Phase II evaluation of conceptual sewer extensions.

After reviewing the study and meeting with local residents, the County Executive made four recommendations:

- To maintain consistency with sewer service policies articulated in the Potomac Subregion Master Plan, and because public sewer service is not generally available in Glen Hills, property owners should first consider septic disposal systems for new development or replacing existing systems;
- Documented health problems caused by septic system failures should remain the only justification for constructing new sewer extensions; if larger areas suffer such failures, existing Water and Sewer Plan policies are available to address such situations;
 - WSSC, Montgomery and Prince George's counties should develop a main extension process that improves affordability for property owners;
- Allow use of the existing Water and Sewer Plan policy for abutting mains in Glen Hills;
- Maintain the existing Piney Branch restricted sewer service access policy for the portions of the Glen Hills study area within that watershed.

ANALYSIS

The text amendment to the Water and Sewer Plan now under review reflects the Executive's recommendations. It clearly indicates that individual, on-site septic systems are and should continue to be the primary means of wastewater disposal in Glen Hills. It strictly limits consideration of community sewer service to four conditions:

- Relief for individual properties with health problems resulting from documented septic system failures;
- Properties in a specifically designated public health problem area;
- Properties that abut existing or planned sewer mains and satisfy the policy requirements in the "abutting mains" policy;
- Properties located in both the study area and the Piney Branch watershed that meet requirements of the Piney Branch restricted sewer access policy.

The proposed text amendment precisely conforms to the policy recommendations of the 2002 Potomac Subregion Master Plan. The Master Plan proposes a policy under which “the sole basis for providing new sewer service would be well-documented septic failures where extension could be provided consistent with results of the study and in a logical, economical and environmentally acceptable manner.” (p 24) The text amendment offers four conditions that will enable resolution of future septic system failures by allowing extensions of public sewer service: when septic failures can be documented; when public health problem areas are designated; when properties can meet abutting mains requirements (which requires the property or building on the property to have existed *before* the sewer line was extended to the area); and when the requirements of the Piney Branch restricted service policy can be met. (The Subregion Master Plan recommended modifications to the existing service policy that were included in the Water and Sewer Plan.)

More broadly, the proposed text amendment reinforces the 2002 Potomac Subregion Master Plan’s long-standing land use vision for Glen Hills—as a low density residential community whose development using septic systems would contribute to protecting natural resources. Earlier master plans sought to use the provision of sewer service to help set appropriate densities in parts of the Subregion. The 1980 Potomac Master Plan set four stages for providing public sewer service; it placed Glen Hills in stage 4, which would be evaluated only after higher priority areas (generally, unserved areas in the R-200 Zone that could take advantage of existing road capacity and would, at the time, provide moderately priced dwelling units) received service.

By 2002, the Master Plan stated, “a comprehensive evaluation indicates that providing community sewer service to areas zoned for one- and two-acre development, and contrary to smart growth policies, has undermined the environmental emphasis of zoning areas for low-density development, especially where septic suitability is marginal.” (p 22) The Plan therefore generally recommended against public sewer service for low-density areas in the RE-1 and RE-2 zones, except for properties at or very near the edge of previously approved areas.

It should be noted that under the Sustainable Growth and Agricultural Preservation Act of 2012, whose goal was to limit the impact of large subdivisions using septic systems on sensitive environmental resources, most of the Glen Hills neighborhood was designated a Septic Tier III area. Tier III areas are generally large-lot residential communities that are not planned for sewerage service. This designation reflects the policy recommendations of the 2002 Master Plan. Glen Hills’ Tier III designation is included in the official map displaying septic tiers for Montgomery County. The Council may amend official tiers only through amendments to the General Plan or by amendments to the Subdivision Regulations.

CONCLUSION

The Executive’s proposed amendment to the Comprehensive Water Supply and Sewerage Systems Plan is consistent with both the Potomac Subregion Master Plan’s specific recommendations for evaluating sewer service in the community and with the Master Plan’s broader land use goals for the preservation of low-density residential resources in Potomac. It reinforces the Plan’s environmental focus by using septic suitability as a “proxy” for managing densities and allowing environmental constraints to limit the environmental impact of residential development. Planning staff recommends that the Planning Board support the proposed amendment, and transmit comments to the County Council for Council consideration.

Attachment



OFFICE OF THE COUNTY EXECUTIVE
ROCKVILLE, MARYLAND 20850

Isiah Leggett
County Executive

MEMORANDUM

June 2, 2015

TO: George Leventhal, President
Montgomery County Council

FROM: Isiah Leggett, Montgomery County Executive 

SUBJECT: Transmittal of a Water and Sewer Plan Text Amendment for the Glen Hills Area Sanitary Study

This transmittal provides the County Council with a proposed Water and Sewer Plan amendment that converts my sewer service recommendations for the Glen Hills Study Area into a format for inclusion with other service policies in the Plan text.

