United States
Environmental Protection
Agency

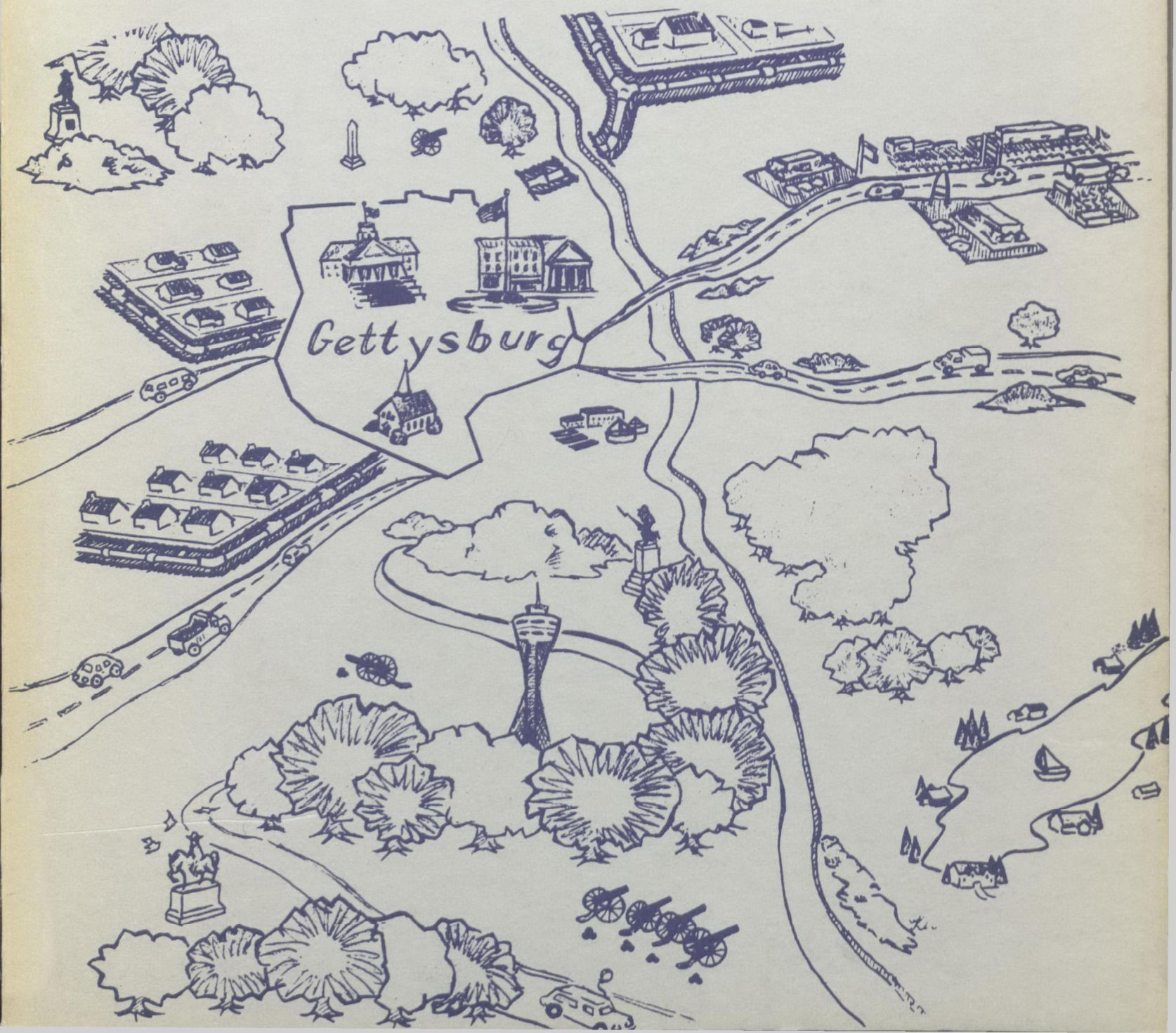
Region 3
Sixth and Walnut Streets
Philadelphia, PA 19106

September 1981

EPA

Final Environmental Impact Statement

Gettysburg, PA Area
Wastewater Treatment Facilities



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
6TH AND WALNUT STREETS
PHILADELPHIA, PENNSYLVANIA 19106

SEP 01 1981

TO ALL INTERESTED AGENCIES, PUBLIC GROUPS, AND CITIZENS:

Enclosed is a copy of the Final Environmental Impact Statement (EIS) prepared by the U.S. Environmental Protection Agency (EPA) in conjunction with wastewater treatment facilities plans for Gettysburg and surrounding Townships in Adams County, Pennsylvania.

This Final EIS is being issued for public review in accordance with the National Environmental Policy Act of 1969, the Clean Water Act of 1977, and regulations promulgated by this Agency (40 CFR, Part 6, November 6, 1979). Comments or inquiries concerning this EIS should be submitted to the attention of Mr. Thomas Slenkamp at the above address by October 9 , 1981.

EPA recommends as part of this Final EIS that three separate projects be carried out: (1) Improvement and expansion of the existing Gettysburg sewage treatment facility to handle current users plus the Route 30 east area of Straban Townshp; (2) Improvement and expansion of the existing Cumberland Township sewage treatment facility for the current service area and adjacent areas in Cumberland Township; and (3) Construction of a pressurized sewer system for the Lake Heritage community with transmission to a new sewage treatment facility.

As a means of protecting historic and archaeologic resources which could be affected by the first two projects, EPA has worked with local communities to develop a set of mitigative measures which are described in detail in Chapter V. The cornerstone of these calls for establishment of locally controlled Historic Districts which cover the areas of the project's potential impact.

I wish to thank the three prospective grant applicants for the assistance provided to EPA's staff during this EIS process. I especially want to thank members of the Public Advisory Group who devoted considerable time and effort to provide the public a window through which to view these plans. And finally, I wish to thank the area's citizens and encourage you to work with your local governments to ensure that the recommended projects and protection measures are fully implemented.

A public meeting regarding the Final EIS will be held on September 29, 1981 at 7:30 p.m. in the (old) Adams County Courthouse Both the public and representatives of organizations are encouraged to attend and express their comments and opinions on EPA's recommendations.

Sincerely yours,

George D. Pence Jr.

George D. Pence, Jr., Chief
Environmental Impact Branch

Enclosure

FINAL ENVIRONMENTAL IMPACT STATEMENT

on

WASTEWATER MANAGEMENT FACILITIES IN THE GETTYSBURG, PENNSYLVANIA AREA

Prepared by

US Environmental Protection Agency
Region III
Philadelphia, Pennsylvania

Thomas A. Slenkamp, Project Monitor

Prepared with the assistance of

WAPORA, Inc.
Chevy Chase, Maryland

Type of Action:

Legislative ( )
Administrative (X)

EXECUTIVE SUMMARY

GETTYSBURG FINAL EIS
EXECUTIVE SUMMARY

This Final Environmental Impact Statement (EIS) has been prepared by the Region III Office of the U.S. Environmental Protection Agency (EPA). It was prepared under the National Environmental Policy Act (NEPA), which requires all Federal agencies to prepare EIS's when major Federal actions (e.g. funding of wastewater treatment facilities) could significantly affect the quality of the environment.

It's purpose is to address salient comments received on the Draft EIS which was issued in December 1980, and to recommend a wastewater management alternative for the Gettysburg area. This Final EIS is the conclusion of a planning process which has been ongoing for several years to simultaneously solve water pollution problems while preserving environmental and cultural resources, especially those associated with Gettysburg National Park.

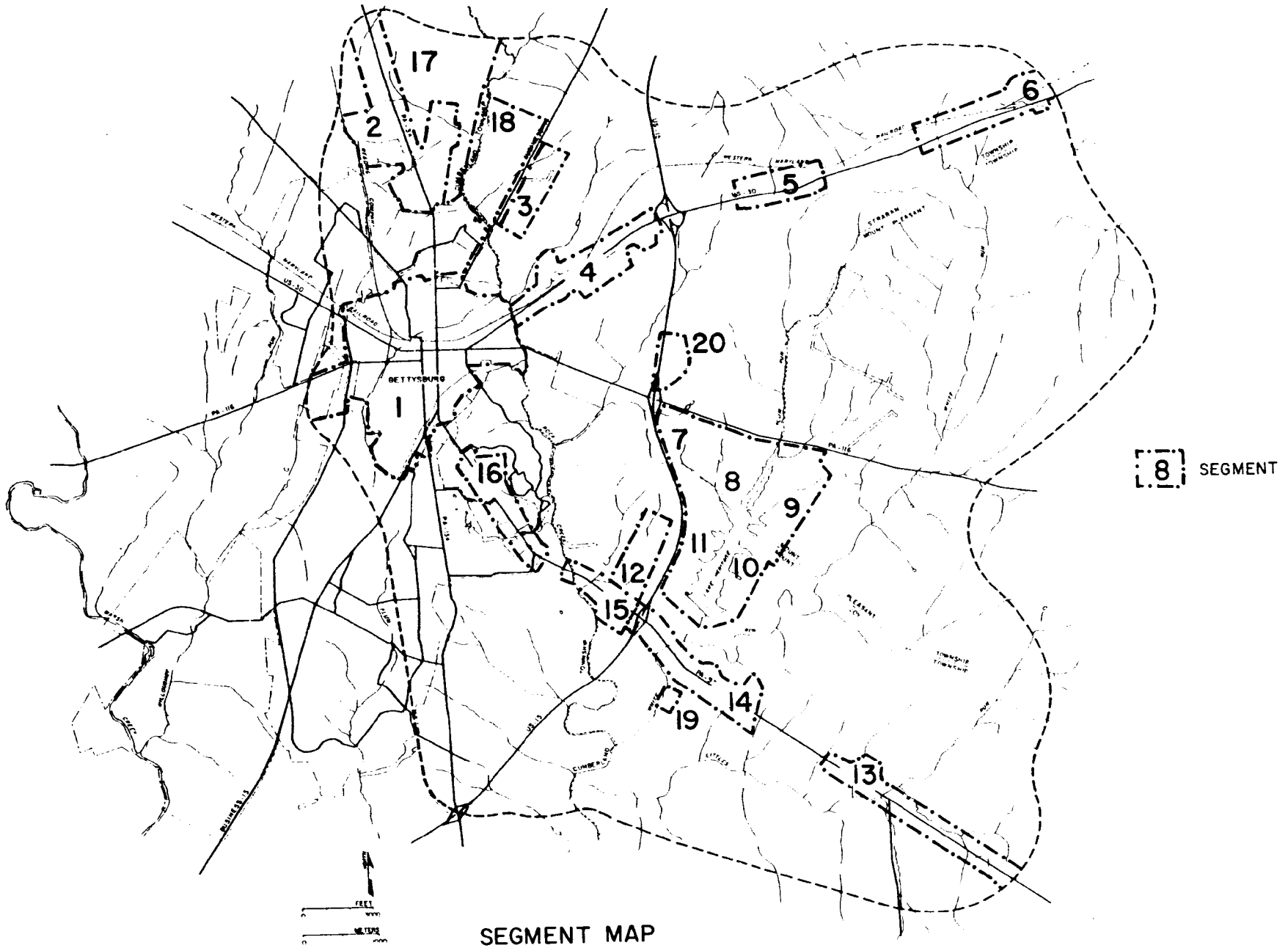
Draft EIS

The Draft EIS presented five possible alternatives for handling wastewater treatment needs. They are outlined in the chart below in terms of which central sewage treatment plants would be improved, expanded, or eliminated, and which areas (segments) would be served.

FEASIBLE ALTERNATIVES

Alternative	Major Components	Segments Served
A	Upgrade Gettysburg STP	1,3
	Upgrade Cumberland STP	2
	Construct New STP for Schaff's Trailer Park	Part of 4
	Construct New STP for Lake Hertiage holding tanks	7-11
	Improve on-site systems as needed	4,7-12,14-18,20
B	Upgrade Gettysburg STP	1,3,4
	Upgrade Cumberland STP	2
	Construct New STP for Lake Heritage holding tanks	7-11
	Improve on-site systems as needed	7-12,14-18,20
C	Upgrade Gettysburg STP	1,3
	Upgrade Cumberland STP	2
	Construct Land Application system for Segment 4	4
	Construct New STP for Lake Heritage holding tanks	7-11
	Improve on-site systems	7-12,14-18,20
D	Upgrade Gettysburg STP	1,3,4,18
	Upgrade Cumberland STP	2,17
	Construct New STP for Lake Heritage	7-11
	Improve on-site systems	12,14-16,20
E	Upgrade Gettysburg STP	1-4,17-18
	Construct New Lake Heritage STP	7-11,20
	Improve on-site systems	12,14-16

EPA indicated no preferences among the alternatives in the Draft EIS; rather, a variety of information (cost estimates, environmental effects, available technologies, etc.) was provided to enable the reader to decide which alternative might be the most "cost-effective".



SEGMENT MAP

Public Comments

EPA received many written and verbal comments on the Draft EIS during a formal public comment period from December 12, 1980 to February 10, 1981. In addition, oral testimony on the Draft EIS was recorded at a Public Hearing conducted by EPA at the Adams County Courthouse on January 28, 1981. Comments on the Draft EIS were in the form of questions, new information, suggestions for improvements to the document, and recommendations for selecting an alternative.

EPA reviewed all comments and determined those of greatest concern based on the frequency of comment or the importance of the issue to local, State, or Federal government decision making responsibilities.

Key public comments involved the following isssues:

- o Reserve treatment capacities for anticipated future needs
- o Treatment technologies available to meet defined needs
- o Overall project costs and expected local cost burdens, including individual user charge estimates
- o Methods recommended for concurrently protecting historic and archaeologic resources from project impacts
- o Levels of treatment necessary to protect water quality in area streams
- o Feasibility of on-site systems in areas where sewer service is not cost-effective

These key comments are responded to in Chapter III. From EPA's persepective, all comments made were considered beneficial in assisting the Agency to refine the Draft EIS analysis and to make final recommendations on fundable alternatives. All written comments received are reprinted in Appendix B.

Final Alternatives Evaluation

In determining which alternative should be recommended, EPA considered estimated costs, environmental impacts, public and government agency preferences, and potential for successful implementation. The objective was to determine the best (most cost-effective) alternative for the overall planning area, all factors considered. The roughly equivalent cost estimates and similarity of impacts among most alternatives meant that large weight was given to public/community preferences and ease of implementation.

Costs

A review of the cost estimates presented in the Draft EIS indicates that, with the exception of Alternative A, the alternatives' present worth costs (those dollars necessary to construct, operate, and maintain the facilities over the 20 year planning period) are not appreciably different from one another (all were within $\pm$ 10%). Alternative A is significantly lower in costs than the others, but is not directly comparable due to its limited service population. Alternatives D and E are more expensive due to the more extensive sewering involved with these.

EPA also considered estimated costs to individual users inasmuch as they affect public acceptability and ease of implementation. Estimated annual user charges vary widely ($118-548), depending on the user's location (municipality) and to a lesser extent on the alternative selected. That is, where a person lives will have more of an effect on his sewer rates than which particular alternative is selected. In addition, the estimates themselves are rough and are subject to change depending on level of Federal funding available, actual construction costs and the financing system used by local municipal authorities to bill customers. Nevertheless, the cost burden to municipalities and individual users was also taken into account.

Environmental Considerations

The environmental impact comparison from the Draft EIS shows that while all the alternatives will convey, on balance, more positive than negative effects, there are relatively minor impact differences among them. Also, resolution of a key issue of this EIS, impacts on historic and archaeologic resources, would be the same in principle irregardless of alternative selected.

To sharpen the distinction among the alternatives in terms of environmental impacts, EPA performed several additional tasks after the Draft EIS was issued:

- o Supplemental photographic field work from strategic National Park focal points
- o Water quality modeling for impact analysis and effluent discharge limitations
- o Analysis of viewsheds, or panoramas, based on topographic and vegetative features
- o Growth distribution predictions by alternative

After reanalyzing the environmental evaluations based on public comments received, EPA reached the following conclusions: Alternatives B and C are environmentally prefereable, by a slim margin, to the other alternatives. Alternative A, while seemingly less obtrusive because of limited facilities construction and sewered service area, is considered less desirable environmentally than B or C because of its lack of growth control and heavy reliance on on-site systems in areas of poor soil suitability. Alternative D is considered inferior to A,B, and C as it would induce growth into prime agricultural areas and conforms less to local desires concerning future growth and land use. Alternative E is least desirable environmentally, not because it is the only alternative which calls for sewering Lake Heritage, but because it would convey all wastewater flow from the upper segments north of Gettysburg into an expanded Gettysburg STP, causing excessive induced growth, a larger, more concentrated, water quality impact on Rock Creek, and a strain on the amount of land necesary for the STP expansion, already of limited availability.

Community Preferences

With these factors in mind, EPA considered the preferences of local governments and municipal authorities, State and Federal Agencies, and the public at large.

Of the communities within the planning area, three registered specific preferences about the selection of an alternative wastewater treatment system. Cumberland Township endorsed Alternative D, with some qualifications, as the one being closest to meeting the interests of Cumberland. Straban Township expressed a desire for Alternative B, provided that a sufficient amount of capacity will be reserved for Straban in an expanded Gettysburg STP. The Lake Heritage community voiced the most and the strongest opinions about the alternatives available, in their case, either a pressurized sewer system or continued use of a combination of holding tanks and other on-site systems. The Lake Heritage Municipal Authority endorsed Alternative E as the only acceptable solution to the unique needs of Lake Heritage. The Lake Heritage Property Owners Association, after some initial reservations, also decided to support Alternative E. In addition, a majority of letters received from Lake Heritage residents indicated support for a sewered vs. non-sewered approach. The Borough of Gettysburg voiced no specific preferences, but indicated that they desired the most expedient solution possible.

The Pennsylvania Department of Environmental Resources raised several questions about the Draft EIS, but generally supported local preferences on the alternatives. The National Park Service was likewise supportive of local governments desires as long as they could be assured that any improved facilities would not be detrimental to historic and archaeologic resources in the area. Several other government agencies commented on the Draft EIS, with about half encouraging a specific alternative. (See Appendix B).

General public comments were divided about equally between those on Lake Heritage and those on other areas, with about one-third expressing specific alternative preferences. Many individual commenters wanted to see strong historic protection measures applied, regardless of the alternative selected.

Recommended Alternative

With a final consideration given to all of the above factors, EPA recommends the following alternative for implementation:

Components of Recommended Alternative

Municipality	Draft EIS Alternative	Segments Sewered
Gettysburg/Straban	B	1, 3, 4
Cumberland	D	2, 17
Lake Heritage	E	7-11, 20

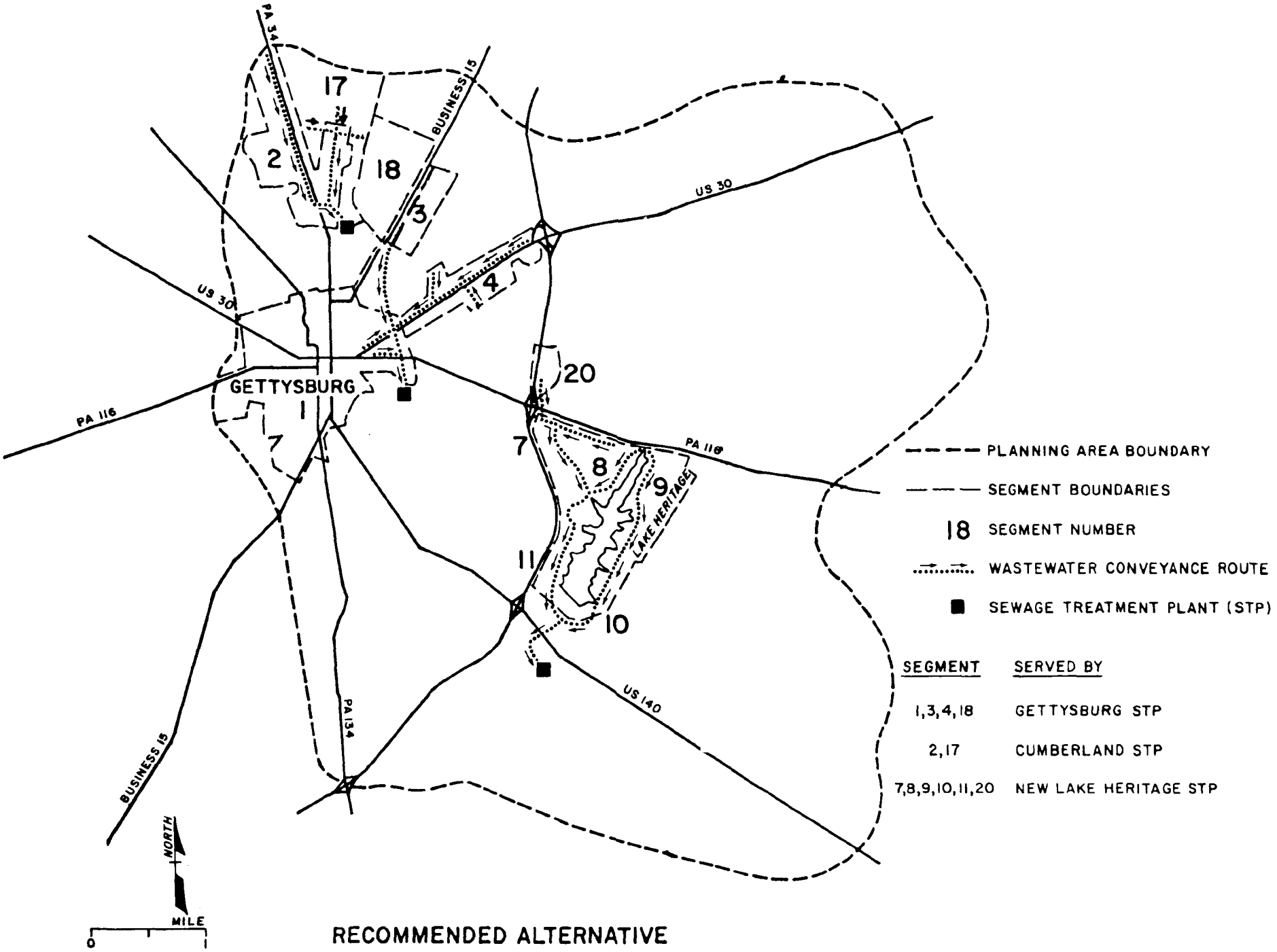
Under the recommended alternative (See Figure), Cumberland Township will upgrade its north plant and expand it to accommodate future needs in Segments 2 and 17. The existing Gettysburg STP will be upgraded and expanded to serve existing users (the Borough of Gettysburg and the Twin Oaks subdivision) plus the Route 30 East area of Straban Township (Segment 4) and a small amount of holding tank waste from Segment 18. The Lake Heritage community (Segments 7-10), Hazelbrook Hills (Segment 11), and Little Drummer Boy Campground (Segment 20), will be served by a pressure sewer system, with the wastewater flow being treated at an improved STP located south of the lake below Route 97. The improved Lake Heritage STP will also treat holding tank waste from Segments 12 and 14-16.

The capital cost estimates for the three combined projects is $18,098,200.

Protection of Historic Resources

Along with the recommended wastewater treatment alternative, EPA recommends that a set of preventive mesures be carried out for protecting valuable historic and archaeologic resources. These measures are contained in a Memorandum of Agreement developed during the EIS process through a series of meetings among local, State, and Federal representatives. The MOA has been developed in accordance with the requirements of the National Historic Preservation Act and supporting regulations.

A chief mitigative measures calls for Cumberland and Straban Townships to establish and administer Historic Districts under the Pennsylvania Historic District Act. The districts will provide for local review of future development to ensure its consistency with the historic, archaeologic, and architectural character of the area.



RECOMMENDED ALTERNATIVE

other protective mesures outlined in the MOA call for archaeologic surveys in areas of wastewater facility construction, a determination of eligibility for National recognition of any newly discovered resources, design of wastewater faciities to minimize visual effects, and a program to explain the advantages of scenic easements to area property owners.

Many of these measures will take place during design of the wastewater treatment projects, but all must be completed prior to construction. Local governments and citizens are encouraged to work together with the State Historic Preservation Office (Pennsylvania Historic and Museum Commission) and the National Park Service to implement these measures in an effective and expeditious manner.

Implementation of Projects

The responsibility for final decisionmaking on Federal funding of the recommended projects lies with the EPA Regional Administrator. The prospective grantees (Gettysburg, Cumberland, and Lake Heritage Municipal Authorities) must work with the State Department of Environmental Resources to fulfill requirements for Step 2 (design) and Step 3 (construction) funding. DER then will submit the projects to EPA for approval.

Following the close of a 30-day comment period on the Final EIS, EPA will be in a position to make grant awards. Later this year, EPA will prepare a Record of Decision which will set forth the conclusions of the EIS process, the decisions made by DER and EPA on the funding level of alternatives, and the subsequent actions to be taken by the grantees.

A final public meeting to discuss the recommendations presented in the Final EIS will be held in Gettysburg as specified in the cover letter of this document.

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LIST OF ABBREVIATIONS

ACHP	Advisory Council of Historic Preservation
ACPC	Adams County Planning Commission
AQCR	Air Quality Control Region
BOD_5	Five-day Biochemical Oxygen Demand
BOD	Biochemical Oxygen Demand
cfs	Cubic foot per second
BAQNC	Bureau of Air Quality and Noise Control
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
GASD	Gettysburg Area School District
GFCC	Gannett, Fleming, Corddry, and Carpenter, Inc.
GMA	Gettysburg Municipal Authority
gpcd	Gallons per capita per day
gpd	Gallons per day
HGAC	Historic Gettysburg-Adams County
HUD	Housing and Urban Development
I/I	Infiltration/Inflow
LASD	Littlestown Area School District
LHMA	Lake Heritage Municipal Authority
mgd	Million gallons per day
mg/l	Miligrams per liter
msl	Mean sea level
NAAQS	National Ambient Air Quality Standards
NBOD	Nitrogenous Biochemical Oxygen Demand
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NPS	National Park Service
O & M	Operation and Maintenance
PA-DER	Pennsylvania Department of Environmental Resources
PAG	Public Advisory Group
PIHP	Pennsylvania Inventory of Historic Places
PSD	Prevention of Significant Deterioration
SEO	Sewage Enforcement Officer
SHPO	State Historic Preservation Officer
ST/SAS	Septic Tank-Soil Absorption Systems
STP	Sewage Treatment Plant
TDS	Total Dissolved Solids
TSP	Total Suspended Particulates
TSS	Total Suspended Solids
USDA	US Department of Agriculture
USDOC	US Department of Commerce
USGS	US Geological Survey
7Q10	Seven-day ten-year low flow

CHAPTER I

Introduction

CHAPTER I

INTRODUCTION

This Final Environmental Impact Statement (EIS) has been prepared in conjunction with wastewater facilities plans and applications for Federal construction grants submitted to the U.S. Environmental Protection Agency (U.S. EPA) in the area of Gettysburg, Pennsylvania. The Gettysburg Municipal Authority (GMA) initially requested Federal financial assistance from EPA in 1976 in order to carry out their proposed plan for a regional wastewater treatment system for Gettysburg and surrounding townships in Adams County, Pennsylvania. Under the National Environmental Policy Act (NEPA), EPA is responsible for making the public aware of any significant environmental consequences that may occur as a result of any proposed project involving a Federal government action. Because questions have been raised about the impacts that this project may have on the local communities and the Gettysburg National Park, EPA decided to prepare an EIS.

EPA's Notice of Intent to prepare an EIS was issued on February 16, 1979. A Draft EIS was distributed to the public and government agencies on December 12, 1980. The Draft EIS is summarized in Section II of this Final EIS. Aside from that summation, the content of the Draft EIS is not repeated in this document. When necessary, contents of the Draft EIS are herein referred to by page (i.e., DEIS, 21). The Draft EIS is available for review at local and county libraries and municipal offices. Copies of the Draft EIS have been distributed to Federal agencies, state agencies, Federal and state elected officials, local government agencies, environmental interest groups, citizens, and numerous other individuals and organizations.

A public hearing on the Draft EIS was conducted by EPA at the Adams County Court House in Gettysburg Borough on January 28, 1981, at which time local officials and other interested parties presented their comments and recommendations concerning this project. Written comments also were received by EPA during a public comment period that commenced with the distribution of the Draft EIS (December 12, 1980) and ended on February 10, 1981. Public and agency comments on the Draft EIS are presented and addressed in Chapter III of this document.

The primary purpose of the Final EIS is to evaluate and address questions, comments, and recommendations received during the commenting period. By doing so, the critical issues concerning this project are clarified, enabling EPA to present its recommendations on alternatives eligible for funding by the Agency. The final evaluation of alternatives is presented in Chapter IV of this document.

The Final EIS has two other purposes. First, it presents a Final Memorandum of Agreement (MOA) among all concerned parties on the protection of historic and archaeological resources in the Study Area. Mitigative measures and timing of the adoption of the MOA are established in the Agreement. Mitigative measures proposed include the stipulation for an archaeologic survey of all proposed wastewater collection and treatment facility sites, design of all facilities to minimize visual impacts, establishment of municipal historic district ordinances, and the formulation of a scenic easement program.

Second, the Final EIS provides guidance for the successful implementation of recommended alternatives by the grant applicants, the State, and EPA. Questions regarding design capacity of facilities, funding eligibility, and management responsibilities are addressed in this document.

Alternative Selection Process

Through the EIS process, several alternatives for improved wastewater management have been developed and evaluated. Details about the most feasible of these were presented for public consideration in the Draft EIS. Both the costs and environmental impact information have been carefully reviewed and commented on by area residents and other interested parties to determine the preferable alternatives.

EPA has evaluated all comments received and made necessary changes to the alternatives analysis based on these comments. A response to substantive comments is provided in this Final EIS. Also in this Final EIS, EPA has identified a recommended alternative for implementation, with consideration given to public comments, local government positions, and the cost and impact evaluations.

Following publication of this Final EIS, each local jurisdiction or municipal authority must decide which course of action they wish to pursue. If local decisions are consistent with the results of the EIS, applications for Federal funding to design and construct wastewater treatment facilities can then be processed.

CHAPTER II

Summary of Draft EIS

CHAPTER II.
SUMMARY OF DRAFT EIS

This section addresses the goals, alternatives, and conclusions of the Draft EIS.

Goal

The primary goal of the Draft EIS was to develop solutions to the existing and probable wastewater disposal problems for the Gettysburg area that are cost-effective and environmentally sound. The Draft EIS established an information base upon which rational decisions could be made by local jurisdictions and authorities when they apply for construction grant funds, as well as by PA-DER and EPA in deciding whether to award the funds. In order to achieve this goal, the following objectives were set for examination in the Draft EIS:

- To eliminate the water quality problems in Rock Creek and other surface waters
- To minimize costs for wastewater management for the Gettysburg area
- To minimize impacts on historic and archaeological resources and to develop mitigative measures to control secondary impacts resulting from induced growth.

Draft EIS Alternatives

The following summary describes the alternatives that were presented in the Draft EIS. The alternatives are described on a segment basis. Figure II-1 illustrates the division of the Study Area into segments. Alternative A, Figure II-2, the "limited action" alternative consists of upgrading the Gettysburg Sewage Treatment Plant (STP) to serve segments 1 and 4 and Cumberland Township STP to handle existing flows from segment 2; constructing a new STP for the Schaff's Trailer Park; and constructing a new STP for Lake Heritage residents, who would continue to use a combination of septic tanks and holding tanks.

Alternative B, Figure II-3, calls for upgrading and expanding the Gettysburg STP to accommodate currently sewered areas plus Route 30 east (Segment 4) in Straban Township. The Cumberland STP would be upgraded for currently served areas. A new Lake Heritage STP would be constructed to handle that area's septic tank and holding tank wastes. Areas north of Gettysburg in Cumberland and Straban Townships would be accommodated by on-site systems.

Under Alternative C, Figure II-4, Gettysburg and Cumberland STP's would be upgraded to handle the existing service area only. A new land treatment system would be built to serve Route 30 east in Straban Township. A new STP would be constructed to handle septic/ holding tank waste from Lake Heritage homes. Areas north of Gettysburg in Cumberland and Straban Townships would be accommodated by on-site systems.

Under Alternative D, Figure II-5, the Gettysburg STP would be upgraded and expanded to accommodate currently served areas plus portions of Straban Township along Route 30 east and Business Route 15 north. Cumberland STP would also be upgraded and enlarged to serve an expanded area along Route 34 north of Gettys-

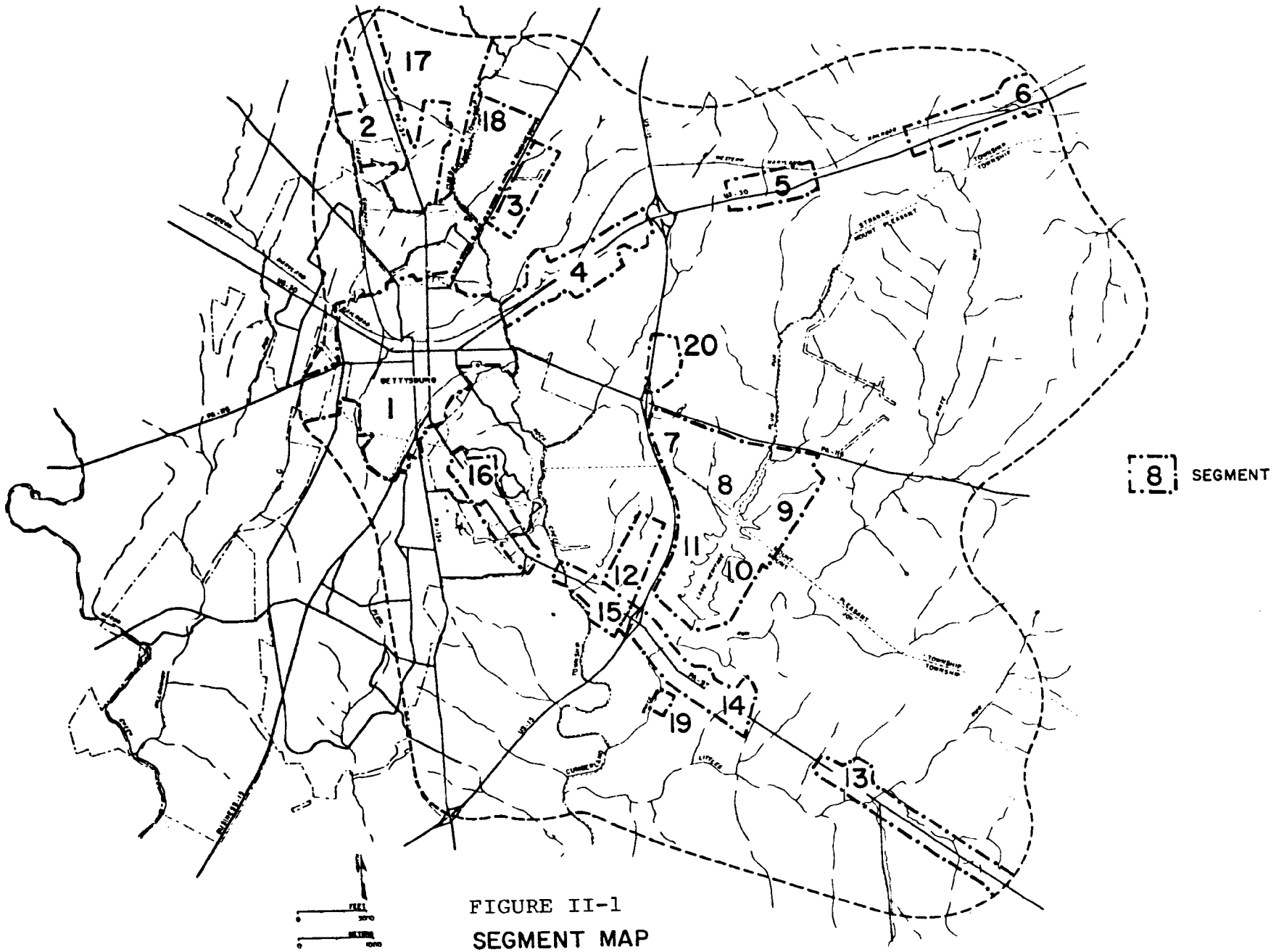


FIGURE II-1
SEGMENT MAP

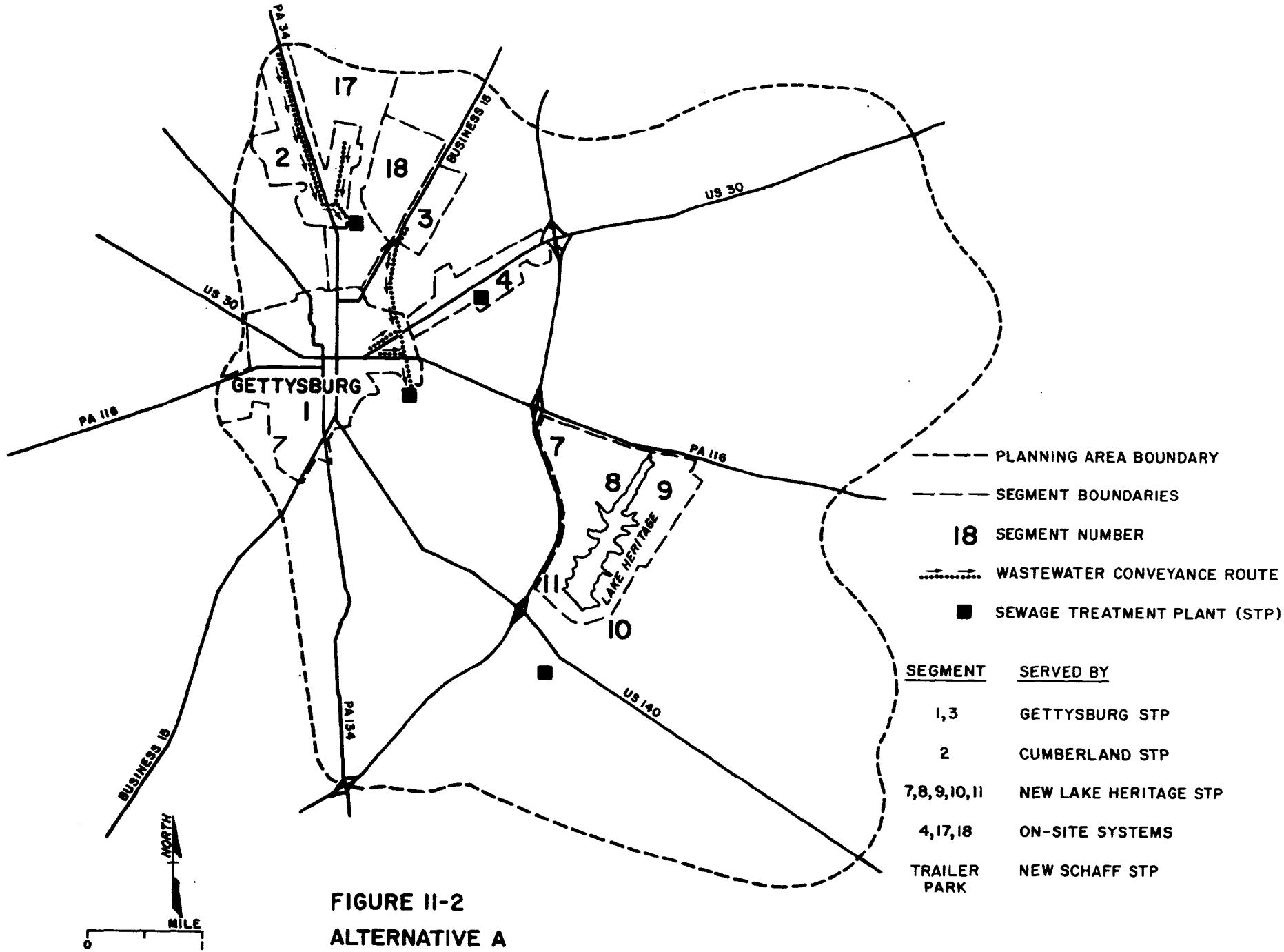


FIGURE II-2
ALTERNATIVE A

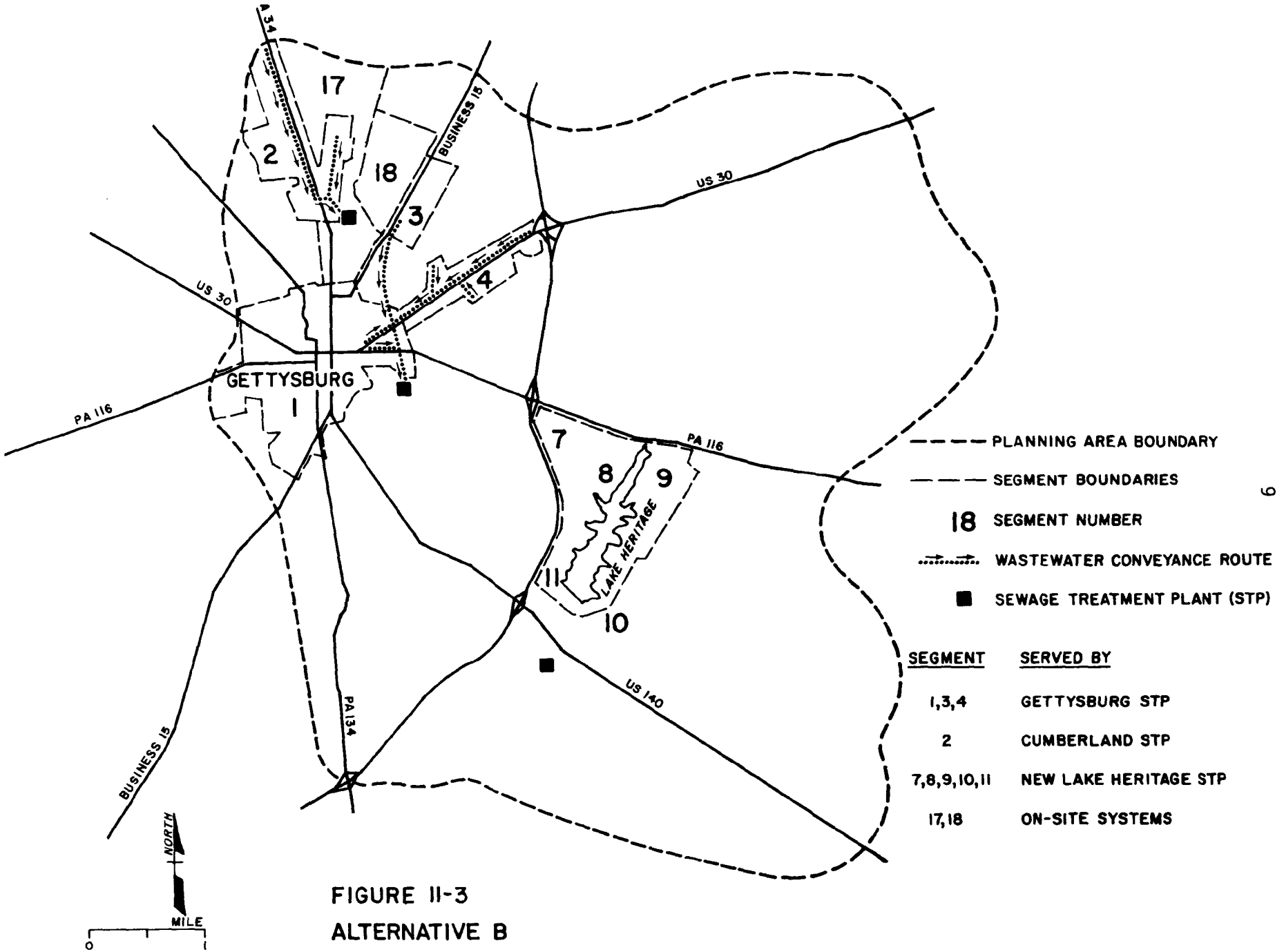


FIGURE II-3
ALTERNATIVE B

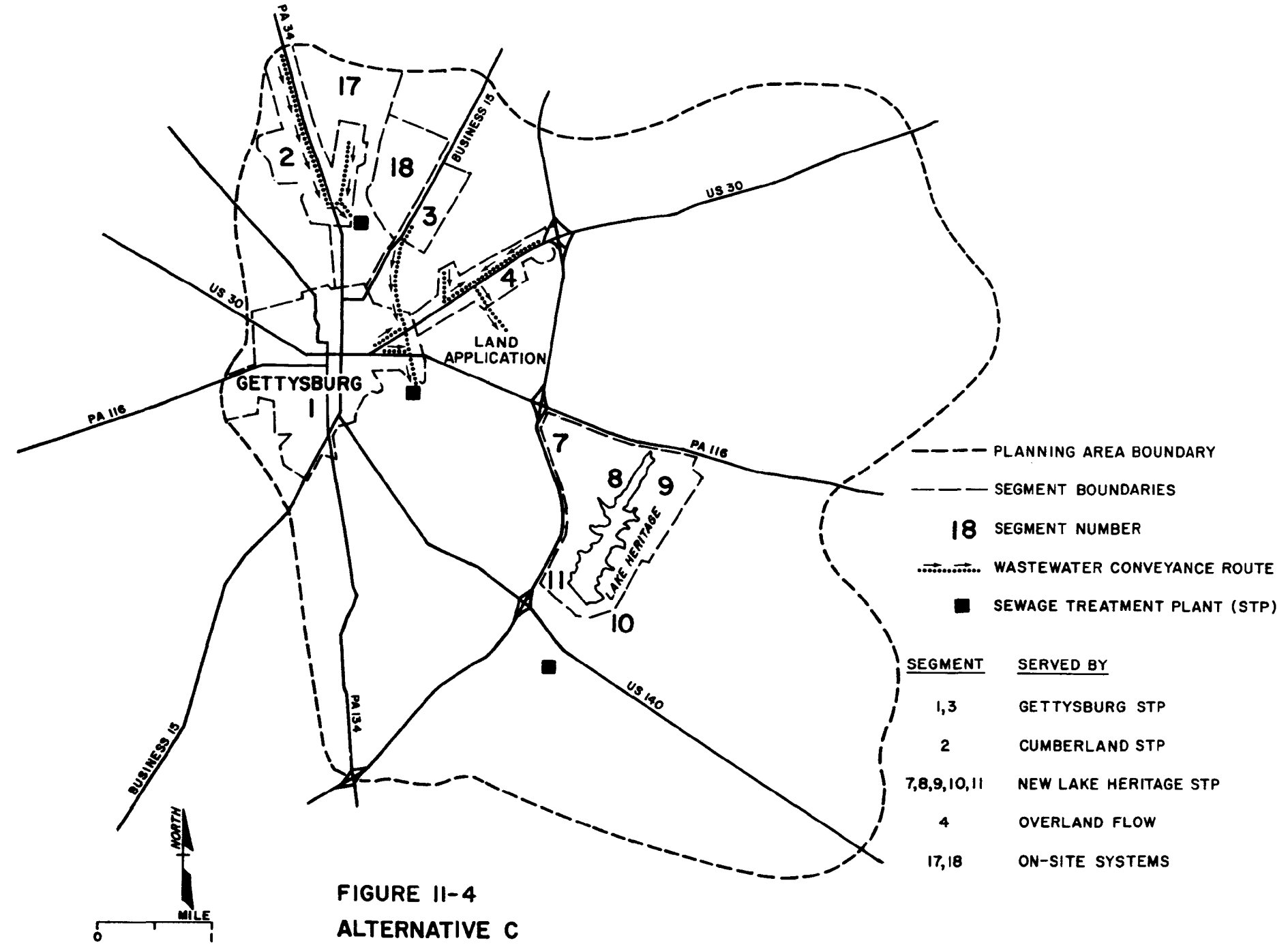


FIGURE II-4
ALTERNATIVE C

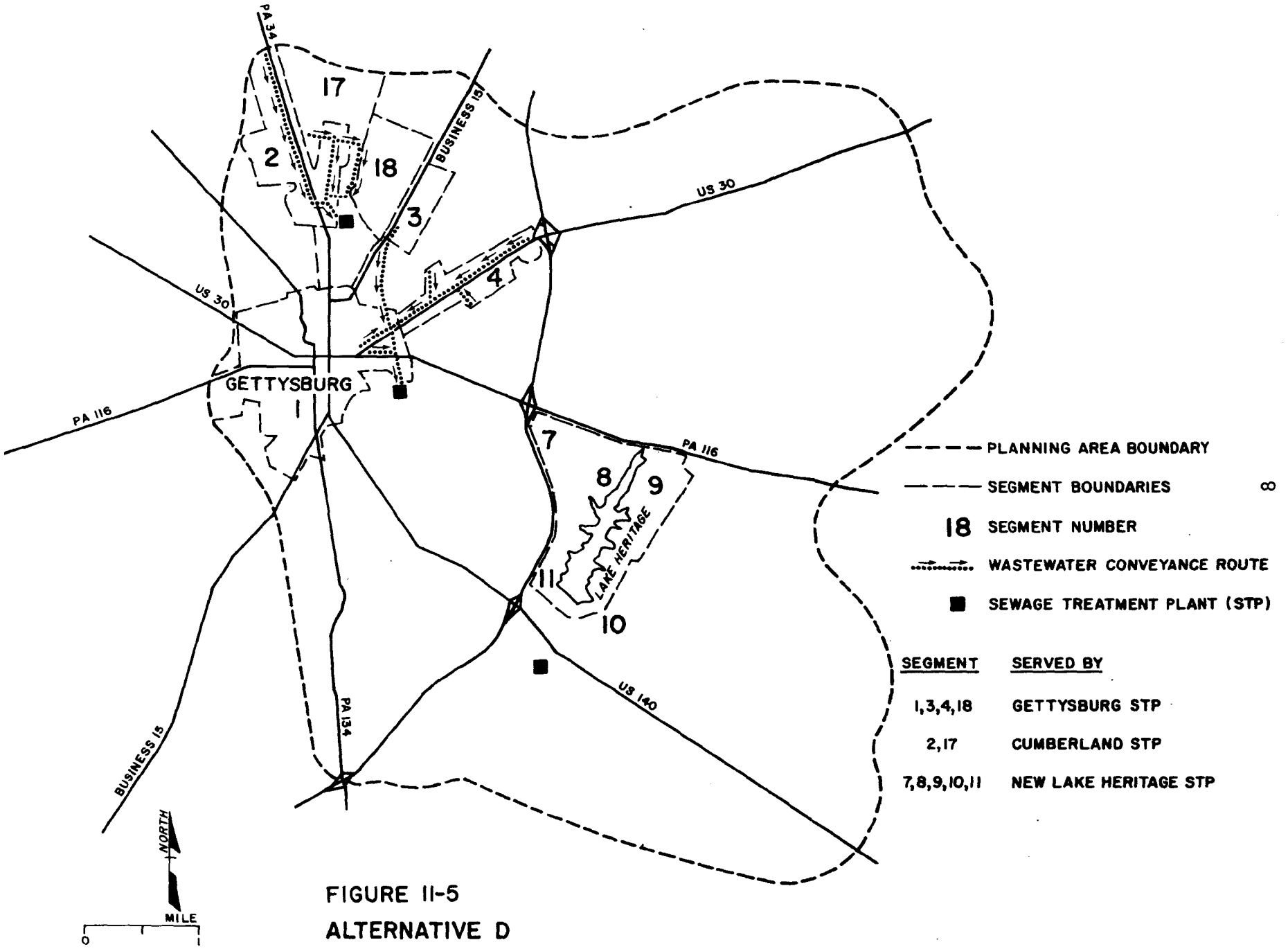


FIGURE II-5
ALTERNATIVE D

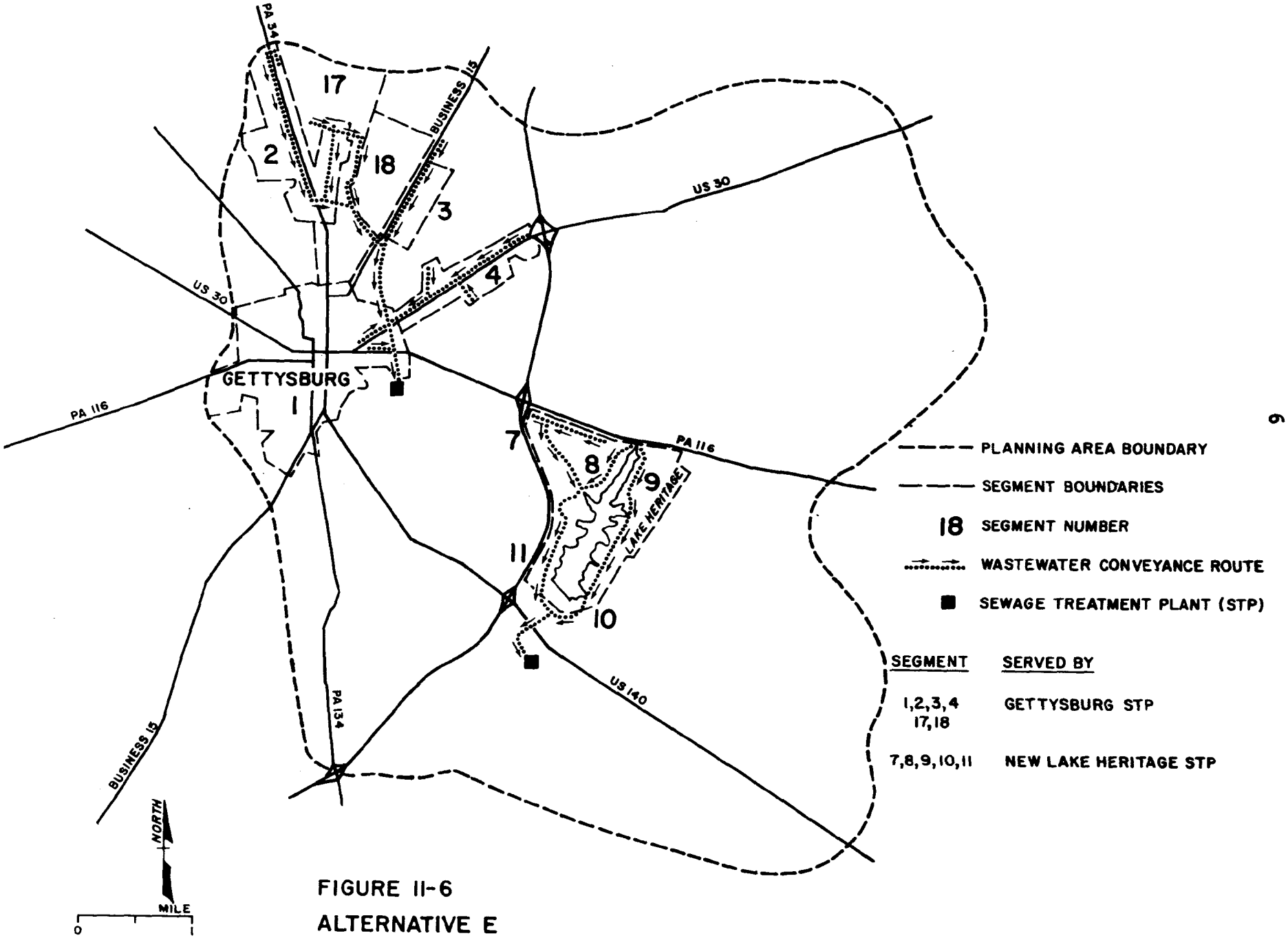


FIGURE II-6
ALTERNATIVE E

burg. A new STP would be constructed to treat septic and holding tank wastes from Lake Heritage.

Alternative E, Figure II-6, is the most centralized option and consists of upgrading the Gettysburg Sewage Treatment Plant to serve the Borough as well as the areas to the north in Cumberland and Straban Townships. New collection and treatment facilities would be constructed for all of the Lake Heritage area. For the segments to be served by decentralized treatment, 12, 14, 15, and 16, improvement of on-site systems is proposed.

Draft EIS Findings

On December 12, 1980, a Draft EIS on this project was issued by EPA. The Draft EIS presented these five alternative wastewater management systems which incorporated alternative approaches for resolving wastewater treatment problems. Table II-1 summarizes centralized and decentralized approaches, described in the Draft EIS, which are suggested to satisfy Gettysburg area's wastewater management needs.

A primary purpose of the Draft EIS was to identify wastewater management solutions which were implementable, cost-effective, environmentally sound, and grant eligible. The Draft EIS made no specific recommendations concerning preferred alternatives. Instead, probable adverse and beneficial effects of each approach were identified as well as the costs expected to be incurred. The alternative wastewater management system identified in the Draft EIS were demonstrated to have varying effects upon the existing and future environmental setting in the planning area. The environmental categories which specifically were addressed in the Draft EIS include:

- land use
- population growth
- earth resources
- water resources
- air quality/noise levels
- socioeconomic conditions
- cultural resources.

Table II-2 summarizes the adverse and beneficial environmental impact of these alternative wastewater management systems. These impacts are characterized by directness of impact (primary or secondary) and anticipated severity. Primary impacts are direct effects on the environment of the construction and operation of the wastewater facilities. Secondary impacts are indirect or induced changes in the environment resulting from the operation and availability of the wastewater facility and wastewater treatment service. Secondary impacts would include the induced changes in the pattern of land use, population density and related effects on air and water quality or other natural resources.

Table II-1. Major Components and Segments Served by EIS Alternatives

Alternative	FEASIBLE ALTERNATIVES Major Components	Segments Served	Sewered?
A	Upgrade Gettysburg STP	1,3	Yes
	Upgrade Cumberland STP	2	Yes
	Construct New STP for Schaff's Trailer Park	Part of 4	Yes
	Construct New STP for Lake Heritage holding tanks	7-11	No
	Improve on-site systems as needed	4,7-12,14-17,18,20	No
B	Upgrade Gettysburg STP	1,3,4	Yes
	Upgrade Cumberland STP	2	Yes
	Construct New STP for Lake Heritage holding tanks	7-11	No
	Improve on-site systems as needed	7-12,14-17,1820	No
C	Upgrade Gettysburg STP	1,3	Yes
	Upgrade Cumberland STP	2	Yes
	Construct Land Application system for Segment 4	4	Yes
	Construct New STP for Lake Heritage holding tanks	7-11	No
	Improve on-site systems	7-12,14-17,18,20	No
D	Upgrade Gettysburg STP	1,3,4,18	Yes
	Upgrade Cumberland STP	2,17	Yes
	Construct New STP for Lake Heritage	7-11	No
	Improve on-site systems	12,14-16,20	No
E	Upgrade Gettysburg STP	1-4,17-18	Yes
	Construct New Lake Heritage STP	7-11,20	Yes
	Improve on-site systems	12,14-16	No

Table II-2. Summary of Environmental Effects of Alternative Wastewater Management Systems in the Study Area

Environmental effect (by environmental category)	Type of Impact		Probability of Occurrence of Impact		Alternatives					
	Primary	Secondary	High	Moderate	A	B	C	D	E	RA
Land Use										
1. Conversion of undeveloped land to developed uses		•	•		-	-	+	+	o	o
2. Compatibility of future land uses with local plans and policies		•		•	-	-	+	+	o	o
3. Conformance with conservation and density objectives of municipal growth management plans		•		•	-	o	o	o	o	o
Population										
1. Inducement for population increase		•		•	-	o	o	o	+	+
2. Inducement for shifting of population increase in the planning area		•		•	-	o	o	o	+	+
Earth Resources										
1. Prime agricultural land		•		•	-	o	o	o	+	+
2. Erosion and sedimentation	•	•		•	-	o	o	o	+	+
3. Groundwater supply/recharge	•	•		•	-	o	o	o	+	+
Water Resources										
1. Surface waters quality		•		•	o	+	+	+	+	+
2. Groundwater quality	•	•		•	o	+	+	+	+	+
3. Frequency/intensity of downstream flooding	•	•		•	o	+	+	+	+	+
Socioeconomic Conditions										
1. Customer cost for wastewater service		•	•		o	o	-	-	--	o
2. Utilization of school facilities due to population increase		•		•	-	o	o	o	o	o
Historical and Archaeological Resources										
1. Aesthetic value of landscape, open space, and vistas	•	•		•	+	-	-	--	--	-
2. Noise, air, and aesthetic effects of STP on potential district	•	•		•	+	-	-	-	--	-
3. Prehistoric archaeologic sites	•	•		•	+	-	-	-	--	-

Key: + Beneficial Impact
o Negligible Impact
- Adverse Impact
-- Significant Adverse Impact

CHAPTER III

Public and Agency Comments on Draft EIS

CHAPTER III

PUBLIC AND AGENCY COMMENTS ON DRAFT EIS

In accordance with the National Environmental Policy Act and EPA procedures for the preparation of environmental impact statements, Federal, State, and local agencies as well as the public were requested to comment on the Draft EIS from December 12, 1980 to February 10, 1981. In addition, oral testimony on the Draft EIS was received at the Public Hearing held on January 28, 1981.

Comments on the Draft EIS included questions, new information, recommendations on improvements to the document, and recommendations for selecting alternatives. Preferences for alternative systems are summarized in Chapter IV. In total, written comments were received by EPA from Federal agencies, State agencies, county agencies, regional agencies, municipal authorities, and numerous citizens and interest groups. In addition, testimony at the public hearing on the Draft EIS was made by representatives of one State agency, three municipal authorities, and several citizens.

From the perspective of EPA, all comments concerning the Draft EIS were beneficial in assisting the Agency to refine its analysis of this project and in making final recommendations concerning fundable alternatives. From all the comments received, however, the following questions are considered by EPA to be among the most critical comments, based on the direct importance of the issue to the Agency's decision-making responsibilities:

Key Comments

- What are the treatment capacities available to local townships, and is this capacity sufficient for the design period?
- What are the design options considered for the Lake Heritage area?
- What are the overall project costs, the local share of that cost, and resultant user charges?
- Given the wastewater treatment needs defined in the Draft EIS, will the alternatives address the public health and water quality problems identified?
- Is advanced secondary treatment (AST) necessary in light of the DER proposed effluent limits and the results of water quality modeling accomplished as part of this EIS?
- What is the feasibility of upgrading on-site systems in problem areas where no sewer service is proposed?
- What are the anticipated impacts on historic and archaeologic resources from residential or commercial growth that will be induced by the Alternatives?

- What are the realistic mitigative measures necessary to protect historic and archaeologic resources from the recommended alternative and are they sufficient to ensure negotiation of Memorandum of Agreement (MOA)?

