GREENE COUNTY COMPREHENSIVE SEWAGE STUDY

By

Kenneth W. Dufalla

As

Commissioned by

Rep. H. William DeWeese

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1998

ACKNOWLEDGEMENTS

Rep. H. William DeWeese would like to extend his heart filled thanks to all participants in the survey. Suggestions of both the township supervisors and the public were very helpful in the summation of data. Input from people actually involved in the problem has directly influenced recommendations made in this survey. Your comments were given high consideration, reviewed and appreciated.

As the field coordinator, I would also like to express my appreciation for all the cooperation extended to me while completing the survey.

PURPOSE OF THE STUDY

This study was conducted to evaluate the current problems that exist with the treatment of sewage in Greene County, Pennsylvania. Residents need information about the patterns and methods of soil evaluation, sewage treatment requirements, cost, and the conflicting information given by sewage enforcement officers. Townships are losing their tax base due to their inability to grant new permits. Many residents are reluctant to update systems due to the cost they may incur or are quoted. In many cases, the cost of the sewage treatment is actually higher than the cost of housing. For example, residents have been quoted a cost of $15,000 to $20,000 for alternative systems, which is higher than the average cost of housing in Greene County. A definite need to locate alternative systems for sewage treatment exists throughout the county. These systems need to be geared to the type of soil found in Greene County, and at a reasonable cost for low to moderate income residents. We can not change the composition of the soil found in Greene County, but we must endeavor to find cost effective and efficient systems. With the information collected in this study, we hope to identify alternative systems that will be feasible to both the Department of Environmental Protection and the residents of Greene County.

INTRODUCTION

In order for an area to expand and develop, certain components must be present. These include transportation, adequate land for development, water, and proper sewage treatment.

Greene County's transportation system is currently being updated. Bridges to the north and east of Waynesburg are currently being replaced. To the west and south of Waynesburg, bridges with weight limits are listed for replacement as funds become available. Interstate 79 is presently under construction to replace worn and damage concrete. Routes 21, 218, 19, 18 and 188 provide more than spurs throughout the county. River and rail systems are being used to transport goods from the area.

Land for housing is available throughout the county. The land changes from flat areas in the east to steep hills in the west and southwest. Within 45 minutes, one can enjoy these changes in terrain. This change in terrain provides a unique situation for choosing a variety of home sites.

Mainly wells or springs provide water. There are several community water systems that supply water needs for the small metropolitan areas. Long wall mining is currently being practiced in the county. This is leading to some water losses from wells and springs, which may impact future development.

The final component is sewage treatment. In the following context, sewage will be addressed. The problems with sewage and solutions were researched as to feasibility and effectiveness. Results of the study will be available to township supervisors and any interested parties.

SOILS and SLOPE

One of the major methods to treat sewage is absorption, therefore soil is the leading factor in the treatment of sewage. The United States' Department of Agriculture and the Soil Conservation Service in cooperation with several other organizations have compiled a complete analysis of Pennsylvania soil. A complete description of these findings is available upon request from the Soil Conservation Service located in the County Building in Waynesburg, Pa.

The results include a complete description of the soil and the slope ratings found in each county. Composition of soil is mainly Dormont-Culleoka. In Greene County the soil composition, and slopes vary with location in the county. For example, some stream bottoms are mainly Dormont-Culleoka- Newark association, however there are also pockets of Glenford-Dormont-Library association found near Waynesburg, Dry Tavern, Carmichaels, Bobtown, and Mt. Morris. These soil compositions are the key to types of sewage treatments during evaluations of the absorption method. A complete code to the soil types and breakdown of the soil by acreage can be found in tables 1 and 2, reprinted from the soil survey of Greene and Washington Counties. Over 180,000 acres of Greene County is composed of Dormont- Culleoka silt loams with 25 to 50 percent slope. This association is found in about 50% of Greene County. Under current D.E.P guidelines, any slope greater than 25% will not be considered for sewage treatment. Also this type of soil is considered "severe" in relation to septic system tank absorption fields (table 3). These factors severely limit the use of conventional septic treatment methods. Soil and slopes

are the main reasons for rejections of many permits in regards to conventional treatment methods. These factors also are the main reason for the use of the costly sand mounds now being currently prescribed in the county.