On March 30, 2015, I provided the County Council with a memo summarizing the results of the Glen Hills Area Sanitary Study. That memo also provided my recommendations for sewer service policies for the Glen Hills Study Area. These recommendations were developed in order to begin the Council's consideration of sewer service policies for the study area, as called for in the 2002 Potomac Subregion Master Plan.

Keith Levchenko of the Council's staff subsequently advised my staff that the Council preferred to address the Glen Hills area sewer service policy issues in the context of a Water and Sewer Plan text amendment. Using the recommendations from my previous memo, the Department of Environmental Protection (DEP) prepared the attached text amendment package for the Council's consideration.

For convenience, a copy of my March 30, 2015, memo is included with this package. The Phase 1 and Phase 2 Glen Hills Area Sanitary Study reports are available for review and download at DEP's Glen Hills webpage: www.montgomerycountymd.gov/glenhills.



George Leventhal, President

June 2, 2015

Page 2

Staff from DEP will be available to discuss the Glen Hills Area Sanitary Study and the proposed text amendment at work sessions with the Transportation, Infrastructure, Energy, and Environment Committee and with the full Council.

IL:as

Attachment

c: Virginia Kearney, Acting Director, Water Management Administration,
Maryland Department of the Environment
David Craig, Secretary, Maryland Department of Planning
Casey Anderson, Chair, Montgomery County Planning Board
Jerry Johnson, General Manager, Washington Suburban Sanitary Commission
Lisa Feldt, Director, Department of Environmental Protection
Diane Schwartz Jones, Director, Department of Permitting Services

**COMPREHENSIVE WATER SUPPLY AND SEWERAGE SYSTEMS PLAN AMENDMENTS
County Executive's June 2015 Transmittal**

Chapter 1 Text Amendment Related to the Glen Hills Area Sanitary Study

Page 1

PROPOSED TEXT AMENDMENT CPTA 15-CH1-01T

Chapter 1, Table 1-T3: Special Master Plan Water and Sewer Service Recommendations

Glen Hills Study Area Sewer Service Policies

County Executive's Recommendation: Approve the recommended text amendment to establish sewer service policies for the Glen Hills Study Area.

Executive Staff Report

On March 30, 2015, the County Executive transmitted recommendations to the County Council for sewer service policies for the Glen Hills Study Area. (See the transmittal memo at pgs. 7 - 14.) The service recommendations were based on the results of the Glen Hills Area Sanitary Study, which was undertaken by the Department of Environmental Protection as recommended in the 2002 Potomac Subregion Master Plan.

The following text amendment takes the Executive's sewer service policy recommendations from the March 30, 2015, memo and converts them into the format of policy language for the Water and Sewer Plan text. It amends existing language addressing the Glen Hills Neighborhoods found in Chapter 1, Section II.E.1., Table 1-T3: Special Master Plan Water and Sewer Service Recommendations.

Introductory language for the text amendment begins below. Table 1-T3 is shown on page 2; only that part of the table addressing the Glen Hills area is included in the amendment. Water and Sewer Plan Chapter 1 service policies referenced in the following amendment are found on pages 3 - 5. A reference map of the study area is provided on page 6.

CPTA 15-CH1-01T

Amendment Key: Underscored Text: Recommended Addition [Bracketed Text]: Recommended Deletion

CHAPTER 1: Objective and Policies

II. POLICIES FOR THE PROVISION OF WATER AND SEWERAGE SERVICE

E. Special Policies for Water and Sewer Service - In addition to the preceding general service policies, the County Council has adopted specific policies for the provision of community water and/or sewer service which create exceptions to the general service policies. The Council has also adopted service recommendations in local area master plans which create exceptions to the general service policies.

1. Master Plan Recommended Exceptions -- The preceding sections discussing general water and sewer service policies noted that local area master plans may recommend exceptions to those general service policies. In order to implement specific development and land use strategies, a master plan may recommend policies for community water and/or sewer service which can be either less restrictive or more restrictive than this Plan's general service policies. When a master plan makes such a recommendation, it must also include an appropriate justification for the recommended departure from the general policies. DEP staff coordinate closely with M-NCPPC staff with regard to the water and sewer service recommendations developed in local area master plans.

These exceptional recommendations are, of necessity, scattered throughout the County's various local area master plans. The following table is intended to consolidate and summarize these recommendations into convenient format and to make them part of this Plan. For additional information concerning these issues, please refer to the master plans cited below.