- What are the impact areas that must be covered in MOA?

These questions and each of the issues identified are addressed in the following sections:

- Response to comments on existing conditions.

- Response to comments on wastewater management alternatives.

- Response to comments on water quality justifications.

- Response to comments on historic and archaeologic impacts and mitigative measures.

Because many of the comments and issues were addressed by more than one organization or person, the comments that are discussed have been reformulated by EPA to indicate the central concerns of the commenting parties. Sources of the comments can be ascertained from Appendix B, where the full text of comment letters is presented.

EXISTING CONDITIONS:

COMMENTS AND RESPONSES

Each of the following comments and responses concern existing conditions and issues in the planning area. The issues must be resolved in order to finalize the alternatives and assess environmental impacts.

General Population Projections

Issue 1: Several commenters have questioned the reasonableness of the population projections used in the EIS process. Also, during recent meetings with municipalities in the Study Area, commenters indicated that they were confused by the different population projection tables in the DEIS and Appendices and by the concept of baseline projections themselves, as well as the manner in which these baseline projections provided the basis for design flow calculations in the alternatives development.

Response to Issue 1: Population projections for all municipalities and Study Area portions of municipalities are summarized (Table III-5, p. 38) and explained (pp. 37-40) in the DEIS. DEIS Appendix F describes the methodologies used to calculate the projections for the five municipalities as well as the methodologies used to break out the projections for the Study Area portions of these five municipalities. DEIS Appendix F also reviews other population projections evaluated during this EIS process.

The population projections used by EPA for waste planning purposes (Table III-5, Tables 2 and 3 in Appendix F-1, Table 2 in Appendix F-3, the last columns of Tables A and B in Appendix F-10, and Table IV-7 in the DEIS, incorrectly labelled Table III-7) are described as baseline projections. These baseline projections are intended to accommodate a reasonable amount of

growth, taking into account overall State, regional, and county growth; major developments in the five municipalities; and regulations/guidance from the U.S. Council on Environmental Quality and other Federal agencies. Past development trends and other land use factors were used to distribute baseline growth in such a way as to understand where growth would occur. Baseline population with associated land development is depicted in Figure III-7 of the Draft EIS. These baseline population and associated housing unit projections are separated by five-year periods and increments in Tables 2 and 3 in Appendix F-1 and are translated into both housing units and acres absorbed by new development in Tables A and B in Appendix F-10 which, in turn, is keyed to Figure III-7. Baseline projections and future development directly have been used in the development of alternatives (Table IV-7/III-7). Existing and future user needs have been tallied by segment and then translated into flows by alternative (Table IV-9).

The concept of induced growth stimulated by any of the alternatives is discussed in the impact discussion of the DEIS (pp. 119-125) and is presented in Table V-2. (It should be noted that the concept of induced growth applied in this EIS is not value influenced and does not suggest positive or negative effects; induced growth estimates are variations from baseline patterns.) DEIS Appendix F-10 describes the induced growth and overall impact methodology in greater detail with Tables A and B indicating housing unit and associated acreage counts by alternative by municipality by segment (baseline growth also is provided for comparison). For the purpose of clarification, a new descriptive table (Table III-1) has been developed to summarize the vital induced growth and overall impact findings and contrast these findings with baseline projections. As was stated in the DEIS (p. 120), the induced growth effects of any of the alternatives are not sizable, largely as a result of the careful engineering of sewage treatment and conveyance facilities in all alternatives. Nevertheless, some of the alternatives (B, D, and E) can be expected to result in population shifts or redistributions between segments, as well as potential acceleration in growth rates such that year 2005 baseline projected growth could be reached earlier. The basic theme which emerges from Table III-1 is that, by sewering the Route 30 east area (Segment 4) in Straban Township, future growth can be expected to be attracted away from areas north of Gettysburg Borough (Segment 17 in Cumberland and Segment 18 in Straban). It is important to note that this redistribution to Segment 4 appears to be positive when many of the impact areas are evaluated.

Specific Population Projections

Issue 2: Straban Township specifically has addressed population projection issues in their letters of 16 January 1981 and 9 February 1981, which questioned the overall projection for the municipality as well as the distribution of growth (Segment 4 versus Segment 18). Basically, Straban continues to want to provide sewage capacity for more growth in Segment 4 (Route 30 east) than has been projected by EPA in the baseline projections (59 dwelling units for 166 people).

Response to Issue 2: The baseline projections prepared for Straban and the other four municipalities emerged as the result of EPA's evaluation of all existing population projections, recent development trends (subdivision approvals, building per-

Table III-1. A Comparison of Projected Baseline and Induced Growth Impacts by Alternative by Segment by Municipality for Population and Housing Units*

Alternative A (Baseline)	
Cumberland	No change from baseline future land use
Gettysburg	No change from baseline future land use
Mt. Joy	No change from baseline future land use
Mt. Pleasant	No change from baseline future land use
Straban	No change from baseline future land use
Alternative B	
Cumberland	Loss of 420 people and 150 dwelling units in Segment 17
Gettysburg	No change from baseline future land use
Mt. Joy	No change from baseline future land use
Mt. Pleasant	No change from baseline future land use
Straban	Gain of 420 people and 150 dwelling units in Segment 4; also internal redistribution of 340 people and 121 dwelling units from Segment 18 to Segment 4, increasing Segment 4 total by 761 people and 271 dwelling units when compared to baseline future land use
Alternative C	
Cumberland	No change from baseline future land use
Gettysburg	No change from baseline future land use
Mt. Joy	No change from baseline future land use
Mt. Pleasant	No change from baseline future land use
Straban	Internal redistribution of 295 people and 105 dwelling units from Segment 18 to Segment 4
Alternative D	
Cumberland	No change from baseline future land use
Gettysburg	No change from baseline future land use
Mt. Joy	No change from baseline future land use
Mt. Pleasant	No change from baseline future land use
Straban	Internal redistribution of 295 people and 105 dwelling units from Segment 18 to Segment 4
Alternative E	
Cumberland	Loss of 395 people and 141 dwelling units in Segment 17
Gettysburg	No change from baseline future land use
Mt. Joy	Loss of 128 people and 42 dwelling units in Segments 10/11
Mt. Pleasant	Loss of 75 people and 25 dwelling units in Segment 9
Straban	Gain of 452 people and 161 dwelling units total; Segment 18 loses 295 people and 105 dwelling units, Segment 4 gains 691 people and 246 dwelling units, Segments 7 and 8 gain 56 persons and 20 dwelling units
Recommended Alternative	
Cumberland	No change from baseline future land use
Gettysburg	No change from baseline future land use
Mt. Joy	No change from baseline future land use
Mt. Pleasant	No change from baseline future land use
Straban	Gain of 420 people and 150 dwellings units in Segment 4; also internal redistribution of 340 people and 121 dwelling units from Segment 18 to Segment 4, increasing Segment 4 total by 761 people and 271 dwelling units when compared to baseline future land use

* Based on baseline projections for population in Table III-5 (DEIS, p. 38) and baseline projections for population and housing units in Tables 2 and 3 (DEIS, Appendix F-1); reflected in baseline projections in Table IV-7/III-7 (DEIS, p.95) and design flows given in Table IV-8 (DEIS, pp. 97 and 198). Induced growth calculations are based on Table V-2 (DEIS, pp. 121 and 122) and Table A and B in Appendix F-10.

mits issued, etc.) obtained from the Adams County Planning Commission files and other sources such as air photo interpretation. EPA sought to use existing projections prepared by appropriate agencies. In this case, recent projections for Straban were not available. As a consequence, EPA has estimated current population and then applied a reasonable rate of growth to the existing population base. This rate of growth basically is the same as that developed by the Pennsylvania Department of Community Affairs for neighboring Cumberland Township during the preparation of the Cumberland Comprehensive Plan. Because the two municipalities are so similar in terms of growth determinants (e.g., demographic factors affecting fertility, net migration factors, etc.) and because the Cumberland planning process constitutes the most recent throughgoing planning process undertaken in the area, use of this growth rate was deemed to be reasonable.

One major difficulty in the projection process has been the necessary development of the Straban population projections prior to the release of the 1980 U.S. Census counts. EPA and its consultant utilized then published U.S. Census counts in the projection process (Table III-5 in the DEIS, p. 38). New residential development activity was used to extend 1976 estimates to an existing 1980 population. The 1980 U.S. Census preliminary count for Straban was 4,030 and was recently revised even higher to 4,248. Assuming that the U.S. Census count is reasonably accurate, the 4,248 figure suggests that either there are considerably more housing units in Straban than EPA has been able to determine from county files (building permits) or that there are more people living in each housing unit than has been projected by EPA. The latter explanation based on average household size appears to be more likely. In many municipalities, the 1980 counts are much higher than previously estimated and are not compatible with building permit data. (Verbally, Mr. John Callenbach, Adams County Planning Commission, to Mr. Wesley Horner, WAPORA, Inc., 21 April 1981.) Publication of detailed population and housing data for the 1980 count may help to explain these inconsistencies.

If DEIS population projections were to be adjusted upward using the 1980 U.S. Census count for Straban, but retaining all prior assumptions, an increase of approximately 400 additional persons could result in the Study Area portion of Straban. Most likely this additional projected population component would be distributed throughout the Study Area portion, though definitely clustered in the sewered segments. However, if all of this additional growth were to occur in Segment 4, this total expanded growth could be accommodated by the Recommended Alternative (secondary or induced growth impacts have been estimated which themselves exceed these upwardly adjusted projections for Segment 4; as much as 80,400 gpd [Table IV-8 in the DEIS, pp. 97 and 98] is available for future growth in Segment 4 if Segment 18 is not connected, allowing for approximately 350 new units with between 1,000 to 1,100 residents rather than the baseline projection of 59 new units with 166 people). At the same time soils analysis for Segment 18 suggests that 50% of the baseline projected growth (320 units or 1,000 persons) could be developed in Segment 18 without public sewers, thereby increasing the net projection for the Study Area portion of Straban considerably together with the very substantial increase in Segment 4.

In sum, the Recommended Alternative addresses Straban's concerns regarding future growth thoroughly. Through the careful sizing, timing, and overall engineering of system elements, the Recom-

mended Alternative should promote a reasonable amount of new development in those areas deemed most locally desirable and least environmentally destructive.

WASTEWATER MANAGEMENT ALTERNATIVES:

COMMENTS AND RESPONSES

Straban Township Reserve Capacity

Issue 1: The Board of Supervisors for Straban Township voiced their disagreement with the population projections for Segments 4 and 18. They claim that the majority of growth will be in Segment 4, not in Segment 18 as projected in the Draft EIS. Straban has provided documentation supporting their claim of future development occuring in Segment 4. Straban's projection for Segment 4 includes 198 existing EDU's, 152 proposed EDU's for a motel complex under construction, and 150 EDU's for future development resulting in a total of 500 EDU's. Considering the above, what is the number of EDU's and the resulting reserve capacity allocated to Straban in the Recommended Alternative?

Response to Issue 1: When sewers are provided along Rt. 30, the projected development is expected to shift from Segment 18 to Segment 4. This shift results in a projection of 330 EDU's in Segment 4 by 2005. This figure is comparable to the 349 EDU's projected by the Straban Board of Supervisors (198 existing + 150 future). In addition, Schaff's Trailer Park is expected to have 331 residents and motel rooms are expected to add 108 resident-equivalents to the total population. These additions represent approximately 157 EDU's [(331 + 108) ÷ 2.8]. The total number of EDU's projected is therefore 487 (157 + 330) which is similar to the number projected by Straban (500 EDU's). Wastewater flow projections from Segment 4 can therefore be calculated as follows:

487 EDU's x 2.8 people/EDU x 75 GPCD = 102,225 gpd

To this flow projection, I/I must be added along with the contribution from the holding tanks in Segment 18. Holding tanks are expected to serve 100 residents in Segment 18 by the year 2005. The total capacity reserved for Straban at the Gettysburg STP can therefore be calculated as follows:

Flow from Segment 4	102,225 gpd
I/I - Schaff's	2,945 gpd
I/I - Rt. 30	5,265 gpd
Segment 18 100 holding tanks x $\frac{2,000 \text{ gal}}{14 \text{ days}}$	14,286 gpd

Total Straban capacity = 124,721 gpd

Lake Heritage Options

Issue 2: Problems with on-site systems such as failing septic tanks and holding tanks have been identified in the Lake Heritage area. What options were considered for handling the wastewater management needs of this area?

Response to Issue 2: The basic options considered for the Lake Heritage Area were the on-site option and the central collection and treatment option. Within each of these basic categories many options were considered. For example, on-site options included septic tank-sand mound systems and holding tanks. Sewering options included consideration of conventional gravity, pressure

sewers and vacuum sewers. Treatment options considered include land application (such as overland flow and marsh-pond systems), and activated sludge systems, such as the oxidation ditch.

Conventional gravity sewering was eliminated from consideration because of the expense of installation in areas of rolling terrain and shallow bedrock. On-site options were more cost-effective than sewering, but were not recommended as a result of the existing problems with on-site systems, the expected population increase, and the local preference for central collection.

Project Costs
User Charges

Issue 3: Project costs were a contributing factor in recommending the Alternatives for implementation in the Study Area. What are these costs and how accurate are they?

Response to Issue 3: The Draft EIS presents the results of the cost-effectiveness analysis. Component costs by municipality are presented in the Draft EIS and Appendix A of that document. Costs of the Recommended Action are presented in Chapter IV of the Final EIS and are summarized below.

Project	Total Present Worth ($ x 10^3, 4th Quarter 1979)	Local Share (By Segments) ($ x 10^3, 4 Quarter, 1979)	1985 Use Charges (By Segments) ($/yr)
Cumberland	3,794.1	119.8 (2,17)	332 (2,17)
Gettysburg/	11,218.4	1074.7 (1,3)	109 (1,3)
Straban		449.8 (4,18)	*313 (4,18)
Lake Heritage	7,251.6	818.1 (7-11,20)	568 (7-11,20)
		32.5 (12,14-16)	126 (12,14-16)

* Assumes no difference in user charge between Segment 4 (sewered) and Segment 18 (not sewered).

Note that the total present worth figures include costs associated with the entire project whether or not constructed by 1985. Local shares and user charges only consider pre-1985 costs. Existing debt is used in calculating the user charges but is not included in the local share.

These costs were developed from cost estimates for the Recommended Alternative. They can be expected to change by the time estimates are prepared in the design step of the construction grants sequence. A detailed user charge scheme will be completed as part of the Step II process. Reasons for expecting the Step II estimates to vary from those presented in the EIS include the following:

- Cost estimates reflect the planning stage of the process, subsequent estimates will use more detailed cost information appropriate to the design stage of the project.
- Costs are expressed in 4th Quarter 1979 dollars.
- Individual municipalities may wish to allocate costs differently among their users than was assumed in the EIS.

- EPA's share of the funding may change or the availability of such funds altogether may be questionable.

Due to the questionable status of future EPA funds, municipalities should investigate the possibility of alternate funding through sources such as FHA or HUD.

Wastewater Treatment Needs

Issue 4: Several commentors questioned where existing water quality and public health needs for wastewater improvements have been defined and if the alternatives address these problems.

Response to Issue 4: Chapter V Draft EIS outlined the needs documentation for wastewater management in the Study Area through a sanitary survey, local SEO records, visits to area treatment plants, water quality modeling, and analysis of local soil conditions. These data were analyzed to determine the nature and extent of needs in order to propose improved wastewater management in the Study Area. A complete record of the needs analysis may be found on pages 82 through 84 of the Draft EIS and in Appendix I-2 and I-3 of that document.

The Recommended Alternative outlined here in Chapter IV proposes centralized collection and treatment of wastewater for Segments 1-4, 7-11, 17, and 20. This wastewater management plan is designed to solve the needs defined in this area as well as to provide for a reasonable rate of growth. In Segments 12 through 16 and 18, insufficient needs were defined to warrant the large capital investment of centralized facilities. This could have been based on low population density, lack of well contamination evidence, or the existence of large lot sizes and marginal but appropriate soil conditions for on-site wastewater management. These areas are proposed to continue on the use of upgraded on-site systems with the possibility of the assistance of an on-site management agency.

On-Site System Feasibility

Issue 5: Several commentors have questioned the suitability of the soils in the Study Area to accommodate on-site wastewater treatment and think that upgrading these systems will not adequately protect public health.

Response to Issue 5: Soil limitations for on-site systems do exist in the Study Area. The major limiting factors cited by the US Department of Agriculture (USDA), the Soil Conservation Service (SCS) and the Commonwealth of Pennsylvania Chapter 73 Regulations are (1) shallow depth to bedrock, (2) shallow depth to water bearing strata, (3) seasonal high water table (4) too rapid or too slow a rate of permeability, and (5) excessively steep slopes. Because of these limitations the two types of on-site systems considered for use in the area are septic tank - sand mound systems and holding tanks. Holding tanks were considered where soils were believed inadequate to support a sand mound system. The assumption of using these technologies is conservative. Site-by-site analyses may find that some on-site systems can be upgraded with a less costly system than sand mounds or holding tanks.

A small waste flows (SWF) management District could be set up to provide an overall framework in which on-site systems would be properly regulated. A description of such a district is included in Chapter IV of the Draft EIS. A SWF management district would provide for better protection of the public health than would be available without such an agency. The purpose of a SWF management district is to balance the costs of management with the needs of public health and environmental quality.

Infiltration and Inflow

Issue 6: In Gettysburg Borough, infiltration and inflow (I/I) to existing wastewater collection systems is considered by the Gettysburg Municipal Authority and PA-DER to be excessive. Sewer system evaluation studies required by EPA and PA-DER for facility planning have yet to be completed by Gettysburg Municipal Authority and are critical in arriving at the selected plant design for the Gettysburg STP. In light of these facts, what is the current status of I/I studies performed by the Authority, what remains to be accomplished, and how can I/I reduction be estimated for purposes of this EIS?

Response to Issue 6: EPA and PA-DER met with the Gettysburg Municipal Authority's consultant, Gannett, Fleming, Corddry, and Carpenter, Inc. (GFCC) on April 16, 1981 to discuss I/I. GFCC pointed out that I/I to Gettysburg STP is very significant and believed that the actual I/I is higher than 0.5 mgd which was the amount initially estimated and was used in the Draft EIS. GFCC was near the completion of their second phase I/I study for GMA and their revised estimate showed that the amount of I/I is at least 0.7 mgd. It was decided that, with the concurrence of PA-DER, the I/I from Gettysburg Borough will be 0.7 mgd in the Final EIS.

Water Consumption

Issue 7: The metered water consumption in Gettysburg Borough during the past two years has averaged 1.0 mgd, excluding fire protection, leaks, etc. Assuming that an average of 85 percent of this is returned to the sewer system, the present average sanitary flow is about 0.855 mgd. The Draft EIS estimated a sanitary flow of 0.755 mgd which is 0.1 mgd lower than the above estimated. GMA suggested an increase of 0.1 mgd in sanitary along with the I/I increase.

Response to Issue 7: EPA's design flows for Gettysburg Borough for the year 2005 were developed by allowing 80 gallons per person per day which is a very reasonable projected wastewater flow considering the past history of water usage. In addition, there is still uncertainty about the I/I from Gettysburg Borough. This uncertainty, which is reflected by the increase of 0.2 mgd over the initial I/I estimate, can over shadow the increase of 0.1 mgd in sanitary flow. For practical purpose, the sanitary flow for the year 2005 will remain at 0.755 mgd.

WATER QUALITY JUSTIFICATIONS:

COMMENTS AND RESPONSES

Effluent Limitations

Issue 1: Advanced secondary effluent limitations are required by PA-DER for all three STP's in the Study Area. These limitations

restrict 5 day biochemical oxygen demand (BOD_5) and suspended solids (SS) to 15 milligrams per liter (mg/l) and amonia nitrogen (NH_3) to 3 mg/l in the summer and 9 mg/l in the winter. Based on the modeling performed as a part of this EIS, these limitations appear to be more stringent than necessary to protect the water quality of Rock Creek.

Response to Issue 1: In the Draft EIS, the PA-DER effluent limits were used as given to determine the treatment facilities required. Appendix C is a waste load allocation which was done as a part of the Final EIS, to evaluate the PA-DER limits and, if possible, to derive less stringent effluent limits. The results of the waste load allocation are summarized as follows:

STP	Flow (MGD)	BOD_5 (mg/l)	NH_3 (mg/l)	TP (mg/l)	DO (mg/l)
Cumberland	0.17	30	3.0	3.0	5.0
Gettysburg	1.58	25	2.0	1.0	5.0
Lake Heritage	0.14	30	15.0	7.0	5.0

These results must be used with caution, however. For example, the BOD_5 limit derived for Gettysburg assumes zero bottom oxygen demand in the vicinity of the plant. That is, the bottom sludge blanket was assumed to disappear with the improvement of the treatment facility. If a certain amount of aged sludge remains and exerts some bottom oxygen demand (say 1.5 gm O_2/M^2/day) in the future, the effluent BOD_5 limit for the Gettysburg STP will be reduced to 15 mg/l in order to maintain a dissolved oxygen level (DO) of 5 mg/l in Rock Creek. Also, because of the restriction of NH_3 for the Cumberland STP, an effluent with BOD_5 values below the 30 mg/l (calculated to maintain the required DO levels in Rock Creek) can easily be met. The impact of Lake Heritage's discharge was not evaluated for White Run, only for Rock Creek.

In summary, the effluent requirements for Lake Heritage and Cumberland could possibly be relaxed somewhat without affecting the water quality of Rock Creek. The advanced secondary treatment levels required for the Gettysburg STP, however, appear justified based on the water quality modeling (see Appendix C) and the inclusion of the bottom oxygen demand as noted above.

Nutrient Limitations

Issue 2: Ammonia concentrations in the effluent were not evaluated, based on toxicity considerations.

Response to Issue 2: A mass balance calculation for ammonia levels in Rock Creek was conducted. PA-DER requires a maximum level of 1.5 mg/l ammonia nitrogen in Rock Creek for toxicity reasons. The calculation indicates that to maintain the ammonia nitrogen level below 1.5 mg/l, these effluent limits are required: 3 mg/l at Cumberland, 2 mg/l at Gettysburg, and 15.0 mg/l at Lake Heritage. These results suggest that nitrification process is required at these facilities.

PA-DER has placed seasonal effluent ammonia concentrations on the facilities. From June 1 through October 31, the plants are required to meet an ammonia limit of 3 mg/l; the remainder of the year, the facilities should meet an ammonia limit of 9 mg/l. The non-summer low flow for Rock Creek has been estimated as 11 cubic feet per second (cfs) at the Gettysburg STP with a critical

temperature of 15°C. For the temperature of 15°C and a pH value of 7.5, the EPA Quality Criteria for Water indicates that an in-stream ammonia level of 2.3 mg/l would maintain a condition that is not toxic to fish. PA-DER's effluent limits of 9 mg/l will result in a stream concentration, for the above conditions, of 2.4 mg/l ammonia nitrogen. As can be seen, this will maintain concentrations as suggested by EPA criteria.

HISTORIC AND ARCHAEOLOGIC RESOURCE IMPACTS:

COMMENTS AND RESPONSES

Primary Visual Impacts

Issue 1: Commentors have suggested that additional mitigative measures be discussed for avoidance of primary adverse visual effects of new sewage treatment facility construction on historic sites adjacent to and within the Gettysburg Battlefield National Historic District (e.g., construction of a new pump station on the Cumberland Township border northwest of Business Route 15 and expansion of sewage treatment plants such as at the Gettysburg STP site).

Response to Issue 1: Although pump stations are generally one-story structures of small size, they frequently are constructed in a style which is not compatible with the surrounding architecture. They are often sited in open areas and surrounded by hurricane fences with negative aesthetic quality. Therefore, the presence of such structures adjacent to historic buildings and districts constitutes a negative adverse visual effect on these resources. Sewage treatment plant expansion which requires construction of additions to the physical plant may increase visual degradation of the Historic District. The Gettysburg STP, at present, is in a low lying wooded floodplain of Rock Creek and not readily visible from Gettysburg National Military Park focal interpretive points (Figures 1 and 2 as attached in Appendix D update). It is, however, adjacent to the Benner Hill Section of Gettysburg National Military Park. Expansion at the Gettysburg site could result in primary adverse visual effects. An existing house on Benner Hill is not compatible in style with the surrounding architecture and pastoral vistas and creates a visual intrusion. This house is readily visible from Culp's Hill (Figure 1), is more noticeable than the Gettysburg STP, and lessens the visual integrity of the area. Nevertheless, any development or construction activity in the area should be undertaken with extreme care so as not to further affect visual values.

Mitigation measures to alleviate potential primary adverse visual impacts from new wastewater treatment facilities to be erected as part of the Recommended Alternative are presented in Chapter V. Mitigative measures are discussed in the DEIS and Appendix E included in this document. The process by which these measures will be implemented in specified in Chapter V, describing MOA provisions.

Primary Archaeological Impacts

Issue 2: The Advisory Council on Historic Preservation has pointed out that Dr. Kinsey's preliminary survey of the Rock Creek interceptor route, proposed for the Regional 201 Wastewater

Treatment Facilities Plan, was corridor specific and preliminary. In addition, it appears that only prehistoric sites were considered by Kinsey. The Advisory Council states that if areas of the Rock Creek drainage determined by Kinsey to have "low" archaeologic potential will be disturbed by construction related to the selected alternative, an additional survey should be conducted in these areas to test Kinsey's model. The Council indicates that detailed intensive archaeological survey and testing will be necessary when an alternative is chosen. "This should include 100% survey of interceptor corridors, treatment plant expansion areas, and pumping stations [sites] along with subsurfaces testing. Survey and testing should be scheduled as early as possible during Step II, so that there will be enough time for results to be taken into account both in line alignment and in carrying out any necessary mitigative activities."

Response to Issue 2: The presence of significant historic and archaeological resources which may be adversely affected by construction of the proposed wastewater treatment facilities (i.e., primary impacts) is pointed out in the Draft EIS on pages 58, 60, 62, and 63. The lack of professional reconnaissance of areas, other than Rock Creek, which may be adversely affected by construction of alternatives is pointed out on page 128; and the need for a full-scale archaeological survey of the selected alternative prior to construction is discussed on pages 128 and 130. As specified in the MOA (Chapter V), a comprehensive archaeological survey will be conducted to identify both historic and prehistoric archaeological resources which may be disturbed by construction of the selected alternative. Such survey will be conducted as early as possible during Step II. In accordance with the Advisory Council's recommendation, any areas to be affected by construction, which were determined by Kinsey to have "low" archaeological potential and require no further survey, will be included in the comprehensive archaeological survey. The comprehensive archaeological survey will systematically investigate 100% of the primary impact areas (areas to be disturbed by construction). These areas include interceptor corridors, treatment plant expansion areas, land application areas, and pump station sites. Such survey will provide both a test of Kinsey's model, and generation of additional systematically collected data which may provide a data base for formulation of future predictive models.

Secondary Effects

Issue 3: The language in the DEIS which states that existing historic preservation legislation provides for "consideration of primary effects on historic cultural resources", but continues with "such consideration would not be required for privately funded future development (secondary effects) in the planning area" (DEIS, p. 135) was questioned and asked to be rectified. It was also pointed out that consideration of mitigative measures by EPA to avoid adverse indirect impacts of EPA-funded projects is mandated by historic preservation legislation and by NEPA.

Response to Issue 3: The intent of the statement has been misinterpreted (DEIS, p. 135). To clarify the meaning of that statement, the fifth paragraph on page 135 should be reworded to read as follows:

> "Federal cultural resource protection legislation does not and is not empowered to require private developers to consider the effects of project-related development occurring after installation of the EPA-funded facilities on the historic/aesthetic integrity of the area. However, EPA is charged with responsi-

bility for considering the effects of a secondary impact, such as future project-related development, on cultural resources. It is difficult, however, for EPA alone to implement controls on future development in the absence of any local land development regulations. EPA may deny a construction grant, but does not have the power to enforce controls over future development which occurs if the construction grant is approved. A mechanism would be required for implementing and enforcing local controls on future land development.

Federal historic preservation legislation requires that when a Federally-funded project will have an unavoidable adverse effect on significant cultural resources, a Memorandum of Agreement (MOA) to mitigate such adverse effects should be executed between the Executive Director of the Advisory Council, EPA and the State Historic Preservation Officer, prior to awarding a Step II constructon grant. In order to formulate an MOA which can be successfully administered, however, both legislative sanctions (State or local) and the cooperation of local officals are necessary."

Such mitigative measures and a proposed Memorandum of Agreement are discussed in Chapter V.

Issue 4: It has been point out that Appendix G-8 (the Advisory Council's A Plan to Preserve the Historic Resources of the Gettysburg Area of the Commonwealth of Pennsylvania) is missing.

Response to Issue 4: Appendix G-8 is included in the Final EIS (Appendix D). Specific reference is made to page 33 (Items 1, 2, and 3); page 34, paragraph 4; and page 37, paragraph 2 for examples of mitigation alternatives which are applicable to the present project. This ACHP document provides excellent background discussion of the cultural values, including aesthetics, characterizing the Gettysburg area, potential impacts, and mitigative measures which should be considered when actions are contemplated.

Secondary Impacts on Historic/Archaeologic Resources

Issue 5a: Both the Advisory Council on Historic Preservation and the National Park Service requested clarification of the discussion of potential indirect impacts of the project on archaeological, historic and aesthetic resources. Specific reference was made to the statement (pages 130, 135), "none of the alternatives would induce growth or development beyond that which would occur without the proposed Federally-funded project." It was requested that a better discussion be provided of "where population will tend to cluster under each alternative."

Response to Issue 5a: Baseline growth has been used to design the various elements of various wastewater treatment facilities proposed in the alternatives. Nevertheless, construction of these EPA-funded projects can be anticipated to alter the amount and distribution of future growth in degree, between municipalities, and within municipalities (between segments). Rate of growth also may be affected. All of these types of induced growth effects constitute secondary or indirect impacts. Areas where induced growth impacts may be concentrated as a result of implementation of the project consist of Segments 4, 7-11, 17 and 18.

The following discussion summarizes the projected future growth configurations under each revised alternative (Chapter VI of the Draft EIS). This information is also discussed under Existing Conditions; Issue 1; Table III-1 summarizes the data presented below. Figure III-1 illustrates the future land development pattern anticipated by the year 2005. Differences between the various alternatives are at most modest and relate to shifts among Segments 4, 17, and 18.

Under Alternative A, the projected growth configuration would be the same as that for future baseline growth which would occur by the year 2005 if the EPA funded wastewater treatment project were not constructed. Generalized future growth projections for each segment of Alternative A are as follows:

Segment No	Population	Dwelling Units
1	662	305
2	0	0
17	1,207	431
18	899	320
3	118	42
4	166	59
5	14	5
6	107	38
7	14	5
8	236	84
9	229	76
10/11	382	125
20	3	1

Growth configurations in Segments 16, 12, 15, 14, 19, and 13 are related to correction of on-lot systems, and will not be discussed among secondary impacts of the proposed EPA-funded wastewater treatment facility.

Implementation of Atlernative B would result in a growth and development pattern similar to that of Alternative A, except that 420 fewer people can be expected in 150 fewer dwelling units in Segment 17. Segment 18 would serve only 599 persons in 199 projected dwelling units. Development would shift to Segment 4 along Route 30, where projected population growth of 927 persons would be contained in 330 dwelling units.

Construction of Alternative C would result in a growth pattern similar to Alternative A.

Under Alternative D, there would be a reduction in the population projected for Segment 18 in Alternative A or baseline growth, from 899 persons in 320 dwellings units to 604 persons in 215 units. Segment 4 would serve a population of 461 persons in 104 dwelling units, an increase over Alternative A of 295 persons in 105 dwelling units. Remaining growth configurations in the Study Area would remain the same for Alternatives A and D.

If Alternative E were implemented, there is expected to be a reduction in growth projected for Segments 17 and 18 under Alternative A and an increase in Segment 4. Projected population in Segment 17 would be reduced to 812 persons and dwelling units would be reduced to 290. In Segment 18, a projected population of 604 persons would be located in 215 dwelling units; whereas 257 persons in 308 units are anticipated in Segment 4. There would be less development in the Lake Heritage area (Segments 7,

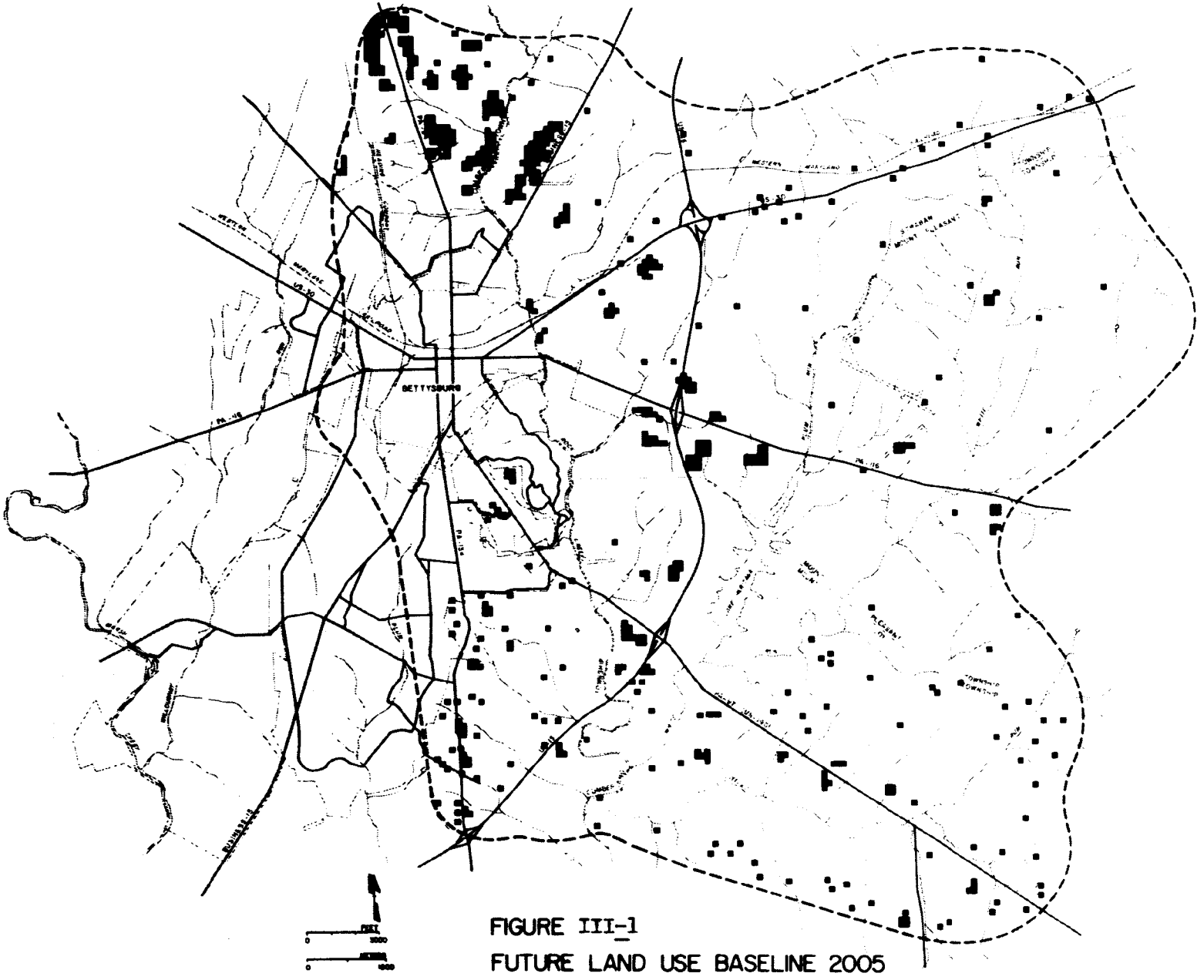


FIGURE III-1
FUTURE LAND USE BASELINE 2005

8, 9, 10, 11) and more in outlying areas of Mount Joy, resulting in an increase of 137 persons in 48 dwelling units in this outlying area in contrast to Alternative A. There would be an increase of 135 persons in 48 units in Segment 7 near the US-15 interchange and a reduction of 282 persons in 95 dwelling units elsewhere in Lake Heritage.

The Recommended Alternative would not result in a growth configuration significantly different than baseline conditions projected in the majority of the study area. In Straben Township, the Alternative will result in a gain of 420 people and 150 dwelling units in Segment 4. Also on internal redistribution of 340 people and 21 dwelling units will occur between Segment 18 to Segment 4. This will result in a total increase in Segment 4 of 761 people and 271 dwellings units above baseline conditions projected.

Mitigation of Indirect Impacts

Issue 5b: If the proposed EPA-funded project affects the configuration and clustering of future growth, would EPA be responsible for consideration of indirect effects of project-related future development on archaeological, historic, and aesthetic resources.

Response to Issue 5b: It is anticipated that after selection of the Recommended Alternative, an achaeological survey will be conducted of all areas where indirect effects of construction of the alternative are expected to occur. Such a survey may consist of background studies, development of a predictive model, pedestrian reconnaissance, shovel tests, and other investigations to test the predictive model. Results of the survey would provide an inventory of the historic and prehistoric resources to be affected by future growth related to the selected alternative, and would assist with future planning. Provision necessarily should be made for mitigation of unavoidable adverse indirect effects of the preferred alternative on archaeological resources listed on or determined eligible for the National Register of Historic Places. An archaeological survey of areas to be indirectly affected by construction of the selected alternative has been requested by the Pennsylvania Historical and Museum Commission (Verbally, Mr. William McClaughlin, Pennsylvania Historical and Museum Commission, Office of Historic Preservation, at WAPORA, Inc., on 8 April 1981).

EPA also is be responsible for consideration of indirect effects of the project on historic and visual resources. The potential adverse indirect effect of the project on historic and visual resources of the Gettysburg area is discussed under responses to Issue 6 (a request by the National Park Service for additional work to assess the potential indirect adverse impacts of the project on the integrity of views from additional focal points within the Gettysburg National Military Park). Indirect effects on historic resources from induced growth pertain primarily to alteration of the overall scenic historic setting of historic structures and districts; therefore, the assesssments of indirect impacts on historic resources basically are the same as those for indirect impacts on visual resources. Indirect effects on historic resources also include those impacts resulting from sewer-related development, resulting in conversion/demolition of historic structures and sites to other uses. These impacts are not expected to be widespread in the Study Area as the result of any of the proposed alternatives. There are, however, select identified historic sites listed in the DEIS inventory (Figure III-9, DEIS, p. 59 and Appendix G-2) and located in Segment 4 which may be subjected to increased development pressure in Alternatives B,

D, and E as the result of induced growth. the manner in which these impacts are to be mitigated is discussed in Chapter V.

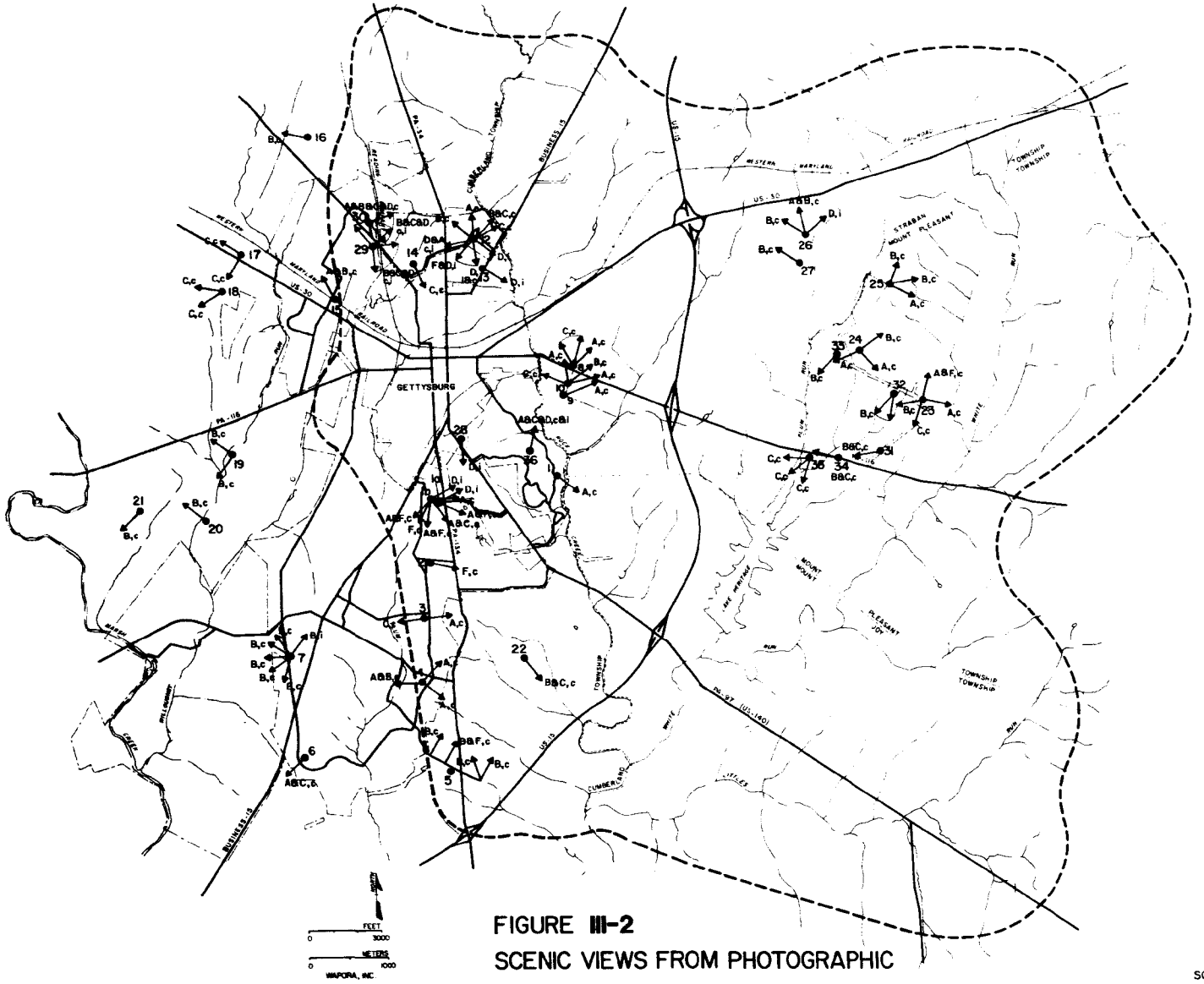
Aesthetic Impacts

Issue 6: The National Park Service requested that the aesthetic section of the DEIS be improved by considering additional significant view points as seen from the Battlefield tour route and historic routes entering Gettysburg. They requested additional analysis of the anticipated future development on significant views of the Park and National Register District. Improved graphics which show the relationship between segments and the Park and Historic District areas were also requested.

Response to Issue 6: To comply with the NPS request for additional analyses of indirect impacts on aesthetics and for consideration of additional views from focal points within the Park, additional fieldwork was conducted on April 12 and 13, 1981. This fieldwork adds to Appendix G-7 which documented views from 28 different stations shown on Figure III-11 (DEIS p. 63). All photographic inventory work has been directed into those areas where cultural and aesthetic values are presumed to be significant (i.e., the National Register Historic District) in combination with those areas of direct and indirect impact relating to potential EPA sewering actions (i.e., those segments to be sewered in the Recommended Alternative).

In order to document potential adverse indirect effects of the EPA-funded project on the Gettysburg National Military Park and the National Register Historic Distric, a series of views and panaoramas was photographed from strategic focal points within the Gettysburg National Military Park (Figure III-2 revised). Additional views selected were guided by DEIS comments and by Mr. Thomas Harrison, NPS Historian, who also provided the list of visual features (aesthetically compatible and incompatible) which are visible from these stations (Table III-2) and an estimate of viewsheds from these focal points. Figure III-2 has been revised and updated from Figure III-11 in the DEIS (p. 65) and documents the most vital focal points in the Park and in the National Register Historic District. Again, the stations mapped are keyed to Appendix D (revised DEIS Appendix G-7) where the views themselves are shown and classified as to type of view and quality of view. Figure III-3 takes the view data another step and makes a determination regarding extent of viewshed relating to the major cultural values such as Oak Ridge, the Peace Memorial Drive, Barlow's Knoll, Benner Hill entrace, Culp's Hill, and East Cavalry Battlefield. This delineation of viewsheds was developed as the result of topographic analysis, fieldwork, and picture analysis as well as extended conversations with National Park Officials at Gettysburg. Also, on Figure III-3, all areas or segments proposed for sewering by EPA in all of the alternatives have been represented. The interaction or overlay of the proposed sewering and the viewshed representations is basis for indirect visual impact analysis. In summary, Figure III-3 indicates those areas where significant adverse visual impacts can be expected as the result of additional development induced by provision of public sewers.

More specifically, important focal points in and adjacent to the park and National Register Historic District include Barlow's Knoll, the entrance to Benner Hill, the Route 116 entrance to the East Cavalry Battlefield Site, and Culp's Hill. Figures 1, 2, 3, and 4 (Station 12, Appendix D) depict views in a 360° panorama



VIEW TYPE:
- c COMPATIBLE
- i INCOMPATIBLE

LAND USE:
- A NATURAL
- B AGRICULTURAL
- C RESIDENTIAL
- D COMMERCIAL
- E INDUSTRIAL
- F MONUMENTAL

14● PHOTOGRAPHIC STATION

↖ DIRECTION OF PHOTOGRAPHIC VIEW

FIGURE III-2
SCENIC VIEWS FROM PHOTOGRAPHIC STATIONS IN GETTYSBURG NATIONAL HISTORIC DISTRICT

SOURCE: FIELD SURVEY (WAPORA)

Table III-2. Landmarks, Compatible Features, and Intrusions Visible from Oak Ridge Observatory, Peace Memorial Drive, and Barlow's Knoll and Culp's Hill (Mr. Thomas Harrison, NPS). Locations are keyed to revised Figure III-II. (C = compatible, I = incompatible)

Oak Ridge Station 29	Peace Memorial Station 30	Barlow's Knoll Station 12	Culp's Hill Station 36	Visible Features	Quality of Features
				Route 34	C and I
X				Westinghouse Plant - post 1968	C
X				Keckler's Hill and mountains (off map)	C
X	X	X		Farms on Table Rock Road	C
X	X	X		Houses on Route 34 and blue bldg.	I
X				James Gettys. School - post 1968	C and I
X				Farms and houses Bus. Rt. 15	C and I
X	X			High lands	I
X		X		Twin Oaks Subdivision - post 1968	I
X	X			Interchange Overpass Rt. 15 and 30 - post 1963	I
X	X		X	Mobile Home Park - post 1963	I
X				Houses on Rt. 116	C and I
X	X			Benner's Hill (Park)	C
X	X		X	House on Benner's Hill (Park) - post 1963	I
X	X	X	X	Wolfe's Hill	C
X	X	X		Culp's Hill (Park)	C
X				Park Tower on Culp's Hill (Park)	N.A.
X	X	X	X	National Tower - post 1963	I
X				Big Round Top (Park)	C
X			X	Unfinished Holiday Inn (7 stories)	I
X	X	X	X	College	C and I
X	X		X	Radio Tower	I
X	X			Ford Agency	I
			X	Sheep's Heaven	C
			X	High School	I
X		X	X	Peace Memorial	C
X		X		Cobean Farm	C
		X		House on Oak Hill	C
		X		Bank	I
		X		Shopping Center	I
	X	X		Woods screening view north	C

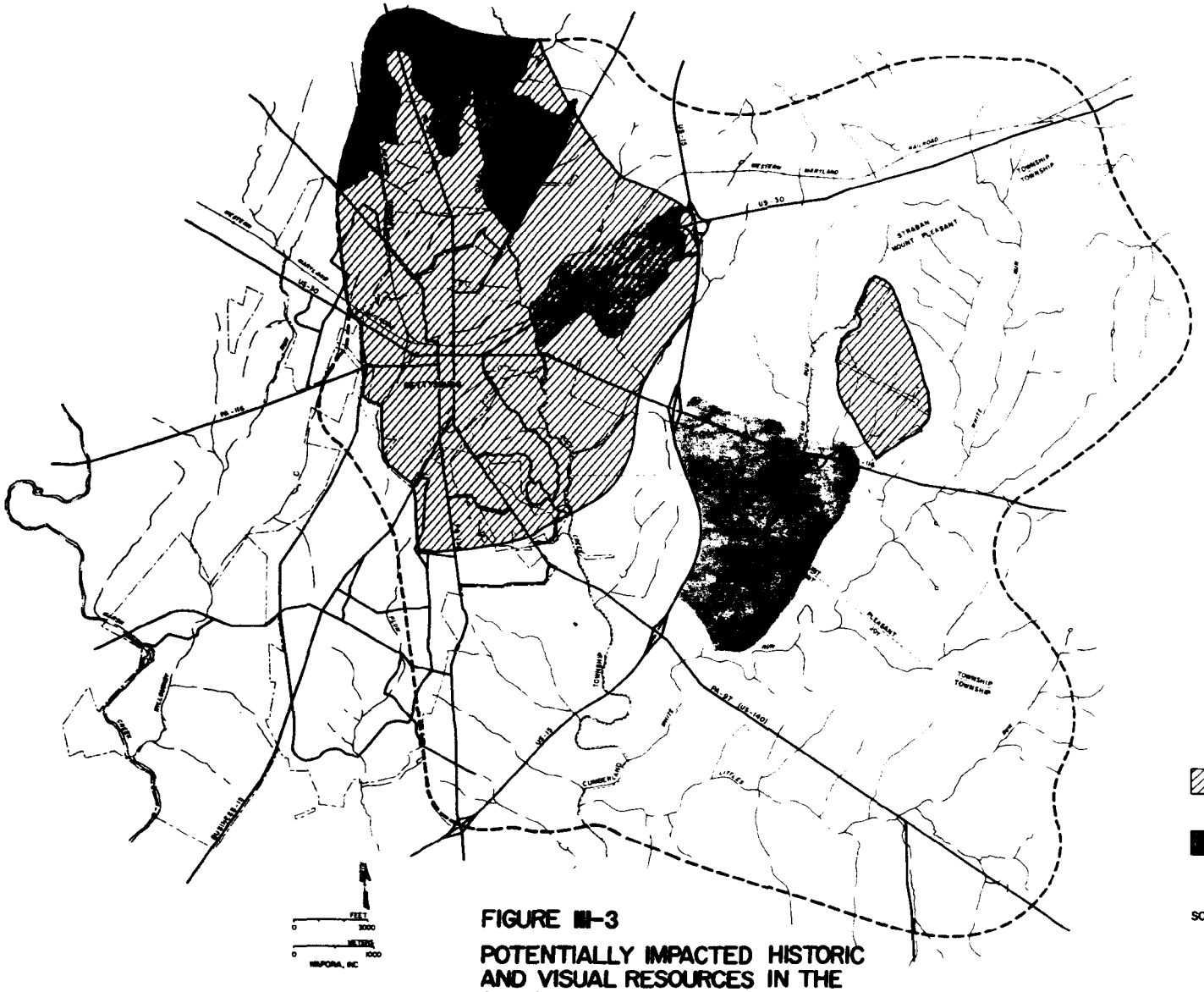


FIGURE III-3

POTENTIALLY IMPACTED HISTORIC AND VISUAL RESOURCES IN THE GETTYSBURG STUDY AREA

from Barlow's Knoll. The view southeast is degraded by the present King's Supermarket development (Figure 5). Areas to the north are screened by a dense stand of trees, and several visual interruptions occur in views to the south and southwest. Future development, which would be most intense under Alternatives A and C, however, potentially may degrade views to the north on the west side of Business Route 15 (Segments 17 and 18). On the other hand, Alternatives B, D, and E would provide greater concentration of growth in Segment 4 along Route 30, which may further degrade views from Culp's Hill (Figure 1, Station 36) and from the entrance to Benner Hill (Figure 1, Station 8, Figure 1, Station 10). By and large the Route 30 area (Segment 4) is relatively removed from important focal points and already is substantially degraded in terms of visual consistency with the Park setting.

In terms of the Lake Heritage area, views from the Route 116 entrance to the East Cavalry Battlefield (Figure 1, Station 31; Figures 1, 2, and 3, Station 35) and from other areas within the East Cavalry Battlefield holdings indicate that areas surrounding the East Cavalry Battlefield site are vulnerable. These adjacnet areas were shown as "critical areas" in the Advisory Council's 1977 report (Figure III-4) where some sort of Federal control was to recommended by ACHP. In the same report, however, the Advisory Council did not map areas around the East Cavalry Battlefield as especially important from a visual perspective. In the National Park Service's General Management Plan, a zone surrounding the East Cavalry Battlefield site also has been designated as a "critical area land that if developed, would have visual impact on the park" (Figure III-4). Under all Alternatives, additional development can be expected to occur at Lake Heritage. Development adjacent to Route 116 would be visible from the entrace of the East Cavalry site (Figure 1, Station 37; Figure 1, Station 34), from General Custer's Memorial (Figures 1, Station 32) and from sections of Route 116 which are within the National Register Historic District. Future growth also can be expected to intrude into the National Register Historic District in the vicinity of Lake Heritage (Segments 8 and 9); however, such development would not be visible from Station 3, wiithin the East Cavalry Battlefield site (Figure 1). Furthermore Lake Heritage is an existing subdivision where development can be expected to remain at low densities and be of a low-rise residential character in the future. Viewshed impacts in the Lake Heritage area, in sum, are limited in areal extent and not potentially severe.

For the purpose of illustration, hypothetical massings of potential development which may occur as the result of sewering in Alternatives A-E have been sketched onto photographic enlargements of specific views (Figures III-5 and III-6). These figures were prepared to indicate hypothetically "worst case" or incompatible development possible in each alternative. Though not actually proposed, a commercial hotel structure or elderly housing or college dormity all could take the form of a 6- to 8-story mid-rise structure and appear as shown in Figures III-5 and III-6. In addition to sheer mass to height of structures, issues such as color, texture, building lines, signing, etc. also are determinants of incompatibility. These building-related issues can be expected to be important concerns in the future development of Segments 17, 18, 4, and the Lake Heritage area. Figures III-5 and III-6 indicate the type of impact that could result in those areas identified in Figure III-3.

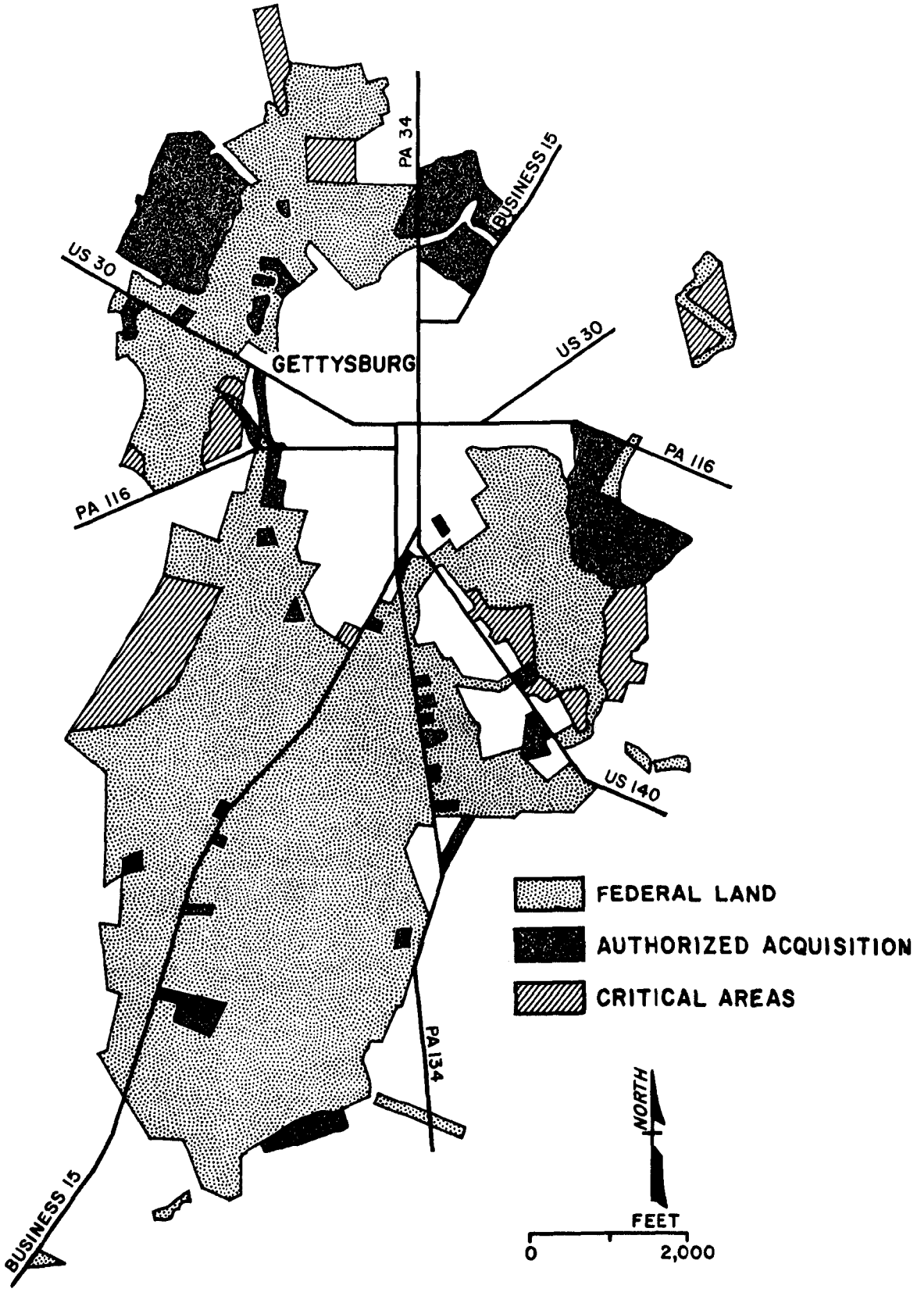


FIGURE III-4

AREAS DESIGNATED AS CRITICAL BY ACHP (ACHP 1977)

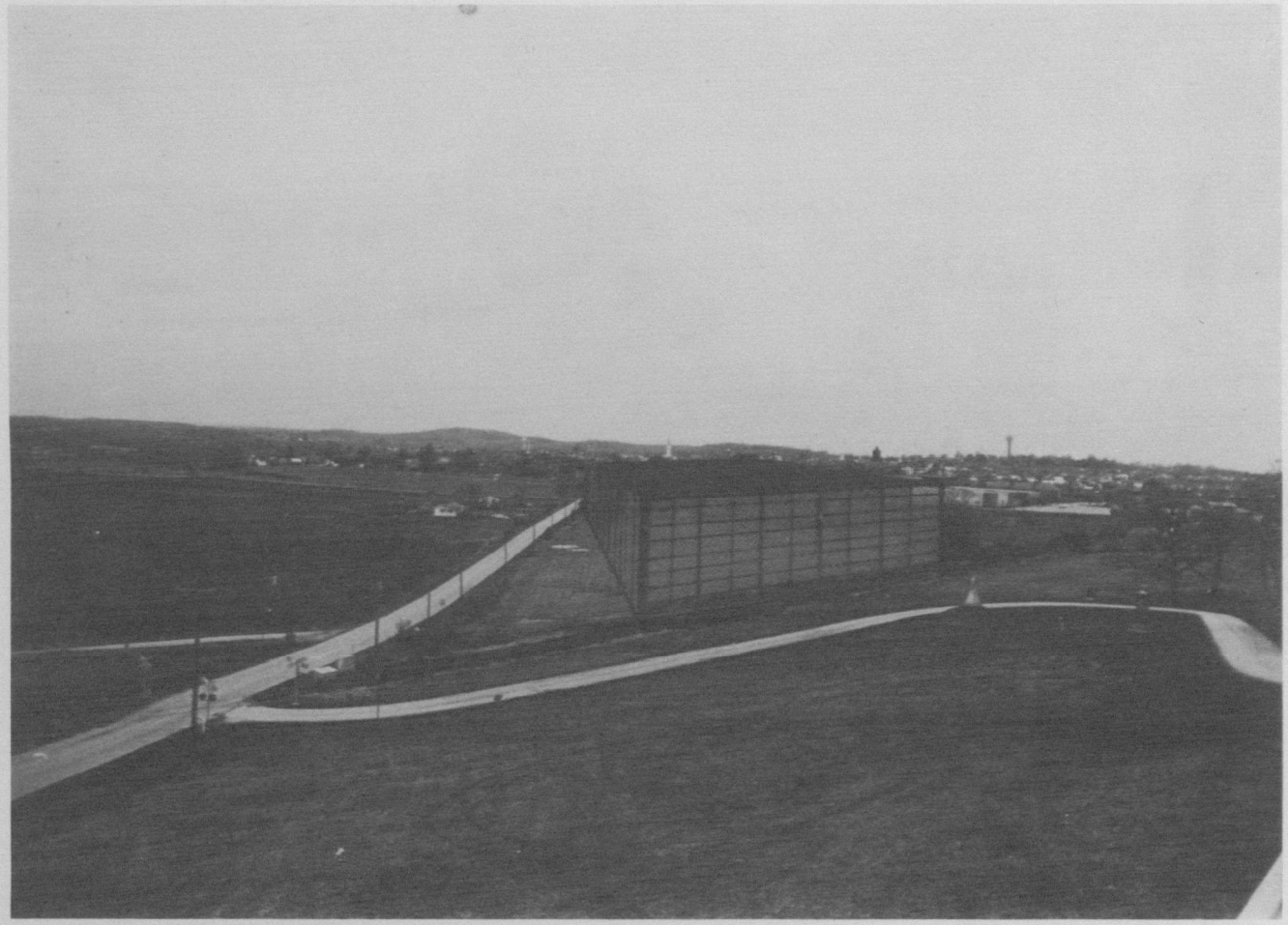


FIGURE III-5. HYPOTHETICAL SECONDARY VISUAL IMPACT IN AREAS TO BE SEWERED

FIGURE III-6. HYPOTHETICAL SECONDARY VISUAL IMPACT IN AREAS TO BE SEWERED

Of special concern are the vacant institutional lands north of Gettysburg Borough (Figure III-6 in the DEIS) which currently constitute open space but which potentially may be developed if additional sewage capacity is provided. These vacant institutional lands happen to be contained within viewsheds depicted on Figure III-3 and are especially important to maintaining the value of the viewsheds. Because institutions are permitted to erect buildings with heights of eight stories (in the Borough) and because these institutions are more prone to large-scale construction with taller structures, institutional lands adjacent to the Park are especially critical. In Appendix D, Figures 1 and 2, Station 29; Figure 2, Station 30 institutional land have been photographed; development on these lands would constitute an indirect visual impact on views from Oak Ridge Observation Tower, Barlow's Knoll, and Peace Memorial Drive. Although Gettysburg College and the other relevant institutions indicated that they have no plans for expansion; future land exchanges, changes in sewage treatment allocation, future hook up arrangements, etc. may conceivably result in further development of institutional lands in the future.