Conventional sewage treatment methods can not be utilized in Greene County because of soil and slope composition. In addition, the approved alternative methods are not cost affective, and are not designed exclusively for the soil and slope types confronted by most property owners in Greene County.

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SOIL LEGEND

*The publication symbols consists of letters. The first letter, always a capital, is the initial letter of the soil name. The second letter in each symbol is always a lower case letter. The third letter, if used, is a capital and connotes slope class. Symbols without a slope letter are for nearly level soils or miscellaneous areas.

SYMBOL	NAME
AgB	Allegheny silt loam, 3 to 8 percent slopes
AgC	Allegheny silt loam, 8 to 15 percent slopes
BoB	Brooke silty clay loam, 3 to 8 percent slopes
BoC	Brooke silty clay loam, 8 to 15 percent slopes
BoD	Brooke silty clay loam, 15 to 25 percent slopes
CaB	Culleoka silt loam, 3 to 8 percent slopes
CaC	Culleoka silt loam, 8 to 15 percent slopes
CaD	Culleoka silt loam, 15 to 25 percent slopes
CkB	Culleoka-Upshur complex, 3 to 8 percent slopes
CkC	Culleoka-Upshur complex, 8 to 15 percent slopes
CkD	Culleoka-Upshur complex, 15 to 25 percent slopes
DaB	Dekalb channery loam, 3 to 8 percent slopes
DaC	Dekalb channery loam, 8 to 15 percent slopes
DaD	Dekalb channery loam, 15 to 25 percent slopes
DaF	Dekalb channery loam, 25 to 80 percent slopes
DbD	Dekalb very stony loam, 8 to 25 percent slopes
DoB	Dormont silt loam, 3 to 8 percent slopes
DoC	Dormont silt loam, 8 to 15 percent slopes
DoD	Dormont silt loam, 15 to 25 percent slopes
DtD	Dormont-Culleoka silt loams, 15 to 25 percent slopes
DtF	Dormont-Culleoka silt loams, 25 to 50 percent slopes
Du	Dumps, mine
Fa	Fluvaguents, loamy
GdA	Glenford silt loam, 0 to 3 percent slopes
GdB	Glenford silt loam, 3 to 8 percent slopes
GdC	Glenford silt loam, 8 to 15 percent slopes
GeB	Guernsey silt loam, 3 to 8 percent slopes
GeC	Guernsey silt loam, 8 to 15 percent slopes
GeD	Guernsey silt loam, 15 to 25 percent slopes
Hu	Huntington silt loam
LbA	Library silty clay loam, 0 to 3 percent slopes
LbB	Library silty clay loam, 3 to 8 percent slopes
LbC	Library silty clay loam, 8 to 15 percent slopes
Nw	Newark silt loam
Py	Purdy silt loam
UdB	Udorthents, smoothed, gently sloping
UdD	Udorthents, smoothed, moderately steep
UdF	Udorthents, smoothed, steep
UkB	Udorthents, strip mine, gently sloping
UkD	Udorthents, strip mine, moderately steep
UkF	Udorthents, strip mine, steep
Us	Urban land
WeB	Weikert-Culleoka complex, 3 to 8 percent slopes
WeC	Weikert-Culleoka complex, 8 to 15 percent slopes
WeD	Weikert-Culleoka complex, 15 to 25 percent slopes
W	Water