Table 1-T3: Special Master Plan Water and Sewer Service Recommendations	
General Area Affected	Master Plan Service Recommendation & Comments
Potomac Subregion Master Plan (2002)	
Glen Hills Study Area [Neighborhoods (as defined in the 2002 master plan.)]	<p>The 2002 Potomac Subregion Master Plan recommended new community sewer service be limited only to documented public health problems pending the completion of an area-wide sanitary survey by DPS and DEP.</p> <p>With the master plan-requested study completed in 2014, the following service policies apply to the Glen Hills Study Area:</p> <ul style="list-style-type: none"> • <u>Individual, on-site septic systems are the primary wastewater disposal method consistent with the area's standard-type development under the RE-1 Zone.</u> • <u>Community sewer service can be considered only under the following conditions for:</u> <ul style="list-style-type: none"> ○ <u>Properties in need of relief from public health problems resulting from documented septic system failures (Sections II.B.5.b. and II.E.2.).</u> ○ <u>Properties included within a specifically designated public health problem area (Sections II.B.5.a. and II.E.2.).</u> ○ <u>Properties that abut existing or planned sewer mains and that satisfy the requirements of the "abutting mains" policy (Section II.E.3.a.)</u> ○ <u>Properties within the study area and within the Piney Branch subwatershed that satisfy the requirements for community sewer service under the Piney Branch restricted sewer service policy (Section II.E.12.b.).</u> <p>[The master plan recommends that only documented public health problems shall be justification for the approval of sewer service area category changes within this area, pending the completion of an area-wide sanitary survey by DPS and DEP.]</p>

End of CPTA 15-CH1-01T

Excerpts from Chapter 1 Referenced in the Preceding Text Amendment

II. POLICIES FOR THE PROVISION OF WATER AND SEWERAGE SERVICE

The water and sewer service policies addressed in this section of the Plan provide the basis for establishing what areas of the county will receive community versus individual systems service. The Plan uses water and sewer service area categories both to designate areas eligible for either community or private service and to provide a staging element for the provision of community service. These policies provide guidance not only in evaluating individual and general service area change amendments, but also in the preparation of development and water/sewer service recommendations in the County's land use master plans.

The County Council relies primarily on these service policies in evaluating and acting on Water and Sewer Plan amendments. However, the scope of the Council's responsibilities goes far beyond this Plan and includes issues such as the county-wide economic growth, public health and safety, transportation infrastructure, and public education. The Council has the authority and responsibility to consider such issues where they may affect its actions with respect to this Plan. Given this, the Council may reach conclusions regarding this Plan or its amendments which do not necessarily follow the policies provided in the following sections; in such cases, the Council will provide an explanation of the issues involved and rationale for actions that may vary from these standard policies.

B. Water and Sewer Service Development Policies by Service Area Designation -- The following policies govern the provision of water and sewer service under each of the County's service area categories:

5. Categories W-5 and W-6, and S-5 and S-6 -- Individual water supply or sewerage systems, not of an interim nature, shall be permitted to be installed in any portion of the County designated as categories W-5 or W-6 and S-5 or S-6, consistent with COMAR 26.03.01, 26.03.05, and 26.04.02 - .04, and County Executive Regulations 28-93AM, "On-Site Water Systems and On-Site Sewage Disposal Systems in Montgomery County". Individual systems may be installed within these areas on an indefinite basis without firm obligation to connect to a community system, when and if it becomes available.

Within areas designated as categories W-5 and S-5, the construction of dry community systems shall not be required for subdivisions or individual properties which develop using individual on-site systems. DEP may recommend water and/or sewer map amendments to designate subdivisions developing on individual systems as categories W-6 and/or S-6.

Section II.B.5.a.

a. Area-Wide Public Health Hazards -- Under conditions that a defined area of the county has an **existing or anticipated health hazard**, DPS, in coordination with DEP, may recommend the construction of a community system for water or sewerage service. Any such community system shall be operated by a public agency and be approved by the County Council as a formal amendment to the plan. The issues and alternatives relative to such a recommendation for properties in categories will be reviewed by DEP as a proposed category change request, initiated by the County.

Section II.B.5.b.

b. Individual Public Health Hazards -- Under conditions of an **existing or anticipated health hazard**, as certified in writing by DPS, DEP may require connections of individual structures to a community system if available, and may require service extensions when deemed desirable. DEP will coordinate a category change for the site, usually through the administrative delegation process, although WSSC need not await approval of such an amendment prior to providing community service.

E. Special Policies for Water and Sewer Service - In addition to the preceding general service policies, the County Council has adopted specific policies for the provision of community water and/or sewer

COMPREHENSIVE WATER SUPPLY AND SEWERAGE SYSTEMS PLAN AMENDMENTS
County Executive's June 2015 Transmittal

Chapter 1 Text Amendment Related to the Glen Hills Area Sanitary Study

Page 4

service which create exceptions to the general service policies. The Council has also adopted service recommendations in local area master plans which create exceptions to the general service policies.

Section II.E.2.

2. Community Service to Relieve Public Health Problems -- Community water and/or sewer service may be extended to existing structures to alleviate or eliminate existing or anticipated public health problems, upon certification of such by the Director of the Department of Permitting Services (DPS) or his or her designee. DEP, in coordination with WSSC, shall evaluate whether the provision of community service is reasonable. If appropriate, DEP will direct WSSC to expedite the provision of community water and/or sewer service either by a connection to existing mains or by the extension of new mains in order to relieve the public health problem. Under these circumstances, community service will be provided regardless of the existing service area category, and WSSC need not wait for a service area change approval in order to plan, design, or implement the service. DEP may act to approve related service area changes through the administrative delegation process, Section V.F.2.a.: Public Health Problems. In such cases, community service will generally be limited to a single water and/or sewer hookup for existing properties. The provision of community service under this policy shall not be used as justification for the connection of intervening or nearby lots or parcels if they would not otherwise be entitled to connect to community systems. In addition, DEP will coordinate with DPS to identify, as necessary, larger-scale, chronic public health problem areas and to recommend solutions for those problems in this plan. A decision to extend community service will depend on the number of properties affected, the feasibility of service, and the viability of alternative relief methods.