Mitigation of these potential adverse effects on the Oak Ridge viewshed, the Peace Memorial Drive viewshed, Barlow's Knoll viewshed, Benner Hill viewshed, Culp's Hill, and the East Cavalry Battlefield viewshed are discussed in Chapter V.

CHAPTER IV

Final Evaluation of Alternatives

CHAPTER IV.
FINAL EVALUATION
OF ALTERNATIVES

INTRODUCTION

In recommending wastewater service alternatives to be funded by the Agency, EPA has considered individual and cumulative environmental effects, cost-effectiveness, public and governmental agency preferences, and potential for successful implementation. Based upon this evaluation, EPA revised the Alternatives presented in the Draft EIS to formulate a Recommended Alternative that is described in this section.

Municipal Preferences

Of the local communities which have participated in the EIS process, three communities registered specific preferences on the selection of alternative wastewater service systems. These local communities are Cumberland Township, Straban Township, and Lake Heritage.

Cumberland Township recommends adoption of Alternative D. This conclusion was reached after a careful review by the township of the five alternatives set forth in the Draft EIS. Some refinements of Alternative D were made to meet the interests of Cumberland.

Straban Township expressed a willingness to support Alternative B with the provision of sufficient treatment capacity reserved for Segment 4.

Lake Heritage Municipal Authority with the concurrence of the property owners endorsed Alternative E which would provide sewer to the area. With significant growth projected in the next 20 years, it is their belief that low pressure collection and centralized treatment is the most reliable and best overall solution for the area.

Environmental Impact Considerations

The environmental impacts of the alternative systems have been summarized in Chapter II. As the public comments in Chapter III indicate, questions involving environmental impacts centered upon these specific effects:

- historic and archaeologic impacts
- population projections and induced growth
- surface water quality impacts
- cost-effectiveness.

Based on these comments, a Memorandum of Agreement has been drafted to protect the historic and archaeologic resources of the area, and design modifications have been made to mitigate other impacts identified.

Alternative Recommended by EPA

The Recommended Alternative for the Study Area is shown in Figure IV-1. Components of the Recommended Alternative are taken from the various alternatives evaluated in the Draft EIS.

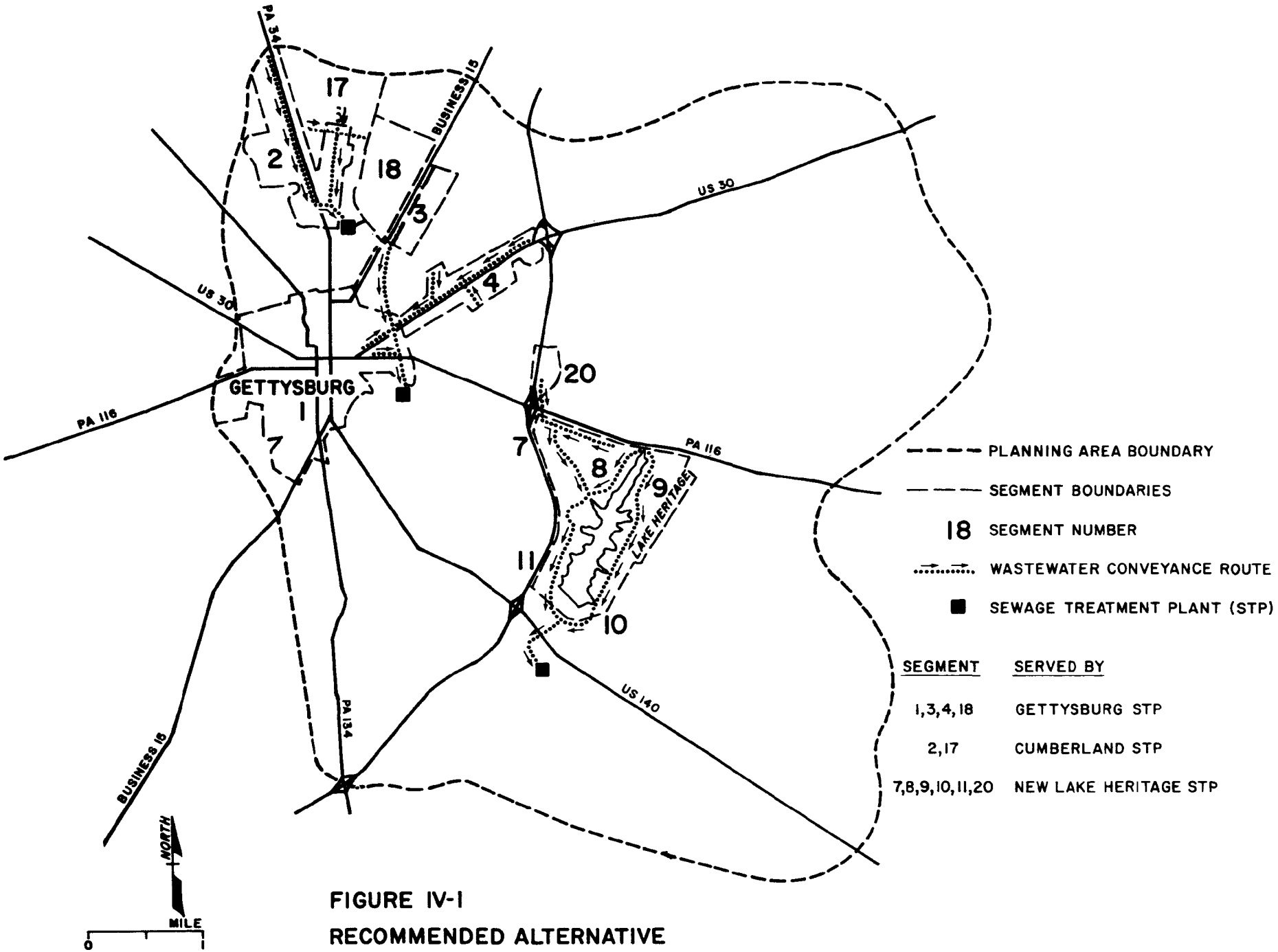


FIGURE IV-1
RECOMMENDED ALTERNATIVE

Each municipality and EPA individually considered the advantages of the Draft EIS alternatives and compared these to the associated costs. Through this process, the Recommended Alternative was derived. The alternatives in the Draft EIS from which the recommended alternative was derived are shown in Table IV-1 along with the segments served by sewers.

Table IV-1. Components of the Recommended Alternative

Municipality	Most similar Alternative in Draft EIS	Segments sewered
Gettysburg/Straban	B	1,3,4
Cumberland	D	2,17
Lake Heritage	E	7-11,20

Gettysburg Borough

For Gettysburg Borough, the wastewater treatment and service system proposed in various Draft EIS alternatives present insignificant differences in user charges and environmental impacts among these alternatives. They all are considered to be environmentally sound, cost-effective, and readily implementable. The Borough of Gettysburg did not formally state its preference for any specific alternative. All alternatives for Gettysburg included upgrading the existing STP to serve Segments 1 and 3. The alternatives evaluated included the options of serving or not serving Segments 4, 17, and 18 (Straban Township). EPA recommends Alternative B which calls for upgrading and expansion of the existing facilities to serve Segments 1, 3, and 4 and treat the holding tank waste from Segment 18.

Straban Township

EPA recommends Alternative B to serve Straban Township with some increase in treatment capacity at the Gettysburg plant in order to meet the future growth and sewage disposal needs in Segment 4 along Route 30. Segment 18 is not sewered in this alternative, but holding tank waste from this segment will be treated at the Gettysburg treatment plant.

Cumberland Township

The Recommended Alternative for Cumberland is the same as Alternative D in the Draft EIS. This alternative consists of upgrading the existing treatment plant to serve Segments 2 and 17 and has been endorsed by Cumberland Township. As on-site systems are not recommended for this area, the Cumberland STP is not expected to treat any holding tank waste.

Lake Heritage

The wastewater service problems (particularly holding tank and septic tank failures) of Lake Heritage area have been the focus of considerable attention in the EIS process. The alternatives available for Lake Heritage are either continued use of a combination of holding tanks and on-site systems or centralized collection (pressure sewers) and treatment.

Conventional on-lot disposal systems are unsuitable in many parts of the area due to limited permeability of soils and other factors. Holding tanks have numerous problems, particularly after storms. Although improvement of on-site systems is more cost-effective in terms of present worth, the above factors outweigh the present worth. As a result, EPA recommends centralized treatment for Lake Heritage by sewering the area. This recommendation corresponds to Alternative E in the Draft EIS. Segments served in this alternative include 7-11, and 20. Federal funding of 85% for pressure sewers is a factor in making user charges more competitive with on-site treatment alternatives.

In summary, under EPA's recommended alternative, Cumberland Township will retain its north plant and expand it to accomodate future growth in Segments 2 and 17. The existing Gettysburg STP will be expanded to serve the Gettysburg Borough (Segments 1 and 3) and Segments 4 and 18 (holding tank waste only) of Straban Township. The Lake Heritage STP will serve Lake Heritage residents (Segments 7-11 and 20). The Lake Heritage STP will also treat holding tank waste from Segments 12 and 14-16. Table IV-2 summarizes the wastewater management proposed for each segment in the Recommended Alternative.

Table IV-2. Wastewater Management in the Recommended Alternative

Segment	Decentralized treatment	Centralized treatment	Treatment facility
1		X	Gettysburg STP
2		X	Cumberland STP
3		X	Gettysburg STP
4		X	Gettysburg STP
7		X	Lake Heritage STP
8		X	Lake Heritage STP
9		X	Lake Heritage STP
10		X	Lake Heritage STP
11		X	Lake Heritage STP
12	X		Lake Heritage STP
14	X		Lake Heritage STP
15	X		Lake Heritage STP
16	X		Lake Heritage STP
17		X	Cumberland STP
18*	X		Gettysburg STP
20		X	Lake Heritage STP

* Part of Segment 18 will be accommodated by septic systems wherever soil conditions allow. The remaining portion of this segment will be served by holding tanks whose flows will be treated by the Gettysburg STP.

A detailed breakdown of wastewater flows from each segment and the treatment capacity at each plant are summarized in Table IV-3. The sewage treatment plant capacities are 0.17 mgd, 1.58 mgd, and 0.15 mgd for Cumberland STP, Gettysburg STP, and Lake Heritage STP, respectively.

The prospective grantees (Gettysburg, Cumberland, and Lake Heritage) will have discretion in selecting treatment methods presented in the Draft EIS, provided that the treatment processes are capable of achieving the effluent limits prescribed by Pennsylvania DER.

Table IV-3. Wastewater Flows (mgd) for the Recommended Alternative

Treatment plant	Segment No.	Sewage	I/I	Total
Cumberland	2	0.051	0.015	0.066
	17	0.088	0.013	0.101
				0.167
Gettysburg	1 & 3	0.755	0.700	1.455
	4	0.102	0.008	0.110
	18	0.014*	-	0.014
				1.579
Lake Heritage	7-11, 20	0.137	0.003	0.140
	12, 14-16	0.003+	-	0.003
				0.143

* Indicating the sewage flow from holding tanks in Segment 18.
\+ Indicating the sewage flow from holding tanks in these segments.

Cost of Recommended Alternative

A cost-effectiveness analysis for Alternatives A through E is presented in the Draft EIS. The cost analysis was a factor in the alternatives recommended for each municipality. A summary of the costs for the recommended alternative is presented in Tables IV-4 through IV-8. Capital, O & M, and salvage values are shown in Tables IV-4, IV-5, and IV-6, respectively. The total present worth is shown in Table IV-7 and local share and user charges are shown in Table IV-8. Only costs that are anticipated to occur prior to 1985 are included in the tabulation of local share and user charges. A more detailed presentation of these costs can be found in Appendix F. All costs (except user charges) are expressed in 4th quarter, 1979 dollars x 10^3.

Table IV-4. Capital Costs of Recommended Alternative (in Thousands of Dollars, 4th quarter 1979)

Project	On-Site system	Sewer system	I/I reduction	Sewage treatment	Total
Cumberland	-0-	3,168.5	38.2	417.0	3,623.7
Gettysburg	808.2*	3,015.5	968.8	3,440.0	9,232.5
Lake Heritage	510.5+	5,430.5	-0-	301.0	6,242.0

* Segment 18.
\+ Segments 12, 14-16, 20.

Table IV-5. Annual O & M Costs of Recommended Alternative (in Thousands of Dollars, 4th quarter 1979)

Project	On-site systems	Sewer system	Sewage treatment	Total
Cumberland	-0-	7.1	46.0	53.1
Gettysburg	39.6*	38.3	264.0	341.9
Lake Heritage	18.9+	79.2	38.0	136.1

* Segment 18.
\+ Segments 12, 14-16, 20.

Table IV-6. Salvage Value of the Proposed Projects (in Thousands of Dollars, 4th quarter 1979)

Project	On-site systems	Sewer system	Sewage treatment	Total
Cumberland	-0-	1,462.4	69.0	1,531.4
Gettysburg	331.7	1,391.8	658.0	2,381.5
Lake Heritage	204.8	1,383.2	69.0	1,657.0

Table IV-7. Total Present Worth by Project (in Thousands of Dollars, 4th quarter 1979)

Project	Capital	O & M	Salvage	Present worth
Cumberland	3,623.7	557.1	(386.7)	3,794.1
Gettysburg	8,232.5	3,587.2	(601.3)	11,218.4
Lake Heritage	6,242.0	1,428.0	(418.4)	7,251.6

Table IV-8. Local Share and User Charges for the Recommended Alternative

Project (Segments)	Local share $1,000 (4th Quarter, 1979)	User charges $/yr.
Gettysburg (1, 3)	1,074.7	109
(4, 18)	449.8	*313
Cumberland (2, 17)	119.8	332
Lake Heritage (7-11, 20)	818.1	568
(12, 14-16)	32.5	126

* Assumes no difference in user charge between Segments 4 and 18. Straban may wish to allocate these differently since Segment 4 is sewered and segment 18 is not sewered.

On-Site Systems

Solution of the area's concentrated water pollution problems through the centralized alternative described above does not diminish the importance of dealing effectively and quickly with the scattered, but serious on-site system malfunctions elsewhere. Proceeding with the recommended sewered projects for certain segments should not detract from efforts to achieve long-term sanitation and water quality objectives in the remainder of the planning area.

Although the Clean Water Act of 1977 provides economic incentives to improve rural wastewater management by making repair and upgrading of on-site systems eligible for 85% Federal grants, the isolated, immediate needs in the area would be most expeditiously resolved without grant processes by inspections and enforcement actions conducted by Sewage Enforcement Officers (SEO's) and by owner funding of appropriate repairs.

Long-term sanitation and water quality objectives could also be met without grant processes. This could be achieved first by adoption of local ordinances to require monitoring and periodic inspection of on-site systems and to allow access to individual on-site systems for inspection and maintenance. It could also be achieved by sufficient appripriations for additional skilled personnel to carry out the inspection, monitoring, and maintenance. For the reason that this additional effort has not traditionally been provided here or elsewhere, costs and manpower cannot be accurately estimated. Services provided could be:

- o Lot inspection and resident interview every three years to detect problems with surface malfunctions and plumbing backups and to educate residents in the proper use of their systems.
- o Periodic well water sampling from properly constructed wells in representative locations
- o Emergency septic tank pumping
- o Routine septic tank pumping once every three years
- o Professional consultation and design recommendations, for problem systems.

These services would supplement the present regulatory functions of municipal SEOs.

The benefits of applying for Federal and State grant assistance to initiate such a program can be seen as:

- o Initial planning, site analysis of existing problems and development of the management structure would be completed in an orderly manner and at relatively low costs to the municipalities
- o Repair and replacement of malfunctioning systems would cost the homeowner a fraction of the total cost(applies only to homes built before December 1977)
- o Public participation requirements would insure citizen input to the development of the management structure.

CHAPTER V

Protection of Historic Resources

Remaining Impacts

As indicated in the previous chapters, a Recommended Alternative has been chosen based upon its merits as the most cost-effective, environmentally sound wastewater management plan for the area. However, in spite of design measures that significantly reduce impacts, this EIS shows adverse impacts could occur with the construction and operation of the proposed alternative. Impacts identified include primary, construction-related disruption of historic and archaeological resources, and design of collection and treatment facilities that could conflict with the surrounding historic landscape. In addition, induced growth, that which would be drawn from surrounding areas as a result of excess collection and treatment capacity, may impact the setting of the Gettysburg National Military Park.

In order to mitigate these impacts, an interagency coordinating group has drafted a Memorandum of Agreement (MOA) in compliance with Federal Regulations outlining measures that when executed will reduce these impacts to acceptable levels. The interagency coordinating group was comprised of representatives from EPA, the National Park Service (NPS), the Advisory Council on Historic Preservation (ACHP), the Gettysburg Municipal Authority (GMA), the Pennsylvania Department of Environmental Resources (PA-DER), and the Pennsylvania State Historic Preservation Officer (SHPO). The "Memorandum of Agreement" is a formal agreement between EPA, NPS, ACHP, and the SHPO. This agreement outlines the measures that will be taken to preserve the historic and archaeological resources of the Gettysburg area in relation to Federally funded wastewater treatment facilities.

The project history leading to this draft MOA begin with the Facility Plan submitted to EPA for construction grant funding by the Gettysburg Municipal Authority (GMA). In order to serve a large projected regional population, the Facility Plan proposed construction of an interceptor along Route 97 and Rock Creek to a new 2.5 mgd facility near Route 15 and Rock Creek. Prior to making any grant awards, independent requirements of the National Historic Preservation Act (NHPA) had to be addressed. Federal regulations under this Act, administered by the Advisory Council on Historic Preservation (ACHP), describe procedures to be followed if a Federally funded project will affect a site listed on the National Register of Historic Places.

Legislative Requirements

Basically, the requirements under 36 CFR Part 800, the Archaeological and Historic Preservation Act of 1974 (P.L. 93-291), Section 106 of the National Historic Preservation Act of 1966 (P. L. 89-665), and Executive Order 11593 "Protection and Enhancement of the Cultural Environment" dictate a stepwise procedure to establish what the effects of Federally assisted or licensed projects are on any property listed on the National Register of Historic Places. This requires a consultation among appropriate agencies to identify resources listed or eligible and establish what effect the project will have. Upon finding of adverse impact as in this case, a preliminary case report is required for ACHP and the SHPO to comment on impacts identified. Upon review of the case report, all parties must consider prudent and feasible alternatives which may avoid impacts If agreement is achieved on an action that will mitigate impacts defined, the ACHP and the SHPO draft and executive an MOA acknowledging satisfactory mitigation of adverse effects.

Project Background

EPA's environmental review of GMA's application at that time determined the proposed project did represent a potential significant adverse effect because induced development could occur as a result of the new facilities in a manner which might alter the historic and scenic values associated with the National Park. EPA prepared and submitted a "Preliminary Case Report" to the Advisory Council which served as a basis for consultation among several involved agencies, including EPA, the ACHP, PA-DER, the Pennsylvania SHPO, the NPS, and local officials. The efforts resulted in a Draft Memorandum of Agreement in 1978 which was supported by several of the parties. However, the efforts faltered when a more comprehensive version of the MOA could not gain the necessary support.

EPA recognized the impasse in executing an MOA and in consultation with the involved parties agreed that an Environmental Impact Statement specified under the National Environmental Policy Act (NEPA) was needed to more thoroughly study the issue. This EIS combines the requirements of NEPA and NHPA to yield a single process which meets all applicable regulations. Thus, one of the primary goals of the EIS has been to develop solutions to the wastewater problems in the area that would minimize impacts on cultural resources and develop mitigative measures to control secondary impacts resulting from induced growth. The EIS established an information base upon which the local jurisdictions and other authorities have deliberated the relative merits of wastewater management alternatives. The EIS process has also established a number of forums that expedited negotiations for the MOA over the course of two years. These have included regular meetings of the Public Advisory Group and the Interagency Coordinating Group, newsletters, public meetings, public hearings and most recently intensive dialogues have taken place between EPA, NPS, ACHP, the local jurisdictions and their consultants.

The findings of these forums are that the proposed action does have the potential for adverse effect on the Gettysburg Battlefield Historic Distric. These adverse effects include the historic and prehistoric archaeologic resources that may be disturbed with the construction of sewer interceptors and collectors pump stations, and wastewater treatment plants. Adverse impacts include both direct construction impacts as well as potential aesthetic impacts associated with the form, height, and color of facilities in relation to the surrounding landscape. The other impact defined is the amount, rate, and distribution of residential growth that would occur with the recommended action. This induced growth could have the effect of adversely impacting the historic setting of the Battlefield District through the development of residential and commercial structures which are inconsistent with existing development and the surrounding landscape.

Mitigative Measures

In order to mitigate these adverse effects, the key parties have agreed to stipulations in the MOA which when executed will satisfactorily implement measures to protect identified resources. This includes an archaeologic survey of proposed sewer interceptor rights of ways, pump station sites, and wastewater treatment plant locations. A determination of eligibility of resources located during this survey will be obtained for inclusion in the Natonal Register. The final proposed wastewater facility improvements are also to be designed to minimize visual and construction impacts on the surrounding landscape.

EPA has also agreed to ensure that the local municipalities adopt an Historic District Ordinance under the Pennsylvania Historic

District Act (P.L. 282, No. 167). This Act permits Pennsylvania municipalities to delineate and officially map historic districts based upon a survey of historic and archaeological resources worthy of preservation. Once an ordinance has been drafted, the Pennsylvania Historic and Museum Commission will certify the historic significance of the district delineated. This Ordinance will establish an Historical and Architectural Review Board and promulgate design guidelines for review of the erection, alteration, restoration, demolition or razing of buildings in that district. These activities cannot take place unless a certificate of appropriateness has been issued attesting to the compatibility of the action with the provisions of the ordinance.

Lastly, the National Park Service will work with local organizations to establish a scenic easement program. This program will inform property owners in potentially impacted areas of the tax advantages of granting scenic easements or full property interest to non-profit organizations. In addition, the NPS will work to develop model landscape plans which can be voluntarily used by developers and owners of existing real estate to screen buildings and structures from Park viewpoints.

Following is the list of mitigative measures developed through the NHPA and EIS consultation process which EPA proposes be included into the Memorandum of Agreement. The proposal has been informally agreed to by all involved parties and will be formally transmitted with concurrence of EPA, NPS, and the SHPO to the SCHP for ratification.

PROPOSAL FOR INCLUSION IN THE MEMORANDUM OF AGREEMENT

Stipulations

I. EPA will ensure that any grant funds awarded by EPA for wastewater treatment facilities will be granted only upon the following conditions, and in the event of such award EPA will ensure that these measures are carried out.

A. Primary Impacts

1. Archeology

a. Prior to the award of an EPA Step II grant, all readily available information on the location, type, and significance of known prehistoric and historic archeological properties in the vicinity of the proposed project construction areas will be assembled and made available for facilities planning and design use.

b. As soon as possible after the award of an EPA Step II grant and using the results of previous identification efforts referred to in Stipulation A(1)(a), archeological surveys of proposed sewer interceptor rights-of-way, pump station sites, and wastewater treatment plant locations will be conducted. These surveys will be undertaken in consultation with the Pennsylvania SHPO and in accordance with 36 CFR Part 66, Appendix B, "Guidelines for the Location and Identification of Historic Properties Containing Scientific, Prehistoric, Historical, or Archeological Data."

c. In the event that significant archeological properties are found that may meet the National Register Criteria (36 CFR Part 60), a determination of eligibility for inclusion in the National Register will be obtained from the Secretary of the Interior.

d. During the preparation of the plans and specifications of the proposed wastewater treatment system, significant archeological properties will be avoided to the maximum extent feasible. If avoidance is not feasible, a data recovery plan covering affected archeological properties throughout the project area will be developed consistent with the Council's Handbook, Treatment of Archeological Properties. The plan will include consideration of important research questions related to the prehistory and history of the Adams County area. The plan will be submitted to the Pennsylvania SHPO and the Council for review.

If neither the SHPO nor the Council objects within 30 days after receipt of the plan, the plan will be implemented. If either the SHPO nor the Council objects, the parties will meet in order to resolve the objections.

e. All requests for proposals, scopes of work, and draft reports for archeological and related research will be submitted to the Pennsylvania SHPO for review and approval.

f. The archeological work called for in Stipulations A(1)(b), A(1)(c), and A(1)(d) will be conducted under the direct supervision of an archeologist(s) who meets, at a minimum, the qualifications set forth in 36 CFR Part 66, Appendix C.

2. Wastewater Facilities Design

The design of all above-ground portions of the proposed wastewater facility improvements will be accomplished in an appropriate manner to minimize the visual and construction impacts on surrounding National Register Historic Districts. The designs must be reviewed and approved by the Pennsylvania SHPO.

B. Secondary Impacts

1. Historic District Ordinance

a. Prior to the award of an EPA Step II grant, EPA will require that a copy of a Resolution to Adopt an Historic District Ordinance passed by each municipality which will be provided sewerage service under the proposed facilities be submitted.

b. Prior to the award of an EPA Step II grant, EPA will require to be submitted evidence that the municipalities have drawn proposed boundaries for an historic district which have been approved in writing by the Pennsylvania SHPO, and conducted a thorough inventory of historic buildings, structures, sites or areas which could be affected by development resulting from the proposed waste water treatment facilities.

c. Prior to the award of an EPA Step III grant, or prior to EPA approval of local contracts for construction of wastewater treatment facilities, EPA will require to be submitted a copy of an historic district ordinance, passed in accordance with Pennsylvania Act 167 (53 P.S.

§ 8002) by the local governing body of each municipality served by the proposed facilities, and certified by the Pennsylvania Historical and Museum Commission. The ordinance will designate certain areas as an historic district based upon the information obtained in the prior surveys.

d. Prior to the award of an EPA Step III grant, or prior to EPA approval of local contracts for construction of wastewater treatment facilities, EPA will require that it be shown that a Board of Historical Architectural Review has been appointed for each historical district consisting of a registered architect, licensed realtor, a building inspector and two or more citizens who have some knowledge and interest in historic presevation. (53 P.S. § 8003).

e. Prior to the award of an EPA Step III grant, or prior to EPA approval of local contracts for construction of wastewater treatment facilities, EPA will require to be submitted a copy of the specific guidelines for architectural review which each board will use in making recommendations regarding plans for the erection, reconstruction, alteration, restoration, demolition or razing of buildings in their district, along with documentation showing that these guidelines were drafted by a suitably qualified professional who was approved by the Pennsylvania Historical and Museum Commission. EPA will further require that it be shown that these guidelines have been submitted to the Pennsylvania Historical and Museum Commission, the National Park Service and the Council for their comments.

II. National Park Service Measures.

A. Scenic Easements

The National Park Service will work through local organizations to inform property owners in potentially impacted areas of the income tax, estate tax, and property tax advantages of granting senic easements or full property interests to non-profit entities such as Historic Gettysburg-Adams County or the Park Service itself. The voluntary nature of this type of program will be stressed.

B. Model Landscape Plans

The Park Service will also undertake the development of model landscape plans that could be used by developers to screen new construction from Park Service holdings. These models will present different options on the use of indigenous plant materials and show how these materials may enhance and increase the value of properties in a development. These model plans would be made available to local developers, municipal planning boards conducting subdivision review, and the Adams County Planning Commission. Completion of these two projects should be accomplished within six months after the execution of this Agreement.

_____ (date)
Environmental Protection Agency

_____ (date)
Pennsylvania State Historic Preservation Officer

_____ (date)
National Park Service

MAILING LIST

GETTYSBURG EIS MAILING LIST

Federal Agencies

Advisory Council on Historic
  Preservation
Council on Environmental Quality
Federal Emergency Management Agency
National Agricultural Lands Study
US Army Corps of Engineers
US Bureau of Persons
US Department of Agriculture
  Cooperative Extension Service
  Soil Conservation Service
US Department of Commerce
  Office of Environmental Affairs
US Department of Defense
US Department of Energy
  Office of the Secretary for the Environment
US Department of Health, Education and Welfare
US Department of Housing and Urban Development
US Department of the Interior
  Bureau of Outdoor Recreation
  Fish and Wildlife Service
    National Water Resource Analysis Group/
      Eastern Land Use Team
  National Park Service
  Heritage, Conservation and
    Recreation Service
US Department of Transportation
  Federal Highway Administration
  Marine Environmental Protection Division
US Department of Treasury
US General Services Administration
Water Resources Council

Pennsylvania State Agencies

Department of Agriculture
Department of Commerce
Department of Community Affairs
Department of Environmental Resources
  Bureau of Air Quality and Noise Control
  Bureau of Community Environmental Control
  Bureau of Radiological Health
  Bureau of Solid Waste Management
  Bureau of State Forestry

Pennsylvania State Agencies (Cont.)

  Bureau of State Forestry
  Bureau of State Parks
  Bureau of Topographic and Geological
    Survey
  Bureau of Water Quality Management
  Division of Coordination
  Division of Solid Waste Management
  Division of Water Supply & Sewerage
  Regional Sanitary Engineer
  State Conservation Commission
Department of Health
Department of Transportation
Environmental Hearing Board
Fish Commission
Game Commission
Governor's Office of the Budget
Historical and Museum Commission
Interstate Commission on the Potomac
  River Basin
State Clearinghouse

Citizens Groups

Air Pollution Control Association
America the Beautiful Fund, Washington, DC
Audobon Naturalist Society of the Central
  Atlantic States, Inc., Washington, DC
Citizens' Advisory Council to PA Dept. of
  Environmental Resources
Citizens Environmental Task Force
Environmental Defense Fund
Group Against Smog and Pollution
Lake Heritage Property Owners
League of Women Voters, Gettysburg, PA
League of Women Voters, Philadelphia, PA
National Audubon Society, Harrisburg, PA
National Parks and Conservation Association,
  Washington, DC
Natural Resources Defense Council,
  Washington, DC
PA Forestry Association, Mechanicsburg, PA
PA Horticultural Society, Philadelphia, PA
PA Lung Association, Hershey, PA
PA Roadside Council, Inc., Philadelphia, PA
PA State Fish and Game Protective Association
  Philadelphia, PA
Rachel Carson Trust for the Living Environment,
  Inc., Washington, DC

Citizens Groups (Cont.)

Sierra Club, PA Chapter
Sierra Club, Southwestern Group, Pittsburg, PA
Water Pollution Control Association, Washington, DC
Wilderness Society
Wildlife Society

Local Agencies

Cumberland Township
- Chairman
- Engineer
- Planning Commission
- Solicitor
- Cumberland Township Authority

Gettysburg Borough
- Council
- Engineer
- Planning Commission
- Solicitor

Gettysburg Municipal Authority
Lake Heritage Municipal Authority
Mt. Joy Township
- Chairman
- Planning Commission
- Solicitor

Mt. Pleasant Township
- Chairman
- Engineer

Straban Township
- Engineer
- Planning Commission
- Solicitor
- Supervisors

Elected Officials

Honorable Richard Thornburg
Governor of Pennsylvania
Honorable H. John Heinz, III
United States Senator
Honorable Richard S. Schweiker
United States Senator
Honorable William F. Goodling
United States Representative
Mr. & Mrs. Chris H. Walters
(Congressman Goodling's Staff)
Honorable William J. Moore
Senate of Pennsylvania
Honorable Ralph W. Hess
Senate of Pennsylvania
Honorable John D. Happer
Senate of Pennyslvania

Elected Officials (Cont.)

Honorable Kenneth J. Cole
Pennsylvania House of Representatives
Honorable A. Corville Foster, Jr.
Pennsylvania House of Representatives
Honorable Eugene A. Geesey
Pennsylvania House of Representatives
Honorable Fred C. Noye
Pennslyvania House of Representatives

Public Advisory Group

Jack A. Corbin
John Earnst - Superintendent, National Park Service
Ruth Gritsch - League of Women Voters
Ronald Hankey - President, Gettysburg Area Chamber of Commerce
Crosby L. Hartzell, Jr. - President, Retail Merchants Association
Charles H. Huber, Jr. - Taxpayers Association
Walter Lane
George N. Mahaffey
George W. Olinger - Landlords Association
Charles A. Strayer - Straban Township Builders Association
Rev. James W. Tipton - Historic Gettysburg Adams County
John B. Zinn, Jr.

Media

Newspapers

Five Star News, Manchester, PA
Gettysburg Times, Gettysburg, PA
Hanover Sun, Hanover, PA
Patroit News, York, PA
Sunday News, York, PA
York Daily Record, York, PA
York Dispatch, York PA
York News Agency, York, PA

Radio

WGCB, Red Lion, PA
WGET, Gettysburg, PA
WHVR-AM, Hanover, PA
WNOW AM-FM, York, PA
WSBA, York, PA
WZIX, York, PA

TV

Cypress Cable TV, Reedville, PA
TV Host Inc., Harrisburg, PA
WHP-TV, Harrisburg, PA
WITF-TV, Hershey, PA
WLYH-TV, Lebanon, PA
WSBA-TV, York, PA
WTPA-TV, Harrisburg, PA

Citizens

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Mr. and Mrs. Marvin L. Anderson
Ms. Jane Boblitz
Ms. June Boherg
Mr. Jack Carhon
Mr. and Mrs. Richard Chatelain
Mr. David Clark
Ms. Gloria Clark
Mr. H. Wayne Cluck
Mr. and Mrs. David Cobb
Mr. Joseph L. Cole
Mr. Phillip Cole
Mr. Irvin S. Conover
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Mr. Edgar May
Mr. Hugh C. McAllheny
Mr. Ed Merrell
Mr. and Mrs. Gerald Miller
Mr. Roger C. Mitterling
Mr. Steve J. Monforte

Citizens (Cont.)

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Mr. Lonny Nummet
Mr. Joseph J. Pellegrini
Mr. Thomas Phillip, Jr.
Mr. A. F. Premo, Jr.
Mr. Richard C. Price
Mr. Raymond C. Protzman
Mr. Clay Rebert
Ms. Sonja Y. Reisinaer
Mr. and Mrs. M. J. Rockey
Mr. and Mrs. C. K. Roulette & Family
Ms. Paula Rubuer
Mr. Michael Rura
Mr. John K. Salt
Mr. Byril Sanders
Mr. Michael E. Sanders
Mr. Frank Sheak
Mr. Dean A. Shultz
Mr. Edward Slening
Mr. Edward Smith
Mr. Randy Smith
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Ms. Sharon Sontheimer
Ms. Susan Stan
Ms. Pearl Steinour
Mr. John A. Stemen
Mrs. Strnad
Mr. Carl T. Swinn
Ms. Peggy Taughenbaugh
Mr. Roy E. Thomas
Mrs. Dorothy Thompson
Ms. Ethel W. Thorniley
Mr. Dave Walters
Mr. John D. Warner
Mr. Allen Weikert
Mr. Leo Weiner
Mr. Steve Wennberg
Mr. Glenn Whaley
Mr. and Mrs. Roger D. Williamson
Mr. Clifford Yarwood
Mr. Lee A. Yohn
Mr. Gary L. Yount

Others

Adams County Home Builders Association
Adams County Library
American Water Works Company, Inc.
Carroll Valley Sewer and Water Authority
Century 21 Real Estate
Environmental Consultant and Testing Services, Inc.
Gannett, Fleming, Corddry & Carpenter
International Research Evaluation

REFERENCES

REFERENCES

Adams County Planning Commission. 1968. Comprehensive County Plan for Water and Sewage Systems, Adams County. In conjunction with Clifton E. Rodgers and Associates, Harrisburg, PA. 147p.

Adams County Planning Commission. 1970. Adams County Comprehensive County Plan. In conjunction with Clifton E. Rodgers and Associates, Harrisburg, PA. Three technical reports and a summary report: Part 1, Background Information; Part 2, Planning Proposals; part 3, Implementation Program; Summary Report, variously paged.

Adams County Planning Commission. No date. Adams County Land Subdivision Regulations. Gettysburg, PA. 32p.

Adams County Planning Commission. No date. Adams County Proposed Subdivision and Land Development Regulations. Gettysburg, PA. 51p.

Adams County Planning Commission. No date. Housing Study: An Analysis of the 1970 Census Data. Gettysburg, PA. 52p.

Advisory Council on Historic Preservation. 1977. A Plan to Preserve the Historic Resources of the Gettysburg Area of the Commonwealth of Pennsylvania. US Government Printing Office, Washington, DC. 40p.

Air Quality Report. 1978. Commonwealth of Pennsylvania: Department of Environmental Resources - Bureau of Air Quality and Noise Control. Harrisburg, PA.

Beranek, L. L. 1971. Noise and Vibration Control. McGraw-Hill, Inc. 650pp.

Black, Terry. (oral communication). June 22, 1979. Conversation between Terry Black, Air Quality Engineer, PennDER, York, Pennsylvania and David L. Bush, Air Quality Scientist, WAPORA, Inc., NY, NY.

Borough of Gettysburg. 1977. The Gettysburg Borough Zoning Ordinance (Ordinance 902-75, October 13, 1975, Article 1, Section 100; Revised January 11, 1977). Gettysburg, PA. 252p.

Buchart-Horn, Inc. 1978. Cumberland Township Authority 201 Facilities Plan, Report on Program Requirements Memorandum 78-9, US Route 140 Area. York, PA. Variously paged.

Burchell, Robert W. and David Listokin. 1978. The Fiscal Impact Handbook. Center for Urban Polisy Research, New Brunswick, NJ. 480p.

Clean Air Act Amendments. 1977. Public Law 95-95. 95th Congress. August 7, 1977.

Climate of Gettysburg, Pennsylvania. June, 1977. National Oceanic and Atmospheric Administration. Environmental Data Service. National Climatic Center. Asheville, NC.

Commonwealth of Pennsylvania - Title 25. 1971-1972. Rules and Regulations. Part I. Department of Environmental Resources. Subpart C. Protection of Natural Resources. Article III - Air Resources. Chapter 131 - Ambient Air Quality Standards.

Cumberland Township Board of Supervisors. 1973. The Cumberland Township Subdivision and Land Development Ordinance (No. 28), Cumberland Township, PA. 47p. (includes Proposed Revisions of June 7, 1979)

EPA. 1974. Population Distribution of the United States As a Function of Outdoor Noise Level. 550la-74-009. Washington, DC.

Federal Register. 1971-79. National Ambient Air Quality Standards.

Federal Register. September 12, 1978. States Attainment Status.

Gannet Fleming Corddry and Carpenter, Inc. 1976. Wastewater Management Facilities Plan (201) 197b: Volumes 1 and 2. Prepared for the Gettysburg Municipal Authority, Harrisburg, PA. Vol.1, 125p; Vol. 2, 250p.

Gettysburg Area School District (GASD). 1973. A Long Range Development Plan (revised). Gettysburg, PA.

Gettysburg Area School District. 1978. Table of Grade Enrollments 1965-1966 Through 1977-1978, and Projected Enrollments 1977-1978 Through 1987-1988. Gettysburg, PA.

Gettysburg Area School District. 1979a. Budget Document 1979-1980. Gettysburg, PA. 42p.

Gettysburg Area School District. 1979b. Long Term Development Plan. Gettysburg, PA.

Gettysburg-Cumberland Demonstration Program: Technical Report #2, Ecological Studies. (In Conjunction with Wallace, McHarg, Roberts and Todd, and Gladstone Associates; Philadelphia, PA) Harrrisburg, PA. 60p.

Gettysburg Municipal Authority. 1977. Water Supply System Improvement Study. Harrisburg, PA. 80p.

Gettysburg Municipal Authority. 1978b. Report on Operation of Water System for the Period October 1, 1977 to September 30, 1978. Gettysburg, PA. 17p.

Health Resources Planning and Development, Inc. 1979. Acute Inpatient Care (Draft) Section of the Health System Plan. Camp Hill, PA. 312-414pp.

Holzworth, George C. January, 1972. Mixing Heights, Wind Speeds and Potential for Urban Air Pollution Throughout the Contiguous United States. EPA Publication AP-101. Research Triangle Park, NC.

Hughey, Ronald E. 1973. Aquatic Biology Investigation of the Gettysburg Sewage Treatment Plant on Rock Creek, Adams County. Pennsylvania Department of Environmental Resources, Stream File 5.11.2, 7p.

Hughey, Ronald E. 1978. Aquatic biological investigations of Rock Creek, Adams County. Pennsylvania Department of Environmental Resources, Stream File 5.11.2, 3p.

Lake Heritage Property Owner's Association, Inc. 1973. Revised Bylaws, Code of Regulations. Gettysburg, PA. 8p.

Littlestown Area School District (LASD). 1978a. Proposed budget 1978-1979. Littlestown, PA. 17p.

Littlestown Area School District. 1978b. Long range development plan. Section 8: School facilities (3p.), Section 4: Pupil enrollment projections (2p.) Littlestown, PA.

Mount Joy Board of Supervisors. 1979. Mount Joy Township subdivision and land development ordinance. Mount Joy, PA. 74p.

Mount Pleasant Township Board of Supervisors. 1972. The Mount Pleasant Township subdivision and land development regulation. Mount Pleasant, PA. 39p.

Pennsylvania Department of Agriculture, Crop Reporting Service. 1972. Pennsylvania Orchard and Vineyard Survey. Harrisburg, PA. 38p.

Pennsylvania Department of Agriculture, Crop Reporting Service. 1977. 1976 Crop and Livestock Annual Summary, CRS-67. Harrisburg, PA.

Pennsylvania Department of Commerce, Bureau of Employment Security. 1979. Labor Market Analyst, Annual Planning Report: York Labor Market Area, Pennsylvania. York, PA. 52p.

Pennsylvania Department of Commerce, Bureau of Statistics. Research and Planning. 1978. Pennsylvania County Industry Report: Adams County. Harrisburg, PA. 27p.

Pennsylvania Department of Commerce. No Date. Adams County Industrial Report (Release No. M-5-70). Harrisburg, PA. 25p.

Pennsylvania Department of Community Affairs (DCA). 1970 Through 1977. Local Government Financial Statistics: Adams County. Harrisburg, PA. Variously paged.

Pennsylvania Department of Community Affairs. 1972a. Gettysburg-Cumberland Demonstration Program: Technical Report #1, Economic Studies. (In Conjunction with Wallace, McHarg, Roberts, and Todd, and Gladstone Associates; Philadelphia, PA) Harrisburg, PA. 70p.

Pennsylvania Department of Community Affairs. 1972b. Gettysburg-Cumberland Demonstration Program (In Conjunction with Wallace, McHarg, Roberts, and Todd, and Gladstone Associates; Philadelphia, PA). Harrisburg, PA. 155p.

Pennsylvania Department of Community Affairs. 1975. A Study of the Economic Impact of the Gettysburg National Military Park and Tourism on the Gettysburg Area. Harrisburg, PA. 155p.

Pennsylvania Department of Community Affairs. 1979a. Annual Budget of the Township of Cumberland for the Year 1979. Harrisburg, PA. 7p.

Pennsylvania Department of Community Affairs. 1979b. Draft Gettysburg Borough Comprehensive Plan (unadopted). Harrisburg, PA. (Unpaginated).

Pennsylvania Department Community Affairs. 1979c. Annual Budget Report and Guide for Mount Pleasant Township for the Year 1979. Harrisburg, PA. 26p.

Pennsylvania Department of Community Affairs. 1979d. Annual Budget for Adams County, PA for the Year 1979. Harrisburg, PA. 57p.

Pennsylvania Department of Community Affairs. 1979e. Cumberland Township Comprehensive Plan. Harrisburg, PA. Variously paged.

Pennsylvania Department of Education. 1971 Through 1979. Auditor's Reports (DECO-502) and Annual Financial Reports (DECO-500) for Gettysburg Area School District, and Littlestown Area School District. Harrisburg, PA. Variously paged.

Pennsylvania Department of Education. 1979a. A Listing of Pennsylvania Non-public Schools Having Elementary Enrollments 1978-1979. Harrisburg, PA. 172p.

Pennsylvania Department of Education. 1979b. A Listing of Pennsylvania Non-public Schools Having Secondary Enrollments 1978-1979. Harrisburg, PA.

Pennsylvania Department of Education. 1979C. Perpetual School Building Inventory Listing as of September 15, 1978. [Public] School Buildings in Operation 1978-1979. Harrisburg, PA. 287p.

Pennsylvania Department of Labor and Industry. 1970. Through 1979. York Labor Market Letter. Bureau of Employment Security, York, PA. Variously paged.

Pennsylvania Department of Labor and Industry. 1976. Pennsylvania Occupational Projections. Bureau of Employment Security, Labor Market Information Section, Research and Statistics Division. Harrisburg, PA. 586p.

Pennsylvania Department of Labor and Industry. 1979. Annual Planning Report, Fiscal Year 1980. Bureau of Employment Security, Labor Market Analyst for York, Pennsylvania. Harrisburg, PA. 50p.

Pennsylvania Department of Transportation. 1977. Pennsylvania Traffic Data Annual Report: 1977 (and 1975 Traffic Volume Map of Adams County). Bureau of Transportation Planning Statistics. Harrisburg, PA. 40p.

Pennsylvania Office of State Planning and Development. 1974a. Net Migration by Age, Sex, and Race in Selected Counties 1960-1970. Harrisburg, PA.

Pennsylvania Office of State Planning and Development. 1974b. Patterns of Commutation in Pennsylvania by County. Harrisburg, PA. 78p.

Pennsylvania Office of State Planning and Development. 1978. Pennsulvania Projection Series Summary Report (No. 78 PPS-1), State Economic and Social Research Data Center. Harrisburg, PA. Unpaginated.

Regional Science Research Institute. 1976. Housing Requirements and Needs in Pennsylvania: 1970-1990. (A Report to the PA-DCA). Philadelphia, PA. 151p.

State Industrial Directories, Inc. 1972. Pennsylvania State Industrial Directory. New York, NY. pp.G-13 Through G-16.

Straban Township Board of Supervisors. 1964. Land Subdivision Regulations. Straban, PA.

Straban Township Board of Supervisors. 1974. Buidlign Permit Ordinance. Straban, PA.

Straban Township Board of Supervisors. 1978. Annual [Budget] Report to the Treasurer. Straban, PA.

Straban Township Board of Supervisors. No Date. Development Potential - 1981 (Map). Straban, PA.

US Department of Commerce, Bureau of the Census (DOC). 1971. 1970 Census of Population, General Population Characteristics: Pennsylvania (PC (1) - B40). US Government Printing Office, Washington, DC. 287p.

US Department of Commerce, Bureau of the Census. 1972. 1970 Census of Population, Detailed Characteristics: Pennsylvania (PC(1) - D40). US Government Printing Office, Washington, DC.

US Department of Commerce, Bureau of the Census. 1973. 1970 Census of Population and Housing. York, PA, SMSA Census Tracts. US Government Printing Office, Washington, DC.

US Department of Commerce, Bureau of the Census. 1977. Projections of the Population of the United States, 1977 to 2050. Series P-25, No. 704. US Government Printing Office, Washington, DC. 87p.

US Department of Commerce, Bureau of the Census. 1978. Illustrative projections of State Populations: 1975 to 2000 (Advance Report). Series P-25, No. 735. US Government Printing Office, Washington, DC. 4p.

US Department of Commerce, Bureau of the Census. 1979a. Projections of the Number of Households and Families: 1979 to 1995. Series P-25, No. 805. US Government Printing Office, Washington, DC. 22p.

US Department of Commerce, Bureau of the Census. 1979b. 1976 Population Estimates and 1975 and Revised 1974 Per Capita Income Estimates for Counties, Incorporated Places, and Selected Minor Civil Divisions in Pennsylvania. Series P-25, No. 777. US Government Printing Office, Washington, DC. 42p.

US Department of Interior, National Park Service. 1979. Draft General Management Plan (for) Gettysburg National Military Park, Pennsylvania. 126p.

US Department of the Interior, National Park Service. Undated. Revised Draft General Management Plan for the Gettysburg National Military Park, Pennsylvania. 141p.

US Department of the Interior, National Park Service, Undated. Draft general management plan and draft environmental assessment for the Gettysburg National Cemetary. Pennsylvania. 117p.

US Water Resources Council. 1972. OBERS Projections, Regional Economic Activity in the United States. Series E. Washington, DC.

Van Orden, Dean. (oral communication). June 22, 1979. Conversation Between Dean Van Orden, Air Quality Engineer, PennDER, Harrisburg, Pennsylvania and David L. Bush, Air Quality Scientist, WAPORA, Inc., NY, NY.

WAPORA, Inc. 1979. Chlorine Toxicity Survey Data. Report Submitted to USEPA Region II.

APPENDICES

APPENDIX A

Draft EIS Included by Reference

APPENDIX B

Comment Letters

Board of Supervisors

Straban Township, Adams County, Pa.

Township erected 1746

STEWART E. DAVIS
FREDERICK M. SHEALER
EMERY E. SIBERT

ARTHUR WEANER, SEC. - TREAS.
R. D. 6, BOX 320 (Weaner Rd.)
GETTYSBURG, PA. 17325
PHONE 717 334 - 6140

January 16, 1981

Mr. Thomas Slenkamp
Project Monitor, Region 3
6th and Walnut Streets
Philadelphia, Pa. 19106

Dear Mr. Slenkamp:

Straban Township Officials outlined in their letter dated, May 2, 1981, and at the September meeting with WAPORA, Inc. several discrepancies in the EIS Study.

In reviewing the December, 1980 Draft Environmental Impact Statement for Gettysburg, Pa. Area Wastewater Treatment Facilities, the majority of these statements and items are still included as follows:

(1) Segment 3 indicated that the area along both sides of Business Rt. 15 is now serviced by sewer. None of the existing EDU's along Business Rt. 15 are serviced by Public Sewer. The sewer only services the development of Twin Oaks and The Lutheran Home, which lie East of Business Rt. 15.

(2) The Study still indicates that Segment 18 is the area where the most development will occur by 2005. Straban Township disagrees with this. It is evident that there is a need for Public Sewer to service the existing EDU's in this area because of malfunctions, but the low density of development makes it uneconmical to construct sewer lines to service this small number of EDU's. The majority of the land in Segment 18 is presently used as productive farm land. There has been no proposals for developing this land presented to the Supervisors, with the exception of several lots fronting along the roads. The Township feels that

this area may eventually be developed, but the projection of 320 EDU's as indicated in the Study is too great. It would be desirable to service as many of the existing EDU's along Business Rt. 15 as economically feasible at this time and size the collection line large enough for future development. This area should not be considered as the most prominent area in the Township for future development.

(3) On Page 47, Segment 4 (U.S. RT. 30) is not mentioned under Future Land Use--Straban Township. This segment should be recognized.

(4) The Study indicates that Segment 4, by 2005, will have a population growth of 42 EDU's or 9,300 gallons will be reserved in the treatment system for future growth for this area. The development potential of this area is far greater than this estimate. It is questionable of how this projection was arrived at. This area now has current development under construction, which will require more than 42 EDU's. A permit for a Sewage Treatment Plant, to service this development and existing EDU's along U.S. RT. 30, has been issued to Straban Township by the Penna. Dept. of Environmental Resources. This permit was issued under the stipulation that the treatment plant must be abandoned and the area serviced by the Regional Sewer, when it becomes available.

(5) The Study is unclear as to what capacity will be reserved for Straban Township at the treatment plant. Is it the Design Flows shown in Table IV-8?

Sincerely yours,

Arthur Weaner

STRABAN TOWNSHIP SUPERVISORS
Arthur Weaner/Secretary/Treasurer

cc: DER, Corriveau, PE, Hbg.
Schultz, ESQ.
STPC, Redding, Sec.
STA, Hull, Sec.
Davis, ESQ.
GMA, Larson, Chn.
GEC, Shultz
CRC, Jordan
Mr. Strayer
Mr. Zinn,P.A.G.
Miller, ACPC

W. HOWARD CORDDRY
JOHN R. DIETZ
H. BRUCE GERBER
MAURICE A. WADSWORTH
WALTER K. MORRIS
J. DOUGLASS BERRY
HAROLD T. WADDINGTON
JOHN E. WATERS
CHARLES H. KRESSLER

JAMES R. MADARA
CHARLES W. PICKERING
WILLIAM H. ALLEN
MARCELLO H. SOTO
FRANK J. DONATELLI
HERMAN R. STARTZENBACH
PAUL E. PAUL

JOSEPH W. LIPSCOMB
JAMES L. LONG
ANTON F. MIORIN

GANNETT FLEMING CORDDRY AND CARPENTER, INC.
ENGINEERS AND PLANNERS

P. O. BOX 1963
HARRISBURG, PENNSYLVANIA 17105
PHONE 717 763-7211

CABLE ADDRESS: GANFLEC
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RAY F. STAUFFER
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C. KENNETH MYERS
GEORGE H. SMITH
ROBERT J. DIETZ
RONALD J. ORNEVICH
RUSSELL S. KLINGENSMITH
EDWARD W. MONROE
DAVID ANTENUCCI
PAUL W. BRICKER
WILLIAM K. CORLISS, JR.
ROBERT A. STARK
JOHN J. YURICK
THOMAS R. BENYO
WILLIAM C. EHRESMAN
FREDERICK FUTCHKO
JAMES G. HANEY
GERALD P. VOEGLER
GERALD B. SPECK
ROGER J. BANKS
GEOFFREY A. FOSBROOK
THOMAS M. RACHFORD
STEPHEN F. TALIAN
MARLIN K. ULSH

January 23, 1981

Mr. Thomas Slenkamp
Environmental Protection Agency (3IR61)
Sixth and Walnut Streets
Philadelphia, Pennsylvania 19106

Dear Mr. Slenkamp:

Re: Draft Environmental Impact Statement
Gettysburg Area Wastewater Treatment
Facilities

On behalf of the Gettysburg Municipal Authority, we have reviewed the Draft EIS on wastewater management facilities for the Gettysburg area. We feel that, with consideration and cooperation among all entities involved in the project, the five alternatives formulated in the EIS can lead to the development of a wastewater management plan that will substantially benefit the inhabitants of the planning area.

The existing Gettysburg wastewater treatment plant would be upgraded and expanded, in varying degrees, under any one of the alternatives. Therefore, there is relatively little difference among the costs or other effects of the varous alternatives on the residents of Gettysburg. However, there are some comments we would make which pertain to all of the proposed alternatives.

First, the year 2005 design flows from the existing Gettysburg service area (Segments 1 and 3) were developed by allowing 80 gallons per person per day and adding the estimated I/I of 0.5 million gallons per day. For all but Alternative A, this amounts to a design flow from Segments 1 and 3 consisting of 0.755 mgd sewage and 0.5 mgd I/I, for a total of 1.255 mgd. We request that EPA consider increasing Gettysburg's portion of the total design flow to at least 1.6 mgd for the following reasons:

Continuous Service Since 1915

1. The metered water consumption in Gettysburg during the past two years has averaged 1.0 mgd, excluding fire protection, leaks, etc. Assuming that an average of 85 percent of this is returned to the sewer system, the present average sewage flow is about 0.85 mgd.

2. The 0.5 mgd I/I allowance, which was estimated in GFCC's preliminary I/I analysis, may be too low as a result of recent draft guidelines issued by EPA on I/I analyses. The implications of the draft guidelines are the design I/I allowance should be increased from 0.5 mgd to 0.7 mgd.

The sum of these revised components totals 1.55 mgd, and does not account for any future growth or any increase in I/I over the next 25 years. Should EPA's projected growth (1.6% total growth in Gettysburg) over the next 25 years be too low, or should the I/I component increase, the flow from Gettysburg in the year 2005 may exceed 1.6 mgd.

Our second concern, which has been expressed previously, is over the physical condition of the existing Gettysburg treatment plant. Please refer to our letter of August 4, 1980 for details. We are not in agreement with the EIS's conclusion that the plant is suitable for future use with relatively minor improvements. By the year 2005, this facility will have been in operation for over 50 years with only minor improvements. In order to prevent the people of Gettysburg from being saddled with an O & M burden long before the design year, we request that a detailed evaluation of the plant's suitability for future use be conducted prior to EPA's final recommendation.

We also question the feasibility of an upgraded and expanded facility on the existing plant site, particularly with the denitrification and dechlorination facilities proposed by EPA. We would appreciate receiving a layout drawing of the proposed facilities.

Due to the limitations of the existing plant site, EPA should consider maintaining the Cumberland Township treatment plant regardless of the alternative ultimately recommended. Any amount of flow removed from the Gettysburg plant would help to ease the problem created by the limited site. It appears, from previous meetings and work sessions, that this situation is preferable to Cumberland Township also.

In addition to the above comments, we request EPA's consideration of the following questions and observations:

1. On what basis have denitrification and dechlorination facilities been included in the proposed Gettysburg (and Cumberland, for that matter) treatment plants? DER's requirements, which are stringent, do not require either of these processes.

2. We would appreciate receiving information on the estimated cost of the expanded and upgraded Gettysburg treatment plant, including the cost of renovations of the existing facilities, as well as the recommended renovations.

We trust that the comments and observations contained in this letter will be helpful to EPA in determining a final recommendation. We would welcome the opportunity to meet with representatives of EPA to further discuss the items in this letter.

Please contact this office if you have any questions or need clarification of any of these comments.

Very truly yours,

GANNETT FLEMING CORDDRY AND CARPENTER, INC

VICTOR S. KREA
Project Manager
Pollution Control Division

VSK:bfd

cc: Mr. Allen Larson, Gettysburg Municipal Authority
Mr. Edward J. Corriveau, DER, Harrisburg

Please do everything possible to protect the Gettysburg Park. We have visited the park & feel the area is beautiful, unique & needs all the protection it can get.

Thank you.

MRS. STRNAD
1 S 445 SCHOOL
LOMBARD, ILL
60148

LAKE HERITAGE MUNICIPAL AUTHORITY
Post Office Box 114
Gettysburg, Pennsylvania 17325

January 23, 1981

Mr. Thomas Slenkamp, Project Monitor (3IR60)
EIS Preparation Section
U.S. Environmental Protection Agency
Region III - 6th and Walnut Streets
Philadelphia, Pennsylvania 19106

Dear Mr. Slenkamp:

Draft Environmental Impact Statement
Gettysburg, Pa. Area Wastewater
Treatment Facilities,
December 1980

Having reviewed the above referenced Draft EIS, the Lake Heritage Municipal Authority (LHMA) would like to take this opportunity to comment on the wastewater treatment alternatives being offered for the Gettysburg area with respect to Lake Heritage. These comments represent the official position of the Authority and, as such, comprise the testimony we wish to make record at the January 28, 1981 EIS public hearing. Our comments follow:

Of the five wastewater treatment alternatives A through E, presented in Chapter VI of the Draft EIS, only Alternative E (with modifications to be discussed herein) is acceptable to the Authority in its general scheme of service. Alternatives A through D recommend the utilization of either holding tanks or on-site disposal systems for the majority of the LHMA service area and are therefore unacceptable for the following reasons:

1) The number of problems with existing on-site disposal systems and the marginal acceptability of soils in our area indicates to us that on-site systems do not provide sufficient long term reliability to be considered as a viable large-scale wastewater treatment alternative for the LHMA area. They may be useful, however, in remote, less densely populated portions of the service area.

2) Our experience with holding tanks and pump-and-haul disposal indicates that it is labor, management and energy intensive. Our 1981 annual user charges, for example, are $450 and our costs under this system are still continuing to rise even with the existing ban on holding tanks due to our limited treatment plant capacity.

3) DER has already indicated to EPA that it views holding tanks as a "last resort" alternative to be utilized when no other affordable solutions are available.

4) The Authority feels long-term, large-scale utilization of on-site systems or holding tanks will have a detrimental effect on property values within the Lake Heritage area.

5) Although there are naturally some differences of opinion, the Lake Heritage Property Owners Association has indicated a preference for sewers over holding tanks or on-site disposal system.

In light of the above, only a wastewater treatment alternative which recommends sewering the immediate Lake Heritage area (segments 7 to 11, inclusive) and Drummer Boy Campground (segment 20) would be acceptable to the Authority. Therefore, LHMA prefers Alternative E, but with the following modifications and contingencies:

1) Hillside Estates (segment 19) must be added to the initial LHMA service area. This development presently has sewers which would convey wastewater by gravity to the LHMA treatment plant. Under an existing agreement with the developer, LHMA has reserved treatment plant capacity for this area in exchange for the developer's assistance in building the existing plant and collection sewers. Additionally, once our new plant is built and this area develops, it will be of great financial benefit to the Authority to treat this wastewater since relatively little capital expenditure would be required to connect the existing sewers. This would help assure the financial feasibility of the overall project.

2) The Authority would like to have the option of providing service to segments 12, 14 and 15 as site conditions, population density and economics best allow. Although the EIS analysis indicates on-site disposal may be the least cost alternative for these areas, the Authority would like to sewer those portions where it can prove sewers will be cost-effective. Even if left unsewered, the questionable application of on-site systems and the need for treatment of holding tank wastes still requires that the new LHMA treatment plant have adequate capacity to serve these areas in the future.

3) The Authority is concerned that the population projections and, hence, the wastewater flows, the number of EDU's, and the required treatment plant capacity depicted in the EIS are too low for the LHMA service area (now considered to be segments 7-11, 12, 14, 15, 19 and 20). We realize, however, that a determined effort to refute these projections at this time will disrupt the EIS process and result in additional delays in meeting the wastewater treatment needs of the area. For this reason, LHMA is not submitting their projections at this time, but will do so later or withhold them providing we have some assurance from EPA that we will not be arbitrarily held to the EIS projections if we can prove them inaccurate in the future. If the EPA intends to adher strictly to the EIS when determining funding eligibility and project participation, then the Authority would want revised projections considered for the Final EIS.