TABLE 2 --ACREAGE AND PROPORTIONATE EXTENT OF THE SOILS

Map symbol	Soil name	Greene County	Washington County	Total-- Area	Total-- Extent
		Acres	Acres	Acres	Pct
AgB	Allegheny silt loam, 3 to 8 percent slopes	693	415	1,108	0.1
AgC	Allegheny silt loam, 8 to 15 percent slopes	303	50	353	*
BoB	Brooke silty clay loam, 3 to 8 percent slopes	192	3,430	3,622	0.4
BoC	Brooke silty clay loam, 8 to 15 percent slopes	147	3,030	3,177	0.3
BoD	Brooke silty clay loam, 15 to 25 percent slopes	5	2,965	2,970	0.3
CaB	Culleoka silt loam, 3 to 8 percent slopes	5,793	12,790	18,583	2.0
CaC	Culleoka silt loam, 8 to 15 percent slopes	5,390	21,285	26,675	2.9
CaD	Culleoka silt loam, 15 to 25 percent slopes	3,832	41,200	45,032	4.9
CkB	Culleoka-Upshur complex, 3 to 8 percent slopes	500	250	750	0.1
CkC	Culleoka-Upshur complex, 8 to 15 percent slopes	1,315	505	1,820	0.2
CkD	Culleoka-Upshur complex, 15 to 25 percent slopes	1,979	460	2,439	0.3
DaB	Dekalb channery loam, 3 to 8 percent slopes	1,063	0	1,063	0.1
DaC	Dekalb channery loam, 8 to 15 percent slopes	647	0	647	0.1
DaD	Dekalb channery loam, 15 to 25 percent slopes	794	0	794	0.1
DaF	Dekalb channery loam, 25 to 80 percent slopes	825	0	825	0.1
DbD	Dekalb very stony loam, 8 to 25 percent slopes	86	925	1,011	0.1
DoB	Dormont silt loam, 3 to 8 percent slopes	5,267	12,655	17,922	1.9
DoC	Dormont silt loam, 8 to 15 percent slopes	17,672	64,565	82,237	8.9
DoD	Dormont silt loam, 15 to 25 percent slopes	28,110	18,710	46,820	5.1
DtD	Dormont-Culleoka silt loams, 15 to 25 percent slopes	55,584	77,560	133,144	14.5
DtF	Dormont-Culleoka silt loams, 25 to 50 percent slopes	180,417	117,218	297,635	32.4
Du	Dumps, mine	1,012	2,425	3,437	0.4
Fa	Fluvaquents, loamy	11,233	10,074	21,307	2.3
GdA	Glenford silt loam, 0 to 3 percent slopes	844	955	1,799	0.2
GdB	Glenford silt loam, 3 to 8 percent slopes	7,770	9,080	16,850	1.8
GdC	Glenford silt loam, 8 to 15 percent slopes	3,522	3,040	6,562	0.7
GeB	Guernsey silt loam, 3 to 8 percent slopes	2,142	9,325	11,467	1.2
GeC	Guernsey silt loam, 8 to 15 percent slopes	2,734	22,300	25,034	2.7
GeD	Guernsey silt loam, 15 to 25 percent slopes	517	13,825	14,342	1.6
Hu	Huntington silt loam	3,261	3,362	6,623	0.7
LbA	Library silty clay loam, 0 to 3 percent slopes	1,034	50	1,084	0.1
LbB	Library silty clay loam, 3 to 8 percent slopes	1,566	1,075	2,641	0.3
LbC	Library silty clay loam, 8 to 15 percent slopes	134	345	479	0.1
Nw	Newark silt loam	7,591	18,359	25,950	2.8
Py	Purdy silt loam	817	325	1,142	0.1
UdB	Udorthents, smoothed, gently sloping	1,199	3,863	5,062	0.5
UdD	Udorthents, smoothed, moderately steep	239	922	1,161	0.1
UdF	Udorthents, smoothed, steep	316	807	1,123	0.1
UkB	Udorthents, strip mine, gently sloping	350	4,475	4,825	0.5
UkD	Udorthents, strip mine, moderately steep	1,792	6,050	7,842	0.9
UkF	Udorthents, strip mine, steep	941	11,885	12,826	1.4
Us	Urban land	0	5,198	5,198	0.6
WeB	Weikert-Culleoka complex, 3 to 8 percent slopes	4,404	11,880	16,284	1.8
WeC	Weikert-Culleoka complex, 8 to 15 percent slopes	3,126	9,330	12,456	1.4
WeD	Weikert-Culleoka complex, 15 to 25 percent slopes	2,570	21,325	23,895	2.6
W	Water	944	2,000	2,944	0.3
	Total	371,000	549,960	920,960	100.0

* Less than 0.1 percent.