3. Community Service for Properties Abutting Existing Mains -- Under specific and limited circumstances, community water and or sewer service may be provided to properties which abut an existing or approved water and/or sewer main. The provision of community service requires that the property, or a structure on the property must have been established prior to the extension of the abutting main. A residence, business, or institution (church, school, etc.) qualifies as an existing structure; a barn, garage, or other type of outbuilding does not qualify. The provisions of this policy do not include community service for private institutional facilities (PIFs), which must be addressed through the PIF policy (see Section II.E.4.).

Community service must be technically feasible from the abutting main. Major water and sewer transmission mains and sewer force mains cannot support individual service connections and hookups, and therefore do not qualify abutting properties for community service under this policy.

This policy may be used in cases where a property is not otherwise eligible for such service under the general policies of this Plan. Under this policy, the provision of community service is allowed under the following circumstances:

Section II.E.3.a.

a. Single Hookups Only -- A single water and/or sewer hookup only is allowed for an individual property or for a structure which abuts an existing or approved water and/or sewer main. The subject property or structure must predate the abutting main. A change in the property configuration due to the dedication of land for a public use such as a road right-of-way or park land shall not invalidate this allowed single hookup. Neither shall an exchange of land between adjacent, qualifying properties invalidate this allowed hookup, provided the overall number of qualifying lots and therefore allowed hookups remains the same. DEP may grant approval for this single hookup under the administrative delegation policies included in this chapter (Section V.F.2.b.: Properties Abutting Existing Mains).

DEP may direct WSSC to provide an allowed single, residential water and/or sewer hookup upon 1) staff confirmation that the property qualifies for service under this policy, and 2) DEP's receipt a category change request for the property. Only in such cases may DEP approve service from an abutting main in advance of granting the actual service area category approval. Commercial and institutional uses must first receive the required service area change.

COMPREHENSIVE WATER SUPPLY AND SEWERAGE SYSTEMS PLAN AMENDMENTS
County Executive's June 2015 Transmittal

Chapter 1 Text Amendment Related to the Glen Hills Area Sanitary Study

Page 5

12. Special and Restricted Community Service Areas -- In addition to the preceding policies, the County may also designate specific areas for or restrict specific areas from community water and/or sewer service in order to achieve specific development goals, to promote environmental protection, or to address other special concerns. These areas are shown in Figure 1-F3 and are listed below:

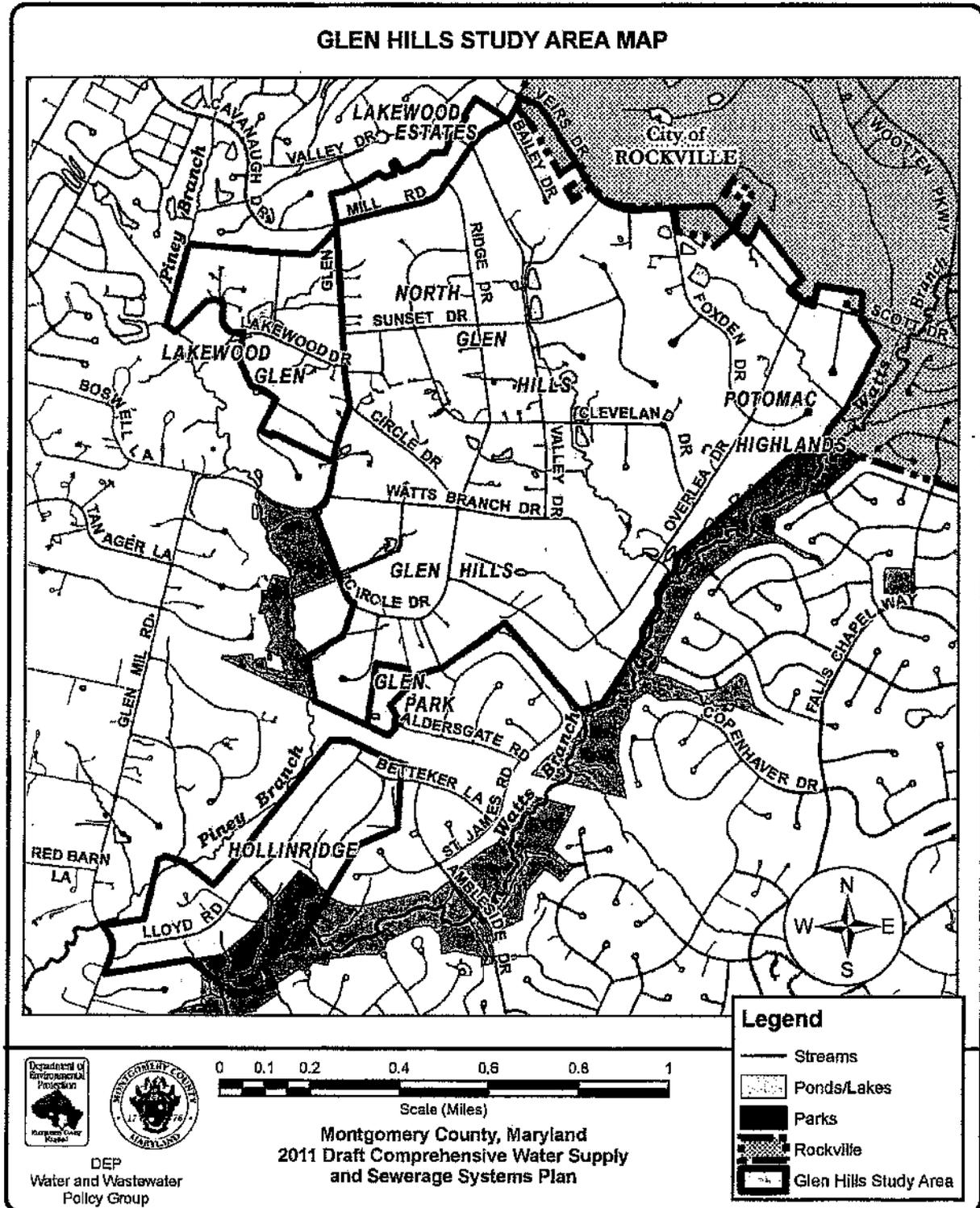
Section II.E.12.b.