In closing, LHMA would like to get on with the business of meeting the wastewater treatment needs of our area. To do so, we are willing to work closely with the EPA and DER to arrive at mutually satisfying solutions. We appreciate the intent of the EIS, but believe it is lacking in the specifics addressed herein simply because its preparers are less familiar than we with the history and needs of our service area. We hope our position and the points we've mentioned will be seriously considered in the preparation of the Final Gettysburg EIS and our engineer, Gannett Fleming Corddry and Carpenter, Inc., is willing to provide whatever support documentation EPA may require.

Very truly yours,

LAKE HERITAGE MUNICIPAL AUTHORITY

DAVID L. LEWIS
Executive Director

cc:
Edward Corriveau, DER
Allen Larson, Gettysburg Municipal Authority
All LHMA Board Members
Leonard Ferrara, Pres. LHPOA
Mount Joy Township
Mount Pleasant Township
Drummer Boy Campground
William Martin, Hillside Estates
Gary Hartman, Attorney LHMA
Winston Lung, WAPORA INC.
Angelo Tesoriero, GFCC INC.

603 N. Union Street
Natchez, Mississippi 39120
January 26, 1981

Mr. Thomas A. Slenkamp
U.S. Environmental Protection Agency
Region III
6th and Walnut Streets
Philadelphia, Pennsylvania 19106

Dear Mr. Slenkamp:

Thank you for the opportunity to comment on the Draft Environmental Impact Statement for the Gettysburg, Pennsylvania Area Wastewater Treatment Facilities. While I find the Draft EIS to be quite thorough, I fear that a lack of safeguards and procedures for implementation leave glaring weaknesses in the document. This is particularly evident in the areas of archeological and historical resources and aesthetic values. (PP. 44 & 64 respectively demonstrate this concern.)

Something needs to be incorporated in the Final EIS to insure that proper land use controls are implemented and enforced or that substitute measures are taken in mitigation.

On page 64 it is stated that "criteria can be developed to evaluate aesthetics and scenic views in an orderly, disciplined manner related to existing land use and to the 'sense of place'." Will these criteria be developed? The Final Environmental Impact Statement must insure again that such measures are taken and not merely mention that they can be taken.

With respect to the alternatives, A and B are the more desireable for reasons of cost, services rendered and least negative impacts. Alternative A is most preferable because it offers the most protection to historical and archeological resources of the area.

Obviously, Gettysburg National Military Park is the most important resource in the area and it must be given the utmost protection whatever the cost and whichever alternative is chosen.

Sincerely,

Ed Merrell

Ed Merrell

Lake Heritage
PROPERTY OWNER'S ASSOCIATION
P. O. BOX 420
GETTYSBURG, PENNSYLVANIA 17325

January 27, 1981

Mr. Thomas Slenkamp, EPA (31R61)
Curtis Building
6th and Walnut Streets
Philadelphia, PA 19106

Dear Mr. Slenkamp,

After review of the Draft EIS and Appendixes for the Gettysburg PA Area Wastewater Treatment Facilities, the Lake Heritage Property Owners Association (LHPOA) desires to submit the comments outlined herein.

In 1975 the LHPOA was prepared to proceed with the construction of a sewage collection system and treatment plant to serve the residences of the Lake Heritage Subdivision. However, the Pennsylvania Department of Environmental Resources directed that work on the system be deferred in favor of a central Gettysburg system. As a result LHPOA has been prevented, to this day, from solving its own sewage treatment problem.

Today, in January 1981, 5 years after being held up on the construction of our own system, we are advised by the EPA EIS that, indeed, Lake Heritage should be sewered separately. In the meantime, costs have risen by at least 100%, and we still have no sewage treatment system.

As a contrasting and similar situation, the Subdivision of Lake Mead was allowed to construct their own collection system and treatment plant, which has been in operation since 1979, and is probably the finest and most economically constructed system in Adams County. It should also be noted that the system was constructed on the basis of supplying present and future needs of the subdivision.

By contrast, LHPOA is being asked to consider the use of holding tanks as a permanent solution. The use of holding tanks has been considered by authorities in the past, as a strictly temporary solution. It has little or no precedent as a permanent solution. Also, it would appear that the legality of such action might be in question. It would definitely penalize Lake Heritage property values in contrast with surrounding conventionally sewered dwelling units.

LHPOA wants to go on record as strongly protesting the use of holding tanks as a permanent solution to the problem; and questions why, in view of the thwarted efforts of LHPOA to do the job correctly, it has even been considered as a solution.

One of the most obvious deficiencies in the EIS, is the failure to make provision for serving the entire Lake Heritage Community. There are 1,000 lots at Lake Heritage, which are owned by some 800 property owners, who comprise the LHPOA. Most of these owners purchased the lots prior to 1967. Today, there are 315 dwelling units at Lake Heritage. We estimate that approximately 350 additional owners will build here eventually. Many have applied for a building permit in the past three years, but have been turned down, and are being turned down almost every week, for lack of sewage service. If sewage connections were available today, it is estimated that construction would be started immediately on 50 or more dwelling units (under favorable market conditions). The right of these property owners to utilize properties, which they have owned, and for which they have paid taxes and dues, in many cases for 14 years, is a legal right. Efforts have been growing by these frustated owners, to seek legal redress from those responsible for this delay.

It is therefore necessary, in an area where development has long been completed and site ownership long established, to make provision for the future. The EIS cost estimate makes no provision for future needs with respect to the treatment plant. The pressure sewer system plan would undoubtedly pass all properties, and would be designed for future connections.

It is understood that EPA grant funding is primarily to cover existing sewage treatment needs. Therefore in view of the mandatory need for future treatment, the estimated 111% increase in present flow, and the EPA funding limitations, it is considered that the use of sewage treatment lagoons with floating aerators would be a logical and economical treatment solution. The initial cost would be considerably less than a conventional treatment plant, require no interceptor line, and could readily be sized for present and future needs, storage, and seasonal discharge considerations.

While the low pressure system described in the EIS, when coupled with an aerated lagoon treatment plant, would be mechanically satisfactory, the anticipated completion date is not satisfactory because of urgent current requirements for construction. In addition, as far as is known, the availability of EPA grant monies is uncertain today, or in 1985. (A firm DER EPA position on this question would be appreciated.)

It is considered that a more immediate and far less expensive solution would be in the use of high performance aerated systems for individual dwelling units. Such units are now available. They utilize aeration and membrane filtering, and produce a very high quality effluent. With such units the immediate need would be for approximately 150 units to replace existing holding tanks. The estimated cost of these per unit with drain field is $8,000, or a capital cost of $1,200,000. The cost to the government (grant) would be $1,920,000 versus the $3,910,000 grant now contemplated for a pressure system. The cost per year to the individual user (with EPA grant) would be $257 per year vs $548 per year for the pressurized system. New dwelling unit

owners, beyond the existing 315, would be responsible for the cost of their treatment system. Existing septic systems would be replaced at the owner's expense, if the need arose. However, no evidence has been presented in the EIS that present septic systems are a problem. As would be necessary with any central treatment plant, local authoritities would be responsible for the inspection, proper operation, and installation permits, and approval of all individual treatment systems.

It should be noted that individual systems will eliminate the need for extensive planning and engineering, a collection system, road repair, interceptor lines, and central treatment plant; and, in addition, would permit immediate installations to meet our construction requirements.

One very important aspect favoring the choice of individual systems, is the fact that at least 150 residents, already on satisfactorily operating septic systems, would not suddenly be faced with an added annual cost of $548.

From the environmental and ecological viewpoint, the individual dwelling unit treatment plant is the right solution. Their use results in zero discharge of effluent to streams and rivers, as contrasted with central treatment. At a time when the supply of potable water is threatened because of extremely dry weather, the conservation of high quality effluent for cultivation of gardens and lawns reaches necessity.

We would expect that the foregoing would be incorporated in the final EIS. In view of the long and costly delay encountered at Lake Heritage by the prior denial of a central system by DER, LHPOA would also expect prompt approval of the installation of individual treatment units, or, as a more costly, less satisfactory alternative, approval of the pressurized system, permitting immediate construction and early completion. We would expect that the long delays in construction forced upon LHPOA would be the basis for most expeditious approval by DER and EPA, permitting LHPOA to start construction this year, and have systems, or a system, in operation in 1982.

Finally, LHPOA would like to draw the distinction between LHPOA and the Lake Heritage Municipal Authority (LHMA). LHPOA is an association of the 800 plus property owners at Lake Heritage, and is representing their views and interests. The LHMA is really a misnomer. It is no part of LHPOA. It is a board composed of members from three townships, which acts on DER matters over an area larger than Lake Heritage, without consultation with LHPOA. The policies of LHMA are, in many instances, contrary to the interests of LHPOA members. Specifically LHPOA wishes strongly to protest the addition of segments 12, 14, 15, and 19 to the Lake Heritage Area. These segments are not now included in the EIS Lake Heritage Area. These are undeveloped segments, and the

property owners at Lake Heritage, who have been waiting for years for sewer service, should not have to bear the costs and delays associated with the inclusion of additional segments, as sponsored by LHMA.

LHPOA is giving serious consideration to incorporating as a Borough, in order among other considerations, to maintain control over the water and sewer policies which affect Lake Heritage property owners.

Very truly yours,

The Board of Directors
Lake Heritage Property Owners Association

By Edward S. Fleming. E.S.F.
Edward S. Fleming, P.E.
Treasurer

Sonja Y. Reisinger
R. D. #5, Wheatland Acres
Gettysburg, Pa. 17325

January 29, 1981

Mr. Thomas Slenkamp
E.P.A. (31R61)
Curtis Building
6th & Walnut Streets
Philadelphia, Pa. 19106

Dear Mr. SlenKamp,

My husband and I attended your E.P.A. meeting January 28, 1981 at 7:45 P.M. in the Old Adams County Court House. Since my husband and I were unprepared to testify last night, I decided to write you today, so you can enter "our opinion", though an individual opinion, one we feel will represent most of the 150 residents at Lake Heritage currently using Holding Tanks, as a Temporary solution to their sewerage needs. We also feel "our opinion" will represent non-residential owners, and some residential owners who own properties at Lake Heritage and cannot BUILD OR SELL because of the unavailability of a feasible sewerage system.

My husband and I are currently one of the non-residential owners of multiple lots at Lake Heritage. That clarifies our personal position, as frustrated lot owners at Lake Heritage, unable to build or sell our lots for many years, because of a lack of availble sewerage.

With our personal position stated, we have decided to endorse your "Alternative E." Why? As a current resident of Wheatland Acres located in Mount Pleasant Township, our sewerage costs per year our 300.00. Your 1985 projected cost of 548.00 per year with the implementation of Alternative E, seems a bit high now, but taking into account that this is a five-year projection, we have decided this cost would be one we would try to bear. We certainly can't endorse holding tanks! Taking into consideration only 142.00 difference between Alternative A and E, completely resolved the issue in our minds. Though we would hope you could recommend another alternative that would be more economical for all concerned, if our choice is only ever to be between Alternative A and E, then count our vote for Alternative E well founded.

We are confident that our single vote will be joined by a multitude of others in the same situation at Lake Heritage.

I have enclosed for your review, a copy of L.H.P.O.A. January News Letter. Please note under the heading of "Status of Holding Tanks", the 150 members at Lake Heritage currently using holding tanks who are faced with an increase of 90.00 this year, creating a total charge of 450.00 per year for waste water collection. This is only 98.00 less than Alternative E. What do you think their projected costs will be for waste water collection by 1985? I'm sure you can see those 150 members will have no trouble endorsing your Alternative E, nor could anyone endorse future holding tank expansion, instead of Alternative E.

Thus far I have represented 150 people now on holding tanks at Lake Heritage, plus the future expansion of 300 "New Homes" that can be built in the future at the Lake, which of course, represents our personal position, also. I have not represented the Residential Property Owners now on septic systems, who will be faced with what they consider, and rightly so, an unnecessary 548.00 yearly cost, not to mention installation costs. I personally sympathize with them and wish we could somehow ease this financial burden on them.

However, we must move foreward to meet the challenges of the future. We have not been able to go forward at Lake Heritage, this has undoubtly hurt 150 people on holding tanks now, as well as another 300 future new home expansions at the Lake. This represents a total of 450 families as opposed to 150 members currently using septic systems, a 3-1 majority, which speaks clearly for itself.

In closing this letter, I have but one last comment. Whatever decision is made, please don't procrasinate! Move swiftly forward!

Thank You,

Sincerely,

Robert K Reisinger

Sonja Y. Reisinger

Bob and Sonja Reisinger

SYR/enc.

February 2, 1981

Mr. Thomas Slenkamp
Environmental Protection Agency
(31R61) Curtis Building
6th and Walnut Streets
Philadelphia, Pennsylvania 19106

Dear Mr. Slenkamp:

Since I was unable to attend the Public Hearing concerning the Federal study of regional sewer needs for Gettysburg, I am writing this letter to ask the following questions:

1. The Gettysburg Municipal Authority plant east of town presently treats the sewerage for my housing development "Twin Oaks". What will be the additional cost to me for each plan? The same as projected for Gettysburg or Straban Township?

2. Everyone agrees that Gettysburg needs to update its sewerage system. From the Federal and your point of view, which is the best immediate plan?

3. Although I realize that the various amount of monies listed for each plan is only an estimate, do you feel the residents of these communities are financially able to fund these plans? Will there be assistance provided to help with the financial obligation for the residents?

Although I realize that you are very busy, I would appreciate the answers to my questions since they will help me decide what plan is the most beneficial for the least amount of expenditure.

Sincerely,

Jack F. Klein
121 Artillery Dr.
Gettysburg, Pa. 17325

GETTYSBURG MUNICIPAL AUTHORITY
223 BALTIMORE STREET
GETTYSBURG, PENNSYLVANIA 17325

April 21, 1981

Mr. Jack F. Klein
121 Artillery Drive
Gettysburg, Pennsylvania 17325

Dear Mr. Klein:

Your letter to the Environmental Protection Agency concerning the Environmental Impact Statement, being prepared for this area, recently crossed my desk and I believe I am able to answer the questions that you posed.

The Twin Oaks development is served by the Gettysburg Municipal Authority and will continue to be regardless of what "Plan" is arrived at. Of the various plans being considered there would be very little difference in cost between them to the properties served by the Gettysburg Municipal Authority. It has been estimated that the average annual sewer rental charge will be about $130.00 per year. It must be remembered that the above figure is average, naturally some will be considerably more, others will be less, based upon flows as determined by water consumption. For a residence, it is possible that the annual charge for Gettysburg will be considerably less than $130.00. For commercial properties, much more.

The best "Plan" has not yet been determined. Several prominent factors must be considered. What do the various municipalities desire? That is Gettysburg Borough (including Twin Oaks), Straban Township, Cumberland Township and the Lake Heritage area. What is the most cost effective plan? This question is of prime consideration to the E.P.A. in as much as the Federal Government will be offering a grant in the amount of 75% of the construction costs for treatment facilities. In some cases, collection systems will be included, and in other areas they will not be grant eligible and must be financed by that political jurisdiction. It is hoped that the best plan will be arrived at in the very near future.

Financial assistance to the consumer will not be an ongoing program. The E.P.A. Grant is up front, and the debt service, operational and maintenance charges in the future will have to be borne by the consumer. This is the problem confronting Lake Heritage.

I hope I have answered your questions satisfactorily and if I can be of assistance in the future, do not hesitate to inquire.

Sincerely,

Allen A. Larson

Allen A. Larson
Chairman
GETTYSBURG MUNICIPAL AUTHORITY

AAL/ja

ebruary 2, 1981

r. Thomas A Slenkamp
.S. Environmental Protection Agency (3KR61)
urtis Building, 6th and Walnut Sts.
hiladelphia, PA 19106

Ethel W Thornley
18653 Schoenherr
Detroit, Mi 48205

ear Mr. Slenkamp:

our EIS for the proposed Gettysburg, PA. Area waste water treatment facilities gave several
ternatives. Alternative A seems to be the best seems to offer the most protection for the
rcheological andhistoric treasures and is also less costly than B or C but even Alternative
ll not be really satisfactory unless mitigating measures are used. Because of the history
re of a lack of land use control it is especially necessary to have strong mitigation measures.

ere are several severe deficiencies in the Draft EOS. Page 44 notes the crucial issue of
nd use controls and chapter five discusses mitigation measures BUT THERE IS VERY LITTLE
SU ANCE GIVEN THAT EITHER LAND USE CONTROLS OR MITIGATION MEASURES WILL BE USED AND WITHOUT
EM THE FUTURE OF THE PARK AND ITS TREASURES COULD BE IN JEOPARDY.

E OF THE REASONSTTHAT WE ARE LOSING SO MUCH OF OUR VITAL FARMLANDS IS THAT WHEN SEWER LINES
expanded the land developers move in and destroy these lands with subdivisions and/or shopping
ls. They do not pay the costs of these sewers and roads and unfortunately the use tax which
ld protect our farms in not common.it is more important to protect our country than to make a
developersrrich.
rs truly, Ethel W Thornley

. & Mrs. R Poland, Mr. & Mrs. L Harwood, Mrs. C Karpinski, Mr. & Mrs. R Angst, Mr. & Mrs. D Doerr,
& Mrs. C Wilkins, Mr. & Mrs. M Colette, Mrs. S Leslie, Mr. & Mrs. E Park, Mr. & Mrs. F Fountaine

February 2, 1981

Mr. Thomas Slenkamp (3IR60)
Environmental Protection Agency
6th and Walnut Streets
Curtis Building
Philadelphia, Pennsylvania 19106

Dear Mr. Slenkamp:

We have resided in Lake Heritage since October 1978. We have holding tanks, as do many of the residents in this development. After more than two years of putting up with holding tanks I'd pay almost anything to get the sewer put in Lake Heritage.

I, along with many others, have nothing but trouble with the holding tanks. They let ground water and rain water in as well as leak waste water out. With situations like this, all the water saving devices in the world won't help. I've talked with building contractors about this problem and they suggest knocking holes in the bottom of the holding tank or fitting a drain hose in the upper part of the second tank so that no matter how much ground water gets in, it will not fill up. According to them, many people at Lake Heritage have been forced to take these kinds of steps to avoid constant problems with sewage backing up into their homes.

I, along with my neighbors, are for sewer lines being put in and holding tanks being abolished.

Thank you,

Steve J. Monforte

Steve J. Monforte
256A Thomas Drive
Lake Heritage
Gettysburg, Pennsylvania 17325

TEETER, TEETER & TEETER
ATTORNEYS AT LAW
108 WEST MIDDLE STREET
GETTYSBURG, PENNSYLVANIA
17325

DANIEL E. TEETER
ROBERT G. TEETER
SAMUEL E. TEETER

TELEPHONE
(717) 334-2195

February 6, 1981

File No. 2881
Re: Adams County Home Builders Association

Mr. Thomas Slenkamp
Environmental Protection Agency (3IR61) Curtis Bldg.
6th and Walnut Streets
Philadelphia, Pa. 19106

Dear Mr. Slenkamp:

As counsel for the Adams County Home Builders Association, I have been requested to provide the following comments on your draft environmental impact statement for the Gettysburg, Pennsylvania wastewater treatment facilities. At its February 2, 1981 meeting, the Board of Directors of the Adams County Home Builders Association voted unanimously in favor of Alternative D as outlined in the draft. A stagnating economy and unavailability of suitable building soils in the Gettysburg area have greatly injured the growth of the community and those employed in the building construction trades. Alternative D provides an opportunity for reasonable growth which will in turn stimulate a considerably depressed building trade.

Thank you for your consideration of these comments.

Very truly yours,

TEETER, TEETER & TEETER

Robert G. Teeter

Robert G. Teeter

Warren W. Stouck

Warren W. Stouck,
President, Adams County Home Builders Association

RGT:es

c/c to Adams County Home Bldrs. Assoc.

Alternative B — The Gettysburg STP would be upgraded and expanded to accommodate currently sewered areas plus Route 30 east in Straban Township. The Cumberland STP would be upgraded for currently served areas. A new Lake Heritage STP would be constructed to handle that area's septic tank and holding tank wastes. Areas north of Gettysburg in Cumberland and Straban Townships would be accommodated by on-site systems.

Overall Cost $20,059,000

Alternative C — Gettysburg and Cumberland STP's would be upgraded to handle existing service areas only. A new land treatment system would be built to serve Route 30 east in Straban Township. A new STP would be constructed to handle septic/holding tank waste from Lake Heritage homes. Areas north of Gettysburg in Cumberland and Straban Townships would be accommodated by on-site systems.

Overall Cost $20,782,000

Alternative D — Gettysburg STP would be upgraded and expanded to accommodate currently served areas plus portions of Straban Township along Route 30 east and Business Route 15 north. Cumberland STP would also be upgraded and enlarged to serve an expanded area along Route 34 north of Gettysburg. A new STP would be constructed to treat septic and holding tank wastes from Lake Heritage.

Overall Cost $22,100,000

Alternative E — An upgraded/expanded Gettysburg STP would accommodate flows from current service areas plus Straban and Cumberland Townships. The Cumberland STP would be abandoned. The Lake Heritage community would be sewered and served by a new STP.

Overall Cost $23,100,000

The Federal government will help to defray many of the construction costs associated with the selected alternative. Local governments would have to pay for remaining construction costs plus operation and maintenance. By making some preliminary eligibility assumptions, EPA developed the following rough estimates of what average households within the affected jurisdictions could expect to pay under each of the alternatives.

DEAR MR. SLENKAMP — ALT. E IS THE ONLY ONE THAT WILL MEET THE OVER ALL NEEDS OF THE AREA! THIS AREA NEEDS GROWTH IN ORDER TO SUSTAIN AND ENHANCE OUR QUALITY

Estimated 1985 Annual Household Charge by Municipality
(Costs expressed in dollars/household/year)

Alternative	Gettysburg	Cumberland	Straban	Lake Heritage	Mt. Joy
A	123	253	245	406	126
B	124	274	300	461	126
C	124	274	430	461	126
D	124	312	479	488	126
E	118	267	436	548	126

Environmental Impacts

While there are some differences among alternatives in terms of the environmental impacts they would produce, the differences are for the most part minor. However, the issue of how to protect the historic and archaeologic resources related to Gettysburg National Park remains significant regardless of which of the wastewater treatment alternatives is selected.

Through the EIS process, careful development of alternatives has reduced many of the potential historic and archaeologic resource impacts associated with the originally proposed project (which prompted an EIS). Those remaining areas of concern are being currently discussed between members of local, State, and Federal governments. An agreement outlining how the historic resources will be protected is expected to be negotiated soon after completion of a Final EIS.

What Happens Now?

The Draft EIS discusses five alternatives for improving wastewater treatment service in the Gettysburg area. It also discusses the impacts which would occur if any of the alternatives were implemented. You should decide which of the alternatives you prefer and how you feel about the monetary, social, and environmental impacts of these alternatives.

The Environmental Protection Agency will hold a public hearing on January 28, 1980 at 7:30 p.m. in the new Adams County Courthouse to gather comments and opinions on the Draft EIS (Copies of the Draft EIS are available for review in the Adams County Library or the offices of the Gettysburg Municipal Authority). The review period for the Draft EIS will remain open until February 10, 1980. Written comments should be submitted by that date to Mr. Thomas Slenkamp, Environmental Protection Agency (3IR61), Curtis Building, 6th and Walnut Sts., Philadelphia, Pennsylvania 19106.

After the close of the Draft EIS review period, EPA will complete a Final EIS, taking into account and responding to the comments received on the Draft EIS. The Final EIS will indicate a recommended action based on consideration of costs, environmental impacts, public comments, and local government positions.

Following publication of the Final EIS, each local jurisdiction must decide which course of action they wish to pursue. If their decisions are consistent with the recommendations of the EIS, then applications can be submitted to EPA through the Pennsylvania Department of Environmental Resources requesting Federal funds to implement a wastewater treatment alternative.

MR. & MRS. C. K. ROULETTE + FAMILY
111 ARTILLERY DR. (STRABAN TWP.)
GETTYSBURG, PA. 17325 (717-334-9409)

ES — NO GROWTH + REDUCED QUALITY OF LIFE!!!

P.M. COLE
128 MONTCLAIR PL.
GETTYSBURG, PA. 17325

FEB 4, 1981

Dear Mr. Slenkamp,

Because of prior business committments I was unable to attend the public meeting held in Gettysburg recently however. I would still like my views on the proposal entered since I am a resident of Hazelbrook Hills which falls in the Lake Heritage category.

It is my understanding that annual fees for sewering this area would amount to an annual cost of $548.00. If this is correct, I am amazed that a proposal with such high fees attached would even be presented for public acceptance. I say this for several reasons. Number one, at least half of the residents of Hazelbrook Hills are on septic systems. To my knowledge, all are functioning properly. I submit that it is blatantly unfair to burden contented septic systems users with a system that is uneconomically feasible even for users with holding tanks. Annual holding tank fees are much less than the $548.00 fee proposed and undoubtedly this fee is not impinged to inflation. Speaking for myself I do not wish to subsidize other residences for a system they are in favor of possibly because of convenience rather than utility value.

I knew what system I was getting when my house was constructed over one year ago. It was specifically designed to handle my wastewater generated and as an added safety factor the house was fully equipped with water conservation devices and the drainfield designed with 4 access ports for preventative maintenance or if necessary quick access in case a malfunction occured. When converting the $548.00 fee to gross pay needed to be earned to get net pay to pay the $548.00 this proposal is even more ridiculous. Most profit making organizations will lay out on paper a plan to invest their money in situations that will make them better off as a result of their investment than they were before. Septic System users pay little or nothing more and someone wants us to donate $548.00 a year for as long as we're here??? What's the gimmick?

Although my letter doesn't show it I am truly opposed to this proposal ending up as a debate between holding tank users and septic system users. Health and economic well being for all supports my vote B-27 for no sewer hook down.

VERY TRULY YOURS P.M. COLE

February 6, 1981

Thomas Slenkamp (3RA00)
Environmental Protection Agency
6th + Walnut Streets
Curtis Building
Philadelphia PA 19106

Dear Mr. Slenkamp,

I would like to give my opinion on the proposed wastewater treatment alternative for Lake Heritage in the Hettysburg Area. I would like to see sewer lines put in, regardless of cost. Holding tanks are only a temporary solution, and not a very good one.

Thank you

Sincerely,
Susan Gruver

Mr Thomas Slenkamp
I'm from Cumberland township
34 north of Gettysburg
Grandview terrace when
they stuck the sewer
in on us it was
$90.00 a year Plus $255.00 to
hook on they told us
the more new homes
went on it would
come down it did
the first thing we
new it went to
$150,00 a year we
got a couple families
now that has sewer
backing up on them

They told the sewer
officials and there lawyer
and still nothing done
the first place I did not
need the sewer my
Septic system worked
Perfick about 1/3 of the
People in cumberland
township our Retired
People with a fixed
income I like to know
how these People our
goeing to Pay those
kind of Prices listed
the way I heard I think
theres goeing to be a
lot of homes for sale
or go to the Poor house
Signed Donald C. Gulden

SWOPE, HEISER & McQUAIDE
ATTORNEYS AT LAW
104 BALTIMORE STREET
GETTYSBURG, PENNSYLVANIA 17325
P. O. BOX 368
TELEPHONE (717) 334-2134

DONALD M. SWOPE
HENRY O. HEISER, III
ROBERT L. McQUAIDE
SUSAN HOWARD SWOPE

J. DONALD SWOPE (1907-1940)
SWOPE, BROWN & SWOPE (1940-1956)
BROWN, SWOPE & MacPHAIL (1956-1966)
DONALD M. SWOPE (1966-1969)
SWOPE & FRAZEE (1969-1980)

February 6, 1981

Mr. Thomas A. Slenkamp
Environmental Protection
Agency (3IR61)
Curtis Building
Sixth and Walnut Streets
Philadelphia, PA 19106

Re: EIS - Gettysburg

Dear Mr. Slenkamp:

As solicitor to both the Board of Supervisors of Cumberland Township and the Cumberland Township Authority, we have been asked to comment on the draft EIS for waste water management facilities in the Gettysburg, Pennsylvania, area.

After careful review of the five alternatives set forth in said study, my clients are of the view that with some refinement alternative D should be selected insofar as the interests of Cumberland are concerned. This preference has been made after discussion with the Township's engineers, Buchart-Horn, and is based on the following considerations:

1. Maintenance of control over waste water matters.

2. Sewer District 3 will continue in operation and hence a retention of existing facilities can result in a sharing of staff as well as certain costs.

3. Much of the equipment in the STP for Districts 1 and 2 has future utility, and therefore it would be more economical to continue the use of such facilities. Restated, abandoning properly functioning facilities that have remaining useful life is not a cost effective approach.

4. There is adequate room for expansion in the STP for Districts 1 and 2.

5. Our own data (based on information extending over more than two years) relative to effluent characteristics indicates that the B.O.D. factor set forth in Table III-3 on page 28 should read 9.5, and the ammonia factor less than 1.0. Thus, we believe that the Cumberland STP is not exceeding effluent limitations for B.O.D. and ammonia nitrogen, and, accordingly, the extent of necessary upgrading is not, in our view, as extensive as the study envisions.

6. Under alternative E, Gettysburg will have insufficient capacity in its STP to handle flows from Cumberland Township.

While for the reasons above noted Cumberland favors alternative D, we do not concur with the treatment process proposed in conjunction therewith. This is because we do not accept the idea that denitrification and dechlorination should be considered in capital cost evaluation since, to our knowledge, these are not required to meet the effluent criteria. Furthermore, the extended aeration treatment plant for Districts 1 and 2 has shown its capability to properly nitrify the wastes to meet the present discharge criterion. Rather than proceed as suggested in the study, we would propose a process study be conducted by our consultants since they are most familiar with the system.

Finally, Cumberland will not accept responsibility for repairs, maintenance, or user charge administration for on-site systems. In our view, such governmental action is not mandated or authorized by state legislation, and since the Commonwealth has pre-empted this entire area of regulation, we feel that any such interference at this point would be illegal.

We trust that the above will be helpful to you in preparing the final EIS, and if you have any questions or need any additional information regarding the position of Cumberland Township, please don't hesitate to contact the undersigned.

Sincerely yours,

SWOPE, HEISER & McQUAIDE

Henry O. Heiser, III

HOH:vlf

cc: Eloise M. Wilson, Secretary
Cumberland Township
Lawrence J. Heltzel, Chairman
Cumberland Township Authority

Lake Heritage
PROPERTY OWNER'S ASSOCIATION
P. O. BOX 420
GETTYSBURG, PENNSYLVANIA 17325

February 6, 1981

Mr. Thomas Slenkamp, EPA (3lR61)
Curtis Building
6th and Walnut Streets
Philadelphia, PA 19106

Dear Mr. Slenkamp,

Following the public meeting on January 28, 1981, at which time we presented our views on the EIS, it occurs to us that the fact that we are still an Association of Property Owners and not as yet a municipal body, may tend to make State and Federal Authorities discount the stated views in our letter of January 27, 1981.

We want to assure you that we are moving toward becoming a Borough, and plan to present this proposal to our membership at a meeting scheduled for April 24, 1981.

We want the direct control of water and sewer matters, which we would possess as a Borough, and we want to deal directly with EPA and DER. We do not want the Lake Heritage Municipal Authority to act as our agent or spokesman in the implementing of the solutions to the wastewater treatment problem at Lake Heritage.

We hope that you appreciate our position, and cooperate with us in this matter.

Very truly yours,

Leonard J. Ferrara
President, L.H.P.O.A.

W. HOWARD CORDDRY
JOHN R. DIETZ
H. BRUCE GERBER
MAURICE A. WADSWORTH
WALTER K. MORRIS
J. DOUGLASS BERRY
HAROLD T. WADDINGTON
JOHN E. WATERS
CHARLES H. KRESSLER

JAMES R. MADARA
CHARLES W. PICKERING
WILLIAM H. ALLEN
MARCELLO H. SOTO
FRANK J. DONATELLI
HERMAN R. STARTZENBACH
PAUL E. PAUL

JOSEPH W. LIPSCOMB
JAMES L. LONG
ANTON F. MIORIN

GANNETT FLEMING CORDDRY AND CARPENTER, INC.
ENGINEERS AND PLANNERS

P. O. BOX 1963
HARRISBURG, PENNSYLVANIA 17105
PHONE 717 763-7211

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TELEX 84-2375

RAY F. STAUFFER
F. JAMES KNIGHT
C. KENNETH MYERS
GEORGE H. SMITH
ROBERT J. DIETZ
RONALD J. DRNEVICH
RUSSELL S. KLINGENSMITH
EDWARD W. MONROE
DAVID ANTENUCCI
PAUL W. BRICKER
WILLIAM K. CORLISS JR.
ROBERT A. STARK
JOHN J. YURICK
THOMAS R. BENYO
WILLIAM C. EHRESMAN
FREDERICK FUTCHKO
JAMES G. HANEY
GERALD P. VOEGLER
GERALD B. SPECK
ROGER J. BANKS
GEOFFREY A. FOSBROOK
THOMAS M. RACHFORD
STEPHEN F. TALIAN
MARLIN K. ULSH

February 6, 1981

Mr. Thomas Slenkamp, Project Monitor (3IR60)
EIS Preparation Section
U.S. Environmental Protection Agency
Region III - 6th and Walnut Streets
Philadelphia, Pennsylvania 19106

Dear Mr. Slenkamp:

Draft Environmental Impact Statement
Gettysburg, Pa. Area Wastewater
Treatment Facilities,
December 1980

On behalf of the Lake Heritage Municipal Authority (LHMA), we are providing comments on the above referenced document, in support of the Authority's position stated in their letter of January 23, 1981. In addition, we have been asked by the Authority to respond to certain comments made during the Draft Gettysburg EIS Hearing of January 28, 1981.

Specifically, with respect to Lake Heritage, we will be addressing hearing comments which advocated the use of individual aerobic treatment units and on-site disposal systems.

Aerobic Treatment Units

A comment was made that "high performance aerated systems for individual dwelling units" can produce high quality effluents disposable on-site, at less cost than a low pressure collection system and centrailized treatment.

It may be possible that such units are capable of high quality effluents, but field experience indicates that they are susceptible to upsets resulting in poor effluents and may be prohibitively expensive to operate and maintain. These extended aeration units require regular semi-skilled supervision and maintenance and, moreover, still require subsurface absorption systems for effluent disposal. They provide little advantage in areas with tight soils, high water tables, or slow percolation rates.

Continuous Service Since 1915

These miniature treatment plants employ the same processes and incorporate the same operating complexities found at the Authority's existing treatment facility. A proliferation of these units would increase annual operation and maintenance costs and result in a serious management problem for the Authority. Additionally, these units may not be suitable for large-scale usage due to soil limitations in the area and may eventually constitute a health risk and pollution problem for Lake Heritage if improperly utilized. As with any on-site system, however, these units may be applicable in scattered areas where site conditions are appropriate.

On-Site Disposal Systems (and Holding Tanks)

We support the Authority's position that holding tanks and a pump-and-haul collection system is an unacceptable long-term alternative for the Lake Heritage area. Contrary to sewers, this system offers no economy of scale--getting increasingly more expensive to operate as additional homes are served and labor, fuel and administrative costs rise. With 1981 user charges of $450, the future costs of an alternative depending primarily on holding tanks would be a severe economic burden on the community.

As for on-site disposal, we share the Authority's concern that soil limitations are generally too severe to allow their extensive usage in the immediate Lake Heritage area, (segments 7 to 11, inclusive). Please note that the EIS sanitary survey documenting existing on-site disposal practices and problems neglected segments 7 to 11 and, as such, is lacking in this regard. The EIS did indicate, however, that "Generally, soils within the study area are not suitable for conventional septic systems. High levels of groundwater and bedrock, and/or poor soil permeability are soil characteristics in virtually all of the study area."

According to the local sewage enforcement officer, approximately 85% of roughly 100 lots tested for compliance with the latest standards for on-lot disposal suitability have failed to meet the requirements for subsurface absorption. The remaining 15% qualified for modified on-lot systems utilizing elevated sand mounds. Similarly, an analysis of the "Adams County Soil Survey" indicates that soils surrounding Lake Heritage have a "severe" limitation for disposal of effluent from septic tanks and that the depth to bedrock, ground surface slope and/or high water limitation may also prohibit the construction of sand mounds in certain areas.

We do not believe that the Authority is indifferent to the approximately 150 homeowners who presently utilize on-site disposal systems. A number of alternatives in terms of system configuration, staged construction or connection, and local funding can be examined to minimize impacts on these users. However, the Authority's overriding concern is to meet the wastewater treatment needs of the entire community (1100 developable lots) in a manner which will equitably minimize costs and the potential for polluting Lake Heritage. There are approximately 170 homeowners now paying $450/year to

have their holding tanks pumped due to on-site disposal system malfunctions or inadequate soils. With an additional 350 homes projected in the next 20 years, it is our belief that low pressure collection and centralized treatment is the most reliable and best overall solution for the area.

Very truly yours,

GANNETT FLEMING CORDDRY AND CARPENTER, INC.

ROBERT E. SHAFFER, P.E.
Project Manager
Pollution Control Division

RES/AAT/dav

cc: David Lewis, Exec. Director, LHMA
Edward Corriveau, DER
Gary Hartman, Attorney LHMA
Dean Schultz, Gettysburg Engineers
Ann Hunter, LHMA

LEAGUE OF WOMEN VOTERS
OF ADAMS COUNTY

Feb. 7, 1981

Attention: Mr. Thomas Slenkamp,

The League of Women Voters' concern in Adams County is to support the broad objectives of the Adams County Comprehensive Plan to coordinate the development and conservation of resources of the entire county. To that end, we encourage comprehensive planning and cooperation among local governments, and would therefore like to endorse the DEIS so carefully prepared by the EPA, which consistently makes the point that careful consideration must be given to land use planning on the part of municipalities. Please accept the following statements as our testimony as given on January 28, 1981.

According to the new census figures, the population in Adams County has increased by 20% in the last ten years which, if continued, would make the average annual increase rate 2% rather than the 1.6% listed in the DEIS. This would be enough growth to place greater demands on any of the alternatives chosen for sewerage, especially in the Lake Heritage and Segment 4 areas.

Also, Housing has increased by 32% in the county in the last ten years, making an annual increase rate of 3.2%, placing greater stress on on-site sewage systems, and increasing dangers of malfunction and pollution of diminishing groundwater supplies. This increase in housing is in spite of the building ban placed on areas served by the Gettysburg and Cumberland STP, which, when lifted, will probably increase the rate of housing construction. However, the alternatives given in this DEIS do not provide for much future expansion, and concentrate on meeting present needs instead. This raises the question of having to face another whole series of surveys and problems long before year 2005.

According to the breakdown in 1980 census figures so far published, a large percentage of the population increase has been from elderly and retired people. This will raise some problems with some alternatives on users fees, especially in Straban and Lake Heritage, unless help can be provided in financing.

The DEIS mentioned that acreage needed for population expansion would be reduced in sewered areas since higher density could be accomodated on less ground, but that would depend on municipal land use regulations, which in many of the municipalities concerned do not exist.

The League does not wish to promote any of the given alternatives, but we do strongly encourage land use planning at the local level in order that all may benefit from the wise use of our natural resources. Thank you.

Sincerely

Sharon Sontheimer
Land Use Chairperson
League of Women Voters, Adams County

Betty Heckel
290 Dolphin Way
Laguna Beach CA 92651

2-7-81

Mr.Thomas A.Slenkamp
U.S.Environmental Protection Agency
Curtis Bldg.
6th and Walnut Street
Philadelphia Penn.

Dear Mr. Slenkamp.

Re.: Gettysburg,Pennsylvania Area Wastewater Treatment Facilities.

The Draft EIS offers no assurance that measures will be taken to mitigate the harmful effects of the sewer system on the Park.

It appears that Alternative A appears to be the best alternative and Alternative B is the second best.

It is hoped that the proposed sewer system near Gettysburg National Military Park will not be detrimental to the existing Park,which is a national monument and should stay unharmed and in the same way for generations to come.

Very truly

Betty Heckel

BULLEIT & SCHULTZ
ATTORNEYS AT LAW
ADAMS COUNTY NATIONAL BANK BUILDING
GETTYSBURG, PENNSYLVANIA 17325

EDWARD B. BULLEIT
CHESTER GITT SCHULTZ

TELEPHONE (717) 334-3158

(FORMERLY BULLEIT & BULLEIT)

February 9, 1981

In re: Straban Township, Board of Supervisors - EPA Draft Environmental Impact Statement for Gettysburg, Pennsylvania, dated December, 1980.
Our file 4016-C

Thomas Slenkamp, Project Monitor, Region 3
Sixth and Walnut Streets
Philadelphia, PA 19106

Dear Mr. Slenkamp:

By way of further response to the Environmental Protection Agency Draft Environmental Impact Statement for Gettysburg, Pennsylvania, dated December, 1980, for the area wastewater treatment facilities, I write to you as the solicitor for Straban Township and on behalf of Straban Township, Adams County, Pennsylvania.

The Board of Supervisors of Straban Township had previously outlined in their letter dated May 2, 1980, a subsequent letter to you dated January 16, 1981, and their oral comments given by me at the public hearing held on January 28, 1981, their previous concerns as to the Draft Environmental Impact Statement of December, 1980. Further statements are warranted as follows:

1. The area to the east of the Borough of Gettysburg in Straban Township located along U.S. Route 30 designated as Segment 4 is considered by Straban Township to be a prime area for development within the township.

2. Alternative B as set forth in the December, 1980, Environmental Protection Agency Draft Environmental Impact Statement is considered to be the alternative most acceptable to Straban Township with the following limitations:

A. The capacity as presently set forth does not appear to be sufficient to handle the needs of the segment.

B. The township has previously addressed itself to these concerns and questions in previous letters and statements.

BULLEIT & SCHULTZ
ATTORNEYS AT LAW
ADAMS COUNTY NATIONAL BANK BUILDING
GETTYSBURG, PENNSYLVANIA 17325

EDWARD B. BULLEIT
CHESTER GITT SCHULTZ

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(FORMERLY BULLEIT & BULLEIT)

C. This alternative comes closest to address the concerns which Straban Township had originally raised.

3. Table III-V, Population Trends and Projections (1980-2005) shows the population for Straban Township in the year 1980 to be 3,574. According to the most recent figures available to Straban Township, the present population is 4,248 which would put the township at approximately the level designated and projected for the year 1990 of 4,357 in population. This would indicate that these projections are already outdated in Table III-V.

4. Page 133 of the Draft Environmental Impact Statement as to Alternative B states . . . "However, Segment 4 is not considered to be a critical area by the National Park Service and scenic views from the battleground historic district toward Segment 4 were not found to be of high quality during the 1979 aesthetic resources survey . . . There may be some adverse effect on these views, such an effect constitutes a secondary impact on the Gettysburg National Military Park and battlefield historic district."

Even though it is indicated that the secondary impact as it relates to Segment 4 and Alternative B is not considered to be a critical area by the National Park Service, Straban Township is willing and has been willing in the past to consider alternatives to minimize the secondary impacts related on Page 133 as to Alternative B in Segment 4. One such alternative which is presently being considered by Straban Township as a proposal is the adoption of an historic district ordinance under the provisions of Act 167 adopted by the General Assembly of the Commonwealth of Pennsylvania and approved by the governor of the Commonwealth of Pennsylvania on the 13th day of June, 1961, as amended, which authorizes townships to create historic districts within their geographic boundaries. This legislation would authorize a township to protect the distinctive historical character of the district and to regulate the erection, reconstruction, alteration, restoration, demolition or razing of buildings within the specific historic district. This would also tend to set the limits or the boundary of the service area which would also, therefore, be a means to control secondary impacts.

Very truly yours,

Chester Gitt Schultz

CGS/dm
cc: Straban Township Board of Supervisors
Dean Shultz

COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA HISTORICAL AND MUSEUM COMMISSION
WILLIAM PENN MEMORIAL MUSEUM AND ARCHIVES BUILDING
BOX 1026
HARRISBURG, PENNSYLVANIA 17120

March 13, 1981

Mr. Thomas Slenkamp
Environmental Protection Agency
(3IR 61)
Curtis Building
Sixth and Walnut Streets
Philadelphia, Pennsylvania 19106

Re: ER 81 001 0109

Dear Mr. Slenkamp:

The Bureau for Historic Preservation has reviewed your draft environmental impact statement for the Gettysburg Area Wastewater Treatment Facilities. Our primary concern pertains to the indirect effects of this project on the distribution of growth in Cumberland and Straban Townships. We look forward to further discussions regarding Act 167 historic districts as mitigative measures.

Sincerely,

Greg Ramsey
Architectural Historian
Division of Planning & Protection
Bureau for Historic Preservation
(717) 783-8947

GR:jek

Commonwealth
of
Pennsylvania

GOVERNOR'S OFFICE
OFFICE OF THE BUDGET

Pennsylvania State Clearinghouse

P.O. BOX 1323 – HARRISBURG, PA. 17120 – (717) 787-8046
783-3133

February 3, 1981

United States Environmental Protection Agency
Region III
6th and Walnut Sts.
Philadelphia, PA 19106

ATTN: Thomas Slenkamp

Dear Sir,

Enclosed are comments from the Department of Environmental Resources concerning the draft EIS "Gettysburg, PA Area Wastewater Treatment Facilities." Please consider these the comments of the Pennsylvania State Clearinghouse.

Sincerely,

Anne Ketchum

Anne Ketchum
Supervisor

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
P. O. Box 2063
Harrisburg, PA 17120

Secretary

January 23, 1981

Review and Evaluation of PSCH No.: 5-80-12-009
Draft Environmental Impact Statement Gettysburg, PA Area Wastewater Treatment Facilities, Adams County

Anne Ketchum, Supervisor
Pennsylvania State Clearinghouse

CLIFFORD L. JONES
Secretary of Environmental Resources

The Department has reviewed the Draft Environmental Impact Statement (DEIS) on the Gettysburg Area Wastewater Treatment Facilities and offers these comments.

The Department has worked closely with the consultant and the Environmental Protection Agency in preparing the DEIS for this project. Because of this cooperative arrangement the Department has no major problems with the DEIS contents that could not be resolved.

There is an overwhelming need for wastewater treatment facilities in the Gettysburg Area. The recent preliminary census count summaries for 1980 show a 20% increase in population and a 31.9% increase in housing units in Adams County.

We should note the permits will be required under the provisions of the Dam Safety and Encroachments Act and Floodplain Management Act for some parts of the project. The applicant may contact Mr. Paul Gardasick of the Harrisburg Regional Office, Bureau of Dams and Waterway Management, 116 Executive House, P.O. Box 2357, Harrisburg, PA 17120, (717) 783-9726 for further information.

KENNETH J. COLE, MEMBER
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GETTYSBURG, PENNSYLVANIA 17325
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COMMITTEES

CHAIRMAN, SUB-COMMITTEE ON HEALTH
AGRICULTURE AND RURAL AFFAIRS
MILITARY AND VETERANS AFFAIRS

HOUSE OF REPRESENTATIVES
COMMONWEALTH OF PENNSYLVANIA
HARRISBURG

February 3, 1981

Mr. Thomas Slenkamp
Environmental Protection Agency
EIS Preparation Section
6th and Walnut St.
Philadelphia, Pennsylvania

SUBJECT: Centralized Sewers/Pressure Sewers
Lake Heritage

Gentlemen:

As a resident of Lake Heritage and on behalf of the residents on septic systems I feel that an annual user charge of $548/yr., as determined by the Environmental Impact Statement, is excessive for residential sanitary sewer service.

I was about the fifth resident at Lake Heritage and have seen our community develop, and also feel that the individuals with septic systems should not be responsible for offsetting high cost of holding tanks. Those individuals on holding tanks made that decision on their own, and probably save on their capital investment when purchasing property.

I know of no community that pays a sewerage rate as high as proposed here. I therefore, wish to enter this as testimony in lieu of personal testimony at the public hearing January 28, 1981.

Sincerely,

Kenneth J. Cole

KENNETH J. COLE
State Representative

cc: W. F. Hill
L. H. M. A.

COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA FISH COMMISSION
Division of Fisheries
Fisheries Environmental Services Section
Robinson Lane
814/359-2754 Bellefonte, PA 16823

February 5, 1981

Mr. Thomas Slenkamp
U.S. Environmental Protection Agency
Region III
Sixth and Walnut Streets
Philadelphia, PA 19106

Re: Draft E.I.S.
Gettysburg, PA Area
Wastewater Treatment Facilities

Dear Mr. Slenkamp:

The subject draft environmental impact statement has been reviewed by the Pennsylvania Fish Commission and we wish to make the following comments.

Since our primary concern is with the quality of the surface water as it relates to a possible fishery, the alternative (or alternatives) which gives a desirable quality effluent without removing recharge water from too large an area would be our preference. It seems that alternatives B and D, although they collect water from a larger area than alternative A, will give a desirable quality effluent from the three STPs into Rock Creek and its tributary, White Creek.

The building of additional sewer lines in the vicinity of and across the streams involved is also of concern to us. Adequate plans for siltation control and for minimizing stream crossings should be included in the study.

Appendixes E-3 and E-4 were not included in the material sent to us. E-4 is of importance to the Pennsylvania Fish Commission since we are the regulatory agency responsible for amphibians and reptiles. We would like to receive a copy of E-4 if available.

Thank you for the opportunity to review the draft environmental impact statement and we will be expecting the final environmental impact statement when completed.

Sincerely,

Jack G. Miller, Chief
Fisheries Environmental Services

JGM:dms

cc: D. Graff
L. Jackson

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
Bureau of Water Quality Management
407 South Cameron Street
Harrisburg, Pennsylvania 17101
(717) 787-9665
February 6, 1981

Certified Mail
Sewerage
Grants
Gettysburg Borough
Adams County

Mr. Thomas Slenkamp
Project Monitor
Environmental Impact Section
U. S. Environmental Protection Agency
Sixth and Walnut Streets
Philadelphia, PA 19106

Re: Draft Environmental Impact Statement Testimony

Dear Mr. Slenkamp:

The Department of Environmental Resources has reviewed the Draft Environmental Impact Statement (EIS) and would like to provide the following written testimony.

The Department wishes to express its appreciation for the effort expended in developing this draft EIS to date. We would like to impress upon all participants the need to continue on in refining, selecting and implementing an alternative that will solve the severe water quality problems of the Gettysburg Area while minimizing potential secondary impacts on the historical ammenities of this area. While the EIS has expressed quite clearly the tremendous need for improved wastewater treatment facilities, it has fallen short in conveying guidance and initiative back to the local level. The following comments, many of which have been raised by other participants either in writing or testimony need to be evaluated and discussed in the final Environmental Impact Statement.

1. An issue, which must be addressed, has been raised seriously questioning the structural stability and usefulness of the existing Gettysburg treatment plant.

2. There were still some uncertainties expressed during the EIS process concerning the availability of land necessary for expansion and upgrading at the existing Gettysburg plant site.

3. Recent EPA draft guidelines which questions the effectiveness of the I/I removal program means that the I/I allowance figures used in the Draft EIS are only preliminary figures and will be confirmed upon approval of the final I/I work.

4. The alternatives recommending replacement of or development on the septic tank sand mound systems or overland treatment is unsupportable based on any information we have seen either in previous grant project submissions, in local municipal planning submissions, or in the EIS. As we have stated previously, holding tanks may be considered a viable option only when they are managed properly in a municipally controlled district and when no other affordable solutions are available. The pump haul on-lot municipally controlled district was addressed too loosely in the draft EIS. If it is EPA's intention to recommend the pump and haul alternative, then EPA must place greater emphasis on implementation and defining municipal responsibilities for this alternative.

5. It was very disturbing for us to hear, at this late date, another section of EPA raising questions concerning AWT/AST review. We trust that EPA will communicate themselves clearly on what and how to address any questions as efficiently as possible, being sensitive to the time constraints of this project. As pointed out previously to you, the State does not require denitrification and dechlorination facilities for the Gettysburg area facilities.

6. The draft EIS report unfortunately at this point does not specifically get at the main reason why the EIS was initiated, which is to provide the framework for a Memorandum of Agreement (MOA) on what mitigating measures can be implemented to minimize the possible secondary impacts on the historical nature of the area. The Department feels that a feasible alternative to address mitigating measure will only come through the fostering of a spirit of communication and coordination between the Park Service and the local municipalities. The Park Service must take the initiative and be up front in communicating its concerns to local developers, if any mitigating measures are to be implemented smoothly and effectively. For this reason, the Department feels that the MOA is basically a federal matter to develop an understanding between federal agencies on what mitigating measures are feasible and implementable. In order to be respectful of all parties involved, particularly the tremendous need for implementing a solution to the water quality problems in the area, some boundaries or constraints and a time frame must be established for finalizing the MOA. Indeed, the proposed solutions to the water quality problems of the area and their grant applications must proceed as soon as possible and should not be delayed while the federal matter of an MOA is resolved.

7. The Department has mentioned previously that as the EIS draws to a close EPA must provide for a smooth transition from the federal level (EIS) back to the local projects. It is very important for the local municipalities to regain the initiative in order for their needs to be met. The Department will meet with and communicate to the municipalities what is needed to refine the EIS to meet State Sewage Facilities Act requirements. EPA has an obligation to communicate in writing what may be needed to refine the EIS from a federal prospective as well as as set up a mechanism to monitor the transition back to the local municipalities. As suggested to the EIS project monitor, we recommend a monthly meeting between the grant applicants beginning with the end of February to allow for this smooth transition. This meeting must involve all sections of EPA necessary to secure federal grant assistance.

8. We would like to acknowledge that the Department has monitored and provided comments in writing (November 14, 1979, April 17, 1980 and September 16, 1980) and orally during the development of the Draft EIS.

The Department would appreciate a copy of all the written testimony received on the draft EIS report as well a written response on how EPA intends to pursue the questions raised with our testimony.

If you have any questions concerning this matter please contact Edward Corriveau, DER Project Manager.

Sincerely yours,

Edward O Corriveau for

Frederick A. Marrocco, P.E.
Regional Water Quality Manager
Harrisburg Regional Office

FAM:EJC:jvl

cc: Gettysburg Borough Municipal Authority
Lake Heritage Municipal Authority
Cumberland Township Municipal Authority
Straban Township
Gettysburg National Park
Dennis Capella, EPA
Dick Pastor, EPA
Joe Galda, EPA

Advisory Council On Historic Preservation

1522 K Street, NW
Washington, DC 20005

Mr. Jack J. Schramm
Regional Administrator
U.S. Environmental Protection Agency
Region 111
6th and Walnut Streets
Philadelphia, PA 19106

Dear Mr. Schramm:

The Council has reviewed your draft environmental impact statement (DEIS) for Gettysburg Area Wastewater Treatment Facilities, Adams County, Pennsylvania, circulated for comment under Section 102(2)(C) of the National Environmental Policy Act of 1969. As you know, the Council has had an ongoing involvement in the consideration of various proposals for wastewater treatment in the Gettysburg, Pennsylvania, region. Amy Schlagel of our staff has been participating on the Interagency Coordinating Group. We have been concerned about project impacts on the numerous historic and cultural properties in the area, including those resources associated with the Gettysburg Battlefield Historic District, a property included in the National Register of Historic Places. As your staff is aware, our concerns have included both potential direct (primary) and indirect (secondary) impacts of the proposed project. We have, therefore, divided our comments on the DEIS into the two following sections.

Primary Impacts

The DEIS contains a good discussion of potential primary impacts on historic resources in the planning area. We would encourage EPA, however, to pursue further planning and design of facilities like the proposed pumping station on the Cumberland Township border northwest of Business Rt. 15 (p. 131), in order to minimize the visual and construction impacts of such project facilities on both historic sites adjacent to the National Register Historic District and individual structures within it. Landscape screening and below-grade construction (p. 134) to help mitigate visual impacts are good first steps, but such measures need considerable design work and refinement.

The sections addressing primary project impacts on archeological resources must be updated. It is unfortunate that the archeological reconnaissance performed by Kinsey (1979) was both preliminary and corridor-specific. As the National Park Service has previously pointed out, discussion of the archeological potential (both prehistoric and historic) of the entire planning area would substantially assist in the 201 planning

effort. If construction is proposed along the portions of Rock Creek and in sewage treatment plant expansion areas which Kinsey identified as having "low" archeological potential, we recommend that some additional geological and/or archeological investigations be carried out in order to verify Kinsey predictions. Nothing is known of the alluvial history of Rock Creek, and the low marshy areas may be relatively recent. In addition, as the National Park Service has indicated, Kinsey did not consider the presence of possible historic archeological resources in these areas. In any event, detailed, intensive archeological survey and testing will be necessary when an alternative is chosen. This should include 100% survey of interceptor corridors, treatment plant expansion areas, and pumping stations, along with subsurface testing. Survey and testing should be scheduled as early as possible during Step II, so that there will be enough time for the results to be taken into account in both line alignment and in carrying out any necessary mitigation activities.

Indirect Impacts

The most serious problems with the DEIS stem from our concern with the potential indirect effects of wastewater treatment facilities and associated future development in Adams County. Under "Aesthetic Resources," the DEIS states that existing historic preservation legislation provides for "consideration of primary effects on historic cultural resources," but that "such consideration would not be required for privately-funded future development (secondary effects) in planning area" (p. 135). This is incorrect. Section 800.3(a) of the Council's regulations, "Protection of Historic and Cultural Properties" (36 CFR Part 800), clearly states that it is the responsibility of Federal agencies to consider both the direct and indirect effects of its undertakings. This section should, therefore, be corrected.

In general, the discussion of potential indirect impacts throughout the DEIS is non-specific and somewhat confusing. We do not understand the statement on page 135, as repeated from page 130, which notes that "none of the alternatives would induce growth or development beyond what would occur without the proposed Federally-funded project." While this may indeed be true for the overall magnitude of growth, it is doubtful whether it is true for the distribution of that growth. It should be possible to get some better understanding of where population will tend to cluster under each alternative. The very brief discussion of possible induced growth effects under each alternative (p. 135) is helpful, but more analysis is needed. Simple reference to the Council's report on Gettysburg (which we understand is the missing Appendix G-8) adds little to the discussion in this regard. We wish to reactivate our participation in the EPA-sponsored interagency coordinating group, and join in any future meetings. The focus of the group's discussions since the beginning of revised project planning has been on lands adjacent to the historic district and outside National Park Service managed property. We agree that further discussions should be focused on these adjacent lands, particularly on development in Cumberland and Straban Townships (p. 125). Development in these areas may in fact prove to be more compatible with the long-range planning goals of the National Park Service, as the DEIS recognizes (p. 126).

We hope these comments will be helpful to you, and we would be pleased to discuss our concerns or suggestions for possible mitigating measures in further detail. Please contact Amy Schlagel at FTS-254-3495.

Thank you.

Sincerely,

Jordan E. Tannenbaum

Jordan E. Tannenbaum
Chief, Eastern Division
of Project Review

United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

FEB 20 1981

Mr. Jack J. Schramm
Regional Administrator, Region III
Environmental Protection Agency
6th & Walnut Streets
Philadelphia, Pennsylvania 19106
Attention: Mr. Thomas Slenkamp

Dear Mr. Schramm:

The Department of the Interior has completed its review of the draft environmental impact statement (DEIS) for wastewater management facilities in the Gettysburg, Pennsylvania area. Our comments are presented below by our areas of jurisdiction and special expertise.

NATIONAL PARK SYSTEM AND THE NATIONAL REGISTER OF HISTORIC PLACES

The Department of the Interior supports efforts to improve wastewater management in the Gettysburg, Pennsylvania area. However, the DEIS fails to provide an analysis of impacts and alternatives for the ensuing development of the project areas, from the standpoint of the proposal's potential impacts on Gettysburg National Military Park and Gettysburg National Cemetery.

As presented the alternatives are difficult to differentiate, especially in how they rank regarding impacts on National Park Service concerns. Attention to development opportunities in segments 2, 3, 4 and 18 is also limited to corridors along major highway routes. Discussion is necessary on the possibility for expansion of service to development outward from these segments and corridors. The relationship between the segments and the Park and Historic District areas should also be clarified through improved graphics.

The DEIS states that it may be difficult for EPA to provide adequate mitigation for secondary impacts due to the presence of privately funded future development in the planning area. Consideration of mitigation alternatives, however, is mandated by historic preservation legislation, as well as by the National Environmental Policy Act. In this regard, the document referenced for further detail on mitigative measures, Appendix G-8 (pages 134, 137), is omitted from the Appendix volume. It is our understanding that Appendix G-8 represents the Advisory Council on Historic Preservation's report on a variety of possible mitigation measures.

This report does not, however, provide an analysis of the likely impacts of the mitigation measures proposed. The final statement should focus on the details of mitigation for primary and secondary impacts. While the draft EIS has been responsive to certain of the National Park Service's earlier concerns, it does not provide an adequate description of likely impacts for the potential development of the project areas (segments) in question.

Background

The following brief, early history of the Battlefield is offered to illustrate the longstanding concern that the nation has had for the site of the battle. Over the years much has been invested in terms of individuals' personal efforts, and private and public funds, to preserve the Battlefield. This interest is ongoing.

The significance of the events at Gettysburg was perceived almost immediately. Local efforts to preserve the battleground were launched within days of the armies' withdrawal. Six weeks after the great battle, the first purchase of commemorative lands occurred. The 17-acre cemetery was purchased with funds that came from the legislatures of certain states represented at the battle. On November 19, 1863, President Lincoln came to Gettysburg to attend the dedication of the Soldiers Cemetery, and at the ceremony gave his immortal Gettysburg Address.

Battlefield preservation continued under the War Department, which administered the Cemetery, and the Gettysburg Battlefield Memorial Association incorporated in April 1864. In 1865, the Gettysburg National Military Park was established by Federal legislation. Later in 1896 in a landmark decision, the U.S. Supreme Court upheld the right of the Secretary of War to condemn a portion of the battlefield threatened by private development, for the purpose of protecting it for the "use and inspiration of all Americans." It was at Gettysburg that the concept of the taking of private lands for historical purposes was first tested and upheld.

In addition to an annual park operating budget of 1.4 million which covers salaries, maintenance and restoration work, there is a large public capital investment within the park. In addition, the Commonwealth of Pennsylvania estimates that $50 million is generated annually from tourism in the area. Because of the uniqueness of Gettysburg, it is difficult to quantify all of the values that the National Park Service is committed to protect; these figures give some sense of the magnitude of present Federal involvement in the area.