TABLE 3.--SANITARY FACILITIES

[Some terms that describe restrictive soil features are defined in the Glossary. See text for definitions of "slight," "moderate," "good," "fair," and other terms. Absence of an entry indicates that the soil was not rated]

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
AgB Allegheny	Moderate: percs slowly.	Moderate: slope, seepage.	Slight	Slight	Fair: too clayey.
AgC Allegheny	Moderate: percs slowly, slope.	Severe: slope.	Moderate: slope.	Moderate: slope.	Fair: too clayey, slope.
BoB Brooke	Severe: percs slowly, depth to rock, slippage.	Severe: depth to rock.	Severe: depth to rock, too clayey, slippage.	Severe: depth to rock.	Poor: thin layer.
BoC Brooke	Severe: percs slowly, depth to rock, slippage.	Severe: slope, depth to rock.	Severe: depth to rock, too clayey, slippage.	Severe: depth to rock.	Poor: thin layer.
BoD Brooke	Severe: slope, slippage, depth to rock.	Severe: slope, depth to rock.	Severe: depth to rock, slippage, slope.	Severe: slope, depth to rock.	Poor: slope, thin layer.
CaB Culleoka	Severe: depth to rock.	Severe: seepage, depth to rock.	Severe: depth to rock, seepage.	Severe: depth to rock, seepage.	Poor: area reclaim.
CaC Culleoka	Severe: depth to rock.	Severe: seepage, depth to rock, slope.	Severe: depth to rock, seepage.	Severe: depth to rock, seepage.	Poor: area reclaim.
CaD Culleoka	Severe: depth to rock, slope.	Severe: seepage, depth to rock, slope.	Severe: depth to rock, seepage, slope.	Severe: depth to rock, seepage, slope.	Poor: area reclaim, slope.
CkB*: Culleoka	Severe: depth to rock.	Severe: seepage, depth to rock.	Severe: depth to rock, seepage.	Severe: depth to rock, seepage.	Poor: area reclaim.
Upshur	Severe: percs slowly, slippage.	Moderate: slope, depth to rock.	Severe: too clayey, depth to rock, slippage.	Moderate: depth to rock.	Poor: too clayey.
CkC*: Culleoka	Severe: depth to rock.	Severe: seepage, depth to rock, slope.	Severe: depth to rock, seepage.	Severe: depth to rock, seepage.	Poor: area reclaim.
Upshur	Severe: percs slowly, slippage.	Severe: slope.	Severe: too clayey, depth to rock, slippage.	Moderate: slope, depth to rock.	Poor: too clayey.
CkD*: Culleoka	Severe: depth to rock, slope.	Severe: seepage, depth to rock, slope.	Severe: depth to rock, seepage, slope.	Severe: depth to rock, seepage, slope.	Poor: area reclaim, slope.

See footnote at end of table.