b. Piney Branch Restricted Sewer Service Area -- In 1991, the County Council established a policy to restrict the availability of community sewer service in the Piney Branch Watershed, which is designated as one of the county's Special Protection Area watersheds. Through the Piney Branch Sewer Restricted Access Policy, the Council sought to limit the growth of public sewer-dependent development within and near this environmentally-sensitive watershed, particularly within the areas of the watershed zoned for one- and two-acre development. The Council subsequently amended the policy in March 1997 under CR 13-830 and again in October 2002 under CR 14-1481. By these actions, the Council has specifically designated the Piney Branch Trunk Sewer and its tributary mains as **Limited Access** mains (see Section III.A.2.).

This restricted access policy was recently reexamined in the context of interrelated land use, zoning, and sewer service recommendations in the 2002 Potomac Subregion Master Plan; the following conditions reflect the policy changes recommended by the new master plan. In order to be eligible for community sewer service, properties within the Piney Branch watershed must satisfy at least one of the following conditions, i. through vi.:

- i. Properties designated as Sewer Stages I or II in the 1980 Potomac Subregion Master Plan;
- ii. Properties which the Piney Branch Trunk Sewer Right-of-Way either traverses or abuts, including properties adjacent to, and commonly owned with, these abutted or traversed properties as of December 3, 1991;
- iii. Properties with approval or conditional approval for sewer categories S-1 or S-3 as of December 3, 1991;
- iv. Properties with documented public health problems resulting from failed septic systems where the provision of public sewer service is logical, economical, and environmentally acceptable; or
- v. Properties which abut sewer mains and which satisfy the policy requirements for Section II.E.3.a.: Community Service for Properties Abutting Existing Mains – Single Hookups Only. Applicants shall not use the provision of a single sewer hookup to support subdivision or resubdivision of these properties into more than one lot. (This condition does not restrict sewer service provided to properties satisfying condition ii., preceding.)
- vi. The properties zoned RE-2C located in the southeast corner of the intersection of Boswell Lane and Piney Meetinghouse Road which develop using the cluster method.

All other properties within the Piney Branch watershed are restricted from community sewer service, whether from the Piney Branch sewerage system or from other adjacent sewerage systems.



**COMPREHENSIVE WATER SUPPLY AND SEWERAGE SYSTEMS PLAN AMENDMENTS
County Executive's June 2015 Transmittal**

Chapter 1 Text Amendment Related to the Glen Hills Area Sanitary Study

Page 7



OFFICE OF THE COUNTY EXECUTIVE
ROCKVILLE, MARYLAND 20850

Isiah Leggett
County Executive

MEMORANDUM

March 30, 2015

TO: George Leventhal, President
Montgomery County Council

FROM: Isiah Leggett, Montgomery County Executive 

SUBJECT: Transmittal of Reports and Recommendations on the Glen Hills Area Sanitary Study

As directed by the County Council, the Department of Environmental Protection (DEP) has conducted a study of sanitary service in the Glen Hills Area southwest of Rockville based on recommendations provided in the 2002 Potomac Subregion Master Plan. The purpose of this transmittal is twofold:

- To provide the Phase 1 and Phase 2 reports that present the background, methodology, and findings of this study.
- To provide recommendations concerning appropriate sewer service policies for the study area.