Since the 1963 Civil War Centennial Celebration at Gettysburg there have been several planning efforts focused on preserving the area's historic character, scenic and environmental values. The National Park Service is currently preparing a new development/master plan for the park.

The controversy surrounding the Gettysburg Tower also spawned several planning studies. Special Federal funds were provided for the Gettysburg-Cumberland Demonstration Project 1969-71, prepared by Wallace, McHarg, Roberts and Todd. The Pennsylvania Department of Community Affairs has devoted considerable attention to Cumberland Township in working with that municipality to prepare a township plan. In its 1977 report the Advisory Council on Historic Preservation identified 916 acres of land as critical to the integrity of the battlefield and recommended National Park Service acquisition of those lands.

Throughout these efforts the National Park Service objective has been to protect the scenic/visual values of the historic battleground setting through cooperative efforts with local communities. The National Park Service has participated fully in the studies noted above, and is still working with local communities to meet its objectives of protecting the Battlefield setting.

Discussion

The alternative actions evaluated would facilitate centralized sewage service to varying numbers of segments or service areas. These segments are delineated with approximate boundaries, but no information is presented on how each segment is likely to be developed. In the absence of any proposed actions which would regulate or mitigate effects of growth, we must assume a worst-case situation. Such a "worst-case" assumption would be of particular concern to NPS for segments 1, 2, 3, 4, 17 and 18, in which adjacent development has the most potential for adversely impacting the historic scene surrounding the Park and Cemetery. Even in these areas, however, we believe that with consideration given to proper siting, screening, and density and type of building, these adjacent lands could be developed without undue adverse impact to NPS areas. Without such safeguards, the park and cemetery could be impacted quite seriously. Should EPA fail to consider an array of mitigation measures within these proposed development areas, we believe NEPA compliance will be inadequate. At a minimum, these mitigation measures should be included in the final EIS; and only after further consultation with the National Park Service. We recognize that actual implementation of such mitigation measures is a difficult challenge. Ultimately, achievement of effective land use patterns at the various areas proposed for sewer development will have to be a joint effort by all parties concerned. Such an approach will be the only way to ensure that both the Federal and the state and local concerns at Gettysburg can be brought into balance.

Without such a joint venture, Gettysburg will have continued conflict between the need to protect the nationally significant park area and the legitimate concerns of the local community for growth and development. This situation was clearly articulated by Judge MacPhail of the Adams County Branch of the Court of Common Pleas in his October 26, 1971

opinion refusing to enjoin the construction of the Gettysburg Tower. The key passage is as follows:

> "We have emphasized "present-day Gettysburg" in our discussion thus far because much as we may like to deal with things as they should be or even have been, we must view the situation as it now exists. The evidence in this case clearly shows that the historical Gettysburg area has already been raped. A major highway bisects the fields of Pickett's Charge. A Stuckey's restaurant, a motel and an ice cream parlor face the Peach Orchard. A souvenir stand flourishes near a government observation tower opposite the Eisenhower farm. These are but a few examples. The Federal government's only recourse in the past has been to purchase these sites as funds become available. Then, of course, new ventures start elsewhere in equally offensive locations. Those who are so vociferous in their protest against the commercialism would be well advised to transmit their feelings to local officials and insist upon the enactment of appropriate ordinances and the adoption and implementation of comprehensive plans for the entire area. Since all of the people of this nation, including "generations yet to come" have a stake in the outcome, this must be a joint venture among the Federal, state and local governments. It is encouraging to note that at last there is a comprehensive plan for the future development of the Gettysburg National Military Park and that, since this case was instituted, efforts have been initiated on a state and local level to plan for the future development of this historical area. In the meanwhile, however, the courts cannot be used as a substitute for the legitimate exercise of police power by the local governments, and unless there is a clear showing of irreparable damage, the extraordinary remedy of injunctive relief cannot be, and will not be, invoked."
>
> Opinion of the Adams County Branch of the Court of Common Pleas of the 51st Judicial District in and for the Commonwealth of Pennsylvania (MacPhail, J.) at 13 & 14.

Judge MacPhail essentially concludes that the threats and intrusions to the park are there because the park is there; that the traditional National Park Service approach of purchasing various threatened areas is not a permanent solution; that the real solution is a "joint venture among the Federal, state and local governments"; and that the

courts cannot be used as a substitute for the legitimate exercise of police power by the local governments. This is a concise and accurate summary of the situation presently confronting the Gettysburg National Military Park. It is as true today as when it was written.

The need to promote constructive dialogue over land use decisions affecting local communities adjacent to the Battlefield has long been noted. A decision to go forward to construct wastewater facilities without consideration of types of induced development or land uses adjacent to the park would fail to give the National Park Service any assurance that land use impacts would be governed by compatible practices, standards or design measures. Tract-by-tract actions by NPS in the absence of such considerations promote an adversary relationship when NPS moves to protect the park from adverse impacts and the local community sees such development as necessary for expanding their tax base.

We request that EPA consider the alternative impacts that will be set in motion within the proposed sewer areas discussed above, depending upon the type of development that will occur. The true environmental impact of this project can only be evaluated from this perspective; we believe this is required by NEPA and the CEQ regulations. We also encourage EPA to consider the joint preparation of development guidelines to be adopted and enforced by the affected community as a part of their grant process. In this manner the existing Federal investment and role at Gettysburg will not be compromised by the EPA project in question. Careful planning now -- as a joint effort -- can avoid needless and ineffectual confrontations in the future.

FISH AND WILDLIFE RESOURCES

General Comments

The draft EIS (DEIS) does not indicate whether or not the project as planned would require Federal permits under Section 404 of the Clean Water Act of 1977. If proposed stream crossings are covered under Nationwide permits (33 CFR 303.4-2 and -3) we recommend that the work be undertaken in full compliance with the standards described in the Nationwide permit. If further action is needed for either 404 or National Pollutant Discharge Elimination System (NPDES) permitting, the Department of the Interior reserves the right to either oppose, or negotiate differences on, permit-related matters that deal with either stream crossings or the integrity of the National Military Park.

Detailed Comments

Pages 31-32: In the discussion of existing terrestrial biota, reference is made to appendices E-3, E-4 and E-5, dealing with flora, amphibians/

reptiles and mammals. No such appendices were included in the document we received. Appendices E-1 and E-2 adequately cover the existing aquatic fauna in the study area.

Page 79: Marsh/pond systems are mentioned as one alternative means of disposing of treated sewage plant effluent. Depending on their size, depth and land use adjacent to them, such artificially-created wetlands could benefit a variety of wildlife, including migratory waterfowl, wading birds, pheasant, songbirds, muskrat and raccoon. Because of these potential advantages to area wildlife, we believe the EIS should explain why marsh/pond systems are considered less feasible and more costly than overland flow, as stated at the bottom of the page.

Page 82: According to the last paragraph, the analysis of need for improved wastewater treatment emphasized septic system malfunctions and sewage treatment plant problems rather than well water contamination, soil suitability for septic systems, lot sizes or projections of population growth. We believe that this is a sensible approach. Consequently, we are puzzled by the fact that each of the six alternative plans summarized in Table IV-6 (page 88) includes construction of a new Lake Heritage sewage treatment plant, construction of sewers in that community, or both. These proposed modifications seem unjustified, considering information presented elsewhere in the DEIS:

> -The existing Lake Heritage STP is operating at about only 50 percent of its capacity and is producing an effluent that is clear, odor-free and well within the requirements of the discharge permit (page 70).
>
> -There is no evidence of malfunctioning on-site systems in the currently unsewered Lake Heritage community (page 83).

Page 116: The second paragraph states that a phosphorus concentration of 1.0 mg/l is "acceptable in the free-flowing water, from a eutrophication point of view." This concentration is twice the existing effluent limitation for Gettysburg and Cumberland STP (Table III-3, page 28), and 10 times the phosphorus water quality criterion for the Rock Creek watershed (Table III-4, page 28). It seems odd that the Environmental Protection Agency deems acceptable a phosphorus concentration that far exceeds established standards. Even if the existing effluent limitation (0.5 mg/l) is maintained by new or upgraded STPs, the Rock Creek phosphorus criterion (0.1 mg/l) will be exceeded for about 5 miles downstream from Cumberland STP (See Figure V-2, page 117).

Page 119: The penultimate paragraph states the "wildlife habitat is concentrated in forest areas and forest loss is nearly equal to habitat loss." This statement seems misleading since wildlife habitat includes all vegetated land -not merely woodland. In this connection we believe the EIS should contain estimates of the acreage of forest, agricultural land, etc., that would be impacted by each alternative. This information would add an important perspective to the ecological evaluation of alternative plans.

Page 139: We disagree with the last sentence in the penultimate paragraph. All alternative plans for wastewater management in the study area are scaled for human populations larger than those that now exist. The alternative plans would accommodate a population increase from 47 to 1170 in Segment 17 and from 105 to 951 in Segment 18 (Table IV-7, page 95 and third paragraph, page 96). Both planning segments are characterized (Table IV-3, page 83) by malfunctioning on-site septic systems and soils that are unsuitable for conventional on-site systems. The plans also accommodate a population increase of 811 in the Lake Heritage development, which likewise has soils unsuitable for conventional on-site systems. Induced growth, even if referred to euphemistically as "projected baseline population", will decrease the acreage of wildlife habitat in the study area. This fact should be made explicit in the EIS.

MINERAL RESOURCES

The proposed wastewater management facilities will have no significant impact upon mineral resources or their availability.

AESTHETIC AND RECREATIONAL RESOURCES

A number of the stations selected for classifying scenic views are not pertinent to the segments under consideration within the DEIS. Some that are presently classified as compatible with the historic/aesthetic integrity of the Park and Historic District may become incompatible through foreseeable development in the near future. Additional analysis is appropriate, on what effect the anticipated development in the project segments will have on the significant views of the Park and District. The aesthetic study should also be improved by considering additional significant view points as seen from the Battlefield tour route and historic routes entering Gettysburg.

Pursuant to the Clean Water Act of 1977, Section 201, the final statement should consider project impacts on recreation and the potential of the wastewater treatment facility to provide recreational and/or environmental education facilities. The 1977 Memorandum of Understanding between the Environmental Protection Agency and the Department of the Interior encourages such consideration. The State Liaison Officer who is responsible for the

Statewide Comprehensive Outdoor Recreation Plan can provide further information on recreation proposals for the Gettysburg area. The State Liaison Officer for Pennsylvania is Clifford Jones, Secretary of Environmental Resources, P. O. Box 2063, Harrisburg, Pennsylvania 17120.

SUMMARY COMMENTS

We appreciate the opportunity to comment on this proposal and look forward to working with you in ensuring that wastewater treatment facilities planned and implemented in a manner that protects the environment of Gettysburg National Military Park, Gettysburg National Cemetery and the Gettysburg Battlefield Historic District.

While we believe that all matters of concern to us can be resolved to our mutual satisfaction, including the compatibility of development adjacent to the National Military Park, we recognize that a significant amount of coordination will be necessary before release of your final EIS. The office assigned responsibility for coordination of the Department's interest in this project is the Regional Director of the Mid-Atlantic Regional Office of the National Park Service, 143 South Third Street, Philadelphia, Pennsylvania 19106, telephone (215) 597-7013. We urge that you contact them as soon as possible to initiate discussion.

Sincerely,

CECIL S. HOFFMANN
Special Assistant to
Assistant SECRETARY

DEPARTMENT OF HEALTH AND HUMAN SERVICES
REGION III
3535 MARKET STREET
PHILADELPHIA, PENNSYLVANIA 19101

PUBLIC HEALTH SERVICE
MAILING ADDRESS
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PENNSYLVANIA 19101

February 11, 1981

Mr. Thomas Slenkamp
U.S. Environmental Protection Agency
6th and Walnut Streets
Philadelphia, PA 19106

RE: DEIS - Gettysburg, PA
Wastewater Treatment Facilit

Dear Mr. Slenkamp:

Thank you for the opportunity to review and comment. We are responding on behalf of the Public Health Service. Our comments are:

1. The document is well prepared and contains adequate justifications to the need to improve the water quality by eliminating water pollution problems in the study area. We are impressed with your success in obtaining community participation in the planning process.

2. Since the historical and archaeological importance of the area is significant, we would like to recommend that as a spin-off of the improvements to the sewerage system the Public Advisory Group and/or the other committees embark in the adoption of zoning ordinances to guide the future growth of the area.

3. The solution to the problem of illegal greywater (26% of the systems, Page 72) should be addressed in the final EIS.

Please provide us with a copy of the Final Environmental Impact Statement.

Sincerely,

H. McDonald Rimple, M.D.
Assistant Surgeon General
Regional Health Administrator

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
PHILADELPHIA REGIONAL OFFICE
CURTIS BUILDING, SIXTH AND WALNUT STREETS
PHILADELPHIA, PENNSYLVANIA 19106

REGION III

IN REPLY REFER TO:
3CE

Mr. Thomas Slenkamp
Project Monitor
Environmental Protection Agency
Region III, Curtis Building
6th and Walnut Streets
Philadelphia, Pennsylvania 19106

Dear Mr. Slenkamp:

We have completed our review of the Draft EIS for the Gettysburg, Pennsylvania Area Wastewater Treatment Facilities and have no substantive comments to offer.

Thank you for the opportunity to comment.

Sincerely,

Tom Maloney

Thomas C. Maloney
Regional Administrator

United States Department of Agriculture
Soil Conservation Service
Box 985
Federal Square Station
Harrisburg, Pennsylvania 17108

February 4, 1981

Mr. Thomas Slenkamp
U. S. Environmental Protection Agency
Region III
6th and Walnut Streets
Philadelphia, PA 19106

Dear Sir:

In accordance with CFR 650.20, we have reviewed the draft EIS for the Gettysburg, Pennsylvania, Area Waste Water Treatment Facility and have the following comments.

1. Soil Suitability or Limitations.

   The time of year that construction of sewerlines occurs is important because of seasonal high water tables in some of the soils in the project area.

2. Erosion and Sedimentation Control Provisions.

   Contour grading is not applicable to this project because the sewerline rights-of-way are only 10 feet wide.

   Displaced soil should not be hauled away until maximum compaction of backfill material is obtained.

   The E&S Control Plan should include a project time frame, construction sequence, and temporary and permanent stabilization specifications. Straw bale barriers should be installed according to PennDOT standards. Mulches should be used according to guidelines in the current PSU Agronomy Guide or SCS Technical Guide, Sec.IV, Standard #484.

3. Conservation Management Measures.

   More detail is needed about the impact of sewerlines on the stream corridors. Will riprap be necessary where sewerlines are adjacent to outside turns in streams? If so, how will the impact on the aquatic ecosystem be mitigated?

4. Effects of Water Discharges.

   A storm water management plan should be prepared for the proposed treatment plants.

5. Effects of Disruption of Natural Drainage and Severance of Private Land Units.

   Insignificant.

6. Impact on Existing Conservation Systems.

   Sewerlines will parallel streams in some places. Therefore, outlets for subsurface drainage systems will be disrupted. These should be replaced as soon as possible.

7. Impacts on Prime and Unique Farmlands:

   The projection of future developments which might affect prime agriculture land are based on the assumption that land use regulations will not change. This may not be valid, because of increased public interest in preserving agriculture land. Latamore Township, for example, though not in the study area, recently decided to study the possibility of developing an agriculture district.

8. Impacts on Ecosystems.

   There will be temporary adverse effects on streams in the study area from erosion and sedimentation resulting from the construction. This can be minimized by well planned and executed E&S measures. In the long run, the project will have beneficial effects on water quality and aquatic life. This will be accomplished by reducing pollutant levels in sewage effluent and by eliminating many individual onsite septic systems, 12% of which now fail and 26% of which now have illegal greywater separation.

   Alternative A seems to be the best alternative in terms of the terrestrial and aquatic ecosystem. Alternatives E and F would have the greatest adverse impact on existing streamside vegetation.

   The plan of "Jacking" sewer pipe under streambeds appears to be sound and would have a minimum impact on the aquatic ecosystem.

We appreciate the opportunity to comment on this project.

Sincerely,

William Hunt, Acting

Graham T. Munkittrick
State Conservationist

cc:
Norman A. Berg, Chief, SCS, Washington, DC
Arthur B. Holland, Acting Director, NTSC, SCS, Broomall, PA

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

WASHINGTON, D.C. 20410

OFFICE OF THE ASSISTANT SECRETARY
FOR COMMUNITY PLANNING AND DEVELOPMENT

IN REPLY REFER TO:

23

Mr. Jack J. Schramm
Regional Administrator
United States Environmental
Protection Agency - Region III
6th and Walnut Streets
Philadelphia, Pennsylvania 19106

Dear Mr. Schramm:

Subject: Draft Environmental Impact Statement
Gettysburg, Pennsylvania Area
Wastewater Treatment Facilities

Thank you for providing us the opportunity to review the above draft Environmental Impact Statement (EIS). In accordance with 24 CFR Part 50 Protection and Enhancement of Environmental Quality, Department of Housing and Urban Development procedures, particularly Section 50.61 of our Regulations, we are forwarding the EIS to the responsible HUD Regional Environmental Officer. He will review and comment as appropriate, directly to you by your due date.

If non-HUD EIS's are sent directly to the Office with review responsibility, it would assure more prompt and thorough review. You should send copies of all future EIS's as follows:

1. All EIS's on legislative proposals, regulations, or policy documents of national or multi-state programmatic significance are reviewed by HUD Headquarters and should be sent to Mr. Richard H. Broun, Director, Office of Environmental Quality, HUD, Washington, D. C. 20410; and

2. All other site specific activities or project EIS's should be forwarded to the appropriate HUD Regional Office for comment. We have enclosed a list of our Regional Environmental Officers and their addresses.

If you have any questions in this regard, please feel free to contact me at (202) 755-6300.

Sincerely,

Richard H. Broun
Director
Office of Environmental Quality

Enclosure

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David Prescott
Environmental Officer
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NPCA

January 15, 1981

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Special Counsel

Mr. Thomas A. Slenkamp
U.S. Environmental Protection Agency (3IR61)
Curtis Building
6th and Walnut Streets
Philadelphia, Pennsylvania 19106

Dear Mr. Slenkamp:

The National Parks & Conservation Association appreciates the opportunity to comment on the Draft Environmental Impact Statement for the Gettysburg, Pennsylvania Area Wastewater Treatment Facilities. Generally, we would like to commend EPA for its work on this Draft EIS. However, as noted below, we have reservations about certain aspects of the EIS and note changes which should be incorporated in the Final EIS.

In the summary section starting on page xi, it is stated that this Draft EIS was prepared primarily as a result of EPA's determination "that the proposed project might have an adverse impact on archaeological/historical resources associated with the Gettysburg National Park." We, too, are primarily interested in protecting these resources while solving the Gettysburg area's water quality problems at least cost. We are, as a result, very disappointed that there is little assurance given in the Draft EIS that these resources will be protected.

For example, on page 44 it is noted that: "the status of these [land use] controls is crucial, in that one of the major issues of this EIS is the possible negative effect on NPS lands of possible growth induced by sewage treatment facilities. The efforts to control such effects in most areas of the country would normally rely very heavily on land use controls." However, the discussion on the previous page indicates that there is very little likelihood that such controls would be adopted. The obvious conclusion is that the resources of Gettysburg National Military Park are most likely going to be harmed by growth on adjacent lands.

The discussion of mitigation measures in chapter five is equally unreassuring. Several different mitigation measures are mentioned without any realistic discussion about who will actually use them to preserve the Park's resources. Unless some assurance is given by the various responsible agencies that such measures will be employed, it is quite possible, if not probable, that they will not

National Parks & Conservation Association, 1701 Eighteenth Street, N.W., Washington, D.C. 20009
Telephone (202) 265-2717
printed on recycled paper

be put into practice. Based on the area's history of a lack of land use control, it is likely that few, if any, of the mitigation measures will actually see any widespread use.

Therefore, in order to make this EIS process worthwhile, EPA must find a way to make sure that the archaeological and historical resources are protected. One way would be to condition any further Section 201 grants by requiring the responsible agencies and the localities to adopt necessary mitigating measures. A possibly more productive way would be to enter into negotiations now with the agencies and localities and have them adopt the measures voluntarily. Another approach would have EPA act as a mediator among the interested parties and help them develop memoranda of understanding listing the actions which will be taken. Any of these approaches could be successful. It is imperative that some action be taken now so that adequate assurances are provided.

We would recommend that in the Final EIS that a map be included which shows both the segments being planned for and the boundaries of Gettysburg National Military Park. Such a map would make it easier for the reviewer to visualize the potential adverse effects from development on lands adjacent to the Park.

With respect to the alternatives, we believe that the first three, A, B, and C, are the best for several reasons. They offer the greater likelihood for protecting the Park's resources at least cost for the users. Alternative C is significantly more expensive than A or B for Straban and, therefore, is likely to be less acceptable. Alternative A appears to be preferable to Alternative B both because it is less costly and because it seems to offer more protection for archaeological and historic resources. We will be examining these two alternatives in more detail and if our preference changes, we will notify you prior to the close of the comment period.

However, regardless of which alternative is chosen, assurances must be given that mitigating measures will be used. Unless this is done, a major purpose of this EIS process, the protection of the resources of Gettysburg National Military Park, probably will not be fulfilled. We would be pleased to offer any assistance we can to help ensure the protection of these nationally significant resources.

Sincerely,

William C. Lienesch

William C. Lienesch
Assistant Director
Federal Activities

FEDERAL EMERGENCY MANAGEMENT AGENCY
REGION III
CURTIS BUILDING
6th and WALNUT STREETS
PHILADELPHIA, PENNSYLVANIA 19106

January 15, 1981

Mr. Thomas Slenkamp
EIS Preparation
U.S. Environmental Protection Agency
Region III
Curtis Building
6th & Walnut Streets
Philadelphia, PA 19106

Re: Draft EIS, Gettysburg, Pa.
Wastewater Treatment Facility

Dear Mr. Slenkamp:

We have reviewed the above referenced Environmental Impact Statement and offer the following comments:

None of the various alternatives for wastewater management considered in the EIS appear to conflict with legislation or policies for which this office is responsible in an enforcement or consultative capacity. Our primary concern in a discussion of the provision wastewater treatment facilities is compliance with Executive Order 11988 (E.O. 11988) Floodplain Management.

A reading of the EIS leads to the inference that the intent of E.O. 11988 will be honored by the various alternatives. Mitigation of the primary effects of the construction of collection systems crossing watercourses appear to have been adequately addressed in Chapter V (p. 113). Secondary effects in the form of development of land in floodplains because of the provision of wastewater treatment capacity apparently are not expected. County and local subdivision regulations generally prohibit or limit development in floodplains (p. 43). In addition, the amount of growth generated by each of the alternatives does not differ significantly from projected baseline conditions (p. 123), although the location of land required to accommodate growth may differ.

In general, we believe it would be helpful if the EIS illustrated compliance with E.O. 11988 by presenting expected primary and secondary impacts and necessary mitigation measures under a subsection of Chapter V analogous to the subsection titled "Flood-Prone Areas" under the Environmentally Sensitive Areas section of Chapter III. Such a treatment of E.O. 11988 issues would make the fact of compliance more explicit.

If you have any questions concerning these comments, please contact Joseph Gavin of this office at FTS 597-9581.

Sincerely yours,

Frederick G. Schmank III

for Walter P. Pierson
Director
Insurance and Mitigation

APPENDIX C

Evaluation of Treatment Requirements for Rock Creek

EVALUATION OF TREATMENT REQUIREMENTS FOR ROCK CREEK

I. INTRODUCTION AND PURPOSE

The wastewater management scheme selected in the Final EIS for the Gettysburg area consists of three sewage treatment plants. Among them, the Cumberland STP and Gettysburg STP will be upgraded and expanded and their effluents will be discharged directly into Rock Creek at the existing outfall locations. A new Lake Heritage STP serving the Lake Heritage residents will discharge into White Run which, in turn, enters Rock Creek.

The design of upgrading and expansion for these treatment facilities was initially based on the effluent limits proposed by the Pennsylvania Department of Environmental Resources (DER). The proposed stringent effluent limits for the Rock Creek basin are considered advanced secondary treatment level according to today's standards.

With the rising costs of building wastewater treatment facilities, congressional budget and appropriations committees become more skeptical about assumptions that treatment beyond secondary is either necessary or worthwhile everywhere. As a result, EPA has been directed repeatedly by the Congress to review all grants for advanced secondary treatment (AST) and advanced waste treatment (AWT). The review process is outlined in the revised PRM 79-7 which was published in the Federal Register (45 FR 41890, June 20, 1980).

Two of the key elements in the review are water quality justification and incremental cost analysis. This report provides information for these two elements. The water quality justification requires the evaluation of effluent limitations proposed by DER. That is, modeling of Rock Creek is conducted to determine if the stream water quality will meet the stream water quality standards while the DER proposed effluent limits are adopted. Preliminary modeling results presented in the Draft EIS (EPA 1980) indicate that the resulting stream water quality will exceed the stream water quality standards. For example, the minimum dissolved oxygen level in Rock Creek under 7-day 10-year low flow conditions will be 6 mg/l, a level higher than the minimum 5 mg/l required by DER for Rock Creek. It is suggested that BOD_5 and ammonia limits less stringent than the DER proposed limits be applied while still meeting DER's stream standards. This comparison of stream water quality is more pronounced for the smaller treatment facilities such as Cumberland and Lake Heritage STP's. That is, even less stringent limits can be applied to these smaller facilities.

The purpose of this study is to conduct a waste load allocation and to derive less stringent effluent limits in terms of BOD_5, ammonia, total phosphorus, and total suspended solids for the three treatment plants. It is expected that the calculated effluent limits (expected to be slightly more stringent than secondary treatment) will serve as a guide for implementation of wastewater treatment requirements during the upcoming Step 2 (design) of the Construction Grant Program.

Computations will be conducted to determine the incremental cost for treatment beyond the secondary level; that is, the cost difference in treatment between the secondary level and the advanced secondary level proposed by DER, as well as the difference between the secondary treatment and the treatment level determined from waste load allocations. If the incremental cost is higher than $3 million, the project will be reviewed more intensively by EPA.

II. WATER QUALITY STANDARDS FOR ROCK CREEK

Water quality standards established for Rock Creek watershed by DER are summarized in Table 1.

Table 1. Water Quality Standards for Rock Creek Watershed*

Parameter	Standard
pH	6.0 - 8.5
Dissolved Oxygen	Minimum daily average 5.0 mg/l Absolute minimum 4.0 mg/l
Total Iron	Below 1.5 mg/l
Temperature	Not more than a 5° F rise above ambient temperature or a maximum of 87° F, whichever is less; not to be changed by more than 2° F during any one-hour period
Ammonia Nitrogen	1.5 mg N/l
Dissolved Solids	Maximum monthly average 500 mg/l Absolute maximum 750 mg/l
Dissolved Phosphorus	0.1 mg P/l
Fecal Coliform	Below 200 per 100 ml

* Rules and Regulations, Title 25 -- Environmental Resources, Part 1. Department of Environmental Resources Subpart C. Protection of Natural Resources, Article II. Water Resources Chapter 93. *Water Quality* Standards, Pennsylvania Bulletin, January 1980.

The water quality constituents concerned in this study are dissolved oxygen, ammonia nitrogen for toxicity reason, and total phosphorus. Since total phosphorus standard for Rock Creek is not established by DER, a level of 1.0 mg/l total phosphorus in the stream (based on literature values) was used to prevent significant algal growth.

III. PROPOSED EFFLUENT LIMITS/PRESENT EFFLUENT QUALITY

The proposed effluent limits for the Rock Creek basin are BOD_5 15 mg/l, total suspended solids 15 mg/l, ammonia nitrogen 3 mg/l in summer and 9 mg/l in winter, and total phosphorus 1 mg/l. These effluent limits are beyond the secondary treatment and close to the advanced treatment level. The present effluent quality at the Gettysburg and Cumberland STP's are summarized in Table 2.

Table 2. Effluent Quality* at Cumberland and Gettysburg STP

	Total Suspended Solids (mg/l)	BOD_5 (mg/l)	Ammonia (mg N/l)	Total P (mg P/l)
Cumberland	2.0	34.5	9.6	5.6
Gettysburg	5.0	58.5	12.0	6.5

*Water quality survey on August 8-9, 1979

The present concentrations of BOD_5, ammonia and total phosphorus in the effluent based on the 1979 survey exceed the proposed effluent limitations proposed by the state.

IV. MODELING WATER QUALITY OF ROCK CREEK

A. Model Calibration/Verification

The BOD/DO model of Rock Creek was calibrated using the data collected in the August 1979 extensive survey. The measured in-stream water quality parameters, hydraulic geometry, and stream flows were incorporated into the model. Measured effluent characteristics from the Cumberland STP and Gettysburg STP were also included in model calibration analysis.

The results of this calibration analysis are presented in Figure 1. Also shown in this figure are the BOD_5 and nitrogenous BOD loadings measured at the Cumberland and Gettysburg STP's. A comparison of observed and calculated BOD_5 and nitrogenous BOD concentrations is also presented. In general, the calculations match the data very well. Similar comparison is demonstrated for nitrogenous BOD, the second stage of in-stream oxidation. That is, nitrification in Rock Creek is delayed under low DO conditions such as this one encountered in August 1979. The phase-lag of nitrification process is substantiated by examining the distributions of nitrogenous BOD and nitrate nitrogen in Rock Creek (Figure 2). Figure 2 shows that the peak nitrate concentration is approximately at mile point 6.0 while the peak ammonia concentration is at mile point 3.0, suggesting a phase-lag between the carbonaceous BOD and nitrogenous BOD oxidation processes.

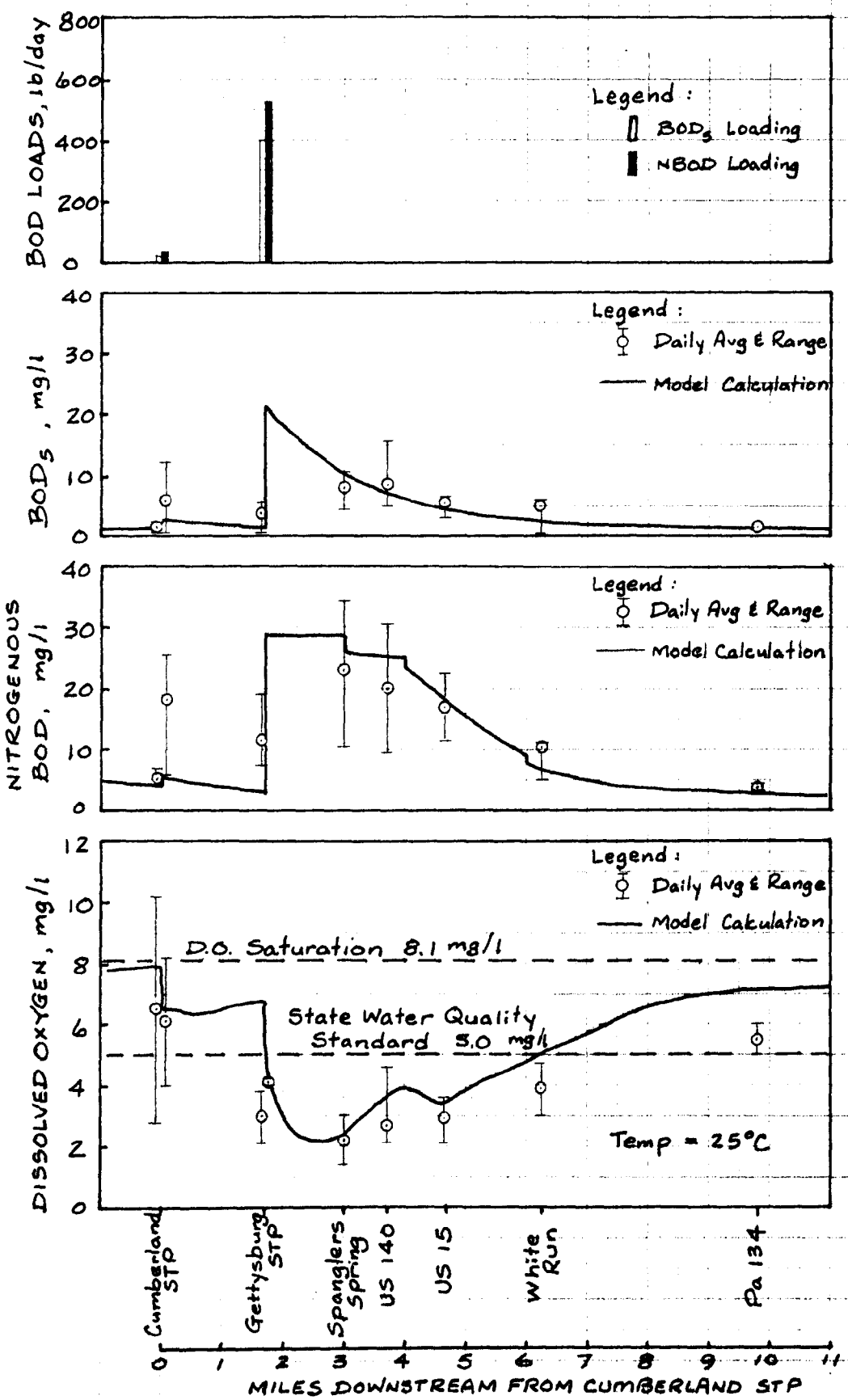


FIGURE 1. STEADY STATE DISSOLVED OXYGEN ANALYSIS OF ROCK CREEK AUGUST 1979 CONDITIONS

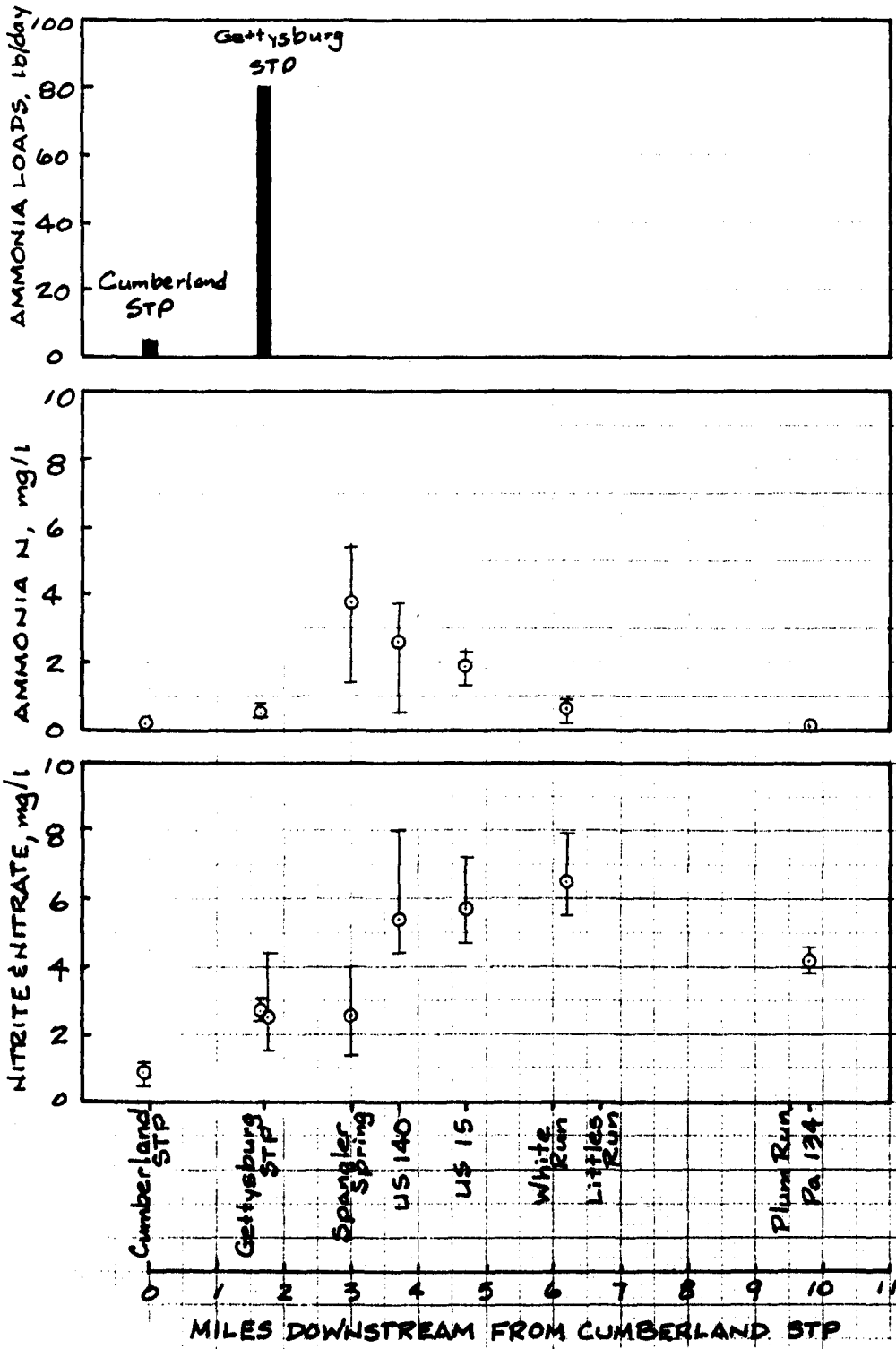


FIGURE 2. OBSERVED AMMONIA AND NITRITE & NITRATE CONCENTRATIONS IN ROCK CREEK, AUGUST 1979

Table 3 lists the key model parameters such as stream flow, depth, velocity, and reaction coefficients used in the calibration analysis. For additional information as to model segmentation and detailed computation procedures, the Draft EIS appendix should be consulted.

Additional credibility for the model can be inferred from verifying another set of data that was collected under different hydrologic and loading conditions in Rock Creek. Thus, the August 1969 data set was used to further calibrate the BOD/DO model. The results of this model calibration/verification exercise are presented in Figure 3 which shows again favorable comparison between the model calculations and observations. In order to further verify the model, another data set collected in October 1973 was used. The stream discharge and temperature were different than those observed in the August 1979 and August 1969 surveys. Due to the high DO level in the stream, nitrification was assumed to begin at the same time as the oxidation of carbonaceous BOD. The results of verification using the 1973 data (Figure 4) show good comparison between calculations and observations. The above results have demonstrated that the BOD/DO model of Rock Creek reproduces three different data sets very well and, therefore, can be considered successfully verified.

A similar model was developed for total phosphorus in Rock Creek. Figure 5 shows the results of model calibration using the August 1979 data set. A first-order decay rate of 0.15/day was determined from this model calibration analysis by reproducing the observed phosphorus concentration profile in Rock Creek. Unfortunately, additional data set on phosophorus is not available for further model verification.

Table 3. Model Parameters Related to the August 1979 Conditions

Segment No.	Mile Point+	Flow (cfs)	Depth (ft.)	Velocity (ft./sec.)	BOD Removal Rate* (1/day)	Deoxy-genation Rate* (1/day)	Nitrification Rate* (1/day)	Cumulative Time of Travel (Day)
1	-1.0-0.0	1.2	0.40	0.08	0.5	0.5	0.0	--
2	0.0-1.7	2.4	0.80	0.12	1.0	1.0	0.0	0.86
3	1.7-3.0	3.6	0.90	0.14	1.0	0.8	0.0	1.41
4	3.0-4.0	4.2	1.00	0.13	0.9	0.7	0.0	1.89
5	4.0-5.0	4.6	1.10	0.10	0.5	0.5	0.63	2.49
6	5.0-6.0	4.6	1.20	0.10	0.5	0.5	0.63	3.08
7	6.0-6.7	7.1	1.30	0.16	0.5	0.5	0.63	3.36
8	6.7-8.0	8.6	1.30	0.19	0.5	0.5	0.63	3.77
9	8.0-9.0	8.6	1.40	0.19	0.5	0.5	0.63	4.09
10	9.0-9.5	8.6	1.40	0.19	0.5	0.5	0.63	4.25
11	9.5-11.0	9.4	1.50	0.21	0.5	0.5	0.63	4.69

+ Downstream from Cumberland STP

* At 20° C

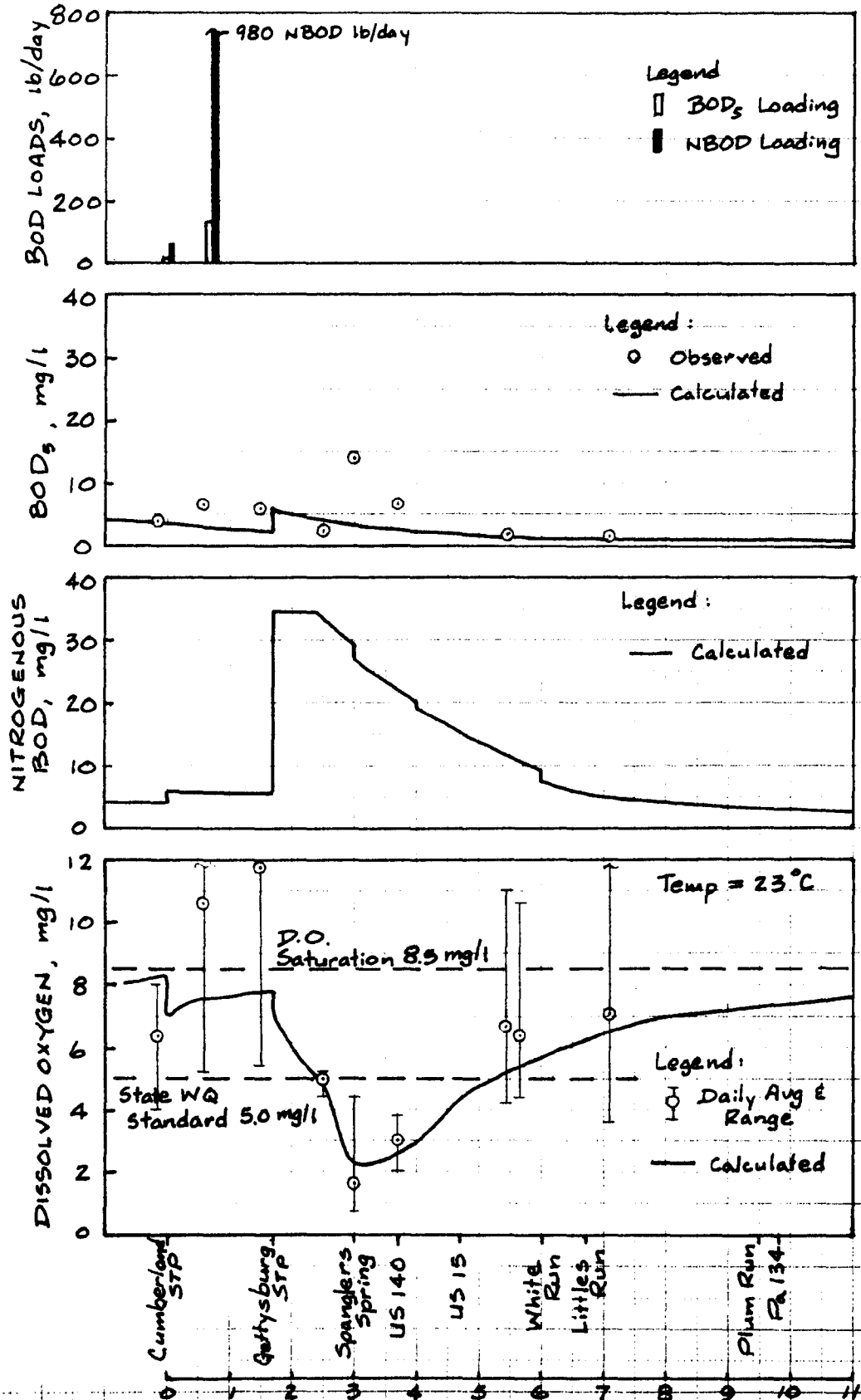


FIGURE 3. STEADY STATE DISSOLVED OXYGEN ANALYSIS OF ROCK CREEK AUGUST 1969 CONDITIONS

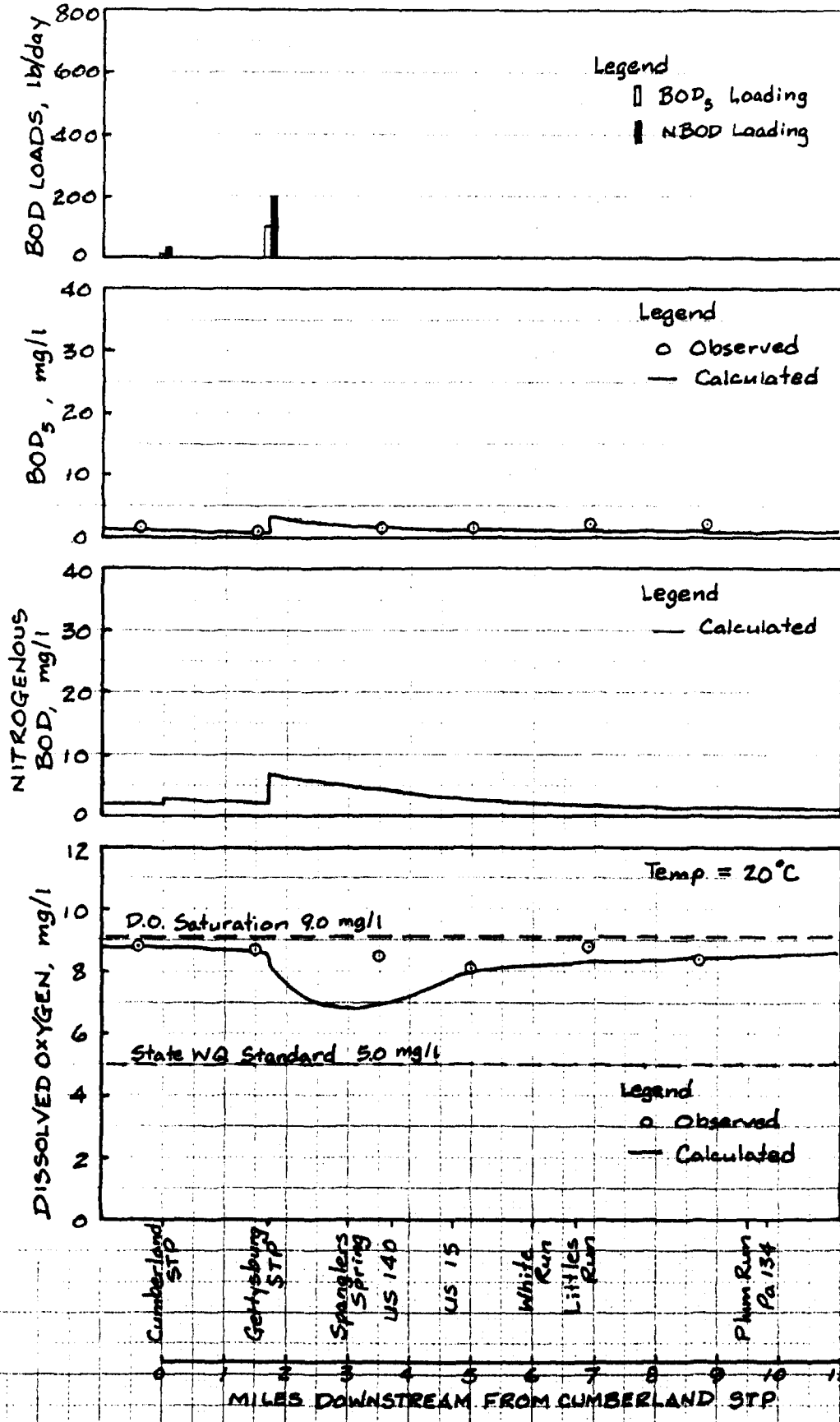


FIGURE 4. STEADY STATE DISSOLVED OXYGEN ANALYSIS OF ROCK CREEK OCTOBER 1973 CONDITIONS

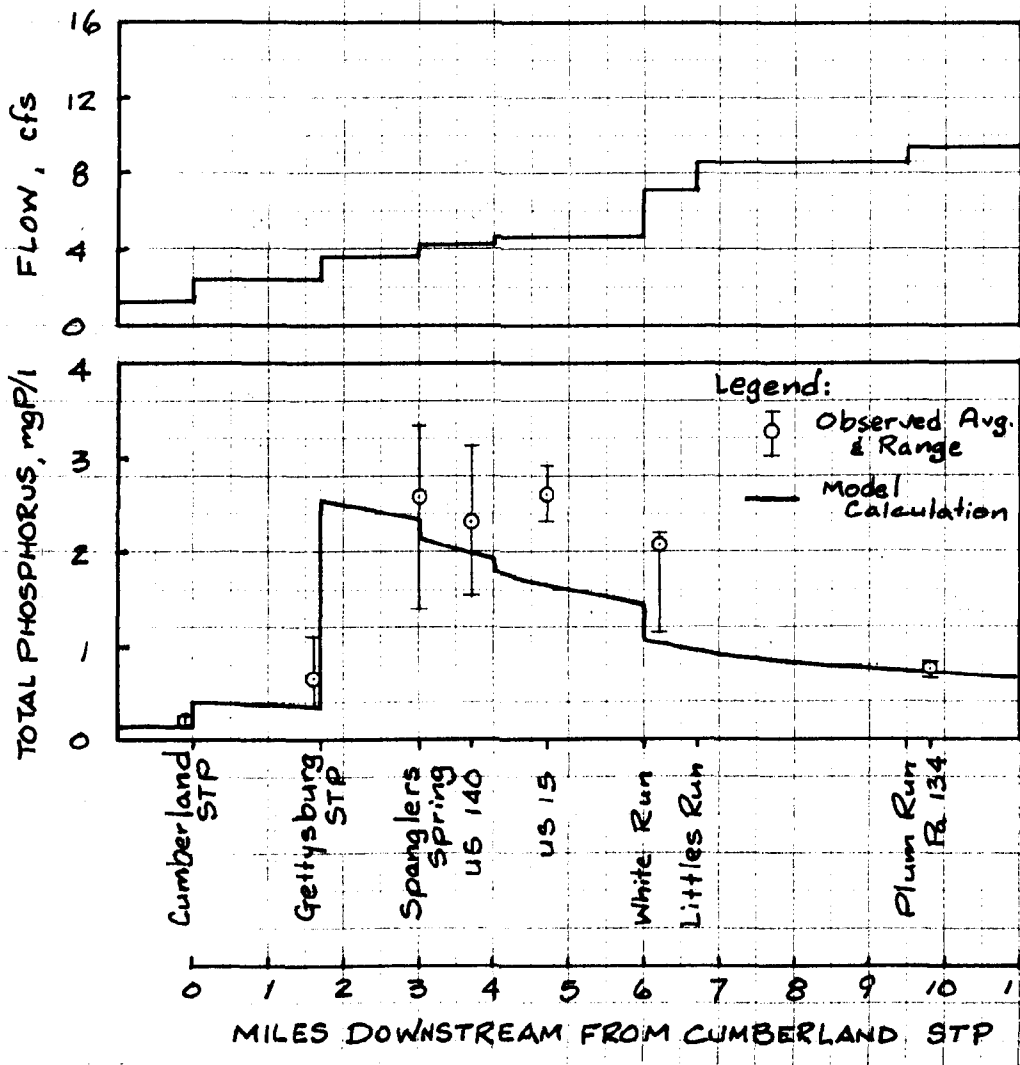


FIGURE 5. TOTAL PHOSPHORUS ANALYSIS OF ROCK CREEK AUGUST 1979 CONDITIONS

B. Model Application to Low Flow Conditions

The accepted design stream flow, to which the water quality criteria as set forth will apply in Pennsylvania, is the actual or estimated lowest seven-consecutive-day average flow that occurs once in ten years for a stream with unregulated flow, or the estimated minimum flow for a stream with regulated flows. That is, over a long period of time, the average time interval between 7-day low flow of this severity will be ten years. There is no stream flow gauging station in Rock Creek. The 7-day 10-year low flows along the stream were estimated (EPA 1980) and are presented in Table 4 along the other model physical parameters.

Table 4. Model Physical Parameters Under 7-Day 10-Year Low Flow Conditions.

Segment No.	Mile Point[d]	Flow (cfs)	Depth (ft)	Velocity (ft./sec.)	Cumulated Time of Travel (Day)
1	-1.0-0.0	0.5	0.2	0.05	--
2	0.0-1.7	1.0[a]	0.6	0.07	1.55
3	1.7-2.4	3.6[b]	0.7	0.18	1.79
4	2.4-3.0	3.6	0.8	0.12	2.10
5	3.0-4.0	3.9	0.9	0.13	2.57
6	4.0-5.0	4.1	1.0	0.10	3.16
7	5.0-6.0	4.1	1.1	0.14	3.61
8	6.0-6.7	4.8[c]	1.1	0.13	3.94
9	6.7-8.0	5.3	1.1	0.14	4.51
10	8.0-9.0	5.3	1.1	0.15	4.95
11	9.0-9.5	5.3	1.1	0.15	5.17
12	9.5-11.0	5.6	1.2	0.16	5.79

[a] including wastewater flow of 0.167 mgd from Cumberland STP

[b] including wastewater flow of 1.58 mgd from Gettysburg STP

[c] including 0.7 cfs of tributary flow from White Run and wastewater flow from Lake Heritage STP

[d] downstream from Cumberland STP

The verified BOD/DO model of Rock Creek was used to calculate the dissolved oxygen levels under the existing BOD_5 and nitrogenous loading rates (measured in August 1979) and the 7-day 10-year low flow conditions.

The results of the model calculation are shown in Figure 6. Rock Creek under the existing loading conditions exhibits a minimum DO of 1 mg/1 immediately downstream from the Gettysburg STP. Another low DO of 1.5 mg/1 is calculated to occur about 3 miles downstream from the plant discharge as a result of stream nitrification. Rock Creek then recovers and the DO level becomes above 5 mg/1 beyond mile point 6.0.

C. Dissolved Oxygen Resulting from DER Proposed Limits

The BOD/DO model was then used to calculate the dissolved oxygen levels in Rock Creek under the assumption that the Cumberland STP, Gettysburg STP, and Lake Heritage STP will comply with the DER proposed effluent limits: TSS 15 mg/1, BOD_5 15 mg/1, and NH_3 3 mg/1 in summer months. The result of model prediction is also presented in Figure 6 for comparison with the dissolved oxygen levels under existing loading rates. The comparison shows that compliance with the proposed DER limits will result in significant water quality improvement by raising the dissolved oxygen levels in Rock Creek. The improvement over the existing condition is so substantial that the minimum dissolved oxygen level, 6 mg/1, is higher than the minimum 5 mg/1 required by DER for Rock Creek. The results suggest that less stringent effluent limits apply while still meeting the minimum 5 mg/1 dissolved oxygen requirement..

D. Waste Load Allocation

A waste load allocations analysis was then conducted using the BOD/DO model of Rock Creek to determine the minimum effluent requirements (BOD_5 and NH_3) for the three wastewater treatment facilities. The governing factors considered in this analysis are: (1) minimum stream dissolved oxygen level 5 mg/1 and (2) maximum BOD_5 level in the effluent 30 mg/1. The second factor mandates a secondary treatment level as a minimum for all facilities.

The results of waste load allocations are summarized in Figure 7. The minimum dissolved oxygen level in Rock Creek is about 5.2 mg/1 downstream from the Gettysburg STP with effluent limits of BOD_5 25 mg/1 and NH_3 3 mg/1. Secondary treatment level with BOD_5 of 30 mg/1 is acceptable for Cumberland and Lake Heritage STP's. Ammonia nitrogen requirements at Cumberland Lake Heritage STP's can be as high as 15 mg/1. This NH_3 level in the effluent requires no nitrification at the plants under the 7-day 10-year low flow condition. The dissolved oxygen levels in the effluent varies from 5 mg/1 to 7 mg/1 in the modeling analysis. No significant difference in stream dissolved oxygen levels is predicted by the model. As a result, dissolved oxygen concentration in the effluents is not an important factor as compared with BOD_5 and NH_3.

E. Toxicity of Ammonia Nitrogen

The state DER requires a maximum level of 1.5 mg/1 ammonia nitrogen in Rock Creek for toxicity reasons. The calculated ammonia nitrogen limits in the effluents were reviewed to determine if they meet the toxicity standard. The calculated ammonia nitrogen concentrations in Rock Creek are shown in Figure 8. The first curve in Figure 8 is associated with the ammonia limits derived in the preceding section. It is seen that the derived limits for Cumberland and Gettysburg STP's are too high for toxicity concern in the

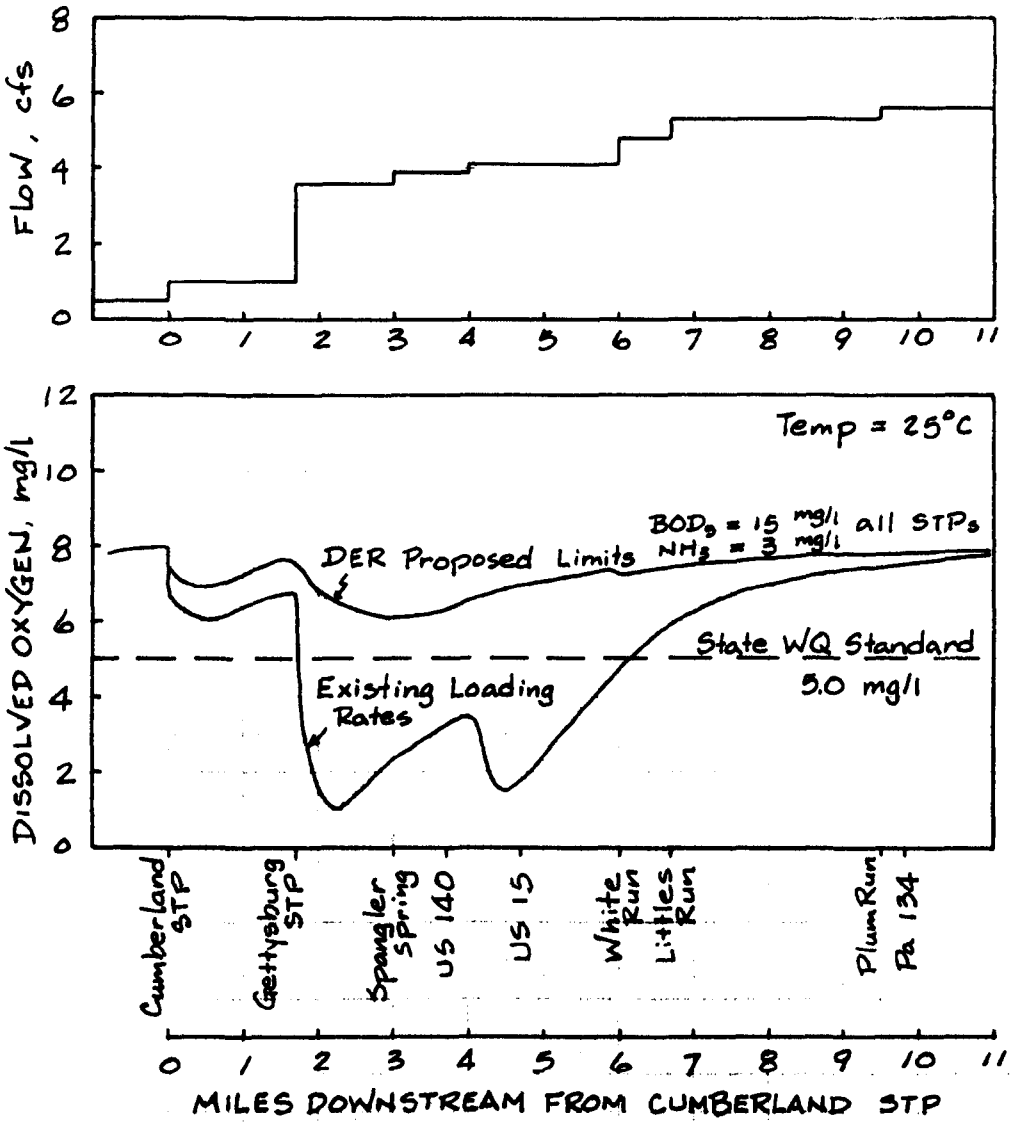


FIGURE 6

PROJECTED DISSOLVED OXYGEN LEVELS IN ROCK CREEK UNDER 7 DAY 10 YEAR LOW FLOW CONDITIONS AND DER EFFLUENT LIMITS

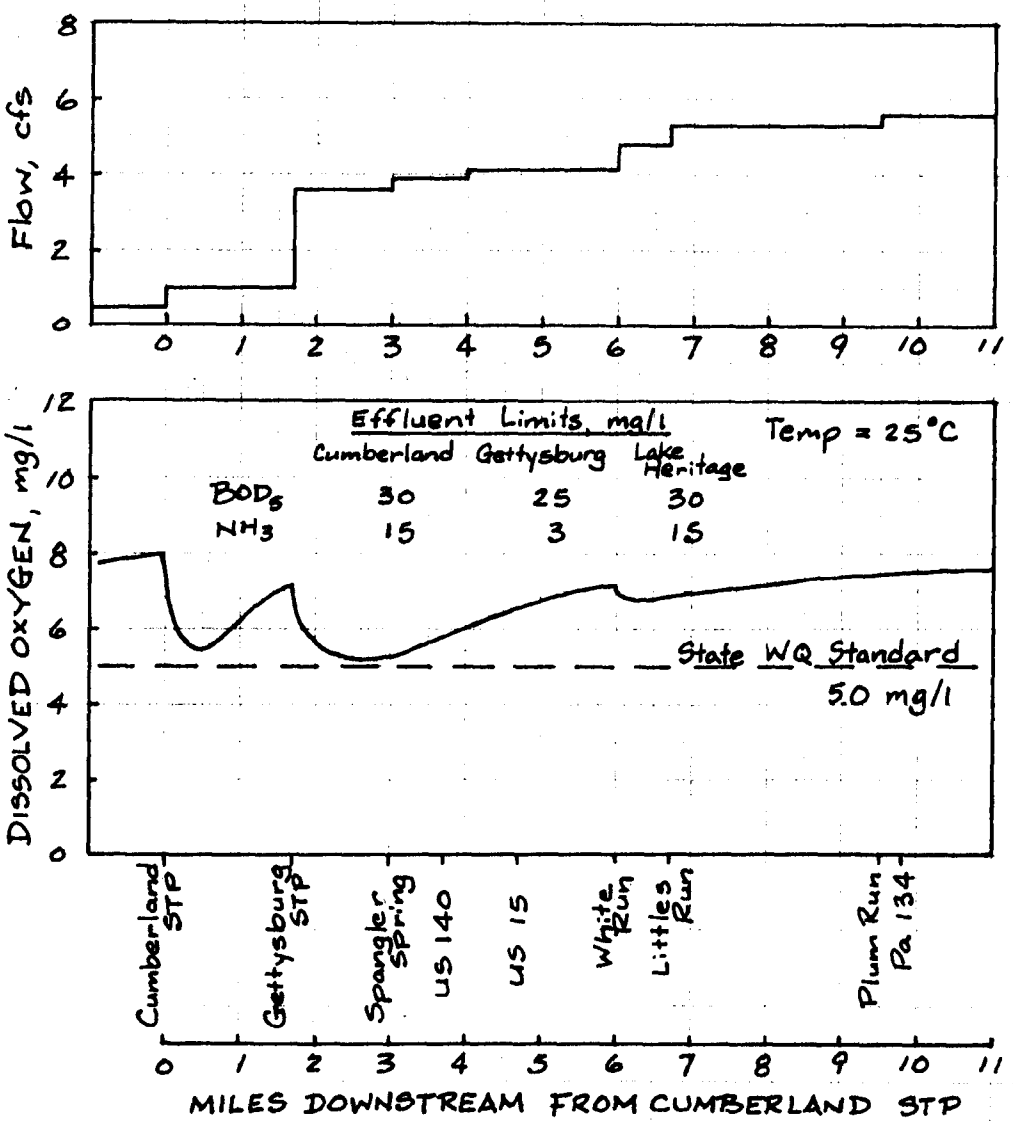


FIGURE 7

WASTE LOAD ALLOCATIONS, PROJECTED DISSOLVED OXYGEN LEVELS IN ROCK CREEK UNDER 7 DAY 10 YEAR LOW FLOW CONDITIONS

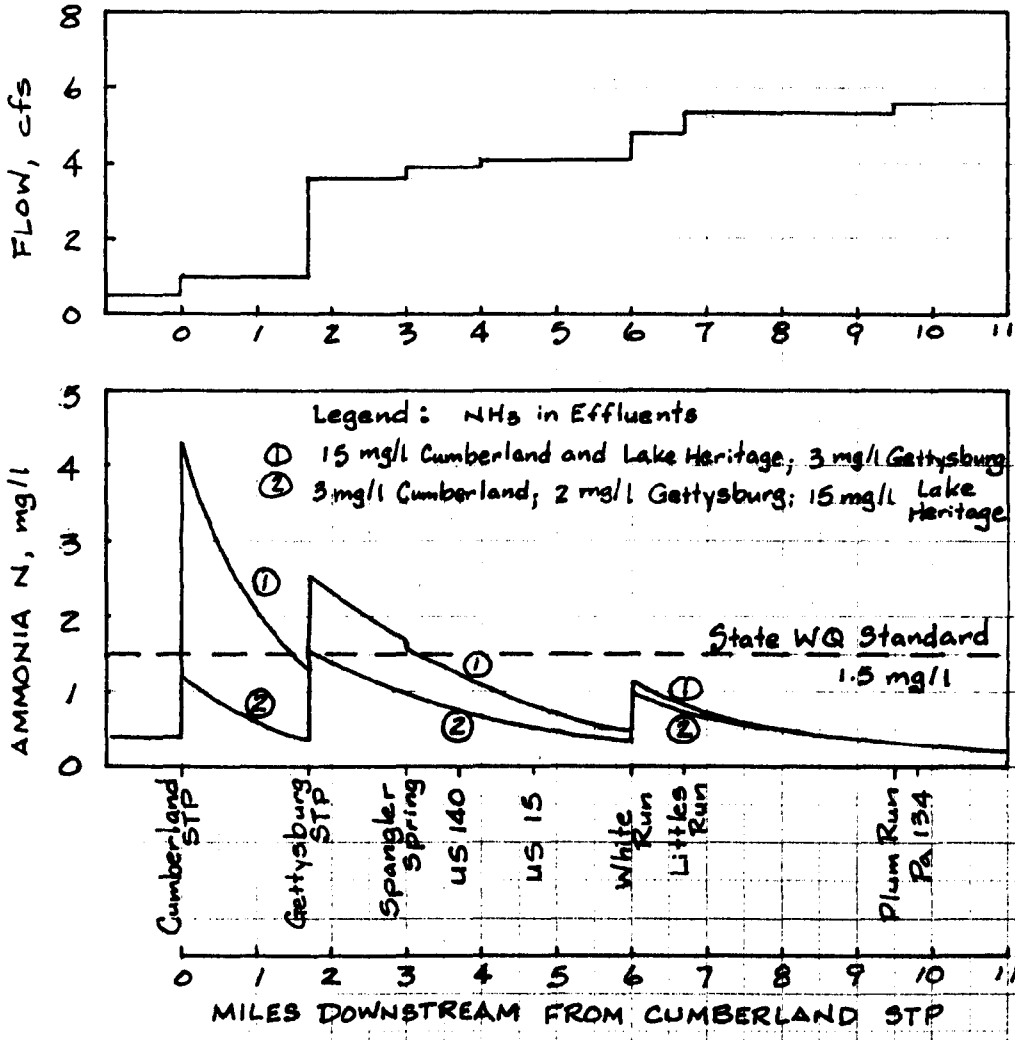


FIGURE 8

PROJECTED AMMONIA NITROGEN LEVELS IN ROCK CREEK UNDER 7-DAY 10-YEAR LOW FLOW CONDITIONS

stream. Subsequently, a waste load allocation for ammonia nitrogen was conducted and the results are represented by curve 2 in Figure 8. In order to maintain the ammonia nitrogen level below 1.5 mg/l in the stream, these limitations are required: 3 mg/l at Cumberland, 2 mg/l at Gettysburg, and 15 mg/l at Lake Heritage. These results indicate that nitrification process is required at Cumberland and Gettysburg STP's. Although nitrification is not required at Lake Heritage STP based on the model calculation, high ammonia levels can be found in White Run below the outfall but before the junction of White Run with Rock Creek. At the present time, however, there is no DER requirement on ammonia nitrogen levels in White Run.