TABLE 3.--SANITARY FACILITIES--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
CkD*:					
Upshur	Severe: slope, percs slowly, slippage.	Severe: slope.	Severe: too clayey, depth to rock, slippage.	Severe: slope.	Poor: slope, too clayey.
DaB	Severe: depth to rock, poor filter.	Severe: depth to rock, small stones, seepage.	Severe: seepage, depth to rock.	Severe: seepage, depth to rock.	Poor: small stones.
Dekalb					
DaC	Severe: depth to rock, poor filter.	Severe: slope, depth to rock, seepage.	Severe: seepage, depth to rock.	Severe: seepage, depth to rock.	Poor: small stones.
Dekalb					
DaD	Severe: slope, depth to rock, poor filter.	Severe: slope, depth to rock, seepage.	Severe: seepage, depth to rock, slope.	Severe: slope, seepage, depth to rock.	Poor: slope, small stones.
Dekalb					
DaF	Severe: slope, depth to rock, poor filter.	Severe: slope, depth to rock, seepage.	Severe: slope, seepage, depth to rock.	Severe: slope, seepage, depth to rock.	Poor: slope, small stones.
Dekalb					
DbD	Severe: slope, depth to rock, poor filter.	Severe: slope, depth to rock, seepage.	Severe: depth to rock, seepage, slope.	Severe: slope, seepage, depth to rock.	Poor: slope, small stones.
Dekalb					
DoB	Severe: percs slowly, wetness, slippage.	Moderate: slope.	Severe: slippage.	Moderate: wetness.	Fair: too clayey.
Dormont					
DoC	Severe: percs slowly, wetness, slippage.	Severe: slope.	Severe: slippage.	Moderate: slope, wetness.	Fair: slope, too clayey.
Dormont					
DoD	Severe: slope, slippage, wetness.	Severe: slope.	Severe: slope, slippage.	Severe: slope.	Poor: slope.
Dormont					
DtD*:					
Dormont	Severe: slope, slippage, wetness.	Severe: slope.	Severe: slope, slippage.	Severe: slope.	Poor: slope.
Culleoka	Severe: depth to rock, slope.	Severe: seepage, depth to rock, slope.	Severe: depth to rock, seepage, slope.	Severe: depth to rock, seepage, slope.	Poor: area reclaim, slope.
DtF*:					
Dormont	Severe: slope, slippage, wetness.	Severe: slope.	Severe: slope, slippage.	Severe: slope.	Poor: slope.
Culleoka	Severe: depth to rock, slope.	Severe: seepage, depth to rock, slope.	Severe: depth to rock, seepage, slope.	Severe: depth to rock, seepage, slope.	Poor: area reclaim, slope.
Du*.					
Dumps					

See footnote at end of table.

Economic Structure

The economic structure of Greene County is such that many residents are not financially equipped to purchase new homes. The cost of sewage treatment can not be more than the housing available. In many situations, that is exactly the case. How can a family, who invests $7,000 in a mobile home, be expected to install a sand mound for $8,000? These people just move to our neighboring states. Our tax base is then lowered, and the existing residents must account for cost increases by having their taxes increased. Many of our residents are on fixed incomes, and any additional tax could effect their standard of living. The economics of the area is based on coal production, and when the coal industry either decreases production or finds more economical methods of production, the monetary value in the area suffers. This action forces the residents to seek more affordable housing. In order to enhance new housing, we must provide more economical and efficient methods of sewage treatment that proves to be durable. The existing situation is curtailing development and hindering growth in Greene County. Even if new industrial development were to arise, the present methods of evaluating septic systems would highly influence any new housing. The present guidelines make the treatment of sewage a nightmare for all involved. Alternative methods must be developed that can both meet DEP guidelines and be cost acceptable. DEP must be willing to consider new methods of treatments and be willing to work on changing the guidelines to meet the special soil needs of the area.

This will not be an easy task! There are so many variables to consider that if 80% of the problems can be addressed and suggested alternate methods are feasible, this research can be evaluated as very successful. Only time will reveal the outcome.

SEWAGE PROBLEMS IN GREENE COUNTY

Before any solutions can be given, the problem must be identified. The main problem with providing sewage treatment in Greene County is the composition of the soil. Soils in Greene County do not allow for proper absorption of wastes. Dormont and Culleoka are the main forms of soil found in the county. Neither of these compositions allows for proper treatment of sewage through absorption. The lack of proper absorption and / or the amount of shale found in the soil forces many new homeowners to either use sand mounds or not build at all. Cost of sand mounds can exceed $ 12,000, which in many cases, is greater than the actual cost of housing. With most of our residents earning less than $ 25,000 yearly, the additional cost of sewage treatment directly effects the quality of living. Many residents have expressed concern over the life span of sand mounds. If these units are pumped yearly and back flushed, their life expectancy is greatly enhanced; however the cost becomes a determining factor in maintenance. Most residents feel that at an average cost of $ 8000, these systems should function with little or no care. Along with the high cost of installation, using sand mounds upsets the aesthetic landscape of the property. Large sand mounds are located in areas close to homes and are really not attractive.