DEP conducted this study with the assistance of a local engineering firm, A. Morton Thomas and Associates, following the Council's allocation of funding for the consultant's work starting in FY 2012. Public participation in the study process included three public meetings: one at the start of the study process and then one each at the conclusion of the two study phases. DEP also formed a citizens advisory committee (CAC) consisting of twelve study area residents and property owners. The CAC met seven times during the study process to discuss study issues in more detail than the public meeting forums allowed. DEP maintained a Glen Hills Study webpage on the County's website to post public and CAC meeting notices, provide study updates, and present draft and final versions of the study reports. DEP also used a property owner survey at the start of the study process to gain a general understanding of the public's awareness of septic system use and maintenance.

The Department of Permitting Services (DPS), Well and Septic Section, had previously identified the Glen Hills area as a neighborhood where the replacement of existing, failed septic systems can be problematic. The study area has many vacant lots that at present

George Leventhal, Council President
March 30, 2015
Page 2

cannot be developed due to soil and regulatory limitations for septic systems. These limitations may also restrict a homeowner's ability to improve or replace existing houses. In response to these concerns, the 2002 master plan recommended that the County:

"Conduct a study described above of the Glen Hills area. Based on the results of that study develop a policy outlining the measures needed to ensure the long-term sustainability of septic service for new home construction and existing home renovations, minimizing the need for future sewer extensions. Under this policy the sole basis for providing new sewer service would be well-documented septic failures where extension could be provided consistent with the results of the study and in a logical, economical, and environmentally acceptable manner. Until a policy is developed, restrict further sewer service extensions in Glen Hills to properties with documented public health problems resulting from septic system failures."

Although not explicitly stated in the master plan, DEP also recognized at the start of this study the need to support the existing housing stock through the replacement of existing septic systems that have failed or will require replacement in the future.

Phase 1

The Phase 1 report presents information on the collection of data concerning existing conditions in the study area, including soil conditions, septic systems type and age, septic testing results, and distribution of existing public sewerage systems. The purpose of this phase was to determine, as best possible from existing information, whether parts of the study area could experience potential difficulties with long-term septic system use and, if needed, replacement of existing septic systems using standard deep stone-trench septic systems. Phase 1 revealed the following among its findings:

- Approximately one-third of the study area is subject to soil conditions and regulatory requirements that may result in difficulties with the long-term use of deep stone-trench septic systems. Those parts of the study area so affected are referred to as "review areas" (RAs). Given the planning-level nature of the study, the determination of a review area does not infer that all land within the RAs is not suited for deep trench septic systems. Conversely, not all land outside the RAs is guaranteed as suited for deep trench septic systems.
- Approximately one-half of the 370 existing, operating septic systems in the study area were permitted and constructed before the advent of modern testing standards, which includes establishing reserve septic field areas as a backup for the initial system. When one of these septic systems fails, there is no established septic drainfield area guaranteed as a viable replacement. A new drainfield area must be established by on-site testing.

COMPREHENSIVE WATER SUPPLY AND SEWERAGE SYSTEMS PLAN AMENDMENTS
County Executive's June 2015 Transmittal

Chapter 1 Text Amendment Related to the Glen Hills Area Sanitary Study

Page 9

George Leventhal, Council President
March 30, 2015
Page 3

Phase 2

Following completion of the Phase 1 work and development of the draft Phase 1 report, DEP developed a scope of work for the Phase 2 portion of the study. The Phase 2 report presents alternatives for providing and maintaining wastewater disposal service for the review areas (RAs) identified in the Phase 1 report.

The underlying assumption in the second phase of the study was that the use of deep stone trench systems within the RAs may not satisfy today's septic regulations. The permitting and construction of this type of septic system could be difficult predominantly due to poor soil conditions including slow percolation rates, shallow depth to ground water, and shallow depth to bedrock. The alternatives to the use of this type of septic system were as follows:

- **Use of other types of permitted septic systems: shallow stone-trench systems, sand mound systems, or drip-disposal systems.** Each of these on-site systems has applications for specific soil constraints, although even taken together they do not necessarily provide solutions for all situations. The use of a specific type of on-site septic system for the replacement or expansion of an existing septic system will require proper soil testing and evaluations to determine that system's suitability for a particular property. Given these testing requirements, the development of alternative solutions for specific sites was not attempted.
- **Provision of public sewer service.** The Phase 2 report showed that only a few of the identified review areas had access to existing sewer mains. For those review areas without available sewer mains, the study contractor designed 13 conceptual sewer extension alignments to show possibilities for providing public sewer service, if needed. Both gravity and low-pressure sewer mains were used in this design work. Low-pressure mains were primarily used where the study criteria from the 2002 master plan directed sewer extensions away from streams, stream buffers, and easements across private properties, and instead towards public road alignments. Note that of the 13 conceptual sewer extension alignments shown in the Phase 2 report none are proposed for approval or construction at this time.

Planning-level cost estimates developed for each of the preceding Phase 2 alternatives showed that, in most cases, the use of an on-site septic system for new or replacement wastewater service, where feasible, provided a less expensive service option than the extension of new mains for public sewer service for property owners. Costs for sewer service connections to an available, existing sewer main were much closer to the range of septic system costs, depending on the type of septic system required for service.