F. Seasonal Effluent Limitations

Pennsylvania has placed limitation for ammonia on the Gettysburg facility. From June 1 through October 31, the plants are required to meet a limitation of 3 mg/l of ammonia; the remainder of the year, the facilities should meet an ammonia limit of 9 mg/l. The non-summer low flow for Rock Creek has been estimated as 11 cfs at the Gettysburg STP with a critical temperature of 15° C. For the temperature of 15° C and a pH value of 7.5, the EPA Quality Criteria for Water indicates that an in-stream NH_3 level of 2.3 mg/l would maintain a condition that is not toxic to fish. DER's limitation of 9 mg/l NH_3 will result in a stream concentration, for the above conditions, of 2.4 mg/l NH_3. As can be seen, this will maintain concentrations as suggested by EPA Criteria.

G. Total Phosphorus Limitation

The state DER has proposed a total phosphorus effluent limit of 1.0 mg/l for the Rock Creek basin. The calculated phosphorus model was used to predict the resulting phosphorus level in Rock Creek under the 7-day 10-year low flow condition. The results are shown in Figure 9 (see curve #2). The maximum total phosphorus concentration in Rock Creek is about 0.8 mg/l immediately downstream from the Gettysburg STP.

There is no total phosphorus standard established for Rock Creek at the present time for comparison with the above model calculations. However, literature has presented free-flowing stream situations where nuisance algae blooms have occurred when phosphorus concentrations are in the 0.1 mg/l to 0.6 mg/l range. Additional research has indicated limiting phosphorus concentrations to range from 0.1 mg/l to 1.0 mg/l, with drastic reduction in growth rates below 1.0 mg/l. The above model results illustrate that the proposed 1.0 mg/l phosphorus effluent limitation would yield phosphorus levels below 1.0 mg/l in the stream.

Figure 9 also indicates that higher phosophorus levels in the effluents from both Cumberland and Lake Heritage STP's are applicable. Therefore, the phosphorus model of Rock Creek was used to determine the maximum phosphorus concentrations that are allowed in the effluents while maintaining the stream phosphorus levels below 1.0 mg/l. The results are also presented in Figure 9 (see curve #1). The effluent phosphorus limits determined are 3.0 mg/l, 1.0 mg/l and 7.0 mg/l for Cumberland, Gettysburg, and Lake Heritage STP's, respectively. It is believed that these limits would be adequate to prevent significant plant growth problem in Rock Creek.

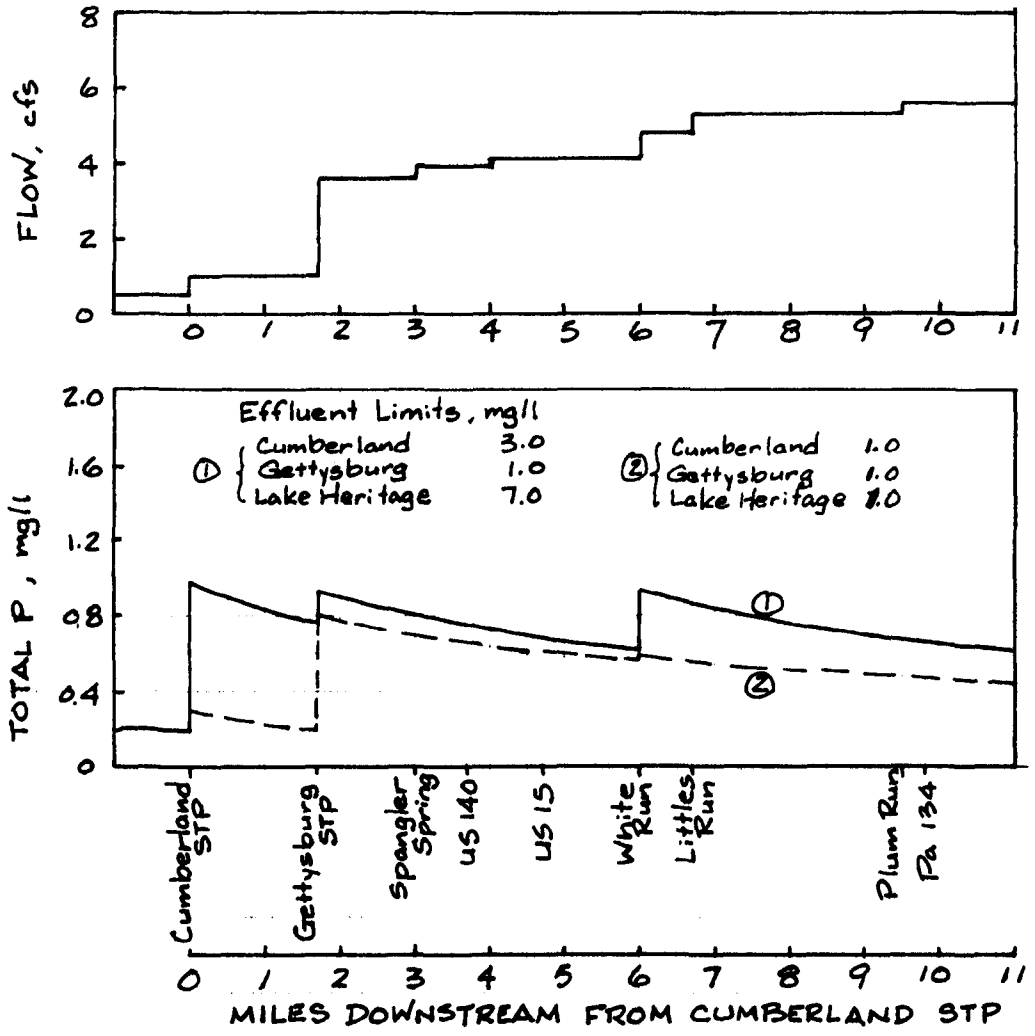


FIGURE 9

PROJECTED TOTAL PHOSPHORUS LEVELS IN ROCK CREEK UNDER 7-DAY 10-YEAR LOW FLOW CONDITIONS

V. RECOMMENDED EFFLUENT LIMITS

Table 5 summarizes the effluent limits for Cumberland, Gettysburg, and Lake Heritage STP's derived in the waste load allocations for Rock Creek.

Table 5. Effluent Limits Based on Waste Load Allocations

STP	Flow (mgd)	BOD_5 (mg/l)	NH_3 (mg/l)	TP (mg/l)	DO (mg/l)
Cumberland	0.17	30	3.0	3.0	5.0
Gettysburg	1.58	25	2.0	1.0	5.0
Lake Heritage	0.14	30	15.0	7.0	5.0

It is recommended that cautions be exercised to use these limits for the following reasons. For example, nitrification required at Cumberland STP to produce effluents with NH_3 below 3 mg/l will have benefit for BOD_5 oxidation as well, so that the effluent BOD_5 will be lower than 30 mg/l. Similar results will be obtained at the Gettysburg STP also. Therefore, the effluent limits in Table 5 represent the worst case scenario and can only be used as a guide for design.

The actual effluent quality is expected to exceed that (Table 5) to some extent. As a result, for Cumberland STP, a secondary treatment with nitrification is recommended. Phosphorus removal is also required.

Gettysburg STP will need secondary treatment with nitrification. Phosphorus removal to produce effluents with total phosphorus concentration no more than 1.0 mg/l is recommended.

Lake Heritage, with secondary treatment, will meet the water quality requirements for Rock Creek. Nitrification and phosphorus are not needed for Rock Creek's concern. However, high ammonia and phosphorus levels will exist in the immediate vicinity of the outfall on White Run.

Although no quantitative analysis of effluent limits for total suspended solids was conducted, it is believed that based on the above analysis, secondary treatment should yield effluents with acceptable total suspended solids concentrations.

VI. PROJECT COST

The capital costs and annual operation and maintenance costs for sewage treatment of the Cumberland, Gettysburg, and Lake Heritage STP's based on the DER proposed effluent limits are summarized as follows:

	Cumberland STP	Gettysburg STP	Lake Heritage STP
Capital ($ x 10^3)	417.0	3,440.0	301.0
O & M ($ x 10^3)	46.0	264.0	38.0

The newly derived effluent limits shown in Table 5 are not expected to substantially reduce the capital and O&M costs for Cumberland and Gettysburg because both facilities will still require nitrification process (mainly to satisfy the stream ammonia toxicity standard). Secondly, both facilities will still have phosphorus removal process.

Any reduction in capital and O&M cost will probably come from the Lake Heritage STP because the modeling result suggests that nitrification and phosphorus removal are not necessary. It is difficult, however, to estimate the accurate cost saving at this point of time simply because the exact treatment scheme has not been finalized. Lake Heritage has the option to purchase the package AWT plant from the Washington Suburban Sanitary Commission or to construct a new oxidation ditch plant. Both options have the capability of nitrification.

Finally, the $3 million incremental cost will not be exceeded in either case (DER proposed effluent limits and newly derived effluent limits) because the total capital cost for Gettysburg STP is only $3.4 million. Capital costs for Cumberland STP and Lake Heritage STP are much below $1 million to begin with. Thus, the project is not expected to undergo AST/AWT review.

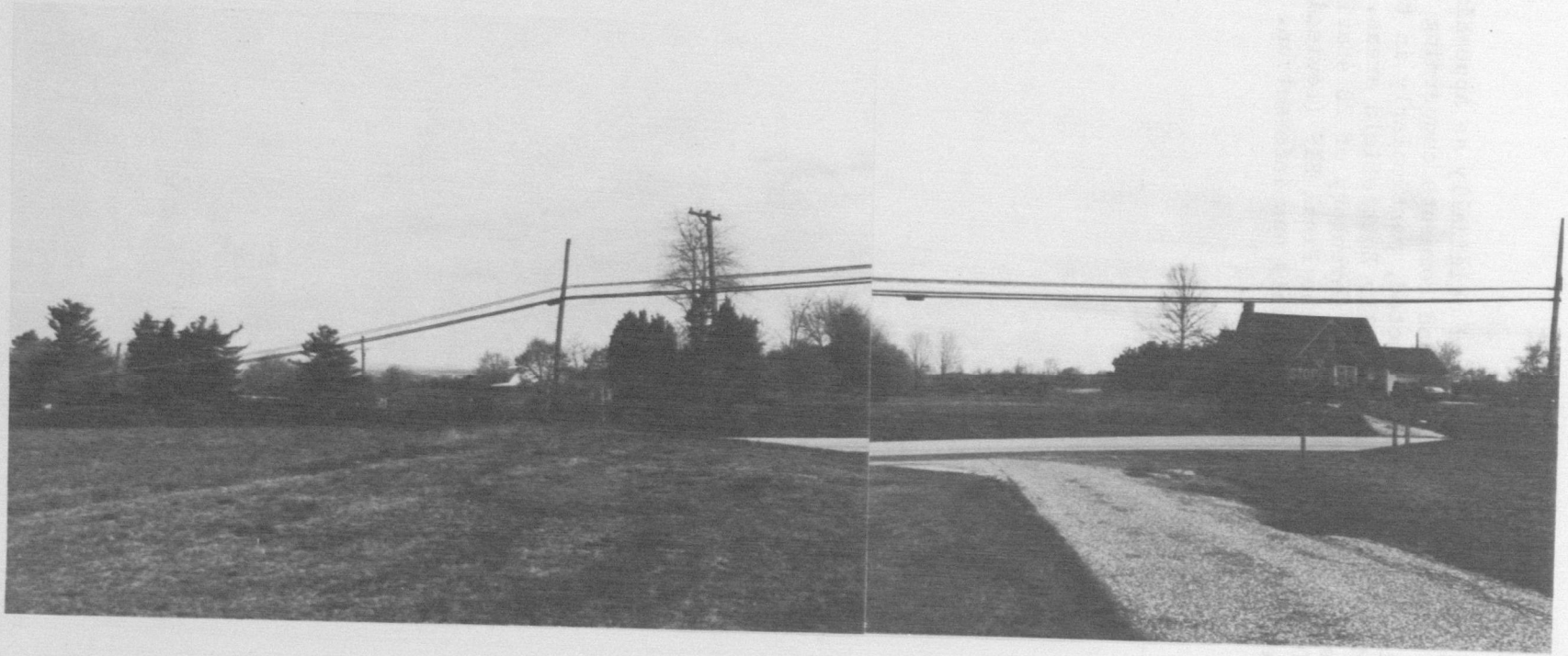
The project costs presented are based on rough estimates of the conceptual design for the treatment facilities. It is recommended, however, that a value engineering analysis be conducted for next level of cost estimates during the Step 2 design.

APPENDIX D

DEIS Appendix G-7 Addendum

Survey of Aesthetic Resources of the Gettysburg National Historic District, Gettysburg, Pennsylvania

The aesthetic inventory was published originally as Appendix G-7 in the DEIS. As the result of questions and comments concerning this inventory, additional field work was conducted, particularly in the Barlow Knoll, Peace Memorial, and East Cavalry Battlefield areas. The following photographs modify and expand the inventory of 28 stations as presented in the DEIS. Figure III-2 of the Final EIS (revised DEIS Figure III-11) has been updated to reflect this new information.

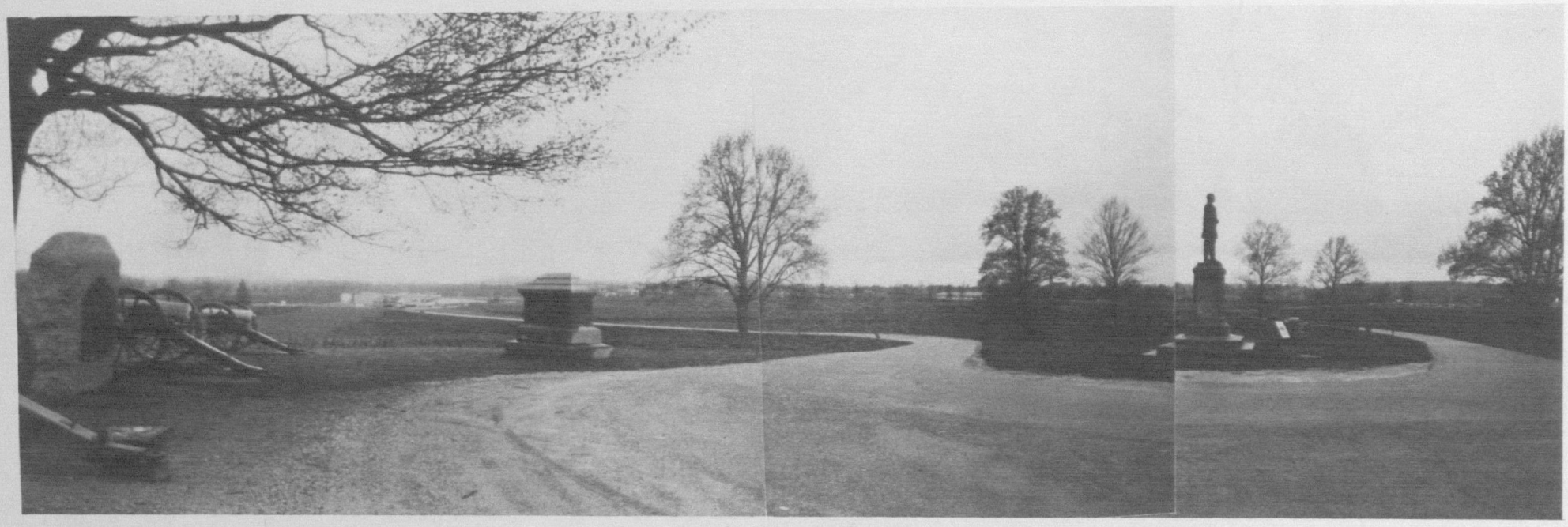


1. View north from entrance to Benner Hill, Gettysburg National Military Park, April 1981. C, c.

Station 10.

1. View northwest from Benner Hill, Gettysburg National Military Park. Gettysburg Wastewater Treatment Plant is in wooded area at extreme left of photograph. April 1981. C,c.

Station 12.



1. Panoramic view southeast - southwest 180° from Barlow Knoll. Gettysburg National Military Park, April 1981. F & D, C & i.

2. View southwest - northwest from Barlow Knoll, Gettysburg National Military Park, April 1981. D & A, c & i.

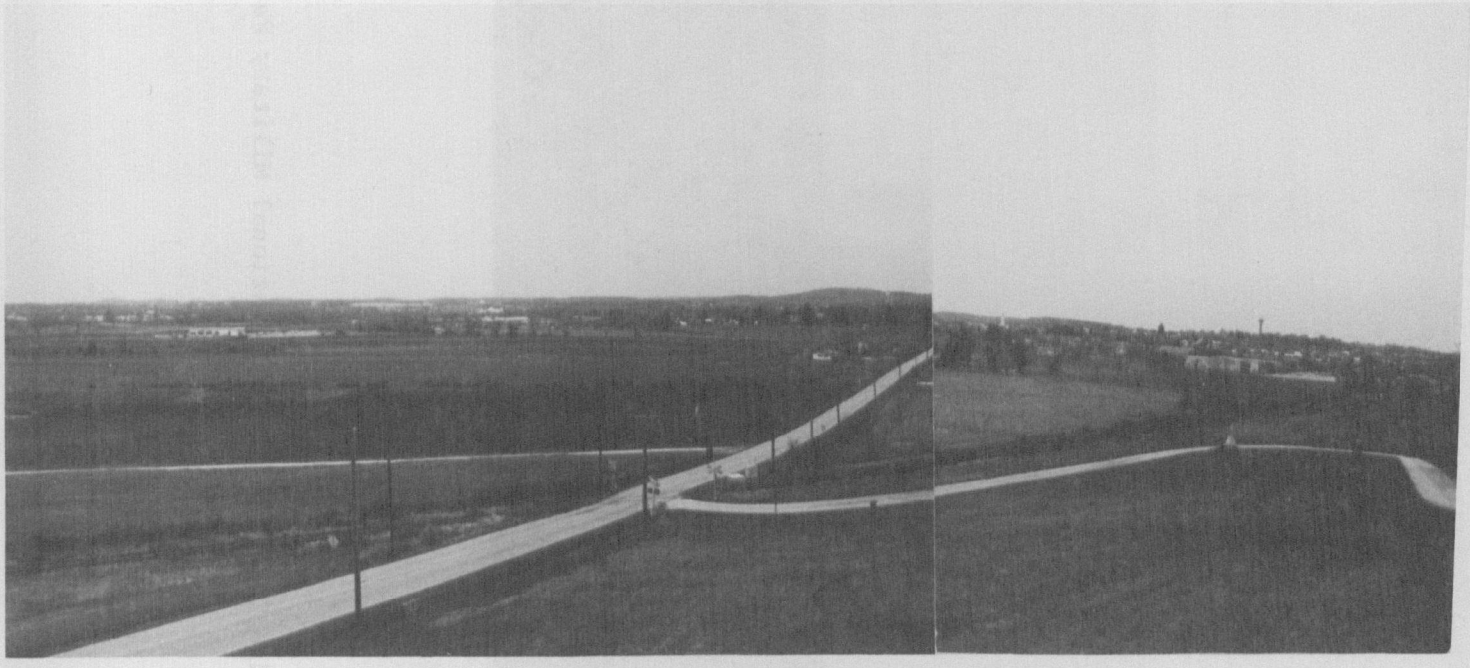
3. View northwest - northeast from Barlow Knoll, Gettysburg National Military Park, April 1981. B,C.

4. View northeast - southeast, Barlow Knoll, Gettysburg National Military Park, April 1981. C & B,c.

5. Degraded view southeast toward King's Supermarket from Barlow Knoll, Gettysburg National Military Park, April 1981. D,i.

6. Dense stand of trees which screens view north from Barlow Knoll, Gettysburg National Military Park, April 1981. A,C.

Station 29.



1. View west - south from Oak Ridge Observation Tower, Gettysburg National Military Park, April 1981. Developable land is in the left midground. The Ford agency is visible on the left; Gettysburg Tower is in right farground. B,C, & D; c & i.

2. View northeast - northwest from Oak Ridge Tower, Gettysburg National Military Park, April 1981. A,B,C, & D;c.

Station 30.

1. View northeast - southeast from entrance to Peace Memorial, Gettysburg National Military Park, April 1981. B & C & D; c & i.

Station 31.

1. View southwest from entrance to East Cavalry Battlefield Site north of PA 116, Gettysburg, Pennsylvania, April 1981. B & C, c.

Station 32.

1. View south from General Custer's Memorial, East Cavalry Battlefield Site, Gettysburg, Pennsylvania, April 1981. Figure III & II, Station 32, B, c.

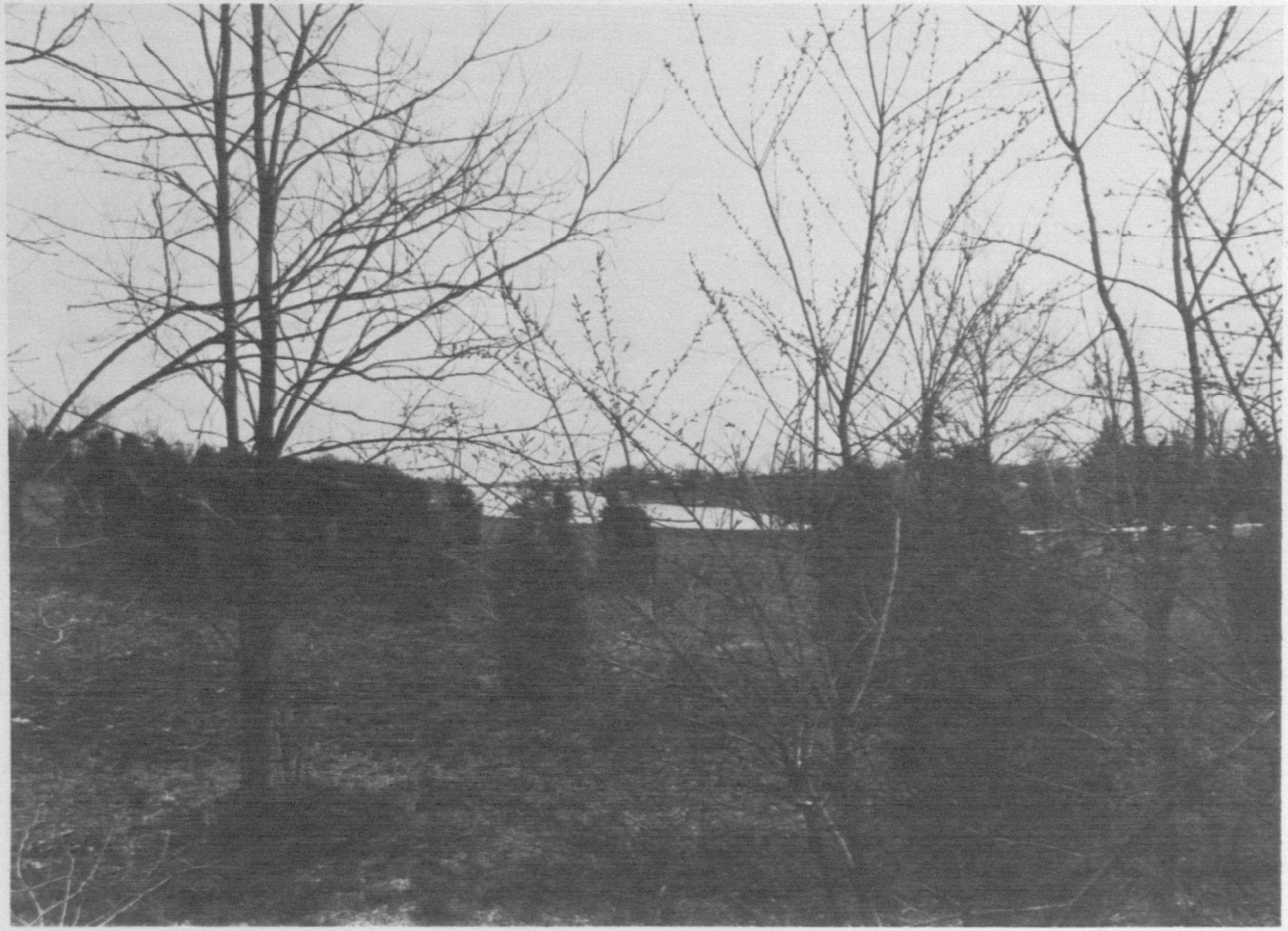
Station 33.

1. View southwest from Station 33. Developable land at Lake Heritage and north of Route 116, would not be visible from this location. East Cavalry Battlefield Site, Gettysburg, Pennsylvania, April 1981. B, c.

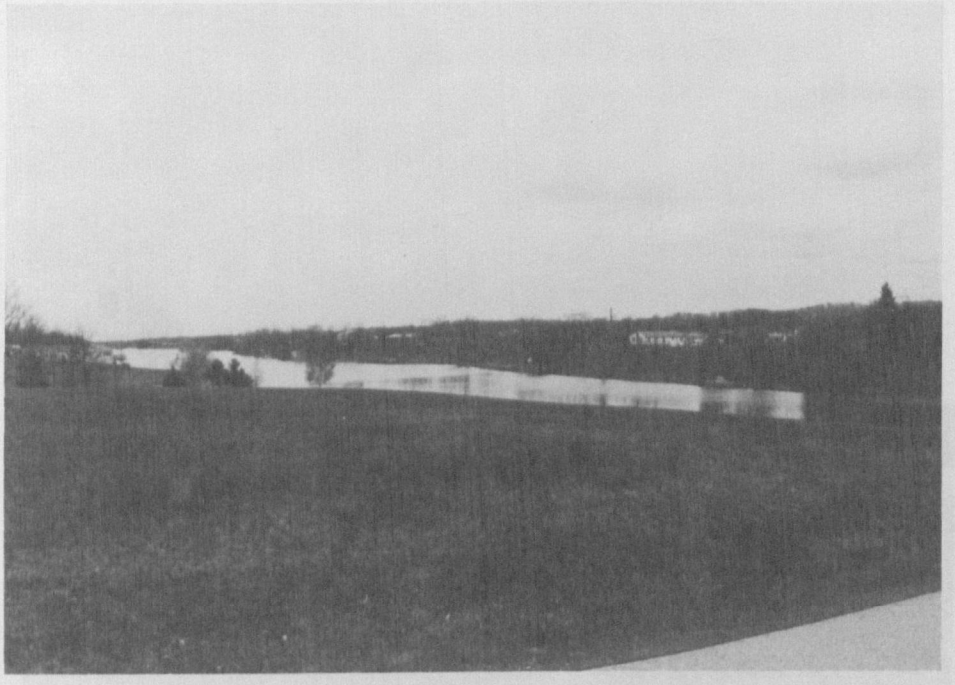
Station 34.

1. View west from PA 116 east of the entrance to the East Cavalry Battlefield Site, Gettysburg, Pennsylvania. April 1981. B & C, c.

Station 35.



1. View south from south of Route PA 116 east of Plum Run toward Lake Heritage. Gettysburg, Pennsylvania, April 1981. A, c.



2. View southwest toward Lake Heritage from south of PA 116. Gettysburg, Pennsylvania, April 1981. C, c.

3. View west southwest from south of PA 116, at junction of Lake Heritage and Plum Run. Gettysburg, Pennsylvania, April 1981. C,c.

Station 36.

1. View north from Culp's Hill. Gettysburg Wastewater Treatment Plant is in wooded section in the center of the photograph. House on Benner Hill is on hilltop on the right side of the photograph. Gettysburg, Pennsylvania, April 1981. A, D & C; c & i.

APPENDIX E

DEIS Appendix G-8

★ A Plan to Preserve the Historic Resources of the Gettysburg Area of the Commonwealth of Pennsylvania A Report Prepared by ★ the Advisory Council on Historic Preservation ★

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Introduction

Established in 1917 to honor writings that contribute to an understanding and appreciation of American principles and ideals, the Pulitzer Prize for Fiction is one of our most coveted literary awards. In 1975, the winner was *The Killer Angels,* a novel written by Michael Shaara, who described his work simply as "the story of the Battle of Gettysburg told from the viewpoint of Robert E. Lee and James Longstreet and some of the other men who fought there." It was, of course, much more than that, but the point is that Gettysburg continues to be a subject able to stir the minds of our best young writers, as well as historians, teachers, school children, and the millions who annually visit the site of the great battle. Why? Because the events that occurred there shaped our national life, and the lessons learned there are lessons we need to remember.

It was for these reasons in 1896 that the United States Supreme Court upheld the right of the Secretary of War to condemn a part of the battlefield in private ownership for the purpose of protecting it for the use and inspiration of all Americans. Speaking for the court, Justice Rufus Peckham declared that the taking of property for this purpose "touches the heart, and comes home to the imagination of every citizen, and greatly tends to enhance his love and respect for those institutions for which these heroic sacrifices were made." Peckham pointed out that this love and respect were essential to the perpetuation of the Nation: "The greater the love of the citizen for the institutions of his country the greater is the dependence properly to be placed upon him for their defense in time of necessity, and it is to such men that the country must look for its safety." Thus, it was at Gettysburg that the concept of the right of condemnation of private property for historical purposes was first tested and not found wanting.

What then were the events that occurred there and the lessons learned? Why is Gettysburg a very special place? One reason Gettysburg is a very special place is because of the many who died there. The Battle of Gettysburg was a terrible, tragic event in our history, and yet, perhaps ironically, it remains a source of national strength and inspiration. Described at the time as "an unremarkable Pennsylvania market town," Gettysburg became an uncommon ground on July 1, 2, and 3, 1863, when more men died in the battle fought there than in any other battle fought before or since on American soil. In 1881, Jefferson Davis called it, "the most eventful struggle of the war," and time has proven him correct.

The Union victory ended the last Confederate invasion of the North and marked the beginning of a gradual decline in Southern military power. Distinguished Civil War historian Bruce Catton sees the battle as the great hinge of the conflict, "the turning point where it began to swing in a different direction," and labels the site as "the greatest of our battlefields."

Abraham Lincoln made fast its greatness when he spoke at the dedication of the Soldiers' National Cemetery on November 19, 1863. Reminding his listeners that the American people had brough forth "a new nation, conceived in Liberty, and dedicated to the proposition that all men were created equal," he likened the Great War to a testing, a testing to determine whether that nation and the ideals it embodied could long endure. Death was the ultimate sacrifice, and the terrible rendering at Gettysburg was a price paid in pursuit of that dream. He asked that his countrymen stand firm in future accountings sure to come in order to give meaning to the loss of life at Gettysburg and to ensure that "government of the people, by the people, for the people, shall not perish from the earth." Thus Lincoln's statement gave larger meaning to the conflict, and Gettysburg became one of our most poignant and powerful symbols for democracy.

It is proper and fitting that another man who knew much about war and diplomacy chose to make his home at Gettysburg. Dwight D. Eisenhower bought a farm there in 1950, a place much in the news whether as a weekend retreat, a refuge in time of illness, or the site of visits from such foreign dignitaries as Premier Khrushchev, Chancellor Adenauer, President DeGaulle, or Prime Minister Nehru. Following his retirement in 1951, President Eisenhower took special interest in reclaiming the land and preserving the scene where Longstreet's Corps formed its battle lines on the second of those fateful days in July, 1863.

Gettysburg National Military Park, Gettysburg National Cemetery, and Eisenhower National Historic Site are three of the most important historical parks under Federal control. Indeed, two of them rank among the handful of our greatest historic properties anywhere. But that is not all; there is more at Gettysburg. Much of the historic town remains and has been designated a historic district by the Commonwealth of Pennsylvania and protected by borough zoning. One hundred twelve of the 336 buildings in Gettysburg at the time of the battle are still standing. One of the most important resources is the beauty of the natural

landscape in Adams County, and, in many cases, views from prime locations on the battlefield are traditional ones, quiet agricultural scenes unimpeded by instrusions or developments that are not compatible with the historic setting.

Rich in history, rich in historical resources, rich in natural beauty, Gettysburg is a very special place. But like very special places, it attracts and attraction often means development, and sometimes development can mean a loss of history, a loss of historical resources, and a loss of natural beauty. Development pressures at Gettysburg are evident. While the borough has little room left for expansion, adjacent Cumberland Township is beginning to change from an agricultural region to a suburb and is ripe for speculative ventures generated by increased tourism. Significant intrusions like the privately owned National Gettysburg Battlefield Tower are already there, and unless something is done in the future, the Gettysburg area will lose its sense of place, and the things that make it very special will disappear—diminished, eroded, and erased by density, modernity, and sameness.

There is another thing about Gettysburg. It has been special so long that it has been taken for granted. While great new natural and historical parks have been added to the National Park System in the past decade, not enough has been done at Gettysburg, which exceeds most of them in importance and meaning. The National Park Service is burdened by limitations imposed upon it by an antiquated preservation plan conceived in 1895 when there were no development pressures and visions of a 307-foot tower staring down on the place where Lincoln stood could only be attributed to a heavy meal before retiring. Adams County has no interest in zoning, and Steinwehr Avenue at the foot of Cemetery Hill is becoming one great fast food complex, a monument to the importance of the hamburger in American life.

And yet there are vital signs in Gettysburg. It has not forgotten its past. In 1972 the borough passed a historic zoning ordinance, and a sign ordinance whose restrictive provisions become effective in November, 1978; Cumberland Township is considering the adoption of a land use plan, hopefully to be followed by zoning; a Community Relations Committee, formed to promote cooperation between the National Park Service and the community, recently adopted articles of organization; Historic Gettysburg-Adams County, Inc., a private non-profit organization founded in 1975, is developing a campaign to beautify the town under a 13-year plan; the National Park Service promises to complete its long-awaited master plan for the military park and cemetery; and merchants in the borough are beginning to renovate and restore historic commercial buildings.

Perhaps the single, most important factor in stimulating a renewed interest in Gettysburg, the catalytic agent that stirred the collective conscience and drew attention to an area never forgotten but recently ignored, was the construction of the National Gettysburg Battlefield Tower. The tower is also the reason that the Advisory Council on Historic Preservation initially became involved in preservation problems at Gettysburg.

The tower controversy began on August 4, 1970, when Mr. Thomas R. Ottenstein of Chevy Chase, Maryland, called upon Mr. George B. Hartzog, Director of the National Park Service, for the purpose of informing him of the intention of a newly organized corporation to build a 300-foot tower near the Jennie Wade House on Cemetery Hill. Characterizing the tower as a monstrosity, Hartzog expressed chagrin that the Borough of Gettysburg had granted a construction permit. Subsequently, Ottenstein chose another location within the borough in the subdivision of Colt Park, a short distance north of the park boundary and the field of Pickett's Charge, and began some preliminary work on the site. Much to the surprise of many, a few months later, on July 2, 1971, the National Park Service entered into an "Agreement and Land Exchange" with the National Gettysburg Battlefield Tower and Mr. Ottenstein. The agreement allowed the developer a 22-foot right-of-way across park lands to another privately owned site behind the Stonehenge Motel, where the tower was now to be constructed. In return the corporation agreed to donate five percent of its "taxable income" to a non-profit foundation established for charitable and historic preservation purposes and to convey the Colt Park site to the National Park Service. In subsequent statements, Service spokesman observed that the agreement did not constitute approval of the tower but was made to minimize its adverse effects, and justified the action by pointing to a lack of local zoning or any other practical means of controlling development of that kind. However, many believed that the agreement was ill-conceived and that the treatment prescribed by the National Park Service was nearly as bad as the disease. While a tower at the Stonehenge site might be less intrusive, it would still have tremendous visual impact on the battlefield and

surrounding area. The site was approximately 1,200 feet from where President Lincoln delivered the Gettysburg Address and approximately 2,500 feet from the High Water Mark of the Confederacy, the pivotal point in the battle.

Eighteen days after the signing of the agreement, the Commonwealth of Pennsylvania sued the National Gettysburg Battlefield Tower and Mr. Ottenstein in the Court of Common Pleas of Adams County to permanently enjoin construction of any tower near the military park, the national cemetery, and the Eisenhower farm. The court denied the injunction stating that the Commonwealth had failed to show clear and convincing proof that the natural historic, scenic, and esthetic values of the Gettysburg area would be irreparably harmed by the erection of the proposed tower, citing the participation of the National Park Service in the agreement as evidence that such values would not be harmed. The Commonwealth appealed the case.

On January 24, 1972, while the appeal was pending, the Department of the Interior, in accordance with Section 106 of the National Historic Preservation Act of 1966, requested the comments of the Advisory Council on Historic Preservation on the agreement, explaining the lack of previous referral as an oversight.

The Council initially considered the matter of the Gettysburg tower at its May 3-4, 1972, meeting. The Council found that a tower at any location in the vicinity of Gettysburg National Military Park, Gettysburg National Cemetery, and the Eisenhower National Historic Site would have an adverse effect upon those resources. In its comments, the Council stated: "The character and height of the proposed tower is out of keeping with the historic structures and monuments of the battlefield, the farming countryside. . . and the rural townscape of the Borough of Gettysburg." Because of the adverse visual impacts of the tower, the Council looked "unfavorably" upon the consequences of the agreement negotiated by the National Park Service and recommended that steps be taken to explore appropriate legal remedies to stop construction at the Stonehenge site and any site proposed in the future. The Council further recommended that the National Park Service make clear its position that the agreement with the National Gettysburg Battlefield Tower and Mr. Ottenstein was in no sense an approval of the tower and that it do everything it could to assist the Commonwealth of Pennsylvania in its legal action at Gettysburg. Finally, the Council concluded that the Secretary of the Interior should have the means to control such undesirable development as this in the vicinity of all historical areas of the National Park System and recommended that the Department study ways of providing adequate protection to these areas.

As a result of Council comments, the Department of the Interior assisted the Commonwealth in its suit. The Commonwealth, however, lost its appeal in April, 1973. Following the decision, the Commonwealth brought suit in Federal court against the Secretary of the Interior, contending that an environmental impact statement should have been prepared on the agreement. The court ruled that the agreement did not constitute a major Federal action within the meaning of the National Environmental Policy Act and, therefore, did not require an environmental impact statement. The tower was completed and opened for business on July 29, 1974. A single picket paraded in protest.

As previously mentioned, much has been accomplished since that time. One can only surmise that the attention, the drama, the heated reaction and even the bitterness served a useful purpose. Deepened awareness, renewed pride in what remains, and, perhaps, a sense of guilt have caused a new interest at Gettysburg on the part of the citizenry, the borough, Cumberland Township, the State, and the Federal Government.

On May 24, 1976, Assistant Secretary of the Interior Nathaniel P. Reed sent a letter to the Executive Director of the Council informing him that the National Park Service was in the process of completing its legal responsibilities imposed by the "Agreement and Land Exchange"; that is, it was conveying an unrestricted vehicle and pedestrial right-of-way to Mr. Ottenstein, While being advised that the agreement was binding and must be effected, Mr. Reed stated that the Department continued to remain strongly opposed to the tower. Finally, he invited the Council to join with the National Park Service to consider alternatives that could be available "to avoid this type of compromise decision in the future."

In response to the invitation, the Council went to Gettysburg on August 5 as a part of its regular summer meeting. After hearing from the National Park Service, the State Historic Preservation Officer, and a number of local officials and representatives of community organizations, the Council instructed its staff to

prepare a report on what might be done at Gettysburg to protect and enhance the historic resources that are so abundant there, with an emphasis on creative and innovative solutions to critical problems. This report is a response to that instruction.

In the pages that follow, we suggest ways in which the objectives of historic preservation can be met. In the appendix, the reader will find an analysis of the historic resources of the Gettysburg area; a discussion of past effort, either successful or unsuccessful, to deal with threatened impairments; and a description of the authorities of the various jurisdictions and how they have used or not used them to protect and enhance historic properties. While the section "What Can Be Done: A New Preservation Program for the Gettysburg Area" is intended to stand alone,the papers in the Appendix more fully outline the basis for recommendations.

Now is the time to take another step forward at Gettysburg. The report suggests how it might be done. Perhaps Gettysburg will again be a place where we can learn new lessons and reaffirm three of America's traditional characteristics: those of optimism, pragmatism, and voluntary cooperation. We hope so, for Gettysburg is a very special place.

What Can be Done: A New Preservation Program for the Gettysburg Area

Many opportunities exist for developing a stronger preservation program for the Gettysburg area, and, fortunately, there are a variety of ways in which preservation can be accomplished or at least fostered. Encouraged by the Commonwealth of Pennsylvania, actions by the Borough of Gettysburg, the planning effort of Cumberland Township, and the educational program of Historic Gettysburg-Adams County, Inc., have all contributed to a new sense of awareness in the locality. Recent Federal legislation provides new incentives for the jurisdictions and private citizens to participate in a broadened preservation program, and there are other actions that the Federal Government can take to preserve and encourage the preservation of the historic resources of the region and to protect for the American People the Federal investment in the battlefield, cemetery, and farm.

The following pages describe the things that can be done by all parties involved—by citizens, community organizations, the borough, the townships, the State, the Department of the Interior, other Federal agencies, and the Congress of the United States. In some cases, several jurisdictions have the ability to achieve the desired goal, and if one does not act, another can exercise its authority to accomplish a particular objective. In cases of this kind, it is hoped that local governmental entities will be the first to act, avoiding the consideration of the problem by other jurisdictions. Local governmental entities will be better able to act if they have a professional planning capability. None have this except Adams County, and it is recommended that other jurisdictions secure full time professional help as soon as possible.

A. A Key: The Highway System

Many have compared the highway system at Gettysburg to a wheel, imagining roads as spokes and the town square as the hub. Major highways that meet in the center of town are U.S. 30 to York, Business U.S. 15 to Harrisburg and Washington, U.S. 140 to Baltimore, Pennsylvania 116 to Hanover, and Pennsylvania 134 to Biglerville. Because of this circumstance, major congestion occurs in the borough at and near the town square and at several key intersections. Worst congestion occurs on weekends when visitation to the military park is heaviest. Unfortunately, this coincides with the peak of local shopping. Consequently, the highway system works against both the park, impeding visitation, and the town, making purchasing more difficult and thereby creating pressures to develop shopping centers in suburban areas. Besides congestion, the noise, fumes, and heavy signing detract appreciably from the atmosphere of the historic urban center, and movement of commerce away from downtown will not only lead to a deterioration of the core but may result in further intrusions near Federal areas.

A bypass to U.S. 30 has long been recommended as a way of removing congestion from the borough and making it possible for the National Park Service to put into effect its plans for a new visitor contact and orientation center north of Gettysburg. The proposed facility will enable the National Park Service to interpret the Battle of Gettysburg in better chronological sequence and attract new commercial development to a more suitable area, in terms of visual impact upon the community's prime historic resources. The estimated cost of the bypass at the present time is between 25 and 30 million dollars.

Because 30 is a U.S. Highway, the Federal government will fund 70 percent of the cost of the bypass, leaving the matching share at between 9 and 7.5 million. The Federal Highway Administration has already approved the project in concept, and an environmental impact statement was prepared in 1971. However, Adams County is unable to raise the matching portion, having been allotted only about $8 million for the next 12 years by the Pennsylvania Department of Transportation, which sets its priorities based on traffic volume. The current allotment must go to keep present roads maintained and make necessary improvements on existing highways.

Because U.S. Bypass 30 is crucial to the development of a new preservation plan, new ways must be found to permit its construction, and the only practical solution appears to be 100 percent Federal funding. One hundred percent Federal funding might be accomplished in one of two ways. Because 3 million visitors visit Gettysburg National Military Park and the National Cemetery, and because visitation will increase at a rate greater than normal when the Eisenhower National Historic Site is opened to the public in future years, the National Park Service could seek appropriations from the Congress to make up the deficit. Such an appropriation request can be justified in view of the fact that congestion is substantially due to visitor vehicular traffic and that park land has not been taxable by the local jurisdictions. With respect to the latter, one might view Federal

funding of the matching share as partial compensation to the State and municipalities for tax losses over many decades.

It should be pointed out that 100 percent Federal funding of highways is not without precedent. In fact, Section 141 of the Federal Aid Highway Act of May 5, 1976 (Public Law 94-280) provides for a program to accelerate highway projects by 100 percent funding when there has been an impact due to a Federal installation. One of the reasons for the provision in the legislation was to permit the construction of a U.S. Bypass 30 at Everett, Pennsylvania, where the construction of Raystown Dam by the U.S. Corps of Engineers resulted in traffic congestion. The second possibility, then, would be to utilize some of the monies appropriated for the purposes of Section 141 to construct the bypass at Gettysburg. During the present fiscal year, 10 million dollars are available for accelerated projects. (See Public Law 94-387 "Project Acceleration Demonstration Program.")

Controls along the periphery of Bypass 30 will be essential in order to ensure compatible development.

B. A Vicious Circle: Changing Economic Motivators

The Federal presence is a major factor in the economic life of the Borough of Gettysburg, Cumberland Township, and Adams County. As Federal properties of outstanding historical significance, Gettysburg National Military Park and Gettysburg National Cemetery draw millions of visitors to the area, 1.5 million in 1974, 2.3 million in 1975, and a probable 3.1 million in 1976. A study in 1970 indicated that tourists pumped between 15 and 20 million dollars into the local economy, and figures show that the National Park Service contributes more than one million in direct spending each year.

In the past, Federal properties have not contributed to the tax base of the small local jurisdictions with the result that they have been burdened with the task of providing, willingly or not, many of the services that millions of visitors require. For example, visitation has had a significant impact upon water, sewer, and road systems. To benefit from tourism, the township enacted an amusement tax, which brings in half of its revenues, and has been receptive to developments that will yield more income, many of which are visually intrusive and adversely affect the historic resources. To combat intrusive developments near Federal properties, the National Park Service, in some cases, has acquired these properties. However, acquisition has been distasteful to the county because it depends on a real estate tax for much of its income and to the township because of its loss of the important amusement tax.

1. Payment in Lieu of Taxes

New legislation, signed by the President on October 20, 1976, recognizes that communities have had to bear additional costs because of the presence of large Federal properties in the area. To compensate local governments for this burden, the Payment in Lieu of Taxes Act (Public Law 94-565) provides for the annual return of 75 cents an acre on land owned by the Federal Government on a permanent basis. In addition, county taxing authorities—the county, the township, and the school district—will share in one percent of market value of land acquired by the National Park Service since January 1, 1971, at an assessed value on that date. According to a recent news release, Adams County taxing authorities may receive as much as $72,992 per year when the Congress funds the program.

Prior to the passage of the Payment in Lieu of Taxes Act, the National Park Service at Gettysburg had taken steps to make some visitor generated revenues available to the municipalities by turning over the operation of its "Electric Map" to the Eastern National Parks and Monuments Association, a private cooperating association whose income from the map is subject to the township amusement tax. As a further step, the National Park Service should consider doing the same thing with the operation of the Cyclorama program.

2. Entitlement for the Community Development Program

There are other ways of reducing economic pressures that obstruct or impede the preservation of historic resources in the Gettysburg area. In order to correct past inequities and stimulate new programs, one step that could be taken would be to qualify the Borough of Gettysburg as a "metropolitan city" under the Housing and Community Development Act of August 22, 1974 (Public Law 93-383). This legislation makes annual grants available to these cities for a wide variety of purposes including acquisition of certain kinds of real property, public works programs, community services necessary to achieve

community development objectives, the improvement of public facilities, and historic preservation activities. Grant monies can also be used as a matching share for other Federal programs requiring local contributions.

In order to qualify, a city must have a population of 50,000 or more. The population of the Borough of Gettysburg in 1970 was 7,275; however, millions of tourists visit Gettysburg National Military Park each year, creating demands and pressures similar to those found in much larger communities. Annual community development grants would permit the borough to deal with these demands and pressures in an orderly fashion and to implement a city beautification and historic preservation program proposed by Historic Gettysburg-Adams County, Inc., which includes building restoration, burying of overhead utilities, and installation of period street lighting and street furniture. The Congress is aware of some inequities in the criteria for determining eligible cities, and before the close of the last session held hearings to gather information to assist it in considering amendments to the legislation, which will be considered for renewal next year.

One way for the Borough of Gettysburg to qualify as a metropolitan city would be for the Congress to amend Section 102(a)(4) of the 1974 Act to give weight to visitation resulting from the presence of Federal properties listed in the National Register of Historic Places. For example, if Gettysburg were able to count the 3.1 million visitors to Gettysburg National Military Park at a rate of 25 to one, it would easily qualify.

3. Federal Tax Incentives and Disincentives

The new Tax Reform Act of 1976, signed into law on October 4, will also contribute to the redirection of economic pressures so that they will favor rather than discourage preservation. Section 2124, entitled "Tax Incentives to Encourage the Preservation of Historic Structures," contains five provisions that should have substantial impact in the Gettysburg area. These provisions are applicable to historic properties individually listed or included in historic districts that are listed in the National Register of Historic Places. The five provisions are:

a. Amortization of Rehabilitation Expenditures, Section 2124(a) A new part, Section 191, "Amortization of Certain Rehabilitation Expenditures for Certified Historic Structures," was added to Part VI of subchapter B of Chapter 1 of the tax code relating to itemized deductions. It provides that a taxpayer may amortize over a 60-month period any capital expenditure incurred in a certified rehabilitation of a certified historic structure, in lieu of depreciation deductions otherwise allowable.

The law defines certified historic structure as a building or structure which can be depreciated as provided in Section 167 of the tax code (i.e., the property must have some commercial characteristics; residential property may qualify if it is rented), and which is listed in the National Register; located in a Registered Historic District and is certified by the Secretary of the Interior as being of historic significance to the district; or located in a historic district designated under a statute of the appropriate State or local government, if the statute is certified by the Secretary of Interior as containing criteria that will substantially achieve the purpose of preserving and rehabilitating buildings of historic significance to the district.

The law defines certified rehabilitation as any rehabilitation of a certified historic structure that the Secretary of the Interior has certified as being consistent with the historic character of the property or the district in which the property is located. To take advantage of this provision, rehabilitation expenditures must occur after June 14, 1976, and before June 15, 1981.

The effect of this new section is that owners will be encouraged to rehabilitate their historic commercial properties because of the availability of substantial tax savings in a short period of time. Before the passage of the Tax Reform Act, an owner was required to spread his tax deductions over the life of the property; now the deductions can be taken in five years.

b. Demolition, Section 2124(b) A new part, Section 280B, "Demolition of Certain Historic Structures," has been added to Part IX of subchapter B of Chapter 1 of the tax code, relating to items not deductible. It provides that an owner or lessee of a certified historic structure cannot deduct any amounts expended for its demolition or for any loss sustained on account of its demolition. Furthermore, the law provides that any building or other structure located in a Registered Historic District will be

treated as a certified historic structure unless the Secretary of the Interior has certified, prior to the demolition of the structure, that it is not of historic significance. This provision applies to demolitions beginning after June 30, 1976 and before January 1, 1981.

For tax purposes, demolition costs or losses sustained as a result of demolition must be added to the capital account as part of the cost of the land, rather than being deductible as part of the cost of the replacement structure. The effect of this provision is to discourage the demolition of certified historic structures because taxpayers will not be able to deduct these costs in later years through depreciation.

c. Depreciation of Improvements, Section 2124(c) A new part has been added to Section 167 of the tax code, relating to depreciation. This portion of the Tax Reform Act prohibits the accelerated method of depreciation for any property in whole or in part constructed, reconstructed, erected, or used (after December 31, 1975 and before January 1, 1981) on a site which was, on or after June 30, 1976, occupied by a certified historic structure which is demolished or substantially altered, other than by a certified rehabilitation.

The effect of the provision is to discourage the demolition of certified historic structures by limiting taxpayers to the straight-line method of depreciation, which provides less of a tax deduction in the early years of a project than does the accelerated method.

d. Substantially Rehabilitated Property, Section 2124(d) Another new subsection has been added to Section 167 of the tax code, relating to depreciation. Taxpayers will be allowed to depreciate substantially rehabilitated historic property as though they were the original users of the property.

The law defines substantially rehabilitated historic property as any certified historic structure with respect to which capital expenditures for any certified rehabilitation during the 24-month period ending on the last day of any taxable year, reduced by depreciation or amortization deductions, exceed the greater of the adjusted basis of the property or $5,000. To take advantage of the provision, rehabilitation expenditures must occur after June 30, 1976 and before July 1, 1981.

The effect of this provision is to encourage owners of certified historic structures to substantially rehabilitate their properties because they are allowed a more advantegeous method of depreciation.

e. Transfers of Partial Interests in Property for Conservation Purposes, Section 2124(e) Section 170(f)(3) of the tax code, relating to income tax deductions for charitable contributions, was amended by the Tax Reform Act. The act provides that a deduction is allowed for the contribution to a charitable organization or a governmental entity exclusively for conservation purposes of a lease on, option to purchase, or easement with respect to real property of not less than 30 years' duration or a remainder interest in real property.

The law defines conservation purposes as the preservation of land areas for outdoor public recreation or education or scenic enjoyment, the preservation of historically important land areas or structures, or the protection of natural environmental systems. Such contributions for estate and gift tax purposes. To take advantage of this provision, the charitable contributions and/ or transfers must be made after June 13 1976 and before June 14 1977. This provision has the effect of encouraging owners to grant easements on their properties for conservation purposes by allowing deductions in taxes.

C. Gettysburg National Military Park

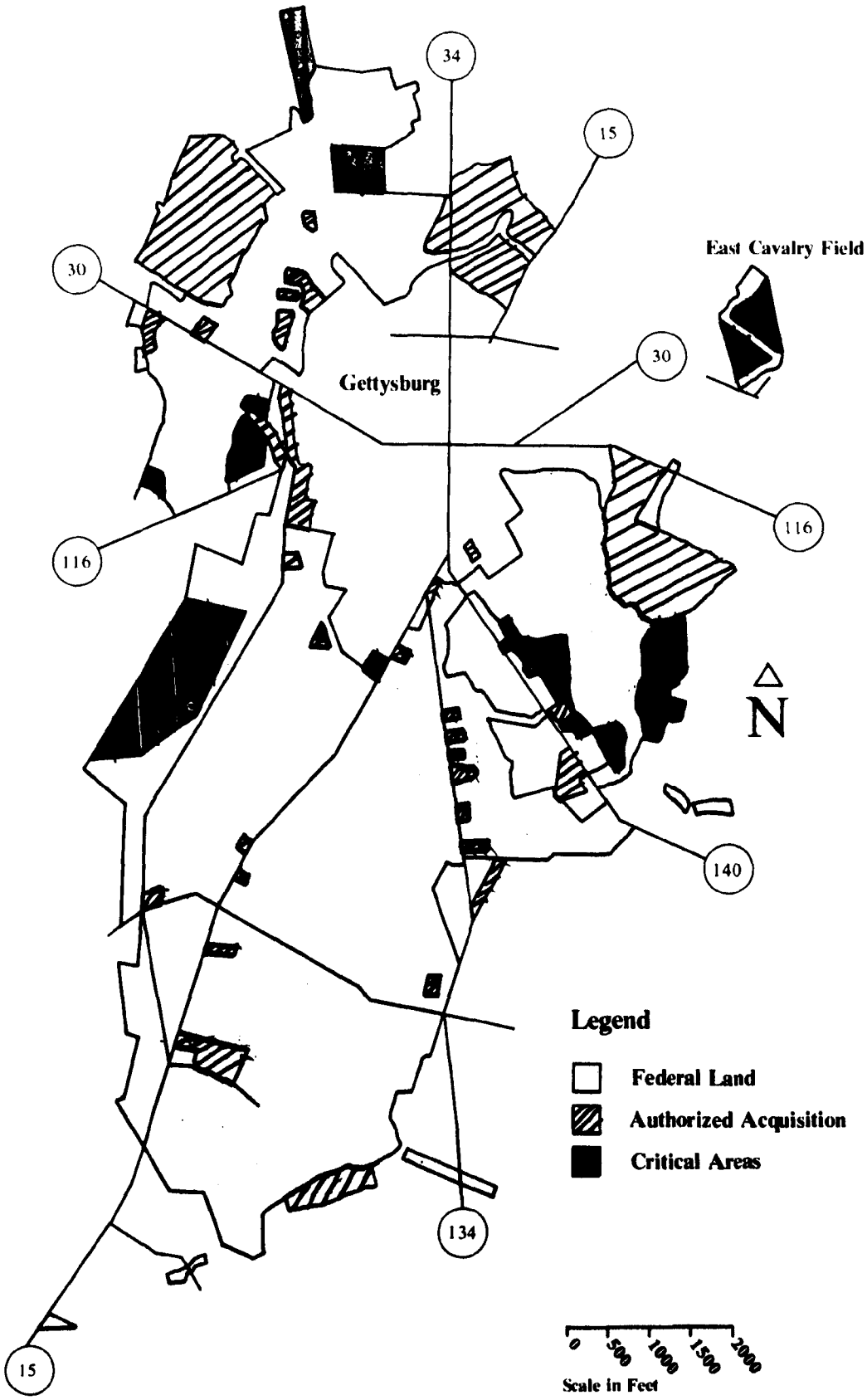
1. Critical Areas

In order to implement a new preservation program at Gettysburg, the National Park Service must have control over certain lands now in non-Federal ownership. For purposes of this report, these properties are termed "critical areas."