Another problem arises with the guidelines established by DEP. Too often homeowners feel that over regulation has taken the place of common sense. Alternative methods must be developed to maintain suitable treatment and be cost efficient. By completing this study, we hope to provide information that results in the decision that may incur DEP to adjust their parameters on sewage treatment. This may lead to re-evaluation of the state's guidelines on sewage treatment. The state may need to establish new guidelines on sewage treatment and develop new techniques by region instead of by state to target regional needs. Needs such as soil composition, slope and

economics capabilities of the area must be evaluated prior to establishing guidelines. In areas where soil composition and economic structure can not utilize existing methods, alternative methods must be developed to meet the existing demand for cost effective quality controls. Instead of utilizing gamma diversity to establish treatment guidelines, beta diversity may prove to be a better alternative. Cost will ultimately be the main factor in the development of any alternative methods of sewage treatment. Along with the cost factors, a policy for the 10- acre exemption guideline needs to be addressed. New homeowners are not aware of the problems they face in regards to sewage prior to purchasing a tract of land. How information is provided to future homeowners by local enforcement officers is directly related to the SEO's ability to provide consistent methods of sewage treatment. If the initial contact with the local SEO is not productive, the property owner becomes frustrated and contacts another SEO to receive a second opinion. All too often, the property owner receives two contrasting opinions which usually results in their decision not to build a new home. These decisions directly effect the economic growth in Greene County. Homeowners should be presented with several options on methods of sewage treatment. Each should have the right to chose which system is best for their needs. All methods of treatment should be fully explained as to longevity and maintenance. The homeowner must be instructed that maintenance of the system is required, and to protect their system, they must accept the maintenance responsibilities.

SUPERVISORS' COMMENTS

Upon meeting with the representatives from all the townships in Greene County Pennsylvania and discussing the problems with sewage treatment, the following comments and suggestions were the commonly expressed:

(1). Cost of systems other than conventional is too high.

(2). Sewage enforcement officers (S.E.Os) must become more consistent in their evaluations of perc information.

(3). The County should have one or two S.E.O's to handle all the problems within the County.

(4). Alternative treatment systems are needed.

(5). Treatment systems must be cost efficient and functional.

(6). The Department of Environmental Protection (D.E.P.) must acknowledge that the soil conditions and land slopes are unique.

(7). D.E.P must be willing to investigate alternative systems.

(8). Sand mounds are too costly and ineffective.

(9). Township supervisors should not be expected to enforce laws to which supervisors have no input.

(10). D.E.P restrictions must be adjusted to the economic structure of the community.

(11). Allowances should be made for acreage greater than 10 ac.

Of these 11 main comments, two were highly emphasized by almost all supervisors.

First, there is a definite need for consistency among the sewage enforcement officers.

Second, With the economic structure of the county being low and the cost of sand mounds high, alternate methods of sewage treatment must be developed and they must be accepted by D.E.P.

RECOMMENDATIONS

The complexities of the sewage problems in Greene County have proven to be an interesting challenge. These problems were approached from three aspects. Each area was carefully studied and evaluated from both the efficiency and economical approach. The following is a summation of each area.

The problem with dwellings that lie near existing sewage treatment facilities can be resolved by extending the present conduction lines. Grants may be obtained to increase the range of the present treatment capacity. Consideration must be given to cost efficiency when employing new construction. A study of the topography will aid in the determination for extending new lines. Also any current treatment facility should be evaluated for capacity and updated to accommodate affluent increases. This action will eliminate the need for soil absorption testing.

The next section of study becomes a bigger problem. This area deals with small communities that do not have sewage treatment facilities. In these cases, the distance to existing facilities is to great to allow the construction of conduction lines. Township supervisors and the county development planners must formulate a plan in which small units for treatment can be used to handle the demand for sewage treatment. These units should be constructed as to provide 100% growth capacity. If a small village has 14 homes, then the facility should allow for additional 14 new homes or more. On the market today, there are current designs that accommodated single hotels and motels. These units can be utilized to treat sewage from smaller towns and villages. Grants and loans may be needed to construct these units. Once in place, the

township should maintain these facilities. The cost of operation should come from the consumer. Sewage enforcement officers could be trained to oversee the operations in their respective townships. The payment of the operators could be shared by state, county and local means, or if decided that S.E.O's are to be centralized, then they may be they should become state employees.