George Leventhal, Council President
March 30, 2015
Page 4

Policy Issues and Recommendations for Septic System Sustainability

The feasibility of permitting a new septic system for any particular piece of property is dependent on the characteristics of the soils and geology of that property. These characteristics (permeability, water table depth, depth to rock, etc.) do not change substantially over time. Soil testing standards for septic systems for the County have become both more encompassing and restrictive over time. This serves to improve the longevity of septic system use and to help mitigate environmental impacts resulting from septic system use in vulnerable areas. (See the Phase 1 report, Section 3.5 and Table 3.1.) Other regulatory standards (drainage and drinking water well setbacks, best available technology requirements, etc.), have also been strengthened to help protect human and environmental health. The DPS permitting process recognizes that a septic system approved and built for a new home—including the initial system and planned replacement fields—is intended to serve that property for an indefinite time. These standards exist to ensure that new development dependent on septic systems does not occur on properties that cannot support septic system use for the foreseeable future.

Recommendation:

- **Consistent with the policy focus of the 2002 master plan, where public sewer service is not currently available in the Glen Hills area, it is typically in the interest of a property owner to explore on-site septic system options, as needed, when needing to replace an existing system or install a system for new development.**

Policy Issues and Recommendations for the Extension of Public Sewer Service

Based on Water and Sewer Plan general service policies, and supported by the 2002 master plan's service recommendations, areas designated for standard-type development under the RE-1 Zone—such as this study area—are not intended for widespread public sewer service. However, the master plan also recognized that the relief of some septic problems within the study area could require the provision of public sewer service. The master plan advocated a sewer service policy that would allow new sewer service only for cases of documented septic system failures. This refers to cases where new sewer construction would be required, as the master plan goes on to specify that sewer extensions would need to be planned and provided in a logical, economical, and environmentally acceptable manner. Other than to relieve public health problems, there are few Water and Sewer Plan special sewer service policy justifications (public facilities, private institutional facilities, etc.) that would have an application for the extension of new sewer mains within the study area.

Typically, the County's designation of a public health problem results from an on-site system failure applying to a single property. However, Water and Sewer Plan policies also direct the County to identify public health problem areas, where appropriate; groupings of properties where existing and anticipated on-site systems problems apply to more than just one property, usually in a relatively small geographic area. The Council's designation of a public health problem area by an amendment to the Water and Sewer Plan usually applies to an area

COMPREHENSIVE WATER SUPPLY AND SEWERAGE SYSTEMS PLAN AMENDMENTS
County Executive's June 2015 Transmittal

Chapter 1 Text Amendment Related to the Glen Hills Area Sanitary Study

Page 11

George Leventhal, Council President
March 30, 2015
Page 5

where public service is not yet provided and often not approved, but needs to become a priority to support public and environmental health. Where the Plan establishes such an area, all properties within it are eligible to pursue the extension of public service, regardless of whether or not an existing failure has occurred. This allows for some public service extension within the health problem area in advance of an immediate failure. The study does not propose the designation of any part of the study area as a public health problem area at this time.

The cost of extending new water and sewer mains currently remains beyond the financial reach of most individual property owners, including those situations where new service is needed to relieve a public health problem resulting from a septic system failure. Under WSSC's current system expansion permit (SEP) process, virtually all new main construction is paid in total by the applicant seeking service, typically a developer constructing a new subdivision. This has drained funding resources away from the older front-foot benefit financed (or "WSSC-built") process, wherein WSSC finances and constructs new mains, to the point where the older process is no longer functional. Staff from Montgomery and Prince George's Counties and from WSSC are working to develop a modified financing system that would again make construction of new main extensions for individual property owners feasible. In cases where the County determines that new public service is needed to relieve health problems, manageable financing is of great importance.

Recommendations:

- **Adopt, but also expand on the policy recommendation from the 2002 master plan; that documented health problems resulting from septic system failures are the only justification for the construction of new sewer main extensions within the study area. Public sewer mains can also be constructed to serve public health problem areas—throughout the study area—that are explicitly designated by the County Council in the Water and Sewer Plan. Two Water and Sewer Plan policies address this situation: the "public health problems" and "properties affected by public improvements" policies (Chapter 1, Sect. II.E.2. & II.E.7., respectively.**
- **Pursue with WSSC and Prince George's County the development of a modified water and sewer main extension process that improves the affordability of main construction for individual property owners.**

One other special service policy that relates to the use of public sewer in place of on-site septic systems is the "on-site system regulation changes" policy (CWSP Chapter 1, Sect. II.E.10.). The policy provides for consideration of public sewer service where changes in testing regulations now render a property previously established and permitted for an on-site system unsuited for septic system use. The substantial majority of lots in the study area were not established on the basis of successful septic system testing. Before 1965, septic testing was not required in order to record a building lot. As a result, this requirement for the application of this

George Leventhal, Council President
March 30, 2015
Page 6

service policy cannot be satisfied. This policy is not proposed to justify sewer main construction to provide new sewer service for unimproved lots within the study area.