The first preservation plan, known as the Sickles' Plan, focused on the battleground south of the borough and served as the basis for the legislation creating Gettysburg National Military Park in 1895. The Sickles' Map recommended Federal ownership of 3,874 acres for the purpose of preserving the most significant lands associated with the Battle of Gettysburg. This document has continued to guide the Congress in its approach to land acquisition at Gettysburg, although the enabling act also states that the Federal Government should also acquire "such other adjacent lands as may be necessary to preserve the important topographic features of the battlefield" (28 *Stat.* 651).

At present, the National Park Service needs to acquire 374 acres to reach the 3,874-acre limitation. Of these, 159 acres are now in the process of being appraised for purchase. As

Gettysburg National Military Park



previously noted, general opposition to acquisition has been related to the loss of tax revenues, and the new Payment in Lieu of Taxes Act should do much to change attitudes and justify controls over critical parcels.

One problem with the land program is that the National Park Service has been instructed by the Senate and House Appropriations Committees to acquire any "public" property by donation, or, if not, through a mutually agreeable program of all concerned. The most difficult acquisition under these terms is the purchase of 55 acres of public lands owned by Adams County, which are extremely important in preserving the site of the first day of battle. At this date, no satisfactory agreement has been made to preserve and interpret these vital historic lands.

In addition to the 374 acres identified by the National Park Service, there are some other historic lands over which control is advisable. These include 139 acres on the first day battlefield, 171.5 acres on the second day battlefield, 103 acres (the Brown Farm) west of the field of Pickett's Charge, 4 acres at the bottom of Cemetery Hill, and 498 acres at East Cavalry Battlefield. The map on page 5 shows these areas as well as existing Federal holdings and those presently authorized for acquisition. Except for 10 acres, scenic easements or some other partial interest in the land appears sufficient to accomplish preservation goals. In addition, the present authorization does not provide for the acquisition of lands for a park road corridor for access to the new visitor contract-orientation center from the proposed U.S. 30 Bypass. About 14 acres will be required for this purpose.

2. Steinwehr Avenue

There are ways other than acquisition in fee or through easements to mitigate intrusions near the climactic scene. The sign ordinance of the Borough of Gettysburg will do much to eliminate large, vivid signs and billboards on Steinwehr avenue when it becomes fully operative on November 18, 1978. Further mitigation of the adverse effects of the commercial strip on the battlefield and cemetery are possible. The borough could enact an ordinance to control paint colors and require landscaping in order to reduce the brilliancy of commercial structures and create a vegetative cover between them and the prime historic resources they abut. The Department of Landscape Architecture of Pennsylvania State University has indicated that it would prepare a landscaping plan for a three-block area of Steinwehr Avenue for $7,500. The purpose would be to show owners what might be done to beautify the avenue, and, at the same time, protect the historic values of the battleground and cemetery. It would appear to be in the best interest of the National Park Service to finance this project and sponsor other studies and efforts aimed at upgrading the environment of the Borough of Gettysburg. For example, the National Park Service might fund the services of a historical architect for Historic Gettysburg-Adams County, Inc., to assist owners of historic buildings in the Gettysburg Battlefield Historic District in the preparation of restoration and rehabilitation plans. The National Park Service has been providing technical assistance to non-Federal entities over many decades under a variety of authorities, including the Historic Sites Act of 1935, the Park Planning Act of June 23, 1936 (16 U.S.C. 17k), and the National Historic Preservation Act of 1966.

In the case of Steinwehr Avenue, the ideal would be to phase out strip development and replace it with more compatible land uses. It has been suggested that the National Park Service provide space at the site of its proposed visitor contact-orientation center for commercial activity and grant the businesses located on Steinwehr Avenue the right of first refusal on development opportunities there. The recommendation, however, did not take into account legal problems involved in taking such an action. The National Park Service has authority for concessionaires in many parks, but permits are usually granted to satisfy demands in isolated areas. However, on October 19, 1976, the President signed into law the Public Buildings Cooperative Use Act (Public Law 94-955) which, among other things, "encourages the location of commercial, cultural, educational and recreational facilities and activities within or near public buildings."

The new authority to encourage mixed uses at Federal installations is further justification for implementing the recommendation, which indeed may be the best practical and equitable means of restoring the historic character of the battlefield and cemetery in that area.

3. Other Intrusions

Two other intrusions near the cemetery and the climactic scene of the battle are the Electric Map Building and the Cyclorama Center, both owned by the National Park Service. Plans call for the removal of the former with the completion of the proposed visitor contact orientation center. Long-range plans should

also call for the relocation of the Cyclorama Center. Presently, the National Park Service could minimize the visual intrusion of that facility by screening, and by painting of the building a color more compatible with the landscape and vegetation.

The most intrusive development near the climatic scene is the National Gettysburg Battlefield Tower. The Council reaffirms its earlier position with regard to the tower and urges the Secretary of the Interior to seek appropriate legal action that will result in its removal from the scene.

4. Helicopter Flights

Another problem is the regulation of helicopter noise and related intrusive effects of overflight in the area of the Gettysburg National Military Park and adjoining historic sites. At present the key to the control of the helicopters and their operations around the military park is local zoning. The existence of the present AG Rotors heliport is important, inasmuch as any zoning that might be adopted in the township or county in the future would almost certainly have to recognize the helicopter as a pre-existing nonconforming use, or might ratify its presence as a confirming use by establishing a separate zone for it. While it is reasonably remote from the sections of the battlefield that might be most vulnerable to the generally higher noise levels associated with take-offs and landings, approaches and departures, it is in effect a permitted use dually sanctioned by the local jurisdiction. While this enterprise seems to enjoy something of a monopoly at present, there is nothing to discourage the establishment of several other heliports or helipads for AG Rotors or competing services. Looking ahead, the absence of specific prescription for heliports and helicopter operations, including prescribed routes for sight-seeing flights and travel to agriculture sites for crop spraying, to other airports for passenger service, and to industrial sites for parcel delivery, etc., indicates a condition of potentially severe vulnerability to aggravated environmental problems associated with helicopter operations in the general area of the battlefield and related historic sites. Some degree of protection other than zoning may be accomplished through the adoption by the Federal Aviation Administration (FAA) or regulations concerning helicopter noise. The FAA is testing helicopter noise output at Dulles Airport under a variety of conditions with the objective of developing appropriate environmental noise regulations sometime in the future.

The National Park Service has had several meetings with FAA concerning helicopter flights over Grand Canyon National Park, and further consultations may suggest ways to control undesirable flights in nationally significant areas. From our research, it would appear that several parts of the basic Federal Aviation Regulations (FARs) apply to helicopter operations and offer some potential for establishing an appropriate framework of controls for helicopters as they might affect the Gettysburg National Park.

a. Part 36 This is the basic element of the FAR affecting aircraft noise in general, and it does not apply to helicopters. This is an unfortunate omission, but in view of the magnitude of noise problems associated with all other types of aircraft and the tortuous history of the development of this regulation over a ten-year period, the exclusion of helicopters is understandable. It is reasonable to expect this omission to be corrected after appropriate studies by FAA.

b. FAR Part 91, Sec. 91.79.d This section provides for a waiver of minimum altitude requirements where sufficient justification can be shown without compromising flight safety of persons on the ground. Inasmuch as Part 91 applies generally to all aircraft, the language that permits aircraft to be operated at less than the minimum altitude specified for most aircraft applies particularly to helicopters; thus, many helicopter operations of the sort characteristic of the Gettysburg battlefield area operate under a waiver of this basic part of the FAR. The conditions of the waiver should be examined to verify whether any periodic renewal is required in relation to experience gained after the original granting of the waiver and whether any additional conditions should be established.

c. FAR Part 91, Sec. 135.69 This section governs the granting of certificates for helicopter operations, and provides the basis for area limitations and operations of helicopters. New York Airways, a helicopter air taxi service linking the major airports in the New York region, operates under such a certificate. The routes that New York Airways helicopters may use to link their various destinations are prescribed by the FAA Administrator. All pilots are required to learn these routes in their regular training programs. The routes are carefully

mapped to follow waterways and nonresidential areas wherever possible to minimize the environmental noise problems that helicopters often cause.

d. FAR Part 91, Sec. 135.89 This regulation governs emergency leading procedures, and may also afford a basis for regulating helicopter flights in the Gettysburg area. This section prescribes minimum altitudes under a variety of conditions to insure that helicopters have sufficient altitude to permit safe landing under autorotation or other emergency conditions. The height at which helicopters are often seen over the Gettysburg battlefield area is probably not sufficient to comply with the requirements of this section, but this would have to be checked.

e. FAR Part 91, Sec. 135.91 This section prescribes additional minimum altitude requirements over congested areas, and also may afford some basis for dealing with the problem of helicopters or Gettysburg. It is doubtful, however, that much of the battlefield would qualify as a congested area, even though there are pockets of relative congestion, particularly in the vicinity of the visitor center, at many times of the year. It would probably be necessary to broaden the typical definition of "congested area" and explore with the FAA an interpretation that might be applied to the Gettysburg battlefield sites where people assemble in substantial numbers.

5. Park Historic Resources

It should also be noted that the historic resources under the protection of the National Park Service at Gettysburg National Military Park need immediate preservation treatment. The park recently prepared a "List of Classified Structures" that, for the first time, represents an accurate inventory of this physical assets. The study shows that 3.1 million dollars will be required to bring these resources to an adequate level of preservation. One-half million is needed to repair monuments on the battlefield, and 2.6 million dollars are required to restore deteriorating historic structures. In view of the importance of Gettysburg battlefield, the National Park Service should give high priority to this item in it budgeting and staffing process.

D. Eisenhower National Historic Site

Presently, the 593 acres of the Eisenhower National Historic Site are protected from intrusions only on its east boundary, where the farm joins Gettysburg National Military Park. On the north and south there are open farmlands, while to the west a number of new residential units are beginning to disrupt the historic setting.

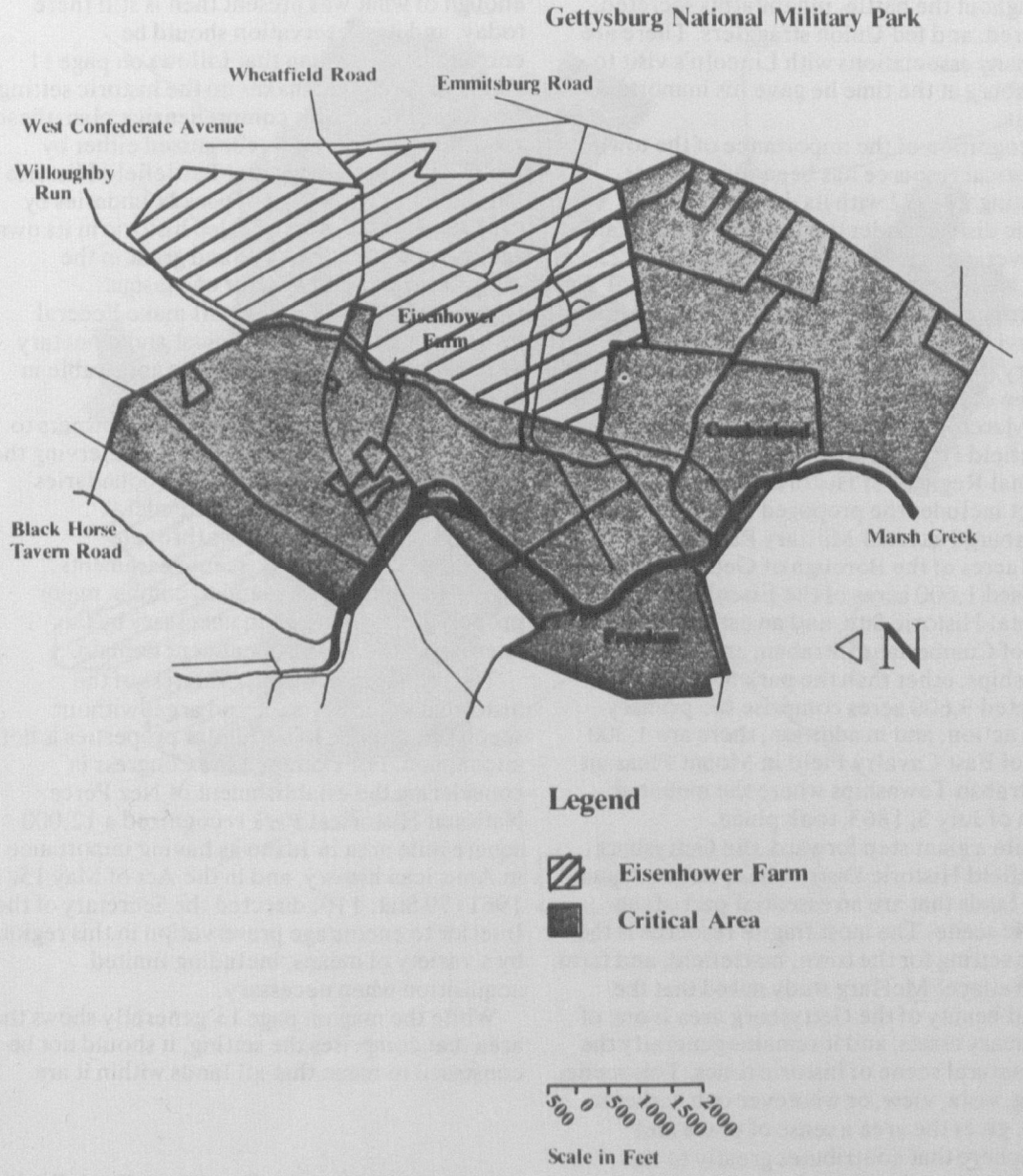
In order to provide the Eisenhower farm with adequate lands for development and protect it from intrusions, it has been proposed that certain lands on the south and west be acquired whether in fee simple or by scenic easement. The preferred method in most cases may be scenic easement. Recommended as the south boundary line is the 580-foot ridge, the site of the South Cavalry Field engagement of the Battle of Gettysburg. On the west, it is the natural boundary formed by Marsh Creek and its historic covered bridge. These lands consist of the 195 acres held by the National Park Foundation, 19 acres owned by the Gettysburg Municipal Water Authority, and approximately 903 acres in private ownership. Of the latter, 544 acres are in three large farms. One large 156-acre tract initially offered to the Federal government has been subdivided. Legislation will be required to protect the 493 acres of the present Eisenhower Farm by ensuring the protection of the additional 1,117 acres.

E. Preservation of the Historical Setting: Expanding the Preservation Concept

A basic step in a new preservation plan for the Gettysburg area is a broadening of the concept of what needs to be preserved.

While narrow in scope, the Sickles' Plan was sufficient for its day. In those times, preservationists sought to protect significant portions of the ground on which the most dramatic events occurred. Those promoting preservation gave little thought to the setting for the battlefield; development did not threaten to encircle the park: the pastoral scene was there for all to see an enjoy. While Americans placed great value on the property, the meaning of the Battle of Gettysburg had not been fully assessed. We know now that it was one of the most significant events in American history, not only because of its importance in determining the outcome of the Civil War, but because of the symbol it became.

Eisenhower National Historic Site



The major failing of the Sickles' Plan was that it did not recognize the town as an integral part of the battle. In the beginning, it was the town's road system that drew Confederates to Gettysburg. Both Union and Confederate troops finally assembled at Gettysburg and not elsewhere simply because it was central, and all roads led to the town. Particularly on the first day of battle, the town was the scene of heavy fighting. The First and Eleventh Corps of the Union Army, forced from their positions west and north of town, retreated through Gettysburg, where many were captured. Throughout the battle, inhabitatnts secreted, sheltered, and fed Union stragglers. There are also many associations with Lincoln's visit to Gettysburg at the time he gave his immortal address.

Recognition of the importance of the town as a historical resource has been quite recent, beginning in 1972 with its designation as a historic district under the laws of Pennsylvania. However, designation pertained only to a 25-block area, which does not include all Civil War era structures, and the emphasis is placed on preserving buildings that remain from the 19th century. Federal recognition of the intimate realtion of the town and battle did not come until March 18, 1975, when the Gettysburg Battlefield Historic District was listed in the National Register of Historic Places.* The district includes the proposed 3,800 acres of Gettysburg National Military Park, an estimated 1,200 acres of the Borough of Gettysburg, the proposed 1,600 acres of the Eisenhower National Historic Site, and an estimated 3,100 acres of Cumberland, Straban, and Mount Joy Townships, other than the park and farm. As estimated 9,600 acres comprise the primary battle action, and in addition, there are 1,300 acres of East Cavalry Field in Mount Pleasant and Straban Townships where the mounted action of July 3, 1863, took place.

While a giant step forward, the Gettysburg Battlefield Historic District does not contain all of the lands that are an essential part of the historic scene. The most fragile resource is the scenic setting for the town, battlefield, and farm. The Wallace/ McHarg study noted that the natural beauty of the Gettysburg area is one of its primary assets, and it remains generally the same natural scene of historic times. This scene, setting, vista, view, or whatever one wishes to call it, gives the area a sense of place and atmosphere that contributes greatly to the ability of the visitor to understand and appreciate the remains that are left and the events which ocurred there. In 1886, a local history described one of the views as follows:

No natural panorama in the world surpasses that which the spectator beholds when, standing on the west of Cemetery Hill, he looks down upon the broad expanse of field, meadow and woodland, dotted with farm houses and barns, the deep red of the newly-turned-up soil in strong contrast with the verdure of growing crops and magnificent groves, and the whole landscape bounded by the outside mountain wall as far as the eye can reach.

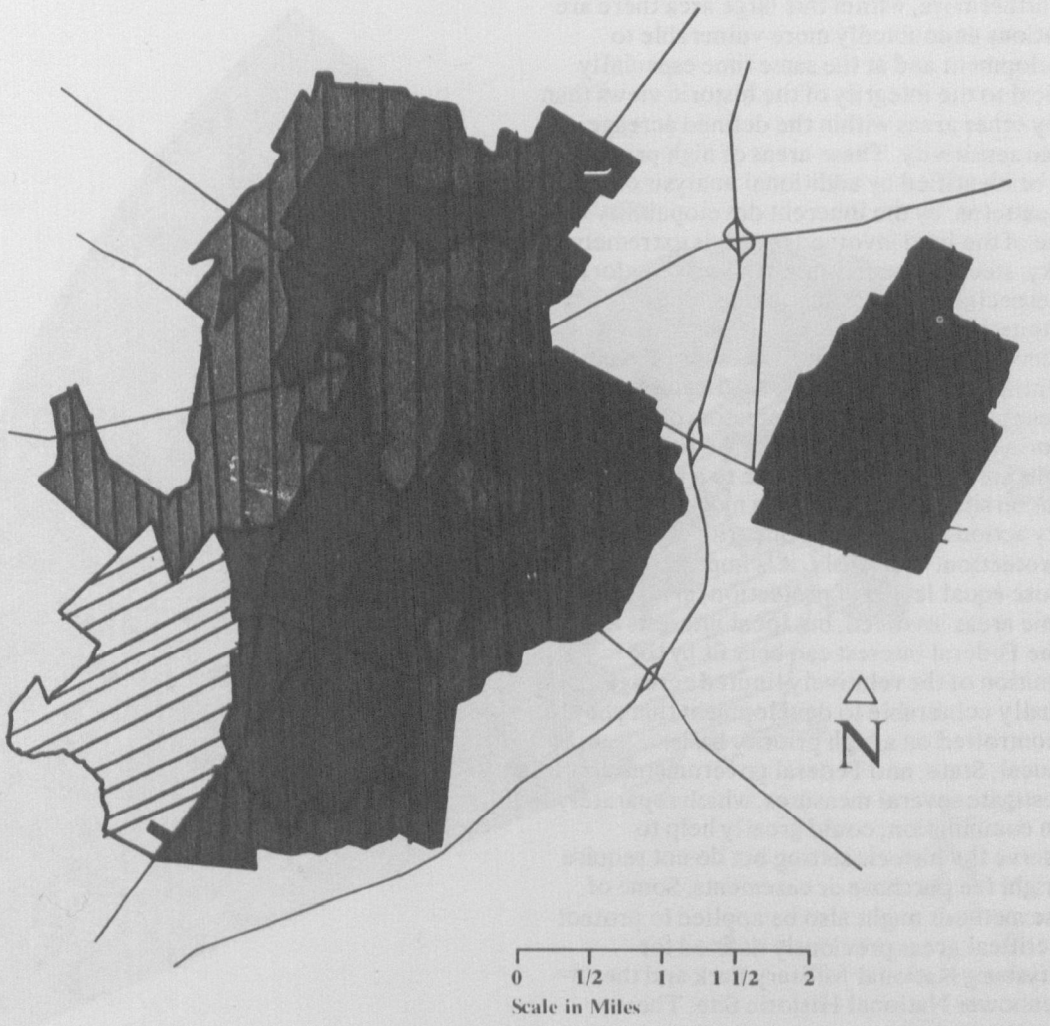
While there are some significant intrusions, enough of what was present then is still there today, and its preservation should be encouraged. The map that follows on page 11 shows the area that makes up the historic setting. In order to develop a comprehensive plan, these views must be formally recognized either by inclusion in the Gettysburg Battlefield Historic District or by a revision of park boundaries by the Congress. This area is also historic in its own right, comprising the first land grant in the region known as the Manor of Masque. Designation in either case will make Federal programs that provide technical and monetary assistance for historic properties applicable in this area, and make it possible for the jurisdictions and individual property owners to receive aid and encouragement in preserving the scene. However, revision of park boundaries would make it possible for the Federal government to protect views through cooperative agreements, scenic easements, regulation and the like, and to combat major proposed intrusions when necessary by the exercise of the power of eminent domain.

The recognition by the Congress of the historical value of large land areas without specific reference to particular properties is not uncommon. For example, the Congress in considering the establishment of Nez Perce National Historical Park recognized a 12,000 square mile area in Idaho as having importance in American history, and in the Act of May 15, 1961 (79 Stat. 110) directed the Secretary of the Interior to encourage preservation in this region by a variety of means, including limited acquisition when necessary.

While the map on page 13 generally shows the area that comprises the setting, it should not be construed to mean that all lands within it are

* See map showing the Gettysburg Battlefield Historic District on page 11

Boundaries of Historic Sites



essential to preserving the view or that a single land use must be perpetuated. For example, substantial development could occur behind ridges or at low elevation which could not be seen from the battlefield or farm. Landscaping could hide low-rise development at higher elevations, and painting of modern structures would be effective in reducing visual impact, especially as the distance increases from Federal properties. A study to define essential areas within the zone will be necessary.

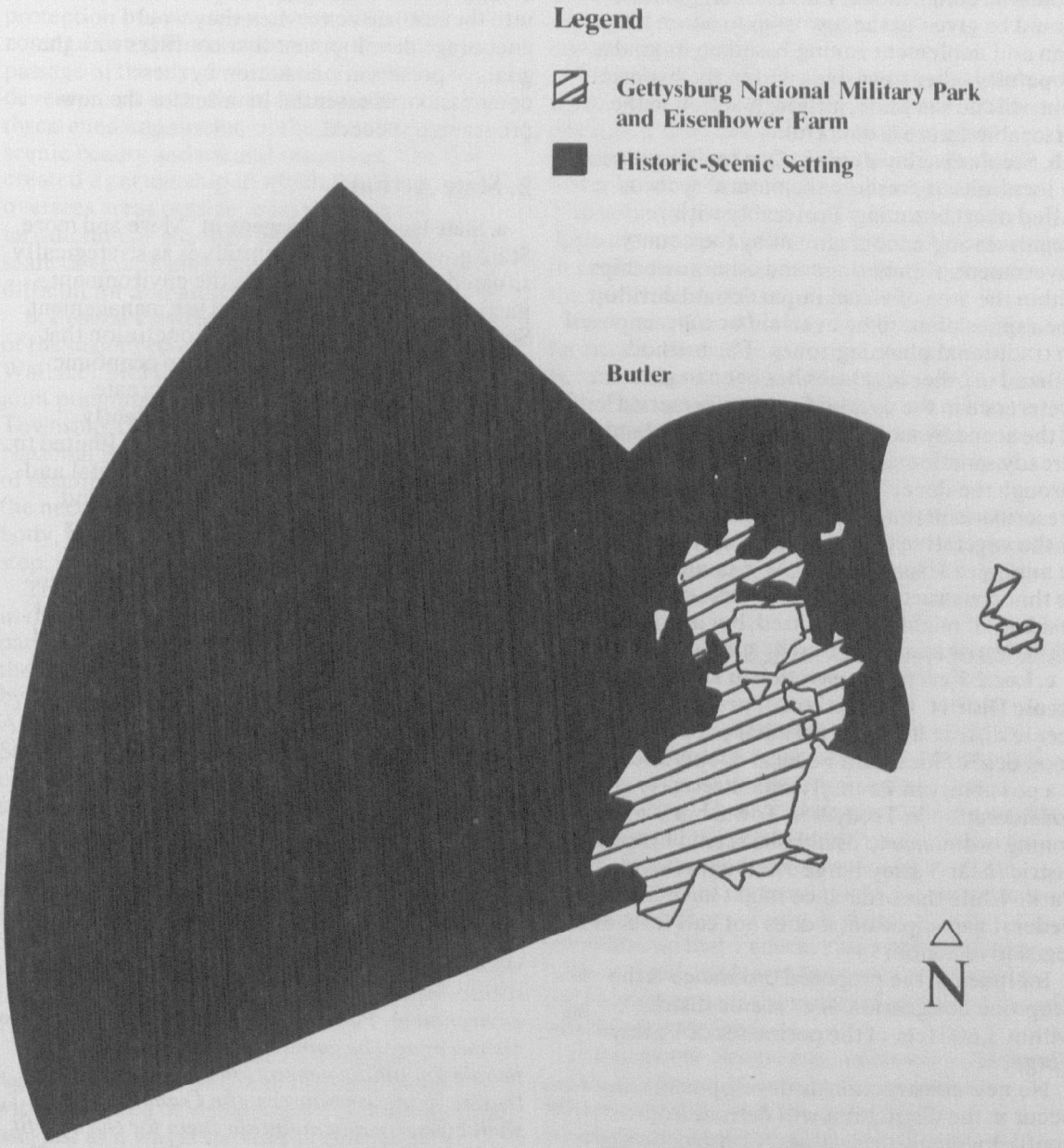
Furthermore, within this large area there are locations undoubtedly more vulnerable to development and at the same time especially critical to the integrity of the historic views than many other areas within the defined acreage of visual sensitivity. These areas of high priority can be identified by additional analysis of land use patterns, by the inherent developability of some of the land involved (much is extremely rocky, steep, or poorly drained and therefore not especially susceptible to immediate exploitation), by patterns of ownership, and by the level of access that such sites may have to essential utilities, including roads, sewers, and water systems. Thus, the protectors of the historic and scenic interests of the battlefield and its surroundings may come to a fairly sharp focus on sites within the areas most in need of early action to ensure the integrity of the pattern of protection. Obviously, it is impractical to impose equal levels of protection on all of the scenic areas involved, but local interests as well as the Federal interest can benefit by the definition of the relatively limited acreage actually vulnerable to development that should be controlled on a high priority basis.

Local, State, and Federal governments could investigate several measures, which separately or in combination, could greatly help to preserve the historic setting but do not require outright fee purchase or easements. Some of these methods might also be applied to protect the critical areas previously defined for Gettysburg National Military Park and the Eisenhower National Historic Site. These measures include:

1. Local Action

a. Cumberland Township: Planning and Zoning Cumberland Township is presently considering measures that would begin to protect the area immediately around the battlefield and farm. It has prepared a "Comprehensive Land Use Plan" that attempts to anticipate growth in a way that—although an admitted compromise—takes into account the

The Extent of Historic-Scenic Area



value of historic resources. (For a full discussion of the plan and its probable effects see Part III of the Appendix.) It is appropriate that the local government is taking the initiative, and its effort should be commended. Full encouragement should be given to the township to adopt the plan and implement zoning based on its goals. Hopefully other townships within the historic zone will do the same, although action in the forseeable future is doubtful.

b. Scenic Overlay Zoning One technique used by localities to preserve the natural scene is called overlay zoning. Preferably with incentives and encouragment by the county government, Cumberland and other townships within the area of visual impact could develop open space plans to be overlaid or superimposed on traditional planning zones. The method utilized in other localities has been to give preference in the overlaid zone to preservation of the scene by modifying the particular land use already sanctioned. This is accomplished through the development of standards that prescribe such things as the type of construction or the vegetative treatment needed to eliminate or minimize visual impact. An example would be that construction in an area already zoned residential might be permitted, but at a lower elevation or at a decreased height.

c. Local-Federal Cooperation to Preserve a Scenic District One method of preserving a scenic district aroung a national park involves a good deal of local and Federal cooperation and is a possibility in Pennsylvania. Presently under consideration in Tredyffrin Township is a zoning ordinance to establisha scenic historic district near Valley Forge National Historical Park. While this ordinance might have indirect Federal participation, it does not call for State legislative action.

Included in the proposed ordinance is the proposed designation of a "scenic district" within 3,600 feet of the perimeter of Valley Forge.

No new construction or development can occur in the district if it will detract from or conflict with historic values. Construction is allowed if it is naturally shielded from direct observation from within the park. A further "Scenic Peripheral District" is being proposed in a radius of 3,600 to 7,200 feet from park boundaries, While less rigid construction guidelines are proposed in the peripheral zone, construction will not be allowed to detract from the scenic view. Also under consideration by the local government is another proposal that would allow the scenic district to be expanded from time to time to include any area certified by a designated official of the National Park Service as being within the line of sight.

d. Placement of Public Utilities Public utilitiy commissiones could prevent extensions of mains into the historic zone when they would encourage development that conflicts with the goals of preservation. Action by these commissions is essential in order for the new program to succeed.

2. State Action

a. State land Use Management More and more, State government see themselves as strategically situated to plan and manage the environment, particularly in matters of land use management. Some States are coming to the conclusion that local governments are too close to economic and political pressures which help create environmental problems to be sufficiently detached. Furthermore, perspective is limited to their jurisdictions, although environmental and scenic protection problems often go beyond political subdivisions. In many cases, States have decided local governments lack the financial tools and professional capabilities to do a proper job of environmental management. There is a definitive trend in State government to reclaim the traditionally delegated power to control land use. For example, the State of Florida under its policy for "Areas of Critical Environmental Concern" includes improper management of historical resources as one of the reasons for abrogating control by local governments.

In May of 1971, the voters of Pennsylvania approved an amendment to the Pennsylvania Constitution which reads:

The people have the right to clean air, pure water, and to the preservation of the natural scenic, historic and aesthetic values of the environment. Pennsylvania's public natural resources are the common property of all the people, including generations yet to come. As trustee of these resources, the Commonwealth shall conserve and maintain them for the benefit of all people.

The State has not yet enacted legislation that would interpret the amendment so that it can be clearly enforced. It is hoped that the Commonwealth of Pennsylvania will consider these most important historic resources as worthy of a plan for environmental protection either in the absence of local control or in concert with local protection.

A recent example of State action is Vermont's Land Use and Development Act, which has environmental protection as its major goal. One of the objectives is to regulate large-scale, physical growth within the State in order to promote polution control, esthetic values, and protection of open space. Very little local zoning existed in Vermont at the time of the passage of the act, and vacation home development and related construction threatened impairment of the State's unique scenic beauty and natural resources. The law created a partnership in which the State oversees areas outside local government jurisdiction or unzoned areas, as well as large-scale developments that may be too politically difficult for a small town to control.

b. Federal Participation in Local Zoning One of the major recommendations of the Wallace/ McHarg study was the creation of a joint planning body consisting of Cumberland Township, the Borough of Gettysburg, and the National Park Service. Partly because of a lack of planning history in the area and because of the necessity for new authority, a joint planning body, which would have been an innovative step, was never formed.

The participation of the Federal Government in the administration of local zoning implies the partial surrender of the duties and authorities of the municipalities. To achieve this end, action by the State legislature would be needed. Another possibility would be the creation by the State legislature of a zoning district comprised of private lands within the boundaries of the authorized Federal area that would not be taken by eminent domain if developed within the framework of park objectives. Such an act could set limitations on uses and provide for the establishment of a joint planning commission. Specific methods of joint local-Federal zoning would have to be tailored to the requirements of the Constitution of the Commonwealth of Pennsylvania.

c. State Tax Incentive for Preservation of Agricultural Land Much of the land found within the area of visual impact is in agricultural use, just as it was at the time of the battle in 1863. This land use should be encouraged.

Under Pennsylvania statute, a county or other municipality is authorized to designate agricultural "preserves." The law makes it possible for landowners within the preserves to sign an agreement with the municipality accepting agricultural restrictions on the land in return for a reduction in assessed valuation. Under this arrangement the land can be assessed on the basis of its agricultural productivity rather than, for example, on its potential value as a development site. The impetus of the legislation is the preservation of prime agricultural land. However, amendment of similar legislation in other States has permitted inclusion of other open space lands for conservation purposes.

This kind of legislation for the preservation of agricultural land has been criticized in concept because it does not provide for permanent protection of open space and can be used to lower holding costs for long-term speculators. The voluntary nature of such acts and their dependence upon initiative by local government in establishing preserves have further limited the fulfillment of State objectives.

In Adams County, little incentive exists for farmers to enter into preserve agreements because tax assessment of agricultural land is so low. This is a situation subject to change as pressure for development occurs on land close to Gettysburg. The act can be effective as a short-term measure, and its use should be encouraged. An amendment that would allow State payments to municipalities to recoup some of the foregone property taxes would make its use more attractive to local governments.

3. Easements and Federal Lease-Back and Sell-Back

There are two other methods that could be applied in the area comprising the historic and natural scene which do involve large public expenditures. These techniques might be used to control small parcels that turn out to be prime sites for intrusive development. An in-depth study of the area, as previously recommended, will define these parcels. It should also be remembered that Federal easements and lease-back and sell-back arrangements are possible only within or near the authorized boundaries of a national park area.

a. Easements Scenic easements are a practical means of control in certain circumstances. Where the land is not yet under heavy development pressure, such as is the case in most of the areas of concern near the Gettysburg National Military Park and Eisenhower farm, the initial costs for scenic easements are often substantially less than for outright fee acquisition. The property remains in private ownership so owners are not displeased and the government does not have to assume the administrative expenses of a large-scale land holding operation. The property also remains on the tax rolls, although the assessed values

should certainly be lowered.

A scenic easement would not interfere with the possession or basic title of the owner, who continues to have all the rights and benefits of ownership, except those specifically restricted by the terms of the scenic easement document. A scenic easement is concerned primarily with controlling future uses of the land.

b. Federal Lease-Back and Sell-Back Another method of direct Federal action to protect land adjacent to national parks that has been applied in the past is "lease-back and sell-back." This method has been Congressionally authorized in at least two instances: at Antietam National Battlefield and at Piscataway Park. In the Antietam case, in 1960, Congress authorized the acquisition of the outright fee and immediate reconveyance to the former owner, subject to a new deed covenant or a scenic easement retained by the Federal Government.

In 1966, Congress authorized acquisition of the fee in a described area adjacent to Piscataway Park. The legislation authorized the Secretary of the Interior to convey a freehold or leasehold interest in property acquired, subject to conditions that assure him control over the property and its use in accordance with the purposes of the park. Sales or leases were to be made to the highest bidder with receipts going into the Land and Water Conservation Fund.

The Piscataway method of control does not depend upon either local zoning, the willingness or ability of the landowner to withstand economic pressure, or upon suspension of Federal condemnation. It relies on traditional methods of covenant enforcement. The major disadvantage of this method is that it may require the appropriation of funds sufficient to acquire the fee in all the property within a designated area. This would be partially offset, however, through the subsequent sale or lease of such lands.

The lease-back and sell-back of development rights of lands owned in fee often involves the public policy issue of the taking of one person's property and the selling or leasing of it to another. This is not a new method in Federal programs, and is essentially the tool to implement the Federally-funded urban renewal programs of the past 25 years.

4. A Final Alternative

Each of the proceeding alternatives concerning what can be done to protect the important and nationally significant cultural values inherent in the Gettysburg area—acquisition, land use controls, Federal purchase of development rights, Federal lease or sell back, Federal participation in local zoning or Federal-local cooperation—rests on a premise that the Federal government must either purchase protection or cajole the State and/ or local governments to act to protect such nationally significant values. However, there is another non-monetary solution—authorization for the National Park Service to regulate and control detrimental land use activities. Legal research concerning other areas of the National Park System has concluded that there is Constitutional authority to regulate private lands to protect national holdings and that the Constitution also appears to authorize the regulation and protection of nationally significant resources regardless of ownership.

Accordingly, a final alternative is to seek Congressional approval to establish a federal regulatory framework within which at least the most critical national interests could be protected—without acquisition—should the State and/ or local governments fail to act in a responsive fashion.

Such an approach would require the shaping of new legal tools; could stress the traditional governmental authorities in the Gettysburg area; and it could also, perhaps inevitably, lead to another landmark case concerning the balance between preservation of deeply significant national values and State, local, and private prerogatives. Nevertheless, the protection of the Gettysburg environment is, in a real sense, a responsibility of trust to all citizens of this country. Such a responsibility cannot be ignored.

These, then, are some of the things that can be done to institute a new era of preservation. Many of the problems that beset Gettysburg are common to other national park areas, and some of the solutions suggested in this report might be applied elsewhere. If there is one truth to be learned from the Gettysburg experience, it is that one jurisdiction or one agency of the government cannot be expected to deal successfully with all the problems that demand treatment. A consortium approach to Federal planning appears to be the only means of accomplishing the objectives of preserving the best of our historic properties.

Appendix Part 1 The Federal Properties

A. Gettysburg National Military Park

The Battle of Gettysburg was the climactic engagement of the Civil War. General Robert E. Lee's Confederate Army of Northern Virginia had invaded Pennsylvania in 1863 to move the arena of war and devastation from Virginia to the rich North, hoping to give the Old Dominion a chance to recuperate, to disrupt Federal military operations in the East, and to win a victory that might be decisive. The Confederates encountered George G. Meade's Army of the Potomac west of Gettysburg, and nearby forces gathered rapidly. On July 1, portions of the two armies met west and north of the town in a bloody battle classic in its illustration of the tactics of that time. Having superior numbers, the Confederates prevailed and drove the remnants of decimated Union regiments through the town south to Cemetery Hill, where they rallied and prepared to fight again.

The armies concentrated rapidly that night, and on the following day 170,000 men with horses and equipment gathered in and about the rural community. The Union Army occupied a hook-shaped position on Cemetery Hill, Cemetery Ridge, Culp's Hill, and the Round Tops; the Confederates formed in a concentric line on Seminary Ridge, in the town, and northeast of Culp's Hill. July 2 was a day of great confusion and little coordination, savage fighting, and Federal improvisation. The left of the Union force advanced from its line on Cemetery Ridge to tempting ground along the Emmitsburg Road in a movement that occasioned one of the lasting controversies of the war. The Confederates assaulted this new attenuated line in heavy but uncoordinated attacks and destroyed it, making the place names of that action—Little Round Top, Devil's Den, The Wheatfield, and The Peach Orchard—household words. But their success was partial and Pyrrhic. The Confederates also gained some success that night in an attack on Culp's Hill but, after prolonged fighting on the following morning, the Federal army eliminated these gains.

There were two dramas on the afternoon of July 3. One of the greatest cavalry battles of the war, a drawn fight, took place in the fields three miles east of Gettysburg (the area remains essentially pristine, but little of it is in public ownership). At the same time, a mighty artillery duel was taking place on the main field as Lee prepared to attack the Union center. This thrust, "Pickett's Charge," was one of the grand spectacles of American history. After two hours of incessant cannon fire, 12,000 Confederate infantry in well ordered lines carried their colors toward Meade's center on Cemetery Ridge but failed to break the Union line. The Army of the Potomac had prevailed, and Lee ordered his crippled army back to Virginia. Never again in the two years of war that followed would he be able to launch a major offensive

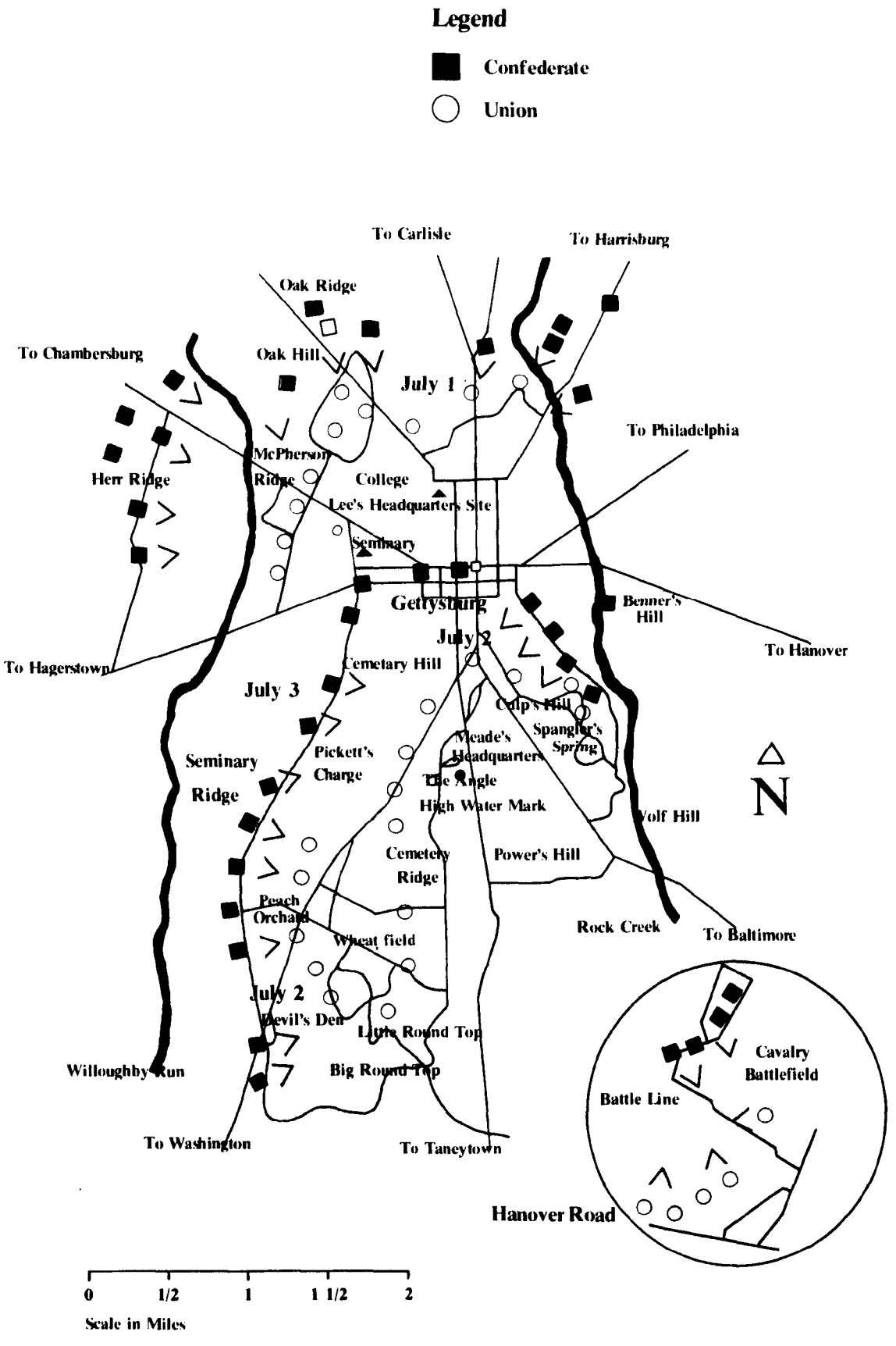
Nearly 10,000 men were killed or mortally wounded and buried in shallow graves on the field. In order to provide decent burial for the Federal dead (the Confederates were removed to the South after the war), Governor Curtin of Pennsylvania and his agent David Wills purchased 17 acres on Cemetery Hill for what became the Soldiers' National Cemetery. It was at the dedication of this cemetery on November 19, 1863, that President Lincoln gave his Gettysburg Address.

Soon after the battle and the establishment of the cemetery, some Gettysburg citizens began one of the nation's major pioneer preservation movements with the goal of preserving the battlefield as a national shrine. The vehicle for this movement was the Gettysburg Battlefield Memorial Association. Fueled by donations from the northern states, particular those having troops in the battle, the Association's aim was to acquire land occupied by the Federal forces, place monuments upon it in the positions occupied by the regiments that had defended it, and develop avenues by these memorials to make them readily accessible to visitors.

The Association drafted simple but effective rules governing the materials used for memorials and their inscriptions and location, and, appealing to State pride, succeeded in obtaining state cooperation. The Association's board was essentially local until the 1880's, when it was taken over by the Grand Army of the Republic. The Association existed until 1895, when its debts and assets, including 500 acres of land and 300 monuments, were transferred to the War Department and the new national park.

A park commission of three men had been formed in 1893 to mark positions of both armies on the field, open avenues, purchase or condemn needed land, accept the donation of land from the Association, and to do historial research needed to accomplish their task. It was this commission that was on hand at the creation of "Gettysburg National Park" two years later to take control both of the Federal land therein apart from the cemetery, and the land of the Association.

Battle of Gettysburg



In the 1890's the battlefield was the subject of a key Supreme Court decision in the historic preservation movement. It had been bisected by a railroad spur that ran south from the town across the field of "Pickett's Charge" to the rear of Little Round Top. Then, in 1893, the spur was incorporated into a trolley line designed to carry visitors on a loop over much of the field, dropping them at designated stations at key points along the way. Although broad avenues for horse drawn vehicles had been located throughout the park, the work of the "trolley vandals" was not to be tolerated. Congress agreed and passed a resolution urging that the trolley holdings be condemned. This was done, but the trolley company, the Gettysburg Electric Railway Company, appealed on the grounds that preserving and marking lines of battle were not public uses permitting condemnation.

The appeal went to the Supreme Court, which on January 27, 1896, rendered the decision that the condemnation had indeed been constitutional and that the preservation and marking of battlefields was a public use "so closely connected with the welfare of the republic itself as to be within the powers granted Congress by the Constitution for the purpose of protecting and preserving the whole country."

The War Department held custody of the battlefield until 1933. During its management of nearly forty years, it constructed approximately 30 miles of excellent avenues, acquired 2,116 acres of land, and managed the park as a great memorial. In this period, in keeping with the War Department's concept that battlefield parks could be used for military training, the field of "Pickett's Charge" became the site of Camp Colt during World War I, and the Army utilized the park for military training at other times. It was during this period also, in 1915, that the War Department took measures to control the numerous persons who offered their services as guides to tourists who visited the park. Only such guides as were deemed capable were licensed and authorized to charge prescribed fees for their services within the park. This special service has continued throughout the years and must loom large in the early history of park interpretation.

Although the Government added tracts of land here and there, Gettysburg underwent few changes prior to the mid 1950's. Park headquarters was located in the second floor of the post office in downtown Gettysburg, where there was a large exhibit room decorated with photographs of the park and the excellent relief map of the battlefield area. Visitors to the park used commercial guidebooks exclusively until the 1930's, when the Service made its own literature available to them. Field exhibits apart from tablets and markers came into use during the World War II period.

The end or World War II marked the beginning of major changes at Gettysburg. Travel increased and with it commercial development. Vast improvements in highway systems in the 1950's simplified travel to Gettysburg, and park improvement, under the Service's Mission 66 program, made the battlefield more attractive.

This ten-year program was instituted throughout the National Park System an effort to repair and improve facilities that had suffered from neglect during the war and that would be needed to help the parks meet expected heavy visitation. Mission 66 at Gettysburg meant a number of things: the resurfacing of park avenues, the construction of a new visitor center and offices, the repair of the Gettysburg Cyclorama and its installation in the visitor center, new field exhibits and pullouts on the park's auto tour route, a new High Water Mark Walking Tour, and a new vehicle bridge over the Railroad Cut. Coupled with Mission 66 in this and other Civil War areas was a desire to have facilities as complete as possible during the Civil War Centennial.

Gettysburg had experienced a building boom after World War II as had other communities, but the Gettysburg boom threatened the battlefield itself. The Colt Park addition crowded the field of "Pickett's Charge," houses went up on Oak Ridge and along the Emmitsburg Road, and a subdivision threatened the McMillan farm. During the late 50's and 60's commercial development, particularly motels, sprung up along Steinwehr Avenue followed during the centennial by numerous and varied eating places and museums.

In this period, the park administration countered pressures with limited success by attempts to purchase threatened tracts of land. Funds were scarce, and in the 60's their expenditure was limited because of a restriction imposed by Congress requiring local effective zoning. Another factor inhibiting land acquisition was the Federal Government's reluctance to acquire real estate and remove property from tax rolls. Too, land restrictions existed in the form of a 3,874-acre ceiling imposed through the Sickles' Map by the act establishing the park. Numerous tracts of land including those along the Baltimore Pike and at the site of the great cavalry battle remain

outside proposed boundaries, because they are beyond the ceiling limit.

The park has been concerned for years over the tracts owned by the Adams County Poor Farm. These tracts, which are highly significant in the first day's battle, cannot be donated under State law, and by Congressional committee decision they cannot be acquired by the park except through donation. As a result, the county sold some country land on the Carlisle Road north of Howard Avenue, which has been developed for commercial purposes. A few years ago, a tract south of Barlow's Knoll, site of the historic farm buildings, was slated for use by the county's Vo-Tech School, a thoroughly unacceptable intrusion. Because the proposal included Federal funding from the Department of Health, Education, and Welfare and because the construction of the school at that location constituted an adverse visual affect on the park as a National Register property, the Advisory Council on Historic Preservation reviewed the action. In the course of review and the discussion of efforts to mitigate the intrusion, local parties found a suitable site off the battlefield, and this threat dissipated. However, permanent preservation of this tract has yet to be accomplished.

No preservation problem at Gettysburg engendered more heated reaction and debate that that of Thomas Ottenstein's "National Tower," described in the introduction of this report. Another intrusion dealt with in recent years is the Gettysburg National Museum of "Electric Map," one of the oldest, if not the oldest, private museums at Gettysburg. This museum, located opposite the Taneytown Road entrance of the National Cemetery, had a visitation comparable to if not exceeding that of the park's visitor center. The museum features a large and fine collection of Civil War artifacts and a popular program, but was objectionable as a commercial venture opposite the National Cemetery entrance. It was also an intrusion on the historic scene and the word "National" in its name proved misleading to many visitors, who assumed it to be a park installation.

The park acquired the museum in 1972 and now operates it through the Eastern National Park and Monument Association. Although it pleases visitors, many of the objections to it that were leveled when it was a private enterprise still remain and are strong arguments for its removal. Plans call for its eventual demolition and removal of its contents to a building at another location. The disposition of the "Electric Map" will be complicated, because the township amusement tax collected as a part of its admission fee provides a significant portion of the township revenue. Thus, interference with this tax could cause repercussions and would no doubt be locally unpopular.

Helicopters have also provided problems for the park. During the centennial period a heliport opened along the Emmitsburg Road a short distance from the battlefield. The proprietors offer rides over the park for a fee. At times of heavy visitation, there has been constant helicopter travel over the park creating both a visual and audible intrusion. Although the proprietors of this attraction have cooperated by not routing flights near the Cyclorama Center and National Cemetery, the intrusion elsewhere remains.

The Service is preparing a new master plan for the park that will replace that approved in 1966 and deal with problems and opportunities which have become apparent since that time. This plan will include the military park and national cemetery but not the Eisenhower National Historic Site.

The plan will, of course, address a variety of park needs and facets of park management. It will deal particularly with the problem of visitors to the Gettysburg community as well as the park and propose the location of a new visitor center north of Gettysburg that will accommodate travelers approaching the park over a proposed Route 30 bypass. The target date for the completion of this plan is May, 1977.

B. Eisenhower National Historic Site

Eisenhower National Historic Site was the last home of President and Mrs. Eisenhower, and it was said to have been the only residence they ever owned. Eisenhower had commanded Camp Colt on the field of "Pickett's Charge" during World War I and was attracted to the Gettysburg area as a residence after retirement from active military service. Thus it was in 1950 that he purchased a 230-acre farm adjoining the park.

The Eisenhowers enlarged and modernized the ante-bellum farmhouse and other buildings and began raising cattle. During his presidency, they used the farm as a retreat from the White House, and in 1961 it became a full time residence and remained Eisenhower's home until his death in 1969. The same year the

Eisenhowers donated the farm and house to the Federal Government, and on November 27, it was declared a national historic site. The President retained a life estate in the farm, and Mrs. Eisenhower occupies the house and 14 acres surrounding it under a special use permit from the National Park Service.

The historic site contains 493 acres, the Eisenhower farm, plus the Alton Jones property that was managed as part of the Eisenhower farm. The National Park Service proposes to add other acreage to the west and south. Additional land will include tracts that slope from the farm to high ground along the Emmitsburg Road and those encompassing the Marsh Creek Valley immediately to the west.

The Eisenhower National Historic Site shares most of the environmental problems of the adjacent battlefield. Like that field, it is threatened by numerous changes associated with the increasing urbanization and development of the area.

The problem with Gettysburg National Military Park, Gettysburg National Cemetery, and Eisenhower National Historic Site is that while, with certain exceptions, much of the land that is historic—the land where Eisenhower walked, Lincoln talked, and soldiers fought—is contained within park boundaries, most of the setting for this land is not, and to maintain the integrity of the former, it is necessary to maintain the integrity of the latter. The purpose of these parks is to preserve the appearance and atmosphere at the time the events occured so that others might experience them vicariously.

The ability, then, to preserve the essential nature of the three Federal properties in the Gettysburg area, as they are presently constituted, lies with the jurisdictions that surround them. It should be remembered, and indeed, emphasized, that these non-Federal jurisdictions contain significant sections of the battlefield, and other historic resources worthy of preservation, as well as encompassing much of the historic setting for these areas. Just as there are factors operating with the jurisdictions to protect these resources, there are others that work against preservation. In order to understand the situation, we must take a close look at the history, authorities and the political, social, and economic motivators that influence decision-making in the Borough of Gettysburg, Cumberland Township, and Adams County.

Part 2

History and Development of Adams County the Borough of Gettysburg and Cumberland Township

A. Settlement

King Charles II of England included the 526-square mile area of South Central Pennsylvania that today is known as Adams County in a grant to William Penn in 1681. There is little evidence of earlier Indian settlement. While vanguards began to arrive in the area during the early century. First to settle in what is now Adams County were English Catholics, who moved up from eastern Maryland in 1727. Germans under Penn's authority arrived in 1734, and the Scotch-Irish settled in the western area of the county in the second half of the 18th century, becoming the most numerous and influential group. Penn's claims conflicted with those of the Calverts in Maryland, and disagreement lasted until completion of the Mason-Dixon survey in 1767. The Mason-Dixon Line forms the southern boundary of Adams County where it borders Maryland.

The three jurisdictions originally established in Pennsylvania were Philadelphia, Bucks, and Chester Counties. As areas to the west became settled, others were formed for legal and communication purposes, Lancaster being the fourth, followed by York organized in 1749. The first Pennsylvania county west of the Susquehanna River, York originally contained the area now in Adams County. The next step was the creation of townships to serve as the basic level of local government. In the mid-18th century, Cumberland Township, now containing the Gettsburg National Military Park, became one of the twelve jurisdictions subdividing York County. In the following decades, the area that later came to be known as Gettystown grew as a market center within the township.

By the turn of the century, population in the western half of York County had grown appreciably. Settlers had to travel over 40 miles to the county seat in order to attend court, pick up mail, and conduct public business. Because of the distance, citizens petitioned the new State government for a division, which resulted in the creation of Adams County on January 22, 1800. Named for the President at the time, John Adams, the new county had a population of 13,172.

The settlement of Gettystown, soon to be called Gettysburg, became the judicial center of Adams County, the choice being partly made because of an offer by the founder of the settlement. James Gettys, and other citizens to provide land and finance the construction of public buildings. In 1800, Cumberland Township had a population of 1,263, with approximately 500 of those residing in Gettystown.

In 1806, the State legislature passed an act incorporating Gettysburg as a borough, allowing the establishment of a form of government distinct and separate from the township.

B. Adams County

The population of Adams County has grown slowly, but steadily, since its creation. The slow growth reflects the economy, which has always been rooted in agriculture.

Lack of major growth also reflects the bypassing of Adams County by any principal transportation thoroughfares in the 19th and 20th centuries. Adams County had no part in the canal period of transportation important in the development of Pennsylvania and New York. The railroad came late to Adams County, and when it did, in 1858, it was a feeder line between Hanover and Gettysburg. No interstate highway routes cross Adams County, and none are planned. Similarly, the area is not served by an interstate airport.

The growth that has been conducive to a rural lifestyle in the county is beginning to conflict with the pattern of concentrated growth in Gettysburg and Cumberland Township which began after World War II. The conflict is and will be evident when proposals for planning and land use controls are discussed. The following statistical chart shows population increases from historic times to the present.

The 1970 population figure of 56,937, spread over 526 square miles, still indicates a rural area. Gettysburg and Cumberland Township are the population core, accounting for about one-fifth of the county's population. In all, the county contains 33 municipalities: 21 townships and 12 boroughs. Twenty-six percent of the population is classified as urban, while the remaining 74 percent is considered rural. However, the latter categorization does not necessarily mean a farming population. The number of those involved in farming has, in fact, been declining since World War II. Studies show that approximately 85 percent of Adams County

Jurisdiction	1800	1810	1860	1900	1940	1960	1970
Adams County	13,172	14,500*	28,006	34,496	39,435	51,906	56,937
Cumberland Township	1,263	863* *		1,600	1,787	2,925	3,497
Borough of Gettysburg	Not In corpor ated	725			5,916	7,960	7,275

* Approximate

* * Reflects Creation of Borough in 1806

residents classified as rural are non-farmers.

The development of Adams County has been strongly influenced by its physiography. Located on the eastern side of the Appalachian Mountains, Adams County is in the southern section of the so-called Great Valley, including Cumberland, Lehigh, and Lebanon valleys, all of which have rich, productive farms and numerous small towns. The South Mountains of the Appalachian Range, having many high ridges, form the western boundary of the county. Numerous orchards cover the foothills of the South Mountains, helping to make Adams County the largest apple processing center in the world. Dairy and livestock farming are found in the Gattysburg Plain and intermountain valleys throughout central and southeastern Adams County. Major portions of the South Mountains in the western part of the county and the Pidgeon Hills, near the eastern edge, are covered with forests. The Commonwealth of Pennsylvania owns large areas of these forest lands as a conservation measure.

Two major watersheds almost equally divide the county. About half of the area is drained northward into the Susquehanna River by the Conowago River and its tributaries, while the other half of the county is drained south and west into the Potomac River by the tributaries of the Monocacy.

C. Adams County Government and Planning

The State Constitution authorizes a county governing body, consisting of a popularly elected three-menber Board of Commissioners. The commissioners' responsibilities include the following:

(1) the preparation of county budgets and the levying and collection of county taxes:

(2) service as the Board of Elections responsible for voter registration, preparation of ballots, and official ballot tabulation;

(3) responsibility for the building and maintenance of county buildings and bridges. In this respect, the commissioners handle the disbursement of a "liquid fuels tax fund," which is returned to the county by the Commonwealth. Approximately 50 percent of this fund is used for building and maintaining over 40 county bridges, and the balance is handed over to townships and boroughs on a per capita and mileage basis for the improvement of township and borough roads. (The county itself does not maintain roads.) All road improvements must be approved by the Pennsylvania Department of Transportation;

(4) responsibility for the county prison, and for providing services and facilities to the county courts and to court-related activities;

(5) the power to make appropriations and to authorize bonds with the approval of the courts; and

(6) the authority to appoint all county employees, except for those who serve other elected officials.

The Board of Commissioners also appoints the members of the Adams County Planning Commission, who in 1965, were given the responsibility of preparing a plan to guide orderly development. The consulting firm of Clifton E. Rogers and Associates produced the *Comprehensive Plan: Adams County* in 1971.

The planning commission and the comprehensive plan serve the county in an advisory capacity. While the county may zone, it has not yet done so, nor does it appear likely to do so in the future. One of the reasons, which will be explained in detail later, is that under State law the zoning authority of the borough and township is preemptive.

Planning activity has increased since 1972, not only in Cumberland Township and the Borough of Gettysburg, but in many of the 33 jurisdictions in Adams County. As of 1974, nine municipalities had adopted comprehensive plans; four others, not including Cumberland Township, had plans pending adoption; 10 communities, primarily in northeastern Adams County, had drafted zoning ordinances; and 24 municipalities had subdivision regulations.

The county's land use plan does not greatly detail recommended land uses in the county. It recommends reinforcement of the existing land use patterns and does not conflict with the plans and zoning ordinances of the varied townships and boroughs. The fundamental recommendation of the county planning program regarding urban and urbanizing areas of the county is, in fact, to encourage intensive borough and township activity in planning and land use control.

D. County Revenues and Economy

The total revenues for all of the general operating funds of Adams County have increased substantially in recent years. Between 1964 and 1972, county revenue rose from $808,655 to $2,637,587. The principal source of income is derived from the real estate tax, which now accounts for about 40 percent of the total revenue and over 50 percent of county taxes. The county made its last real estate re-assessment in 1976, At that time properties were assessed at 40 percent of market value, a figure realistically below 30 percent of market value in 1976 dollars. There are no State or county regulations determining the frequency of assessments.

Other major county revenue sources include a per capita tax of about six percent of total revenue, and a personal property tax of four percent. State grants provide about 12 percent of the total revenue, and Federal revenue sharing another six percent. The primary expenditures of the county are for operation of a county home and county jail, other correction expenses, child welfare, and general government, including the operation of county courts.