The most difficult area of consideration is the individual homeowner. Many people enjoy the tranquillity of rural Greene County, and the county provides an ideal rustic setting. Plots of lands are sometimes purchased without prior perc testing. Later, the landowner is informed that he / she can not build on the land, and if they do build they must install a costly sand mound. This greatly effects county growth. In order to enhance developmental growth that fit the county's economical structure, alternative methods are needed. There have been many constituents that suggest Pennsylvania utilize the same treatment methods as West Virginia. Many of the current methods being used in West Virginia do not fully address the criteria established in Pennsylvania. A better method must be developed. One suggestion is a two-tank method of collection. In one tank, black water would be treated, and in the other, gray water would be considered. Two independent leach fields would be utilized. Sand and gravel, liners, and chloronation should be used to treat black water. Graveless pipe, used in a trench method, would be used for gray water treatment. Both systems would be attached to a chloronator to remove any overflow bacteria. The final treated water then egresses into a gravel leach for de-chloronation. However upon consulting with DEP, the sand needed in the black water treatment is of a special nature, and the total unit must be sealed in order to prevent surface water from entering the unit. These requirements would extend the cost to about $12,000 per unit, which is not feasible for our economic needs.

At the present time DEP is involved in a 5 million dollar study that is trying to develop alternative means of treating sewage. In a recent meeting with DEP, emphasis on cost and efficiency of alternative treatment was clearly relayed by this office and the county development representative. The DEP project is a 5 year study and the research is currently into its 2nd year. Hopefully, within the coming months, newer cost efficient treatment methods will be presented. In the interim, a local agency should be considered to help answer questions on sewage, and to obtain grants and low interest loans to aid those citizens who find the cost of sewage treatment overwhelming to their financial state. This agency could be responsible for aiding townships to obtain the necessary funds for the construction of the small community treatment facilities and be responsible for the distribution of those funds.

These suggestions will not address all the existing problems, however this is a start. As other information becomes available and more efficient alternative treatment methods develop these recommendations will need to be updated.

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Waynesburg, Pa 15370

Supervisors Participating in Study

TOWNSHIP	SUPERVISOR(S)
Aleppo	Richard Rutan Walter Alger Bub Martin
Center	Donald Jarvis Rodney Bristor Tim Horr
Cumberland	Homer Nicholson Leroy Baker Jim Sokol
Dunkard	Marvin Moody Mike Shory
Franklin	Jim Hopkins John Higgins Reed Kiger
Freeport	Charles Gorby Tom Coss Tamara Coss
Gilmore	Ralph Weaver Charles Wise Jeff Rode
Gray	Kenneth Baldwin Clyde Iams
Greene	David Wise Dan Stoneking Danny Vernon
Jackson	Ronald Morris Mike Rice
Jefferson	Clancy Murray Mickey Dikun

Monongahela	Ed Brumley Jerry Yoskovich Bill Kennedy
Morgan	Shirl Barnhart
Morris	Glenn Adamson Bill Hildreth Bryon Moninger
Perry	Ron Minor Allen Lemley
Richhill	Harold Finnegan Thomas Chess Harry Gillispie
Springhill	Bruce Johnson David DeBolt Charles Geho
Washington	Leonard Dulaney William Phillips Allen Shipman
Wayne	Allen Wells Tim Chapman
Whitely	Mark Lemely

GREENE COUNTY COMPREHENSIVE SEWAGE STUDY

Date : _____

Township : _____

Supervisor(s) : _____

_____

_____

Sewage Enforcement Officer : _____

Sewage Authority : _____

Meeting Comments :

Field Survey :

Township Property Owner Comments :

(1) Name :

(2) Name :

(3) Name :

(4) Name :

(5) Name :

Township History Data :

Number of Permits Issued : 5yrs_____ 10 yrs_____

Number of Permits Rejected : 5yrs_____ 10yrs_____

Permit Rejections (Reasons) :

Soil Issues Regarding Sewage :

Current Possible Recommended Solutions, if any, and Cost thereof :

D.E.P. Contacts, if any, and Results :

Who Called?

Who was Contacted in D.E.P.?

What Course of Action, if any, was Advised?