Policy Issues and Recommendations for the Abutting Mains Sewer Service Policy

The 2002 master plan specifically recommends that the Glen Hills study include, "An evaluation and recommendation of the abutting mains policy for this area." The "abutting mains" service policy (CWSP Chapter 1, Sect. II.E.3.) involves the provision of public service from existing or approved public mains. To qualify for consideration, a property or a building on the property had to exist at the time the abutting main was or will be installed. This policy typically limits public service to a single sewer hookup for each existing property abutted by a main. While the policy allows for limited public service from an abutting main, new main construction is not the policy's function.

Where public service mains are already provided, or where they are approved, Water and Sewer Plan service policies support limited use of those mains by abutting property owners. In the past, this policy helped to support new main construction, where front-foot benefit charges helped to finance that construction. As noted previously, escalating costs associated the "WSSC-built" process have made its use by individual property owners largely infeasible, including cases where needed a new main is needed to relieve a public health problem. The potential for the participation of abutting property owners in a modified WSSC extension financing system needs to be maintained through the use of the abutting mains policy. Owners of qualifying properties that abut or will abut sewer mains in the study area should have an option to use public sewer service if they choose. Although the cost for connecting to public sewer service can be greater than for replacing a septic system, public service provides a permanent means of wastewater disposal, as opposed to septic systems which will require periodic replacement.

Starting in 2002, County Council actions on sewer category change requests suspended use of the abutting mains policy (CWSP Chapter 1, Section II.E.2.) within the Glen Hills area, as recommended in the 2002 master plan. Currently, 21 properties designated as sewer category S-6, and as such ineligible for public sewer service, abut existing sewer mains within the study area; all are improved with existing single-family homes. Of these, one category change request case filed since 2002 would have benefitted from the ability to use the abutting mains policy.

Recommendation:

- **Restore the use of the abutting mains policy for public sewer service within the Glen Hills study area. Note that no property owner is compelled to connect to public sewer service as long as their property remains in category S-6 and their existing septic system continues to function.**

COMPREHENSIVE WATER SUPPLY AND SEWERAGE SYSTEMS PLAN AMENDMENTS
County Executive's June 2015 Transmittal

Chapter 1 Text Amendment Related to the Glen Hills Area Sanitary Study

Page 13

George Leventhal
March 27, 2015
Page 7

conceptually designed for the purposes of this study to serve the Review Areas. In the unlikely event that all 13 sewer extensions were to be built in their entirety, they could abut and serve as many as 223 properties: 197 already improved with single-family homes using septic systems and 26 unimproved. (The total study area currently includes 370 improved properties using septic systems and 69 unimproved properties.)

Policy Issues and Recommendations for the Piney Branch Subwatershed

The western and northwestern parts of the study area fall within the Piney Branch subwatershed of Watts Branch. (See the Phase 1 report, Figure 2.1, pg. 7.) Starting in late 1991, during planning for the Piney Branch Trunk Sewer, the County decided to implement a restricted sewer service access policy for the subwatershed that sought to limit environmental impacts from sewer-dependent development in the lower, less-densely zoned parts of the subwatershed. This includes some of the properties within this study area. The 2002 master plan does not recommend any changes to the application of the restricted sewer service access policy within the study area. This restricted sewer access policy remains in effect for those parts of the study area included in the subwatershed.

Recommendation:

- **Maintain the Piney Branch restricted sewer service access policy for those parts of the Glen Hills study area that fall within the limits of the Piney Branch subwatershed.**

Additional Master Plan Study Recommendations

The 2002 master plan also recommended that the study include elements such as the delineation and causes of known septic system failures, and the identification and exclusion of environmentally sensitive properties with no development potential. Each of these recommendations and brief discussions about how they were addressed as part of the Glen Hills study are included in the Phase 2 report; see Sect. 6, pg. 31.

Copies of the Executive Summaries from the Phase 1 and Phase 2 reports are attached with this transmittal. The full reports are available for review and download at DEP's Glen Hills webpage: www.montgomerycountymd.gov/glenhills.

Staff from DEP will be available to discuss the Glen Hills Area Sanitary Study at work sessions with the Transportation, Infrastructure, Energy, and Environment Committee and with the full Council.

IL:as
Attachments

**COMPREHENSIVE WATER SUPPLY AND SEWERAGE SYSTEMS PLAN AMENDMENTS
County Executive's June 2015 Transmittal**

Chapter 1 Text Amendment Related to the Glen Hills Area Sanitary Study

Page 14

George Leventhal, Council President
March 30, 2015
Page 8

cc: Jay Sakai, Director, Water Management Administration, Maryland Department of the Environment
David Craig, Secretary, Maryland Department of Planning
Casey Anderson, Chair, Montgomery County Planning Board
Jerry Johnson, General Manager, Washington Suburban Sanitary Commission
Lisa Feldt, Director, Department of Environmental Protection
Diane Schwartz Jones, Director, Department of Permitting Services