Despite large amounts of land devoted to agriculture in Adams County and attention given to farm production, the major economic activity is manufacturing, and trends in the economy are dependent on the potential for its growth. The value of farm production in the county is estimated to be less than 25 percent of the value of production in manufacturing. The manufacturing activity of Adams County is diversified, with a high proportion of effort related to the furnishing of food and clothing. The farm product of greatest value is fruit, considerably above the next most important, livestock.

E. The Borough of Gettysburg

The Borough of Gettysburg has continued its traditional functions as a market and governmental center. From the late 1940's and into the 1960's, as population figures attest, the Borough of Gettysburg filled in and residential suburbs began to grow in Cumberland Township, principally to the southwest and northwest. At present no more substantial, undeveloped parcels remain within the borough limits, and a borough zoning height limitation will probably ensure a continued spreading-out growth pattern. Annexation of Cumberland Township areas by the borough is not seen likely in the foreseeable future.

Some of the growth in population of the borough and township since 1950 can be attributed to enrollment increases at Gettysburg College and the Lutheran Seminary. These two institutions, drawing students primarily from the mid-Atlantic states, grew from 1,231 students in 1950 to 1,875 in 1970. The institutions' present policy is to stabilize the size of the student body at or near 2,000 students.

The growth of the borough, as we have mentioned, has stabilized, with very few vacant areas left undeveloped. New residential buildings are spreading into Cumberland

Township, Gettysburg's suburb. The population is expected to remain constant between 7,000-7,500. The borough has enacted zoning ordinances over the past four years, which should help stabilize new construction and help control and reduce the intrusions to the adjoining military part and cemetery.

The borough is governed by a strong City Council-weak mayor type of local government. The voters elect nine borough council representatives and a functionary mayor. The Borough Council appoints the planning commission, an historic district review board, a zoning hearing board, and other municipal boards and authorities, as well as an administrative city manager.

F. Borough Revenues and Economy

Visitors began coming to view the battlefield at Gettysburg even before the end of the Civil War. Relatives of the men who fought in the pivotal battle made up a large portion of early visitors. By the time of the establishment of the National park, in 1895, a tourist industry to provide goods and services to the ever-increasing number of visitors was well underway. Tourism has grown to be the major economic factor in Gettysburg and Cumberland Township, and, thus, a significant county factor as well.

The National Park Service and others associated with or concerned about Gettysburg often claim that the presence of a large and important national battlefield in the area is, because of the large number of tourists who visit it, a boon and not a hindrance to the local economy. While much of the hard data supports this position, they do not take into account such negative aspects as increased traffic congestion and lack of parking, seasonal employment and lower paying jobs, and the preemption of land that could have been devoted to unrealized industrial or residential development. The hard economic data cannot measure the impact of the park on the quality of life in the Gettysburg area. Studies do reveal that in 1970* , about $103,013 of Gettysburg's municipal revenues were attributable to tourists, with an additional $6,921 of real estate taxes paid indirectly by tourists. This amounts to $109,934, or 30.6 percent of total revenues. Similarly, 33.5 percent of total revenues for Cumberland Township are attributable to tourists.

As is the case with most local governments, the Borough of Gettysburg finances municipal expenditure principally through real estate taxes. Approximately 50* percent of the borough's revenue is derived from taxation of real estate, even with a large portion of the borough's land in non-taxable institutional and governmental status. The other two principal revenue sources are an amusement tax of 10 percent, levied primarily on tourist-oriented commercial facilities in the borough, and revenue from parking meters, which again are aimed at the non-borough resident. Both the amusement tax and the parking fees provide about 15 percent each of the borough's total revenues. Unlike larger towns, Federal and State grants provide a very small portion of Gettysburg's money—less than three percent in 1970.

Two other economic factors related to tourism in the Gettysburg area should be mentioned. First, it has been estimated by the Pennsylvania Department of Community Affairs that tourists currently pump between 15.1 and 20.8 million dollars into the local economy annually, and that this amount is multiplied two-fold as the tourist dollars are respent. Second, and a factor often overlooked, is the flow of funds generated by the National Park Service itself. Out of a fiscal 1975 budget of $985,900, approximately $978,500 were spent locally. About 83 percent of the park budget is payroll, and an additional $100,000 are spent locally for annual construction and rehabilitation projects.

The tourist industry is the most important element in the Gettysburg employment segment of the economy. Retail trade and personal services, the two industries most directly affected by tourism, comprise 28.5 percent of Gettysburg's resident employment, with 19.6 percent of those in retail trade. Manufacturing accounts for 17.7 percent, and educational services for 17.5 percent of resident employment.

Since 1975, the entire borough of Gettysburg has been listed in the National Register of Historic Places as an essential element of the 1863 battle area. The Gettysburg Battlefield Historic District, distinct from the Gettysburg National Military Park which is a separate National Register entry, was nominated by the Pennsylvania Historic Preservation Officer and entered on the Register on March 19, 1975. The District contains 11,820 acres, including the 3,874 acres of the Gettysburg National Military

* All figures 1970: Source: *A Study of the Economic Impact of the Gettysburg National Military Park and Tourism on the Gettysburg Area; Pennsylvania Department of Community Affairs, 1975.*

Park, and more fully encompasses a geographical description of the 1863 battle that began north of the borough, involved fighting in the western half of the borough, and concluded south of the borough.

Other properties in the borough that are listed separately on the National Register are:

(1) The Adams County Courthouse at Baltimore and W. Middle Streets;

(2) Pennsylvania Hall, on the campus of Gettysburg College; and,

(3) Old Dorm, Lutheran Theological Seminary, on the Seminary campus.

The previously mentioned 25-block Gettysburg Historic District, designated for its architectural significance and importance in the original development of the borough, is not separately listed in the National Register but is included as part of the Gettysburg Battlefield Historic District.

The borough has not initiated a survey of historic structures and places. A survey is underway, however, by the recently formed Historic Gettysburg-Adams County, Inc. Using volunteer helpers, the organization has surveyed and photographed over 450 structures.

G. Cumberland Township

Population figures that were presented earlier sharply reflect the trend, well underway, of Cumberland Township serving as a suburb to the Borough of Gettysburg, which it nearly surrounds. The population of the township in 1880 stood at 1,512. By 1940, that figure had only reached 1,787. Over the next 30 years, however, the population of the township nearly doubled to 3,497 in 1970, as Gettysburg "filled-in", and the area conformed to the post-World War II American pattern of suburban growth.

Cumberland Township is the jurisdiction whose future development and pattern of development will have the greatest direct effect on the Gettysburg National Military Park and the Eisenhower farm. There is an apparent conflict between the past history of the township and its entrenched traditions of independent farming and a rural lifestyle and the growing suburbanization of that area of the township most influenced by the borough's overflow. The objectives and the administration of Gettysburg National Military Park and the Eisenhower farm are caught in the middle of that conflict, a conflict that has many precedents in post-World War II America.

The voters of Cumberland Township elect a three-member Board of Supervisors as their governing body. The supervisors appoint necessary municipal officers, authorities, and commissions. The five-member planning commission is one of the bodies appointed by the Board of Supervisors.

Cumberland Township first attempted to enact a zoning ordinance in the early 1960's, which was dropped from consideration because of widespread public disapproval. Reportedly, many residents viewed the proposed ordinance as principally benefitting the National Park Service at the expense of private land owners. Long-time residents of Cumberland Township, many of whom are owners or associated with large farms in the township, can be expected to resist any hint of land use planning and legal controls over the land. New home owners, many of them recently arrived in the Gettysburg area and living in a suburban relationship to Gettysburg, are bringing and will continue to bring demands for new services, roads, schools, shopping areas, parks, and other facilities nearer to the newly developing residential areas. Discussion and demands for planning and land use controls in such a situation are inevitable, and are well underway in the township. The Pennsylvania Department of Community Affairs, through its Bureau of Planning, has tried to foresee the problems and has worked with the township government to draft a comprehensive land use plan. If the plan is adopted, the Bureau can be expected to suggest zoning controls to help implement the plan. Resistance to the comprehensive plan is developing, primarily among large land owners who, so far, do not feel threatened by development and wish to maintain the existing legal controls over land use in the township, which consist of simple regulations governing subdivision requirements.

The National Park Service is looked upon with suspicion by many elements within the township and will be a continuing centerpiece of the discussion over land use controls. The Federal Government, through the National Park Service, has ownership of 17.9 percent of Cumberland Township land, or 3,785 acres. Another 198 acres is held by the National Park Foundation for expansion of the Eisenhower farm. The resentment of residents to Federal ownership can be traced to the 1895 Act creating the national military park, and the ensuing Supreme Court decision that upheld the Federal Government's ability to employ the power of eminent domain for park purposes. The residents resisted that original action, and some land owners in Cumberland Township have resisted suggestions of park expansion over the

ensuing 80 years. A major element in the resistance to expansion, as well as a factor in local antagonism toward the National Park Service, has been the non-taxable nature of Federal land. Local citizens and officials talk of an "erosion" of the tax base.

H. Township Revenues and Economy

The financial situation of Cumberland Township reflects the unnatural economic situation of a large nearby tourist-related attraction, the Gettysburg National Military Park, even more so than does the Borough of Gettysburg. The Pennsylvania Department of Community Affairs reported that in Cumberland Township in 1970, $33,633 of municipal revenues were the direct result of tourism, with an additional $597 attributable to indirect real estate taxes paid by tourists. This amounted to $34,230 or 33.5 percent of total revenues. The corresponding percentage of the Borough's revenues was 30.6 percent.

The largest source of Township Revenue is derived from amusement taxes, a seven-percent levy placed on commercial enterprises that cater to tourists drawn to Gettysburg because of the Gettysburg National Military Park. Nearly 33 percent of total revenue is from the amusement tax. Another 30 percent of Cumberland's revenues is from real estate taxes. The third primary source of revenue for the township is through State highway aid derived from the highway-user tax levied on gasoline-related products by the State.

Cumberland Township is the jurisdiction that feels the greatest impact of the tax exempt status of the National Park Service lands in the Gettysburg area. With 3,785 acres of the Township in National Park Service or National Park Foundation stewardship, this land constitutes over 17 percent of the Township's land area. Other tax exempt lands in the Township, primarily school district land, county government acreage, and church property, account for only an additional 255 acres. While this situation might appear to impose a severe hardship on the township, documentation produced by the State refutes any such claim. The township has a relatively minor amount of land in tax exempt status compared to other jurisdictions. The total township tax exempt acreage is 18.5 percent of total land, while the Borough of Gettysburg, primarily because of the College and Seminary has 36.6 percent of its acreage in tax exempt status. Nine of 33 jurisdictions in Adams County, in fact, have a higher percentage of land in a tax exempt status.

While no in-depth picture of the Gettysburg economy has been presented, an interesting conclusion of a 1975 study by the Pennsylvania Department of Community Affairs, entitled *A Study of the Economic Impact of the Gettysburg National Military Park and Tourism on the Gettysburg Area,* is of relevance to both the economy of Cumberland Township and the Borough of Gettysburg. The report commented that:

The residents of Gettysburg and Cumberland Township are understandably more oriented toward the employment sectors related to tourism. Although tourism and manufacturing industries are not mutually exclusive, certain other local factors (soil limitations, water supply, sewage, etc.) mitigate against large-scale industrial development. It seems evident that despite the lower paying and seasonal jobs associated with tourism, that the local economy would be worse off, not better, without the tourist dollars and jobs.

Part 3

Planning in the Gettysburg Area

A. Introduction

The bitter legal and emotional struggle that surrounded the construction of a 307-foot observation tower overlooking the Gettysburg National Military Park ended with the building of the tower. It is now the dominant element of the Gettysburg landscape. The height and metallic color of the tower intrude upon the pastoral scene of rolling hills and farmland surrounding the Borough of Gettysburg and its low-rise scale, where church steeples and public building cupolas formerly were the highest man-made features. The presence of the tower is, in large part, an excellent example of what can easily occur when there is no legal control on the use of the land.

The tower controversy, which reached a climax in the courts in 1971-72, has led to changes in the approach to problems in the Gettysburg area and served as a stimulus to those concerned about protection of the historic identity of Gettysburg. At least two identifiable and beneficial developments have occurred since that period. First, the National Park Service has taken significant steps to become a part of the Gettysburg community, and there is an easing of local animosity. Second, the three principal local units of government, working with the Commonwealth of Pennsylvania, have begun to undertake comprehensive planning and the first hesitant steps to initiate land use controls.

The earlier total reluctance of the municipalities to enact land use controls was the subject of criticism by the court in the 1971 decision against the Commonwealth of Pennsylvania's request for a permanent injunction against the tower. The court had criticized Adams County, Cumberland Township, and the Borough of Gettysburg for not previously attempting to remedy the excesses of commercialism and intrusions to the historic Gettysburg scene, and advised those opposed to intrusion to insist that local officials enact appropriate ordinances and adopt comprehensive plans for the area. The recent moves to undertake plans and control land use, as we shall see, owe as much to the increased speed of growth around Gettysburg, and the reaction to that growth as it concerns the protection of historic resources.

B. Land Use Control Background

The application of public powers to restrict the use of privately owned land is a relatively recent development. Most laws in America before the twentieth century related only to those uses considered a menace to life. Colonial Boston's segregation of the storage place for gunpowder from the center of the city was one of America's first recorded acts of "zoning". The development of zoning ordinances, the most widely accepted and practiced form of land use control, arose with the recognition of the necessity for dealing with the problems created by the concentration of people in cities. From the migration to the cities and the unplanned growth of these cities came zoning to help regulate the uses made of land within city boundaries. New York City enacted the first comprehensive zoning ordinance in this country in 1916. Enforcement of esthetic standards through the zoning power followed in due course and was supported by the courts.

Zoning is one of the most important means of putting community plans into effect. The power to zone is derived from the police power of the State, a basic power reserved to the States by the Constitution under their authority to protect the public health, welfare, and safety. States have generally vested the zoning power in counties, towns, and cities, and left it up to these jurisdictions to enact or not enact zoning. Most States, including Pennsylvania, have enacted enabling legislation to guide municipalities in the specific use of the zoning power. The State Enabling Act defines the scope of zoning, procedures for adoption of a local ordinance, the composition of the zoning board and its powers and functions, and methods for modifying the ordinance. Pennsylvania has given the power to zone to its counties, but if a municipality within a county, such as a borough or township, enacts its own municipal zoning, the municipality's ordinance becomes the zoning law for the boundaries of that locality, thereby superseding that of the county. Or, in the absence of county zoning, which is the situation in Adams County, a municipality can enact zoning that will remain in effect even if the county decides to enact county-wide zoning at a later date.

It has been the history of zoning in America that municipalities resort to zoning as a reaction to growth. As long as an area remains essentially rural with few concentrated areas of population, control over the use of land for the common welfare usually is not deemed necessary. Typically when a village expands to a town and

the boundaries of a town become indistinguishable in the suburban pattern of growth, then zoning and debate over what particular land uses are desirable become issues.

The long-time residents, often farmers of large tracts of land, feel threatened by discussion of controls on their land. They are joined by the more recently arrived commercial interests and real estate speculators who have benefited from the situation of growth and lack of land use controls. The Gettysburg area presents a current case study of this pattern. The Gettysburg situation has the added ingredient of the major Civil War battlefield as an element and an issue over land use controls.

Zoning, it should be pointed out, is not a substitute nor an alternative for a general plan, sometimes termed a comprehensive plan, for a community. The zoning ordinance and the zoning map that delineates districts within which provisions of the ordinance apply serve as the legal instruments or tools to achieve basic development policies and objectives set forth in the general or comprehensive plan.

C. Previous and Current Planning in Gettysburg Area

The Planning situation in and around Gettysburg has evolved substantially since the debate over the construction of the tower and the original involvement of the Advisory Council on Historic Preservation in 1972. Comprehensive planning is underway in Cumberland Township and the Borough of Gettysburg has enacted zoning ordinances.

Planning and zoning are significant steps for the local Gettysburg-area governments to take, offering short-run protection for the Gettysburg battlefield, the Gettysburg National Cemetery, and the Eisenhower farm. Other adjoining municipalities in Adams County, now more rural in character, still reject any form of land use controls. Some of the scenic areas in these townships can be viewed from vantage points in the battlefield and the Eisenhower farm. The Adams County Planning Commission has rejected county-wide zoning in the past and does not foresee land use controls as acceptable to most of the townships that surround Gettysburg.

Since 1972, the Borough of Gettysburg and Cumberland Township, which contains Gettysburg National Military Park and functions as a suburb of the borough, have taken commendable steps to develop land use controls and attempt planning, which for the immediate future will be beneficial to and supportive of the objectives of the National Park Service. One objective is to protect the historic and scenic qualities of the original appearance of the battlefield.

What led the borough and the township to act? Two elements seem most significant. First, the battle over the tower and the accompanying involvement of local, State, and national interests included a debate over the lack of and desirability for land use controls, highlighted by the court's reprimand to the localities for their failure to exercise appropriate land use and development controls. The reprimand served as an instruction to act. Second, the Federal Government and the Commonwealth of Pennsylvania were already engaged in planning efforts, and the tower controversey served to intensify and strengthen these efforts. The involvement of the State, through its Department of Community Affairs, has been the strongest and most influential part of the planning efforts over the past five years.

While this investigation and report will commend the planning efforts of the past five years, a strong note of caution is added. The tool being considered to enact planning in the Gettysburg area is, predictably, zoning—zoning of the most traditional kind. There are certain inherent and unavoidable problems that will be encountered in future years if local zoning is to be the only form of protection Gettysburg National Military Park, the National Cemetery, and the Eisenhower farm are to have from intrusions on the historic scene. These problems will be associated with the following:

1. Local zoning is not static. The objective of the local governments may change and easily conflict with the objectives of protection of Gettysburg National Military Park. The primary revenue for Cumberland Township and a sizable portion for the Borough of Gettysburg is from amusement taxes that are collected from private recreational and museum-type attractions relating to the 1863 battle and battlefield. The pressure to accomodate more taxable enterprises will probably continue to exist, although the new Payment in Lieu of Taxes Act may considerably reduce this pressure. These enterprises will seek locations accessible to tourists and park interpretive sites. It is a recognizable and acceptable practice that local governments often exercise the zoning power in a way which will provide the highest taxable value on property.

2. Zoning, by legal interpretation, must be flexible and responsive. The regulation of private land uses through zoning does not

require a permanent *establishment of compatible uses. The exercise of the police power in the interest of health, welfare, and safety requires that there be an opportunity to reevaluate and reconsider the various factors affecting land usage. The opportunity will be there, as it must be, for interested parties to apply for changes in the uses zoning establishes.*

3. Land use controls now being considered for enactment in the Gettysburg area do not cover all areas affecting Federal properties. From the high vantage points along Cemetery Ridge, such as the High Water Mark of the Confederacy and the Round Tops, a visitor looking west and southwest beyond the Confederate lines on the second and third days of the battle sees a landscape not too different from the 1860's. The land is in agricultural use, consisting of gently rolling hills and meadows leading up to the South Mountains, six to seven miles west/ southwest of cemetery ridge. While this area is entirely in Adams County, the boundaries of Cumberland Township extend only for about two miles. Beyond lie unzoned Highland, Freedom, and Liberty Townships and farther west, where the visible South Mountains rise, is Hamiltonban Township. (See map on page 13.) Freedom Township also borders the Eisenhower farm to the Southwest.

Similarly, the scenic views to the northwest of Gettysburg, from which Confederate forces approached on the first day of the battle, extend into unzoned Franklin and Butler Townships. The area adjoining Gettysburg National Military Park to the east and northeast of Gettysburg is of lesser concern visually because of topographical protection, but constitutes yet other unzoned jurisdictions, Straban and Mt. Joy Townships. Straban and Cumberland Townships are probable areas for industrial and commercial growth connected with the principal north/ south route around Gettysburg, the Route 15 bypass.

Because of the condition of a sizable quadrant of land unopen for development and occupied by one use, i.e., Federal parks, growth of the Gettysburg area will be forced to funnel unnaturally into corridors, north, east, and west, which are open for expansion. These growth areas can be expected to expand outwardly more rapidly than they would if the park was not abutting Gettysburg and forming a non-growth quadrant to the south. The expansion of residential and service areas will reach unzoned areas more rapidly than if National Park Service land did not form a southern "no growth" barrier.

4. Park redevelopment plans will alter the existing patterns of land use. A major element of the unpublished Master plan for Gettysburg National Military Park is a new visitor orientation and contact center north of Gettysburg. One of the purposes of locating the new facility in that area is to draw automobiles and congestion away from the Cemetery Ridge road and National Cemetery areas near the present visitor center, as well as to provide a much needed improvement in the interpretation of the three-day battle. However, the move portends major redirection of land uses associated with commercial services and entertainment, which if allowed, can be expected to follow the move.

The Borough of Gettysburg hopes to prevent a repetition of the intrusions that have occured in the battlefield area near the existing visitor center and cyclorama. The borough and hopefully the township will have their zoning ordinances in hand, but problems associated with zoning and planning will assuredly arise. One problem will be the previously discussed pressure to increase local tax bases by accomodating tax-generating establishments. A major problem that is presently much discussed is that all plans, including the handling of traffic by the National Park Service, Cumberland Township future land use direction, and vehicular congestion in the Borough of Gettysburg, are tied to the construction of a long proposed east/ west Route 30 bypass north of Gettysburg. Without the bypass, all parties see chaos resulting if the visitor center is relocated. The investigations that were part of this report revealed that construction of the bypass is not probable in the foreseeable future if highway funding possibilities remain as they are. The State has assigned a low priority to the project, principally because of the high cost of the road. The Pennsylvania Department of Transportation estimates its share of the project under existing State-Federal programs (Route 30 is a U.S. highway) to be between 25 and 30 million dollars. The most recent State allocation plan for major highway projects in Adams County lists only $8 million over the next twelve years for all of Adams County.

D. Planning That Has Occurred to Date

The fight over the tower and the surrounding publicity and interest by the State and Federal agencies can be said to have helped lead to zoning ordinances in the Borough of Gettysburg and the possible adoption of a comprehensive plan and perhaps zoning ordinances in Cumberland Township. Planning for the area had already begun, however, by the time the tower controversy reached a climax in late 1971 and early 1972.

In 1970 Adams County received an urban planning grant from the Department of Housing and Urban Development under provision of Section 701 of the Housing Act of 1954, as amended, for preparation of a county-wide comprehensive plan. Administration for the preparation of the report rested partly with the Bureau of Planning, Pennsylvania Department of Community Affairs. The *Adams County Comprehensive Plan,* published in three volumes in early 1971, was the first major planning document produced for the locality. As such, it compiled for the first time much valuable data on economic and population trends, natural resources, transportation needs, existing land use patterns, and community facilities. The study also contained recommendations to guide the future development of the county.

The Adams County plan is general in nature, with no proposals to enforce its provisions. It is seen by county officials as a general blueprint to encourage the many and varied municipalities in the county, as well as private enterprise, into making decisions based on firm data and hopefully for county-wide benefit.

Nineteen seventy-two saw the publication of a unique planning document entitled *The Gettysburg-Cumberland Demonstration Program.* It was the product of a combined effort by the National Park Service, the Borough of Gettysburg, and Cumberland Township to produce a prototype program for cooperation between the Federal agency and the adjoining local governments. The genesis for this effort was the increasing concern by the Department of the Interior and other Federal bodies during the 1960's concerning types of development occuring in and around national parks throughout the country. One result of this concern was the announcement by the U.S. Department of Housing and Urban Development that it would fund, under a Section 701 planning grant, a demonstration study to develop an experimental planning process that could be followed by both the Federal government and local municipalities in areas where major national parks exist. After a lengthy selection process and consideration of many park areas, officials chose Gettysburg National Military Park and surrounding municipalities as the pilot. The growing tower controversy may have influenced the decision.

The noted planning consulting firm of Wallace, McHarg, Roberts, and Todd and Gladstone Associates was chosen to undertake the study and prepare a demonstration report. The Wallace/ McHarg firm is widely-respected for its work in environmental planning, and its resulting document presented an extremely useful description of where particular types of growth should occur, based on an impressive environmental analysis of Cumberland Township and the surrounding region.

The report further outlined a sophisticated planning process that was experimental in its recommendations for involvement of a Federal agency, the National Park Service, in the decisions of local government. Among the recommendations in the report were the following:

1. The Borough of Gettysburg, Cumberland Township, and the National Park Service should form a joint planning commission.

2. The Borough, Township, and the National Park Service should form a quasi-public development corporation to provide legal, planning, design, and managerial skills to the communities; to acquire and improve suitable lands; and, where appropriate, to develop the lands or convey them to private entrepreneurs for appropriate and desired uses.

3. The Borough, Township, and the National Park Service should form an Advisory Board to begin implementation of recommendations in the demonstration plan, carry on the planning work, begin legislative tasks, and coordinate between citizen groups and levels of government.

No one addressed the legality of these steps in the absence of new Federal and/ or State legislation. The legal question remained unanswered because the recommended planning process was, understandably, never initiated. The recommendations would have been strong stuff for the most advanced American community and were difficult to accept in a community which had no prior history of planning. At that time, there was not even the simplest zoning ordinance on the books, and, then as now, neither the borough nor the

township employed a professional planner.

A further barrier for any success of the demonstration program was the expectation of the local communities concerning the study. The Wallace/ McHarg firm apparently entered the project with the idea of producing a recommended experimental program from which a comprehensive plan would later emerge. The local municipalities were apparently expecting a "Plan" in the traditional concept to lead the local governments in implementation of concrete objectives. The National Park Service, for its part, was proceeding with preparation of its own master plan (still not completed) independent of the local governments and of the Wallace/ McHarg study. No party appeared to be willing to lead in establishment of a demonstration process, and the end result was dissatisfaction by all concerned.

The Wallace/ McHarg study certainly understood the "Gettysburg Problem." It is the same problem that today is more pressing than ever. The introduction of the 1972 study stated the complexities that National Park Service and the local communities faced:

The long slow growth patterns both in the local community and in visitor attendance to the Park have in the past provided time to adjust to change. The forces are now at hand which will alter both the form and the pace of development. Anticipated growth in attendance at the Gettysburg National Military Park, National Cemetery and Eisenhower National Historic Site will create pressure for additional facilities both within the Park System and from commercial activities which serve the visitor. Cumberland Township is in the throes of changing from an agricultural region to a suburb of the Borough and a target of speculative ventures generated by increasing tourism. The Borough itself has reached a point of limited possible future growth and increased competition for development from adjacent areas. With pressures of these dimensions, the potential for sharp conflict and eventual paralysis arising from high levels of dissent between the three communities is ripe.

Despite dissatisfaction, the 1972 Demonstration project did leave a beneficial legacy. Communication improved. The Wallace/ McHarg report recommended formation of a three-party advisory board to carry on planning that was to initiate with the report. A short-lived advisory board, with borough, township and National Park Service participation, was formed to discuss common problems and serve as a means of communicating the objectives and content of each member's plans. The advisory board disolved in disagreement over the purchase of land by the National Park Service north of Gettysburg, reportedly for a future relocated visitor center. The advisory board was replaced by a community relations committee, which still serves as a means of communication between National Park Service, local governments, and citizen groups. All parties agree that cooperation and communication between National Park Service and local governments has improved since 1972.

An additional contribution of the Wallace/ McHarg study, according to most reports, is that it "got things moving" and motivated people to think of planning. What has resulted so far, however, is not the sophisticated process that was recommended. Instead, a very traditional planning mechanism is being set in place, bringing to the Gettysburg community concepts of land use controls and laws to back the concepts that had not been there before. In retrospect, it would seem the natural place to begin a local planning process.

The motivation first took the form of the Borough of Gettysburg askind the Pennsylvania Department of Community Affairs in Harrisburg through its Bureau of Planning to help draw up local zoning ordinances. This initiation was encouraged by the State. Later, Cumberland Township asked the same State agency to assist in preparation of a comprehensive plan for the township. The State's Bureau of Planning has acted as a competent professional staff for the two local planning commissions. It is a beneficial situation in that the planning for both municipalities, which are contiguous, has been or is being done by the same staff. (An example of the benefit thus derived is that the height limitation on new construction is 35 feet in the Borough ordinance, and it is assumed if zoning is proposed those will the same height controls for the township.)

E. Borough Ordinances

The enactment of current borough ordinances is the result of four years of effort on the part of Gettysburg's five-menber planning commission, using the consulting services of the Pennsylvania Department of Community Affairs. Instead of attempting to prepare a comprehensive plan as a first step, a task that could take years, the commission decided to proceed directly with zoning in order to stabilize the borough's building activities and

control the proliferation of signs and billboards. The comprehensive plan is still in the discussion stage.

Current planning controls are in three forms:

1. **Historic District Ordinance** *The borough first enacted an historic district ordinance covering a 25-square block area centered around the Lincoln Square. The original county courthouse stood near the square many years ago, and it is still the hub of borough activity because all principal roads into and out of the community meet there.*

The historic district ordinance, adopted in 1972, was permissible under a 1961 Act of the Pennsylvania legislature, which allowed historic district zoning combined with the establishment of an architectural review board. In Gettysburg, the historic district review board recommends to the Borough Council the approval or disapproval, with or without suggestions, of applications for work on the exterior of buildings within the central 25-block area. The council has almost always accepted the recommendations of the review board.

2. **Sign Ordinance** *In late 1973, the Borough Council approved a sign ordinance in reaction to the growing number of large and brightly colored commercial signs and billboards placed on major thoroughfares near the Gettysburg National Military Park and the National Cemetery. The ordinance prohibits the erection or alteration of any sign until the building inspector for the borough issues a permit. Existing or proposed signs withn the Borough historic district are subject to the additional approval by the historic district review board. The ordinance requires that an owner limit signing to his premises, and that advertising must relate to the activity on that particular property. It also limits the size of signs to one square foot for each lineal foot of property street frontage, and in no case allows a sign to exceed 50 square feet. Animated, flashing, or moving signs are prohibited. The ordinance contained a "grandfather clause," permitting signs not in conformance with it at the time of enactment to be exempt for a five year period or until November 14, 1978.*

3. **General Zoning Ordinance** *In 1975, the Borough Planning Commission, working with the Bureau of Planning of the Pennsylvania Department of Community Affairs, developed a general zoning ordinance that was adopted by the Borough Council and became effective in October, 1975.*

The general zoning ordinance for Gettysburg contains a "Statement of Community Development Objectives," which, until a comprehensive plan is adopted, will serve as the borough's planning goals. The statement defines the physical aspects of the land, the natural resources, and the historic properties that as a fundamental consideration are most worthy of protection. According to the document, "development should take place in the proper areas so that in no way does it react negatively with out prime natural resources."

The "Statement of Objectives" calls for complete cooperation with and by the National Park Service, the adjoining Cumberland and Straban Townships, and the Gettysburg College and Lutheran Seminary. The stimulation of commercial development within the Borough is a primary objective, including the encouragement of the conversion of the downtown core into a "unique Civil War Period Shopping Mall."

The borough zoning ordinance and zoning map are essentially protective of the integrity of the Gettysburg National Military Park and the National Cemetery. Generally, a 35 or 40-foot, or three-story, height limitation is placed on construction—with spires, belfries, cupolas, chimneys, and other appurtenances usually located above the roof of a structure allowed to exceed that height. Institutional buildings (the institutional zones, being primarily concerned with the College and Seminary on the western side of town) are allowed a height of eight stories.

The zoning ordinance essentially defines the existing pattern of land use in the borough and attempts to reinforce and encourage that pattern with controls. The ordinance is administered by the building inspector for the borough. A zoning hearing board, appointed by the Borough Council, oversees the ordinance and hears appeals of decisions made by the building inspector and considers requests for zoning variances and special exceptions. One of three members of the zoning hearing board, but not more than one, is usually a member of the borough planning commission.

F. Cumberland Township Comprehensive Plan

The State Bureau of Planning, after assisting the Borough of Gettysburg in the role of consulting staff in the preparation of borough zoning ordinances, agreed to help the Cumberland Township Planning Commission draft a comprehensive plan. The plan, now in draft, is, as are most plans that attempt to serve varying interests, a compromise between large landholders, commercial interests, real estate development interests, those favoring protection of the Federal historic areas, and those favoring growth and expansion of the tax base. A fair appraisal would be that the Gettysburg National Military Park and the Eisenhower farm receive sympathetic treatment in the plan, if not foremost consideration.

If the plan is adopted and if permanent legal controls follow, then the integrity of park land would be fairly well served by Cumberland Township. However, even if the township adopted the plan and enacted controls, a not altogether certain expectation, the probability will remain for modification and adjustment to accommodate any developing growth situation in the township.

The draft of the comprehensive plan "protects" or is sympathetic to the need for the protection of Gettysburg National Military Park and the Eisenhower farm in that its land use proposals reinforce existing patterns of township growth. That pattern has been for residential development to occur northwest of the Gettysburg National Military Park; consequently the areas visually more critical to maintaining the National Park Service objective of a rural setting—those being the views from the second and third days of the battle—have remained essentially agricultural. The plan's authors, however, foresee an eventual zoning ordinance that will allow large-lot (one or two housing units per acre) residential development as township population grows in an agricultural zone directly west and southwest of the Seminary Ridge section of the military park. Areas to the south and east of the park that border Cumberland Township receive the protection of a conservation zone under the draft plan. These areas are now fairly well protected by hills and natural vegetation.

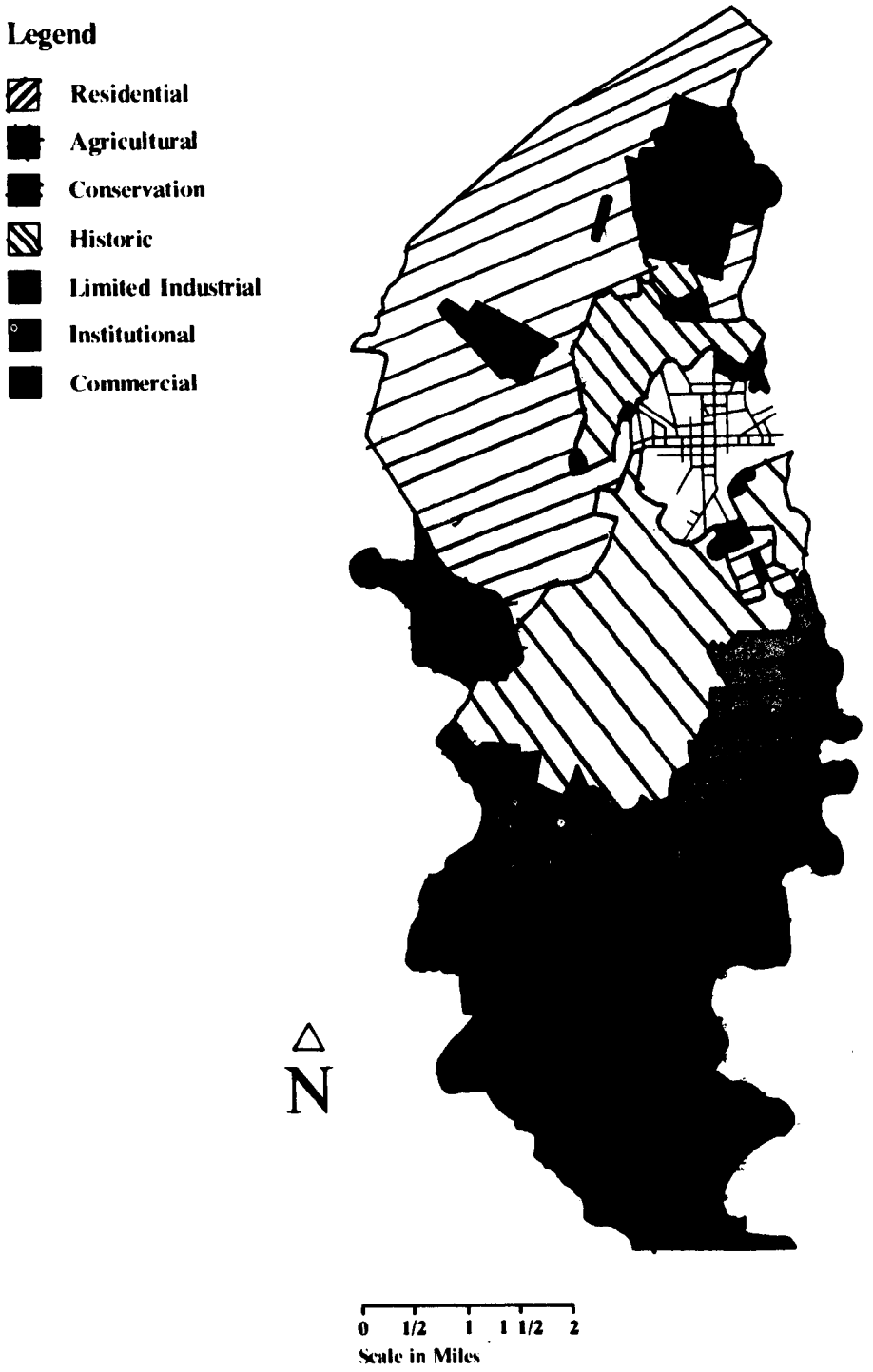
Even if Cumberland Township adopts a comprehensive plan and a zoning ordinance to implement it, the most immediate problem of visual protection for the Gettysburg National Military Park will be in the area of existing residential development northeast of Gettysburg and just west of the Peace Light Memorial and adjacent park land associated with the first day of the battle. Residential development should continue in this area at an increased pace, with or without a comprehensive plan, as a result of planned expansion of the township sewer system. Natural vegetation in this area is thin and the vista is open, although interrupted by a few rolling hills to a row of small mountains about three miles away. A building height limitation would be helpful in this area, if a zoning ordinance materialized, as would refinement of the plan and any zoning proposals, to encourage residential developments into the valleys between the rolling hills and onto the far or western side of the hills.

The potential problem of intrusions to the Gettysburg National Military Park and Eisenhower Farm through construction of high structures of any nature will exist in all areas of Cumberland Township in the absence of a local zoning ordinance limiting structural heights or in the absence of unique State or Federal action. If a comprehensive plan is adopted, it is hoped that a zoning ordinance will follow that includes a universal height limitation on new construction throughout the township.

Perhaps the greatest potential problem of intrusion for Gettysburg National Military Park can be identified as building or development in that part of Cumberland Township just beyond the western and southwestern borders of existing park boundaries. This area is readily visible from important vantage points on Cemetery Ridge, and certain kinds of development would conflict with the scene of a rural landscape that the National Park Service is working to preserve in and around the battlefield and the farm. If there are not unique State and/ or Federal actions in this area, there are three possibilities to consider.

First, the area will continue to develop without any form of new land use controls. Presently, with the exception of easily met subdivision regulations, there are no controls on this or other parts of Cumberland Township. This area, lying just beyond Seminary Ridge, is now in farm usage and borders on residential areas to the north swiftly reaching out from Gettysburg. With the rapid growth of the township, which has doubled in population since 1940, this area can shortly be expected to undergo pressure for residential subdivision. If tourism continues to grow, this area will be attractive for new tourist-related industries, although access to major roads is presently

Future Land Use



absent. If the existing tower becomes a financial success and someone wishes to try and duplicate it, no other location in or around Gettysburg will afford a more advantageous vantage point to the Gettysburg National Military Park and the Eisenhower farm.

The situation would be different if the township were to adopt the comprehensive plan and zoning controls. Then the area would have locally imposed legal restraints placed on its use. A zoning ordinance based on the plan could be expected to encourage continued agricultural use, but would permit a large-lot residential development if the demand for it increased. A building height limitation could be expected based on the plan that has been drafted.

Finally, it has been pointed out that any zoning ordinance must legally be responsive to requests for adjustments. If growth continues, this area of the township at some future date, probably in 10 to 20 years, could be under pressure to rezone to a small-lot residential area with needed commercial services to follow. The possibility will also exist that a plan or zoning ordinance, if it proves unpopular, will be changed by elected officials in response to public demand.

In summary, Cumberland Township is presently in a hesitant and transitional period from no prior planning to adopting its first comprehensive plan. A zoning ordinance of a traditional and simple nature would be the next logical step. Some resistance to land use controls is evident among land owners in the township, lessening full optimism about the quick adoption of even a simple zoning ordinance. The draft of the comprehensive plan respects the integrity of the Gettysburg National Military Park in that it proposes to maintain the status quo of existing patterns of development. Plans and zoning in rural areas undergoing suburbanization are traditionally open to change and fairly quick revision as growth accelerates. It should also be remembered that Cumberland Township's move to land use controls will not directly affect adjoining townships, some parts of which are visible from the Gettysburg National Military Park and the Eisenhower farm.

The evidence of planning that is beginning to occur in an around Gettysburg, while long overdue, is a good sign. It is proof that local officials and citizens are aware of a problem and have begun to act. However, it can *not* be said that there is an awareness of the need for extraordinary protection for the unique environment of the Nation's most significant battlefield. The planning that is occuring differs little if at all from what a locality of similar size and make up would adopt in America today without a Gettysburg National Military Park in its background. Furthermore, the ongoing local planning does not include the concept of the battle area as the entire Gettysburg Battle Historic District, as included on the National Register of Historic Places. The Register district is three times the land area of the existing Gettysburg National Military Park, including most of the Borough of Gettysburg.

Considering protection of the historic scene in perpetuity as of paramount concern, one can look upon recent planning and zonning activities as buying time. Historic preservation planning should look at protection of worthwhile properties and areas from a very long perspective. Even with the recent local planning activity, it would appear doubtful that the area surrounding historic ground will receive the land use protection it needs to meet historic preservation goals. If special and unique protection is not provided, the area can be expected to change and intrusions will continue to occur.

One might view the problem in terms of an assignment of priorities. Is the Gettysburg scene worthy of protection in a rural setting similar to 1863? The historian and historic preservationist might answer that if the country is to commemorate a battle and a place to represent and interpret the American Civil War, the Gettysburg should be that place and that battlefield. If the priority for protection is assigned, then the conclusion is that existing and now contemplated local land use controls will be inadequate and special action will be required.

G. Historic Gettysburg-Adams County, Inc.

Formed in 1975, the Historic Gettysburg-Adams County, Inc., is a non-profit organization dedicated to the restoration and preservation of historical resources in the Gettysburg area. Under its Articles of Incorporation, filed with the Pennsylvania Department of State, its purposes are "To foster and participate in the preservation, interpretation, and welfare of this historic, architectural, scenic and culturally significant areas, districts, sites, structures, objects and activities, and the townscapes and lanscapes of the Borough of Gettysburg and Adams County, Pennsylvania, and of the Gettysburg National Military Park, Gettysburg

National Cemetery, and the Eisenhower National Historic Site, and to encourage their appreciation by the general public." The organization is guided by a 21-member Board of Directors and four elected officers. The daily affairs of the organization are administered by a salaried executive director and small staff, some of whom are volunteers. Its small budget is made possible by membership dues, donations from the borough, and grants from the National Endowment for the Arts, among others.

During its short life, the organization has done much to promote historic awareness in the Gettysburg community and to encourage the preservation of buildings in the borough's historic district, particularly by providing free technical assistance to those owners undertaking rehabilitation and restoration. Historic Gettysburg-Adams County, Inc., has developed a 13-year "Bicentennial Era Restoration Project" for Gettysburg Historic District, which if implemented will do much to upgrade the borough's historic resources. Plans call for the preservation of the historic exteriors of buildings, of traffic from the historic district, the installation of stone and brick sidewalks and curbs, plantings and landscaping and Victorian street lighting, relocation of utility lines underground, introduction of more compatible street furniture, and more appropriate commercial, street, and traffic signing. It should be emphasized that the effort is aimed at persuading the jurisdictions and individual owners to undertake proposed improvements and to assist in securing what Federal funds that might be available for these purposes.

Bibliography

Advisory Council on Historic Preservation, "Chronology of Significant Events, National Gettysburg Battlefield Tower, Inc.." ACHP Collections, Gettysburg File.

Andrew Brown, *Geology and the Gettysburg Campaign;* U. S. Geological Survey, Washington, D.C., 1973.

Bradsley, H.C., *History of Cumberland and Adams Counties, Pennsylvania.* Warren Beers and Company: Chicago 1886.

Borough of Gettysburg, "Gettysburg Borough Sign Ordinance." Gettysburg Borough Council: Gettysburg, Pennsylvania, 1973.

Borough of Gettysburg, "The Gettysburg Borough Zoning Ordinance" (revised). Gettysburg Borough Council: Gettysburg, Pennsylvania, 1975.

Catton, Bruce, *Gettysburg: The Final Fury.* Bekley Publishing Corporation: New York, 1974.

Clifton E. Rodgers and Associates, *A Comprehensive Plan: Adams County,* Parts 1,2,3 and Summary. Adams County Planning Commission: Gettysburg, Pennsylvania, 1971.

Coddington, Edwin B. *The Gettysburg Campaign: A Study in Command.* New York: Scribners, 1968.

Haskell, Elizabeth, "New Directions in State Environmental Planning." *Journal of the American Institute of Planners,* Vol. 37, No. 4, July 1971, pp. 253-258.

McGrath, Dorn C., Jr., *A Proposed Observation Tower Overlooking the Gettysburg National Military Park: Report to the Advisory Council on Historic Preservation.* Advisory Council on Historic Preservation, April 1972.

National Park Service, "Development of Eisenhower National Historic Site, H. J. RES. 81, 91st Congress - 1st Session." Gettysburg National Military Park, 1969. GNMP Collections

National Park Service, "Gettysburg National Military Park Master Plan," draft, September, 1976. GNMP Collections

National Park Service, "Log of Events Re to Park & Regional Planning and Tower Controversy at Gettysburg National Military Park, Gettysburg National Cemetery, Eisenhower National Historic Site." July, 1976. GNMP Collections

National Register of Historic Places Inventory Form - Nomination Form, "Gettysburg Battlefield Historic District," March 19, 1975. Files of the National Register of Historic Places, 1100 L St., NW., Washington, D.C.

Northern Virginia Regional Planning and Economic Development Commission, "Open Space Easements in the National Capital Region." Northern Virginia Regional Planning and Economic Development Commission: Fairfax, Virginia, 1965.

Overview Corporation, *How to Implement Open Space Plans: For the San Francisco Bay Area, Volume I.* Association of Bay Area Governments: Berkeley California, 1973.

Oyler, John S., *Pickett Charges; Everyone Else Pays* (The Story of the Gettysburg Tower Controversy). Princeton University: Princeton, New Jersey, 1972.

Pennsylvania Department of Community Affairs, Bureau of Planning, *Comprehensive Plan: Cumberland Township,* draft. Cumberland Township Board of Supervisors: Gettysburg, Pennsylvania, 1976.

Plimpton, Oakes A., "Conservation Easements: Legal Analysis of Conservation Easements as a Method of Privately Conserving and Preserving Land." The Nature Conservancy: Washington, D.C.

Roy Mann Associates, Inc., *People and the Sound: Shoreline Appearance and Design.* National Park Service and New England River Basins Commission: Cambridge, Massachusetts, 1975.

Regional Science Research Institute, *Untaxing of Open Space: An Evaluation of the Effectiveness of Differential Assessment of Farms and Open Space* (A Council on Environmental Land Use Publication). Government Printing Office: Washington, D.C., 1976.

Storrick, W.C. *The Battle of Gettysburg,* 28th ed. The McFarland Company: Harrisburg, Pennsylvania, 1975.

Tilberg, Frederick *Gettysburg National Military Park, Pennsylvania,* rev. ed., (National Park Service Historical Handbook Series No. 9). Government Printing Office: Washington, D.C., 1962.

Vanderslice, John M., *Gettysburg Then and Now.* New York: G.W. Dillingham Company, 1899.

Wallace, McHarg, Roberts and Todd and Gladstone Associates, *Gettysburg - Cumberland Demonstration Program.* Pennsylvania Department of Community Affairs: Harrisburg, Pennsylvania, 1972.

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While many contributed information, the viewpoints and recommendations of the report are those decided upon by the Advisory Council on Historic Preservation. The report was made possible by funds made available by the Council and the National Park Service.

APPENDIX F

Engineering Cost Information

HAGARTY 5-8-81

THE RECOMMENDED ECONOMIC ANALYSIS OF ALTERNATIVE

FOR

GETTYSBURG (SEGMENTS 1, 3, 4)
& STRABAN (segement 18)

($ x 10^3)

	Alternate Item	Year	Capital Dollars	Annual O&M Dollars	Salvage Value	Present Worth (1) Capital Dollars	Present Worth (2) O&M Dollars	Present Worth (3) Salvage Value	Total Present Worth (1+2−3)	Average Annual Equivalent Cost
STRABAN (SEGMENT 18)	ON-SITE SYSTEMS	4Q'79	808.2	39.6	331.7	808.2	415.5	83.8	1139.9	
GETTYSBURG (1,3,4)	COLLECTION & CONVEYANCE		3015.5	38.3	1391.8	3015.5	401.8	351.4	3065.9	
	STP		3440.0	264.0	658.0	3440.0	2769.9	166.2	6043.7	
	I/I REDUCTION		968.8	—	—	968.8	—	—	968.8	
	EXISTING DEBT		107.3	—	—	107.3	—	—	107.3	
	TOTAL	✓	8339.8	341.9	2381.5	8339.8	3581.2	601.4	11,325.6	

HAGARTY 5-8-81

THE RECOMMENDED
ECONOMIC ANALYSIS OF A ALTERNATIVE
FOR
CUMBERLAND (SEGMENTS 2, 17)

($ X10^3)

Alternate Item	Year	Capital Dollars	O&M Dollars	Salvage Value	Present Worth (1) Capital Dollars	Present Worth (2) O&M Dollars	Present Worth (3) Salvage Value	Total Present Worth (1+2−3)	Average Annual Equivalent Cost
ON-SITE SYSTEMS	4Q'79	—	—	—	—	—	—	—	
COLLECTION & CONVEYANCE		3168.5	7.1	1462.4	3168.5	74.5	369.3	2873.7	
STP		417.0	46.0	69.0	417.0	482.6	17.4	882.2	
I/I REDUCTION		38.2	—	—	38.2	—	—	38.2	
EXISTING DEBT		150.9	—	—	150.9	—	—	150.9	
TOTAL	↓	3774.6	53.1	1531.4	3774.6	557.1	386.7	3945.0	

F-2

ARE IN LAST SECTION OF THIS PACKET

PROJECT NO. 591-4
CLIENT
SUBJECT

WAPORA, Inc.
Environmental/Energy/Economic Studies
OFFICE DC/Regional

SHEET 1 OF 1
PREPARED BY HDB
DATE 7/3/80
CHECKED BY
DATE

Levels of Federal Funding*

1) On-Site Systems
   - 0% funding – replacements for systems built post-12/77
     – new systems post-12/77
   - 85% funding – replacements for systems built pre-12/77

2) Collection + Conveyance Sewer
   - 0% funding – gravity connection lines from houses to laterals
     – collection sewer where less than 2/3 of present flows were present as of 10/18/72
   - 75% funding – gravity sewer + appurtenances (except 0% categories)
     – force main + pump stations (except 0% categories)
   - 85% funding – low pressure sewer + appurtenances* (except 0% cat's)

3) Sewage Treatment Plants
   - 75% funding – all of our processes except sludge drying / land application of sludge
   - 85% funding – sludge drying / land application of sludge

4) Land Application Treatment
   - 0% funding – land other than that needed for pre-application storage and land application treatment processes
   - 75% funding – our processes subsequent to land application treatment
     – admin./lab. buildings + roads + fences + wells
   - 85% funding – treatment + storage prior to land application
     – land application of effluent
     – sludge drying / land application of sludge
     – land needed for storage + land application of effluent

• Repaving + Stream crossings assumed to be 75% funded for all sewer

* Sources of information – US EPA's Innovative + Alternative Technology Manual (MCD-53, EPA-430/9-78-009) and US EPA's Program Requirements Memoranda 75-25, 78-4, 78-9

PROJECT NO. [illegible]

CLIENT EPA

SUBJECT

WAPORA, Inc.
Environmental/Energy/Economic Studies

OFFICE DC/REGIONAL

SHEET 1 OF 4

PREPARED BY E.P. NAGARTY

DATE 5-12-81

CHECKED BY

DATE

[illegible] BY MUNICIPALITY & LEVEL OF [illegible]

- RECOMMENDED ALTERNATIVE -

GETTYSBURG (1,3)	CONSTRUCTED BY 1985?	($ X 1000) CAPITAL	O&M	SALVAGE
a) 0 % FUNDING				
1) EXISTING DEBT	YES	107.3	0	0
2) SEWERS*	NO*	970.8	0.4	448.1
b) 75% FUNDING				
1) I/I REDUCTION ✓	YES	968.8	0	0
2) SEWERS ✓	YES	149.6	35.3	69.1
3) STP* ✓	YES	3,120.1	237.7	599.9
c) 85% FUNDING				
STP* (LAND APPLIC. - SLUDGE) ✓	YES	100.4	12.0	25.8

* COSTS OF ITEMS SHARED BY MUNICIPALITIES HAVE BEEN SPLIT BETWEEN MUNICIPALITIES IN PROPORTION TO FLOWS CONTRIBUTED BY THE MUNICIPALITIES

* ON-SITE SYSTEMS, CONNECTIONS, AND LATERALS SERVING MAINLY FUTURE GROWTH HAVE BEEN ASSUMED NOT TO BE CONSTRUCTED BY 1985, - THEREFORE, COSTS OF THESE ITEMS HAVE NOT BEEN INCLUDED IN USER CHARGES.

PROJECT NO. 591
CLIENT EPA
SUBJECT

WAPORA, Inc.
Environmental/Energy/Economic Studies
OFFICE DC/REGIONAL

SHEET 2 OF 4
PREPARED BY E.P. HAGARTY
DATE 5-12-81
CHECKED BY
DATE

COSTS BY MUNICIPALITY & LEVELS OF FEDERAL FUNDING

— RECOMMENDED ALTERNATIVE —

STRABAN (4,18)

	CONSTRUCTED BY 1985?	($ x 1000) CAPITAL	O&M	SALVAGE
a) 0% FUNDING				
1) ON-SITE SYSTEMS	NO*	1853.9	65.1	753.5
2) SEWERS°	NO*	122.7	0	56.6
3) SEWERS° (SEGMENT 4) ✓	YES	106.1	0	49.0
b) 75% FUNDING				
1) SEWERS°	YES	1076.2	2.6	496.7
2) STP°	YES	265.9	20.3	51.1
c) 85% FUNDING				
1) ON-SITE SYSTEMS ✓	YES	45.7	4.6	18.8
2) STP° (LAND APPLIC.-SLUDGE) ✓	YES	8.6	1.0	2.2

PROJECT NO. 591
CLIENT EPA
SUBJECT

WAPORA, Inc.
Environmental/Energy/Economic Studies
OFFICE DC/REGIONAL

SHEET 3 OF 4
PREPARED BY E.P. NAGARTY
DATE 5-12-81
CHECKED BY
DATE

COSTS BY MUNICIPALITY & LEVELS OF FEDERAL FUNDING

— RECOMMENDED ALTERNATIVE —

CUMBERLAND (2,17)

	CONSTRUCTED BY 1985?	($ x 10^3) CAPITAL	O&M	SALVAGE
a) 0% FUNDING				
1) ON-SITE SYSTEMS	NO*	45.5	1.7	18.3
2) SEWERS	NO*	3168.5	4.0	1462.4
b) 75% FUNDING				
1) NOW & EXISTING SEWER ✓	YES	0	3.1	0
2) STP (0.167 MGD) ✓	YES	397.0	44.0	64.0
c) 85% FUNDING				
1) ON-SITE SYSTEMS ✓	YES	116.7	7.4	46.8
2) STP (LAND APPLIC - SLUDGE) ✓	YES	20.0	2.0	5.0

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COSTS BY MUNICIPALITY & LEVELS OF FEDERAL FUNDING

— RECOMMENDED ALTERNATIVE —

LAKE HERITAGE (7-11,20)

	CONSTRUCTED BY 1985?	CAPITAL	O & M	SALVAGE
a) 0% FUNDING				
1) SEWERS	NO*	1241.5	28.2	103.5
b) 75% FUNDING				
1) SEWERS	YES	1164.8	16.2	404.4
2) STP (0.15MGD)	YES	281.0	36.0	94.0
c) 85% FUNDING				
1) SEWERS	YES	3024.2	34.7	875.3
2) STP (LAND APPLIC.-SLUDGE)	YES	20.0	2.0	5.0

User Charge Calculation

Please note that the 1985 user charges that have been estimated do not include the costs of those on-site systems house-to-lateral connections, and laterals that will serve mainly future growth (ie growth between 1985 and 2005). Further, they assume that no growth will occur between 1980 and 1985.

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ESTIMATED 1985 USER CHARGES

Alternative: RECOMMENDED ALTERNATIVE
Municipality: GETTYSBURG (SEGMENTS 1, 3)
Number of EDU's: 3771

(4th Quarter 1979 $ x 1000)

	Capital	Federal Share	Local Share	Annual O+M
On-Site Systems (85%)				
Sewer				
Ineligible (0%)				
75% fed. funding	149.6	112.2	37.4	35.3
85% fed. funding				
I/I Reduction (75%)	968.8	726.6	242.2	0
Treatment Plants				
75% fed. funding	3120.1	2340.1	780.0	237.7
85% fed. funding	100.4	85.3	15.1	12.0
Land Application				
Ineligible (0%)				
75% fed. funding				
85% fed. funding				
Total	4338.9	3264.2	1074.7	285.0

		($x1000)
Annual Local Capital Cost (Local Share x 0.0816*)	=	87.7
Debt Reserve (20% of Annual Local Capital Cost)	=	17.5
Existing Debt Retirement (per Year)	=	21.0
Annual Operating + Maintenance Costs (Annual O+M)	=	285.0
Total 1985 Local Cost		411.2

* Capital Recovery Factor - 30 years, 7⅛%

ESTIMATED 1985 USER CHARGE $\left(\frac{\text{Total Local Cost}}{\text{No. of EDU's}}\right)$ in Dollars = $109

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ESTIMATED 1985 USER CHARGES

Alternative: RECOMMENDED ALTERNATIVE
Municipality: STRABAN (SEGMENTS 4, 18)
Number of EDU's: 232

NOTE: SEGMENT 18 IS NOT SEWERED AND 4 IS USER CHARGES MAY BE ALLOCATED ACCORDINGLY BY STRABAN.

(4th Quarter 1979 $ x 1000)

	Capital	Federal Share	Local Share	Annual O+M
On-Site Systems (85%)	45.7	38.8	6.9	4.6
Sewer				
Ineligible (0%)	106.1	0	106.1	0
75% fed. funding	1076.2	807.2	269.0	2.6
85% fed. funding				
I/I Reduction (75%)				
Treatment Plants				
75% fed. funding	265.9	199.4	66.5	20.3
85% fed. funding	8.6	7.3	1.3	1.0
Land Application				
Ineligible (0%)				
75% fed. funding				
85% fed. funding				
Total	1502.5	1052.7	449.8	28.5

		($x1000)
Annual Local Capital Cost (Local Share x 0.0816*)	=	36.7
Debt Reserve (20% of Annual Local Capital Cost)	=	7.3
Existing Debt Retirement (per Year)	=	0
Annual Operating + Maintenance Costs (Annual O+M)	=	28.5
Total 1985 Local Cost		72.5

* Capital Recovery Factor - 30 years, 7 1/8%

ESTIMATED 1985 USER CHARGE $\left(\frac{\text{Total Local Cost}}{\text{No. of EDU's}}\right)$($) = $313

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ESTIMATED 1985 USER CHARGES

Alternative: RECOMMENDED ALTERNATIVE
Municipality: CUMBERLAND (SEGMENTS 2, 17)
Number of EDU's: 316*

(4th Quarter 1979 $ x 1000)

	Capital	Federal Share	Local Share	Annual O+M
On-Site Systems (85%)	116.7	99.2	17.5	7.4
Sewer				
Ineligible (0%)				
75% fed. funding	0	0	0	3.1
85% fed. funding				
I/I Reduction (75%)				
Treatment Plants				
75% fed. funding	397.0	297.7	99.3	44.0
85% fed. funding	20.0	17.0	3.0	2.0
Land Application				
Ineligible (0%)				
75% fed. funding				
85% fed. funding				
Total	533.7	413.9	119.8	56.5

*CTA'S 300 EDU'S + 16 ON-SITE SYSTS

		($x1000)
Annual Local Capital Cost (Local Share x 0.0816*)	=	9.8
Debt Reserve (20% of Annual Local Capital Cost)	=	24.0
Existing Debt Retirement (per Year)	=	14.6
Annual Operating + Maintenance Costs (Annual O+M)	=	56.5
Total 1985 Local Cost		104.9

* Capital Recovery Factor - 30 years, 7⅛%

ESTIMATED 1985 USER CHARGE $\left(\frac{\text{Total Local Cost}}{\text{No. of EDU's}}\right)$ ($) = $332

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ESTIMATED 1985 USER CHARGES

Alternative: RECOMMENDED ALTERNATIVE
Municipality: LAKE HERITAGE
Number of EDU's: 363*

(4th Quarter 1979 $ x 1000)

	Capital	Federal Share	Local Share	Annual O+M
On-Site Systems (85%)				
Sewer				
Ineligible (0%)				
75% fed. funding	1164.8	873.6	291.2	16.2
85% fed. funding	3024.2	2570.6	453.6	34.7
I/I Reduction (75%)				
Treatment Plants				
75% fed. funding	281.0	210.7	70.3	64.0
85% fed. funding	20.0	17.0	3.0	5.0
Land Application				
Ineligible (0%)				
75% fed. funding				
85% fed. funding				
Total	4490.0	3671.9	818.1	119.9

* DRUMMER BAY (10) + RESIDENCES

($ x 1000)

Annual Local Capital Cost (Local Share x 0.0816*)	=	66.8
Debt Reserve (20% of Annual Local Capital Cost)	=	13.4
Existing Debt Retirement (per Year)	=	6.0
Annual Operating + Maintenance Costs (Annual O+M)	=	119.9
Total 1985 Local Cost		206.1

* Capital Recovery Factor - 30 years, 7 1/8%

ESTIMATED 1985 USER CHARGE $\left(\frac{\text{Total Local Cost}}{\text{No. of EDU's}}\right)$ ($) = $568